

# L-force

*Geared servo motors*



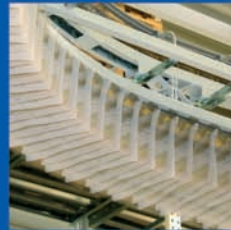
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**Lenze**

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You want to implement your machine and plant concepts efficiently and easily or optimise existing concepts to reduce costs? Then, Lenze is the partner you are looking for. For more than 60 years, drive and automation systems have been our core competence.

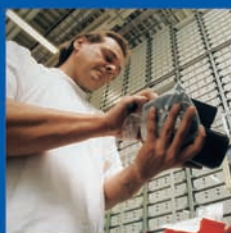
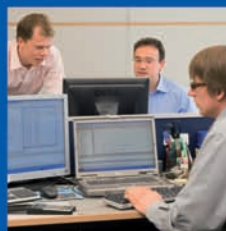


Drive and automation technology from Lenze keep things moving – for example in the areas of materials handling, robotics and component handling as well as in packaging facilities for the intralogistics and automotive sectors and the food and beverage industries.

# Lenze | about us

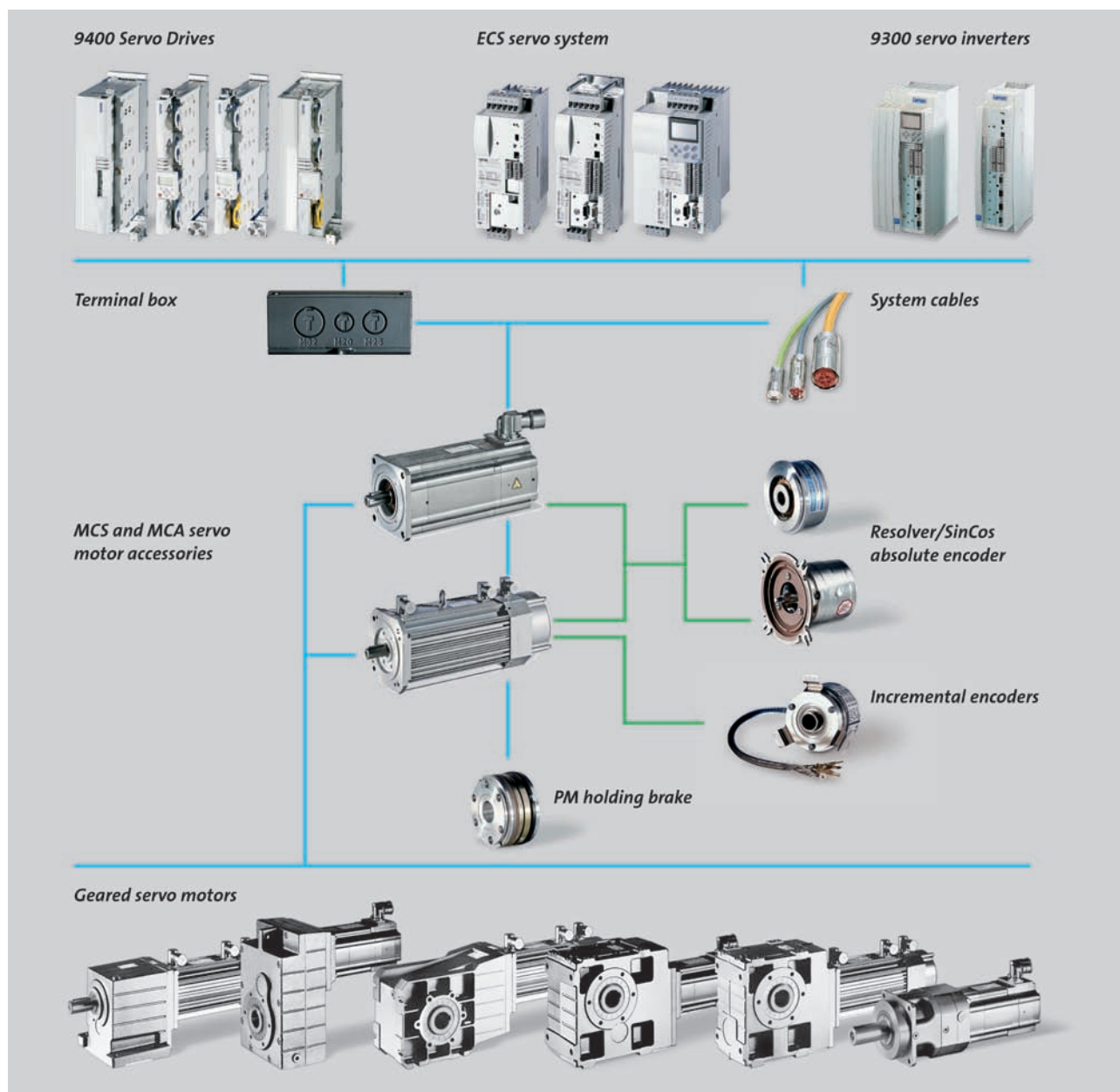
We can offer you automation solutions, including control, visualisation and drive technology, from a single source. Our drive systems will improve the performance of your machines. From project planning to commissioning, we have the know-how, while our international sales and service network can provide you with expert help and advice at any time.

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At your side all over the world – with thorough and professional support from our motivated team.

# System overview | Geared servo motors



## Further catalogues

This catalogue describes geared servo motors in the G-motion Servo MC series. Further components in the above system overview may be found in the following catalogues:

Components	Catalogue
9400 Servo Drives	▶ 9400 Servo Drives
ECS servo system	▶ ECS servo system
9300 servo inverter	▶ 9300 servo inverter
MCS/MCA servo motors and built-on accessories	▶ Servo motors

# Overview | Geared servo motors

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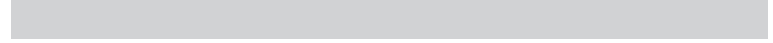
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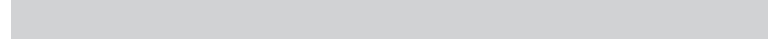
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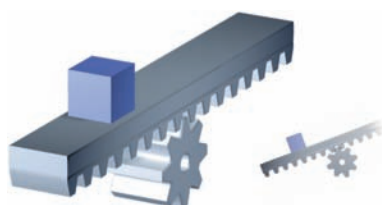
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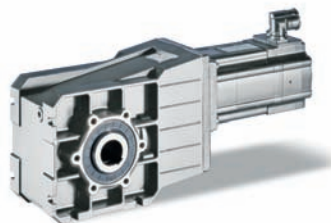




## GPA planetary gearbox

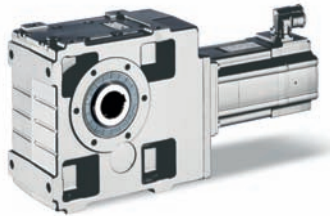
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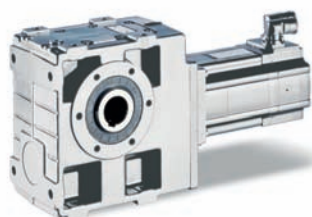
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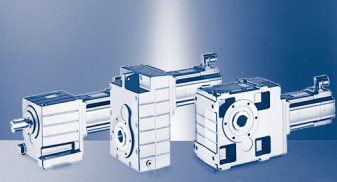
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# Contents | Geared servo motors



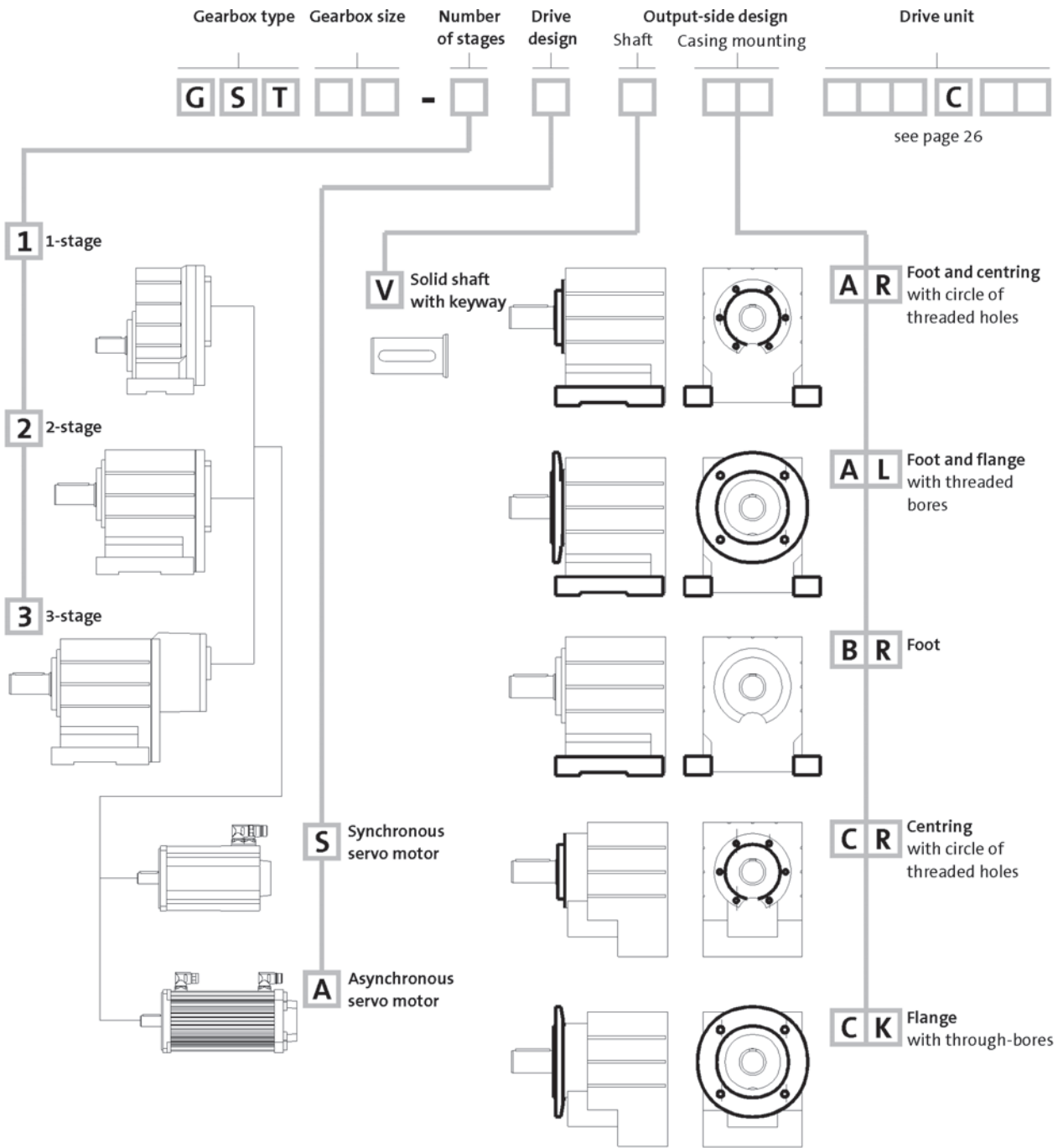
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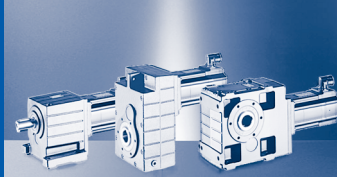
# General information

## Helical gearbox product key

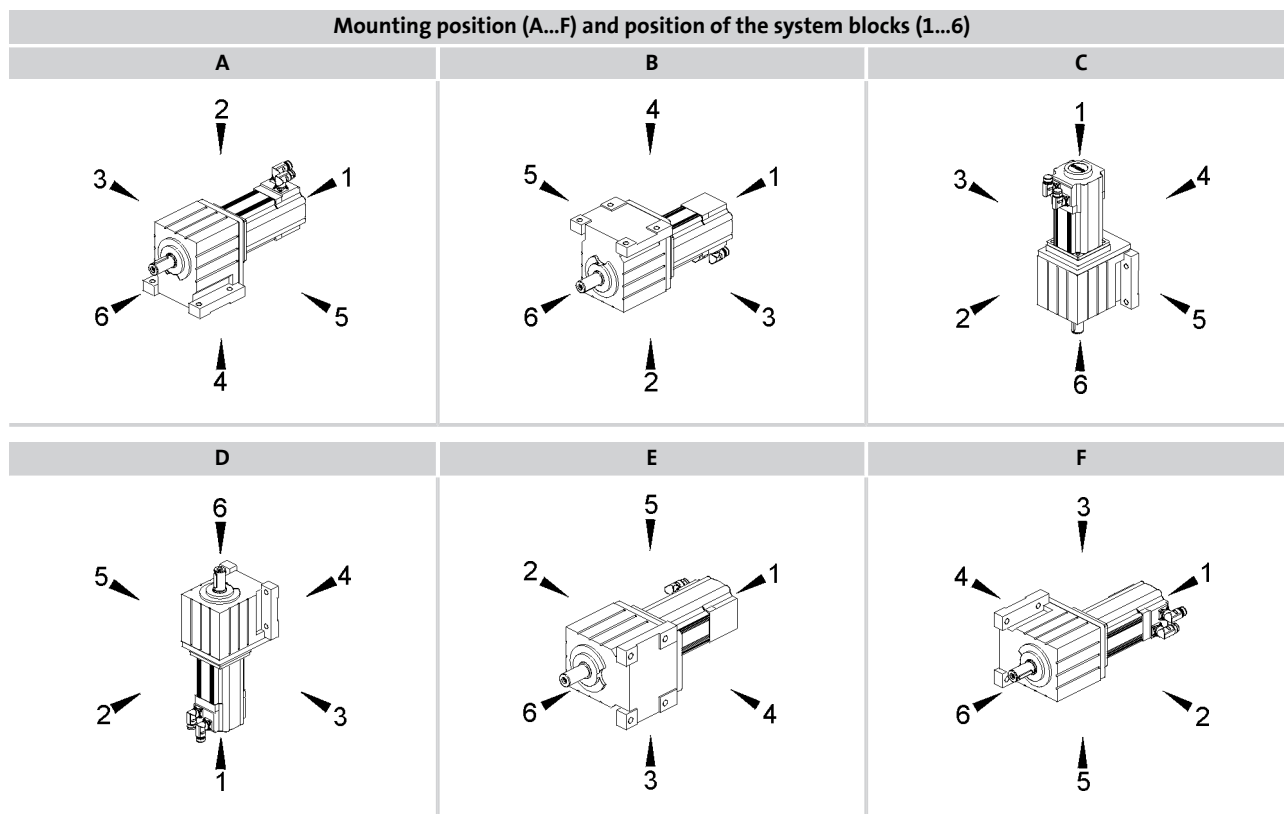


	Output-side design		
	V	K	L
	d x l [mm]	Øa2 [mm]	Øa2 [mm]
GST03-2	14x28	120/140/160	
	20x40	120/140/160	
GST04-1	16x32	120/140/160	
GST04-2	20x40	120/140/160	120/140
GST05-1	20x40	120/140/160/200	
GST05-2/3	25x50	120/140/160/200	120/140/160
GST06-1	25x50	160/200	

	Output side design		
	V	K	L
	d x l [mm]	Øa2 [mm]	Øa2 [mm]
GST06-2/3	30x60	160/200	160/200
GST07-1	30x60	200/250	
GST07-2/3	40x80	200/250	200/250
GST09-1	40x80	250/300	
GST09-2/3	50x100	250/300	250/300
GST11-2/3	60x120	300/350	300/350
GST14-2/3	80x160	350/400	350/400



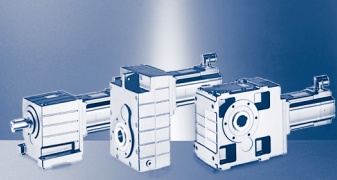
Mounting position (A...F) and position of the system blocks (1...6)



Connector/terminal box: 2, 3, 4, 5

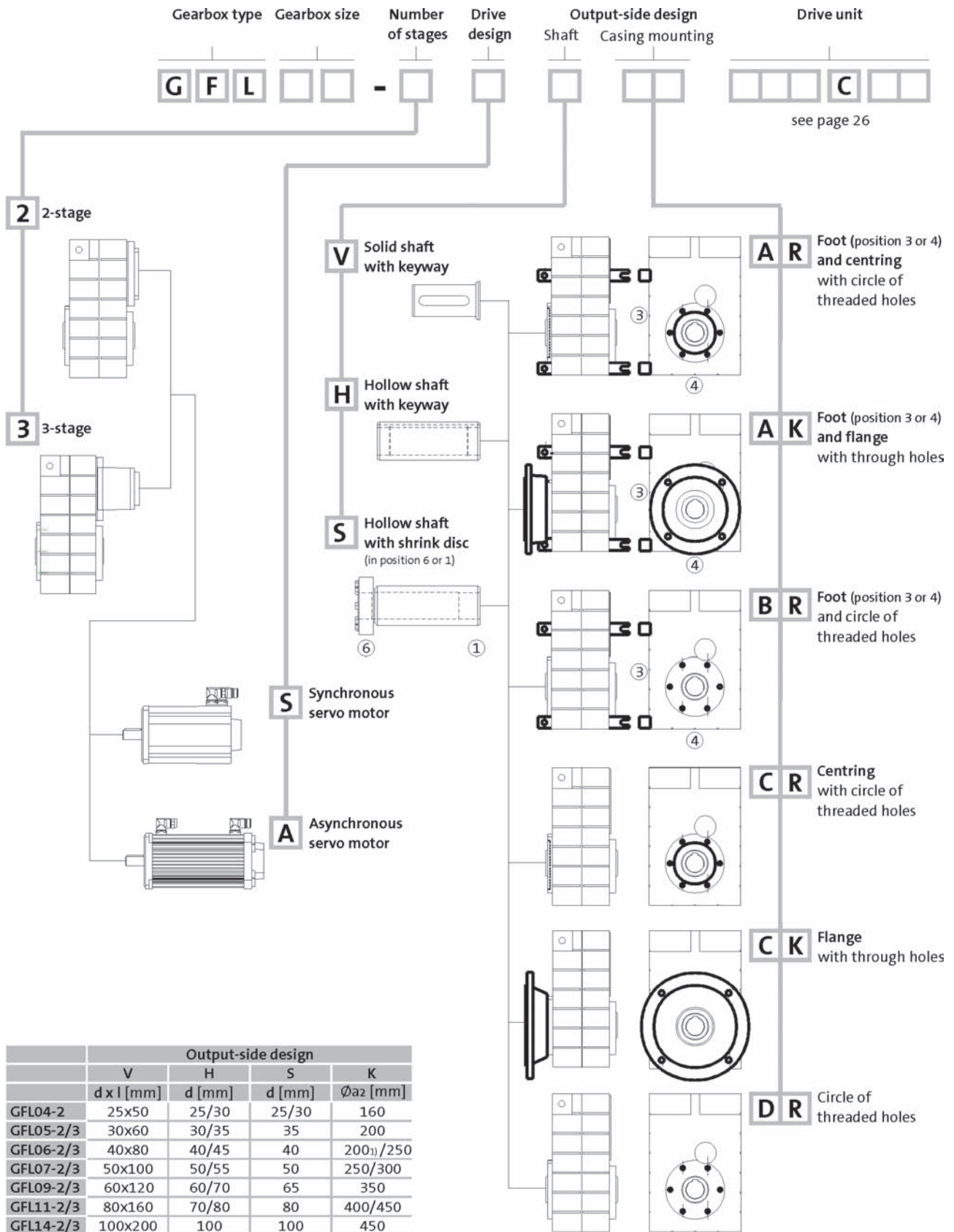
Basic versions	
Colour	Grey primer RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP HC 320
Ventilation	Oil control plugs for GST05 - 14 Breather elements for GST06...14
Options	
Colour	Special paint in accordance with RAL
Lubricant	CLP HC 220 USDA H1
Ventilation	Breather elements for GST05 Compensation reservoir for GST09...14 in mounting position C
Bearing	GST04 ... 09-2: Reinforced driven shaft
Shaft sealing rings	Driven shaft: Viton

Ordering details checklist	
Product key	GST...
Ratio	$i = \dots$
Shaft diameter	$d = \dots$ [mm]
Flange diameter	$a_2 = \dots$ [mm]
Mounting position	A, B, C, D, E, F
Position of system blocks	Connector/terminal box: 2, 3, 4, 5
Colour	
Options	



# General information

## Shaft-mounted helical gearbox product key

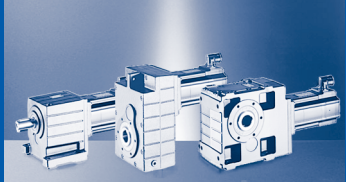


1) Only with output-side design H and S

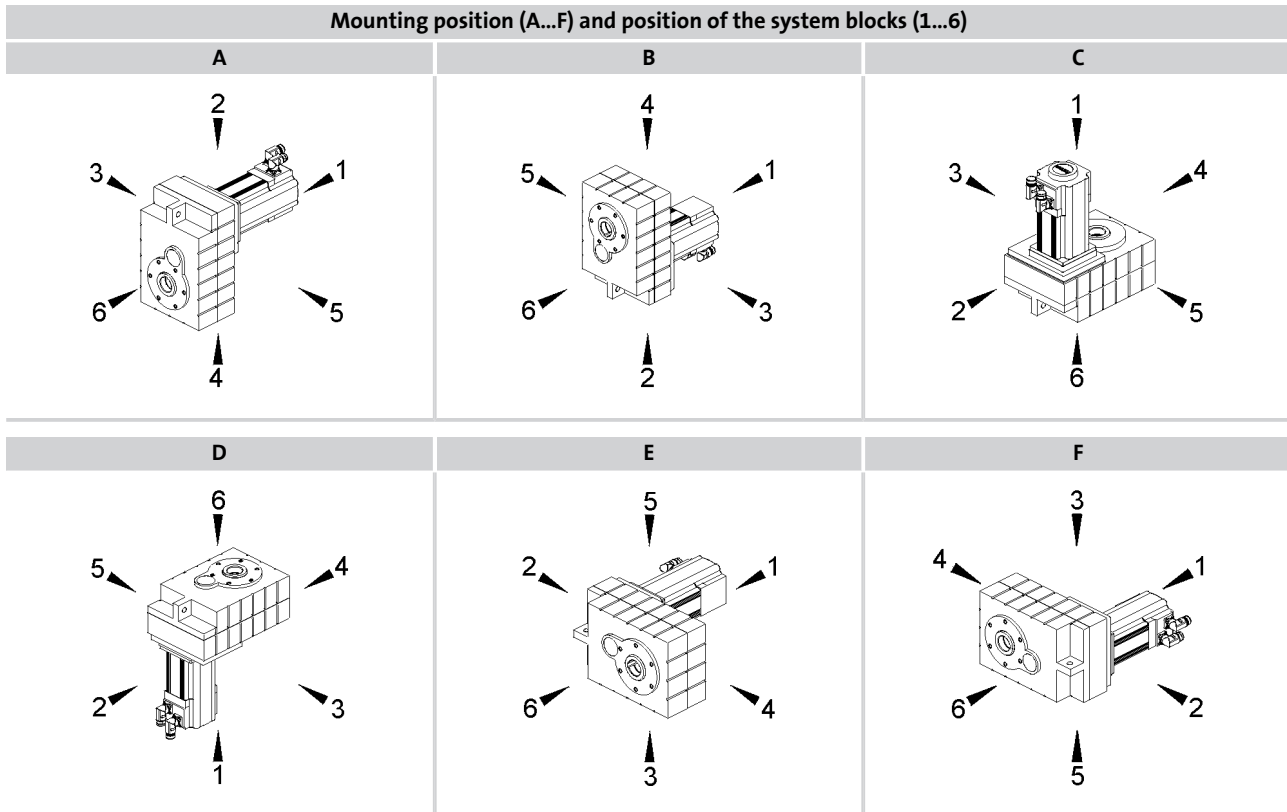


# General information

## Shaft-mounted helical gearbox product key



Mounting position (A...F) and position of the system blocks (1...6)

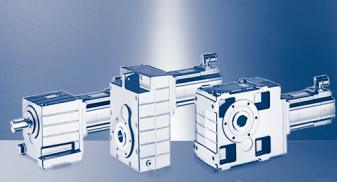


Solid shaft: 6  
 Hollow shaft: 0  
 Hollow shaft with shrink disc: 1, 6

Without foot: 0  
 Foot: 3, 4  
 Connector/terminal box: 2, 3, 4, 5

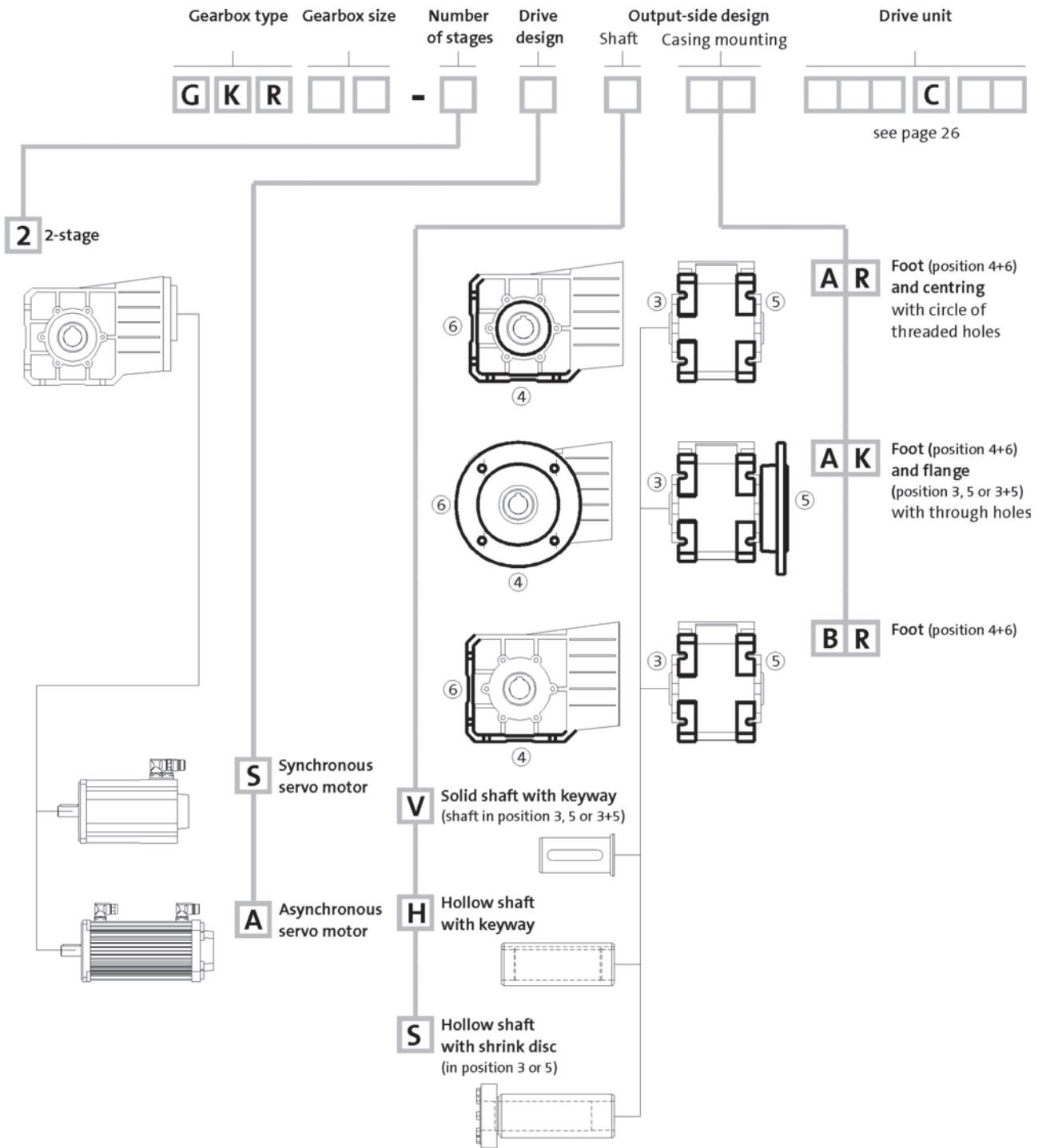
Basic versions	
Colour	Grey primer RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP HC 320
Ventilation	Oil control plugs for GFL05 - 14 Breather elements for GFL06...14
Options	
Colour	Special paint in accordance with RAL
Lubricant	CLP HC 220 USDA H1
Ventilation	Breather elements for GFL05 Compensation reservoir for GFL09...14 in mounting position C
Shaft sealing rings	Driven shaft: Viton
Accessories	Rubber buffer for torque plate Cover shrink disc Hollow shaft circlip assembly kit

Ordering details checklist	
Product key	GFL...
Ratio	$i = \dots$
Shaft diameter	$d = \dots$ [mm]
Flange diameter	$a_2 = \dots$ [mm]
Mounting position	A, B, C, D, E, F
Position of system blocks	Shaft: 0, 1, 6 Foot: 0, 3, 4 Connector/terminal box: 2, 3, 4, 5
Colour	
Options	

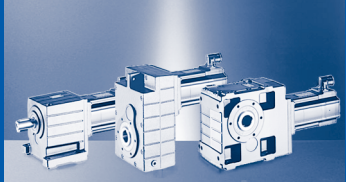


# General information

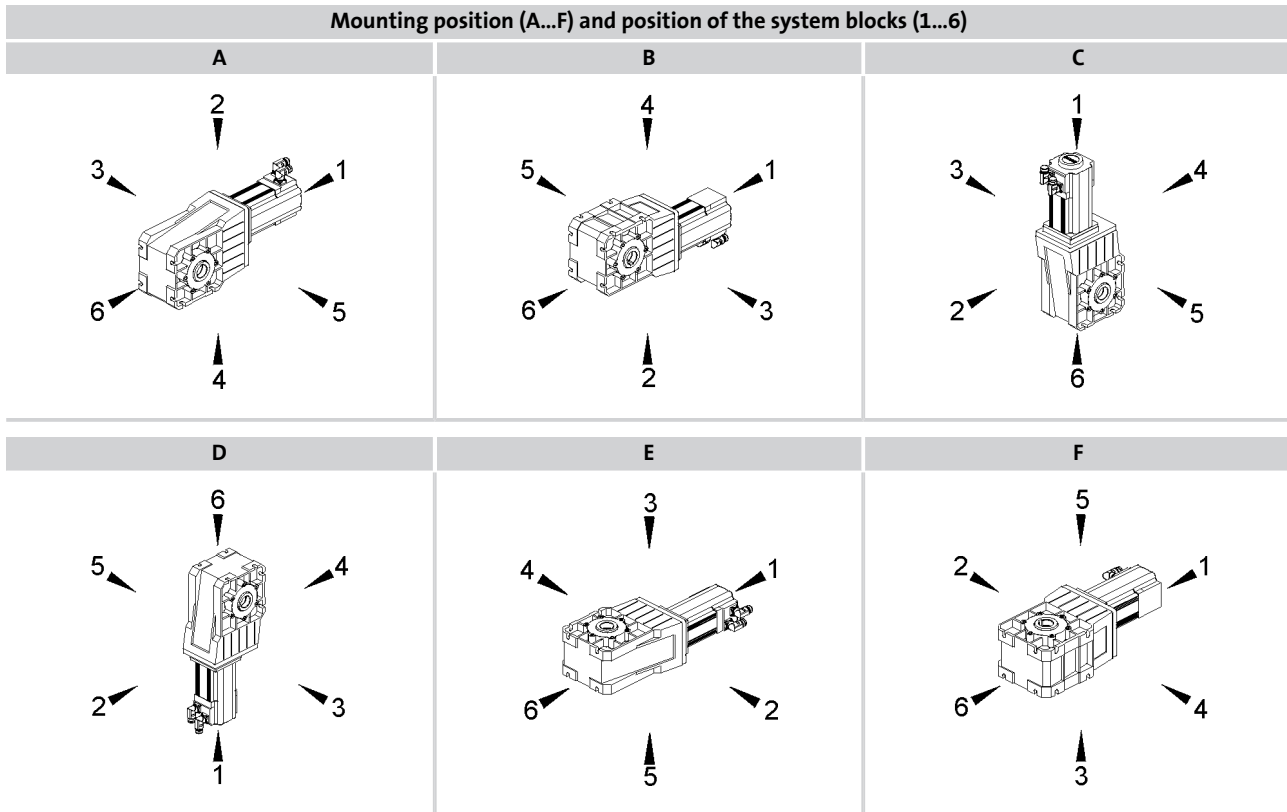
## Bevel gearbox product key



	Output-side design			
	V	H	S	K
	d x l [mm]	d [mm]	d [mm]	Øa2 [mm]
GKR03-2	20x40	18/20	20	110/120
GKR04-2	20x40	20/25	20	120/160
GKR05-2	30x60	30/35	30/35	160/200
GKR06-2	35x70	40/45	40	200/250



Mounting position (A...F) and position of the system blocks (1...6)

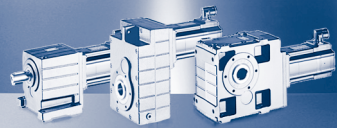


Solid shaft: 3, 5, 8 (3+5)  
 Hollow shaft: 0  
 Hollow shaft with shrink disc: 3, 5

Without flange: 0  
 Flange: 3, 5, 8 (3+5)  
 Connector/terminal box: 2, 3, 4, 5

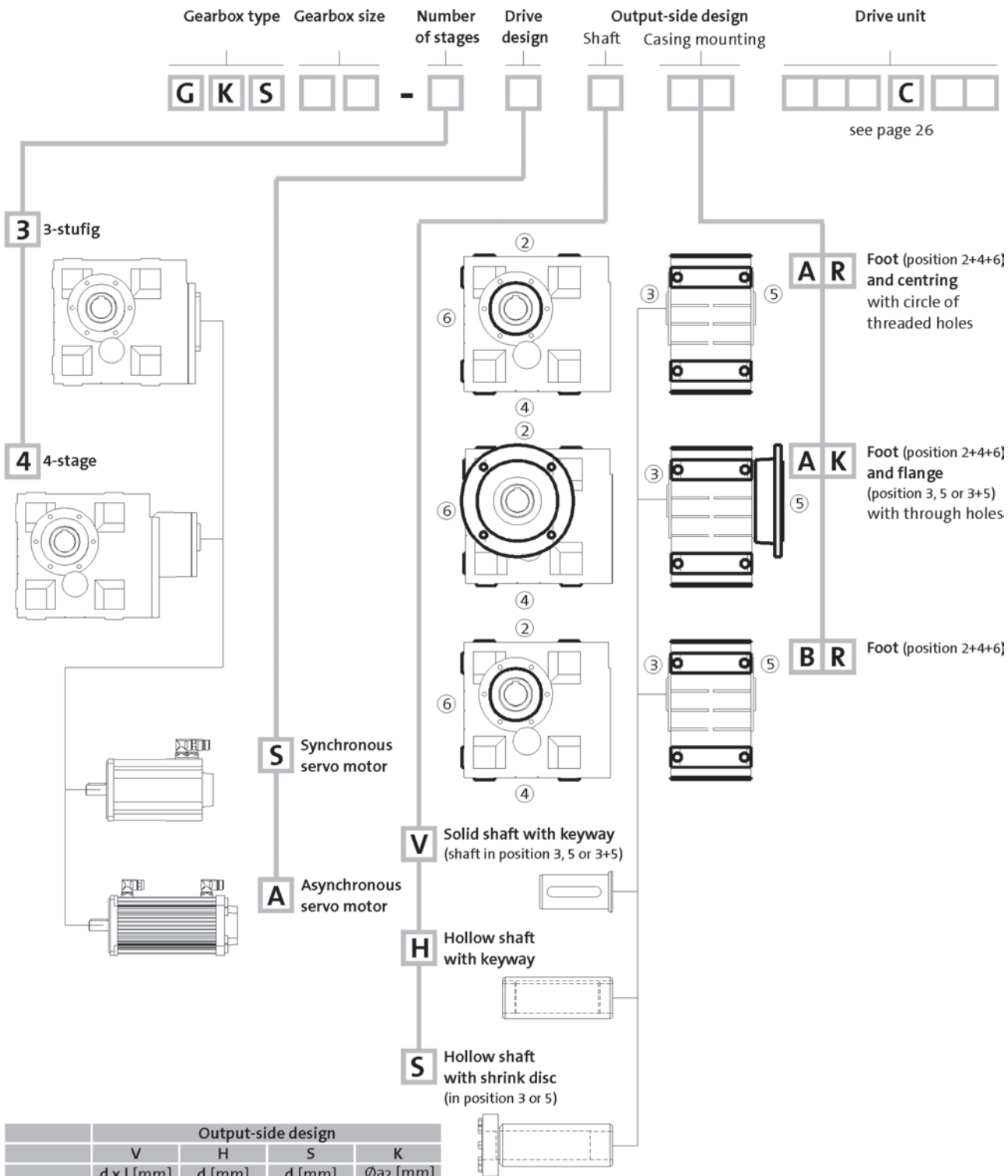
Basic versions	
Colour	Grey primer RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP HC 320
Ventilation	Breather elements for GKR06
Options	
Colour	Special paint in accordance with RAL
Lubricant	CLP HC 220 USDA H1
Shaft sealing rings	Driven shaft: Viton
Accessories	Rubber buffer for torque plate (GKR03/04 only) Threaded hole circle torque plate Torque plate for casing foot (GKR05/06 only) 2nd output shaft end Cover shrink disc Hoseproof hollow shaft cover Hollow shaft circlip assembly kit

Ordering details checklist	
Product key	GKR...
Ratio	$i = \dots$
Shaft diameter	$d = \dots$ [mm]
Flange diameter	$a_2 = \dots$ [mm]
Mounting position	A, B, C, D, E, F
Position of system blocks	Shaft: 3, 5, 8 Flange: 0, 3, 5, 8 Connector/terminal box: 2, 3, 4, 5
Colour	
Options	

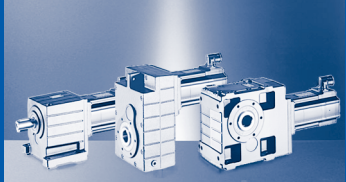


# General information

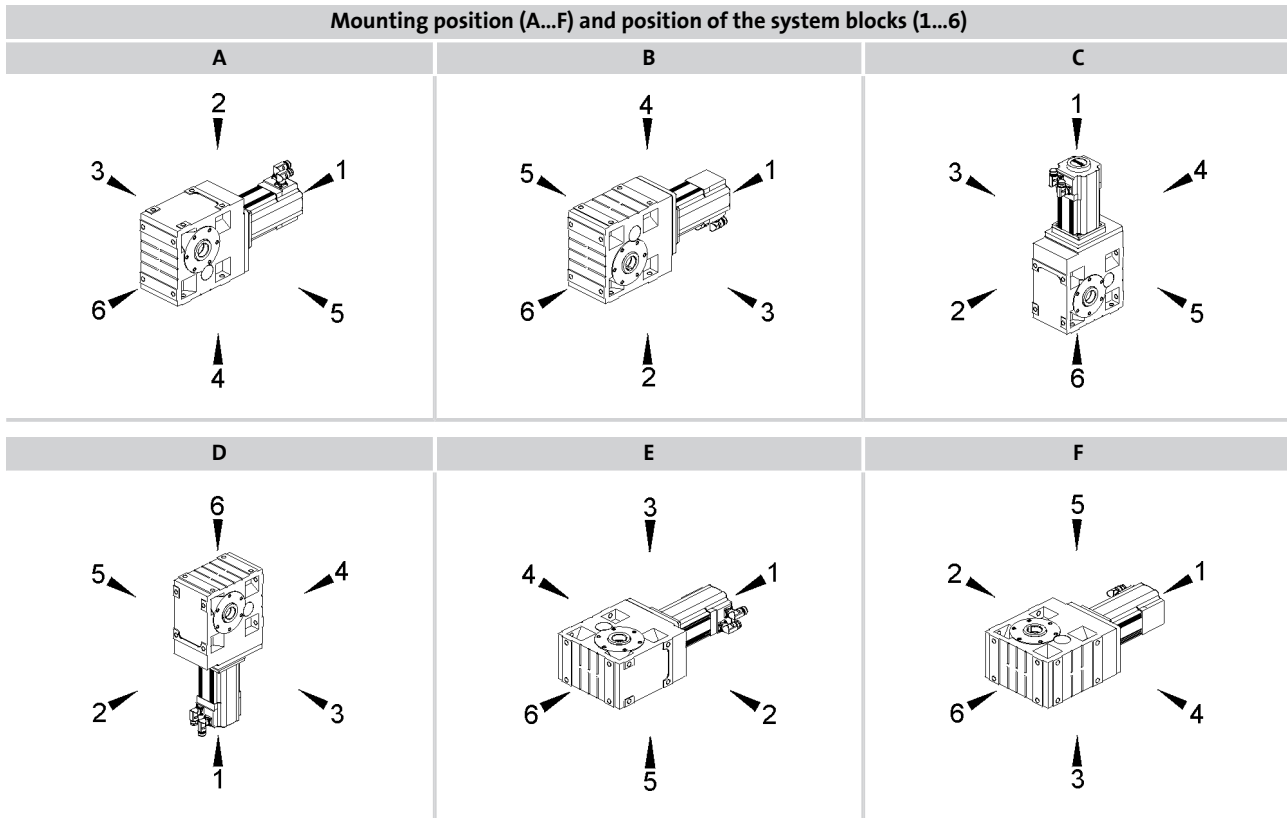
## Helical-bevel gearbox product key



1) Only with output-side design H and S



Mounting position (A...F) and position of the system blocks (1...6)

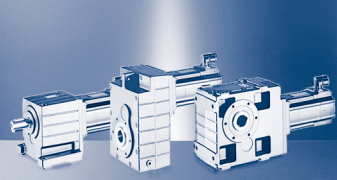


Solid shaft: 3, 5, 8 (3+5)  
 Hollow shaft: 0  
 Hollow shaft with shrink disc: 3, 5

Without flange: 0  
 Flange: 3, 5, 8 (3+5)  
 Connector/terminal box: 2, 3, 4, 5

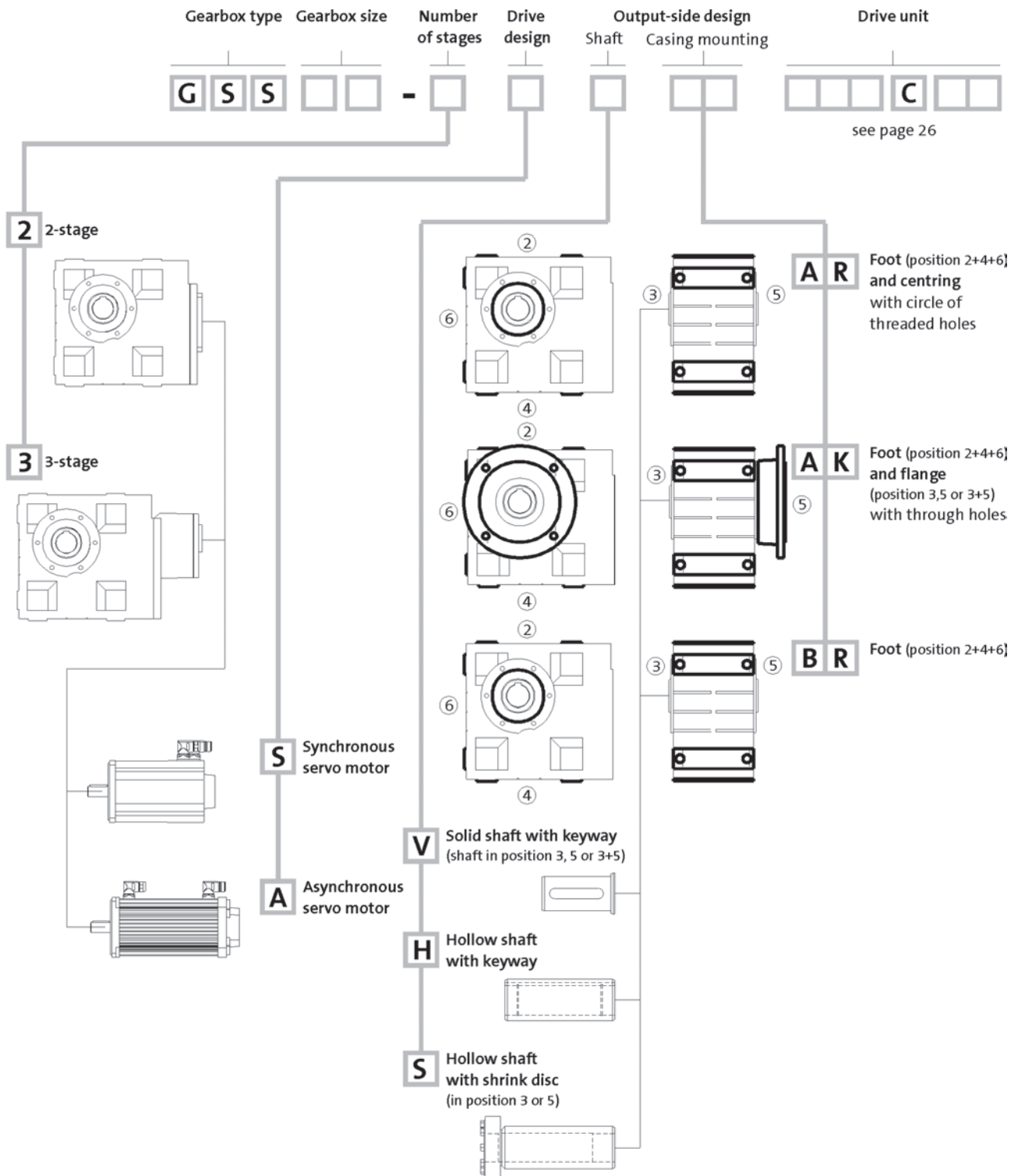
Basic versions	
Colour	Grey primer RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP HC 320
Ventilation	Oil control plugs for GKS05 - 14 Breather elements for GKS06...14
Options	
Colour	Special paint in accordance with RAL
Lubricant	CLP HC 220 USDA H1
Ventilation	Breather elements for GKS05 Compensation reservoir for GKS09...14 in mounting position C
Shaft sealing rings	Driven shaft: Viton
Accessories	Threaded hole circle torque plate Casing foot torque plate 2nd output shaft end Cover shrink disc Hoseproof hollow shaft cover Hollow shaft circlip assembly kit

Ordering details checklist	
Product key	GKS...
Ratio	$i = \dots$
Shaft diameter	$d = \dots$ [mm]
Flange diameter	$a_2 = \dots$ [mm]
Mounting position	A, B, C, D, E, F
Position of system blocks	Shaft: 3, 5, 8 Flange: 0, 3, 5, 8 Connector/terminal box: 2, 3, 4, 5
Colour	
Options	



# General information

## Helical-worm gearbox product key

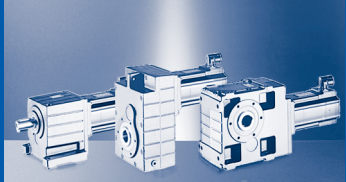


	Output-side design			
	V	H	S	K
	d x l [mm]	d [mm]	d [mm]	Øa2 [mm]
GSS04-2	25x50	25/30	25/30	160
GSS05-2/3	30x60	30/35	35	200
GSS06-2/3	40x80	40/45	40	200 <sub>1</sub> /250
GSS07-2/3	50x100	50/55	50	250/300

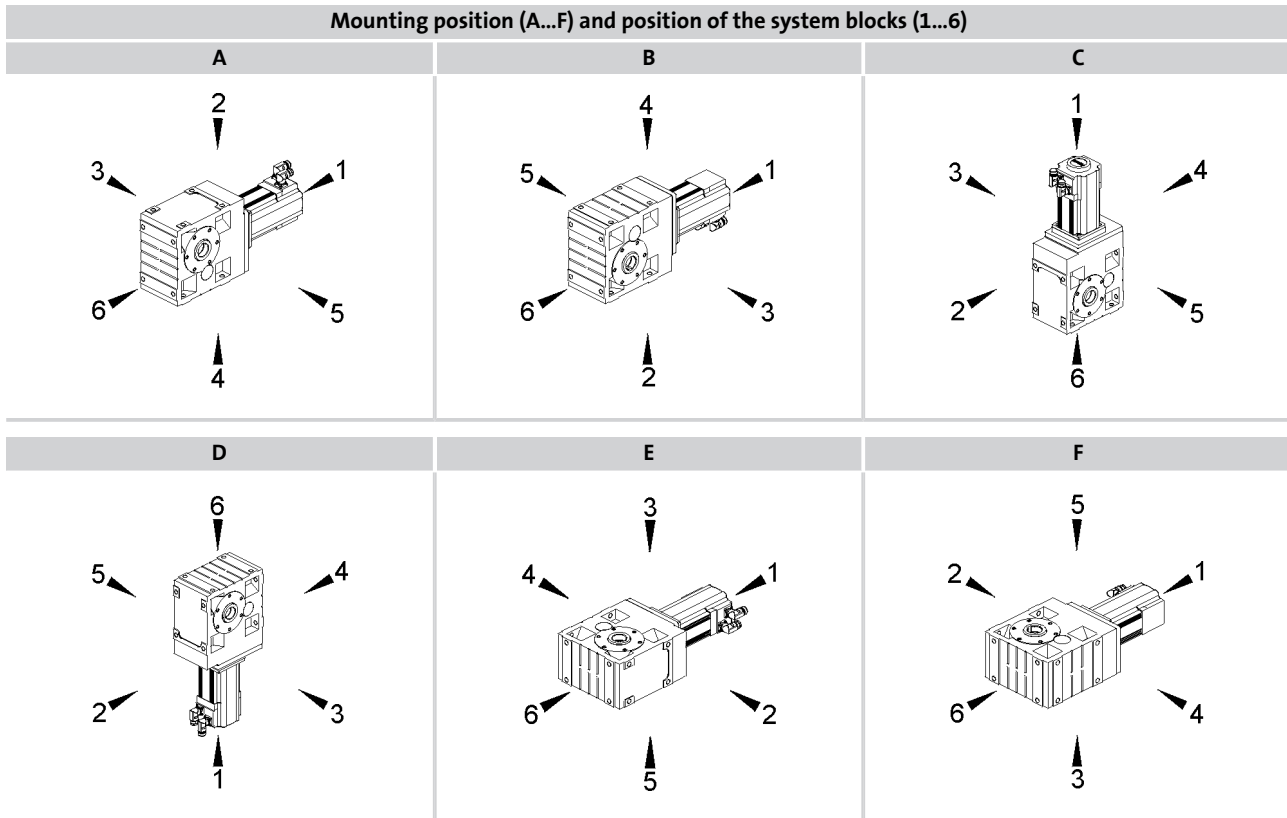
1) Only with output-side design H and S

# General information

## Helical-worm gearbox product key



Mounting position (A...F) and position of the system blocks (1...6)

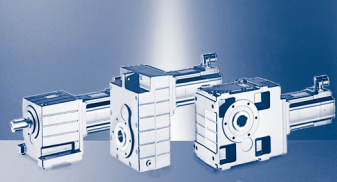


Solid shaft: 3, 5, 8 (3+5)  
 Hollow shaft: 0  
 Hollow shaft with shrink disc: 3, 5

Without flange: 0  
 Flange: 3, 5, 8 (3+5)  
 Connector/terminal box: 2, 3, 4, 5

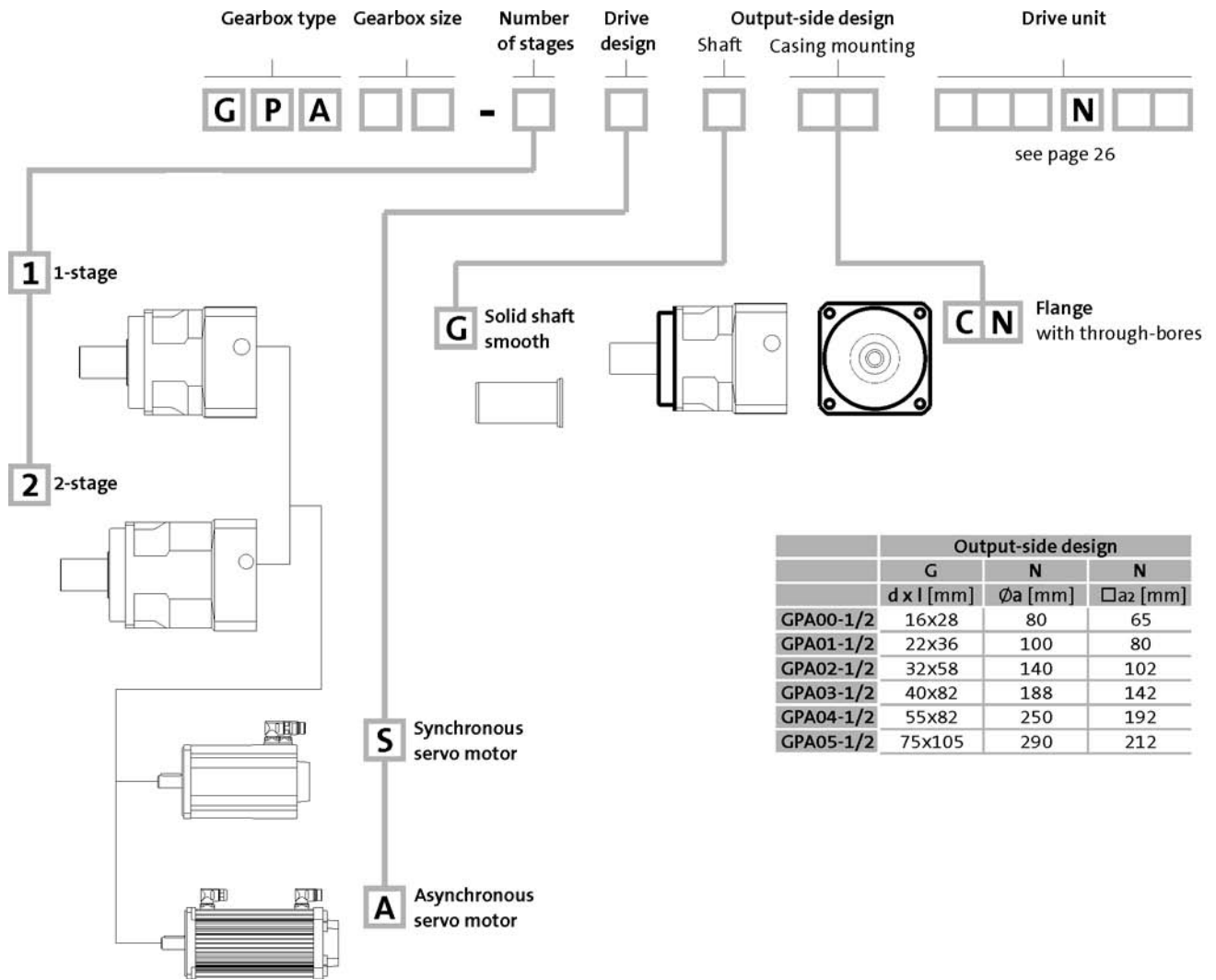
Basic versions	
Colour	Grey primer RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP PG 460
Ventilation	Breather elements for GSS05...07 Oil control plugs for GSS05 - 07
Options	
Colour	Special paint in accordance with RAL
Lubricant	CLP HC 220 USDA H1
Shaft sealing rings	Driven shaft: Viton
Accessories	Threaded hole circle torque plate Casing foot torque plate 2nd output shaft end Cover shrink disc Hoseproof hollow shaft cover Hollow shaft circlip assembly kit

Ordering details checklist	
Product key	GSS...
Ratio	$i = \dots$
Shaft diameter	$d = \dots$ [mm]
Flange diameter	$a_2 = \dots$ [mm]
Mounting position	A, B, C, D, E, F
Position of system blocks	Shaft: 3, 5, 8 Flange: 0, 3, 5, 8 Connector/terminal box: 2, 3, 4, 5
Colour	
Options	



# General information

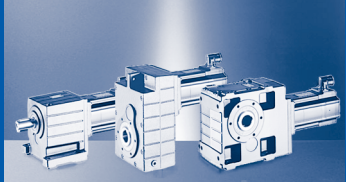
## Planetary gearbox product key

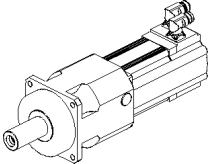
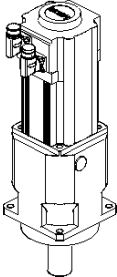
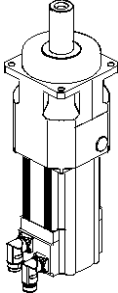




# General information

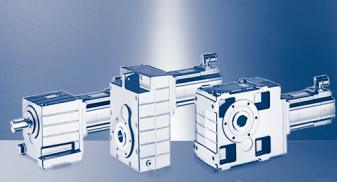
## Planetary gearbox product key



Mounting position (A...D)		
A	C	D
		

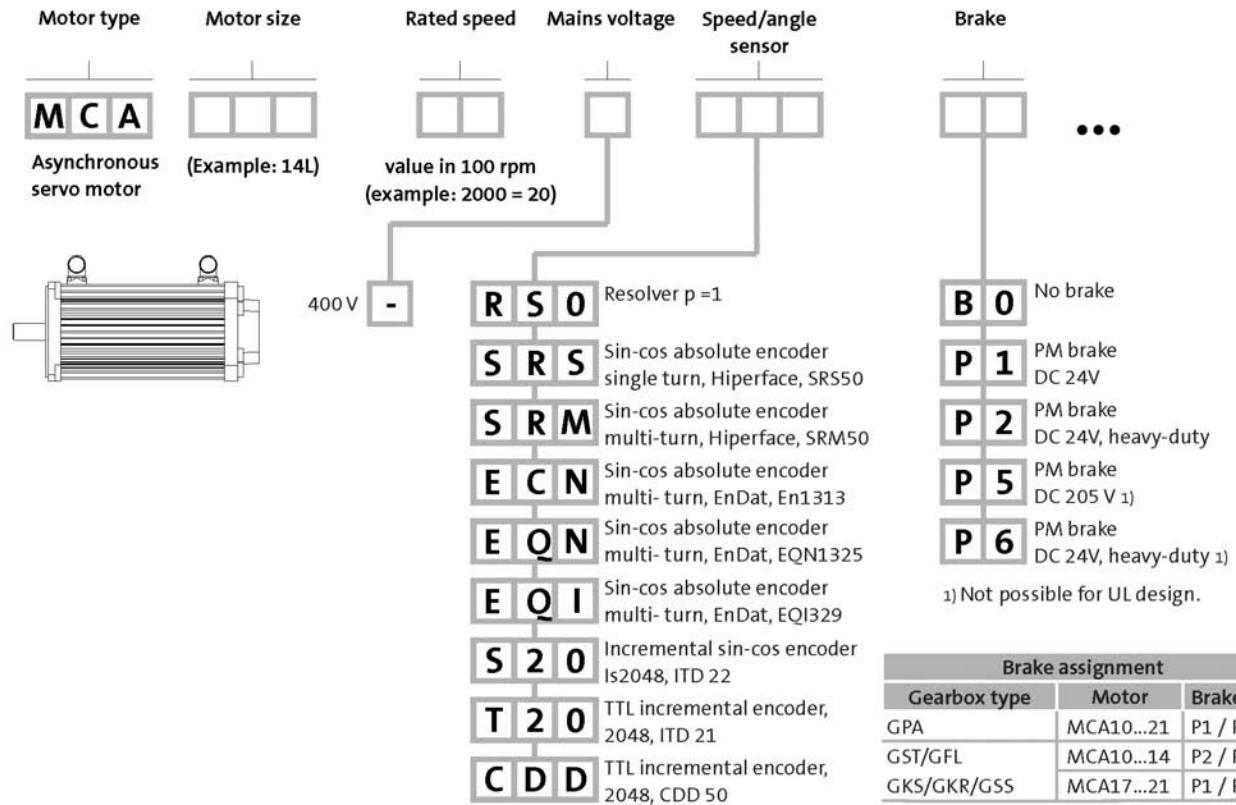
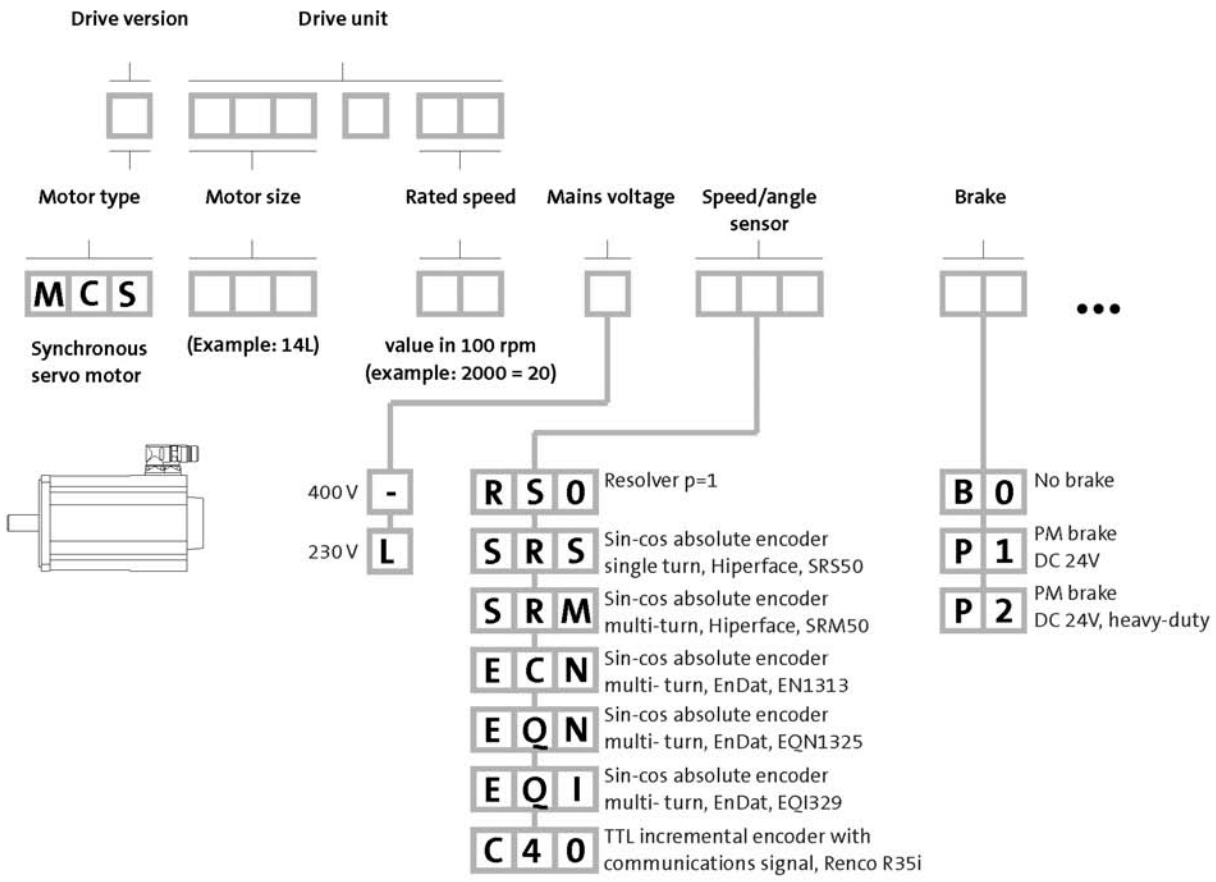
Basic versions	
Colour	RAL 9005 (jet black matt) paint
Lubricant	Synthetic CLP PAO 150

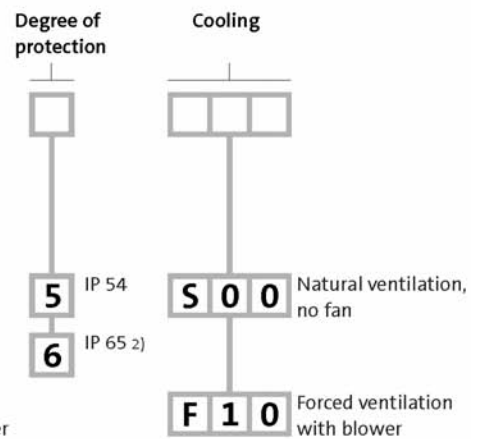
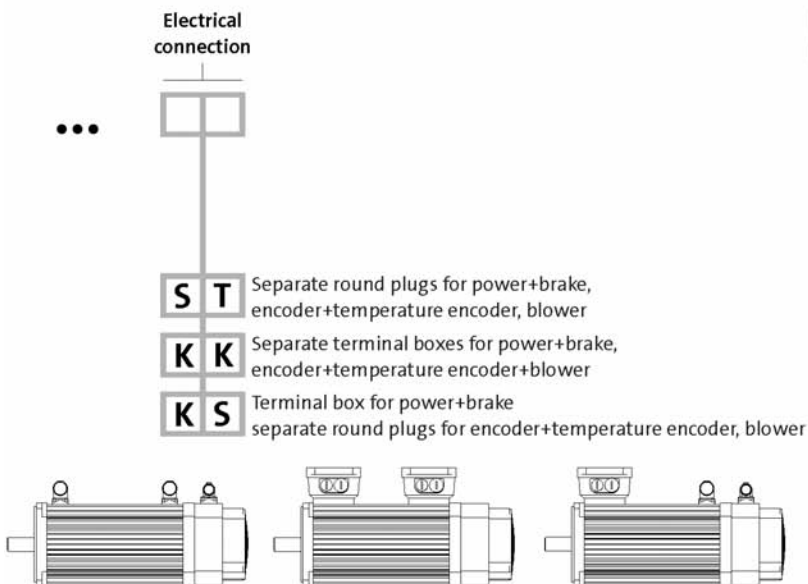
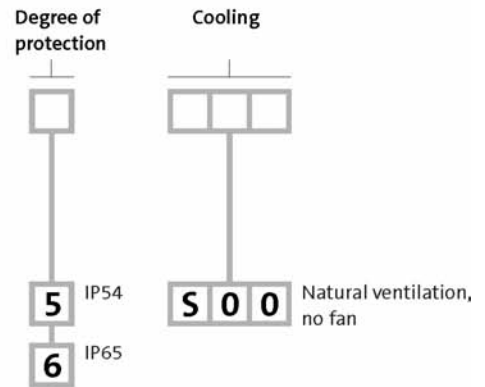
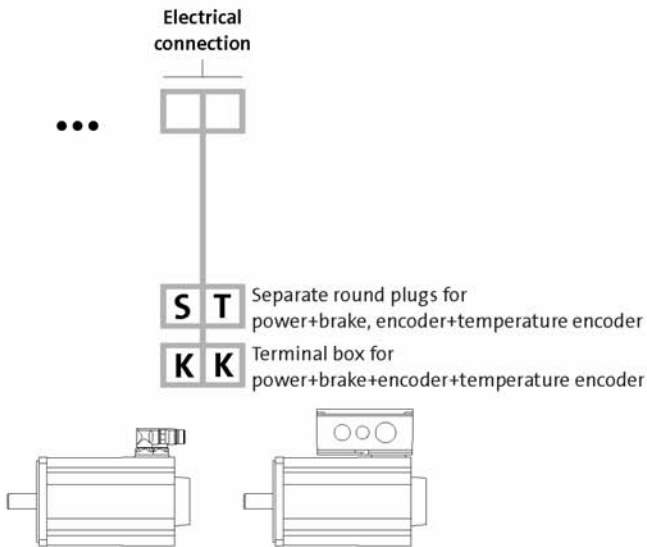
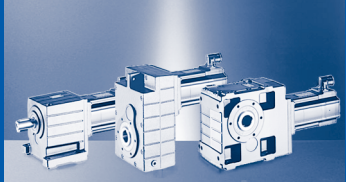
Ordering details checklist	
Product key	GPA...
Mounting position	A, C, D



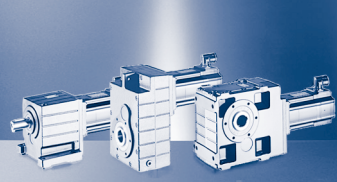
# General information

## Servo motor product key





2) Not possible with blower.



## General information

### Product information

Innovative geared motors combined with powerful drive electronics to meet the highest standards in terms of dynamics, positioning accuracy and robustness: the G-motion servo.

Featuring a wide variety of geared motors in the following variants:

- ▶ Helical gearboxes
- ▶ Shaft-mounted helical gearboxes
- ▶ Bevel gearboxes
- ▶ Helical-bevel gearboxes
- ▶ Helical-worm gearboxes
- ▶ Servo-planetary gearboxes

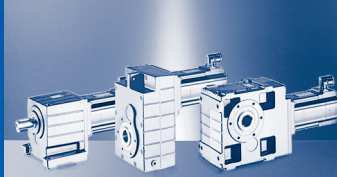
Lenze offers high levels of functionality while complying with many industrial standards. Closely stepped output speeds allow you to make the perfect choice for your drive task.

Lenze geared servo motors are available in a power range from 0.25...20.3 kW.

Together with the Lenze servo controllers, these geared motors offer a perfect drive combination with high dynamic performance.

- ▶ Power range of the synchronous servo motors: 0.25...10 kW
- ▶ Power range of the asynchronous servo motors: 0.8...20.3 kW

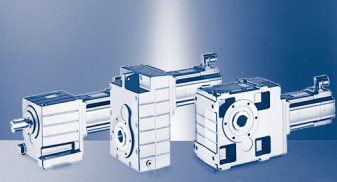




### Designations used in the catalogue:

□	Wildcard
$\alpha$	Angle of action of radial force
$\varphi$	Ratio step
$\eta$ [%]	Mechanical efficiency
$\eta_A$ [%]	Mechanical start-up efficiency of gearbox
$\eta_{c=1}$ [%]	Mechanical efficiency of gearbox with gearbox loading $c = 1$
$\eta_G$ [%]	Mechanical efficiency of gearbox
$\vartheta$ [°C]	Temperature
<b>AC</b>	Alternating current/voltage
<b>BD</b> [h]	Operating time
<b>c</b>	Load capacity of geared motors
<b>DC</b>	Direct current/voltage
<b>ED</b>	Duty time
$f_\alpha$	Effective direction factor at output shaft
$f_N$ [Hz]	Rated frequency
$f_w$	Additional load factor at output shaft
$f_z$	Additional radial force factor of transmission element
$F_a$ [N]	Applied axial force
$F_{aTab}$ [N]	Table value of axial force
$F_{aZul}$ [N]	Permissible axial force
$F_r$ [N]	Applied radial force
$F_{rTab}$ [N]	Table value of radial force
$F_{rZul}$ [N]	Permissible radial force
$H$ [m]	Site altitude above mean sea level
$i$	Ratio
$i_g$	Precise ratio
$I_B$ [A]	Rated brake current
$I_{max}$ [A]	Maximum current
$I_M$ [A]	Rated motor current
$I_0$ [A]	Continuous standstill current
$J_B$ [kgcm <sup>2</sup> ]	Moment of inertia of the brake
$J_G$ [kgcm <sup>2</sup> ]	Moment of inertia of the gearbox reduced to the motor shaft
$J_L$ [kgcm <sup>2</sup> ]	Moment of inertia of load at output shaft
$J_M$ [kgcm <sup>2</sup> ]	Moment of inertia of the motor
<b>k</b>	Application factor (following DIN 3990)
$k_i$	Intensity of gearbox load capacity
$k_j$	Load-matching factor
$k_L$	Overload factor

$k_{n1}$	Speed correction factor for ambient temperature
$k_{n2}$	Speed correction factor for mounting position
$k_{n3}$	Speed correction factor for duty time/average speed
$k_m$	Speed correction factor for average speed
$KE_{LL}$ [V / 1000 r/min]	Voltage constant (phase-to-phase)
$Kt_0$ [Nm/A]	Torque constant at standstill
$L_{1\sigma}$ [mH]	Stator leakage inductance
$L_{2\sigma'}$ [mH]	Rotor leakage inductance (referred to stator)
$L_h$ [mH]	Mutual inductance
$L_{St}$ [mH]	Winding inductance per phase
<b>m</b> [kg]	Mass
$M_B$ [Nm]	Brake holding torque
$M_{eff}$ [Nm]	Effective torque
$M_L$ [Nm]	Load torque
$M_{L,max}$ [Nm]	Maximum load torque
$M_{L,z}$ [Nm]	Stationary load torque per time segment
$M_{max}$ [Nm]	Maximum torque
$M_N$ [Nm]	Rated torque
$M_{S,z}$ [Nm]	Acceleration torque
$M_{S,eff}$ [Nm]	Effective torque at the motor
$M_z$ [Nm]	Output torque per time segment
$M_{p,max}$ [Nm]	Maximum torque of profile
$M_0$ [Nm]	Continuous standstill torque
$M_1$ [Nm]	Input torque
$M_2$ [Nm]	Output torque
$M_{2,max}$ [Nm]	Maximum output torque
$M_{2,GN}$ [Nm]	Rated gearbox torque at the output at $c=1$ and $n_1 = 1400$ r/min
<b>N</b>	Start-ups
$n_{L,z}$ [r/min]	Load speed per time segment
$\Delta n_{L,z}$ [r/min]	Load speed difference per time segment
$n_{max}$ [r/min]	Maximum speed
$n_N$ [r/min]	Rated speed
$n_m$ [r/min]	Mean speed
$n_1$ [r/min]	Input speed
$n_{1,max}$ [r/min]	Maximum input speed
$n_2$ [r/min]	Output speed
$n_{2,Eck}$ [r/min]	Output speed at rated motor speed



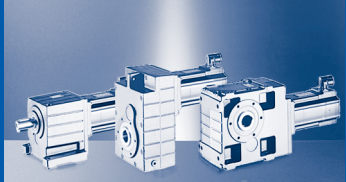
## General information

### List of abbreviations

#### Designations used in the catalogue:

$n_{2,th}$ [r/min]	Thermal limit speed at output
$P_N$ [kW]	Rated power
$R_1$ [ $\Omega$ ]	Winding resistance per phase
$R_2$ [ $\Omega$ ]	Rotor resistance (referred to stator)
$R_{UV}$ [ $\Omega$ ]	Winding resistance between 2 terminals
$T$ [s]	Load cycle duration
$t_L$ [%]	Runtime at maximum torque
$T_U$ [ $^{\circ}\text{C}$ ]	Ambient operating temperature
$\Delta t_z$ [s]	Individual time segments
$U_B$ [V]	Rated brake voltage
$U_N$ [V]	Rated voltage
$z_g$	Multiplied numbers of teeth (driven gears)
$z_t$	Multiplied numbers of teeth (driving gears)

<b>IM</b>	International Mounting Code
<b>IP</b>	International Protection Code
<b>CE</b>	Communauté Européenne
<b>CSA</b>	Canadian Standards Association
<b>DIN</b>	Deutsches Institut für Normung
<b>EMV</b>	Electromagnetic compatibility
<b>EN</b>	European standard
<b>IEC</b>	International Electrotechnical Commission
<b>NEMA</b>	National Electrical Manufacturers Association
<b>UL</b>	Underwriters Laboratory
<b>UR</b>	Underwriters Laboratory recognized component
<b>VDE</b>	Verband deutscher Elektrotechniker



## General information about the data provided in this catalogue

### Power ratings, torques and speeds

The power ratings, torques and speeds specified in the catalogue are rounded values and apply for

- ▶ Daily running time of 8h, 240 days a year
- ▶ Ambient temperature up to 30°C
- ▶ Operating time 5.5 hrs a day
- ▶ Average speed utilisation in relation to the load speed of the geared motor: 80%
- ▶ Site altitude up to 1000 m above mean sea level.
- ▶ Mounting positions and designs listed in the catalogue (selection table relates to mounting position A).
- ▶ Standard lubricant.

Under different operating conditions, the values obtained may vary from those listed here.  
In the case of extreme operating conditions, please contact your Lenze sales office.

### Load capacity $c$ of the gearboxes

Characteristic value for the load capacity of Lenze geared motors.

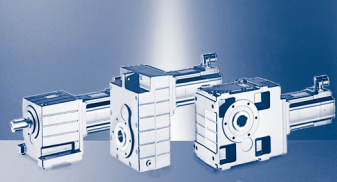
- ▶  $c$  is the ratio of the permissible rated torque of the gearbox to the rated torque supplied by the drive component (e.g. the internal Lenze motor).
- ▶  $c$  must always be greater than the application factor  $k$  determined for the application.

### Application factor $k$ (in accordance with DIN 3990)

Takes into account the influence of temporally variable loads which are actually present during the anticipated runtime of geared motors.

$k$  depends on

- ▶ The type of load
- ▶ The intensity of the load
- ▶ Temporary factors



## General information

### Notes on ordering

**We aim to process your order quickly and accurately. Therefore, please ensure that your order details are complete.**

In order to receive the correct products in good time, please provide the following information:

- ▶ Your address and order data
- ▶ Our product keys for the individual products in this catalogue
- ▶ Your delivery details, such as delivery date and delivery address

#### **Ordering procedure**

Use the ordering details checklist to ensure that you provide all the necessary information for each product.

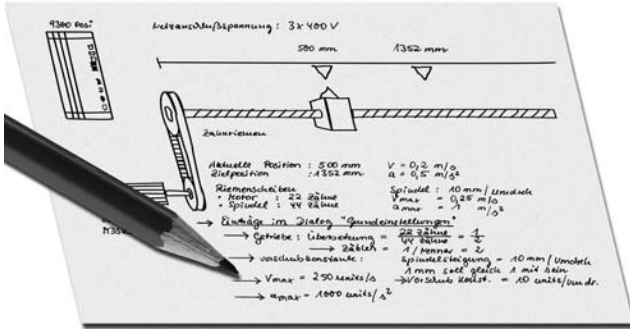
You can find the ordering details checklist, product key, basic designs, options, mounting position and system block positions in the chapter General information - Product key.

A list of Lenze sales offices can be found at the end of this catalogue.





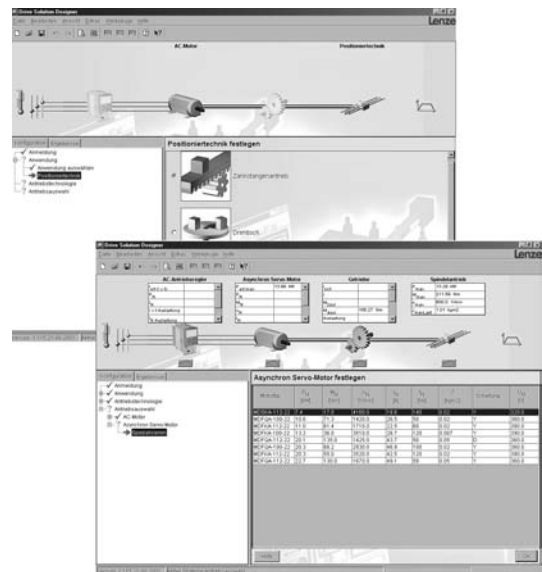
Lenze wants to assist you in optimising your project planning processes. Drive selection and dimensioning is the foundation of all plant planning. This project planning manual for Lenze geared servo motors will guide you from the initial torque and speed input variables right through to a functional and efficient drive train. Your local Lenze sales office will assist you in drive dimensioning. Please consult us.



## From the rough outline to the finished drive solution

After gathering information about the mechanical parameters and the motion profile, sales staff use the "Drive Solution Designer" to complete drive dimensioning and optimisation in next to no time.

The original application data and the results from the Drive Solution Designer are summarised in a document in a structured manner. The graphical analysis provides clear, comprehensive information about the drive load and configuration. The hardware required by the solution is documented; this simplifies the ordering process and means that the complete solution can be supplied quickly.





## Drive dimensioning

### Aim of dimensioning

This section describes the dimensioning of drives with geared servo motors.

#### The aim of dimensioning

is to select the right geared servo motor for a given application, ensuring that the requirements for the specific application are reliably met. The operating conditions concerned are taken into consideration in this process:

- ▶ Ambient temperature
- ▶ Mounting position
- ▶ Load cycle

For the sake of simplicity, the dimensioning given is for standard operating modes and for general load cycles:

- ▶ Constant load, operating mode **S1** \*
- ▶ Short-time operation **S2**
- ▶ Intermittent operation **S3**
- ▶ Continuous operation **S6** \*
- ▶ Load profiles for an **application-specific load cycle**

\* For maximum life expectancy, Lenze recommends the use of motors with a low rated speed for operating modes S1 and S6.

#### Dimensioning involves 3 elements:

- ▶ **Satisfying the drive function** - Can the required speeds, torques, accelerations be achieved with the chosen drive?
- ▶ **Mechanical strength** - Can the drive transmit the torques and forces that occur?
- ▶ **Thermal dimensioning** - Does the operating temperature remain within the permissible limits, preventing premature ageing?

#### Drive function

The process values required are used to select a drive for which all working points lie within the speed/torque characteristic curves. This results in the selection of a gearbox of the correct ratio with a motor of the correct speed and an inverter with the correct maximum current. Other limits (maximum speed, site altitude) are shown in tables.

#### Mechanical strength

The forces and torques arising together with the application factor and the gearbox torque are used to select a drive with adequate mechanical strength (endurance strength of the gearing for periodically occurring torques and endurance limit for sporadically occurring torques).



### Thermal dimensioning

For the **inverter**, thermal dimensioning uses the continuous inverter current or the continuous torque achievable by the motor-inverter combination.

For the **motor**, thermal dimensioning uses the average speed and the effective torque.

For the **gearbox**, thermal dimensioning uses the average speed and the continuous torque of the motor-gearbox combination. The thermal limit speed specified is intended as a recommendation. The average speed of the drive should not exceed the specified values.

### Dimensioning in three steps

The dimensioning of geared servo motors can be divided into three steps, which are listed separately for each of the operating modes referred to above (S1, S2, S3, S6, profile):

### Determination of input variables, including:

- ▶ Load torque, load speed, acceleration (for speed profiles, several working points with times)
- ▶ Maximum torque
- ▶ Mounting position
- ▶ Power loading
- ▶ Method of torque transmission

### Calculation of values required for the process, including:

- ▶ Overall torques from load torque and acceleration
- ▶ Maximum load torque
- ▶ Effective torque
- ▶ Average speed
- ▶ Maximum speed

### Selection of the geared servo motor and checking the selection for fulfilment of required values, including:

- ▶ Calculation of overall torque on the motor end (effective torque, maximum torque)
- ▶ Thermal checking of the motor by reference to effective torque and average speed
- ▶ Thermal checking of the gearbox by reference to average speed and effective torque
- ▶ Checking of maximum gearbox torque by reference to periodically occurring torques and sporadically occurring maximum torques
- ▶ Checking of the motor-inverter combination by reference to maximum torques
- ▶ Checking of load adjustment
- ▶ Checking of axial and radial force on the gearbox

To obtain a **reliable drive**, **particular attention** must be given to selecting and checking it. The various elements involved in dimensioning and checking are described in more detail below. Special emphasis is placed on **compliance with the limits of the geared servo motor drive** (functional limits, thermal limits, mechanical limits).



## Drive dimensioning Scope

### Dimensioning of geared servo motors for kinematic profiles, operating modes S1, S2, S3, S6 and speed profiles

Suitable for simple linear speed profiles, not for S-curves or similar. For complex or full-load dimensioning, please contact your local Lenze subsidiary.

#### Standard operating conditions:

- ▶ Single shift operation, 8 hours a day, 240 days a year
- ▶ Ambient temperature up to 30 °C
- ▶ Operating time 5.5 hours a day
- ▶ Average speed utilisation in relation to the load speed of the geared motor 80%
- ▶ Mounting position A
- ▶ Site altitude up to 1000 m amsl

#### Included

- ▶ Rated mains voltage AC 400 V, 3-phase
- ▶ Ambient temperature
- ▶ Site altitude
- ▶ Dimensioning with 9400, 9300 and ECS speed-torque characteristic curves for mains voltages of 400 V, 3-phase
- ▶ Process requirement
- ▶ Preselection of motor
- ▶ Load capacity of gearbox
- ▶ Intended transmission ratio
- ▶ Maximum permissible gearbox input speed
- ▶ Axial and radial load on gearbox output shaft
- ▶ Overall reduced moment of inertia
- ▶ Load adjustment to moments of inertia

#### Not included

- ▶ Correct consideration of efficiency in motor mode/generator mode
- ▶ Accessories such as brake choppers, brake resistors, feedback systems, mains filters
- ▶ Current derating on 9300 servo at low speeds
- ▶ Special ambient conditions such as special power system characteristics, high temperatures/site altitudes, contamination, outdoor use, explosion protection
- ▶ Maximum standstill current
- ▶ Setting the controller inhibit to reduce the heat load on the drive



The operating mode is important when selecting a motor. For example, the temperature rise on a motor subject to short-term load will be lower than that on a motor subject to long-term load. EN 60034 defines operating modes S1 to S8.

### **Continuous operation S1**

The operating time at rated power is long enough for the machine to reach steady-state temperature. The motor operates continuously at rated power.

### **Short-time operation S2**

In comparison with the subsequent pause, the operating time is too short for the machine to reach steady-state temperature. During the subsequent lengthy pause, the motor cools down to the initial temperature.

### **Intermittent operation S3, S4, S5**

Cycles of the same type combine to form a sequence. The cycle time is usually 10 minutes.

- ▶ S3: The starting current is not significant for the temperature rise in the motor
- ▶ S4: The starting current contributes to the temperature rise in the motor
- ▶ S5: Starting current and braking current contribute to the temperature rise in the motor

### **Continuous operation with intermittent loading S6**

The motor continues to be ventilated during the no-load phases, enabling it to cool down.

### **Uninterrupted operation with acceleration and braking S7**

The motor runs almost without break.

### **Uninterrupted operation S8 with pole changing**

The machine runs constantly under load but with frequent speed variation.

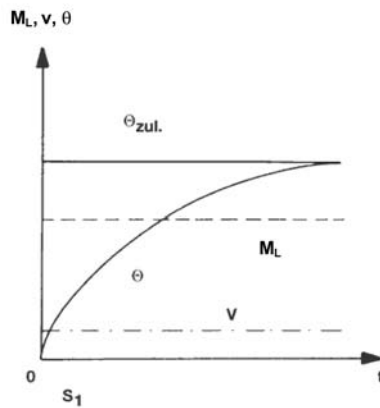


# Drive dimensioning


## Operating mode S1

### Dimensioning of geared servo motors for operating mode S1 (EN 60034)

The drive is constantly loaded in operating mode S1, there may be a change of direction of rotation or an alternating load.  
 Precondition: constant power loss, neglect of start-up process (constant temperature rise)



Required input variables			
Operating time/day	BD =		[h]
Average speed utilisation of the geared motor related to the speed under load $n_L$			[%]
Ambient temperature	$T_u =$		[°C]
Site altitude above mean sea level	H =		[m]
Radial force	$F_r =$		[N]
Axial force	$F_a =$		[N]
Transmission element at gearbox (gear wheels, sprockets...)			
Pitch circle diameter of the transmission element	$d_w =$		[mm]
Load torque	$M_L =$		[Nm]
Load speed	$n_L =$		[r/min]
Momentary maximum torque (emergency off, quick stop, occasional high starting duty)	$M_{L,max} =$		[Nm]
Runtime at maximum torque	$t_L =$		[%]
Determine gearbox design and servo motor design			
Gearbox type (GST, GFL, GKR, GKS, GSS, GPA)			
Mounting position (A, B, C, D, E, F)			
Output designs (shaft design: hollow shaft, solid shaft...)			
Input design (A asynchronous/S synchronous)			
Cooling type (S00 without fan/F10 with blower)			

→  14 - General information - Product key



Determine gearbox size from the forces		
Determination of the axial and radial forces acting on the gearbox shaft		
	Calculation	Check
Additional radial force factor of transmission element	$f_z =$	
Radial force	$Fr = 2000 \cdot \frac{M_{L,max} \cdot f_z}{d_w}$	$Fr \leq Fr_{zul} = \min(f_w \cdot f_\alpha \cdot Fr_{Tab}; f_w \cdot Fr_{max})$
Axial force		$Fa \leq Fa_{zul} = Fa_{Tab} \quad , \quad Fr = 0$

→ 52 -  $f_z$

→ Permissible radial and axial forces  $G \square \square$  [N]  
 $Fr_{Tab}, Fa_{Tab}, f_w, f_\alpha$

Determine speed correction factors	
Ambient temperature, site altitude	$k_{n1} =$
Mounting position	$k_{n2} =$
Average speed utilisation of the geared motor (in % of $n_L$ ) and daily operating time	$k_{n3} =$
	$k_n = k_{n1} \cdot k_{n2} \cdot k_{n3}$

→ 51 -  $k_{n1}, k_{n2}, k_{n3}$

Select and check the geared servo motor-inverter combination			
For maximum life expectancy, Lenze recommends the use of motors with a low rated speed for operating modes S1 and S6.			
	Check	Selection	
Output torque	$M_2 \geq M_L$	$M_2 =$	[Nm]
Output speed (recommendation)	$n_{2,th} \geq \frac{n_L}{k_n}$	$n_{2,th} =$	[r/min]
Output speed	$n_{2,Eck} \geq n_L$	$n_{2,Eck} =$	
Alternating load influence: without alternating load	$M_{2,GN} \geq M_L$	$M_{2,GN} =$	[Nm]
Alternating load influence: with alternating load	$M_{2,GN} \geq M_L \cdot 1.4$		
Ratio		$i =$	
Load capacity of the geared motor		$c =$	
Momentary maximum torque	$M_{2,max} = M_{2,GN} \cdot 1.5 \geq M_{L,max}$	$M_{2,max} =$	[Nm]

→ Selection tables  $G \square \square$  [Nm]  
 $M_2, M_{2,GN}, n_{2,th}, n_{2,Eck}, i, c$

→ 50 - Motors for operating modes S1 and S6



# Drive dimensioning

## Operating mode S1

Determine the required gearbox load capacity		
Calculate intensity	Without alternating load	k <sub>1</sub> =
	$k_1 = \frac{M_{L,max}}{M_2}$	
	With alternating load	
	$k_1 = \frac{M_{L,max}}{M_2} \cdot 1.4$	
At runtime t <sub>L</sub> > 10%: take intensity k <sub>1</sub> from the calculation into account At runtime t <sub>L</sub> ≤ 10%: take load factor k from the diagram into account		k =
Required load capacity	t <sub>L</sub> > 10% → c ≥ k <sub>1</sub>  t <sub>L</sub> ≤ 10% → c ≥ k	c =

→  52 - k





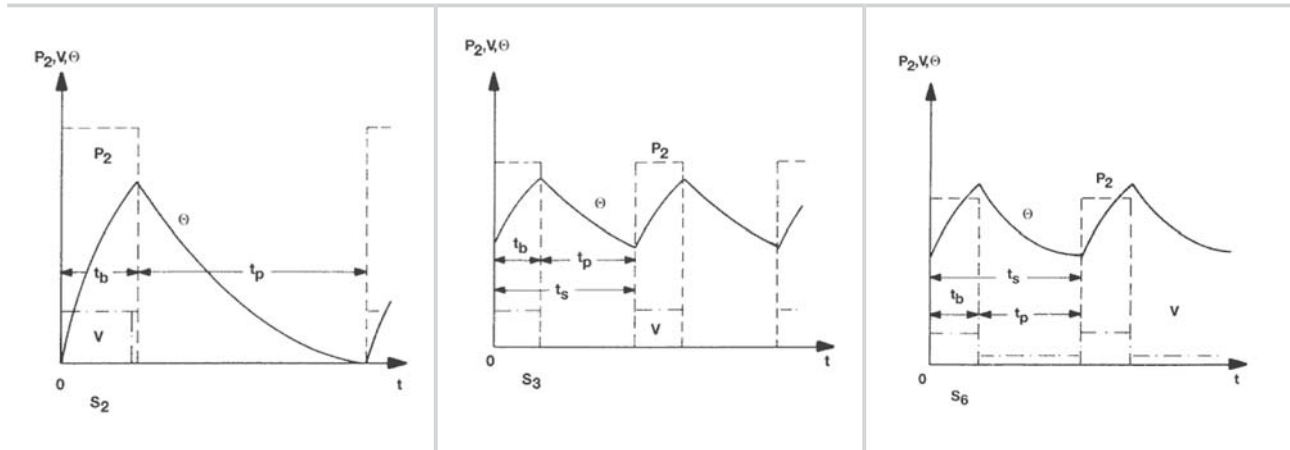
### Dimensioning of geared servo motors for operating modes S2, S3 and S6 (EN 60034)

**Short-time operation S2:** Short-time running of the drive followed by a “long” pause

**Periodic intermittent operation S3:** Periodic alternation of the drive between on and off (maximum cycle time 10 minutes)

**Periodic intermittent loading S6:** The load alternates between on and off with the motor running constantly (maximum cycle time 10 minutes).

The acceleration process is ignored. Dimensioning for profile is required for dynamic applications.




Required input variables			
Operating time/day	BD =		[h]
Average speed utilisation of the geared motor related to the speed under load $n_L$			[%]
Operating mode	S2 - ED = S3, S6 - ED =		[min] [%]
Ambient temperature	$T_u =$		[°C]
Site altitude above mean sea level	H =		[m]
Radial force	$F_r =$		[N]
Axial force	$F_a =$		[N]
Transmission element at gearbox (gear wheels, sprockets...)			
Pitch circle diameter of the transmission element	$d_w =$		[mm]
Load torque	$M_L =$		[Nm]
Load speed	$n_L =$		[r/min]
Momentary maximum torque (emergency off, quick stop, occasional high starting duty)	$M_{L,max} =$		[Nm]
Runtime at maximum torque	$t_L =$		[%]



# Drive dimensioning

## Operating modes S2, S3 and S6

Determine gearbox design and servo motor design	
Gearbox type (GST, GFL, GKR, GKS, GSS, GPA)	
Mounting position (A, B, C, D, E, F)	
Output designs (shaft design: hollow shaft, solid shaft...)	
Input design (A asynchronous/S synchronous)	
Cooling type (S00 without fan/F10 with blower)	


→  14 - General information - Product key

Determine gearbox size from the forces		
Determination of the axial and radial forces acting on the gearbox shaft		
	<b>Calculation</b>	<b>Check</b>
Additional radial force factor of transmission element	$f_z =$	
Radial force	$Fr = 2000 \cdot \frac{M_{L,max} \cdot f_z}{d_w}$	$Fr \leq Fr_{zul} = \min(f_w \cdot f_\alpha \cdot Fr_{Tab}; f_w \cdot Fr_{max})$
Axial force		$Fa \leq Fa_{zul} = Fa_{Tab} \quad , \quad Fr = 0$

→  52 -  $f_z$

→ Permissible radial and axial forces  $G \square \square$  [N]  
 $Fr_{Tab}, Fa_{Tab}, f_w, f_\alpha$

Determine speed correction factors	
Ambient temperature, site altitude	$k_{n1} =$
Mounting position	$k_{n2} =$
Average speed utilisation of the geared motor (in % of $n_l$ ) and daily operating time	$k_{n3} =$

→  51 -  $k_{n1}, k_{n2}, k_{n3}$

Speed correction factors for average speed $k_m$					
Op. mode S2		Op. mode S3		Op. mode S6	
ED [min]	$k_m$	ED [%]	$k_m$	ED [%]	$k_m$
10	0.16	15	0.15	15	1.00
30	0.50	25	0.25	25	
60	1.00	40	0.40	40	
90		60	0.60	60	

$$k_m =$$

$$k_n = \frac{k_{n1} \cdot k_{n2} \cdot k_{n3}}{k_m}$$



Specify the overload factor $k_L$ (guide values) as a function of the application/kinematics					
Op. mode S2		Op. mode S3		Op. mode S6	
ED [min]	$k_L$	ED [%]	$k_L$	ED [%]	$k_L$
10	1.4-1.5	15	1.4-1.5	15	1.5-1.6
30	1.15-1.2	25	1.3-1.4	25	1.4-1.5
60	1.07-1.1	40	1.15-1.2	40	1.3-1.4
90	1.0-1.05	60	1.05-1.1	60	1.15-1.2

$k_L =$

Select and check the geared servo motor-inverter combination			
For maximum life expectancy, Lenze recommends the use of motors with a low rated speed for operating modes S1 and S6.			
	<b>Check</b>	<b>Selection</b>	
Output torque	$M_2 \geq \frac{M_L}{k_L}$	$M_2 =$	[Nm]
Output speed (recommendation)	$n_{2,th} \geq \frac{n_L}{k_n}$	$n_{2,th} =$	[r/min]
Output speed	$n_{2,Eck} \geq n_L$	$n_{2,Eck} =$	
Alternating load influence: without alternating load	$M_{2,GN} \geq M_L$	$M_{2,GN} =$	[Nm]
Alternating load influence: with alternating load	$M_{2,GN} \geq M_L \cdot 1.4$		
Ratio		$i =$	
Load capacity of the geared motor		$c =$	
Efficiency of gearbox	$\eta_G = \eta_{c=1} - (c-1) \cdot 0.01$	$\eta_G =$	
Momentary maximum torque	$M_{2,max} = M_{2,GN} \cdot 1.5 \geq M_{L,max}$	$M_{2,max} =$	[Nm]
Thermally effective working point (○) below S1 torque characteristic of the servo motor		$\left( \frac{i \cdot k_m \cdot n_L}{k_{n3}}, \frac{M_L}{k_L \cdot i \cdot \eta_G} \right)$	
All working points (●) below the maximum torque characteristic curve of the servo motor-inverter combination, taking $M_{L,max}$ into account		$\left( i \cdot n_L, \frac{M_L}{i \cdot \eta_G} \right)$	

- Selection tables G□□ [Nm]  
 $M_2, M_{2,GN}, n_{2,th}, n_{2,Eck}, i, c$
- Servo motors catalogue  
Torque characteristics

- 50 - Motors for operating modes S1 and S6
- 53 -  $\eta_{c=1}$



## Drive dimensioning

Operating modes S2, S3 and S6

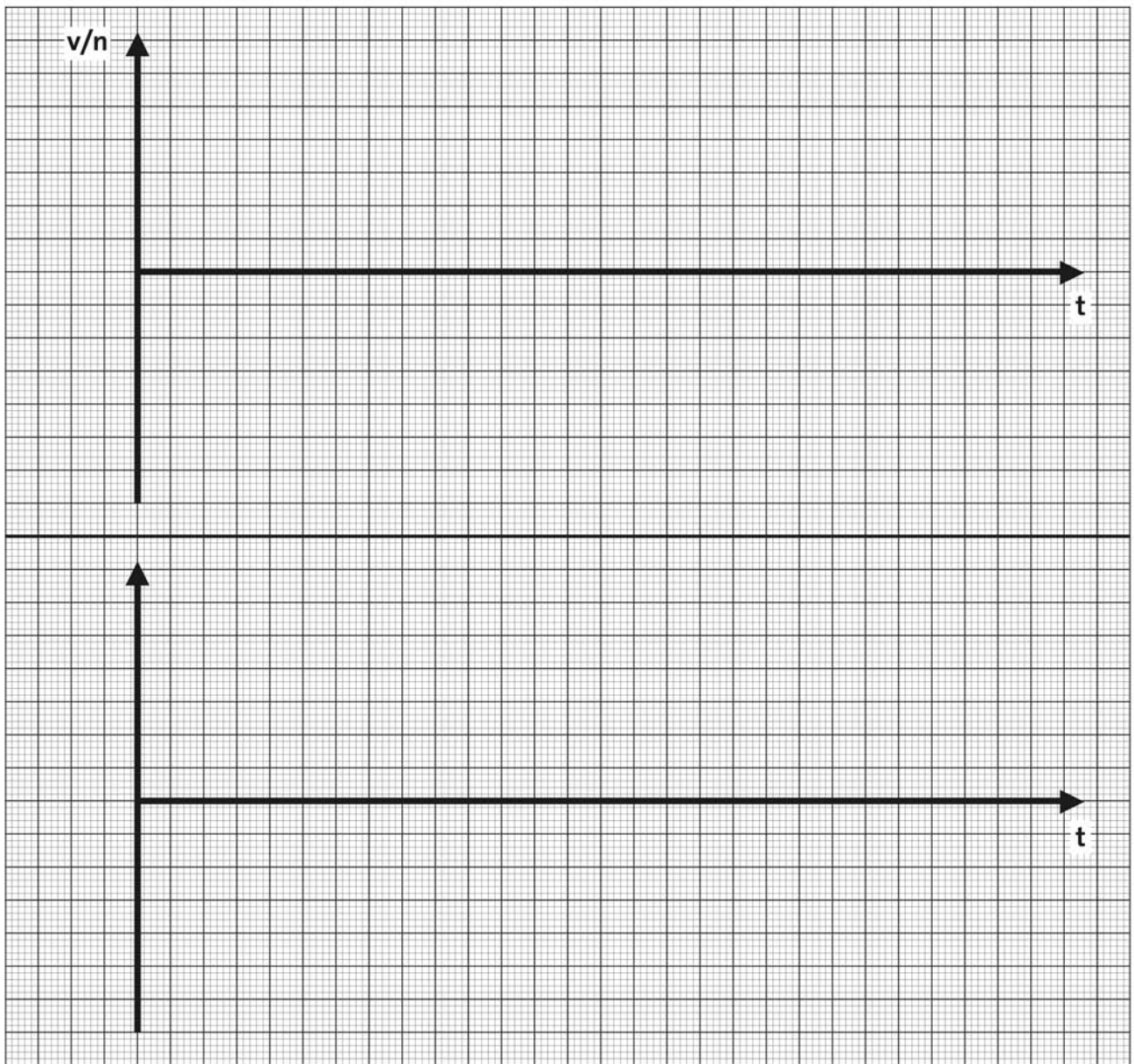
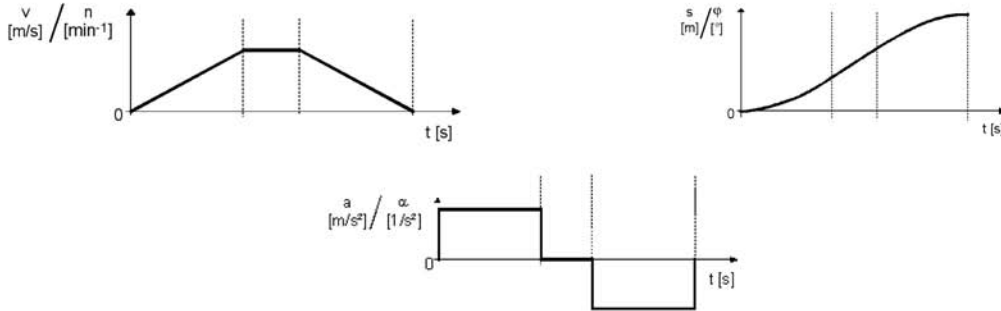
Determine the required gearbox load capacity		
Calculate intensity	Without alternating load	k <sub>1</sub> =
	$k_1 = \frac{M_{L,max}}{M_2}$	
	With alternating load	
	$k_1 = \frac{M_{L,max}}{M_2} \cdot 1.4$	
At runtime t <sub>L</sub> > 10%: take intensity k <sub>1</sub> from the calculation into account At runtime t <sub>L</sub> ≤ 10%: take load factor k from the diagram into account		k =
Required load capacity	t <sub>L</sub> > 10% → c ≥ k <sub>1</sub>  t <sub>L</sub> ≤ 10% → c ≥ k	c =

→  52 - k



### Dimensioning of geared servo motors with speed profiles, cycle time/load cycle duration ≤ 1 min

The profiles, some examples of which are shown below, must be determined.  
A small sketch of the movement to be carried out can help with the subsequent calculation.



Required input variables			
Operating time/day	BD =		[h]
Average speed utilisation of the geared motor related to the speed under load $n_L$			[%]
Ambient temperature	$T_u =$		[°C]
Site altitude above mean sea level	H =		[m]
Radial force	$F_r =$		[N]
Axial force	$F_a =$		[N]
Transmission element at gearbox (gear wheels, sprockets...)			
Pitch circle diameter of the transmission element	$d_w =$		[mm]
Momentary maximum torque (emergency off, quick stop, occasional high starting duty)	$M_{L,max} =$		[Nm]
Runtime at maximum torque	$t_L =$		[%]

### Time characteristic of load for the individual time segments z

Total time	Individual time segments	Load speed	Load speed variation	Stationary load torque	Torque	Acceleration torque	Moment of inertia
t [s]	$\Delta t_z$ [s]	$n_{L,z}$ [r/min]	$\Delta n_{L,z}$ [r/min]	$M_{L,z}$ [Nm]	$M_z$ [Nm]	$M_{s,z}$ [Nm]	$J_L$ [kgm <sup>2</sup> ]

Load cycle duration	$T = \sum \Delta t_z$	T =	[s]
---------------------	-----------------------	-----	-----

### Calculation of values required for the process

Torque per time segment	$M_z = M_{L,z} + J_L \cdot \frac{2\pi \cdot \Delta n_{L,z}}{60 \cdot \Delta t_z} = M_{L,z} + 0.105 \cdot \frac{\Delta n_{L,z}}{\Delta t_z} \cdot J_L$		
Maximum torque of profile	$M_{p,max} = \max(M_z)$	$M_{p,max} =$	[Nm]
Effective torque	$M_{eff} = \sqrt{\frac{1}{T} \sum_z M_z^2 \cdot \Delta t_z}, T \leq 1 \text{min}$	$M_{eff} =$	[Nm]
Mean speed	$n_m = \overline{n_{L,z}} = \frac{1}{T} \sum_z n_{L,z} \cdot \Delta t_z$	$n_m =$	[r/min]
Maximum speed	$n_{max} = \max(n_{L,z})$	$n_{max} =$	[r/min]



Determine gearbox design and servo motor design	
Gearbox type (GST, GFL, GKR, GKS, GSS, GPA)	
Mounting position (A, B, C, D, E, F)	
Output designs (shaft design: hollow shaft, solid shaft...)	
Input design (A asynchronous/S synchronous)	
Cooling type (S00 without fan/F10 with blower)	

→ 14 - General information - Product key

Determine gearbox size from the forces		
Determination of the axial and radial forces acting on the gearbox shaft		
	Calculation	Check
Additional radial force factor of transmission element	$f_z =$	
Radial force	$Fr = 2000 \cdot \frac{M_{L,max} \cdot f_z}{d_w}$	$Fr \leq Fr_{zul} = \min(f_w \cdot f_\alpha \cdot Fr_{Tab}; f_w \cdot Fr_{max})$
Axial force		$Fa \leq Fa_{zul} = Fa_{Tab}$ , $Fr = 0$

→ 52 -  $f_z$

→ Permissible radial and axial forces  $G \square \square$  [N]  
 $Fr_{Tab}, Fa_{Tab}, f_w, f_\alpha$

Determine speed correction factors	
Ambient temperature, site altitude	$k_{n1} =$
Mounting position	$k_{n2} =$
Average speed utilisation of the geared motor (in % of $n_l$ ) and daily operating time	$k_{n3} =$
	$k_n = k_{n1} \cdot k_{n2} \cdot k_{n3}$

→ 51 -  $kn_1, kn_2, kn_3$




## Drive dimensioning


### Speed profiles

Select and check the geared servo motor-inverter combination	Check	Preselection	
Output torque	$M_2 > M_{\text{eff}}$	$M_2 =$	[Nm]
Output speed (recommendation)	$n_{2,\text{th}} \geq \frac{n_m}{k_n}$	$n_{2,\text{th}} =$	
Output speed	$n_{2,\text{Eck}} \geq n_L$	$n_{2,\text{Eck}} =$	[r/min]
Maximum speed	$n_{1,\text{max}} \geq n_{\text{max}} \cdot i$	$n_{1,\text{max}} =$	
Alternating load influence: without alternating load	$M_{2,\text{GN}} \geq M_{\text{P,max}}$	$M_{2,\text{GN}} =$	[Nm]
Alternating load influence: with alternating load	$M_{2,\text{GN}} \geq M_{\text{P,max}} \cdot 1,4$		
Load capacity of the geared motor		$c =$	
Efficiency of gearbox	$\eta_G = \eta_{c=1} - (c-1) \cdot 0,01$	$\eta_G =$	
Ratio	$i \approx \sqrt{\frac{J_L}{J_G + J_M + J_B}}$ (Optimum $k_j = 1$ )	$i =$	
Load-matching factor (for optimum dynamics/control properties)	Requirement $k_j = 0,5 \dots 10$ Optimum $k_j = 1$	$k_j = \frac{J_L}{i^2 \cdot (J_G + J_M + J_B)}$	

→ Selection tables G□□ [Nm]  
 $M_2, M_{2,\text{GN}}, n_{2,\text{th}}, n_{2,\text{Eck}}, i, c, J_G, J_M$

→ Servo motors catalogue  
 $J_B$

→  50 -  $n_{1,\text{max}}$

→  53 -  $\eta_{c=1}$





Check the motor torques		
Taking into account the mass inertia of gearbox, motor and brake		
Acceleration torque	$M_{S,z} = M_z + (J_{GM} + J_B) \cdot \frac{2 \pi \cdot \Delta n_{L,z}}{60 \cdot \Delta t_z} \cdot i^2$	$M_{S,z} =$
Effective torque	$M_{S,eff} = \sqrt{\frac{1}{T} \sum_z M_{S,z}^2 \cdot \Delta t_z}$	$M_{S,eff} =$
Thermally effective working point (○) below S1 torque characteristic of the servo motor		$\left( \frac{i \cdot n_m}{k_{n3}}, \frac{M_{S,eff}}{i \cdot \eta_G} \right)$
All working points (●) below the maximum torque characteristic curve of the servo motor-inverter combination		$\left( i \cdot n_{L,z}, \frac{M_{S,z}}{i \cdot \eta_G} \right)$

→ Servo motors catalogue  
Torque characteristics

Determine the required gearbox load capacity		
Calculate intensity	Without alternating load $k_1 = \frac{M_{L,max}}{M_2}$	$k_1 =$
	With alternating load $k_1 = \frac{M_{L,max}}{M_2} \cdot 1.4$	
At runtime $t_L > 10\%$ : take intensity $k_1$ from the calculation into account At runtime $t_L \leq 10\%$ : take load factor $k$ from the diagram into account		$k =$
Required load capacity	$t_L > 10\% \rightarrow c \geq k_1$ $t_L \leq 10\% \rightarrow c \geq k$	$c =$

→ 52 - k



## Drive dimensioning

Maximum input speeds/Recommended motors for S1 and S6

### Maximum gearbox input speeds

- ▶ These may not be exceeded, even momentarily.

Motor type	Input speeds	Motor type	Input speeds
	$n_{1,max}$ [r/min]		$n_{1,max}$ [r/min]
MCA10...	5000	MCS06...	5000
MCA13...			
MCA14...			
MCA17...			
MCA19...			
MCA21...	4000	MCS19...	4000

### Recommended motors for operating modes S1 and S6

- ▶ With operating modes S1 and S6, the motor rotates at a constant, high speed. Motors with low rated speeds are preferable in respect of service life and oil temperature rise.

Motor type	Motor type
MCA10I40	MCS06C41
MCA13I41	MCS06F41
MCA13I34	MCS06I41
MCA14L20	MCS09D41
MCA14L16	MCS09F38
MCA17N23	MCS09H41
MCA17N17	MCS09L41
MCA19S23	MCS12D20
MCA19S17	MCS12H15
MCA21X25	MCS12L20
MCA21X17	MCS14D15
-	MCS14H15
-	MCS14L15
-	MCS14P14
-	MCS19F14
-	MCS19J14
-	MCS19P14



### Ambient temperature and site altitude $k_{n1}$

Ambient temperature	Site altitude H [m] above mean sea level			
	< 1000	< 2000	< 3000	< 4000
$T_u$ [°C]	$k_{n1}$	$k_{n1}$	$k_{n1}$	$k_{n1}$
≤ 20	1.15	1.04	0.92	0.81
30	1.00	0.90	0.80	0.70
40	0.80	0.72	0.64	0.56
50	0.60	0.54	0.48	0.42
60	0.40	0.36	0.32	0.28

### Mounting positions $k_{n2}$

Gearbox type	Mounting position					
	A	B	E	D	E	F
	$k_{n2}$	$k_{n2}$	$k_{n2}$	$k_{n2}$	$k_{n2}$	$k_{n2}$
GST	1.00	0.80	0.80	0.70 <sup>1)</sup>	1.00	1.00
GFL	1.00	0.80	0.85	0.70 <sup>1)</sup>	0.90	0.80
GKR	1.00	0.90	0.80	0.80 <sup>1)</sup>	0.95	0.95
GKS	1.00	0.80	0.80	0.70 <sup>1)</sup>	0.80	0.80
GSS	1.00	0.90	0.80	0.80 <sup>1)</sup>	0.95	0.95
GPA	1.00	-	0.80	0.70 <sup>1)</sup>	-	-

<sup>1)</sup> The average input speed  $n_1$  should not exceed 1500 r/min.

### Daily operating time and average speed utilisation of the geared motor $k_{n3}$

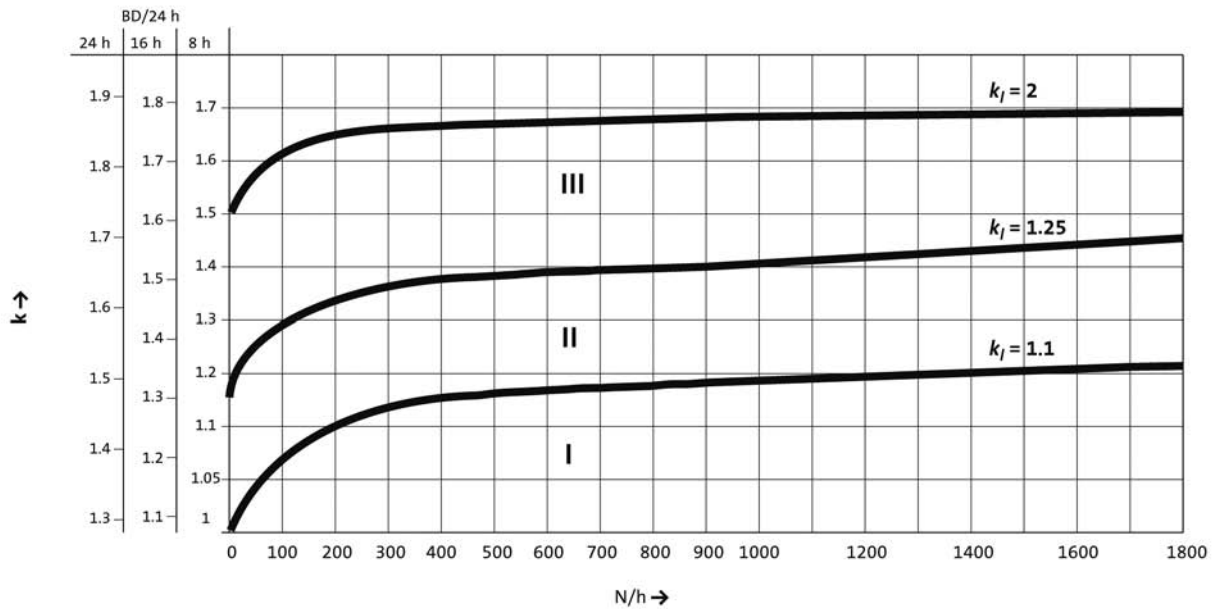
Daily operating time	Average speed utilisation of the geared motor related to the speed under load $n_L$				
	100%	80%	60%	50%	25%
[h]	$k_{n3}$	$k_{n3}$	$k_{n3}$	$k_{n3}$	$k_{n3}$
1.0	1.29	1.33	1.38	1.42	1.55
2.0	1.15	1.20	1.25	1.29	1.42
3.0	1.08	1.12	1.17	1.21	1.34
4.0	1.02	1.06	1.12	1.15	1.29
5.5	0.96	1.00	1.06	1.09	1.22
8.0	0.89	0.93	0.99	1.02	1.15
12.0	0.81	0.85	0.91	0.94	1.08
16.0	0.76	0.80	0.85	0.89	1.02
22.0	0.71	0.76	0.81	0.85	0.98
24.0	0.68	0.72	0.78	0.81	0.94

## Additional radial force factors for the transmission elements

Transmission element	Additional radial force factor
	$f_z$
Gear wheels	1.12
Sprockets	1.25...1.4
Toothed belt pulleys	1.5
Narrow V-belt, depending on tension	1.5 ... 2.0

## Application factors GPA

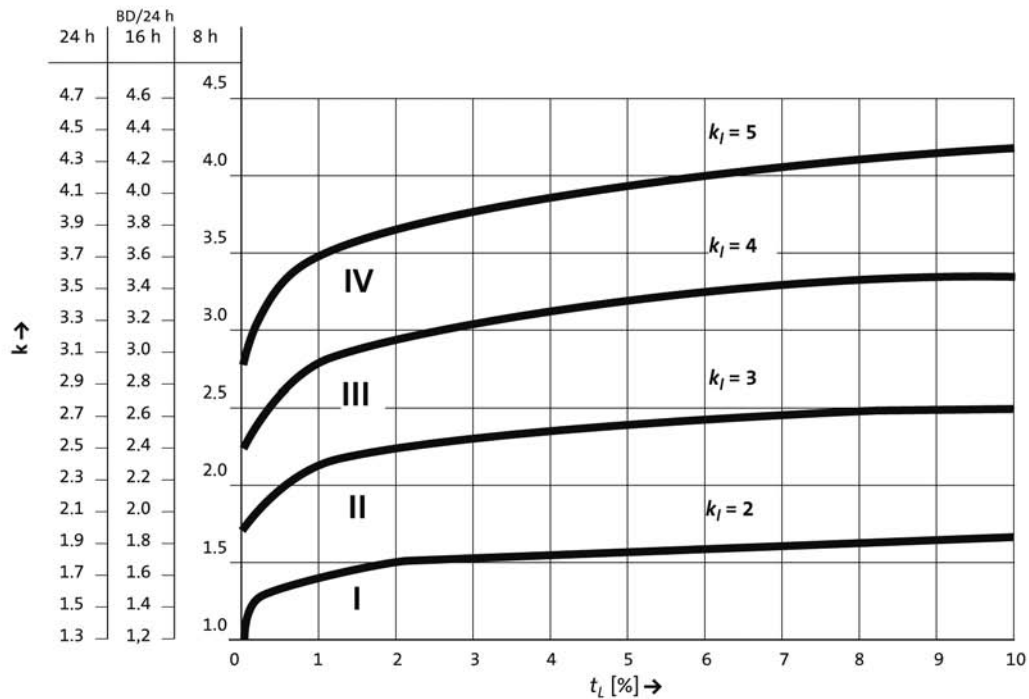
Take application factor  $k$  of the machine from the diagram into account.  
Interpolation between the curves is permissible.





## Application factors GST, GFL, GKR, GKS, GSS

Take application factor  $k$  of the machine from the diagram into account.  
Interpolation between the curves is permissible.



## Efficiencies

Gearbox type	Number of stages			
	1	2	3	4
	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GST	0.98	0.97	0.95	
GFL		0.97	0.95	
GKR		0.95		
GKS			0.95	0.93
GPA	0.97	0.95		



## Drive dimensioning

### GSS efficiencies

The start-up efficiency  $\eta_A$  of a helical-worm gearbox is lower than its operative efficiency at rated speed.

The start-up efficiency  $\eta_A$  must therefore always be taken into consideration when starting under load.

		Output speeds $n_2$ [r/min]														
		I	1	5	10	16	25	32	40	63	100	160	250	400	630	800
		$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GSS04-2	5.639	0.71	0.78	0.79	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
	7.733	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	-
	9.042	0.71	0.78	0.79	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
	9.897	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	-
	10.827	0.71	0.78	0.79	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
	12.400	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	-
	13.810	0.71	0.78	0.79	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
	15.869	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	-
	17.360	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	-
	20.417	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	22.143	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	0.87
	24.800	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	27.125	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	0.87
	31.738	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	34.100	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	0.87
	39.200	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	43.917	0.67	0.74	0.76	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	0.87
	50.000	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	54.250	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	61.250	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	68.200	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	77.000	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	87.833	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	99.167	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	111.318	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	125.682	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
	139.500	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-
	157.500	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-
183.786	0.56	0.62	0.72	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79	-	-	-	
207.500	0.55	0.60	0.71	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78	-	-	-	



	Output speeds $n_2$ [r/min]															
	I	1	5	10	16	25	32	40	63	100	160	250	400	630	800	
	$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	
GSS05-2	5.639	0.71	0.79	0.81	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
	7.733															
	9.042	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	-
	9.897															
	10.827	0.71	0.79	0.81	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
	12.400	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	-
	13.810	0.71	0.79	0.81	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
	15.869															
	17.360	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	20.417	0.55	0.62	0.74	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81	-	-	
	22.143	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	24.800	0.57	0.63	0.75	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82	-	-	
	27.125	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	31.738	0.57	0.63	0.75	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82	-	-	
	35.306	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	39.200	0.55	0.62	0.74	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81	-	-	
	43.917	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	50.000	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81			
	54.250	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82			-
	61.250	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81			
	70.611	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82			
	79.722	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81			
	87.833	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82			
	99.167	0.55	0.62	0.74	0.79		0.80	0.81	0.81	0.81	0.81	0.81	0.81	-	-	
	113.667	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82			
	128.333	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81			
	137.950	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82			
	155.750	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81			
176.313	0.57	0.63	0.75			0.81	0.82	0.82	0.83	0.83	0.82	0.82				
199.063	0.55	0.62	0.74			0.80	0.81	0.81	0.81	0.81	0.81	0.81				



## Drive dimensioning

### GSS efficiencies

		Output speeds $n_2$ [r/min]														
		I	1	5	10	16	25	32	40	63	100	160	250	400	630	800
		$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GSS05-3	<b>125.476</b>															
	<b>153.708</b>	0.67	0.75	0.79	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
	<b>193.233</b>															
	<b>222.133</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
	<b>250.952</b>	0.57	0.63	0.75		0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
	<b>283.333</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
	<b>307.417</b>	0.57	0.63	0.75		0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
	<b>347.083</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
	<b>386.467</b>	0.57	0.63	0.75	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82	-	-	
	<b>436.333</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
	<b>497.722</b>	0.57	0.63	0.75		0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
	<b>561.944</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
	<b>630.803</b>	0.57	0.63	0.75		0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
	<b>712.197</b>	0.55	0.62	0.74		0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			





	Output speeds $n_2$ [r/min]																
	I	1	5	10	16	25	32	40	63	100	160	250	400	630	800		
	$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$		
GSS06-2	5.833	0.72	0.80	0.83	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91	
	8.000																
	9.042	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	-	
	10.238																
	11.200	0.72	0.80	0.83	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91	
	12.400	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	-
	14.286	0.72	0.80	0.83	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91	
	15.869																
	17.360	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
	20.417	0.57	0.64	0.77	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	
	22.143	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
	24.800	0.57	0.64	0.77	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	
	27.125	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
	31.738	0.57	0.64	0.77	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	
	35.306	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
	39.200	0.57	0.64	0.77	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	
	43.917	0.67	0.75	0.81	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
	50.000						0.82										
	54.250						0.83										-
	61.250						0.82										
	70.611						0.83										
	79.722						0.82										
	87.833						0.83										
	99.167	0.57	0.64	0.77	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	
113.667						0.83											
128.333						0.82											
137.950						0.83											
155.750						0.82											
174.375						0.83											
196.875						0.82											



# Drive dimensioning

## GSS efficiencies

		Output speeds $n_2$ [r/min]														
		I	1	5	10	16	25	32	40	63	100	160	250	400	630	800
		$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GSS06-3	126.531					0.83										
	142.857					0.82										
	155.000					0.83										
	175.000					0.82										
	194.857					0.83										
	220.000					0.82										
	238.700					0.83										
	269.500					0.82										
	310.689					0.83										
	350.778					0.82										
	386.467					0.83										
	436.333	0.57	0.64	0.77	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-	-	-
	497.722					0.83										
	561.944					0.82										
	630.803					0.83										
	712.197					0.82										
	816.333					0.83										
	921.667					0.82										
	1023.000					0.83										
	1155.000					0.82										
1241.550					0.83											
1401.750					0.82											
1635.693					0.83											
1846.750					0.82											



	Output speeds $n_2$ [r/min]														
	I	1	5	10	16	25	32	40	63	100	160	250	400	630	800
	$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GSS07-2	5.862	0.74	0.82	0.86	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
	8.125														
	9.086	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	10.000														
	11.200	0.74	0.82	0.86	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
	12.594	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	14.286	0.74	0.82	0.86	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
	15.500														
	17.360	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	20.517	0.60	0.67	0.81	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-
	22.143	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	25.188	0.60	0.66	0.80	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-
	27.125	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	31.000	0.60	0.66	0.80	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-
	35.306	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	39.200	0.60	0.67	0.81	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-
	43.271	0.69	0.77	0.84	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	50.000		0.67	0.81		0.84									
	54.250		0.66	0.80		0.85									
	61.250		0.67	0.81		0.84									
	70.611		0.66	0.80		0.85									
	79.722		0.67	0.81		0.84									
	86.542		0.66	0.80		0.85									
97.708	0.60	0.67	0.81	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-	
113.667		0.66	0.80		0.85										
128.333		0.67	0.81		0.84										
137.950		0.66	0.80		0.85										
155.750		0.67	0.81		0.84										
174.375		0.66	0.80		0.85										
196.875		0.67	0.81		0.84										



## Drive dimensioning

### GSS efficiencies

		Output speeds $n_2$ [r/min]														
		I	1	5	10	16	25	32	40	63	100	160	250	400	630	800
		$\eta_A$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$	$\eta_{c=1}$
GSS07-3	126.531	0.60	0.66	0.80	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-	-
	142.857		0.67	0.81		0.84										
	155.000		0.66	0.80		0.85										
	175.000		0.67	0.81		0.84										
	201.746		0.66	0.80		0.85										
	227.778		0.67	0.81		0.84										
	247.139		0.66	0.80		0.85										
	279.028		0.67	0.81		0.84										
	321.673		0.66	0.80		0.85										
	363.179		0.67	0.81		0.84										
	394.245		0.66	0.80		0.85										
	445.116		0.67	0.81		0.84										
	490.403		0.66	0.80		0.85										
	553.681		0.67	0.81		0.84										
	634.639		0.66	0.80		0.85										
	716.528		0.67	0.81		0.84										
	833.556		0.66	0.80		0.85										
	941.111		0.67	0.81		0.84										
	1011.633		0.66	0.80		0.85										
	1142.167		0.67	0.81		0.84										
1227.755	0.66	0.80	0.85													
1386.175	0.67	0.81	0.84													
1569.181	0.66	0.80	0.85													
1771.656	0.67	0.81	0.84													



### General data

Gearbox type	GST	GFL	GKR	GKS	GSS
<b>Housing</b>					
Design	Cuboid				
Material	Aluminium/grey cast iron				
<b>Solid shaft</b>					
Design	With keyway in accordance with DIN 6885 Centring hole in accordance with DIN 332, Part 2				
Tolerance	k6 ( $d \leq 50$ mm) m6 ( $d > 50$ mm)				
Material	Tempering steel C45 or 42CrMo4				
<b>Hollow shaft</b>					
Design	-	Hollow shaft (H): with keyway Hollow shaft with shrink disc (S): smooth			
Tolerance	-	Bore measured in accordance with ISO H7 with plug gauge			
Material	-	Tempering steel C45			
<b>Geared parts</b>					
Design	Optimised tooth flanks and profile geometry; ground tooth flanks				
Material	Case-hardened steel			Case-hardened steel, worm gear bronze	
<b>Shaft-hub joint</b>					
Design	1st stage/pre-stage: friction-type connection (= 2nd, 3rd or 4th stage): friction-type or positive-fit				
<b>Shaft sealing rings</b>					
Design	With dust lip				
Material	NB/FP (Viton)				
<b>Bearing</b>					
Design	Ball bearings/tapered-roller bearings depending on frame size and design				
<b>Lubricants</b>					
Design	In accordance with DIN 51502				
Fill volumes	Depending on the mounting position (see Operating Instructions)				
<b>Mechanical efficiency</b>					
At rated torque	$0.95 \leq \eta \leq 0.98$	$0.95 \leq \eta \leq 0.96$	$0.93 \leq \eta \leq 0.95$	$0.79 \leq \eta \leq 0.92$ ▶ depending on ratio ▶ when $n_1 = 1400$ r/min ▶ gearbox at operating temperature and gearing run in	
<b>Noises</b>	Does not exceed the emission values specified in VDI Guideline 2159				
<b>Enclosure</b>					
Design	IP55 and IP65				

### General data

<b>Gearbox type</b>	<b>GPA</b>
<b>Housing</b>	
Design	Cuboid
Material	Cast iron with nodular graphite
<b>Solid shaft</b>	
Design	Smooth without keyway Centring hole in accordance with DIN 332, Part 2
Tolerance	k6
Material	Tempering steel C45
<b>Geared parts</b>	
Design	Spur toothing, optimised tooth flanks and profile geometry
Planet pinions + sun wheel	Design: case-hardened and tooth flanks ground Material: case-hardened steel 17 Cr Ni Mo 6
Internal gearing	Design: shaped or broached Material: ductile cast iron EN-GJS-700-2
Ratios	Design: all ratios are mathematically exact
<b>Shaft-hub joint</b>	
	Positive-fit with special splined shaft profile
<b>Shaft sealing rings</b>	
Design	With dust lip
Material	FP (Viton)
<b>Bearing</b>	
Design	Ball bearings/tapered-roller bearings/needle bearings depending on frame size
<b>Lubricants</b>	
Design	In accordance with DIN 51502
Fill volumes	Depending on the mounting position (see Operating Instructions)
<b>Mechanical efficiency</b>	
At rated torque	$0.95 \leq \eta \leq 0.98$
<b>Noises</b>	
	Does not exceed the emission values specified in VDI Guideline 2159
<b>Enclosure</b>	
Design	IP54 and IP65



## Ventilation

### Gearboxes without ventilation

Ventilation is not required for the following gearboxes:

GST03/04  
GFL04  
GPA00...05  
GKR03...05  
GKS04  
GSS04

### Gearboxes that can be fitted with optional ventilation

If you are using these gearboxes, in most cases you will not need to provide special means of ventilation. In borderline cases, e.g. at input speeds > 2000 r/min, we recommend the use of breather elements, which can be purchased separately from us.

GST05  
GFL05  
GKS05

### Gearboxes with ventilation

The following gearboxes are supplied with breather elements as standard:

GST06...14  
GFL06...14  
GKR06  
GKS06...14  
GSS05...07

### Special precautions for mounting position C (motor on top)

For gearbox sizes G□□09...14 in this mounting position, we recommend the use of an oil compensation reservoir. This can be purchased separately. Depending on the gearbox type, you can find illustrations and special precautions under ventilation G□□ [⊗].

It is not required at high ratios or low input speeds. Please contact Lenze in such cases.

### Lubricants

Lenze gearboxes and geared motors are ready for operation on delivery and are filled with lubricants that are specific to both the drive and the design. The mounting position and design specified in the order are decisive factors in choosing the volume of lubricant.

The lubricants listed in the lubricant table are approved for use in Lenze drives.

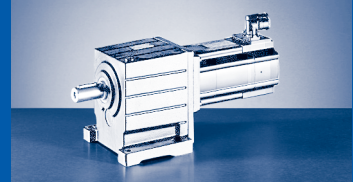
### Lubricant table

- ▶ Please contact us you are working at ambient temperatures < -20°C or > +40°C.

Lubricants in accordance with DIN 51517-3: CLP-ISO 12925-1: CKC/CKD	CLP HC 320	CLP HC 150	CLP HC 220 USDA H1	CLP PG 460
GST / GFL / GKR / GKS	•		•	
GPA		•		
GSS				•
Ambient temperature [°C]	-25 ... +50		-20 ... +40	
Specification	Synthetic oil (synthetic hydrocarbon/poly-alpha-olefin oil)			Synthetic oil (polyglycol)
Note			For the foodstuffs processing industry.	Not mixable with other oil types.
Change interval	25000 operating hours		16000 operating hours	25000 operating hours
	After no more than three years (oil temperature 70 ... 80°C)			
Fuchs	Fuchs Renolin Unisyn CLP 320		bremer & leguil Cassida Fluid GL 220	
Klüber	Klübersynth GEM4-320		Klüberoil 4 UH1-220 N	Klübersynth GH 6-460
Shell	Shell Omala Oil HD 320			Shell Tivela S 460
Mobil		Mobil SHC 629		

- ▶ Caution: when using the lubricant CLP HC 220 on the GSS helical-worm gearbox, the torque  $M_2$  must be reduced to 80 % of the values stated in the catalogue!





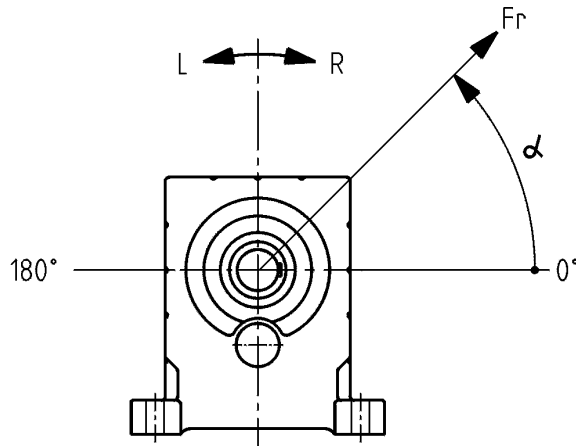
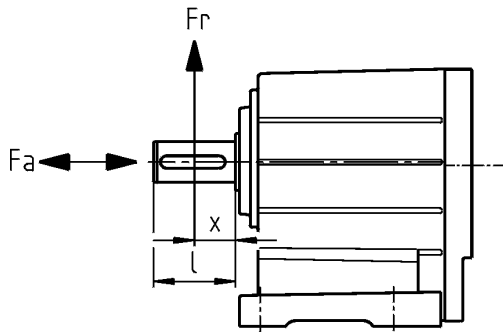
**Permissible radial force**

$$F_{r_{zul}} = \min(f_w \times f_\alpha \times Fr_{Tab}; f_w \times Fr_{max})$$

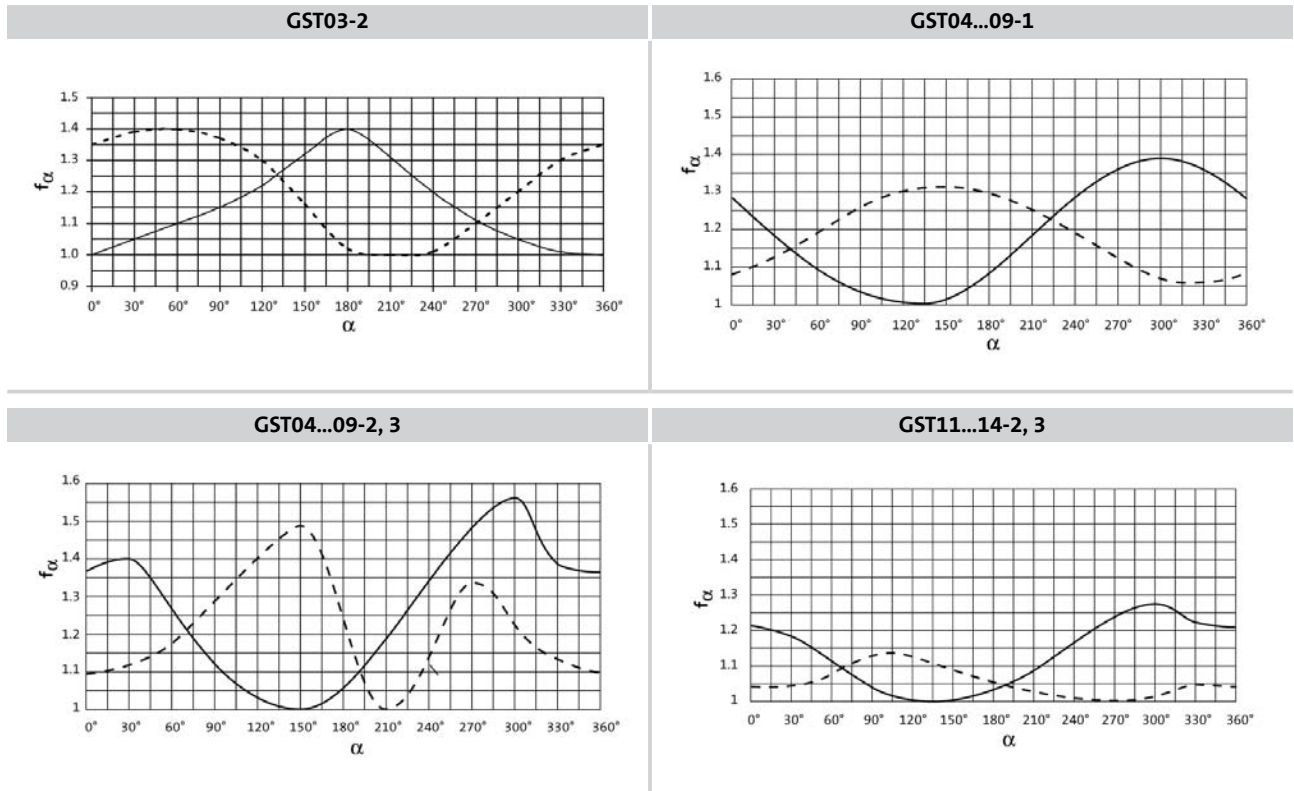
At  $F_r$  and  $F_a \neq 0$  please contact your Lenze sales office.

**Permissible axial force**

$$F_{a_{zul}} = Fa_{Tab} \text{ at } Fr = 0$$



**Effective direction factor  $f_\alpha$  at output shaft**



—— Direction of rotation R

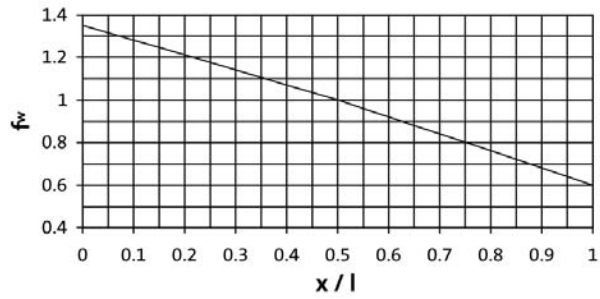
- - - Direction of rotation L



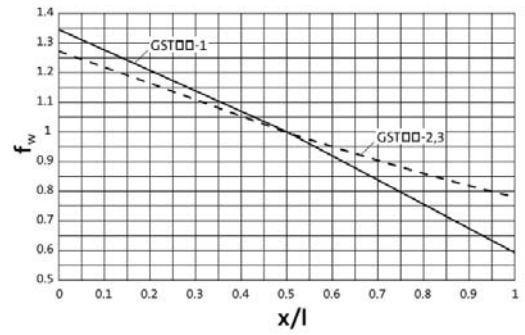
# GST [N]

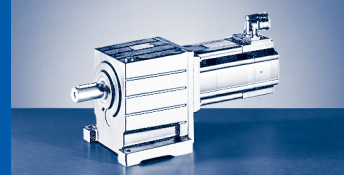
## Additional load factor $f_w$ at output shaft

GST03-2



GST04...14-1, 2, 3





## GST□□-1

Solid shaft (V□□)										
Application of force Fr: centre of shaft journal (x = l/2)										
Fa <sub>Tab</sub> only valid for Fr = 0										
	GST04-1		GST05-1		GST06-1		GST07-1		GST09-1	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
2500	100	600	100	800	200	900	700	1200	1750	2500
1600	180	800	250	1100	600	1200	1000	1600	2200	3400
1000	440	1000	550	1400	800	1500	1200	2000	2500	4300
600	600	1300	750	2000	800	2000	1300	2700	2500	5700
400	850	1400	1400	2000	1100	2500	1900	3300	3500	6800
200	1050	1400	2000	2000	2200	2500	3000	3700	6200	7000
125	1050	1400	2300	2000	2900	2500	3900	3700	7900	7000
80	1050	1400	2300	2000	3500	2500	4700	3700	9000	7000
≤ 50	1050	1400	2300	2000	3500	2500	5300	3700	9500	7000
Fr <sub>max</sub>	1050	-	2300	-	3500	-	5300	-	9500	-



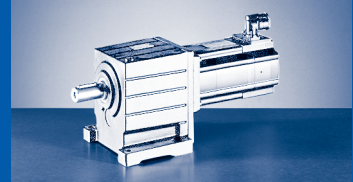
# GST [N]

## GST□□-2/3 with standard bearings

		Solid shaft (V□□)															
		Application of force Fr: centre of shaft journal (x = l/2)															
		Fa <sub>Tab</sub> only valid for Fr = 0															
		GST03-2		GST04-2		GST05-2/3		GST06-2/3		GST07-2/3		GST09-2/3		GST11-2/3		GST14-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	
1000	100	300	730	600	1150	1200	140	500	140	1100	1500	1300	11500	5700	16600	9000	
630	300	400	950	800	1500	1600	750	600	2050	1500	1950	1800	14400	7600	20700	12000	
400	630	600	1250	1100	1950	2000	2350	850	3400	1900	6800	2300	17000	9500	24000	15000	
250	710	700	1450	1300	2200	2300	2600	900	3800	2200	7600	2800	19000	10000	27000	16000	
160	800	800	1700	1650	2600	2650	3100	1250	4500	2900	9400	4000	21000	11000	31000	18000	
100	920	900	2100	2000	3000	3100	3600	1800	5400	3900	11500	5600	21000	14000	36000	20000	
63	1100	1000	2500	2000	3500	3600	4300	2600	6400	5300	11500	8100	21000	16000	39000	20000	
40	1400	1000	2650	2000	3800	3600	4350	3600	7600	7000	11500	11000	21000	16000	40000	20000	
25	1500	1000	2650	2000	3900	3600	4350	4800	9100	7000	11500	12000	21000	16000	40000	20000	
≤ 16	1500	1000	2650	2000	3900	3600	4350	4800	9500	7000	11500	12000	21000	16000	40000	20000	
Fr <sub>max</sub>	1500	-	2650	-	3900	-	4350	-	9500	-	11500	-	21000	-	40000	-	

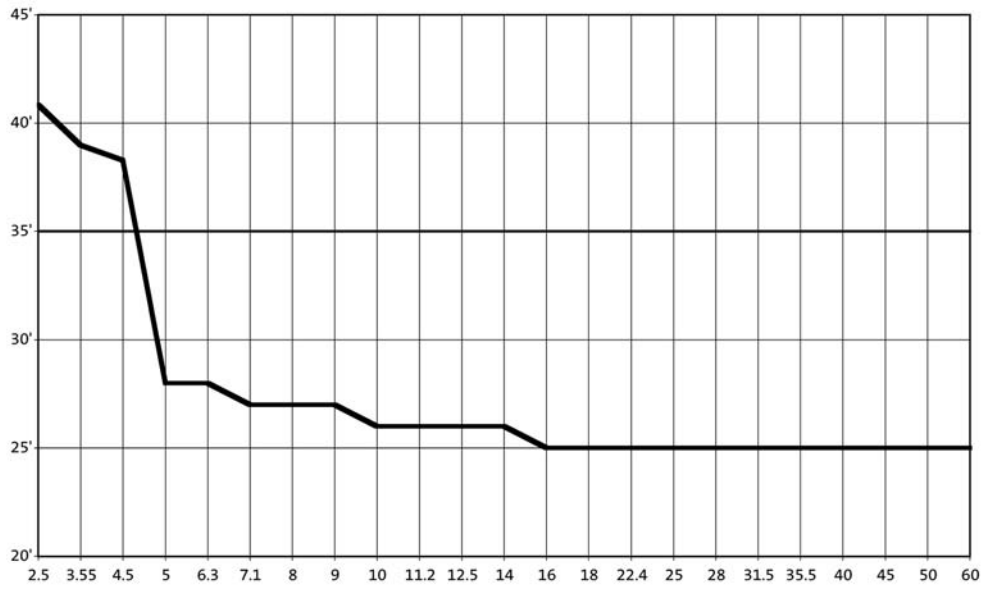
## GST□□-2/3 with reinforced bearings

		Solid shaft (V□□)									
		Application of force Fr: centre of shaft journal (x = l/2)									
		Fa <sub>Tab</sub> only valid for Fr = 0									
		GST04-2		GST05-2/3		GST06-2/3		GST07-2/3		GST09-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	
1000	1900	1000	3350	2100	4250	2100	5650	3300	11300	4800	
630	2350	1300	3950	2800	5100	2800	6850	4400	14000	6400	
400	2850	1700	4900	3600	6300	3500	8500	5500	16500	8000	
250	3150	1900	5400	3900	7000	3600	9500	6100	17000	9000	
160	3550	2200	5400	4300	7700	4200	10500	7100	17000	10500	
100	3750	2500	5400	4500	7700	4900	12500	8300	17000	12500	
63	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000	
40	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000	
25	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000	
≤ 16	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000	
Fr <sub>max</sub>	3750	-	5400	-	7700	-	13000	-	17000	-	



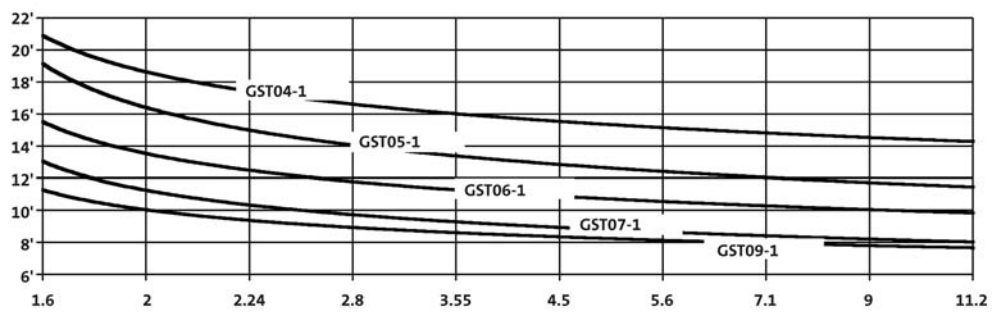
Output backlash in angular minutes

GST03-2



Ratio

GST04...09-1

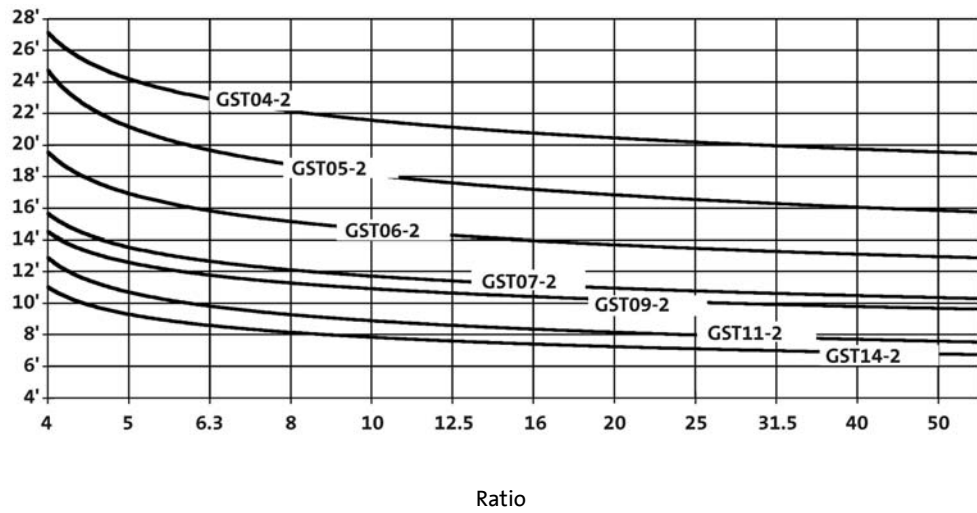


Ratio

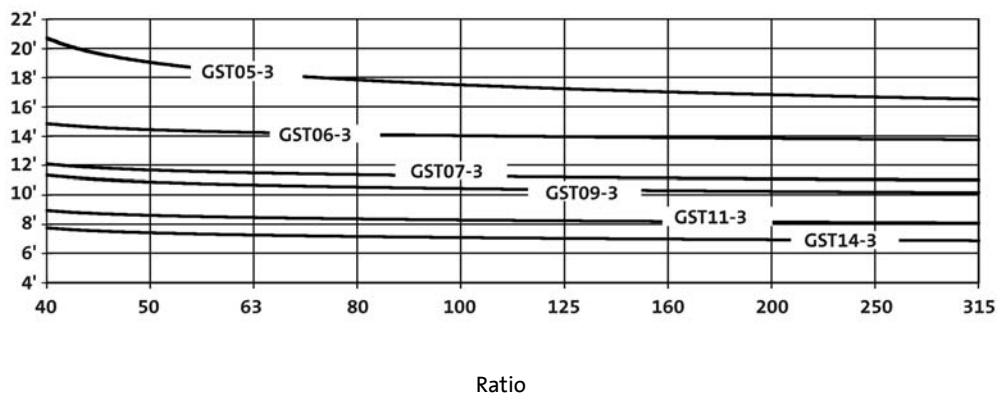


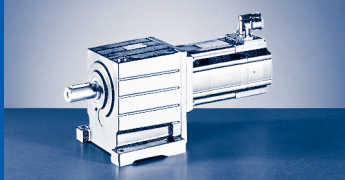
Output backlash in angular minutes

GST04...14-2



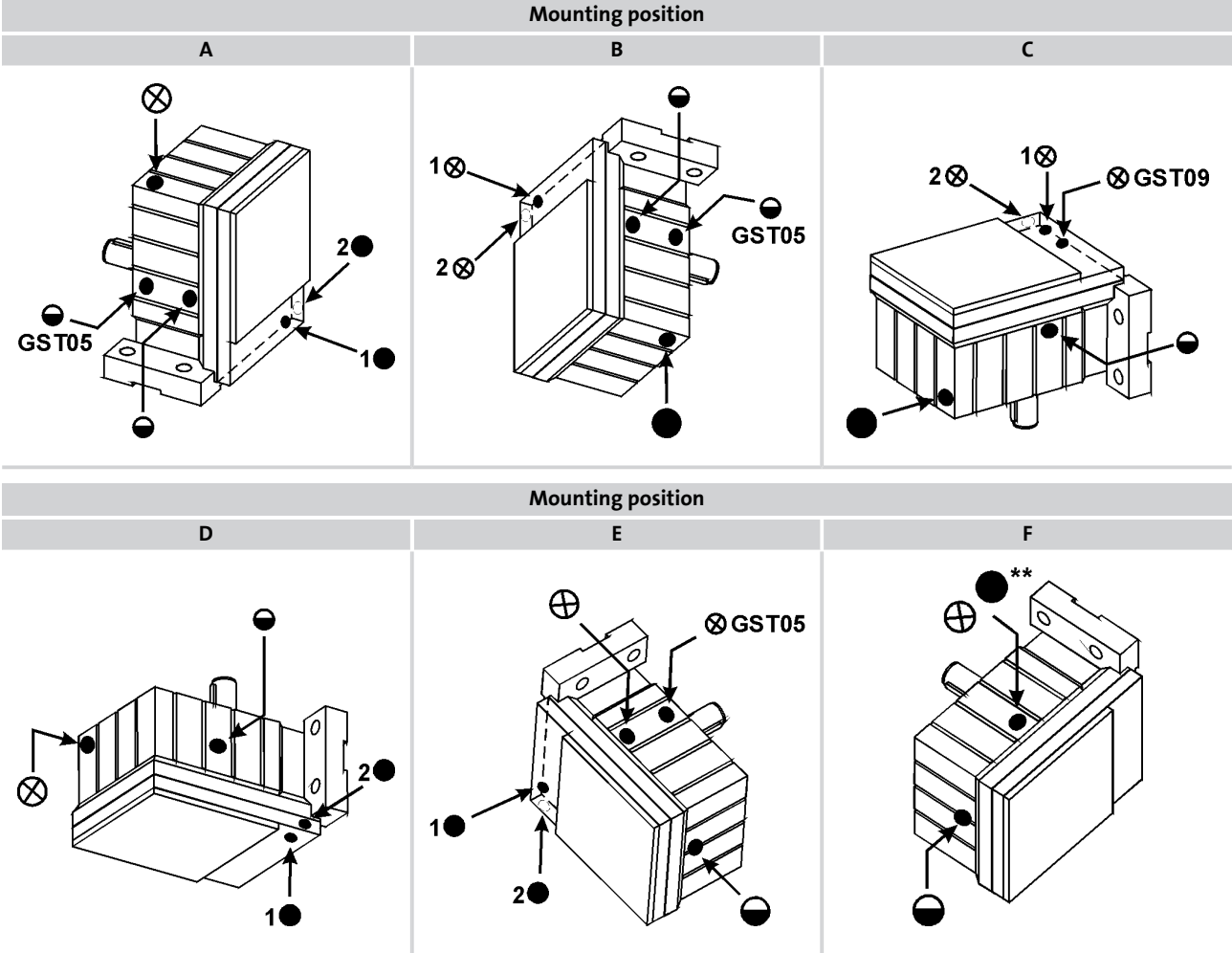
GST05...14-3





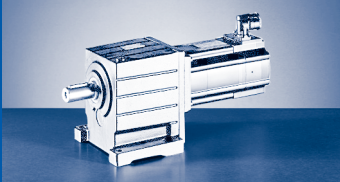
**Position of ventilation, sealing elements and oil control**

**GST05...09-1**



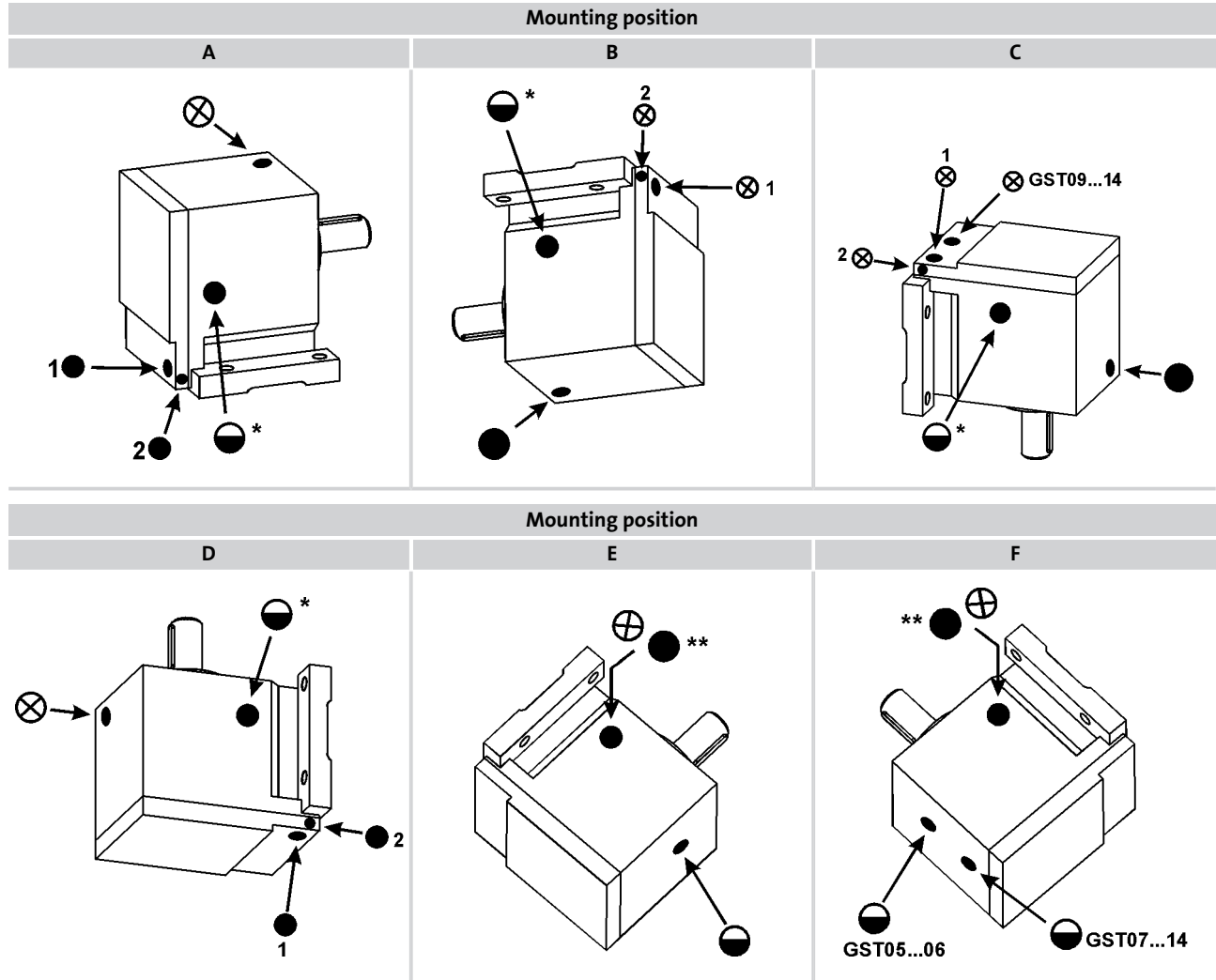
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ⊖ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GST05-1A □□□ 14LC□□



**Position of ventilation, sealing elements and oil control**

**GST05...14-2**



- ⊗ Ventilation/oil filler plug
- Oil drain plug
- Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GST05-2A □□□ 14LC□□





**Position of ventilation, sealing elements and oil control**

**GST05...14-3**

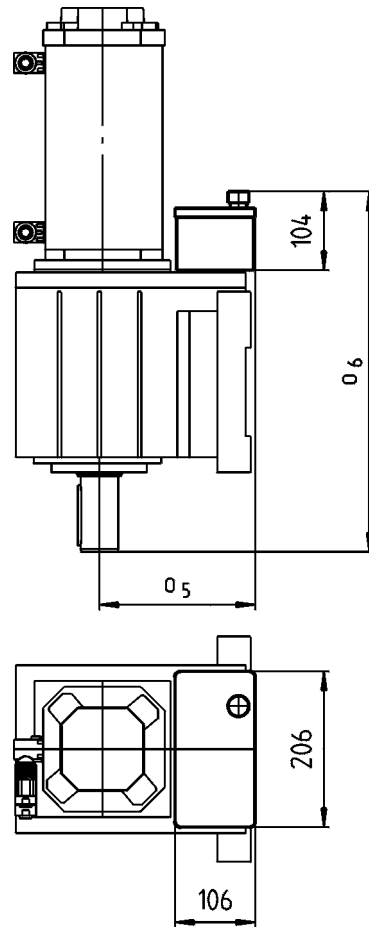
Mounting position		
A	B	C
Mounting position		
D	E	F

- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ◐ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GST07-3A □□□ 14LC□□



Compensation reservoir for mounting position C



GST□□-2A...		14LC□□ <sup>1)</sup>	17NC□□ <sup>1)</sup>	19SC□□ <sup>1)</sup>	21XC□□ <sup>1)</sup>	GST□□-2S...		12□C□□	14□C□□	19□C□□
GST09...	o <sub>5</sub>	206		226	245	GST09...	o <sub>5</sub>	206		245
	o <sub>6</sub>	477					o <sub>6</sub>	477		
GST11...	o <sub>5</sub>	208		230	254	GST11...	o <sub>5</sub>	208		254
	o <sub>6</sub>	536		540			o <sub>6</sub>	536		540
GST14...	o <sub>5</sub>			252	282	GST14...	o <sub>5</sub>			282
	o <sub>6</sub>			640			o <sub>6</sub>			640

<sup>1)</sup> Connector/terminal box position 4 is not permitted.



**GST□□-1S VBR...RSO B0**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST04...	7		8	10		11	13							
GST05...	9		10	12		13		15			18			21
GST06...	14		15	16	17	18	20	19			23			26
GST07...				26	27	28	30	29			32			35
GST09...								45			48			51

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST06...	25		29		34		39							
GST07...	34		39		44		49		51		58			68
GST09...	50		55		59		64		66		73			83

**GST□□-1S VCR...RSO B0**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST04...	6		7	9	10	11	13							
GST05...	8		9	11		12		14			17			20
GST06...	12		13	15	16			18			21			24
GST07...				23	24	25	27	26			29			32
GST09...								40			43			47

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST06...	23		28		32		37							
GST07...	31		36		41		46		48		55			65
GST09...	45		50		55		60		62		69			79

Note additional weights.  
Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GST [kg]

### GST□□-2S VAR/VBR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST03...	4	5	6											
GST04...	9		10	11	12	13	15							
GST05...	12	13		15	16	17	19	18		22			25	
GST06...	20	21		23	24	25		26		29			32	
GST07...				38	39	40	42	41		44			48	
GST09...								69		72			76	
	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST06...	31		36		40		45							
GST07...	47		51		56		61		63		70		80	
GST09...	75		79		84		89		91		98		108	
GST11...	121		126		130		135		137		144		154	
GST14...								227		234		244		

### GST□□-2S VCR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST03...	4	5												
GST04...	8		9	11	12	13	14							
GST05...	11	12		14		15		17		20			23	
GST06...	18	19		20	21	22	24	23		26			29	
GST07...				34	35	36		37		40			43	
GST09...								61		64			67	
	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST06...	28		33		38		42							
GST07...	42		47		52		56		59		66		76	
GST09...	66		71		75		80		82		89		99	
GST11...	106		111		115		120		122		129		139	
GST14...								199		206		216		

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



**GST□□-3S VAR/VBR...RSO B0**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST05...	15		16	18	19	21								
GST06...	25		26	28	29	31								
GST07...	43		44	45	46	47		49			52			55
GST09...	75		76	78	79	80	82	81			84			87
GST11...				133		134		136			139			142
GST14...								243			246			249

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST09...	86		91		95		100							
GST11...	141		146		150		155		158		165			175
GST14...	248		253		257		262		264		271			281

**GST□□-3S VCR...RSO B0**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST05...	13		14	16	17	18	20							
GST06...	22		23	25	26	27	28							
GST07...	38		39	41	42	43	45	44			47			51
GST09...	67		68	69	70	71	73	72			76			79
GST11...				118		119		121			124			127
GST14...								215			218			221

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GST09...	78		82		87		92							
GST11...	126		131		135		140		143		150			160
GST14...	220		225		229		234		236		243			253

Note additional weights.  
Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GST [kg]

### GST□□-1A VBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	10	15	16						
GST05...	14	18	20	24		26			
GST06...	18	22	24	29		30		36	
GST07...	28	32	33	38		40		45	
GST09...				52		54		60	

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	39									
GST07...	48		69		72		86		89	
GST09...	63		83		86		101		104	

### GST□□-1A VCR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	10	14	16						
GST05...	13	17	19	23		25			
GST06...	17	21	22	27		29		35	
GST07...	25	29	30	35		36		42	
GST09...				48		50		56	

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	37									
GST07...	45		66		69		83		86	
GST09...	58		78		82		96		100	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



**GST□□-2A VAR/VBR...RSO B0**

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	12	17	18						
GST05...	18	22	23		27		29		
GST06...	25	29	30		35		37		43
GST07...	40	44	46		50		52		58
GST09...					77		79		85
GST11...					123		125		131
GST14...									

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	45									
GST07...	60		81		84		98		101	
GST09...	87		107		111		125		129	
GST11...	133		153		156		170		173	
GST14...			245		248		259		263	

**GST□□-2A VCR...RSO B0**

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	12	16	18						
GST05...	16	20	22		26		28		
GST06...	22	26	28		32		34		40
GST07...	36	40	41		45		47		53
GST09...					68		70		76
GST11...					108		110		116
GST14...									

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	43									
GST07...	56		77		80		93		97	
GST09...	79		99		102		117		120	
GST11...	118		138		141		155		158	
GST14...			217		220		231		235	

Note additional weights.  
Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GST [kg]

### GST□□-3A VAR/VBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST05...	18	23	25						
GST06...	28	33	35						
GST07...	48	52	54		58		60		
GST09...	80	84	85		90		92		98
GST11...	134	138	140		144		146		152
GST14...					250		252		258

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST09...	100									
GST11...	155		175		179		192		196	
GST14...	261		281		284		299		302	

### GST□□-3A VCR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST05...	17	21	23						
GST06...	26	30	32						
GST07...	44	48	49		53		55		
GST09...	71	75	77		82		83		89
GST11...	119	123	125		129		131		137
GST14...					222		224		230

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST09...	92									
GST11...	140		160		164		177		181	
GST14...	233		253		256		271		274	

Note additional weights.  
Weights in [kg] with oil capacity for mounting position A, all given as approximate values





### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8			0.9							
...P2				0.5			1.2							
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2			0.3							

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
...P1	1.9						1.5							
...P2	3.1									4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN							0.3							

### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6			0.7		

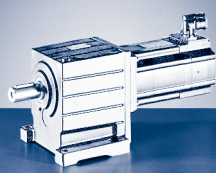
  

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
...P1/P5	2.4		4.8			5.0				
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0			1.1				

### Additional weights gearbox

	Flange
	VAL/VCK
GST03...	0.8
GST04...	1.0
GST05...	1.5
GST06...	3.0
GST07...	4.0
GST09...	7.0
GST11...	10.5
GST14...	15.5

Weights in [kg]



# GST [ i ]

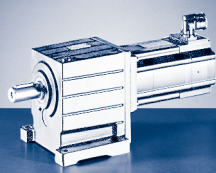
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GST03-2	2.597	896	345
	3.413	1280	375
	4.368	1376	315
	5.312	1344	253
	5.965	1372	230
	6.982	1920	275
	7.840	1960	250
	8.935	2064	231
	10.033	2107	210
	11.429	2640	231
	12.833	2695	210
	14.836	2448	165
	16.660	2499	150
	19.013	2928	154
	21.350	2989	140
	24.595	2976	121
	27.618	3038	110
	32.000	3168	99
	35.933	3234	90
	41.455	4560	110
46.550	4655	100	
52.909	4656	88	
59.413	4753	80	
GST04-1	1.600	40	25
	2.048	43	21
	2.240	56	25
	2.857	60	21
	3.500	63	18
	4.400	66	15
	5.667	68	12
	7.182	79	11
	9.000	81	9
	11.857	83	7
GST04-2	2.956	1330	450
	3.333	1400	420
	4.053	1520	375
	4.571	1600	350
	5.187	1634	315
	5.850	1720	294
	6.400	2240	350
	7.040	1760	250
	8.000	1800	225
	9.010	1892	210
	9.856	2464	250
	11.200	2520	225



►  $i_g = z_g / z_t$

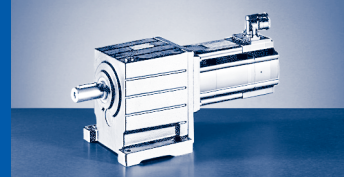
	i	$z_g$	$z_t$
GST04-2	12.571	2640	210
	14.286	2700	189
	15.400	2772	180
	17.500	2835	162
	19.360	2904	150
	22.000	2970	135
	24.933	2992	120
	28.333	3060	108
	31.600	3476	110
	35.909	3555	99
	39.600	3564	90
	45.000	3645	81
	52.171	3652	70
	59.286	3735	63
GST05-1	1.600	40	25
	2.048	43	21
	2.240	56	25
	2.857	60	21
	3.500	63	18
	4.556	82	
	5.667	68	12
	7.333	88	
	8.900	89	10
	11.375	91	8
	GST05-2	2.956	1330
3.333		1400	420
4.053		1520	375
4.571		1600	350
5.187		1634	315
5.850		1720	294
6.400		2240	350
7.238		2280	315
8.163		2400	294
9.010		1892	210
10.000		2520	252
11.200			225
13.016		3280	252
14.356		2584	180
16.190		2720	168
17.500		2835	162
20.044		3608	180
22.778		3690	162
24.933		2992	120
28.333		3060	108
32.267	3872	120	



# GST [ i ]

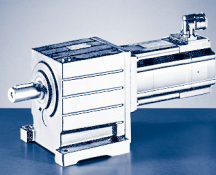
►  $i_g = z_g / z_t$

	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GST05-2</b>	36.667	3960	108
	39.160	3916	100
	44.500	4005	90
	50.050	4004	80
	56.875	4095	72
<b>GST05-3</b>	36.267	152320	4200
	46.259	163200	3528
	56.667	171360	3024
	63.467		2700
	71.238	179520	2520
	80.952	183600	2268
	91.746	184960	2016
	99.167	192780	1944
	116.277	214880	1848
	124.667	201960	1620
	145.714	220320	1512
	160.556	208080	1296
	179.067	236368	1320
	191.973	225760	1176
	224.400	242352	1080
	255.000	247860	972
	295.638	248336	840
335.952	253980	756	
<b>GST06-1</b>	1.600	40	25
	2.048	43	21
	2.240	56	25
	2.857	60	21
	3.500	63	18
	4.556	82	
	5.667	68	12
	7.333	88	
	8.900	89	10
	11.250	90	8
<b>GST06-2</b>	3.033	1365	450
	3.333	1400	420
	4.160	1560	375
	4.571	1600	350
	5.324	1677	315
	5.850	1720	294
	6.400	2240	350
	7.040	1760	250
	8.163	2400	294
	9.010	1892	210
	10.000	2520	252
	11.200		225



►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GST06-2	12.571	2640	210
	14.286	2700	189
	15.400	2772	180
	17.500	2835	162
	20.044	3608	180
	22.778	3690	162
	24.933	2992	120
	28.333	3060	108
	32.267	3872	120
	36.667	3960	108
	39.160	3916	100
	44.500	4005	90
	49.500	3960	80
	56.250	4050	72
GST06-3	39.200	158760	4050
	44.000	166320	3780
	51.022	206640	4050
	53.900	174636	3240
	67.760	182952	2700
	70.156	227304	3240
	80.952	183600	2268
	87.267	188496	2160
	99.167	192780	1944
	109.707	197472	1800
	124.667	201960	1620
	141.289	203456	1440
	160.556	208080	1296
	179.067	236368	1320
	203.485	241740	1188
	231.733	305888	1320
	255.000	247860	972
	290.400	313632	1080
	330.000	320760	972
382.590	321376	840	
434.762	328680	756	
GST07-1	1.625	39	24
	2.000	42	21
	2.240	56	25
	2.857	60	21
	3.500	63	18
	4.556	82	
	5.583	67	12
	7.333	88	
	8.900	89	
	11.250	90	8



# GST [ i ]

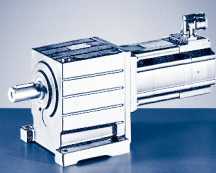
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GST07-2	3.048	1326	435
	3.350	1360	406
	4.225	1521	360
	4.643	1560	336
	5.200	1638	315
	5.714	1680	294
	6.400	2240	350
	7.150	1716	240
	8.125	1755	216
	8.800	1848	210
	9.856	2464	250
	11.200	2520	225
	12.571	2640	210
	14.286	2700	189
	15.400	2772	180
	17.500	2835	162
	20.044	3608	180
	22.778	3690	162
	24.567	2948	120
	27.917	3015	108
	32.267	3872	120
	36.667	3960	108
	39.160	3916	100
	44.500	4005	90
49.500	3960	80	
56.250	4050	72	
GST07-3	39.200	158760	4050
	44.000	166320	3780
	51.022	206640	4050
	53.900	174636	3240
	65.079	221400	3402
	70.156	227304	3240
	79.762	180900	2268
	85.983	185724	2160
	97.708	189945	1944
	111.915	241736	2160
	127.176	247230	1944
	139.211	200464	1440
	158.194	205020	1296
	180.156	259424	1440
	204.722	265320	1296
	236.622	340736	1440
	248.458	268335	1080
	268.889	348480	1296
326.333	352440	1080	



▶  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GST07-3	367.033	352352	960
	417.083	360360	864
GST09-1	1.560	39	25
	2.048	43	21
	2.333	56	24
	2.810	59	21
	3.444	62	18
	4.667	84	
	5.667	68	12
	7.333	88	
	8.900	89	
	11.250	90	8
GST09-2	4.056	1521	375
	4.457	1560	350
	5.324	1677	315
	5.850	1720	294
	6.667	2240	336
	7.305	2301	315
	8.027	2360	294
	9.010	1892	210
	10.267	2464	240
	11.667	2520	216
	12.362	2596	210
	14.048	2655	189
	15.156	2728	180
	17.222	2790	162
	20.533	3696	180
	23.333	3780	162
	24.933	2992	120
	28.333	3060	108
	32.267	3872	120
	36.667	3960	108
39.160	3916	100	
44.500	4005	90	
49.500	3960	80	
56.250	4050	72	
GST09-3	40.136	159300	3969
	43.267	163548	3780
	49.167	167265	3402
	53.044	171864	3240
	60.278	175770	2916
	71.867	232848	3240
	81.667	238140	2916
	93.541	303072	3240
99.167	192780	1944	

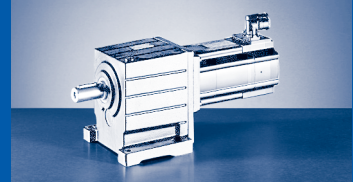


# GST [ i ]

▶  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GST09-3	113.585	245344	2160
	129.074	250920	1944
	141.289	203456	1440
	160.556	208080	1296
	182.844	263296	1440
	207.778	269280	1296
	236.622	340736	1440
	252.167	272340	1080
	268.889	348480	1296
	326.333	352440	1080
	363.000	348480	960
	412.500	356400	864
GST11-2	4.056	1521	375
	4.457	1560	350
	5.324	1677	315
	5.850	1720	294
	6.400	2240	350
	6.864	1716	250
	7.800	1755	225
	9.010	1892	210
	9.856	2464	250
	11.200	2520	225
	12.571	2640	210
	14.286	2700	189
	15.400	2772	180
	17.500	2835	162
	20.289	3652	180
	23.056	3735	162
	24.933	2992	120
	28.333	3060	108
	32.267	3872	120
	36.667	3960	108
39.160	3916	100	
44.500	4005	90	
49.500	3960	80	
56.250	4050	72	
GST11-3	40.816	162000	3969
	44.000	166320	3780
	50.000	170100	3402
	57.968	219120	3780
	61.250	178605	2916
	71.011	230076	3240
	80.694	235305	2916
	87.267	188496	2160
99.167	192780	1944	





$$\blacktriangleright i_g = z_g / z_t$$

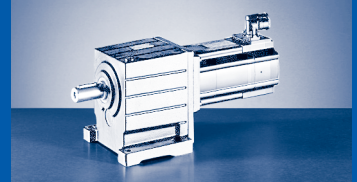
	i	$z_g$	$z_t$
GST11-3	112.933	243936	2160
	129.074	250920	1944
	146.993	317504	2160
	158.194	205020	1296
	180.156	259424	1440
	207.778	269280	1296
	236.622	340736	1440
	252.167	272340	1080
	268.889	348480	1296
	326.333	352440	1080
	363.000	348480	960
	412.500	356400	864
GST14-2	4.225	1521	360
	4.643	1560	336
	5.200	1638	315
	5.714	1680	294
	6.286	2200	350
	7.150	1716	240
	8.027	2360	294
	8.800	1848	210
	9.841	2480	252
	11.000	2475	225
	12.362	2596	210
	14.048	2655	189
	15.156	2728	180
	17.222	2790	162
	20.044	3608	180
	22.778	3690	162
	24.567	2948	120
	27.917	3015	108
	32.267	3872	120
	36.667	3960	108
39.160	3916	100	
44.500	4005	90	
49.500	3960	80	
56.250	4050	72	
GST14-3	40.185	156240	3888
	42.580	160952	3780
	48.386	164610	3402
	53.148	206640	3888
	59.321	172980	2916
	69.042	223696	3240
	78.457	228780	2916
	93.541	303072	3240
96.157	186930	1944	



# GST [ i ]

►  $i_g = z_g / z_t$

	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GST14-3</b>	<b>106.296</b>	309960	2916
	<b>130.278</b>	253260	1944
	<b>139.211</b>	200464	1440
	<b>158.194</b>	205020	1296
	<b>171.111</b>	332640	1944
	<b>204.722</b>	265320	1296
	<b>236.622</b>	340736	1440
	<b>248.458</b>	268335	1080
	<b>268.889</b>	348480	1296
	<b>326.333</b>	352440	1080
	<b>363.000</b>	348480	960
	<b>412.500</b>	356400	864





# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 45 \text{ Nm}$

GST03-2S				06CC41	06FC41	06IC41
				...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
2.597	18	0.26	$M_2$		3	4
			c		4.3	3.4
			$n_{2 \text{ Eck}}$		1559	1559
			$n_{2 \text{ th}}$		1559	1559
3.413	19	0.17	$M_2$		4	5
			c		3.5	2.8
			$n_{2 \text{ Eck}}$		1187	1187
			$n_{2 \text{ th}}$		1187	1187
4.368	21	0.12	$M_2$	2	5	6
			c	5.9	3.0	2.4
			$n_{2 \text{ Eck}}$	927	927	927
			$n_{2 \text{ th}}$	927	927	927
5.312	27	0.18	$M_2$		6	8
			c		3.1	2.5
			$n_{2 \text{ Eck}}$		762	762
			$n_{2 \text{ th}}$		762	740
5.965	29	0.17	$M_2$	3	7	9
			c	5.9	3.0	2.4
			$n_{2 \text{ Eck}}$	679	679	679
			$n_{2 \text{ th}}$	679	679	653
6.982	30	0.12	$M_2$	4	8	10
			c	5.2	2.6	2.1
			$n_{2 \text{ Eck}}$	580	580	580
			$n_{2 \text{ th}}$	580	580	580
7.840	32	0.12	$M_2$	4	9	11
			c	5.0	2.5	2.0
			$n_{2 \text{ Eck}}$	517	517	517
			$n_{2 \text{ th}}$	517	517	517
8.935	33	0.09	$M_2$	5	10	13
			c	4.5	2.3	1.8
			$n_{2 \text{ Eck}}$	453	453	453
			$n_{2 \text{ th}}$	453	453	453
10.033	35	0.09	$M_2$	6	12	14
			c	4.3	2.1	1.7
			$n_{2 \text{ Eck}}$	404	404	404
			$n_{2 \text{ th}}$	404	404	404
11.429	35	0.06	$M_2$	7	13	17
			c	3.8	1.9	1.5
			$n_{2 \text{ Eck}}$	354	354	354
			$n_{2 \text{ th}}$	354	354	354
12.833	38	0.06	$M_2$	7	15	19
			c	3.6	1.8	1.5
			$n_{2 \text{ Eck}}$	316	316	316
			$n_{2 \text{ th}}$	316	316	316
14.836	39	0.04	$M_2$	8	17	22
			c	3.2	1.6	1.3
			$n_{2 \text{ Eck}}$	273	273	273
			$n_{2 \text{ th}}$	273	273	273
16.660	41	0.04	$M_2$	10	19	24
			c	3.5	1.7	1.4
			$n_{2 \text{ Eck}}$	243	243	243
			$n_{2 \text{ th}}$	243	243	243

$M \dots [\text{Nm}]$   
 $n \dots [\text{r/min}]$   
 $J \dots [\text{kgcm}^2]$

$P \dots [\text{kW}]$   
 $I \dots [\text{A}]$   
 $i \dots [-]$   
 $c \dots [-]$



$M_{2GN} \leq 45 \text{ Nm}$

GST03-2S				06CC41	06FC41	06IC41
				...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
19.013	42	0.03	$M_2$	11	22	28
			c	3.1	1.5	1.2
			$n_{2 \text{ Eck}}$	213	213	213
			$n_{2 \text{ th}}$	213	213	213
21.350	44	0.03	$M_2$	12	25	31
			c	2.9	1.5	1.2
			$n_{2 \text{ Eck}}$	190	190	190
			$n_{2 \text{ th}}$	190	190	190
24.595	45	0.02	$M_2$	14	29	36
			c	2.6	1.3	1.0
			$n_{2 \text{ Eck}}$	165	165	165
			$n_{2 \text{ th}}$	165	165	165
27.618	45	0.02	$M_2$	16	32	
			c	2.3	1.1	
			$n_{2 \text{ Eck}}$	147	147	
			$n_{2 \text{ th}}$	147	147	
32.000	45	0.01	$M_2$	18		
			c	2.0		
			$n_{2 \text{ Eck}}$	127		
			$n_{2 \text{ th}}$	127		
35.933	45	0.01	$M_2$	21		
			c	1.8		
			$n_{2 \text{ Eck}}$	113		
			$n_{2 \text{ th}}$	113		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 25 \text{ Nm}$

GST04-1S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
1.600	19	0.27	$M_2$			2	4	5	6	7
			c			5.8	3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$			2531	2531	2344	2531	2531
			$n_{2 \text{ th}}$			2531	2380	2271	2179	2104
2.048	23	0.19	$M_2$			3	5	6	8	9
			c			5.4	3.5	2.7	2.1	1.8
			$n_{2 \text{ Eck}}$			1978	1978	1831	1978	1978
			$n_{2 \text{ th}}$			1978	1978	1831	1978	1867
2.240	25	0.17	$M_2$			3	5	7	8	10
			c			5.4	3.5	2.7	2.1	1.8
			$n_{2 \text{ Eck}}$			1808	1808	1674	1808	1808
			$n_{2 \text{ th}}$			1808	1808	1674	1808	1770
2.857	25	0.13	$M_2$		3	4	6	9	11	13
			c		5.3	4.3	2.8	2.1	1.7	1.4
			$n_{2 \text{ Eck}}$		1418	1418	1418	1313	1418	1418
			$n_{2 \text{ th}}$		1418	1418	1418	1313	1418	1418
3.500	25	0.10	$M_2$		4	5	8	11	13	15
			c		4.3	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		1157	1157	1157	1071	1157	1157
			$n_{2 \text{ th}}$		1157	1157	1157	1071	1157	1157
4.400	25	0.07	$M_2$		5	6				
			c		3.5	2.8				
			$n_{2 \text{ Eck}}$		921	921				
			$n_{2 \text{ th}}$		920	920				
5.667	25	0.05	$M_2$	3	7	8				
			c	5.4	2.7	2.1				
			$n_{2 \text{ Eck}}$	715	715	715				
			$n_{2 \text{ th}}$	715	715	715				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 71 \text{ Nm}$

GST04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
2.956	39	0.34	$M_2$				6	9	11	13
			c				4.3	3.2	2.6	2.2
			$n_{2 \text{ Eck}}$				1370	1269	1370	1370
			$n_{2 \text{ th}}$				1186	1127	1077	1041
3.333	42	0.32	$M_2$				7	10	12	14
			c				4.0	3.1	2.4	2.1
			$n_{2 \text{ Eck}}$				1215	1125	1215	1215
			$n_{2 \text{ th}}$				1041	989	945	912
4.053	45	0.31	$M_2$			6	9	12	15	18
			c			5.5	3.6	2.7	2.2	1.8
			$n_{2 \text{ Eck}}$			999	999	925	999	999
			$n_{2 \text{ th}}$			997	930	887	850	805
4.571	48	0.30	$M_2$			6	10	14	17	20
			c			5.2	3.4	2.6	2.0	1.7
			$n_{2 \text{ Eck}}$			886	886	820	886	886
			$n_{2 \text{ th}}$			876	816	778	746	694
5.187	50	0.22	$M_2$		6	7	11	15	19	23
			c		6.0	4.8	3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$		781	781	781	723	781	781
			$n_{2 \text{ th}}$		781	781	781	723	753	689
5.850	53	0.22	$M_2$		7	8	13	17	21	25
			c		5.6	4.5	2.9	2.2	1.8	1.5
			$n_{2 \text{ Eck}}$		692	692	692	641	692	692
			$n_{2 \text{ th}}$		692	692	692	641	648	594
6.400	55	0.19	$M_2$		7	9	14	19	23	28
			c		5.3	4.3	2.8	2.1	1.7	1.4
			$n_{2 \text{ Eck}}$		633	633	633	586	633	633
			$n_{2 \text{ th}}$		633	633	633	586	600	553
7.040	57	0.26	$M_2$		8	10	15	21	26	31
			c		5.0	4.0	2.6	2.0	1.6	1.3
			$n_{2 \text{ Eck}}$		575	575	575	533	575	575
			$n_{2 \text{ th}}$		565	545	506	482	431	400
8.000	59	0.26	$M_2$		9	11	18	24	29	35
			c		4.5	3.6	2.4	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		506	506	506	469	506	506
			$n_{2 \text{ th}}$		490	472	438	405	364	339
9.010	63	0.19	$M_2$		10	13	20	27	33	39
			c		4.3	3.4	2.2	1.7	1.4	1.1
			$n_{2 \text{ Eck}}$		450	450	450	416	450	450
			$n_{2 \text{ th}}$		450	450	450	412	368	341
9.856	65	0.17	$M_2$		11	14	22	29	36	43
			c		4.1	3.2	2.1	1.6	1.3	1.1
			$n_{2 \text{ Eck}}$		411	411	411	381	411	411
			$n_{2 \text{ th}}$		411	411	411	380	344	321
11.200	60	0.17	$M_2$		13	16	25	34	41	
			c		3.3	2.6	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		362	362	362	335	362	
			$n_{2 \text{ th}}$		362	362	348	306	278	
12.571	69	0.13	$M_2$		14	18	28	38	46	
			c		3.4	2.7	1.8	1.4	1.1	
			$n_{2 \text{ Eck}}$		322	322	322	298	322	
			$n_{2 \text{ th}}$		322	322	322	298	291	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 71 \text{ Nm}$

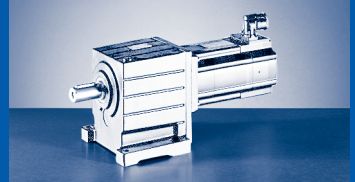
GST04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
14.286	61	0.12	$M_2$	8	16	21	32	43		
			c	5.3	2.6	2.1	1.4	1.0		
			$n_2$ Eck	284	284	284	284	263		
			$n_2$ th	284	284	284	280	254		
15.400	70	0.10	$M_2$		18	22	34	46	57	
			c		3.2	2.5	1.7	1.3	1.0	
			$n_2$ Eck		263	263	263	244	263	
			$n_2$ th		263	263	263	244	263	
17.500	62	0.10	$M_2$	10	20	25	39			
			c	4.9	2.5	2.0	1.3			
			$n_2$ Eck	231	231	231	231			
			$n_2$ th	231	231	231	231			
19.360	70	0.06	$M_2$	11	22	28				
			c	5.1	2.6	2.0				
			$n_2$ Eck	209	209	209				
			$n_2$ th	209	209	209				
22.000	62	0.06	$M_2$	12	25	32				
			c	4.0	2.0	1.6				
			$n_2$ Eck	184	184	184				
			$n_2$ th	184	184	184				
24.933	71	0.04	$M_2$	14	29	36				
			c	4.0	2.0	1.6				
			$n_2$ Eck	162	162	162				
			$n_2$ th	162	162	162				
28.333	63	0.04	$M_2$	16	33	41				
			c	3.1	1.6	1.3				
			$n_2$ Eck	143	143	143				
			$n_2$ th	143	143	143				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



**GST [Nm]**  
GST□□-□S (MCS)





# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 54 \text{ Nm}$

GST05-1S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
1.600	45	0.76	$M_2$						6	7
			c					5.4	4.5	
			$n_{2 \text{ Eck}}$					2531	2531	
			$n_{2 \text{ th}}$					2236	2168	
2.048	51	0.55	$M_2$					6	7	9
			c					6.0	4.8	4.0
			$n_{2 \text{ Eck}}$					1831	1978	1978
			$n_{2 \text{ th}}$					1831	1862	1809
2.048	53	0.55	$M_2$							
			c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
2.240	53	0.48	$M_2$					7	8	10
			c					5.7	4.5	3.8
			$n_{2 \text{ Eck}}$					1674	1808	1808
			$n_{2 \text{ th}}$					1674	1748	1699
2.857	53	0.35	$M_2$				6	8	10	12
			c				5.9	4.5	3.6	3.0
			$n_{2 \text{ Eck}}$				1418	1313	1418	1418
			$n_{2 \text{ th}}$				1418	1313	1418	1418
3.500	41	0.27	$M_2$			5				
			c			5.7				
			$n_{2 \text{ Eck}}$			1157				
			$n_{2 \text{ th}}$			1157				
3.500	54	0.27	$M_2$				8	10	13	15
			c				4.9	3.7	3.0	2.5
			$n_{2 \text{ Eck}}$				1157	1071	1157	1157
			$n_{2 \text{ th}}$				1157	1071	1157	1157
4.556	42	0.18	$M_2$		5	7				
			c		5.7	4.5				
			$n_{2 \text{ Eck}}$		889	889				
			$n_{2 \text{ th}}$		889	889				
4.556	54	0.18	$M_2$				10	14	17	20
			c				3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$				889	823	889	889
			$n_{2 \text{ th}}$				889	823	889	889
5.667	44	0.13	$M_2$		6	8				
			c		4.7	3.8				
			$n_{2 \text{ Eck}}$		715	715				
			$n_{2 \text{ th}}$		715	715				
5.667	54	0.13	$M_2$				13	17	21	25
			c				3.0	2.3	1.8	1.5
			$n_{2 \text{ Eck}}$				715	662	715	715
			$n_{2 \text{ th}}$				715	662	715	715
7.333	46	0.06	$M_2$		8	11				
			c		3.8	3.0				
			$n_{2 \text{ Eck}}$		552	552				
			$n_{2 \text{ th}}$		552	552				
8.900	42	0.06	$M_2$	5	10	13				
			c	5.8	2.9	2.3				
			$n_{2 \text{ Eck}}$	455	455	455				
			$n_{2 \text{ th}}$	455	455	455				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 54 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST05-1S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
8	7	15	12	12	21	17	$c$	0.76	45	1.600
4.7	4.7	2.8	2.8	2.8	1.9	1.9	$n_{2 \text{ Eck}}$			
1219	2531	938	1875	2203	1219	2531	$n_{2 \text{ th}}$			
1219	2186	938	1875	1982	1219	1771	$M_2$			
							$c$	0.55	51	2.048
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
11	8	20	16	15	27	22	$M_2$			
4.3	4.4	2.6	2.6	2.6	1.8	1.7	$c$	0.55	53	2.048
952	1978	733	1465	1722	952	1978	$n_{2 \text{ Eck}}$			
952	1834	733	1465	1674	952	1470	$n_{2 \text{ th}}$			
12	9	22	17	16	30	24	$M_2$			
4.0	4.0	2.4	2.4	2.4	1.6	1.6	$c$	0.48	53	2.240
871	1808	670	1339	1574	871	1808	$n_{2 \text{ Eck}}$			
871	1712	670	1339	1567	871	1351	$n_{2 \text{ th}}$			
15	12	28	22	21	38	31	$M_2$			
3.1	3.2	1.9	1.9	1.9	1.3	1.2	$c$	0.35	53	2.857
683	1418	525	1050	1234	683	1418	$n_{2 \text{ Eck}}$			
683	1418	525	1050	1234	683	1120	$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.27	41	3.500
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
19	15	34	27	26	47	38	$M_2$			
2.6	2.6	1.6	1.6	1.6	1.1	1.0	$c$	0.27	54	3.500
557	1157	429	857	1007	557	1157	$n_{2 \text{ Eck}}$			
557	1157	429	857	1007	557	969	$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.18	42	4.556
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.18	54	4.556
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.13	44	5.667
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.13	54	5.667
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.06	46	7.333
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							$c$	0.06	42	8.900
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 165 \text{ Nm}$

GST05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
2.956	63	0.99	$M_2$					9	11	13
			c				5.2	4.2	3.5	
			$n_{2 \text{ Eck}}$				1269	1370	1370	
			$n_{2 \text{ th}}$				1029	985	953	
3.333	78	0.94	$M_2$					10	12	14
			c				5.7	4.6	3.9	
			$n_{2 \text{ Eck}}$				1125	1215	1215	
			$n_{2 \text{ th}}$				928	889	860	
4.053	81	0.90	$M_2$					12	14	17
			c				4.9	3.9	3.3	
			$n_{2 \text{ Eck}}$				925	999	999	
			$n_{2 \text{ th}}$				869	832	806	
4.571	91	0.86	$M_2$					13	16	19
			c				4.9	3.9	3.3	
			$n_{2 \text{ Eck}}$				820	886	886	
			$n_{2 \text{ th}}$				770	738	714	
5.187	90	0.64	$M_2$			11	15	19	22	
			c			5.6	4.3	3.4	2.9	
			$n_{2 \text{ Eck}}$			781	723	781	781	
			$n_{2 \text{ th}}$			755	721	693	672	
5.850	101	0.61	$M_2$			12	17	21	25	
			c			5.6	4.2	3.4	2.9	
			$n_{2 \text{ Eck}}$			692	641	692	692	
			$n_{2 \text{ th}}$			669	639	614	596	
6.400	105	0.53	$M_2$			14	19	23	27	
			c			5.3	4.0	3.2	2.7	
			$n_{2 \text{ Eck}}$			633	586	633	633	
			$n_{2 \text{ th}}$			627	586	576	559	
7.238	108	0.40	$M_2$			16	21	26	31	
			c			4.8	3.7	2.9	2.5	
			$n_{2 \text{ Eck}}$			560	518	560	560	
			$n_{2 \text{ th}}$			560	518	560	560	
8.163	115	0.39	$M_2$			18	24	30	35	
			c			4.5	3.5	2.8	2.3	
			$n_{2 \text{ Eck}}$			496	459	496	496	
			$n_{2 \text{ th}}$			496	459	496	496	
9.010	119	0.54	$M_2$			19	26	33	39	
			c			4.2	3.2	2.6	2.2	
			$n_{2 \text{ Eck}}$			450	416	450	450	
			$n_{2 \text{ th}}$			415	396	379	367	
10.000	114	0.30	$M_2$		14					
			c		5.7					
			$n_{2 \text{ Eck}}$		405					
			$n_{2 \text{ th}}$		405					
10.000	124	0.30	$M_2$			22	29	36	43	
			c			4.0	3.0	2.4	2.0	
			$n_{2 \text{ Eck}}$			405	375	405	405	
			$n_{2 \text{ th}}$			405	375	405	405	
11.200	128	0.46	$M_2$		16	24	33	41	48	
			c		5.6	3.7	2.8	2.2	1.9	
			$n_{2 \text{ Eck}}$		362	362	335	362	362	
			$n_{2 \text{ th}}$		362	337	322	309	294	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 165 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
15	12	28	23	21	39	31	c	0.99	63	2.956
3.7	3.7	2.2	2.2	2.2	1.5	1.4	$n_{2 \text{ Eck}}$			
660	1370	508	1015	1193	660	1370	$n_{2 \text{ th}}$			
660	961	508	861	863	660	708	$M_2$			
17	13	32	26	24	43	35	c	0.94	78	3.333
4.0	4.0	2.4	2.4	2.4	1.6	1.6	$n_{2 \text{ Eck}}$			
585	1215	450	900	1058	585	1215	$n_{2 \text{ th}}$			
585	868	450	779	781	585	659	$M_2$			
21	16	39	31	29	53	43	c	0.90	81	4.053
3.4	3.5	2.1	2.1	2.1	1.4	1.4	$n_{2 \text{ Eck}}$			
481	999	370	740	870	481	999	$n_{2 \text{ th}}$			
481	813	370	731	732	481	589	$M_2$			
24	19	44	35	33	60	49	c	0.86	91	4.571
3.4	3.4	2.1	2.0	2.1	1.4	1.3	$n_{2 \text{ Eck}}$			
427	886	328	656	771	427	886	$n_{2 \text{ th}}$			
427	720	328	647	649	427	521	$M_2$			
27	21	50	40	37	68	55	c	0.64	90	5.187
3.0	3.0	1.8	1.8	1.8	1.2	1.2	$n_{2 \text{ Eck}}$			
376	781	289	578	680	376	781	$n_{2 \text{ th}}$			
376	677	289	578	596	376	489	$M_2$			
31	24	56	45	42	76	62	c	0.61	101	5.850
3.0	3.0	1.8	1.8	1.8	1.2	1.2	$n_{2 \text{ Eck}}$			
333	692	256	513	603	333	692	$n_{2 \text{ th}}$			
333	601	256	513	528	333	433	$M_2$			
34	26	62	49	46	84	68	c	0.53	105	6.400
2.8	2.8	1.7	1.7	1.7	1.2	1.1	$n_{2 \text{ Eck}}$			
305	633	234	469	551	305	633	$n_{2 \text{ th}}$			
305	564	234	469	490	305	408	$M_2$			
38	30	70	56	52	95	77	c	0.40	108	7.238
2.6	2.6	1.5	1.5	1.6	1.1	1.0	$n_{2 \text{ Eck}}$			
269	560	207	415	487	269	560	$n_{2 \text{ th}}$			
269	560	207	414	487	269	407	$M_2$			
43	34	79	63	59			c	0.39	115	8.163
2.4	2.4	1.5	1.4	1.5			$n_{2 \text{ Eck}}$			
239	496	184	368	432			$n_{2 \text{ th}}$			
239	496	184	368	424			$M_2$			
47	37	87	70	65			c	0.54	119	9.010
2.3	2.3	1.4	1.4	1.4			$n_{2 \text{ Eck}}$			
216	450	167	333	391			$n_{2 \text{ th}}$			
216	371	166	300	301			$M_2$			
							c	0.30	114	10.000
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
53	41	97	77	73			$M_2$			
2.1	2.1	1.3	1.3	1.3			c	0.30	124	10.000
195	405	150	300	353			$n_{2 \text{ Eck}}$			
195	405	150	300	353			$n_{2 \text{ th}}$			
59	46	108	87	81			$M_2$			
2.0	2.0	1.2	1.2	1.2			c	0.46	128	11.200
174	362	134	268	315			$n_{2 \text{ Eck}}$			
174	301	134	238	239			$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 165 \text{ Nm}$

GST05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
13.016	119	0.18	$M_2$		14	18				
			c		5.7	4.5				
			$n_{2 \text{ Eck}}$		311	311				
			$n_{2 \text{ th}}$		311	311				
13.016	137	0.18	$M_2$				28	39	47	56
			c				3.4	2.6	2.1	1.7
			$n_{2 \text{ Eck}}$				311	288	311	311
			$n_{2 \text{ th}}$				311	288	311	311
14.356	110	0.13	$M_2$		16	20				
			c		4.7	3.8				
			$n_{2 \text{ Eck}}$		282	282				
			$n_{2 \text{ th}}$		282	282				
14.356	140	0.13	$M_2$				31	43	52	62
			c				3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$				282	261	282	282
			$n_{2 \text{ th}}$				282	261	282	282
16.190	124	0.13	$M_2$		18	23				
			c		5.4	4.3				
			$n_{2 \text{ Eck}}$		250	250				
			$n_{2 \text{ th}}$		250	250				
16.190	148	0.13	$M_2$				35	48	59	70
			c				3.4	2.6	2.0	1.7
			$n_{2 \text{ Eck}}$				250	232	250	250
			$n_{2 \text{ th}}$				250	232	250	250
17.500	142	0.27	$M_2$		19	25	38	52	64	76
			c		5.7	4.6	3.0	2.3	1.8	1.5
			$n_{2 \text{ Eck}}$		231	231	231	214	231	231
			$n_{2 \text{ th}}$		231	231	231	214	231	226
20.044	159	0.16	$M_2$		22	28	44	60	73	87
			c		5.6	4.5	2.9	2.2	1.8	1.5
			$n_{2 \text{ Eck}}$		202	202	202	187	202	202
			$n_{2 \text{ th}}$		202	202	202	187	202	202
22.778	144	0.16	$M_2$		26	32	50	68	84	99
			c		4.4	3.5	2.3	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		178	178	178	165	178	178
			$n_{2 \text{ th}}$		178	178	178	165	178	178
24.933	162	0.12	$M_2$		28	35	55	74	92	109
			c		4.6	3.6	2.4	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		162	162	162	150	162	162
			$n_{2 \text{ th}}$		162	162	162	150	162	162
28.333	147	0.12	$M_2$		32	40	63	85	104	
			c		3.6	2.9	1.9	1.4	1.2	
			$n_{2 \text{ Eck}}$		143	143	143	132	143	
			$n_{2 \text{ th}}$		143	143	143	132	143	
32.267	164	0.08	$M_2$		37	46				
			c		3.6	2.9				
			$n_{2 \text{ Eck}}$		126	126				
			$n_{2 \text{ th}}$		126	126				
36.667	148	0.08	$M_2$	20	42	53				
			c	5.7	2.8	2.3				
			$n_{2 \text{ Eck}}$	111	111	111				
			$n_{2 \text{ th}}$	110	110	110				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 165 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c			
							$n_2$ Eck	0.18	119	13.016
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.18	137	13.016
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.13	110	14.356
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.13	140	14.356
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.13	124	16.190
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.13	148	16.190
							$n_2$ th			
93	73						$M_2$ c			
1.5	1.6						$n_2$ Eck	0.27	142	17.500
111	231						$n_2$ th			
111	231						$M_2$ c			
							$n_2$ Eck	0.16	159	20.044
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.16	144	22.778
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.12	162	24.933
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.12	147	28.333
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.08	164	32.267
							$n_2$ th			
							$M_2$ c			
							$n_2$ Eck	0.08	148	36.667
							$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 165 \text{ Nm}$

GST05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
39.160	165	0.06	$M_2$	22	45	56				
			c	5.9	3.0	2.4				
			$n_{2 \text{ Eck}}$	103	103	103				
			$n_{2 \text{ th}}$	103	103	103				
44.500	149	0.06	$M_2$	25	51	64				
			c	5.2	2.6	2.1				
			$n_{2 \text{ Eck}}$	91	91	91				
			$n_{2 \text{ th}}$	91	91	91				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]





$M_{2GN} \leq 165 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.06	165	39.160
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.06	149	44.500
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

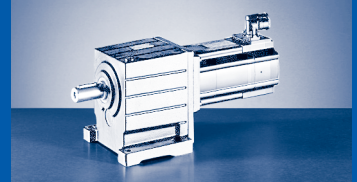
$M_{2GN} \leq 171 \text{ Nm}$

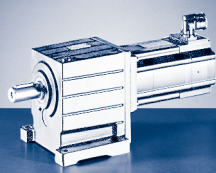
GST05-3S				06CC41	06FC41	06IC41	09DC41	09FC38
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$					
			$n_1$	4050	4050	4050	4050	3750
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5
			$P_N$	0.25	0.51	0.64	1.00	1.20
			$J_M$	0.17	0.25	0.33	1.13	1.53
36.267	134	0.20	$M_2$	20	41	51	79	107
			c	5.3	2.6	2.1	1.4	1.1
			$n_{2 \text{ Eck}}$	112	112	112	112	103
			$n_{2 \text{ th}}$	112	112	112	112	103
46.259	145	0.14	$M_2$	25	52	66	101	
			c	5.0	2.5	2.0	1.3	
			$n_{2 \text{ Eck}}$	88	88	88	88	
			$n_{2 \text{ th}}$	88	88	88	88	
56.667	155	0.11	$M_2$	31	64	81	124	
			c	4.3	2.2	1.7	1.1	
			$n_{2 \text{ Eck}}$	72	72	72	72	
			$n_{2 \text{ th}}$	71	71	71	71	
63.467	146	0.19	$M_2$	35	72	91		
			c	3.6	1.8	1.5		
			$n_{2 \text{ Eck}}$	64	64	64		
			$n_{2 \text{ th}}$	64	64	64		
71.238	167	0.07	$M_2$	40	81	102		
			c	3.7	1.9	1.5		
			$n_{2 \text{ Eck}}$	57	57	57		
			$n_{2 \text{ th}}$	57	57	57		
80.952	147	0.14	$M_2$	46	92	116		
			c	2.9	1.4	1.2		
			$n_{2 \text{ Eck}}$	50	50	50		
			$n_{2 \text{ th}}$	50	50	50		
91.746	171	0.05	$M_2$	52	105	131		
			c	2.9	1.5	1.2		
			$n_{2 \text{ Eck}}$	44	44	44		
			$n_{2 \text{ th}}$	44	44	44		
99.167	148	0.11	$M_2$	56	114			
			c	2.4	1.2			
			$n_{2 \text{ Eck}}$	41	41			
			$n_{2 \text{ th}}$	41	41			
124.667	149	0.07	$M_2$	71				
			c	1.9				
			$n_{2 \text{ Eck}}$	33				
			$n_{2 \text{ th}}$	32				
160.556	150	0.05	$M_2$	92				
			c	1.5				
			$n_{2 \text{ Eck}}$	25				
			$n_{2 \text{ th}}$	25				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

**GST [Nm]**  
GST□□-□S (MCS)





# GST [Nm]

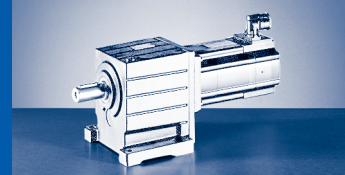
## GST□□-□S (MCS)

$M_{2GN} \leq 105 \text{ Nm}$

GST06-1S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
1.600	61	2.01	$M_2$									15	12	
			c										3.9	3.9
			$n_{2 \text{ Eck}}$										938	1875
			$n_{2 \text{ th}}$										938	1759
2.048	63	1.46	$M_2$					7	9					
			c					5.9	5.0					
			$n_{2 \text{ Eck}}$					1978	1978					
			$n_{2 \text{ th}}$					1725	1672					
2.048	72	1.46	$M_2$							11	8	20	16	
			c							6.0	6.0	3.6	3.6	
			$n_{2 \text{ Eck}}$							952	1978	733	1465	
			$n_{2 \text{ th}}$							952	1730	733	1465	
2.240	66	1.27	$M_2$					8	10					
			c					5.6	4.8					
			$n_{2 \text{ Eck}}$					1808	1808					
			$n_{2 \text{ th}}$					1612	1564					
2.240	79	1.27	$M_2$							12	9	21	17	
			c							5.9	5.9	3.6	3.5	
			$n_{2 \text{ Eck}}$							871	1808	670	1339	
			$n_{2 \text{ th}}$							871	1627	670	1339	
2.857	71	0.97	$M_2$				8	10	12					
			c				6.0	4.8	4.0					
			$n_{2 \text{ Eck}}$				1313	1418	1418					
			$n_{2 \text{ th}}$				1313	1346	1309					
2.857	91	0.97	$M_2$							15	12	28	22	
			c							5.4	5.4	3.3	3.2	
			$n_{2 \text{ Eck}}$							683	1418	525	1050	
			$n_{2 \text{ th}}$							683	1376	525	1050	
2.857	92	0.97	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
3.500	74	0.74	$M_2$				10	13	15					
			c				5.1	4.1	3.4					
			$n_{2 \text{ Eck}}$				1071	1157	1157					
			$n_{2 \text{ th}}$				1071	1157	1157					
3.500	96	0.74	$M_2$							18	14	34	27	
			c							4.6	4.7	2.8	2.8	
			$n_{2 \text{ Eck}}$							557	1157	429	857	
			$n_{2 \text{ th}}$							557	1157	429	857	
3.500	105	0.74	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
4.556	52	0.48	$M_2$		6									
			c		5.6									
			$n_{2 \text{ Eck}}$		889									
			$n_{2 \text{ th}}$		889									
4.556	78	0.48	$M_2$			10	13	17	20					
			c			5.4	4.1	3.3	2.8					
			$n_{2 \text{ Eck}}$			889	823	889	889					
			$n_{2 \text{ th}}$			889	823	889	889					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 105 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST06-1S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
11	21	17	14	11	25	22	36	27	47	33	c	2.01	61	1.600
3.9	2.6	2.5	4.2	3.9	2.4	2.2	1.7	1.8	1.3	1.4	$n_2 \text{ Eck}$			
2203	1219	2531	938	2250	938	2016	938	2016	844	2016	$n_2 \text{ th}$			
1763	1219	1610	938	1760	938	1551	938	1421	844	1274	$M_2$			
											c	1.46	63	2.048
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
15	27	22	18	15	32	28	46	34	60	42	$M_2$			
3.6	2.4	2.3	3.9	3.6	2.2	2.0	1.6	1.6	1.2	1.3	c	1.46	72	2.048
1722	952	1978	733	1758	733	1575	733	1575	659	1575	$n_2 \text{ Eck}$			
1570	952	1436	733	1568	733	1390	733	1230	659	1103	$n_2 \text{ th}$			
											$M_2$			
											c	1.27	66	2.240
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
16	29	24	20	16	35	31	50	38	66	46	$M_2$			
3.6	2.4	2.3	3.9	3.5	2.2	2.0	1.6	1.6	1.2	1.3	c	1.27	79	2.240
1574	871	1808	670	1607	670	1440	670	1440	603	1440	$n_2 \text{ Eck}$			
1482	871	1359	670	1480	670	1313	670	1167	603	1053	$n_2 \text{ th}$			
											$M_2$			
											c	0.97	71	2.857
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
21	38	31									$M_2$			
3.3	2.2	2.1									c	0.97	91	2.857
1234	683	1418									$n_2 \text{ Eck}$			
1234	683	1166									$n_2 \text{ th}$			
			25	21	45	39	64	48	84	59	$M_2$			
			3.6	3.3	2.1	1.8	1.4	1.5	1.1	1.2	c	0.97	92	2.857
			525	1260	525	1129	525	1129	473	1129	$n_2 \text{ Eck}$			
			525	1257	525	1103	525	998	473	914	$n_2 \text{ th}$			
											$M_2$			
											c	0.74	74	3.500
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
25	46	38									$M_2$			
2.8	1.9	1.8									c	0.74	96	3.500
1007	557	1157									$n_2 \text{ Eck}$			
1007	557	1060									$n_2 \text{ th}$			
			31	25	55	48	79	59	103	72	$M_2$			
			3.3	3.0	1.9	1.7	1.3	1.4	1.0	1.1	c	0.74	105	3.500
			429	1029	429	921	429	921	386	921	$n_2 \text{ Eck}$			
			429	1026	429	921	429	913	386	833	$n_2 \text{ th}$			
											$M_2$			
											c	0.48	52	4.556
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
											$M_2$			
											c	0.48	78	4.556
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

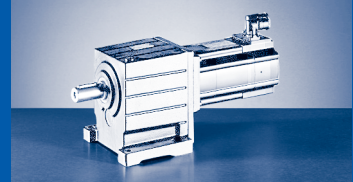
## GST□□-□S (MCS)

$M_{2GN} \leq 105 \text{ Nm}$

GST06-1S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
4.556	100	0.48	$M_2$							24	19	44	35
			c							3.7	3.7	2.2	2.2
			$n_{2 \text{ Eck}}$							428	889	329	659
			$n_{2 \text{ th}}$							428	889	329	659
5.667	54	0.36	$M_2$	6	8								
			c	5.8	4.7								
			$n_{2 \text{ Eck}}$	715	715								
			$n_{2 \text{ th}}$	715	715								
5.667	81	0.36	$M_2$			12	17	21	25				
			c			4.5	3.4	2.7	2.3				
			$n_{2 \text{ Eck}}$			715	662	715	715				
			$n_{2 \text{ th}}$			715	662	715	715				
5.667	104	0.36	$M_2$							30	23	55	44
			c							3.1	3.1	1.9	1.9
			$n_{2 \text{ Eck}}$							344	715	265	529
			$n_{2 \text{ th}}$							344	715	265	529
7.333	56	0.23	$M_2$	8	11								
			c	4.7	3.7								
			$n_{2 \text{ Eck}}$	552	552								
			$n_{2 \text{ th}}$	552	552								
7.333	83	0.23	$M_2$			16	22	27	32				
			c			3.6	2.8	2.2	1.8				
			$n_{2 \text{ Eck}}$			552	511	552	552				
			$n_{2 \text{ th}}$			552	511	552	552				
8.900	57	0.17	$M_2$	10	13								
			c	3.9	3.1								
			$n_{2 \text{ Eck}}$	455	455								
			$n_{2 \text{ th}}$	455	455								
8.900	84	0.17	$M_2$			20	27	33	39				
			c			3.0	2.3	1.8	1.5				
			$n_{2 \text{ Eck}}$			455	421	455	455				
			$n_{2 \text{ th}}$			455	421	455	455				
11.250	56	0.11	$M_2$	13	16								
			c	3.1	2.4								
			$n_{2 \text{ Eck}}$	360	360								
			$n_{2 \text{ th}}$	360	360								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

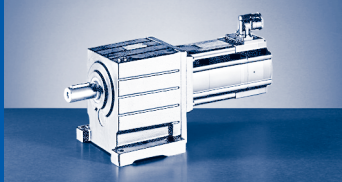


$M_{2GN} \leq 105 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST06-1S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
33	60	49									$c$	0.48	100	4.556
774	428	889									$n_{2 \text{ Eck}}$			
774	428	848									$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.36	54	5.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.36	81	5.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
41	75	61									$M_2$			
1.9	1.3	1.2									$c$	0.36	104	5.667
622	344	715									$n_{2 \text{ Eck}}$			
622	344	715									$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.23	56	7.333
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.23	83	7.333
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.17	57	8.900
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.17	84	8.900
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.11	56	11.250
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

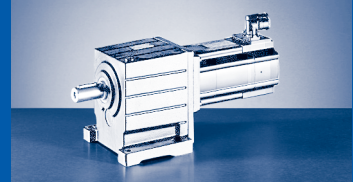
$M_{2GN} \leq 366 \text{ Nm}$

GST06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
3.033	166	2.72	$M_2$									28	22
			c									5.7	5.6
			$n_{2 \text{ Eck}}$									495	989
			$n_{2 \text{ th}}$									495	862
3.333	174	2.61	$M_2$									31	25
			c									5.4	5.3
			$n_{2 \text{ Eck}}$									450	900
			$n_{2 \text{ th}}$									450	777
4.160	191	2.51	$M_2$									39	31
			c									4.7	4.7
			$n_{2 \text{ Eck}}$									361	721
			$n_{2 \text{ th}}$									361	703
4.571	200	2.41	$M_2$									43	34
			c									4.5	4.5
			$n_{2 \text{ Eck}}$									328	656
			$n_{2 \text{ th}}$									328	634
5.324	161	1.76	$M_2$					19	22				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					761	761				
			$n_{2 \text{ th}}$					663	643				
5.324	207	1.76	$M_2$									50	40
			c									4.0	4.0
			$n_{2 \text{ Eck}}$									282	564
			$n_{2 \text{ th}}$									282	564
5.850	177	1.71	$M_2$					20	24				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					692	692				
			$n_{2 \text{ th}}$					604	585				
5.850	222	1.71	$M_2$									55	44
			c									3.9	3.9
			$n_{2 \text{ Eck}}$									256	513
			$n_{2 \text{ th}}$									256	513
6.400	185	1.47	$M_2$					22	27				
			c					5.6	4.8				
			$n_{2 \text{ Eck}}$					633	633				
			$n_{2 \text{ th}}$					564	547				
6.400	229	1.47	$M_2$									60	48
			c									3.7	3.7
			$n_{2 \text{ Eck}}$									234	469
			$n_{2 \text{ th}}$									234	469
7.040	236	2.07	$M_2$							36	28	67	53
			c							5.8	5.8	3.5	3.4
			$n_{2 \text{ Eck}}$							277	575	213	426
			$n_{2 \text{ th}}$							277	432	213	390
8.163	199	1.06	$M_2$				23	29	35				
			c				6.0	4.8	4.0				
			$n_{2 \text{ Eck}}$				459	496	496				
			$n_{2 \text{ th}}$				459	471	458				
8.163	252	1.06	$M_2$							42	33	77	62
			c							5.3	5.3	3.2	3.2
			$n_{2 \text{ Eck}}$							239	496	184	368
			$n_{2 \text{ th}}$							239	480	184	368

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



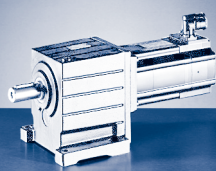


$M_{2GN} \leq 366 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
21	39	31		21	46	40	67	50	87	61	c	2.72	166	3.033
5.7	3.8	3.7		5.6	3.5	3.1	2.5	2.6	1.9	2.1	$n_2$ Eck			
1162	643	1335		1187	495	1063	495	1063	445	1063	$n_2$ th			
864	643	791		862	495	764	495	729	445	696				
23	42	35	28	23	50	44	73	55	96	67	$M_2$			
5.4	3.7	3.5	5.9	5.4	3.4	3.0	2.3	2.4	1.8	2.0	c	2.61	174	3.333
1058	585	1215	450	1080	450	968	450	968	405	968	$n_2$ Eck			
778	585	713	450	777	450	687	450	656	405	628	$n_2$ th			
29	53	43	36	29	63	56	92	69	120	84	$M_2$			
4.8	3.2	3.1	5.2	4.7	3.0	2.6	2.1	2.1	1.6	1.8	c	2.51	191	4.160
847	469	974	361	865	361	775	361	775	325	775	$n_2$ Eck			
705	469	646	361	704	361	623	361	595	325	545	$n_2$ th			
32	59	48	39	32	70	61	101	75	132	93	$M_2$			
4.5	3.1	2.9	4.9	4.5	2.8	2.5	2.0	2.0	1.5	1.7	c	2.41	200	4.571
771	427	886	328	788	328	706	328	706	295	706	$n_2$ Eck			
635	427	582	328	634	328	561	328	535	295	482	$n_2$ th			
											$M_2$			
											c	1.76	161	5.324
											$n_2$ Eck			
											$n_2$ th			
38	68	56	46	38	81	71	118	88	154	108	$M_2$			
4.0	2.7	2.6	4.4	4.0	2.5	2.2	1.8	1.8	1.3	1.5	c	1.76	207	5.324
662	366	761	282	676	282	606	282	606	254	606	$n_2$ Eck			
617	366	566	282	617	282	546	282	505	254	450	$n_2$ th			
											$M_2$			
											c	1.71	177	5.850
											$n_2$ Eck			
											$n_2$ th			
41	75	61	50	41	89	79	130	97	170	119	$M_2$			
3.9	2.7	2.6	4.3	3.9	2.4	2.2	1.7	1.8	1.3	1.4	c	1.71	222	5.850
603	333	692	256	615	256	551	256	551	231	551	$n_2$ Eck			
559	333	512	256	558	256	494	256	452	231	404	$n_2$ th			
											$M_2$			
											c	1.47	185	6.400
											$n_2$ Eck			
											$n_2$ th			
45	83	67	55	45	98	86	142	106	186	130	$M_2$			
3.7	2.5	2.4	4.0	3.7	2.3	2.0	1.6	1.7	1.2	1.4	c	1.47	229	6.400
551	305	633	234	563	234	504	234	504	211	504	$n_2$ Eck			
522	305	479	234	522	234	463	234	417	211	375	$n_2$ th			
50	91	74	61	50	108	95	156	117	205	143	$M_2$			
3.5	2.4	2.3	3.8	3.4	2.2	1.9	1.5	1.6	1.2	1.3	c	2.07	236	7.040
501	277	575	213	511	213	458	213	458	192	458	$n_2$ Eck			
391	277	356	213	390	213	340	213	302	192	273	$n_2$ th			
											$M_2$			
											c	1.06	199	8.163
											$n_2$ Eck			
											$n_2$ th			
58	106	86	71	58	125	110	181	136	237	166	$M_2$			
3.2	2.2	2.1	3.5	3.2	2.0	1.8	1.4	1.4	1.1	1.2	c	1.06	252	8.163
432	239	496	184	441	184	395	184	395	165	395	$n_2$ Eck			
432	239	406	184	439	184	380	184	344	165	316	$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

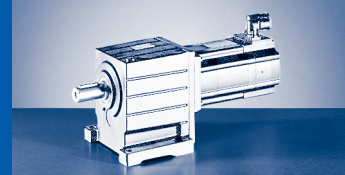
## GST□□-□S (MCS)

$M_{2GN} \leq 366 \text{ Nm}$

GST06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
9.010	261	1.50	$M_2$					32	38	46	36	86	69
			c				5.6	4.8	5.0	5.0	3.0	3.0	
			$n_{2 \text{ Eck}}$				450	450	216	450	167	333	
			$n_{2 \text{ th}}$				389	377	216	380	166	333	
10.000	209	0.82	$M_2$				29	36	43				
			c				5.1	4.1	3.4				
			$n_{2 \text{ Eck}}$				375	405	405				
			$n_{2 \text{ th}}$				375	405	405				
10.000	269	0.82	$M_2$							51	40	95	76
			c							4.6	4.6	2.8	2.8
			$n_{2 \text{ Eck}}$							195	405	150	300
			$n_{2 \text{ th}}$							195	405	150	300
11.200	280	1.26	$M_2$					40	47	58	45	107	86
			c					4.9	4.1	4.3	4.3	2.6	2.6
			$n_{2 \text{ Eck}}$					362	362	174	362	134	268
			$n_{2 \text{ th}}$					314	304	174	307	134	268
12.571	295	0.96	$M_2$				36	45	53	65	51	120	96
			c				5.8	4.6	3.9	4.0	4.0	2.4	2.4
			$n_{2 \text{ Eck}}$				298	322	322	155	322	119	239
			$n_{2 \text{ th}}$				298	304	295	155	298	119	239
14.286	307	0.93	$M_2$				41	51	61	74	58	137	110
			c				5.3	4.2	3.5	3.7	3.7	2.2	2.2
			$n_{2 \text{ Eck}}$				263	284	284	137	284	105	210
			$n_{2 \text{ th}}$				263	264	256	137	258	105	210
15.400	318	0.75	$M_2$				44	55	65	80	62	148	118
			c				5.8	4.6	3.9	3.9	4.0	2.1	2.4
			$n_{2 \text{ Eck}}$				244	263	263	127	263	97	195
			$n_{2 \text{ th}}$				244	263	263	127	263	97	195
17.500	313	0.73	$M_2$				50	63	75	91	71	168	134
			c				5.0	4.0	3.3	3.4	3.5	1.8	2.1
			$n_{2 \text{ Eck}}$				214	231	231	111	231	86	171
			$n_{2 \text{ th}}$				214	231	231	111	231	86	171
20.044	336	0.46	$M_2$				58	72	86				
			c				4.7	3.7	3.1				
			$n_{2 \text{ Eck}}$				187	202	202				
			$n_{2 \text{ th}}$				187	202	202				
20.044	350	0.46	$M_2$							104	82	193	154
			c							3.3	3.4	1.8	2.0
			$n_{2 \text{ Eck}}$							97	202	75	150
			$n_{2 \text{ th}}$							97	202	75	150
22.778	315	0.45	$M_2$			49	66	82	98	120	93	220	176
			c			5.1	3.9	3.1	2.6	2.6	2.7	1.4	1.6
			$n_{2 \text{ Eck}}$			178	165	178	178	86	178	66	132
			$n_{2 \text{ th}}$			178	165	178	178	86	178	66	132
24.933	236	0.33	$M_2$		35								
			c		5.3								
			$n_{2 \text{ Eck}}$		162								
			$n_{2 \text{ th}}$		162								
24.933	349	0.33	$M_2$			53	73	90	107				
			c			5.1	3.9	3.1	2.6				
			$n_{2 \text{ Eck}}$			162	150	162	162				
			$n_{2 \text{ th}}$			162	150	162	162				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

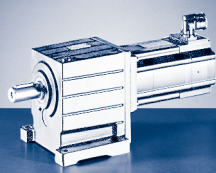


$M_{2GN} \leq 366 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
64	117	95	79	64	139	122	200	150		183	$c$	1.50	261	9.010
3.0	2.0	2.0	3.2	3.0	1.9	1.7	1.3	1.4		1.1	$n_{2 \text{ Eck}}$			
391	216	450	167	400	167	358	167	358		358	$n_{2 \text{ th}}$			
344	216	312	166	343	166	283	166	253		229	$M_2$			
											$c$	0.82	209	10.000
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
71	130	106	87	71	154	135	223	166		204	$M_2$			
2.8	1.9	1.8	3.0	2.8	1.7	1.5	1.2	1.3		1.0	$c$	0.82	269	10.000
353	195	405	150	360	150	323	150	323		323	$n_{2 \text{ Eck}}$			
353	195	370	150	359	150	323	150	306		280	$n_{2 \text{ th}}$			
80	146	119	98	80	173	151	250	187			$M_2$			
2.6	1.8	1.7	2.8	2.6	1.6	1.4	1.1	1.2			$c$	1.26	280	11.200
315	174	362	134	321	134	288	134	288			$n_{2 \text{ Eck}}$			
278	174	240	134	278	134	220	134	199			$n_{2 \text{ th}}$			
90	164	133	110	90	194	170	280	210			$M_2$			
2.4	1.6	1.6	2.6	2.4	1.5	1.3	1.1	1.1			$c$	0.96	295	12.571
280	155	322	119	286	119	257	119	257			$n_{2 \text{ Eck}}$			
272	155	234	119	271	119	217	119	199			$n_{2 \text{ th}}$			
103	186	152	126	103	221	194					$M_2$			
2.2	1.5	1.4	2.4	2.2	1.4	1.2					$c$	0.93	307	14.286
247	137	284	105	252	105	226					$n_{2 \text{ Eck}}$			
235	137	197	105	235	105	184					$n_{2 \text{ th}}$			
110	201	163	136	110	238	208		257			$M_2$			
2.4	1.6	1.6	2.3	2.4	1.3	1.3		1.1			$c$	0.75	318	15.400
229	127	263	97	234	97	209		209			$n_{2 \text{ Eck}}$			
229	127	223	97	233	97	205		187			$n_{2 \text{ th}}$			
126	228	186	155	126	271	237					$M_2$			
2.1	1.4	1.4	2.0	2.1	1.2	1.2					$c$	0.73	313	17.500
201	111	231	86	206	86	184					$n_{2 \text{ Eck}}$			
201	111	183	86	205	86	169					$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.46	336	20.044
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
144	262	213									$M_2$			
2.1	1.3	1.3									$c$	0.46	350	20.044
176	97	202									$n_{2 \text{ Eck}}$			
176	97	186									$n_{2 \text{ th}}$			
165	298	243									$M_2$			
1.6	1.1	1.1									$c$	0.45	315	22.778
155	86	178									$n_{2 \text{ Eck}}$			
155	86	150									$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.33	236	24.933
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.33	349	24.933
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 366 \text{ Nm}$

GST06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
24.933	360	0.33	$M_2$							131	102	241	192	
			c							2.7	2.8	1.5	1.7	
			$n_{2 \text{ Eck}}$								78	162	60	120
			$n_{2 \text{ th}}$								78	162	60	120
28.333	268	0.33	$M_2$		39									
			c		5.3									
			$n_{2 \text{ Eck}}$		143									
			$n_{2 \text{ th}}$		143									
28.333	317	0.33	$M_2$			61	83	103	122	149	117	274	219	
			c			4.1	3.1	2.5	2.1	2.1	2.2	1.2	1.3	
			$n_{2 \text{ Eck}}$			143	132	143	143	69	143	53	106	
			$n_{2 \text{ th}}$			143	132	143	143	69	143	53	106	
32.267	245	0.22	$M_2$	36	45									
			c	5.3	4.3									
			$n_{2 \text{ Eck}}$	126	126									
			$n_{2 \text{ th}}$	126	126									
32.267	362	0.22	$M_2$			70	95	117	139					
			c			4.1	3.1	2.5	2.1					
			$n_{2 \text{ Eck}}$			126	116	126	126					
			$n_{2 \text{ th}}$			126	116	126	126					
36.667	278	0.22	$M_2$	41	52									
			c	5.3	4.3									
			$n_{2 \text{ Eck}}$	111	111									
			$n_{2 \text{ th}}$	110	110									
36.667	322	0.22	$M_2$			80	109	134	159					
			c			3.2	2.4	1.9	1.6					
			$n_{2 \text{ Eck}}$			111	102	111	111					
			$n_{2 \text{ th}}$			110	102	110	110					
39.160	247	0.16	$M_2$	44	55									
			c	4.4	3.5									
			$n_{2 \text{ Eck}}$	103	103									
			$n_{2 \text{ th}}$	103	103									
39.160	366	0.16	$M_2$			85	116	143	170					
			c			3.4	2.6	2.1	1.8					
			$n_{2 \text{ Eck}}$			103	96	103	103					
			$n_{2 \text{ th}}$			103	96	103	103					
44.500	281	0.16	$M_2$	50	63									
			c	4.9	3.9									
			$n_{2 \text{ Eck}}$	91	91									
			$n_{2 \text{ th}}$	91	91									
44.500	325	0.16	$M_2$			97	132	163	193					
			c			3.0	2.3	1.8	1.5					
			$n_{2 \text{ Eck}}$			91	84	91	91					
			$n_{2 \text{ th}}$			91	84	91	91					
49.500	245	0.11	$M_2$	56	71									
			c	3.8	3.1									
			$n_{2 \text{ Eck}}$	82	82									
			$n_{2 \text{ th}}$	82	82									
56.250	278	0.11	$M_2$	64	80									
			c	3.8	3.1									
			$n_{2 \text{ Eck}}$	72	72									
			$n_{2 \text{ th}}$	72	72									

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 366 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
180	326	266									c	0.33	360	24.933
141	78	162									$n_{2 \text{ Eck}}$			
141	78	162									$n_{2 \text{ th}}$			
											$M_2$	0.33	268	28.333
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
206											$M_2$	0.33	317	28.333
1.3											c			
124											$n_{2 \text{ Eck}}$			
124											$n_{2 \text{ th}}$			
											$M_2$	0.22	245	32.267
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.22	362	32.267
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.22	278	36.667
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.22	322	36.667
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.16	247	39.160
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.16	366	39.160
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.16	281	44.500
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.16	325	44.500
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.11	245	49.500
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.11	278	56.250
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

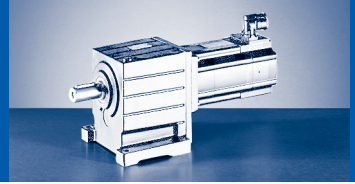
$M_{2GN} \leq 375 \text{ Nm}$

GST06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
39.200	321	0.36	$M_2$		43	54	84	115	141	168
			c		5.8	4.7	3.0	2.3	1.8	1.6
			$n_{2 \text{ Eck}}$		103	103	103	96	103	103
			$n_{2 \text{ th}}$		103	103	103	96	103	103
44.000	335	0.20	$M_2$			61	95	128	158	188
			c			4.8	3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$			92	92	85	92	92
			$n_{2 \text{ th}}$			92	92	85	92	92
51.022	325	0.32	$M_2$		56	71	110	150	184	219
			c		5.0	4.0	2.6	2.0	1.6	1.3
			$n_{2 \text{ Eck}}$		79	79	79	74	79	79
			$n_{2 \text{ th}}$		79	79	79	74	79	79
53.900	349	0.18	$M_2$		59	75	116	158	194	231
			c		5.1	4.1	2.7	2.0	1.6	1.4
			$n_{2 \text{ Eck}}$		75	75	75	70	75	75
			$n_{2 \text{ th}}$		75	75	75	70	75	75
67.760	365	0.11	$M_2$		75	95				
			c		4.3	3.4				
			$n_{2 \text{ Eck}}$		60	60				
			$n_{2 \text{ th}}$		60	60				
70.156	359	0.16	$M_2$		78	98	152	207	254	301
			c		4.0	3.2	2.1	1.6	1.3	1.1
			$n_{2 \text{ Eck}}$		58	58	58	54	58	58
			$n_{2 \text{ th}}$		58	58	58	53	58	58
80.952	332	0.20	$M_2$		91	114	177	239	294	
			c		3.2	2.6	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		50	50	50	46	50	
			$n_{2 \text{ th}}$		50	50	50	46	50	
87.267	370	0.15	$M_2$		98	123	190	258	317	
			c		3.3	2.7	1.7	1.3	1.1	
			$n_{2 \text{ Eck}}$		46	46	46	43	46	
			$n_{2 \text{ th}}$		46	46	46	43	46	
99.167	336	0.15	$M_2$	54	112	140	217	294		
			c	5.3	2.7	2.1	1.4	1.1		
			$n_{2 \text{ Eck}}$	41	41	41	41	38		
			$n_{2 \text{ th}}$	41	41	41	41	38		
109.707	375	0.10	$M_2$	60	124	155				
			c	5.4	2.7	2.2				
			$n_{2 \text{ Eck}}$	37	37	37				
			$n_{2 \text{ th}}$	37	37	37				
124.667	339	0.10	$M_2$	69	141	177				
			c	4.3	2.2	1.7				
			$n_{2 \text{ Eck}}$	33	33	33				
			$n_{2 \text{ th}}$	32	32	32				
141.289	375	0.06	$M_2$	78	160	201				
			c	4.2	2.1	1.7				
			$n_{2 \text{ Eck}}$	29	29	29				
			$n_{2 \text{ th}}$	29	29	29				
160.556	342	0.06	$M_2$	90	183	229				
			c	3.4	1.7	1.3				
			$n_{2 \text{ Eck}}$	25	25	25				
			$n_{2 \text{ th}}$	25	25	25				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

**GST [Nm]**  
GST□□-□S (MCS)





# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 196 \text{ Nm}$

GST07-1S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
1.625	106	6.12	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$													
2.000	99	4.78	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							19 5.0 750 750	15 5.0 1500 1422	14 5.1 1763 1425	26 3.4 975 975	21 3.3 2025 1303		
2.000	124	4.78	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$													
2.240	105	4.02	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							21 4.8 670 670	17 4.7 1339 1306	16 4.8 1574 1308	29 3.2 871 871	24 3.1 1808 1199		
2.240	135	4.02	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$													
2.857	88	2.69	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			10 5.9 1418 1243	12 5.0 1418 1206									
2.857	113	2.69	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							27 4.0 525 525	22 4.0 1050 1050	20 4.0 1234 1158	37 2.7 683 683	30 2.6 1418 1062		
2.857	156	2.69	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$													
3.500	119	2.15	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					18 5.7 557 557	14 5.8 1157 1093	34 3.5 429 429	27 3.4 857 857	25 3.5 1007 1000	46 2.3 557 557	37 2.3 1157 922		
3.500	172	2.15	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												30 5.4 429 429	
4.556	96	1.37	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		13 5.1 823 823	17 4.1 889 889	20 3.4 889 889									
4.556	124	1.37	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					24 4.6 428 428	19 4.6 889 889	44 2.8 329 329	35 2.7 659 659	33 2.8 774 774	60 1.9 428 428	49 1.8 889 804		
4.556	186	1.37	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												40 4.5 329 329	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]





$M_{2GN} \leq 196 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-1S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$l_{M230}$			
													$l_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
	25	22	36	27	47	33	43	33	64	46	81	51	$c$	6.12	106	1.625
	4.1	3.7	2.9	3.0	2.2	2.5	2.5	2.5	1.7	1.8	1.3	1.6	$n_{2 \text{ Eck}}$			
	923	1985	923	1985	831	1985	877	1846	877	1846	831	1846	$n_{2 \text{ th}}$			
	923	1451	923	1387	831	1324	877	1331	877	1196	831	1128	$M_2$			
													$c$	4.78	99	2.000
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	31	27	45	33	58	41	52	41	78	57	100	63	$M_2$			
	3.9	3.5	2.7	2.8	2.1	2.3	2.3	2.4	1.6	1.7	1.2	1.6	$c$	4.78	124	2.000
	750	1613	750	1613	675	1613	713	1500	713	1500	675	1500	$n_{2 \text{ Eck}}$			
	750	1319	750	1260	675	1203	713	1105	713	1065	675	1006	$n_{2 \text{ th}}$			
													$M_2$			
													$c$	4.02	105	2.240
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	34	30	50	37	65	46	59	46	88	64	112	70	$M_2$			
	3.8	3.4	2.7	2.8	2.0	2.3	2.3	2.3	1.5	1.7	1.2	1.5	$c$	4.02	135	2.240
	670	1440	670	1440	603	1440	636	1339	636	1339	603	1339	$n_{2 \text{ Eck}}$			
	670	1220	670	1167	603	1117	636	987	636	984	603	932	$n_{2 \text{ th}}$			
													$M_2$			
													$c$	2.69	88	2.857
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													$c$	2.69	113	2.857
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
20	44	39	64	48	84	58							$M_2$			
5.5	3.5	3.1	2.4	2.5	1.9	2.1							$c$	2.69	156	2.857
1260	525	1129	525	1129	473	1129							$n_{2 \text{ Eck}}$			
1229	525	1098	525	1051	473	1007							$n_{2 \text{ th}}$			
													$M_2$			
													$c$	2.15	119	3.500
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
25	54	47	78	59	103	72							$M_2$			
5.0	3.1	2.8	2.2	2.3	1.7	1.8							$c$	2.15	172	3.500
1029	429	921	429	921	386	921							$n_{2 \text{ Eck}}$			
1026	429	921	429	921	386	865							$n_{2 \text{ th}}$			
													$M_2$			
													$c$	1.37	96	4.556
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													$c$	1.37	124	4.556
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
33	71	62	102	77	134	94							$M_2$			
4.1	2.6	2.3	1.8	1.9	1.4	1.5							$c$	1.37	186	4.556
790	329	708	329	708	296	708							$n_{2 \text{ Eck}}$			
788	329	708	329	708	296	708							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 196 \text{ Nm}$

GST07-1S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
5.583	101	1.05	$M_2$	12	16	20	24									
			c	5.7	4.4	3.5	2.9									
			$n_{2 \text{ Eck}}$	725	672	725	725									
			$n_{2 \text{ th}}$	725	672	725	725									
5.583	130	1.05	$M_2$					29	23	54	43	41	74	60		
			c					3.9	4.0	2.4	2.4	2.4	1.6	1.5		
			$n_{2 \text{ Eck}}$					349	725	269	537	631	349	725		
			$n_{2 \text{ th}}$					349	725	269	537	631	349	682		
5.583	196	1.05	$M_2$												49	
			c												3.9	
			$n_{2 \text{ Eck}}$												269	
			$n_{2 \text{ th}}$												269	
7.333	104	0.66	$M_2$	16	22	27	32									
			c	4.5	3.4	2.7	2.3									
			$n_{2 \text{ Eck}}$	552	511	552	552									
			$n_{2 \text{ th}}$	552	511	552	552									
7.333	134	0.66	$M_2$					39	30	72	57	54	97	79		
			c					3.1	3.1	1.9	1.8	1.9	1.3	1.2		
			$n_{2 \text{ Eck}}$					266	552	205	409	481	266	552		
			$n_{2 \text{ th}}$					266	552	205	409	481	266	552		
8.900	105	0.49	$M_2$	20	27	33	39									
			c	3.7	2.9	2.3	1.9									
			$n_{2 \text{ Eck}}$	455	421	455	455									
			$n_{2 \text{ th}}$	455	421	455	455									
8.900	135	0.49	$M_2$					47	37	87	70	65	118	96		
			c					2.6	2.6	1.5	1.5	1.6	1.1	1.0		
			$n_{2 \text{ Eck}}$					219	455	169	337	396	219	455		
			$n_{2 \text{ th}}$					219	455	169	337	396	219	455		
11.250	106	0.32	$M_2$	25	34	42	50									
			c	3.0	2.3	1.8	1.5									
			$n_{2 \text{ Eck}}$	360	333	360	360									
			$n_{2 \text{ th}}$	360	333	360	360									

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 196 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-1S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c	1.05	101	5.583
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.05	130	5.583
													$n_2$ Eck			
													$n_2$ th			
40	87	76	126	94	165	115							$M_2$ c	1.05	196	5.583
3.6	2.2	2.0	1.6	1.6	1.2	1.3							$n_2$ Eck			
645	269	578	269	578	242	578							$n_2$ th			
643	269	578	269	578	242	578							$M_2$ c	0.66	104	7.333
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.66	134	7.333
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.49	105	8.900
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.49	135	8.900
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.32	106	11.250
													$n_2$ Eck			
													$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 706 \text{ Nm}$

GST07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
3.048	304	8.20	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
3.048	351	8.20	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
3.350	334	7.92	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
3.350	367	7.92	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
4.225	373	7.65	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
4.225	398	7.65	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
4.643	410	7.39	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
4.643	414	7.39	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
5.200	254	5.64	$M_2$							48	39	36	66	54	
			c							5.0	5.0	5.1	3.4	3.3	
			$n_2$ Eck							289	577	678	375	779	
			$n_2$ th							288	547	548	375	501	
5.200	399	5.64	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
5.200	427	5.64	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												
5.714	279	5.46	$M_2$							53	43	40	73	60	
			c							5.0	5.0	5.1	3.4	3.3	
			$n_2$ Eck							263	525	617	341	709	
			$n_2$ th							263	498	499	341	456	
5.714	438	5.46	$M_2$												
			c												
			$n_2$ Eck												
			$n_2$ th												

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 706 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
		39	66	49	87	60							c	8.20	304	3.048
		5.7	4.5	4.6	3.4	3.8							$n_2 \text{ Eck}$			
		1058	492	1058	443	1058							$n_2 \text{ th}$			
		738	492	706	443	675										
							77	60	116	84	149	93	$M_2$			
							4.4	4.5	3.0	3.3	2.3	3.0	c	8.20	351	3.048
							468	984	468	984	443	984	$n_2 \text{ Eck}$			
							467	701	467	652	443	636	$n_2 \text{ th}$			
		43	72	54	95	66							$M_2$			
		5.7	4.5	4.6	3.4	3.8							c	7.92	334	3.350
		963	448	963	403	963							$n_2 \text{ Eck}$			
		671	448	643	403	615							$n_2 \text{ th}$			
							85	66	128	92	164	102	$M_2$			
							4.2	4.3	2.8	3.1	2.2	2.8	c	7.92	367	3.350
							425	896	425	896	403	896	$n_2 \text{ Eck}$			
							425	631	425	586	403	572	$n_2 \text{ th}$			
	62	55	91	68	120	84							$M_2$			
	5.7	5.0	4.0	4.1	3.0	3.4							c	7.65	373	4.225
	355	763	355	763	320	763							$n_2 \text{ Eck}$			
	355	596	355	571	320	547							$n_2 \text{ th}$			
							108	84	162	117	207	129	$M_2$			
							3.6	3.7	2.4	2.7	1.9	2.4	c	7.65	398	4.225
							337	710	337	710	320	710	$n_2 \text{ Eck}$			
							337	523	337	519	320	507	$n_2 \text{ th}$			
	69	60	100	75	132	92							$M_2$			
	5.7	5.0	4.0	4.1	3.0	3.4							c	7.39	410	4.643
	323	695	323	695	291	695							$n_2 \text{ Eck}$			
	323	543	323	520	291	498							$n_2 \text{ th}$			
							119	92	178	129	228	142	$M_2$			
							3.4	3.5	2.3	2.5	1.8	2.3	c	7.39	414	4.643
							307	646	307	646	291	646	$n_2 \text{ Eck}$			
							307	476	307	466	291	456	$n_2 \text{ th}$			
													$M_2$			
													c	5.64	254	5.200
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
	77	68	113	84	149	104							$M_2$			
	4.9	4.4	3.4	3.6	2.6	2.9							c	5.64	399	5.200
	289	620	289	620	260	620							$n_2 \text{ Eck}$			
	288	532	288	510	260	488							$n_2 \text{ th}$			
							133	104	199	144	256	160	$M_2$			
							3.1	3.2	2.1	2.3	1.7	2.1	c	5.64	427	5.200
							274	577	274	577	260	577	$n_2 \text{ Eck}$			
							274	425	274	425	260	425	$n_2 \text{ th}$			
													$M_2$			
													c	5.46	279	5.714
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
	85	75	124	93	164	114							$M_2$			
	4.9	4.4	3.4	3.6	2.6	2.9							c	5.46	438	5.714
	263	564	263	564	236	564							$n_2 \text{ Eck}$			
	263	484	263	464	236	444							$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 706 \text{ Nm}$

GST07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
5.714	448	5.46	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
6.400	296	4.49	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							60 4.8	48 4.7	45 4.8	82 3.2	67 3.1	
6.400	460	4.49	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							234	469	551	305	633	
6.400	463	4.49	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							234	457	458	305	420	
7.150	489	6.27	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
8.125	539	6.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
8.800	430	4.73	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							82 5.0	65 5.0	61 5.1	112 3.4	92 3.3	
8.800	527	4.73	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							171	341	401	222	460	
9.856	456	3.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							170	323	324	222	296	
9.856	549	3.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
11.200	518	3.78	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							92 4.8	74 4.7	69 4.8	126 3.2	103 3.1	
11.200	598	3.78	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							152	304	358	198	411	
12.571	380	2.86	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			44 5.9 322 283	53 5.0 322 274			152	297	297	198	273	
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							92	74	69	126	103	
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							4.8	4.7	4.8	3.2	3.1	
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							134	268	315	174	362	
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							134	261	262	174	240	
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												95
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												6.0
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												134
			$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												134

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

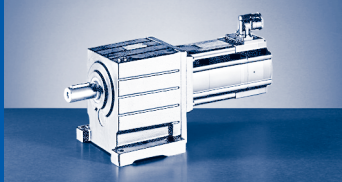


$M_{2GN} \leq 706 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
							147	114	219	159	281	176	c	5.46	448	5.714
							3.0	3.1	2.0	2.2	1.6	2.0	$n_{2 \text{ Eck}}$			
							249	525	249	525	236	525	$n_{2 \text{ th}}$			
							249	387	249	387	236	387	$M_2$			
													c	4.49	296	6.400
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	96	84	140	104	183	128							$M_2$			
	4.6	4.1	3.2	3.3	2.5	2.7							c	4.49	460	6.400
	234	504	234	504	211	504							$n_{2 \text{ Eck}}$			
	234	444	234	426	211	408							$n_{2 \text{ th}}$			
							165	128	246	178	315	197	$M_2$			
							2.8	2.8	1.9	2.0	1.5	1.9	c	4.49	463	6.400
							223	469	223	469	211	469	$n_{2 \text{ Eck}}$			
							223	345	223	345	211	345	$n_{2 \text{ th}}$			
	107	94	156	117	205	143	184	143	275	199	352	220	$M_2$			
	4.4	3.9	3.1	3.2	2.4	2.6	2.6	2.7	1.8	1.9	1.4	1.8	c	6.27	489	7.150
	210	451	210	451	189	451	199	420	199	420	189	420	$n_{2 \text{ Eck}}$			
	210	334	210	319	189	305	199	307	199	282	189	266	$n_{2 \text{ th}}$			
	122	107	178	133	233	163	209	163	313	227	401	250	$M_2$			
	4.3	3.8	3.0	3.1	2.3	2.5	2.5	2.6	1.7	1.9	1.3	1.7	c	6.04	539	8.125
	185	397	185	397	166	397	175	369	175	369	166	369	$n_{2 \text{ Eck}}$			
	185	292	185	279	166	267	175	268	175	244	166	230	$n_{2 \text{ th}}$			
													$M_2$			
													c	4.73	430	8.800
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	133	117	193	144	253	177	227	177	340	246	434	272	$M_2$			
	3.9	3.4	2.7	2.8	2.1	2.3	2.3	2.3	1.5	1.7	1.2	1.5	c	4.73	527	8.800
	171	367	171	367	153	367	162	341	162	341	153	341	$n_{2 \text{ Eck}}$			
	170	299	170	285	153	272	162	251	162	240	153	226	$n_{2 \text{ th}}$			
													$M_2$			
													c	3.90	456	9.856
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
68	149	131	217	162	284	198	255	198	381	276	487	305	$M_2$			
5.7	3.6	3.2	2.5	2.6	1.9	2.1	2.1	2.2	1.4	1.6	1.1	1.4	c	3.90	549	9.856
365	152	327	152	327	137	327	145	304	145	304	137	304	$n_{2 \text{ Eck}}$			
308	152	274	152	262	137	250	145	224	145	216	137	205	$n_{2 \text{ th}}$			
													$M_2$			
													c	3.78	518	11.200
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
78	169	149	246	184	323	226	290	226	433	313	554	346	$M_2$			
5.5	3.4	3.1	2.4	2.5	1.8	2.0	2.0	2.1	1.4	1.5	1.1	1.4	c	3.78	598	11.200
321	134	288	134	288	121	288	127	268	127	268	121	268	$n_{2 \text{ Eck}}$			
269	134	239	134	228	121	218	127	197	127	186	121	177	$n_{2 \text{ th}}$			
													$M_2$			
													c	2.86	380	12.571
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 706 \text{ Nm}$

GST07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15				
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500				
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20				
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500				
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8						
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5				
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45				
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22				
12.571	489	2.86	$M_2$									118	95	89	162	132			
			c																
			$n_{2 \text{ Eck}}$																
			$n_{2 \text{ th}}$																
12.571	601	2.86	$M_2$													107			
			c														5.4		
			$n_{2 \text{ Eck}}$															119	
			$n_{2 \text{ th}}$															119	
14.286	432	2.79	$M_2$			50	60												
			c			5.9	5.0												
			$n_{2 \text{ Eck}}$			284	284												
			$n_{2 \text{ th}}$			249	241												
14.286	556	2.79	$M_2$							134	107	101	184	150					
			c							4.0	4.0	4.0	2.7	2.6					
			$n_{2 \text{ Eck}}$								105	210	247	137	284				
			$n_{2 \text{ th}}$								105	210	232	137	212				
14.286	642	2.79	$M_2$													122			
			c														5.0		
			$n_{2 \text{ Eck}}$															105	
			$n_{2 \text{ th}}$															105	
15.400	515	2.26	$M_2$							146	116	109	198	162					
			c							3.5	3.9	3.9	2.6	2.6					
			$n_{2 \text{ Eck}}$								97	195	229	127	263				
			$n_{2 \text{ th}}$								97	195	229	127	215				
15.400	644	2.26	$M_2$													132			
			c														4.7		
			$n_{2 \text{ Eck}}$															97	
			$n_{2 \text{ th}}$															97	
17.500	585	2.21	$M_2$							166	132	124	226	184					
			c							3.5	3.9	3.9	2.6	2.6					
			$n_{2 \text{ Eck}}$								86	171	201	111	231				
			$n_{2 \text{ th}}$								86	171	201	111	189				
17.500	680	2.21	$M_2$													151			
			c														4.4		
			$n_{2 \text{ Eck}}$															86	
			$n_{2 \text{ th}}$															86	
20.044	418	1.38	$M_2$		57	71	85												
			c		5.8	4.6	3.9												
			$n_{2 \text{ Eck}}$		187	202	202												
			$n_{2 \text{ th}}$		187	202	202												
20.044	538	1.38	$M_2$					103	80	191	152	143	260	212					
			c					5.0	5.3	2.8	3.1	3.2	2.1	2.1					
			$n_{2 \text{ Eck}}$					97	202	75	150	176	97	202					
			$n_{2 \text{ th}}$					97	202	75	150	176	97	193					
20.044	694	1.38	$M_2$													174			
			c														3.9		
			$n_{2 \text{ Eck}}$															75	
			$n_{2 \text{ th}}$															75	
22.778	475	1.35	$M_2$		65	81	96												
			c		5.8	4.6	3.9												
			$n_{2 \text{ Eck}}$		165	178	178												
			$n_{2 \text{ th}}$		165	178	178												

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



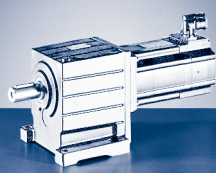


$M_{2GN} \leq 706 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c			
													$n_2$ Eck	2.86	489	12.571
													$n_2$ th			
88	191	168	277	207	363	254							$M_2$ c			
4.9	3.1	2.7	2.1	2.2	1.6	1.8							$n_2$ Eck	2.86	601	12.571
286	119	257	119	257	107	257							$n_2$ th			
273	119	243	119	233	107	216							$M_2$ c			
													$n_2$ Eck	2.79	432	14.286
													$n_2$ th			
													$M_2$ c			
													$n_2$ Eck	2.79	556	14.286
													$n_2$ th			
100	217	191	315	236	413	289							$M_2$ c			
4.6	2.9	2.6	2.0	2.1	1.5	1.7							$n_2$ Eck	2.79	642	14.286
252	105	226	105	226	95	226							$n_2$ th			
238	105	211	105	202	95	183							$M_2$ c			
													$n_2$ Eck	2.26	515	15.400
													$n_2$ th			
108	235	205	341	254	446	311							$M_2$ c			
4.9	2.7	2.7	1.9	2.2	1.4	1.8							$n_2$ Eck	2.26	644	15.400
234	97	209	97	209	88	209							$n_2$ th			
233	97	209	97	209	88	195							$M_2$ c			
													$n_2$ Eck	2.21	585	17.500
													$n_2$ th			
123	267	234	388	289	508	354							$M_2$ c			
4.5	2.5	2.5	1.7	2.1	1.3	1.7							$n_2$ Eck	2.21	680	17.500
206	86	184	86	184	77	184							$n_2$ th			
205	86	184	86	181	77	165							$M_2$ c			
													$n_2$ Eck	1.38	418	20.044
													$n_2$ th			
													$M_2$ c			
													$n_2$ Eck	1.38	538	20.044
													$n_2$ th			
141	307	269	445	332	582	406							$M_2$ c			
4.0	2.2	2.2	1.6	1.8	1.2	1.5							$n_2$ Eck	1.38	694	20.044
180	75	161	75	161	67	161							$n_2$ th			
179	75	161	75	161	67	161							$M_2$ c			
													$n_2$ Eck	1.35	475	22.778
													$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 706 \text{ Nm}$

GST07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
22.778	611	1.35	$M_2$					117	91	217	173	162	295	240	
			c				5.0	5.3	2.8	3.1	3.2	2.1	2.1		
			$n_{2 \text{ Eck}}$				86	178	66	132	155	86	178		
			$n_{2 \text{ th}}$				86	178	66	132	155	86	170		
22.778	682	1.35	$M_2$												198
			c												3.4
			$n_{2 \text{ Eck}}$												66
			$n_{2 \text{ th}}$												66
24.567	438	1.02	$M_2$		71	88	105								
			c		5.0	4.0	3.3								
			$n_{2 \text{ Eck}}$		153	165	165								
			$n_{2 \text{ th}}$		153	165	165								
24.567	564	1.02	$M_2$					127	99	235	187	176	319	260	
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8	
			$n_{2 \text{ Eck}}$					79	165	61	122	144	79	165	
			$n_{2 \text{ th}}$					79	165	61	122	143	79	165	
24.567	706	1.02	$M_2$												214
			c												3.2
			$n_{2 \text{ Eck}}$												61
			$n_{2 \text{ th}}$												61
27.917	498	1.01	$M_2$		81	100	119								
			c		5.0	4.0	3.3								
			$n_{2 \text{ Eck}}$		134	145	145								
			$n_{2 \text{ th}}$		134	145	145								
27.917	641	1.01	$M_2$					144	112	267	213	200	363	296	
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8	
			$n_{2 \text{ Eck}}$					70	145	54	108	126	70	145	
			$n_{2 \text{ th}}$					70	145	54	107	126	70	145	
27.917	691	1.01	$M_2$												245
			c												2.8
			$n_{2 \text{ Eck}}$												54
			$n_{2 \text{ th}}$												54
32.267	450	0.66	$M_2$	69	94	116	139								
			c	5.1	3.9	3.1	2.6								
			$n_{2 \text{ Eck}}$	126	116	126	126								
			$n_{2 \text{ th}}$	126	116	126	126								
32.267	580	0.66	$M_2$					168	131	310	248	232	421	343	
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4	
			$n_{2 \text{ Eck}}$					60	126	47	93	109	60	126	
			$n_{2 \text{ th}}$					60	126	46	93	109	60	126	
36.667	512	0.65	$M_2$	78	107	132	157								
			c	5.1	3.9	3.1	2.6								
			$n_{2 \text{ Eck}}$	111	102	111	111								
			$n_{2 \text{ th}}$	110	102	110	110								
36.667	659	0.65	$M_2$					191	149	353	281	264	478	390	
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4	
			$n_{2 \text{ Eck}}$					53	111	41	82	96	53	111	
			$n_{2 \text{ th}}$					53	110	41	82	96	53	110	
39.160	456	0.49	$M_2$	84	115	142	169								
			c	4.3	3.2	2.6	2.2								
			$n_{2 \text{ Eck}}$	103	96	103	103								
			$n_{2 \text{ th}}$	103	96	103	103								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 706 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c	1.35	611	22.778
													$n_2$ Eck			
													$n_2$ th			
161	350	306	506	378	663	463							$M_2$ c	1.35	682	22.778
3.5	1.9	1.9	1.3	1.6	1.0	1.3							$n_2$ Eck			
158	66	142	66	142	59	142							$n_2$ th			
158	66	142	66	142	59	135							$M_2$ c	1.02	438	24.567
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.02	564	24.567
													$n_2$ Eck			
													$n_2$ th			
174	378	331	547	408		499							$M_2$ c	1.02	706	24.567
3.4	1.9	1.9	1.3	1.5		1.2							$n_2$ Eck			
147	61	131	61	131		131							$n_2$ th			
146	61	131	61	131		131							$M_2$ c	1.01	498	27.917
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.01	641	27.917
													$n_2$ Eck			
													$n_2$ th			
199	431	377	622	464		568							$M_2$ c	1.01	691	27.917
2.9	1.6	1.6	1.1	1.3		1.1							$n_2$ Eck			
129	54	116	54	116		116							$n_2$ th			
129	54	116	54	116		116							$M_2$ c	0.66	450	32.267
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.66	580	32.267
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.65	512	36.667
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.65	659	36.667
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.49	456	39.160
													$n_2$ Eck			
													$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 706 \text{ Nm}$

GST07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
39.160	586	0.49	$M_2$					205	160	378	302	283	512	417	
			c				2.8	2.9	1.5	1.7	1.8	1.1	1.2		
			$n_{2 \text{ Eck}}$				50	103	38	77	90	50	103		
			$n_{2 \text{ th}}$				50	103	38	77	90	50	103		
44.500	518	0.48	$M_2$	95	130	161	191								
			c	4.7	3.6	2.9	2.4								
			$n_{2 \text{ Eck}}$	91	84	91	91								
			$n_{2 \text{ th}}$	91	84	91	91								
44.500	666	0.48	$M_2$					233	181	429	342	321	582	474	
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3	
			$n_{2 \text{ Eck}}$					44	91	34	67	79	44	91	
			$n_{2 \text{ th}}$					44	91	34	67	79	44	91	
49.500	461	0.33	$M_2$	107	146	180	214								
			c	3.8	2.9	2.3	1.9								
			$n_{2 \text{ Eck}}$	82	76	82	82								
			$n_{2 \text{ th}}$	82	76	82	82								
56.250	524	0.33	$M_2$	122	166	205	243								
			c	3.8	2.9	2.3	1.9								
			$n_{2 \text{ Eck}}$	72	67	72	72								
			$n_{2 \text{ th}}$	72	67	72	72								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



$M_{2GN} \leq 706 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST07-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c	0.49	586	39.160
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.48	518	44.500
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.48	666	44.500
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.33	461	49.500
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	0.33	524	56.250
													$n_2$ Eck			
													$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 710 \text{ Nm}$

GST07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
39.200	692	0.97	$M_2$					111	138	164
			c				5.0	4.0	3.4	
			$n_{2 \text{ Eck}}$				96	103	103	
			$n_{2 \text{ th}}$				96	103	103	
44.000	706	0.53	$M_2$					125	155	185
			c				5.0	4.0	3.4	
			$n_{2 \text{ Eck}}$				85	92	92	
			$n_{2 \text{ th}}$				85	92	92	
51.022	700	0.84	$M_2$			107	146	181	215	
			c			5.7	4.3	3.4	2.9	
			$n_{2 \text{ Eck}}$			79	74	79	79	
			$n_{2 \text{ th}}$			79	74	79	79	
53.900	706	0.48	$M_2$			113	154	191	228	
			c			5.4	4.1	3.3	2.8	
			$n_{2 \text{ Eck}}$			75	70	75	75	
			$n_{2 \text{ th}}$			75	70	75	75	
65.079	587	0.31	$M_2$		89					
			c		5.7					
			$n_{2 \text{ Eck}}$		62					
			$n_{2 \text{ th}}$		62					
65.079	707	0.31	$M_2$			138	188	232	276	
			c			4.5	3.4	2.7	2.3	
			$n_{2 \text{ Eck}}$			62	58	62	62	
			$n_{2 \text{ th}}$			62	58	62	62	
70.156	706	0.43	$M_2$			149	203	251	298	
			c			4.1	3.2	2.5	2.1	
			$n_{2 \text{ Eck}}$			58	54	58	58	
			$n_{2 \text{ th}}$			58	53	58	58	
79.762	710	0.54	$M_2$		109	170	232	286	340	
			c		5.6	3.7	2.8	2.2	1.9	
			$n_{2 \text{ Eck}}$		51	51	47	51	51	
			$n_{2 \text{ th}}$		51	51	47	51	51	
85.983	706	0.40	$M_2$		118	184	251	309	367	
			c		5.2	3.4	2.6	2.1	1.7	
			$n_{2 \text{ Eck}}$		47	47	44	47	47	
			$n_{2 \text{ th}}$		47	47	44	47	47	
97.708	710	0.40	$M_2$	107	135	210	286	352	418	
			c	5.7	4.6	3.0	2.3	1.8	1.5	
			$n_{2 \text{ Eck}}$	42	42	42	38	42	42	
			$n_{2 \text{ th}}$	41	41	41	38	41	41	
111.915	706	0.24	$M_2$	123	155	242	328	404	480	
			c	5.0	4.0	2.6	2.0	1.6	1.3	
			$n_{2 \text{ Eck}}$	36	36	36	34	36	36	
			$n_{2 \text{ th}}$	36	36	36	34	36	36	
127.176	710	0.24	$M_2$	141	177	276	374	460	546	
			c	4.4	3.5	2.3	1.8	1.4	1.2	
			$n_{2 \text{ Eck}}$	32	32	32	30	32	32	
			$n_{2 \text{ th}}$	32	32	32	29	32	32	
139.211	706	0.17	$M_2$	155	195	303	410	504	598	
			c	4.0	3.2	2.1	1.6	1.3	1.1	
			$n_{2 \text{ Eck}}$	29	29	29	27	29	29	
			$n_{2 \text{ th}}$	29	29	29	27	29	29	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 710 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST07-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
201	157	371	296	278	504	410	c	0.97	692	39.200
3.4	3.5	1.9	2.1	2.1	1.4	1.4	$n_{2 \text{ Eck}}$			
50	103	38	77	90	50	103	$n_{2 \text{ th}}$			
50	103	38	77	90	50	94				
226	176	418	333	312	566	461	$M_2$			
3.1	3.5	1.7	2.1	2.1	1.2	1.4	c	0.53	706	44.000
44	92	34	68	80	44	92	$n_{2 \text{ Eck}}$			
44	92	34	68	80	44	92	$n_{2 \text{ th}}$			
264	205	485	387	363	658	535	$M_2$			
2.6	3.0	1.4	1.8	1.8	1.1	1.2	c	0.84	700	51.022
38	79	29	59	69	38	79	$n_{2 \text{ Eck}}$			
38	79	29	59	69	38	68	$n_{2 \text{ th}}$			
279	217	513	409	383	695	566	$M_2$			
2.5	2.9	1.4	1.7	1.7	1.0	1.1	c	0.48	706	53.900
36	75	28	56	65	36	75	$n_{2 \text{ Eck}}$			
36	75	28	56	65	36	75	$n_{2 \text{ th}}$			
							$M_2$			
							c	0.31	587	65.079
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.31	707	65.079
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
365	285	670	535	501			$M_2$			
1.9	2.2	1.1	1.3	1.3			c	0.43	706	70.156
28	58	21	43	50			$n_{2 \text{ Eck}}$			
28	58	21	43	50			$n_{2 \text{ th}}$			
416	324		609	571			$M_2$			
1.7	2.0		1.2	1.2			c	0.54	710	79.762
25	51		38	44			$n_{2 \text{ Eck}}$			
24	51		38	44			$n_{2 \text{ th}}$			
449	350		657	616			$M_2$			
1.6	1.8		1.1	1.1			c	0.40	706	85.983
23	47		35	41			$n_{2 \text{ Eck}}$			
23	47		35	41			$n_{2 \text{ th}}$			
512	399						$M_2$			
1.4	1.6						c	0.40	710	97.708
20	42						$n_{2 \text{ Eck}}$			
20	41						$n_{2 \text{ th}}$			
							$M_2$			
							c	0.24	706	111.915
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.24	710	127.176
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.17	706	139.211
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 710 \text{ Nm}$

GST07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
158.194	710	0.17	$M_2$		177	222	345	467	574	
			c		3.5	2.8	1.9	1.4	1.1	
			$n_2$ Eck		26	26	26	24	26	
			$n_2$ th		26	26	26	24	26	
180.156	706	0.11	$M_2$		202	254				
			c		3.1	2.5				
			$n_2$ Eck		23	23				
			$n_2$ th		22	22				
204.722	710	0.11	$M_2$	112	231	290				
			c	5.5	2.7	2.2				
			$n_2$ Eck	20	20	20				
			$n_2$ th	20	20	20				
236.622	706	0.10	$M_2$	130	268	336				
			c	4.7	2.4	1.9				
			$n_2$ Eck	17	17	17				
			$n_2$ th	17	17	17				
248.458	710	0.08	$M_2$	137	281	353				
			c	4.5	2.3	1.8				
			$n_2$ Eck	16	16	16				
			$n_2$ th	16	16	16				
268.889	710	0.10	$M_2$	149	305	383				
			c	4.2	2.1	1.7				
			$n_2$ Eck	15	15	15				
			$n_2$ th	15	15	15				
326.333	710	0.07	$M_2$	182	371	466				
			c	3.4	1.7	1.4				
			$n_2$ Eck	12	12	12				
			$n_2$ th	12	12	12				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



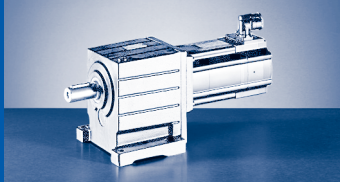


$M_{2GN} \leq 710 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GST07-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c $n_2$ Eck $n_2$ th	0.17	710	158.194
							$M_2$ c $n_2$ Eck $n_2$ th	0.11	706	180.156
							$M_2$ c $n_2$ Eck $n_2$ th	0.11	710	204.722
							$M_2$ c $n_2$ Eck $n_2$ th	0.10	706	236.622
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	710	248.458
							$M_2$ c $n_2$ Eck $n_2$ th	0.10	710	268.889
							$M_2$ c $n_2$ Eck $n_2$ th	0.07	710	326.333

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 357 \text{ Nm}$

GST09-1S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
1.560	277	22.20	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
2.048	198	15.60	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
2.048	308	15.60	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
2.333	207	12.20	$M_2$										35
			c										5.6
			$n_{2 \text{ Eck}}$										643
			$n_{2 \text{ th}}$										643
2.333	322	12.20	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
2.810	140	9.58	$M_2$			27	21	20	36	30			
			c			5.0	5.0	5.1	3.4	3.3			
			$n_{2 \text{ Eck}}$			534	1068	1255	694	1442			
			$n_{2 \text{ th}}$			534	1012	1014	694	927			
2.810	218	9.58	$M_2$										43
			c										4.9
			$n_{2 \text{ Eck}}$										534
			$n_{2 \text{ th}}$										534
2.810	339	9.58	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
3.444	230	7.30	$M_2$										53
			c										4.2
			$n_{2 \text{ Eck}}$										436
			$n_{2 \text{ th}}$										435
3.444	357	7.30	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
4.667	156	4.60	$M_2$	24	19	45	36	34	61	50			
			c	5.7	5.7	3.4	3.4	3.4	2.3	2.2			
			$n_{2 \text{ Eck}}$	418	868	321	643	755	418	868			
			$n_{2 \text{ th}}$	418	814	321	643	744	418	685			
4.667	243	4.60	$M_2$								40	33	72
			c								5.8	5.3	3.3
			$n_{2 \text{ Eck}}$								321	771	321
			$n_{2 \text{ th}}$								321	769	321
5.667	162	3.51	$M_2$	30	23	55	44	41	75	61			
			c	4.8	4.9	2.9	2.9	2.9	2.0	1.9			
			$n_{2 \text{ Eck}}$	344	715	265	529	622	344	715			
			$n_{2 \text{ th}}$	344	715	265	529	622	344	641			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 357 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-1S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
							59	43	76	47	c	22.20	277	1.560
							4.5	4.9	3.5	4.5	$n_{2 \text{ Eck}}$			
							914	1923	865	1923	$n_{2 \text{ th}}$			
							913	1294	865	1267				
27	45	33	59	41							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	15.60	198	2.048
1575	733	1575	659	1575							$n_{2 \text{ Eck}}$			
1142	733	1094	659	1048							$n_{2 \text{ th}}$			
					52	40	78	57	101	63	$M_2$			
					5.7	5.8	3.8	4.2	3.0	3.8	c	15.60	308	2.048
					696	1465	696	1465	659	1465	$n_{2 \text{ Eck}}$			
					696	1080	696	1080	659	1058	$n_{2 \text{ th}}$			
31	51	38	68	47							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	12.20	207	2.333
1382	643	1382	579	1382							$n_{2 \text{ Eck}}$			
1077	643	1032	579	988							$n_{2 \text{ th}}$			
					59	46	90	65	115	72	$M_2$			
					5.2	5.3	3.5	3.8	2.7	3.5	c	12.20	322	2.333
					611	1286	611	1286	579	1286	$n_{2 \text{ Eck}}$			
					611	947	611	947	579	947	$n_{2 \text{ th}}$			
											$M_2$			
											c	9.58	140	2.810
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
37	62	46	82	57							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	9.58	218	2.810
1148	534	1148	481	1148							$n_{2 \text{ Eck}}$			
984	534	943	481	902							$n_{2 \text{ th}}$			
					72	56	108	78	139	87	$M_2$			
					4.5	4.6	3.1	3.4	2.4	3.0	c	9.58	339	2.810
					507	1068	507	1068	481	1068	$n_{2 \text{ Eck}}$			
					507	787	507	787	481	787	$n_{2 \text{ th}}$			
46	76	57	100	70							$M_2$			
3.8	3.0	3.1	2.3	2.5							c	7.30	230	3.444
936	436	936	392	936							$n_{2 \text{ Eck}}$			
845	435	811	392	778							$n_{2 \text{ th}}$			
					89	69	133	97	171	107	$M_2$			
					3.9	4.0	2.6	2.9	2.1	2.6	c	7.30	357	3.444
					414	871	414	871	392	871	$n_{2 \text{ Eck}}$			
					414	642	414	642	392	642	$n_{2 \text{ th}}$			
											$M_2$			
											c	4.60	156	4.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
63	104	78	137	96							$M_2$			
2.9	2.3	2.4	1.8	2.0							c	4.60	243	4.667
691	321	691	289	691							$n_{2 \text{ Eck}}$			
691	321	691	289	666							$n_{2 \text{ th}}$			
											$M_2$			
											c	3.51	162	5.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

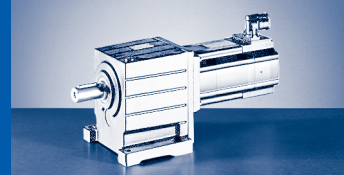
## GST□□-□S (MCS)

$M_{2GN} \leq 357 \text{ Nm}$

GST09-1S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00	
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500	
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6	
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50	
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32	
5.667	253	3.51	$M_2$								49	40	88	
			c									4.9	4.5	2.8
			$n_{2 \text{ Eck}}$									265	635	265
			$n_{2 \text{ th}}$									265	634	265
7.333	168	2.26	$M_2$	39	30	71	57	53	97	79				
			c	3.9	3.9	2.3	2.3	2.3	1.6	1.5				
			$n_{2 \text{ Eck}}$	266	552	205	409	481	266	552				
			$n_{2 \text{ th}}$	266	552	205	409	481	266	514				
7.333	262	2.26	$M_2$								64	53	114	
			c									4.0	3.6	2.3
			$n_{2 \text{ Eck}}$									205	491	205
			$n_{2 \text{ th}}$									205	490	205
8.900	170	1.66	$M_2$	47	37	87	69	65	118	96				
			c	3.2	3.3	1.9	1.9	2.0	1.3	1.3				
			$n_{2 \text{ Eck}}$	219	455	169	337	396	219	455				
			$n_{2 \text{ th}}$	219	455	169	337	396	219	450				
8.900	265	1.66	$M_2$								79	64	139	
			c									3.3	3.0	1.9
			$n_{2 \text{ Eck}}$									169	405	169
			$n_{2 \text{ th}}$									169	403	169
11.250	173	1.11	$M_2$	60	47	110	88	83	150	122				
			c	2.6	2.6	1.6	1.6	1.6	1.1	1.0				
			$n_{2 \text{ Eck}}$	173	360	133	267	313	173	360				
			$n_{2 \text{ th}}$	173	360	133	267	313	173	360				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 357 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-1S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
77	127	95	167	116							$c$	3.51	253	5.667
2.5	2.0	2.0	1.5	1.7							$n_{2 \text{ Eck}}$			
569	265	569	238	569							$n_{2 \text{ th}}$			
569	265	569	238	569							$M_2$			
											$c$	2.26	168	7.333
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
100	165	123	216	151							$M_2$			
2.0	1.6	1.6	1.2	1.3							$c$	2.26	262	7.333
440	205	440	184	440							$n_{2 \text{ Eck}}$			
440	205	440	184	440							$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.66	170	8.900
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
122	201	150	263	184							$M_2$			
1.7	1.3	1.4	1.0	1.1							$c$	1.66	265	8.900
362	169	362	152	362							$n_{2 \text{ Eck}}$			
362	169	362	152	362							$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.11	173	11.250
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

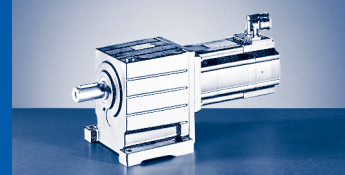
## GST□□-□S (MCS)

$M_{2GN} \leq 1373 \text{ Nm}$

GST09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
4.056	714	27.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
4.457	784	25.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
5.324	508	18.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
5.324	789	18.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
5.850	558	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
5.850	867	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
6.667	583	14.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										99 5.6 225 225
6.667	905	14.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
7.305	357	11.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			68 5.0 205 205	54 5.0 411 389	51 5.1 483 390	93 3.4 267 267	76 3.3 554 357			
7.305	559	11.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										109 4.9 205 205
7.305	869	11.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
8.027	393	11.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			75 5.0 187 187	60 5.0 374 354	56 5.1 439 355	103 3.4 243 243	84 3.3 505 324			
8.027	615	11.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										120 4.9 187 187

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

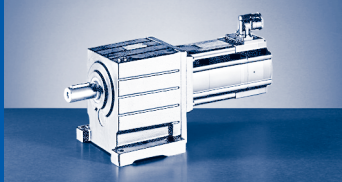


$M_{2GN} \leq 1373 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
							152	109	195	121	c	27.00	714	4.056
							4.5	5.0	3.6	4.5	$n_2 \text{ Eck}$			
							351	740	333	740	$n_2 \text{ th}$			
							351	498	333	488				
							167	120	215	133	$M_2$	25.90	784	4.457
							4.5	5.0	3.6	4.5	c			
							320	673	303	673	$n_2 \text{ Eck}$			
							320	454	303	444	$n_2 \text{ th}$			
69	115	86	151	106							$M_2$	18.10	508	5.324
5.4	4.3	4.4	3.3	3.6							c			
606	282	606	254	606							$n_2 \text{ Eck}$			
439	282	421	254	403							$n_2 \text{ th}$			
					133	103	201	145	258	161	$M_2$	18.10	789	5.324
					5.7	5.8	3.8	4.2	3.0	3.8	c			
					268	564	268	564	254	564	$n_2 \text{ Eck}$			
					268	415	268	415	254	407	$n_2 \text{ th}$			
76	126	94	166	116							$M_2$	17.50	558	5.850
5.4	4.3	4.4	3.3	3.6							c			
551	256	551	231	551							$n_2 \text{ Eck}$			
400	256	383	231	367							$n_2 \text{ th}$			
					146	113	220	159	284	176	$M_2$	17.50	867	5.850
					5.7	5.8	3.8	4.2	3.0	3.8	c			
					244	513	244	513	231	513	$n_2 \text{ Eck}$			
					244	378	244	378	231	370	$n_2 \text{ th}$			
87	144	108	190	133							$M_2$	14.20	583	6.667
5.0	3.9	4.1	3.0	3.3							c			
484	225	484	203	484							$n_2 \text{ Eck}$			
377	225	361	203	346							$n_2 \text{ th}$			
					167	130	252	182	324	202	$M_2$	14.20	905	6.667
					5.2	5.3	3.5	3.8	2.7	3.5	c			
					214	450	214	450	203	450	$n_2 \text{ Eck}$			
					214	332	214	332	203	332	$n_2 \text{ th}$			
											$M_2$	11.30	357	7.305
											c			
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
96	159	119	209	146							$M_2$	11.30	559	7.305
4.4	3.4	3.6	2.6	2.9							c			
442	205	442	185	442							$n_2 \text{ Eck}$			
379	205	363	185	347							$n_2 \text{ th}$			
					184	143	277	201	356	222	$M_2$	11.30	869	7.305
					4.5	4.6	3.1	3.4	2.4	3.0	c			
					195	411	195	411	185	411	$n_2 \text{ Eck}$			
					195	303	195	303	185	303	$n_2 \text{ th}$			
											$M_2$	11.00	393	8.027
											c			
											$n_2 \text{ Eck}$			
											$n_2 \text{ th}$			
105	175	130	230	160							$M_2$	11.00	615	8.027
4.4	3.4	3.6	2.6	2.9							c			
402	187	402	168	402							$n_2 \text{ Eck}$			
345	187	330	168	316							$n_2 \text{ th}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□S (MCS)

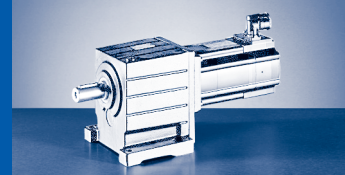
$M_{2GN} \leq 1373 \text{ Nm}$

GST09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
8.027	955	11.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.010	860	15.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.010	1128	15.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
10.267	897	12.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										152 5.6 146 146
10.267	1178	12.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
11.667	1019	12.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										172 5.6 129 129
11.667	1206	12.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
12.362	605	9.79	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			115 5.0 121 121	92 5.0 243 230	86 5.1 285 230	158 3.4 158 158	129 3.3 328 211			
12.362	947	9.79	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										184 4.9 121 121
12.362	1253	9.79	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
14.048	687	9.53	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			131 5.0 107 107	105 5.0 214 202	98 5.1 251 203	179 3.4 139 139	146 3.3 288 185			
14.048	1076	9.53	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										209 4.9 107 107
14.048	1283	9.53	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]





$M_{2GN} \leq 1373 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
					203	157	305	220	391	244	c	11.00	955	8.027
					4.5	4.6	3.1	3.4	2.4	3.0	$n_{2 \text{ Eck}}$			
					178	374	178	374	168	374	$n_{2 \text{ th}}$			
					178	275	178	275	168	275				
117	194	145	256	179							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	15.20	860	9.010
358	167	358	150	358							$n_{2 \text{ Eck}}$			
259	166	249	150	238							$n_{2 \text{ th}}$			
					227	176	342	247	439	273	$M_2$			
					4.8	4.9	3.2	3.5	2.5	3.2	c	15.20	1128	9.010
					158	333	158	333	150	333	$n_{2 \text{ Eck}}$			
					158	245	158	237	150	232	$n_{2 \text{ th}}$			
134	222	166	293	204							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	12.40	897	10.267
314	146	314	132	314							$n_{2 \text{ Eck}}$			
245	146	235	131	225							$n_{2 \text{ th}}$			
					260	202	390	282	501	312	$M_2$			
					4.4	4.5	3.0	3.2	2.3	2.9	c	12.40	1178	10.267
					139	292	139	292	132	292	$n_{2 \text{ Eck}}$			
					139	215	139	215	131	215	$n_{2 \text{ th}}$			
152	253	189	333	232							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	12.10	1019	11.667
276	129	276	116	276							$n_{2 \text{ Eck}}$			
215	129	206	116	198							$n_{2 \text{ th}}$			
					296	230	445	322	571	356	$M_2$			
					4.0	4.0	2.7	2.9	2.1	2.6	c	12.10	1206	11.667
					122	257	122	257	116	257	$n_{2 \text{ Eck}}$			
					122	189	122	189	116	188	$n_{2 \text{ th}}$			
											$M_2$			
											c	9.79	605	12.362
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
162	269	201	354	247							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	9.79	947	12.362
261	121	261	109	261							$n_{2 \text{ Eck}}$			
224	121	214	109	205							$n_{2 \text{ th}}$			
					314	244	472	341	605	378	$M_2$			
					3.9	4.0	2.6	2.9	2.1	2.6	c	9.79	1253	12.362
					115	243	115	243	109	243	$n_{2 \text{ Eck}}$			
					115	179	115	179	109	179	$n_{2 \text{ th}}$			
											$M_2$			
											c	9.53	687	14.048
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
184	306	228	402	281							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	9.53	1076	14.048
230	107	230	96	230							$n_{2 \text{ Eck}}$			
197	107	189	96	180							$n_{2 \text{ th}}$			
					359	279	538	389	689	430	$M_2$			
					3.5	3.6	2.4	2.6	1.9	2.3	c	9.53	1283	14.048
					101	214	101	214	96	214	$n_{2 \text{ Eck}}$			
					101	157	101	157	96	157	$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 1373 \text{ Nm}$

GST09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
15.156	996	7.65	$M_2$										227
			c										4.2
			$n_{2 \text{ Eck}}$										99
			$n_{2 \text{ th}}$										99
15.156	1340	7.65	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
17.222	1132	7.49	$M_2$										258
			c										4.2
			$n_{2 \text{ Eck}}$										87
			$n_{2 \text{ th}}$										87
17.222	1373	7.49	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
20.533	675	4.50	$M_2$			194	155	145	265	216			
			c			3.4	3.8	3.9	2.5	2.5			
			$n_{2 \text{ Eck}}$			73	146	172	95	197			
			$n_{2 \text{ th}}$			73	146	172	95	160			
20.533	1055	4.50	$M_2$								174	142	311
			c								5.8	6.0	3.3
			$n_{2 \text{ Eck}}$								73	175	73
			$n_{2 \text{ th}}$								73	175	73
23.333	767	4.41	$M_2$			221	176	165	301	245			
			c			3.4	3.8	3.9	2.5	2.5			
			$n_{2 \text{ Eck}}$			64	129	151	84	174			
			$n_{2 \text{ th}}$			64	129	151	84	140			
23.333	1199	4.41	$M_2$								198	161	354
			c								5.8	6.0	3.3
			$n_{2 \text{ Eck}}$								64	154	64
			$n_{2 \text{ th}}$								64	154	64
24.933	703	3.38	$M_2$	127	99	237	189	177	323	263			
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2			
			$n_{2 \text{ Eck}}$	78	162	60	120	141	78	162			
			$n_{2 \text{ th}}$	78	162	60	120	141	78	151			
24.933	1096	3.38	$M_2$								214	174	380
			c								4.9	5.1	2.8
			$n_{2 \text{ Eck}}$								60	144	60
			$n_{2 \text{ th}}$								60	144	60
28.333	799	3.32	$M_2$	145	113	269	215	201	367	299			
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2			
			$n_{2 \text{ Eck}}$	69	143	53	106	124	69	143			
			$n_{2 \text{ th}}$	69	143	53	106	124	69	133			
28.333	1245	3.32	$M_2$								243	197	432
			c								4.9	5.1	2.8
			$n_{2 \text{ Eck}}$								53	127	53
			$n_{2 \text{ th}}$								53	127	53
32.267	729	2.25	$M_2$	166	130	309	246	231	419	342			
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7			
			$n_{2 \text{ Eck}}$	60	126	47	93	109	60	126			
			$n_{2 \text{ th}}$	60	126	46	93	109	60	124			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 1373 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
199	331	246	435	303							c	7.65	996	15.156
4.3	3.0	3.5	2.3	2.8							$n_{2 \text{ Eck}}$			
213	99	213	89	213							$n_{2 \text{ th}}$			
197	99	189	89	182										
					387	300	580	418	744	463	$M_2$			
					3.4	3.9	2.3	2.8	1.8	2.6	c	7.65	1340	15.156
					94	198	94	198	89	198	$n_{2 \text{ Eck}}$			
					94	146	94	146	89	146	$n_{2 \text{ th}}$			
226	377	280	495	344							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	7.49	1132	17.222
187	87	187	78	187							$n_{2 \text{ Eck}}$			
173	87	166	78	160							$n_{2 \text{ th}}$			
					442	342	661	477	847	527	$M_2$			
					3.0	3.5	2.1	2.6	1.6	2.3	c	7.49	1373	17.222
					83	174	83	174	78	174	$n_{2 \text{ Eck}}$			
					83	128	83	128	78	128	$n_{2 \text{ th}}$			
											$M_2$			
											c	4.50	675	20.533
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
272	452	337	593	413							$M_2$			
3.3	2.3	2.7	1.8	2.2							c	4.50	1055	20.533
157	73	157	66	157							$n_{2 \text{ Eck}}$			
157	73	157	66	156							$n_{2 \text{ th}}$			
											$M_2$			
											c	4.41	767	23.333
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
309	514	383	674	469							$M_2$			
3.3	2.3	2.7	1.8	2.2							c	4.41	1199	23.333
138	64	138	58	138							$n_{2 \text{ Eck}}$			
138	64	138	58	137							$n_{2 \text{ th}}$			
											$M_2$			
											c	3.38	703	24.933
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
332	551	410	722	503							$M_2$			
2.9	2.0	2.3	1.5	1.9							c	3.38	1096	24.933
129	60	129	54	129							$n_{2 \text{ Eck}}$			
129	60	129	54	129							$n_{2 \text{ th}}$			
											$M_2$			
											c	3.32	799	28.333
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
378	626	466	820	572							$M_2$			
2.9	2.0	2.3	1.5	1.9							c	3.32	1245	28.333
114	53	114	48	114							$n_{2 \text{ Eck}}$			
114	53	114	48	114							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.25	729	32.267
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 1373 \text{ Nm}$

GST09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00		
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500		
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8						
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6		
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50		
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32		
32.267	1136	2.25	$M_2$								279	227	494		
			c									4.0	4.1	2.3	
			$n_{2 \text{ Eck}}$										47	112	47
			$n_{2 \text{ th}}$										46	111	46
36.667	829	2.21	$M_2$	189	148	351	280	262	477	388					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_{2 \text{ Eck}}$	53	111	41	82	96	53	111					
			$n_{2 \text{ th}}$	53	110	41	82	96	53	109					
36.667	1291	2.21	$M_2$								317	258	562		
			c									4.0	4.1	2.3	
			$n_{2 \text{ Eck}}$										41	98	41
			$n_{2 \text{ th}}$										41	98	41
39.160	738	1.64	$M_2$	204	159	376	300	281	511	416					
			c	3.5	3.7	1.9	2.2	2.2	1.4	1.4					
			$n_{2 \text{ Eck}}$	50	103	38	77	90	50	103					
			$n_{2 \text{ th}}$	50	103	38	77	90	50	103					
39.160	1150	1.64	$M_2$								341	278	602		
			c									3.3	3.4	1.9	
			$n_{2 \text{ Eck}}$										38	92	38
			$n_{2 \text{ th}}$										38	92	38
44.500	839	1.62	$M_2$	231	180	428	340	319	580	472					
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6					
			$n_{2 \text{ Eck}}$	44	91	34	67	79	44	91					
			$n_{2 \text{ th}}$	44	91	34	67	79	44	91					
44.500	1307	1.62	$M_2$								388	314	684		
			c									3.3	3.8	1.9	
			$n_{2 \text{ Eck}}$										34	81	34
			$n_{2 \text{ th}}$										34	81	34
49.500	748	1.12	$M_2$	259	202	478	380	357	647	527					
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3					
			$n_{2 \text{ Eck}}$	39	82	30	61	71	39	82					
			$n_{2 \text{ th}}$	39	82	30	61	71	39	82					
56.250	850	1.10	$M_2$	294	229	543	432	405	736	599					
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3					
			$n_{2 \text{ Eck}}$	35	72	27	53	63	35	72					
			$n_{2 \text{ th}}$	35	72	27	53	63	35	72					

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 1373 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
432	716	534	937	654							$c$	2.25	1136	32.267
2.3	1.6	1.9	1.2	1.5							$n_{2 \text{ Eck}}$			
100	47	100	42	100							$n_{2 \text{ th}}$			
100	46	100	42	100							$M_2$			
											$c$	2.21	829	36.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
491	813	606	1065	743							$M_2$			
2.3	1.6	1.9	1.2	1.5							$c$	2.21	1291	36.667
88	41	88	37	88							$n_{2 \text{ Eck}}$			
88	41	88	37	88							$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.64	738	39.160
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
527	871	650	1140	796							$M_2$			
1.9	1.3	1.6	1.0	1.3							$c$	1.64	1150	39.160
82	38	82	35	82							$n_{2 \text{ Eck}}$			
82	38	82	34	82							$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.62	839	44.500
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
598	990	737	1295	903							$M_2$			
2.1	1.3	1.7	1.0	1.4							$c$	1.62	1307	44.500
73	34	73	30	73							$n_{2 \text{ Eck}}$			
72	34	72	30	72							$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.12	748	49.500
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.10	850	56.250
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

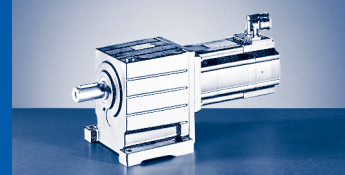
## GST□□-□S (MCS)

$M_{2GN} \leq 1623 \text{ Nm}$

GST09-3S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
40.136	964	2.14	$M_2$					139	166				
			c					5.4	4.6				
			$n_{2 \text{ Eck}}$					101	101				
			$n_{2 \text{ th}}$					101	101				
40.136	1245	2.14	$M_2$							200		375	298
			c							5.9		3.3	3.7
			$n_{2 \text{ Eck}}$							49		37	75
			$n_{2 \text{ th}}$							49		37	75
40.136	1344	2.14	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
43.267	892	1.55	$M_2$					150	180				
			c					5.1	4.3				
			$n_{2 \text{ Eck}}$					94	94				
			$n_{2 \text{ th}}$					94	94				
43.267	1152	1.55	$M_2$							218	169	406	322
			c							5.1	5.9	2.8	3.5
			$n_{2 \text{ Eck}}$							45	94	35	69
			$n_{2 \text{ th}}$							45	94	35	69
43.267	1290	1.55	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
49.167	1013	1.53	$M_2$					171	204				
			c					5.1	4.3				
			$n_{2 \text{ Eck}}$					82	82				
			$n_{2 \text{ th}}$					82	82				
49.167	1310	1.53	$M_2$							247	192	461	366
			c							5.1	5.9	2.8	3.5
			$n_{2 \text{ Eck}}$							40	82	31	61
			$n_{2 \text{ th}}$							40	82	31	61
49.167	1466	1.53	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
53.044	1093	1.38	$M_2$					184	220				
			c					5.1	4.3				
			$n_{2 \text{ Eck}}$					76	76				
			$n_{2 \text{ th}}$					76	76				
53.044	1379	1.38	$M_2$							267	207	498	395
			c							5.0	5.7	2.7	3.4
			$n_{2 \text{ Eck}}$							37	76	28	57
			$n_{2 \text{ th}}$							37	76	28	57
60.278	1242	1.37	$M_2$					209	250				
			c					5.1	4.3				
			$n_{2 \text{ Eck}}$					67	67				
			$n_{2 \text{ th}}$					67	67				
60.278	1565	1.37	$M_2$							304	235	566	449
			c							4.9	5.7	2.7	3.4
			$n_{2 \text{ Eck}}$							32	67	25	50
			$n_{2 \text{ th}}$							32	67	25	50

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 1623 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	2.14	964	40.136
											$n_2$			
											$n_2$			
											$n_2$			
280	510	416									$M_2$			
3.7	2.4	2.4									c	2.14	1245	40.136
88	49	101									$n_2$			
88	49	101									$n_2$			
			343	279	606	530	877	654	1149	802	$M_2$			
			3.8	4.0	2.2	2.2	1.5	1.8	1.2	1.5	c	2.14	1344	40.136
			37	90	37	80	37	80	34	80	$n_2$			
			37	89	37	80	37	80	34	80	$n_2$			
											$M_2$			
											c	1.55	892	43.267
											$n_2$			
											$n_2$			
302	552	449									$M_2$			
3.5	2.1	2.3									c	1.55	1152	43.267
82	45	94									$n_2$			
81	45	94									$n_2$			
			371	301	655	572	947	705	1240	864	$M_2$			
			3.4	3.9	2.0	2.2	1.4	1.8	1.0	1.5	c	1.55	1290	43.267
			35	83	35	75	35	75	31	75	$n_2$			
			35	83	35	75	35	75	31	75	$n_2$			
											$M_2$			
											c	1.53	1013	49.167
											$n_2$			
											$n_2$			
343	627	510									$M_2$			
3.5	2.1	2.3									c	1.53	1310	49.167
72	40	82									$n_2$			
72	40	82									$n_2$			
			421	342	744	650	1077	802	1409	982	$M_2$			
			3.4	3.9	2.0	2.2	1.4	1.8	1.0	1.5	c	1.53	1466	49.167
			31	73	31	66	31	66	28	66	$n_2$			
			31	73	31	66	31	66	27	66	$n_2$			
											$M_2$			
											c	1.38	1093	53.044
											$n_2$			
											$n_2$			
371	677	550	457	371	805	703	1164	867		1062	$M_2$			
3.4	2.0	2.2	3.0	3.4	1.7	1.9	1.2	1.5		1.3	c	1.38	1379	53.044
67	37	76	28	68	28	61	28	61		61	$n_2$			
66	37	76	28	68	28	61	28	61		61	$n_2$			
											$M_2$			
											c	1.37	1242	60.278
											$n_2$			
											$n_2$			
421	769	625	519	421	915	799	1322	985		1206	$M_2$			
3.4	2.0	2.2	3.0	3.4	1.7	1.9	1.2	1.5		1.3	c	1.37	1565	60.278
59	32	67	25	60	25	54	25	54		54	$n_2$			
58	32	67	25	60	25	54	25	54		54	$n_2$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

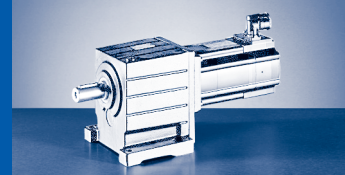
$M_{2GN} \leq 1623 \text{ Nm}$

GST09-3S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
71.867	1477	1.17	$M_2$					250	298	366	284	679	540
			c				5.1	4.3	3.9	4.5	2.2	2.7	
			$n_{2 \text{ Eck}}$				56	56	27	56	21	42	
			$n_{2 \text{ th}}$				56	56	27	56	21	42	
81.667	1584	1.16	$M_2$					285	340	417	324	772	614
			c				4.8	4.1	3.7	4.3	2.0	2.5	
			$n_{2 \text{ Eck}}$				50	50	24	50	18	37	
			$n_{2 \text{ th}}$				50	50	24	50	18	37	
93.541	1545	0.71	$M_2$			265	329	392					
			c			5.2	4.1	3.5					
			$n_{2 \text{ Eck}}$			40	43	43					
			$n_{2 \text{ th}}$			40	43	43					
93.541	1613	0.71	$M_2$							480	373	886	706
			c							3.3	3.8	1.8	2.3
			$n_{2 \text{ Eck}}$							21	43	16	32
			$n_{2 \text{ th}}$							21	43	16	32
99.167	1596	1.07	$M_2$			281	349	416	510	397	941	749	
			c			5.0	4.0	3.4	3.1	3.5	1.7	2.1	
			$n_{2 \text{ Eck}}$			38	41	41	20	41	15	30	
			$n_{2 \text{ th}}$			38	41	41	20	41	15	30	
113.585	1613	0.65	$M_2$			237	324	402	478	586	456	1080	861
			c			5.9	4.5	3.5	3.0	2.7	3.1	1.5	1.9
			$n_{2 \text{ Eck}}$			36	33	36	36	17	36	13	26
			$n_{2 \text{ th}}$			36	33	36	36	17	36	13	26
129.074	1612	0.65	$M_2$			271	371	458	546	669	521	1230	980
			c			5.1	3.9	3.1	2.6	2.4	2.8	1.3	1.6
			$n_{2 \text{ Eck}}$			31	29	31	31	15	31	12	23
			$n_{2 \text{ th}}$			31	29	31	31	15	31	12	23
141.289	1316	0.46	$M_2$		192								
			c		5.9								
			$n_{2 \text{ Eck}}$		29								
			$n_{2 \text{ th}}$		29								
141.289	1613	0.46	$M_2$			299	407	503	599	734	571	1348	1075
			c			4.7	3.6	2.8	2.4	2.2	2.5	1.2	1.5
			$n_{2 \text{ Eck}}$			29	27	29	29	14	29	11	21
			$n_{2 \text{ th}}$			29	27	29	29	14	29	11	21
160.556	1495	0.46	$M_2$		218								
			c		5.9								
			$n_{2 \text{ Eck}}$		25								
			$n_{2 \text{ th}}$		25								
160.556	1623	0.46	$M_2$			341	465	574	682	836	651	1533	1223
			c			4.2	3.2	2.5	2.1	1.9	2.2	1.1	1.3
			$n_{2 \text{ Eck}}$			25	23	25	25	12	25	9	19
			$n_{2 \text{ th}}$			25	23	25	25	12	25	9	19
182.844	1365	0.30	$M_2$	199	252								
			c	5.9	4.7								
			$n_{2 \text{ Eck}}$	22	22								
			$n_{2 \text{ th}}$	22	22								
182.844	1613	0.30	$M_2$			391	532	656	779				
			c			3.6	2.8	2.2	1.9				
			$n_{2 \text{ Eck}}$			22	21	22	22				
			$n_{2 \text{ th}}$			22	21	22	22				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]





$M_{2GN} \leq 1623 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
506	921	749	623	506	1095	957		1179			c	1.17	1477	71.867
2.7	1.6	1.8	2.3	2.7	1.3	1.5		1.2			$n_{2 \text{ Eck}}$			
49	27	56	21	50	21	45		45			$n_{2 \text{ th}}$			
49	27	56	21	50	21	45		45						
576	1048	853	709	576	1245	1088		1340			$M_2$			
2.6	1.5	1.7	2.2	2.6	1.3	1.4		1.2			c	1.16	1584	81.667
43	24	50	18	44	18	40		40			$n_{2 \text{ Eck}}$			
43	24	50	18	44	18	39		39			$n_{2 \text{ th}}$			
											$M_2$			
											c	0.71	1545	93.541
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
661	1203	978									$M_2$			
2.3	1.3	1.5									c	0.71	1613	93.541
38	21	43									$n_{2 \text{ Eck}}$			
38	21	43									$n_{2 \text{ th}}$			
702	1276	1038	864	703	1516	1324					$M_2$			
2.1	1.3	1.4	1.8	2.1	1.1	1.2					c	1.07	1596	99.167
36	20	41	15	36	15	33					$n_{2 \text{ Eck}}$			
36	20	41	15	36	15	33					$n_{2 \text{ th}}$			
807	1464	1191									$M_2$			
1.9	1.1	1.2									c	0.65	1613	113.585
31	17	36									$n_{2 \text{ Eck}}$			
31	17	36									$n_{2 \text{ th}}$			
919		1356									$M_2$			
1.7		1.1									c	0.65	1612	129.074
27		31									$n_{2 \text{ Eck}}$			
27		31									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.46	1316	141.289
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1007											$M_2$			
1.5											c	0.46	1613	141.289
25											$n_{2 \text{ Eck}}$			
25											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.46	1495	160.556
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1147											$M_2$			
1.3											c	0.46	1623	160.556
22											$n_{2 \text{ Eck}}$			
22											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.30	1365	182.844
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.30	1613	182.844
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 1623 \text{ Nm}$

GST09-3S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
207.778	1551	0.30	$M_2$	226	286									
			c	5.9	4.7									
			$n_{2 \text{ Eck}}$	20	20									
			$n_{2 \text{ th}}$	19	19									
207.778	1623	0.30	$M_2$			446	606	747	888					
			c			3.2	2.5	2.0	1.6					
			$n_{2 \text{ Eck}}$			20	18	20	20					
			$n_{2 \text{ th}}$			19	18	19	19					
236.622	1613	0.28	$M_2$	259	327	510	693	853	1013					
			c	5.4	4.3	2.8	2.1	1.7	1.4					
			$n_{2 \text{ Eck}}$	17	17	17	16	17	17					
			$n_{2 \text{ th}}$	17	17	17	16	17	17					
252.167	1569	0.21	$M_2$	277	350									
			c	4.9	3.9									
			$n_{2 \text{ Eck}}$	16	16									
			$n_{2 \text{ th}}$	16	16									
252.167	1623	0.21	$M_2$			545	739	910	1080					
			c			2.7	2.0	1.6	1.4					
			$n_{2 \text{ Eck}}$			16	15	16	16					
			$n_{2 \text{ th}}$			16	15	16	16					
268.889	1623	0.28	$M_2$	296	374	582	789	971	1153					
			c	4.8	3.8	2.5	1.9	1.5	1.3					
			$n_{2 \text{ Eck}}$	15	15	15	14	15	15					
			$n_{2 \text{ th}}$	15	15	15	14	15	15					
326.333	1623	0.20	$M_2$	363	457	709	961	1182	1403					
			c	3.9	3.1	2.1	1.6	1.2	1.1					
			$n_{2 \text{ Eck}}$	12	12	12	12	12	12					
			$n_{2 \text{ th}}$	12	12	12	11	12	12					
363.000	1613	0.26	$M_2$	405	511									
			c	3.5	2.8									
			$n_{2 \text{ Eck}}$	11	11									
			$n_{2 \text{ th}}$	11	11									
412.500	1623	0.18	$M_2$	463	582									
			c	3.1	2.5									
			$n_{2 \text{ Eck}}$	10	10									
			$n_{2 \text{ th}}$	10	10									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 1623 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	0.30	1551	207.778
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.30	1623	207.778
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.28	1613	236.622
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.21	1569	252.167
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.21	1623	252.167
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.28	1623	268.889
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.20	1623	326.333
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.26	1613	363.000
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.18	1623	412.500
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 2396 \text{ Nm}$

GST11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$I_{M400}$	1.500	3.600	1.500	3.225	1.500	3.225	1.350
			$P_N$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$J_M$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$M_2$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
4.056	888	82.20	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
4.457	976	79.00	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
5.324	982	55.40	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
5.850	1080	53.50	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
6.400	1118	45.70	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
6.864	1502	67.50	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
7.800	1707	65.10	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
9.010	1663	46.80	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
9.856	1721	40.20	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
11.200	1956	39.00	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
12.571	1191	29.40	c				163	271	202	357
			$n_{2 \text{ Eck}}$				5.4	4.2	4.4	3.3
			$n_{2 \text{ th}}$				257	119	257	107
			$n_{2 \text{ th}}$				186	119	178	107
12.571	1849	29.40	c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
14.286	1353	28.70	c				185	308	230	406
			$n_{2 \text{ Eck}}$				5.4	4.2	4.4	3.3
			$n_{2 \text{ th}}$				226	105	226	95
			$n_{2 \text{ th}}$				164	105	157	95

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 2396 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST11-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
			150		194	120	c			
			5.6		4.4	5.6	$n_{2 \text{ Eck}}$	82.20	888	4.056
			351		333	740	$n_{2 \text{ th}}$			
			351		333	428				
			165		213	132	$M_2$			
			5.6		4.4	5.6	c	79.00	976	4.457
			320		303	673	$n_{2 \text{ Eck}}$			
			320		303	390	$n_{2 \text{ th}}$			
			199	143	256	159	$M_2$			
			4.8	5.2	3.7	4.7	c	55.40	982	5.324
			268	564	254	564	$n_{2 \text{ Eck}}$			
			268	374	254	365	$n_{2 \text{ th}}$			
			218	157	281	175	$M_2$			
			4.8	5.2	3.7	4.7	c	53.50	1080	5.850
			244	513	231	513	$n_{2 \text{ Eck}}$			
			244	340	231	333	$n_{2 \text{ th}}$			
			239	173	308	192	$M_2$			
			4.5	4.9	3.5	4.5	c	45.70	1118	6.400
			223	469	211	469	$n_{2 \text{ Eck}}$			
			223	316	211	310	$n_{2 \text{ th}}$			
			254		328	203	$M_2$			
			5.6		4.4	5.6	c	67.50	1502	6.864
			208		197	437	$n_{2 \text{ Eck}}$			
			208		197	253	$n_{2 \text{ th}}$			
			288		372	231	$M_2$			
			5.6		4.4	5.6	c	65.10	1707	7.800
			183		173	385	$n_{2 \text{ Eck}}$			
			183		173	223	$n_{2 \text{ th}}$			
			336	243	433	269	$M_2$			
			4.8	5.2	3.7	4.7	c	46.80	1663	9.010
			158	333	150	333	$n_{2 \text{ Eck}}$			
			158	221	150	216	$n_{2 \text{ th}}$			
			369	266	475	295	$M_2$			
			4.5	4.9	3.5	4.5	c	40.20	1721	9.856
			145	304	137	304	$n_{2 \text{ Eck}}$			
			145	205	137	201	$n_{2 \text{ th}}$			
			419	302	540	335	$M_2$			
			4.5	4.9	3.5	4.5	c	39.00	1956	11.200
			127	268	121	268	$n_{2 \text{ Eck}}$			
			127	181	121	177	$n_{2 \text{ th}}$			
249							$M_2$			
3.6							c	29.40	1191	12.571
257							$n_{2 \text{ Eck}}$			
171							$n_{2 \text{ th}}$			
	314	244	474	342	609	379	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	29.40	1849	12.571
	113	239	113	239	107	239	$n_{2 \text{ Eck}}$			
	113	176	113	176	107	173	$n_{2 \text{ th}}$			
283							$M_2$			
3.6							c	28.70	1353	14.286
226							$n_{2 \text{ Eck}}$			
150							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 2396 \text{ Nm}$

GST11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
14.286	2101	28.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
15.400	1947	23.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
17.500	2212	22.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
20.289	1323	14.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			305 4.2 74 74	266 4.2 159 147	444 2.9 74 74	330 3.4 159 141	583 2.2 67 67
20.289	2057	14.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
23.056	1503	14.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			346 4.2 65 65	303 4.2 140 129	504 2.9 65 65	375 3.4 140 124	662 2.2 59 59
23.056	2338	14.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
24.933	1357	10.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			377 3.5 60 60	330 3.5 129 129	548 2.4 60 60	408 2.9 129 129	719 1.9 54 54
24.933	2108	10.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
28.333	1542	10.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			428 3.5 53 53	375 3.5 114 114	623 2.4 53 53	464 2.9 114 114	817 1.9 48 48
28.333	2396	10.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
32.267	1407	7.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	276 4.9 47 46	225 5.1 112 111	492 2.8 47 46	430 2.8 100 100	713 2.0 47 46	531 2.3 100 100	934 1.5 42 42
36.667	1598	6.93	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	314 4.9 41 41	256 5.1 98 98	559 2.8 41 41	489 2.8 88 88	810 2.0 41 41	604 2.3 88 88	1062 1.5 37 37

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 2396 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST11-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
	356	277	538	389	693	431	$c$	28.70	2101	14.286
	5.6	5.7	3.8	4.2	3.0	3.8	$n_{2 \text{ Eck}}$			
	100	210	100	210	95	210	$n_{2 \text{ th}}$			
	100	155	100	155	95	152				
	388	299	584	420	750	465	$M_2$	23.00	1947	15.400
	4.8	5.6	3.3	4.1	2.6	3.7	$c$			
	93	195	93	195	88	195	$n_{2 \text{ Eck}}$			
	93	144	93	144	88	144	$n_{2 \text{ th}}$			
	440	340	663	477	852	528	$M_2$	22.50	2212	17.500
	4.8	5.6	3.3	4.1	2.6	3.7	$c$			
	81	171	81	171	77	171	$n_{2 \text{ Eck}}$			
	81	126	81	126	77	126	$n_{2 \text{ th}}$			
406							$M_2$	14.30	1323	20.289
2.8							$c$			
159							$n_{2 \text{ Eck}}$			
136							$n_{2 \text{ th}}$			
	516	399	774	558	993	617	$M_2$	14.30	2057	20.289
	3.9	4.5	2.6	3.3	2.1	3.0	$c$			
	70	148	70	148	67	148	$n_{2 \text{ Eck}}$			
	70	109	70	109	67	109	$n_{2 \text{ th}}$			
461							$M_2$	14.10	1503	23.056
2.8							$c$			
140							$n_{2 \text{ Eck}}$			
119							$n_{2 \text{ th}}$			
	586	453	880	634	1128	701	$M_2$	14.10	2338	23.056
	3.9	4.5	2.6	3.3	2.1	3.0	$c$			
	62	130	62	130	59	130	$n_{2 \text{ Eck}}$			
	62	96	62	96	59	96	$n_{2 \text{ th}}$			
501							$M_2$	10.60	1357	24.933
2.4							$c$			
129							$n_{2 \text{ Eck}}$			
125							$n_{2 \text{ th}}$			
	638	494	956	689	1225	762	$M_2$	10.60	2108	24.933
	3.2	3.7	2.2	2.7	1.7	2.5	$c$			
	57	120	57	120	54	120	$n_{2 \text{ Eck}}$			
	57	89	57	89	54	89	$n_{2 \text{ th}}$			
569							$M_2$	10.40	1542	28.333
2.4							$c$			
114							$n_{2 \text{ Eck}}$			
110							$n_{2 \text{ th}}$			
	725	561	1086	783	1392	866	$M_2$	10.40	2396	28.333
	3.2	3.7	2.2	2.7	1.7	2.5	$c$			
	50	106	50	106	48	106	$n_{2 \text{ Eck}}$			
	50	78	50	78	48	78	$n_{2 \text{ th}}$			
651							$M_2$	7.04	1407	32.267
1.9							$c$			
100							$n_{2 \text{ Eck}}$			
100							$n_{2 \text{ th}}$			
740							$M_2$	6.93	1598	36.667
1.9							$c$			
88							$n_{2 \text{ Eck}}$			
88							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 2396 \text{ Nm}$

GST11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
39.160	1424	5.15	$M_2$	338	275	599	524	868	647	1137
			c	4.1	4.2	2.3	2.4	1.6	1.9	1.3
			$n_{2 \text{ Eck}}$	38	92	38	82	38	82	35
			$n_{2 \text{ th}}$	38	92	38	82	38	82	34
44.500	1618	5.08	$M_2$	385	311	681	594	987	734	1292
			c	4.1	4.7	2.3	2.6	1.6	2.1	1.3
			$n_{2 \text{ Eck}}$	34	81	34	73	34	73	30
			$n_{2 \text{ th}}$	34	81	34	72	34	72	30
49.500	1441	3.52	$M_2$	432	350	761	665	1101	820	1441
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	30	73	30	65	30	65	27
			$n_{2 \text{ th}}$	30	73	30	65	30	65	27
56.250	1637	3.44	$M_2$	490	398	865	755	1251	932	1637
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	27	64	27	57	27	57	24
			$n_{2 \text{ th}}$	27	64	27	57	27	57	24

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



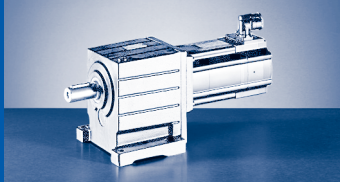


$M_{2GN} \leq 2396 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST11-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
793							$c$			
1.6							$n_{2 \text{ Eck}}$	5.15	1424	39.160
82							$n_{2 \text{ th}}$			
82							$M_2$			
900							$c$			
1.7							$n_{2 \text{ Eck}}$	5.08	1618	44.500
73							$n_{2 \text{ th}}$			
72							$M_2$			
1004							$c$			
1.4							$n_{2 \text{ Eck}}$	3.52	1441	49.500
65							$n_{2 \text{ th}}$			
65							$M_2$			
1141							$c$			
1.4							$n_{2 \text{ Eck}}$	3.44	1637	56.250
57							$n_{2 \text{ th}}$			
57										

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

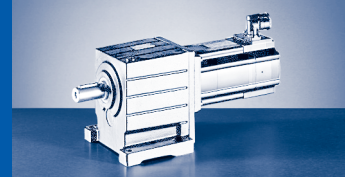
## GST□□-□S (MCS)

$M_{2GN} \leq 2848 \text{ Nm}$

GST11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
40.816	1216	6.36	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				167 5.7 99 99					
40.816	1565	6.36	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							378 4.0 37 37	301 4.5 74 74	282 4.6 86 86
40.816	2165	6.36	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
44.000	1687	5.66	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							407 4.0 34 34	322 5.0 68 68	302 5.1 80 80
44.000	2334	5.66	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
50.000	1917	5.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							463 4.0 30 30	366 5.0 60 60	343 5.1 71 71
50.000	2652	5.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
57.968	2222	4.77	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							537 4.0 26 26	425 5.0 52 52	398 5.1 61 61
57.968	2577	4.77	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
61.250	2017	4.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							570 3.5 25 24	452 4.3 49 49	424 4.4 58 58
61.250	2725	4.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
71.011	2339	3.52	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							661 3.5 21 21	524 4.3 42 42	491 4.4 50 50
71.011	2637	3.52	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 2848 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
11.8										$I_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
										c			
										$n_2$ Eck	6.36	1216	40.816
										$n_2$ th			
516	420									$M_2$			
3.0	3.0									c			
48	99									$n_2$ Eck	6.36	1565	40.816
48	99									$n_2$ th			
				608	532	884	658	1160	808	$M_2$			
				3.5	3.5	2.4	2.8	1.9	2.3	c			
				37	79	37	79	33	79	$n_2$ Eck	6.36	2165	40.816
				37	79	37	79	33	79	$n_2$ th			
556	451									$M_2$			
3.0	3.3									c			
44	92									$n_2$ Eck	5.66	1687	44.000
44	92									$n_2$ th			
				655	571	953	707	1250	868	$M_2$			
				3.5	3.9	2.4	3.2	1.9	2.6	c			
				34	73	34	73	31	73	$n_2$ Eck	5.66	2334	44.000
				34	73	34	73	31	73	$n_2$ th			
632	513									$M_2$			
3.0	3.3									c			
39	81									$n_2$ Eck	5.60	1917	50.000
39	81									$n_2$ th			
				745	649	1083	803	1421	987	$M_2$			
				3.5	3.9	2.4	3.2	1.9	2.6	c			
				30	65	30	65	27	65	$n_2$ Eck	5.60	2652	50.000
				30	65	30	65	27	65	$n_2$ th			
732	595									$M_2$			
3.0	3.3									c			
34	70									$n_2$ Eck	4.77	2222	57.968
34	70									$n_2$ th			
		488	394	869	757	1261	937	1652	1149	$M_2$			
		5.1	5.8	2.9	3.2	2.0	2.6	1.6	2.2	c			
		26	62	26	56	26	56	23	56	$n_2$ Eck	4.77	2577	57.968
		26	62	26	56	26	56	23	56	$n_2$ th			
777	632									$M_2$			
2.6	2.8									c			
32	66									$n_2$ Eck	4.08	2017	61.250
32	66									$n_2$ th			
		516	417	918	800	1332	989	1746	1214	$M_2$			
		5.1	5.8	2.9	3.3	2.0	2.6	1.6	2.2	c			
		25	59	25	53	25	53	22	53	$n_2$ Eck	4.08	2725	61.250
		24	59	24	53	24	53	22	53	$n_2$ th			
901	732									$M_2$			
2.6	2.8									c			
28	57									$n_2$ Eck	3.52	2339	71.011
27	57									$n_2$ th			
		603	488	1070	933	1550	1153	2030	1413	$M_2$			
		4.2	4.9	2.4	2.7	1.7	2.2	1.3	1.8	c			
		21	51	21	45	21	45	19	45	$n_2$ Eck	3.52	2637	71.011
		21	51	21	45	21	45	19	45	$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

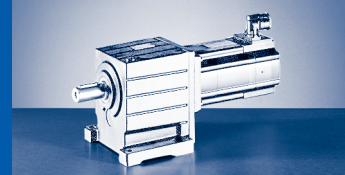
## GST□□-□S (MCS)

$M_{2GN} \leq 2848 \text{ Nm}$

GST11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
80.694	2658	3.50	$M_2$							751	596	558
			c							3.5	4.3	4.4
			$n_{2 \text{ Eck}}$							19	37	44
			$n_{2 \text{ th}}$							19	37	44
80.694	2787	3.50	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
87.267	2657	3.22	$M_2$					436		815	646	606
			c					5.8		3.2	4.0	4.0
			$n_{2 \text{ Eck}}$					22		17	34	40
			$n_{2 \text{ th}}$					22		17	34	40
99.167	2810	3.20	$M_2$					497		928	737	690
			c					5.4		3.0	3.7	3.8
			$n_{2 \text{ Eck}}$					20		15	30	36
			$n_{2 \text{ th}}$					20		15	30	36
112.933	2695	2.93	$M_2$					572	443	1062	844	791
			c					4.5	5.3	2.5	3.1	3.2
			$n_{2 \text{ Eck}}$					17	36	13	27	31
			$n_{2 \text{ th}}$					17	36	13	27	31
129.074	2651	1.94	$M_2$			449	536					
			c			5.1	4.3					
			$n_{2 \text{ Eck}}$			31	31					
			$n_{2 \text{ th}}$			31	31					
129.074	2810	1.94	$M_2$					656	509	1217	968	907
			c					4.1	4.8	2.3	2.9	2.9
			$n_{2 \text{ Eck}}$					15	31	12	23	27
			$n_{2 \text{ th}}$					15	31	12	23	27
146.993	2695	1.77	$M_2$		414	514	613	753	585	1391	1107	1038
			c		5.8	4.6	3.9	3.5	4.0	1.9	2.4	2.4
			$n_{2 \text{ Eck}}$		26	28	28	13	28	10	20	24
			$n_{2 \text{ th}}$		26	28	28	13	28	10	20	24
158.194	2779	1.40	$M_2$		447	554	661					
			c		5.5	4.4	3.7					
			$n_{2 \text{ Eck}}$		24	26	26					
			$n_{2 \text{ th}}$		24	26	26					
158.194	2810	1.40	$M_2$					811	630	1498	1193	1118
			c					3.4	3.9	1.9	2.3	2.4
			$n_{2 \text{ Eck}}$					12	26	10	19	22
			$n_{2 \text{ th}}$					12	26	9	19	22
180.156	2695	1.29	$M_2$		513	636	757	929	723	1712	1364	1278
			c		4.7	3.7	3.2	2.9	3.3	1.6	2.0	2.0
			$n_{2 \text{ Eck}}$		21	23	23	11	23	8	17	20
			$n_{2 \text{ th}}$		21	22	22	11	22	8	17	20
207.778	2810	0.88	$M_2$	435	595	736	876	1074	836	1977	1576	1477
			c	5.6	4.2	3.4	2.9	2.6	3.0	1.4	1.8	1.8
			$n_{2 \text{ Eck}}$	20	18	20	20	9	20	7	14	17
			$n_{2 \text{ th}}$	19	18	19	19	9	19	7	14	17
236.622	2695	0.82	$M_2$	500	682	843	1003	1229	957	2257	1800	1687
			c	4.7	3.6	2.8	2.4	2.2	2.5	1.2	1.5	1.5
			$n_{2 \text{ Eck}}$	17	16	17	17	8	17	6	13	15
			$n_{2 \text{ th}}$	17	16	17	17	8	17	6	13	15

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 2848 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
11.8										$I_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
1024	832									c			
2.6	2.8									$n_{2 \text{ Eck}}$	3.50	2658	80.694
24	50									$n_{2 \text{ th}}$			
24	50									$M_2$			
		688	557	1218	1062	1763	1312	2309	1608	c			
		3.9	4.5	2.3	2.5	1.6	2.1	1.2	1.7	$n_{2 \text{ Eck}}$	3.50	2787	80.694
		19	45	19	40	19	40	17	40	$n_{2 \text{ th}}$			
		19	44	19	40	19	40	17	40	$M_2$			
1110	902	747	606	1321	1153	1910	1422	2500	1743	c			
2.4	2.6	3.5	4.0	2.0	2.2	1.4	1.8	1.1	1.5	$n_{2 \text{ Eck}}$	3.22	2657	87.267
22	46	17	41	17	37	17	37	16	37	$n_{2 \text{ th}}$			
22	46	17	41	17	37	17	37	15	37	$M_2$			
1263	1027	852	691	1503	1312	2173	1618		1982	c			
2.2	2.4	3.2	3.7	1.9	2.1	1.3	1.7		1.4	$n_{2 \text{ Eck}}$	3.20	2810	99.167
20	41	15	36	15	33	15	33		33	$n_{2 \text{ th}}$			
20	41	15	36	15	33	15	33		33	$M_2$			
1444	1174	975	791	1717	1499	2480	1848		2263	c			
1.9	2.1	2.7	3.1	1.6	1.7	1.1	1.4		1.2	$n_{2 \text{ Eck}}$	2.93	2695	112.933
17	36	13	32	13	29	13	29		29	$n_{2 \text{ th}}$			
17	36	13	32	13	29	13	29		29	$M_2$			
										c			
										$n_{2 \text{ Eck}}$	1.94	2651	129.074
										$n_{2 \text{ th}}$			
1653	1344	1117	907	1965	1716		2115		2589	c			
1.7	1.9	2.5	2.9	1.4	1.6		1.3		1.1	$n_{2 \text{ Eck}}$	1.94	2810	129.074
15	31	12	28	12	25		25		25	$n_{2 \text{ th}}$			
15	31	12	28	12	25		25		25	$M_2$			
1888	1536	1278	1038	2243	1960		2414			c			
1.4	1.6	2.1	2.4	1.2	1.3		1.1			$n_{2 \text{ Eck}}$	1.77	2695	146.993
13	28	10	25	10	22		22			$n_{2 \text{ th}}$			
13	28	10	24	10	22		22			$M_2$			
										c			
										$n_{2 \text{ Eck}}$	1.40	2779	158.194
										$n_{2 \text{ th}}$			
2033	1654	1376	1118	2415	2110		2599			c			
1.4	1.5	2.0	2.3	1.2	1.3		1.1			$n_{2 \text{ Eck}}$	1.40	2810	158.194
12	26	10	23	10	20		20			$n_{2 \text{ th}}$			
12	26	9	23	9	20		20			$M_2$			
2320	1888	1572	1278		2408					c			
1.2	1.3	1.7	2.0		1.1					$n_{2 \text{ Eck}}$	1.29	2695	180.156
11	23	8	20		18					$n_{2 \text{ th}}$			
11	22	8	20		18					$M_2$			
2679	2180									c			
1.1	1.2									$n_{2 \text{ Eck}}$	0.88	2810	207.778
9	20									$n_{2 \text{ th}}$			
9	19									$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.82	2695	236.622
										$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 2848 \text{ Nm}$

GST11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
252.167	2810	0.63	$M_2$	533	728	899	1069	1310	1020	2406	1919	1798
			c	4.6	3.5	2.8	2.4	2.1	2.5	1.2	1.5	1.5
			$n_{2 \text{ Eck}}$	16	15	16	16	8	16	6	12	14
			$n_{2 \text{ th}}$	16	15	16	16	8	16	6	12	14
268.889	2848	0.82	$M_2$	570	777	960	1141	1398	1090	2567	2047	1919
			c	4.4	3.3	2.6	2.2	2.0	2.3	1.1	1.4	1.4
			$n_{2 \text{ Eck}}$	15	14	15	15	7	15	6	11	13
			$n_{2 \text{ th}}$	15	14	15	15	7	15	6	11	13
326.333	2848	0.59	$M_2$	698	949	1171	1391	1703	1328		2491	2335
			c	3.6	2.7	2.2	1.8	1.7	1.9		1.1	1.2
			$n_{2 \text{ Eck}}$	12	12	12	12	6	12		9	11
			$n_{2 \text{ th}}$	12	11	12	12	6	12		9	11
363.000	2695	0.76	$M_2$	781	1060	1307	1552					
			c	3.1	2.3	1.9	1.6					
			$n_{2 \text{ Eck}}$	11	10	11	11					
			$n_{2 \text{ th}}$	11	10	11	11					
412.500	2848	0.55	$M_2$	889	1207	1487	1766					
			c	2.8	2.2	1.7	1.5					
			$n_{2 \text{ Eck}}$	10	9	10	10					
			$n_{2 \text{ th}}$	10	9	10	10					

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

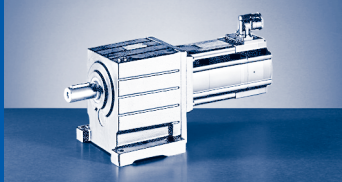


$M_{2GN} \leq 2848 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GST11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
11.8										$I_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.63	2810	252.167
										$n_{2 \text{ th}}$			
										$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.82	2848	268.889
										$n_{2 \text{ th}}$			
										$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.59	2848	326.333
										$n_{2 \text{ th}}$			
										$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.76	2695	363.000
										$n_{2 \text{ th}}$			
										$M_2$			
										c			
										$n_{2 \text{ Eck}}$	0.55	2848	412.500
										$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 3107 \text{ Nm}$

GST14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
5.200	1201	168.00	$M_2$			192		248	153
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			274		260	577
			$n_{2 \text{ th}}$			274		260	328
5.714	1320	161.00	$M_2$			210		272	168
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			249		236	525
			$n_{2 \text{ th}}$			249		236	299
6.286	1364	141.00	$M_2$			232		300	186
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			227		215	477
			$n_{2 \text{ th}}$			227		215	276
8.027	1467	100.00	$M_2$			300	216	386	240
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			178	374	168	374
			$n_{2 \text{ th}}$			178	247	168	242
8.800	2033	139.00	$M_2$			324		419	259
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			162		153	341
			$n_{2 \text{ th}}$			162		153	194
9.841	1546	75.10	$M_2$	245		370	267	476	296
			c	6.0		4.1	4.4	3.2	4.0
			$n_{2 \text{ Eck}}$	145		145	305	137	305
			$n_{2 \text{ th}}$	145		145	219	137	214
11.000	2386	119.00	$M_2$			407		525	326
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			130		123	273
			$n_{2 \text{ th}}$			130		123	158
12.362	2260	89.00	$M_2$			461	333	595	369
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			115	243	109	243
			$n_{2 \text{ th}}$			115	161	109	157
14.048	2568	86.60	$M_2$			524	378	676	420
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			101	214	96	214
			$n_{2 \text{ th}}$			101	141	96	138
15.156	2381	67.60	$M_2$	377		570	409	733	453
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	94		94	198	89	198
			$n_{2 \text{ th}}$	94		94	146	89	143
17.222	2705	66.00	$M_2$	428		647	464	833	515
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	83		83	174	78	174
			$n_{2 \text{ th}}$	83		83	128	78	126
20.044	2507	45.80	$M_2$	505	389	760	546	976	605
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	71	150	71	150	67	150
			$n_{2 \text{ th}}$	71	110	71	110	67	110
22.778	2849	44.90	$M_2$	573	442	864	621	1109	688
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	63	132	63	132	59	132
			$n_{2 \text{ th}}$	63	97	63	97	59	97

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





$M_{2GN} \leq 3107 \text{ Nm}$

GST14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
24.567	2627	33.20	$M_2$	623	481	936	674	1201	746
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_2$ Eck	58	122	58	122	55	122
			$n_2$ th	58	90	58	90	55	90
27.917	2985	32.60	$M_2$	708	547	1064	766	1365	848
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_2$ Eck	51	108	51	108	48	108
			$n_2$ th	51	79	51	79	48	79
32.267	2701	21.50	$M_2$	826	639	1237	892	1585	987
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_2$ Eck	44	93	44	93	42	93
			$n_2$ th	44	69	44	69	42	69
36.667	3069	21.20	$M_2$	939	726	1406	1014	1801	1122
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_2$ Eck	39	82	39	82	37	82
			$n_2$ th	39	60	39	60	37	60
39.160	2734	15.70	$M_2$	1008	781	1507	1088	1929	1203
			c	2.7	3.1	1.8	2.2	1.4	2.0
			$n_2$ Eck	36	77	36	77	35	77
			$n_2$ th	36	56	36	56	34	56
44.500	3107	15.50	$M_2$	1146	884	1713	1233	2193	1364
			c	2.7	3.4	1.8	2.5	1.4	2.3
			$n_2$ Eck	32	67	32	67	30	67
			$n_2$ th	32	50	32	50	30	50

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
40.185	3459	24.40	$M_2$										585
			c										5.6
			$n_{2 \text{ Eck}}$										37
			$n_{2 \text{ th}}$										37
40.185	4476	24.40	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
42.580	2052	18.30	$M_2$			390			534	433			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			35			46	95			
			$n_{2 \text{ th}}$			35			46	84			
42.580	3211	18.30	$M_2$										624
			c										4.9
			$n_{2 \text{ Eck}}$										35
			$n_{2 \text{ th}}$										35
42.580	4262	18.30	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
48.386	2332	18.10	$M_2$			443			606	492			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			31			40	84			
			$n_{2 \text{ th}}$			31			40	74			
48.386	3649	18.10	$M_2$										709
			c										4.9
			$n_{2 \text{ Eck}}$										31
			$n_{2 \text{ th}}$										31
48.386	4843	18.10	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
53.148	4574	20.50	$M_2$										773
			c										5.6
			$n_{2 \text{ Eck}}$										28
			$n_{2 \text{ th}}$										28
53.148	4779	20.50	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
59.321	3840	13.20	$M_2$										876
			c										4.2
			$n_{2 \text{ Eck}}$										25
			$n_{2 \text{ th}}$										25
59.321	5267	13.20	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
69.042	4470	11.50	$M_2$										1020
			c										4.2
			$n_{2 \text{ Eck}}$										22
			$n_{2 \text{ th}}$										22

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 5920 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST14-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
511	856	636	1128	783							c	24.40	3459	40.185
5.7	3.9	4.6	3.0	3.8							$n_{2 \text{ Eck}}$			
80	37	80	34	80							$n_{2 \text{ th}}$			
80	37	80	34	77										
					1001	773	1505	1083	1932	1200	$M_2$			
					4.3	5.0	2.9	3.6	2.3	3.3	c	24.40	4476	40.185
					36	75	36	75	34	75	$n_{2 \text{ Eck}}$			
					35	55	35	55	34	55	$n_{2 \text{ th}}$			
											$M_2$			
											c	18.30	2052	42.580
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
543	912	674	1200	831							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	18.30	3211	42.580
76	35	76	32	76							$n_{2 \text{ Eck}}$			
76	35	76	32	76							$n_{2 \text{ th}}$			
					1066	819	1600	1148	2052	1271	$M_2$			
					3.9	5.0	2.6	3.6	2.1	3.3	c	18.30	4262	42.580
					34	71	34	71	32	71	$n_{2 \text{ Eck}}$			
					33	52	33	52	32	52	$n_{2 \text{ th}}$			
											$M_2$			
											c	18.10	2332	48.386
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
617	1036	766	1364	944							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	18.10	3649	48.386
67	31	67	28	67							$n_{2 \text{ Eck}}$			
67	31	67	28	67							$n_{2 \text{ th}}$			
					1211	931	1818	1304	2332	1445	$M_2$			
					3.9	5.0	2.6	3.6	2.1	3.3	c	18.10	4843	48.386
					30	62	30	62	28	62	$n_{2 \text{ Eck}}$			
					29	46	29	46	28	46	$n_{2 \text{ th}}$			
	1133	836	1492	1031							$M_2$			
	3.9	5.1	3.0	4.2							c	20.50	4574	53.148
	28	61	25	61							$n_{2 \text{ Eck}}$			
	28	61	25	59							$n_{2 \text{ th}}$			
					1336	1028	2003	1438	2568	1592	$M_2$			
					3.5	4.5	2.4	3.2	1.9	2.9	c	20.50	4779	53.148
					27	57	27	57	25	57	$n_{2 \text{ Eck}}$			
					27	42	27	42	25	42	$n_{2 \text{ th}}$			
763	1277	946	1678	1164							$M_2$			
4.7	3.0	3.9	2.3	3.2							c	13.20	3840	59.321
54	25	54	23	54							$n_{2 \text{ Eck}}$			
54	25	54	23	54							$n_{2 \text{ th}}$			
					1492	1148	2236	1606	2866	1778	$M_2$			
					3.4	4.4	2.3	3.2	1.8	2.9	c	13.20	5267	59.321
					24	51	24	51	23	51	$n_{2 \text{ Eck}}$			
					24	37	24	37	23	37	$n_{2 \text{ th}}$			
888	1487	1101	1953	1354							$M_2$			
4.7	3.0	3.9	2.3	3.2							c	11.50	4470	69.042
47	22	47	20	47							$n_{2 \text{ Eck}}$			
47	22	47	20	47							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□S (MCS)

$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
69.042	4917	11.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
78.457	5079	11.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										1159 4.2 19 19
78.457	5587	11.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
93.541	3031	6.57	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			872 3.4 16 16	691 4.2 32 32	647 4.3 38 38	1188 2.5 21 21	965 2.8 43 43			
93.541	4733	6.57	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								782 5.8 16 16		1396 3.3 16 16
96.157	5882	10.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										1424 4.0 16 16
106.296	3444	6.52	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			990 3.4 14 14	785 4.2 28 28	736 4.3 33 33	1350 2.5 18 18	1097 2.8 38 38			
106.296	5378	6.52	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								888 5.8 14 14		1586 3.3 14 14
130.278	4221	6.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			1214 3.4 12 12	962 4.2 23 23	902 4.3 27 27	1654 2.5 15 15	1344 2.8 31 31			
130.278	5920	6.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								1095 5.2 12 12	885 6.0 28 28	1951 3.0 12 12
139.211	3865	4.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	699 5.3 14 14		1304 2.9 11 11	1035 3.6 22 22	970 3.7 25 25	1774 2.2 14 14	1442 2.4 29 29			
139.211	5736	4.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								1177 4.7 11 11	952 5.4 26 26	2091 2.7 11 11
158.194	4392	4.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	794 5.3 12 12		1482 2.9 10 9	1176 3.6 19 19	1102 3.7 22 22	2016 2.2 12 12	1639 2.4 26 26			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 5920 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
					1749	1349	2615	1882	3349	2082	c	11.50	4917	69.042
					2.8	3.6	1.9	2.6	1.5	2.3	$n_{2 \text{ Eck}}$			
					21	44	21	44	20	44	$n_{2 \text{ th}}$			
					21	32	21	32	20	32				
1009	1689	1251	2220	1539							$M_2$			
4.7	3.0	3.9	2.3	3.2							c	11.40	5079	78.457
41	19	41	17	41							$n_{2 \text{ Eck}}$			
41	19	41	17	41							$n_{2 \text{ th}}$			
					1987	1533	2972	2139	3805	2366	$M_2$			
					2.8	3.6	1.9	2.6	1.5	2.3	c	11.40	5587	78.457
					18	38	18	38	17	38	$n_{2 \text{ Eck}}$			
					18	28	18	28	17	28	$n_{2 \text{ th}}$			
											$M_2$			
											c	6.57	3031	93.541
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1216	2028	1505	2660	1849							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	6.57	4733	93.541
35	16	35	14	35							$n_{2 \text{ Eck}}$			
34	16	34	14	34							$n_{2 \text{ th}}$			
1240	2074	1537	2724	1890	2446	1888	3653	2631	4674	2910	$M_2$			
4.5	2.8	3.6	2.1	3.0	2.4	3.1	1.6	2.2	1.3	2.0	c	10.40	5882	96.157
34	16	34	14	34	15	31	15	31	14	31	$n_{2 \text{ Eck}}$			
34	16	34	14	34	15	23	15	23	14	23	$n_{2 \text{ th}}$			
											$M_2$			
											c	6.52	3444	106.296
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1382	2305	1711	3023	2101							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	6.52	5378	106.296
30	14	30	13	30							$n_{2 \text{ Eck}}$			
30	14	30	13	30							$n_{2 \text{ th}}$			
											$M_2$			
											c	6.00	4221	130.278
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1701	2832	2103	3712	2581							$M_2$			
3.3	2.1	2.7	1.6	2.2							c	6.00	5920	130.278
25	12	25	10	25							$n_{2 \text{ Eck}}$			
25	12	25	10	25							$n_{2 \text{ th}}$			
											$M_2$			
											c	4.42	3865	139.211
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1823	3032	2254	3973	2764							$M_2$			
3.0	1.9	2.5	1.4	2.0							c	4.42	5736	139.211
23	11	23	10	23							$n_{2 \text{ Eck}}$			
23	11	23	10	23							$n_{2 \text{ th}}$			
											$M_2$			
											c	4.40	4392	158.194
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

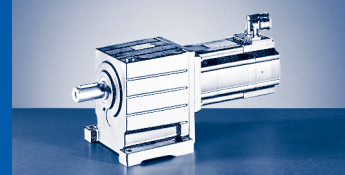
## GST□□-□S (MCS)

$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
158.194	5920	4.40	$M_2$								1343	1087	2382
			c								4.3	4.9	2.5
			$n_{2 \text{ Eck}}$								10	23	10
			$n_{2 \text{ th}}$								9	23	9
171.111	5544	5.49	$M_2$			1594	1264	1184	2173	1765			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			9	18	21	11	24			
			$n_{2 \text{ th}}$			9	18	21	11	24			
171.111	5920	5.49	$M_2$								1458	1181	2582
			c								3.9	4.5	2.3
			$n_{2 \text{ Eck}}$								9	21	9
			$n_{2 \text{ th}}$								9	21	9
204.722	4557	2.86	$M_2$	1040	807	1929	1534	1438	2621	2131			
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9			
			$n_{2 \text{ Eck}}$	10	20	7	15	17	10	20			
			$n_{2 \text{ th}}$	10	20	7	15	17	10	20			
204.722	5920	2.86	$M_2$								1757	1424	3101
			c								3.3	3.8	1.9
			$n_{2 \text{ Eck}}$								7	18	7
			$n_{2 \text{ th}}$								7	18	7
236.622	5267	2.65	$M_2$	1202	933	2230	1773	1662	3030	2464			
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9			
			$n_{2 \text{ Eck}}$	8	17	6	13	15	8	17			
			$n_{2 \text{ th}}$	8	17	6	13	15	8	17			
236.622	5779	2.65	$M_2$								2042	1657	3596
			c								2.8	3.2	1.6
			$n_{2 \text{ Eck}}$								6	15	6
			$n_{2 \text{ th}}$								6	15	6
248.458	4614	2.06	$M_2$	1271	988	2351	1871	1754	3191	2596			
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6			
			$n_{2 \text{ Eck}}$	8	16	6	12	14	8	16			
			$n_{2 \text{ th}}$	8	16	6	12	14	8	16			
248.458	5920	2.06	$M_2$								2145	1741	3777
			c								2.7	3.1	1.6
			$n_{2 \text{ Eck}}$								6	15	6
			$n_{2 \text{ th}}$								6	14	6
268.889	5920	2.65	$M_2$	1366	1060	2535	2015	1889	3443	2800	2327	1889	4093
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9	2.5	2.9	1.4
			$n_{2 \text{ Eck}}$	7	15	6	11	13	7	15	6	13	6
			$n_{2 \text{ th}}$	7	15	6	11	13	7	15	6	13	6
326.333	5920	1.92	$M_2$	1671	1299	3089	2459	2305	4192	3410	2837	2305	4980
			c	3.5	4.0	1.9	2.4	2.4	1.4	1.6	2.1	2.4	1.2
			$n_{2 \text{ Eck}}$	6	12	5	9	11	6	12	5	11	5
			$n_{2 \text{ th}}$	6	12	5	9	11	6	12	5	11	5
363.000	5401	2.45	$M_2$	1871	1456	3449	2748	2575	4676	3805			
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3			
			$n_{2 \text{ Eck}}$	5	11	4	8	10	5	11			
			$n_{2 \text{ th}}$	5	11	4	8	10	5	11			
412.500	5920	1.78	$M_2$	2129	1657	3921	3125	2929	5316	4326			
			c	2.7	3.2	1.5	1.9	1.9	1.1	1.2			
			$n_{2 \text{ Eck}}$	5	10	4	7	9	5	10			
			$n_{2 \text{ th}}$	5	10	4	7	9	5	10			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

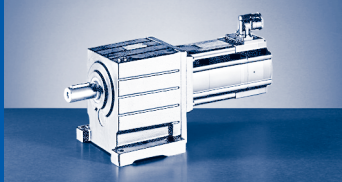


$M_{2GN} \leq 5920 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GST14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
2078	3452	2567	4521	3148							c	4.40	5920	158.194
2.7	1.7	2.2	1.3	1.8							$n_{2 \text{ Eck}}$			
20	10	20	9	20							$n_{2 \text{ th}}$			
20	9	20	9	20							$M_2$			
											c	5.49	5544	171.111
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
2253	3739	2782	4895	3410							$M_2$			
2.5	1.6	2.1	1.2	1.7							c	5.49	5920	171.111
19	9	19	8	19							$n_{2 \text{ Eck}}$			
19	9	19	8	19							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.86	4557	204.722
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
2707	4485	3340	5869	4091							$M_2$			
2.1	1.3	1.7	1.0	1.4							c	2.86	5920	204.722
16	7	16	7	16							$n_{2 \text{ Eck}}$			
16	7	16	7	16							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.65	5267	236.622
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
3140	5195	3871		4739							$M_2$			
1.8	1.1	1.5		1.2							c	2.65	5779	236.622
14	6	14		14							$n_{2 \text{ Eck}}$			
14	6	14		14							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.06	4614	248.458
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
3299	5456	4066		4978							$M_2$			
1.7	1.1	1.4		1.2							c	2.06	5920	248.458
13	6	13		13							$n_{2 \text{ Eck}}$			
13	6	13		13							$n_{2 \text{ th}}$			
3575	5910	4406		5392							$M_2$			
1.6	1.0	1.3		1.1							c	2.65	5920	268.889
12	6	12		12							$n_{2 \text{ Eck}}$			
12	6	12		12							$n_{2 \text{ th}}$			
4351		5360									$M_2$			
1.3		1.1									c	1.92	5920	326.333
10		10									$n_{2 \text{ Eck}}$			
10		10									$n_{2 \text{ th}}$			
											$M_2$			
											c	2.45	5401	363.000
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	1.78	5920	412.500
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 25 \text{ Nm}$

GST04-1A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
1.600	19	0.27	$M_2$	20	10	6
			c	5.1	1.5	2.2
			$n_2$ Eck	1023	2131	2531
			$n_2$ th	2439	1841	2159
2.048	23	0.19	$M_2$	4	13	8
			c	4.1	1.4	2.0
			$n_2$ Eck	1929	1665	1978
			$n_2$ th	1929	1623	1966
2.240	25	0.17	$M_2$	4	14	9
			c	4.1	1.4	2.0
			$n_2$ Eck	1763	1522	1808
			$n_2$ th	1763	1522	1808
2.857	25	0.13	$M_2$	6	18	11
			c	3.2	1.1	1.6
			$n_2$ Eck	1383	1194	1418
			$n_2$ th	1383	1194	1418
3.500	25	0.10	$M_2$	7		14
			c	2.6		1.3
			$n_2$ Eck	1129		1157
			$n_2$ th	1129		1157
4.400	25	0.07	$M_2$	9		
			c	2.1		
			$n_2$ Eck	898		
			$n_2$ th	898		
5.667	25	0.05	$M_2$	11		
			c	1.6		
			$n_2$ Eck	697		
			$n_2$ th	697		

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





$M_{2GN} \leq 71 \text{ Nm}$

GST04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
2.956	39	0.34	$M_2$	6	18	11
			c	4.9	1.7	2.5
			$n_2$ Eck	1337	1154	1370
			$n_2$ th	1218	923	1066
3.333	42	0.32	$M_2$	6	20	13
			c	4.7	1.6	2.3
			$n_2$ Eck	1185	1023	1215
			$n_2$ th	1070	795	935
4.053	45	0.31	$M_2$	8	25	16
			c	4.1	1.4	2.1
			$n_2$ Eck	975	841	999
			$n_2$ th	953	707	842
4.571	48	0.30	$M_2$	9	28	18
			c	3.9	1.3	1.9
			$n_2$ Eck	864	746	886
			$n_2$ th	837	612	736
5.187	50	0.22	$M_2$	10	32	20
			c	3.6	1.2	1.8
			$n_2$ Eck	762	657	781
			$n_2$ th	761	604	733
5.850	53	0.22	$M_2$	11	36	23
			c	3.4	1.1	1.7
			$n_2$ Eck	675	583	692
			$n_2$ th	675	523	630
6.400	55	0.19	$M_2$	12	39	25
			c	3.2	1.1	1.6
			$n_2$ Eck	617	533	633
			$n_2$ th	617	492	585
7.040	57	0.26	$M_2$	13	43	27
			c	3.0	1.0	1.5
			$n_2$ Eck	561	484	575
			$n_2$ th	520	359	421
8.000	59	0.26	$M_2$	15		31
			c	2.7		1.4
			$n_2$ Eck	494		506
			$n_2$ th	450		356
9.010	63	0.19	$M_2$	17		35
			c	2.6		1.3
			$n_2$ Eck	438		450
			$n_2$ th	438		359
9.856	65	0.17	$M_2$	19		38
			c	2.5		1.2
			$n_2$ Eck	401		411
			$n_2$ th	401		336
11.200	60	0.17	$M_2$	22		
			c	2.0		
			$n_2$ Eck	353		
			$n_2$ th	353		
12.571	69	0.13	$M_2$	24		49
			c	2.1		1.0
			$n_2$ Eck	314		322
			$n_2$ th	314		286

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 71 \text{ Nm}$

GST04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
14.286	61	0.12	$M_2$	28		
			c	1.6		
			$n_{2 \text{ Eck}}$	277		
			$n_{2 \text{ th}}$	277		
15.400	70	0.10	$M_2$	30		
			c	1.9		
			$n_{2 \text{ Eck}}$	257		
			$n_{2 \text{ th}}$	256		
17.500	62	0.10	$M_2$	34		
			c	1.5		
			$n_{2 \text{ Eck}}$	226		
			$n_{2 \text{ th}}$	226		
19.360	70	0.06	$M_2$	37		
			c	1.5		
			$n_{2 \text{ Eck}}$	204		
			$n_{2 \text{ th}}$	204		
22.000	62	0.06	$M_2$	43		
			c	1.2		
			$n_{2 \text{ Eck}}$	180		
			$n_{2 \text{ th}}$	180		
24.933	71	0.04	$M_2$	48		
			c	1.2		
			$n_{2 \text{ Eck}}$	158		
			$n_{2 \text{ th}}$	158		

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 54 \text{ Nm}$

GST05-1A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
1.600	45	0.76	c		10	6	19	10	17	8
			$n_2$ Eck		3.4	5.1	2.3	3.9	2.0	3.8
			$n_2$ th		2131	2531	1022	1250	2159	2563
					2056	2215	1022	1250	1847	2093
2.048	53	0.55	$M_2$		12	8	24	13	22	11
			c		3.1	4.7	2.1	3.5	1.8	3.5
			$n_2$ Eck		1665	1978	799	977	1687	2002
			$n_2$ th		1665	1856	798	977	1525	1753
2.240	53	0.48	$M_2$		14	9	26	14	24	12
			c		2.9	4.3	2.0	3.3	1.7	3.2
			$n_2$ Eck		1522	1808	730	893	1542	1830
			$n_2$ th		1522	1733	730	893	1397	1603
2.857	53	0.35	$M_2$		18	11	34	19	30	15
			c		2.3	3.4	1.5	2.6	1.3	2.5
			$n_2$ Eck		1194	1418	572	700	1209	1435
			$n_2$ th		1194	1418	572	700	1157	1257
3.500	54	0.27	$M_2$	7	22	14	41	23	37	18
			c	5.7	1.9	2.8	1.3	2.1	1.1	2.1
			$n_2$ Eck	1129	974	1157	467	571	987	1171
			$n_2$ th	1129	974	1157	467	571	987	1026
4.556	54	0.18	$M_2$	9	28	18				
			c	4.4	1.5	2.2				
			$n_2$ Eck	867	749	889				
			$n_2$ th	867	749	889				
5.667	54	0.13	$M_2$	11	35	22				
			c	3.5	1.2	1.7				
			$n_2$ Eck	697	602	715				
			$n_2$ th	697	602	715				
7.333	47	0.06	$M_2$	14						
			c	2.3						
			$n_2$ Eck	539						
			$n_2$ th	539						
8.900	42	0.06	$M_2$	17						
			c	1.7						
			$n_2$ Eck	444						
			$n_2$ th	444						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 165 \text{ Nm}$

GST05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
2.956	63	0.99	c		18	11	34	19	31	15
			$n_2$ Eck		2.7	4.0	1.8	3.0	1.5	2.9
			$n_2$ th		1154	1370	553	677	1169	1387
					899	975	553	677	735	917
3.333	78	0.94	$M_2$		20	12	38	21	35	17
			c		2.9	4.3	2.0	3.3	1.7	3.2
			$n_2$ Eck		1023	1215	491	600	1037	1230
			$n_2$ th		813	880	491	600	684	828
4.053	81	0.90	$M_2$		24	15	47	26	42	21
			c		2.5	3.7	1.7	2.8	1.5	2.7
			$n_2$ Eck		841	999	403	493	852	1012
			$n_2$ th		762	824	403	493	611	776
4.571	91	0.86	$M_2$		28	17	53	29	48	24
			c		2.5	3.7	1.7	2.8	1.4	2.7
			$n_2$ Eck		746	886	358	438	756	897
			$n_2$ th		675	730	358	438	541	688
5.187	90	0.64	$M_2$		31	20	60	33	54	27
			c		2.2	3.2	1.5	2.4	1.3	2.4
			$n_2$ Eck		657	781	315	386	666	790
			$n_2$ th		637	686	315	386	504	649
5.850	101	0.61	$M_2$		35	22	68	37	61	30
			c		2.2	3.2	1.5	2.4	1.3	2.4
			$n_2$ Eck		583	692	280	342	591	701
			$n_2$ th		565	608	279	342	447	575
6.400	105	0.53	$M_2$		39	24	74	41	67	33
			c		2.0	3.0	1.4	2.3	1.2	2.2
			$n_2$ Eck		533	633	256	313	540	641
			$n_2$ th		531	571	255	313	419	541
7.238	108	0.40	$M_2$	13	44	28	84	47	76	38
			c	5.6	1.9	2.8	1.3	2.1	1.1	2.0
			$n_2$ Eck	546	471	560	226	276	477	567
			$n_2$ th	546	471	560	226	276	419	496
8.163	115	0.39	$M_2$	15	50	31	95	53	86	42
			c	5.3	1.8	2.6	1.2	2.0	1.0	1.9
			$n_2$ Eck	484	418	496	200	245	423	502
			$n_2$ th	484	418	496	200	245	363	440
9.010	119	0.54	$M_2$	17	55	34	105	58		47
			c	4.9	1.6	2.4	1.1	1.8		1.8
			$n_2$ Eck	438	379	450	182	222		455
			$n_2$ th	426	328	376	181	222		344
10.000	124	0.30	$M_2$	19	61	38	116	65		52
			c	4.6	1.6	2.3	1.0	1.7		1.7
			$n_2$ Eck	395	341	405	164	200		410
			$n_2$ th	395	341	405	164	200		359
11.200	128	0.46	$M_2$	21	68	43		72		58
			c	4.3	1.4	2.1		1.6		1.6
			$n_2$ Eck	353	305	362		179		366
			$n_2$ th	346	258	306		179		269
13.016	137	0.18	$M_2$	24	79	50				
			c	3.9	1.3	2.0				
			$n_2$ Eck	304	262	311				
			$n_2$ th	303	262	311				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 165 \text{ Nm}$

GST05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	27	88	55				
14.356	140	0.13	$n_2$ Eck	3.6	1.2	1.8				
			$n_2$ th	275	238	282				
			$n_2$ th	275	238	282				
			$M_2$	30	99	62				
			c	3.9	1.3	1.9				
16.190	148	0.13	$n_2$ Eck	244	211	250				
			$n_2$ th	244	211	250				
			$M_2$	33	107	67		113		91
			c	3.4	1.2	1.7		1.3		1.3
17.500	142	0.27	$n_2$ Eck	226	195	231		114		234
			$n_2$ th	226	195	231		114		205
			$M_2$	38	122	77				
			c	3.4	1.1	1.7				
20.044	159	0.16	$n_2$ Eck	197	170	202				
			$n_2$ th	197	170	202				
			$M_2$	43		88				
			c	2.7		1.3				
22.778	144	0.16	$n_2$ Eck	173		178				
			$n_2$ th	173		178				
			$M_2$	48		96				
			c	2.8		1.4				
24.933	162	0.12	$n_2$ Eck	158		162				
			$n_2$ th	158		162				
			$M_2$	54		110				
			c	2.2		1.1				
28.333	147	0.12	$n_2$ Eck	139		143				
			$n_2$ th	139		143				
			$M_2$	62						
			c	2.2						
32.267	164	0.08	$n_2$ Eck	122						
			$n_2$ th	122						
			$M_2$	71						
			c	1.7						
36.667	148	0.08	$n_2$ Eck	108						
			$n_2$ th	108						
			$M_2$	75						
			c	1.8						
39.160	165	0.06	$n_2$ Eck	101						
			$n_2$ th	101						
			$M_2$	86						
			c	1.6						
44.500	149	0.06	$n_2$ Eck	89						
			$n_2$ th	89						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 167 \text{ Nm}$

GST05-3A				10IC40
				...500
i	$M_{2GN}$	$J_G$	$M_1$	
			$n_1$	2.00
			$I_{M400}$	3950
			$P_N$	-
			$J_M$	0.80
			$M_2$	2.44
			c	69
36.267	134	0.20	$n_{2 \text{ Eck}}$	1.6
			$n_{2 \text{ th}}$	109
			$M_2$	109
			c	88
46.259	145	0.14	$n_{2 \text{ Eck}}$	1.5
			$n_{2 \text{ th}}$	85
			$M_2$	85
			c	108
56.667	155	0.11	$n_{2 \text{ Eck}}$	1.3
			$n_{2 \text{ th}}$	70
			$M_2$	70
			c	121
63.467	146	0.19	$n_{2 \text{ Eck}}$	1.1
			$n_{2 \text{ th}}$	62
			$M_2$	62
			c	136
71.238	167	0.07	$n_{2 \text{ Eck}}$	1.1
			$n_{2 \text{ th}}$	56
				55

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

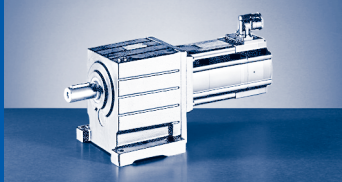


$M_{2GN} \leq 105 \text{ Nm}$

GST06-1A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
1.600	61	2.01	$M_2$				18	10	17	8	34	17	30	15
			c				3.2	5.3	2.7	5.2	1.8	3.1	1.6	2.9
			$n_{2 \text{ Eck}}$				1022	1250	2159	2563	1050	1438	2175	2569
			$n_{2 \text{ th}}$				1022	1250	1635	1862	1050	1438	1325	1660
2.048	72	1.46	$M_2$		12		24	13	21	10	43	21	38	19
			c		4.3		2.9	4.9	2.5	4.8	1.6	2.9	1.4	2.7
			$n_{2 \text{ Eck}}$		1665		799	977	1687	2002	821	1123	1700	2007
			$n_{2 \text{ th}}$		1628		798	977	1459	1657	820	1123	1148	1481
2.240	79	1.27	$M_2$		13		26	14	23	11	47	23	42	21
			c		4.3		2.9	4.8	2.5	4.7	1.6	2.9	1.4	2.7
			$n_{2 \text{ Eck}}$		1522		730	893	1542	1830	750	1027	1554	1835
			$n_{2 \text{ th}}$		1522		730	893	1379	1561	750	1027	1093	1389
2.857	92	0.97	$M_2$		17	11	33	18	30	15	60	30	53	26
			c		4.0	5.9	2.7	4.5	2.3	4.4	1.5	2.6	1.3	2.5
			$n_{2 \text{ Eck}}$		1194	1418	572	700	1209	1435	588	805	1218	1439
			$n_{2 \text{ th}}$		1194	1395	572	700	1184	1257	588	805	944	1089
3.500	105	0.74	$M_2$		21	13	41	22	37	18	74	37	65	32
			c		3.7	5.5	2.5	4.1	2.1	4.0	1.4	2.4	1.2	2.3
			$n_{2 \text{ Eck}}$		974	1157	467	571	987	1171	480	657	994	1174
			$n_{2 \text{ th}}$		974	1157	467	571	987	1026	480	657	861	889
4.556	105	0.48	$M_2$		28	17	53	29	48	24				
			c		2.8	4.2	1.9	3.2	1.6	3.1				
			$n_{2 \text{ Eck}}$		749	889	359	439	758	900				
			$n_{2 \text{ th}}$		749	889	359	439	758	788				
5.667	82	0.36	$M_2$	11										
			c	5.3										
			$n_{2 \text{ Eck}}$	697										
			$n_{2 \text{ th}}$	697										
5.667	105	0.36	$M_2$		35	22	67	37	60	30				
			c		2.3	3.4	1.5	2.6	1.3	2.5				
			$n_{2 \text{ Eck}}$		602	715	289	353	610	724				
			$n_{2 \text{ th}}$		602	715	289	353	610	634				
7.333	95	0.23	$M_2$	14										
			c	4.8										
			$n_{2 \text{ Eck}}$	539										
			$n_{2 \text{ th}}$	539										
7.333	100	0.23	$M_2$		45	28								
			c		1.7	2.5								
			$n_{2 \text{ Eck}}$		465	552								
			$n_{2 \text{ th}}$		465	552								
8.900	85	0.17	$M_2$	17	55	35								
			c	3.5	1.2	1.8								
			$n_{2 \text{ Eck}}$	444	383	455								
			$n_{2 \text{ th}}$	444	383	455								
11.250	63	0.11	$M_2$	22										
			c	2.1										
			$n_{2 \text{ Eck}}$	351										
			$n_{2 \text{ th}}$	351										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 368 \text{ Nm}$

GST06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
3.033	166	2.72	$M_2$				34		31		62	31	55	27	
			c				4.6		4.0		2.5	4.5	2.3	4.3	
			$n_{2 \text{ Eck}}$				539		1139		554		758	1147	1355
			$n_{2 \text{ th}}$				539		803		554		758	708	815
3.333	174	2.61	$M_2$				37		34		69	34	61	30	
			c				4.4		3.8		2.4	4.3	2.1	4.1	
			$n_{2 \text{ Eck}}$				491		1037		504		690	1044	1233
			$n_{2 \text{ th}}$				491		724		504		690	637	734
4.160	191	2.51	$M_2$				47		43		86	42	76	37	
			c				3.8		3.3		2.1	3.8	1.9	3.6	
			$n_{2 \text{ Eck}}$				393		831		404		553	837	988
			$n_{2 \text{ th}}$				393		656		404		553	569	665
4.571	200	2.41	$M_2$				52		47	23	94	47	84	41	
			c				3.7		3.2	6.0	2.0	3.6	1.8	3.4	
			$n_{2 \text{ Eck}}$				358		756	897	368	503	761	899	
			$n_{2 \text{ th}}$				358		590	670	368	503	503	599	
5.324	207	1.76	$M_2$		31		61	33	55	27	110	55	98	48	
			c		4.9		3.3	5.4	2.8	5.3	1.8	3.2	1.6	3.0	
			$n_{2 \text{ Eck}}$		641		307	376	649	770	316	432	654	772	
			$n_{2 \text{ th}}$		640		307	376	574	651	316	432	470	583	
5.850	222	1.71	$M_2$		34		67	36	60	29	121	60	107	53	
			c		4.7		3.2	5.3	2.7	5.2	1.8	3.1	1.6	2.9	
			$n_{2 \text{ Eck}}$		583		280	342	591	701	287	393	595	703	
			$n_{2 \text{ th}}$		579		279	342	520	589	287	393	421	527	
6.400	229	1.47	$M_2$		38		73	40	66	32	133	66	117	58	
			c		4.5		3.0	5.0	2.6	4.9	1.7	3.0	1.5	2.8	
			$n_{2 \text{ Eck}}$		533		256	313	540	641	263	359	544	642	
			$n_{2 \text{ th}}$		533		255	313	487	550	263	359	390	486	
7.040	236	2.07	$M_2$				80	44	73	36	146	72	129	64	
			c				2.8	4.7	2.4	4.6	1.6	2.8	1.4	2.6	
			$n_{2 \text{ Eck}}$				232	284	491	582	239	327	494	584	
			$n_{2 \text{ th}}$				232	284	362	414	239	327	283	368	
8.163	252	1.06	$M_2$		48	30	94	51	84	41	170	84	150	74	
			c		3.8	5.7	2.6	4.3	2.2	4.2	1.4	2.6	1.3	2.4	
			$n_{2 \text{ Eck}}$		418	496	200	245	423	502	206	282	426	504	
			$n_{2 \text{ th}}$		418	486	200	245	412	440	206	282	326	381	
9.010	261	1.50	$M_2$		54	33	103	57	93	46	187	93	166	82	
			c		3.6	5.4	2.4	4.1	2.1	4.0	1.3	2.4	1.2	2.3	
			$n_{2 \text{ Eck}}$		379	450	182	222	384	455	187	255	386	456	
			$n_{2 \text{ th}}$		357	385	181	222	318	364	186	255	237	323	
10.000	269	0.82	$M_2$		60	37	115	63	104	51	208	103	184	91	
			c		3.4	5.0	2.3	3.8	2.0	3.7	1.2	2.2	1.1	2.1	
			$n_{2 \text{ Eck}}$		341	405	164	200	346	410	168	230	348	411	
			$n_{2 \text{ th}}$		341	405	164	200	346	359	168	230	289	311	
11.200	280	1.26	$M_2$		67	42	129	71	116	57	233	116	206	102	
			c		3.1	4.6	2.1	3.5	1.8	3.4	1.2	2.1	1.0	1.9	
			$n_{2 \text{ Eck}}$		305	362	146	179	309	366	150	205	311	367	
			$n_{2 \text{ th}}$		289	311	146	179	250	294	150	205	188	260	
12.571	295	0.96	$M_2$		75	47	145	80	131	64	262	130		115	
			c		2.9	4.3	2.0	3.3	1.7	3.2	1.1	1.9		1.8	
			$n_{2 \text{ Eck}}$		271	322	130	159	275	326	134	183		327	
			$n_{2 \text{ th}}$		271	301	130	159	242	286	134	183		247	

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





$M_{2GN} \leq 368 \text{ Nm}$

GST06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
14.286	307	0.93	$M_2$		86	54	165	91	149	73		148		131
			c		2.7	4.0	1.8	3.0	1.6	2.9		1.8		1.7
			$n_{2 \text{ Eck}}$		239	284	115	140	242	287		161		288
			$n_{2 \text{ th}}$		239	261	114	140	204	248		161		211
15.400	318	0.75	$M_2$		92	58	178	98	160	79		160		141
			c		2.9	4.3	1.8	3.2	1.7	3.2		1.9		1.8
			$n_{2 \text{ Eck}}$		221	263	106	130	224	266		149		267
			$n_{2 \text{ th}}$		221	263	106	130	224	233		149		202
17.500	313	0.73	$M_2$		105	66	203	112	182	90		182		160
			c		2.5	3.8	1.5	2.8	1.5	2.8		1.7		1.6
			$n_{2 \text{ Eck}}$		195	231	93	114	197	234		131		235
			$n_{2 \text{ th}}$		195	231	93	114	189	205		131		178
20.044	350	0.46	$M_2$		121	76	232	128	209	103				
			c		2.5	3.7	1.5	2.7	1.4	2.7				
			$n_{2 \text{ Eck}}$		170	202	82	100	172	205				
			$n_{2 \text{ th}}$		170	202	82	100	172	179				
22.778	315	0.45	$M_2$	42	138	87	265	146	238	118				
			c	5.9	2.0	2.9	1.2	2.1	1.1	2.2				
			$n_{2 \text{ Eck}}$	173	150	178	72	88	152	180				
			$n_{2 \text{ th}}$	173	150	178	72	88	152	158				
24.933	360	0.33	$M_2$		151	95	290	160	261	129				
			c		2.0	3.0	1.2	2.2	1.2	2.2				
			$n_{2 \text{ Eck}}$		137	162	66	80	139	164				
			$n_{2 \text{ th}}$		137	162	66	80	139	144				
28.333	317	0.33	$M_2$	53	172	108		183		147				
			c	4.7	1.6	2.4		1.7		1.7				
			$n_{2 \text{ Eck}}$	139	120	143		71		145				
			$n_{2 \text{ th}}$	139	120	143		71		127				
32.267	363	0.22	$M_2$	60	196	123								
			c	4.8	1.6	2.4								
			$n_{2 \text{ Eck}}$	122	106	126								
			$n_{2 \text{ th}}$	122	106	126								
36.667	322	0.22	$M_2$	69	224	141								
			c	3.7	1.2	1.9								
			$n_{2 \text{ Eck}}$	108	93	111								
			$n_{2 \text{ th}}$	108	93	110								
39.160	368	0.16	$M_2$	74	239	150								
			c	4.0	1.3	2.0								
			$n_{2 \text{ Eck}}$	101	87	103								
			$n_{2 \text{ th}}$	101	87	103								
44.500	325	0.16	$M_2$	84	272	171								
			c	3.4	1.2	1.7								
			$n_{2 \text{ Eck}}$	89	77	91								
			$n_{2 \text{ th}}$	89	77	91								
49.500	278	0.11	$M_2$	94										
			c	2.6										
			$n_{2 \text{ Eck}}$	80										
			$n_{2 \text{ th}}$	80										
56.250	316	0.11	$M_2$	107										
			c	2.6										
			$n_{2 \text{ Eck}}$	70										
			$n_{2 \text{ th}}$	70										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

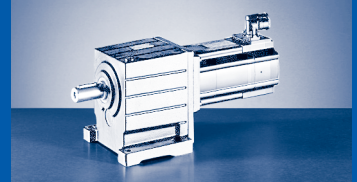
$M_{2GN} \leq 375 \text{ Nm}$

GST06-3A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
39.200	321	0.36	$M_2$	73	236	149
			c	3.5	1.2	1.8
			$n_2$ Eck	101	87	103
			$n_2$ th	101	87	103
			$M_2$	82	264	167
44.000	335	0.20	c	3.6	1.2	1.8
			$n_2$ Eck	90	78	92
			$n_2$ th	90	78	92
			$M_2$	95	307	194
			c	3.0	1.0	1.5
51.022	325	0.32	$n_2$ Eck	77	67	79
			$n_2$ th	77	67	79
			$M_2$	101	324	205
			c	3.1	1.0	1.5
			$n_2$ Eck	73	63	75
53.900	349	0.18	$n_2$ th	73	63	75
			$M_2$	127		
			c	2.6		
			$n_2$ Eck	58		
			$n_2$ th	58		
67.760	365	0.11	$M_2$	132		268
			c	2.4		1.2
			$n_2$ Eck	56		58
			$n_2$ th	56		58
			$M_2$	153		
70.156	359	0.16	c	2.0		
			$n_2$ Eck	49		
			$n_2$ th	49		
			$M_2$	165		334
			c	2.0		1.0
77.267	370	0.15	$n_2$ Eck	45		46
			$n_2$ th	45		46
			$M_2$	188		
			c	1.6		
			$n_2$ Eck	40		
99.167	336	0.15	$n_2$ th	40		
			$M_2$	208		
			c	1.6		
			$n_2$ Eck	36		
			$n_2$ th	36		
109.707	375	0.10	$M_2$	238		
			c	1.3		
			$n_2$ Eck	32		
			$n_2$ th	32		
			$M_2$	269		
124.667	339	0.10	c	1.3		
			$n_2$ Eck	28		
			$n_2$ th	28		
			$M_2$	307		
			c	1.0		
141.289	375	0.06	$n_2$ Eck	25		
			$n_2$ th	25		
			$M_2$	307		
			c	1.0		
			$n_2$ Eck	25		
160.556	342	0.06	$n_2$ th	25		

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

**GST [Nm]**  
GST□□-□A (MCA)





# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 196 \text{ Nm}$

GST07-1A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	
1.625	106	6.12	$M_2$								34	17	
			c								3.0	5.3	
			$n_2$ Eck									1034	1415
			$n_2$ th									1034	1415
2.000	124	4.78	$M_2$				23		21		42	20	
			c				5.1		4.4		2.8	5.1	
			$n_2$ Eck				818		1728		840	1150	
			$n_2$ th				818		1386		840	1150	
2.240	135	4.02	$M_2$				25		23		47	23	
			c				4.9		4.3		2.7	4.9	
			$n_2$ Eck				730		1542		750	1027	
			$n_2$ th				730		1280		750	1027	
2.857	118	2.69	$M_2$		17								
			c		5.1								
			$n_2$ Eck		1194								
			$n_2$ th		1194								
2.857	159	2.69	$M_2$				33		29		60	29	
			c				4.6		4.0		2.5	4.5	
			$n_2$ Eck				572		1209		588	805	
			$n_2$ th				572		1154		588	805	
3.500	172	2.15	$M_2$				40		36		73	36	
			c				4.0		3.5		2.2	4.0	
			$n_2$ Eck				467		987		480	657	
			$n_2$ th				467		987		480	657	
4.556	150	1.37	$M_2$		27	17							
			c		4.0	6.0							
			$n_2$ Eck		749	889							
			$n_2$ th		749	889							
4.556	186	1.37	$M_2$				53	29	48	23	96	47	
			c				3.4	5.6	2.9	5.5	1.9	3.3	
			$n_2$ Eck				359	439	758	900	369	505	
			$n_2$ th				359	439	758	788	369	505	
5.583	156	1.05	$M_2$		34	21							
			c		3.4	5.1							
			$n_2$ Eck		611	725							
			$n_2$ th		611	725							
5.583	196	1.05	$M_2$				65	35	58	29	118	58	
			c				2.9	4.8	2.5	4.7	1.6	2.9	
			$n_2$ Eck				293	358	619	734	301	412	
			$n_2$ th				293	358	619	643	301	412	
7.333	107	0.66	$M_2$	14									
			c	5.3									
			$n_2$ Eck	539									
			$n_2$ th	539									
7.333	161	0.66	$M_2$		45	28							
			c		2.7	4.0							
			$n_2$ Eck		465	552							
			$n_2$ th		465	552							
7.333	196	0.66	$M_2$				86	47	77	38			
			c				2.2	3.7	1.9	3.6			
			$n_2$ Eck				223	273	471	559			
			$n_2$ th				223	273	471	490			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 196 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC42	GST07-1A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	$M_2$			
30	15	58	25	57	19	98	39	27	$c$	6.12	106	1.625
2.6	5.0	1.8	3.5	1.4	3.9	1.0	2.3	2.8	$n_{2 \text{ Eck}}$			
2142	2529	1046	1440	2160	2554	1052	1532	2560	$n_{2 \text{ th}}$			
1347	1547	1046	1437	1027	1473	887	1239	1239	$M_2$			
37	18	71	31	71	23		48	33	$c$	4.78	124	2.000
2.5	4.7	1.7	3.3	1.3	3.7		2.2	2.6	$n_{2 \text{ Eck}}$			
1740	2055	850	1170	1755	2075		1245	2080	$n_{2 \text{ th}}$			
1225	1406	850	1170	915	1224		1007	1007	$M_2$			
41	20	80	35	79	26		54	37	$c$	4.02	135	2.240
2.4	4.6	1.6	3.2	1.3	3.6		2.1	2.6	$n_{2 \text{ Eck}}$			
1554	1835	759	1045	1567	1853		1112	1857	$n_{2 \text{ th}}$			
1136	1298	759	1045	854	1093		899	899	$M_2$			
									$c$	2.69	118	2.857
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
53	26	102	45	101	33				$M_2$			
2.2	4.2	1.5	3.0	1.2	3.4				$c$	2.69	159	2.857
1218	1439	595	819	1229	1453				$n_{2 \text{ Eck}}$			
1027	1089	595	819	753	857				$n_{2 \text{ th}}$			
65	32	125	55	124	41				$M_2$			
2.0	3.8	1.3	2.6	1.0	3.0				$c$	2.15	172	3.500
994	1174	486	669	1003	1186				$n_{2 \text{ Eck}}$			
889	889	486	669	663	700				$n_{2 \text{ th}}$			
									$M_2$			
									$c$	1.37	150	4.556
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
85	42								$M_2$			
1.7	3.1								$c$	1.37	186	4.556
764	902								$n_{2 \text{ Eck}}$			
683	683								$n_{2 \text{ th}}$			
									$M_2$			
									$c$	1.05	156	5.583
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
104	51								$M_2$			
1.4	2.7								$c$	1.05	196	5.583
623	736								$n_{2 \text{ Eck}}$			
557	557								$n_{2 \text{ th}}$			
									$M_2$			
									$c$	0.66	107	7.333
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									$c$	0.66	161	7.333
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									$c$	0.66	196	7.333
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

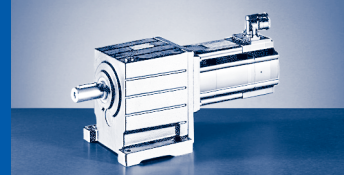
## GST□□-□A (MCA)

$M_{2GN} \leq 196 \text{ Nm}$

GST07-1A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
8.900	113	0.49	$M_2$	17								
			c	4.7								
			$n_2$ Eck	444								
			$n_2$ th	444								
8.900	164	0.49	$M_2$		55	34						
			c		2.3	3.4						
			$n_2$ Eck		383	455						
			$n_2$ th		383	455						
8.900	183	0.49	$M_2$				104	58	94	46		
			c				1.7	2.8	1.5	2.8		
			$n_2$ Eck				184	225	388	461		
			$n_2$ th				184	225	388	403		
11.250	114	0.32	$M_2$	22								
			c	3.7								
			$n_2$ Eck	351								
			$n_2$ th	351								
11.250	136	0.32	$M_2$		69	44						
			c		1.5	2.2						
			$n_2$ Eck		303	360						
			$n_2$ th		303	360						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

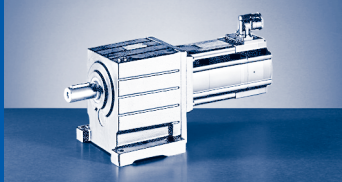


$M_{2GN} \leq 196 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC42	GST07-1A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	$M_2$ c			
									$n_{2\text{ Eck}}$	0.49	113	8.900
									$n_{2\text{ th}}$			
									$M_2$ c			
									$n_{2\text{ Eck}}$	0.49	164	8.900
									$n_{2\text{ th}}$			
									$M_2$ c			
									$n_{2\text{ Eck}}$	0.49	183	8.900
									$n_{2\text{ th}}$			
									$M_2$ c			
									$n_{2\text{ Eck}}$	0.32	114	11.250
									$n_{2\text{ th}}$			
									$M_2$ c			
									$n_{2\text{ Eck}}$	0.32	136	11.250
									$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 707 \text{ Nm}$

GST07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	
				...500	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	
3.048	317	8.20	$M_2$								61		
			c								4.8		
			$n_2$ Eck									551	
			$n_2$ th									551	
3.048	351	8.20	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
3.350	349	7.92	$M_2$								67		
			c								4.8		
			$n_2$ Eck									502	
			$n_2$ th									502	
3.350	367	7.92	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
4.225	398	7.65	$M_2$								85		
			c								4.4		
			$n_2$ Eck									398	
			$n_2$ th									398	
4.643	414	7.39	$M_2$								94		
			c								4.1		
			$n_2$ Eck									362	
			$n_2$ th									362	
5.200	405	5.64	$M_2$						52				
			c						5.6				
			$n_2$ Eck						664				
			$n_2$ th						560				
5.200	427	5.64	$M_2$								105		
			c								3.8		
			$n_2$ Eck									323	
			$n_2$ th									323	
5.714	445	5.46	$M_2$						57				
			c						5.6				
			$n_2$ Eck						605				
			$n_2$ th						510				
5.714	448	5.46	$M_2$								116		
			c								3.6		
			$n_2$ Eck									294	
			$n_2$ th									294	
6.400	463	4.49	$M_2$						64		130	64	
			c						5.2		3.3	6.0	
			$n_2$ Eck						540		263	359	
			$n_2$ th						466		263	359	
7.150	489	6.27	$M_2$								146	71	
			c								3.2	5.7	
			$n_2$ Eck									235	322
			$n_2$ th									235	322
8.125	539	6.04	$M_2$								166	81	
			c								3.1	5.5	
			$n_2$ Eck									207	283
			$n_2$ th									207	283

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



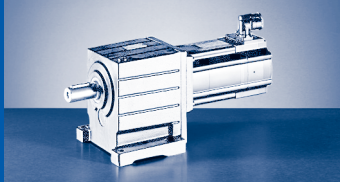


$M_{2GN} \leq 707 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GST07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	i
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
54										c			
4.3										$n_{2\text{Eck}}$	8.20	317	3.048
1142										$n_{2\text{th}}$			
693										$M_2$			
		105		105		180	70	162	48	c			
		3.1		2.5		1.9	4.1	1.6	5.0	$n_{2\text{Eck}}$	8.20	351	3.048
		558		1152		561	817	1155	1365	$n_{2\text{th}}$			
		558		610		554	661	511	661	$M_2$			
60										c			
4.3										$n_{2\text{Eck}}$	7.92	349	3.350
1039										$n_{2\text{th}}$			
631										$M_2$			
		116	50	115		198	78	178	53	c			
		3.0	6.0	2.4		1.8	3.9	1.5	4.7	$n_{2\text{Eck}}$	7.92	367	3.350
		508	699	1048		511	743	1051	1242	$n_{2\text{th}}$			
		508	678	548		488	601	451	601	$M_2$			
76		146	64	146	47	250	98	225	67	c			
3.9		2.6	5.1	2.0	5.8	1.5	3.3	1.3	4.1	$n_{2\text{Eck}}$	7.65	398	4.225
824		402	554	831	982	405	589	833	985	$n_{2\text{th}}$			
564		402	554	487	580	405	477	386	477	$M_2$			
83		161	71	161	52	275	108	247	74	c			
3.7		2.4	4.9	1.9	5.5	1.4	3.2	1.3	3.9	$n_{2\text{Eck}}$	7.39	414	4.643
750		366	504	756	894	368	536	758	896	$n_{2\text{th}}$			
507		366	504	434	527	366	434	341	434	$M_2$			
										c			
										$n_{2\text{Eck}}$	5.64	405	5.200
										$n_{2\text{th}}$			
94		181	79	180	58	309	122	277	84	$M_2$			
3.4		2.2	4.5	1.8	5.0	1.3	2.9	1.2	3.6	c			
669		327	450	675	798	329	479	677	800	$n_{2\text{Eck}}$	5.64	427	5.200
504		327	450	417	471	329	387	330	387	$n_{2\text{th}}$			
										$M_2$			
										c			
										$n_{2\text{Eck}}$	5.46	445	5.714
										$n_{2\text{th}}$			
103		199	87	198	64	339	134	305	92	$M_2$			
3.2		2.1	4.3	1.7	4.8	1.3	2.8	1.1	3.4	c			
609		298	410	614	726	299	436	616	728	$n_{2\text{Eck}}$	5.46	448	5.714
454		298	410	369	429	299	352	293	352	$n_{2\text{th}}$			
116	56	223	98	222	72	381	150	341	103	$M_2$			
3.0	5.6	2.0	4.0	1.6	4.4	1.2	2.6	1.0	3.1	c			
544	642	266	366	548	648	267	389	550	650	$n_{2\text{Eck}}$	4.49	463	6.400
415	472	266	366	332	383	267	315	269	315	$n_{2\text{th}}$			
129	63	250	110	249	81	426	168		116	$M_2$			
2.8	5.3	1.9	3.7	1.5	4.2	1.1	2.4		3.0	c			
487	575	238	327	491	580	239	348		582	$n_{2\text{Eck}}$	6.27	489	7.150
311	356	238	327	241	339	207	282		282	$n_{2\text{th}}$			
147	72	284	125	283	92	484	191		131	$M_2$			
2.7	5.1	1.8	3.6	1.4	4.1	1.1	2.4		2.9	c			
428	506	209	288	432	511	211	307		512	$n_{2\text{Eck}}$	6.04	539	8.125
271	311	209	288	209	297	180	248		248	$n_{2\text{th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 707 \text{ Nm}$

GST07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
8.800	527	4.73	$M_2$				98		89		180	88
			c				5.0		4.3		2.8	5.0
			$n_{2 \text{ Eck}}$				186		393		191	261
			$n_{2 \text{ th}}$				186		314		191	261
9.856	549	3.90	$M_2$				110		100		202	99
			c				4.7		4.0		2.6	4.6
			$n_{2 \text{ Eck}}$				166		351		171	233
			$n_{2 \text{ th}}$				166		287		170	233
11.200	598	3.78	$M_2$				126		114		230	113
			c				4.5		3.9		2.5	4.4
			$n_{2 \text{ Eck}}$				146		309		150	205
			$n_{2 \text{ th}}$				146		251		150	205
12.571	513	2.86	$M_2$		74							
			c		5.1							
			$n_{2 \text{ Eck}}$		271							
			$n_{2 \text{ th}}$		271							
12.571	601	2.86	$M_2$				142		128		259	128
			c				4.0		3.5		2.2	4.0
			$n_{2 \text{ Eck}}$				130		275		134	183
			$n_{2 \text{ th}}$				130		255		134	183
14.286	583	2.79	$M_2$		84							
			c		5.1							
			$n_{2 \text{ Eck}}$		239							
			$n_{2 \text{ th}}$		239							
14.286	642	2.79	$M_2$				162		146		295	146
			c				3.8		3.3		2.1	3.7
			$n_{2 \text{ Eck}}$				115		242		118	161
			$n_{2 \text{ th}}$				114		222		118	161
15.400	644	2.26	$M_2$				175		157		318	156
			c				3.6		3.4		2.0	3.9
			$n_{2 \text{ Eck}}$				106		224		109	149
			$n_{2 \text{ th}}$				106		224		109	149
17.500	680	2.21	$M_2$				199	108	179		362	178
			c				3.3	6.0	3.2		1.9	3.7
			$n_{2 \text{ Eck}}$				93	114	197		96	131
			$n_{2 \text{ th}}$				93	114	197		96	131
20.044	650	1.38	$M_2$		118							
			c		4.6							
			$n_{2 \text{ Eck}}$		170							
			$n_{2 \text{ th}}$		170							
20.044	694	1.38	$M_2$				229	124	206	100	415	205
			c				3.0	5.3	2.8	5.4	1.7	3.3
			$n_{2 \text{ Eck}}$				82	100	172	205	84	115
			$n_{2 \text{ th}}$				82	100	172	179	84	115
22.778	682	1.35	$M_2$		135		261	143	235	115	473	234
			c		4.2		2.6	4.6	2.5	4.6	1.4	2.8
			$n_{2 \text{ Eck}}$		150		72	88	152	180	74	101
			$n_{2 \text{ th}}$		150		72	88	152	158	74	101
24.567	677	1.02	$M_2$		146	91						
			c		3.9	5.8						
			$n_{2 \text{ Eck}}$		139	165						
			$n_{2 \text{ th}}$		139	165						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 707 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GST07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	i
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
160	78	308	136	306	100		208		143	c	4.73	527	8.800
2.5	4.6	1.6	3.3	1.3	3.7		2.1		2.6	$n_{2 \text{ Eck}}$			
396	467	193	266	399	472		283		473	$n_{2 \text{ th}}$			
277	318	193	266	206	278		229		229				
179	88	345	153	344	112		233		160	$M_2$	3.90	549	9.856
2.3	4.3	1.5	3.0	1.2	3.4		2.0		2.4	c			
353	417	173	237	356	421		253		422	$n_{2 \text{ Eck}}$			
255	292	172	237	189	248		204		204	$n_{2 \text{ th}}$			
204	100	393	174	391	127		265		182	$M_2$	3.78	598	11.200
2.2	4.1	1.5	2.9	1.2	3.3		1.9		2.3	c			
311	367	152	209	313	371		222		371	$n_{2 \text{ Eck}}$			
222	254	152	209	163	219		180		180	$n_{2 \text{ th}}$			
										$M_2$	2.86	513	12.571
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
229	113	441	196	439	143					$M_2$	2.86	601	12.571
2.0	3.7	1.3	2.6	1.0	2.9					c			
277	327	135	186	279	330					$n_{2 \text{ Eck}}$			
226	247	135	186	161	195					$n_{2 \text{ th}}$			
										$M_2$	2.79	583	14.286
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
261	128	502	223		163					$M_2$	2.79	642	14.286
1.8	3.5	1.2	2.5		2.8					c			
244	288	119	164		291					$n_{2 \text{ Eck}}$			
192	218	119	164		171					$n_{2 \text{ th}}$			
281	138	541	240	538	176					$M_2$	2.26	644	15.400
2.0	3.7	1.2	2.6	1.0	2.9					c			
226	267	110	152	228	270					$n_{2 \text{ Eck}}$			
202	202	110	152	150	159					$n_{2 \text{ th}}$			
320	157	616	273		200					$M_2$	2.21	680	17.500
1.8	3.4	1.1	2.4		2.7					c			
199	235	97	134		237					$n_{2 \text{ Eck}}$			
171	178	97	134		140					$n_{2 \text{ th}}$			
										$M_2$	1.38	650	20.044
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
367	181									$M_2$	1.38	694	20.044
1.6	3.1									c			
174	205									$n_{2 \text{ Eck}}$			
155	155									$n_{2 \text{ th}}$			
418	206									$M_2$	1.35	682	22.778
1.4	2.6									c			
153	180									$n_{2 \text{ Eck}}$			
137	137									$n_{2 \text{ th}}$			
										$M_2$	1.02	677	24.567
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 707 \text{ Nm}$

GST07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
24.567	706	1.02	$M_2$				282	154	254	124	510	253
			c				2.5	4.4	2.4	4.5	1.4	2.7
			$n_{2 \text{ Eck}}$				67	81	141	167	68	94
			$n_{2 \text{ th}}$				67	81	141	146	68	94
27.917	691	1.01	$M_2$		166	104	321	176	289	142	581	289
			c		3.5	5.2	2.1	3.8	2.0	3.8	1.2	2.3
			$n_{2 \text{ Eck}}$		122	145	59	72	124	147	60	82
			$n_{2 \text{ th}}$		122	145	59	72	124	129	60	82
32.267	698	0.66	$M_2$		193	121						
			c		3.1	4.6						
			$n_{2 \text{ Eck}}$		106	126						
			$n_{2 \text{ th}}$		106	126						
32.267	706	0.66	$M_2$				372	205	335	165		
			c				1.9	3.4	1.8	3.4		
			$n_{2 \text{ Eck}}$				51	62	107	127		
			$n_{2 \text{ th}}$				51	62	107	111		
36.667	702	0.65	$M_2$		220	138	424	234	382	188		
			c		2.7	4.0	1.6	3.0	1.6	3.0		
			$n_{2 \text{ Eck}}$		93	111	45	55	94	112		
			$n_{2 \text{ th}}$		93	110	45	55	94	98		
39.160	491	0.49	$M_2$	73								
			c	5.3								
			$n_{2 \text{ Eck}}$	101								
			$n_{2 \text{ th}}$	101								
39.160	706	0.49	$M_2$		236	148	453	250	408	201		
			c		2.6	3.8	1.6	2.8	1.5	2.8		
			$n_{2 \text{ Eck}}$		87	103	42	51	88	105		
			$n_{2 \text{ th}}$		87	103	42	51	88	92		
44.500	558	0.48	$M_2$	82								
			c	5.9								
			$n_{2 \text{ Eck}}$	89								
			$n_{2 \text{ th}}$	89								
44.500	707	0.48	$M_2$		268	168	516	285	464	229		
			c		2.5	3.7	1.4	2.4	1.5	2.7		
			$n_{2 \text{ Eck}}$		77	91	37	45	78	92		
			$n_{2 \text{ th}}$		77	91	37	45	78	81		
49.500	493	0.33	$M_2$	92								
			c	4.7								
			$n_{2 \text{ Eck}}$	80								
			$n_{2 \text{ th}}$	80								
49.500	600	0.33	$M_2$		300	188						
			c		1.9	2.8						
			$n_{2 \text{ Eck}}$		69	82						
			$n_{2 \text{ th}}$		69	82						
56.250	560	0.33	$M_2$	105								
			c	4.7								
			$n_{2 \text{ Eck}}$	70								
			$n_{2 \text{ th}}$	70								
56.250	688	0.33	$M_2$		341	214						
			c		1.9	2.9						
			$n_{2 \text{ Eck}}$		61	72						
			$n_{2 \text{ th}}$		61	72						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 707 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GST07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
451	223									$c$			
1.3	2.5									$n_{2 \text{ Eck}}$	1.02	706	24.567
142	167									$n_{2 \text{ th}}$			
127	127									$M_2$			
514	254									$c$			
1.2	2.2									$n_{2 \text{ Eck}}$	1.01	691	27.917
125	147									$n_{2 \text{ th}}$			
111	111									$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.66	698	32.267
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.66	706	32.267
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.65	702	36.667
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.49	491	39.160
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.49	706	39.160
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.48	558	44.500
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.48	707	44.500
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.33	493	49.500
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.33	600	49.500
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.33	560	56.250
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$			
										$n_{2 \text{ Eck}}$	0.33	688	56.250
										$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 710 \text{ Nm}$

GST07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
39.200	692	0.97	c		232	146	447	246	403	199
			$n_2$ Eck		2.5	3.8	1.5	2.8	1.5	2.8
			$n_2$ th		87	103	42	51	88	105
					87	103	42	51	88	92
44.000	706	0.53	$M_2$		261	163	502	277	452	223
			c		2.6	3.8	1.4	2.5	1.5	2.8
			$n_2$ Eck		78	92	37	46	79	93
			$n_2$ th		78	92	37	45	79	82
51.022	700	0.84	$M_2$		303	190	584	323	525	259
			c		2.2	3.3	1.2	2.1	1.3	2.4
			$n_2$ Eck		67	79	32	39	68	80
			$n_2$ th		67	79	32	39	68	70
53.900	706	0.48	$M_2$		321	202	617	341	555	274
			c		2.1	3.1	1.1	2.1	1.2	2.3
			$n_2$ Eck		63	75	30	37	64	76
			$n_2$ th		63	75	30	37	64	67
65.079	707	0.31	$M_2$	119	389	245				
			c	5.2	1.7	2.6				
			$n_2$ Eck	61	52	62				
			$n_2$ th	61	52	62				
70.156	706	0.43	$M_2$	129	420	264		447		359
			c	4.8	1.6	2.4		1.6		1.8
			$n_2$ Eck	56	49	58		29		58
			$n_2$ th	56	49	58		29		51
79.762	710	0.54	$M_2$	147	478	301		509		409
			c	4.3	1.4	2.1		1.4		1.6
			$n_2$ Eck	50	43	51		25		51
			$n_2$ th	50	43	51		25		45
85.983	706	0.40	$M_2$	159	516	325		549		442
			c	3.9	1.3	1.9		1.3		1.4
			$n_2$ Eck	46	40	47		23		48
			$n_2$ th	46	40	47		23		42
97.708	710	0.40	$M_2$	182	587	371		625		503
			c	3.5	1.2	1.7		1.1		1.3
			$n_2$ Eck	40	35	42		21		42
			$n_2$ th	40	35	41		20		37
111.915	706	0.24	$M_2$	209	674	426				
			c	3.0	1.0	1.5				
			$n_2$ Eck	35	31	36				
			$n_2$ th	35	30	36				
127.176	710	0.24	$M_2$	239		485				
			c	2.7		1.3				
			$n_2$ Eck	31		32				
			$n_2$ th	31		32				
139.211	706	0.17	$M_2$	262		531				
			c	2.4		1.2				
			$n_2$ Eck	28		29				
			$n_2$ th	28		29				
158.194	710	0.17	$M_2$	299		604				
			c	2.1		1.1				
			$n_2$ Eck	25		26				
			$n_2$ th	25		26				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 710 \text{ Nm}$

GST07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	341						
180.156	706	0.11	$n_2$ Eck	1.9						
			$n_2$ th	22						
			$M_2$	22						
204.722	710	0.11	c	389						
			$n_2$ Eck	1.7						
			$n_2$ th	19						
			$M_2$	19						
236.622	706	0.10	c	450						
			$n_2$ Eck	1.4						
			$n_2$ th	17						
			$M_2$	17						
248.458	710	0.08	c	473						
			$n_2$ Eck	1.4						
			$n_2$ th	16						
			$M_2$	16						
268.889	710	0.10	c	513						
			$n_2$ Eck	1.3						
			$n_2$ th	15						
			$M_2$	15						
326.333	710	0.07	c	623						
			$n_2$ Eck	1.0						
			$n_2$ th	12						
			$M_2$	12						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 465 \text{ Nm}$

GST09-1A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
1.560	277	22.20	c								
			$n_2$ Eck								
			$n_2$ th								
2.048	239	15.60	$M_2$					41		37	
			c					5.3		4.7	
			$n_2$ Eck					821		1700	
			$n_2$ th					820		1109	
2.048	338	15.60	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
2.333	245	12.20	$M_2$					48		42	
			c					4.8		4.2	
			$n_2$ Eck					720		1491	
			$n_2$ th					720		1042	
2.333	370	12.20	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
2.810	221	9.58	$M_2$			28					
			c			5.6					
			$n_2$ Eck			1230					
			$n_2$ th			1035					
2.810	259	9.58	$M_2$					58		51	
			c					4.2		3.7	
			$n_2$ Eck					598		1239	
			$n_2$ th					598		952	
2.810	418	9.58	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
3.444	272	7.30	$M_2$					71		63	
			c					3.6		3.2	
			$n_2$ Eck					488		1010	
			$n_2$ th					488		818	
3.444	443	7.30	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
4.667	247	4.60	$M_2$	53		48					
			c	4.3		3.8					
			$n_2$ Eck	350		740					
			$n_2$ th	350		740					
4.667	289	4.60	$M_2$					97	48	86	42
			c					2.8	5.0	2.5	4.7
			$n_2$ Eck					360	493	746	881
			$n_2$ th					360	493	667	667
4.667	379	4.60	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



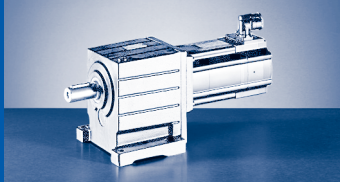


$M_{2GN} \leq 465 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GST09-1A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
54		54		93		83		$c$	22.20	277	1.560
4.8		3.8		2.8		2.5		$n_{2 \text{ Eck}}$			
1090		2250		1096		2256		$n_{2 \text{ th}}$			
1090		1219		1096		1101		$M_2$			
								$c$	15.60	239	2.048
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
71		71		122	47	109		$M_2$	15.60	338	2.048
4.4		3.5		2.6	5.8	2.3		$c$			
830		1714		835	1216	1719		$n_{2 \text{ Eck}}$			
830		1041		835	983	943		$n_{2 \text{ th}}$			
								$M_2$	12.20	245	2.333
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
81		81		139	54	125		$M_2$	12.20	370	2.333
4.3		3.4		2.5	5.5	2.2		$c$			
729		1504		733	1067	1509		$n_{2 \text{ Eck}}$			
729		991		733	863	863		$n_{2 \text{ th}}$			
								$M_2$	9.58	221	2.810
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$	9.58	259	2.810
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
97		97		168	65	151		$M_2$	9.58	418	2.810
4.0		3.2		2.4	5.2	2.1		$c$			
605		1249		609	886	1253		$n_{2 \text{ Eck}}$			
605		872		609	717	717		$n_{2 \text{ th}}$			
								$M_2$	7.30	272	3.444
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
120		120		206	81	185	55	$M_2$	7.30	443	3.444
3.5		2.7		2.0	4.5	1.8	5.5	$c$			
494		1019		497	723	1022	1208	$n_{2 \text{ Eck}}$			
494		711		496	585	585	585	$n_{2 \text{ th}}$			
								$M_2$	4.60	247	4.667
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$	4.60	289	4.667
								$c$			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
165	72	164	53					$M_2$	4.60	379	4.667
2.2	4.4	1.7	4.9					$c$			
364	501	752	889					$n_{2 \text{ Eck}}$			
364	501	525	525					$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 465 \text{ Nm}$

GST09-1A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
5.667	256	3.51	$M_2$	65		59					
			c	3.7		3.2					
			$n_{2 \text{ Eck}}$	289		610					
			$n_{2 \text{ th}}$	289		610					
5.667	299	3.51	$M_2$					118	58	105	51
			c					2.4	4.3	2.1	4.0
			$n_{2 \text{ Eck}}$					297	406	614	725
			$n_{2 \text{ th}}$					296	406	549	549
5.667	465	3.51	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
7.333	265	2.26	$M_2$	85	46	77	37				
			c	3.0	5.0	2.6	4.9				
			$n_{2 \text{ Eck}}$	223	273	471	559				
			$n_{2 \text{ th}}$	223	273	471	490				
7.333	310	2.26	$M_2$					154	76	136	67
			c					1.9	3.4	1.7	3.2
			$n_{2 \text{ Eck}}$					229	314	475	561
			$n_{2 \text{ th}}$					229	314	424	424
8.900	269	1.66	$M_2$	104	57	94	46				
			c	2.5	4.2	2.2	4.1				
			$n_{2 \text{ Eck}}$	184	225	388	461				
			$n_{2 \text{ th}}$	184	225	388	403				
8.900	315	1.66	$M_2$					187	93	166	82
			c					1.6	2.9	1.4	2.7
			$n_{2 \text{ Eck}}$					189	258	391	462
			$n_{2 \text{ th}}$					189	258	350	350
11.250	273	1.11	$M_2$	132	72	119	58				
			c	2.0	3.3	1.7	3.3				
			$n_{2 \text{ Eck}}$	145	178	307	364				
			$n_{2 \text{ th}}$	145	178	307	319				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 465 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST09-1A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_2$ Eck	3.51	256	5.667
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	3.51	299	5.667
								$n_2$ th			
200	88	199	64					$M_2$ c			
2.2	4.4	1.7	5.0					$n_2$ Eck	3.51	465	5.667
300	413	619	732					$n_2$ th			
300	413	432	432					$M_2$ c			
								$n_2$ Eck	2.26	265	7.333
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.26	310	7.333
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.66	269	8.900
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.66	315	8.900
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.11	273	11.250
								$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 1582 \text{ Nm}$

GST09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			$M_2$								
4.056	878	27.00	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$								
4.457	931	25.90	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$					106		94	
5.324	613	18.10	c					5.3		4.7	
			$n_2$ Eck					316		654	
			$n_2$ th					316		426	
			$M_2$								
5.324	993	18.10	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$					117		104	
5.850	674	17.50	c					5.3		4.7	
			$n_2$ Eck					287		595	
			$n_2$ th					287		388	
			$M_2$								
5.850	1020	17.50	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$					134		119	
6.667	690	14.20	c					4.8		4.2	
			$n_2$ Eck					252		522	
			$n_2$ th					252		365	
			$M_2$								
6.667	1065	14.20	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$								
7.305	566	11.30	c			73					
			$n_2$ Eck			5.6					
			$n_2$ th			473					
			$n_2$ th			398					
			$M_2$					147		131	
7.305	663	11.30	c					4.2		3.7	
			$n_2$ Eck					230		476	
			$n_2$ th					230		366	
			$M_2$								
7.305	1103	11.30	c								
			$n_2$ Eck								
			$n_2$ th								
			$M_2$								
8.027	622	11.00	c			80					
			$n_2$ Eck			5.6					
			$n_2$ th			430					
			$n_2$ th			362					
			$M_2$					162		144	
8.027	728	11.00	c					4.2		3.7	
			$n_2$ Eck					209		434	
			$n_2$ th					209		333	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 1582 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
136		136		235		212		c			
5.9		4.7		3.5		3.1		$n_{2 \text{ Eck}}$	27.00	878	4.056
419		865		422		868		$n_{2 \text{ th}}$			
419		492		422		446		$M_2$			
149		150		259		233		c			
5.7		4.5		3.4		3.0		$n_{2 \text{ Eck}}$	25.90	931	4.457
381		788		384		790		$n_{2 \text{ th}}$			
381		444		384		403		$M_2$			
								c			
								$n_{2 \text{ Eck}}$	18.10	613	5.324
								$n_{2 \text{ th}}$			
180		180		311		279		$M_2$			
5.1		4.0		3.0		2.6		c			
319		659		321		661		$n_{2 \text{ Eck}}$	18.10	993	5.324
319		412		321		375		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	17.50	674	5.850
								$n_{2 \text{ th}}$			
198		199		342		307		$M_2$			
4.8		3.8		2.8		2.5		c			
291		600		292		602		$n_{2 \text{ Eck}}$	17.50	1020	5.850
291		370		292		336		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	14.20	690	6.667
								$n_{2 \text{ th}}$			
227		227		391	151	351		$M_2$			
4.4		3.5		2.6	5.7	2.3		c			
255		527		257	374	528		$n_{2 \text{ Eck}}$	14.20	1065	6.667
255		349		257	302	302		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	11.30	566	7.305
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	11.30	663	7.305
								$n_{2 \text{ th}}$			
249		249		429	167	385		$M_2$			
4.1		3.3		2.4	5.4	2.1		c			
233		481		234	341	482		$n_{2 \text{ Eck}}$	11.30	1103	7.305
233		335		234	276	276		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	11.00	622	8.027
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	11.00	728	8.027
								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 1582 \text{ Nm}$

GST09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
8.027	1133	11.00	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
9.010	1037	15.20	$M_2$					180		160	
			c					5.3		4.7	
			$n_2$ Eck					187		386	
			$n_2$ th					186		252	
9.010	1128	15.20	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
10.267	1063	12.40	$M_2$					206		183	
			c					4.8		4.2	
			$n_2$ Eck					164		339	
			$n_2$ th					164		237	
10.267	1178	12.40	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
11.667	1206	12.10	$M_2$					234		208	
			c					4.8		4.2	
			$n_2$ Eck					144		298	
			$n_2$ th					144		208	
12.362	958	9.79	$M_2$			123					
			c			5.6					
			$n_2$ Eck			280					
			$n_2$ th			235					
12.362	1121	9.79	$M_2$					249		222	
			c					4.2		3.7	
			$n_2$ Eck					136		282	
			$n_2$ th					136		216	
12.362	1253	9.79	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
14.048	1088	9.53	$M_2$			140					
			c			5.6					
			$n_2$ Eck			246					
			$n_2$ th			207					
14.048	1274	9.53	$M_2$					283		252	
			c					4.2		3.7	
			$n_2$ Eck					120		248	
			$n_2$ th					120		190	
14.048	1283	9.53	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
15.156	1179	7.65	$M_2$					307		272	
			c					3.7		3.6	
			$n_2$ Eck					111		230	
			$n_2$ th					111		191	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

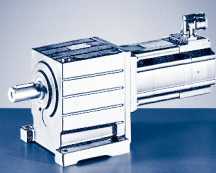


$M_{2GN} \leq 1582 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
274		274		472	184	424		$c$	11.00	1133	8.027
3.8		3.0		2.3	5.0	2.0		$n_{2 \text{ Eck}}$			
212		437		213	310	439		$n_{2 \text{ th}}$			
212		305		213	251	251		$M_2$			
								$c$	15.20	1037	9.010
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
309		309		531	207	477	142	$M_2$			
3.4		2.7		2.0	4.4	1.8	5.4	$c$	15.20	1128	9.010
189		390		190	276	391	462	$n_{2 \text{ Eck}}$			
189		223		190	223	194	223	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	12.40	1063	10.267
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
354		353		606	237	544	162	$M_2$			
3.1		2.5		1.8	4.1	1.6	5.0	$c$	12.40	1178	10.267
166		342		167	243	343	405	$n_{2 \text{ Eck}}$			
166		210		167	196	177	196	$n_{2 \text{ th}}$			
403	176	402		690	271	620	186	$M_2$			
2.8	5.6	2.2		1.7	3.7	1.5	4.5	$c$	12.10	1206	11.667
146	201	301		147	213	302	357	$n_{2 \text{ Eck}}$			
146	201	180		147	173	147	173	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	9.79	958	12.362
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	9.79	1121	12.362
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
427	186	427		732	287	657	197	$M_2$			
2.8	5.5	2.2		1.6	3.6	1.4	4.4	$c$	9.79	1253	12.362
138	189	284		138	201	285	337	$n_{2 \text{ Eck}}$			
138	189	192		138	163	155	163	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	9.53	1088	14.048
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	9.53	1274	14.048
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
487	213	486	156	833	328	747	225	$M_2$			
2.5	5.0	2.0	5.6	1.5	3.2	1.3	3.9	$c$	9.53	1283	14.048
121	167	250	295	122	177	251	296	$n_{2 \text{ Eck}}$			
121	167	165	174	122	143	129	143	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	7.65	1179	15.156
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 1582 \text{ Nm}$

GST09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
15.156	1340	7.65	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
17.222	1340	7.49	$M_2$					349		309	
			c					3.7		3.6	
			$n_{2 \text{ Eck}}$					98		202	
			$n_{2 \text{ th}}$					98		168	
17.222	1373	7.49	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
20.533	1068	4.50	$M_2$	231		208					
			c	4.5		4.3					
			$n_{2 \text{ Eck}}$	80		168					
			$n_{2 \text{ th}}$	80		168					
20.533	1251	4.50	$M_2$					420	205	371	181
			c					2.9	5.7	2.8	5.4
			$n_{2 \text{ Eck}}$					82	112	170	200
			$n_{2 \text{ th}}$					82	112	152	152
20.533	1484	4.50	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
23.333	1214	4.41	$M_2$	262		236					
			c	4.5		4.3					
			$n_{2 \text{ Eck}}$	70		148					
			$n_{2 \text{ th}}$	70		148					
23.333	1421	4.41	$M_2$					477	233	422	205
			c					2.9	5.7	2.8	5.4
			$n_{2 \text{ Eck}}$					72	99	149	176
			$n_{2 \text{ th}}$					72	99	133	133
23.333	1508	4.41	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
24.933	1107	3.38	$M_2$	282		254					
			c	3.8		3.7					
			$n_{2 \text{ Eck}}$	66		139					
			$n_{2 \text{ th}}$	66		139					
24.933	1296	3.38	$M_2$					512	251	453	221
			c					2.5	4.9	2.4	4.6
			$n_{2 \text{ Eck}}$					67	92	140	165
			$n_{2 \text{ th}}$					67	92	125	125
24.933	1582	3.38	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
28.333	1258	3.32	$M_2$	320		289					
			c	3.8		3.7					
			$n_{2 \text{ Eck}}$	58		122					
			$n_{2 \text{ th}}$	58		122					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



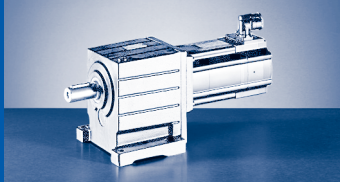


$M_{2GN} \leq 1582 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GST09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
525	229	523		898	352	805	241	$c$	7.65	1340	15.156
2.5	5.5	2.2		1.5	3.6	1.4	4.3	$n_{2 \text{ Eck}}$			
112	154	232		113	164	232	275	$n_{2 \text{ th}}$			
112	154	162		113	133	133	133	$M_2$			
								$c$	7.49	1340	17.222
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
599	261	596	191	1022	402	916	276	$M_2$			
2.3	4.9	2.0	5.5	1.3	3.2	1.3	3.9	$c$	7.49	1373	17.222
99	136	204	241	99	145	204	242	$n_{2 \text{ Eck}}$			
99	136	142	142	99	117	117	117	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.50	1068	20.533
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.50	1251	20.533
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
715	313	711	229					$M_2$			
2.1	4.5	1.8	5.0					$c$	4.50	1484	20.533
83	114	171	202					$n_{2 \text{ Eck}}$			
83	114	119	119					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.41	1214	23.333
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.41	1421	23.333
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
815	358	810	262					$M_2$			
1.8	4.0	1.6	4.5					$c$	4.41	1508	23.333
73	100	150	178					$n_{2 \text{ Eck}}$			
73	100	105	105					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	3.38	1107	24.933
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	3.38	1296	24.933
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
871	382	866	280					$M_2$			
1.8	3.9	1.6	4.4					$c$	3.38	1582	24.933
68	94	141	166					$n_{2 \text{ Eck}}$			
68	94	98	98					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	3.32	1258	28.333
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 1582 \text{ Nm}$

GST09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
28.333	1472	3.32	c					582	285	515	252
			$n_2$ Eck					2.5	4.9	2.4	4.6
			$n_2$ th					59	81	123	145
								59	81	110	110
28.333	1519	3.32	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
32.267	1147	2.25	$M_2$	368	200	331	161				
			c	3.1	5.5	2.9	5.5				
			$n_2$ Eck	51	62	107	127				
			$n_2$ th	51	62	107	111				
32.267	1343	2.25	$M_2$					666	328	589	289
			c					2.0	3.9	1.9	3.7
			$n_2$ Eck					52	71	108	127
			$n_2$ th					52	71	96	96
36.667	1304	2.21	$M_2$	418	227	377	183				
			c	3.1	5.5	2.9	5.5				
			$n_2$ Eck	45	55	94	112				
			$n_2$ th	45	55	94	98				
36.667	1526	2.21	$M_2$					757	373	669	329
			c					2.0	3.9	1.9	3.7
			$n_2$ Eck					46	63	95	112
			$n_2$ th					46	63	85	85
39.160	1166	1.64	$M_2$	449	245	404	198				
			c	2.6	4.6	2.4	4.6				
			$n_2$ Eck	42	51	88	105				
			$n_2$ th	42	51	88	92				
39.160	1364	1.64	$M_2$					811	401	717	353
			c					1.7	3.3	1.6	3.1
			$n_2$ Eck					43	59	89	105
			$n_2$ th					43	59	79	79
44.500	1324	1.62	$M_2$	510	279	458	223				
			c	2.6	4.6	2.7	5.1				
			$n_2$ Eck	37	45	78	92				
			$n_2$ th	37	45	78	81				
44.500	1546	1.62	$M_2$					922	455	814	400
			c					1.7	3.3	1.8	3.4
			$n_2$ Eck					38	52	78	92
			$n_2$ th					38	52	70	70
49.500	1184	1.12	$M_2$	570	313	512	251				
			c	2.1	3.7	2.2	4.1				
			$n_2$ Eck	33	40	70	83				
			$n_2$ th	33	40	70	73				
56.250	1345	1.10	$M_2$	648	356	582	285				
			c	2.1	3.7	2.2	4.1				
			$n_2$ Eck	29	36	61	73				
			$n_2$ th	29	36	61	64				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

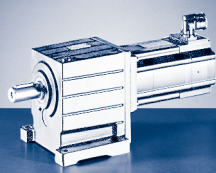


$M_{2GN} \leq 1582 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_2$ Eck $n_2$ th	3.32	1472	28.333
993	437	986	321					$M_2$ c $n_2$ Eck $n_2$ th	3.32	1519	28.333
1.5	3.3	1.3	3.7					$M_2$ c $n_2$ Eck $n_2$ th	2.25	1147	32.267
60	83	124	147					$M_2$ c $n_2$ Eck $n_2$ th	2.25	1343	32.267
60	83	86	86					$M_2$ c $n_2$ Eck $n_2$ th	2.21	1304	36.667
								$M_2$ c $n_2$ Eck $n_2$ th	2.21	1526	36.667
								$M_2$ c $n_2$ Eck $n_2$ th	1.64	1166	39.160
								$M_2$ c $n_2$ Eck $n_2$ th	1.64	1364	39.160
								$M_2$ c $n_2$ Eck $n_2$ th	1.62	1324	44.500
								$M_2$ c $n_2$ Eck $n_2$ th	1.62	1546	44.500
								$M_2$ c $n_2$ Eck $n_2$ th	1.12	1184	49.500
								$M_2$ c $n_2$ Eck $n_2$ th	1.10	1345	56.250

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 1623 \text{ Nm}$

GST09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
40.136	1344	2.14	$M_2$		232		451	246	406	198	819	405	724	357	
			c		4.8		2.9	5.2	2.8	5.3	1.6	3.2	1.6	3.0	
			$n_{2 \text{ Eck}}$		85		41	50	86	102	42	57	87	102	102
			$n_{2 \text{ th}}$		85		41	50	86	89	42	57	78	78	78
43.267	1290	1.55	$M_2$		250		488	266	438	213	885	438	781	385	
			c		4.7		2.6	4.7	2.8	5.2	1.5	2.9	1.6	3.0	
			$n_{2 \text{ Eck}}$		79		38	46	80	95	39	53	80	95	95
			$n_{2 \text{ th}}$		79		38	46	80	83	39	53	72	72	72
49.167	1466	1.53	$M_2$		284		554	303	498	243	1005	497	888	437	
			c		4.7		2.6	4.7	2.8	5.2	1.5	2.9	1.6	3.0	
			$n_{2 \text{ Eck}}$		69		33	41	70	83	34	47	71	84	84
			$n_{2 \text{ th}}$		69		33	41	70	73	34	47	63	63	63
53.044	1379	1.38	$M_2$		309		600	329	539	264	1087	539	960	474	
			c		4.1		2.3	4.1	2.4	4.5	1.3	2.5	1.4	2.6	
			$n_{2 \text{ Eck}}$		64		31	38	65	77	32	43	66	78	78
			$n_{2 \text{ th}}$		64		31	38	65	68	32	43	59	59	59
60.278	1565	1.37	$M_2$		351		682	374	613	300	1235	612	1090	538	
			c		4.1		2.3	4.1	2.4	4.5	1.3	2.5	1.4	2.6	
			$n_{2 \text{ Eck}}$		57		27	33	57	68	28	38	58	68	68
			$n_{2 \text{ th}}$		57		27	33	57	60	28	38	52	52	52
71.867	1477	1.17	$M_2$		422	264	817	450	735	361	1477	734	1304	645	
			c		3.3	4.9	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.0	
			$n_{2 \text{ Eck}}$		48	56	23	28	48	57	23	32	48	57	57
			$n_{2 \text{ th}}$		47	56	23	28	48	50	23	32	43	43	43
81.667	1584	1.16	$M_2$		481	300	930	512	836	411		835	1483	734	
			c		3.1	4.6	1.7	3.0	1.8	3.4		1.9	1.0	1.9	
			$n_{2 \text{ Eck}}$		42	50	20	25	42	50		28	43	50	50
			$n_{2 \text{ th}}$		42	50	20	24	42	44		28	38	38	38
93.541	1613	0.71	$M_2$		553	346	1067	588	959	473					
			c		2.7	4.1	1.5	2.7	1.6	3.0					
			$n_{2 \text{ Eck}}$		37	43	18	21	37	44					
			$n_{2 \text{ th}}$		36	43	17	21	37	38					
99.167	1596	1.07	$M_2$		587	368	1132	625	1018	502		1018		895	
			c		2.6	3.8	1.4	2.5	1.5	2.8		1.6		1.6	
			$n_{2 \text{ Eck}}$		34	41	17	20	35	41		23		42	
			$n_{2 \text{ th}}$		34	41	16	20	35	36		23		31	
113.585	1613	0.65	$M_2$		675	423	1299	718	1169	577					
			c		2.3	3.4	1.2	2.2	1.3	2.5					
			$n_{2 \text{ Eck}}$		30	36	14	18	30	36					
			$n_{2 \text{ th}}$		30	36	14	18	30	32					
129.074	1612	0.65	$M_2$	234	769	483	1479	818	1330	658					
			c	6.0	2.0	3.0	1.1	2.0	1.2	2.2					
			$n_{2 \text{ Eck}}$	31	26	31	13	16	27	32					
			$n_{2 \text{ th}}$	31	26	31	13	15	27	28					
141.289	1613	0.46	$M_2$	257	843	530		897	1457	722					
			c	5.5	1.8	2.7		1.8	1.1	2.0					
			$n_{2 \text{ Eck}}$	28	24	29		14	25	29					
			$n_{2 \text{ th}}$	28	24	29		14	24	25					
160.556	1623	0.46	$M_2$	295	961	605		1022		822					
			c	4.8	1.6	2.4		1.6		1.8					
			$n_{2 \text{ Eck}}$	25	21	25		13		26					
			$n_{2 \text{ th}}$	25	21	25		12		22					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 1623 \text{ Nm}$

GST09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
182.844	1613	0.30	$M_2$	338	1096	691									
			c	4.2	1.4	2.1									
			$n_{2 \text{ Eck}}$	22	19	22									
			$n_{2 \text{ th}}$	22	19	22									
207.778	1623	0.30	$M_2$	386	1248	787									
			c	3.7	1.2	1.9									
			$n_{2 \text{ Eck}}$	19	16	20									
			$n_{2 \text{ th}}$	19	16	19									
236.622	1613	0.28	$M_2$	442	1423	899									
			c	3.3	1.1	1.6									
			$n_{2 \text{ Eck}}$	17	14	17									
			$n_{2 \text{ th}}$	17	14	17									
252.167	1623	0.21	$M_2$	472	1518	959									
			c	3.1	1.0	1.5									
			$n_{2 \text{ Eck}}$	16	14	16									
			$n_{2 \text{ th}}$	16	14	16									
268.889	1623	0.28	$M_2$	504		1023									
			c	2.9		1.4									
			$n_{2 \text{ Eck}}$	15		15									
			$n_{2 \text{ th}}$	15		15									
326.333	1623	0.20	$M_2$	615		1245									
			c	2.4		1.2									
			$n_{2 \text{ Eck}}$	12		12									
			$n_{2 \text{ th}}$	12		12									
363.000	1613	0.26	$M_2$	686											
			c	2.1											
			$n_{2 \text{ Eck}}$	11											
			$n_{2 \text{ th}}$	11											
412.500	1623	0.18	$M_2$	781											
			c	1.9											
			$n_{2 \text{ Eck}}$	10											
			$n_{2 \text{ th}}$	10											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2933 \text{ Nm}$

GST11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c								
4.056	1490	82.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
4.457	1606	79.00	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
5.324	1594	55.40	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
5.850	1772	53.50	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
6.400	1549	45.70	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
6.400	1801	45.70	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
6.864	2065	67.50	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
7.800	2114	65.10	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.010	2259	46.80	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.856	2325	40.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
11.200	2380	39.00	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
12.571	1414	29.40	$n_{2 \text{ Eck}}$					251		223	
			$n_{2 \text{ th}}$					5.2		4.6	
			$M_2$					134		277	
			c					134		180	
12.571	2520	29.40	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 2933 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST11-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
				229		207		c			
				5.9		5.2		$n_{2 \text{ Eck}}$	82.20	1490	4.056
				422		868		$n_{2 \text{ th}}$			
				422		421		$M_2$			
				252		228		c			
				5.8		5.1		$n_{2 \text{ Eck}}$	79.00	1606	4.457
				384		790		$n_{2 \text{ th}}$			
				384		382		$M_2$			
				305		275		c			
				4.8		4.2		$n_{2 \text{ Eck}}$	55.40	1594	5.324
				321		661		$n_{2 \text{ th}}$			
				321		356		$M_2$			
				335		302		c			
				4.9		4.3		$n_{2 \text{ Eck}}$	53.50	1772	5.850
				292		602		$n_{2 \text{ th}}$			
				292		325		$M_2$			
		214						c			
		5.2						$n_{2 \text{ Eck}}$	45.70	1549	6.400
		548						$n_{2 \text{ th}}$			
		320						$M_2$			
				367		331		c			
				4.5		4.0		$n_{2 \text{ Eck}}$	45.70	1801	6.400
				267		550		$n_{2 \text{ th}}$			
				267		302		$M_2$			
				393		354		c			
				4.8		4.2		$n_{2 \text{ Eck}}$	67.50	2065	6.864
				249		513		$n_{2 \text{ th}}$			
				245		238		$M_2$			
				449		404		c			
				4.4		3.8		$n_{2 \text{ Eck}}$	65.10	2114	7.800
				219		451		$n_{2 \text{ th}}$			
				211		204		$M_2$			
				520		468		c			
				4.0		3.5		$n_{2 \text{ Eck}}$	46.80	2259	9.010
				190		391		$n_{2 \text{ th}}$			
				190		202		$M_2$			
		330		570		513		c			
		5.1		3.8		3.3		$n_{2 \text{ Eck}}$	40.20	2325	9.856
		356		174		357		$n_{2 \text{ th}}$			
		207		174		188		$M_2$			
375		377		651		585		c			
5.8		4.6		3.4		3.0		$n_{2 \text{ Eck}}$	39.00	2380	11.200
152		313		153		314		$n_{2 \text{ th}}$			
152		178		153		161		$M_2$			
								c			
								$n_{2 \text{ Eck}}$	29.40	1414	12.571
								$n_{2 \text{ th}}$			
422		424		732		658		$M_2$			
5.5		4.3		3.2		2.8		c			
135		279		136		280		$n_{2 \text{ Eck}}$	29.40	2520	12.571
135		178		136		160		$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2933 \text{ Nm}$

GST11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c					285		254	
14.286	1607	28.70	$n_{2 \text{ Eck}}$					5.2		4.6	
			$n_{2 \text{ th}}$					118		244	
			$M_2$								
14.286	2579	28.70	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
15.400	2695	23.00	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
17.500	2758	22.50	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
20.289	1570	14.30	c					411		364	
			$n_{2 \text{ Eck}}$					3.7		3.6	
			$n_{2 \text{ th}}$					83		172	
			$M_2$								
20.289	2756	14.30	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
23.056	1784	14.10	c					468		414	
			$n_{2 \text{ Eck}}$					3.7		3.6	
			$n_{2 \text{ th}}$					73		151	
			$M_2$								
23.056	2913	14.10	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
24.933	1616	10.60	c					509		450	219
			$n_{2 \text{ Eck}}$					3.1		3.0	5.7
			$n_{2 \text{ th}}$					67		140	165
			$M_2$								
24.933	2777	10.60	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
28.333	1836	10.40	c					578		511	248
			$n_{2 \text{ Eck}}$					3.1		3.0	5.7
			$n_{2 \text{ th}}$					59		123	145
			$M_2$								
28.333	2933	10.40	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
32.267	1430	7.04	c	365		329					
			$n_{2 \text{ Eck}}$	3.8		3.6					
			$n_{2 \text{ th}}$	51		107					
			$M_2$	51		107					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



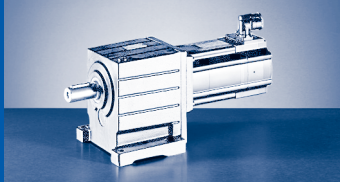


$M_{2GN} \leq 2933 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST11-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	28.70	1607	14.286
483		484		834		750		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	28.70	2579	14.286
4.9		3.9		2.9		2.6					
119		246		120		246					
119		153		120		139					
520		520		899		807		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	23.00	2695	15.400
5.0		4.3		2.9		2.8					
110		228		111		229					
110		159		111		131					
594		593		1025		919		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	22.50	2758	17.500
4.5		3.9		2.7		2.5					
97		201		98		201					
97		140		98		115					
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.30	1570	20.289
694		692		1193	462	1070		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.30	2756	20.289
3.9		3.3		2.3	5.5	2.2					
84		173		84	123	174					
84		121		84	99	99					
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.10	1784	23.056
790		788		1358	527	1217		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.10	2913	23.056
3.6		3.1		2.1	5.1	2.0					
74		152		74	108	153					
74		106		74	87	87					
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	10.60	1616	24.933
859		855		1472	574	1320	392	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	10.60	2777	24.933
3.2		2.7		1.9	4.5	1.8	5.5				
68		141		69	100	141	167				
68		98		69	81	81	81				
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	10.40	1836	28.333
978		974		1675	654	1502	448	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	10.40	2933	28.333
2.9		2.5		1.7	4.2	1.7	5.1				
60		124		60	88	124	147				
60		86		60	71	71	71				
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	7.04	1430	32.267

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2933 \text{ Nm}$

GST11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c					663	325	586	286
32.267	1674	7.04	$n_{2 \text{ Eck}}$					2.5	4.9	2.4	4.6
			$n_{2 \text{ th}}$					52	71	108	127
			$n_{2 \text{ th}}$					52	71	96	96
32.267	2818	7.04	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	415		374					
36.667	1624	6.93	c	3.8		3.6					
			$n_{2 \text{ Eck}}$	45		94					
			$n_{2 \text{ th}}$	45		94					
36.667	1902	6.93	$M_2$					753	369	666	326
			c					2.5	4.9	2.4	4.6
			$n_{2 \text{ Eck}}$					46	63	95	112
			$n_{2 \text{ th}}$					46	63	85	85
36.667	2933	6.93	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
39.160	1452	5.15	$M_2$	446	242	402	195				
			c	3.2	5.7	3.1	5.8				
			$n_{2 \text{ Eck}}$	42	51	88	105				
			$n_{2 \text{ th}}$	42	51	88	92				
39.160	1701	5.15	$M_2$					808	397	714	350
			c					2.1	4.1	2.0	3.8
			$n_{2 \text{ Eck}}$					43	59	89	105
			$n_{2 \text{ th}}$					43	59	79	79
39.160	2826	5.15	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
44.500	1650	5.08	$M_2$	506	275	455					
			c	3.2	5.7	3.4					
			$n_{2 \text{ Eck}}$	37	45	78					
			$n_{2 \text{ th}}$	37	45	78					
44.500	1933	5.08	$M_2$					918	451	810	396
			c					2.1	4.2	2.2	4.2
			$n_{2 \text{ Eck}}$					38	52	78	92
			$n_{2 \text{ th}}$					38	52	70	70
44.500	2933	5.08	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
49.500	1476	3.52	$M_2$	567	310	510	248				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	33	40	70	83				
			$n_{2 \text{ th}}$	33	40	70	73				
49.500	1728	3.52	$M_2$					1025	506	905	445
			c					1.7	3.3	1.8	3.4
			$n_{2 \text{ Eck}}$					34	47	70	83
			$n_{2 \text{ th}}$					34	46	63	63

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 2933 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST11-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2Eck}$ $n_{2th}$	7.04	1674	32.267
1119	487	1114						$M_2$ c $n_{2Eck}$ $n_{2th}$	7.04	2818	32.267
2.5	5.4	2.1						$M_2$ c $n_{2Eck}$ $n_{2th}$	6.93	1624	36.667
53	73	109						$M_2$ c $n_{2Eck}$ $n_{2th}$	6.93	1902	36.667
53	73	76						$M_2$ c $n_{2Eck}$ $n_{2th}$	6.93	2933	36.667
1274	556	1268	407					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.15	1452	39.160
2.3	5.0	2.0	5.6					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.15	1701	39.160
46	64	96	113					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.15	2826	39.160
46	64	67	67					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.08	1650	44.500
1364	597	1357	437					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.08	1933	44.500
2.1	4.5	1.8	5.0					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.08	2933	44.500
43	60	90	106					$M_2$ c $n_{2Eck}$ $n_{2th}$	3.52	1476	49.500
43	60	63	63					$M_2$ c $n_{2Eck}$ $n_{2th}$	3.52	1728	49.500

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2933 \text{ Nm}$

GST11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
56.250	1677	3.44	$M_2$	644	352	579	282				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	29	36	61	73				
			$n_{2 \text{ th}}$	29	36	61	64				
56.250	1964	3.44	$M_2$					1165	575	1028	506
			c					1.7	3.3	1.8	3.4
			$n_{2 \text{ Eck}}$					30	41	62	73
			$n_{2 \text{ th}}$					30	41	55	55

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 2933 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST11-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.44	1677	56.250
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.44	1964	56.250

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2848 \text{ Nm}$

GST11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
40.816	1641	6.36	$M_2$		233					
			c		5.8					
			$n_{2 \text{ Eck}}$		84					
			$n_{2 \text{ th}}$		84					
40.816	2444	6.36	$M_2$				447		404	
			c				5.2		5.0	
			$n_{2 \text{ Eck}}$				40		85	
			$n_{2 \text{ th}}$				40		85	
40.816	2550	6.36	$M_2$							
			c							
			$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
44.000	2410	5.66	$M_2$				485		435	
			c				4.8		5.1	
			$n_{2 \text{ Eck}}$				37		79	
			$n_{2 \text{ th}}$				37		79	
50.000	2725	5.60	$M_2$				551		494	
			c				4.8		5.0	
			$n_{2 \text{ Eck}}$				33		69	
			$n_{2 \text{ th}}$				33		69	
57.968	2577	4.77	$M_2$				645		579	
			c				3.9		4.1	
			$n_{2 \text{ Eck}}$				28		60	
			$n_{2 \text{ th}}$				28		60	
61.250	2725	4.08	$M_2$				681		612	
			c				3.9		4.1	
			$n_{2 \text{ Eck}}$				27		56	
			$n_{2 \text{ th}}$				27		56	
71.011	2637	3.52	$M_2$				795	432	714	
			c				3.2	5.8	3.4	
			$n_{2 \text{ Eck}}$				23	28	49	
			$n_{2 \text{ th}}$				23	28	49	
80.694	2787	3.50	$M_2$				906	493	814	
			c				3.0	5.4	3.2	
			$n_{2 \text{ Eck}}$				20	25	43	
			$n_{2 \text{ th}}$				20	25	43	
87.267	2657	3.22	$M_2$				983	537	884	430
			c				2.7	4.8	2.8	5.3
			$n_{2 \text{ Eck}}$				19	23	40	47
			$n_{2 \text{ th}}$				19	23	40	41
99.167	2810	3.20	$M_2$				1120	612	1006	491
			c				2.5	4.4	2.6	5.0
			$n_{2 \text{ Eck}}$				17	20	35	41
			$n_{2 \text{ th}}$				16	20	35	36
112.933	2695	2.93	$M_2$				1280	702	1151	563
			c				2.1	3.7	2.2	4.2
			$n_{2 \text{ Eck}}$				15	18	31	36
			$n_{2 \text{ th}}$				14	18	31	32
129.074	2810	1.94	$M_2$		757	472	1466	806	1318	647
			c		3.5	5.2	1.9	3.4	2.0	3.8
			$n_{2 \text{ Eck}}$		26	31	13	16	27	32
			$n_{2 \text{ th}}$		26	31	13	15	27	28

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 2848 \text{ Nm}$

17NC17	17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	GST11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.50	10.80	19.00	9.50	36.30	16.30	36.00	12.00	$n_1$			
1680	2300	3480	4110	1700	2340	3510	4150	$I_{M400}$			
8.5	5.5	15.8	10.2	13.9	8.2	28.7	14.0	$P_N$			
3.80	2.60	6.90	4.10	6.40	4.00	13.20	5.20	$J_M$			
36.04	36.04	36.04	36.04	72.12	72.12	72.04	72.12	$M_2$			
								c			
								$n_{2\text{ Eck}}$	6.36	1641	40.816
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	6.36	2444	40.816
								$n_{2\text{ th}}$			
821	399	726	353	1404	616	1396	451	$M_2$			
3.0	6.0	3.0	5.6	1.8	3.9	1.6	4.4	c			
41	56	85	101	42	57	86	102	$n_{2\text{ Eck}}$	6.36	2550	40.816
41	56	76	76	42	57	60	60	$n_{2\text{ th}}$			
888	434	783	381	1517	667	1506	487	$M_2$			
2.7	5.3	2.9	5.4	1.6	3.5	1.5	4.3	c			
38	52	79	93	39	53	80	94	$n_{2\text{ Eck}}$	5.66	2410	44.000
38	52	71	71	39	53	56	56	$n_{2\text{ th}}$			
1010	493	890	433	1724	759	1711	554	$M_2$			
2.7	5.3	2.9	5.4	1.6	3.5	1.5	4.3	c			
34	46	70	82	34	47	70	83	$n_{2\text{ Eck}}$	5.60	2725	50.000
34	46	62	62	34	47	49	49	$n_{2\text{ th}}$			
1177	578	1038	508	2005	885	1990	648	$M_2$			
2.2	4.3	2.3	4.4	1.3	2.9	1.2	3.5	c			
29	40	60	71	29	40	61	72	$n_{2\text{ Eck}}$	4.77	2577	57.968
29	40	54	54	29	40	42	42	$n_{2\text{ th}}$			
1243	610	1097	536	2119	936	2102	684	$M_2$			
2.2	4.3	2.3	4.4	1.3	2.9	1.2	3.5	c			
27	38	57	67	28	38	57	68	$n_{2\text{ Eck}}$	4.08	2725	61.250
27	38	51	51	28	38	40	40	$n_{2\text{ th}}$			
1447	713	1277	627	2462	1090	2442	798	$M_2$			
1.8	3.6	2.0	3.7	1.1	2.4	1.0	2.9	c			
24	32	49	58	24	33	49	58	$n_{2\text{ Eck}}$	3.52	2637	71.011
24	32	44	44	24	33	34	34	$n_{2\text{ th}}$			
1646	812	1453	714		1241		909	$M_2$			
1.7	3.4	1.8	3.4		2.2		2.7	c			
21	29	43	51		29		51	$n_{2\text{ Eck}}$	3.50	2787	80.694
21	29	39	39		29		30	$n_{2\text{ th}}$			
1784	882	1575	776		1346		986	$M_2$			
1.5	3.0	1.6	3.0		2.0		2.4	c			
19	26	40	47		27		48	$n_{2\text{ Eck}}$	3.22	2657	87.267
19	26	36	36		27		28	$n_{2\text{ th}}$			
2029	1005	1792	883		1532		1123	$M_2$			
1.4	2.8	1.5	2.8		1.8		2.2	c			
17	23	35	42		24		42	$n_{2\text{ Eck}}$	3.20	2810	99.167
17	23	31	31		24		25	$n_{2\text{ th}}$			
2317	1150	2045	1011		1749		1283	$M_2$			
1.2	2.3	1.3	2.4		1.5		1.9	c			
15	20	31	36		21		37	$n_{2\text{ Eck}}$	2.93	2695	112.933
15	20	28	28		21		22	$n_{2\text{ th}}$			
2650	1317	2340	1158					$M_2$			
1.1	2.1	1.1	2.2					c			
13	18	27	32					$n_{2\text{ Eck}}$	1.94	2810	129.074
13	18	24	24					$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 2848 \text{ Nm}$

GST11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
146.993	2695	1.77	$M_2$		867	542	1675	923	1506	741
			c		2.9	4.3	1.6	2.9	1.7	3.2
			$n_{2 \text{ Eck}}$		23	28	11	14	24	28
			$n_{2 \text{ th}}$		23	28	11	14	24	24
158.194	2810	1.40	$M_2$		934	584	1804	994	1622	798
			c		2.8	4.2	1.6	2.8	1.6	3.1
			$n_{2 \text{ Eck}}$		22	26	10	13	22	26
			$n_{2 \text{ th}}$		22	26	10	13	22	23
180.156	2695	1.29	$M_2$		1069	670	2059	1137	1852	914
			c		2.4	3.5	1.3	2.3	1.4	2.6
			$n_{2 \text{ Eck}}$		19	23	9	11	19	23
			$n_{2 \text{ th}}$		19	22	9	11	19	20
207.778	2810	0.88	$M_2$		1236	776	2378	1315	2139	1057
			c		2.2	3.2	1.2	2.1	1.3	2.4
			$n_{2 \text{ Eck}}$		16	20	8	10	17	20
			$n_{2 \text{ th}}$		16	19	8	10	17	17
236.622	2695	0.82	$M_2$	431	1413	888		1503	2441	1208
			c	5.4	1.8	2.7		1.8	1.1	2.0
			$n_{2 \text{ Eck}}$	17	14	17		9	15	17
			$n_{2 \text{ th}}$	17	14	17		8	15	15
252.167	2810	0.63	$M_2$	460	1506	947		1602	2602	1288
			c	5.3	1.8	2.6		1.7	1.0	2.0
			$n_{2 \text{ Eck}}$	16	14	16		8	14	16
			$n_{2 \text{ th}}$	16	14	16		8	14	14
268.889	2848	0.82	$M_2$	492	1607	1012		1710		1375
			c	5.1	1.7	2.5		1.7		1.9
			$n_{2 \text{ Eck}}$	15	13	15		7		15
			$n_{2 \text{ th}}$	15	13	15		7		13
326.333	2848	0.59	$M_2$	603	1957	1234		2082		1675
			c	4.2	1.4	2.1		1.4		1.5
			$n_{2 \text{ Eck}}$	12	11	12		6		13
			$n_{2 \text{ th}}$	12	10	12		6		11
363.000	2695	0.76	$M_2$	675	2181	1377				
			c	3.5	1.2	1.8				
			$n_{2 \text{ Eck}}$	11	9	11				
			$n_{2 \text{ th}}$	11	9	11				
412.500	2848	0.55	$M_2$	769	2481	1566				
			c	3.3	1.1	1.6				
			$n_{2 \text{ Eck}}$	10	8	10				
			$n_{2 \text{ th}}$	10	8	10				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



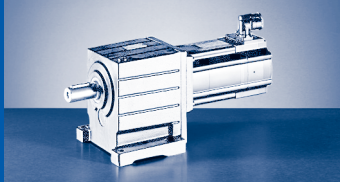


$M_{2GN} \leq 2848 \text{ Nm}$

17NC17	17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	GST11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.50	10.80	19.00	9.50	36.30	16.30	36.00	12.00	$n_1$			
1680	2300	3480	4110	1700	2340	3510	4150	$I_{M400}$			
8.5	5.5	15.8	10.2	13.9	8.2	28.7	14.0	$P_N$			
3.80	2.60	6.90	4.10	6.40	4.00	13.20	5.20	$J_M$			
36.04	36.04	36.04	36.04	72.12	72.12	72.04	72.12	$M_2$			
	1505		1323					c			
	1.8		1.8					$n_{2\text{ Eck}}$	1.77	2695	146.993
	16		28					$n_{2\text{ th}}$			
	16		21					$M_2$			
	1620		1425					c			
	1.7		1.8					$n_{2\text{ Eck}}$	1.40	2810	158.194
	15		26					$n_{2\text{ th}}$			
	15		20					$M_2$			
	1851		1627					c			
	1.5		1.5					$n_{2\text{ Eck}}$	1.29	2695	180.156
	13		23					$n_{2\text{ th}}$			
	13		17					$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.88	2810	207.778
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.82	2695	236.622
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.63	2810	252.167
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.82	2848	268.889
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.59	2848	326.333
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.76	2695	363.000
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.55	2848	412.500
								$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 5786 \text{ Nm}$

GST14-2A				195C17	195C23	195C35	21XC17	21XC25	21XC35
				...F10	...500	...F10	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	36.30	16.30	36.00	61.40	24.60	55.00
			$I_{M400}$	1700	2340	3510	1710	2490	3520
			$P_N$	13.9	8.2	28.7	22.5	13.5	42.5
			$J_M$	6.40	4.00	13.20	11.00	6.40	20.30
			$M_2$	72.12	72.12	72.04	180.04	180.04	180.04
8.027	3168	100.00	c						408
			$n_2$ Eck						5.6
			$n_2$ th						439
									251
8.800	3737	139.00	$M_2$						445
			c						6.0
			$n_2$ Eck						400
			$n_2$ th						195
9.841	3333	75.10	$M_2$				559		505
			c				5.4		4.8
			$n_2$ Eck				174		358
			$n_2$ th				174		205
11.000	3940	119.00	$M_2$				623		562
			c				5.8		5.1
			$n_2$ Eck				156		320
			$n_2$ th				155		154
12.362	4176	89.00	$M_2$				703		634
			c				5.4		4.8
			$n_2$ Eck				138		285
			$n_2$ th				138		158
14.048	4270	86.60	$M_2$				803		724
			c				4.9		4.3
			$n_2$ Eck				122		251
			$n_2$ th				122		136
15.156	4466	67.60	$M_2$				866		778
			c				5.0		4.7
			$n_2$ Eck				113		232
			$n_2$ th				113		133
17.222	4565	66.00	$M_2$				989		888
			c				4.5		4.3
			$n_2$ Eck				99		204
			$n_2$ th				99		117
20.044	3958	45.80	$M_2$	672		672			
			c	5.6		4.8			
			$n_2$ Eck	85		175			
			$n_2$ th	85		122			
20.044	4902	45.80	$M_2$				1156		1037
			c				4.1		3.9
			$n_2$ Eck				85		176
			$n_2$ th				85		100
22.778	4498	44.90	$M_2$	764		764			
			c	5.6		4.8			
			$n_2$ Eck	75		154			
			$n_2$ th	75		108			
22.778	5010	44.90	$M_2$				1319		1184
			c				3.7		3.5
			$n_2$ Eck				75		155
			$n_2$ th				75		88
24.567	4286	33.20	$M_2$	830		829			
			c	5.0		4.3			
			$n_2$ Eck	69		143			
			$n_2$ th	69		100			

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 5786 \text{ Nm}$

GST14-2A				195C17	195C23	195C35	21XC17	21XC25	21XC35
				...F10	...S00	...F10	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	1700	2340	3510	1710	2490	3520
			$I_{M400}$	13.9	8.2	28.7	22.5	13.5	42.5
			$P_N$	6.40	4.00	13.20	11.00	6.40	20.30
			$J_M$	72.12	72.12	72.04	180.04	180.04	180.04
24.567	5236	33.20	$M_2$				1425		1278
			c				3.6		3.4
			$n_{2 \text{ Eck}}$				70		143
			$n_{2 \text{ th}}$				70		82
27.917	4871	32.60	$M_2$	943		942			
			c	5.0		4.3			
			$n_{2 \text{ Eck}}$	61		126			
			$n_{2 \text{ th}}$	61		88			
27.917	5355	32.60	$M_2$				1625		1458
			c				3.2		3.1
			$n_{2 \text{ Eck}}$				61		126
			$n_{2 \text{ th}}$				61		72
32.267	4423	21.50	$M_2$	1103		1100			
			c	3.9		3.4			
			$n_{2 \text{ Eck}}$	53		109			
			$n_{2 \text{ th}}$	53		76			
32.267	5436	21.50	$M_2$				1886		1692
			c				2.8		2.7
			$n_{2 \text{ Eck}}$				53		109
			$n_{2 \text{ th}}$				53		62
36.667	5026	21.20	$M_2$	1253		1250			
			c	3.9		3.4			
			$n_{2 \text{ Eck}}$	46		96			
			$n_{2 \text{ th}}$	46		67			
36.667	5768	21.20	$M_2$				2147		1926
			c				2.6		2.5
			$n_{2 \text{ Eck}}$				47		96
			$n_{2 \text{ th}}$				47		55
39.160	4493	15.70	$M_2$	1347		1342			
			c	3.3		2.8			
			$n_{2 \text{ Eck}}$	43		90			
			$n_{2 \text{ th}}$	43		63			
39.160	5452	15.70	$M_2$				2301	890	2063
			c				2.3	5.6	2.2
			$n_{2 \text{ Eck}}$				44	64	90
			$n_{2 \text{ th}}$				44	51	51
44.500	5106	15.50	$M_2$	1531		1520			
			c	3.3		3.1			
			$n_{2 \text{ Eck}}$	38		79			
			$n_{2 \text{ th}}$	38		55			
44.500	5786	15.50	$M_2$				2619	1013	2343
			c				2.2	5.5	2.3
			$n_{2 \text{ Eck}}$				38	56	79
			$n_{2 \text{ th}}$				38	45	45
49.500	4348	10.60	$M_2$	1717	746	1704			
			c	2.5	5.6	2.4			
			$n_{2 \text{ Eck}}$	34	47	71			
			$n_{2 \text{ th}}$	34	47	49			
56.250	4940	10.50	$M_2$	1951	848	1937			
			c	2.5	5.6	2.4			
			$n_{2 \text{ Eck}}$	30	42	62			
			$n_{2 \text{ th}}$	30	42	44			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
40.185	4099	24.40	$M_2$					791		700	
			c				5.0		4.8		
			$n_2$ Eck				42		87		
			$n_2$ th				42		77		
40.185	4476	24.40	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
42.580	3804	18.30	$M_2$					844		743	
			c					4.4		4.7	
			$n_2$ Eck					40		82	
			$n_2$ th					39		73	
42.580	4262	18.30	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
48.386	4323	18.10	$M_2$					959		845	
			c					4.4		4.7	
			$n_2$ Eck					35		72	
			$n_2$ th					35		64	
48.386	4843	18.10	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
53.148	4779	20.50	$M_2$					1053		928	
			c					4.4		4.7	
			$n_2$ Eck					32		66	
			$n_2$ th					32		59	
59.321	4546	13.20	$M_2$					1184		1043	
			c					3.7		4.0	
			$n_2$ Eck					28		59	
			$n_2$ th					28		52	
59.321	5267	13.20	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
69.042	4917	11.50	$M_2$					1382		1218	
			c					3.5		3.7	
			$n_2$ Eck					24		50	
			$n_2$ th					24		45	
78.457	5587	11.40	$M_2$					1570		1384	
			c					3.5		3.7	
			$n_2$ Eck					21		44	
			$n_2$ th					21		40	
93.541	4793	6.57	$M_2$	1034		928					
			c	4.5		4.7					
			$n_2$ Eck	18		37					
			$n_2$ th	17		37					
93.541	5524	6.57	$M_2$					1884	918	1661	806
			c					2.9	5.7	3.1	5.9
			$n_2$ Eck					18	25	37	44
			$n_2$ th					18	25	33	33

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

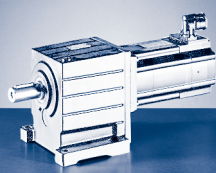


$M_{2GN} \leq 5920 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	24.40	4099	40.185
1362		1357		2336	910	2094	622	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	24.40	4476	40.185
3.2		2.8		1.9	4.6	1.8	5.5				
42		87		43	62	88	104				
42		61		43	50	50	50				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	18.30	3804	42.580
1448		1438		2480	967	2219	659	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	18.30	4262	42.580
2.9		2.8		1.7	4.3	1.8	5.5				
40		82		40	59	83	98				
40		58		40	47	47	47				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	18.10	4323	48.386
1645		1634		2818	1099	2522	749	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	18.10	4843	48.386
2.9		2.8		1.7	4.3	1.8	5.5				
35		73		35	52	73	86				
35		51		35	42	42	42				
1813	787	1800		3101	1213	2775	828	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	20.50	4779	53.148
2.6	5.8	2.5		1.5	3.8	1.6	5.0				
32	44	66		32	47	66	78				
32	44	46		32	38	38	38				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	13.20	4546	59.321
2024	879	2010		3462	1354	3098	924	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	13.20	5267	59.321
2.6	5.7	2.5		1.5	3.8	1.6	4.9				
29	40	59		29	42	59	70				
29	39	41		29	34	34	34				
2369	1035	2351	754	4042	1589	3618	1087	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	11.50	4917	69.042
2.1	4.6	2.0	5.6	1.2	3.0	1.3	3.9				
25	34	51	60	25	36	51	60				
25	34	35	35	25	29	29	29				
2692	1176	2672	857	4593	1805	4112	1236	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	11.40	5587	78.457
2.1	4.6	2.0	5.6	1.2	3.0	1.3	3.9				
22	30	45	53	22	32	45	53				
22	30	31	31	22	26	26	26				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	6.57	4793	93.541
3221	1415	3197	1032					$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	6.57	5524	93.541
1.7	3.8	1.6	4.6								
18	25	38	44								
18	25	26	26								

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
96.157	5882	10.40	$M_2$					1935	941	1706	
			c				3.0	5.9	3.2		
			$n_{2 \text{ Eck}}$				18	24	36		
			$n_{2 \text{ th}}$				17	24	32		
106.296	5447	6.52	$M_2$	1175		1054					
			c	4.5		4.7					
			$n_{2 \text{ Eck}}$	15		33					
			$n_{2 \text{ th}}$	15		33					
106.296	5920	6.52	$M_2$					2145	1047	1891	919
			c					2.7	5.4	2.9	5.5
			$n_{2 \text{ Eck}}$					16	22	33	39
			$n_{2 \text{ th}}$					16	22	29	29
130.278	5920	6.00	$M_2$	1448		1300		2643	1297	2331	1139
			c	4.0		4.2		2.2	4.4	2.4	4.5
			$n_{2 \text{ Eck}}$	13		27		13	18	27	32
			$n_{2 \text{ th}}$	13		27		13	18	24	24
139.211	5736	4.42	$M_2$	1553		1395		2830	1392	2497	1223
			c	3.6		3.8		2.0	4.0	2.2	4.1
			$n_{2 \text{ Eck}}$	12		25		12	17	25	30
			$n_{2 \text{ th}}$	12		25		12	17	22	22
158.194	5920	4.40	$M_2$	1771	962	1591		3222	1588	2844	1395
			c	3.3	5.8	3.5		1.8	3.6	2.0	3.7
			$n_{2 \text{ Eck}}$	10	13	22		11	15	22	26
			$n_{2 \text{ th}}$	10	13	22		11	15	20	20
171.111	5920	5.49	$M_2$	1921	1045	1725		3491	1723	3081	1514
			c	3.0	5.4	3.2		1.7	3.4	1.8	3.4
			$n_{2 \text{ Eck}}$	10	12	20		10	13	20	24
			$n_{2 \text{ th}}$	10	12	20		10	13	18	18
204.722	5920	2.86	$M_2$	2310	1263	2076	1012	4188	2073	3697	1822
			c	2.5	4.5	2.7	5.1	1.4	2.8	1.5	2.9
			$n_{2 \text{ Eck}}$	8	10	17	20	8	11	17	20
			$n_{2 \text{ th}}$	8	10	17	18	8	11	15	15
236.622	5779	2.65	$M_2$	2682	1470	2410	1179	4852	2407	4284	2116
			c	2.1	3.8	2.3	4.3	1.2	2.4	1.3	2.4
			$n_{2 \text{ Eck}}$	7	9	15	17	7	10	15	17
			$n_{2 \text{ th}}$	7	8	15	15	7	10	13	13
248.458	5920	2.06	$M_2$	2817	1546	2532	1240	5097	2529	4500	2224
			c	2.1	3.7	2.2	4.2	1.2	2.3	1.3	2.4
			$n_{2 \text{ Eck}}$	7	8	14	17	7	9	14	17
			$n_{2 \text{ th}}$	7	8	14	14	7	9	13	13
268.889	5920	2.65	$M_2$	3054	1678	2745	1346	5521	2742	4875	2411
			c	1.9	3.4	2.0	3.8	1.1	2.1	1.2	2.2
			$n_{2 \text{ Eck}}$	6	7	13	15	6	9	13	15
			$n_{2 \text{ th}}$	6	7	13	13	6	9	12	12
326.333	5920	1.92	$M_2$	3720	2049	3344	1646		3341		2938
			c	1.6	2.8	1.7	3.2		1.8		1.8
			$n_{2 \text{ Eck}}$	5	6	11	13		7		13
			$n_{2 \text{ th}}$	5	6	11	11		7		10
363.000	5779	2.45	$M_2$	4146	2288	3728	1838				
			c	1.4	2.5	1.5	2.8				
			$n_{2 \text{ Eck}}$	5	6	10	11				
			$n_{2 \text{ th}}$	5	6	10	10				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 5920 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
3309	1452	3284	1059	5640	2223	5049	1523	c	10.40	5882	96.157
18	3.9	1.7	4.8	1.0	2.6	1.1	3.4	$n_{2 \text{ Eck}}$			
18	24	37	43	18	26	37	43	$n_{2 \text{ th}}$			
18	24	25	25	18	21	21	21	$M_2$			
								c	6.52	5447	106.296
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3664	1611	3637	1176					$M_2$			
1.6	3.6	1.5	4.4					c	6.52	5920	106.296
16	22	33	39					$n_{2 \text{ Eck}}$			
16	22	23	23					$n_{2 \text{ th}}$			
4505	1989	4470	1454					$M_2$			
1.3	2.9	1.3	3.6					c	6.00	5920	130.278
13	18	27	32					$n_{2 \text{ Eck}}$			
13	18	19	19					$n_{2 \text{ th}}$			
4820	2131	4783	1559					$M_2$			
1.2	2.7	1.1	3.2					c	4.42	5736	139.211
12	17	25	30					$n_{2 \text{ Eck}}$			
12	17	18	18					$n_{2 \text{ th}}$			
5483	2428	5441	1778					$M_2$			
1.1	2.4	1.0	2.9					c	4.40	5920	158.194
11	15	22	26					$n_{2 \text{ Eck}}$			
11	15	15	15					$n_{2 \text{ th}}$			
	2631		1927					$M_2$			
	2.2		2.7					c	5.49	5920	171.111
	14		24					$n_{2 \text{ Eck}}$			
	14		14					$n_{2 \text{ th}}$			
								$M_2$			
								c	2.86	5920	204.722
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	2.65	5779	236.622
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	2.06	5920	248.458
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	2.65	5920	268.889
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	1.92	5920	326.333
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	2.45	5779	363.000
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [Nm]

## GST□□-□A (MCA)

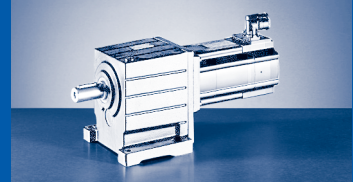
$M_{2GN} \leq 5920 \text{ Nm}$

GST14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
412.500	5920	1.78	$M_2$	4718	2607	4243	2095				
			c	1.3	2.2	1.3	2.5				
			$n_{2 \text{ Eck}}$	4	5	8	10				
			$n_{2 \text{ th}}$	4	5	8	9				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





$M_{2GN} \leq 5920 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GST14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
								$c$	1.78	5920	412.500
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

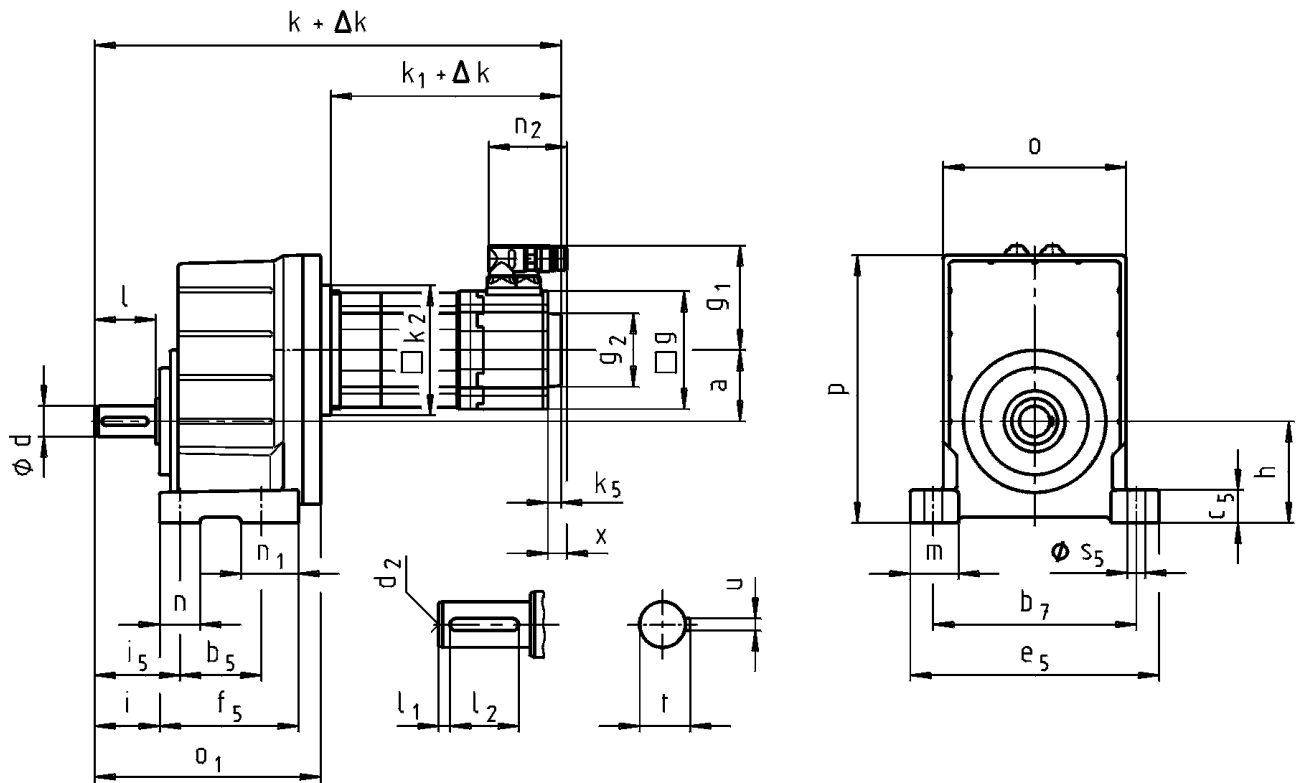
M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GST [mm]

## GST□□-1S (MCS)

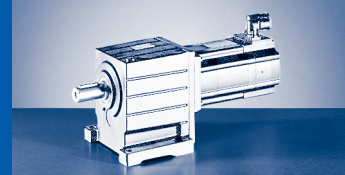


### GST□□-1S VBR ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GST04...	k	279	309	339	331	351	371	411								
GST05...	k	300	330	360	352	372	392	432	369		409			449		
GST06...	k	323	353	383	375	395	415	455	392		432			472		
GST07...	k				404	424	444	484	421		461			501		
GST09...	k								464		504			544		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
...RSO	k <sub>1</sub>	132	162	192	183	203	223	263	188		228			268		
	k <sub>2</sub>	66			91								118	145 <sup>2)</sup>		
	g	62			89								116			
	k <sub>5</sub>	0			13								14			
	g <sub>2</sub>	□ 62			Ø 67								Ø 72			
	g <sub>1</sub>	76			90								105			
	n <sub>2</sub>	64							78							
	x	21								18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST05: 12DC20 ... 12LC41



### GST□□-1S VBR ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	408		448		488		528											
GST07...	k	437		477		517		557		476		516		576					
GST09...	k	480		520		560		600		519		559		619					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-1S VBR

	o	o <sub>1</sub>	p	h	a
GST04...	100	134	138	50	36
GST05...	115	165	168	63	45
GST06...	145	191	211	80	56
GST07...	180	223	264	100	70
GST09...	222	271	329	125	89

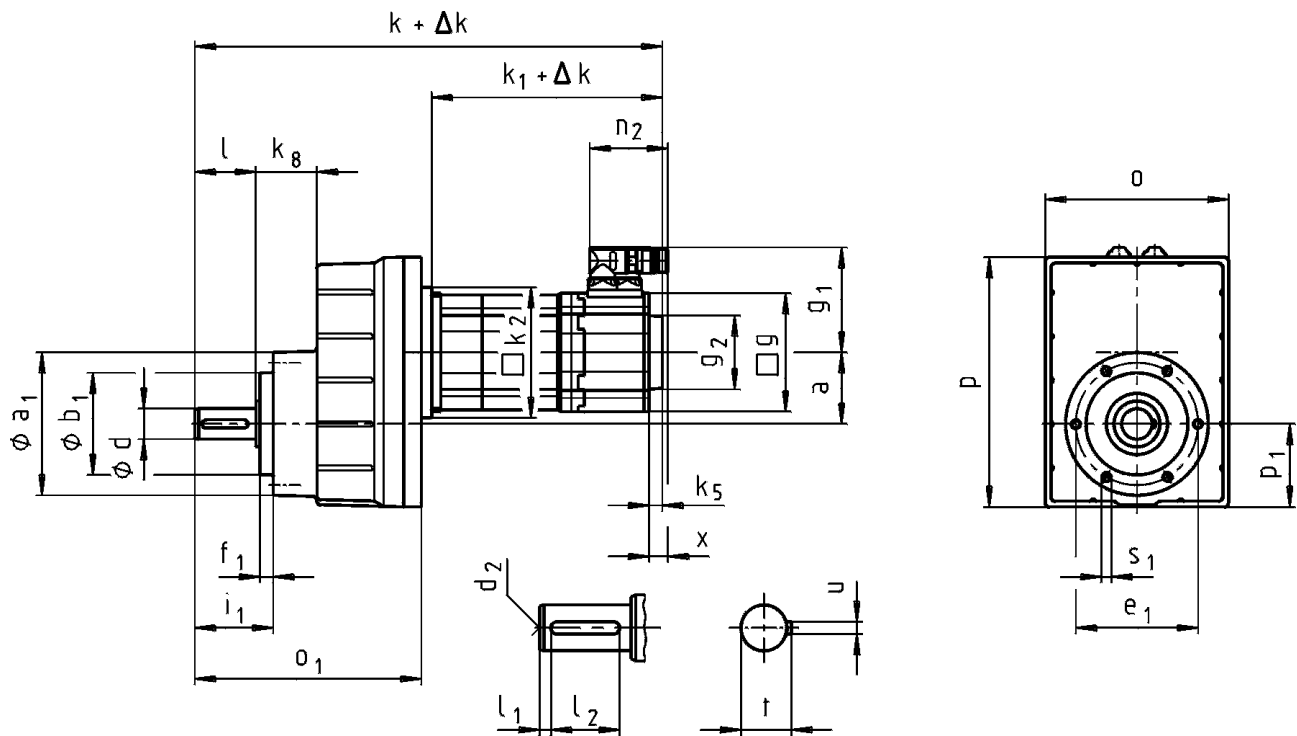
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST04...	16	32	6	20	M5	5	18	55	105	17	128	80	35	45	24	20	25	9
GST05...	20	40		28	M6	6	22.5	70	125	22	154	99	43	56	32	26	29	11
GST06...	25	50	4	40	M10	8	28	72	160	27	194	115	53	68	37	30	43	13.5
GST07...	30	60	7.5	45				80	200	35	245	137	64	84	48	40	57	
GST09...	40	80	8.5	63				M16	12	43	105	245	43	296	161	84	107	

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-1S (MCS)



### GST□□-1S VCR ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GST04...	k	279	309	339	331	351	371	411								
GST05...	k	300	330	360	352	372	392	432	369			409			449	
GST06...	k	323	353	383	375	395	415	455	392			432			472	
GST07...	k				404	424	444	484	421			461			501	
GST09...	k								464			504			544	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91							118			145 <sup>2)</sup>	
	g	62			89							116				
...RSO	$k_5$	0			13							14				
	$g_2$	□ 62			Ø 67							Ø 72				
	$g_1$	76			90							105				
	$n_2$	64								78						
	x				21							18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST05: 12DC20 ... 12LC41



**GST□□-1S VCR ... RSO**

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	408		448		488		528											
GST07...	k	437		477		517		557		476		516		576					
GST09...	k	480		520		560		600		519		559		619					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

**GST□□-1S VCR**

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	k <sub>g</sub>
GST04...	100	134	129	41	36	35
GST05...	115	165	156	51	45	43
GST06...	145	191	194	63	56	48
GST07...	180	223	245	82	70	60
GST09...	222	271	304	101	89	74

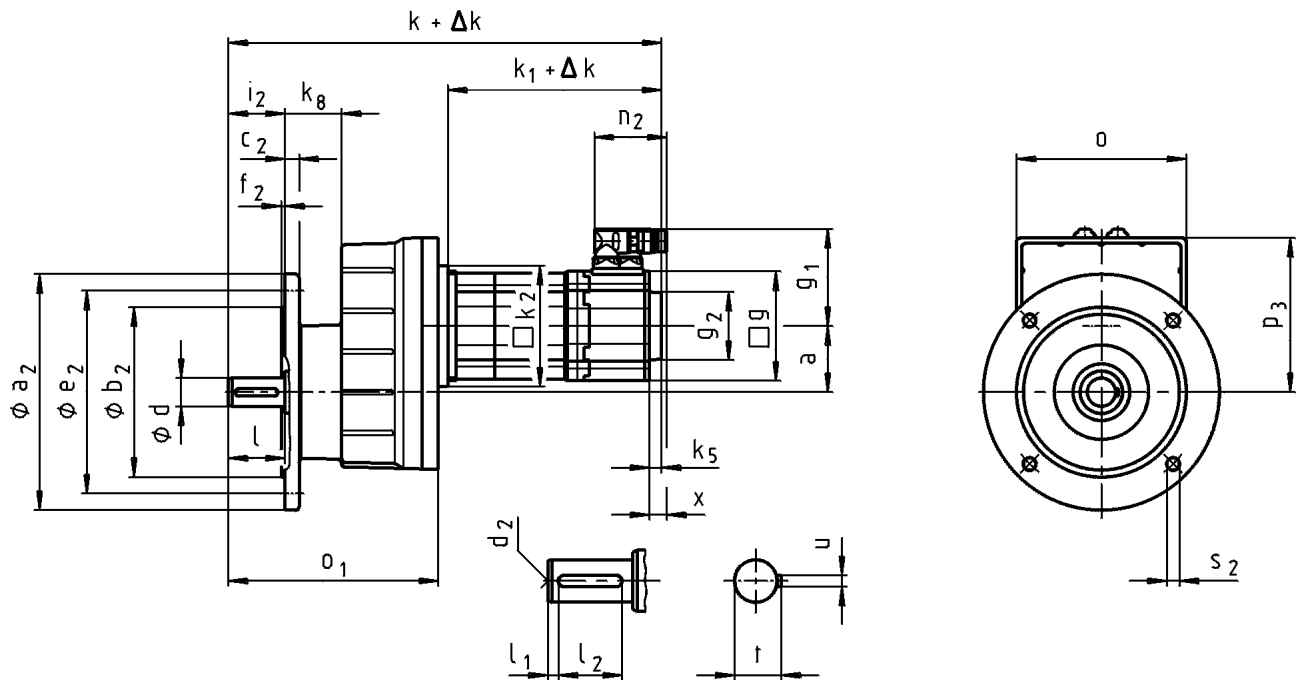
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST04...	16	32	6	20	M5	5	18	72	48	61	8	43	M5x10
GST05...	20	40		28	M6	6	22.5	88	58	74	9	52	M6x12
GST06...	25	50	4	40	M10	8	28	109	70	90	11	64	M8x14
GST07...	30	60	7.5	45			33	140	100	120	13	77	M10x18
GST09...	40	80	8.5	63	M16	12	43	174	120	145	15	100	M12x20

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-1S (MCS)

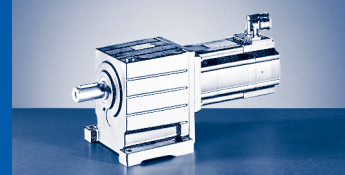


### GST□□-1S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GST04...	k	279	309	339	331	351	371	411									
GST05...	k	300	330	360	352	372	392	432	369			409			449		
GST06...	k	323	353	383	375	395	415	455	392			432			472		
GST07...	k				404	424	444	484	421			461			501		
GST09...	k								464			504			544		
...RSO B0 <sup>1)</sup>	Δ k	0															
...RSO P□ <sup>2)</sup>	Δ k	19								20							
	k <sub>1</sub>	132	162	192	183	203	223	263	188			228			268		
	k <sub>2</sub>	66			91								118	145 <sup>2)</sup>			
	g	62			89								116				
...RSO	k <sub>5</sub>	0			13								14				
	g <sub>2</sub>	□ 62			Ø 67								Ø 72				
	g <sub>1</sub>	76			90								105				
	n <sub>2</sub>	64							78								
	x					21								18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST05: 12DC20 ... 12LC41



### GST□□-1S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	408		448		488		528											
GST07...	k	437		477		517		557		476		516		576					
GST09...	k	480		520		560		600		519		559		619					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

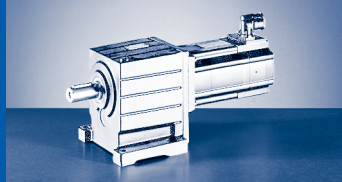
1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-1S VCK

	o	o <sub>1</sub>	p <sub>1</sub>	p <sub>3</sub>	a	k <sub>g</sub>
GST04...	100	134	41	88	36	35
GST05...	115	165	51	105	45	43
GST06...	145	191	63	131	56	48
GST07...	180	223	82	164	70	60
GST09...	222	271	101	204	89	74

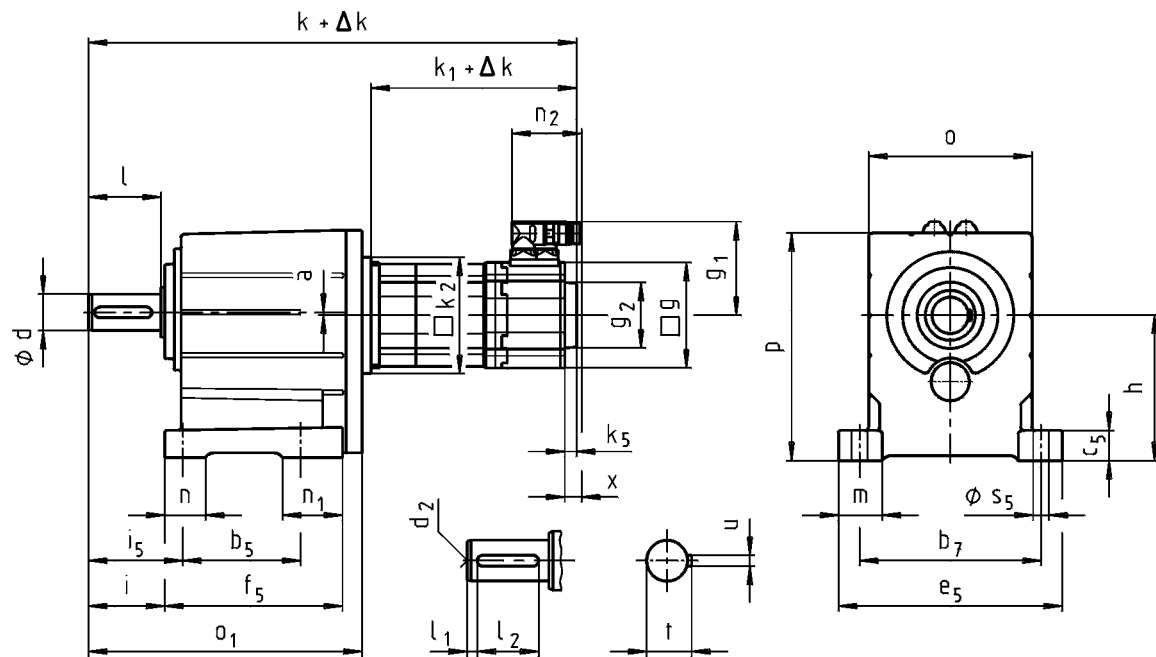
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>	
									j7					4x90°	
GST04...	16	32	6	20	M5	5	18	120	80	10	100	3	32	7	
								140	95					115	9
								160	110					130	3.5
GST05...	20	40	6	28	M6	6	22.5	120	80	10	100	3	40	7	
								140	95					115	9
								160	110					130	11
GST06...	25	50	4	40	M10	8	28	160	110	12	130	3.5	50	9	
								200	130					165	11
								200	130					14	165
GST07...	30	60	7.5	45	M10	8	33	250	180	15	215	4	60	13.5	
								300	230					16	265
GST09...	40	80	8.5	63	M16	12	43	250	180	16	215	4	80	13.5	
								300	230					18	265

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-2S (MCS)



### GST□□-2S VBR ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GST03...	k	279 <sup>2)</sup>	309 <sup>2)</sup>	339 <sup>2)</sup>												
	k	291 <sup>3)</sup>	321 <sup>3)</sup>	351 <sup>3)</sup>												
GST04...	k	319	349	379	371	391	411	451								
GST05...	k	349	379	409	401	421	441	481	418		458			498		
GST06...	k	375	405	435	427	447	467	507	444		484			524		
GST07...	k				483	503	523	563	500		540			580		
GST09...	k								563		603			643		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19			20											
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91							118				
	g	62			89							116				
...RSO	$k_5$	0			13							14				
	$g_2$	□ 62			Ø 67							Ø 72				
	$g_1$	76			90							105				
	$n_2$	64								78						
	x					21							18			

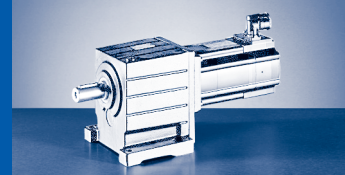
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> d = 14

<sup>3)</sup> d = 20

<sup>4)</sup> GST05: 12DC20 ... 12LC41





### GST□□-2S VBR ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	460		500		540		580											
GST07...	k	516		556		596		636		555		595		655					
GST09...	k	579		619		659		699		618		658		718					
GST11...	k	636		676		716		756		675		715		775					
GST14...	k									765		805		865					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-2S VBR

	o	o <sub>1</sub>	p	h	a
GST03...	90	127 <sup>2)</sup> 139 <sup>3)</sup>	101	65	2
GST04...	100	174	132	80	0
GST05...	115	214	159	100	1
GST06...	145	243	198	125	2
GST07...	180	302	251	160	3
GST09...	222	370	311	200	4
GST11...	270	433	385	250	
GST14...	328	533	479	315	6

<sup>2)</sup> d = 14

<sup>3)</sup> d = 20

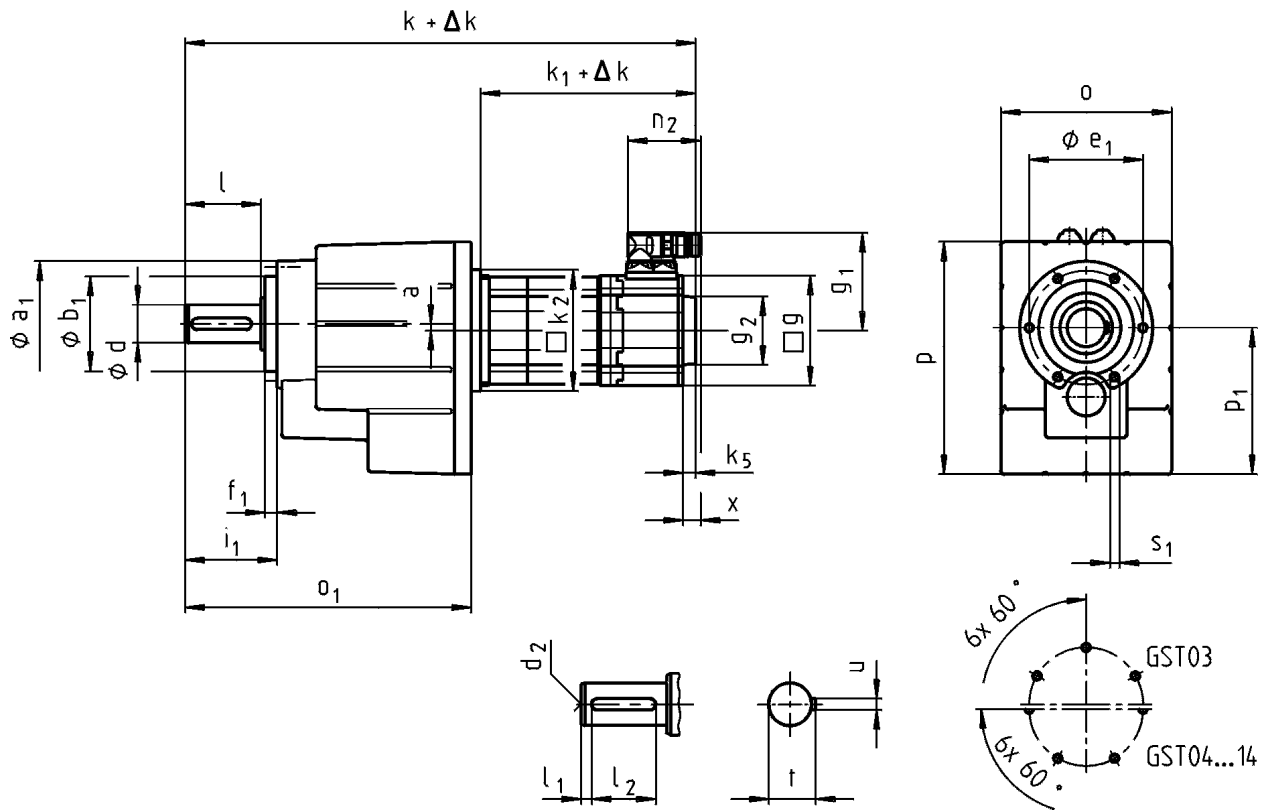
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST03...	14	28	4	20	M5	5	16	60	91	11	105	84	34	40	20	-	-	6.6
													46	52				
GST04...	20	40	5	28	M6	6	22.5	76	105	18	129	112	43	53	25	20	36	9
GST05...	25	50	4	40	M10	8	28	90	125	23	155	139	53	66	33	26	49	11
GST06...	30	60	6	45				33	106	160	28	196	157	64	79	38	35	52
GST07...	40	80	7	63	M16	12	43	130	200	34	247	196	84	104	49	45	66	18
GST09...	50	100	8	80				14	53.5	165	245	44	298	239	105	127.5	54	
GST11...	60	120		100	M20	18	64	200	300	54	368	280	125	155	69	65	80	22
GST14...	80	160	15	125				22	85	250	380	65	460	340	165	200	85	85

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-2S (MCS)



### GST□□-2S VCR ... RSO

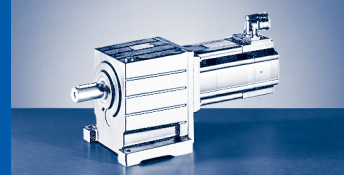
		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GST03...	k	279 <sup>2)</sup>	309 <sup>2)</sup>	339 <sup>2)</sup>												
	k	291 <sup>3)</sup>	321 <sup>3)</sup>	351 <sup>3)</sup>												
GST04...	k	319	349	379	371	391	411	451								
GST05...	k	349	379	409	401	421	441	481	418			458			498	
GST06...	k	375	405	435	427	447	467	507	444			484			524	
GST07...	k				483	503	523	563	500			540			580	
GST09...	k								563			603			643	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91								118	145 <sup>4)</sup>		
	g	62			89								116			
	$k_5$	0			13								14			
	$g_2$	□ 62			Ø 67								Ø 72			
	$g_1$	76			90								105			
	$n_2$	64							78							
x					21								18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> d = 14

<sup>3)</sup> d = 20

<sup>4)</sup> GST05: 12DC20 ... 12LC41



### GST□□-2S VCR ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	460		500		540		580											
GST07...	k	516		556		596		636		555		595		655					
GST09...	k	579		619		659		699		618		658		718					
GST11...	k	636		676		716		756		675		715		775					
GST14...	k									765		805		865					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-2S VCR

	o	o <sub>1</sub>	p	p <sub>1</sub>	a
GST03...	90	127 <sup>2)</sup> 139 <sup>3)</sup>	100	64	2
GST04...	100	174	129	77	0
GST05...	115	214	156	98	1
GST06...	145	243	194	121	2
GST07...	180	302	245	155	3
GST09...	222	370	304	194	4
GST11...	270	433	378	243	
GST14...	328	533	470	306	6

<sup>2)</sup> d = 14

<sup>3)</sup> d = 20

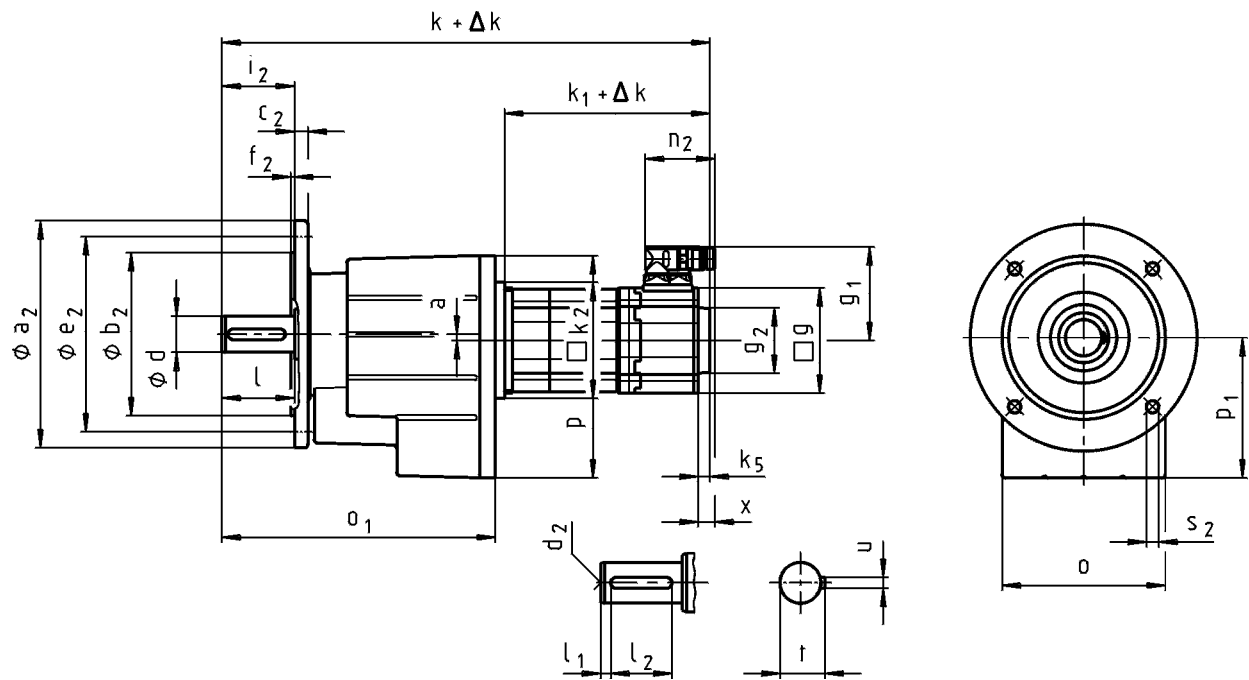
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST03...	14	28	4	20	M5	5	16	71	48	61	8	39	M5x10
GST04...	20	40	5	28	M6	6	22.5	72				51	
GST05...	25	50	4	40	M10	8	28	88	58	74	9	62	M6x12
GST06...	30	60	6	45			33	109	70	90	10	74	M8x14
GST07...	40	80	7	63	M16	12	43	140	100	120	13	97	M10x18
GST09...	50	100	8	80			14	53.5	174	120	145	15	120
GST11...	60	120		100	M20	18	64	215	150	185	18	143	M16x26
GST14...	80	160	15	125				22	85	265	195	230	22

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-2S (MCS)



### GST□□-2S VCK ... RSO

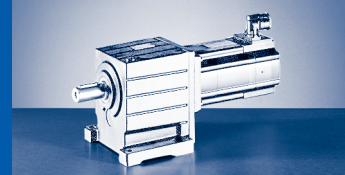
		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GST03...	k	279 <sup>2)</sup>	309 <sup>2)</sup>	339 <sup>2)</sup>													
	k	291 <sup>3)</sup>	321 <sup>3)</sup>	351 <sup>3)</sup>													
GST04...	k	319	349	379	371	391	411	451									
GST05...	k	349	379	409	401	421	441	481	418			458			498		
GST06...	k	375	405	435	427	447	467	507	444			484			524		
GST07...	k				483	503	523	563	500			540			580		
GST09...	k								563			603			643		
...RSO B0 <sup>1)</sup>	Δ k	0															
...RSO P□ <sup>1)</sup>	Δ k	19								20							
	k <sub>1</sub>	132	162	192	183	203	223	263	188			228			268		
	k <sub>2</sub>	66			91				118				145 <sup>4)</sup>				
	g	62			89				116								
...RSO	k <sub>5</sub>	0			13				14								
	g <sub>2</sub>	□ 62			Ø 67				Ø 72								
	g <sub>1</sub>	76			90				105								
	n <sub>2</sub>	64							78								
	x					21								18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> d = 14

<sup>3)</sup> d = 20

<sup>4)</sup> GST05: 12DC20 ... 12LC41



### GST□□-2S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST06...	k	460		500		540		580											
GST07...	k	516		556		596		636		555		595		655					
GST09...	k	579		619		659		699		618		658		718					
GST11...	k	636		676		716		756		675		715		775					
GST14...	k									765		805		865					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-2S VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t
GST03...	90	127 <sup>2)</sup> 139 <sup>3)</sup>	100	64	2	14	28	4	20	M5	5	16
GST04...	100	174	129	77	0	20	40	5	28	M6	6	22.5
GST05...	115	214	156	98	1	25	50	4	40	M10	8	28
GST06...	145	243	194	121	2	30	60	6	45			33
GST07...	180	302	245	155	3	40	80	7	63	M16	12	43
GST09...	222	370	304	194	4	50	100	8	80		14	53.5
GST11...	270	433	378	243		60	120	100	M20	18	64	
GST14...	328	533	470	306	6	80	160	15		125	22	85

	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>		a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
		j7					4x90°			j7					4x90°
GST03...	120	80	10	100	3	28 <sup>2)</sup> 40 <sup>3)</sup>	7	GST06...	160	110	12	130	3.5	60	9
	140	95		115			9		200	130		165			11
	160	110		130	3.5	7	250		180	15	215	4	100	13.5	
GST04...	120	80	10	100	3	40	7	GST07...	300	230	18	265	4	120	14
	140	95		115			9		350	250		20			300
	160	110		130	3.5	7	400		300	24	350	5	160	18	
GST05...	120	80	12	100	3	50	7	GST09...	350	250	22	300	5	160	18
	140	95		115			9		400	300		24			350
	160	110		130	3.5	7	400		300	24	350	5	160	18	
	200	130		165	3.5	11	400		300	24	350	5	160	18	

d ≤ 50 mm: k6; d > 50 mm: m6

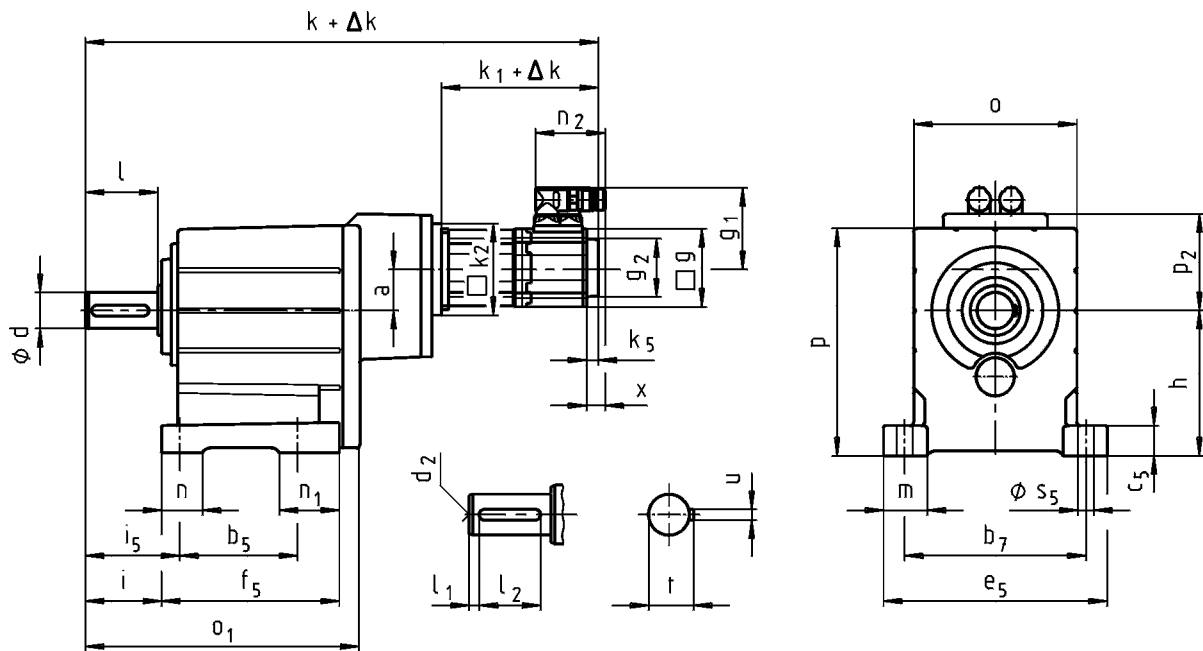
<sup>2)</sup> d = 14

<sup>3)</sup> d = 20



# GST [mm]

## GST□□-3S (MCS)

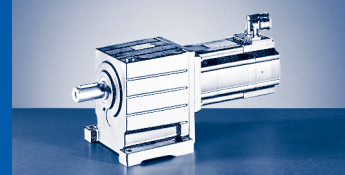


### GST□□-3S VBR ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GST05...	k	425	455	485	478	498	518	558								
GST06...	k	468	498	528	521	541	561	601								
GST07...	k	535	565	595	588	608	628	668	605		645			685		
GST09...	k	616	646	676	669	689	709	749	686		726			766		
GST11...	k				745	765	785	825	762		802			842		
GST14...	k								886		926			966		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91				118				145 <sup>2)</sup>			
	g	62			89				116							
	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
x					21				18							

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST07: 12DC20 ... 12LC41



### GST□□-3S VBR ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST09...	k	701		741		781		821											
GST11...	k	777		817		857		897		816		856		916					
GST14...	k	901		941		981		1021		940		980		1040					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

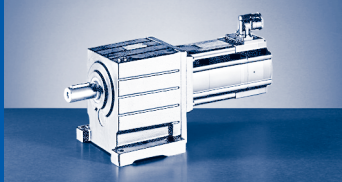
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-3S VBR

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	a
GST05...	115	208	159	87	100	35
GST06...	145	240	198		125	34
GST07...	180	302	251	103	160	42
GST09...	222	370	311	129	200	52
GST11...	270	433	385	162	250	66
GST14...	328	533	479	200	315	83

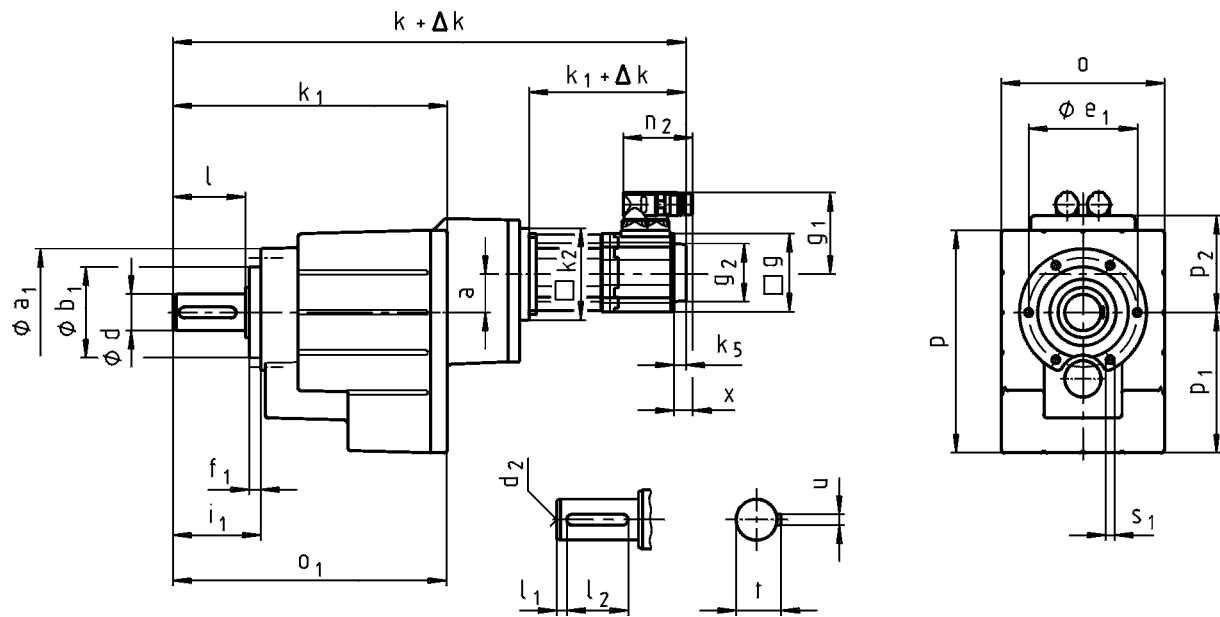
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST05...	25	50	4	40	M10	8	28	90	125	23	155	139	53	66	33	26	49	11
GST06...	30	60	6	45			33	106	160	28	196	157	64	79	38	35	52	13.5
GST07...	40	80	7	63	M16	12	43	130	200	34	247	196	84	104	49	45	66	18
GST09...	50	100	8	80			14	53.5	165	245	44	298	239	105	127.5	54	48	
GST11...	60	120		100	M20	18	64	200	300	54	368	280	125	155	69	65	80	22
GST14...	80	160	15	125			22	85	250	380	65	460	340	165	200	85	85	91

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-3S (MCS)



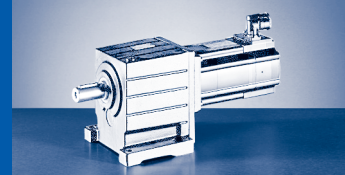
### GST□□-3S VCR ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST05...	k	425	455	485	478	498	518	558							
GST06...	k	468	498	528	521	541	561	601							
GST07...	k	535	565	595	588	608	628	668	605		645			685	
GST09...	k	616	646	676	669	689	709	749	686		726			766	
GST11...	k				745	765	785	825	762		802			842	
GST14...	k								886		926			966	
...RSO B0 <sup>1)</sup>	$\Delta k$	0													
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20									
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268	
	$k_2$	66			91				118				145 <sup>2)</sup>		
	g	62			89				116						
	$k_5$	0			13				14						
	$g_2$	□ 62			Ø 67				Ø 72						
	$g_1$	76			90				105						
	$n_2$	64							78						
	x				21				18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST07: 12DC20 ... 12LC41





### GST□□-3S VCR ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST09...	k	701		741		781		821											
GST11...	k	777		817		857		897		816		856		916					
GST14...	k	901		941		981		1021		940		980		1040					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GST□□-3S VCR

	o	o <sub>1</sub>	p	p <sub>1</sub>	p <sub>2</sub>	a
GST05...	115	208	156	98	87	35
GST06...	145	240	194	121		34
GST07...	180	302	245	155	103	42
GST09...	222	370	304	194	129	52
GST11...	270	433	378	243	162	66
GST14...	328	533	470	306	200	83

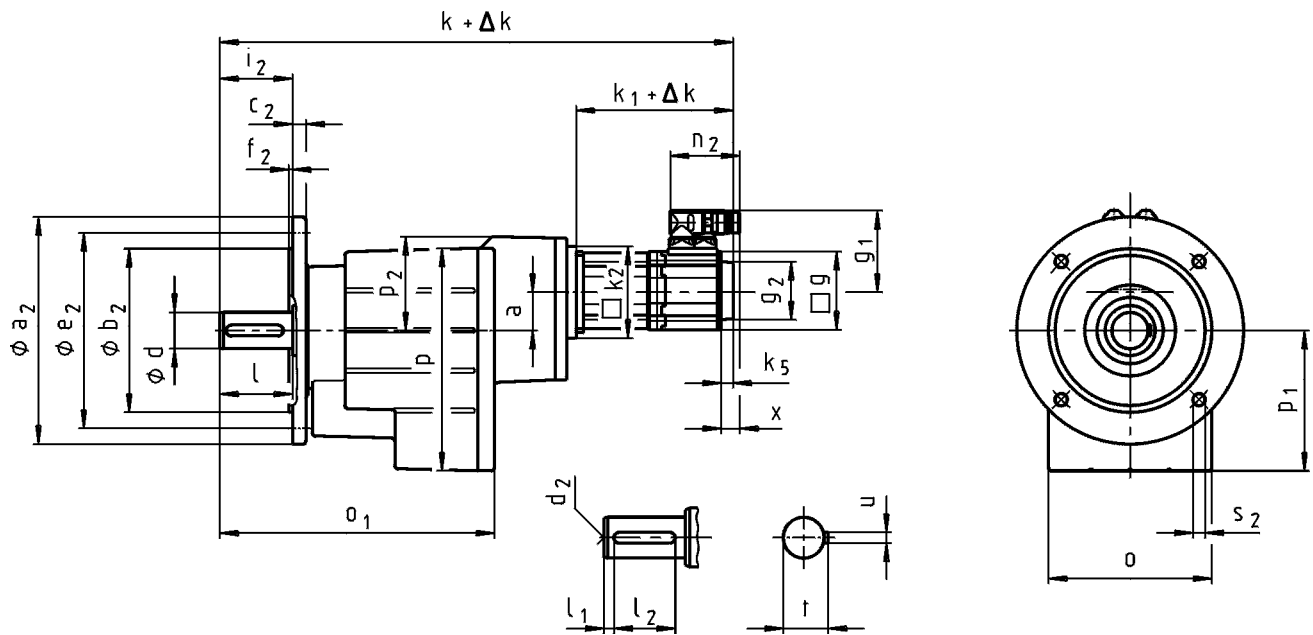
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST05...	25	50	4	40	M10	8	28	88	58	74	9	62	M6x12
GST06...	30	60	6	45			33	109	70	90	10	74	M8x14
GST07...	40	80	7	63	M16	12	43	140	100	120	13	97	M10x18
GST09...	50	100	8	80			53.5	174	120	145	15	120	M12x20
GST11...	60	120		100	M20	18	64	215	150	185	18	143	M16x26
GST14...	80	160	125	22			85	265	195	230	22	187	M20x34

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-3S (MCS)

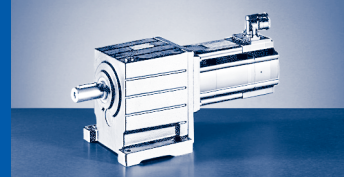


### GST□□-3S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GST05...	k	425	455	485	478	498	518	558							
GST06...	k	468	498	528	521	541	561	601							
GST07...	k	535	565	595	588	608	628	668	605			645		685	
GST09...	k	616	646	676	669	689	709	749	686			726		766	
GST11...	k				745	765	785	825	762			802		842	
GST14...	k								886			926		966	
...RSO B0 <sup>1)</sup>	Δ k	0													
...RSO P□ <sup>2)</sup>	Δ k	19			20										
	k <sub>1</sub>	132	162	192	183	203	223	263	188			228		268	
	k <sub>2</sub>	66			91							118		145 <sup>2)</sup>	
	g	62			89							116			
...RSO	k <sub>5</sub>	0			13							14			
	g <sub>2</sub>	□ 62			Ø 67							Ø 72			
	g <sub>1</sub>	76			90							105			
	n <sub>2</sub>	64								78					
	x				21							18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GST07: 12DC20 ... 12LC41



GST□□-3S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GST09...	k	701		741		781		821											
GST11...	k	777		817		857		897		816		856		916					
GST14...	k	901		941		981		1021		940		980		1040					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

GST□□-3S VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	p <sub>2</sub>	a
GST05...	115	208	156	98	87	35
GST06...	145	240	194	121		34
GST07...	180	302	245	155	103	42
GST09...	222	370	304	194	129	52
GST11...	270	433	378	243	162	66
GST14...	328	533	470	306	200	83

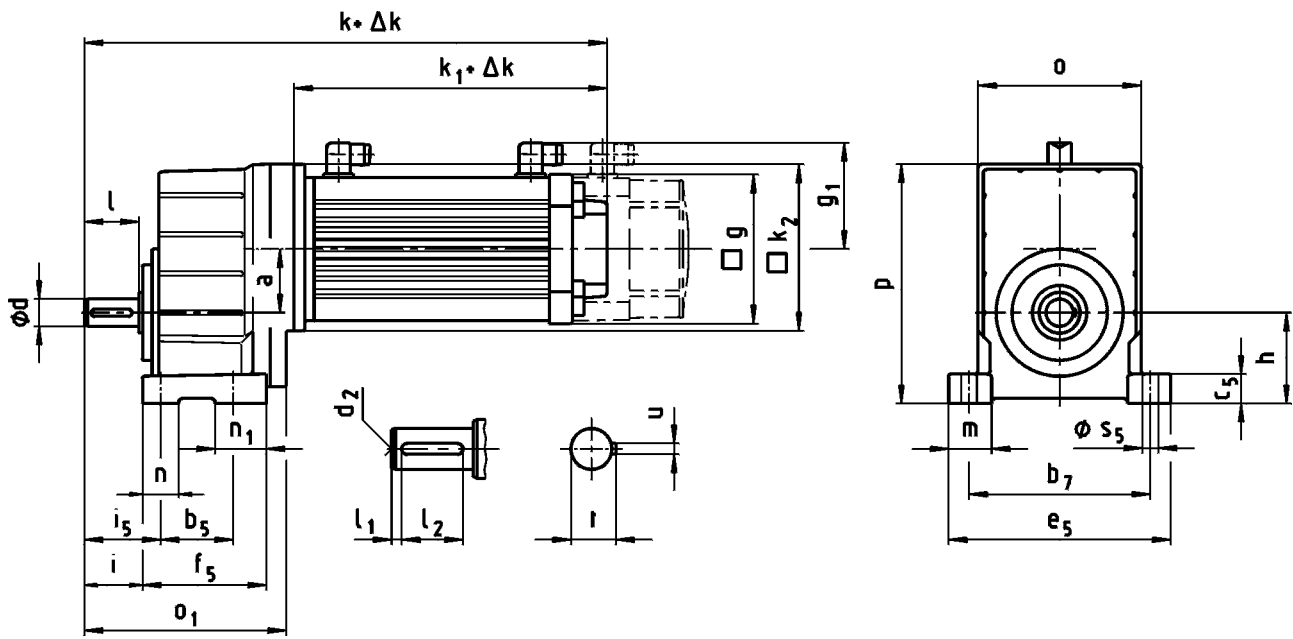
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					4x90°
GST05...	25	50	4	40	M10	8	28	120	80	10	100	3	50	7
								140	95		115			9
								160	110		130			11
								200	130		165			11
GST06...	30	60	6	45	M16	12	33	160	110	12	130	3.5	60	9
								200	130		165			11
GST07...	40	80	7	63	M16	14	43	250	180	15	215	4	80	13.5
								300	230		18			
GST09...	50	100	8	80	M20	18	53.5	350	250	20	300	5	100	14
								400	300		22			
GST11...	60	120	15	125	M20	22	85	400	300	24	350	5	120	18
								400	300		24			

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-1A (MCA)



### GST□□-1A VBR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	407	415	483						
GST05...	k	428	436	504	486		548			
GST06...	k	451	459	527	509		571		548	
GST07...	k	480	488	556	538		600		577	
GST09...	k				581		643		620	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GST□□-1A VBR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GST06...	k	637											
GST07...	k	666		646		743		724		820			
GST09...	k	709		689		786		767		863			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GST□□-1A VBR

	o	o <sub>1</sub>	p	h	a
GST04...	100	134	138	50	36
GST05...	115	165	168	63	45
GST06...	145	191	211	80	56
GST07...	180	223	264	100	70
GST09...	222	271	329	125	89

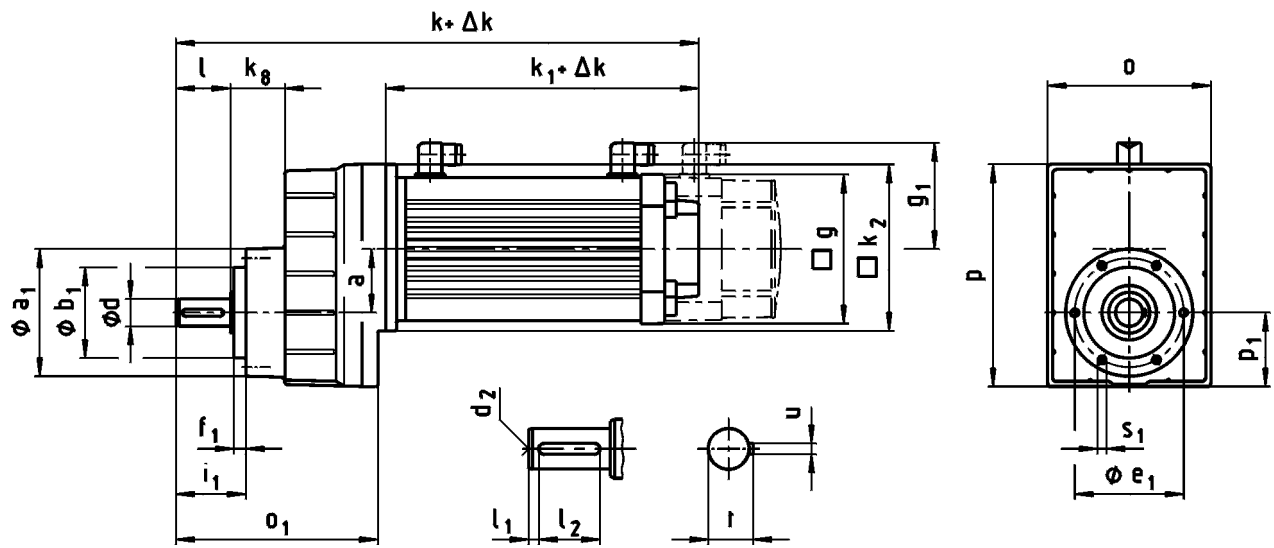
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST04...	16	32	6	20	M5	5	18	55	105	17	128	80	35	45	24	20	25	9
GST05...	20	40		28	M6	6	22.5	70	125	22	154	99	43	56	32	26	29	11
GST06...	25	50	4	40	M10	8	28	72	160	27	194	115	53	68	37	30	43	13.5
GST07...	30	60	7.5	45			33	80	200	35	245	137	64	84	48	40	57	18
GST09...	40	80	8.5	63			M16	12	43	105	245	43	296	161	84	107	51	

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-1A (MCA)



### GST□□-1A VCR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	407	415	483						
GST05...	k	428	436	504	486		548			
GST06...	k	451	459	527	509		571		548	
GST07...	k	480	488	556	538		600		577	
GST09...	k				581		643		620	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GST□□-1A VCR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	k	637				743		724		820	
GST07...	k	666		646		743		724		820	
GST09...	k	709		689		786		767		863	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222		265			
	g	165				192		214			
	g <sub>1</sub>	118				161		172			

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

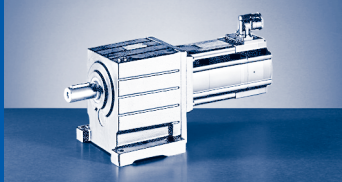
### GST□□-1A VCR

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	k <sub>g</sub>
GST04...	100	134	129	41	36	35
GST05...	115	165	156	51	45	43
GST06...	145	191	194	63	56	48
GST07...	180	223	245	82	70	60
GST09...	222	271	304	101	89	74

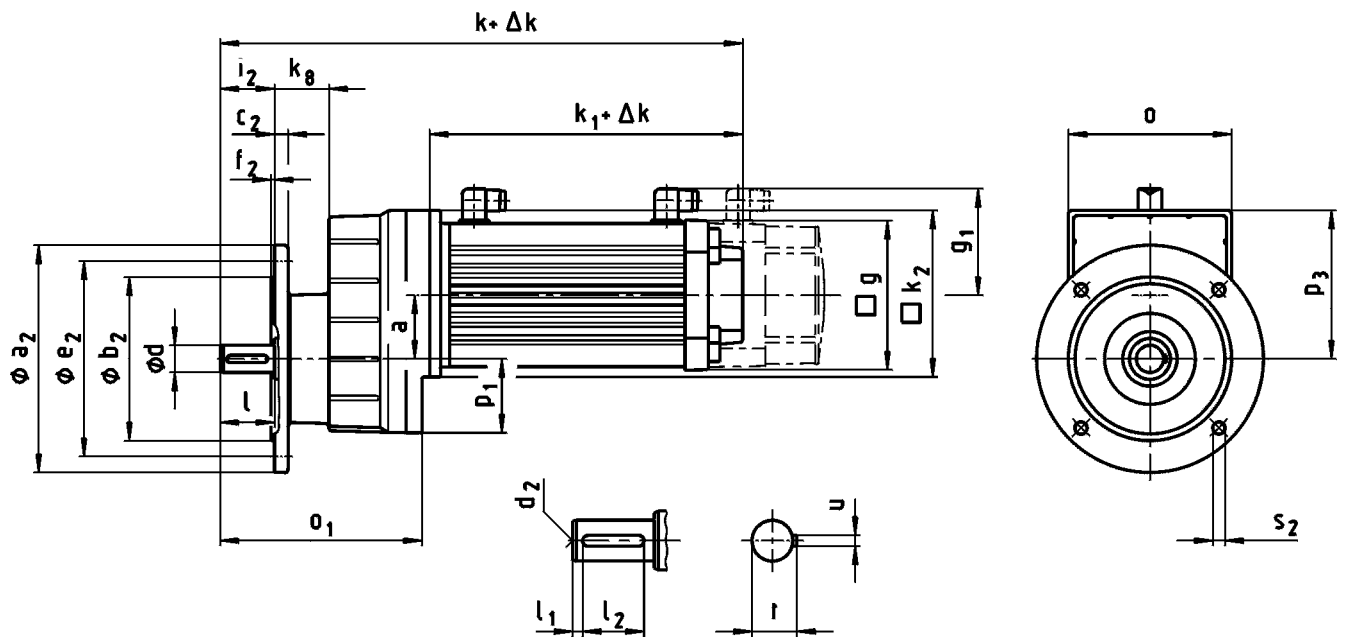
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST04...	16	32	6	20	M5	5	18	72	48	61	8	43	M5x10
GST05...	20	40		28	M6	6	22.5	88	58	74	9	52	M6x12
GST06...	25	50	4	40	M10	8	28	109	70	90	11	64	M8x14
GST07...	30	60	7.5	45			33	140	100	120	13	77	M10x18
GST09...	40	80	8.5	63	M16	12	43	174	120	145	15	100	M12x20

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-1A (MCA)



### GST□□-1A VCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	407	415	483						
GST05...	k	428	436	504	486		548			
GST06...	k	451	459	527	509		571		548	
GST07...	k	480	488	556	538		600		577	
GST09...	k				581		643		620	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





GST□□-1A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	k	637									
GST07...	k	666		646		743		724		820	
GST09...	k	709		689		786		767		863	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180		222				265			
	g	165		192				214			
	g <sub>1</sub>	118		161				172			

1) → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-1A VCK

	o	o <sub>1</sub>	p <sub>1</sub>	p <sub>3</sub>	a	k <sub>8</sub>
GST04...	100	134	41	88	36	35
GST05...	115	165	51	105	45	43
GST06...	145	191	63	131	56	48
GST07...	180	223	82	164	70	60
GST09...	222	271	101	204	89	74

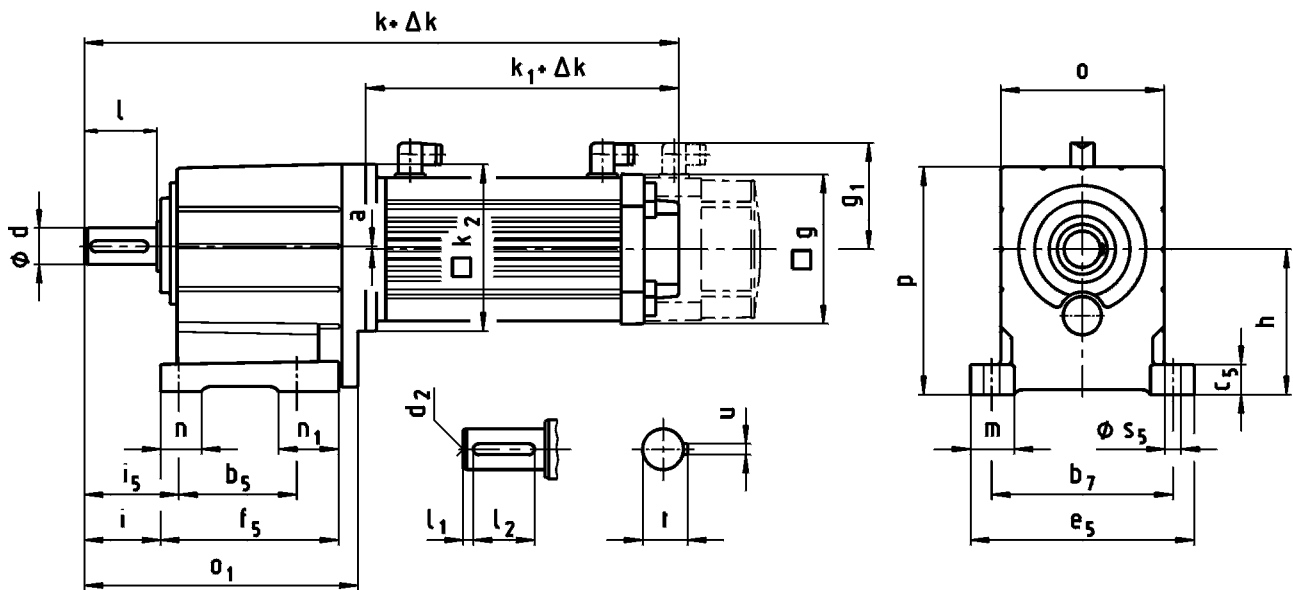
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					4x90°
GST04...	16	32	6	20	M5	5	18	120	80	10	100	3	32	7
140								95	115		9			
160								110	130		3.5			9
GST05...	20	40	6	28	M6	6	22.5	120	80	12	100	3	40	7
140								95	115		9			
160								110	130		11			
200								130	165		11			
GST06...	25	50	4	40	M10	8	28	160	110	14	130	3.5	50	9
200								130	165		11			
GST07...	30	60	7.5	45	M10	8	33	250	180	15	215	4	60	13.5
GST09...								40	80		8.5			63
										300		230	18	

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

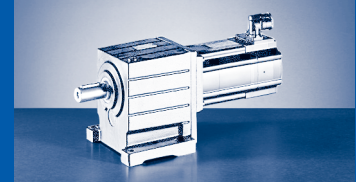
## GST□□-2A (MCA)



### GST□□-2A VBR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	447	455	523						
GST05...	k	477	485	553	535		597			
GST06...	k	503	511	579	561		623		600	
GST07...	k	559	567	635	617		679		656	
GST09...	k				680		742		719	
GST11...	k				737		799		776	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GST□□-2A VBR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GST06...	k	689											
GST07...	k	745		725		822		803		899			
GST09...	k	808		788		885		866		962			
GST11...	k	865		845		942		923		1019			
GST14...	k			935		1032		1013		1109			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-2A VBR

	o		o <sub>1</sub>		p		h		a	
GST04...	100		174		132		80		0	
GST05...	115		214		159		100		1	
GST06...	145		243		198		125		2	
GST07...	180		302		251		160		3	
GST09...	222		370		311		200		4	
GST11...	270		433		385		250		4	
GST14...	328		533		479		315		6	

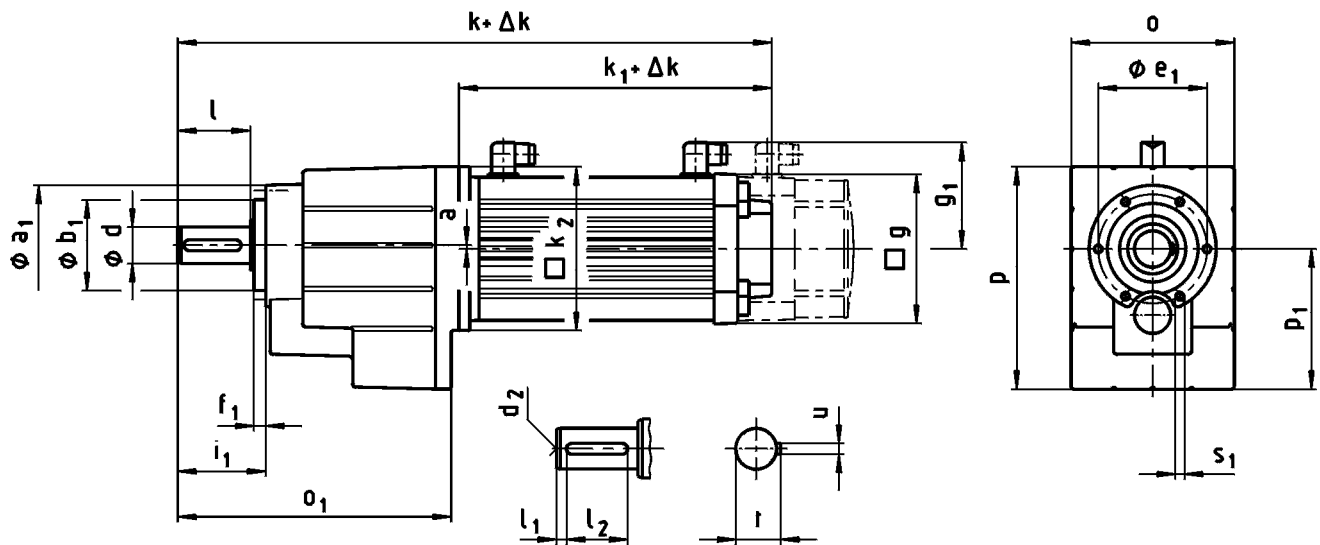
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST04...	20	40	5	28	M6	6	22.5	76	105	18	129	112	43	53	25	20	36	9
GST05...	25	50	4	40	M10	8	28	90	125	23	155	139	53	66	33	26	49	11
GST06...	30	60	6	45			33	106	160	28	196	157	64	79	38	35	52	13.5
GST07...	40	80	7	63	M16	12	43	130	200	34	247	196	84	104	49	45	66	18
GST09...	50	100	8	80			14	53.5	165	245	44	298	239	105	127.5	54	48	
GST11...	60	120		15	100	M20	18	64	200	300	54	368	280	125	155	69	65	80
GST14...	80	160	125		22			85	250	380	65	460	340	165	200	85	85	91

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

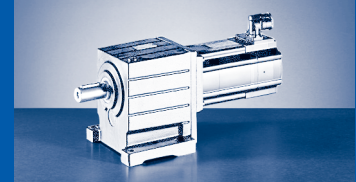
## GST□□-2A (MCA)



### GST□□-2A VCR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	447	455	523						
GST05...	k	477	485	553	535		597			
GST06...	k	503	511	579	561		623		600	
GST07...	k	559	567	635	617		679		656	
GST09...	k				680		742		719	
GST11...	k				737		799		776	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GST□□-2A VCR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	k	689									
GST07...	k	745		725		822		803		899	
GST09...	k	808		788		885		866		962	
GST11...	k	865		845		942		923		1019	
GST14...	k			935		1032		1013		1109	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180		222				265			
	g	165		192				214			
	g <sub>1</sub>	118		161				172			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GST□□-2A VCR

	o	o <sub>1</sub>	p		p <sub>1</sub>		a					
GST04...	100	174	129		77		0					
GST05...	115	214	156		98		1					
GST06...	145	243	194		121		2					
GST07...	180	302	245		155		3					
GST09...	222	370	304		194		4					
GST11...	270	433	378		243		4					
GST14...	328	533	470		306		6					

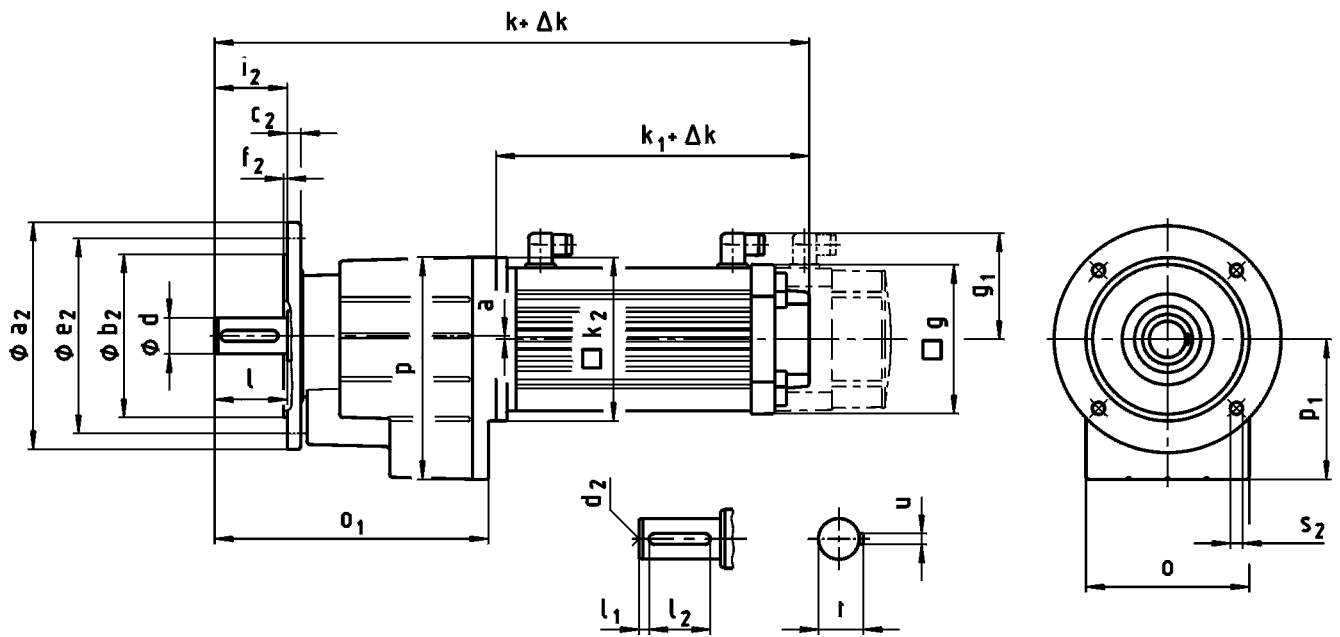
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST04...	20	40	5	28	M6	6	22.5	72	48	61	8	51	M5x10
GST05...	25	50	4	40	M10	8	28	88	58	74	9	62	M6x12
GST06...	30	60	6	45			33	109	70	90	10	74	M8x14
GST07...	40	80	7	63	M16	12	43	140	100	120	13	97	M10x18
GST09...	50	100	8	80			14	53.5	174	120	145	15	120
GST11...	60	120		15	100	M20	18	64	215	150	185	18	143
GST14...	80	160	125		22			85	265	195	230	22	187

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-2A (MCA)



### GST□□-2A VCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST04...	k	447	455	523						
GST05...	k	477	485	553	535		597			
GST06...	k	503	511	579	561		623		600	
GST07...	k	559	567	635	617		679		656	
GST09...	k				680		742		719	
GST11...	k				737		799		776	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>2)</sup>	$\Delta k$	25	35		33			35		
	$k_1$	258	267	335	307		369		346	
	$k_2$	145			180					
	g	102	131		142				165	
	$g_1$	90	102		109				118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GST□□-2A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST06...	k	689									
GST07...	k	745		725		822		803		899	
GST09...	k	808		788		885		866		962	
GST11...	k	865		845		942		923		1019	
GST14...	k			935		1032		1013		1109	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

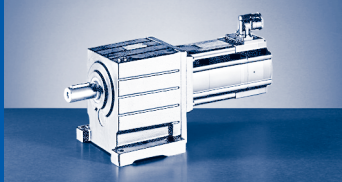
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-2A VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t
GST04...	100	174	129	77	0	20	40	5	28	M6	6	22.5
GST05...	115	214	156	98	1	25	50	4	40	M10	8	28
GST06...	145	243	194	121	2	30	60	6	45			33
GST07...	180	302	245	155	3	40	80	7	63	M16	12	43
GST09...	222	370	304	194	4	50	100	8	80		14	53.5
GST11...	270	433	378	243		60	120		100	M20	18	64
GST14...	328	533	470	306	6	80	160	15	125		22	85

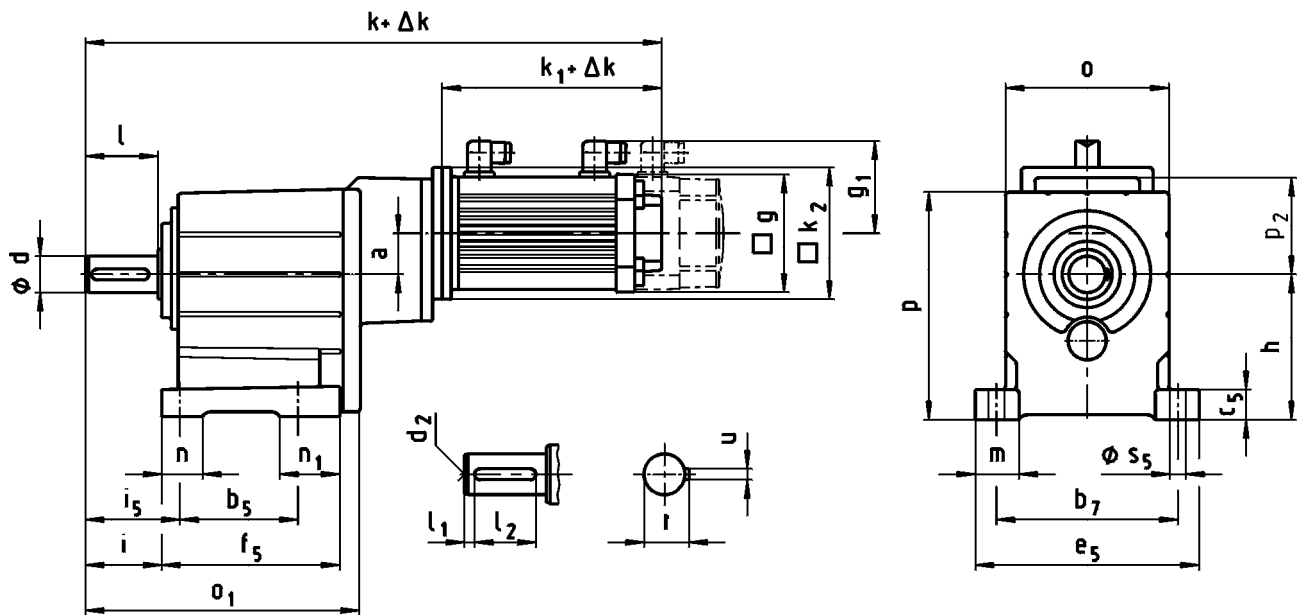
	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>		a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
		j7					4x90°			j7					4x90°
GST04...	120	80	10	100	3	40	7	GST07...	200	130	14	165	3.5	80	11
	140	95		115			9		250	180	15	215			13.5
	160	110		130	3.5		16		100	13.5					
GST05...	120	80	10	100	3	50	7	GST09...	300	230	18	265	4	120	14
	140	95		115			9		350	250	20	300			18
	160	110		130	3.5		22		160	18					
GST06...	160	110	12	130	3.5	60	9	GST11...	400	300	24	350	5	160	18
	200	130		165			11		400	300	24	350			18

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-3A (MCA)



### GST□□-3A VBR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST05...	k	553	562	630						
GST06...	k	596	605	673						
GST07...	k	663	672	740	722		784			
GST09...	k	744	753	821	803		865		842	
GST11...	k	820	829	897	879		941		918	
GST14...	k				1003		1065		1042	
...RSO B0 <sup>1)</sup>	$\Delta k$				0					
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





GST□□-3A VBR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST09...	k	931				1083		1065		1161	
GST11...	k	1007		986		1083		1065		1161	
GST14...	k	1131		1110		1207		1189		1285	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-3A VBR

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	a
GST05...	115	208	159	87	100	35
GST06...	145	240	198		125	34
GST07...	180	302	251	103	160	42
GST09...	222	370	311	129	200	52
GST11...	270	433	385	162	250	66
GST14...	328	533	479	200	315	83

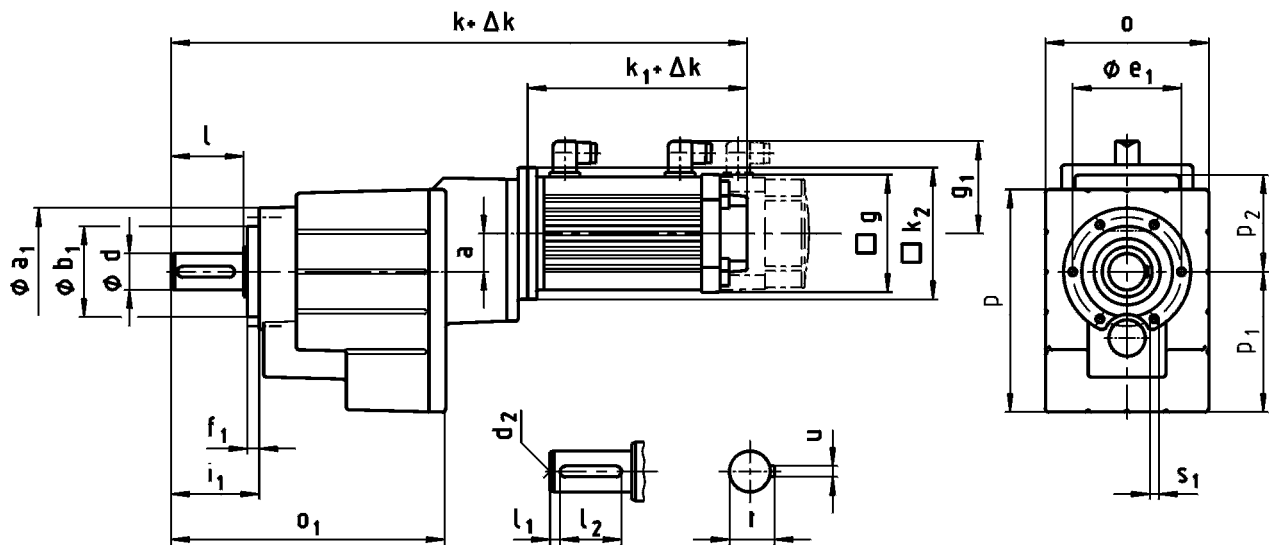
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	i	i <sub>5</sub>	m	n	n <sub>1</sub>	s <sub>5</sub>
GST05...	25	50	4	40	M10	8	28	90	125	23	155	139	53	66	33	26	49	11
GST06...	30	60	6	45			33	106	160	28	196	157	64	79	38	35	52	13.5
GST07...	40	80	7	63	M16	12	43	130	200	34	247	196	84	104	49	45	66	18
GST09...	50	100	8	80			14	53.5	165	245	44	298	239	105	127.5	54	48	
GST11...	60	120		100	M20	18	64	200	300	54	368	280	125	155	69	65	80	22
GST14...	80	160	15	125				22	85	250	380	65	460	340	165	200	85	85

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

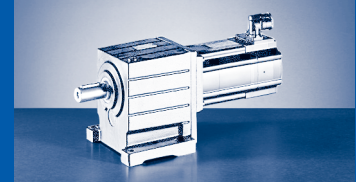
## GST□□-3A (MCA)



### GST□□-3A VCR ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST05...	k	553	562	630						
GST06...	k	596	605	673						
GST07...	k	663	672	740	722		784			
GST09...	k	744	753	821	803		865		842	
GST11...	k	820	829	897	879		941		918	
GST14...	k				1003		1065		1042	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25		35			33		35	
	$k_1$	258	267	335		307		369		346
	$k_2$		145					180		
	g	102		131			142		165	
	g <sub>1</sub>	90		102			109		118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GST□□-3A VCR ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST09...	k	931									
GST11...	k	1007		986		1083		1065		1161	
GST14...	k	1131		1110		1207		1189		1285	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-3A VCR

	o	o <sub>1</sub>	p	p <sub>1</sub>	p <sub>2</sub>	a
GST05...	115	208	156	98	87	35
GST06...	145	240	194	121		34
GST07...	180	302	245	155	103	42
GST09...	222	370	304	194	129	52
GST11...	270	433	378	243	162	66
GST14...	328	533	470	306	200	83

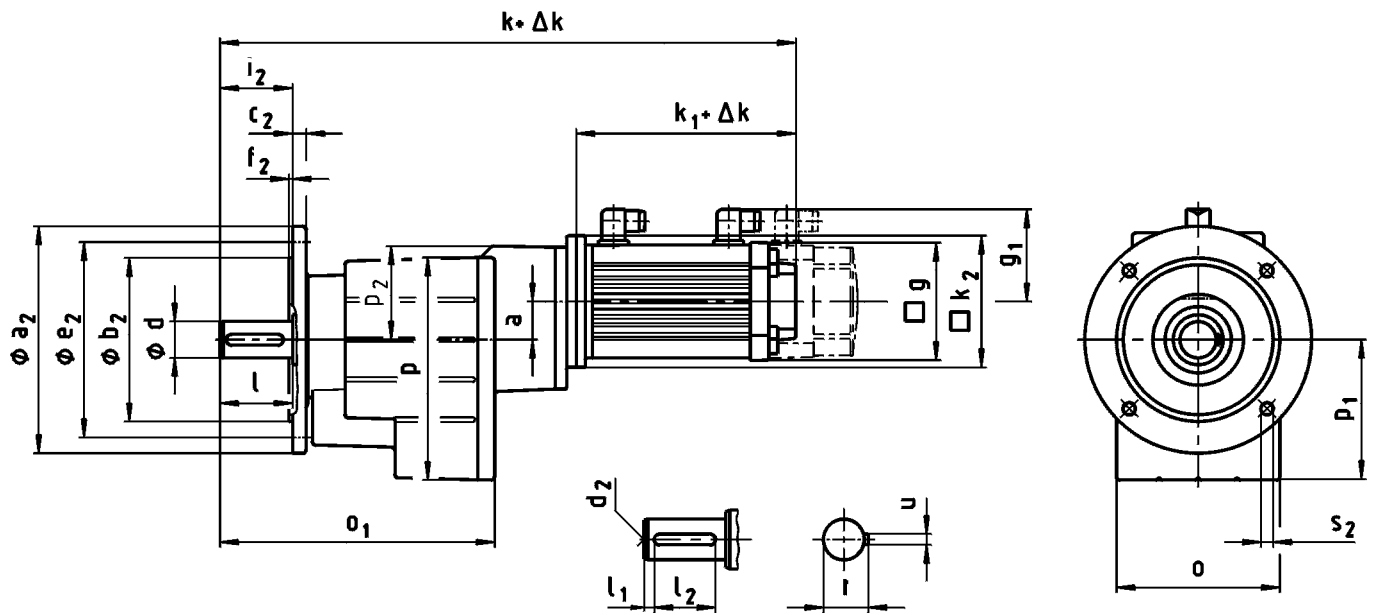
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
									h7				6x60°
GST05...	25	50	4	40	M10	8	28	88	58	74	9	62	M6x12
GST06...	30	60	6	45			33	109	70	90	10	74	M8x14
GST07...	40	80	7	63	M16	12	43	140	100	120	13	97	M10x18
GST09...	50	100	8	80			53.5	174	120	145	15	120	M12x20
GST11...	60	120		100	M20	18	64	215	150	185	18	143	M16x26
GST14...	80	160	15	125			85	265	195	230	22	187	M20x34

d ≤ 50 mm: k6; d > 50 mm: m6



# GST [mm]

## GST□□-3A (MCA)



### GST□□-3A VCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GST05...	k	553	562	630						
GST06...	k	596	605	673						
GST07...	k	663	672	740	722		784			
GST09...	k	744	753	821	803		865		842	
GST11...	k	820	829	897	879		941		918	
GST14...	k				1003		1065		1042	
...RSO B0 <sup>1)</sup>	$\Delta k$				0					
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GST□□-3A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GST09...	k	931				1083		1065		1161	
GST11...	k	1007		986		1083		1065		1161	
GST14...	k	1131		1110		1207		1189		1285	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GST□□-3A VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	p <sub>2</sub>	a
GST05...	115	208	156	98	87	35
GST06...	145	240	194	121		34
GST07...	180	302	245	155	103	42
GST09...	222	370	304	194	129	52
GST11...	270	433	378	243	162	66
GST14...	328	533	470	306	200	83

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GST05...	25	50	4	40	M10	8	28	120	80	10	100	3	50	7
								140	95		115			9
								160	110		130			11
								200	130		165			11
GST06...	30	60	6	45	M16	12	33	160	110	12	130	3.5	60	9
								200	130		165			11
GST07...	40	80	7	63	M16	12	43	250	180	14	215	4	80	13.5
GST09...	50	100	8	80	M20	14	53.5	300	230	18	265	4	100	14
								350	250		20			
GST11...	60	120	15	125	M20	18	64	350	250	22	300	5	120	18
								400	300		24			

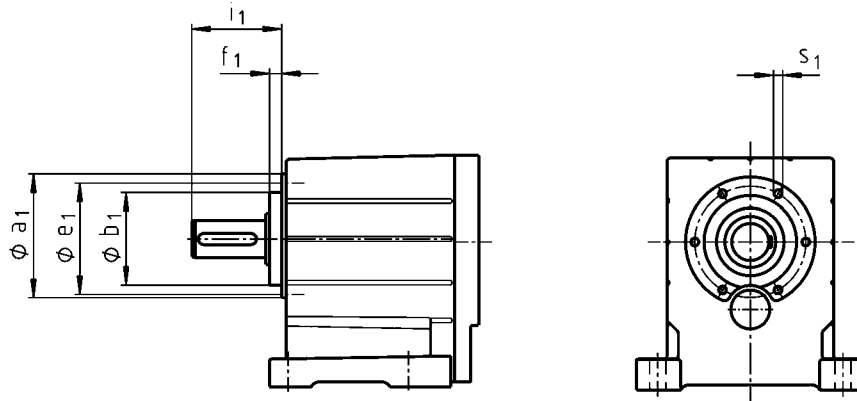
d ≤ 50 mm: k6; d > 50 mm: m6



# GST & [mm]

GST□□-2 / 3

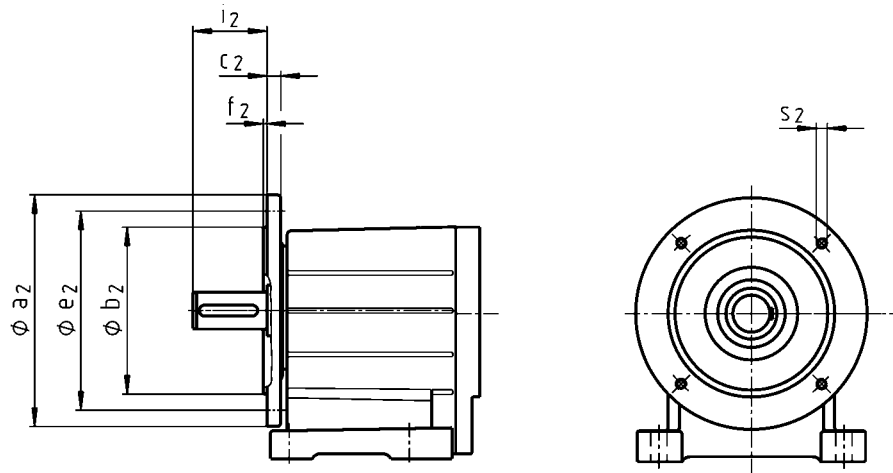
GST□□-2A/S VAR  
 GST□□-3A/S VAR



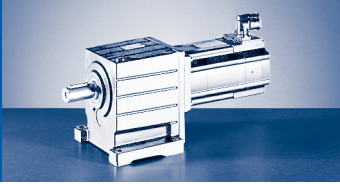
	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
		h7				6x60°
GST04...	72	48	61	8	51	M5x10
GST05...	88	58	74	9	62	M6x12
GST06...	109	70	90	10	74	M8x14
GST07...	140	100	120	13	97	M10x18
GST09...	174	120	145	15	120	M12x20
GST11...	215	150	185	18	143	M16x26
GST14...	265	195	230	22	187	M20x34



GST□□-2A/S VAL  
GST□□-3A/S VAL



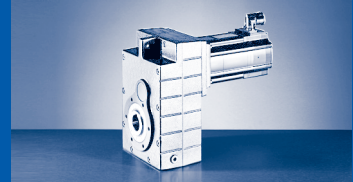
	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>	
		j7					4x90°	
GST04...	120	80	10	100	3	40	M6	
	140	95		115			M8	
GST05...	120	80		100		50	M6	
	140	95		115			M8	
GST06...	160	110	12	130	3.5	60	M10	
	200	130	14	165		80		
GST07...	250	180	15	215	4	100	M12	
	300	230	16			120		
GST09...	350	250	18	265		5	160	M16
	400	300	22	300				
GST11...	350	250	20	300	5	160	M16	
	400	300	24					350



## GST & [mm]

GST□□-2 / 3

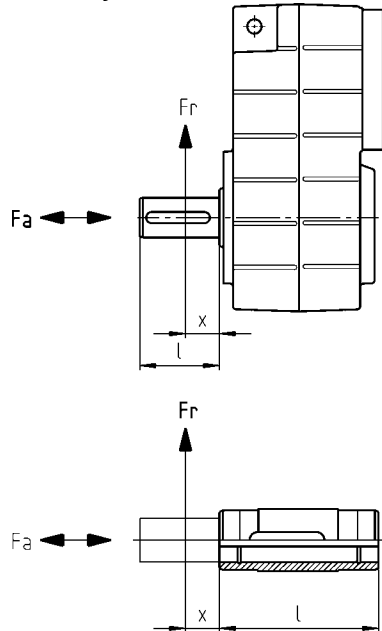




**Permissible radial force**

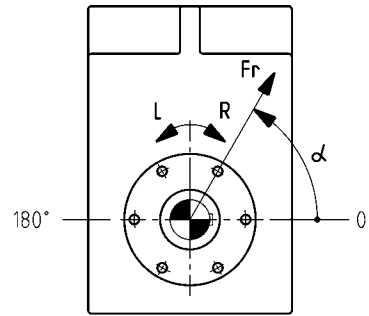
$$Fr_{zul} = \min(f_w \times f_{\alpha} \times Fr_{Tab}; f_w \times Fr_{max})$$

At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office.

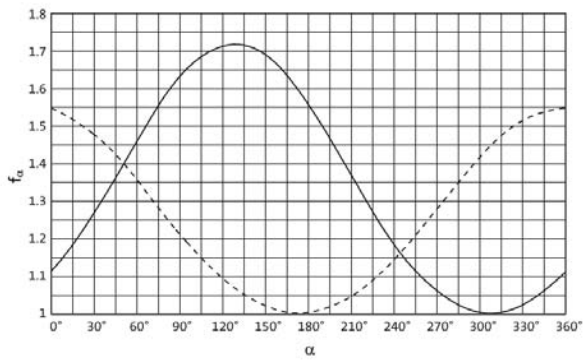


**Permissible axial force**

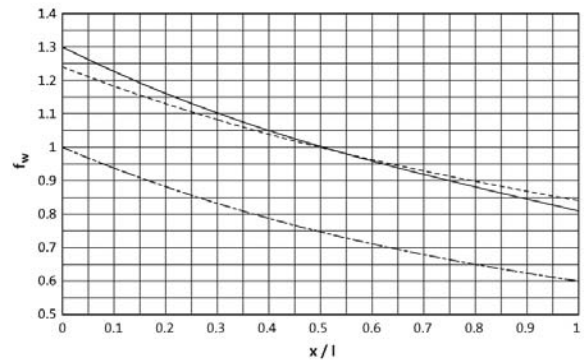
$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$



**Effective direction factor  $f_{\alpha}$  at output shaft**

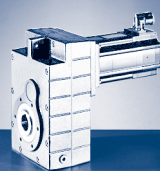


**Additional load factor  $f_w$  at output shaft**



- Direction of rotation R
- - - Direction of rotation L

- Solid shaft (V□R)
- - - Solid shaft with flange (V□K)
- · - Hollow shaft (H□□)



# GFL [N]

Solid shaft without flange (V□R)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3 <sup>1)</sup>		GFL11-2/3 <sup>1)</sup>		GFL14-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	1650	1300	1400	1600	1850	2400	1650	2000	-	-	-	-	-	-
630	2100	1700	1900	2200	2500	3200	2600	2700	-	-	-	-	-	-
400	2300	2200	2400	2800	3200	4000	3200	3400	3800	3100	5500	4700	47000	25000
250	2700	2600	2700	3600	3600	5200	3600	4700	4400	4200	6300	6000	54000	27000
160	3200	3200	3200	4200	3900	6000	3900	6000	5500	5800	7300	7500	62000	29000
100	3600	4200	4000	5900	5100	8500	5100	8500	8000	10000	11200	14000	65000	32000
63	3600	5300	4800	6600	6500	10000	6500	12000	10000	13500	14500	19000	65000	35000
40	3600	5500	5800	6600	8400	10000	8400	14000	12000	17000	17400	25000	65000	35000
25	3600	5500	6200	6600	9000	10000	9000	14000	18000	21000	20500	27000	65000	35000
≤ 16	3600	5500	6200	6600	9000	10000	9000	14000	18000	21000	23000	27000	65000	35000
Fr <sub>max</sub>	3600	-	7000	-	11000	-	11000	-	22000	-	28000	-	65000	-

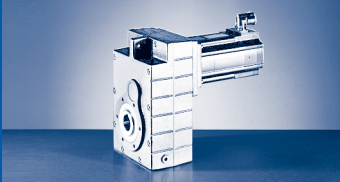
<sup>1)</sup> Reinforced output shaft bearings are available on request for V□R versions.

Solid shaft with flange (V□K)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3		GFL11-2/3		GFL14-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	2300	1300	2900	1800	4000	2500	4000	3600	-	-	-	-	-	-
630	2800	1700	3700	2400	5000	3400	5200	4800	-	-	-	-	-	-
400	3200	2200	4300	3100	6100	4300	6400	6100	7800	6100	12500	6800	18000	6000
250	3700	2600	5100	3900	7000	5500	7400	6500	9000	6500	14500	8500	20000	8000
160	4400	3200	5900	4800	7800	6500	8900	7000	10500	7000	17000	10500	23000	10000
100	4600	4200	6800	6400	9600	8500	10500	9500	14000	9500	21500	17000	27500	13000
63	4600	4400	7000	6600	10000	10000	12000	11500	15000	11500	26000	22000	32000	19000
40	4600	4400	7000	6600	10000	10000	13000	11500	15000	11500	30000	27000	38000	26000
25	4600	4400	7000	6600	10000	10000	14000	11500	15000	11500	30000	27000	43000	35000
≤ 16	4600	4400	7000	6600	10000	10000	14000	11500	15000	11500	30000	27000	43000	35000
Fr <sub>max</sub>	4600	-	7400	-	11000	-	16000	-	16000	-	32000	-	46000	-



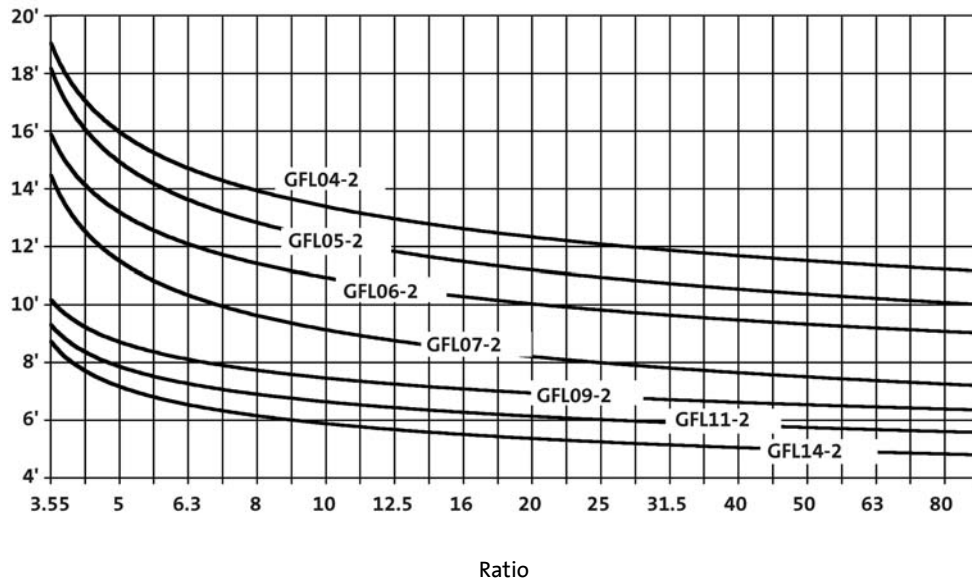
Hollow shaft (H□□)														
Application of force $F_r$ : on hollow shaft end face ( $x = 0$ )														
$F_{a_{Tab}}$ only valid for $F_r = 0$														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3		GFL11-2/3		GFL14-2/3	
$n_2$ [r/min]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]
1000	2100	1300	1800	1600	2400	2400	2200	2000	-	-	-	-	-	-
630	2700	1700	2400	2200	3300	3200	3400	2700	-	-	-	-	-	-
400	2800	2200	3000	2800	4300	4000	4500	3400	5000	3100	7300	4700	8000	4000
250	3200	2600	3400	3600	4700	5200	5100	4700	6000	4200	8700	6000	9000	5000
160	3800	3200	4100	4200	5000	6000	6400	6000	7200	5800	10000	7500	9500	6200
100	4600	4200	5000	5900	6600	8500	7900	8500	10500	10000	14200	14000	11500	7500
63	5500	5300	6000	6600	8500	10000	9300	12000	13000	13500	19000	19000	14000	11000
40	6300	5500	7100	6600	10800	10000	11500	14000	15000	17000	23000	25000	18000	17500
25	7000	5500	8000	6600	12000	10000	15000	14000	22000	21000	27000	27000	30000	31000
≤ 16	7000	5500	8000	6600	12000	10000	16000	14000	24000	21000	30000	27000	45000	35000
$F_{r_{max}}$	7000	-	10000	-	15000	-	20000	-	30000	-	38000	-	56000	-

- ▶ Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).

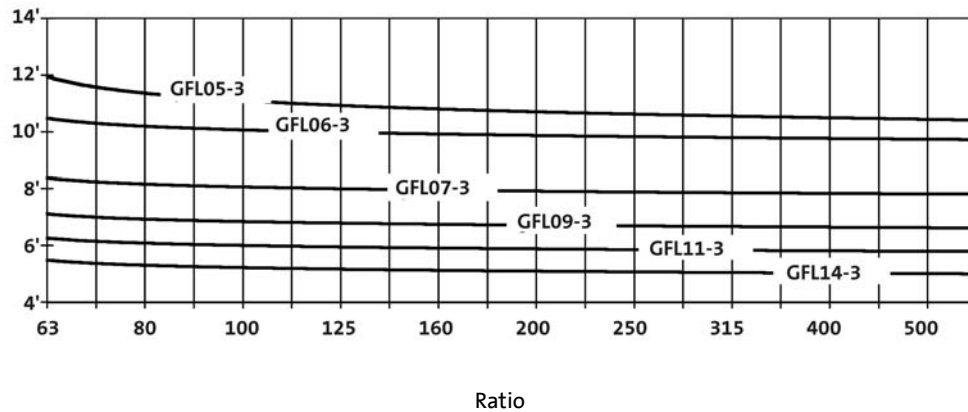


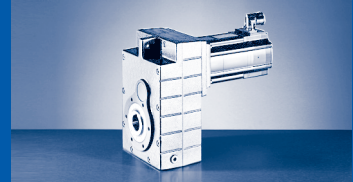
Output backlash in angular minutes

GFL04...14-2



GFL05...14-3





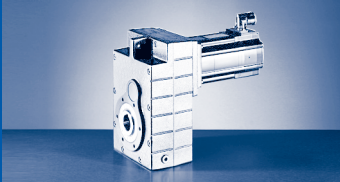
**Position of ventilation, sealing elements and oil control**

GFL05...14-2

Mounting position		
A	B	C
Mounting position		
D	E	F

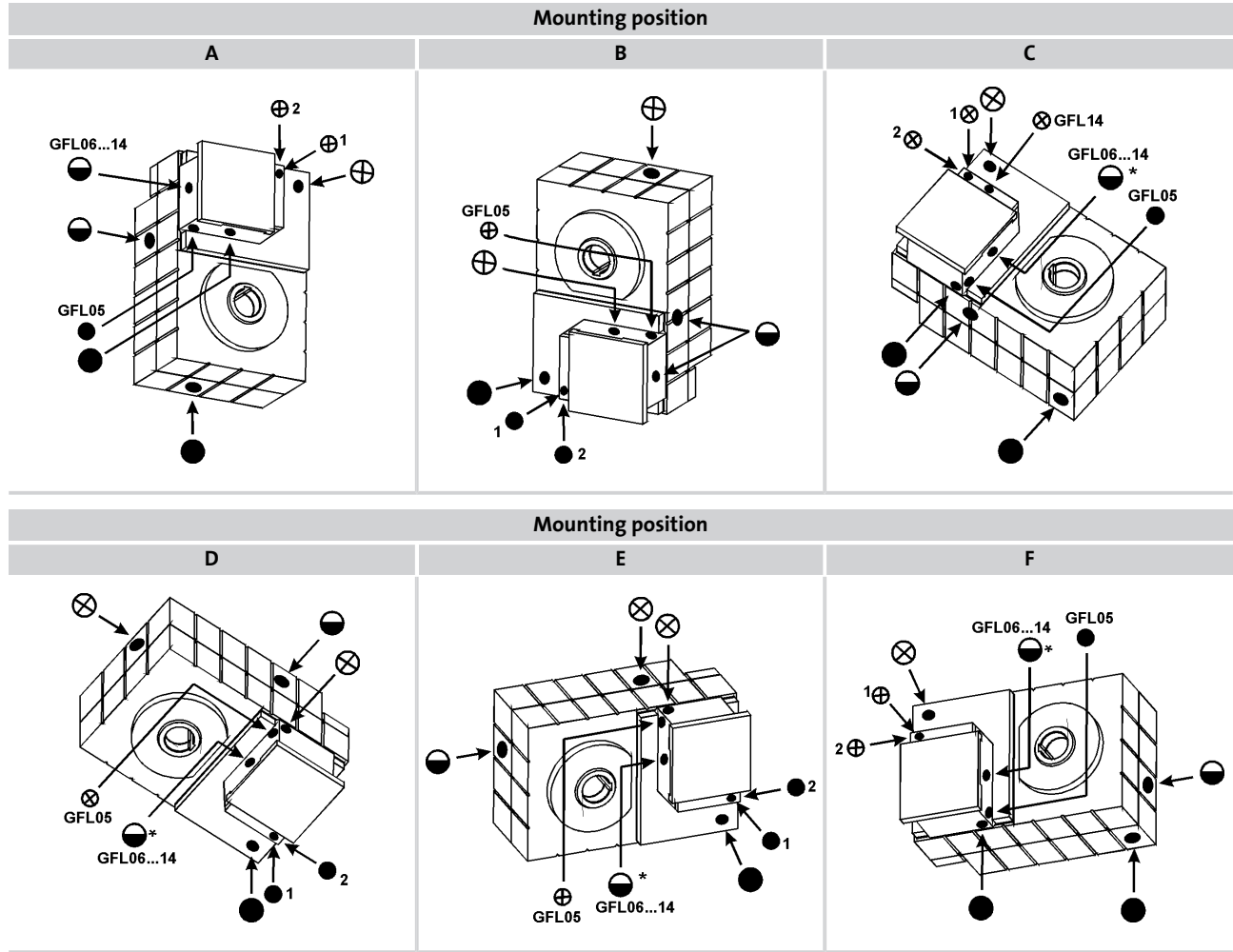
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ◐ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GFL05-2A □□□ 14LC□□



Position of ventilation, sealing elements and oil control

GFL05...14-3

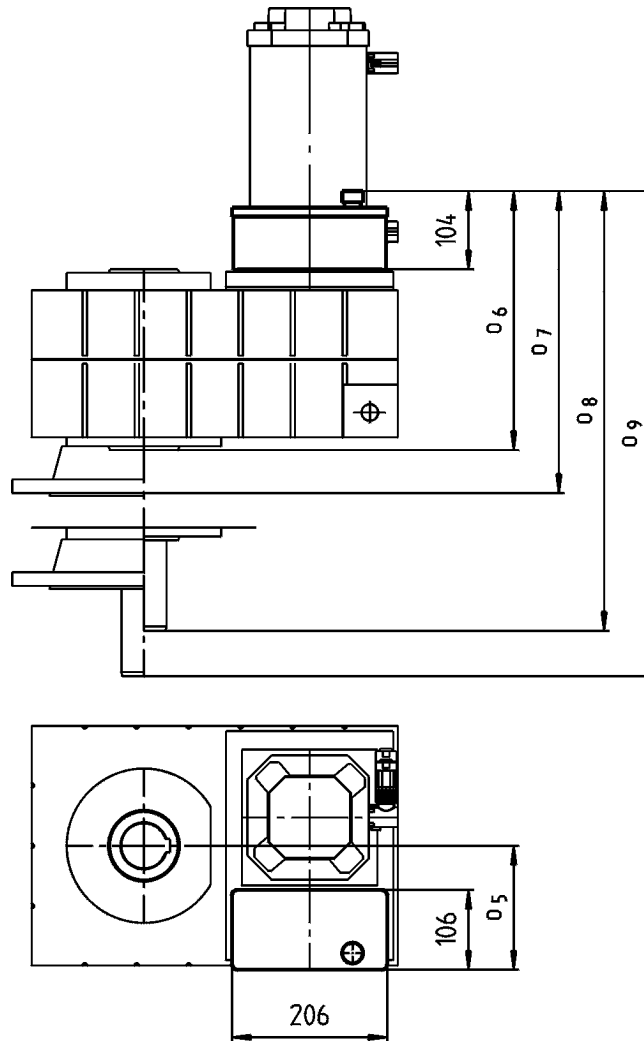


- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ⊖ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GFL07-3A □□□ 14LC□□

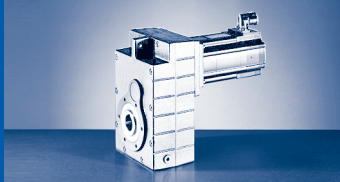


Compensation reservoir for mounting position C



GFL□□-2A...		14LC□□ <sup>1)</sup>	17NC□□ <sup>1)</sup>	19SC□□ <sup>1)</sup>	21XC□□ <sup>1)</sup>	GFL□□-2S...		12□C□□	14□C□□	19□C□□	
GFL09...	o <sub>5</sub>	165		187	204	GFL09...	o <sub>5</sub>	165		204	
	o <sub>6</sub>		344				o <sub>6</sub>		344		
	o <sub>7</sub>		405				o <sub>7</sub>		405		
	o <sub>8</sub>		464				o <sub>8</sub>		464		
	o <sub>9</sub>		525				o <sub>9</sub>		525		
GFL11...	o <sub>5</sub>	154		176	200	GFL11...	o <sub>5</sub>	154		200	
	o <sub>6</sub>	387		391			o <sub>6</sub>	387		391	
	o <sub>7</sub>	448		452			o <sub>7</sub>	448		452	
	o <sub>8</sub>	547		551			o <sub>8</sub>	547		551	
	o <sub>9</sub>	608		612			o <sub>9</sub>	608		612	
GFL14...	o <sub>5</sub>			181	211	GFL14...	o <sub>5</sub>			211	
	o <sub>6</sub>			446			o <sub>6</sub>			446	
	o <sub>7</sub>			507			o <sub>7</sub>			507	
	o <sub>8</sub>			646			o <sub>8</sub>			646	
	o <sub>9</sub>			707			o <sub>9</sub>			707	

<sup>1)</sup> Connector/terminal box position 3 is not permitted.



## GFL [kg]

### GFL□□-2S HCR/HDR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL04...	9		10	12	13	14	16								
GFL05...	21		22	24		25	27			30				33	
GFL06...	35	36	37	38	39	40	42	41		44				47	
GFL07...				64	65	66	68	67		70				73	
GFL09...								115		118				121	

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL06...	46		51		56		60							
GFL07...	73		77		82		87		89		96		106	
GFL09...	120		125		129		134		136		143		153	
GFL11...	206		210		215		220		221		228		238	
GFL14...								363		370		380		

### GFL□□-3S HCR/HDR...RSO B0

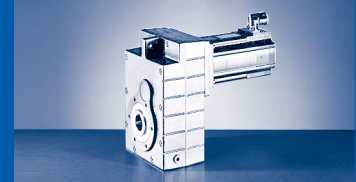
	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	23		24	26	27	28	30								
GFL06...	40		41	43	44	45	47								
GFL07...	69		70	71	72	73	75		78				81		
GFL09...	121		122	123	124	125	127	126		129				133	
GFL11...				217	218	219	221	220		223				226	
GFL14...								377		380				383	

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL07...														
GFL09...	131		136		141		146							
GFL11...	225		230		235		239		242		249		259	
GFL14...	382		387		392		397		399		406		416	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values





## GFL□□-2A HCR/HDR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	13	17	19						
GFL05...	26	30	32		36		38		
GFL06...	40	44	46		50		52		58
GFL07...	66	70	72		76		78		84
GFL09...					122		124		130
GFL11...					208		209		215
GFL14...									

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	61									
GFL07...	86		107		110		124		127	
GFL09...	133		153		156		171		174	
GFL11...	218		238		241		254		258	
GFL14...			380		384		395		398	

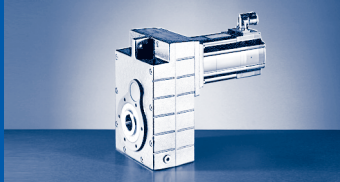
## GFL□□-3A HCR/HDR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	27	31	33						
GFL06...	44	48	50						
GFL07...	74	78	80		84		86		
GFL09...	125	129	131		135		137		143
GFL11...	219	223	224		228		230		236
GFL14...					385		387		393

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	146									
GFL11...	239		260		263		277		280	
GFL14...	395		415		419		433		437	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GFL [kg]

### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8			0.9							
...P2				0.5			1.2							
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2			0.3							

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
...P1	1.9						1.5							
...P2	3.1									4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN							0.3							

### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6			0.7		

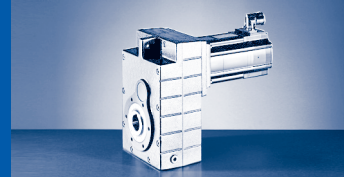
  

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
...P1/P5	2.4		4.8			5.0				
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0			1.1				

### Additional weights gearbox

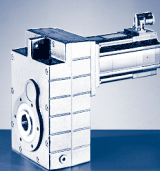
	Solid shaft	2nd output shaft end	Hollow shaft with shrink disc	Flange	Foot
	V□□	V□□	S□□	□□K	□A□/□B□
GFL04...	0.6	0.2	0.6	2.5	1
GFL05...	1	0.3	0.8	4	1.5
GFL06...	2.5	0.8	1	7	2.5
GFL07...	5	1.5	1.5	11	4
GFL09...	8	2.7	3	16	7
GFL11...	16	6.3	5	24	14
GFL14...	33	12	11	33	23

Weights in [kg]



$$\triangleright i_g = z_g / z_t$$

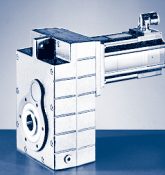
	i	z <sub>g</sub>	z <sub>t</sub>
<b>GFL04-2</b>	3.659	2415	660
	5.018	2760	550
	5.833	2625	450
	6.422	2967	462
	7.025	3864	550
	8.379	2765	330
	9.333	2800	300
	10.238	3225	315
	11.491	3160	275
	12.800	3200	250
	14.706	3397	231
	16.087	4424	275
	17.920	4480	250
	20.519	4740	231
	22.857	4800	210
	25.136	4977	198
	28.000	5040	180
	31.600	5214	165
	35.200	5280	150
	40.697	5372	132
	45.333	5440	120
	51.579	6241	121
	57.455	6320	110
	64.636	6399	99
72.000	6480	90	
85.156	6557	77	
94.857	6640	70	
<b>GFL05-2</b>	3.333	2100	630
	4.571	2400	525
	5.133	2310	450
	5.667	2380	420
	6.400	3360	525
	7.040	2640	375
	7.771	2720	350
	9.010	2838	315
	9.946	2924	294
	11.360	2840	250
	12.800	2880	225
	14.538	3053	210
	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162



# GFL [ i ]

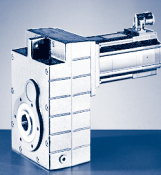
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GFL05-2	32.344	5822	180
	36.444	5904	162
	40.233	4828	120
	45.333	4896	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	80.763	6461	80
	91.000	6552	72
GFL05-3	61.653	258944	4200
	78.639	277440	3528
	90.123	270368	3000
	101.547	274176	2700
	114.952	289680	2520
	129.524	293760	2268
	140.817	304164	2160
	158.667	308448	1944
	177.027	318648	1800
	199.467	323136	1620
	227.989	328304	1440
	256.889	332928	1296
	288.948	381412	1320
	325.576	386784	1188
	362.100	391068	1080
	408.000	396576	972
	477.052	400724	840
	537.524	406368	756
GFL06-2	3.675	2205	600
	5.211	2345	450
	5.750	2415	420
	6.450	2709	
	7.147	2680	375
	8.400	2520	300
	9.463	2555	270
	10.092	2967	294
	11.520	2880	250
	12.978	2920	225
	14.743	3096	210
	16.128	4032	250
	18.169	4088	225
	20.571	4320	210
	23.175	4380	189
	25.200	4536	180
	28.389	4599	162



$$\blacktriangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GFL06-2	32.800	5904	180
	36.951	5986	162
	40.800	4896	120
	45.963	4964	108
	52.800	6336	120
	59.481	6424	108
	64.080	6408	100
	72.189	6497	90
	81.000	6480	80
	91.250	6570	72
GFL06-3	66.213	262800	3969
	72.000	272160	3780
	81.111	275940	3402
	88.200	285768	3240
	99.361	289737	2916
	116.571	293760	2520
	131.323	297840	2268
	144.320	389664	2700
	162.583	395076	2430
	179.520	323136	1800
	202.237	327624	1620
	231.200	332928	1440
	260.457	337552	1296
	293.018	386784	1320
	299.200	430848	1440
	367.200	396576	1080
	413.667	402084	972
	475.200	513216	1080
	535.333	520344	972
	576.720	519048	900
649.700	526257	810	
759.806	531864	700	
855.954	539251	630	
GFL07-2	3.350	2040	609
	4.643	2340	504
	5.159	2244	435
	5.695	2312	406
	6.400	3360	525
	7.150	2574	360
	8.324	2414	290
	9.379	2448	261
	9.714	2856	294
	11.538	2769	240
	13.000	2808	216
	14.200	2982	210



# GFL [ i ]

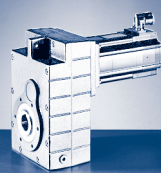
►  $i_g = z_g / z_t$

	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GFL07-2</b>	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162
	32.344	5822	180
	36.444	5904	162
	39.642	4757	120
	44.667	4824	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
<b>GFL07-3</b>	65.306	259200	3969
	72.452	326032	4500
	81.636	330624	4050
	92.413	349320	3780
	104.127	354240	3402
	113.206	366786	3240
	127.556	371952	2916
	147.347	477404	3240
	166.025	484128	2916
	183.285	395896	2160
	206.519	401472	1944
	224.636	323476	1440
	253.111	328032	1296
	290.706	418616	1440
	327.556	424512	1296
	352.811	423373	1200
	397.533	429336	1080
	430.222	557568	1296
	522.133	563904	1080
	562.391	562391	1000
633.680	570312	900	
718.786	575029	800	
809.900	583128	720	
<b>GFL09-2</b>	6.864	2574	375
	7.466	2613	350
	9.010	2838	315
	9.799	2881	294
	11.167	3752	336
	12.307	2769	225



$$\triangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GFL09-2	14.333	3010	210
	16.333	3920	240
	18.407	3976	216
	19.667	4130	210
	22.164	4189	189
	24.111	4340	180
	27.173	4402	162
	32.667	5880	180
	36.815	5964	162
	39.667	4760	120
	44.704	4828	108
	51.333	6160	120
	57.852	6248	108
	62.300	6230	100
	70.211	6319	90
	78.750	6300	80
	88.750	6390	72
	GFL09-3	63.326	251340
73.173		329280	4500
82.465		333984	4050
93.333		352800	3780
105.185		357840	3402
114.333		370440	3240
128.852		375732	2916
148.815		482160	3240
167.712		489048	2916
185.111		399840	2160
208.617		405552	1944
224.778		323680	1440
253.321		328304	1296
290.889		418880	1440
327.827		424864	1296
353.033		423640	1200
397.863		429692	1080
424.247		549824	1296
514.881		556072	1080
554.470		554470	1000
624.879	562391	900	
700.875	560700	800	
789.875	568710	720	
GFL11-2	6.864	2574	375
	7.466	2613	350
	9.010	2838	315
	9.799	2881	294
	10.720	3752	350

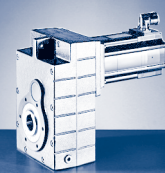


# GFL [ i ]

►  $i_g = z_g / z_t$

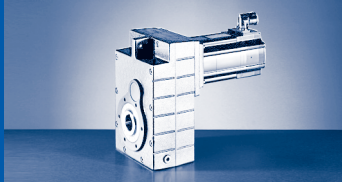
	i	$z_g$	$z_t$
GFL11-2	12.480	2808	225
	14.538	3053	210
	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162
	32.739	5893	180
	36.889	5976	162
	40.233	4828	120
	45.333	4896	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
	GFL11-3	65.306	259200
73.335		330008	4500
82.631		334656	4050
93.540		353580	3780
105.397		358560	3402
114.586		371259	3240
129.111		376488	2916
149.144		483226	3240
168.049		490032	2916
182.792		394831	2160
205.963		400392	1944
224.636		323476	1440
253.111		328032	1296
267.259		519552	1944
327.556		424512	1296
358.077		429692	1200
403.467		435744	1080
430.222		557568	1296
522.133		563904	1080
562.391		562391	1000
633.680	570312	900	
710.888	568710	800	
801.000	576720	720	
GFL14-2	7.150	2574	360
	7.777	2613	336
	8.800	2772	315
	9.571	2814	294





►  $i_g = z_g / z_t$

	<b>i</b>	<b><math>z_g</math></b>	<b><math>z_t</math></b>
<b>GFL14-2</b>	11.538	2769	240
	13.000	2808	216
	14.200	2982	210
	15.620	3905	250
	17.600	3960	225
	19.948	4189	210
	22.476	4248	189
	24.456	4402	180
	27.556	4464	162
	32.344	5822	180
	36.444	5904	162
	39.642	4757	120
	44.667	4824	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
	<b>GFL14-3</b>	64.296	249984
68.708		259718	3780
77.418		263376	3402
85.037		330624	3888
104.889		356832	3402
114.126		369768	3240
128.593		374976	2916
136.889		354816	2592
156.148		303552	1944
170.074		495936	2916
202.074		392832	1944
224.636		323476	1440
253.111		328032	1296
273.778		532224	1944
332.444		430848	1296
352.811		423373	1200
397.533		429336	1080
430.222		557568	1296
522.133		563904	1080
562.391		562391	1000
633.680	570312	900	
710.888	568710	800	
801.000	576720	720	



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
3.659	100	1.51	$M_2$						13	15
			c						5.4	4.5
			$n_{2 \text{ Eck}}$						1107	1107
			$n_{2 \text{ th}}$						998	968
5.018	111	0.86	$M_2$					14	18	21
			c					5.4	4.3	3.7
			$n_{2 \text{ Eck}}$					747	807	807
			$n_{2 \text{ th}}$					747	775	754
5.833	153	0.93	$M_2$						21	25
			c						5.1	4.3
			$n_{2 \text{ Eck}}$						694	694
			$n_{2 \text{ th}}$						621	603
6.422	113	0.56	$M_2$				14	19	23	27
			c				5.6	4.3	3.4	2.9
			$n_{2 \text{ Eck}}$				631	584	631	631
			$n_{2 \text{ th}}$				631	584	631	631
7.025	113	0.47	$M_2$				15	20	25	30
			c				5.2	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				577	534	577	577
			$n_{2 \text{ th}}$				576	534	576	576
8.379	179	0.67	$M_2$					24	30	36
			c					5.2	4.2	3.5
			$n_{2 \text{ Eck}}$					448	483	483
			$n_{2 \text{ th}}$					434	416	404
9.333	165	0.61	$M_2$				20	27	34	40
			c				5.7	4.3	3.4	2.9
			$n_{2 \text{ Eck}}$				434	402	434	434
			$n_{2 \text{ th}}$				395	377	361	349
10.238	159	0.37	$M_2$				22	30	37	44
			c				5.0	3.8	3.0	2.6
			$n_{2 \text{ Eck}}$				396	366	396	396
			$n_{2 \text{ th}}$				396	366	396	396
11.491	181	0.41	$M_2$				25	34	41	49
			c				5.1	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				353	326	353	353
			$n_{2 \text{ th}}$				347	326	319	310
12.800	166	0.38	$M_2$				28	38	46	55
			c				4.2	3.2	2.5	2.1
			$n_{2 \text{ Eck}}$				316	293	316	316
			$n_{2 \text{ th}}$				302	289	277	269
14.706	182	0.28	$M_2$				32	43	53	64
			c				4.0	3.0	2.4	2.0
			$n_{2 \text{ Eck}}$				275	255	275	275
			$n_{2 \text{ th}}$				275	255	275	274
16.087	182	0.25	$M_2$			22	35	48	59	70
			c			5.6	3.6	2.8	2.2	1.9
			$n_{2 \text{ Eck}}$			252	252	233	252	252
			$n_{2 \text{ th}}$			252	252	233	252	252
17.920	167	0.23	$M_2$		20	25	39	53	66	78
			c		5.8	4.6	3.0	2.3	1.8	1.5
			$n_{2 \text{ Eck}}$		226	226	226	209	226	226
			$n_{2 \text{ th}}$		226	226	226	209	223	205

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

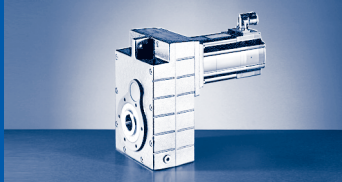


$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
20.519	183	0.17	$M_2$		23	29	45	61	75	89
			c		5.5	4.4	2.9	2.2	1.7	1.5
			$n_{2 \text{ Eck}}$		197	197	197	183	197	197
			$n_{2 \text{ th}}$		197	197	197	183	197	197
22.857	167	0.16	$M_2$		26	32	50	68	84	100
			c		4.5	3.6	2.4	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		177	177	177	164	177	177
			$n_{2 \text{ th}}$		177	177	177	164	177	167
25.136	183	0.13	$M_2$		28	35	55	75	92	109
			c		5.1	4.1	2.7	2.0	1.6	1.4
			$n_{2 \text{ Eck}}$		161	161	161	149	161	161
			$n_{2 \text{ th}}$		161	161	161	149	161	161
28.000	168	0.12	$M_2$		32	40	62	84	103	122
			c		4.2	3.4	2.2	1.7	1.3	1.1
			$n_{2 \text{ Eck}}$		145	145	145	134	145	145
			$n_{2 \text{ th}}$		145	145	145	134	145	145
31.600	185	0.09	$M_2$		36	45				
			c		4.1	3.3				
			$n_{2 \text{ Eck}}$		128	128				
			$n_{2 \text{ th}}$		128	128				
35.200	170	0.08	$M_2$		40	50				
			c		3.4	2.7				
			$n_{2 \text{ Eck}}$		115	115				
			$n_{2 \text{ th}}$		115	115				
40.697	187	0.06	$M_2$		46	58				
			c		3.2	2.6				
			$n_{2 \text{ Eck}}$		100	100				
			$n_{2 \text{ th}}$		100	100				
45.333	172	0.06	$M_2$	25	52	65				
			c	5.3	2.7	2.1				
			$n_{2 \text{ Eck}}$	89	89	89				
			$n_{2 \text{ th}}$	89	89	89				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83
3.333	110	1.68	$M_2$						14
			c						5.4
			$n_2$ Eck						1215
			$n_2$ th						920
3.333	150	1.68	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
4.571	133	2.13	$M_2$					16	19
			c					5.7	4.8
			$n_2$ Eck					886	886
			$n_2$ th					790	766
4.571	170	2.13	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
5.133	170	2.37	$M_2$						21
			c						5.4
			$n_2$ Eck						789
			$n_2$ th						597
5.133	223	2.37	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
5.667	187	2.33	$M_2$						24
			c						5.4
			$n_2$ Eck						715
			$n_2$ th						541
5.667	233	2.33	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
6.400	149	0.82	$M_2$				18	23	27
			c				5.7	4.5	3.8
			$n_2$ Eck				586	633	633
			$n_2$ th				586	612	595
6.400	173	0.82	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
7.040	205	1.47	$M_2$					25	30
			c					5.7	4.8
			$n_2$ Eck					575	575
			$n_2$ th					513	498
7.040	248	1.47	$M_2$						
			c						
			$n_2$ Eck						
			$n_2$ th						
7.771	226	1.45	$M_2$					27	33
			c					5.7	4.8
			$n_2$ Eck					521	521
			$n_2$ th					465	451

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

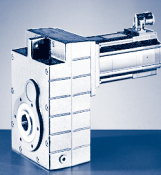


$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c			
							$n_{2\text{ Eck}}$	1.68	110	3.333
							$n_{2\text{ th}}$			
		31	25	23	43	35	$M_2$ c			
		4.6	4.6	4.7	3.2	3.0	$n_{2\text{ Eck}}$	1.68	150	3.333
		450	900	1058	585	1215	$n_{2\text{ th}}$			
		450	891	893	585	819	$M_2$ c			
							$n_{2\text{ Eck}}$	2.13	133	4.571
							$n_{2\text{ th}}$			
		43	34	32	59	48	$M_2$ c			
		3.8	3.8	3.9	2.6	2.5	$n_{2\text{ Eck}}$	2.13	170	4.571
		328	656	771	427	886	$n_{2\text{ th}}$			
		328	656	736	427	676	$M_2$ c			
							$n_{2\text{ Eck}}$	2.37	170	5.133
							$n_{2\text{ th}}$			
		48	38	36	66	54	$M_2$ c			
		4.5	4.5	4.5	3.0	2.9	$n_{2\text{ Eck}}$	2.37	223	5.133
		292	584	687	380	789	$n_{2\text{ th}}$			
		292	575	576	380	528	$M_2$ c			
							$n_{2\text{ Eck}}$	2.33	187	5.667
							$n_{2\text{ th}}$			
		53	43	40	73	59	$M_2$ c			
		4.2	4.2	4.2	2.9	2.8	$n_{2\text{ Eck}}$	2.33	233	5.667
		265	529	622	344	715	$n_{2\text{ th}}$			
		265	515	516	344	473	$M_2$ c			
							$n_{2\text{ Eck}}$	0.82	149	6.400
							$n_{2\text{ th}}$			
33	26	61	49	46	83	68	$M_2$ c			
4.7	4.7	2.8	2.8	2.8	1.9	1.8	$n_{2\text{ Eck}}$	0.82	173	6.400
305	633	234	469	551	305	633	$n_{2\text{ th}}$			
305	614	234	469	551	305	508	$M_2$ c			
							$n_{2\text{ Eck}}$	1.47	205	7.040
							$n_{2\text{ th}}$			
		66	53	50	91	74	$M_2$ c			
		3.6	3.6	3.6	2.5	2.4	$n_{2\text{ Eck}}$	1.47	248	7.040
		213	426	501	277	575	$n_{2\text{ th}}$			
		213	426	473	277	434	$M_2$ c			
							$n_{2\text{ Eck}}$	1.45	226	7.771
							$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83
7.771	258	1.45	$M_2$ c $n_2$ Eck $n_2$ th						
9.010	220	0.95	$M_2$ c $n_2$ Eck $n_2$ th				26 6.0 416 416	32 4.8 450 423	38 4.0 450 411
9.010	266	0.95	$M_2$ c $n_2$ Eck $n_2$ th						
9.946	243	0.89	$M_2$ c $n_2$ Eck $n_2$ th				28 6.0 377 377	35 4.8 407 383	42 4.0 407 373
9.946	275	0.89	$M_2$ c $n_2$ Eck $n_2$ th						
11.360	278	1.08	$M_2$ c $n_2$ Eck $n_2$ th					40 4.8 357 308	48 4.0 357 299
12.800	285	1.01	$M_2$ c $n_2$ Eck $n_2$ th				37 5.5 293 280	46 4.3 316 269	54 3.7 316 260
14.538	301	0.75	$M_2$ c $n_2$ Eck $n_2$ th				42 5.1 258 258	52 4.0 279 255	62 3.4 279 248
15.904	310	0.60	$M_2$ c $n_2$ Eck $n_2$ th				46 4.8 236 236	57 3.8 255 239	68 3.2 255 232
17.920	312	0.61	$M_2$ c $n_2$ Eck $n_2$ th			38 5.6 226 226	52 4.3 209 209	64 3.4 226 208	77 2.9 226 202
20.286	333	0.43	$M_2$ c $n_2$ Eck $n_2$ th			43 5.3 200 200	59 4.0 185 185	73 3.2 200 200	87 2.7 200 200
22.857	313	0.43	$M_2$ c $n_2$ Eck $n_2$ th			49 4.4 177 177	67 3.4 164 164	83 2.7 177 177	99 2.3 177 177
24.850	344	0.35	$M_2$ c $n_2$ Eck $n_2$ th			53 5.1 163 163	73 3.9 151 151	90 3.1 163 163	107 2.6 163 163

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

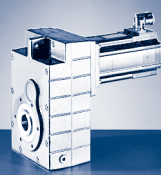


$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
39	31	74	59	55	100	82	$c$	1.45	258	7.771
5.7	5.7	3.4	3.4	3.4	2.3	2.2	$n_{2\text{Eck}}$			
251	521	193	386	454	251	521	$n_{2\text{th}}$			
251	466	193	386	424	251	388	$M_2$			
							$c$	0.95	220	9.010
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
46	36	86	68	64	117	95	$M_2$			
5.1	5.1	3.0	3.0	3.1	2.1	2.0	$c$	0.95	266	9.010
216	450	167	333	391	216	450	$n_{2\text{Eck}}$			
216	428	166	333	391	216	362	$n_{2\text{th}}$			
							$M_2$			
							$c$	0.89	243	9.946
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
51	40	95	76	71	129	105	$M_2$			
4.7	4.8	2.9	2.8	2.9	1.9	1.9	$c$	0.89	275	9.946
196	407	151	302	354	196	407	$n_{2\text{Eck}}$			
196	383	151	302	350	196	317	$n_{2\text{th}}$			
59	46	108	87	81	148	120	$M_2$			
4.2	4.2	2.5	2.5	2.5	1.7	1.7	$c$	1.08	278	11.360
172	357	132	264	310	172	357	$n_{2\text{Eck}}$			
172	301	132	264	273	172	234	$n_{2\text{th}}$			
66	52	123	98	92	167	136	$M_2$			
3.8	3.8	2.3	2.3	2.3	1.6	1.5	$c$	1.01	285	12.800
152	316	117	234	275	152	316	$n_{2\text{Eck}}$			
152	263	117	234	237	152	197	$n_{2\text{th}}$			
76	59	139	112	105	190	155	$M_2$			
3.6	3.6	2.1	2.1	2.1	1.5	1.4	$c$	0.75	301	14.538
134	279	103	206	243	134	279	$n_{2\text{Eck}}$			
134	250	103	206	227	134	188	$n_{2\text{th}}$			
83	65	153	122	115	208	169	$M_2$			
3.4	3.4	2.0	2.0	2.0	1.4	1.3	$c$	0.60	310	15.904
123	255	94	189	222	123	255	$n_{2\text{Eck}}$			
123	234	94	189	213	123	176	$n_{2\text{th}}$			
94	73	172	138	129	234	191	$M_2$			
3.0	3.0	1.8	1.8	1.8	1.2	1.2	$c$	0.61	312	17.920
109	226	84	167	197	109	226	$n_{2\text{Eck}}$			
109	204	84	167	180	109	149	$n_{2\text{th}}$			
106	83	195	156	147	265	216	$M_2$			
2.8	2.8	1.7	1.7	1.7	1.2	1.1	$c$	0.43	333	20.286
96	200	74	148	174	96	200	$n_{2\text{Eck}}$			
96	200	74	148	174	96	151	$n_{2\text{th}}$			
120	94	221	177	166			$M_2$			
2.4	2.4	1.4	1.4	1.4			$c$	0.43	313	22.857
85	177	66	131	154			$n_{2\text{Eck}}$			
85	177	66	131	149			$n_{2\text{th}}$			
130	102	240	192	180	325	265	$M_2$			
2.6	2.7	1.4	1.6	1.6	1.1	1.1	$c$	0.35	344	24.850
79	163	60	121	142	79	163	$n_{2\text{Eck}}$			
78	163	60	121	142	78	138	$n_{2\text{th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83
28.000	314	0.33	$M_2$			60	82	102	121
			c			4.1	3.1	2.5	2.1
			$n_2$ Eck			145	134	145	145
			$n_2$ th			145	134	145	145
32.344	296	0.20	$M_2$		45				
			c		5.1				
			$n_2$ Eck		125				
			$n_2$ th		125				
32.344	345	0.20	$M_2$			70	95	118	140
			c			3.9	3.0	2.4	2.0
			$n_2$ Eck			125	116	125	125
			$n_2$ th			125	116	125	125
36.444	316	0.20	$M_2$		51	80	108	133	158
			c		4.9	3.2	2.4	1.9	1.6
			$n_2$ Eck		111	111	103	111	111
			$n_2$ th		111	111	103	111	111
40.233	307	0.15	$M_2$	45	57				
			c	5.4	4.3				
			$n_2$ Eck	101	101				
			$n_2$ th	101	101				
40.233	345	0.15	$M_2$			88	119	147	175
			c			3.1	2.4	1.9	1.6
			$n_2$ Eck			101	93	101	101
			$n_2$ th			101	93	101	101
45.333	319	0.14	$M_2$	51	64	100	135	166	197
			c	4.9	4.0	2.6	2.0	1.6	1.3
			$n_2$ Eck	89	89	89	83	89	89
			$n_2$ th	89	89	89	83	89	89
52.067	309	0.09	$M_2$	59	74				
			c	4.2	3.3				
			$n_2$ Eck	78	78				
			$n_2$ th	78	78				
58.667	322	0.09	$M_2$	66	84				
			c	3.9	3.1				
			$n_2$ Eck	69	69				
			$n_2$ th	69	69				
63.190	282	0.07	$M_2$	72	91				
			c	3.1	2.5				
			$n_2$ Eck	64	64				
			$n_2$ th	64	64				
71.200	305	0.06	$M_2$	81	102				
			c	3.3	2.7				
			$n_2$ Eck	57	57				
			$n_2$ th	57	57				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



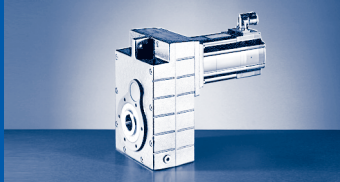


$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
148	115	271	217	203			c			
2.1	2.2	1.2	1.3	1.3			$n_2$ Eck	0.33	314	28.000
70	145	54	107	126			$n_2$ th			
70	145	54	107	126			$M_2$			
							c			
							$n_2$ Eck	0.20	296	32.344
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.20	345	32.344
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.20	316	36.444
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.15	307	40.233
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.15	345	40.233
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.14	319	45.333
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.09	309	52.067
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.09	322	58.667
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.07	282	63.190
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.06	305	71.200
							$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

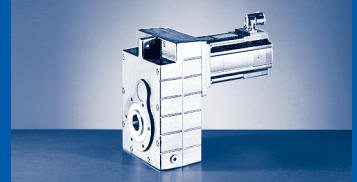
$M_{2GN} \leq 345 \text{ Nm}$

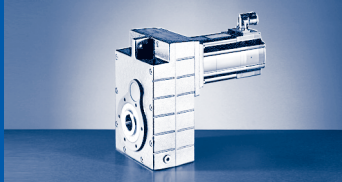
GFL05-3S				06CC41	06FC41	06IC41	09DC41	09FC38
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$					
			$n_1$	4050	4050	4050	4050	3750
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5
			$P_N$	0.25	0.51	0.64	1.00	1.20
			$J_M$	0.17	0.25	0.33	1.13	1.53
61.653	207	0.20	$M_2$	34	70	88	135	
			c	4.8	2.4	1.9	1.3	
			$n_2$ Eck	66	66	66	66	
			$n_2$ th	66	66	66	66	
78.639	225	0.14	$M_2$	43	89	112	173	
			c	4.5	2.3	1.8	1.2	
			$n_2$ Eck	52	52	52	52	
			$n_2$ th	52	52	52	52	
90.123	303	0.20	$M_2$	49	102	128	197	267
			c	5.3	2.7	2.1	1.4	1.1
			$n_2$ Eck	45	45	45	45	42
			$n_2$ th	45	45	45	45	42
101.547	328	0.20	$M_2$	56	115	144	222	301
			c	5.1	2.6	2.0	1.3	1.0
			$n_2$ Eck	40	40	40	40	37
			$n_2$ th	40	40	40	40	37
114.952	329	0.14	$M_2$	63	130	163	252	
			c	4.5	2.3	1.8	1.2	
			$n_2$ Eck	35	35	35	35	
			$n_2$ th	35	35	35	35	
129.524	328	0.14	$M_2$	72	147	185	285	
			c	4.0	2.0	1.6	1.0	
			$n_2$ Eck	31	31	31	31	
			$n_2$ th	31	31	31	31	
140.817	345	0.11	$M_2$	78	160	201	309	
			c	3.9	1.9	1.6	1.0	
			$n_2$ Eck	29	29	29	29	
			$n_2$ th	29	29	29	29	
158.667	328	0.11	$M_2$	89	181	227		
			c	3.3	1.6	1.3		
			$n_2$ Eck	26	26	26		
			$n_2$ th	26	26	26		
177.027	345	0.07	$M_2$	99	202	253		
			c	3.1	1.5	1.2		
			$n_2$ Eck	23	23	23		
			$n_2$ th	23	23	23		
199.467	328	0.07	$M_2$	112	228	286		
			c	2.6	1.3	1.0		
			$n_2$ Eck	20	20	20		
			$n_2$ th	20	20	20		
227.989	345	0.05	$M_2$	129	261			
			c	2.4	1.2			
			$n_2$ Eck	18	18			
			$n_2$ th	18	18			
256.889	328	0.05	$M_2$	146	295			
			c	2.0	1.0			
			$n_2$ Eck	16	16			
			$n_2$ th	16	16			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

**GFL [Nm]**  
GFL□□-□S (MCS)





# GFL [Nm]

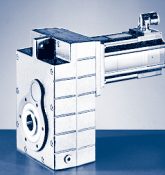
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
3.675	205	7.76	$M_2$									34	27
			c									5.8	5.7
			$n_2$ Eck									408	816
			$n_2$ th									408	714
3.675	317	7.76	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
5.211	291	6.64	$M_2$									48	38
			c									5.8	5.7
			$n_2$ Eck									288	576
			$n_2$ th									288	503
5.211	424	6.64	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
5.750	321	6.04	$M_2$									53	42
			c									5.8	5.7
			$n_2$ Eck									261	522
			$n_2$ th									261	456
5.750	442	6.04	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
6.450	195	3.65	$M_2$					23	27				
			c					5.9	5.0				
			$n_2$ Eck					628	628				
			$n_2$ th					548	531				
6.450	252	3.65	$M_2$									61	49
			c									4.0	4.0
			$n_2$ Eck									233	465
			$n_2$ th									233	465
6.450	352	3.65	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
7.147	333	4.04	$M_2$									67	53
			c									4.8	4.8
			$n_2$ Eck									210	420
			$n_2$ th									210	410
7.147	433	4.04	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
8.400	469	4.26	$M_2$									78	62
			c									5.8	5.7
			$n_2$ Eck									179	357
			$n_2$ th									179	312
8.400	604	4.26	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

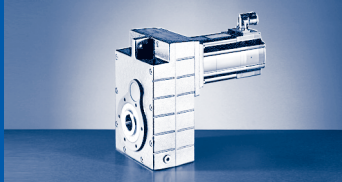


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
25	47	38									c	7.76	205	3.675
5.8	3.9	3.8									$n_{2 \text{ Eck}}$			
959	531	1102									$n_{2 \text{ th}}$			
715	531	656									$M_2$			
					54	48	80	59	105	73	c	7.76	317	3.675
					5.6	4.9	3.9	4.0	3.0	3.3	$n_{2 \text{ Eck}}$			
					408	878	408	878	367	878	$n_{2 \text{ th}}$			
					408	693	408	665	367	637	$M_2$			
36	66	54									c	6.64	291	5.211
5.8	3.9	3.8									$n_{2 \text{ Eck}}$			
676	374	777									$n_{2 \text{ th}}$			
505	374	463									$M_2$			
					77	68	113	84	149	104	c	6.64	424	5.211
					5.2	4.6	3.6	3.8	2.8	3.1	$n_{2 \text{ Eck}}$			
					288	619	288	619	259	619	$n_{2 \text{ th}}$			
					288	483	288	463	259	443	$M_2$			
40	73	60									c	6.04	321	5.750
5.8	3.9	3.8									$n_{2 \text{ Eck}}$			
613	339	704									$n_{2 \text{ th}}$			
457	339	419									$M_2$			
					86	75	125	93	165	115	c	6.04	442	5.750
					5.0	4.4	3.4	3.6	2.6	2.9	$n_{2 \text{ Eck}}$			
					261	561	261	561	235	561	$n_{2 \text{ th}}$			
					261	433	261	415	235	397	$M_2$			
											c	3.65	195	6.450
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
45	83	68									$M_2$			
4.1	2.7	2.6									c	3.65	252	6.450
547	302	628									$n_{2 \text{ Eck}}$			
510	302	468									$n_{2 \text{ th}}$			
					45	98	86	142	106	186	$M_2$			
					5.6	3.5	3.1	2.4	2.5	1.9	c	3.65	352	6.450
					558	233	500	233	500	209	$n_{2 \text{ Eck}}$			
					542	233	484	233	464	209	$n_{2 \text{ th}}$			
50	91	75									$M_2$			
4.8	3.3	3.1									c	4.04	333	7.147
493	273	567									$n_{2 \text{ Eck}}$			
411	273	377									$n_{2 \text{ th}}$			
					108	95	157	117	206	144	$M_2$			
					3.9	3.5	2.7	2.8	2.1	2.3	c	4.04	433	7.147
					210	451	210	451	189	451	$n_{2 \text{ Eck}}$			
					210	385	210	369	189	353	$n_{2 \text{ th}}$			
58	107	87									$M_2$			
5.8	3.9	3.8									c	4.26	469	8.400
420	232	482									$n_{2 \text{ Eck}}$			
313	232	287									$n_{2 \text{ th}}$			
					126	110	183	137	241	168	$M_2$			
					4.6	4.1	3.2	3.3	2.5	2.7	c	4.26	604	8.400
					179	384	179	384	161	384	$n_{2 \text{ Eck}}$			
					179	292	179	280	161	268	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

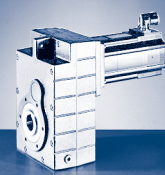
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
9.463	529	3.88	$M_2$									87	70
			c									5.8	5.7
			$n_{2 \text{ Eck}}$									159	317
			$n_{2 \text{ th}}$									159	277
9.463	581	3.88	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
10.092	306	2.52	$M_2$					35	42				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					401	401				
			$n_{2 \text{ th}}$					350	339				
10.092	395	2.52	$M_2$									95	76
			c									4.0	4.0
			$n_{2 \text{ Eck}}$									149	297
			$n_{2 \text{ th}}$									149	297
10.092	459	2.52	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
11.520	536	1.73	$M_2$									107	86
			c									4.8	4.8
			$n_{2 \text{ Eck}}$									130	260
			$n_{2 \text{ th}}$									130	255
11.520	632	1.73	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
12.978	592	2.61	$M_2$									121	97
			c									4.7	4.7
			$n_{2 \text{ Eck}}$									116	231
			$n_{2 \text{ th}}$									116	225
14.743	447	1.95	$M_2$					52	62				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					275	275				
			$n_{2 \text{ th}}$					240	232				
14.743	577	1.95	$M_2$									139	111
			c									4.0	4.0
			$n_{2 \text{ Eck}}$									102	204
			$n_{2 \text{ th}}$									102	203
14.743	641	1.95	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
16.128	467	1.68	$M_2$					57	68				
			c					5.6	4.8				
			$n_{2 \text{ Eck}}$					251	251				
			$n_{2 \text{ th}}$					224	217				
16.128	603	1.68	$M_2$									152	122
			c									3.9	3.8
			$n_{2 \text{ Eck}}$									93	186
			$n_{2 \text{ th}}$									93	186

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

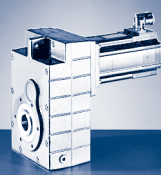


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
65	120	98									c	3.88	529	9.463
5.8	3.9	3.8									$n_{2 \text{ Eck}}$			
373	206	428									$n_{2 \text{ th}}$			
278	206	255												
					142	125	207	155	272	190	$M_2$			
					4.0	3.5	2.8	2.9	2.1	2.3	c	3.88	581	9.463
					159	341	159	341	143	341	$n_{2 \text{ Eck}}$			
					159	251	159	240	143	229	$n_{2 \text{ th}}$			
											$M_2$			
											c	2.52	306	10.092
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
71	130	106									$M_2$			
4.1	2.7	2.6									c	2.52	395	10.092
349	193	401									$n_{2 \text{ Eck}}$			
326	193	299									$n_{2 \text{ th}}$			
			86	71	154	135	223	166	292	204	$M_2$			
			5.1	4.7	2.9	2.6	2.0	2.1	1.6	1.7	c	2.52	459	10.092
			149	357	149	320	149	320	134	320	$n_{2 \text{ Eck}}$			
			149	335	149	298	149	285	134	259	$n_{2 \text{ th}}$			
81	147	120									$M_2$			
4.8	3.3	3.1									c	1.73	536	11.520
306	169	352									$n_{2 \text{ Eck}}$			
255	169	234									$n_{2 \text{ th}}$			
				80	174	153	253	189	332	232	$M_2$			
				5.6	3.5	3.1	2.5	2.6	1.9	2.1	c	1.73	632	11.520
				313	130	280	130	280	117	280	$n_{2 \text{ Eck}}$			
				263	130	234	130	224	117	214	$n_{2 \text{ th}}$			
91	166	136	111	91	197	173	286	214	376	262	$M_2$			
4.7	3.2	3.1	5.1	4.7	2.9	2.6	2.0	2.1	1.6	1.7	c	2.61	592	12.978
272	150	312	116	277	116	249	116	249	104	249	$n_{2 \text{ Eck}}$			
226	150	207	116	225	116	199	116	190	104	174	$n_{2 \text{ th}}$			
											$M_2$			
											c	1.95	447	14.743
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
104	190	155									$M_2$			
4.1	2.7	2.6									c	1.95	577	14.743
239	132	275									$n_{2 \text{ Eck}}$			
223	132	205									$n_{2 \text{ th}}$			
			126	103	225	197	326	243	427	298	$M_2$			
			4.9	4.5	2.8	2.5	2.0	2.0	1.5	1.7	c	1.95	641	14.743
			102	244	102	219	102	219	92	219	$n_{2 \text{ Eck}}$			
			102	227	102	202	102	193	92	173	$n_{2 \text{ th}}$			
											$M_2$			
											c	1.68	467	16.128
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
114	208	169									$M_2$			
3.9	2.6	2.5									c	1.68	603	16.128
219	121	251									$n_{2 \text{ Eck}}$			
209	121	192									$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
16.128	643	1.68	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
18.169	526	1.57	$M_2$					64	76				
			c					5.6	4.8				
			$n_{2 \text{ Eck}}$					223	223				
			$n_{2 \text{ th}}$					199	193				
18.169	600	1.57	$M_2$							92	72	172	138
			c							5.7	5.7	3.4	3.4
			$n_{2 \text{ Eck}}$							107	223	83	165
			$n_{2 \text{ th}}$							107	199	83	165
20.571	501	1.19	$M_2$				59	73	87				
			c				6.0	4.8	4.0				
			$n_{2 \text{ Eck}}$				182	197	197				
			$n_{2 \text{ th}}$				182	187	182				
20.571	645	1.19	$M_2$							105	82	195	156
			c							5.4	5.4	3.2	3.2
			$n_{2 \text{ Eck}}$							95	197	73	146
			$n_{2 \text{ th}}$							95	191	73	146
23.175	565	1.13	$M_2$				66	82	98				
			c				6.0	4.8	4.0				
			$n_{2 \text{ Eck}}$				162	175	175				
			$n_{2 \text{ th}}$				162	166	161				
23.175	604	1.13	$M_2$							119	93	221	177
			c							4.5	4.5	2.7	2.7
			$n_{2 \text{ Eck}}$							84	175	65	130
			$n_{2 \text{ th}}$							84	164	65	129
25.200	527	0.90	$M_2$				72	89	107				
			c				5.8	4.6	3.9				
			$n_{2 \text{ Eck}}$				149	161	161				
			$n_{2 \text{ th}}$				149	161	161				
25.200	651	0.90	$M_2$							129	101	240	192
			c							4.8	5.1	2.7	3.0
			$n_{2 \text{ Eck}}$							77	161	60	119
			$n_{2 \text{ th}}$							77	161	60	119
28.389	594	0.86	$M_2$				81	101	120				
			c				5.8	4.6	3.9				
			$n_{2 \text{ Eck}}$				132	143	143				
			$n_{2 \text{ th}}$				132	143	143				
28.389	607	0.86	$M_2$							147	115	272	217
			c							4.0	4.2	2.2	2.5
			$n_{2 \text{ Eck}}$							69	143	53	106
			$n_{2 \text{ th}}$							69	143	53	106
32.800	550	0.58	$M_2$				95	118	140				
			c				4.7	3.7	3.1				
			$n_{2 \text{ Eck}}$				114	124	124				
			$n_{2 \text{ th}}$				114	123	123				
32.800	641	0.58	$M_2$							170	133	315	251
			c							3.7	3.8	2.0	2.3
			$n_{2 \text{ Eck}}$							60	124	46	92
			$n_{2 \text{ th}}$							59	123	46	91

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



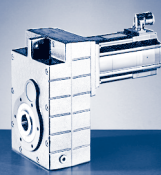


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$l_{M230}$			
	11.8										$l_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
			139	114	246	216	357	267	468	327	$c$	1.68	643	16.128
			4.5	4.1	2.6	2.3	1.8	1.9	1.4	1.5	$n_{2Eck}$			
			93	223	93	200	93	200	84	200	$n_{2th}$			
			93	211	93	188	93	176	84	157	$M_2$			
											$c$	1.57	526	18.169
											$n_{2Eck}$			
											$n_{2th}$			
129	235	191	158	129	279	245	403	302	528	369	$M_2$			
3.4	2.3	2.2	3.7	3.4	2.1	1.9	1.5	1.5	1.1	1.3	$c$	1.57	600	18.169
194	107	223	83	198	83	178	83	178	74	178	$n_{2Eck}$			
181	107	166	83	181	83	158	83	141	74	127	$n_{2th}$			
											$M_2$			
											$c$	1.19	501	20.571
											$n_{2Eck}$			
											$n_{2th}$			
146	266	217	179	146	316	277	457	342	598	418	$M_2$			
3.2	2.2	2.1	3.5	3.2	2.0	1.8	1.4	1.5	1.1	1.2	$c$	1.19	645	20.571
171	95	197	73	175	73	157	73	157	66	157	$n_{2Eck}$			
171	95	162	73	175	73	152	73	138	66	126	$n_{2th}$			
											$M_2$			
											$c$	1.13	565	23.175
											$n_{2Eck}$			
											$n_{2th}$			
166	301	245	203	166	357	313	516	386			$M_2$			
2.7	1.8	1.8	2.9	2.7	1.7	1.5	1.2	1.2			$c$	1.13	604	23.175
152	84	175	65	155	65	139	65	139			$n_{2Eck}$			
150	84	134	65	150	65	123	65	113			$n_{2th}$			
											$M_2$			
											$c$	0.90	527	25.200
											$n_{2Eck}$			
											$n_{2th}$			
180	327	266	221	180	389	340	561	419		513	$M_2$			
3.0	2.0	2.0	2.9	3.0	1.7	1.7	1.2	1.4		1.1	$c$	0.90	651	25.200
140	77	161	60	143	60	128	60	128		128	$n_{2Eck}$			
140	77	154	60	142	60	128	60	127		115	$n_{2th}$			
											$M_2$			
											$c$	0.86	594	28.389
											$n_{2Eck}$			
											$n_{2th}$			
203	369	301	250	203	439	384		473			$M_2$			
2.5	1.6	1.6	2.4	2.5	1.4	1.4		1.1			$c$	0.86	607	28.389
124	69	143	53	127	53	114		114			$n_{2Eck}$			
124	69	123	53	126	53	113		103			$n_{2th}$			
											$M_2$			
											$c$	0.58	550	32.800
											$n_{2Eck}$			
											$n_{2th}$			
235	427	348									$M_2$			
2.3	1.5	1.5									$c$	0.58	641	32.800
108	60	124									$n_{2Eck}$			
107	59	119									$n_{2th}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
36.951	611	0.56	$M_2$				107	132	158	193	151	356	284
			c			4.6	3.7	3.1	3.1	3.2	1.7	1.9	
			$n_{2 \text{ Eck}}$			102	110	110	53	110	41	81	
			$n_{2 \text{ th}}$			101	110	110	53	110	41	81	
40.800	386	0.43	$M_2$		57								
			c		5.3								
			$n_{2 \text{ Eck}}$		99								
			$n_{2 \text{ th}}$		99								
40.800	571	0.43	$M_2$			87	119	147	175				
			c			5.1	3.9	3.1	2.6				
			$n_{2 \text{ Eck}}$			99	92	99	99				
			$n_{2 \text{ th}}$			99	92	99	99				
40.800	657	0.43	$M_2$							213	166	393	314
			c							3.0	3.2	1.7	1.9
			$n_{2 \text{ Eck}}$							48	99	37	74
			$n_{2 \text{ th}}$							48	99	37	74
45.963	435	0.41	$M_2$		64								
			c		5.3								
			$n_{2 \text{ Eck}}$		88								
			$n_{2 \text{ th}}$		88								
45.963	613	0.41	$M_2$			98	134	166	198	241	189	444	355
			c			4.9	3.7	3.0	2.5	2.5	2.6	1.4	1.6
			$n_{2 \text{ Eck}}$			88	82	88	88	42	88	33	65
			$n_{2 \text{ th}}$			88	82	88	88	42	88	33	65
52.800	400	0.26	$M_2$	59	74								
			c	5.3	4.3								
			$n_{2 \text{ Eck}}$	77	77								
			$n_{2 \text{ th}}$	77	77								
52.800	592	0.26	$M_2$			114	155	192	228				
			c			4.1	3.1	2.5	2.1				
			$n_{2 \text{ Eck}}$			77	71	77	77				
			$n_{2 \text{ th}}$			77	71	77	77				
59.481	451	0.25	$M_2$	66	84								
			c	5.3	4.3								
			$n_{2 \text{ Eck}}$	68	68								
			$n_{2 \text{ th}}$	68	68								
59.481	615	0.25	$M_2$			129	175	216	257				
			c			3.8	2.9	2.3	1.9				
			$n_{2 \text{ Eck}}$			68	63	68	68				
			$n_{2 \text{ th}}$			68	63	68	68				
64.080	405	0.19	$M_2$	72	91								
			c	4.4	3.5								
			$n_{2 \text{ Eck}}$	63	63								
			$n_{2 \text{ th}}$	63	63								
64.080	576	0.19	$M_2$			140	190	234	278				
			c			3.3	2.5	2.0	1.7				
			$n_{2 \text{ Eck}}$			63	59	63	63				
			$n_{2 \text{ th}}$			63	59	63	63				
72.189	456	0.19	$M_2$	81	102								
			c	4.9	3.9								
			$n_{2 \text{ Eck}}$	56	56								
			$n_{2 \text{ th}}$	56	56								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

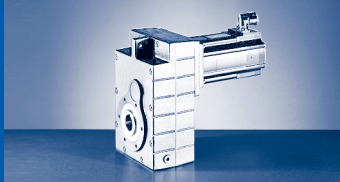


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
266	483	393									c	0.56	611	36.951
1.9	1.3	1.3									$n_{2 \text{ Eck}}$			
95	53	110									$n_{2 \text{ th}}$			
95	53	99									$M_2$			
											c	0.43	386	40.800
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.43	571	40.800
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
294	533	434									$M_2$			
1.9	1.2	1.2									c	0.43	657	40.800
86	48	99									$n_{2 \text{ Eck}}$			
86	48	99									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.41	435	45.963
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
333	602	490									$M_2$			
1.6	1.0	1.0									c	0.41	613	45.963
77	42	88									$n_{2 \text{ Eck}}$			
77	42	86									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.26	400	52.800
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.26	592	52.800
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.25	451	59.481
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.25	615	59.481
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.19	405	64.080
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.19	576	64.080
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.19	456	72.189
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

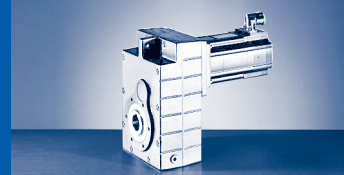
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
72.189	616	0.19	$M_2$			157	213	263	313				
			c			3.5	2.6	2.1	1.8				
			$n_{2 \text{ Eck}}$			56	52	56	56				
			$n_{2 \text{ th}}$			56	52	56	56				
81.000	400	0.13	$M_2$	92	115								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	50	50								
			$n_{2 \text{ th}}$	50	50								
91.250	451	0.12	$M_2$	103	130								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	44	44								
			$n_{2 \text{ th}}$	44	44								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

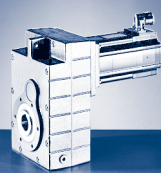


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c			
											$n_{2 \text{ Eck}}$	0.19	616	72.189
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	0.13	400	81.000
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	0.12	451	91.250
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

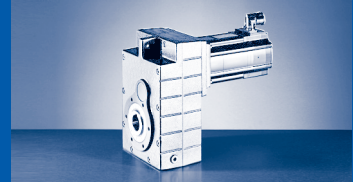
## GFL□□-□S (MCS)

$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
66.213	497	0.29	$M_2$		72	91	142	193	238	283
			c		5.9	4.7	3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$		61	61	61	57	61	61
			$n_{2 \text{ th}}$		61	61	61	57	61	61
72.000	497	0.26	$M_2$		79	100	155	211	260	308
			c		5.4	4.4	2.8	2.2	1.7	1.5
			$n_{2 \text{ Eck}}$		56	56	56	52	56	56
			$n_{2 \text{ th}}$		56	56	56	52	56	56
81.111	497	0.26	$M_2$		89	113	175	238	293	348
			c		4.8	3.9	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$		50	50	50	46	50	50
			$n_{2 \text{ th}}$		50	50	50	46	50	50
88.200	488	0.19	$M_2$		98	123	191	259	319	379
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		46	46	46	43	46	46
			$n_{2 \text{ th}}$		46	46	46	43	46	46
99.361	550	0.19	$M_2$		110	139	215	292	359	427
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		41	41	41	38	41	41
			$n_{2 \text{ th}}$		41	41	41	38	41	41
116.571	528	0.09	$M_2$		130	164				
			c		3.6	2.9				
			$n_{2 \text{ Eck}}$		35	35				
			$n_{2 \text{ th}}$		35	35				
131.323	595	0.21	$M_2$		147	185	286	387	476	
			c		3.6	2.9	1.9	1.4	1.1	
			$n_{2 \text{ Eck}}$		31	31	31	29	31	
			$n_{2 \text{ th}}$		31	31	31	29	31	
144.320	560	0.11	$M_2$		162	204				
			c		3.1	2.5				
			$n_{2 \text{ Eck}}$		28	28				
			$n_{2 \text{ th}}$		28	28				
162.583	613	0.11	$M_2$	88	183	230				
			c	6.0	3.0	2.4				
			$n_{2 \text{ Eck}}$	25	25	25				
			$n_{2 \text{ th}}$	25	25	25				
179.520	605	0.10	$M_2$	98	202	254				
			c	5.3	2.7	2.1				
			$n_{2 \text{ Eck}}$	23	23	23				
			$n_{2 \text{ th}}$	23	23	23				
202.237	611	0.10	$M_2$	111	229	287				
			c	4.8	2.4	1.9				
			$n_{2 \text{ Eck}}$	20	20	20				
			$n_{2 \text{ th}}$	20	20	20				
231.200	634	0.07	$M_2$	128	262	329				
			c	4.3	2.2	1.7				
			$n_{2 \text{ Eck}}$	18	18	18				
			$n_{2 \text{ th}}$	18	18	18				
260.457	613	0.07	$M_2$	145	296	371				
			c	3.7	1.9	1.5				
			$n_{2 \text{ Eck}}$	16	16	16				
			$n_{2 \text{ th}}$	16	16	16				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

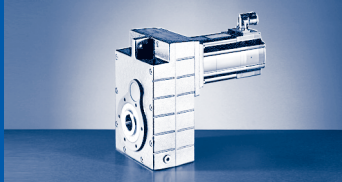


$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
299.200	613	0.06	$M_2$	168	341	428				
			c	3.2	1.6	1.3				
			$n_{2 \text{ Eck}}$	14	14	14				
			$n_{2 \text{ th}}$	14	14	14				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

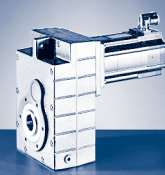
$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
3.350	334	19.57	$M_2$ c $n_2$ Eck $n_2$ th													
3.350	554	19.57	$M_2$ c $n_2$ Eck $n_2$ th													
4.643	410	11.99	$M_2$ c $n_2$ Eck $n_2$ th													
4.643	637	11.99	$M_2$ c $n_2$ Eck $n_2$ th													
5.159	514	11.12	$M_2$ c $n_2$ Eck $n_2$ th													
5.159	850	11.12	$M_2$ c $n_2$ Eck $n_2$ th													
5.695	568	18.09	$M_2$ c $n_2$ Eck $n_2$ th													
5.695	914	18.09	$M_2$ c $n_2$ Eck $n_2$ th													
6.400	296	9.83	$M_2$ c $n_2$ Eck $n_2$ th							60	48	45	82	67		
										4.8	4.7	4.8	3.2	3.1		
										234	469	551	305	633		
										234	457	458	305	420		
6.400	460	9.83	$M_2$ c $n_2$ Eck $n_2$ th													
6.400	662	9.83	$M_2$ c $n_2$ Eck $n_2$ th													
7.150	631	11.88	$M_2$ c $n_2$ Eck $n_2$ th													
7.150	918	11.88	$M_2$ c $n_2$ Eck $n_2$ th													

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



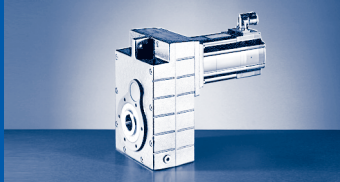


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
		43	72	54	95	66							c	19.57	334	3.350
		5.7	4.5	4.6	3.4	3.8							$n_2$ Eck			
		963	448	963	403	963							$n_2$ th			
		671	448	643	403	615										
									126	91	162	101	$M_2$	19.57	554	3.350
									4.3	4.7	3.3	4.2	c			
									425	896	403	896	$n_2$ Eck			
									425	644	403	630	$n_2$ th			
	69	60	100	75	132	92							$M_2$	11.99	410	4.643
	5.7	5.0	4.0	4.1	3.0	3.4							c			
	323	695	323	695	291	695							$n_2$ Eck			
	323	543	323	520	291	498							$n_2$ th			
							116	90	175	127	226	140	$M_2$	11.99	637	4.643
							5.2	5.3	3.5	3.9	2.8	3.5	c			
							307	646	307	646	291	646	$n_2$ Eck			
							307	476	307	476	291	476	$n_2$ th			
		67	111	83	146	102							$M_2$	11.12	514	5.159
		5.7	4.5	4.6	3.4	3.8							c			
		625	291	625	262	625							$n_2$ Eck			
		436	291	417	262	399							$n_2$ th			
									194	140	249	155	$M_2$	11.12	850	5.159
									4.2	4.7	3.3	4.2	c			
									276	582	262	582	$n_2$ Eck			
									276	418	262	409	$n_2$ th			
		74	123	91	162	113							$M_2$	18.09	568	5.695
		5.7	4.5	4.6	3.4	3.8							c			
		566	263	566	237	566							$n_2$ Eck			
		395	263	378	237	362							$n_2$ th			
									214	154	275	171	$M_2$	18.09	914	5.695
									4.1	4.5	3.2	4.1	c			
									250	527	237	527	$n_2$ Eck			
									250	376	237	368	$n_2$ th			
													$M_2$	9.83	296	6.400
													c			
													$n_2$ Eck			
													$n_2$ th			
	96	84	140	104	183	128							$M_2$	9.83	460	6.400
	4.6	4.1	3.2	3.3	2.5	2.7							c			
	234	504	234	504	211	504							$n_2$ Eck			
	234	444	234	426	211	408							$n_2$ th			
							163	126	244	177	313	195	$M_2$	9.83	662	6.400
							4.0	4.0	2.7	2.9	2.1	2.7	c			
							223	469	223	469	211	469	$n_2$ Eck			
							223	345	223	345	211	345	$n_2$ th			
	106	93	155	116	204	142							$M_2$	11.88	631	7.150
	5.7	5.0	4.0	4.1	3.0	3.4							c			
	210	451	210	451	189	451							$n_2$ Eck			
	210	352	210	338	189	323							$n_2$ th			
							180	140	271	196	348	217	$M_2$	11.88	918	7.150
							4.9	5.0	3.3	3.6	2.6	3.3	c			
							199	420	199	420	189	420	$n_2$ Eck			
							199	309	199	309	189	309	$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

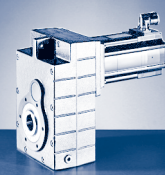
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
8.324	830	13.11	$M_2$ c $n_2$ Eck $n_2$ th													
8.324	993	13.11	$M_2$ c $n_2$ Eck $n_2$ th													
9.379	935	12.04	$M_2$ c $n_2$ Eck $n_2$ th													
9.379	999	12.04	$M_2$ c $n_2$ Eck $n_2$ th													
9.714	475	8.03	$M_2$ c $n_2$ Eck $n_2$ th							90	72	68	124	101		
										5.0	5.0	5.1	3.4	3.3		
										154	309	363	201	417		
										154	293	293	201	268		
9.714	745	8.03	$M_2$ c $n_2$ Eck $n_2$ th													
9.714	969	8.03	$M_2$ c $n_2$ Eck $n_2$ th													
11.538	1018	8.52	$M_2$ c $n_2$ Eck $n_2$ th													
11.538	1080	8.52	$M_2$ c $n_2$ Eck $n_2$ th													
13.000	1089	7.97	$M_2$ c $n_2$ Eck $n_2$ th													
14.200	694	6.35	$M_2$ c $n_2$ Eck $n_2$ th							132	106	99	181	148		
										5.0	5.0	5.1	3.4	3.3		
										106	211	248	137	285		
										106	200	201	137	184		
14.200	1089	6.35	$M_2$ c $n_2$ Eck $n_2$ th													
14.200	1143	6.35	$M_2$ c $n_2$ Eck $n_2$ th													

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

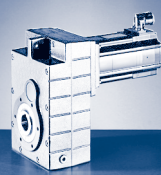


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
		108	179	134	236	165							$c$	13.11	830	8.324
		5.7	4.5	4.6	3.4	3.8							$n_2 \text{ Eck}$			
		387	180	387	162	387							$n_2 \text{ th}$			
		270	180	259	162	247										
							210	163	316	229	406	253	$M_2$	13.11	993	8.324
							4.6	4.7	3.1	3.4	2.4	3.1	$c$			
							171	360	171	360	162	360	$n_2 \text{ Eck}$			
							171	259	171	241	162	235	$n_2 \text{ th}$			
		121	202	151	266	186							$M_2$	12.04	935	9.379
		5.7	4.5	4.6	3.4	3.8							$c$			
		344	160	344	144	344							$n_2 \text{ Eck}$			
		240	160	229	144	219							$n_2 \text{ th}$			
							238	185	357	258	459	286	$M_2$	12.04	999	9.379
							4.1	4.2	2.8	3.0	2.2	2.7	$c$			
							152	320	152	320	144	320	$n_2 \text{ Eck}$			
							152	224	152	208	144	203	$n_2 \text{ th}$			
													$M_2$	8.03	475	9.714
													$c$			
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
	145	127	211	158	278	194							$M_2$	8.03	745	9.714
	4.9	4.4	3.4	3.6	2.6	2.9							$c$			
	154	332	154	332	139	332							$n_2 \text{ Eck}$			
	154	285	154	273	139	261							$n_2 \text{ th}$			
							247	192	371	268	476	297	$M_2$	8.03	969	9.714
							3.8	3.9	2.6	2.8	2.0	2.6	$c$			
							147	309	147	309	139	309	$n_2 \text{ Eck}$			
							147	228	147	228	139	228	$n_2 \text{ th}$			
	170	150	250	186	329	229							$M_2$	8.52	1018	11.538
	5.7	5.0	4.0	4.1	3.0	3.4							$c$			
	130	280	130	280	117	280							$n_2 \text{ Eck}$			
	130	218	130	209	117	200							$n_2 \text{ th}$			
							294	229	441	319	566	353	$M_2$	8.52	1080	11.538
							3.6	3.7	2.4	2.6	1.9	2.4	$c$			
							124	260	124	260	117	260	$n_2 \text{ Eck}$			
							124	192	124	190	117	186	$n_2 \text{ th}$			
	193	170	282	210	371	259	333	259	498	361	639	399	$M_2$	7.97	1089	13.000
	5.4	4.8	3.8	3.9	2.9	3.2	3.2	3.3	2.2	2.4	1.7	2.1	$c$			
	115	248	115	248	104	248	110	231	110	231	104	231	$n_2 \text{ Eck}$			
	115	192	115	184	104	176	110	170	110	164	104	160	$n_2 \text{ th}$			
													$M_2$	6.35	694	14.200
													$c$			
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
	211	186	309	231	406	284							$M_2$	6.35	1089	14.200
	4.9	4.4	3.4	3.6	2.6	2.9							$c$			
	106	227	106	227	95	227							$n_2 \text{ Eck}$			
	106	195	106	187	95	179							$n_2 \text{ th}$			
							364	283	545	394	698	436	$M_2$	6.35	1143	14.200
							3.1	3.1	2.1	2.3	1.6	2.1	$c$			
							100	211	100	211	95	211	$n_2 \text{ Eck}$			
							100	156	100	156	95	156	$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

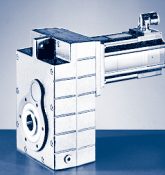
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
15.904	735	5.27	$M_2$							148	119	111	204	166	
			c							4.8	4.7	4.8	3.2	3.1	
			$n_{2 \text{ Eck}}$							94	189	222	123	255	
			$n_{2 \text{ th}}$							94	184	184	123	169	
15.904	1143	5.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
15.904	1179	5.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
17.920	829	4.98	$M_2$							167	134	125	229	187	
			c							4.8	4.7	4.8	3.2	3.1	
			$n_{2 \text{ Eck}}$							84	167	197	109	226	
			$n_{2 \text{ th}}$							84	163	164	109	150	
17.920	1189	4.98	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
20.286	614	3.47	$M_2$			71	85								
			c			5.9	5.0								
			$n_{2 \text{ Eck}}$			200	200								
			$n_{2 \text{ th}}$			175	170								
20.286	789	3.47	$M_2$							191	153	143	261	213	
			c							4.0	4.0	4.0	2.7	2.6	
			$n_{2 \text{ Eck}}$							74	148	174	96	200	
			$n_{2 \text{ th}}$							74	148	163	96	150	
20.286	1092	3.47	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
22.857	691	3.27	$M_2$			80	96								
			c			5.9	5.0								
			$n_{2 \text{ Eck}}$			177	177								
			$n_{2 \text{ th}}$			155	151								
22.857	890	3.27	$M_2$							215	172	161	294	240	
			c							4.0	4.0	4.0	2.7	2.6	
			$n_{2 \text{ Eck}}$							66	131	154	85	177	
			$n_{2 \text{ th}}$							66	131	145	85	133	
22.857	1231	3.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
24.850	831	2.65	$M_2$							235	187	175	320	261	
			c							3.5	3.9	3.9	2.6	2.6	
			$n_{2 \text{ Eck}}$							60	121	142	79	163	
			$n_{2 \text{ th}}$							60	121	142	78	133	
24.850	1289	2.65	$M_2$												211
			c												5.8
			$n_{2 \text{ Eck}}$												60
			$n_{2 \text{ th}}$												60

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

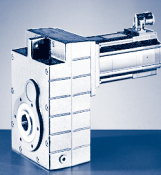


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$l_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$l_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c			
													$n_2$ Eck	5.27	735	15.904
													$n_2$ th			
	238	209	347	259	456	318							$M_2$ c			
	4.6	4.1	3.2	3.3	2.5	2.7							$n_2$ Eck	5.27	1143	15.904
	94	203	94	203	85	203							$n_2$ th			
	94	179	94	171	85	164										
							409	318	611	442	783	489	$M_2$ c			
							2.8	2.9	1.9	2.1	1.5	1.9	$n_2$ Eck	5.27	1179	15.904
							90	189	90	189	85	189	$n_2$ th			
							90	139	90	139	85	139				
													$M_2$ c			
													$n_2$ Eck	4.98	829	17.920
													$n_2$ th			
	269	236	392	293	515	359	462	359	690	500	884	552	$M_2$ c			
	4.3	3.8	3.0	3.1	2.3	2.5	2.5	2.6	1.7	1.9	1.3	1.7	$n_2$ Eck	4.98	1189	17.920
	84	180	84	180	75	180	80	167	80	167	75	167	$n_2$ th			
	84	156	84	150	75	143	80	123	80	123	75	123				
													$M_2$ c			
													$n_2$ Eck	3.47	614	20.286
													$n_2$ th			
													$M_2$ c			
													$n_2$ Eck	3.47	789	20.286
													$n_2$ th			
141	307	270	446	333	585	409							$M_2$ c			
5.5	3.5	3.1	2.4	2.5	1.9	2.1							$n_2$ Eck	3.47	1092	20.286
178	74	159	74	159	67	159							$n_2$ th			
173	74	155	74	148	67	142										
													$M_2$ c			
													$n_2$ Eck	3.27	691	22.857
													$n_2$ th			
													$M_2$ c			
													$n_2$ Eck	3.27	890	22.857
													$n_2$ th			
159	346	304	503	376	659	461							$M_2$ c			
5.5	3.5	3.1	2.4	2.5	1.9	2.1							$n_2$ Eck	3.27	1231	22.857
158	66	141	66	141	59	141							$n_2$ th			
154	66	137	66	131	59	126										
													$M_2$ c			
													$n_2$ Eck	2.65	831	24.850
													$n_2$ th			
	376	329	547	407	717	500							$M_2$ c			
	3.3	3.4	2.3	2.7	1.8	2.2							$n_2$ Eck	2.65	1289	24.850
	60	130	60	130	54	130							$n_2$ th			
	60	130	60	130	54	130										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

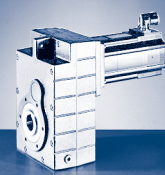
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
28.000	936	2.53	$M_2$							265	211	198	361	294		
			c								3.5	3.9	3.9	2.6	2.6	
			$n_{2 \text{ Eck}}$								54	107	126	70	145	
			$n_{2 \text{ th}}$							54	107	126	70	118		
28.000	1242	2.53	$M_2$												240	
			c												5.0	
			$n_{2 \text{ Eck}}$												54	
			$n_{2 \text{ th}}$											54		
32.344	674	1.69	$M_2$		92	115	137									
			c		5.8	4.6	3.9									
			$n_{2 \text{ Eck}}$		116	125	125									
			$n_{2 \text{ th}}$		116	125	125									
32.344	868	1.69	$M_2$					165	129	308	246	230	419	341		
			c					5.0	5.3	2.8	3.1	3.2	2.1	2.1		
			$n_{2 \text{ Eck}}$					60	125	46	93	109	60	125		
			$n_{2 \text{ th}}$					60	125	46	93	109	60	120		
32.344	1346	1.69	$M_2$												278	
			c												4.7	
			$n_{2 \text{ Eck}}$												46	
			$n_{2 \text{ th}}$											46		
36.444	760	1.61	$M_2$		104	129	154									
			c		5.8	4.6	3.9									
			$n_{2 \text{ Eck}}$		103	111	111									
			$n_{2 \text{ th}}$		103	111	111									
36.444	978	1.61	$M_2$					186	145	347	277	259	472	385		
			c					5.0	5.3	2.8	3.1	3.2	2.1	2.1		
			$n_{2 \text{ Eck}}$					54	111	41	82	97	54	111		
			$n_{2 \text{ th}}$					54	111	41	82	97	54	106		
36.444	1248	1.61	$M_2$												316	
			c												3.8	
			$n_{2 \text{ Eck}}$												41	
			$n_{2 \text{ th}}$											41		
39.642	707	1.25	$M_2$		114	142	169									
			c		5.0	4.0	3.3									
			$n_{2 \text{ Eck}}$		95	102	102									
			$n_{2 \text{ th}}$		95	102	102									
39.642	910	1.25	$M_2$					204	159	379	302	283	515	420		
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8		
			$n_{2 \text{ Eck}}$					49	102	38	76	89	49	102		
			$n_{2 \text{ th}}$					49	102	38	76	89	49	102		
39.642	1378	1.25	$M_2$												343	
			c												3.9	
			$n_{2 \text{ Eck}}$												38	
			$n_{2 \text{ th}}$											38		
44.667	797	1.20	$M_2$		129	160	190									
			c		5.0	4.0	3.3									
			$n_{2 \text{ Eck}}$		84	91	91									
			$n_{2 \text{ th}}$		84	91	91									
44.667	1025	1.20	$M_2$					230	180	427	341	319	581	473		
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8		
			$n_{2 \text{ Eck}}$					44	91	34	67	79	44	91		
			$n_{2 \text{ th}}$					44	91	34	67	79	44	91		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

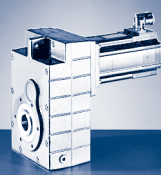


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c	2.53	936	28.000
													$n_2$ Eck			
													$n_2$ th			
195	426	373	618	461	811	565							$M_2$ c	2.53	1242	28.000
5.2	2.9	2.9	2.0	2.3	1.5	1.9							$n_2$ Eck			
129	54	115	54	115	48	115							$n_2$ th			
128	54	115	54	115	48	111							$M_2$ c	1.69	674	32.344
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.69	868	32.344
													$n_2$ Eck			
													$n_2$ th			
226	493	432	715	533	937	654							$M_2$ c	1.69	1346	32.344
4.9	2.7	2.7	1.9	2.2	1.4	1.8							$n_2$ Eck			
111	46	100	46	100	42	100							$n_2$ th			
111	46	100	46	100	42	100							$M_2$ c	1.61	760	36.444
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.61	978	36.444
													$n_2$ Eck			
													$n_2$ th			
257	559	489	809	603	1059	739							$M_2$ c	1.61	1248	36.444
4.0	2.2	2.2	1.5	1.8	1.2	1.5							$n_2$ Eck			
99	41	89	41	89	37	89							$n_2$ th			
99	41	88	41	88	37	88							$M_2$ c	1.25	707	39.642
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.25	910	39.642
													$n_2$ Eck			
													$n_2$ th			
279	608	532	880	656	1152	804							$M_2$ c	1.25	1378	39.642
4.1	2.2	2.3	1.6	1.8	1.2	1.5							$n_2$ Eck			
91	38	81	38	81	34	81							$n_2$ th			
91	38	81	38	81	34	81							$M_2$ c	1.20	797	44.667
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.20	1025	44.667
													$n_2$ Eck			
													$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

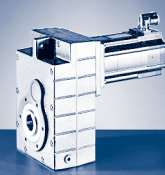
$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15			
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500			
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20			
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500			
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5			
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45			
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22			
44.667	1258	1.20	$M_2$													390		
			c														3.2	
			$n_{2 \text{ Eck}}$															34
			$n_{2 \text{ th}}$															34
52.067	726	0.78	$M_2$	111	152	188	224											
			c	5.1	3.9	3.1	2.6											
			$n_{2 \text{ Eck}}$	78	72	78	78											
			$n_{2 \text{ th}}$	78	72	78	78											
52.067	935	0.78	$M_2$					271	212	501	400	375	679	554				
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4				
			$n_{2 \text{ Eck}}$					38	78	29	58	68	38	78				
			$n_{2 \text{ th}}$					37	78	29	58	68	37	78				
58.667	819	0.75	$M_2$	125	171	212	252											
			c	5.1	3.9	3.1	2.6											
			$n_{2 \text{ Eck}}$	69	64	69	69											
			$n_{2 \text{ th}}$	69	64	69	69											
58.667	1054	0.75	$M_2$					305	238	564	450	422	765	624				
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4				
			$n_{2 \text{ Eck}}$					33	69	26	51	60	33	69				
			$n_{2 \text{ th}}$					33	69	26	51	60	33	69				
63.190	735	0.57	$M_2$	136	186	229	273											
			c	4.3	3.2	2.6	2.2											
			$n_{2 \text{ Eck}}$	64	59	64	64											
			$n_{2 \text{ th}}$	64	59	64	64											
63.190	946	0.57	$M_2$					331	258	610	487	456	826	673				
			c					2.8	2.9	1.5	1.7	1.8	1.1	1.2				
			$n_{2 \text{ Eck}}$					31	64	24	48	56	31	64				
			$n_{2 \text{ th}}$					31	64	24	47	56	31	64				
71.200	828	0.56	$M_2$	153	208	257	306											
			c	4.7	3.6	2.9	2.4											
			$n_{2 \text{ Eck}}$	57	53	57	57											
			$n_{2 \text{ th}}$	57	53	57	57											
71.200	1066	0.56	$M_2$					373	290	687	547	513	931	758				
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3				
			$n_{2 \text{ Eck}}$					27	57	21	42	50	27	57				
			$n_{2 \text{ th}}$					27	57	21	42	50	27	57				
79.875	744	0.37	$M_2$	173	236	291	345											
			c	3.8	2.9	2.3	1.9											
			$n_{2 \text{ Eck}}$	51	47	51	51											
			$n_{2 \text{ th}}$	51	47	51	51											
90.000	839	0.36	$M_2$	195	265	327	389											
			c	3.8	2.9	2.3	1.9											
			$n_{2 \text{ Eck}}$	45	42	45	45											
			$n_{2 \text{ th}}$	45	42	45	45											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



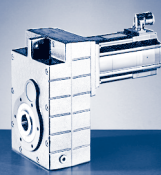


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
317	688	602	994	742		908							c	1.20	1258	44.667
3.3	1.8	1.8	1.3	1.5		1.2							$n_2 \text{ Eck}$			
81	34	72	34	72		72							$n_2 \text{ th}$			
80	34	72	34	72		72							$M_2$			
													c	0.78	726	52.067
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.78	935	52.067
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.75	819	58.667
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.75	1054	58.667
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.57	735	63.190
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.57	946	63.190
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.56	828	71.200
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.56	1066	71.200
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.37	744	79.875
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
													$M_2$			
													c	0.36	839	90.000
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
65.306	883	0.79	$M_2$				137	187	231	275
			c				5.6	4.2	3.4	2.8
			$n_2$ Eck				62	57	62	62
			$n_2$ th				62	57	62	62
72.452	869	0.89	$M_2$				153	208	258	307
			c				4.9	3.8	3.0	2.5
			$n_2$ Eck				56	52	56	56
			$n_2$ th				56	52	56	56
81.636	979	0.88	$M_2$				172	235	290	345
			c				4.9	3.8	3.0	2.5
			$n_2$ Eck				50	46	50	50
			$n_2$ th				50	46	50	50
92.413	961	0.61	$M_2$				196	267	330	392
			c				4.3	3.3	2.6	2.2
			$n_2$ Eck				44	41	44	44
			$n_2$ th				44	41	44	44
104.127	1082	0.60	$M_2$				221	301	372	442
			c				4.3	3.3	2.6	2.2
			$n_2$ Eck				39	36	39	39
			$n_2$ th				39	36	39	39
113.206	1040	0.45	$M_2$			154	242	329	406	482
			c			5.8	3.8	2.9	2.3	1.9
			$n_2$ Eck			36	36	33	36	36
			$n_2$ th			36	36	33	36	36
127.556	1171	0.44	$M_2$			174	272	370	457	543
			c			5.8	3.8	2.9	2.3	1.9
			$n_2$ Eck			32	32	29	32	32
			$n_2$ th			32	32	29	32	32
147.347	1140	0.28	$M_2$			203	316	430	530	630
			c			4.9	3.2	2.4	1.9	1.6
			$n_2$ Eck			28	28	26	28	28
			$n_2$ th			27	27	25	27	27
166.025	1248	0.27	$M_2$		181	229	357	485	597	710
			c		5.9	4.8	3.1	2.4	1.9	1.6
			$n_2$ Eck		24	24	24	23	24	24
			$n_2$ th		24	24	24	23	24	24
183.285	1236	0.19	$M_2$		201	254	395	537	661	785
			c		5.3	4.3	2.8	2.1	1.7	1.4
			$n_2$ Eck		22	22	22	21	22	22
			$n_2$ th		22	22	22	20	22	22
206.519	1248	0.19	$M_2$		227	287	447	606	746	886
			c		4.8	3.8	2.5	1.9	1.5	1.3
			$n_2$ Eck		20	20	20	18	20	20
			$n_2$ th		20	20	20	18	20	20
224.636	1343	0.18	$M_2$		248	313	486	659	812	963
			c		4.7	3.8	2.5	1.9	1.5	1.3
			$n_2$ Eck		18	18	18	17	18	18
			$n_2$ th		18	18	18	17	18	18
253.111	1258	0.18	$M_2$		281	355	550	745	917	1088
			c		3.9	3.1	2.1	1.6	1.2	1.1
			$n_2$ Eck		16	16	16	15	16	16
			$n_2$ th		16	16	16	15	16	16

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

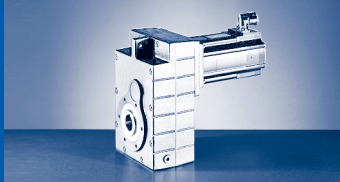


$M_{2GN} \leq 1378 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL07-3S			
...500	...500	...500	...500	...500	...500	...500				
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$M_1$	$J_G$	$M_{2GN}$	$i$
1950	4050	1500	3000	3525	1950	4050	$n_1$			
5.2	8.8	7.6	10.5		11.8		$I_{M230}$			
2.6	4.5	3.8		5.7	5.9	10.2	$I_{M400}$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$P_N$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$J_M$			
338	263	621	495	464	842	685	$M_2$			
2.6	3.0	1.4	1.8	1.8	1.1	1.2	c	0.79	883	65.306
30	62	23	46	54	30	62	$n_{2 \text{ Eck}}$			
30	62	23	46	54	30	62	$n_{2 \text{ th}}$			
376	293	691	551	516		761	$M_2$			
2.3	2.6	1.3	1.6	1.6		1.0	c	0.89	869	72.452
27	56	21	41	49		56	$n_{2 \text{ Eck}}$			
27	56	21	41	49		46	$n_{2 \text{ th}}$			
423	330	778	620	582		858	$M_2$			
2.3	2.6	1.3	1.6	1.6		1.0	c	0.88	979	81.636
24	50	18	37	43		50	$n_{2 \text{ Eck}}$			
24	50	18	37	43		41	$n_{2 \text{ th}}$			
481	375	882	704	660			$M_2$			
2.0	2.3	1.1	1.4	1.4			c	0.61	961	92.413
21	44	16	33	38			$n_{2 \text{ Eck}}$			
21	44	16	32	38			$n_{2 \text{ th}}$			
542	422	994	793	743			$M_2$			
2.0	2.3	1.1	1.4	1.4			c	0.60	1082	104.127
19	39	14	29	34			$n_{2 \text{ Eck}}$			
19	39	14	29	34			$n_{2 \text{ th}}$			
590	460		864	810			$M_2$			
1.8	2.0		1.2	1.2			c	0.45	1040	113.206
17	36		27	31			$n_{2 \text{ Eck}}$			
17	36		27	31			$n_{2 \text{ th}}$			
665	519		973	912			$M_2$			
1.8	2.0		1.2	1.2			c	0.44	1171	127.556
15	32		24	28			$n_{2 \text{ Eck}}$			
15	32		24	28			$n_{2 \text{ th}}$			
							$M_2$			
							c	0.28	1140	147.347
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.27	1248	166.025
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.19	1236	183.285
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.19	1248	206.519
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.18	1343	224.636
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.18	1258	253.111
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
290.706	1378	0.11	$M_2$		324	408				
			c		3.7	3.0				
			$n_{2 \text{ Eck}}$		14	14				
			$n_{2 \text{ th}}$		14	14				
327.556	1258	0.11	$M_2$		368	463				
			c		3.0	2.4				
			$n_{2 \text{ Eck}}$		12	12				
			$n_{2 \text{ th}}$		12	12				
352.811	1378	0.08	$M_2$		396	498				
			c		3.1	2.5				
			$n_{2 \text{ Eck}}$		12	12				
			$n_{2 \text{ th}}$		11	11				
397.533	1258	0.08	$M_2$	218	449	564				
			c	5.0	2.5	2.0				
			$n_{2 \text{ Eck}}$	10	10	10				
			$n_{2 \text{ th}}$	10	10	10				
430.222	1270	0.10	$M_2$	237	487	611				
			c	4.7	2.3	1.9				
			$n_{2 \text{ Eck}}$	9	9	9				
			$n_{2 \text{ th}}$	9	9	9				
522.133	1270	0.08	$M_2$	291	593	744				
			c	3.8	1.9	1.5				
			$n_{2 \text{ Eck}}$	8	8	8				
			$n_{2 \text{ th}}$	8	8	8				
562.391	1128	0.07	$M_2$	315	641	804				
			c	3.2	1.6	1.3				
			$n_{2 \text{ Eck}}$	7	7	7				
			$n_{2 \text{ th}}$	7	7	7				
633.680	1220	0.07	$M_2$	356	723	906				
			c	3.0	1.5	1.2				
			$n_{2 \text{ Eck}}$	6	6	6				
			$n_{2 \text{ th}}$	6	6	6				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

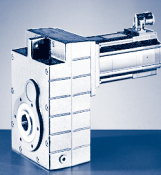


$M_{2GN} \leq 1378 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL07-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c $n_2$ Eck $n_2$ th	0.11	1378	290.706
							$M_2$ c $n_2$ Eck $n_2$ th	0.11	1258	327.556
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1378	352.811
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1258	397.533
							$M_2$ c $n_2$ Eck $n_2$ th	0.10	1270	430.222
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1270	522.133
							$M_2$ c $n_2$ Eck $n_2$ th	0.07	1128	562.391
							$M_2$ c $n_2$ Eck $n_2$ th	0.07	1220	633.680

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

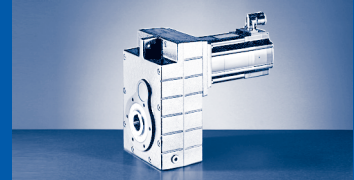
## GFL□□-□S (MCS)

$$M_{2GN} \leq 2767 \text{ Nm}$$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	M <sub>2GN</sub>	J <sub>G</sub>	M <sub>1</sub>	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			n <sub>1</sub>	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			I <sub>M230</sub>	5.2	8.8	7.6	10.5		11.8				
			I <sub>M400</sub>	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			P <sub>N</sub>	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			J <sub>M</sub>	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
6.864	1207	41.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
7.466	1313	38.70	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
9.010	860	26.80	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
9.010	1336	26.80	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
9.799	935	25.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
9.799	1453	25.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
11.167	976	19.50	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										165 5.6 134 134
11.167	1516	19.50	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
12.307	2165	27.60	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
14.333	1368	20.00	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
14.333	2125	20.00	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
16.333	1427	15.50	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										241 5.6 92 92
16.333	2217	15.50	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]

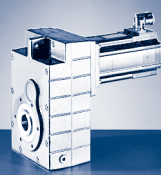


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
							257	185	331	205	c	41.30	1207	6.864
							4.5	5.0	3.6	4.5	$n_{2\text{Eck}}$			
							208	437	197	437	$n_{2\text{th}}$			
							208	294	197	288				
							279	201	360	223	$M_2$	38.70	1313	7.466
							4.5	5.0	3.6	4.5	c			
							191	402	181	402	$n_{2\text{Eck}}$			
							191	271	181	265	$n_{2\text{th}}$			
117	194	145	256	179							$M_2$	26.80	860	9.010
5.4	4.3	4.4	3.3	3.6							c			
358	167	358	150	358							$n_{2\text{Eck}}$			
259	166	249	150	238							$n_{2\text{th}}$			
					225	175	339	245	437	272	$M_2$	26.80	1336	9.010
					5.7	5.8	3.8	4.2	3.0	3.8	c			
					158	333	158	333	150	333	$n_{2\text{Eck}}$			
					158	245	158	245	150	241	$n_{2\text{th}}$			
127	211	158	279	194							$M_2$	25.30	935	9.799
5.4	4.3	4.4	3.3	3.6							c			
329	153	329	138	329							$n_{2\text{Eck}}$			
239	153	229	138	219							$n_{2\text{th}}$			
					244	190	369	267	475	295	$M_2$	25.30	1453	9.799
					5.7	5.8	3.8	4.2	3.0	3.8	c			
					145	306	145	306	138	306	$n_{2\text{Eck}}$			
					145	226	145	226	138	221	$n_{2\text{th}}$			
145	242	180	318	222							$M_2$	19.50	976	11.167
5.0	3.9	4.1	3.0	3.3							c			
289	134	289	121	289							$n_{2\text{Eck}}$			
225	134	216	121	207							$n_{2\text{th}}$			
					280	217	422	305	543	338	$M_2$	19.50	1516	11.167
					5.2	5.3	3.5	3.8	2.7	3.5	c			
					128	269	128	269	121	269	$n_{2\text{Eck}}$			
					128	198	128	198	121	198	$n_{2\text{th}}$			
							460	332	593	368	$M_2$	27.60	2165	12.307
							4.5	5.0	3.6	4.5	c			
							116	244	110	244	$n_{2\text{Eck}}$			
							116	164	110	161	$n_{2\text{th}}$			
186	309	231	407	284							$M_2$	20.00	1368	14.333
5.4	4.3	4.4	3.3	3.6							c			
225	105	225	94	225							$n_{2\text{Eck}}$			
163	105	156	94	150							$n_{2\text{th}}$			
					357	278	540	390	695	432	$M_2$	20.00	2125	14.333
					5.7	5.8	3.8	4.2	3.0	3.8	c			
					99	209	99	209	94	209	$n_{2\text{Eck}}$			
					99	154	99	154	94	151	$n_{2\text{th}}$			
213	354	264	466	325							$M_2$	15.50	1427	16.333
5.0	3.9	4.1	3.0	3.3							c			
198	92	198	83	198							$n_{2\text{Eck}}$			
154	92	147	83	141							$n_{2\text{th}}$			
					409	318	618	446	794	494	$M_2$	15.50	2217	16.333
					5.2	5.3	3.5	3.8	2.7	3.5	c			
					87	184	87	184	83	184	$n_{2\text{Eck}}$			
					87	135	87	135	83	135	$n_{2\text{th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

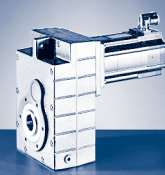
$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	M <sub>2GN</sub>	J <sub>G</sub>	M <sub>1</sub>	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			n <sub>1</sub>	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			I <sub>M230</sub>	5.2	8.8	7.6	10.5		11.8				
			I <sub>M400</sub>	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			P <sub>N</sub>	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			J <sub>M</sub>	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
18.407	1608	14.60	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										272 5.6 82 81
18.407	2480	14.60	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
19.667	962	12.10	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th			183 5.0 76 76	146 5.0 153 145	137 5.1 179 145	251 3.4 99 99	205 3.3 206 132			
19.667	1506	12.10	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										293 4.9 76 76
19.667	2339	12.10	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
22.164	1084	11.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th			206 5.0 68 68	165 5.0 135 128	155 5.1 159 129	283 3.4 88 88	231 3.3 183 118			
22.164	1697	11.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										330 4.9 68 68
22.164	2612	11.30	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
24.111	1585	9.04	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										362 4.2 62 62
24.111	2463	9.04	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
27.173	1786	8.63	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										408 4.2 55 55
27.173	2767	8.63	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th										
32.667	1074	5.43	M <sub>2</sub> c n <sub>2</sub> Eck n <sub>2</sub> th			309 3.4 46 46	246 3.8 92 92	231 3.9 108 108	421 2.5 60 60	343 2.5 124 100			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



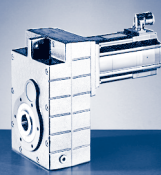


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
240	398	298	525	366							c	14.60	1608	18.407
5.0	3.9	4.1	3.0	3.3							$n_{2 \text{ Eck}}$			
175	82	175	73	175							$n_{2 \text{ th}}$			
137	81	131	73	125										
					462	359	696	503	895	557	$M_2$			
					5.1	5.3	3.5	3.8	2.7	3.4	c	14.60	2480	18.407
					77	163	77	163	73	163	$n_{2 \text{ Eck}}$			
					77	120	77	120	73	120	$n_{2 \text{ th}}$			
											$M_2$			
											c	12.10	962	19.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
258	428	320	563	393							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	12.10	1506	19.667
164	76	164	69	164							$n_{2 \text{ Eck}}$			
141	76	135	69	129							$n_{2 \text{ th}}$			
					496	386	747	540	959	598	$M_2$			
					4.5	4.6	3.1	3.4	2.4	3.0	c	12.10	2339	19.667
					73	153	73	153	69	153	$n_{2 \text{ Eck}}$			
					72	112	72	112	69	112	$n_{2 \text{ th}}$			
											$M_2$			
											c	11.30	1084	22.164
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
291	482	360	634	443							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	11.30	1697	22.164
146	68	146	61	146							$n_{2 \text{ Eck}}$			
125	68	119	61	114							$n_{2 \text{ th}}$			
					560	435	842	609	1081	674	$M_2$			
					4.5	4.6	3.0	3.3	2.4	3.0	c	11.30	2612	22.164
					64	135	64	135	61	135	$n_{2 \text{ Eck}}$			
					64	100	64	100	61	100	$n_{2 \text{ th}}$			
317	527	392	693	482							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	9.04	1585	24.111
134	62	134	56	134							$n_{2 \text{ Eck}}$			
124	62	119	56	114							$n_{2 \text{ th}}$			
					613	473	920	662	1180	733	$M_2$			
					3.9	4.5	2.6	3.3	2.1	3.0	c	9.04	2463	24.111
					59	124	59	124	56	124	$n_{2 \text{ Eck}}$			
					59	92	59	92	56	92	$n_{2 \text{ th}}$			
357	594	442	781	543							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	8.63	1786	27.173
119	55	119	50	119							$n_{2 \text{ Eck}}$			
110	55	105	50	101							$n_{2 \text{ th}}$			
					691	534	1037	747	1330	827	$M_2$			
					3.9	4.5	2.6	3.3	2.1	3.0	c	8.63	2767	27.173
					52	110	52	110	50	110	$n_{2 \text{ Eck}}$			
					52	81	52	81	50	81	$n_{2 \text{ th}}$			
											$M_2$			
											c	5.43	1074	32.667
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

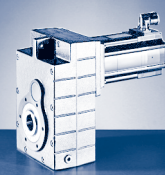
## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00		
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500		
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8						
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6		
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50		
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32		
32.667	1678	5.43	$M_2$								277	225	495		
			c									5.8	6.0	3.3	
			$n_2$ Eck										46	110	46
			$n_2$ th										46	110	46
36.815	1211	5.21	$M_2$			348	277	260	475	387					
			c			3.4	3.8	3.9	2.5	2.5					
			$n_2$ Eck			41	82	96	53	110					
			$n_2$ th			41	81	96	53	89					
36.815	1891	5.21	$M_2$								313	254	558		
			c									5.8	6.0	3.3	
			$n_2$ Eck										41	98	41
			$n_2$ th										41	98	41
39.667	1118	4.07	$M_2$	202	158	377	301	282	513	418					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_2$ Eck	49	102	38	76	89	49	102					
			$n_2$ th	49	102	38	76	89	49	95					
39.667	1743	4.07	$M_2$								340	276	604		
			c									4.9	5.1	2.8	
			$n_2$ Eck										38	91	38
			$n_2$ th										38	91	38
44.704	1260	3.92	$M_2$	228	178	425	339	318	579	471					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_2$ Eck	44	91	34	67	79	44	91					
			$n_2$ th	44	91	34	67	79	44	84					
44.704	1965	3.92	$M_2$								383	311	681		
			c									4.9	5.1	2.8	
			$n_2$ Eck										34	81	34
			$n_2$ th										34	80	34
51.333	1160	2.59	$M_2$	265	207	491	392	367	667	544					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_2$ Eck	38	79	29	58	69	38	79					
			$n_2$ th	38	79	29	58	69	38	78					
51.333	1808	2.59	$M_2$								444	362	786		
			c									4.0	4.1	2.3	
			$n_2$ Eck										29	70	29
			$n_2$ th										29	70	29
57.852	1307	2.50	$M_2$	298	233	554	442	414	752	613					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_2$ Eck	34	70	26	52	61	34	70					
			$n_2$ th	34	70	26	52	61	34	69					
57.852	2038	2.50	$M_2$								501	407	886		
			c									4.0	4.1	2.3	
			$n_2$ Eck										26	62	26
			$n_2$ th										26	62	26
62.300	1174	1.89	$M_2$	324	253	599	478	448	812	662					
			c	3.5	3.7	1.9	2.2	2.2	1.4	1.4					
			$n_2$ Eck	31	65	24	48	57	31	65					
			$n_2$ th	31	65	24	48	57	31	65					
62.300	1829	1.89	$M_2$								543	442	958		
			c									3.3	3.4	1.9	
			$n_2$ Eck										24	58	24
			$n_2$ th										24	58	24

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

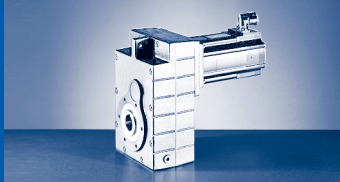


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
433	719	536	943	657							c			
3.3	2.3	2.7	1.8	2.2							$n_{2 \text{ Eck}}$	5.43	1678	32.667
99	46	99	41	99							$n_{2 \text{ th}}$			
99	46	99	41	98							$M_2$			
											c			
											$n_{2 \text{ Eck}}$	5.21	1211	36.815
											$n_{2 \text{ th}}$			
488	811	604	1063	741							$M_2$			
3.3	2.3	2.7	1.8	2.2							c			
88	41	88	37	88							$n_{2 \text{ Eck}}$	5.21	1891	36.815
88	41	88	37	87							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	4.07	1118	39.667
											$n_{2 \text{ th}}$			
529	876	653	1148	801							$M_2$			
2.9	2.0	2.3	1.5	1.9							c			
81	38	81	34	81							$n_{2 \text{ Eck}}$	4.07	1743	39.667
81	38	81	34	81							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	3.92	1260	44.704
											$n_{2 \text{ th}}$			
596	988	736	1294	902							$M_2$			
2.9	2.0	2.3	1.5	1.9							c			
72	34	72	30	72							$n_{2 \text{ Eck}}$	3.92	1965	44.704
72	34	72	30	72							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.59	1160	51.333
											$n_{2 \text{ th}}$			
688	1139	849	1491	1040							$M_2$			
2.3	1.6	1.9	1.2	1.5							c			
63	29	63	26	63							$n_{2 \text{ Eck}}$	2.59	1808	51.333
63	29	63	26	63							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.50	1307	57.852
											$n_{2 \text{ th}}$			
775	1283	957	1680	1172							$M_2$			
2.3	1.6	1.9	1.2	1.5							c			
56	26	56	23	56							$n_{2 \text{ Eck}}$	2.50	2038	57.852
56	26	56	23	56							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.89	1174	62.300
											$n_{2 \text{ th}}$			
838	1386	1034	1813	1266							$M_2$			
1.9	1.3	1.6	1.0	1.3							c			
52	24	52	22	52							$n_{2 \text{ Eck}}$	1.89	1829	62.300
52	24	52	22	52							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00	
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500	
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6	
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50	
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32	
70.211	1324	1.83	$M_2$	365	284	675	537	503	915	745				
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6				
			$n_{2 \text{ Eck}}$	28	58	21	43	50	28	58				
			$n_{2 \text{ th}}$	28	58	21	43	50	28	58				
70.211	2061	1.83	$M_2$								612	496	1080	
			c								3.3	3.8	1.9	
			$n_{2 \text{ Eck}}$								21	51	21	
			$n_{2 \text{ th}}$								21	51	21	
78.750	1190	1.25	$M_2$	412	321	760	605	567	1030	838				
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3				
			$n_{2 \text{ Eck}}$	25	51	19	38	45	25	51				
			$n_{2 \text{ th}}$	25	51	19	38	45	25	51				
88.750	1341	1.21	$M_2$	465	362	856	682	639	1161	944				
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3				
			$n_{2 \text{ Eck}}$	22	46	17	34	40	22	46				
			$n_{2 \text{ th}}$	22	46	17	34	40	22	46				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

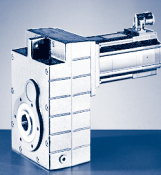


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$ c			
											$n_{2 \text{ Eck}}$	1.83	1324	70.211
											$n_{2 \text{ th}}$			
943	1562	1163	2043	1425							$M_2$ c			
2.1	1.3	1.7	1.0	1.4							$n_{2 \text{ Eck}}$	1.83	2061	70.211
46	21	46	19	46							$n_{2 \text{ th}}$			
46	21	46	19	46							$M_2$ c			
											$n_{2 \text{ Eck}}$	1.25	1190	78.750
											$n_{2 \text{ th}}$			
											$M_2$ c			
											$n_{2 \text{ Eck}}$	1.21	1341	88.750
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

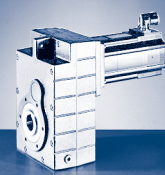
## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	
63.326	1510	2.34	$M_2$						219	262	321	250	596	
			c						5.4	4.5	4.5	4.7	2.5	
			$n_{2 \text{ Eck}}$						64	64	31	64	24	
			$n_{2 \text{ th}}$						64	64	31	64	24	
73.173	1517	2.47	$M_2$						254	304	373	289	691	
			c						5.2	4.4	4.0	4.6	2.2	
			$n_{2 \text{ Eck}}$						55	55	27	55	21	
			$n_{2 \text{ th}}$						55	55	27	55	21	
82.465	1710	2.43	$M_2$						286	342	420	326	778	
			c						5.2	4.4	4.0	4.6	2.2	
			$n_{2 \text{ Eck}}$						49	49	24	49	18	
			$n_{2 \text{ th}}$						49	49	24	49	18	
93.333	1692	1.68	$M_2$					263	326	390	478	372	884	
			c					5.7	4.5	3.8	3.5	4.0	1.9	
			$n_{2 \text{ Eck}}$					40	43	43	21	43	16	
			$n_{2 \text{ th}}$					40	43	43	21	43	16	
105.185	1907	1.65	$M_2$					296	368	439	539	419	996	
			c					5.7	4.5	3.8	3.5	4.0	1.9	
			$n_{2 \text{ Eck}}$					36	39	39	19	39	14	
			$n_{2 \text{ th}}$					36	39	39	19	39	14	
114.333	1847	1.23	$M_2$					324	402	479	588	457	1085	
			c					5.1	4.0	3.4	3.1	3.6	1.7	
			$n_{2 \text{ Eck}}$					33	35	35	17	35	13	
			$n_{2 \text{ th}}$					33	35	35	17	35	13	
128.852	2082	1.21	$M_2$					366	453	540	663	515	1223	
			c					5.1	4.0	3.4	3.1	3.6	1.7	
			$n_{2 \text{ Eck}}$					29	31	31	15	31	12	
			$n_{2 \text{ th}}$					29	31	31	15	31	12	
148.815	2053	0.77	$M_2$				311	426	527	627	769	598	1416	
			c				5.7	4.3	3.4	2.9	2.6	3.0	1.4	
			$n_{2 \text{ Eck}}$				27	25	27	27	13	27	10	
			$n_{2 \text{ th}}$				27	25	27	27	13	27	10	
167.712	2314	0.76	$M_2$				351	480	594	707	867	674	1595	
			c				5.7	4.3	3.4	2.9	2.6	3.0	1.4	
			$n_{2 \text{ Eck}}$				24	22	24	24	12	24	9	
			$n_{2 \text{ th}}$				24	22	24	24	12	24	9	
185.111	1724	0.55	$M_2$			252								
			c			5.9								
			$n_{2 \text{ Eck}}$			22								
			$n_{2 \text{ th}}$			22								
185.111	2232	0.55	$M_2$				390	532	658	783	960	748	1764	
			c				5.0	3.8	3.0	2.5	2.3	2.7	1.3	
			$n_{2 \text{ Eck}}$				22	20	22	22	11	22	8	
			$n_{2 \text{ th}}$				22	20	22	22	11	22	8	
208.617	1943	0.54	$M_2$			284								
			c			5.9								
			$n_{2 \text{ Eck}}$			19								
			$n_{2 \text{ th}}$			19								
208.617	2515	0.54	$M_2$				440	600	742	883	1082	842	1988	
			c				5.0	3.8	3.0	2.5	2.3	2.7	1.3	
			$n_{2 \text{ Eck}}$				19	18	19	19	9	19	7	
			$n_{2 \text{ th}}$				19	18	19	19	9	19	7	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

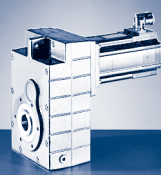


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
475	445	810	660	547	445	963	842	1391	1038	1270	c	2.34	1510	63.326
2.8	2.8	1.9	1.9	2.7	2.8	1.6	1.6	1.1	1.3	1.1	$n_{2 \text{ Eck}}$			
47	56	31	64	24	57	24	51	24	51	51	$n_{2 \text{ th}}$			
47	56	31	64	24	57	24	51	24	51	51				
549	515	938	763	634	515	1115	974		1200	1468	$M_2$	2.47	1517	73.173
2.7	2.7	1.6	1.8	2.4	2.7	1.4	1.5		1.2	1.0	c			
41	48	27	55	21	49	21	44		44	44	$n_{2 \text{ Eck}}$			
41	48	27	49	21	49	21	44		41	37	$n_{2 \text{ th}}$			
619	580	1057	860	715	580	1256	1097		1352	1655	$M_2$	2.43	1710	82.465
2.7	2.7	1.6	1.8	2.4	2.7	1.4	1.5		1.2	1.0	c			
36	43	24	49	18	44	18	39		39	39	$n_{2 \text{ Eck}}$			
36	43	24	44	18	44	18	39		36	33	$n_{2 \text{ th}}$			
703	659	1199	975	811	659	1424	1245		1533		$M_2$	1.68	1692	93.333
2.4	2.4	1.4	1.6	2.1	2.4	1.2	1.3		1.1		c			
32	38	21	43	16	39	16	35		35		$n_{2 \text{ Eck}}$			
32	38	21	41	16	38	16	35		35		$n_{2 \text{ th}}$			
793	743	1351	1099	915	743	1605	1403		1728		$M_2$	1.65	1907	105.185
2.4	2.4	1.4	1.6	2.1	2.4	1.2	1.3		1.1		c			
29	34	19	39	14	34	14	31		31		$n_{2 \text{ Eck}}$			
29	34	19	36	14	34	14	31		31		$n_{2 \text{ th}}$			
864	810	1471	1197	996	810	1747	1527				$M_2$	1.23	1847	114.333
2.1	2.1	1.3	1.4	1.8	2.1	1.1	1.2				c			
26	31	17	35	13	32	13	28				$n_{2 \text{ Eck}}$			
26	31	17	35	13	31	13	28				$n_{2 \text{ th}}$			
974	913	1658	1349	1123	913	1969	1721				$M_2$	1.21	2082	128.852
2.1	2.1	1.3	1.4	1.8	2.1	1.1	1.2				c			
23	27	15	31	12	28	12	25				$n_{2 \text{ Eck}}$			
23	27	15	31	12	28	12	25				$n_{2 \text{ th}}$			
1128	1057	1919	1561								$M_2$	0.77	2053	148.815
1.8	1.8	1.1	1.2								c			
20	24	13	27								$n_{2 \text{ Eck}}$			
20	24	13	27								$n_{2 \text{ th}}$			
1271	1192	2162	1760								$M_2$	0.76	2314	167.712
1.8	1.8	1.1	1.2								c			
18	21	12	24								$n_{2 \text{ Eck}}$			
18	21	12	24								$n_{2 \text{ th}}$			
											$M_2$	0.55	1724	185.111
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1407	1319		1945								$M_2$	0.55	2232	185.111
1.6	1.6		1.0								c			
16	19		22								$n_{2 \text{ Eck}}$			
16	19		22								$n_{2 \text{ th}}$			
											$M_2$	0.54	1943	208.617
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1585	1486		2192								$M_2$	0.54	2515	208.617
1.6	1.6		1.0								c			
14	17		19								$n_{2 \text{ Eck}}$			
14	17		19								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42
224.778	2093	0.51	$M_2$			306							
			c			5.9							
			$n_{2 \text{ Eck}}$			18							
			$n_{2 \text{ th}}$			18							
224.778	2407	0.51	$M_2$				476	650	802	954	1169	911	2145
			c				4.4	3.4	2.7	2.3	2.0	2.4	1.1
			$n_{2 \text{ Eck}}$				18	17	18	18	9	18	7
			$n_{2 \text{ th}}$				18	17	18	18	9	18	7
253.321	2359	0.50	$M_2$			345							
			c			5.9							
			$n_{2 \text{ Eck}}$			16							
			$n_{2 \text{ th}}$			16							
253.321	2712	0.50	$M_2$				537	732	904	1075	1317	1026	2418
			c				4.4	3.4	2.7	2.3	2.0	2.4	1.1
			$n_{2 \text{ Eck}}$				16	15	16	16	8	16	6
			$n_{2 \text{ th}}$				16	15	16	16	8	16	6
290.889	2172	0.31	$M_2$		317	401							
			c		5.9	4.7							
			$n_{2 \text{ Eck}}$		14	14							
			$n_{2 \text{ th}}$		14	14							
290.889	2640	0.31	$M_2$				621	845	1042	1239			
			c				3.7	2.8	2.3	1.9			
			$n_{2 \text{ Eck}}$				14	13	14	14			
			$n_{2 \text{ th}}$				14	13	14	14			
327.827	2447	0.31	$M_2$		357	452							
			c		5.9	4.7							
			$n_{2 \text{ Eck}}$		12	12							
			$n_{2 \text{ th}}$		12	12							
327.827	2976	0.31	$M_2$				700	952	1175	1396			
			c				3.7	2.8	2.3	1.9			
			$n_{2 \text{ Eck}}$				12	11	12	12			
			$n_{2 \text{ th}}$				12	11	12	12			
353.033	2197	0.23	$M_2$		388	491							
			c		4.9	3.9							
			$n_{2 \text{ Eck}}$		12	12							
			$n_{2 \text{ th}}$		11	11							
353.033	2813	0.23	$M_2$				757	1030	1269	1507			
			c				3.3	2.5	2.0	1.7			
			$n_{2 \text{ Eck}}$				12	11	12	12			
			$n_{2 \text{ th}}$				11	11	11	11			
397.863	2476	0.22	$M_2$		438	553							
			c		4.9	3.9							
			$n_{2 \text{ Eck}}$		10	10							
			$n_{2 \text{ th}}$		10	10							
397.863	3170	0.22	$M_2$				854	1160	1430	1699			
			c				3.3	2.5	2.0	1.7			
			$n_{2 \text{ Eck}}$				10	9	10	10			
			$n_{2 \text{ th}}$				10	9	10	10			
424.247	2724	0.29	$M_2$		466	589	916	1244	1531	1818			
			c		5.1	4.1	2.6	2.0	1.6	1.4			
			$n_{2 \text{ Eck}}$		10	10	10	9	10	10			
			$n_{2 \text{ th}}$		10	10	10	9	10	10			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



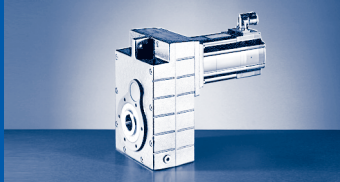


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
											c	0.51	2093	224.778
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1711	1604										$M_2$			
1.4	1.4										c	0.51	2407	224.778
13	16										$n_{2 \text{ Eck}}$			
13	16										$n_{2 \text{ th}}$			
											$M_2$			
											c	0.50	2359	253.321
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1929	1808										$M_2$			
1.4	1.4										c	0.50	2712	253.321
12	14										$n_{2 \text{ Eck}}$			
12	14										$n_{2 \text{ th}}$			
											$M_2$			
											c	0.31	2172	290.889
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.31	2640	290.889
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.31	2447	327.827
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.31	2976	327.827
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.23	2197	353.033
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.23	2813	353.033
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.22	2476	397.863
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.22	3170	397.863
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.29	2724	424.247
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42
514.881	2724	0.21	$M_2$		571	720	1118	1515	1864	2212			
			c		4.2	3.3	2.2	1.7	1.3	1.1			
			$n_2$ Eck		8	8	8	7	8	8			
			$n_2$ th		8	8	8	7	8	8			
554.470	2113	0.20	$M_2$		623	783	1211	1639					
			c		3.0	2.4	1.6	1.2					
			$n_2$ Eck		7	7	7	7					
			$n_2$ th		7	7	7	7					
624.879	2273	0.20	$M_2$	341	703	884	1366	1849					
			c	5.7	2.9	2.3	1.5	1.1					
			$n_2$ Eck	7	7	7	7	6					
			$n_2$ th	6	6	6	6	6					
700.875	2113	0.13	$M_2$	386	792	995							
			c	4.8	2.4	1.9							
			$n_2$ Eck	6	6	6							
			$n_2$ th	6	6	6							
789.875	2273	0.13	$M_2$	436	894	1123							
			c	4.5	2.3	1.8							
			$n_2$ Eck	5	5	5							
			$n_2$ th	5	5	5							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

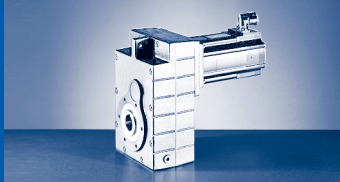


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
											c	0.21	2724	514.881
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$	0.20	2113	554.470
											c			
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$	0.20	2273	624.879
											$M_2$			
											c	0.13	2113	700.875
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.13	2273	789.875
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
6.864	1502	124.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
7.466	1634	116.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
9.010	1663	79.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
9.799	1808	74.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
10.720	1872	65.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
12.480	2732	81.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
14.538	2683	58.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
15.904	2778	51.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
17.920	3130	48.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
20.286	1921	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				263 5.4 159 115	438 4.2 74 74	327 4.4 159 111	577 3.3 67 67
20.286	2984	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
22.857	2165	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				296 5.4 141 102	493 4.2 66 66	368 4.4 141 98	650 3.3 59 59
22.857	3362	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

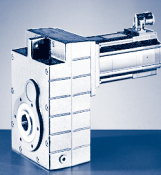


$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
			254		328	203	c			
			5.6		4.4	5.6	$n_{2 \text{ Eck}}$	124.00	1502	6.864
			208		197	437	$n_{2 \text{ th}}$			
			208		197	253				
			276		356	221	$M_2$			
			5.6		4.4	5.6	c	116.00	1634	7.466
			191		181	402	$n_{2 \text{ Eck}}$			
			191		181	233	$n_{2 \text{ th}}$			
			336	243	433	269	$M_2$			
			4.8	5.2	3.7	4.7	c	79.60	1663	9.010
			158	333	150	333	$n_{2 \text{ Eck}}$			
			158	221	150	216	$n_{2 \text{ th}}$			
			366	264	471	293	$M_2$			
			4.8	5.2	3.7	4.7	c	74.80	1808	9.799
			145	306	138	306	$n_{2 \text{ Eck}}$			
			145	203	138	199	$n_{2 \text{ th}}$			
			401	289	517	321	$M_2$			
			4.5	4.9	3.5	4.5	c	65.00	1872	10.720
			133	280	126	280	$n_{2 \text{ Eck}}$			
			133	189	126	185	$n_{2 \text{ th}}$			
			461		596	369	$M_2$			
			5.6		4.4	5.6	c	81.50	2732	12.480
			114		108	240	$n_{2 \text{ Eck}}$			
			114		108	139	$n_{2 \text{ th}}$			
			542	391	699	434	$M_2$			
			4.8	5.2	3.7	4.7	c	58.40	2683	14.538
			98	206	93	206	$n_{2 \text{ Eck}}$			
			98	137	93	134	$n_{2 \text{ th}}$			
			595	429	766	476	$M_2$			
			4.5	4.9	3.5	4.5	c	51.30	2778	15.904
			90	189	85	189	$n_{2 \text{ Eck}}$			
			90	127	85	125	$n_{2 \text{ th}}$			
			670	484	864	536	$M_2$			
			4.5	4.9	3.5	4.5	c	48.30	3130	17.920
			80	167	75	167	$n_{2 \text{ Eck}}$			
			80	113	75	111	$n_{2 \text{ th}}$			
402							$M_2$			
3.6							c	36.10	1921	20.286
159							$n_{2 \text{ Eck}}$			
106							$n_{2 \text{ th}}$			
	506	393	765	552	983	612	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	36.10	2984	20.286
	70	148	70	148	67	148	$n_{2 \text{ Eck}}$			
	70	109	70	109	67	107	$n_{2 \text{ th}}$			
453							$M_2$			
3.6							c	34.30	2165	22.857
141							$n_{2 \text{ Eck}}$			
94							$n_{2 \text{ th}}$			
	570	443	862	622	1108	689	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	34.30	3362	22.857
	62	131	62	131	59	131	$n_{2 \text{ Eck}}$			
	62	97	62	97	59	95	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

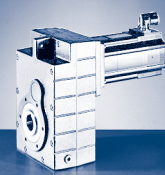
## GFL□□-□S (MCS)

$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
24.850	3142	26.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
28.000	3540	25.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
32.739	2135	17.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			491 4.2 46 46	430 4.2 99 91	716 2.9 46 46	533 3.4 99 88	941 2.2 41 41
32.739	3319	17.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
36.889	2406	16.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			554 4.2 41 41	484 4.2 87 81	807 2.9 41 41	600 3.4 87 78	1060 2.2 37 37
36.889	3740	16.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
40.233	2189	12.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			608 3.5 37 37	532 3.5 80 80	885 2.4 37 37	658 2.9 80 80	1161 1.9 34 34
40.233	3402	12.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
45.333	2467	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			686 3.5 33 33	600 3.5 71 71	997 2.4 33 33	742 2.9 71 71	1308 1.9 30 30
45.333	3833	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
52.067	2270	8.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	446 4.9 29 29	363 5.1 69 69	793 2.8 29 29	694 2.8 62 62	1150 2.0 29 29	857 2.3 62 62	1508 1.5 26 26
58.667	2557	7.81	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	503 4.9 26 26	409 5.1 61 61	894 2.8 26 26	782 2.8 55 55	1296 2.0 26 26	966 2.3 55 55	1699 1.5 23 23
63.190	2297	5.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	546 4.1 24 24	444 4.2 57 57	967 2.3 24 24	846 2.4 51 51	1401 1.6 24 24	1045 1.9 51 51	1835 1.3 21 21

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

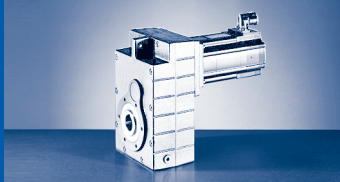


$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
	625	482	942	677	1210	750	c	26.90	3142	24.850
	4.8	5.6	3.3	4.1	2.6	3.7	$n_{2 \text{ Eck}}$			
	57	121	57	121	54	121	$n_{2 \text{ th}}$			
	57	89	57	89	54	89				
	705	543	1061	763	1363	845	$M_2$	25.70	3540	28.000
	4.8	5.6	3.3	4.1	2.6	3.7	c			
	51	107	51	107	48	107	$n_{2 \text{ Eck}}$			
	51	79	51	79	48	79	$n_{2 \text{ th}}$			
655							$M_2$	17.10	2135	32.739
2.8							c			
99							$n_{2 \text{ Eck}}$			
84							$n_{2 \text{ th}}$			
	832	643	1249	900	1602	996	$M_2$	17.10	3319	32.739
	3.9	4.5	2.6	3.3	2.1	3.0	c			
	44	92	44	92	41	92	$n_{2 \text{ Eck}}$			
	44	68	44	68	41	68	$n_{2 \text{ th}}$			
738							$M_2$	16.50	2406	36.889
2.8							c			
87							$n_{2 \text{ Eck}}$			
75							$n_{2 \text{ th}}$			
	938	725	1408	1014	1806	1122	$M_2$	16.50	3740	36.889
	3.9	4.5	2.6	3.3	2.1	3.0	c			
	39	81	39	81	37	81	$n_{2 \text{ Eck}}$			
	39	60	39	60	37	60	$n_{2 \text{ th}}$			
808							$M_2$	12.60	2189	40.233
2.4							c			
80							$n_{2 \text{ Eck}}$			
77							$n_{2 \text{ th}}$			
	1030	797	1542	1112	1976	1230	$M_2$	12.60	3402	40.233
	3.2	3.7	2.2	2.7	1.7	2.5	c			
	35	75	35	75	34	75	$n_{2 \text{ Eck}}$			
	35	55	35	55	34	55	$n_{2 \text{ th}}$			
911							$M_2$	12.20	2467	45.333
2.4							c			
71							$n_{2 \text{ Eck}}$			
68							$n_{2 \text{ th}}$			
	1160	898	1738	1253	2227	1386	$M_2$	12.20	3833	45.333
	3.2	3.7	2.2	2.7	1.7	2.5	c			
	31	66	31	66	30	66	$n_{2 \text{ Eck}}$			
	31	49	31	49	30	49	$n_{2 \text{ th}}$			
1051							$M_2$	8.08	2270	52.067
1.9							c			
62							$n_{2 \text{ Eck}}$			
62							$n_{2 \text{ th}}$			
1184							$M_2$	7.81	2557	58.667
1.9							c			
55							$n_{2 \text{ Eck}}$			
55							$n_{2 \text{ th}}$			
1280							$M_2$	5.90	2297	63.190
1.6							c			
51							$n_{2 \text{ Eck}}$			
51							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

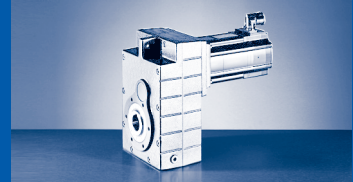
$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
71.200	2588	5.72	$M_2$	615	498	1090	951	1579	1174	2067
			c	4.1	4.7	2.3	2.6	1.6	2.1	1.3
			$n_{2 \text{ Eck}}$	21	51	21	45	21	45	19
			$n_{2 \text{ th}}$	21	50	21	45	21	45	19
			$M_2$	696	565	1229	1073	1777	1323	2325
79.875	2325	3.87	c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	19	45	19	40	19	40	17
			$n_{2 \text{ th}}$	19	45	19	40	19	40	17
			$M_2$	785	636	1385	1209	2002	1491	2620
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
90.000	2620	3.76	$n_{2 \text{ Eck}}$	17	40	17	36	17	36	15
			$n_{2 \text{ th}}$	17	40	17	36	17	36	15

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



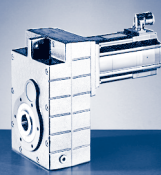


$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
1440							$c$			
1.7							$n_{2 \text{ Eck}}$	5.72	2588	71.200
45							$n_{2 \text{ th}}$			
45							$M_2$			
1621							$c$			
1.4							$n_{2 \text{ Eck}}$	3.87	2325	79.875
40							$n_{2 \text{ th}}$			
40							$M_2$			
1826							$c$			
1.4							$n_{2 \text{ Eck}}$	3.76	2620	90.000
36							$n_{2 \text{ th}}$			
36										

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

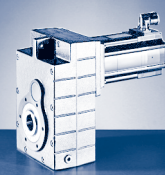
## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
65.306	2503	6.97	$M_2$							604	478	448	825	670		
			c							4.0	5.0	5.1	3.0	3.3		
			$n_{2 \text{ Eck}}$								23	46	54	30	62	
			$n_{2 \text{ th}}$								23	46	54	30	62	
65.306	2891	6.97	$M_2$												550	
			c												5.0	
			$n_{2 \text{ Eck}}$													23
			$n_{2 \text{ th}}$													23
73.335	2875	7.84	$M_2$							678	536	503	926	752	621	
			c							4.1	5.1	5.2	3.0	3.4	4.5	
			$n_{2 \text{ Eck}}$								21	41	48	27	55	21
			$n_{2 \text{ th}}$								20	41	48	27	48	20
82.631	3240	7.71	$M_2$							764	604	566	1043	847	700	
			c							4.1	5.1	5.2	3.0	3.4	4.5	
			$n_{2 \text{ Eck}}$								18	36	43	24	49	18
			$n_{2 \text{ th}}$								18	36	43	24	43	18
93.540	3206	5.05	$M_2$							870	689	646	1186	963	797	
			c							3.6	4.5	4.5	2.7	3.0	3.9	
			$n_{2 \text{ Eck}}$								16	32	38	21	43	16
			$n_{2 \text{ th}}$								16	32	38	21	43	16
105.397	3613	4.97	$M_2$							980	776	728	1336	1085	899	
			c							3.6	4.5	4.5	2.7	3.0	3.9	
			$n_{2 \text{ Eck}}$								14	29	34	19	38	14
			$n_{2 \text{ th}}$								14	28	33	19	38	14
114.586	3501	3.71	$M_2$					572	$M_2$	1070	849	795	1457	1184	981	
			c					5.8		3.2	4.0	4.0	2.4	2.6	3.5	
			$n_{2 \text{ Eck}}$					17		13	26	31	17	35	13	
			$n_{2 \text{ th}}$					17		13	26	31	17	35	13	
129.111	3945	3.66	$M_2$					644		1206	956	896	1642	1334	1106	
			c					5.8		3.2	4.0	4.0	2.4	2.6	3.5	
			$n_{2 \text{ Eck}}$					15		12	23	27	15	31	12	
			$n_{2 \text{ th}}$					15		12	23	27	15	31	12	
149.144	3063	2.30	$M_2$			518	619									
			c			5.1	4.3									
			$n_{2 \text{ Eck}}$			27	27									
			$n_{2 \text{ th}}$			27	27									
149.144	3894	2.30	$M_2$					751	582	1399	1111	1042	1904	1547	1284	
			c					5.0	5.8	2.7	3.4	3.5	2.0	2.3	3.0	
			$n_{2 \text{ Eck}}$					13	27	10	20	24	13	27	10	
			$n_{2 \text{ th}}$					13	27	10	20	24	13	27	10	
168.049	3451	2.27	$M_2$			584	698									
			c			5.1	4.3									
			$n_{2 \text{ Eck}}$			24	24									
			$n_{2 \text{ th}}$			24	24									
168.049	4387	2.27	$M_2$					847	656	1577	1252	1174	2145	1744	1447	
			c					5.0	5.8	2.7	3.4	3.5	2.0	2.3	3.0	
			$n_{2 \text{ Eck}}$					12	24	9	18	21	12	24	9	
			$n_{2 \text{ th}}$					12	24	9	18	21	12	24	9	
182.792	3211	1.66	$M_2$		516	640	764									
			c		5.5	4.4	3.7									
			$n_{2 \text{ Eck}}$		21	22	22									
			$n_{2 \text{ th}}$		21	22	22									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

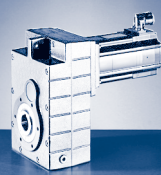


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$I_{M230}$			
												$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$M_2$			
												c	6.97	2503	65.306
												$n_2$ Eck			
												$n_2$ th			
445	979	853	1420	1055	1862	1295						$M_2$			
5.8	2.9	3.2	2.0	2.6	1.5	2.2						c	6.97	2891	65.306
55	23	49	23	49	21	49						$n_2$ Eck			
55	23	49	23	49	21	49						$n_2$ th			
503	1103	962	1599	1189	2094	1458	1882	1457	2803	2024	2236	$M_2$			
5.2	2.6	2.9	1.8	2.3	1.4	1.9	1.5	2.0	1.0	1.4	1.3	c	7.84	2875	73.335
49	21	44	21	44	18	44	19	41	19	41	41	$n_2$ Eck			
49	20	44	20	44	18	42	19	30	19	30	30	$n_2$ th			
567	1243	1084	1801	1339	2360	1643	2121	1642	3158	2280	2520	$M_2$			
5.2	2.6	2.9	1.8	2.3	1.4	1.9	1.5	2.0	1.0	1.4	1.3	c	7.71	3240	82.631
44	18	39	18	39	16	39	17	36	17	36	36	$n_2$ Eck			
43	18	39	18	39	16	37	17	27	17	27	27	$n_2$ th			
646	1412	1232	2044	1521	2676	1864						$M_2$			
4.5	2.2	2.5	1.6	2.0	1.2	1.7						c	5.05	3206	93.540
39	16	35	16	35	14	35						$n_2$ Eck			
38	16	34	16	34	14	34						$n_2$ th			
728	1591	1388	2303	1714	3016	2100						$M_2$			
4.5	2.2	2.5	1.6	2.0	1.2	1.7						c	4.97	3613	105.397
34	14	31	14	31	13	31						$n_2$ Eck			
34	14	31	14	31	13	31						$n_2$ th			
795	1734	1513	2508	1867	3283	2288						$M_2$			
4.0	2.0	2.2	1.4	1.8	1.1	1.5						c	3.71	3501	114.586
31	13	28	13	28	12	28						$n_2$ Eck			
31	13	28	13	28	12	28						$n_2$ th			
896	1954	1705	2826	2104	3699	2578						$M_2$			
4.0	2.0	2.2	1.4	1.8	1.1	1.5						c	3.66	3945	129.111
28	12	25	12	25	11	25						$n_2$ Eck			
28	12	25	12	25	10	25						$n_2$ th			
												$M_2$			
												c	2.30	3063	149.144
												$n_2$ Eck			
												$n_2$ th			
1042	2264	1977	3272	2437		2985						$M_2$			
3.4	1.7	1.9	1.2	1.6		1.3						c	2.30	3894	149.144
24	10	22	10	22		22						$n_2$ Eck			
24	10	22	10	22		22						$n_2$ th			
												$M_2$			
												c	2.27	3451	168.049
												$n_2$ Eck			
												$n_2$ th			
1174	2551	2227	3687	2746		3363						$M_2$			
3.4	1.7	1.9	1.2	1.6		1.3						c	2.27	4387	168.049
21	9	19	9	19		19						$n_2$ Eck			
21	9	19	9	19		19						$n_2$ th			
												$M_2$			
												c	1.66	3211	182.792
												$n_2$ Eck			
												$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500	
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8			
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5	
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	
182.792	4131	1.66	$M_2$					928	720	1722	1369	1283	2340	1903		
			c					4.3	5.0	2.4	3.0	3.0	1.8	2.0		
			$n_{2 \text{ Eck}}$					11	22	8	16	19	11	22		
			$n_{2 \text{ th}}$					11	22	8	16	19	11	22		
182.792	4233	1.66	$M_2$												1580	
			c												2.6	
			$n_{2 \text{ Eck}}$													8
			$n_{2 \text{ th}}$												8	
205.963	3618	1.64	$M_2$		581	722	861									
			c		5.5	4.4	3.7									
			$n_{2 \text{ Eck}}$		18	20	20									
			$n_{2 \text{ th}}$		18	20	20									
205.963	4655	1.64	$M_2$					1045	811	1940	1542	1446	2636	2144		
			c					4.3	5.0	2.4	3.0	3.0	1.8	2.0		
			$n_{2 \text{ Eck}}$					10	20	7	15	17	10	20		
			$n_{2 \text{ th}}$					9	20	7	15	17	9	20		
205.963	4769	1.64	$M_2$												1780	
			c												2.6	
			$n_{2 \text{ Eck}}$													7
			$n_{2 \text{ th}}$												7	
224.636	3946	1.52	$M_2$		634	787	939									
			c		5.5	4.4	3.7									
			$n_{2 \text{ Eck}}$		17	18	18									
			$n_{2 \text{ th}}$		17	18	18									
224.636	4523	1.52	$M_2$					1146	890	2122	1688	1582	2881	2343	1948	
			c					3.8	4.4	2.1	2.6	2.7	1.6	1.7	2.3	
			$n_{2 \text{ Eck}}$					9	18	7	13	16	9	18	7	
			$n_{2 \text{ th}}$					9	18	7	13	16	9	18	7	
253.111	4446	1.50	$M_2$		715	887	1058									
			c		5.5	4.4	3.7									
			$n_{2 \text{ Eck}}$		15	16	16									
			$n_{2 \text{ th}}$		15	16	16									
253.111	5097	1.50	$M_2$					1291	1003	2391	1902	1783	3246	2640	2195	
			c					3.8	4.4	2.1	2.6	2.7	1.6	1.7	2.3	
			$n_{2 \text{ Eck}}$					8	16	6	12	14	8	16	6	
			$n_{2 \text{ th}}$					8	16	6	12	14	8	16	6	
267.259	5106	1.87	$M_2$		750	932	1113	1366	1061	2527	2011	1885	3431	2791	2321	
			c		6.0	4.8	4.0	3.6	4.2	2.0	2.5	2.5	1.5	1.6	2.2	
			$n_{2 \text{ Eck}}$		14	15	15	7	15	6	11	13	7	15	6	
			$n_{2 \text{ th}}$		14	15	15	7	15	6	11	13	7	15	6	
327.556	5523	1.37	$M_2$		927	1150	1371	1682	1308	3105	2473	2318	4212	3427	2852	
			c		5.3	4.2	3.6	3.2	3.7	1.8	2.2	2.2	1.3	1.5	1.9	
			$n_{2 \text{ Eck}}$		12	12	12	6	12	5	9	11	6	12	5	
			$n_{2 \text{ th}}$		11	12	12	6	12	5	9	11	6	12	5	
358.077	4103	0.68	$M_2$	756	1032	1275	1517									
			c	4.7	3.6	2.9	2.4									
			$n_{2 \text{ Eck}}$	11	11	11	11									
			$n_{2 \text{ th}}$	11	10	11	11									
358.077	5280	0.68	$M_2$					1847	1437	3403	2711	2541	4613	3754		
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3		
			$n_{2 \text{ Eck}}$					6	11	4	8	10	6	11		
			$n_{2 \text{ th}}$					5	11	4	8	10	5	11		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

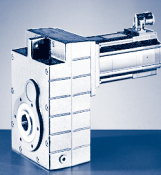


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$I_{M230}$			
												$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$M_2$			
												c			
												$n_2$ Eck	1.66	4131	182.792
												$n_2$ th			
1282	2780	2428	4016	2993		3664						$M_2$			
3.0	1.5	1.7	1.1	1.4		1.1						c	1.66	4233	182.792
20	8	18	8	18		18						$n_2$ Eck			
20	8	18	8	18		18						$n_2$ th			
												$M_2$			
												c	1.64	3618	205.963
												$n_2$ Eck			
												$n_2$ th			
												$M_2$			
												c	1.64	4655	205.963
												$n_2$ Eck			
												$n_2$ th			
1445	3132	2736	4525	3372		4128						$M_2$			
3.0	1.5	1.7	1.1	1.4		1.1						c	1.64	4769	205.963
18	7	16	7	16		16						$n_2$ Eck			
17	7	16	7	16		16						$n_2$ th			
												$M_2$			
												c	1.52	3946	224.636
												$n_2$ Eck			
												$n_2$ th			
1582	3423	2991		3685								$M_2$			
2.6	1.3	1.5		1.2								c	1.52	4523	224.636
16	7	14		14								$n_2$ Eck			
16	7	14		14								$n_2$ th			
												$M_2$			
												c	1.50	4446	253.111
												$n_2$ Eck			
												$n_2$ th			
1783	3857	3370		4152								$M_2$			
2.6	1.3	1.5		1.2								c	1.50	5097	253.111
14	6	13		13								$n_2$ Eck			
14	6	13		13								$n_2$ th			
1885	4076	3561		4387								$M_2$			
2.5	1.3	1.4		1.1								c	1.87	5106	267.259
14	6	12		12								$n_2$ Eck			
13	6	12		12								$n_2$ th			
2318	5003	4372		5384								$M_2$			
2.2	1.1	1.2		1.0								c	1.37	5523	327.556
11	5	10		10								$n_2$ Eck			
11	5	10		10								$n_2$ th			
												$M_2$			
												c	0.68	4103	358.077
												$n_2$ Eck			
												$n_2$ th			
												$M_2$			
												c	0.68	5280	358.077
												$n_2$ Eck			
												$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15			
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500			
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20			
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500			
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5			
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45			
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22			
403.467	4623	0.67	$M_2$	852	1163	1437	1710											
			c	4.7	3.6	2.9	2.4											
			$n_{2 \text{ Eck}}$	10	9	10	10											
			$n_{2 \text{ th}}$	10	9	10	10											
403.467	5950	0.67	$M_2$					2081	1619	3834	3055	2863	5198	4229				
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3				
			$n_{2 \text{ Eck}}$					5	10	4	7	9	5	10				
			$n_{2 \text{ th}}$					5	10	4	7	9	5	10				
430.222	5912	0.85	$M_2$	900	1230	1523	1814											
			c	5.7	4.3	3.4	2.9											
			$n_{2 \text{ Eck}}$	9	9	9	9											
			$n_{2 \text{ th}}$	9	9	9	9											
430.222	5942	0.85	$M_2$					2223	1730	4092	3261	3057	5546	4514				
			c					2.6	3.0	1.5	1.8	1.8	1.1	1.2				
			$n_{2 \text{ Eck}}$					5	9	4	7	8	5	9				
			$n_{2 \text{ th}}$					5	9	3	7	8	5	9				
522.133	5942	0.62	$M_2$	1103	1505	1860	2213	2711	2112	4980	3972	3723						
			c	4.7	3.6	2.8	2.4	2.2	2.5	1.2	1.5	1.5						
			$n_{2 \text{ Eck}}$	8	7	8	8	4	8	3	6	7						
			$n_{2 \text{ th}}$	8	7	8	8	4	8	3	6	7						
562.391	5319	0.60	$M_2$	1199	1632	2013	2394	2931	2285		4289	4020						
			c	3.9	3.0	2.4	2.0	1.8	2.1		1.2	1.3						
			$n_{2 \text{ Eck}}$	7	7	7	7	4	7		5	6						
			$n_{2 \text{ th}}$	7	7	7	7	3	7		5	6						
633.680	5844	0.60	$M_2$	1352	1840	2270	2698	3304	2576		4834	4532						
			c	3.8	2.9	2.3	1.9	1.8	2.0		1.2	1.2						
			$n_{2 \text{ Eck}}$	6	6	6	6	3	6		5	6						
			$n_{2 \text{ th}}$	6	6	6	6	3	6		5	6						
710.888	5319	0.39	$M_2$	1529	2076	2558	3039											
			c	3.1	2.4	1.9	1.6											
			$n_{2 \text{ Eck}}$	6	5	6	6											
			$n_{2 \text{ th}}$	6	5	6	6											
801.000	5844	0.38	$M_2$	1724	2341	2884	3425											
			c	3.0	2.3	1.8	1.5											
			$n_{2 \text{ Eck}}$	5	5	5	5											
			$n_{2 \text{ th}}$	5	5	5	5											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

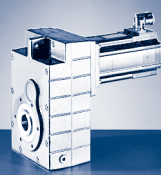


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$i_{M230}$			
												$i_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.67	4623	403.467
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.67	5950	403.467
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.85	5912	430.222
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.85	5942	430.222
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.62	5942	522.133
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.60	5319	562.391
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.60	5844	633.680
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.39	5319	710.888
												$n_{2 \text{ th}}$			
												$M_2$			
												c			
												$n_{2 \text{ Eck}}$	0.38	5844	801.000
												$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 4971 \text{ Nm}$

GFL14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
8.800	2033	247.00	$M_2$			324		419	259
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			162		153	341
			$n_{2 \text{ th}}$			162		153	194
9.571	2211	232.00	$M_2$			352		456	282
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			149		141	313
			$n_{2 \text{ th}}$			149		141	178
14.200	3280	625.00	$M_2$			523		676	419
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			100		95	211
			$n_{2 \text{ th}}$			100		95	120
15.620	3389	156.00	$M_2$			578		746	462
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			91		86	192
			$n_{2 \text{ th}}$			91		86	111
17.600	3818	146.00	$M_2$			651		840	521
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			81		77	171
			$n_{2 \text{ th}}$			81		77	99
19.948	3646	111.00	$M_2$			745	537	960	596
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			71	150	68	150
			$n_{2 \text{ th}}$			71	99	68	97
22.476	4108	105.00	$M_2$			839	605	1081	671
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			63	134	60	134
			$n_{2 \text{ th}}$			63	88	60	86
24.456	3842	83.20	$M_2$	608		919	659	1183	731
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	58		58	123	55	123
			$n_{2 \text{ th}}$	58		58	90	55	89
27.556	4328	79.40	$M_2$	685		1036	743	1333	824
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	52		52	109	49	109
			$n_{2 \text{ th}}$	52		52	80	49	79
32.344	4045	52.90	$M_2$	814	628	1227	882	1575	977
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	44	93	44	93	42	93
			$n_{2 \text{ th}}$	44	68	44	68	42	68
36.444	4558	50.70	$M_2$	918	708	1382	994	1775	1101
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	39	82	39	82	37	82
			$n_{2 \text{ th}}$	39	61	39	61	37	61
39.642	4238	38.00	$M_2$	1005	777	1511	1087	1938	1204
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	36	76	36	76	34	76
			$n_{2 \text{ th}}$	36	56	36	56	34	56
44.667	4776	36.60	$M_2$	1133	875	1702	1225	2184	1357
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	32	67	32	67	30	67
			$n_{2 \text{ th}}$	32	49	32	49	30	49

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



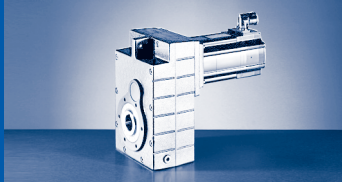


$M_{2GN} \leq 4971 \text{ Nm}$

GFL14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$I_{M400}$	1425	3000	1425	3000	1350	3000
			$P_N$	8.6	14.0	12.3	18.5	14.3	19.0
			$J_M$	4.00	6.60	6.00	9.10	7.20	10.00
			$M_2$	65.12	65.04	105.04	105.12	160.12	160.04
52.067	4358	24.60	c	1333	1031	1997	1440	2558	1593
			$n_2$ Eck	3.2	3.7	2.2	2.7	1.7	2.4
			$n_2$ th	27	58	27	58	26	58
				27	42	27	42	26	42
58.667	4911	23.80	$M_2$	1502	1162	2250	1622	2882	1795
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_2$ Eck	24	51	24	51	23	51
			$n_2$ th	24	38	24	38	23	38
63.190	4412	18.00	$M_2$	1627	1260	2432	1755	3113	1941
			c	2.7	3.1	1.8	2.2	1.4	2.0
			$n_2$ Eck	23	48	23	48	21	48
			$n_2$ th	23	35	23	35	21	35
71.200	4971	17.40	$M_2$	1833	1414	2740	1973	3508	2182
			c	2.7	3.4	1.8	2.5	1.4	2.3
			$n_2$ Eck	20	42	20	42	19	42
			$n_2$ th	20	31	20	31	19	31

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

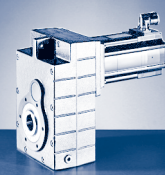
## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
64.296	5534	26.32	$M_2$										936
			c										5.6
			$n_{2 \text{ Eck}}$										23
			$n_{2 \text{ th}}$										23
64.296	5610	26.32	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
68.708	3311	19.86	$M_2$			629			861	699			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			22			28	59			
			$n_{2 \text{ th}}$			22			28	52			
68.708	5182	19.86	$M_2$										1007
			c										4.9
			$n_{2 \text{ Eck}}$										22
			$n_{2 \text{ th}}$										22
68.708	5416	19.86	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
77.418	3730	19.38	$M_2$			709			970	787			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			19			25	52			
			$n_{2 \text{ th}}$			19			25	46			
77.418	5839	19.38	$M_2$										1135
			c										4.9
			$n_{2 \text{ Eck}}$										19
			$n_{2 \text{ th}}$										19
77.418	6103	19.38	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
85.037	6276	21.59	$M_2$										1248
			c										4.8
			$n_{2 \text{ Eck}}$										18
			$n_{2 \text{ th}}$										18
104.889	3398	9.32	$M_2$			977	775	726	1332	1082			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			14	29	34	19	39			
			$n_{2 \text{ th}}$			14	29	34	19	39			
104.889	5307	9.32	$M_2$								876		1565
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								14		14
			$n_{2 \text{ th}}$								14		14
114.126	3697	8.32	$M_2$			1063	843	790	1449	1177			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			13	26	31	17	36			
			$n_{2 \text{ th}}$			13	26	31	17	35			
114.126	5774	8.32	$M_2$								953		1703
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								13		13
			$n_{2 \text{ th}}$								13		13

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

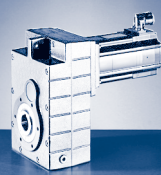


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
818	1370	1017	1805	1253							c	26.32	5534	64.296
5.7	3.9	4.6	3.0	3.8							$n_{2 \text{ Eck}}$			
50	23	50	21	50							$n_{2 \text{ th}}$			
50	23	50	21	48										
					1618	1251	2425	1748	3108	1934	$M_2$			
					3.4	3.9	2.3	2.8	1.8	2.6	c	26.32	5610	64.296
					22	47	22	47	21	47	$n_{2 \text{ Eck}}$			
					22	34	22	34	21	34	$n_{2 \text{ th}}$			
											$M_2$			
											c	19.86	3311	68.708
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
876	1472	1088	1936	1340							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	19.86	5182	68.708
47	22	47	20	47							$n_{2 \text{ Eck}}$			
47	22	47	20	47							$n_{2 \text{ th}}$			
					1735	1337	2597	1867	3327	2067	$M_2$			
					3.1	3.9	2.1	2.8	1.6	2.6	c	19.86	5416	68.708
					21	44	21	44	20	44	$n_{2 \text{ Eck}}$			
					21	32	21	32	20	32	$n_{2 \text{ th}}$			
											$M_2$			
											c	19.38	3730	77.418
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
987	1658	1226	2182	1510							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	19.38	5839	77.418
42	19	42	17	42							$n_{2 \text{ Eck}}$			
42	19	42	17	42							$n_{2 \text{ th}}$			
					1955	1506	2927	2104	3749	2328	$M_2$			
					3.1	3.9	2.1	2.8	1.6	2.6	c	19.38	6103	77.418
					18	39	18	39	17	39	$n_{2 \text{ Eck}}$			
					18	29	18	29	17	29	$n_{2 \text{ th}}$			
1086	1823	1348	2398	1660	2152	1659	3219	2316	4122	2562	$M_2$			
5.4	3.4	4.4	2.6	3.6	2.9	3.7	1.9	2.7	1.5	2.4	c	21.59	6276	85.037
38	18	38	16	38	17	35	17	35	16	35	$n_{2 \text{ Eck}}$			
38	18	37	16	36	17	26	17	26	16	26	$n_{2 \text{ th}}$			
											$M_2$			
											c	9.32	3398	104.889
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1364	2274	1688	2983	2073							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	9.32	5307	104.889
31	14	31	13	31							$n_{2 \text{ Eck}}$			
31	14	31	13	31							$n_{2 \text{ th}}$			
											$M_2$			
											c	8.32	3697	114.126
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1484	2474	1837	3246	2255							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	8.32	5774	114.126
28	13	28	12	28							$n_{2 \text{ Eck}}$			
28	13	28	12	28							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
128.593	4166	8.14	$M_2$			1198	950	890	1633	1327			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			12	23	27	15	32			
			$n_{2 \text{ th}}$			12	23	27	15	31			
128.593	6506	8.14	$M_2$								1074		1919
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								12		12
			$n_{2 \text{ th}}$								12		12
136.889	7359	16.78	$M_2$										2038
			c										3.5
			$n_{2 \text{ Eck}}$										11
			$n_{2 \text{ th}}$										11
156.148	4335	5.92	$M_2$	784		1463	1161	1088	1990	1618			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	13		10	19	23	13	26			
			$n_{2 \text{ th}}$	12		10	19	23	12	26			
156.148	6760	5.92	$M_2$								1317	1064	2342
			c								4.9	5.7	2.8
			$n_{2 \text{ Eck}}$								10	23	10
			$n_{2 \text{ th}}$								10	23	10
170.074	5510	6.96	$M_2$			1585	1256	1177	2160	1754			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			9	18	21	12	24			
			$n_{2 \text{ th}}$			9	18	21	11	24			
170.074	8408	6.96	$M_2$								1423		2540
			c								5.6		3.2
			$n_{2 \text{ Eck}}$								9		9
			$n_{2 \text{ th}}$								9		9
202.074	4498	3.69	$M_2$	1026	797	1904	1514	1419	2587	2104			
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9			
			$n_{2 \text{ Eck}}$	10	20	7	15	17	10	20			
			$n_{2 \text{ th}}$	10	20	7	15	17	10	20			
202.074	7010	3.69	$M_2$								1722	1395	3049
			c								4.0	4.6	2.3
			$n_{2 \text{ Eck}}$								7	18	7
			$n_{2 \text{ th}}$								7	18	7
224.636	6236	4.74	$M_2$	1128		2104	1670	1565	2863	2327			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	9		7	13	16	9	18			
			$n_{2 \text{ th}}$	9		7	13	16	9	18			
224.636	8739	4.74	$M_2$								1904	1541	3379
			c								4.4	5.1	2.5
			$n_{2 \text{ Eck}}$								7	16	7
			$n_{2 \text{ th}}$								7	16	7
253.111	7027	4.70	$M_2$	1271		2371	1882	1763	3226	2622			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	8		6	12	14	8	16			
			$n_{2 \text{ th}}$	8		6	12	14	8	16			
253.111	9846	4.70	$M_2$								2146	1736	3808
			c								4.4	5.1	2.5
			$n_{2 \text{ Eck}}$								6	14	6
			$n_{2 \text{ th}}$								6	14	6

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

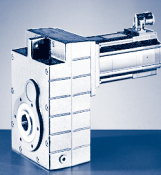


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
											c			
											$n_2$ Eck	8.14	4166	128.593
											$n_2$ th			
1672	2788	2069	3657	2541							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	8.14	6506	128.593
25	12	25	11	25							$n_2$ Eck			
25	12	25	11	25							$n_2$ th			
1775	2963	2198	3889	2701	3492	2699	5211	3757	6665	4153	$M_2$			
3.9	2.5	3.2	1.9	2.6	2.1	2.7	1.4	1.9	1.1	1.8	c	16.78	7359	136.889
24	11	24	10	24	10	22	10	22	10	22	$n_2$ Eck			
23	11	22	10	21	10	16	10	16	10	16	$n_2$ th			
											$M_2$			
											c	5.92	4335	156.148
											$n_2$ Eck			
											$n_2$ th			
2042	3397	2525	4453	3097							$M_2$			
3.2	2.0	2.6	1.5	2.1							c	5.92	6760	156.148
21	10	21	9	21							$n_2$ Eck			
21	10	21	9	21							$n_2$ th			
											$M_2$			
											c	6.96	5510	170.074
											$n_2$ Eck			
											$n_2$ th			
2213	3689	2739	4839	3363							$M_2$			
3.6	2.3	2.9	1.7	2.4							c	6.96	8408	170.074
19	9	19	8	19							$n_2$ Eck			
19	9	19	8	19							$n_2$ th			
											$M_2$			
											c	3.69	4498	202.074
											$n_2$ Eck			
											$n_2$ th			
2660	4415	3285	5781	4026							$M_2$			
2.5	1.6	2.1	1.2	1.7							c	3.69	7010	202.074
16	7	16	7	16							$n_2$ Eck			
16	7	16	7	16							$n_2$ th			
											$M_2$			
											c	4.74	6236	224.636
											$n_2$ Eck			
											$n_2$ th			
2948	4898	3642	6416	4466							$M_2$			
2.8	1.8	2.3	1.4	1.9							c	4.74	8739	224.636
14	7	14	6	14							$n_2$ Eck			
14	7	14	6	14							$n_2$ th			
											$M_2$			
											c	4.70	7027	253.111
											$n_2$ Eck			
											$n_2$ th			
3321	5519	4103	7230	5032							$M_2$			
2.8	1.8	2.3	1.4	1.9							c	4.70	9846	253.111
13	6	13	5	13							$n_2$ Eck			
13	6	13	5	13							$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00	
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500	
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6	
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50	
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32	
273.778	8870	5.76	$M_2$			2551	2022	1895	3476	2824				
			c			3.4	4.2	4.3	2.5	2.8				
			$n_{2 \text{ Eck}}$			6	11	13	7	15				
			$n_{2 \text{ th}}$			5	11	13	7	15				
273.778	9753	5.76	$M_2$								2330	1887	4128	
			c								4.1	4.7	2.3	
			$n_{2 \text{ Eck}}$								6	13	6	
			$n_{2 \text{ th}}$								5	13	5	
332.444	9229	4.30	$M_2$	1669		3114	2472	2316	4237	3444				
			c	5.3		2.9	3.6	3.7	2.2	2.4				
			$n_{2 \text{ Eck}}$	6		5	9	11	6	12				
			$n_{2 \text{ th}}$	6		5	9	11	6	12				
332.444	10550	4.30	$M_2$								2843	2304	5026	
			c								3.6	4.2	2.1	
			$n_{2 \text{ Eck}}$								5	11	5	
			$n_{2 \text{ th}}$								5	11	5	
352.811	6551	2.16	$M_2$	1805	1403	3338	2657	2490	4531	3686				
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6				
			$n_{2 \text{ Eck}}$	6	12	4	9	10	6	12				
			$n_{2 \text{ th}}$	6	11	4	9	10	6	11				
352.811	10203	2.16	$M_2$								3028	2455	5344	
			c								3.3	3.8	1.9	
			$n_{2 \text{ Eck}}$								4	10	4	
			$n_{2 \text{ th}}$								4	10	4	
397.533	7382	2.15	$M_2$	2034	1581	3762	2994	2806	5105	4153				
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6				
			$n_{2 \text{ Eck}}$	5	10	4	8	9	5	10				
			$n_{2 \text{ th}}$	5	10	4	8	9	5	10				
397.533	11496	2.15	$M_2$								3411	2766	6022	
			c								3.3	3.8	1.9	
			$n_{2 \text{ Eck}}$								4	9	4	
			$n_{2 \text{ th}}$								4	9	4	
430.222	9576	2.73	$M_2$	2185	1696	4054	3223	3021	5508	4479				
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9				
			$n_{2 \text{ Eck}}$	5	9	4	7	8	5	9				
			$n_{2 \text{ th}}$	5	9	3	7	8	5	9				
430.222	10560	2.73	$M_2$								3712	3012	6537	
			c								2.8	3.2	1.6	
			$n_{2 \text{ Eck}}$								4	8	4	
			$n_{2 \text{ th}}$								3	8	3	
522.133	9695	1.98	$M_2$	2672	2076	4941	3932	3685	6705	5455				
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6				
			$n_{2 \text{ Eck}}$	4	8	3	6	7	4	8				
			$n_{2 \text{ th}}$	4	8	3	6	7	4	8				
522.133	10560	1.98	$M_2$								4528	3678	7957	
			c								2.3	2.7	1.3	
			$n_{2 \text{ Eck}}$								3	7	3	
			$n_{2 \text{ th}}$								3	7	3	
562.391	9036	1.91	$M_2$	2892	2250	5336	4250	3984	7237	5888	4902	3984	8595	
			c	3.1	3.5	1.7	2.1	2.1	1.3	1.4	1.8	2.1	1.1	
			$n_{2 \text{ Eck}}$	4	7	3	5	6	4	7	3	6	3	
			$n_{2 \text{ th}}$	3	7	3	5	6	3	7	3	6	3	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

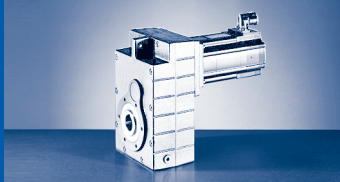


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
											$M_2$ c	5.76	8870	273.778
											$n_2$ Eck			
											$n_2$ th			
3602	5979	4448	7829	5452							$M_2$ c	5.76	9753	273.778
2.6	1.6	2.1	1.2	1.7							$n_2$ Eck			
12	6	12	5	12							$n_2$ th			
12	5	12	5	12							$M_2$ c	4.30	9229	332.444
											$n_2$ Eck			
											$n_2$ th			
4387	7273	5414	9521	6634							$M_2$ c	4.30	10550	332.444
2.3	1.4	1.9	1.1	1.5							$n_2$ Eck			
10	5	10	4	10							$n_2$ th			
10	5	10	4	10							$M_2$ c	2.16	6551	352.811
											$n_2$ Eck			
											$n_2$ th			
4666	7729	5756	10114	7050							$M_2$ c	2.16	10203	352.811
2.1	1.3	1.7	1.0	1.4							$n_2$ Eck			
9	4	9	4	9							$n_2$ th			
9	4	9	4	9							$M_2$ c	2.15	7382	397.533
											$n_2$ Eck			
											$n_2$ th			
5257	8709	6485	11396	7944							$M_2$ c	2.15	11496	397.533
2.1	1.3	1.7	1.0	1.4							$n_2$ Eck			
8	4	8	3	8							$n_2$ th			
8	4	8	3	8							$M_2$ c	2.73	9576	430.222
											$n_2$ Eck			
											$n_2$ th			
5708	9445	7038		8617							$M_2$ c	2.73	10560	430.222
1.8	1.1	1.5		1.2							$n_2$ Eck			
8	4	8		8							$n_2$ th			
8	3	8		8							$M_2$ c	1.98	9695	522.133
											$n_2$ Eck			
											$n_2$ th			
6951		8565									$M_2$ c	1.98	10560	522.133
1.5		1.2									$n_2$ Eck			
6		6									$n_2$ th			
6		6									$M_2$ c	1.91	9036	562.391
7511											$n_2$ Eck			
1.2											$n_2$ th			
6														
6														

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
633.680	9811	1.90	$M_2$	3263	2538	6017	4793	4492	8158	6638	5527	4493	9688
			c	3.0	3.4	1.6	2.0	2.1	1.2	1.3	1.8	2.0	1.0
			$n_{2 \text{ Eck}}$	3	6	2	5	6	3	6	2	6	2
			$n_{2 \text{ th}}$	3	6	2	5	6	3	6	2	6	2
710.888	9036	1.26	$M_2$	3681	2866	6770	5397	5059		7466			
			c	2.4	2.8	1.3	1.7	1.7		1.1			
			$n_{2 \text{ Eck}}$	3	6	2	4	5		6			
			$n_{2 \text{ th}}$	3	6	2	4	5		6			
801.000	9811	1.25	$M_2$	4152	3233	7632	6085	5704		8416			
			c	2.3	2.7	1.3	1.6	1.6		1.1			
			$n_{2 \text{ Eck}}$	2	5	2	4	4		5			
			$n_{2 \text{ th}}$	2	5	2	4	4		5			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



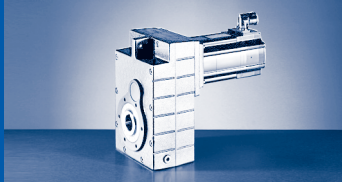


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
8467											$c$			
1.1											$n_{2 \text{ Eck}}$	1.90	9811	633.680
5											$n_{2 \text{ th}}$			
5											$M_2$			
											$c$			
											$n_{2 \text{ Eck}}$	1.26	9036	710.888
											$n_{2 \text{ th}}$			
											$M_2$			
											$c$			
											$n_{2 \text{ Eck}}$	1.25	9811	801.000
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
3.659	109	1.51	$M_2$		22	14
			c		3.7	5.5
			$n_2$ Eck		932	1107
			$n_2$ th		932	1003
5.018	111	0.86	$M_2$		30	19
			c		2.8	4.1
			$n_2$ Eck		680	807
			$n_2$ th		680	769
5.833	153	0.93	$M_2$		35	22
			c		3.3	4.9
			$n_2$ Eck		585	694
			$n_2$ th		572	616
6.422	113	0.56	$M_2$		39	24
			c		2.2	3.2
			$n_2$ Eck		531	631
			$n_2$ th		531	631
7.025	113	0.47	$M_2$	13	42	27
			c	6.0	2.0	3.0
			$n_2$ Eck	562	485	577
			$n_2$ th	562	485	576
8.379	179	0.67	$M_2$		50	32
			c		2.7	3.9
			$n_2$ Eck		407	483
			$n_2$ th		382	413
9.333	165	0.61	$M_2$		56	35
			c		2.2	3.3
			$n_2$ Eck		365	434
			$n_2$ th		330	358
10.238	159	0.37	$M_2$	19	62	39
			c	5.8	1.9	2.9
			$n_2$ Eck	386	333	396
			$n_2$ th	386	333	396
11.491	181	0.41	$M_2$	21	70	44
			c	5.9	2.0	2.9
			$n_2$ Eck	344	297	353
			$n_2$ th	344	294	317
12.800	166	0.38	$M_2$	24	78	49
			c	4.8	1.6	2.4
			$n_2$ Eck	309	266	316
			$n_2$ th	309	240	274
14.706	182	0.28	$M_2$	27	89	56
			c	4.6	1.5	2.3
			$n_2$ Eck	269	232	275
			$n_2$ th	269	232	275
16.087	182	0.25	$M_2$	30	98	62
			c	4.2	1.4	2.1
			$n_2$ Eck	246	212	252
			$n_2$ th	246	212	252
17.920	167	0.23	$M_2$	34	109	69
			c	3.5	1.2	1.7
			$n_2$ Eck	220	190	226
			$n_2$ th	220	181	217

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

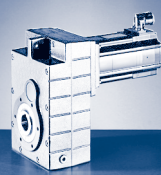


$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
20.519	183	0.17	$M_2$	39	125	79
			c	3.3	1.1	1.7
			$n_2 \text{ Eck}$	193	166	197
			$n_2 \text{ th}$	193	166	197
			$M_2$	44		88
22.857	167	0.16	c	2.7		1.4
			$n_2 \text{ Eck}$	173		177
			$n_2 \text{ th}$	173		174
			$M_2$	48	154	97
			c	3.1	1.0	1.5
25.136	183	0.13	$n_2 \text{ Eck}$	157	136	161
			$n_2 \text{ th}$	157	136	161
			$M_2$	53		108
			c	2.5		1.3
			$n_2 \text{ Eck}$	141		145
28.000	168	0.12	$n_2 \text{ th}$	141		145
			$M_2$	60		
			c	2.5		
			$n_2 \text{ Eck}$	125		
			$n_2 \text{ th}$	125		
31.600	185	0.09	$M_2$	68		
			c	2.1		
			$n_2 \text{ Eck}$	112		
			$n_2 \text{ th}$	112		
			$M_2$	78		
40.697	187	0.06	c	2.0		
			$n_2 \text{ Eck}$	97		
			$n_2 \text{ th}$	97		
			$M_2$	87		
			c	1.6		
45.333	172	0.06	$n_2 \text{ Eck}$	87		
			$n_2 \text{ th}$	87		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
3.333	138	1.68	$M_2$		20					
			c		5.1					
			$n_{2 \text{ Eck}}$		1023					
			$n_{2 \text{ th}}$		910					
3.333	166	1.68	$M_2$				38		34	
			c				4.2		3.6	
			$n_{2 \text{ Eck}}$				491		1037	
			$n_{2 \text{ th}}$				491		849	
4.571	170	2.13	$M_2$		27		52	28	47	23
			c		4.6		3.1	5.2	2.7	5.1
			$n_{2 \text{ Eck}}$		746		358	438	756	897
			$n_{2 \text{ th}}$		746		358	438	686	775
5.133	212	2.37	$M_2$		30					
			c		5.1					
			$n_{2 \text{ Eck}}$		664					
			$n_{2 \text{ th}}$		591					
5.133	223	2.37	$M_2$				58		53	26
			c				3.6		3.1	5.9
			$n_{2 \text{ Eck}}$				319		673	799
			$n_{2 \text{ th}}$				319		536	607
5.667	233	2.33	$M_2$		33		64	35	58	28
			c		5.1		3.4	5.7	3.0	5.6
			$n_{2 \text{ Eck}}$		602		289	353	610	724
			$n_{2 \text{ th}}$		535		289	353	480	544
6.400	173	0.82	$M_2$		38	24	74	40	66	33
			c		3.4	5.0	2.3	3.8	2.0	3.7
			$n_{2 \text{ Eck}}$		533	633	256	313	540	641
			$n_{2 \text{ th}}$		533	621	255	313	527	561
7.040	248	1.47	$M_2$		42		80	44	73	35
			c		4.4		2.9	4.9	2.6	4.8
			$n_{2 \text{ Eck}}$		484		232	284	491	582
			$n_{2 \text{ th}}$		484		232	284	440	498
7.771	258	1.45	$M_2$		46		89	49	80	39
			c		4.1		2.8	4.7	2.4	4.5
			$n_{2 \text{ Eck}}$		439		210	257	445	528
			$n_{2 \text{ th}}$		439		210	257	394	447
9.010	266	0.95	$M_2$		54	33	103	57	93	46
			c		3.7	5.5	2.5	4.1	2.1	4.0
			$n_{2 \text{ Eck}}$		379	450	182	222	384	455
			$n_{2 \text{ th}}$		378	433	181	222	366	399
9.946	275	0.89	$M_2$		59	37	114	63	103	51
			c		3.4	5.1	2.3	3.9	2.0	3.8
			$n_{2 \text{ Eck}}$		343	407	164	201	347	412
			$n_{2 \text{ th}}$		343	388	164	201	329	361
11.360	278	1.08	$M_2$		68	42	131	72	118	58
			c		3.1	4.5	2.1	3.4	1.8	3.4
			$n_{2 \text{ Eck}}$		300	357	144	176	304	361
			$n_{2 \text{ th}}$		283	305	144	176	243	288
12.800	285	1.01	$M_2$		77	48	148	81	133	66
			c		2.8	4.1	1.9	3.1	1.6	3.0
			$n_{2 \text{ Eck}}$		266	316	128	156	270	320
			$n_{2 \text{ th}}$		246	266	128	156	204	251

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

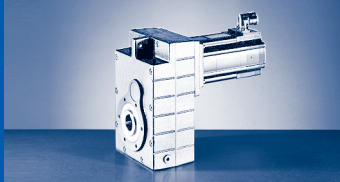


$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
14.538	301	0.75	$M_2$		87	55	168	93	152	75
			c		2.6	3.8	1.7	2.9	1.5	2.8
			$n_{2 \text{ Eck}}$		235	279	113	138	238	282
			$n_{2 \text{ th}}$		235	253	112	138	195	239
15.904	310	0.60	$M_2$		96	60	184	102	166	82
			c		2.4	3.6	1.6	2.7	1.4	2.7
			$n_{2 \text{ Eck}}$		214	255	103	126	217	258
			$n_{2 \text{ th}}$		214	237	103	126	181	225
17.920	312	0.61	$M_2$		108	68	208	115	187	93
			c		2.2	3.2	1.5	2.4	1.3	2.4
			$n_{2 \text{ Eck}}$		190	226	91	112	193	229
			$n_{2 \text{ th}}$		190	206	91	112	154	195
20.286	333	0.43	$M_2$		123	77	235	130	212	105
			c		2.0	3.0	1.4	2.3	1.2	2.2
			$n_{2 \text{ Eck}}$		168	200	81	99	170	202
			$n_{2 \text{ th}}$		168	200	81	99	155	177
22.857	313	0.43	$M_2$	42	139	87	266	147		119
			c	5.1	1.7	2.5	1.1	1.9		1.9
			$n_{2 \text{ Eck}}$	173	149	177	72	88		179
			$n_{2 \text{ th}}$	173	149	177	72	88		157
24.850	344	0.35	$M_2$	46	150	95	289	160	260	129
			c	5.9	2.0	2.9	1.2	2.1	1.1	2.2
			$n_{2 \text{ Eck}}$	159	137	163	66	81	139	165
			$n_{2 \text{ th}}$	159	137	163	66	80	139	144
28.000	314	0.33	$M_2$	52	170	107		181		146
			c	4.8	1.6	2.4		1.7		1.7
			$n_{2 \text{ Eck}}$	141	122	145		71		146
			$n_{2 \text{ th}}$	141	122	145		71		128
32.344	345	0.20	$M_2$	60	197	124				
			c	4.5	1.5	2.2				
			$n_{2 \text{ Eck}}$	122	105	125				
			$n_{2 \text{ th}}$	122	105	125				
36.444	316	0.20	$M_2$	69	222	140				
			c	3.7	1.2	1.8				
			$n_{2 \text{ Eck}}$	108	94	111				
			$n_{2 \text{ th}}$	108	94	111				
40.233	345	0.15	$M_2$	76	245	155				
			c	3.6	1.2	1.8				
			$n_{2 \text{ Eck}}$	98	85	101				
			$n_{2 \text{ th}}$	98	85	101				
45.333	319	0.14	$M_2$	86		175				
			c	3.0		1.5				
			$n_{2 \text{ Eck}}$	87		89				
			$n_{2 \text{ th}}$	87		89				
52.067	309	0.09	$M_2$	99						
			c	2.5						
			$n_{2 \text{ Eck}}$	76						
			$n_{2 \text{ th}}$	76						
58.667	322	0.09	$M_2$	112						
			c	2.3						
			$n_{2 \text{ Eck}}$	67						
			$n_{2 \text{ th}}$	67						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
63.190	282	0.07	$M_2$	121						
			c	1.9						
			$n_{2 \text{ Eck}}$	63						
			$n_{2 \text{ th}}$	63						
71.200	305	0.06	$M_2$	137						
			c	2.0						
			$n_{2 \text{ Eck}}$	56						
			$n_{2 \text{ th}}$	55						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

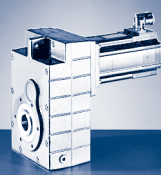


$M_{2GN} \leq 345 \text{ Nm}$

GFL05-3A				10IC40
				...500
i	$M_{2GN}$	$J_G$	$M_1$	
			$n_1$	2.00
			$I_{M400}$	3950
			$P_N$	2.4
			$J_M$	0.80
			$M_2$	2.44
			c	117
61.653	207	0.20	$n_{2 \text{ Eck}}$	1.5
			$n_{2 \text{ th}}$	64
			$M_2$	150
			c	1.4
78.639	225	0.14	$n_{2 \text{ Eck}}$	50
			$n_{2 \text{ th}}$	50
			$M_2$	171
			c	1.6
90.123	303	0.20	$n_{2 \text{ Eck}}$	44
			$n_{2 \text{ th}}$	44
			$M_2$	193
			c	1.5
101.547	328	0.20	$n_{2 \text{ Eck}}$	39
			$n_{2 \text{ th}}$	39
			$M_2$	219
			c	1.4
114.952	329	0.14	$n_{2 \text{ Eck}}$	34
			$n_{2 \text{ th}}$	34
			$M_2$	247
			c	1.2
129.524	328	0.14	$n_{2 \text{ Eck}}$	31
			$n_{2 \text{ th}}$	31
			$M_2$	269
			c	1.2
140.817	345	0.11	$n_{2 \text{ Eck}}$	28
			$n_{2 \text{ th}}$	28

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
3.675	266	7.76	$M_2$						37						
			c						5.2						
			$n_2$ Eck							940					
			$n_2$ th							702					
3.675	311	7.76	$M_2$								74		66		
			c									3.9		3.5	
			$n_2$ Eck									457		947	
			$n_2$ th									457		645	
5.211	377	6.64	$M_2$						52						
			c							5.2					
			$n_2$ Eck								663				
			$n_2$ th								495				
5.211	424	6.64	$M_2$								106		94		
			c									3.8		3.3	
			$n_2$ Eck									322		668	
			$n_2$ th									322		451	
5.750	416	6.04	$M_2$						58						
			c							5.2					
			$n_2$ Eck								601				
			$n_2$ th								448				
5.750	442	6.04	$M_2$								117		104	50	
			c									3.6		3.2	
			$n_2$ Eck									292		605	
			$n_2$ th									292		403	
6.450	263	3.65	$M_2$		38										
			c		5.1										
			$n_2$ Eck		529										
			$n_2$ th		529										
6.450	352	3.65	$M_2$				72		66		132	65	117	57	
			c				4.6		3.9		2.5	4.5	2.2	4.2	
			$n_2$ Eck				254		536		261	357	540	637	
			$n_2$ th				253		507		260	357	451	482	
7.147	433	4.04	$M_2$				80		72		146	72	130	63	
			c				5.1		4.4		2.8	5.0	2.5	4.7	
			$n_2$ Eck				229		483		235	322	487	575	
			$n_2$ th				229		404		235	322	359	409	
8.400	604	4.26	$M_2$				93		84		171	84	152	74	
			c				6.0		5.2		3.3	6.0	3.0	5.6	
			$n_2$ Eck				195		411		200	274	414	489	
			$n_2$ th				195		307		200	274	272	311	
9.463	581	3.88	$M_2$				105		96		194	95	172	84	
			c				5.1		4.4		2.8	5.1	2.5	4.8	
			$n_2$ Eck				173		365		178	243	368	434	
			$n_2$ th				173		264		178	243	233	267	
10.092	412	2.52	$M_2$		59										
			c		5.1										
			$n_2$ Eck		338										
			$n_2$ th		338										
10.092	459	2.52	$M_2$				114		103		208	103	184	91	
			c				3.8		3.3		2.1	3.8	1.9	3.5	
			$n_2$ Eck				162		342		167	228	345	407	
			$n_2$ th				162		313		166	228	271	308	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



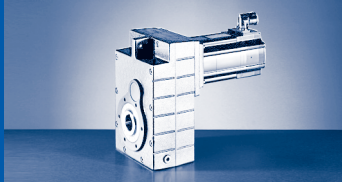


$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
11.520	632	1.73	$M_2$				129		117		237	116	210	103	
			c			4.6		4.0		2.5		4.5		2.3	4.3
			$n_{2 \text{ Eck}}$			142		300		146		200		302	357
			$n_{2 \text{ th}}$			142		246		146		200		217	249
12.978	592	2.61	$M_2$				147		133		268	132	237	116	
			c			3.8		3.3		2.1		3.8		1.9	3.5
			$n_{2 \text{ Eck}}$			126		266		130		177		268	317
			$n_{2 \text{ th}}$			126		210		129		177		182	213
14.743	602	1.95	$M_2$		86										
			c		5.1										
			$n_{2 \text{ Eck}}$		231										
			$n_{2 \text{ th}}$		231										
14.743	641	1.95	$M_2$				167		151	73	304	150	270	133	
			c				3.6		3.1	5.9	2.0	3.6	1.8	3.4	
			$n_{2 \text{ Eck}}$				111		234	278	114	156	236	279	
			$n_{2 \text{ th}}$				111		212	240	114	156	181	211	
16.128	643	1.68	$M_2$		95		183	100	166	81	334	165	295	145	
			c		5.0		3.3	5.6	2.9	5.4	1.8	3.3	1.6	3.1	
			$n_{2 \text{ Eck}}$		211		101	124	214	254	104	143	216	255	
			$n_{2 \text{ th}}$		211		101	124	197	223	104	143	164	193	
18.169	600	1.57	$M_2$		108		208	114	188	92	377	187	334	165	
			c		4.1		2.8	4.6	2.4	4.5	1.5	2.7	1.4	2.6	
			$n_{2 \text{ Eck}}$		188		90	110	190	226	93	127	192	226	
			$n_{2 \text{ th}}$		188		90	110	168	191	92	127	132	171	
20.571	645	1.19	$M_2$		122	76	236	129	213	104	427	212	378	187	
			c		3.9	5.8	2.6	4.4	2.3	4.3	1.5	2.6	1.3	2.4	
			$n_{2 \text{ Eck}}$		166	197	80	97	168	199	82	112	169	200	
			$n_{2 \text{ th}}$		166	193	79	97	164	175	82	112	130	151	
23.175	604	1.13	$M_2$		138	86	267	147	241	118	482	240	427	211	
			c		3.2	4.8	2.2	3.6	1.9	3.6	1.2	2.2	1.1	2.0	
			$n_{2 \text{ Eck}}$		147	175	71	86	149	177	73	99	150	177	
			$n_{2 \text{ th}}$		147	166	71	86	138	155	72	99	107	134	
25.200	651	0.90	$M_2$		150	93	290	159	261	128	524	260	464	229	
			c		3.7	5.4	2.2	4.0	2.1	4.0	1.2	2.4	1.2	2.3	
			$n_{2 \text{ Eck}}$		135	161	65	79	137	163	67	91	138	163	
			$n_{2 \text{ th}}$		135	161	65	79	137	142	67	91	119	123	
28.389	607	0.86	$M_2$		170	106	328	180	295	145	592	294		259	
			c		3.0	4.5	1.8	3.3	1.8	3.3	1.0	2.0		1.9	
			$n_{2 \text{ Eck}}$		120	143	58	71	122	144	59	81		145	
			$n_{2 \text{ th}}$		120	143	58	70	122	126	59	81		110	
32.800	641	0.58	$M_2$		197	123	379	209	342	168					
			c		2.8	4.1	1.7	3.0	1.6	3.0					
			$n_{2 \text{ Eck}}$		104	124	50	61	105	125					
			$n_{2 \text{ th}}$		104	123	50	61	105	109					
36.951	611	0.56	$M_2$		223	140	428	236	386	190					
			c		2.3	3.5	1.4	2.5	1.4	2.6					
			$n_{2 \text{ Eck}}$		92	110	44	54	94	111					
			$n_{2 \text{ th}}$		92	110	44	54	94	97					
40.800	657	0.43	$M_2$		246	154	473	261	426	210					
			c		2.3	3.4	1.4	2.5	1.3	2.5					
			$n_{2 \text{ Eck}}$		84	99	40	49	85	101					
			$n_{2 \text{ th}}$		84	99	40	49	85	88					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
45.963	613	0.41	$M_2$	85	278	175	534	296	481	238				
			c	5.7	1.9	2.8	1.2	2.1	1.1	2.1				
			$n_{2 \text{ Eck}}$	86	74	88	36	44	75	89				
			$n_{2 \text{ th}}$	86	74	88	36	44	75	78				
52.800	660	0.26	$M_2$	98	320	201								
			c	5.3	1.8	2.6								
			$n_{2 \text{ Eck}}$	75	65	77								
			$n_{2 \text{ th}}$	75	65	77								
59.481	615	0.25	$M_2$	111	362	228								
			c	4.4	1.5	2.2								
			$n_{2 \text{ Eck}}$	66	57	68								
			$n_{2 \text{ th}}$	66	57	68								
64.080	576	0.19	$M_2$	121	391	246								
			c	3.8	1.3	1.9								
			$n_{2 \text{ Eck}}$	62	53	63								
			$n_{2 \text{ th}}$	62	53	63								
72.189	616	0.19	$M_2$	136	440	277								
			c	4.0	1.3	2.0								
			$n_{2 \text{ Eck}}$	55	47	56								
			$n_{2 \text{ th}}$	55	47	56								
81.000	435	0.13	$M_2$	155										
			c	2.5										
			$n_{2 \text{ Eck}}$	49										
			$n_{2 \text{ th}}$	49										
91.250	476	0.12	$M_2$	174										
			c	2.5										
			$n_{2 \text{ Eck}}$	43										
			$n_{2 \text{ th}}$	43										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

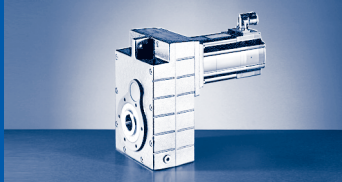


$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
66.213	497	0.29	$M_2$	123	398	251
			c	3.6	1.2	1.8
			$n_{2 \text{ Eck}}$	60	52	61
			$n_{2 \text{ th}}$	60	52	61
			$M_2$	134	433	273
72.000	497	0.26	c	3.3	1.1	1.6
			$n_{2 \text{ Eck}}$	55	47	56
			$n_{2 \text{ th}}$	55	47	56
			$M_2$	152		309
			c	2.9		1.5
81.111	497	0.26	$n_{2 \text{ Eck}}$	49		50
			$n_{2 \text{ th}}$	49		50
			$M_2$	166		336
			c	2.6		1.3
			$n_{2 \text{ Eck}}$	45		46
88.200	488	0.19	$n_{2 \text{ th}}$	45		46
			$M_2$	187		379
			c	2.6		1.3
			$n_{2 \text{ Eck}}$	40		41
			$n_{2 \text{ th}}$	40		41
99.361	550	0.19	$M_2$	220		
			c	2.2		
			$n_{2 \text{ Eck}}$	34		
			$n_{2 \text{ th}}$	34		
			$M_2$	248		502
116.571	528	0.09	c	2.2		1.1
			$n_{2 \text{ Eck}}$	30		31
			$n_{2 \text{ th}}$	30		31
			$M_2$	273		
			c	1.9		
131.323	595	0.21	$n_{2 \text{ Eck}}$	27		
			$n_{2 \text{ th}}$	27		
			$M_2$	308		
			c	1.8		
			$n_{2 \text{ Eck}}$	24		
144.320	560	0.11	$n_{2 \text{ th}}$	24		
			$M_2$	341		
			c	1.6		
			$n_{2 \text{ Eck}}$	22		
			$n_{2 \text{ th}}$	22		
162.583	613	0.11	$M_2$	385		
			c	1.4		
			$n_{2 \text{ Eck}}$	20		
			$n_{2 \text{ th}}$	20		
			$M_2$	440		
179.520	605	0.10	c	1.3		
			$n_{2 \text{ Eck}}$	17		
			$n_{2 \text{ th}}$	17		
			$M_2$	497		
			c	1.1		
202.237	611	0.10	$n_{2 \text{ Eck}}$	15		
			$n_{2 \text{ th}}$	15		
			$M_2$	260.457		
			c	1.1		
			$n_{2 \text{ Eck}}$	15		
231.200	634	0.07	$n_{2 \text{ th}}$	15		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

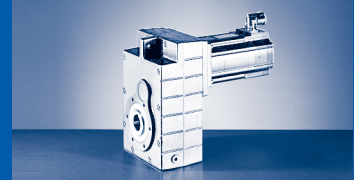
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100	1680
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
3.350	349	19.57	c								67
			$n_2$ Eck								4.8
			$n_2$ th								502
			$n_2$ th								502
3.350	639	19.57	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
4.643	483	11.99	$M_2$								93
			c								4.8
			$n_2$ Eck								362
			$n_2$ th								362
4.643	653	11.99	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
5.159	537	11.12	$M_2$								103
			c								4.8
			$n_2$ Eck								326
			$n_2$ th								326
5.159	850	11.12	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
5.695	592	18.09	$M_2$								114
			c								4.8
			$n_2$ Eck								295
			$n_2$ th								295
5.695	914	18.09	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
6.400	463	9.83	$M_2$						64		
			c						5.2		
			$n_2$ Eck						540		
			$n_2$ th						466		
6.400	541	9.83	$M_2$								130
			c								3.9
			$n_2$ Eck								263
			$n_2$ th								263
6.400	662	9.83	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
7.150	744	11.88	$M_2$								143
			c								4.8
			$n_2$ Eck								235
			$n_2$ th								235
7.150	918	11.88	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

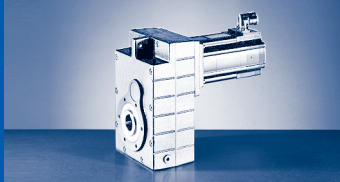


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
60									$c$			
4.3									$n_{2 \text{ Eck}}$	19.57	349	3.350
1039									$n_{2 \text{ th}}$			
631									$M_2$			
		113	113		195		176		$c$			
		5.2	4.1		3.1		2.7		$n_{2 \text{ Eck}}$	19.57	639	3.350
		508	1048		511		1051		$n_{2 \text{ th}}$			
		508	626		510		567		$M_2$			
83									$c$			
4.3									$n_{2 \text{ Eck}}$	11.99	483	4.643
750									$n_{2 \text{ th}}$			
524									$M_2$			
		159	159		273	106	245		$c$			
		3.8	3.0		2.3	5.0	2.0		$n_{2 \text{ Eck}}$	11.99	653	4.643
		366	756		368	536	758		$n_{2 \text{ th}}$			
		366	487		368	434	434		$M_2$			
92									$c$			
4.3									$n_{2 \text{ Eck}}$	11.12	537	5.159
675									$n_{2 \text{ th}}$			
410									$M_2$			
		175	175		302	117	272		$c$			
		4.5	3.6		2.7	5.8	2.3		$n_{2 \text{ Eck}}$	11.12	850	5.159
		330	680		332	483	682		$n_{2 \text{ th}}$			
		330	393		331	390	354		$M_2$			
101									$c$			
4.3									$n_{2 \text{ Eck}}$	18.09	592	5.695
611									$n_{2 \text{ th}}$			
371									$M_2$			
		194	194		334	129	300		$c$			
		4.4	3.5		2.6	5.7	2.3		$n_{2 \text{ Eck}}$	18.09	914	5.695
		299	616		300	437	618		$n_{2 \text{ th}}$			
		299	354		300	354	319		$M_2$			
									$c$			
									$n_{2 \text{ Eck}}$	9.83	463	6.400
									$n_{2 \text{ th}}$			
115									$M_2$			
3.5									$c$			
544									$n_{2 \text{ Eck}}$	9.83	541	6.400
429									$n_{2 \text{ th}}$			
		221	221		379	149	340	102	$M_2$			
		2.8	2.2		1.7	3.7	1.5	4.5	$c$			
		266	548		267	389	550	650	$n_{2 \text{ Eck}}$	9.83	662	6.400
		266	383		267	315	315	315	$n_{2 \text{ th}}$			
127									$M_2$			
4.3									$c$			
487									$n_{2 \text{ Eck}}$	11.88	744	7.150
341									$n_{2 \text{ th}}$			
		245	245		421	164	378	112	$M_2$			
		3.5	2.8		2.1	4.6	1.8	5.5	$c$			
		238	491		239	348	492	582	$n_{2 \text{ Eck}}$	11.88	918	7.150
		238	310		239	282	271	282	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

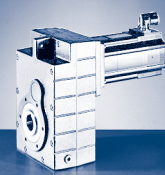
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100	1680
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
8.324	866	13.11	c								167
			$n_2$ Eck								4.8
			$n_2$ th								202
			$n_2$ th								202
8.324	993	13.11	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
9.379	976	12.04	$M_2$								188
			c								4.8
			$n_2$ Eck								179
			$n_2$ th								179
9.379	999	12.04	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
9.714	757	8.03	$M_2$						97		
			c						5.6		
			$n_2$ Eck						356		
			$n_2$ th						300		
9.714	885	8.03	$M_2$								196
			c								4.2
			$n_2$ Eck								173
			$n_2$ th								173
9.714	969	8.03	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
11.538	1080	8.52	$M_2$								232
			c								4.3
			$n_2$ Eck								146
			$n_2$ th								146
13.000	1089	7.97	$M_2$								263
			c								3.9
			$n_2$ Eck								129
			$n_2$ th								129
14.200	1106	6.35	$M_2$						142		
			c						5.6		
			$n_2$ Eck						243		
			$n_2$ th						205		
14.200	1143	6.35	$M_2$								288
			c								3.7
			$n_2$ Eck								118
			$n_2$ th								118
15.904	1150	5.27	$M_2$						159		
			c						5.2		
			$n_2$ Eck						217		
			$n_2$ th						187		
15.904	1179	5.27	$M_2$								323
			c								3.4
			$n_2$ Eck								106
			$n_2$ th								106

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

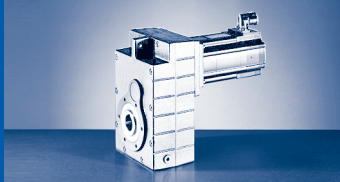


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
148									$c$			
4.3									$n_{2 \text{ Eck}}$	13.11	866	8.324
418									$n_{2 \text{ th}}$			
254									$M_2$			
		286	286		491	192	441	131	$c$			
		3.3	2.6		1.9	4.2	1.7	5.2	$n_{2 \text{ Eck}}$	13.11	993	8.324
		204	422		205	299	423	500	$n_{2 \text{ th}}$			
		204	225		205	242	191	242	$M_2$			
167									$c$			
4.3									$n_{2 \text{ Eck}}$	12.04	976	9.379
371									$n_{2 \text{ th}}$			
225									$M_2$			
		324	323		555	217	498	149	$c$			
		2.9	2.3		1.7	3.8	1.5	4.6	$n_{2 \text{ Eck}}$	12.04	999	9.379
		181	374		182	266	375	444	$n_{2 \text{ th}}$			
		181	194		171	215	159	215	$M_2$			
									$c$			
									$n_{2 \text{ Eck}}$	8.03	757	9.714
									$n_{2 \text{ th}}$			
174									$M_2$			
3.7									$c$	8.03	885	9.714
358									$n_{2 \text{ Eck}}$			
276									$n_{2 \text{ th}}$			
		336	335		575	226	516	155	$M_2$			
		2.7	2.2		1.6	3.5	1.4	4.3	$c$	8.03	969	9.714
		175	361		176	256	362	428	$n_{2 \text{ Eck}}$			
		175	243		176	207	195	207	$n_{2 \text{ th}}$			
206		400	399	128	684	269	614	184	$M_2$			
3.8		2.6	2.0	5.7	1.5	3.3	1.3	4.0	$c$	8.52	1080	11.538
302		147	304	360	148	216	305	361	$n_{2 \text{ Eck}}$			
206		147	178	212	148	175	141	175	$n_{2 \text{ th}}$			
234		452	450	145	772	304	692	209	$M_2$			
3.4		2.3	1.8	5.1	1.4	3.0	1.2	3.6	$c$	7.97	1089	13.000
268		131	270	319	132	192	271	320	$n_{2 \text{ Eck}}$			
179		131	149	188	126	155	118	155	$n_{2 \text{ th}}$			
									$M_2$			
									$c$	6.35	1106	14.200
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
256		494	492	159	843	332	757	228	$M_2$			
3.3		2.2	1.7	4.9	1.3	2.9	1.1	3.5	$c$	6.35	1143	14.200
245		120	247	292	120	175	248	293	$n_{2 \text{ Eck}}$			
184		120	151	172	120	142	120	142	$n_{2 \text{ th}}$			
									$M_2$			
									$c$	5.27	1150	15.904
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
287	139	554	552	178	946	373	848	256	$M_2$			
3.0	5.8	2.0	1.6	4.5	1.2	2.6	1.1	3.2	$c$	5.27	1179	15.904
219	258	107	221	261	108	157	221	262	$n_{2 \text{ Eck}}$			
168	191	107	135	154	108	127	110	127	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100	1680
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
			c				199		180		366
17.920	1189	4.98	$n_2$ Eck				5.5		4.8		3.1
			$n_2$ th				91		193		94
			$n_2$ th				91		164		94
			$M_2$		119						
			c		5.1						
20.286	828	3.47	$n_2$ Eck		168						
			$n_2$ th		168						
			$M_2$				226		205		
			c				5.1		4.4		
20.286	1233	3.47	$n_2$ Eck				81		170		
			$n_2$ th				81		166		
			$M_2$								415
			c								2.9
20.286	1262	3.47	$n_2$ Eck								83
			$n_2$ th								83
			$M_2$		134						
			c		5.1						
22.857	933	3.27	$n_2$ Eck		149						
			$n_2$ th		149						
			$M_2$				256		232		469
			c				4.5		3.9		2.5
22.857	1240	3.27	$n_2$ Eck				72		151		74
			$n_2$ th				72		144		74
			$M_2$				279		252		
			c				4.5		4.3		
24.850	1295	2.65	$n_2$ Eck				66		139		
			$n_2$ th				66		139		
			$M_2$								510
			c								2.6
24.850	1337	2.65	$n_2$ Eck								68
			$n_2$ th								68
			$M_2$				317		285		577
			c				3.8		3.6		2.1
28.000	1242	2.53	$n_2$ Eck				58		123		60
			$n_2$ th				58		123		60
			$M_2$		190						
			c		4.6						
32.344	1048	1.69	$n_2$ Eck		105						
			$n_2$ th		105						
			$M_2$				366		330		
			c				3.6		3.5		
32.344	1358	1.69	$n_2$ Eck				51		107		
			$n_2$ th				51		107		
			$M_2$								668
			c								2.0
32.344	1370	1.69	$n_2$ Eck								52
			$n_2$ th								52
			$M_2$		215						
			c		4.6						
36.444	1181	1.61	$n_2$ Eck		94						
			$n_2$ th		94						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



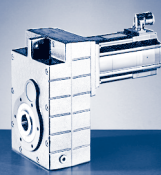


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
324	158	626	623	202	1067	422		290	c	4.98	1189	17.920
2.7	5.2	1.8	1.4	4.1	1.1	2.4		2.9	$n_{2 \text{ Eck}}$			
194	229	95	196	232	95	139		232	$n_{2 \text{ th}}$			
146	166	95	113	137	95	112		112				
									$M_2$			
									c	3.47	828	20.286
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	3.47	1233	20.286
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
368	180	709	706	229					$M_2$			
2.6	4.8	1.7	1.3	3.8					c	3.47	1262	20.286
172	203	84	173	205					$n_{2 \text{ Eck}}$			
149	153	84	113	121					$n_{2 \text{ th}}$			
									$M_2$			
									c	3.27	933	22.857
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
416	204	801	797	260					$M_2$			
2.2	4.2	1.5	1.2	3.3					c	3.27	1240	22.857
152	180	74	154	182					$n_{2 \text{ Eck}}$			
128	136	74	94	107					$n_{2 \text{ th}}$			
									$M_2$			
									c	2.65	1295	24.850
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
451	220	870	865	281					$M_2$			
2.5	4.7	1.5	1.3	3.7					c	2.65	1337	24.850
140	165	68	141	167					$n_{2 \text{ Eck}}$			
125	125	68	99	99					$n_{2 \text{ th}}$			
510	250	983	977	319					$M_2$			
2.1	3.9	1.3	1.1	3.1					c	2.53	1242	28.000
124	147	61	125	148					$n_{2 \text{ Eck}}$			
111	111	61	84	87					$n_{2 \text{ th}}$			
									$M_2$			
									c	1.69	1048	32.344
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	1.69	1358	32.344
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
590	290								$M_2$			
2.0	3.7								c	1.69	1370	32.344
108	127								$n_{2 \text{ Eck}}$			
96	96								$n_{2 \text{ th}}$			
									$M_2$			
									c	1.61	1181	36.444
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
36.444	1248	1.61	$M_2$				416	226	375	182	755
			c				2.9	5.3	2.8	5.3	1.6
			$n_{2 \text{ Eck}}$				45	55	95	113	46
			$n_{2 \text{ th}}$				45	55	95	99	46
39.642	1093	1.25	$M_2$		235	146					
			c		3.9	5.8					
			$n_{2 \text{ Eck}}$		86	102					
			$n_{2 \text{ th}}$		86	102					
39.642	1378	1.25	$M_2$				452	246	407	198	821
			c				3.0	5.4	2.9	5.4	1.7
			$n_{2 \text{ Eck}}$				41	51	87	103	42
			$n_{2 \text{ th}}$				41	50	87	91	42
44.667	1231	1.20	$M_2$		265	165					
			c		3.9	5.8					
			$n_{2 \text{ Eck}}$		76	91					
			$n_{2 \text{ th}}$		76	91					
44.667	1258	1.20	$M_2$				512	280	462	226	928
			c				2.4	4.3	2.3	4.4	1.4
			$n_{2 \text{ Eck}}$				37	45	77	92	38
			$n_{2 \text{ th}}$				37	45	77	80	38
52.067	1127	0.78	$M_2$		311	195					
			c		3.1	4.6					
			$n_{2 \text{ Eck}}$		66	78					
			$n_{2 \text{ th}}$		65	78					
52.067	1342	0.78	$M_2$				599	328	539	264	
			c				2.2	4.0	2.1	4.0	
			$n_{2 \text{ Eck}}$				31	38	66	79	
			$n_{2 \text{ th}}$				31	38	66	69	
58.667	1270	0.75	$M_2$		351	219	677	372	610	300	
			c		3.1	4.6	1.9	3.3	1.8	3.4	
			$n_{2 \text{ Eck}}$		58	69	28	34	59	70	
			$n_{2 \text{ th}}$		58	69	28	34	59	61	
63.190	792	0.57	$M_2$	117							
			c	5.3							
			$n_{2 \text{ Eck}}$	63							
			$n_{2 \text{ th}}$	63							
63.190	1145	0.57	$M_2$		380	238					
			c		2.6	3.8					
			$n_{2 \text{ Eck}}$		54	64					
			$n_{2 \text{ th}}$		54	64					
63.190	1240	0.57	$M_2$				731	402	658	324	
			c				1.7	3.0	1.6	3.1	
			$n_{2 \text{ Eck}}$				26	32	55	65	
			$n_{2 \text{ th}}$				26	32	55	57	
71.200	893	0.56	$M_2$	131							
			c	5.9							
			$n_{2 \text{ Eck}}$	56							
			$n_{2 \text{ th}}$	55							
71.200	1280	0.56	$M_2$		427	267	824	454	741	365	
			c		2.8	4.2	1.5	2.8	1.6	3.1	
			$n_{2 \text{ Eck}}$		48	57	23	28	49	58	
			$n_{2 \text{ th}}$		48	57	23	28	49	50	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

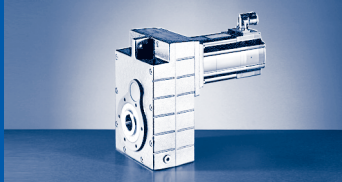


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
668	329								c			
1.6	3.0								$n_{2 \text{ Eck}}$	1.61	1248	36.444
96	113								$n_{2 \text{ th}}$			
85	85								$M_2$			
									c			
									$n_{2 \text{ Eck}}$	1.25	1093	39.642
									$n_{2 \text{ th}}$			
726	358								$M_2$			
1.6	3.1								c			
88	104								$n_{2 \text{ Eck}}$	1.25	1378	39.642
78	78								$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	1.20	1231	44.667
									$n_{2 \text{ th}}$			
821	405								$M_2$			
1.3	2.5								c			
78	92								$n_{2 \text{ Eck}}$	1.20	1258	44.667
70	70								$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.78	1127	52.067
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.78	1342	52.067
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.75	1270	58.667
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.57	792	63.190
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.57	1145	63.190
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.57	1240	63.190
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.56	893	71.200
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.56	1280	71.200
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100	1680
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
79.875	796	0.37	c	149							
			$n_{2 \text{ Eck}}$	4.7							
			$n_{2 \text{ th}}$	50							
			$n_{2 \text{ th}}$	49							
79.875	854	0.37	$M_2$		485	305					
			c		1.7	2.5					
			$n_{2 \text{ Eck}}$		43	51					
			$n_{2 \text{ th}}$		43	51					
90.000	897	0.36	$M_2$	168							
			c	4.7							
			$n_{2 \text{ Eck}}$	44							
			$n_{2 \text{ th}}$	44							
90.000	930	0.36	$M_2$		547	344					
			c		1.6	2.4					
			$n_{2 \text{ Eck}}$		38	45					
			$n_{2 \text{ th}}$		38	45					

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

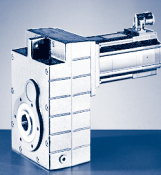


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2Eck}$ $n_{2th}$	0.37	796	79.875
									$M_2$ c $n_{2Eck}$ $n_{2th}$	0.37	854	79.875
									$M_2$ c $n_{2Eck}$ $n_{2th}$	0.36	897	90.000
									$M_2$ c $n_{2Eck}$ $n_{2th}$	0.36	930	90.000

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
65.306	883	0.79	c		388	244	748	413	672	332
			$n_2$ Eck		2.2	3.2	1.2	2.1	1.3	2.4
			$n_2$ th		52	62	25	31	53	63
					52	62	25	31	53	55
72.452	869	0.89	$M_2$	132	432	272	830	460	747	370
			c	5.7	1.9	2.8	1.1	1.9	1.1	2.1
			$n_2$ Eck	55	47	56	23	28	48	57
			$n_2$ th	55	47	56	23	28	47	50
81.636	979	0.88	$M_2$	148	487	306	936	518	842	416
			c	5.7	1.9	2.8	1.1	1.9	1.1	2.1
			$n_2$ Eck	48	42	50	20	25	42	50
			$n_2$ th	48	42	50	20	25	42	44
92.413	961	0.61	$M_2$	169	553	348		588		473
			c	5.0	1.7	2.5		1.6		1.8
			$n_2$ Eck	43	37	44		22		44
			$n_2$ th	43	37	44		22		39
104.127	1082	0.60	$M_2$	191	623	392		662		533
			c	5.0	1.7	2.5		1.6		1.8
			$n_2$ Eck	38	33	39		19		39
			$n_2$ th	38	33	39		19		34
113.206	1040	0.45	$M_2$	209	678	427		722		581
			c	4.4	1.5	2.2		1.4		1.6
			$n_2$ Eck	35	30	36		18		36
			$n_2$ th	35	30	36		18		32
127.556	1171	0.44	$M_2$	235	764	482		813		654
			c	4.4	1.5	2.2		1.4		1.6
			$n_2$ Eck	31	27	32		16		32
			$n_2$ th	31	27	32		16		28
147.347	1140	0.28	$M_2$	274	885	558				
			c	3.7	1.2	1.8				
			$n_2$ Eck	27	23	28				
			$n_2$ th	27	23	27				
166.025	1248	0.27	$M_2$	309	998	629				
			c	3.6	1.2	1.8				
			$n_2$ Eck	24	21	24				
			$n_2$ th	24	21	24				
183.285	1236	0.19	$M_2$	342	1103	696				
			c	3.2	1.1	1.6				
			$n_2$ Eck	22	19	22				
			$n_2$ th	22	19	22				
206.519	1248	0.19	$M_2$	387		786				
			c	2.9		1.4				
			$n_2$ Eck	19		20				
			$n_2$ th	19		20				
224.636	1343	0.18	$M_2$	421		855				
			c	2.9		1.4				
			$n_2$ Eck	18		18				
			$n_2$ th	18		18				
253.111	1258	0.18	$M_2$	477		966				
			c	2.4		1.2				
			$n_2$ Eck	16		16				
			$n_2$ th	16		16				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

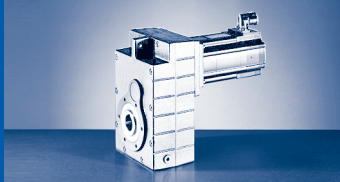


$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
290.706	1378	0.11	$M_2$	548						
			c	2.3						
			$n_2$ Eck	14						
			$n_2$ th	14						
327.556	1258	0.11	$M_2$	621						
			c	1.8						
			$n_2$ Eck	12						
			$n_2$ th	12						
352.811	1378	0.08	$M_2$	668						
			c	1.9						
			$n_2$ Eck	11						
			$n_2$ th	11						
397.533	1258	0.08	$M_2$	756						
			c	1.5						
			$n_2$ Eck	10						
			$n_2$ th	10						
430.222	1270	0.10	$M_2$	819						
			c	1.4						
			$n_2$ Eck	9						
			$n_2$ th	9						
522.133	1270	0.08	$M_2$	996						
			c	1.2						
			$n_2$ Eck	8						
			$n_2$ th	8						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c								
6.864	1662	41.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
6.864	2089	41.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
7.466	1807	38.70	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
7.466	2156	38.70	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.010	1037	26.80	$n_{2 \text{ Eck}}$					180		160	
			$n_{2 \text{ th}}$					5.3		4.7	
			$M_2$					187		386	
			c					186		252	
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.010	2040	26.80	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.010	2230	26.80	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.799	1128	25.30	$n_{2 \text{ Eck}}$					195		174	
			$n_{2 \text{ th}}$					5.3		4.7	
			$M_2$					171		355	
			c					171		232	
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.799	2219	25.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
9.799	2310	25.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
11.167	1156	19.50	$n_{2 \text{ Eck}}$					224		199	
			$n_{2 \text{ th}}$					4.8		4.2	
			$M_2$					151		312	
			c					150		218	
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
11.167	2303	19.50	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
12.307	2223	27.60	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



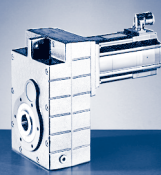


$M_{2GN} \leq 3107 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
		229						c			
		5.2						$n_{2 \text{ Eck}}$	41.30	1662	6.864
		511						$n_{2 \text{ th}}$			
		298									
				393		354		$M_2$			
				4.9		4.3		c			
				249		513		$n_{2 \text{ Eck}}$	41.30	2089	6.864
				249		285		$n_{2 \text{ th}}$			
		249						$M_2$			
		5.2						c			
		470						$n_{2 \text{ Eck}}$	38.70	1807	7.466
		274						$n_{2 \text{ th}}$			
				428		386		$M_2$			
				4.6		4.1		c			
				229		472		$n_{2 \text{ Eck}}$	38.70	2156	7.466
				229		259		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	26.80	1037	9.010
								$n_{2 \text{ th}}$			
		302						$M_2$			
		4.9						c			
		390						$n_{2 \text{ Eck}}$	26.80	2040	9.010
		254						$n_{2 \text{ th}}$			
				520		468		$M_2$			
				4.0		3.5		c			
				190		391		$n_{2 \text{ Eck}}$	26.80	2230	9.010
				190		223		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	25.30	1128	9.799
								$n_{2 \text{ th}}$			
		329						$M_2$			
		4.9						c			
		358						$n_{2 \text{ Eck}}$	25.30	2219	9.799
		233						$n_{2 \text{ th}}$			
				567		510		$M_2$			
				3.8		3.3		c			
				175		359		$n_{2 \text{ Eck}}$	25.30	2310	9.799
				175		205		$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	19.50	1156	11.167
								$n_{2 \text{ th}}$			
375		376		649		584		$M_2$			
5.6		4.5		3.3		2.9		c			
152		314		153		315		$n_{2 \text{ Eck}}$	19.50	2303	11.167
152		219		153		180		$n_{2 \text{ th}}$			
416		417		719		646		$M_2$			
4.9		3.9		2.9		2.6		c			
138		285		139		286		$n_{2 \text{ Eck}}$	27.60	2223	12.307
138		156		139		141		$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

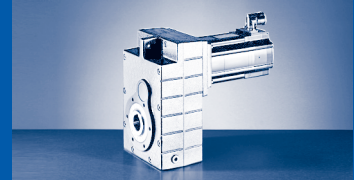
## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c					286		254	
14.333	1650	20.00	$n_{2 \text{ Eck}}$					5.3		4.7	
			$n_{2 \text{ th}}$					117		243	
			$n_{2 \text{ th}}$					117		158	
14.333	2374	20.00	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
16.333	1692	15.50	$M_2$					327		291	
			c					4.8		4.2	
			$n_{2 \text{ Eck}}$					103		213	
			$n_{2 \text{ th}}$					103		149	
16.333	2461	15.50	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
18.407	1906	14.60	$M_2$					369		328	
			c					4.8		4.2	
			$n_{2 \text{ Eck}}$					91		189	
			$n_{2 \text{ th}}$					91		132	
18.407	2480	14.60	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
19.667	1524	12.10	$M_2$			196					
			c			5.6					
			$n_{2 \text{ Eck}}$			176					
			$n_{2 \text{ th}}$			148					
19.667	1784	12.10	$M_2$					397		352	
			c					4.2		3.7	
			$n_{2 \text{ Eck}}$					85		177	
			$n_{2 \text{ th}}$					85		136	
19.667	2563	12.10	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
22.164	1717	11.30	$M_2$			221					
			c			5.6					
			$n_{2 \text{ Eck}}$			156					
			$n_{2 \text{ th}}$			131					
22.164	2010	11.30	$M_2$					447		397	
			c					4.2		3.7	
			$n_{2 \text{ Eck}}$					76		157	
			$n_{2 \text{ th}}$					76		121	
22.164	2612	11.30	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
24.111	1876	9.04	$M_2$					489		432	
			c					3.7		3.6	
			$n_{2 \text{ Eck}}$					70		144	
			$n_{2 \text{ th}}$					70		120	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

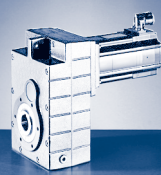


$M_{2GN} \leq 3107 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	20.00	1650	14.333
487		487		839	325	754		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	20.00	2374	14.333
4.5		3.6		2.7	5.9	2.3					
119		245		119	174	246					
119		149		119	140	135					
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	15.50	1692	16.333
557		557		959	372	861		$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	15.50	2461	16.333
4.1		3.3		2.4	5.3	2.1					
104		215		105	153	216					
104		140		105	123	123					
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.60	1906	18.407
630		630		1083	422	973	289	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	14.60	2480	18.407
3.7		2.9		2.2	4.8	1.9	5.8				
92		191		93	135	191	226				
92		122		93	109	108	109				
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	12.10	1524	19.667
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	12.10	1784	19.667
674		674		1158	452	1040	309	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	12.10	2563	19.667
3.6		2.8		2.1	4.6	1.8	5.6				
86		179		87	127	179	212				
86		125		87	102	102	102				
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	11.30	1717	22.164
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	11.30	2010	22.164
763		762		1308	512	1175	350	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	11.30	2612	22.164
3.2		2.5		1.9	4.2	1.7	5.1				
77		158		77	112	159	188				
77		110		77	91	91	91				
								$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	9.04	1876	24.111

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
24.111	2722	9.04	c								
			$n_2$ Eck								
			$n_2$ th								
27.173	2114	8.63	$M_2$					551		487	
			c					3.7		3.6	
			$n_2$ Eck					62		128	
			$n_2$ th					62		106	
27.173	2767	8.63	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
32.667	1699	5.43	$M_2$	367		331					
			c	4.5		4.3					
			$n_2$ Eck	50		106					
			$n_2$ th	50		106					
32.667	1990	5.43	$M_2$					668	326	591	288
			c					2.9	5.7	2.8	5.4
			$n_2$ Eck					51	70	107	126
			$n_2$ th					51	70	95	95
32.667	2990	5.43	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
36.815	1915	5.21	$M_2$	413		373					
			c	4.5		4.3					
			$n_2$ Eck	44		94					
			$n_2$ th	44		94					
36.815	2242	5.21	$M_2$					753	367	666	324
			c					2.9	5.7	2.8	5.4
			$n_2$ Eck					46	63	95	112
			$n_2$ th					46	62	85	85
36.815	3018	5.21	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
39.667	1761	4.07	$M_2$	448		404					
			c	3.8		3.7					
			$n_2$ Eck	41		87					
			$n_2$ th	41		87					
39.667	2061	4.07	$M_2$					815	399	721	352
			c					2.5	4.9	2.4	4.6
			$n_2$ Eck					42	58	88	104
			$n_2$ th					42	58	78	78
39.667	3107	4.07	$M_2$								
			c								
			$n_2$ Eck								
			$n_2$ th								
44.704	1985	3.92	$M_2$	505		456					
			c	3.8		3.7					
			$n_2$ Eck	37		77					
			$n_2$ th	37		77					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

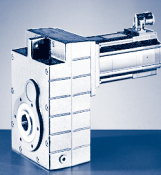


$M_{2GN} \leq 3107 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
830		827		1423	554	1276	379	$c$	9.04	2722	24.111
3.2		2.8		1.9	4.5	1.8	5.5	$n_{2 \text{ Eck}}$			
71		146		71	103	146	173	$n_{2 \text{ th}}$			
71		102		71	84	84	84	$M_2$			
								$c$	8.63	2114	27.173
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
938		934		1607	628	1441	430	$M_2$			
2.9		2.5		1.7	4.1	1.6	5.0	$c$	8.63	2767	27.173
63		129		63	92	130	153	$n_{2 \text{ Eck}}$			
63		90		63	74	74	74	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.43	1699	32.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.43	1990	32.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1132	492	1126						$M_2$			
2.6	5.7	2.2						$c$	5.43	2990	32.667
52	72	108						$n_{2 \text{ Eck}}$			
52	72	75						$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.21	1915	36.815
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.21	2242	36.815
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1279	558	1273	408					$M_2$			
2.3	5.1	2.0	5.7					$c$	5.21	3018	36.815
46	64	95	113					$n_{2 \text{ Eck}}$			
46	64	67	67					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.07	1761	39.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.07	2061	39.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1379	602	1372	441					$M_2$			
2.2	4.9	1.9	5.5					$c$	4.07	3107	39.667
43	59	89	105					$n_{2 \text{ Eck}}$			
43	59	62	62					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	3.92	1985	44.704
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
44.704	2323	3.92	$M_2$					918	450	812	397
			c				2.5	4.9	2.4	4.6	
			$n_{2 \text{ Eck}}$				38	52	78	92	
			$n_{2 \text{ th}}$				38	51	70	70	
44.704	3027	3.92	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
51.333	1825	2.59	$M_2$	585	318	527	256				
			c	3.1	5.5	2.9	5.5				
			$n_{2 \text{ Eck}}$	32	39	67	80				
			$n_{2 \text{ th}}$	32	39	67	70				
51.333	2136	2.59	$M_2$					1060	522	937	460
			c					2.0	3.9	1.9	3.7
			$n_{2 \text{ Eck}}$					33	45	68	80
			$n_{2 \text{ th}}$					33	45	61	61
57.852	2057	2.50	$M_2$	659	359	594	289				
			c	3.1	5.5	2.9	5.5				
			$n_{2 \text{ Eck}}$	28	35	60	71				
			$n_{2 \text{ th}}$	28	35	60	62				
57.852	2407	2.50	$M_2$					1194	588	1056	519
			c					2.0	3.9	1.9	3.7
			$n_{2 \text{ Eck}}$					29	40	60	71
			$n_{2 \text{ th}}$					29	40	54	54
62.300	1854	1.89	$M_2$	714	390	643	314				
			c	2.6	4.6	2.4	4.6				
			$n_{2 \text{ Eck}}$	26	32	56	66				
			$n_{2 \text{ th}}$	26	32	55	58				
62.300	2170	1.89	$M_2$					1291	637	1141	562
			c					1.7	3.3	1.6	3.1
			$n_{2 \text{ Eck}}$					27	37	56	66
			$n_{2 \text{ th}}$					27	37	50	50
70.211	2090	1.83	$M_2$	804	440	723	352				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	23	29	49	58				
			$n_{2 \text{ th}}$	23	28	49	51				
70.211	2445	1.83	$M_2$					1454	718	1284	631
			c					1.7	3.3	1.8	3.4
			$n_{2 \text{ Eck}}$					24	33	50	59
			$n_{2 \text{ th}}$					24	33	44	44
78.750	1631	1.25	$M_2$	910	500	818	402				
			c	1.8	3.2	1.9	3.6				
			$n_{2 \text{ Eck}}$	21	25	44	52				
			$n_{2 \text{ th}}$	21	25	44	46				
88.750	1781	1.21	$M_2$	1026	565	922	453				
			c	1.7	3.1	1.8	3.5				
			$n_{2 \text{ Eck}}$	18	23	39	46				
			$n_{2 \text{ th}}$	18	23	39	40				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

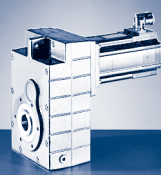


$M_{2GN} \leq 3107 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_2$ Eck $n_2$ th	3.92	2323	44.704
1559	684	1551	501					$M_2$ c $n_2$ Eck $n_2$ th	3.92	3027	44.704
1.9	4.2	1.7	4.7					$M_2$ c $n_2$ Eck $n_2$ th	2.59	1825	51.333
38	52	79	93					$M_2$ c $n_2$ Eck $n_2$ th	2.59	2136	51.333
38	52	55	55					$M_2$ c $n_2$ Eck $n_2$ th	2.50	2057	57.852
								$M_2$ c $n_2$ Eck $n_2$ th	2.50	2407	57.852
								$M_2$ c $n_2$ Eck $n_2$ th	1.89	1854	62.300
								$M_2$ c $n_2$ Eck $n_2$ th	1.89	2170	62.300
								$M_2$ c $n_2$ Eck $n_2$ th	1.83	2090	70.211
								$M_2$ c $n_2$ Eck $n_2$ th	1.83	2445	70.211
								$M_2$ c $n_2$ Eck $n_2$ th	1.25	1631	78.750
								$M_2$ c $n_2$ Eck $n_2$ th	1.21	1781	88.750

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
63.326	1510	2.34	$M_2$		372	232	718	394	647	317	1299	645	1148	568
			c		3.4	5.1	2.1	3.7	2.0	3.8	1.2	2.3	1.1	2.1
			$n_{2 \text{ Eck}}$		54	64	26	32	55	65	27	36	55	65
			$n_{2 \text{ th}}$		54	64	26	32	55	57	27	36	49	49
73.173	1517	2.47	$M_2$		430	268	832	458	748	367	1503	747	1327	657
			c		3.3	4.9	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.1
			$n_{2 \text{ Eck}}$		47	55	22	27	47	56	23	31	48	56
			$n_{2 \text{ th}}$		47	55	22	27	47	49	23	31	38	43
82.465	1710	2.43	$M_2$		485	302	938	516	843	414	1694	842	1496	740
			c		3.3	4.9	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.1
			$n_{2 \text{ Eck}}$		41	49	20	24	42	50	20	28	42	50
			$n_{2 \text{ th}}$		41	49	20	24	42	44	20	28	34	38
93.333	1692	1.68	$M_2$		551	344	1064	586	957	471		956		840
			c		2.9	4.3	1.6	2.8	1.7	3.2		1.8		1.8
			$n_{2 \text{ Eck}}$		37	43	18	21	37	44		25		44
			$n_{2 \text{ th}}$		37	43	18	21	37	38		25		33
105.185	1907	1.65	$M_2$		621	388	1199	661	1078	531		1077		947
			c		2.9	4.3	1.6	2.8	1.7	3.2		1.8		1.8
			$n_{2 \text{ Eck}}$		32	39	16	19	33	39		22		39
			$n_{2 \text{ th}}$		32	39	16	19	33	34		22		30
114.333	1847	1.23	$M_2$		677	424	1306	720	1174	579		1173		1031
			c		2.6	3.8	1.4	2.5	1.5	2.8		1.6		1.6
			$n_{2 \text{ Eck}}$		30	35	14	18	30	36		20		36
			$n_{2 \text{ th}}$		30	35	14	17	30	31		20		27
128.852	2082	1.21	$M_2$		763	478	1471	812	1323	652		1322		1162
			c		2.6	3.8	1.4	2.5	1.5	2.8		1.6		1.6
			$n_{2 \text{ Eck}}$		27	31	13	16	27	32		18		32
			$n_{2 \text{ th}}$		26	31	13	16	27	28		18		24
148.815	2053	0.77	$M_2$		885	555	1703	941	1532	757				
			c		2.2	3.3	1.2	2.2	1.3	2.4				
			$n_{2 \text{ Eck}}$		23	27	11	13	23	28				
			$n_{2 \text{ th}}$		23	27	11	13	23	24				
167.712	2314	0.76	$M_2$		997	626	1919	1061	1726	853				
			c		2.2	3.3	1.2	2.2	1.3	2.4				
			$n_{2 \text{ Eck}}$		20	24	10	12	21	25				
			$n_{2 \text{ th}}$		20	24	10	12	21	21				
185.111	2232	0.55	$M_2$	336	1104	694	2122	1174	1908	944				
			c	5.8	1.9	2.9	1.1	1.9	1.1	2.1				
			$n_{2 \text{ Eck}}$	21	18	22	9	11	19	22				
			$n_{2 \text{ th}}$	21	18	22	9	11	19	19				
208.617	2515	0.54	$M_2$	379	1244	782	2391	1323	2151	1064				
			c	5.8	1.9	2.9	1.1	1.9	1.1	2.1				
			$n_{2 \text{ Eck}}$	19	16	19	8	10	17	20				
			$n_{2 \text{ th}}$	19	16	19	8	10	17	17				
224.778	2407	0.51	$M_2$	411	1343	845		1429		1149				
			c	5.1	1.7	2.5		1.7		1.9				
			$n_{2 \text{ Eck}}$	18	15	18		9		18				
			$n_{2 \text{ th}}$	18	15	18		9		16				
253.321	2712	0.50	$M_2$	463	1514	953		1611		1295				
			c	5.1	1.7	2.5		1.7		1.9				
			$n_{2 \text{ Eck}}$	16	14	16		8		16				
			$n_{2 \text{ th}}$	16	13	16		8		14				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



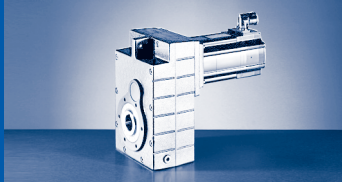


$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
290.889	2640	0.31	$M_2$	537	1743	1099									
			c	4.3	1.5	2.2									
			$n_{2 \text{ Eck}}$	14	12	14									
			$n_{2 \text{ th}}$	14	12	14									
327.827	2976	0.31	$M_2$	605	1965	1238									
			c	4.3	1.5	2.2									
			$n_{2 \text{ Eck}}$	12	10	12									
			$n_{2 \text{ th}}$	12	10	12									
353.033	2813	0.23	$M_2$	655	2120	1337									
			c	3.8	1.3	1.9									
			$n_{2 \text{ Eck}}$	11	10	12									
			$n_{2 \text{ th}}$	11	10	11									
397.863	3170	0.22	$M_2$	738	2389	1507									
			c	3.8	1.3	1.9									
			$n_{2 \text{ Eck}}$	10	9	10									
			$n_{2 \text{ th}}$	10	9	10									
424.247	2724	0.29	$M_2$	793	2554	1613									
			c	3.1	1.0	1.5									
			$n_{2 \text{ Eck}}$	9	8	10									
			$n_{2 \text{ th}}$	9	8	10									
514.881	2724	0.21	$M_2$	968		1963									
			c	2.5		1.3									
			$n_{2 \text{ Eck}}$	8		8									
			$n_{2 \text{ th}}$	8		8									
554.470	2113	0.20	$M_2$	1051											
			c	1.8											
			$n_{2 \text{ Eck}}$	7											
			$n_{2 \text{ th}}$	7											
624.879	2273	0.20	$M_2$	1185											
			c	1.7											
			$n_{2 \text{ Eck}}$	6											
			$n_{2 \text{ th}}$	6											
700.875	2113	0.13	$M_2$	1333											
			c	1.4											
			$n_{2 \text{ Eck}}$	6											
			$n_{2 \text{ th}}$	6											
789.875	2273	0.13	$M_2$	1504											
			c	1.4											
			$n_{2 \text{ Eck}}$	5											
			$n_{2 \text{ th}}$	5											

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

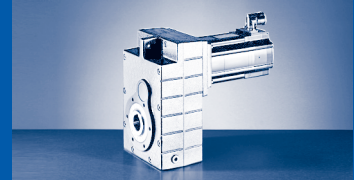
## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35
				...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04
			c							
9.010	3570	79.60	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
9.799	3767	74.80	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
10.720	2595	65.00	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
10.720	3818	65.00	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
12.480	3466	81.50	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
14.538	3718	58.40	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
15.904	3800	51.30	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
17.920	3789	48.30	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
20.286	2281	36.10	$n_{2 \text{ Eck}}$					405		360
			$n_{2 \text{ th}}$					5.2		4.6
			$M_2$					83		172
			c					83		112
			$M_2$							
			c							
20.286	4045	36.10	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
22.857	2570	34.30	$n_{2 \text{ Eck}}$					456		406
			$n_{2 \text{ th}}$					5.2		4.6
			$M_2$					74		152
			c					74		99
			$M_2$							
			c							
22.857	4037	34.30	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$							
			c							
24.850	4268	26.90	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

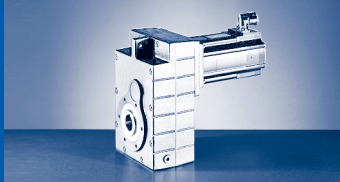


$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...S00	...F10	...S00	...F10	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
						458		c			
						5.6		$n_{2\text{ Eck}}$	79.60	3570	9.010
						391		$n_{2\text{ th}}$			
						223					
						499		$M_2$			
						5.4		c	74.80	3767	9.799
						359		$n_{2\text{ Eck}}$			
						205		$n_{2\text{ th}}$			
			358					$M_2$			
			5.2					c	65.00	2595	10.720
			327					$n_{2\text{ Eck}}$			
			191					$n_{2\text{ th}}$			
				608		548		$M_2$			
				5.7		5.0		c	65.00	3818	10.720
				160		328		$n_{2\text{ Eck}}$			
				160		188		$n_{2\text{ th}}$			
				717		646		$M_2$			
				4.5		3.9		c	81.50	3466	12.480
				137		282		$n_{2\text{ Eck}}$			
				132		128		$n_{2\text{ th}}$			
				838		755		$M_2$			
				4.1		3.6		c	58.40	3718	14.538
				118		242		$n_{2\text{ Eck}}$			
				118		126		$n_{2\text{ th}}$			
			532	920		828		$M_2$			
			5.2	3.8		3.4		c	51.30	3800	15.904
			221	108		221		$n_{2\text{ Eck}}$			
			128	108		117		$n_{2\text{ th}}$			
	600		603	1041		937		$M_2$			
	5.8		4.6	3.4		3.0		c	48.30	3789	17.920
	95		196	95		196		$n_{2\text{ Eck}}$			
	95		111	95		101		$n_{2\text{ th}}$			
								$M_2$			
								c	36.10	2281	20.286
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
	682		684	1181		1062		$M_2$			
	5.4		4.3	3.2		2.8		c	36.10	4045	20.286
	84		173	84		174		$n_{2\text{ Eck}}$			
	84		110	84		99		$n_{2\text{ th}}$			
								$M_2$			
								c	34.30	2570	22.857
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
	773		775	1336		1201		$M_2$			
	4.8		3.8	2.8		2.5		c	34.30	4037	22.857
	74		154	75		154		$n_{2\text{ Eck}}$			
	74		95	75		86		$n_{2\text{ th}}$			
	840		839	1452		1302		$M_2$			
	4.9		4.2	2.9		2.8		c	26.90	4268	24.850
	68		141	69		142		$n_{2\text{ Eck}}$			
	68		99	69		81		$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35
				...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04
28.000	4263	25.70	c							
			$n_2$ Eck							
			$n_2$ th							
32.739	2533	17.10	$M_2$					664		587
			c					3.7		3.6
			$n_2$ Eck					51		106
			$n_2$ th					51		88
32.739	4603	17.10	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
36.889	2855	16.50	$M_2$					748		662
			c					3.7		3.6
			$n_2$ Eck					46		94
			$n_2$ th					46		78
36.889	4601	16.50	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
40.233	2607	12.60	$M_2$					821		726
			c					3.1		3.0
			$n_2$ Eck					42		87
			$n_2$ th					42		77
40.233	4882	12.60	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
45.333	2938	12.20	$M_2$					925		818
			c					3.1		3.0
			$n_2$ Eck					37		77
			$n_2$ th					37		69
45.333	4881	12.20	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
52.067	2307	8.08	$M_2$	589		531				
			c	3.8		3.6				
			$n_2$ Eck	31		66				
			$n_2$ th	31		66				
52.067	2701	8.08	$M_2$					1069	524	946
			c					2.5	4.9	2.4
			$n_2$ Eck					32	44	67
			$n_2$ th					32	44	60
52.067	5251	8.08	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
58.667	2599	7.81	$M_2$	663		598				
			c	3.8		3.6				
			$n_2$ Eck	28		59				
			$n_2$ th	28		59				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

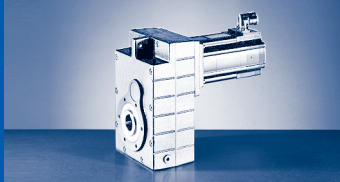


$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...S00	...F10	...S00	...F10	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
	952		950	1641		1472		c	25.70	4263	28.000
	4.3		3.7	2.6		2.4		$n_{2 \text{ Eck}}$			
	61		125	61		126		$n_{2 \text{ th}}$			
	61		87	61		72					
								$M_2$	17.10	2533	32.739
								c			
								$n_{2 \text{ Eck}}$			
	1117		1115	1923	744	1724		$M_2$	17.10	4603	32.739
	4.0		3.5	2.4	5.7	2.3		c			
	52		107	52	76	108		$n_{2 \text{ Eck}}$			
	52		75	52	62	62		$n_{2 \text{ th}}$			
								$M_2$	16.50	2855	36.889
								c			
								$n_{2 \text{ Eck}}$			
	1265		1261	2173	844	1948		$M_2$	16.50	4601	36.889
	3.5		3.1	2.1	5.0	2.0		c			
	46		95	46	68	95		$n_{2 \text{ Eck}}$			
	46		66	46	55	55		$n_{2 \text{ th}}$			
353								$M_2$	12.60	2607	40.233
5.7								c			
102								$n_{2 \text{ Eck}}$			
77								$n_{2 \text{ th}}$			
	1381		1377	2371	922	2126	630	$M_2$	12.60	4882	40.233
	3.5		3.0	2.0	4.9	1.9	6.0	c			
	42		87	43	62	88	103	$n_{2 \text{ Eck}}$			
	42		61	43	50	50	50	$n_{2 \text{ th}}$			
398								$M_2$	12.20	2938	45.333
5.7								c			
91								$n_{2 \text{ Eck}}$			
69								$n_{2 \text{ th}}$			
	1563		1557	2678	1045	2401	715	$M_2$	12.20	4881	45.333
	3.1		2.6	1.8	4.3	1.7	5.3	c			
	38		77	38	55	78	92	$n_{2 \text{ Eck}}$			
	38		54	38	44	44	44	$n_{2 \text{ th}}$			
								$M_2$	8.08	2307	52.067
								c			
								$n_{2 \text{ Eck}}$			
462								$M_2$	8.08	2701	52.067
4.6								c			
79								$n_{2 \text{ Eck}}$			
60								$n_{2 \text{ th}}$			
	1799		1791					$M_2$	8.08	5251	52.067
	2.9		2.5					c			
	33		67					$n_{2 \text{ Eck}}$			
	33		47					$n_{2 \text{ th}}$			
								$M_2$	7.81	2599	58.667
								c			
								$n_{2 \text{ Eck}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35
				...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04
			c					1205	590	1066
58.667	3044	7.81	$n_2 \text{ Eck}$					2.5	4.9	2.4
			$n_2 \text{ th}$					29	39	59
			$n_2 \text{ th}$					29	39	53
58.667	5254	7.81	$M_2$							
			c							
			$n_2 \text{ Eck}$							
			$n_2 \text{ th}$							
63.190	2344	5.90	$M_2$	719	391	648	315			
			c	3.2	5.7	3.1	5.8			
			$n_2 \text{ Eck}$	26	32	55	65			
			$n_2 \text{ th}$	26	32	55	57			
63.190	2745	5.90	$M_2$					1303	641	1153
			c					2.1	4.1	2.0
			$n_2 \text{ Eck}$					27	36	55
			$n_2 \text{ th}$					27	36	49
63.190	5557	5.90	$M_2$							
			c							
			$n_2 \text{ Eck}$							
			$n_2 \text{ th}$							
71.200	2641	5.72	$M_2$	810	440	728				
			c	3.2	5.7	3.4				
			$n_2 \text{ Eck}$	23	28	49				
			$n_2 \text{ th}$	23	28	49				
71.200	3093	5.72	$M_2$					1469	722	1296
			c					2.1	4.2	2.2
			$n_2 \text{ Eck}$					24	32	49
			$n_2 \text{ th}$					24	32	44
71.200	5561	5.72	$M_2$							
			c							
			$n_2 \text{ Eck}$							
			$n_2 \text{ th}$							
79.875	2381	3.87	$M_2$	915	500	822	401			
			c	2.6	4.6	2.7	5.1			
			$n_2 \text{ Eck}$	21	25	43	51			
			$n_2 \text{ th}$	20	25	43	45			
79.875	2789	3.87	$M_2$					1655	817	1460
			c					1.7	3.3	1.8
			$n_2 \text{ Eck}$					21	29	44
			$n_2 \text{ th}$					21	29	39
90.000	2683	3.76	$M_2$	1031	563	926	451			
			c	2.6	4.6	2.7	5.1			
			$n_2 \text{ Eck}$	18	22	38	46			
			$n_2 \text{ th}$	18	22	38	40			
90.000	3143	3.76	$M_2$					1864	920	1645
			c					1.7	3.3	1.8
			$n_2 \text{ Eck}$					19	26	39
			$n_2 \text{ th}$					19	26	35

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

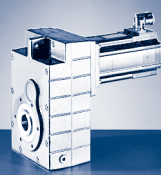


$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...S00	...F10	...S00	...F10	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
521								c			
4.6								$n_{2\text{ Eck}}$	7.81	3044	58.667
70								$n_{2\text{ th}}$			
53								$M_2$			
	2033	884	2024					c			
	2.5	5.6	2.2					$n_{2\text{ Eck}}$	7.81	5254	58.667
	29	40	60					$n_{2\text{ th}}$			
	29	40	42					$M_2$			
								c			
								$n_{2\text{ Eck}}$	5.90	2344	63.190
								$n_{2\text{ th}}$			
565								$M_2$			
3.8								c			
65								$n_{2\text{ Eck}}$	5.90	2745	63.190
49								$n_{2\text{ th}}$			
	2191	954	2181					$M_2$			
	2.5	5.5	2.2					c			
	27	37	56					$n_{2\text{ Eck}}$	5.90	5557	63.190
	27	37	39					$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	5.72	2641	71.200
								$n_{2\text{ th}}$			
634								$M_2$			
4.2								c			
58								$n_{2\text{ Eck}}$	5.72	3093	71.200
44								$n_{2\text{ th}}$			
	2476	1080	2458					$M_2$			
	2.2	4.9	2.1					c			
	24	33	49					$n_{2\text{ Eck}}$	5.72	5561	71.200
	24	33	34					$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	3.87	2381	79.875
								$n_{2\text{ th}}$			
718								$M_2$			
3.4								c			
52								$n_{2\text{ Eck}}$	3.87	2789	79.875
39								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	3.76	2683	90.000
								$n_{2\text{ th}}$			
809								$M_2$			
3.4								c			
46								$n_{2\text{ Eck}}$	3.76	3143	90.000
35								$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

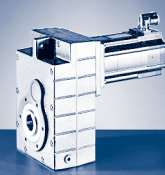
$M_{2GN} \leq 5952 \text{ Nm}$

GFL11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
65.306	2891	6.97	$M_2$				727		652		1326
			c				3.9		4.1		2.2
			$n_{2 \text{ Eck}}$				25		53		26
			$n_{2 \text{ th}}$				25		53		26
73.335	2875	7.84	$M_2$				820		736		1492
			c				3.4		3.6		1.9
			$n_{2 \text{ Eck}}$				22		47		23
			$n_{2 \text{ th}}$				22		47		23
82.631	3240	7.71	$M_2$				924		829		1682
			c				3.4		3.6		1.9
			$n_{2 \text{ Eck}}$				20		42		20
			$n_{2 \text{ th}}$				20		42		20
93.540	3206	5.05	$M_2$		537		1050	572	944	458	1909
			c		5.5		3.0	5.4	3.2	6.0	1.7
			$n_{2 \text{ Eck}}$		37		18	21	37	44	18
			$n_{2 \text{ th}}$		36		17	21	37	38	18
105.397	3613	4.97	$M_2$		605		1184	644	1063	516	2150
			c		5.5		3.0	5.4	3.2	6.0	1.7
			$n_{2 \text{ Eck}}$		32		16	19	33	39	16
			$n_{2 \text{ th}}$		32		16	19	33	34	16
114.586	3501	3.71	$M_2$				1291	705	1160	565	2342
			c				2.7	4.8	2.8	5.3	1.5
			$n_{2 \text{ Eck}}$				14	18	30	36	15
			$n_{2 \text{ th}}$				14	17	30	31	15
129.111	3945	3.66	$M_2$				1455	794	1307	636	2639
			c				2.7	4.8	2.8	5.3	1.5
			$n_{2 \text{ Eck}}$				13	16	27	32	13
			$n_{2 \text{ th}}$				13	15	27	28	13
149.144	3894	2.30	$M_2$		868		1688	924	1517	741	3056
			c		4.2		2.3	4.1	2.4	4.6	1.3
			$n_{2 \text{ Eck}}$		23		11	13	23	28	11
			$n_{2 \text{ th}}$		23		11	13	23	24	11
168.049	4387	2.27	$M_2$		978		1901	1041	1709	835	3443
			c		4.2		2.3	4.1	2.4	4.6	1.3
			$n_{2 \text{ Eck}}$		20		10	12	21	24	10
			$n_{2 \text{ th}}$		20		10	12	21	21	10
182.792	4233	1.66	$M_2$		1070	666	2074	1138	1864	913	3751
			c		3.7	5.5	2.0	3.6	2.1	4.0	1.1
			$n_{2 \text{ Eck}}$		19	22	9	11	19	22	9
			$n_{2 \text{ th}}$		19	22	9	11	19	20	9
205.963	4769	1.64	$M_2$		1205	750	2337	1283	2100	1029	4226
			c		3.7	5.5	2.0	3.6	2.1	4.0	1.1
			$n_{2 \text{ Eck}}$		17	20	8	10	17	20	8
			$n_{2 \text{ th}}$		17	20	8	10	17	17	8
224.636	4523	1.52	$M_2$		1321	825	2556	1406	2298	1129	
			c		3.2	4.8	1.8	3.2	1.9	3.5	
			$n_{2 \text{ Eck}}$		15	18	7	9	15	18	
			$n_{2 \text{ th}}$		15	18	7	9	15	16	
253.111	5097	1.50	$M_2$		1489	929	2880	1584	2589	1272	
			c		3.2	4.8	1.8	3.2	1.9	3.5	
			$n_{2 \text{ Eck}}$		14	16	7	8	14	16	
			$n_{2 \text{ th}}$		13	16	6	8	14	14	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



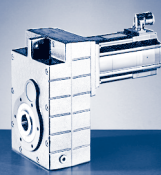


$M_{2GN} \leq 5952 \text{ Nm}$

17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC25	21XC42	GFL11-3A			
...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
10.80	19.00	9.50	36.30	16.30	36.00	12.00	24.60	17.00	$n_1$			
2300	3480	4110	1700	2340	3510	4150	2490	4160	$I_{M400}$			
5.5	15.8	10.2	13.9	8.2	28.7	14.0	13.5	19.8	$P_N$			
2.60	6.90	4.10	6.40	4.00	13.20	5.20	6.40	7.40	$J_M$			
36.04	36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	$M_2$			
651	1169	572	2259	998	2242	730			c	6.97	2891	65.306
4.3	2.3	4.4	1.3	2.8	1.2	3.5			$n_{2 \text{ Eck}}$			
35	53	63	26	36	54	64			$n_{2 \text{ th}}$			
35	48	48	26	36	37	37						
735	1317	646	2541	1124	2521	823	1712	1177	$M_2$	7.84	2875	73.335
3.8	2.1	3.9	1.1	2.5	1.1	3.1	1.7	2.2	c			
31	48	56	23	32	48	57	34	57	$n_{2 \text{ Eck}}$			
31	42	42	23	32	31	33	27	27	$n_{2 \text{ th}}$			
828	1484	728	2863	1267	2840	927	1929	1326	$M_2$	7.71	3240	82.631
3.8	2.1	3.9	1.1	2.5	1.1	3.1	1.7	2.2	c			
28	42	50	21	28	43	50	30	50	$n_{2 \text{ Eck}}$			
28	38	38	21	28	28	30	24	24	$n_{2 \text{ th}}$			
942	1684	828		1439		1054			$M_2$	5.05	3206	93.540
3.3	1.8	3.4		2.2		2.7			c			
25	37	44		25		44			$n_{2 \text{ Eck}}$			
25	33	33		25		26			$n_{2 \text{ th}}$			
1061	1898	933		1621		1187			$M_2$	4.97	3613	105.397
3.3	1.8	3.4		2.2		2.7			c			
22	33	39		22		39			$n_{2 \text{ Eck}}$			
22	30	30		22		23			$n_{2 \text{ th}}$			
1158	2068	1018		1767		1295			$M_2$	3.71	3501	114.586
3.0	1.6	3.0		2.0		2.4			c			
20	30	36		20		36			$n_{2 \text{ Eck}}$			
20	27	27		20		21			$n_{2 \text{ th}}$			
1305	2330	1147		1991		1459			$M_2$	3.66	3945	129.111
3.0	1.6	3.0		2.0		2.4			c			
18	27	32		18		32			$n_{2 \text{ Eck}}$			
18	24	24		18		19			$n_{2 \text{ th}}$			
1515	2698	1332							$M_2$	2.30	3894	149.144
2.5	1.4	2.6							c			
15	23	28							$n_{2 \text{ Eck}}$			
15	21	21							$n_{2 \text{ th}}$			
1707	3040	1500							$M_2$	2.27	4387	168.049
2.5	1.4	2.6							c			
14	21	25							$n_{2 \text{ Eck}}$			
14	19	19							$n_{2 \text{ th}}$			
1862	3312	1637							$M_2$	1.66	4233	182.792
2.2	1.2	2.3							c			
13	19	23							$n_{2 \text{ Eck}}$			
13	17	17							$n_{2 \text{ th}}$			
2098	3731	1845							$M_2$	1.64	4769	205.963
2.2	1.2	2.3							c			
11	17	20							$n_{2 \text{ Eck}}$			
11	15	15							$n_{2 \text{ th}}$			
2295	4077	2018							$M_2$	1.52	4523	224.636
2.0	1.1	2.0							c			
10	16	18							$n_{2 \text{ Eck}}$			
10	14	14							$n_{2 \text{ th}}$			
2586	4593	2274							$M_2$	1.50	5097	253.111
2.0	1.1	2.0							c			
9	14	16							$n_{2 \text{ Eck}}$			
9	12	12							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 5952 \text{ Nm}$

GFL11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
267.259	5106	1.87	$M_2$		1575	984	3044	1676	2736	1346	
			c		3.0	4.5	1.7	3.0	1.8	3.3	
			$n_{2 \text{ Eck}}$		13	15	6	8	13	15	
			$n_{2 \text{ th}}$		13	15	6	7	13	13	
327.556	5523	1.37	$M_2$		1937	1213	3738	2061	3361	1656	
			c		2.7	4.0	1.5	2.6	1.6	2.9	
			$n_{2 \text{ Eck}}$		10	12	5	6	11	13	
			$n_{2 \text{ th}}$		10	12	5	6	11	11	
358.077	4423	0.68	$M_2$	649							
			c	5.9							
			$n_{2 \text{ Eck}}$	11							
			$n_{2 \text{ th}}$	11							
358.077	5283	0.68	$M_2$		2125	1333	4094	2261	3682	1817	
			c		2.4	3.5	1.3	2.3	1.4	2.6	
			$n_{2 \text{ Eck}}$		10	11	5	6	10	12	
			$n_{2 \text{ th}}$		10	11	5	6	10	10	
403.467	4984	0.67	$M_2$	732							
			c	5.9							
			$n_{2 \text{ Eck}}$	10							
			$n_{2 \text{ th}}$	10							
403.467	5952	0.67	$M_2$		2395	1502	4613	2548	4148	2048	
			c		2.4	3.5	1.3	2.3	1.4	2.6	
			$n_{2 \text{ Eck}}$		9	10	4	5	9	10	
			$n_{2 \text{ th}}$		8	10	4	5	9	9	
430.222	5942	0.85	$M_2$		2558	1606	4923	2721	4428	2187	
			c		2.2	3.3	1.2	2.2	1.3	2.4	
			$n_{2 \text{ Eck}}$		8	9	4	5	8	10	
			$n_{2 \text{ th}}$		8	9	4	5	8	8	
522.133	5942	0.62	$M_2$	952	3117	1961		3316	5386	2667	
			c	5.4	1.8	2.7		1.8	1.1	2.0	
			$n_{2 \text{ Eck}}$	8	7	8		4	7	8	
			$n_{2 \text{ th}}$	8	7	8		4	7	7	
562.391	5319	0.60	$M_2$	1035	3368	2122		3583		2883	
			c	4.5	1.5	2.2		1.5		1.7	
			$n_{2 \text{ Eck}}$	7	6	7		4		7	
			$n_{2 \text{ th}}$	7	6	7		4		6	
633.680	5844	0.60	$M_2$	1168	3797	2392		4039		3249	
			c	4.4	1.5	2.2		1.4		1.6	
			$n_{2 \text{ Eck}}$	6	5	6		3		7	
			$n_{2 \text{ th}}$	6	5	6		3		6	
710.888	5319	0.39	$M_2$	1322	4272	2696					
			c	3.6	1.2	1.8					
			$n_{2 \text{ Eck}}$	6	5	6					
			$n_{2 \text{ th}}$	6	5	6					
801.000	5844	0.38	$M_2$	1491	4814	3039					
			c	3.5	1.2	1.7					
			$n_{2 \text{ Eck}}$	5	4	5					
			$n_{2 \text{ th}}$	5	4	5					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

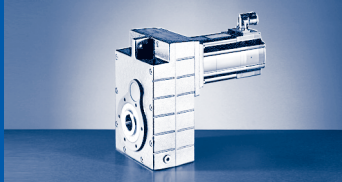


$M_{2GN} \leq 5952 \text{ Nm}$

17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC25	21XC42	GFL11-3A			
...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
10.80	19.00	9.50	36.30	16.30	36.00	12.00	24.60	17.00	$n_1$			
2300	3480	4110	1700	2340	3510	4150	2490	4160	$I_{M400}$			
5.5	15.8	10.2	13.9	8.2	28.7	14.0	13.5	19.8	$P_N$			
2.60	6.90	4.10	6.40	4.00	13.20	5.20	6.40	7.40	$J_M$			
36.04	36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	$M_2$			
2734	4853	2404							c			
1.9	1.0	1.9							$n_{2 \text{ Eck}}$	1.87	5106	267.259
9	13	15							$n_{2 \text{ th}}$			
9	12	12							$M_2$			
3358		2953							c			
1.6		1.7							$n_{2 \text{ Eck}}$	1.37	5523	327.556
7		13							$n_{2 \text{ th}}$			
7		10							$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.68	4423	358.077
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.68	5283	358.077
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.67	4984	403.467
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.67	5952	403.467
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.85	5942	430.222
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.62	5942	522.133
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.60	5319	562.391
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.60	5844	633.680
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.39	5319	710.888
									$n_{2 \text{ th}}$			
									$M_2$			
									c			
									$n_{2 \text{ Eck}}$	0.38	5844	801.000
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 10639 \text{ Nm}$

GFL14-2A				195C17	195C23	195C35	21XC17	21XC35
				...F10	...S00	...F10	...F10	...F10
i	$M_{2GN}$	$J_G$	$M_1$					
			$n_1$	1700	2340	3510	1710	3520
			$I_{M400}$	13.9	8.2	28.7	22.5	42.5
			$P_N$	6.40	4.00	13.20	11.00	20.30
			$J_M$	72.12	72.12	72.04	180.04	180.04
19.948	7873	111.00	$M_2$					1014
			c				5.6	
			$n_2$ Eck				177	
			$n_2$ th				101	
22.476	8870	105.00	$M_2$					1143
			c				5.6	
			$n_2$ Eck				157	
			$n_2$ th				90	
24.456	8282	83.20	$M_2$				1387	1245
			c				5.7	5.4
			$n_2$ Eck				70	144
			$n_2$ th				70	82
27.556	9331	79.40	$M_2$				1562	1403
			c				5.7	5.4
			$n_2$ Eck				62	128
			$n_2$ th				62	73
32.344	6387	52.90	$M_2$	1085		1085		
			c	5.6		4.8		
			$n_2$ Eck	53		109		
			$n_2$ th	53		76		
32.344	8734	52.90	$M_2$				1857	1667
			c				4.5	4.3
			$n_2$ Eck				53	109
			$n_2$ th				53	62
36.444	7196	50.70	$M_2$	1223		1223		
			c	5.6		4.8		
			$n_2$ Eck	47		96		
			$n_2$ th	47		67		
36.444	9841	50.70	$M_2$				2092	1878
			c				4.5	4.3
			$n_2$ Eck				47	97
			$n_2$ th				47	55
39.642	6916	38.00	$M_2$	1339		1338		
			c	5.0		4.3		
			$n_2$ Eck	43		89		
			$n_2$ th	43		62		
39.642	9101	38.00	$M_2$				2292	2057
			c				3.9	3.7
			$n_2$ Eck				43	89
			$n_2$ th				43	51
44.667	7793	36.60	$M_2$	1509		1507		
			c	5.0		4.3		
			$n_2$ Eck	38		79		
			$n_2$ th	38		55		
44.667	10254	36.60	$M_2$				2583	2318
			c				3.9	3.7
			$n_2$ Eck				38	79
			$n_2$ th				38	45
52.067	7136	24.60	$M_2$	1779		1774		
			c	3.9		3.4		
			$n_2$ Eck	33		67		
			$n_2$ th	33		47		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

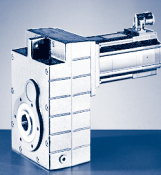


$M_{2GN} \leq 10639 \text{ Nm}$

GFL14-2A				19SC17	19SC23	19SC35	21XC17	21XC35
				...F10	...S00	...F10	...F10	...F10
i	$M_{2GN}$	$J_G$	$M_1$	36.30	16.30	36.00	61.40	55.00
			$n_1$	1700	2340	3510	1710	3520
			$I_{M400}$	13.9	8.2	28.7	22.5	42.5
			$P_N$	6.40	4.00	13.20	11.00	20.30
			$J_M$	72.12	72.12	72.04	180.04	180.04
52.067	9389	24.60	$M_2$				3037	2724
			c				3.0	2.9
			$n_{2 \text{ Eck}}$				33	68
			$n_{2 \text{ th}}$				33	39
58.667	8041	23.80	$M_2$	2005		1999		
			c	3.9		3.4		
			$n_{2 \text{ Eck}}$	29		60		
			$n_{2 \text{ th}}$	29		42		
58.667	10579	23.80	$M_2$				3422	3070
			c				3.0	2.9
			$n_{2 \text{ Eck}}$				29	60
			$n_{2 \text{ th}}$				29	34
63.190	7250	18.00	$M_2$	2174		2166		
			c	3.3		2.8		
			$n_{2 \text{ Eck}}$	27		56		
			$n_{2 \text{ th}}$	27		39		
63.190	9540	18.00	$M_2$				3705	3323
			c				2.5	2.4
			$n_{2 \text{ Eck}}$				27	56
			$n_{2 \text{ th}}$				27	32
71.200	8169	17.40	$M_2$	2449		2433		
			c	3.3		3.1		
			$n_{2 \text{ Eck}}$	24		49		
			$n_{2 \text{ th}}$	24		34		
71.200	10639	17.40	$M_2$				4176	3735
			c				2.5	2.7
			$n_{2 \text{ Eck}}$				24	49
			$n_{2 \text{ th}}$				24	28
79.875	7015	11.80	$M_2$	2770	1204	2750		
			c	2.5	5.6	2.4		
			$n_{2 \text{ Eck}}$	21	29	44		
			$n_{2 \text{ th}}$	21	29	31		
90.000	7905	11.50	$M_2$	3121	1357	3099		
			c	2.5	5.6	2.4		
			$n_{2 \text{ Eck}}$	19	26	39		
			$n_{2 \text{ th}}$	19	26	27		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
64.296	5610	26.32	$M_2$					1276		1129	
			c				4.3		4.1		
			$n_{2 \text{ Eck}}$				26		54		
			$n_{2 \text{ th}}$				26		48		
68.708	5416	19.86	$M_2$					1370		1207	
			c				3.8		4.1		
			$n_{2 \text{ Eck}}$				25		51		
			$n_{2 \text{ th}}$				24		45		
77.418	6103	19.38	$M_2$					1543		1360	
			c				3.8		4.1		
			$n_{2 \text{ Eck}}$				22		45		
			$n_{2 \text{ th}}$				22		40		
85.037	6276	21.59	$M_2$					1700		1498	
			c				3.6		3.9		
			$n_{2 \text{ Eck}}$				20		41		
			$n_{2 \text{ th}}$				20		36		
104.889	5375	9.32	$M_2$	1159		1040					
			c	4.5		4.7					
			$n_{2 \text{ Eck}}$	16		33					
			$n_{2 \text{ th}}$	16		33					
104.889	6292	9.32	$M_2$					2112	1028	1862	903
			c					2.9	5.8	3.1	6.0
			$n_{2 \text{ Eck}}$					16	22	33	39
			$n_{2 \text{ th}}$					16	22	30	30
104.889	6888	9.32	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
114.126	5848	8.32	$M_2$	1261		1132					
			c	4.5		4.7					
			$n_{2 \text{ Eck}}$	14		30					
			$n_{2 \text{ th}}$	14		30					
114.126	6719	8.32	$M_2$					2299	1120	2027	984
			c					2.9	5.7	3.1	5.8
			$n_{2 \text{ Eck}}$					15	20	31	36
			$n_{2 \text{ th}}$					15	20	27	27
128.593	6589	8.14	$M_2$	1421		1275					
			c	4.5		4.7					
			$n_{2 \text{ Eck}}$	13		27					
			$n_{2 \text{ th}}$	13		27					
128.593	7571	8.14	$M_2$					2591	1262	2284	1108
			c					2.9	5.7	3.1	5.8
			$n_{2 \text{ Eck}}$					13	18	27	32
			$n_{2 \text{ th}}$					13	18	24	24
136.889	7359	16.78	$M_2$					2765	1351	2438	1186
			c					2.6	5.2	2.8	5.3
			$n_{2 \text{ Eck}}$					12	17	25	30
			$n_{2 \text{ th}}$					12	17	21	23
156.148	6830	5.92	$M_2$	1738		1560					
			c	3.8		4.0					
			$n_{2 \text{ Eck}}$	11		22					
			$n_{2 \text{ th}}$	10		22					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

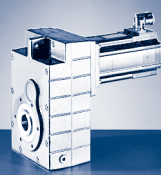


$M_{2GN} \leq 11615 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
2195	955	2185		3754	1471	3365	1008	c	26.32	5610	64.296
2.5	5.5	2.2		1.5	3.6	1.4	4.3	$n_{2 \text{ Eck}}$			
26	36	55		27	39	55	65	$n_{2 \text{ th}}$			
26	36	38		27	31	31	31				
2352	1025	2335		4017	1576	3596	1077	$M_2$	19.86	5416	68.708
2.3	5.1	2.2		1.3	3.4	1.4	4.4	c			
25	34	51		25	36	51	61	$n_{2 \text{ Eck}}$			
25	34	36		25	29	29	29	$n_{2 \text{ th}}$			
2650	1155	2631		4526	1775	4051	1214	$M_2$	19.38	6103	77.418
2.3	5.1	2.2		1.3	3.4	1.4	4.4	c			
22	30	45		22	32	46	54	$n_{2 \text{ Eck}}$			
22	30	32		22	26	26	26	$n_{2 \text{ th}}$			
2915	1273	2894	926	4976	1954	4454	1337	$M_2$	21.59	6276	85.037
2.1	4.7	2.0	5.8	1.3	3.1	1.3	4.1	c			
20	28	41	49	20	29	41	49	$n_{2 \text{ Eck}}$			
20	28	29	29	20	24	24	24	$n_{2 \text{ th}}$			
								$M_2$	9.32	5375	104.889
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$	9.32	6292	104.889
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3605	1579	3578	1151					$M_2$	9.32	6888	104.889
1.9	4.2	1.8	5.1					c			
16	22	34	40					$n_{2 \text{ Eck}}$			
16	22	23	23					$n_{2 \text{ th}}$			
								$M_2$	8.32	5848	114.126
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3930	1726	3901	1259					$M_2$	8.32	6719	114.126
1.7	3.8	1.6	4.6					c			
15	21	31	36					$n_{2 \text{ Eck}}$			
15	21	21	21					$n_{2 \text{ th}}$			
								$M_2$	8.14	6589	128.593
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
4428	1945	4395	1419					$M_2$	8.14	7571	128.593
1.7	3.8	1.6	4.6					c			
13	18	27	32					$n_{2 \text{ Eck}}$			
13	18	19	19					$n_{2 \text{ th}}$			
4721	2078	4686	1517		3175		2178	$M_2$	16.78	7359	136.889
1.6	3.5	1.5	4.2		2.3		3.0	c			
12	17	26	30		18		30	$n_{2 \text{ Eck}}$			
12	17	16	18		15		15	$n_{2 \text{ th}}$			
								$M_2$	5.92	6830	156.148
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
156.148	7992	5.92	$M_2$					3158	1545	2785	1357	
			c					2.5	5.0	2.7	5.1	
			$n_{2 \text{ Eck}}$						11	15	22	26
			$n_{2 \text{ th}}$						11	15	20	20
156.148	8227	5.92	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
170.074	8408	6.96	$M_2$	1883		1690		3443	1686	3037	1481	
			c	4.3		4.6		2.4	4.8	2.6	4.9	
			$n_{2 \text{ Eck}}$	10		20		10	14	21	24	
			$n_{2 \text{ th}}$	10		20		10	14	18	18	
202.074	7076	3.69	$M_2$	2268	1233	2037						
			c	3.1	5.5	3.2						
			$n_{2 \text{ Eck}}$	8	10	17						
			$n_{2 \text{ th}}$	8	10	17						
202.074	8281	3.69	$M_2$					4109	2021	3625	1776	
			c					2.0	4.0	2.2	4.1	
			$n_{2 \text{ Eck}}$					8	11	17	20	
			$n_{2 \text{ th}}$					8	11	15	15	
224.636	8739	4.74	$M_2$	2512		2256		4572	2251	4035	1978	
			c	3.4		3.6		1.9	3.8	2.0	3.9	
			$n_{2 \text{ Eck}}$	7		15		8	10	16	18	
			$n_{2 \text{ th}}$	7		15		7	10	14	14	
253.111	9846	4.70	$M_2$	2830		2541		5152	2537	4546	2229	
			c	3.4		3.6		1.9	3.8	2.0	3.9	
			$n_{2 \text{ Eck}}$	7		14		7	9	14	16	
			$n_{2 \text{ th}}$	6		14		7	9	12	12	
273.778	9753	5.76	$M_2$	3071	1669	2758		5582	2753	4926	2420	
			c	3.1	5.6	3.3		1.7	3.5	1.9	3.5	
			$n_{2 \text{ Eck}}$	6	7	13		6	8	13	15	
			$n_{2 \text{ th}}$	6	7	13		6	8	11	11	
332.444	10550	4.30	$M_2$	3742	2041	3362	1634	6792	3357	5995	2950	
			c	2.8	5.0	2.9	5.5	1.5	3.1	1.7	3.2	
			$n_{2 \text{ Eck}}$	5	6	10	12	5	7	11	12	
			$n_{2 \text{ th}}$	5	6	10	11	5	7	9	9	
352.811	10343	2.16	$M_2$	3980	2174	3576	1742					
			c	2.6	4.6	2.7	5.1					
			$n_{2 \text{ Eck}}$	5	6	10	12					
			$n_{2 \text{ th}}$	5	6	10	10					
352.811	10389	2.16	$M_2$					7216	3571	6370	3139	
			c					1.4	2.9	1.5	2.9	
			$n_{2 \text{ Eck}}$					5	7	10	12	
			$n_{2 \text{ th}}$					5	7	9	9	
397.533	11615	2.15	$M_2$	4485	2451	4030	1963	8132	4024	7178	3537	
			c	2.6	4.6	2.7	5.1	1.4	2.8	1.5	2.9	
			$n_{2 \text{ Eck}}$	4	5	9	10	4	6	9	10	
			$n_{2 \text{ th}}$	4	5	9	9	4	6	8	8	
430.222	10560	2.73	$M_2$	4875	2673	4381	2144	8822	4376	7788	3847	
			c	2.1	3.8	2.3	4.3	1.2	2.4	1.3	2.4	
			$n_{2 \text{ Eck}}$	4	5	8	10	4	5	8	10	
			$n_{2 \text{ th}}$	4	5	8	8	4	5	7	7	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



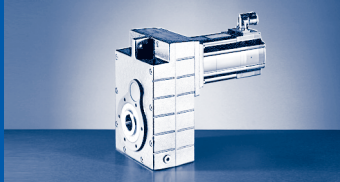


$M_{2GN} \leq 11615 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_{2Eck}$	5.92	7992	156.148
								$n_{2th}$			
5388	2372	5347	1732					$M_2$ c			
1.5	3.4	1.5	4.1					$n_{2Eck}$	5.92	8227	156.148
11	15	23	27					$n_{2th}$			
11	15	16	16					$M_2$ c			
5874	2589	5829	1892					$n_{2Eck}$	6.96	8408	170.074
1.4	3.2	1.4	3.9					$n_{2th}$			
10	14	21	24					$M_2$ c			
10	14	14	14					$n_{2Eck}$	3.69	7076	202.074
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	3.69	8281	202.074
								$n_{2th}$			
7783	3444	7723	2521					$M_2$ c			
1.1	2.5	1.1	3.0					$n_{2Eck}$	4.74	8739	224.636
8	10	16	19					$n_{2th}$			
8	10	11	11					$M_2$ c			
8769	3881	8701	2841					$n_{2Eck}$	4.70	9846	253.111
1.1	2.5	1.1	3.0					$n_{2th}$			
7	9	14	16					$M_2$ c			
7	9	10	10					$n_{2Eck}$	5.76	9753	273.778
9495	4207		3081					$n_{2th}$			
1.0	2.3		2.8					$M_2$ c			
6	9		15					$n_{2Eck}$	4.30	10550	332.444
6	9		9					$n_{2th}$			
	5122		3753					$M_2$ c			
	2.0		2.5					$n_{2Eck}$	2.16	10343	352.811
	7		13					$n_{2th}$			
	7		7					$M_2$ c			
								$n_{2Eck}$	2.16	10389	352.811
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	2.15	11615	397.533
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	2.73	10560	430.222
								$n_{2th}$			

$M_{...}$  [Nm]  
 $n_{...}$  [r/min]  
 $J_{...}$  [kgcm<sup>2</sup>]

$P_{...}$  [kW]  
 $I_{...}$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
522.133	10560	1.98	$M_2$	5940	3268	5340	2623		5335	9475	4690
			c	1.8	3.2	1.9	3.5		2.0	1.1	2.0
			$n_{2 \text{ Eck}}$	3	4	7	8		4	7	8
			$n_{2 \text{ th}}$	3	4	7	7		4	6	6
			$M_2$	6422	3544	5775	2847		5771		5074
562.391	9036	1.91	c	1.4	2.5	1.5	2.8		1.6		1.6
			$n_{2 \text{ Eck}}$	3	4	6	7		4		7
			$n_{2 \text{ th}}$	3	4	6	6		4		6
			$M_2$	7240	3997	6511	3212		6506		5721
			c	1.4	2.4	1.4	2.7		1.5		1.5
633.680	9811	1.90	$n_{2 \text{ Eck}}$	3	3	6	7		4		7
			$n_{2 \text{ th}}$	3	3	5	6		4		5
			$M_2$	8143	4505	7324	3622				
			c	1.1	2.0	1.2	2.2				
			$n_{2 \text{ Eck}}$	2	3	5	6				
710.888	9036	1.26	$n_{2 \text{ th}}$	2	3	5	5				
			$M_2$	9179	5080	8256	4084				
			c	1.1	1.9	1.1	2.1				
			$n_{2 \text{ Eck}}$	2	3	4	5				
			$n_{2 \text{ th}}$	2	3	4	4				
801.000	9811	1.25	$M_2$	9179	5080	8256	4084				
			c	1.1	1.9	1.1	2.1				
			$n_{2 \text{ Eck}}$	2	3	4	5				
			$n_{2 \text{ th}}$	2	3	4	4				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

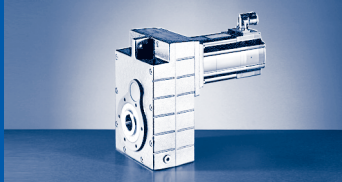


$M_{2GN} \leq 11615 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_{2Eck}$	1.98	10560	522.133
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	1.91	9036	562.391
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	1.90	9811	633.680
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	1.26	9036	710.888
								$n_{2th}$			
								$M_2$ c			
								$n_{2Eck}$	1.25	9811	801.000
								$n_{2th}$			

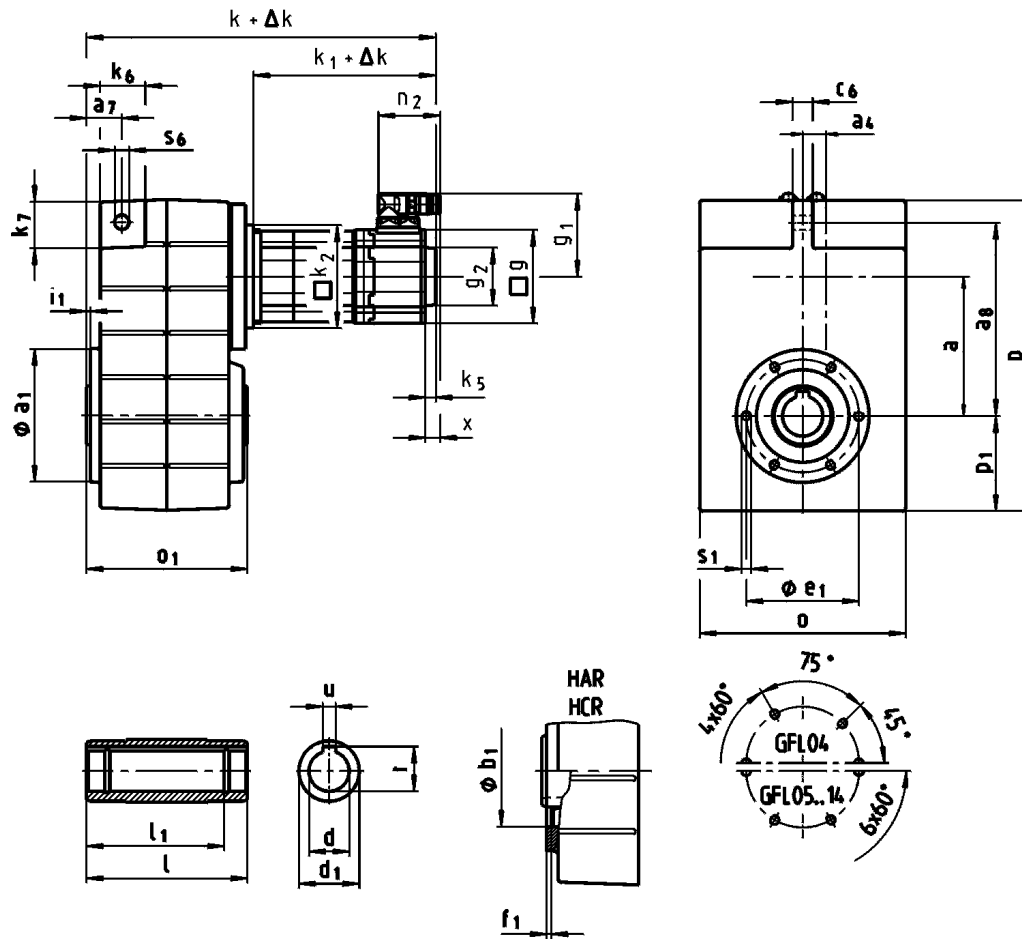
M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [mm]

## GFL□□-2S (MCS)



### GFL□□-2S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL04...	k	260	290	320	312	332	352	392							
GFL05...	k	281	311	341	334	354	374	414	351		391			431	
GFL06...	k	294	324	354	347	367	387	427	364		404			444	
GFL07...	k				380	400	420	460	397		437			477	
GFL09...	k								431		471			511	
...RSO B0 <sup>1)</sup>	$\Delta k$	0													
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20									
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268	
	$k_2$	66			91								118		
	g	62			89								116		
	$k_5$	0			13								14		
	$g_2$	□ 62			Ø 67								Ø 72		
	$g_1$	76			90								105		
	$n_2$	64							78						
x	21										18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41



GFL□□-2S H□R ... RSO

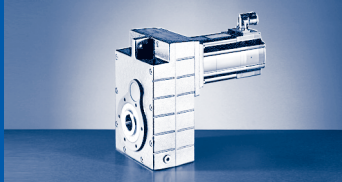
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL06...	k	379		419		459		499											
GFL07...	k	412		452		492		532		451		491		551					
GFL09...	k	446		486		526		566		485		525		585					
GFL11...	k	487		527		567		607		526		566		626					
GFL14...	k									571		611		671					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-2S H□R

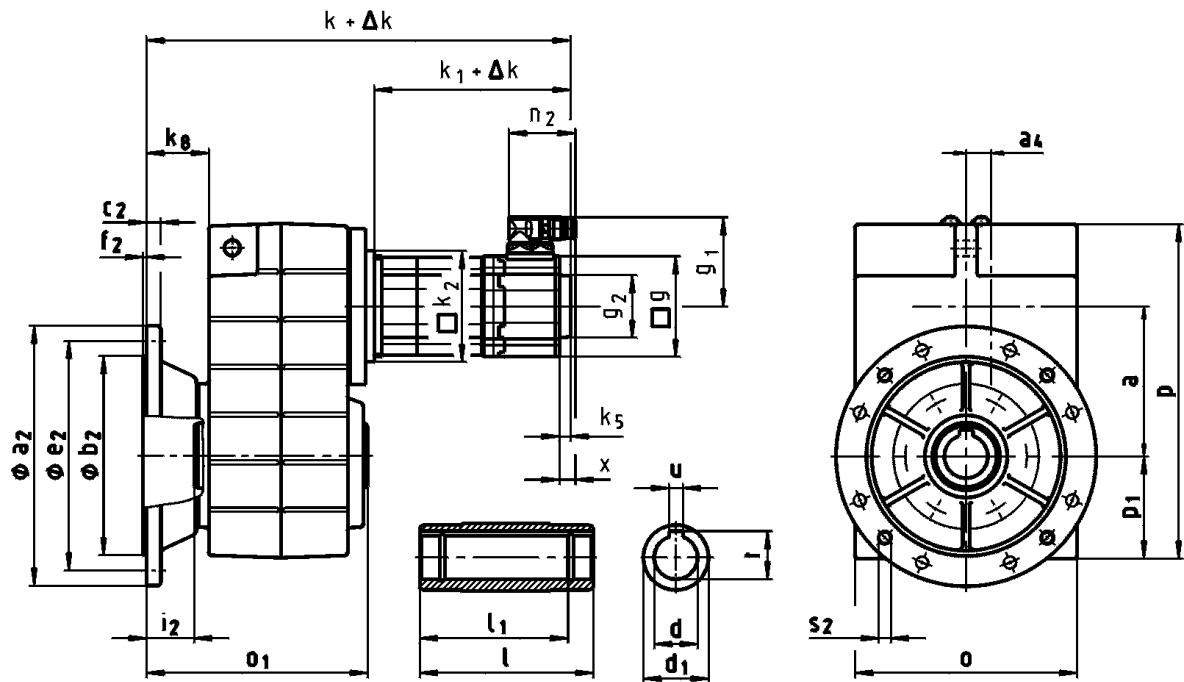
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	115	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	140	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	160	315	98	140	22	35	195	20		46	46
GFL07...	256	200	386	118	173	29	44	240	25	18	56	56
GFL09...	318	240	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	290	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	350	740	228	339	65	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GFL04...	25	115	45	100	8	28.3	110	75	90	3	2.5	M6x12
	30					33.3						
GFL05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GFL06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GFL07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GFL09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GFL11...	80	290	105	250	22	85.4	240	140	205	6	6	M20x32
GFL14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35



# GFL [mm]

## GFL□□-2S (MCS)



### GFL□□-2S HCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL04...	k	293	323	353	346	366	386	426								
GFL05...	k	315	345	375	367	387	407	447	384		424			464		
GFL06...	k	337	367	397	389	409	429	469	406		446			486		
GFL07...	k				435	455	475	515	452		492			532		
GFL09...	k								491		531			571		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91				118				145 <sup>2)</sup>			
	g	62			89				116							
	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64			78											
x	21								18							

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

2) GFL05: 12DC20 ... 12LC41



### GFL□□-2S HCK ... RSO

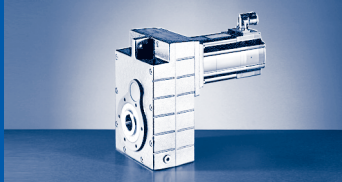
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	422		462		502		542								
GFL07...	k	468		508		548		588		507		547		607		
GFL09...	k	507		547		587		627		546		586		646		
GFL11...	k	548		588		628		668		587		627		687		
GFL14...	k									632		672		732		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>2)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147	116	147	141	172	141	172	141	172	141	172
	n <sub>2</sub>	78				94	78	94	78	94	78	94	78	94	78	94
	x	16				38	16	38	16	36	16	36	16	36	16	36

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GFL□□-2S HCK

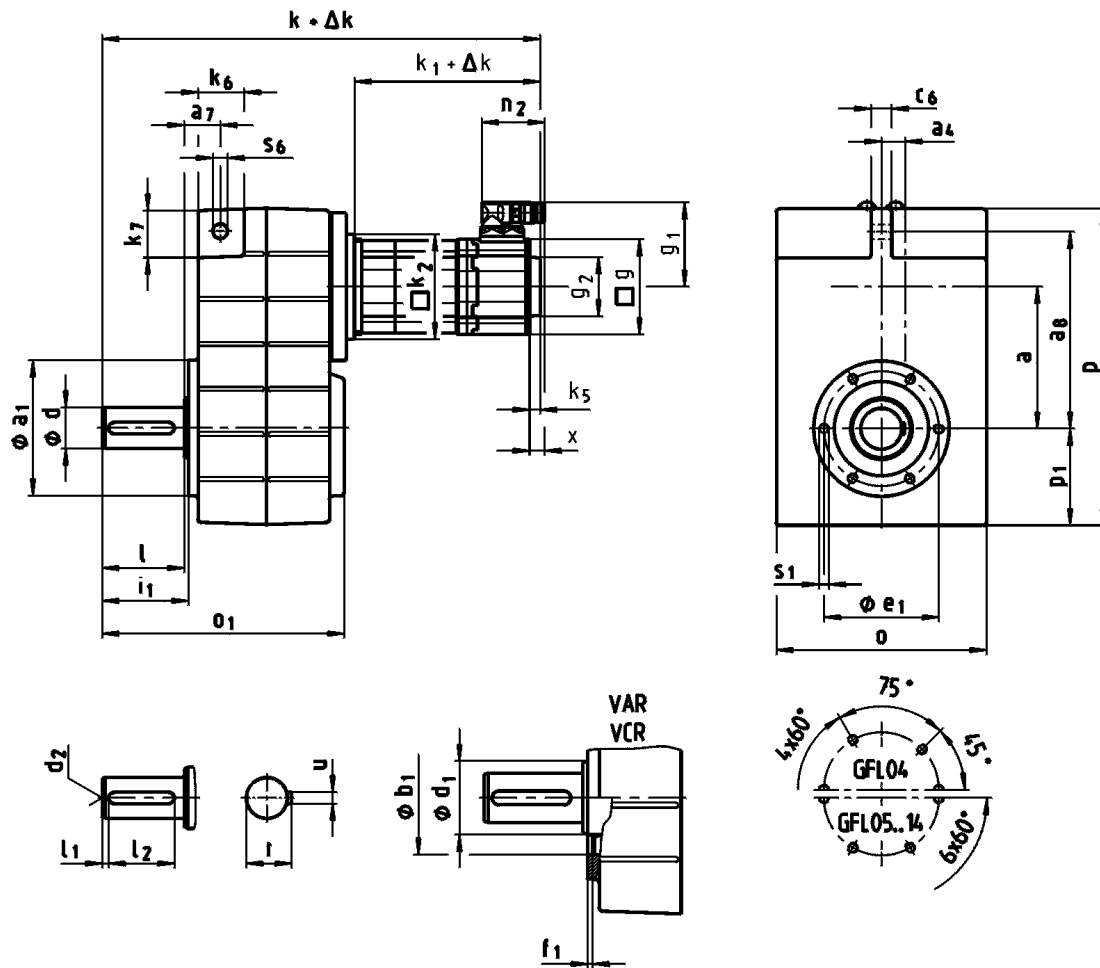
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>g</sub>
GFL04...	148	148	214	69	90.5	12.5	42
GFL05...	165	173	252	78	112.5	18.5	46
GFL06...	206	201	315	98	140	22	56
GFL07...	256	255	386	118	173	29	73
GFL09...	318	300	486	149	220	37.5	78
GFL11...	395	350	600	181	276.5	50	86
GFL14...	490	410	740	228	339	65	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GFL05...	35	140	50	124	10	38.3	200	130	12	165	4	42.5	4 x 11
	40					43.3							
GFL06...	45	160	65	140	14	48.8	250	180	15	215	4	41.5	4 x 14
	50					53.8							
GFL07...	55	200	75	175	16	59.3	300	230	17	265	4	55.5	4 x 17.5
	60					64.4							
GFL09...	70	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	80					85.4							
GFL11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	4 x 17.5
	100					106.4							
GFL14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GFL [mm]

## GFL□□-2S (MCS)



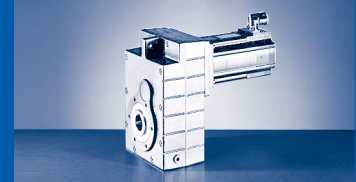
### GFL□□-2S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GFL04...	k	310	340	370	362	382	402	442									
GFL05...	k	341	371	401	394	414	434	474	411			451			491		
GFL06...	k	374	404	434	427	447	467	507	444			484			524		
GFL07...	k				480	500	520	560	497			537			577		
GFL09...	k								551			591			631		
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188			228			268		
	$k_2$	66			91								118 145 <sup>2)</sup>				
	g	62			89								116				
	$k_5$	0			13								14				
	$g_2$	□ 62			Ø 67								Ø 72				
	$g_1$	76			90								105				
	$n_2$	64							78								
	x				21								18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41





GFL□□-2S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	459		499		539		579								
GFL07...	k	512		552		592		632		551		591		651		
GFL09...	k	566		606		646		686		605		645		705		
GFL11...	k	647		687		727		767		686		726		786		
GFL14...	k									771		811		871		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>2)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

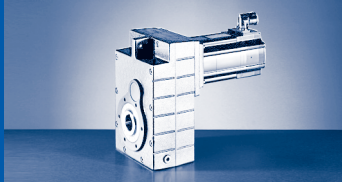
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-2S V□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	163	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	197	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	236	315	98	140	22	35	195	20		46	46
GFL07...	256	296	386	118	173	29	44	240	25	18	56	56
GFL09...	318	356	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	445	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	544	740	228	339	65	80	455	50	32	100	114

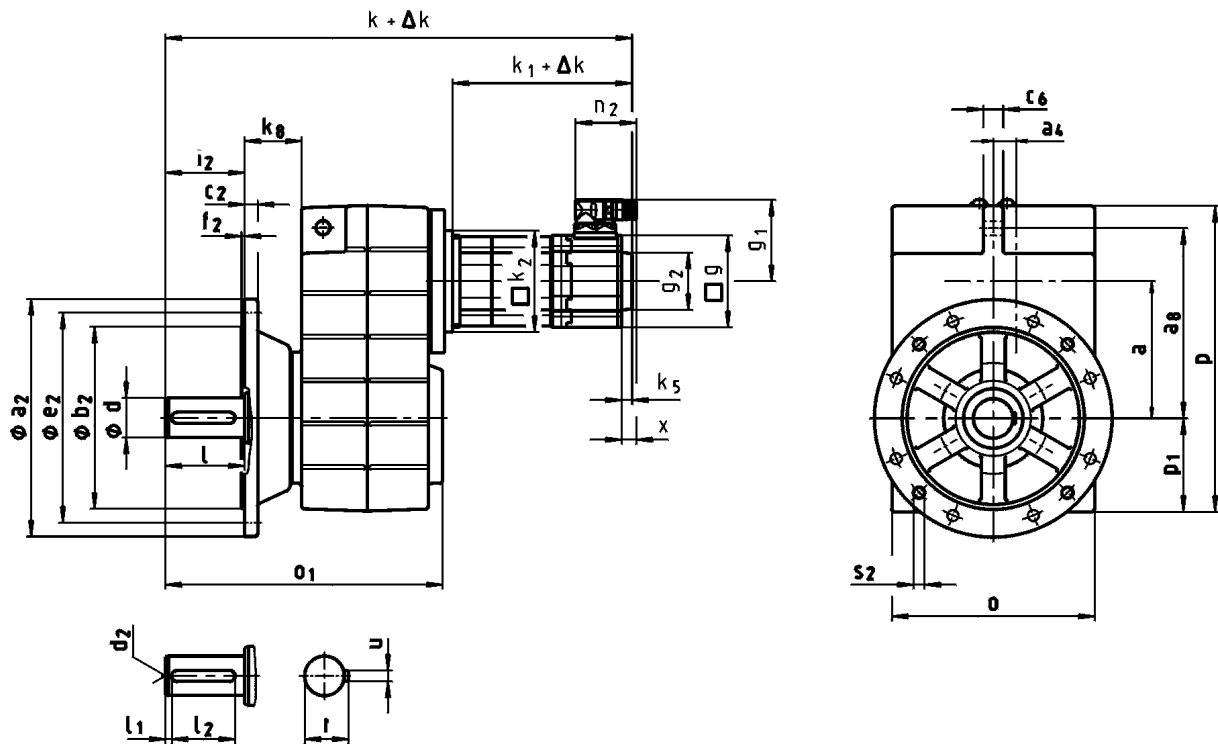
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				
GFL04...	25	50	45	4	40	M10	8	28	110	75	90	3	52.5	M6x12
GFL05...	30	60	50	6	45			33	118	80	100		4	64
GFL06...	40	80	65	7	63	M16	12	43	140	100	120	5		85
GFL07...	50	100	75	8	80			14	53.5	165	115		140	175
GFL09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GFL11...	80	160	105	15	125		22	85	240	140	205		205	166
GFL14...	100	200	135	18	160	M24	28	106	290	170	250	207	M24x35	

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-2S (MCS)

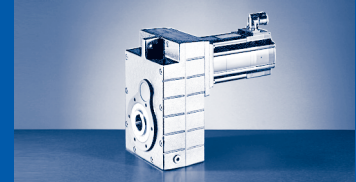


### GFL□□-2S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GFL04...	k	343	373	403	396	416	436	476									
GFL05...	k	374	404	434	427	447	467	507	444		484			524			
GFL06...	k	415	445	475	468	488	508	548	485		525			565			
GFL07...	k				535	555	575	615	552		592			632			
GFL09...	k								611		651			691			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91				118				145 <sup>2)</sup>				
	g	62			89				116								
	$k_5$	0			13				14								
	$g_2$	□ 62			Ø 67				Ø 72								
	$g_1$	76			90				105								
	$n_2$	64							78								
	x				21				18								

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41



GFL□□-2S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	500		540		580		620								
GFL07...	k	567		607		647		687		606		646		706		
GFL09...	k	626		666		706		746		665		705		765		
GFL11...	k	707		747		787		827		746		786		846		
GFL14...	k									831		871		931		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>2)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147	116	147	141	172	141	172	141	172	141	172
	n <sub>2</sub>	78				94	78	94	78	94	78	94	78	94	78	94
	x	16				38	16	38	16	36	16	36	16	36	16	36

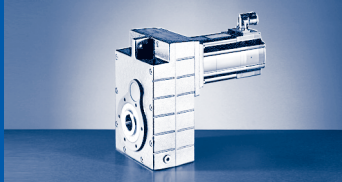
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-2S VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>g</sub>
GFL04...	148	196	214	69	90.5	12.5	42
GFL05...	165	230	252	78	112.5	18.5	46
GFL06...	206	277	315	98	140	22	56
GFL07...	256	351	386	118	173	29	73
GFL09...	318	416	486	149	220	37.5	78
GFL11...	395	505	600	181	276.5	50	86
GFL14...	490	604	740	228	339	65	90

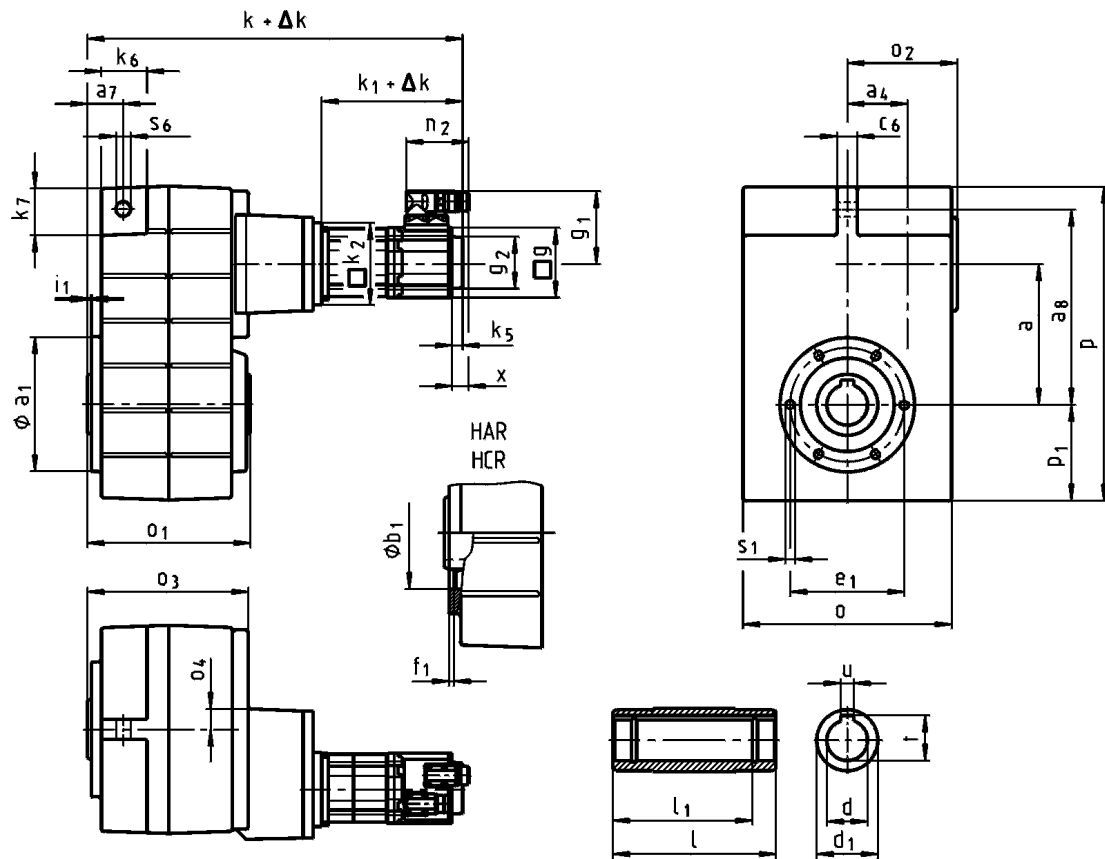
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GFL05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GFL06...	40	80	7	63	M16	14	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80			53.5	300	230	17	265		100	
GFL09...	60	120		100	M20	22	64	350	250	18	300	5	120	4 x 17.5
GFL11...	80	160	15	125			85	400	300	20	350		160	
GFL14...	100	200	18	160	M24	28	106	450	350	22	400		200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-3S (MCS)



### GFL□□-3S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	k	358	388	418	410	430	450	490								
GFL06...	k	388	418	448	440	460	480	520								
GFL07...	k	432	462	492	484	504	524	564	501		541			581		
GFL09...	k	484	514	544	536	556	576	616	553		593			633		
GFL11...	k				596	616	636	676	613		653			693		
GFL14...	k								692		732			772		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19			20											
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91							118				
	g	62			89							116				
...RSO	$k_5$	0			13							14				
	$g_2$	□ 62			Ø 67							Ø 72				
	$g_1$	76			90							105				
	$n_2$	64								78						
	x				21							18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



GFL□□-3S H□R ... RSO

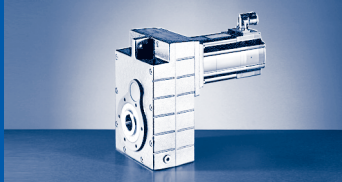
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL09...	k	569		609		649		689											
GFL11...	k	629		669		709		749		668		708		768					
GFL14...	k	708		748		788		828		747		787		847					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-3S H□R

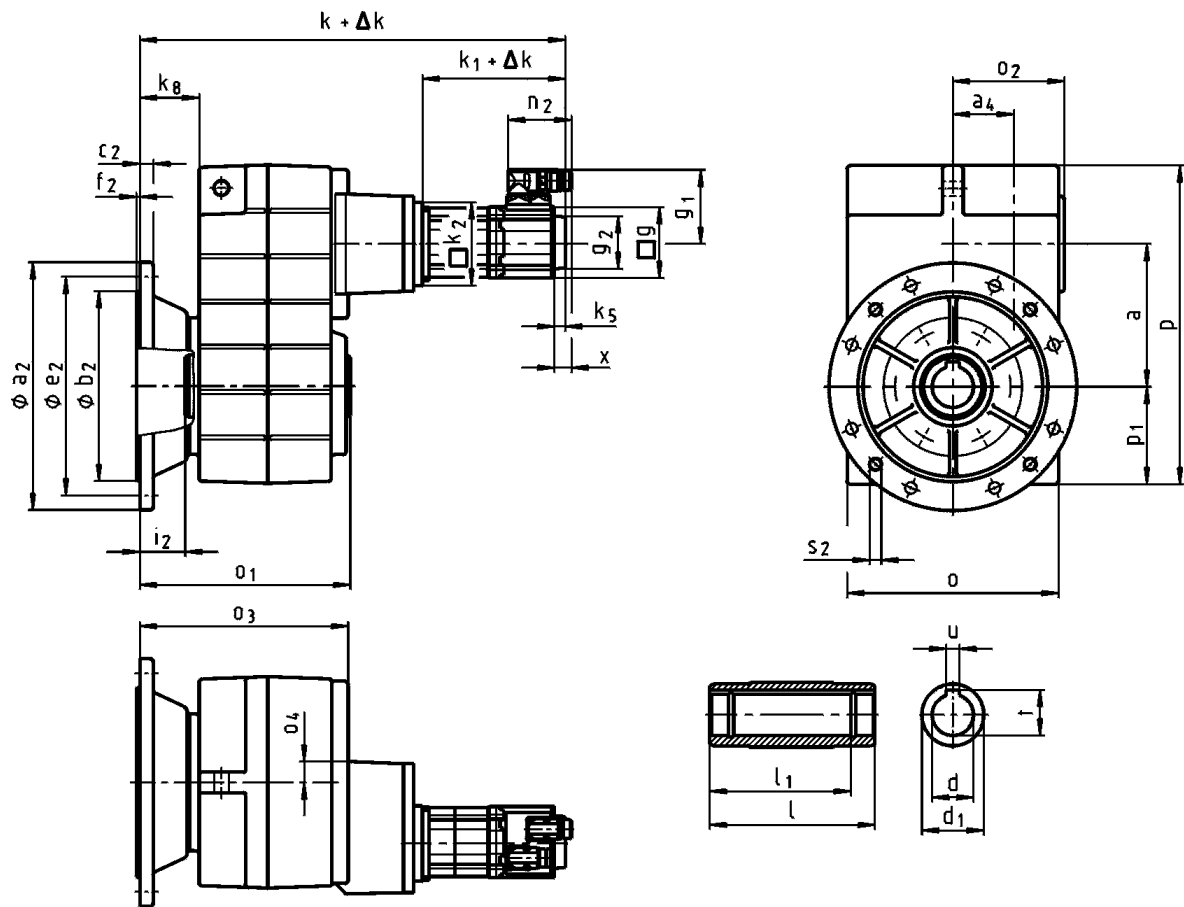
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	140	107	141	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	160	111	160	20	315	98	140	58	35	195	20		46	46
GFL07...	256	200	135	199	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	240	170	238	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	290	216	285	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	350	271	340	38	740	228	339	154	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GFL05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GFL06...	40	160	65	140	12	43.3	140	100	120			
	45				14	48.8						
GFL07...	50	200	75	175	14	53.8	165	115	140	5	5	M12x18
	55				16	59.3						
GFL09...	60	240	95	210	18	64.4	205	145	175	6	6	M16x24
	70				20	74.9						
GFL11...	80	290	105	250	22	85.4	240	140	205			
	80				22	85.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35



# GFL [mm]

## GFL□□-3S (MCS)



### GFL□□-3S HCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	k	391	421	451	444	464	484	524								
GFL06...	k	430	460	490	483	503	523	563								
GFL07...	k	487	517	547	540	560	580	620	557		597			637		
GFL09...	k	544	574	604	597	617	637	677	614		654			694		
GFL11...	k				657	677	697	737	674		714			754		
GFL14...	k								753		793			833		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91				118				145 <sup>2)</sup>			
	g	62			89				116							
	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
x					21								18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



### GFL□□-3S HCK ... RSO

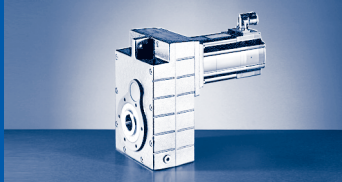
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL09...	k	629		669		709		749											
GFL11...	k	689		729		769		809		728		768		828					
GFL14...	k	768		808		848		888		807		847		907					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GFL□□-3S HCK

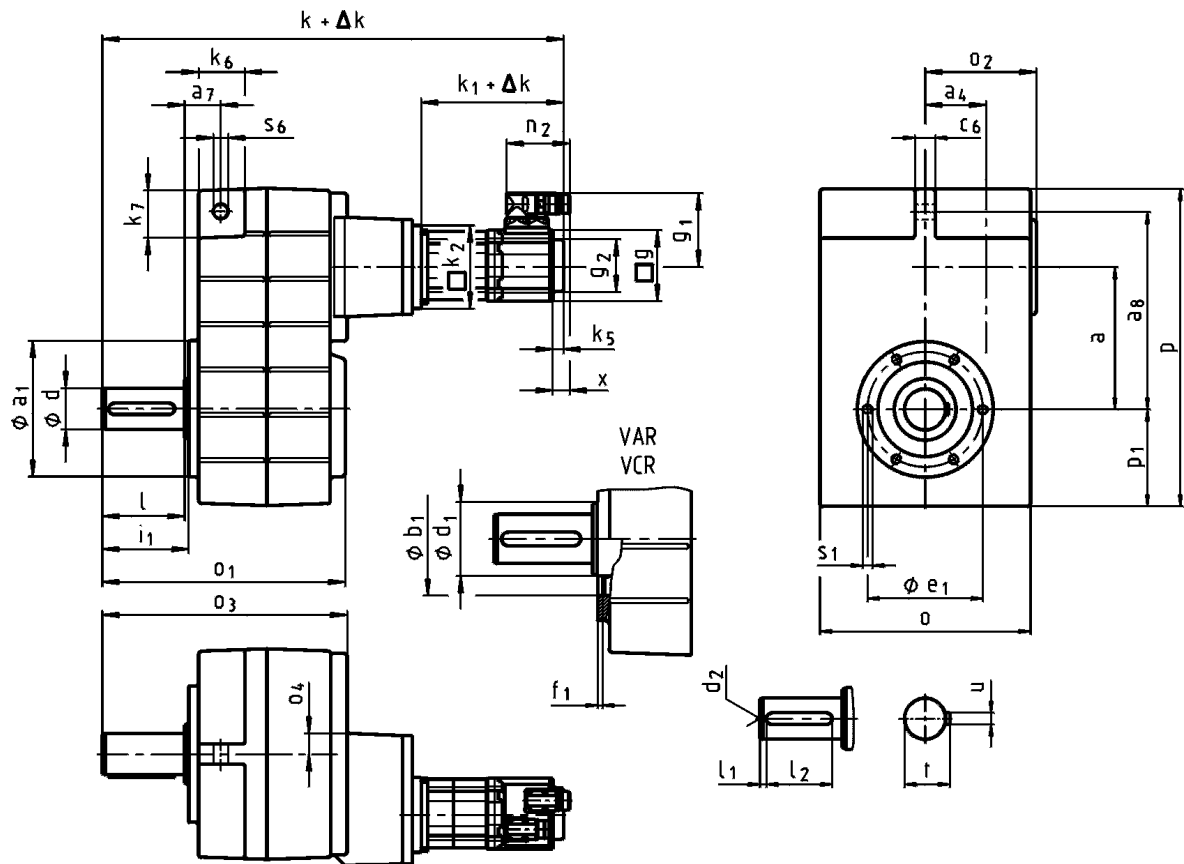
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	173	107	174	23	252	78	112.5	54.5	46
GFL06...	206	201	111	201	20	315	98	140	58	56
GFL07...	256	255	135	254	24	386	118	173	74	73
GFL09...	318	300	170	298	27	486	149	220	93.5	78
GFL11...	395	350	216	345	34	600	181	276.5	120	86
GFL14...	490	410	271	400	38	740	228	339	154	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GFL06...	40	160	65	140	12	43.3	250	180	15	215	4	41.5	4 x 14
	45				14	48.8							
GFL07...	50	200	75	175	16	53.8	300	230	17	265	4	55.5	4 x 17.5
	55				18	64.4							
GFL09...	60	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	70				22	85.4							
GFL11...	80	290	105	250	28	106.4	400	300	20	350	5	60.5	8 x 17.5
	80				22	85.4							
GFL14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GFL [mm]

## GFL□□-3S (MCS)



### GFL□□-3S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL05...	k	418	448	478	470	490	510	550							
GFL06...	k	468	498	528	520	540	560	600							
GFL07...	k	532	562	592	584	604	624	664	601		641			681	
GFL09...	k	604	634	664	656	676	696	736	673		713			753	
GFL11...	k				756	776	796	836	773		813			853	
GFL14...	k								892		932			972	

...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188			228		268		
	$k_2$	66			91							118		145 <sup>2)</sup>		
	g	62			89							116				
...RSO	$k_5$	0			13							14				
	$g_2$	□ 62			Ø 67							Ø 72				
	$g_1$	76			90							105				
	$n_2$	64							78							
	x				21							18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41





GFL□□-3S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL09...	k	689		729		769		809											
GFL11...	k	789		829		869		909		828		868		928					
GFL14...	k	908		948		988		1028		947		987		1047					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

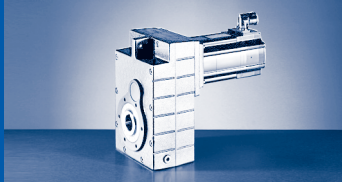
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-3S V□R

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	197	107	201	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	236	111	240	20	315	98	140	58	35	195	20		46	46
GFL07...	256	296	135	299	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	356	170	358	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	445	216	445	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	544	271	540	38	740	228	339	154	80	455	50	32	100	114

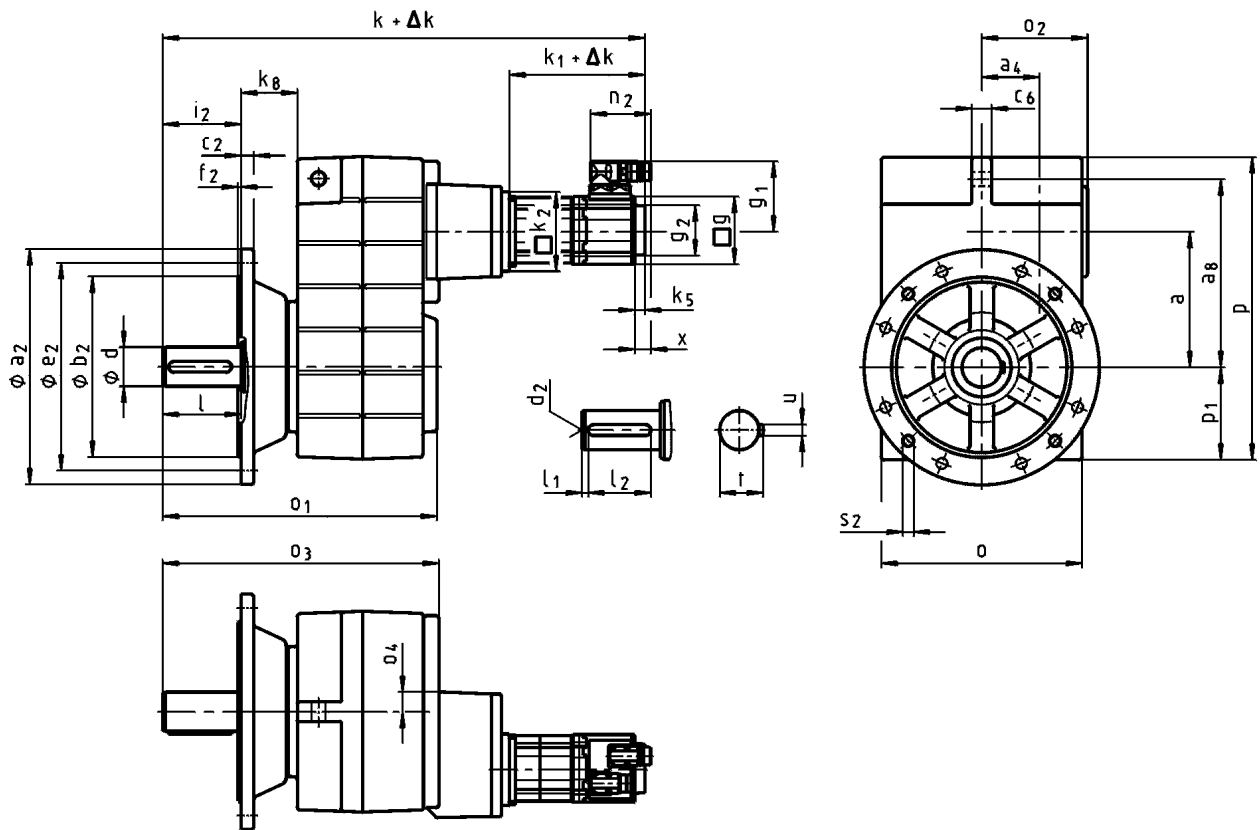
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GFL05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GFL06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GFL07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GFL09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GFL11...	80	160	105	125	22		85	240	140	205	166		M20x32	
GFL14...	100	200	135	18	160	M24	28	106	290	170	250	207	M24x35	

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-3S (MCS)



### GFL□□-3S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	k	451	481	511	504	524	544	584								
GFL06...	k	509	539	569	562	582	602	642								
GFL07...	k	587	617	647	640	660	680	720	657		697			737		
GFL09...	k	664	694	724	717	737	757	797	734		774			814		
GFL11...	k				817	837	857	897	834		874			914		
GFL14...	k								953		993			1033		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91						118			145 <sup>2)</sup>		
	g	62			89						116					
...RSO	$k_5$	0			13						14					
	$g_2$	□ 62			Ø 67						Ø 72					
	$g_1$	76			90						105					
	$n_2$	64							78							
	x	21										18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



### GFL□□-3S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL09...	k	749		789		829		869								
GFL11...	k	849		889		929		969		888		928		988		
GFL14...	k	968		1008		1048		1088		1007		1047		1107		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147	116	147	141	172	141	172	141	172	141	172
	n <sub>2</sub>	78				94	78	94	78	94	78	94	78	94	78	94
	x	16				38	16	38	16	36	16	36	16	36	16	36

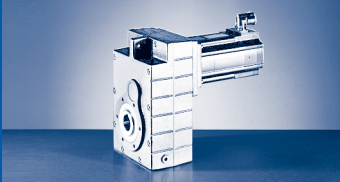
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GFL□□-3S VCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	230	107	234	23	252	78	112.5	54.5	46
GFL06...	206	277	111	281	20	315	98	140	58	56
GFL07...	256	351	135	354	24	386	118	173	74	73
GFL09...	318	416	170	418	27	486	149	220	93.5	78
GFL11...	395	505	216	505	34	600	181	276.5	120	86
GFL14...	490	604	271	600	38	740	228	339	154	90

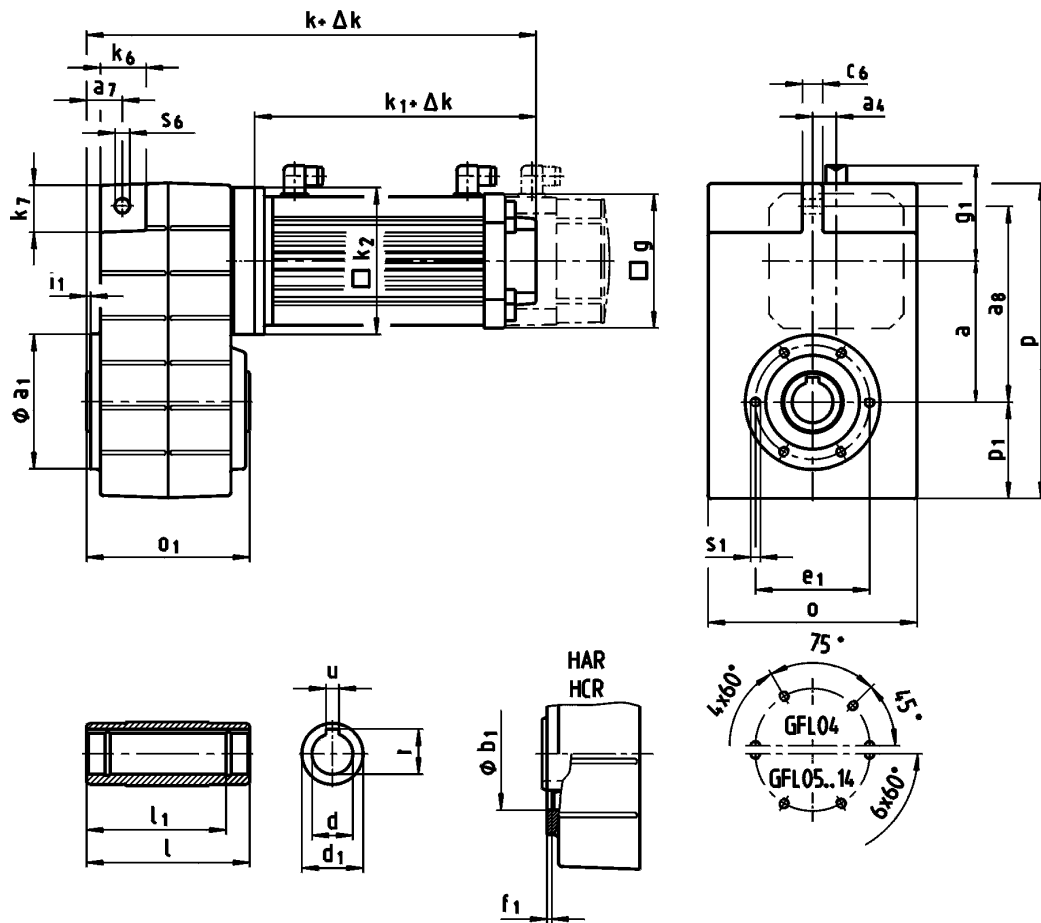
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80		14	53.5	300	230	17	265		100	
GFL09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GFL11...	80	160	15	125		22	85	400	300	20	350		160	
GFL14...	100	200	18	160		M24	28	106	450	350	22		400	200

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

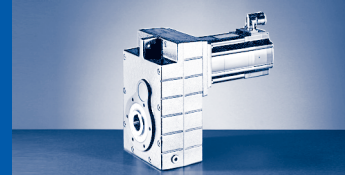
## GFL□□-2A (MCA)



### GFL□□-2A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	388	396	464						
GFL05...	k	409	418	486	468		530			
GFL06...	k	422	431	499	481		543		520	
GFL07...	k	455	464	532	514		576		553	
GFL09...	k				548		610		587	
GFL11...	k				589		651		628	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-2A H□R ... RSO

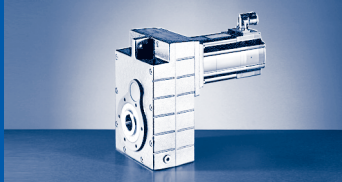
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10	
GFL06...	k	609										
GFL07...	k	642		621		718		700		796		
GFL09...	k	676		655		752		734		830		
GFL11...	k	717		696		793		775		871		
GFL14...	k			741		838		820		916		
...RSO B0 <sup>1)</sup>	Δ k	0										
...RSO P□ <sup>1)</sup>	Δ k	35			38			42				
	k <sub>1</sub>	435		408		505		479		575		
	k <sub>2</sub>	180				222				265		
	g	165				192				214		
	g <sub>1</sub>	118				161				172		

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A H□R

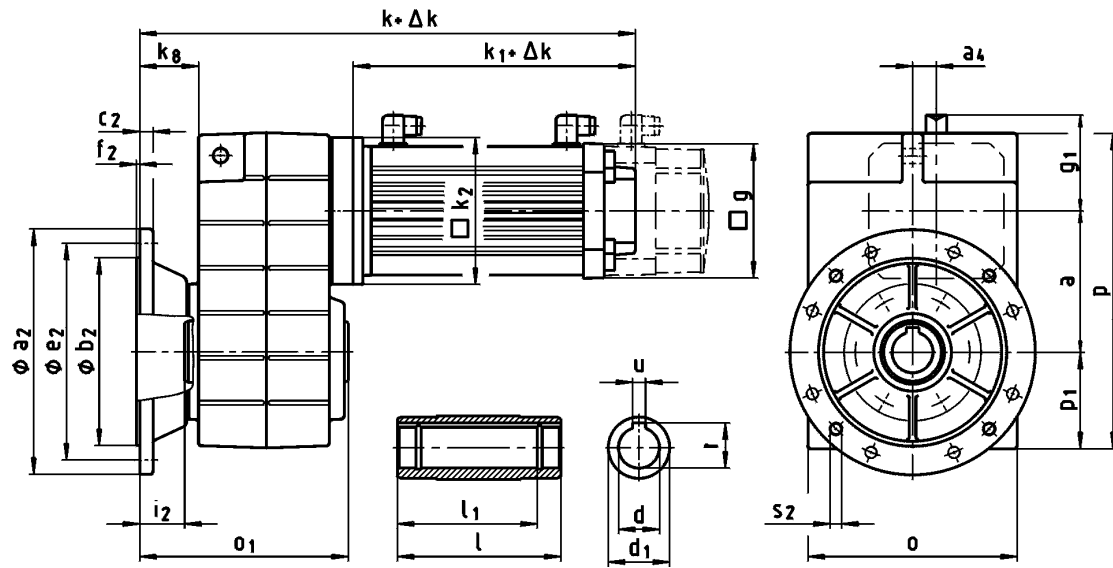
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	115	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	140	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	160	315	98	140	22	35	195	20		46	46
GFL07...	256	200	386	118	173	29	44	240	25	18	56	56
GFL09...	318	240	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	290	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	350	740	228	339	65	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GFL04...	25	115	45	100	8	28.3	110	75	90	3	2.5	M6x12
	30					33.3						
GFL05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GFL06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GFL07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GFL09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GFL11...	80	290	105	250	22	85.4	240	140	205	8	8	M20x32
	100					106.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35



# GFL [mm]

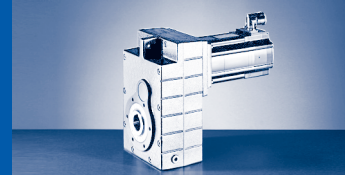
## GFL□□-2A (MCA)



### GFL□□-2A HCK ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	421	430	498						
GFL05...	k	443	451	519	501		563			
GFL06...	k	465	473	541	523		585		562	
GFL07...	k	511	519	587	569		631		608	
GFL09...	k				608		670		647	
GFL11...	k				649		711		688	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335	307		369			346
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-2A HCK ... RSO

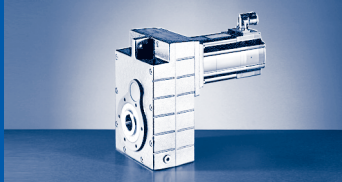
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	k	651									
GFL07...	k	697		677		774		755		851	
GFL09...	k	736		716		813		794		890	
GFL11...	k	777		757		854		835		931	
GFL14...	k			802		899		880		976	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180		222				265			
	g	165		192				214			
	g <sub>1</sub>	118		161				172			

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A HCK

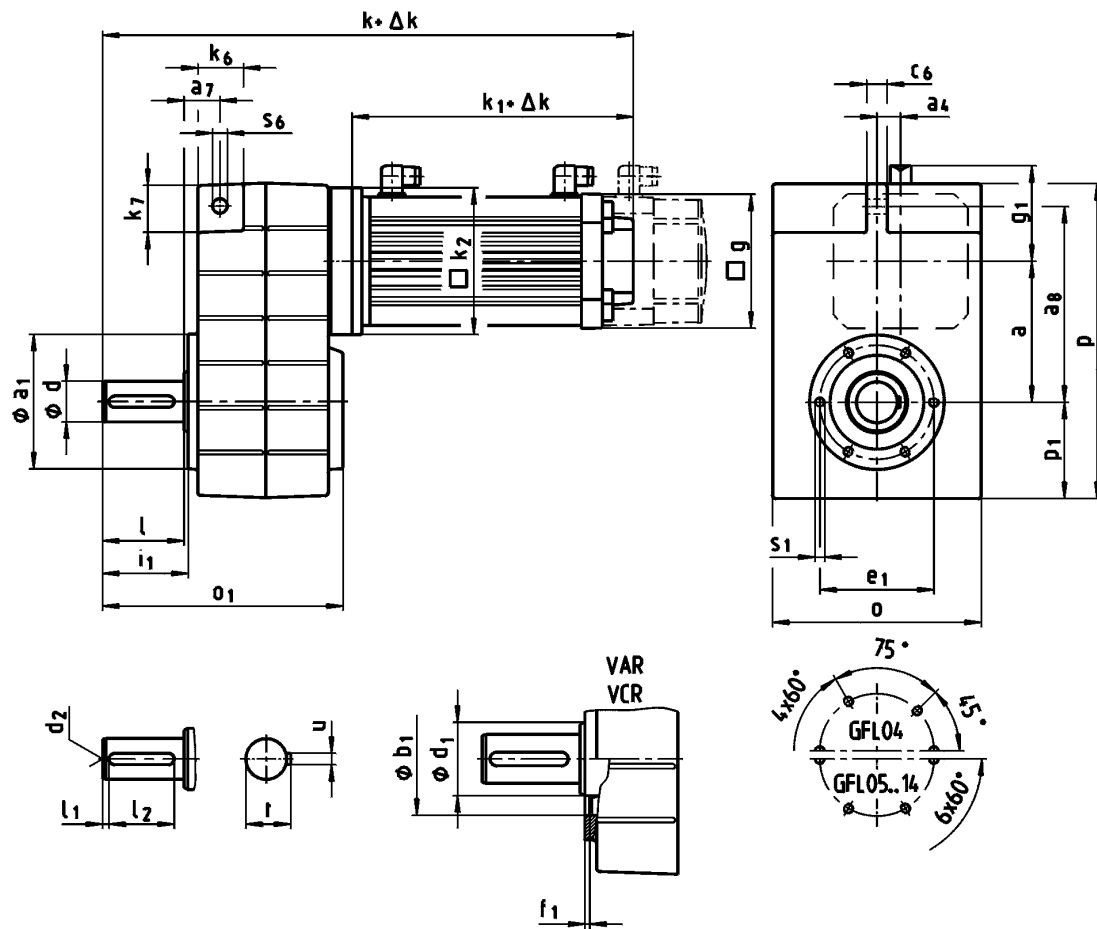
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL04...	148	148	214	69	90.5	12.5	42
GFL05...	165	173	252	78	112.5	18.5	46
GFL06...	206	201	315	98	140	22	56
GFL07...	256	255	386	118	173	29	73
GFL09...	318	300	486	149	220	37.5	78
GFL11...	395	350	600	181	276.5	50	86
GFL14...	490	410	740	228	339	65	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
GFL05...	30					33.3							
	35	140	50	124	10	38.3	200	130	12	165	4	41.5	4 x 11
GFL06...	40					43.3							
	45	160	65	140	14	48.8	250	180	15	215	4	55.5	4 x 14
GFL07...	50					53.8							
	55	200	75	175	16	59.3	300	230	17	265	5	60.5	4 x 17.5
GFL09...	60					64.4							
	70	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
GFL11...	80					85.4							
	80	290	105	250	22	85.4	400	300	20	350	5	60.5	4 x 17.5
GFL14...	100					106.4							



# GFL [mm]

## GFL□□-2A (MCA)

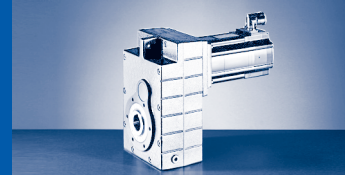


### GFL□□-2A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	438	446	514						
GFL05...	k	469	478	546	528		590			
GFL06...	k	502	511	579	614		623		600	
GFL07...	k	555	564	632	668		676		653	
GFL09...	k				668		730		707	
GFL11...	k				749		811		788	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





### GFL□□-2A V□R ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GFL06...	k	689											
GFL07...	k	742		721		818		800		896			
GFL09...	k	796		775		872		854		950			
GFL11...	k	877		856		953		935		1031			
GFL14...	k			941		1038		1020		1116			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

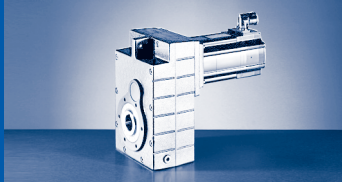
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A V□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	163	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	197	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	236	315	98	140	22	35	195	20		46	46
GFL07...	256	296	386	118	173	29	44	240	25	18	56	56
GFL09...	318	356	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	445	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	544	740	228	339	65	80	455	50	32	100	114

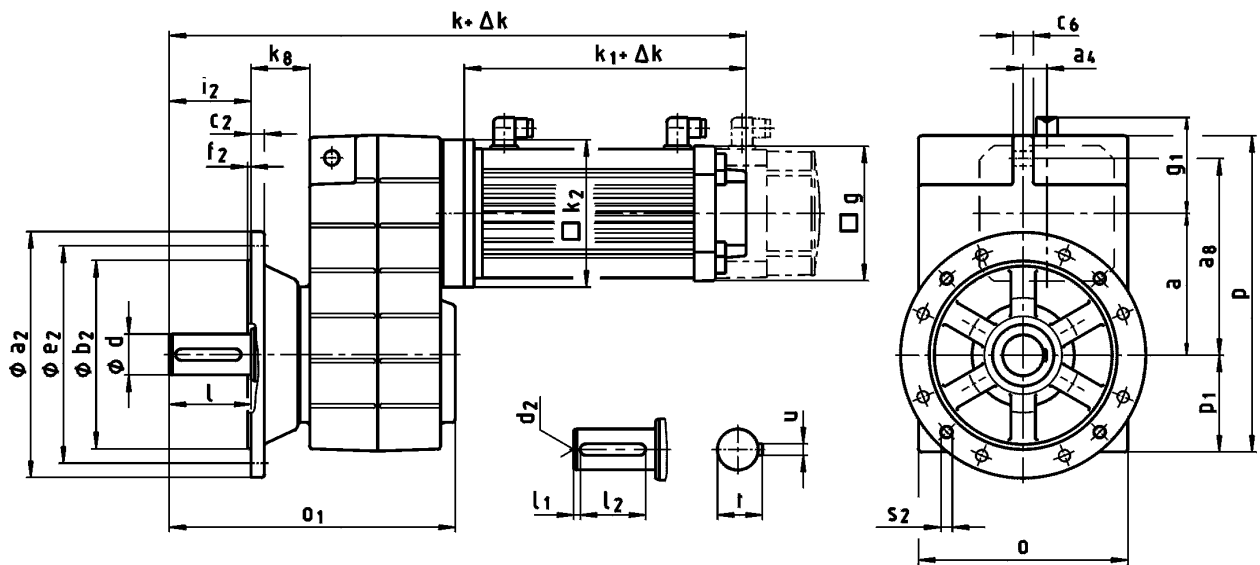
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
GFL04...	25	50	45	4	40	M10	8	28	110	75	90	3	52.5	M6x12
GFL05...	30	60	50	6	45			33	118	80	100			
GFL06...	40	80	65	7	63	M16	12	43	140	100	120	5	105	M10x16
GFL07...	50	100	75	8	80			14	53.5	165	115			
GFL09...	60	120	95		100	M20	18	64	205	145	175	175	166	M16x24
GFL11...	80	160	105	125	M24				22	85	240	140		
GFL14...	100	200	135	160		28	106	290			170	250	250	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-2A (MCA)



### GFL□□-2A VCK ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	471	480	548						
GFL05...	k	502	511	579	561		623			
GFL06...	k	543	552	620	602		664		641	
GFL07...	k	610	619	687	669		731		708	
GFL09...	k				728		790		767	
GFL11...	k				809		871		848	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GFL□□-2A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	k	730									
GFL07...	k	797		776		873		855		951	
GFL09...	k	856		835		932		914		1010	
GFL11...	k	937		916		1013		995		1091	
GFL14...	k			1001		1098		1080		1176	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180		222				265			
	g	165		192				214			
	g <sub>1</sub>	118		161				172			

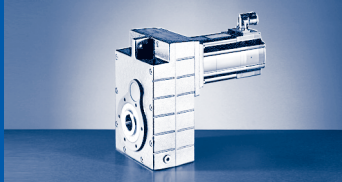
1) → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GFL□□-2A VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL04...	148	196	214	69	90.5	12.5	42
GFL05...	165	230	252	78	112.5	18.5	46
GFL06...	206	277	315	98	140	22	56
GFL07...	256	351	386	118	173	29	73
GFL09...	318	416	486	149	220	37.5	78
GFL11...	395	505	600	181	276.5	50	86
GFL14...	490	604	740	228	339	65	90

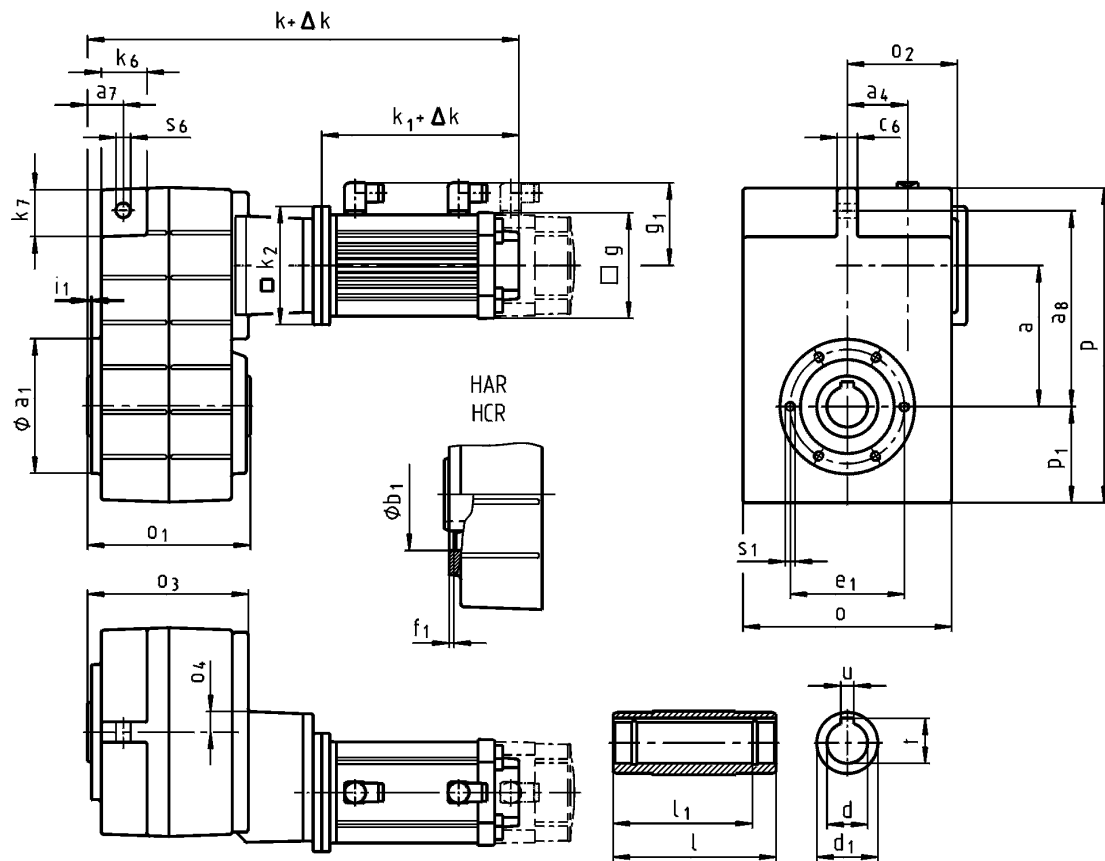
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GFL05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80			53.5	300	230	17	265		100	
GFL09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GFL11...	80	160	15	125			85	400	300	20	350		160	
GFL14...	100	200	18	160	M24	28	106	450	350	22	400		200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

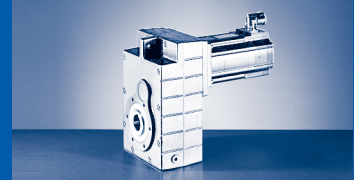
## GFL□□-3A (MCA)



### GFL□□-3A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	486	494	562						
GFL06...	k	516	524	592						
GFL07...	k	560	568	636	618		680			
GFL09...	k	612	620	688	670		732		709	
GFL11...	k	672	680	748	730		792		769	
GFL14...	k				809		871		848	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-3A H□R ... RSO

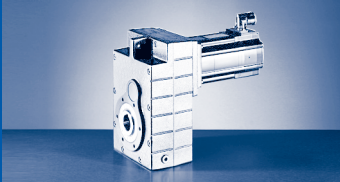
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	798									
GFL11...	k	858		838		935		916		1012	
GFL14...	k	937		917		1014		995		1091	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-3A H□R

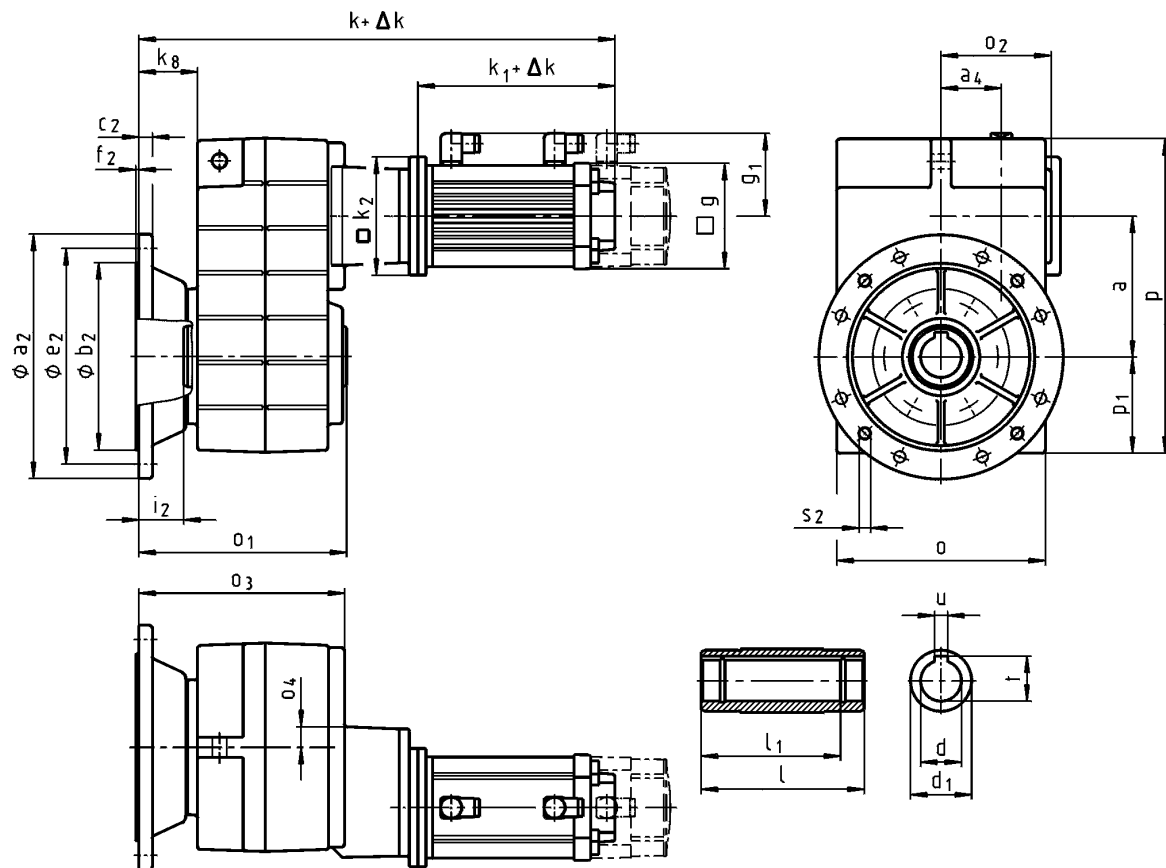
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	140	107	141	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	160	111	160	20	315	98	140	58	35	195	20		46	46
GFL07...	256	200	135	199	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	240	170	238	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	290	216	285	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	350	271	340	38	740	228	339	154	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GFL05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GFL06...	40	160	65	140	12	43.3	140	100	120	5	5	M10x16
	45				14	48.8						
GFL07...	50	200	75	175	16	53.8	165	115	140	6	6	M12x18
	55				18	64.4						
GFL09...	60	240	95	210	20	74.9	205	145	175	7	7	M16x24
	70				22	85.4						
GFL11...	80	290	105	250	28	106.4	240	140	205	8	8	M20x32
	80				28	106.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35



# GFL [mm]

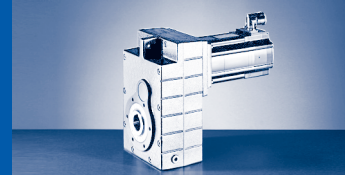
## GFL□□-3A (MCA)



### GFL□□-3A HCK ... RSO


		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	519	528	596						
GFL06...	k	558	567	635						
GFL07...	k	615	624	692	674		736			
GFL09...	k	672	681	749	731		793		770	
GFL11...	k	732	741	809	791		853		830	
GFL14...	k				870		932		909	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335	307		369			346
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-3A HCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	859									
GFL11...	k	919		898		995		977		1073	
GFL14...	k	998		977		1074		1056		1152	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

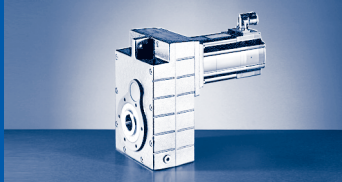
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-3A HCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>g</sub>
GFL05...	165	173	107	174	23	252	78	112.5	54.5	46
GFL06...	206	201	111	201	20	315	98	140	58	56
GFL07...	256	255	135	254	24	386	118	173	74	73
GFL09...	318	300	170	298	27	486	149	220	93.5	78
GFL11...	395	350	216	345	34	600	181	276.5	120	86
GFL14...	490	410	271	400	38	740	228	339	154	90

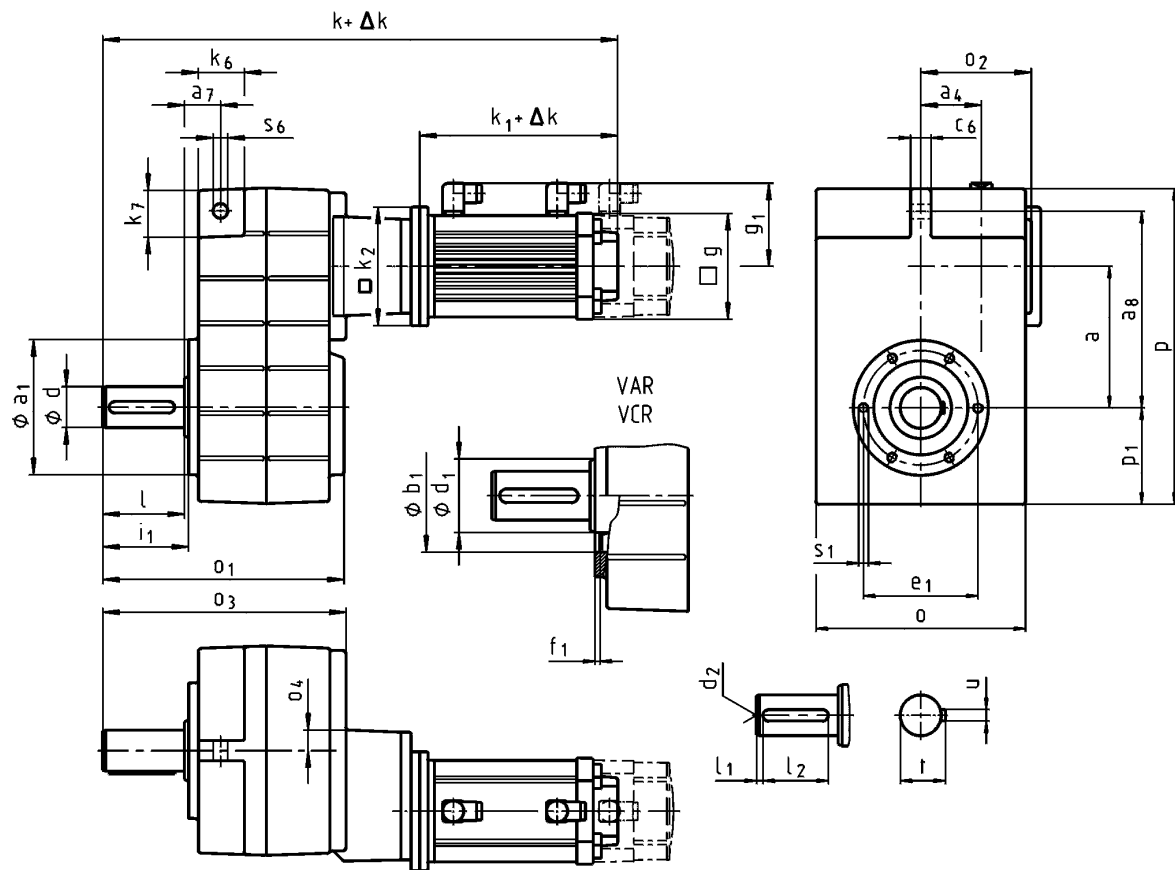
  

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GFL06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5	4 x 14
	45				14	48.8							
GFL07...	50	200	75	175	16	53.8	300	230	17	265	4	55.5	4 x 17.5
	55				18	64.4							
GFL09...	60	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
GFL11...	70				22	85.4	400	300	20	350			
	GFL14...	80	290	105	250	28	106.4	450	350	22	400	5	8 x 17.5



# GFL [mm]

## GFL□□-3A (MCA)



### GFL□□-3A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	546	554	622						
GFL06...	k	596	604	672						
GFL07...	k	660	668	736	718		780			
GFL09...	k	732	740	808	790		852		829	
GFL11...	k	832	840	908	890		952		929	
GFL14...	k				1009		1071		1048	
...RSO B0 <sup>1)</sup>	$\Delta k$				0					
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





**GFL□□-3A V□R ... RSO**

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	918				1095		1076		1172	
GFL11...	k	1018		998		1095		1076		1172	
GFL14...	k	1137		1117		1214		1195		1291	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

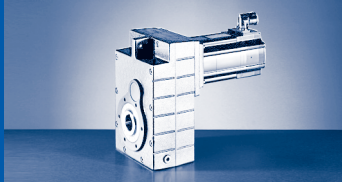
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

**GFL□□-3A V□R**

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	197	107	201	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	236	111	240	20	315	98	140	58	35	195	20		46	46
GFL07...	256	296	135	299	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	356	170	358	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	445	216	445	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	544	271	540	38	740	228	339	154	80	455	50	32	100	114

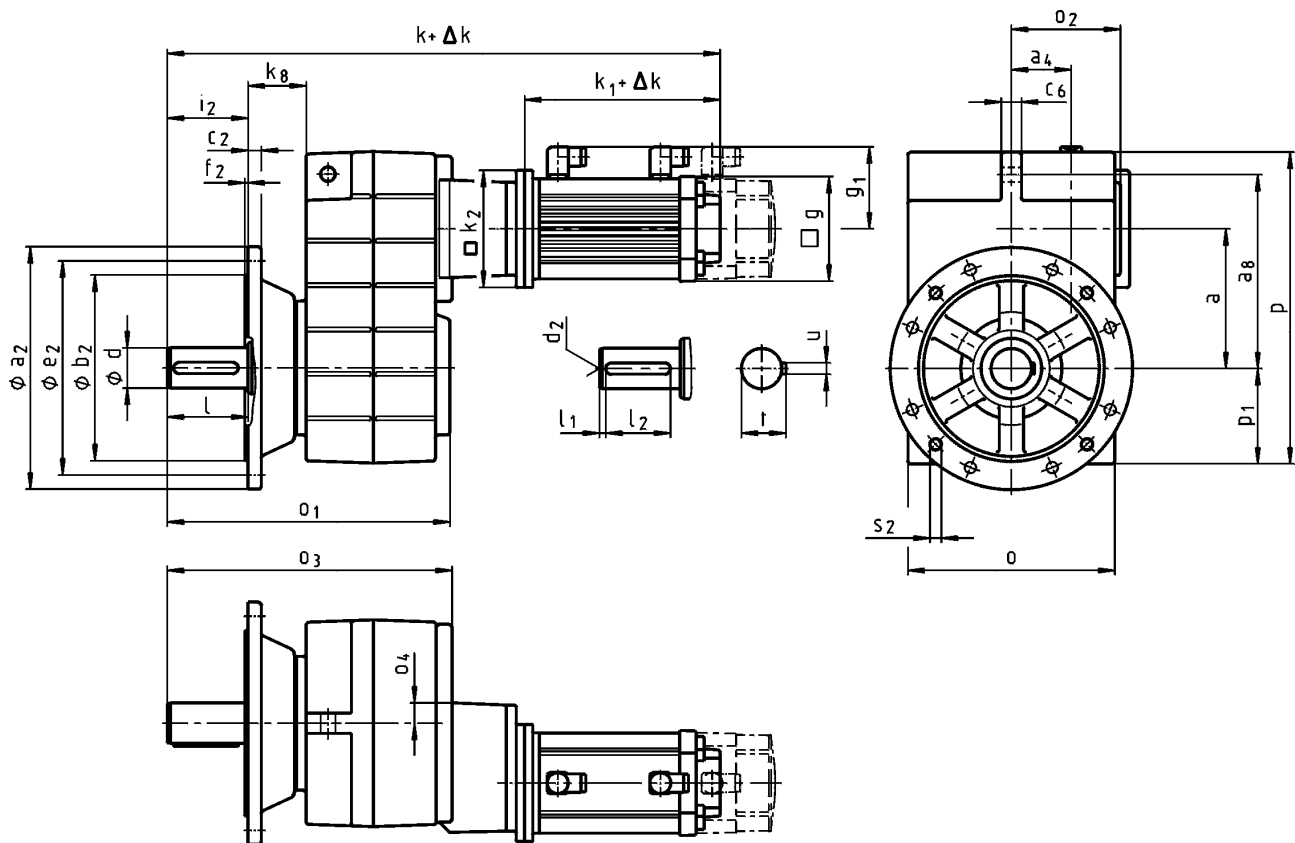
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GFL05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GFL06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GFL07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GFL09...	60	120	95		100	M20	18	64	205	145	175		125	M16x24
GFL11...	80	160	105	15	125		22	85	240	140	205	6	166	M20x32
GFL14...	100	200	135	18	160	M24	28	106	290	170	250		207	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

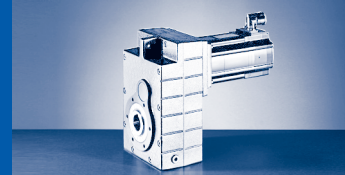
## GFL□□-3A (MCA)



### GFL□□-3A VCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	579	588	656						
GFL06...	k	637	646	714						
GFL07...	k	715	724	792	774		836			
GFL09...	k	792	801	869	851		913		890	
GFL11...	k	892	901	969	951		1013		990	
GFL14...	k				1070		1132		1109	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335		307		369		346
	$k_2$		145					180		
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-3A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	979									
GFL11...	k	1079		1058		1155		1137		1233	
GFL14...	k	1198		1177		1274		1256		1352	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

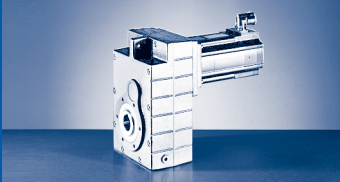
### GFL□□-3A VCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	230	107	234	23	252	78	112.5	54.5	46
GFL06...	206	277	111	281	20	315	98	140	58	56
GFL07...	256	351	135	354	24	386	118	173	74	73
GFL09...	318	416	170	418	27	486	149	220	93.5	78
GFL11...	395	505	216	505	34	600	181	276.5	120	86
GFL14...	490	604	271	600	38	740	228	339	154	90

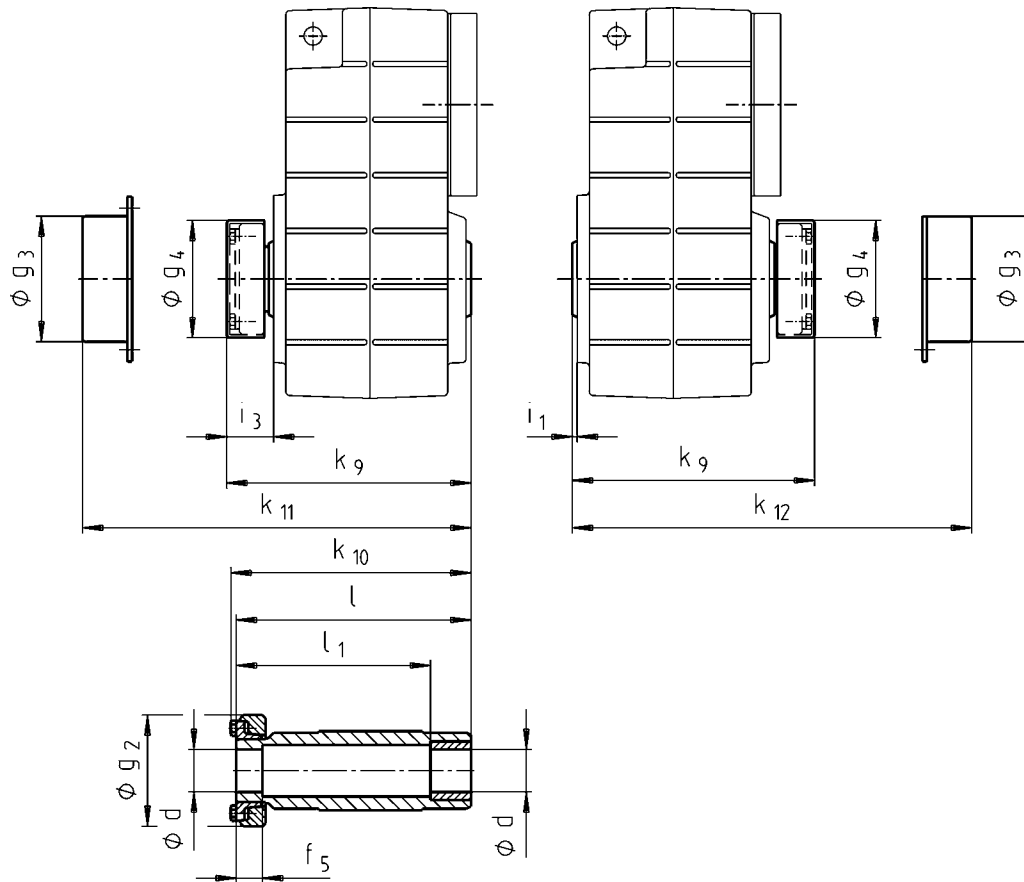
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80		14	53.5						300	
GFL09...	60	120		100	M20	18	64	350	250	18	300		5	120
GFL11...	80	160	15	125		22	85	400	300	20	350	160		
GFL14...	100	200	18	160		M24	28	106	450	350	22	400		200

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL & [mm]

## Hollow shaft with shrink disc



	Machine shaft	Hollow shaft with shrink disc						Protective cap			Cover		
	d	$i_1$	$k_{10}$	$g_2$	l	$l_1$	$f_5$	$i_3$	$k_9$	$g_4$	$k_{11}$	$k_{12}$	$g_3$
	h6												
GFL04...	25 30	2.5	148	72	142	122	26	37	150	76	154	154	79
GFL05...	35	4	174	80	168	148	28	39.5	176	84	179	180	90
GFL06...	40	5	200	90	194	164	30	46.5	202	94	204	205	100
GFL07...	50		238	110	232	192	26	45.5	241	116	244	245	124
GFL09...	65		285	141	278	228	30	53	288	147	287	288	159
GFL11...	80	6	344	170	338	238	42	63	347	176	349	350	191
GFL14...	100	7	415	215	407	307	55	75	418	221	421	422	253

- ▶ Ensure that the strength of the shaft material is adequate in shrink disc designs.

When using typical steels (e.g. C45, 42CrMo4), the torques listed in the selection tables can be used without restriction. When using material that is considerably weaker, please consult us. Medium surface roughness  $R_z$  must not exceed  $15 \mu\text{m}$  (turning operation is sufficient).



**Possible combinations with shrink disc in position 1 (drive end)**

**GFL□□-2S with motor frame size**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL04...	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)							
GFL05...	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)							
GFL06...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL07...				●	●	●	●	●	●	●	●	●	●	●
GFL09...								●	●	●	●	●	●	●

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL06...	●	●	●	●	●	●	●	●						
GFL07...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL09...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL11...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL14...									●	●	●	●	●	●

**GFL□□-2A with motor frame size**

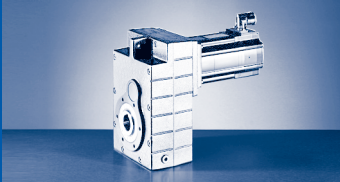
	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL06...	●	●	●	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)
GFL07...	●	●	●	●	●	●	●	●	●
GFL09...				●	●	●	●	●	●
GFL11...				●	●	●	●	●	●

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	● 1)	● 1)								
GFL07...	●	●	● 1)	● 1)	● 1)	● 1)				
GFL09...	●	●	●	●	●	●	●	●	●	●
GFL11...	●	●	●	●	●	●	●	●	●	●
GFL14...			●	●	●	●	●	●	●	●

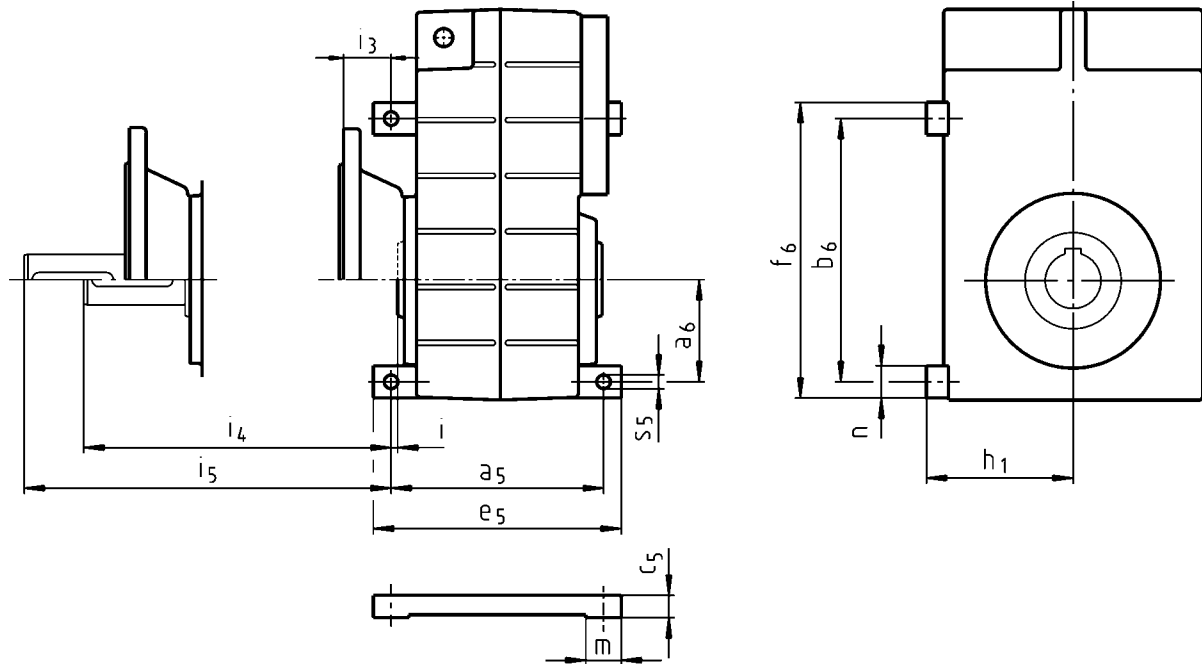
1) Only possible without cover.

- ▶ GFL□□-2S: Terminal box in position 4 on request only.
- GFL□□-2A: Connector/terminal box in position 4 not possible.
- GFL□□-3□: All versions are possible.



# GFL & [mm]

## Foot mounting in position 3

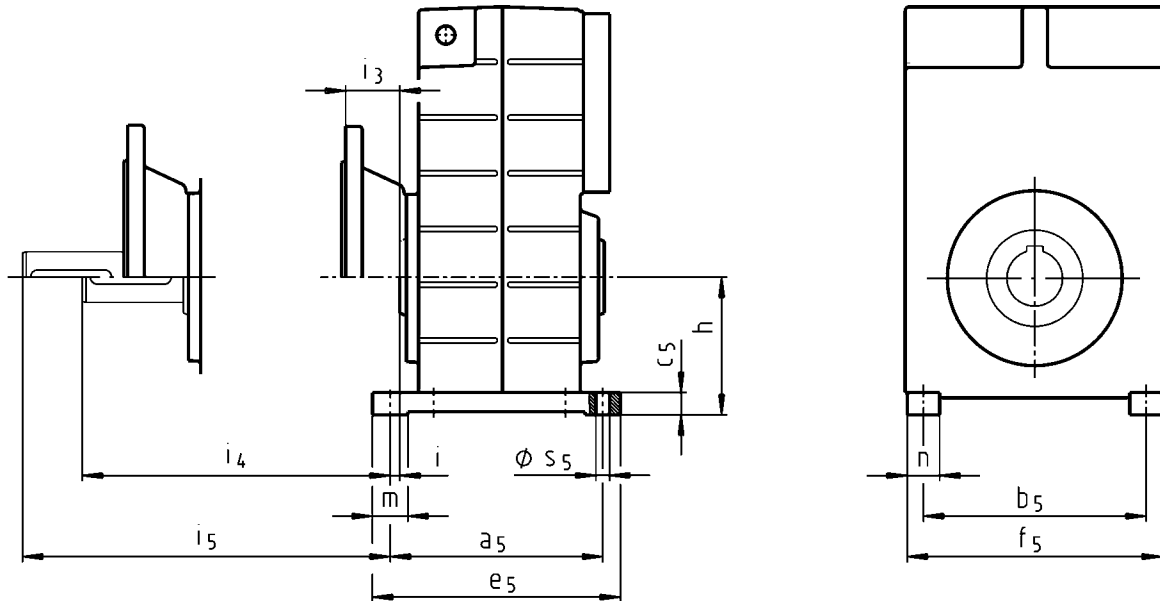


			HAR HBR SAR SBR	HAK SAK	VAR VBR	VAK								
	a <sub>6</sub>	h <sub>1</sub>	i	i <sub>3</sub>	i <sub>4</sub>	i <sub>5</sub>	a <sub>5</sub>	b <sub>6</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>6</sub>	n	m	s <sub>5</sub>
GFL04...	47	90	4.5	28.5	45.5	78.5	130	115	18	152	140	25	22	6.6
GFL05...	65	100	2	31	58	91	160	167	21	185	192		25	9
GFL06...	80	125		3	39	78	119	175	205	27	205	233	28	30
GFL07...	100	155	52		97	152	220	260	31	255	292	32	35	13.5
GFL09...	125	190	117		177	260	335	36	300	375	40	40	17.5	
GFL11...	155	240	57		157	217	315	435	48	365	485	50	50	22
GFL14...	200	295	197		257	375	540	57	430	600	60	55	26	

► Terminal box position 3 is not possible for GFL04...06-2A.

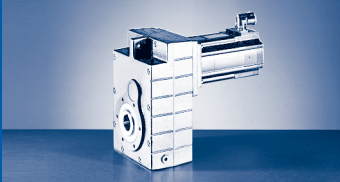


Foot mounting in position 4



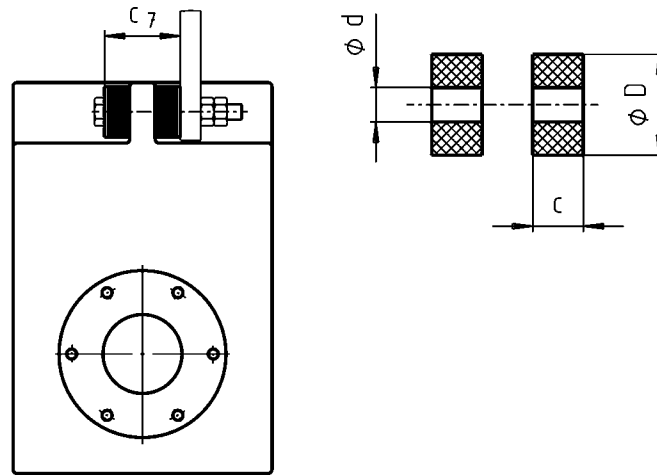
		HAR HBR SAR SBR	HAK SAK	VAR VBR	VAK								
	h	i	i <sub>3</sub>	i <sub>4</sub>	i <sub>5</sub>	a <sub>5</sub>	b <sub>5</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	n	m	s <sub>5</sub>
GFL04...	85	4.5	28.5	45.5	78.5	130	108	18	152	133	25	22	6.6
GFL05...	95	2	31	58	91	160	140	21	185	165		25	9
GFL06...	120		39	78	119	175	175	27	205	203	28	30	11
GFL07...	145	3	52	97	152	220	220	31	255	252	32	35	13.5
GFL09...	180		117	177	260	275	36	300	315	40	40	17.5	
GFL11...	224		57	157	217	315	340	48	365	390	50	50	22
GFL14...	278		197	257	375	425	57	430	485	60	55	26	

► In mounting positions E and F, the oil check bore hole/oil-sight glass are located between the feet in position 4!



# GFL & [mm]

## Rubber buffer for torque plate

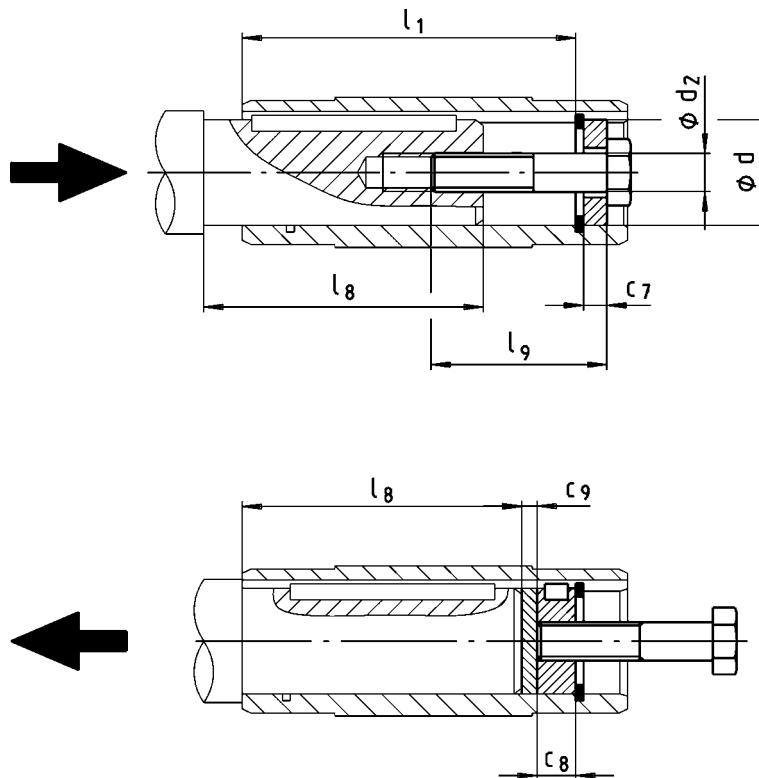


	d	D	c	c <sub>7</sub>
GFL04...	11	30	14.5	43
GFL05...				45
GFL06...	13	40	15	50
GFL07...	17	50	27	79
GFL09...	21	60	28	88
GFL11...	26	72	29	98
GFL14...	33	92	30	110

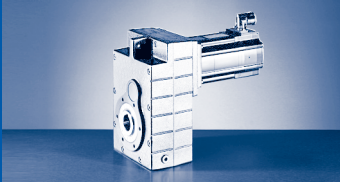




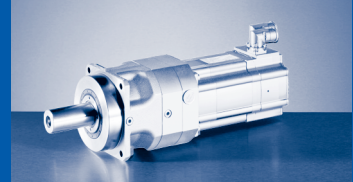
**Mounting set for hollow shaft circlip  
Proposed design for auxiliary tools**



	Hollow shaft		Hollow shaft circlip mounting set (Assembly auxiliaries)			Auxiliary tools Disassembly		Machine shaft
	d	l <sub>1</sub>	d <sub>2</sub>	l <sub>9</sub>	c <sub>7</sub>	c <sub>8</sub>	c <sub>9</sub>	max l <sub>8</sub>
	H7							
GFL04...	25	100	M10	40	5	10	3	85
GFL05...	30				6			
	35	124	M12	50	7	12	4	107
GFL06...	40				8			
	45	140	M16	60	9	16	5	118
GFL07...	50				10			
	55	175	M20	80	11	20	6	148
GFL09...	60				13			
	70	210	M20	80	14	20	6	182
GFL11...	80				16			
GFL14...	100	305	M24	100	20	24	8	221
								270



GFL & [mm]



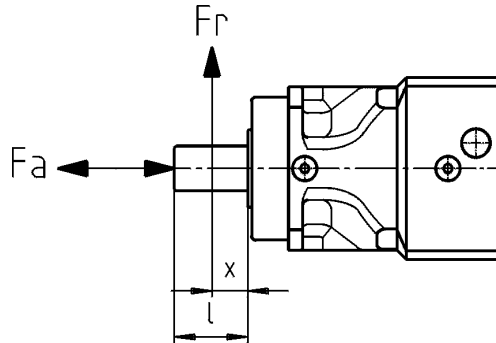
**Permissible radial force**

$$Fr_{zul} = Fr_{Tab} \text{ at } Fa = 0$$

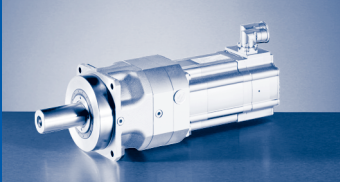
**Permissible axial force**

$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$

At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office



Solid shaft with flange (GCN) Application of force $Fr$ : centre of shaft journal ( $x = l/2$ ) $Fa_{Tab}$ only valid for $Fr = 0$												
	GPA00-1/2		GPA01-1/2		GPA02-1/2		GPA03-1/2		GPA04-1/2		GPA05-1/2	
$n_2$ [r/min]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]	$Fr_{Tab}$ [N]	$Fa_{Tab}$ [N]
1000	1550	2300	2325	3200	3700	5400	4950	9400	7170	13500	11390	22500
900	1600		2400		3825		5125		7400		11750	
800	1675		2475		3950		5300		7670		12180	
700	1725		2600		4125		5525		7980		12680	
600	1825		2700		4325		5775		8360		13280	
500	1925		2850		4550		6100		8830		14020	
400	2050		3050		4875		6525		9450		15000	
300	2250		3350		5300		7100		10300		16350	
200	2525		3775		6000		8025		11630		18000	
$\leq 100$	2600		3800		6000		9000		14000		18000	
$Fr_{max}$												



### Backlash

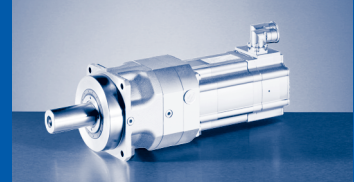
Gearbox type	Standard backlash (measured at 2% of gearbox output torque)
	[arcmin]
GPA00-1	Max. 6
GPA01-1	
GPA02-1	
GPA03-1	
GPA04-1	
GPA05-1	

Gearbox type	Standard backlash (measured at 2% of gearbox output torque)
	[arcmin]
GPA00-2	Max. 8
GPA01-2	
GPA02-2	
GPA03-2	
GPA04-2	
GPA05-2	

### Torsional stiffness

Gearbox type	Torsional stiffness
	[Nm/arcmin]
GPA00-1	3
GPA01-1	8.8
GPA02-1	23
GPA03-1	47
GPA04-1	145
GPA05-1	225

Gearbox type	Torsional stiffness
	[Nm/arcmin]
GPA00-2	2.8
GPA01-2	8
GPA02-2	20
GPA03-2	42
GPA04-2	125
GPA05-2	195



## GPA□□-1S GCN...RSO B0

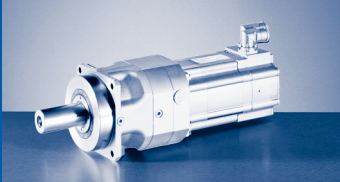
	06C N41	06F N41	06I N41	09D N41	09F N38	09H N41	09L N41	12D N20	12D N41	12H N15	12H N30	12H N35	12L N20	12L N41		
GPA00...	4		5	6	7	8	10									
GPA01...	5	6		8	9	10	11	10		13				16		
GPA02...				11	12	13	14	13		16				19		
GPA03...								21		24				27		
	14D N15	14D N36	14H N15	14H N32	14L N15	14L N32	14P N14	14P N32	19F N14	19F N30	19J N14	19J N30	19P N14	19P N30		
GPA02...	17		22		27		31									
GPA03...	25		30		34		39		37		44				54	
GPA04...										53		60		70		
GPA05...										68		75		85		

## GPA□□-2S GCN...RSO B0

	06C N41	06F N41	06I N41	09D N41	09F N38	09H N41	09L N41	12D N20	12D N41	12H N15	12H N30	12H N35	12L N20	12L N41		
GPA00...	5		6													
GPA01...	6	7		9	10	11	12									
GPA02...				13	14	15	17	15		18				21		
GPA03...								26		30				33		
	14D N15	14D N36	14H N15	14H N32	14L N15	14L N32	14P N14	14P N32	19F N14	19F N30	19J N14	19J N30	19P N14	19P N30		
GPA03...	31		36		40		45									
GPA04...										62		69		79		
GPA05...										90		97		107		

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GPA [kg]

### GPA□□-1A GCN...RSO B0

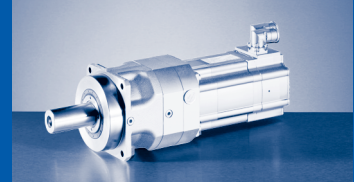
	10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00	
GPA00...	9									
GPA01...	10	14	15							
GPA02...	13	17	19	22		24		29		
GPA03...		26	27	30		32		38		
	17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
GPA01...										
GPA02...	32									
GPA03...	41		60		63		75		79	
GPA04...			75		78		90		94	
GPA05...			90		94		105		109	

### GPA□□-2A GCN...RSO B0

	10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00	
GPA00...	9									
GPA01...	11	15	16							
GPA02...		19	21	24		26		32		
GPA03...										
	17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
GPA02...	34									
GPA03...			65		68					
GPA04...			84		88		99		103	
GPA05...			111		115		126		130	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



### Additional weights MCS servo motors

	06C N41	06F N41	06I N41	09D N41	09F N38	09H N41	09L N41	12D N20	12D N41	12H N15	12H N30	12H N35	12L N20	12L N41
...P1	0.3			0.8				0.9						
...P2				0.5				1.2						
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2				0.3						

	14D N15	14D N36	14H N15	14H N32	14L N15	14L N32	14P N14	14P N32	19F N14	19F N30	19J N14	19J N30	19P N14	19P N30
...P1	1.9						1.5							
...P2	3.1									4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN							0.3							

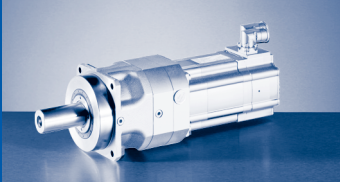
### Additional weights MCA servo motors

	10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6			0.7		

	17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
...P1/P5	2.4		4.8			5.0				
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0			1.1				

Weights in [kg]



# GPA [Nm]

## GPA□□-□S (MCS)

$M_{2GN} \leq 25 \text{ Nm}$

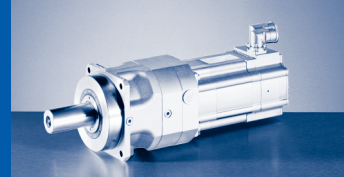
GPA00-1S				06CN41	06FN41	06IN41	09FN38	09HN41
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	3.10	3.80
			$n_1$	4050	4050	4050	3750	4050
			$I_{M230}$	2.6	2.9	3.2	5.0	6.8
			$I_{M400}$	1.3	1.5	1.6	2.5	3.4
			$P_N$	0.25	0.51	0.64	1.20	1.60
			$J_M$	0.17	0.25	0.33	1.53	1.93
3.000	20	0.22	$M_2$		4	4		
			c		5.8	4.6		
			$n_{2 \text{ Eck}}$		1350	1350		
			$n_{2 \text{ th}}$		867	867		
4.000	25	0.16	$M_2$		5	6	12	15
			c		5.4	4.4	2.1	1.7
			$n_{2 \text{ Eck}}$		1013	1013	938	1013
			$n_{2 \text{ th}}$		825	825	825	825
5.000	25	0.13	$M_2$		6	7	15	19
			c		4.3	3.5	1.7	1.4
			$n_{2 \text{ Eck}}$		810	810	750	810
			$n_{2 \text{ th}}$		660	660	660	660
7.000	25	0.12	$M_2$		8	10		
			c		3.1	2.5		
			$n_{2 \text{ Eck}}$		579	579		
			$n_{2 \text{ th}}$		571	571		
10.000	15	0.11	$M_2$	6	12	15		
			c	2.5	1.3	1.0		
			$n_{2 \text{ Eck}}$	405	405	405		
			$n_{2 \text{ th}}$	400	400	400		

GPA00-2S				06CN41	06FN41	06IN41
				...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
16.000	25	0.15	$M_2$	9	18	23
			c	2.8	1.4	1.1
			$n_{2 \text{ Eck}}$	253	253	253
			$n_{2 \text{ th}}$	253	253	253

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





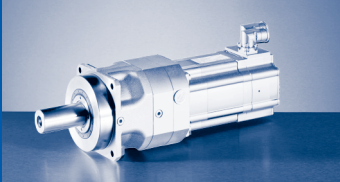
$M_{2GN} \leq 70 \text{ Nm}$

GPA01-1S				06FN41	06IN41	09FN38	09HN41	12HN15	12HN35	12LN20	12LN41
				...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	3.10	3.80	10.00	7.50	13.50	11.00
			$n_1$	4050	4050	3750	4050	1500	3525	1950	4050
			$I_{M230}$	2.9	3.2	5.0	6.8	7.6		11.8	
			$I_{M400}$	1.5	1.6	2.5	3.4	3.8	5.7	5.9	10.2
			$P_N$	0.51	0.64	1.20	1.60	1.60	2.80	2.80	4.70
			$J_M$	0.25	0.33	1.53	1.93	7.42	7.42	10.72	10.72
3.000	56	0.71	$M_2$					29	22	40	32
			c					1.9	2.6	1.4	1.7
			$n_{2 \text{ Eck}}$					500	1175	650	1350
			$n_{2 \text{ th}}$					500	767	650	767
4.000	70	0.52	$M_2$					39	29	53	43
			c					1.8	2.4	1.3	1.6
			$n_{2 \text{ Eck}}$					375	881	488	1013
			$n_{2 \text{ th}}$					375	725	488	725
7.000	70	0.39	$M_2$			21	26	68	51		
			c			3.3	2.7	1.0	1.4		
			$n_{2 \text{ Eck}}$			536	579	214	504		
			$n_{2 \text{ th}}$			443	443	214	443		
10.000	45	0.36	$M_2$	12	15	30	37				
			c	3.9	3.1	1.5	1.2				
			$n_{2 \text{ Eck}}$	405	405	375	405				
			$n_{2 \text{ th}}$	310	310	310	310				

GPA01-2S				06CN41	06FN41	06IN41	09FN38	09HN41
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	3.10	3.80
			$n_1$	4050	4050	4050	3750	4050
			$I_{M230}$	2.6	2.9	3.2	5.0	6.8
			$I_{M400}$	1.3	1.5	1.6	2.5	3.4
			$P_N$	0.25	0.51	0.64	1.20	1.60
			$J_M$	0.17	0.25	0.33	1.53	1.93
16.000	70	0.16	$M_2$		18	23	47	58
			c		3.9	3.1	1.5	1.2
			$n_{2 \text{ Eck}}$		253	253	234	253
			$n_{2 \text{ th}}$		219	219	219	219
20.000	70	0.14	$M_2$		23	29		
			c		3.1	2.5		
			$n_{2 \text{ Eck}}$		203	203		
			$n_{2 \text{ th}}$		175	175		
28.000	70	0.12	$M_2$	16	32	40		
			c	4.4	2.2	1.8		
			$n_{2 \text{ Eck}}$	145	145	145		
			$n_{2 \text{ th}}$	136	136	136		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GPA [Nm]

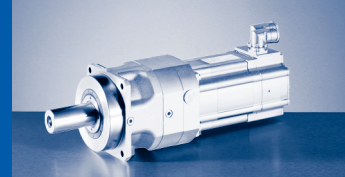
## GPA□□-□S (MCS)

$M_{2GN} \leq 170 \text{ Nm}$

GPA02-1S				09FN38	09HN41	12HN15	12HN35	12LN20	12LN41	14DN15	
				...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	3.10	3.80	10.00	7.50	13.50	11.00	9.20	
			$n_1$	3750	4050	1500	3525	1950	4050	1500	
			$I_{M230}$	5.0	6.8	7.6		11.8			
			$I_{M400}$	2.5	3.4	3.8	5.7	5.9	10.2	4.5	
			$P_N$	1.20	1.60	1.60	2.80	2.80	4.70	1.45	
			$J_M$	1.53	1.93	7.42	7.42	10.72	10.72	8.22	
3.000	135	3.10	$M_2$							27	
			c							5.0	
			$n_2$ Eck								500
			$n_2$ th								500
4.000	0	2.25	$M_2$			38					
			c			4.3					
			$n_2$ Eck			375					
			$n_2$ th			0					
4.000	170	2.25	$M_2$					53	43	36	
			c					3.2	4.0	4.7	
			$n_2$ Eck					488	1013	375	
			$n_2$ th					488	625	375	
5.000	170	1.52	$M_2$			49	37	66	54	45	
			c			3.5	4.6	2.6	3.2	3.8	
			$n_2$ Eck			300	705	390	810	300	
			$n_2$ th			300	500	390	500	300	
7.000	170	1.69	$M_2$			68	51	92	75	63	
			c			2.5	3.3	1.9	2.3	2.7	
			$n_2$ Eck			214	504	279	579	214	
			$n_2$ th			214	400	279	400	214	
10.000	110	1.18	$M_2$	30	37						
			c	3.6	3.0						
			$n_2$ Eck	375	405						
			$n_2$ th	280	280						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

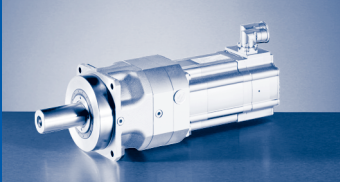


$M_{2GN} \leq 170 \text{ Nm}$

14DN36	14HN15	14HN32	14LN15	14LN32	14PN14	14PN32	GPA02-1S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
							$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
	47	41	67	50	88	61	c	3.10	135	3.000
	2.9	3.3	2.0	2.7	1.5	2.2	$n_{2 \text{ Eck}}$			
	500	1075	500	1075	450	1075	$n_{2 \text{ th}}$			
	500	667	500	667	450	667	$M_2$			
							c	2.25	0	4.000
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
	62	55	90	67	117	82	$M_2$			
	2.7	3.1	1.9	2.5	1.5	2.1	c	2.25	170	4.000
	375	806	375	806	338	806	$n_{2 \text{ Eck}}$			
	375	625	375	625	338	625	$n_{2 \text{ th}}$			
37	78	68	112	84	146	102	$M_2$			
4.6	2.2	2.5	1.5	2.0	1.2	1.7	c	1.52	170	5.000
720	300	645	300	645	270	645	$n_{2 \text{ Eck}}$			
500	300	500	300	500	270	500	$n_{2 \text{ th}}$			
51	109	96	157	117		143	$M_2$			
3.3	1.6	1.8	1.1	1.5		1.2	c	1.69	170	7.000
514	214	461	214	461		461	$n_{2 \text{ Eck}}$			
400	214	400	214	400		400	$n_{2 \text{ th}}$			
							$M_2$			
							c	1.18	110	10.000
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GPA [Nm]

## GPA□□-□S (MCS)

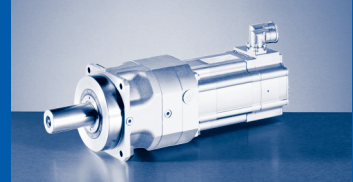
$M_{2GN} \leq 170 \text{ Nm}$

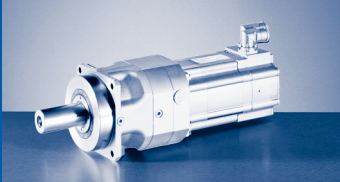
GPA02-2S				09FN38	09HN41	12HN15	12HN35	12LN41
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	3.10	3.80	10.00	7.50	11.00
			$n_1$	3750	4050	1500	3525	4050
			$I_{M230}$	5.0	6.8	7.6		
			$I_{M400}$	2.5	3.4	3.8	5.7	10.2
			$P_N$	1.20	1.60	1.60	2.80	4.70
			$J_M$	1.53	1.93	7.42	7.42	10.72
16.000	170	0.58	$M_2$	47	58	152	114	167
			c	3.6	2.9	1.1	1.5	1.0
			$n_{2 \text{ Eck}}$	234	253	94	220	253
			$n_{2 \text{ th}}$	194	194	94	194	194
20.000	170	0.48	$M_2$	59	72			
			c	2.9	2.4			
			$n_{2 \text{ Eck}}$	188	203			
			$n_{2 \text{ th}}$	155	155			
28.000	170	0.41	$M_2$	83	101			
			c	2.1	1.7			
			$n_{2 \text{ Eck}}$	134	145			
			$n_{2 \text{ th}}$	125	125			
35.000	170	0.40	$M_2$	103	126			
			c	1.7	1.4			
			$n_{2 \text{ Eck}}$	107	116			
			$n_{2 \text{ th}}$	100	100			

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

**GPA [Nm]**  
GPA□□-□S (MCS)





# GPA [Nm]

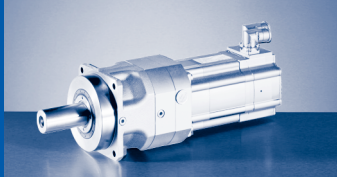
## GPA□□-□S (MCS)

$M_{2GN} \leq 360 \text{ Nm}$

GPA03-1S				12HN15	12HN35	12LN20	12LN41	14DN15	14DN36	14HN15	14HN32	14LN15
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	10.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00
			$n_1$	1500	3525	1950	4050	1500	3600	1500	3225	1500
			$I_{M230}$	7.6		11.8						
			$I_{M400}$	3.8	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7
			$P_N$	1.60	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60
			$J_M$	7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44
3.000	290	9.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
4.000	360	6.89	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
5.000	360	5.97	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
7.000	360	3.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							109 3.3 214 214	96 3.8 461 371	157 2.3 214 214
10.000	220	3.53	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	98 2.3 150 150	73 3.0 353 260	132 1.7 195 195	107 2.1 405 260	90 2.5 150 150	73 3.0 360 260	156 1.4 150 150	137 1.6 323 260	224 1.0 150 150

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

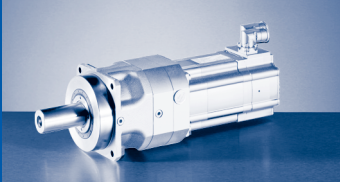


$M_{2GN} \leq 360 \text{ Nm}$

14LN32	14PN14	14PN32	19FN14	19FN30	19JN14	19JN30	19PN14	19PN30	GPA03-1S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
									$I_{M400}$			
15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
			79	61	117	85	149	94	c	9.31	290	3.000
			3.7	4.7	2.5	3.4	2.0	3.1	$n_{2 \text{ Eck}}$			
			475	1000	475	1000	450	1000	$n_{2 \text{ th}}$			
			475	567	475	567	450	567				
			105	82	156	113	199	125	$M_2$	6.89	360	4.000
			3.4	4.4	2.3	3.2	1.8	2.9	c			
			356	750	356	750	338	750	$n_{2 \text{ Eck}}$			
			356	525	356	525	338	525	$n_{2 \text{ th}}$			
			132	102	195	141	249	156	$M_2$	5.97	360	5.000
			2.7	3.5	1.9	2.6	1.5	2.3	c			
			285	600	285	600	270	600	$n_{2 \text{ Eck}}$			
			285	420	285	420	270	420	$n_{2 \text{ th}}$			
117	205	143	184	143	273	198	348	218	$M_2$	3.90	360	7.000
3.1	1.8	2.5	2.0	2.5	1.3	1.8	1.0	1.7	c			
461	193	461	204	429	204	429	193	429	$n_{2 \text{ Eck}}$			
371	193	371	204	371	204	371	193	371	$n_{2 \text{ th}}$			
168		205							$M_2$	3.53	220	10.000
1.3		1.1							c			
323		323							$n_{2 \text{ Eck}}$			
260		260							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GPA [Nm]

## GPA□□-□S (MCS)

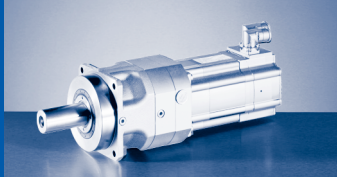
$M_{2GN} \leq 360 \text{ Nm}$

GPA03-2S				12HN15	12HN35	12LN20	12LN41	14DN15	14DN36	14HN15	14HN32	14LN15	14LN32	14PN32	
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	10.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	
			$n_1$	1500	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	3225
			$I_{M230}$	7.6		11.8									
			$I_{M400}$	3.8	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	
			$P_N$	1.60	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	
			$J_M$	7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	
16.000	360	2.37	$M_2$	152	114	205	167	140	114	243	213	350	261	319	
			c	2.4	3.2	1.8	2.2	2.6	3.2	1.5	1.7	1.0	1.4	1.1	
			$n_{2 \text{ Eck}}$	94	220	122	253	94	225	94	202	94	202	202	202
			$n_{2 \text{ th}}$	94	181	122	181	94	181	94	181	94	181	181	181
20.000	360	2.02	$M_2$	190	143	257	209	175	143	304	266		327		
			c	1.9	2.5	1.4	1.7	2.1	2.5	1.2	1.4		1.1		
			$n_{2 \text{ Eck}}$	75	176	98	203	75	180	75	161		161		
			$n_{2 \text{ th}}$	75	145	98	145	75	145	75	145		145		
28.000	360	1.74	$M_2$	266	200	359	293								
			c	1.4	1.8	1.0	1.2								
			$n_{2 \text{ Eck}}$	54	126	70	145								
			$n_{2 \text{ th}}$	54	114	70	114								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]





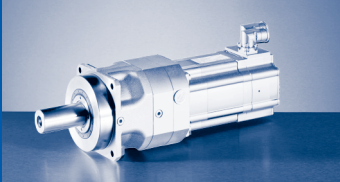
$M_{2GN} \leq 620 \text{ Nm}$

GPA04-1S				19FN14	19FN30	19JN14	19JN30	19PN14	19PN30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
5.000	550	19.46	$M_2$	132		195	141	249	156
			c	4.2		2.8	3.9	2.2	3.5
			$n_{2 \text{ Eck}}$	285		285	600	270	600
			$n_{2 \text{ th}}$	285		285	340	270	340
7.000	550	25.90	$M_2$	184	143	273	198	348	218
			c	3.0	3.8	2.0	2.8	1.6	2.5
			$n_{2 \text{ Eck}}$	204	429	204	429	193	429
			$n_{2 \text{ th}}$	204	343	204	343	193	343
10.000	340	24.89	$M_2$	263	205				312
			c	1.3	1.7				1.1
			$n_{2 \text{ Eck}}$	143	300				300
			$n_{2 \text{ th}}$	143	240				240
10.000	360	24.89	$M_2$				283		
			c				1.3		
			$n_{2 \text{ Eck}}$				300		
			$n_{2 \text{ th}}$				240		

GPA04-2S				19FN14	19FN30	19JN14	19JN30	19PN30
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	32.00
			$n_1$	1425	3000	1425	3000	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	19.0
			$P_N$	4.00	6.60	6.00	9.10	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.04
16.000	550	7.33	$M_2$			550		
			c			1.0		
			$n_{2 \text{ Eck}}$			89		
			$n_{2 \text{ th}}$			89		
16.000	620	7.33	$M_2$	410	319		441	486
			c	1.5	1.9		1.4	1.3
			$n_{2 \text{ Eck}}$	89	188		188	188
			$n_{2 \text{ th}}$	89	169		169	169

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GPA [Nm]

## GPA□□-□S (MCS)

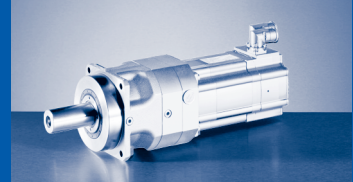
$M_{2GN} \leq 1000 \text{ Nm}$

GPA05-1S				19FN14	19FN30	19JN14	19JN30	19PN14	19PN30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
7.000	1000	21.36	$M_2$			273		348	
			c			3.7		2.9	
			$n_{2 \text{ Eck}}$			204		193	
			$n_{2 \text{ th}}$			204		193	
			$M_2$	263	205	390	283	497	312
10.000	620	18.62	c	2.4	3.0	1.6	2.2	1.3	2.0
			$n_{2 \text{ Eck}}$	143	300	143	300	135	300
			$n_{2 \text{ th}}$	143	220	143	220	135	220

GPA05-2S				19FN14	19FN30	19JN14	19JN30	19PN14	19PN30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
16.000	1000	23.39	$M_2$	410	319	608	441	775	486
			c	2.4	3.1	1.6	2.3	1.3	2.1
			$n_{2 \text{ Eck}}$	89	188	89	188	84	188
			$n_{2 \text{ th}}$	89	156	89	156	84	156
			$M_2$	513	399	760	551	969	608
20.000	1000	20.08	c	2.0	2.5	1.3	1.8	1.0	1.6
			$n_{2 \text{ Eck}}$	71	150	71	150	68	150
			$n_{2 \text{ th}}$	71	125	71	125	68	125
			$M_2$	718	559	1000	771		851
			c	1.4	1.8	1.0	1.3		1.2
28.000	1000	26.22	$n_{2 \text{ Eck}}$	51	107	51	107		107
			$n_{2 \text{ th}}$	51	89	51	89		89

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

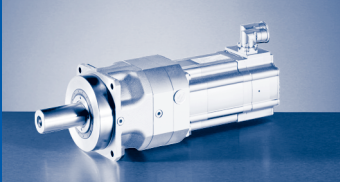


$M_{2GN} \leq 25 \text{ Nm}$

GPA00-1A				10IN40
				...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00
			$n_1$	3950
			$I_{M400}$	2.4
			$P_N$	0.80
			$J_M$	2.44
4.000	25	0.16	$M_2$	8
			c	3.2
			$n_{2 \text{ Eck}}$	988
			$n_{2 \text{ th}}$	825
			$M_2$	10
5.000	25	0.13	c	2.6
			$n_{2 \text{ Eck}}$	790
			$n_{2 \text{ th}}$	660

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GPA [Nm]

## GPA□□-□A (MCA)

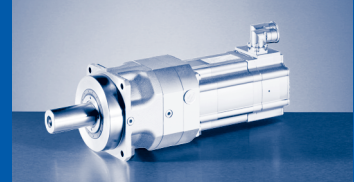
$M_{2GN} \leq 72 \text{ Nm}$

GPA01-1A				10IN40	13IN34	13IN41
				...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
3.000	56	0.71	$M_2$		18	11
			c		3.0	4.8
			$n_{2 \text{ Eck}}$		1137	1350
			$n_{2 \text{ th}}$		767	767
4.000	70	0.52	$M_2$		24	15
			c		2.8	4.5
			$n_{2 \text{ Eck}}$		853	1013
			$n_{2 \text{ th}}$		725	725
7.000	70	0.39	$M_2$		43	27
			c		1.6	2.6
			$n_{2 \text{ Eck}}$		487	579
			$n_{2 \text{ th}}$		443	443
7.000	72	0.39	$M_2$	13		
			c	5.3		
			$n_{2 \text{ Eck}}$	564		
			$n_{2 \text{ th}}$	443		
10.000	46	0.36	$M_2$	19		
			c	2.4		
			$n_{2 \text{ Eck}}$	395		
			$n_{2 \text{ th}}$	310		

GPA01-2A				10IN40
				...S00
i	$M_{2GN}$	$J_G$	$M_1$	
			$n_1$	3950
			$I_{M400}$	2.4
			$P_N$	0.80
			$J_M$	2.44
16.000	70	0.16	$M_2$	30
			c	2.3
			$n_{2 \text{ Eck}}$	247
			$n_{2 \text{ th}}$	219

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



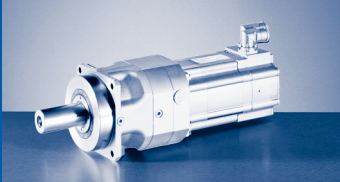
$M_{2GN} \leq 170 \text{ Nm}$

GPA02-1A				10IN40	13IN34	14LN16	14LN20	14LN35	14LN41	17NN17	17NN23	17NN35	17NN41
				...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
3.000	135	3.10	$M_2$			34		31		62	31	55	27
			c			3.8		4.3		2.1	4.3	2.4	4.8
			$n_{2 \text{ Eck}}$			545		1152		560	767	1160	1370
			$n_{2 \text{ th}}$			545		667		560	667	667	667
4.000	170	2.25	$M_2$			46		41		83	41	74	36
			c			3.6		4.0		2.0	4.0	2.3	4.6
			$n_{2 \text{ Eck}}$			409		864		420	575	870	1028
			$n_{2 \text{ th}}$			409		625		420	575	625	625
5.000	170	1.52	$M_2$		29	58	31	52		105	52	92	45
			c		5.5	2.9	5.2	3.2	1.6	3.2	1.8	3.7	
			$n_{2 \text{ Eck}}$		682	327	400	691	336	460	696	822	
			$n_{2 \text{ th}}$		500	327	400	500	336	460	500	500	
7.000	170	1.69	$M_2$		42	81	45	73	36	147	73	130	64
			c		3.9	2.1	3.7	2.3	4.6	1.2	2.3	1.3	2.6
			$n_{2 \text{ Eck}}$		487	234	286	494	586	240	329	497	587
			$n_{2 \text{ th}}$		400	234	286	400	400	240	329	400	400
10.000	110	1.18	$M_2$	19									
			c	5.6									
			$n_{2 \text{ Eck}}$	395									
			$n_{2 \text{ th}}$	280									

GPA02-2A				10IN40	13IN34	13IN41
				...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
16.000	170	0.58	$M_2$	29	96	60
			c	5.5	1.8	2.8
			$n_{2 \text{ Eck}}$	247	213	253
			$n_{2 \text{ th}}$	194	194	194
20.000	170	0.48	$M_2$	37		
			c	4.4		
			$n_{2 \text{ Eck}}$	198		
			$n_{2 \text{ th}}$	155		
28.000	170	0.41	$M_2$	53		
			c	3.2		
			$n_{2 \text{ Eck}}$	141		
			$n_{2 \text{ th}}$	125		
35.000	170	0.40	$M_2$	66		
			c	2.5		
			$n_{2 \text{ Eck}}$	113		
			$n_{2 \text{ th}}$	100		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GPA [Nm]

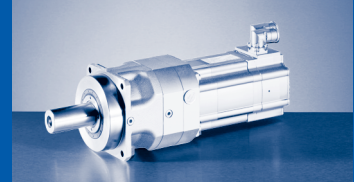
## GPA□□-□A (MCA)

$M_{2GN} \leq 360 \text{ Nm}$

GPA03-1A				13IN34	13IN41	14LN16	14LN20	14LN35	14LN41	17NN17	17NN23	17NN35
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$n_1$	3410	4050	1635	2000	3455	4100	1680	2300	3480
			$I_{M400}$	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$P_N$	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$J_M$	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04
3.000	290	9.31	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
4.000	360	6.89	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
5.000	360	5.97	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
7.000	360	3.90	$M_2$			79		71		145	71	128
			c			4.4		4.9		2.4	4.9	2.8
			$n_{2 \text{ Eck}}$			234		494		240	329	497
			$n_{2 \text{ th}}$			234		371		240	329	371
10.000	220	3.53	$M_2$	60	37	117	64	105	51	211	105	186
			c	3.6	5.6	1.9	3.4	2.1	4.2	1.0	2.1	1.2
			$n_{2 \text{ Eck}}$	341	405	164	200	346	410	168	230	348
			$n_{2 \text{ th}}$	260	260	164	200	260	260	168	230	260

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

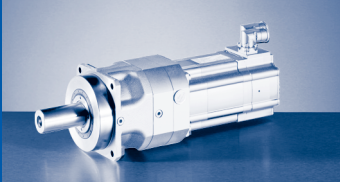


$M_{2GN} \leq 360 \text{ Nm}$

17NN41	195N17	195N23	195N35	195N42	21XN17	21XN25	21XN35	21XN42	GPA03-1A			
...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
	105		104		179	70	160	48	$c$	9.31	290	3.000
	2.7		2.7		1.6	4.0	1.8	5.8	$n_{2 \text{ Eck}}$			
	567		1170		570	830	1173	1387	$n_{2 \text{ th}}$			
	567		567		567	567	567	567				
	140	61	139						$M_2$	6.89	360	4.000
	2.5	5.6	2.6					$c$				
	425	585	878					$n_{2 \text{ Eck}}$				
	425	525	525					$n_{2 \text{ th}}$				
	176	77	175		300	118	269	80	$M_2$	5.97	360	5.000
	2.0	4.5	2.0		1.2	3.0	1.3	4.3	$c$			
	340	468	702		342	498	704	832	$n_{2 \text{ Eck}}$			
	340	420	420		342	420	420	420	$n_{2 \text{ th}}$			
62	248	109	246	79					$M_2$	3.90	360	7.000
5.5	1.5	3.2	1.5	4.4					$c$			
587	243	334	501	593					$n_{2 \text{ Eck}}$			
371	243	334	371	371					$n_{2 \text{ th}}$			
92									$M_2$	3.53	220	10.000
2.4									$c$			
411									$n_{2 \text{ Eck}}$			
260									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GPA [Nm]

## GPA□□-□A (MCA)

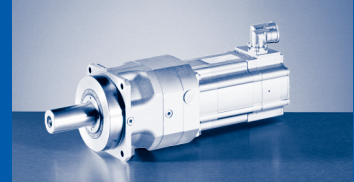
$M_{2GN} \leq 360 \text{ Nm}$

GPA03-2A				13IN34	13IN41	14LN16	14LN20	14LN35	14LN41	17NN17	17NN23	17NN35	17NN41	
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$											
			$n_1$	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
16.000	360	2.37	$M_2$	94	58	183	100	164	80	330	164	291	144	
			c	3.7	5.9	2.0	3.5	2.2	4.3	1.1	2.2	1.2	2.5	
			$n_{2 \text{ Eck}}$	213	253	102	125	216	256	105	144	218	257	
			$n_{2 \text{ th}}$	181	181	102	125	181	181	105	144	181	181	
20.000	360	2.02	$M_2$	119	74	229	126	206	101		206		181	
			c	3.0	4.7	1.6	2.8	1.7	3.5		1.7		2.0	
			$n_{2 \text{ Eck}}$	171	203	82	100	173	205		115		206	
			$n_{2 \text{ th}}$	145	145	82	100	145	145		115		145	
28.000	360	1.74	$M_2$	167	105									
			c	2.1	3.4									
			$n_{2 \text{ Eck}}$	122	145									
			$n_{2 \text{ th}}$	114	114									

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]





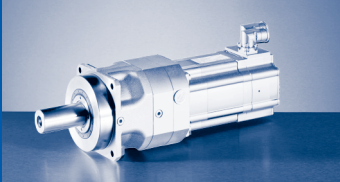
$M_{2GN} \leq 550 \text{ Nm}$

GPA04-1A				19SN17	19SN23	19SN35	19SN42	21XN17	21XN25	21XN35	21XN42
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00
			$n_1$	1700	2340	3510	4150	1710	2490	3520	4160
			$I_{M400}$	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8
			$P_N$	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40
			$J_M$	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04
3.000	420	29.42	$M_2$					178	69	159	
			c					2.3	5.8	2.6	
			$n_{2 \text{ Eck}}$					570	830	1173	
			$n_{2 \text{ th}}$					467	467	467	
4.000	550	22.06	$M_2$					238	92	212	
			c					2.3	5.7	2.6	
			$n_{2 \text{ Eck}}$					428	623	880	
			$n_{2 \text{ th}}$					425	425	425	
5.000	550	19.46	$M_2$	174		173					
			c	3.1		3.1					
			$n_{2 \text{ Eck}}$	340		702					
			$n_{2 \text{ th}}$	340		340					
7.000	550	25.90	$M_2$	246	107	244		420	165	376	112
			c	2.2	4.9	2.2		1.3	3.3	1.5	4.7
			$n_{2 \text{ Eck}}$	243	334	501		244	356	503	594
			$n_{2 \text{ th}}$	243	334	343		244	343	343	343
10.000	340	24.89	$M_2$		158		115				
			c		2.1		2.9				
			$n_{2 \text{ Eck}}$		234		415				
			$n_{2 \text{ th}}$		234		240				

GPA04-2A				19SN23	19SN42
				...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	16.30	12.00
			$n_1$	2340	4150
			$I_{M400}$	8.2	14.0
			$P_N$	4.00	5.20
			$J_M$	72.12	72.12
16.000	550	7.33	$M_2$	247	181
			c	2.2	3.0
			$n_{2 \text{ Eck}}$	146	259
			$n_{2 \text{ th}}$	146	169

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GPA [Nm]

## GPA□□-□A (MCA)

$M_{2GN} \leq 1000 \text{ Nm}$

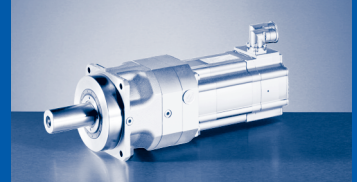
GPA05-1A				21XN17	21XN25	21XN35	21XN42
				...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	61.40	24.60	55.00	17.00
			$n_1$	1710	2490	3520	4160
			$I_{M400}$	22.5	13.5	42.5	19.8
			$P_N$	11.00	6.40	20.30	7.40
			$J_M$	180.04	180.04	180.04	180.04
10.000	620	18.62	$M_2$	602	237	538	162
			c	1.0	2.6	1.2	3.7
			$n_{2 \text{ Eck}}$	171	249	352	416
			$n_{2 \text{ th}}$	171	220	220	220

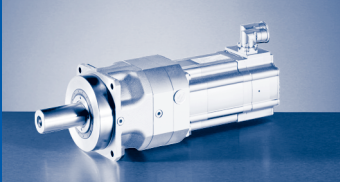
GPA05-2A				21XN17	21XN25	21XN35	21XN42
				...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	61.40	24.60	55.00	17.00
			$n_1$	1710	2490	3520	4160
			$I_{M400}$	22.5	13.5	42.5	19.8
			$P_N$	11.00	6.40	20.30	7.40
			$J_M$	180.04	180.04	180.04	180.04
16.000	1000	23.39	$M_2$	943	372	844	254
			c	1.1	2.7	1.2	3.8
			$n_{2 \text{ Eck}}$	107	156	220	260
			$n_{2 \text{ th}}$	107	156	156	156

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

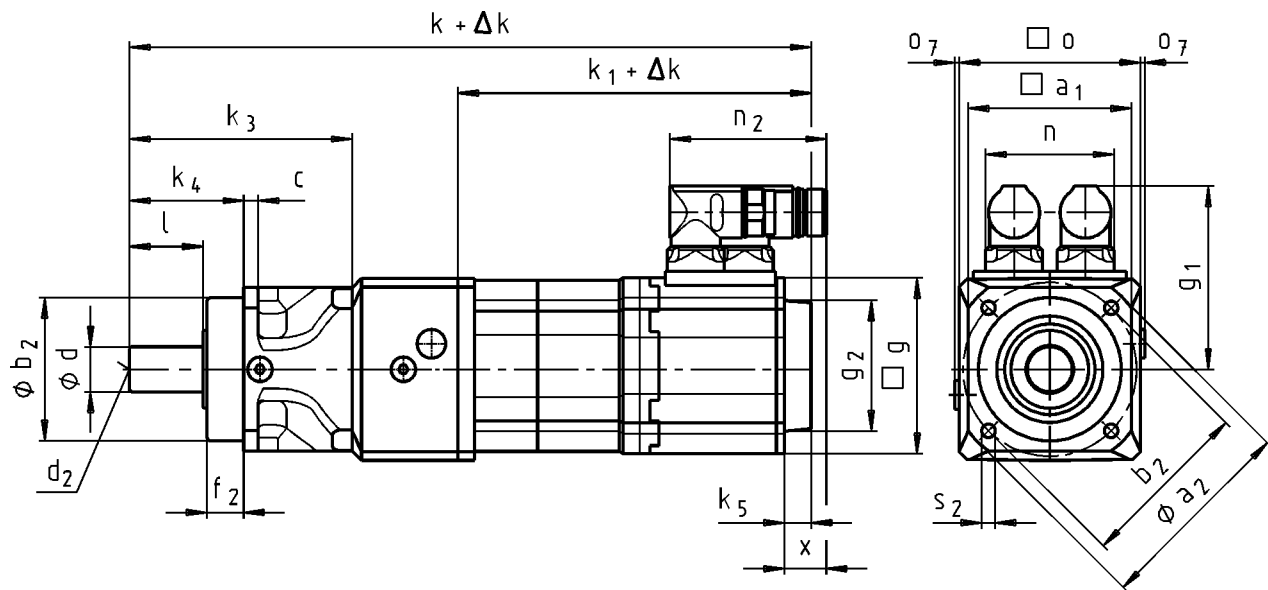
GPA [Nm]  
GPA□□-□A (MCA)





# GPA [mm]

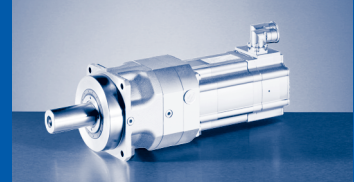
## GPA□□-1S (MCS)



### GPA□□-1S GCN ... RSO

		06C N41	06F N41	06I N41	09D N41	09F N38	09H N41	09L N41	12D N20	12D N41	12H N15	12H N30	12H N35	12L N20	12L N41	
GPA00...	o	65			89											
	k	265	295	325	316	336	356	396								
GPA01...	o	80			89							116				
	k		323	353	344	364	384	424	349		389		429			
GPA02...	o				102							116				
	k				392	412	432	472	397		437		477			
GPA03...	o											142				
	k								455		495		535			
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19			20											
	$k_1$	132	162	192	183	203	223	263	188		228		268			
	g	62			89				116							
...RSO	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
	n	58							63							
	x	21							18							

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20



GPA□□-1S GCN ... RSO

		14D N15	14D N36	14H N15	14H N32	14L N15	14L N32	14P N14	14P N32	19F N14	19F N30	19J N14	19J N30	19P N14	19P N30	
GPA02...	o	142														
	k	410		450			490		530							
GPA03...	o	142														
	k	468		508			548		588	487		527		587		
GPA04...	o	192														
	k							528		568		628				
GPA05...	o	212														
	k							579		619		679				
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k							28		34		44				
	k <sub>1</sub>	201		241			281		321	220		260		320		
	g	143														
...RSO	k <sub>5</sub>							24				15				
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147	116	147	141	172	141	172	141	172		
	n <sub>2</sub>	78				94	78	94	78	94	78	94	78	94		
	n	63				80	63	80	63	80	63	80	63	80		
	x	16				38	16	38	16	36	16	36	16	36		

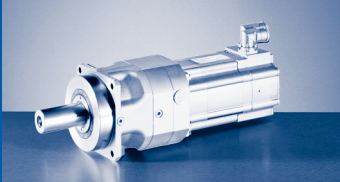
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GPA□□-1S GCN

	k <sub>3</sub>			k <sub>4</sub>			o <sub>7</sub>			
GPA00...	94			48			2			
GPA01...	109			56						
GPA02...	146			88						
GPA03...	189			112			3			
GPA04...	213									
GPA05...	255			143						

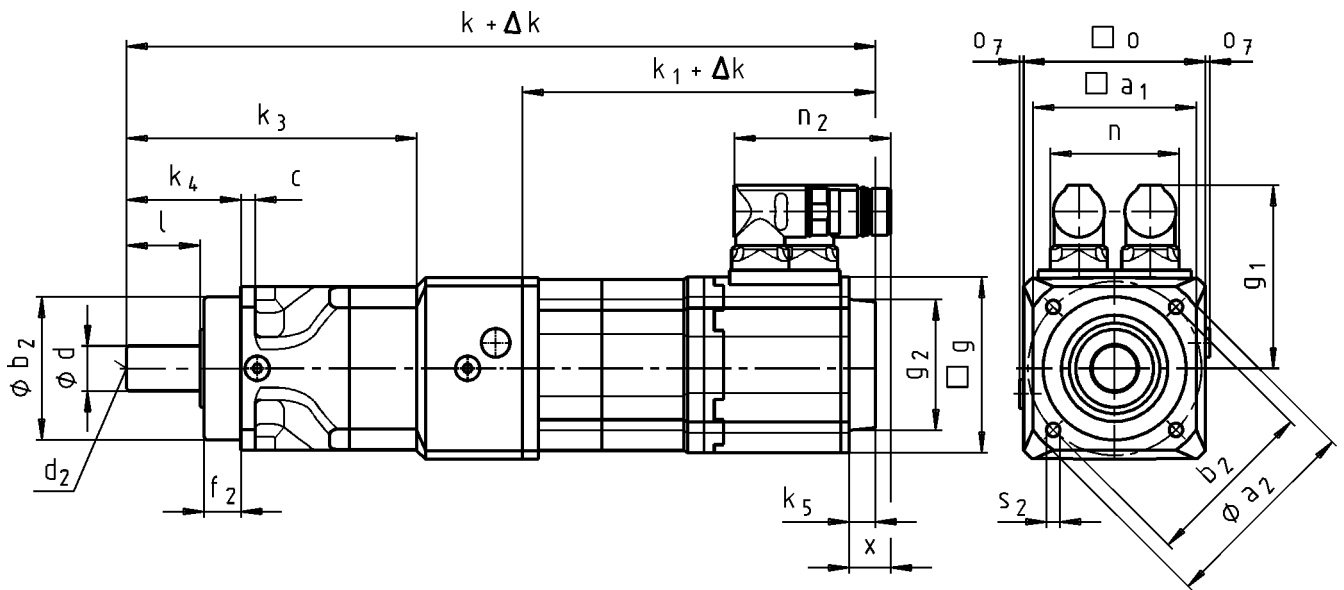
  

	d	l	d <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	s <sub>2</sub>
	k <sub>6</sub>					g <sub>6</sub>				4x90°
GPA00...	16	28	M5	65	80	60	6	68	18	5.5
GPA01...	22	36	M8	80	100	70	7	85		6.6
GPA02...	32	58	M12	102	140	90	10	120	28	9
GPA03...	40	82	M16	142	188	130	12	165		11
GPA04...	55		M20	182	250	160	15	215	27	13
GPA05...	75	105		212	290	180	17	250	35	17



# GPA [mm]

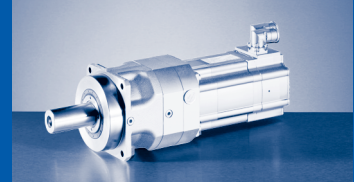
## GPA□□-2S (MCS)



### GPA□□-2S GCN ... RSO

		06C N41	06F N41	06I N41	09D N41	09F N38	09H N41	09L N41	12D N20	12D N41	12H N15	12H N30	12H N35	12L N20	12L N41	
GPA00...	o	65														
	k	296	326	356												
GPA01...	o	80			89											
	k	313	343	373	364	384	404	444								
GPA02...	o					102				116						
	k					419	439	459	499	424	464	504				
GPA03...	o									142						
	k									488	528	568				
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	19			20											
...RSO	k <sub>1</sub>	132	162	192	183	203	223	263	188	228	268					
	g	62			89				116							
...RSO	k <sub>5</sub>	0			13				14							
	g <sub>2</sub>	□ 62			Ø 67				Ø 72							
...RSO	g <sub>1</sub>	76			90				105							
	n <sub>2</sub>	64			78											
...RSO	n	58			63											
	x	21							18							

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20



### GPA□□-2S GCN ... RSO

		14D N15	14D N36	14H N15	14H N32	14L N15	14L N32	14P N32	19F N14	19F N30	19J N14	19J N30	19P N14	19P N30	
GPA03...	o	142													
	k	501		541		581	621								
GPA04...	o									192					
	k									558		598		658	
GPA05...	o									212					
	k									648		688		748	
...RSO B0 <sup>1)</sup>	Δ k	0													
...RSO P□ <sup>1)</sup>	Δ k	28						34			44				
	k <sub>1</sub>	201		241		281	321	220		260		320			
	g	143						192							
...RSO	k <sub>5</sub>	24						15							
	g <sub>2</sub>	Ø 78													
	g <sub>1</sub>	116			147		141	172	141	172	141	172	141	172	
	n <sub>2</sub>	78			94		78	94	78	94	78	94	78	94	
	n	63			80		63	80	63	80	63	80	63	80	
	x	16			38		16	36	16	36	16	36	16	36	

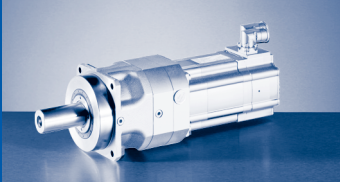
1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GPA□□-2S GCN

	k <sub>3</sub>			k <sub>4</sub>			o <sub>7</sub>			
GPA00...	125			48			2			
GPA01...	142			56						
GPA02...	184			88						
GPA03...	237			112			3			
GPA04...	261			143						
GPA05...	334									

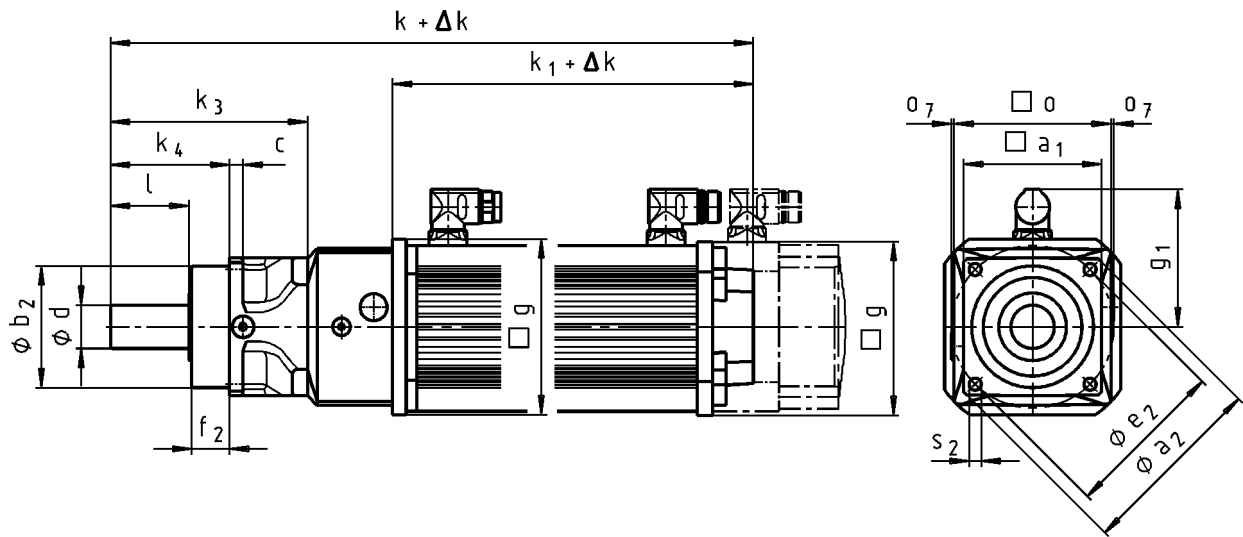
  

	d	l	d <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	s <sub>2</sub>
	k6					g6				4x90°
GPA00...	16	28	M5	65	80	60	6	68	18	5.5
GPA01...	22	36	M8	80	100	70	7	85		6.6
GPA02...	32	58	M12	102	140	90	10	120	28	9
GPA03...	40	82	M16	142	188	130	12	165		11
GPA04...	55		M20	182	250	160	15	215	27	13
GPA05...	75	105		212	290	180	17	250	35	17



# GPA [mm]

## GPA□□-1A (MCA)

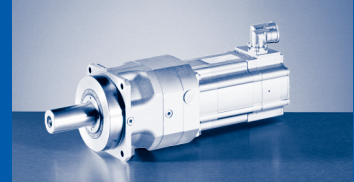


### GPA□□-1A GCN ... RSO

		10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00
GPA00...	o	89								
	k	395								
GPA01...	o	89	116							
	k	423	432	500						
GPA02...	o	102	116				142			
	k	471	479	547	510		572		548	
GPA03...	o					142				
	k		537	605	568		630		606	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	262	271	339	302		364		340	
	g	102	131			142			165	
	g <sub>1</sub>	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





### GPA□□-1A GCN ... RSO

		17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
GPA02...	o	142									
	k	637									
GPA03...	o	142		192				214			
	k	695		668		765		756		852	
GPA04...	o					192					
	k			709		806		777		873	
GPA05...	o					212					
	k			760		857		829		925	
...RSO B0 <sup>1)</sup>	Δ k					0					
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	429		401		498		470		566	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

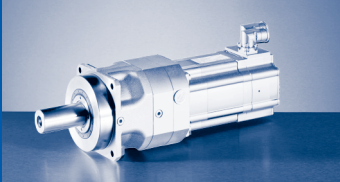
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GPA□□-1A GCN

	k <sub>3</sub>			k <sub>4</sub>			o <sub>7</sub>			
GPA00...	94			48			2			
GPA01...	109			56						
GPA02...	146			88						
GPA03...	189			112			3			
GPA04...	213									
GPA05...	255			143						

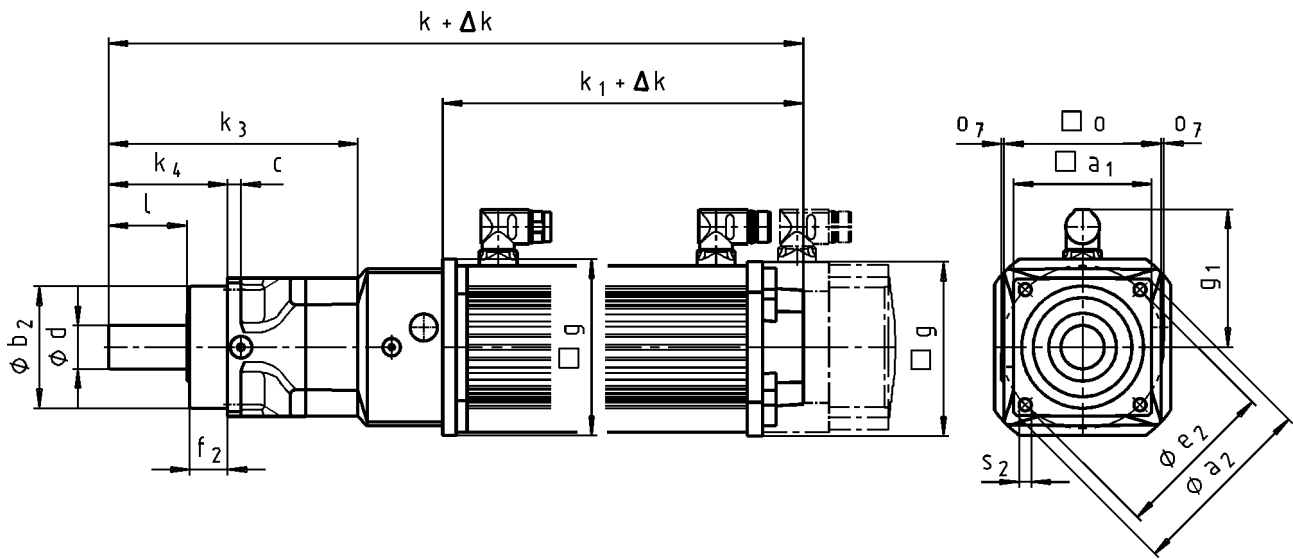
  

	d	l	d <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	s <sub>2</sub>
	k6					g6				4x90°
GPA00...	16	28	M5	65	80	60	6	68	18	5.5
GPA01...	22	36	M8	80	100	70	7	85		6.6
GPA02...	32	58	M12	102	140	90	10	120	28	9
GPA03...	40	82	M16	142	188	130	12	165		11
GPA04...	55		M20	182	250	160	15	215	27	13
GPA05...	75	105	M20	212	290	180	17	250	35	17



# GPA [mm]

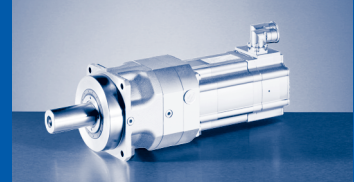
## GPA□□-2A (MCA)



### GPA□□-2A GCN ... RSO

		10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00
GPA01...	o	89								
	k	443								
GPA02...	o	102	116							
	k	498	507	575						
GPA03...	o					142				
	k		571	639	602	664		640		
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35		33				35	
	$k_1$	262	271	339	302		364		340	
	g	102	131		142				165	
	$g_1$	90	102		109				118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GPA□□-2A GCN ... RSO

		17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10	
GPA03...	o	142										
	k	729										
GPA04...	o			192								
	k			739	836							
GPA05...	o					212						
	k			829	926		898		994			
...RSO B0 <sup>1)</sup>	Δ k			0								
...RSO P□ <sup>1)</sup>	Δ k	35		38				42				
	k <sub>1</sub>	429		401		498		470		566		
	g	165				192				214		
	g <sub>1</sub>	118				161				172		

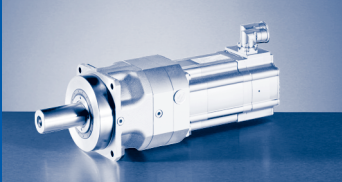
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GPA□□-2A GCN

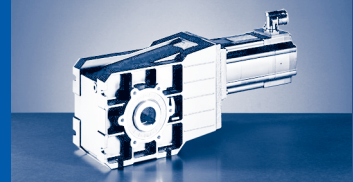
	k <sub>3</sub>			k <sub>4</sub>			o <sub>7</sub>			
GPA01...	142			56			2			
GPA02...	184			88						
GPA03...	237			112						
GPA04...	261			143			3			
GPA05...	334									

	d	l	d <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	s <sub>2</sub>
	k6					g6				4x90°
GPA01...	22	36	M8	80	100	70	7	85	18	6.6
GPA02...	32	58	M12	102	140	90	10	120	28	9
GPA03...	40	82	M16	142	188	130	12	165		11
GPA04...	55		M20	182	250	160	15	215	27	13
GPA05...	75	105		212	290	180	17	250	35	17



**GPA [mm]**  
GPA□□-2A (MCA)



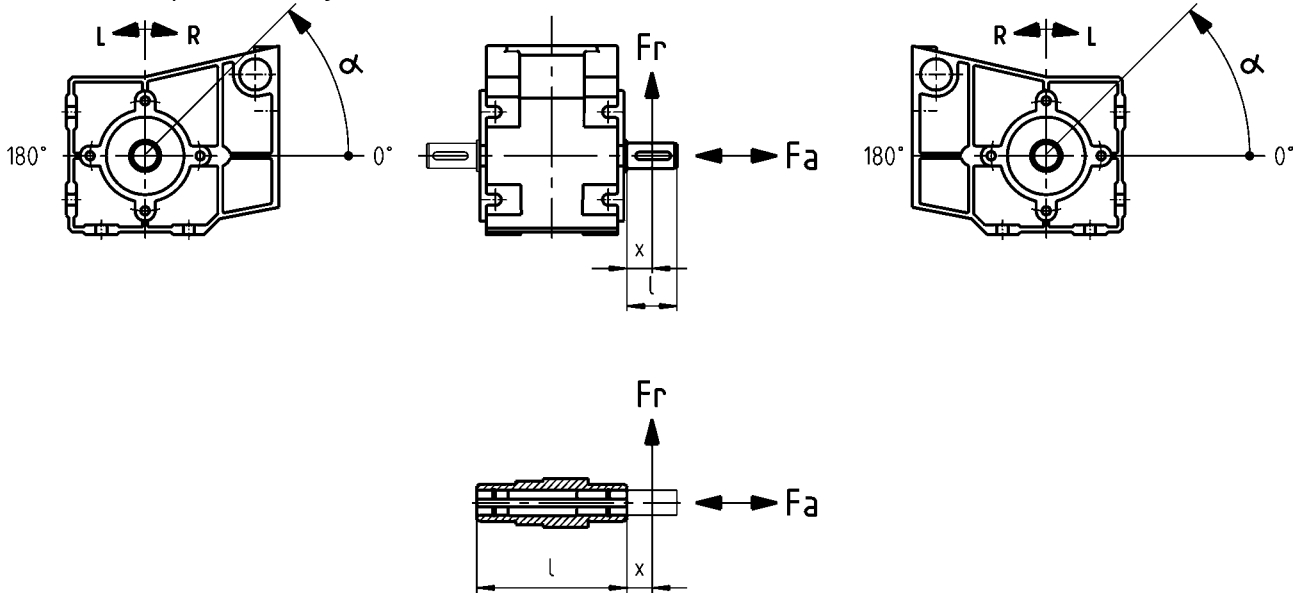
**Permissible radial force**

$$Fr_{zul} = \min(f_w \times f_{\alpha} \times Fr_{Tab}; f_w \times Fr_{max})$$

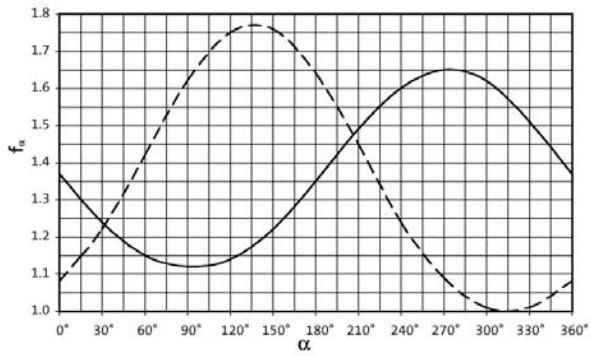
**Permissible axial force**

$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$

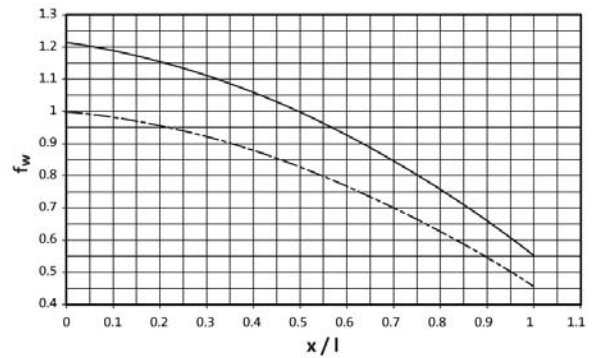
At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office.



**Effective direction factor  $f_{\alpha}$  at output shaft**

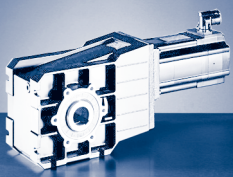


**Additional load factor  $f_w$  at output shaft**



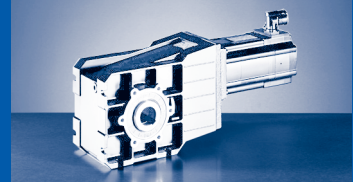
— Direction of rotation R  
 - - - Direction of rotation L

— Solid shaft (V□□)  
 - - - Hollow shaft (H□□)



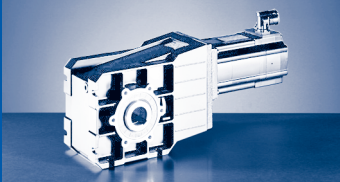
Solid shaft without flange (V□R)								
Application of force Fr: centre of shaft journal (x = l/2)								
Fa <sub>Tab</sub> only valid for Fr = 0								
	GKR03-2		GKR04-2		GKR05-2		GKR06-2	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	900	600	1000	700	1500	1100	2000	1500
630	1200	800	1800	1000	2350	1520	2800	2000
400	1800	1000	2100	1275	3000	1900	4000	2500
250	2100	1100	2500	1500	3600	2200	4200	2600
160	2400	1250	2700	1650	4500	2500	4500	2750
100	2800	1400	3000	1800	5000	3100	5600	3500
63	3000	1400	3000	1800	6000	3700	7300	4500
40	3000	1400	3000	1800	6500	3900	8600	5000
25	3000	1400	3000	1800	6500	3900	9000	5000
≤ 16	3000	1400	3000	1800	6500	3900	9000	5000
Fr <sub>max</sub>	3000	-	3000	-	6500	-	9000	-

Solid shaft with flange (V□K)								
Application of force Fr: centre of shaft journal (x = l/2)								
Fa <sub>Tab</sub> only valid for Fr = 0								
	GKR03-2		GKR04-2		GKR05-2		GKR06-2	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	900	600	1000	700	2400	1100	3000	1500
630	1200	800	1800	1000	3600	1500	4000	2000
400	1800	1000	2100	1275	5200	1900	5500	2500
250	2100	1100	2500	1500	6000	2200	6200	2600
160	2400	1250	2700	1650	6500	2500	7000	2750
100	2800	1400	3000	1800	6500	3100	9000	3500
63	3000	1400	3000	1800	6500	3700	9000	4500
40	3000	1400	3000	1800	6500	3900	9000	5000
25	3000	1400	3000	1800	6500	3900	9000	5000
≤ 16	3000	1400	3000	1800	6500	3900	9000	5000
Fr <sub>max</sub>	3000	-	3000	-	6500	-	9000	-



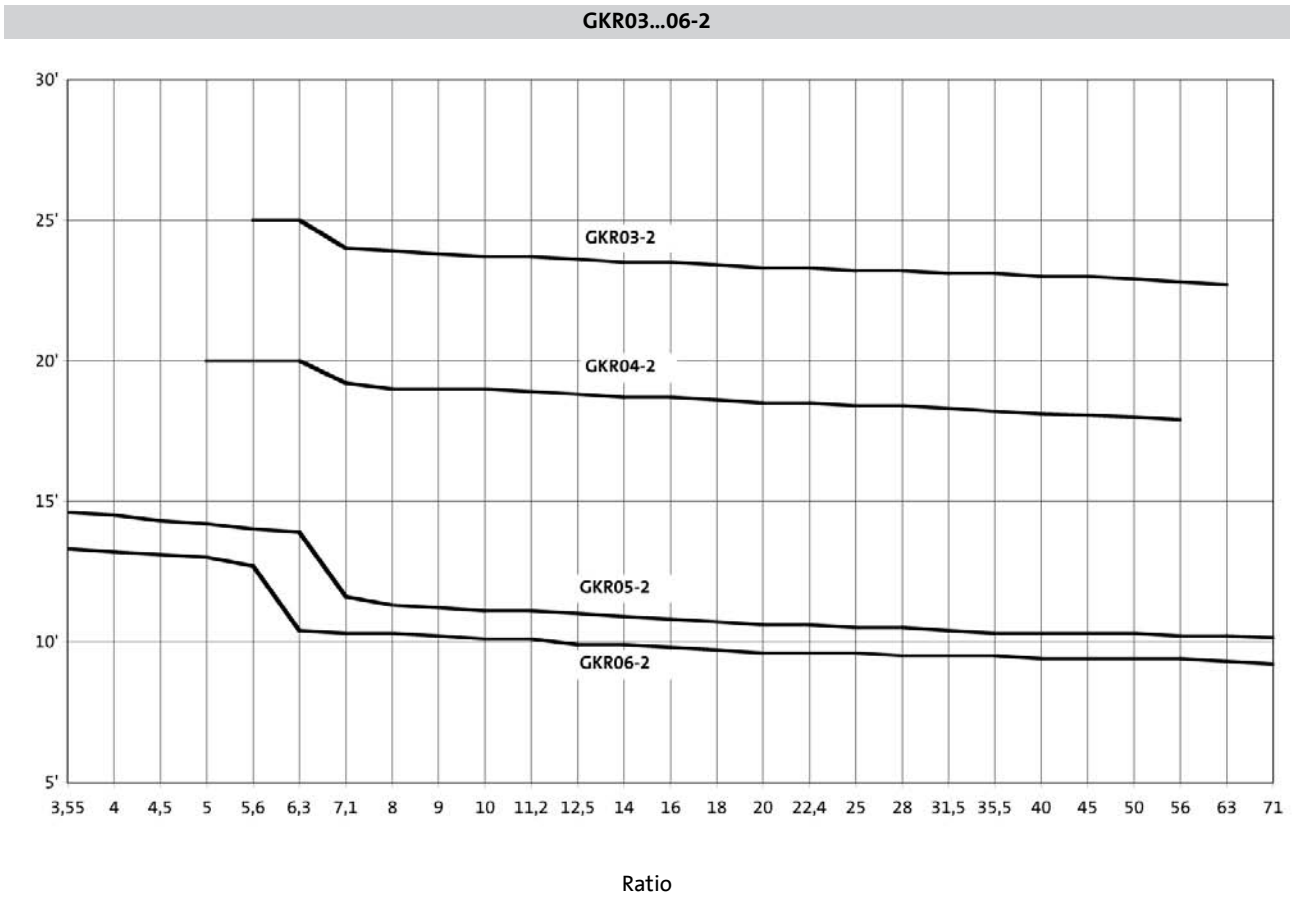
Hollow shaft (H□□)								
Application of force $F_r$ : on hollow shaft end face ( $x = 0$ )								
$F_{a_{Tab}}$ only valid for $F_r = 0$								
	GKR03-2		GKR04-2		GKR05-2		GKR06-2	
$n_2$ [r/min]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]
<b>1000</b>	900	600	1000	700	1500	1100	3000	1500
<b>630</b>	1200	800	2200	1000	2250	1500	3800	2000
<b>400</b>	2200	1000	2550	1275	3800	1900	5000	2500
<b>250</b>	2500	1100	3000	1500	4500	2200	5200	2600
<b>160</b>	2800	1250	3300	1650	5100	2500	5500	2750
<b>100</b>	3000	1400	3600	1800	6200	3100	7000	3500
<b>63</b>	3000	1400	3600	1800	7400	3700	9000	4500
<b>40</b>	3000	1400	3600	1800	7800	3900	10000	5000
<b>25</b>	3000	1400	3600	1800	7800	3900	10000	5000
<b>≤ 16</b>	3000	1400	3600	1800	7800	3900	10000	5000
<b><math>F_{r_{max}}</math></b>	3000	-	3600	-	7800	-	10000	-

- ▶ Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).

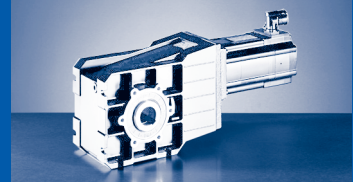


GKR [ ' ]

### Output backlash in angular minutes





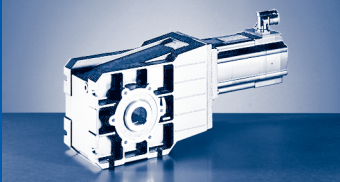


Position of ventilation

GKR06

Mounting position		
A	B	C
Mounting position		
D	E	F

⊗ Ventilation



## GKR [kg]

### GKR□□-2S HAR/HBR...RSO B0

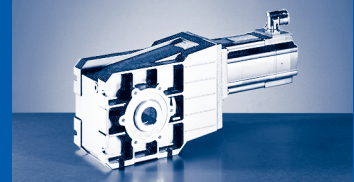
	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKR03...	5	6	7											
GKR04...	7	8		10	11	12	14							
GKR05...	10	11	12	13	14	15		17			20			23
GKR06...	19	20		22	23	24	26	25			28			31
	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14L C15	14L C32	14P C14	14P C32				
GKR06...	30			35			39			44				

### GKR□□-2A HAR/HBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10
GKR04...	11	16	17								
GKR05...	16	20	21	26		27					
GKR06...	24	28	29	34		36		42		44	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8			0.9							
...P2				0.5			1.2							
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2			0.3							

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32
...P1					1.9			
...P2					3.1			
...SCS/SCM/SRM/SRS ...ECN/EQN					0.3			

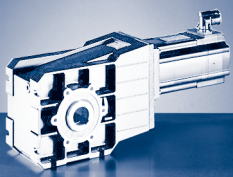
### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10	
...P1/P5								2.4				
...P2/P6	0.8	1.4		1.5								
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6			0.7					

### Additional weights gearbox

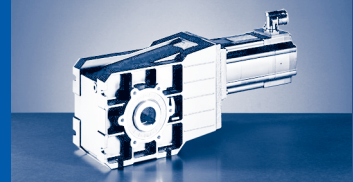
	Solid shaft	2nd output shaft end	Hollow shaft with shrink disc	Flange	Threaded hole circle torque plate	Casing foot torque plate
	V□□	V□□	S□□	□□K		
GKR03...	0.2	0.1	0.3	0.4	0.3	
GKR04...	0.3			0.5	0.4	
GKR05...	1	0.3	0.8	1	1.3	2
GKR06...	1.7	0.5	1		2.1	3.7

Weights in [kg]



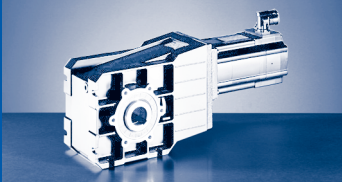
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$	
GKR03-2	5.411	1120	207	
	6.222	1288		
	7.111	1600		
	8.178	1840		
	9.101	1720		
	10.466	1978	189	
	11.640	2200		
	13.386	2530		
	15.111	2040		
	17.378	2346		
	19.365	2440	126	
	22.270	2806		
	25.051	2480		
	28.808	2852		
	32.593	2640		
	37.481	3036	81	
	42.222	3800		
	48.556	4370		
	53.889	3880		
	61.972	4462		
GKR04-2	5.185	1400	270	
	5.963	1610		
	7.111	1600		
	8.178	1840		
	9.101	1720		
	10.466	1978	189	
	11.449	2576		
	12.698	2400		
	14.603	2760		
	15.556	2520		
	17.889	2898	162	
	19.556	2640		
	22.489	3036		
	25.185	2720		
	28.963	3128		
	31.919	3160	99	
	36.707	3634		
	40.000	3240		
	46.000	3726		
	52.698	3320		
60.603	3818	63		
GKR05-2	3.565		1925	540
	4.889		2200	450
	6.257		2365	378
	6.883		2065	300

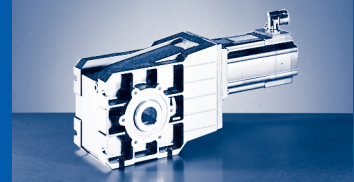


$$\triangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GKR05-2	7.817	2345	300
	9.440	2360	250
	10.720	2680	
	12.081	2537	210
	13.216	3304	250
	13.719	2881	210
	15.008	3752	250
	16.857	3540	210
	19.143	4020	
	20.650	3717	180
	23.450	4221	
	26.878	4838	
	30.522	5494	
	33.433	4012	120
	37.967	4556	
	43.267	5192	
	49.133	5896	
	52.510	5251	100
	59.630	5963	
	67.113	5369	80
76.213	6097		
GKR06-2	3.431	1750	510
	4.706	2000	425
	6.022	2150	357
	6.481	1750	270
	7.146	1715	240
	8.889	2000	225
	9.800	1960	200
	11.376	2150	189
	12.444	2800	225
	13.720	2744	200
	15.873	3000	189
	17.500	2940	168
	19.444	3150	162
	21.438	3087	144
	25.309	4100	162
	27.903	4018	144
	31.481	3400	108
	34.708	3332	96
	40.741	4400	108
	44.917	4312	96
49.444	4450	90	
54.513	4361	80	
62.500	4500	72	
68.906	4410	64	



GKR [i]

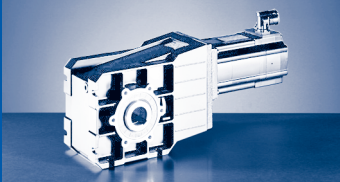


$M_{2GN} \leq 45 \text{ Nm}$

GKR03-2S				06CC41	06FC41	06IC41
				...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
5.411	39	0.31	$M_2$		6	8
			c		4.6	3.7
			$n_2$ Eck		749	749
			$n_2$ th		749	749
6.222	41	0.28	$M_2$		7	9
			c		4.1	3.3
			$n_2$ Eck		651	651
			$n_2$ th		651	651
7.111	43	0.20	$M_2$		8	10
			c		3.8	3.1
			$n_2$ Eck		570	570
			$n_2$ th		570	570
8.178	44	0.18	$M_2$		9	11
			c		3.4	2.7
			$n_2$ Eck		495	495
			$n_2$ th		495	495
9.101	45	0.13	$M_2$		10	13
			c		3.1	2.5
			$n_2$ Eck		445	445
			$n_2$ th		445	445
10.466	45	0.12	$M_2$	6	12	15
			c	5.4	2.7	2.2
			$n_2$ Eck	387	387	387
			$n_2$ th	387	387	387
11.640	45	0.09	$M_2$	6	13	16
			c	4.9	2.4	2.0
			$n_2$ Eck	348	348	348
			$n_2$ th	348	348	348
13.386	45	0.08	$M_2$	7	15	19
			c	4.2	2.1	1.7
			$n_2$ Eck	303	303	303
			$n_2$ th	303	303	303
15.111	45	0.06	$M_2$	8	17	21
			c	3.8	1.9	1.5
			$n_2$ Eck	268	268	268
			$n_2$ th	268	268	268
17.378	45	0.06	$M_2$	10	20	25
			c	3.3	1.6	1.3
			$n_2$ Eck	233	233	233
			$n_2$ th	233	233	233
19.365	45	0.04	$M_2$	11	22	28
			c	2.9	1.5	1.2
			$n_2$ Eck	209	209	209
			$n_2$ th	209	209	209
22.270	45	0.05	$M_2$	12	25	32
			c	2.6	1.3	1.0
			$n_2$ Eck	182	182	182
			$n_2$ th	182	182	182
25.051	45	0.03	$M_2$	14	28	36
			c	2.6	1.3	1.0
			$n_2$ Eck	162	162	162
			$n_2$ th	162	162	162

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GKR [Nm]

## GKR□□-2S (MCS)

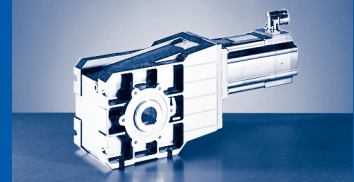
$M_{2GN} \leq 45 \text{ Nm}$

GKR03-2S				06CC41	06FC41	06IC41
				...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
28.808	45	0.02	$M_2$	16	33	
			c	2.2	1.1	
			$n_{2 \text{ Eck}}$	141	141	
			$n_{2 \text{ th}}$	141	141	
32.593	45	0.02	$M_2$	18		
			c	2.0		
			$n_{2 \text{ Eck}}$	124		
			$n_{2 \text{ th}}$	124		
37.481	45	0.02	$M_2$	21		
			c	1.7		
			$n_{2 \text{ Eck}}$	108		
			$n_{2 \text{ th}}$	108		

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



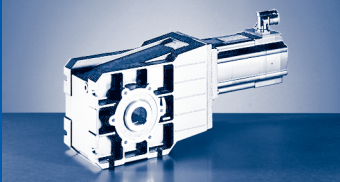


$M_{2GN} \leq 90 \text{ Nm}$

GKR04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
5.185	69	0.81	$M_2$				11	15	18	22
			c			4.4	3.3	2.6	2.2	
			$n_{2 \text{ Eck}}$			781	723	781	781	
			$n_{2 \text{ th}}$			679	645	617	596	
5.963	72	0.72	$M_2$				13	17	21	25
			c			4.0	3.0	2.4	2.0	
			$n_{2 \text{ Eck}}$			679	629	679	679	
			$n_{2 \text{ th}}$			581	551	527	509	
7.111	78	0.45	$M_2$			10	15	21	25	30
			c			5.5	3.6	2.7	2.2	1.8
			$n_{2 \text{ Eck}}$			570	570	527	570	570
			$n_{2 \text{ th}}$			569	530	506	485	459
8.178	81	0.41	$M_2$			11	17	24	29	35
			c			5.0	3.3	2.5	2.0	1.7
			$n_{2 \text{ Eck}}$			495	495	459	495	495
			$n_{2 \text{ th}}$			487	454	432	415	382
9.101	84	3.27	$M_2$		10	12	19	26	33	39
			c		5.8	4.7	3.1	2.3	1.9	1.6
			$n_{2 \text{ Eck}}$		445	445	445	412	445	445
			$n_{2 \text{ th}}$		445	445	445	412	425	389
10.466	89	0.30	$M_2$		11	14	22	30	38	45
			c		5.3	4.3	2.8	2.1	1.7	1.4
			$n_{2 \text{ Eck}}$		387	387	387	358	387	387
			$n_{2 \text{ th}}$		387	387	387	358	352	324
11.449	90	0.26	$M_2$		13	16	25	33	41	49
			c		5.0	4.0	2.6	2.0	1.6	1.3
			$n_{2 \text{ Eck}}$		354	354	354	328	354	354
			$n_{2 \text{ th}}$		354	354	354	328	324	300
12.698	90	1.99	$M_2$		14	18	27	37	46	54
			c		4.5	3.6	2.3	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		319	319	319	295	319	319
			$n_{2 \text{ th}}$		319	319	319	295	318	299
14.603	90	0.18	$M_2$		16	20	32	43	53	62
			c		3.9	3.1	2.0	1.5	1.2	1.0
			$n_{2 \text{ Eck}}$		277	277	277	257	277	277
			$n_{2 \text{ th}}$		277	277	277	257	263	248
15.556	90	1.47	$M_2$		17	22	34	46	56	
			c		3.7	2.9	1.9	1.5	1.2	
			$n_{2 \text{ Eck}}$		260	260	260	241	260	
			$n_{2 \text{ th}}$		260	260	260	241	260	
17.889	90	0.14	$M_2$		20	25	39	53	65	
			c		3.2	2.5	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		226	226	226	210	226	
			$n_{2 \text{ th}}$		226	226	226	210	226	
19.556	90	0.10	$M_2$	11	22	27				
			c	5.8	2.9	2.3				
			$n_{2 \text{ Eck}}$	207	207	207				
			$n_{2 \text{ th}}$	207	207	207				
22.489	90	0.09	$M_2$	12	25	32				
			c	5.0	2.5	2.0				
			$n_{2 \text{ Eck}}$	180	180	180				
			$n_{2 \text{ th}}$	180	180	180				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKR [Nm]

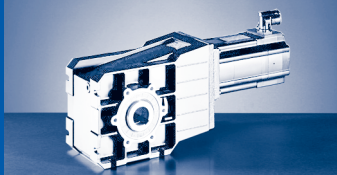
## GKR□□-2S (MCS)

$M_{2GN} \leq 90 \text{ Nm}$

GKR04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
25.185	90	0.07	$M_2$	14	28	35				
			c	5.1	2.6	2.1				
			$n_{2 \text{ Eck}}$	161	161	161				
			$n_{2 \text{ th}}$	161	161	161				
28.963	90	0.06	$M_2$	16	33	41				
			c	4.5	2.2	1.8				
			$n_{2 \text{ Eck}}$	140	140	140				
			$n_{2 \text{ th}}$	140	140	140				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

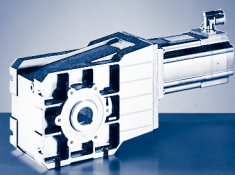


$M_{2GN} \leq 240 \text{ Nm}$

GKR05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72
3.565	116	4.95	$M_2$						15						
			c						5.4						
			$n_2$ Eck						1136						
3.565	138	4.95	$M_2$									33	26		45
			c									4.1	4.0		2.8
			$n_2$ Eck									421	842		547
4.889	139	2.79	$M_2$					17	20						
			c					5.7	4.8						
			$n_2$ Eck					828	828						
4.889	147	2.79	$M_2$							24	19	45	36		62
			c							5.3	5.3	3.2	3.1		2.1
			$n_2$ Eck							399	828	307	614		399
6.257	150	1.79	$M_2$				17	22	26						
			c				6.0	4.8	4.0						
			$n_2$ Eck				599	647	647						
6.257	156	1.79	$M_2$							32	25	58	47		80
			c							4.4	4.4	2.6	2.6		1.8
			$n_2$ Eck							312	647	240	480		312
6.883	179	2.57	$M_2$					24	28	35	27	64	51		87
			c					5.2	4.4	4.6	4.6	2.7	2.7		1.9
			$n_2$ Eck					588	588	283	588	218	436		283
7.817	187	2.32	$M_2$				22	27	32	39	31	73	58		100
			c				6.0	4.8	4.0	4.2	4.2	2.5	2.5		1.7
			$n_2$ Eck				480	518	518	250	518	192	384		250
9.440	191	1.53	$M_2$				27	33	39	48	38	89	71	66	121
			c				5.1	4.0	3.4	3.5	3.6	2.1	2.1	2.1	1.4
			$n_2$ Eck				397	429	429	207	429	159	318	373	207
10.720	204	1.40	$M_2$				30	38	45	55	43	101	81	76	137
			c				4.8	3.8	3.2	3.3	3.3	2.0	2.0	2.0	1.4
			$n_2$ Eck				350	378	378	182	378	140	280	329	182
12.081	208	1.02	$M_2$			25	34	42	51	62	48	114	91		155
			c			5.7	4.3	3.4	2.9	3.0	3.0	1.8	1.8		1.2
			$n_2$ Eck			335	310	335	335	161	335	124	248		161
13.216	214	0.87	$M_2$			28	38	47	55	68	53	125	100		169
			c			5.3	4.1	3.2	2.7	2.8	2.9	1.7	1.7		1.2
			$n_2$ Eck			307	284	307	307	148	307	114	227		148
13.719	217	0.94	$M_2$			29	39	48	58	70	55	129	104		176
			c			5.2	4.0	3.1	2.7	2.8	2.8	1.7	1.7		1.1
			$n_2$ Eck			295	273	295	295	142	295	109	219		142
			$M_2$			282	269	259	251	142	253	109	216		142

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



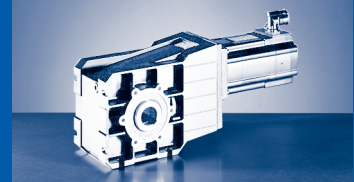
# GKR [Nm] GKR□□-2S (MCS)

$M_{2GN} \leq 240 \text{ Nm}$

GKR05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	
15.008	223	0.81	$M_2$			31	43	53	63	77	60	142	113		192	
			c			4.9	3.7	3.0	2.5	2.6	2.6	1.6	1.6		1.1	
			$n_{2 \text{ Eck}}$			270	250	270	270	270	130	270	100	200		130
			$n_{2 \text{ th}}$			264	250	243	235	130	237	100	200		130	
16.857	240	0.60	$M_2$			35	48	60	71	87	68	159	127		216	
			c			4.7	3.6	2.8	2.4	2.5	2.5	1.5	1.5		1.0	
			$n_{2 \text{ Eck}}$			240	223	240	240	116	240	89	178		116	
			$n_{2 \text{ th}}$			240	222	240	240	116	240	89	178		116	
19.143	240	0.55	$M_2$			40	55	68	81	99	77	181	145			
			c			4.1	3.1	2.5	2.1	2.2	2.2	1.3	1.3			
			$n_{2 \text{ Eck}}$			212	196	212	212	102	212	78	157			
			$n_{2 \text{ th}}$			212	196	212	212	102	212	78	157			
20.650	231	0.44	$M_2$		28											
			c		5.7											
			$n_{2 \text{ Eck}}$		196											
			$n_{2 \text{ th}}$		196											
20.650	240	0.44	$M_2$			44	60	74	87	107	83	196	157	147		
			c			3.8	2.9	2.3	2.0	2.0	1.2	1.2	1.2	1.2		
			$n_{2 \text{ Eck}}$			196	182	196	196	94	196	73	145	171		
			$n_{2 \text{ th}}$			196	182	196	196	94	196	73	145	171		
23.450	240	0.41	$M_2$		32	50	68	84	99	122	95	223	178	167		
			c		5.2	3.4	2.6	2.0	1.7	1.8	1.8	1.1	1.1	1.1		
			$n_{2 \text{ Eck}}$		173	173	160	173	173	83	173	64	128	150		
			$n_{2 \text{ th}}$		173	173	160	173	173	83	173	64	128	147		
26.878	240	0.27	$M_2$		37	57	78	96	114							
			c		5.1	3.3	2.5	2.0	1.7							
			$n_{2 \text{ Eck}}$		151	151	140	151	151							
			$n_{2 \text{ th}}$		151	151	140	151	151							
30.522	240	0.25	$M_2$	33	42	65	89	109	130							
			c	5.6	4.5	2.9	2.2	1.8	1.5							
			$n_{2 \text{ Eck}}$	133	133	133	123	133	133							
			$n_{2 \text{ th}}$	133	133	133	123	133	133							
33.433	240	0.19	$M_2$	36	46	72	97	120	142							
			c	5.1	4.1	2.7	2.0	1.6	1.4							
			$n_{2 \text{ Eck}}$	121	121	121	112	121	121							
			$n_{2 \text{ th}}$	121	121	121	112	121	121							
37.967	240	0.18	$M_2$	42	53	82	111	136	162							
			c	4.5	3.6	2.4	1.8	1.4	1.2							
			$n_{2 \text{ Eck}}$	107	107	107	99	107	107							
			$n_{2 \text{ th}}$	107	107	107	99	107	107							
43.267	240	0.12	$M_2$	48	60											
			c	4.4	3.5											
			$n_{2 \text{ Eck}}$	94	94											
			$n_{2 \text{ th}}$	94	94											
49.133	240	0.11	$M_2$	54	68											
			c	3.9	3.1											
			$n_{2 \text{ Eck}}$	82	82											
			$n_{2 \text{ th}}$	82	82											
52.510	240	0.09	$M_2$	58	73											
			c	3.6	2.9											
			$n_{2 \text{ Eck}}$	77	77											
			$n_{2 \text{ th}}$	77	77											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

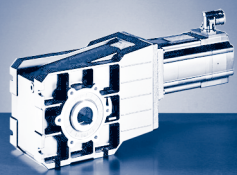


$M_{2GN} \leq 240 \text{ Nm}$

GKR05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72
59.630	240	0.08	$M_2$	66	84										
			c	3.2	2.6										
			$n_{2 \text{ Eck}}$	68	68										
			$n_{2 \text{ th}}$	68	68										

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKR [Nm]

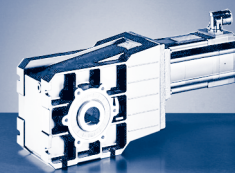
## GKR□□-2S (MCS)

$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00		
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000		
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8			
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50		
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42		
3.431	188	9.58	$M_2$									31	25		
			c										5.8	5.7	
			$n_{2 \text{ Eck}}$											437	874
			$n_{2 \text{ th}}$											437	765
3.431	200	9.58	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
4.706	215	5.61	$M_2$									43	34		
			c										4.8	4.8	
			$n_{2 \text{ Eck}}$											319	638
			$n_{2 \text{ th}}$											319	623
4.706	250	5.61	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
6.022	179	3.66	$M_2$					21	25						
			c					5.9	5.0						
			$n_{2 \text{ Eck}}$					673	673						
			$n_{2 \text{ th}}$					586	568						
6.022	231	3.66	$M_2$									55	44		
			c										4.0	4.0	
			$n_{2 \text{ Eck}}$											249	498
			$n_{2 \text{ th}}$											249	498
6.022	280	3.66	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
6.481	350	5.11	$M_2$									59	47		
			c										5.7	5.6	
			$n_{2 \text{ Eck}}$											231	463
			$n_{2 \text{ th}}$											231	404
7.146	348	4.54	$M_2$									65	52		
			c										5.1	5.1	
			$n_{2 \text{ Eck}}$											210	420
			$n_{2 \text{ th}}$											210	359
8.889	405	3.23	$M_2$									81	65		
			c										4.8	4.8	
			$n_{2 \text{ Eck}}$											169	338
			$n_{2 \text{ th}}$											169	330
8.889	408	3.23	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
9.800	384	2.93	$M_2$									90	72		
			c										4.1	4.1	
			$n_{2 \text{ Eck}}$											153	306
			$n_{2 \text{ th}}$											153	291
11.376	337	2.21	$M_2$					39	47						
			c					5.9	5.0						
			$n_{2 \text{ Eck}}$					356	356						
			$n_{2 \text{ th}}$					310	301						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

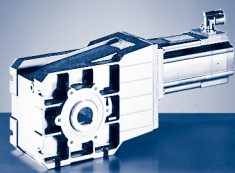


$M_{2GN} \leq 450 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKR06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
23	43	35									c			
5.8	3.9	3.8									$n_{2 \text{ Eck}}$	9.58	188	3.431
1027	568	1180									$n_{2 \text{ th}}$			
766	568	702									$M_2$			
					51	44	74	55	97	68	c			
					3.8	3.4	2.7	2.8	2.1	2.3	$n_{2 \text{ Eck}}$	9.58	200	3.431
					437	940	437	940	393	940	$n_{2 \text{ th}}$			
					437	687	437	657	393	627	$M_2$			
32	59	48									c			
4.8	3.3	3.1									$n_{2 \text{ Eck}}$	5.61	215	4.706
749	414	861									$n_{2 \text{ th}}$			
625	414	573									$M_2$			
					32	70	61	101	76	133	c			
					5.6	3.5	3.1	2.4	2.5	1.9	$n_{2 \text{ Eck}}$	5.61	250	4.706
					765	319	685	319	685	287	$n_{2 \text{ th}}$			
					642	319	571	319	546	287	$M_2$			
											c			
											$n_{2 \text{ Eck}}$	3.66	179	6.022
											$n_{2 \text{ th}}$			
42	76	62									$M_2$			
4.1	2.7	2.6									c			
585	324	673									$n_{2 \text{ Eck}}$	3.66	231	6.022
546	324	501									$n_{2 \text{ th}}$			
					50	41	90	79	130	97	$M_2$			
					5.3	4.9	3.1	2.7	2.1	2.2	c			
					249	598	249	536	249	536	$n_{2 \text{ Eck}}$	3.66	280	6.022
					249	566	249	504	249	482	$n_{2 \text{ th}}$			
44	81	66									$M_2$			
5.7	3.9	3.7			44	96	84	139	104	183	c			
544	301	625			5.7	3.6	3.2	2.5	2.6	1.9	$n_{2 \text{ Eck}}$	5.11	350	6.481
405	301	371			555	231	498	231	498	208	$n_{2 \text{ th}}$			
					404	231	358	231	342	208	$M_2$			
49	89	73	59	49	106	93	154	115	202	141	c			
5.1	3.5	3.4	5.6	5.1	3.2	2.8	2.2	2.3	1.7	1.9	$n_{2 \text{ Eck}}$	4.54	348	7.146
493	273	567	210	504	210	451	210	451	189	451	$n_{2 \text{ th}}$			
360	273	329	210	359	210	317	210	303	189	284	$M_2$			
61	111	91									c			
4.8	3.3	3.1									$n_{2 \text{ Eck}}$	3.23	405	8.889
397	219	456									$n_{2 \text{ th}}$			
331	219	303									$M_2$			
					74	61	132	116	192	143	c			
					5.3	4.8	3.0	2.7	2.1	2.2	$n_{2 \text{ Eck}}$	3.23	408	8.889
					169	405	169	363	169	363	$n_{2 \text{ th}}$			
					169	331	169	293	169	280	$M_2$			
68	123	101	83	68	146	129	212	159	278	194	c			
4.1	2.8	2.7	4.5	4.1	2.6	2.3	1.8	1.9	1.4	1.5	$n_{2 \text{ Eck}}$	2.93	384	9.800
360	199	413	153	367	153	329	153	329	138	329	$n_{2 \text{ th}}$			
291	199	266	153	291	153	257	153	240	138	214	$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.21	337	11.376
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKR [Nm] GKR□□-2S (MCS)

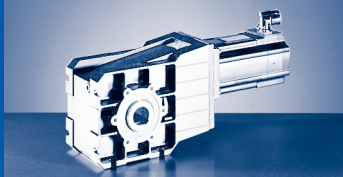
$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
11.376	436	2.21	$M_2$ c $n_2$ Eck $n_2$ th									105 4.0 132 132	84 4.0 264 264
12.444	353	1.89	$M_2$ c $n_2$ Eck $n_2$ th					43 5.6 326 290	51 4.8 326 282				
12.444	450	1.89	$M_2$ c $n_2$ Eck $n_2$ th									115 3.8 121 121	92 3.8 241 241
13.720	389	1.73	$M_2$ c $n_2$ Eck $n_2$ th					47 5.6 295 263	56 4.8 295 255				
13.720	426	1.73	$M_2$ c $n_2$ Eck $n_2$ th							68 5.5 142 142	53 5.5 295 262	127 3.3 109 109	102 3.2 219 219
15.873	379	1.32	$M_2$ c $n_2$ Eck $n_2$ th				44 6.0 236 236	55 4.8 255 242	66 4.0 255 236				
15.873	450	1.32	$M_2$ c $n_2$ Eck $n_2$ th							79 5.0 123 123	62 5.0 255 244	148 3.0 95 95	118 3.0 189 189
17.500	418	1.23	$M_2$ c $n_2$ Eck $n_2$ th				49 6.0 214 214	61 4.8 231 220	72 4.0 231 214				
17.500	450	1.23	$M_2$ c $n_2$ Eck $n_2$ th							88 4.5 111 111	69 4.5 231 218	163 2.7 86 86	131 2.7 171 171
19.444	398	0.99	$M_2$ c $n_2$ Eck $n_2$ th				55 5.1 193 193	68 4.1 208 208	81 3.4 208 208				
19.444	450	0.99	$M_2$ c $n_2$ Eck $n_2$ th							98 4.1 100 100	77 4.1 208 208	182 2.4 77 77	146 2.4 154 154
21.438	439	0.93	$M_2$ c $n_2$ Eck $n_2$ th				60 5.1 175 175	75 4.1 189 189	89 3.4 189 189				
21.438	450	0.93	$M_2$ c $n_2$ Eck $n_2$ th							109 3.7 91 91	85 3.7 189 189	201 2.2 70 70	161 2.2 140 140

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



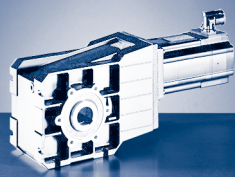


$M_{2GN} \leq 450 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKR06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
78	143	117	96	78	170	149	247	184	323	226	$c$	2.21	436	11.376
4.0	2.7	2.6	4.4	4.0	2.5	2.2	1.8	1.8	1.3	1.5	$n_{2 \text{ Eck}}$			
310	171	356	132	317	132	284	132	284	119	284	$n_{2 \text{ th}}$			
289	171	265	132	289	132	256	132	237	119	211	$M_2$			
											$c$	1.89	353	12.444
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
86	157	128	105	86	186	164	270	202	354	247	$M_2$			
3.8	2.6	2.5	4.1	3.8	2.4	2.1	1.7	1.7	1.3	1.4	$c$	1.89	450	12.444
283	157	326	121	289	121	259	121	259	109	259	$n_{2 \text{ Eck}}$			
270	157	248	121	270	121	240	121	218	108	196	$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.73	389	13.720
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
95	174	142	117	95	206	181	298	223	391	273	$M_2$			
3.3	2.2	2.1	3.6	3.3	2.0	1.8	1.4	1.5	1.1	1.2	$c$	1.73	426	13.720
257	142	295	109	262	109	235	109	235	98	235	$n_{2 \text{ Eck}}$			
238	142	218	109	238	109	204	109	182	98	165	$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.32	379	15.873
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
111	201	164	135	111	239	210	346	258		316	$M_2$			
3.0	2.0	2.0	3.2	3.0	1.9	1.7	1.3	1.3		1.1	$c$	1.32	450	15.873
222	123	255	95	227	95	203	95	203		203	$n_{2 \text{ Eck}}$			
222	123	206	95	223	95	189	95	172		158	$n_{2 \text{ th}}$			
											$M_2$			
											$c$	1.23	418	17.500
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
122	222	181	150	122	264	232	382	285			$M_2$			
2.7	1.8	1.8	2.9	2.7	1.7	1.5	1.2	1.2			$c$	1.23	450	17.500
201	111	231	86	206	86	184	86	184			$n_{2 \text{ Eck}}$			
199	111	177	86	199	86	164	86	150			$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.99	398	19.444
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
136	248	202	167	136	294	258	425	317			$M_2$			
2.4	1.7	1.6	2.7	2.4	1.5	1.4	1.1	1.1			$c$	0.99	450	19.444
181	100	208	77	185	77	166	77	166			$n_{2 \text{ Eck}}$			
181	100	177	77	185	77	163	77	149			$n_{2 \text{ th}}$			
											$M_2$			
											$c$	0.93	439	21.438
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
151	274	223	185	151	325	284					$M_2$			
2.2	1.5	1.4	2.4	2.2	1.4	1.2					$c$	0.93	450	21.438
164	91	189	70	168	70	150					$n_{2 \text{ Eck}}$			
164	91	153	70	167	70	141					$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GKR [Nm]

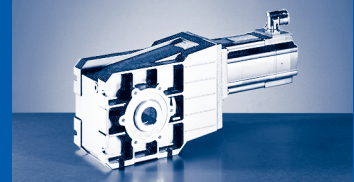
## GKR□□-2S (MCS)

$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
25.309	416	0.63	$M_2$				72	89	106				
			c				4.7	3.7	3.1				
			$n_{2 \text{ Eck}}$				148	160	160				
			$n_{2 \text{ th}}$				148	160	160				
25.309	450	0.63	$M_2$							129	101	238	190
			c							3.4	3.6	1.9	2.1
			$n_{2 \text{ Eck}}$							77	160	59	119
			$n_{2 \text{ th}}$							77	160	59	119
27.903	450	0.59	$M_2$				79	98	117	143	111	263	210
			c				4.6	3.7	3.1	3.1	3.2	1.7	1.9
			$n_{2 \text{ Eck}}$				134	145	145	70	145	54	108
			$n_{2 \text{ th}}$				134	145	145	70	145	54	108
31.481	291	0.46	$M_2$		43								
			c		5.3								
			$n_{2 \text{ Eck}}$		129								
			$n_{2 \text{ th}}$		129								
31.481	431	0.46	$M_2$			66	90	111	132				
			c			5.1	3.9	3.1	2.6				
			$n_{2 \text{ Eck}}$			129	119	129	129				
			$n_{2 \text{ th}}$			129	119	129	129				
31.481	450	0.46	$M_2$							161	126	297	238
			c							2.7	2.9	1.5	1.7
			$n_{2 \text{ Eck}}$							62	129	48	95
			$n_{2 \text{ th}}$							62	129	48	95
34.708	321	0.43	$M_2$		47								
			c		5.3								
			$n_{2 \text{ Eck}}$		117								
			$n_{2 \text{ th}}$		117								
34.708	450	0.43	$M_2$			73	99	123	146	179	139	328	262
			c			4.8	3.7	2.9	2.5	2.5	2.6	1.4	1.5
			$n_{2 \text{ Eck}}$			117	108	117	117	56	117	43	86
			$n_{2 \text{ th}}$			117	108	117	117	56	117	43	86
40.741	302	0.28	$M_2$	44	56								
			c	5.9	4.7								
			$n_{2 \text{ Eck}}$	99	99								
			$n_{2 \text{ th}}$	99	99								
40.741	447	0.28	$M_2$			86	117	144	172				
			c			4.5	3.5	2.8	2.3				
			$n_{2 \text{ Eck}}$			99	92	99	99				
			$n_{2 \text{ th}}$			99	92	99	99				
44.917	333	0.27	$M_2$	49	62								
			c	5.9	4.7								
			$n_{2 \text{ Eck}}$	90	90								
			$n_{2 \text{ th}}$	90	90								
44.917	450	0.27	$M_2$			95	129	160	190				
			c			4.2	3.2	2.5	2.1				
			$n_{2 \text{ Eck}}$			90	84	90	90				
			$n_{2 \text{ th}}$			90	83	90	90				
49.444	306	0.21	$M_2$	54	68								
			c	4.9	3.9								
			$n_{2 \text{ Eck}}$	82	82								
			$n_{2 \text{ th}}$	82	82								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

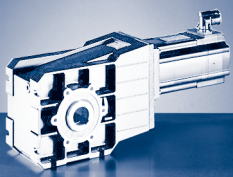


$M_{2GN} \leq 450 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKR06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	0.63	416	25.309
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
178	323	263									$M_2$			
2.1	1.4	1.4									c	0.63	450	25.309
139	77	160									$n_{2 \text{ Eck}}$			
139	77	150									$n_{2 \text{ th}}$			
197	357	291									$M_2$			
1.9	1.3	1.3									c	0.59	450	27.903
126	70	145									$n_{2 \text{ Eck}}$			
126	70	130									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.46	291	31.481
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.46	431	31.481
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
223	403	329									$M_2$			
1.7	1.1	1.1									c	0.46	450	31.481
112	62	129									$n_{2 \text{ Eck}}$			
112	62	129									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.43	321	34.708
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
246	445	363									$M_2$			
1.6	1.0	1.0									c	0.43	450	34.708
102	56	117									$n_{2 \text{ Eck}}$			
102	56	114									$n_{2 \text{ th}}$			
											$M_2$			
											c	0.28	302	40.741
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.28	447	40.741
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.27	333	44.917
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.27	450	44.917
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.21	306	49.444
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKR [Nm]

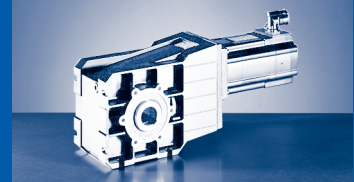
## GKR□□-2S (MCS)

$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$										
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
49.444	450	0.21	$M_2$			105	143	176	209				
			c			3.8	2.9	2.3	1.9				
			$n_{2 \text{ Eck}}$			82	76	82	82				
			$n_{2 \text{ th}}$			82	76	82	82				
54.513	337	0.20	$M_2$	60	75								
			c	4.9	3.9								
			$n_{2 \text{ Eck}}$	74	74								
			$n_{2 \text{ th}}$	74	74								
54.513	450	0.20	$M_2$			116	158	195	231				
			c			3.4	2.6	2.1	1.8				
			$n_{2 \text{ Eck}}$			74	69	74	74				
			$n_{2 \text{ th}}$			74	69	74	74				
62.500	302	0.13	$M_2$	69	87								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	65	65								
			$n_{2 \text{ th}}$	65	65								
68.906	333	0.13	$M_2$	76	96								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	59	59								
			$n_{2 \text{ th}}$	59	59								

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

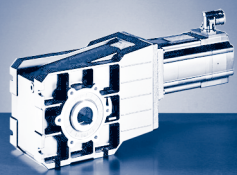


$M_{2GN} \leq 450 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKR06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	0.21	450	49.444
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.20	337	54.513
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.20	450	54.513
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.13	302	62.500
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.13	333	68.906
											c			
											$n_2$ Eck			
											$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKR [Nm]

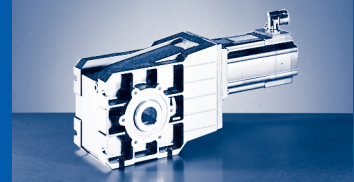
## GKR□□-2A (MCA)

$M_{2GN} \leq 90 \text{ Nm}$

GKR04-2A				10IC40	13IC34	13IC41
				...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
5.185	69	0.81	$M_2$	9	31	19
			c	5.1	1.7	2.5
			$n_2$ Eck	762	658	781
			$n_2$ th	697	533	611
5.963	72	0.72	$M_2$	11	35	22
			c	4.6	1.5	2.3
			$n_2$ Eck	662	572	679
			$n_2$ th	597	441	521
7.111	78	0.45	$M_2$	13	42	27
			c	4.2	1.4	2.1
			$n_2$ Eck	556	480	570
			$n_2$ th	543	404	480
8.178	81	0.41	$M_2$	15	49	31
			c	3.8	1.3	1.9
			$n_2$ Eck	483	417	495
			$n_2$ th	465	337	404
9.101	84	3.27	$M_2$	17	54	34
			c	3.5	1.2	1.8
			$n_2$ Eck	434	375	445
			$n_2$ th	434	342	414
10.466	89	0.30	$M_2$	19	63	40
			c	3.2	1.1	1.6
			$n_2$ Eck	377	326	387
			$n_2$ th	377	286	343
11.449	90	0.26	$M_2$	21		43
			c	3.0		1.5
			$n_2$ Eck	345		354
			$n_2$ th	345		316
12.698	90	1.99	$M_2$	24		48
			c	2.7		1.3
			$n_2$ Eck	311		319
			$n_2$ th	311		312
14.603	90	0.18	$M_2$	27		55
			c	2.4		1.2
			$n_2$ Eck	271		277
			$n_2$ th	270		258
15.556	90	1.47	$M_2$	29		59
			c	2.2		1.1
			$n_2$ Eck	254		260
			$n_2$ th	254		260
17.889	90	0.14	$M_2$	34		
			c	1.9		
			$n_2$ Eck	221		
			$n_2$ th	221		
19.556	90	0.10	$M_2$	37		
			c	1.8		
			$n_2$ Eck	202		
			$n_2$ th	202		
22.489	90	0.09	$M_2$	42		
			c	1.5		
			$n_2$ Eck	176		
			$n_2$ th	176		

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

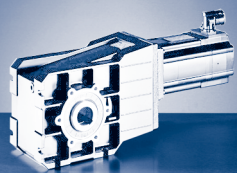


$M_{2GN} \leq 90 \text{ Nm}$

GKR04-2A				10IC40	13IC34	13IC41
				...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
25.185	90	0.07	$M_2$	48		
			c	1.6		
			$n_{2 \text{ Eck}}$	157		
			$n_{2 \text{ th}}$	157		
28.963	90	0.06	$M_2$	55		
			c	1.4		
			$n_{2 \text{ Eck}}$	136		
			$n_{2 \text{ th}}$	136		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKR [Nm]

## GKR□□-2A (MCA)

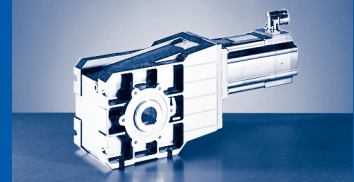
$M_{2GN} \leq 240 \text{ Nm}$

GKR05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
3.565	138	4.95	$M_2$		20		40	22	36	17
			c		4.9		3.3	5.5	2.9	5.4
			$n_{2 \text{ Eck}}$		957		459	561	969	1150
			$n_{2 \text{ th}}$		843		459	561	757	858
4.889	147	2.79	$M_2$		28	18	55	30	50	24
			c		3.8	5.7	2.6	4.3	2.2	4.2
			$n_{2 \text{ Eck}}$		698	828	334	409	707	839
			$n_{2 \text{ th}}$		687	739	334	409	616	699
6.257	156	1.79	$M_2$		37	23	70	39	64	31
			c		3.2	4.7	2.1	3.6	1.8	3.5
			$n_{2 \text{ Eck}}$		545	647	261	320	552	655
			$n_{2 \text{ th}}$		545	608	261	320	501	574
6.883	179	2.57	$M_2$		40	25	77	43	70	34
			c		3.3	4.9	2.2	3.7	1.9	3.6
			$n_{2 \text{ Eck}}$		495	588	238	291	502	596
			$n_{2 \text{ th}}$		404	437	238	291	356	412
7.817	187	2.32	$M_2$		46	29	88	48	80	39
			c		3.0	4.5	2.0	3.4	1.8	3.3
			$n_{2 \text{ Eck}}$		436	518	209	256	442	525
			$n_{2 \text{ th}}$		350	379	209	256	299	356
9.440	191	1.53	$M_2$		56	35	107	59	96	48
			c		2.6	3.8	1.7	2.9	1.5	2.8
			$n_{2 \text{ Eck}}$		361	429	173	212	366	434
			$n_{2 \text{ th}}$		329	356	173	212	266	335
10.720	204	1.40	$M_2$		63	40	121	67	110	54
			c		2.4	3.6	1.6	2.7	1.4	2.7
			$n_{2 \text{ Eck}}$		318	378	153	187	322	383
			$n_{2 \text{ th}}$		286	310	153	187	227	292
12.081	208	1.02	$M_2$		71	45	137	76	124	61
			c		2.2	3.3	1.5	2.5	1.3	2.4
			$n_{2 \text{ Eck}}$		282	335	135	166	286	339
			$n_{2 \text{ th}}$		274	295	135	166	218	279
13.216	214	0.87	$M_2$		78	49	150	83	135	67
			c		2.1	3.1	1.4	2.3	1.2	2.3
			$n_{2 \text{ Eck}}$		258	307	124	151	261	310
			$n_{2 \text{ th}}$		258	277	124	151	204	262
13.719	217	0.94	$M_2$		81	51	156	86	141	69
			c		2.0	3.0	1.4	2.3	1.2	2.2
			$n_{2 \text{ Eck}}$		249	295	119	146	252	299
			$n_{2 \text{ th}}$		238	256	119	146	185	242
15.008	223	0.81	$M_2$	27	89	56	171	94	154	76
			c	5.7	1.9	2.8	1.3	2.1	1.1	2.1
			$n_{2 \text{ Eck}}$	263	227	270	109	133	230	273
			$n_{2 \text{ th}}$	263	221	240	109	133	174	227
16.857	240	0.60	$M_2$	31	100	63	192	106	173	86
			c	5.4	1.8	2.7	1.2	2.0	1.1	2.0
			$n_{2 \text{ Eck}}$	234	202	240	97	119	205	243
			$n_{2 \text{ th}}$	234	202	240	97	119	178	213
19.143	240	0.55	$M_2$	35	114	72	218	121		97
			c	4.8	1.6	2.4	1.1	1.8		1.8
			$n_{2 \text{ Eck}}$	206	178	212	85	105		214
			$n_{2 \text{ th}}$	206	178	212	85	104		188

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



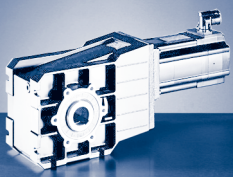


$M_{2GN} \leq 240 \text{ Nm}$

GKR05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	38	123	77		131		105
			$n_{2 \text{ Eck}}$	4.4	1.5	2.2		1.7		1.6
			$n_{2 \text{ th}}$	191	165	196		97		199
				191	165	196		97		174
			$M_2$	43	140	88		149		120
			c	3.9	1.3	1.9		1.5		1.4
			$n_{2 \text{ Eck}}$	168	145	173		85		175
			$n_{2 \text{ th}}$	168	145	173		85		153
			$M_2$	50	160	101				
			c	3.9	1.3	1.9				
			$n_{2 \text{ Eck}}$	147	127	151				
			$n_{2 \text{ th}}$	147	127	151				
			$M_2$	57	182	115				
			c	3.4	1.1	1.7				
			$n_{2 \text{ Eck}}$	129	112	133				
			$n_{2 \text{ th}}$	129	112	133				
			$M_2$	62	200	126				
			c	3.1	1.0	1.5				
			$n_{2 \text{ Eck}}$	118	102	121				
			$n_{2 \text{ th}}$	118	102	121				
			$M_2$	71		144				
			c	2.7		1.4				
			$n_{2 \text{ Eck}}$	104		107				
			$n_{2 \text{ th}}$	104		107				
			$M_2$	81						
			c	2.7						
			$n_{2 \text{ Eck}}$	91						
			$n_{2 \text{ th}}$	91						
			$M_2$	92						
			c	2.4						
			$n_{2 \text{ Eck}}$	80						
			$n_{2 \text{ th}}$	80						
			$M_2$	99						
			c	2.2						
			$n_{2 \text{ Eck}}$	75						
			$n_{2 \text{ th}}$	75						
			$M_2$	112						
			c	1.9						
			$n_{2 \text{ Eck}}$	66						
			$n_{2 \text{ th}}$	66						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKR [Nm]

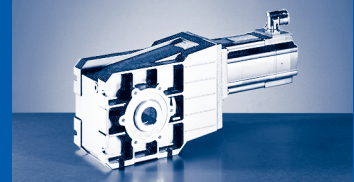
## GKR□□-2A (MCA)

$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
3.431	200	9.58	$M_2$				37		34		69	34	61	30
			c			5.0		4.3		2.8	4.9	2.4	4.6	
			$n_{2 \text{ Eck}}$			477		1007		490		670	1014	1198
			$n_{2 \text{ th}}$			476		722		490		670	638	733
4.706	250	5.61	$M_2$				52		47		95	47	84	41
			c			4.5		3.9		2.5	4.5	2.2	4.2	
			$n_{2 \text{ Eck}}$			347		734		357		489	740	873
			$n_{2 \text{ th}}$			347		600		357		489	531	608
6.022	241	3.66	$M_2$		34									
			c		5.1									
			$n_{2 \text{ Eck}}$		566									
			$n_{2 \text{ th}}$		566									
6.022	280	3.66	$M_2$				67		60		121	60	108	53
			c			4.0		3.4		2.2	3.9	2.0	3.7	
			$n_{2 \text{ Eck}}$			272		574		279		382	578	683
			$n_{2 \text{ th}}$			271		529		279		382	467	517
6.481	350	5.11	$M_2$				71		64		130	64	115	56
			c			4.6		4.0		2.6	4.6	2.3	4.3	
			$n_{2 \text{ Eck}}$			252		533		259		355	537	634
			$n_{2 \text{ th}}$			252		376		259		355	332	382
7.146	348	4.54	$M_2$				79		71		144	71	128	63
			c			4.2		3.6		2.3	4.1	2.0	3.9	
			$n_{2 \text{ Eck}}$			229		484		235		322	487	575
			$n_{2 \text{ th}}$			229		334		235		322	294	339
8.889	408	3.23	$M_2$				98		89		179	88	159	78
			c			3.9		3.4		2.2	3.9	1.9	3.6	
			$n_{2 \text{ Eck}}$			184		389		189		259	392	462
			$n_{2 \text{ th}}$			184		308		189		259	270	313
9.800	384	2.93	$M_2$				109	59	99	48	198	98	176	86
			c			3.3	5.6	2.9	5.5	1.9	3.3	1.6	3.1	
			$n_{2 \text{ Eck}}$			167	204	353	418	171	235	355	419	
			$n_{2 \text{ th}}$			167	204	270	307	171	235	223	274	
11.376	436	2.21	$M_2$		65		127	69	114	56	230	114	204	100
			c		4.9		3.3	5.5	2.8	5.3	1.8	3.2	1.6	3.0
			$n_{2 \text{ Eck}}$		300		144	176	304	360	148	202	306	361
			$n_{2 \text{ th}}$		300		144	176	269	305	148	202	220	273
12.444	450	1.89	$M_2$		72		139	76	125	61	252	125	223	110
			c		4.6		3.1	5.2	2.7	5.0	1.7	3.1	1.5	2.9
			$n_{2 \text{ Eck}}$		274		131	161	278	330	135	185	280	330
			$n_{2 \text{ th}}$		274		131	161	252	284	135	185	204	250
13.720	426	1.73	$M_2$		80	49	154	84	139	68	279	138	247	122
			c		4.0	5.9	2.7	4.4	2.3	4.3	1.5	2.6	1.3	2.5
			$n_{2 \text{ Eck}}$		249	295	119	146	252	299	123	168	254	300
			$n_{2 \text{ th}}$		247	265	119	146	221	251	122	168	171	225
15.873	450	1.32	$M_2$		92	58	178	98	161	79	323	160	286	141
			c		3.6	5.4	2.4	4.1	2.1	4.0	1.3	2.4	1.2	2.3
			$n_{2 \text{ Eck}}$		215	255	103	126	218	258	106	145	219	259
			$n_{2 \text{ th}}$		215	247	103	126	209	226	106	145	163	196
17.500	450	1.23	$M_2$		102	64	197	108	178	87	357	177	316	156
			c		3.3	4.9	2.2	3.7	1.9	3.6	1.2	2.2	1.1	2.0
			$n_{2 \text{ Eck}}$		195	231	93	114	197	234	96	131	199	235
			$n_{2 \text{ th}}$		195	221	93	114	184	205	96	131	142	178

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

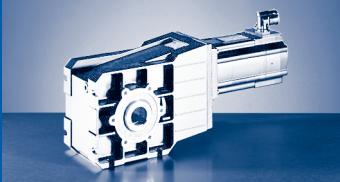


$M_{2GN} \leq 450 \text{ Nm}$

GKR06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
19.444	450	0.99	$M_2$		114	71	219	121	198	97	397	198		174
			c		2.9	4.4	2.0	3.3	1.7	3.2	1.1	2.0		1.8
			$n_{2 \text{ Eck}}$		175	208	84	103	178	211	86	118		211
			$n_{2 \text{ th}}$		175	208	84	103	178	185	86	118		160
21.438	450	0.93	$M_2$		126	79	242	134	219	108		218		192
			c		2.7	4.0	1.8	3.0	1.6	2.9		1.8		1.7
			$n_{2 \text{ Eck}}$		159	189	76	93	161	191		107		192
			$n_{2 \text{ th}}$		159	189	76	93	159	167		107		145
25.309	450	0.63	$M_2$		149	93	287	158	258	127				
			c		2.6	3.8	1.6	2.8	1.5	2.8				
			$n_{2 \text{ Eck}}$		135	160	65	79	137	162				
			$n_{2 \text{ th}}$		135	160	65	79	137	142				
27.903	450	0.59	$M_2$		165	103	317	175	285	141				
			c		2.3	3.5	1.4	2.5	1.4	2.6				
			$n_{2 \text{ Eck}}$		122	145	59	72	124	147				
			$n_{2 \text{ th}}$		122	145	59	72	124	129				
31.481	450	0.46	$M_2$		186	117	358	198	322	159				
			c		2.1	3.1	1.3	2.3	1.2	2.3				
			$n_{2 \text{ Eck}}$		108	129	52	64	110	130				
			$n_{2 \text{ th}}$		108	129	52	64	110	114				
34.708	450	0.43	$M_2$	63	206	129	395	219	356	176				
			c	5.6	1.9	2.8	1.1	2.0	1.1	2.1				
			$n_{2 \text{ Eck}}$	114	98	117	47	58	100	118				
			$n_{2 \text{ th}}$	114	98	117	47	58	100	103				
40.741	450	0.28	$M_2$	74	242	152								
			c	5.3	1.8	2.6								
			$n_{2 \text{ Eck}}$	97	84	99								
			$n_{2 \text{ th}}$	97	84	99								
44.917	450	0.27	$M_2$	82	267	168								
			c	4.8	1.6	2.4								
			$n_{2 \text{ Eck}}$	88	76	90								
			$n_{2 \text{ th}}$	88	76	90								
49.444	450	0.21	$M_2$	91	295	186								
			c	4.4	1.5	2.2								
			$n_{2 \text{ Eck}}$	80	69	82								
			$n_{2 \text{ th}}$	80	69	82								
54.513	450	0.20	$M_2$	100	325	205								
			c	4.0	1.3	2.0								
			$n_{2 \text{ Eck}}$	73	63	74								
			$n_{2 \text{ th}}$	72	63	74								
62.500	378	0.13	$M_2$	116										
			c	2.9										
			$n_{2 \text{ Eck}}$	63										
			$n_{2 \text{ th}}$	63										
68.906	417	0.13	$M_2$	128										
			c	2.9										
			$n_{2 \text{ Eck}}$	57										
			$n_{2 \text{ th}}$	57										

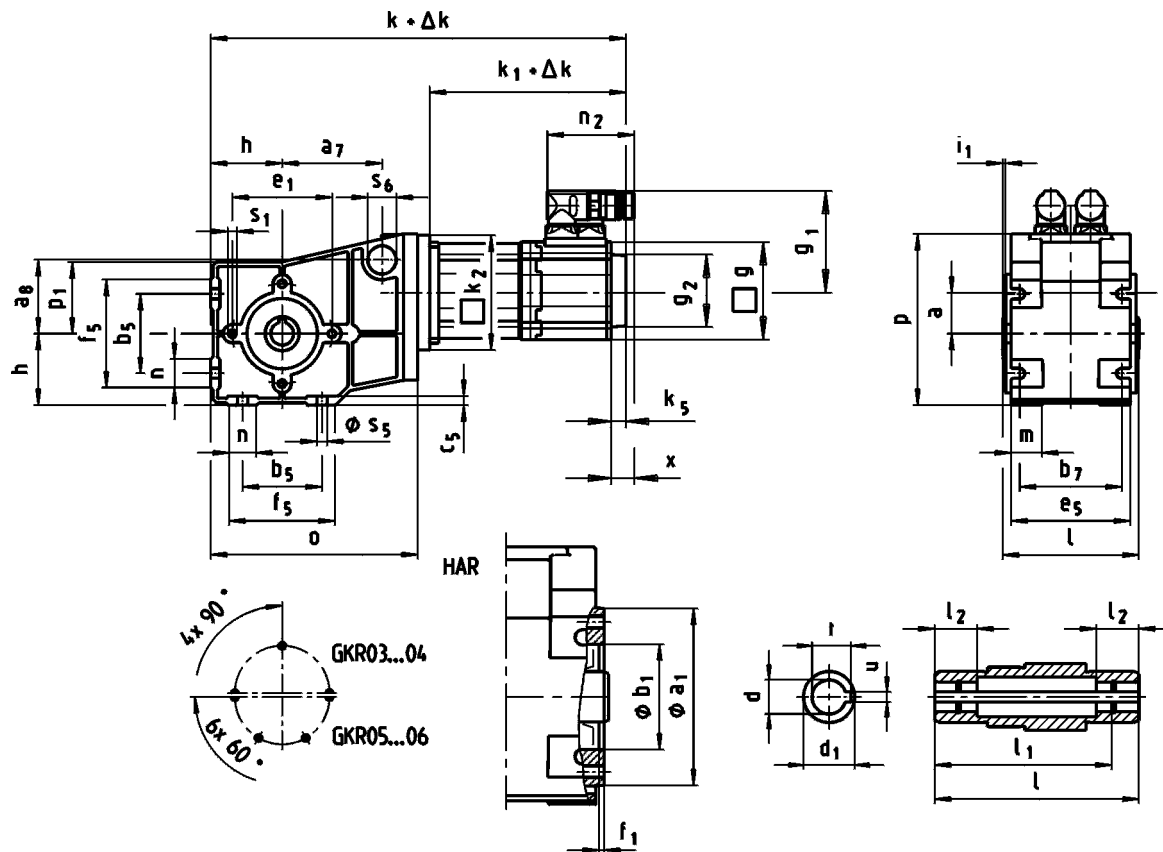
$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKR [mm]

## GKR□□-2S (MCS)

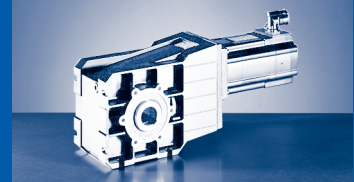


### GKR□□-2S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKR03...	k	294	324	354												
GKR04...	k	331	361	391	383	403	423	463								
GKR05...	k	384	414	444	437	457	477	517	454		494			534		
GKR06...	k	436	466	496	488	508	528	568	505		545			585		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91				118				145 <sup>2)</sup>			
...RSO	g	62				89				116						
	$k_5$	0				13				14						
	$g_2$	□ 62				Ø 67				Ø 72						
	$g_1$	76				90				105						
	$n_2$	64				78										
	x	21								18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKR05: 12DC20 ... 12LC41



### GKR□□-2S H□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32
GKR06...	k	521		561		601		641	
...RSO B0 <sup>1)</sup>	Δ k	0							
...RSO P□ <sup>1)</sup>	Δ k	28							
	k <sub>1</sub>	201		241		281		321	
	k <sub>2</sub>	145							
	g	143							
...RSO	k <sub>5</sub>	24							
	g <sub>2</sub>	Ø 78							
	g <sub>1</sub>	116				147		116	147
	n <sub>2</sub>	78				94		78	94
	x	16				38		16	38

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

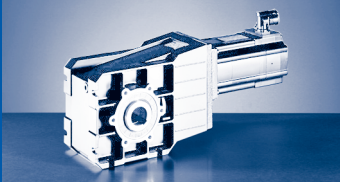
### GKR□□-2S H□R

	o	p	p <sub>1</sub>	h	a	a <sub>7</sub>	a <sub>8</sub>	s <sub>6</sub>
GKR03...	142	117	48	50	29	66	39	25x12
GKR04...	189	151	63	63	36	88	65	25x17
GKR05...	251	181	82	80	40	-	-	-
GKR06...	307	226	100	100	51	-	-	-

	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	m	n	s <sub>5</sub>
GKR03...	60	75	7	90	80	22	20	6.6
GKR04...	70	90	8	105	95	28	25	9
GKR05...	100	100	11	115	138	27	48	
GKR06...	120	125	12	145	164	32	53	11

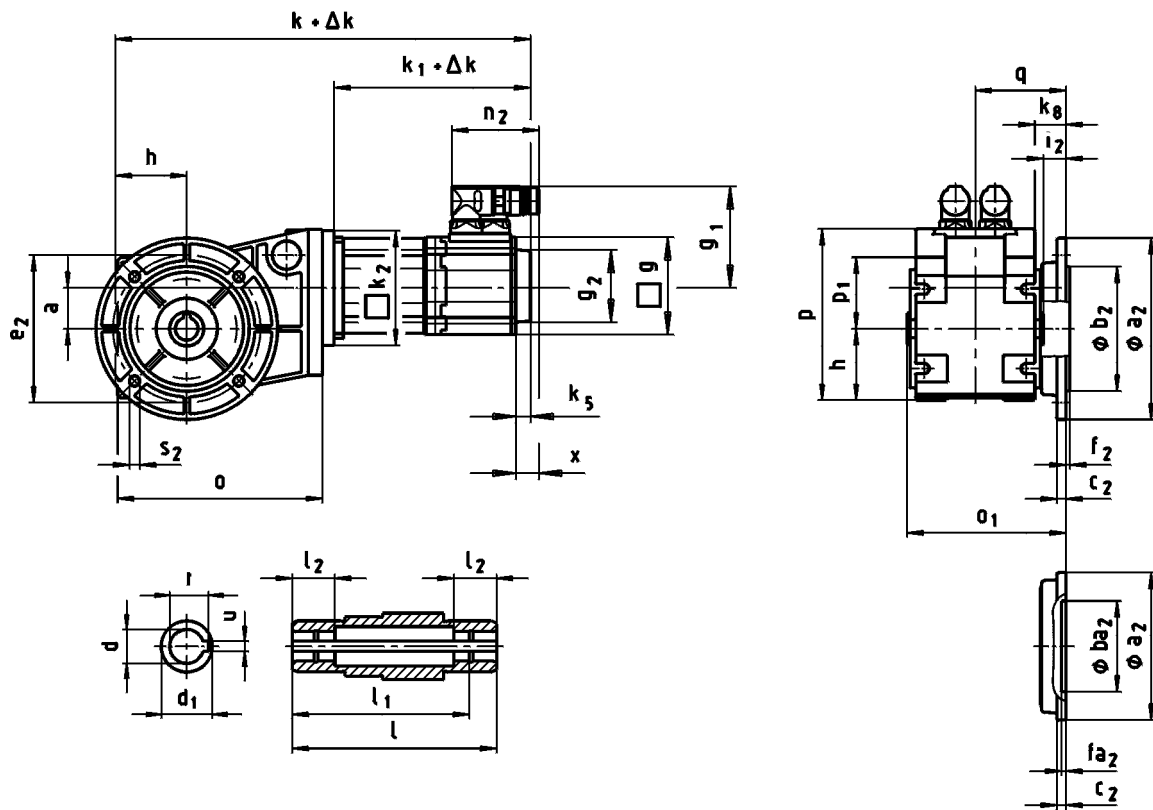
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7					JS9	+0,2		J7				
GKR03...	18	100	30	85	22	6	20.8	85	55	70	2.5	2.5	M6x12
	20						22.8						
GKR04...	25	120	35	105	25	8	27 <sup>2)</sup>	104	62	88	3	4	M8x16
	30						33.3						
GKR05...	35	143	50	127	30	10	38.3	116	80	100	4	4	M8x15
	40						43.3						
GKR06...	45	170	65	150	30	14	48.8	140	100	120	4	5	M10x22

<sup>2)</sup> DIN 6885/3



# GKR [mm]

## GKR□□-2S (MCS)

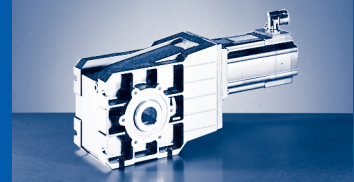


### GKR□□-2S HAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GKR03...	k	294	324	354													
GKR04...	k	331	361	391	383	403	423	463									
GKR05...	k	384	414	444	437	457	477	517	454		494			534			
GKR06...	k	436	466	496	488	508	528	568	505		545			585			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91								118		145 <sup>2)</sup>		
	g	62			89								116				
	$k_5$	0			13								14				
	$g_2$	□ 62			Ø 67								Ø 72				
	$g_1$	76			90								105				
	$n_2$	64							78								
	x				21								18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKR05: 12DC20 ... 12LC41



### GKR□□-2S HAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32
GKR06...	k	521		561		601		641	
...RSO B0 <sup>1)</sup>	Δ k	0							
...RSO P□ <sup>1)</sup>	Δ k	28							
	k <sub>1</sub>	201		241		281		321	
	k <sub>2</sub>	145							
	g	143							
...RSO	k <sub>5</sub>	24							
	g <sub>2</sub>	Ø 78							
	g <sub>1</sub>	116				147		116	147
	n <sub>2</sub>	78				94		78	94
	x	16				38		16	38

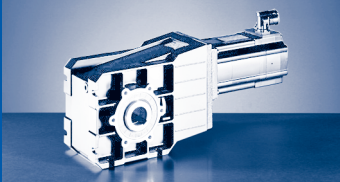
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GKR□□-2S HAK

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	k <sub>8</sub>
GKR03...	142	130	117	48	50	29	80	35
GKR04...	189	140	151	63	63	36		28
GKR05...	251	177	181	82	80	40	105	48
GKR06...	307	212	226	100	100	51	126.5	54

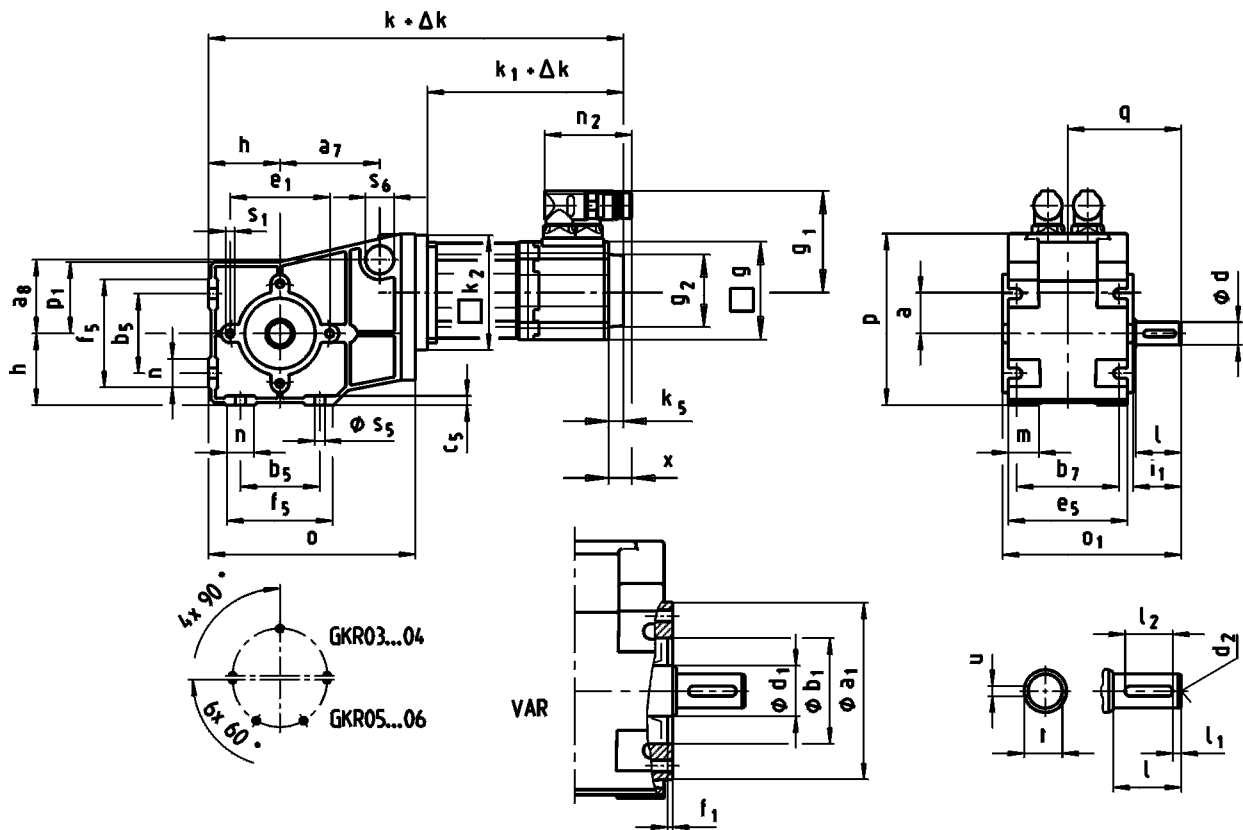
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	ba <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	fa <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7					JS9	+0,2		j7	H7						4x90°
GKR03...	18	100	30	85	22	6	20.8	110	-	60	8	87	-	4	30	9
	20						120	35	105	25		8	27 <sup>2)</sup>	120		80
GKR04...	25	143	50	127	25	8	33.3	160	110	-	12	130	3.5	-	20	9
GKR05...	30						35	10	38.3	200		130		165		11
GKR06...	40	170	65	150	30	12	43.3	250	180		12	215	4		41.5	11
	45						14	48.8	250	180		215		4		14

<sup>2)</sup> DIN 6885/3



# GKR [mm]

## GKR□□-2S (MCS)



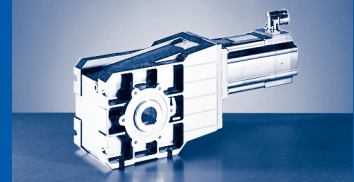
### GKR□□-2S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKR03...	k	294	324	354											
GKR04...	k	331	361	391	383	403	423	463							
GKR05...	k	384	414	444	437	457	477	517	454			494		534	
GKR06...	k	436	466	496	488	508	528	568	505			545		585	
...RSO B0 <sup>1)</sup>	$\Delta k$	0													
...RSO P□ <sup>2)</sup>	$\Delta k$	19			20										
	k <sub>1</sub>	132	162	192	183	203	223	263	188			228			268
	k <sub>2</sub>	66			91					118			145 <sup>2)</sup>		
	g	62			89					116					
...RSO	k <sub>5</sub>	0			13					14					
	g <sub>2</sub>	□ 62			Ø 67					Ø 72					
	g <sub>1</sub>	76			90					105					
	n <sub>2</sub>	64								78					
	x				21					18					

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKR05: 12DC20 ... 12LC41





### GKR□□-2S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32
GKR06...	k	521		561		601		641	
...RSO B0 <sup>1)</sup>	Δ k	0							
...RSO P□ <sup>1)</sup>	Δ k	28							
	k <sub>1</sub>	201		241		281		321	
	k <sub>2</sub>	145							
	g	143							
...RSO	k <sub>5</sub>	24							
	g <sub>2</sub>	Ø 78							
	g <sub>1</sub>	116				147		116	147
	n <sub>2</sub>	78				94		78	94
	x	16				38		16	38

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

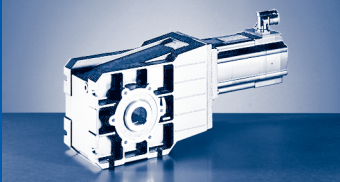
### GKR□□-2S V□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	a <sub>7</sub>	a <sub>8</sub>	s <sub>6</sub>
GKR03...	142	138	117	48	50	29	90	66	39	25x12
GKR04...	189	158	151	63	63	36	100	88	65	25x17
GKR05...	251	199	181	82	80	40	131.5	-	-	-
GKR06...	307	235	226	100	100	51	155	-	-	-

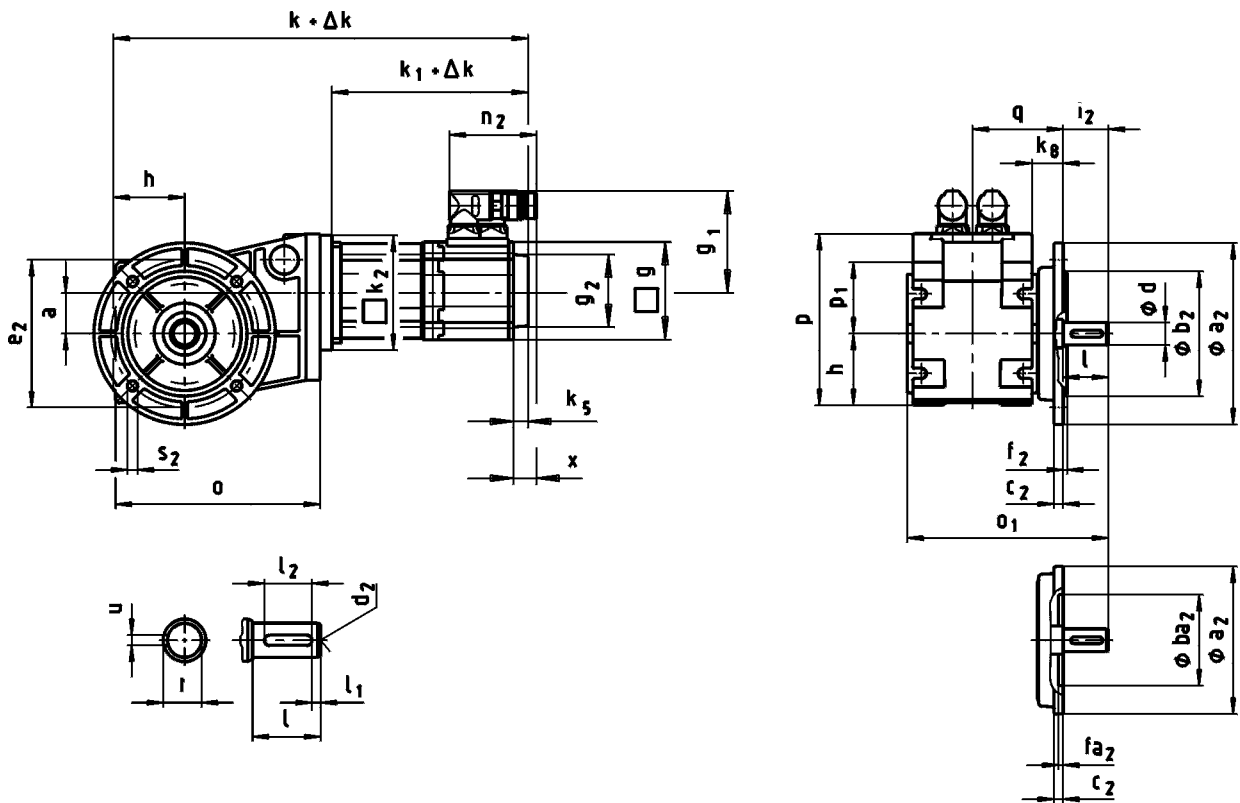
	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	m	n	s <sub>5</sub>
GKR03...	60	75	7	90	80	22	20	6.6
GKR04...	70	90	8	105	95	28	25	9
GKR05...	100	100	11	115	138	27	48	
GKR06...	120	125	12	145	164	32	53	11

	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
GKR03...	20	40	30	5	28	M6	6	22.5	85	J7 55	70	2.5	42.5	M6x12
GKR04...									104	62	88	3		M8x16
GKR05...	30	60	50	6	45	M10	8	33	116	80	100	4	64	M8x15
GKR06...	35	70	65	7	56	M12	10	38	140	100	120	4	75	M10x22

d ≤ 50 mm: k6; d > 50 mm: m6



# GKR [mm] GKR□□-2S (MCS)

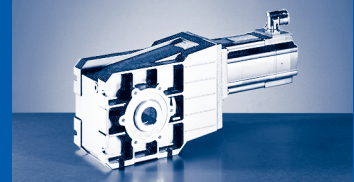


## GKR□□-2S VAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKR03...	k	294	324	354											
GKR04...	k	331	361	391	383	403	423	463							
GKR05...	k	384	414	444	437	457	477	517	454			494			534
GKR06...	k	436	466	496	488	508	528	568	505			545			585
...RSO B0 <sup>1)</sup>	Δ k	0													
...RSO P□ <sup>1)</sup>	Δ k	19			20										
	k <sub>1</sub>	132	162	192	183	203	223	263	188		228		268		
	k <sub>2</sub>	66			91				118					145 <sup>2)</sup>	
	g	62			89				116						
...RSO	k <sub>5</sub>	0			13				14						
	g <sub>2</sub>	□ 62			Ø 67				Ø 72						
	g <sub>1</sub>	76			90				105						
	n <sub>2</sub>	64							78						
	x				21				18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKR05: 12DC20 ... 12LC41



### GKR□□-2S VAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32
GKR06...	k	521		561		601		641	
...RSO B0 <sup>1)</sup>	Δ k	0							
...RSO P□ <sup>1)</sup>	Δ k	28							
	k <sub>1</sub>	201		241		281		321	
	k <sub>2</sub>	145							
	g	143							
...RSO	k <sub>5</sub>	24							
	g <sub>2</sub>	Ø 78							
	g <sub>1</sub>	116				147		116	147
	n <sub>2</sub>	78				94		78	94
	x	16				38		16	38

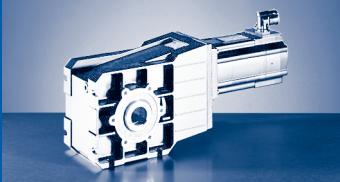
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GKR□□-2S VAK

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	k <sub>8</sub>
GKR03...	142	168	117	48	50	29	80	35
GKR04...	189	178	151	63	63	36	80.5	28
GKR05...	251	233	181	82	80	40	105	48
GKR06...	307	277	226	100	100	51	126.5	54

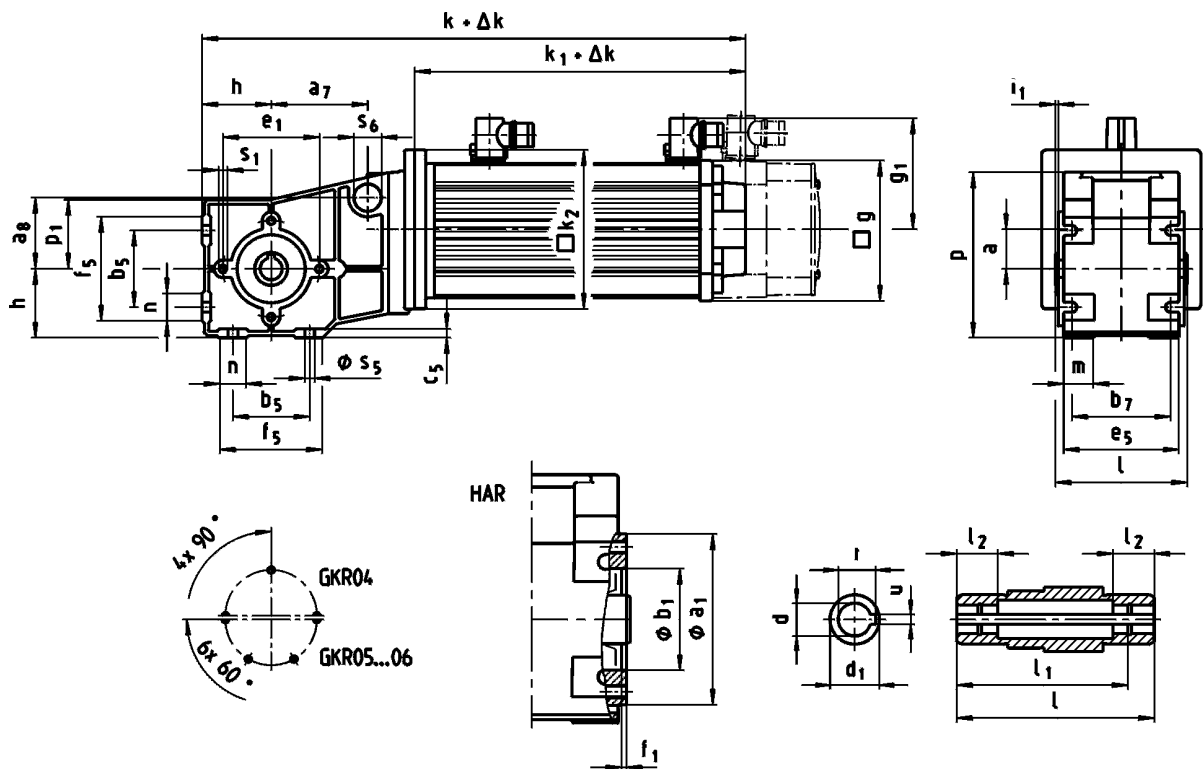
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	ba <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	fa <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7	H7						4x90°
GKR03...	20	40	5	28	M6	6	22.5	110	-	60	8	87	-	4	40	9
GKR04...								120	80	100		3	7			
GKR05...	30	60	6	45	M10	8	33	160	110	-	12	130	3.5	-	60	9
GKR06...								200	130	165		11				
	35	70	7	56	M12	10	38	250	180			215	4		70	14

d ≤ 50 mm: k6; d > 50 mm: m6



# GKR [mm]

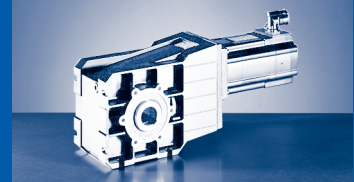
## GKR□□-2A (MCA)



### GKR□□-2A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10
GKR04...	k	459	467	535								
GKR05...	k	512	521	589	571		633					
GKR06...	k	564	572	640	622		684		661		750	
...RSO B0 <sup>1)</sup>	$\Delta k$	0										
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35		
	$k_1$	258	267	335	307		369		346		435	
	$k_2$	145				180						
	g	102	131			142			165			
	$g_1$	90	102			109			118			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



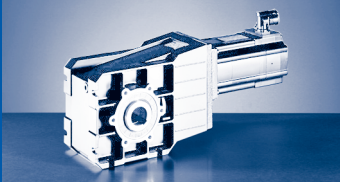
GKR□□-2A H□R

	o	p	p <sub>1</sub>	h	a	a <sub>7</sub>	a <sub>8</sub>	s <sub>6</sub>
GKR04...	189	151	63	63	36	88	65	25x17
GKR05...	251	181	82	80	40	-	-	-
GKR06...	307	226	100	100	51	-	-	-

	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	m	n	s <sub>5</sub>
GKR04...	70	90	8	105	95	28	25	9
GKR05...	100	100	11	115	138	27	48	
GKR06...	120	125	12	145	164	32	53	11

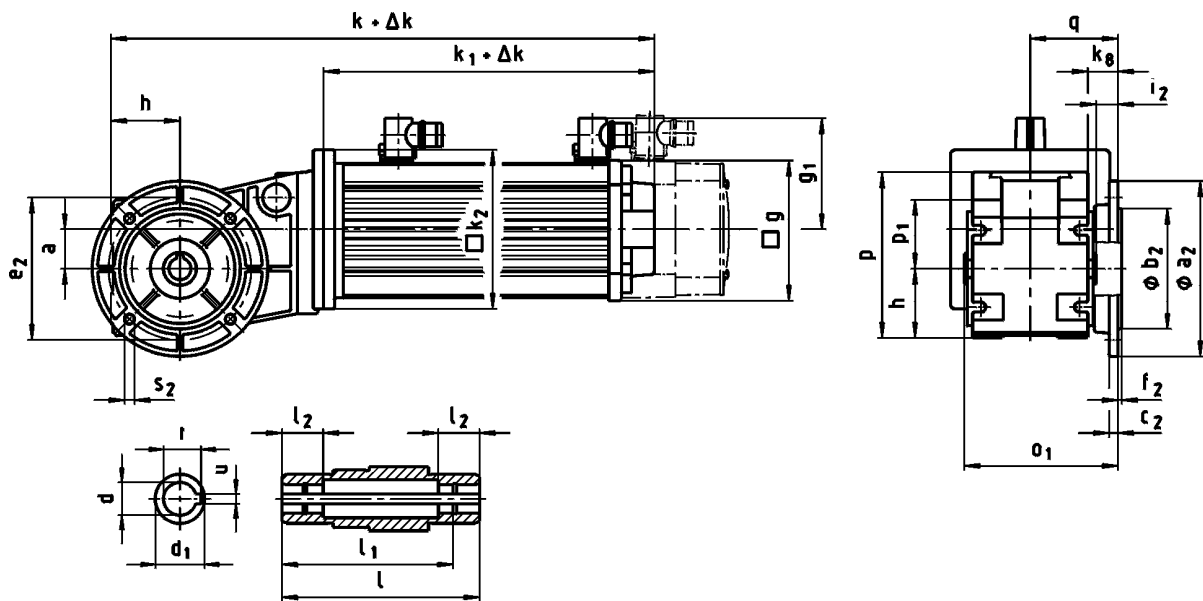
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>	
	H7					JS9	+0,2		J7					
GKR04...	20	120	30	105	25	6	22.8	104	62	88	3	2.5	M8x16	
	25		35			8	27 <sup>1)</sup>							
GKR05...	30	143	50	127		10	33.3	116	80	100		4	4	M8x15
	35					12	38.3							
GKR06...	40	170	65	150	30	14	43.3	140	100	120	5	M10x22		
	45					14	48.8							

<sup>1)</sup> DIN 6885/3



# GKR [mm]

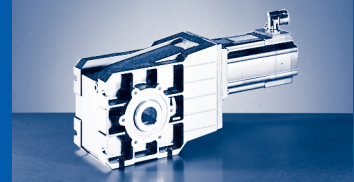
## GKR□□-2A (MCA)



### GKR□□-2A HAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10
GKR04...	k	459	467	535								
GKR05...	k	512	521	589	571		633					
GKR06...	k	564	572	640	622		684	661		750		
...RSO B0 <sup>1)</sup>	$\Delta k$	0										
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35		33				35			
	$k_1$	258	267	335	307		369	346		435		
	$k_2$	145				180						
	g	102	131		142				165			
	$g_1$	90	102		109				118			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

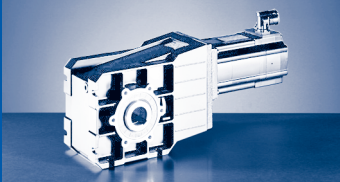


GKR□□-2A HAK

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	k <sub>8</sub>
GKR04...	189	140	151	63	63	36	80	28
GKR05...	251	177	181	82	80	40	105	48
GKR06...	307	212	226	100	100	51	126.5	54

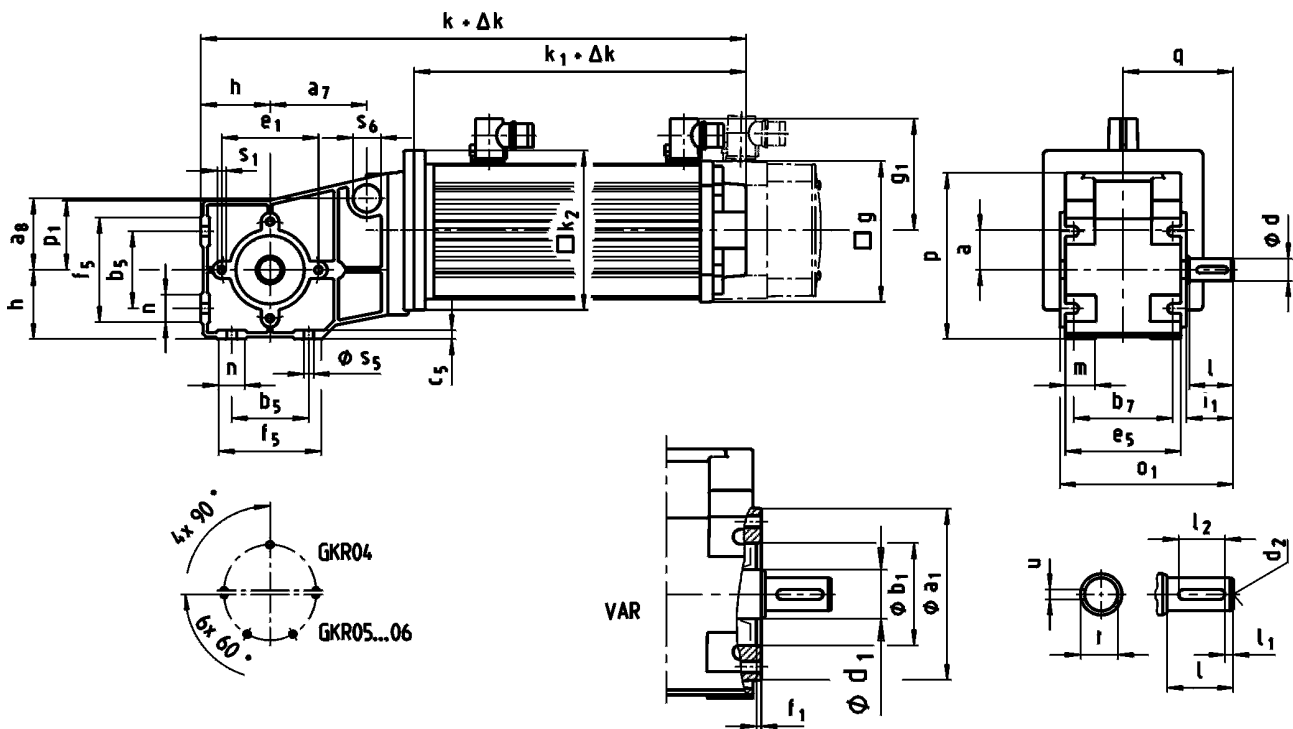
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7					JS9	+0,2		j7					4x90°
GKR04...	20	120	30	105	25	6	22.8	120	80	8	100	3	20	7
	25		35			8	27 <sup>1)</sup>	160	110		130	9		
GKR05...	30	143	50	127		10	38.3	200	130	12	165	3.5	33.5	11
	35					12	43.3							
GKR06...	40	170	65	150	30	14	48.8	250	180	215	4	41.5	14	
	45													

<sup>1)</sup> DIN 6885/3



# GKR [mm]

## GKR□□-2A (MCA)

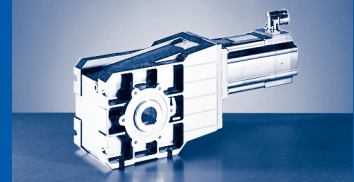


### GKR□□-2A V□R ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10
GKR04...	k	459	467	535								
GKR05...	k	512	521	589	571		633					
GKR06...	k	564	572	640	622		684	661		750		
...RSO B0 <sup>1)</sup>	$\Delta k$	0										
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35			
	$k_1$	258	267	335	307		369	346		435		
	$k_2$	145					180					
	g	102	131			142			165			
	$g_1$	90	102			109			118			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





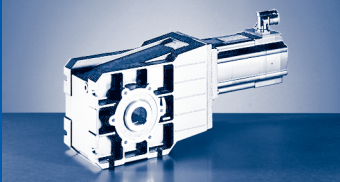
GKR□□-2A V□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	a <sub>7</sub>	a <sub>8</sub>	s <sub>6</sub>
GKR04...	189	158	151	63	63	36	100	88	65	25x17
GKR05...	251	199	181	82	80	40	131.5	-	-	-
GKR06...	307	235	226	100	100	51	155	-	-	-

	b <sub>5</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	m	n	s <sub>5</sub>
GKR04...	70	90	8	105	95	28	25	9
GKR05...	100	100	11	115	138	27	48	
GKR06...	120	125	12	145	164	32	53	11

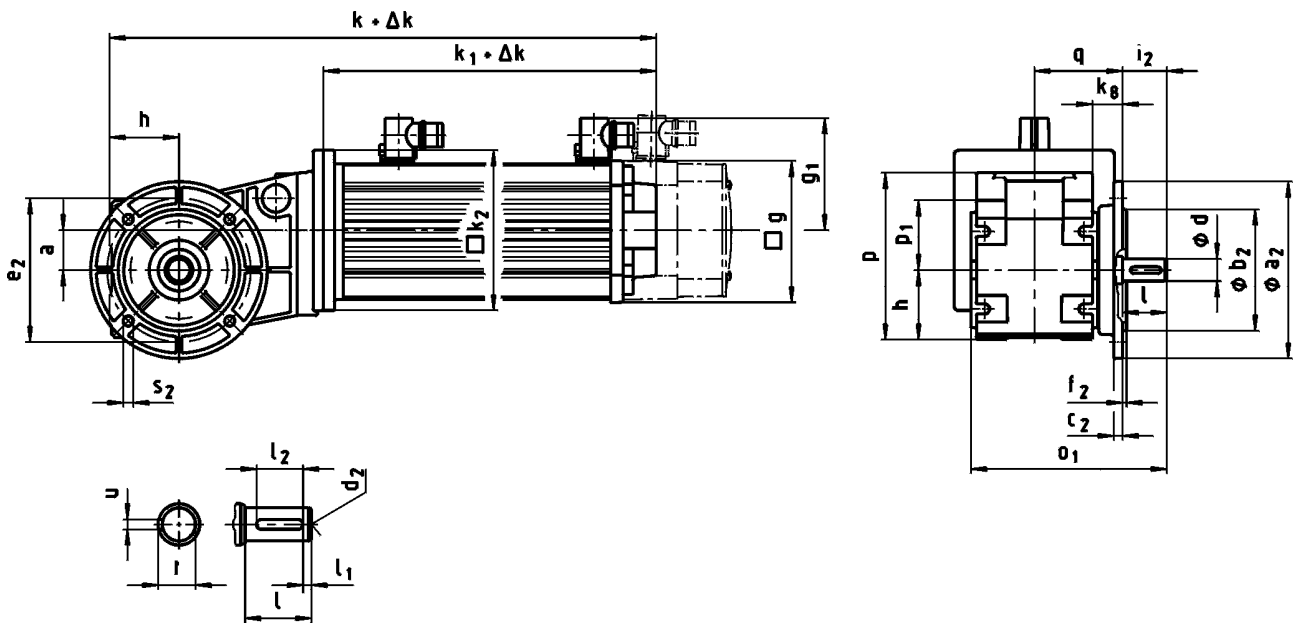
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										J7				
GKR04...	20	40	30	5	28	M6	6	22.5	104	62	88	3	42.5	M8x16
GKR05...	30	60	50	6	45	M10	8	33	116	80	100	4	64	M8x15
GKR06...	35	70	65	7	56	M12	10	38	140	100	120		75	M10x22

d ≤ 50 mm: k6; d > 50 mm: m6



# GKR [mm]

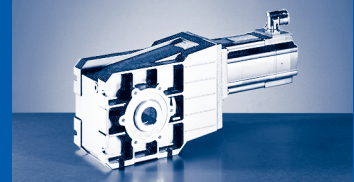
## GKR□□-2A (MCA)



### GKR□□-2A VAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	17N C17 ...F10	17N C35 ...F10
GKR04...	k	459	467	535								
GKR05...	k	512	521	589	571		633					
GKR06...	k	564	572	640	622		684	661			750	
...RSO B0 <sup>1)</sup>	$\Delta k$	0										
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35		
	$k_1$	258	267	335	307		369		346		435	
	$k_2$	145					180					
	g	102	131			142				165		
	g <sub>1</sub>	90	102			109				118		

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



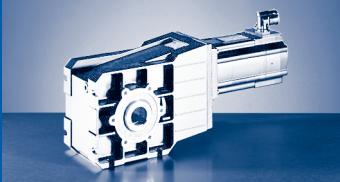
GKR□□-2A VAK

	o	o <sub>1</sub>	p	p <sub>1</sub>	h	a	q	k <sub>8</sub>
GKR04...	189	178	151	63	63	36	80.5	28
GKR05...	251	233	181	82	80	40	105	48
GKR06...	307	277	226	100	100	51	126.5	54

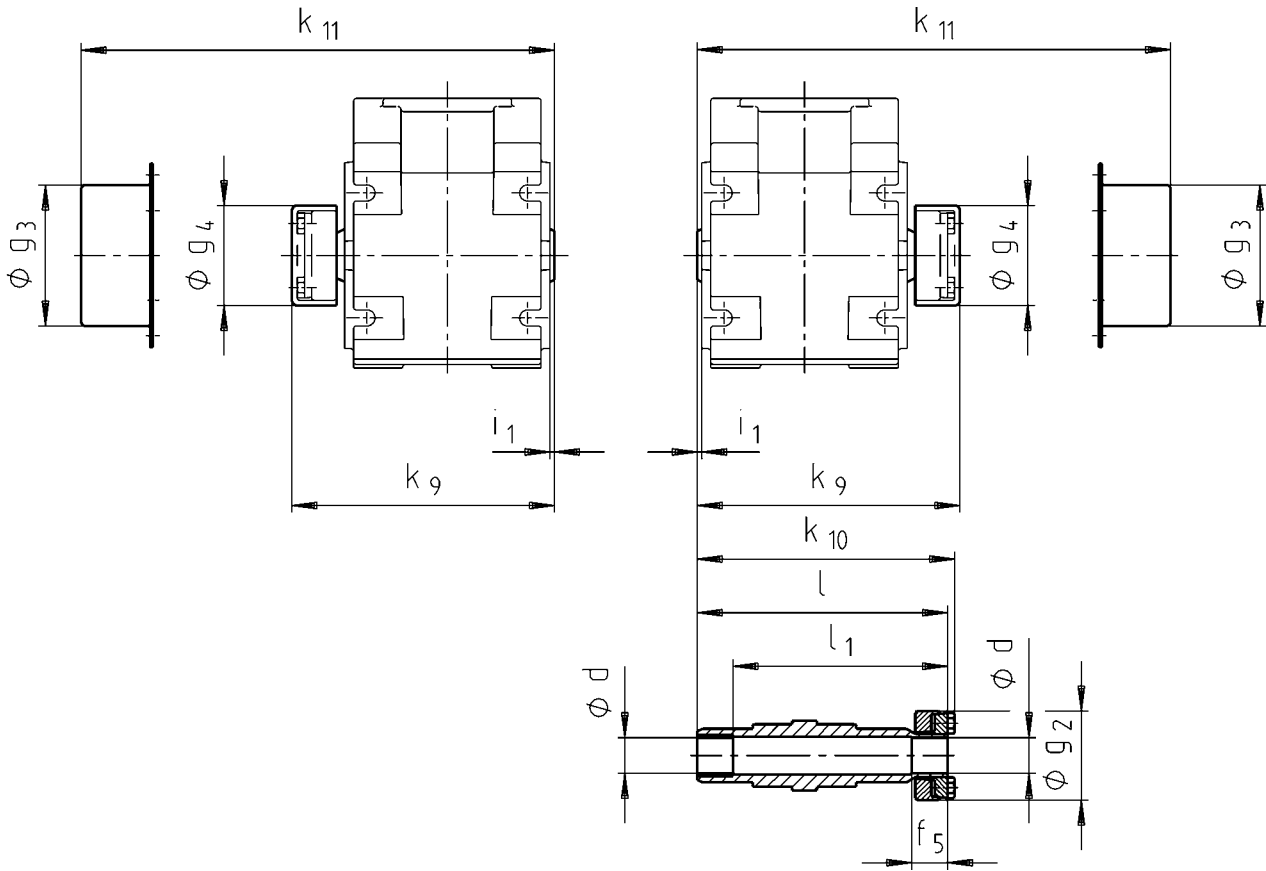
  

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>	
									j7					4x90°	
GKR04...	20	40	5	28	M6	6	22.5	120	80	8	100	3	40	7	
								160	110		130	3.5	60	9	
GKR05...	30	60	6	45	M10	8	33	200	130	12	165			70	11
GKR06...	35	70	7	56	M12	10	38	250	180		215				4

d ≤ 50 mm: k6; d > 50 mm: m6

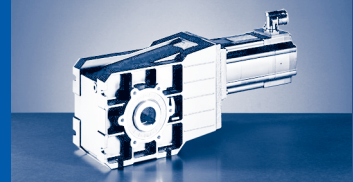


Hollow shaft with shrink disc

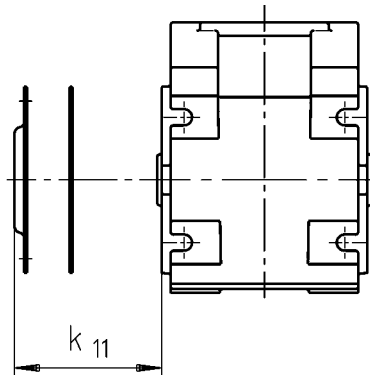


	Machine shaft	Hollow shaft with shrink disc					Protective cap		Cover		
	d	i <sub>1</sub>	k <sub>10</sub>	g <sub>2</sub>	l	l <sub>1</sub>	f <sub>5</sub>	k <sub>9</sub>	g <sub>4</sub>	k <sub>11</sub>	g <sub>3</sub>
	h6										
GKR03...	20	2.5	124	50	120	100	20	126	54	138	65
GKR04...			144		140	120		146		158	79
GKR05...	30	4	177	80	171	151	28	179	84	182	90
	35				204	174		30		212	94
GKR06...	40	5	210	90	204	174	30	212	94	214	100

- ▶ Ensure that the strength of the shaft material is adequate in shrink disc designs. When using typical steels (e.g. C45, 42CrMo4), the torques listed in the selection tables can be used without restriction. When using material that is considerably weaker, please consult us. Medium surface roughness Rz must not exceed 15 µm (turning operation is sufficient).

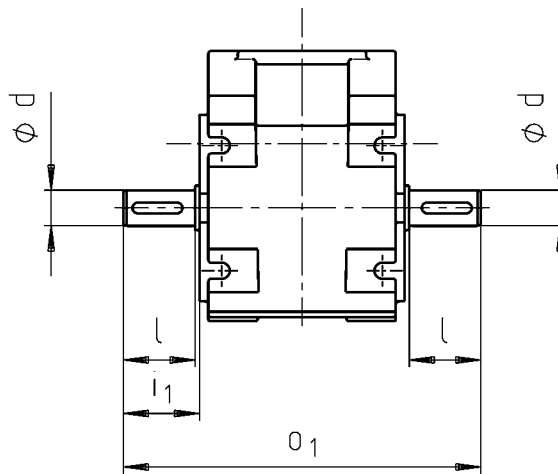


Hoseproof hollow shaft cover

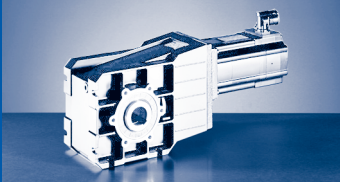


	Cover including seal
	$k_{11}$
GKR03...	9
GKR04...	10
GKR05...	11

Gearbox with 2nd output shaft end

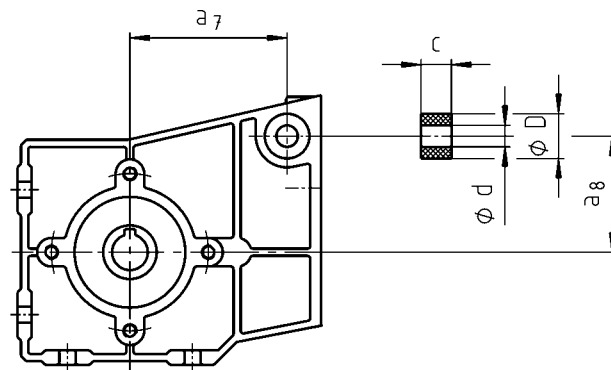


	d	l	$i_1$	$o_1$
GKR03...	20	40	42.5	180
GKR04...				200
GKR05...	30	60	64	263
GKR06...	35	70	75	310

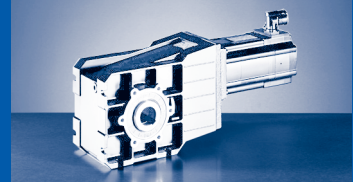


## GKR & [mm]

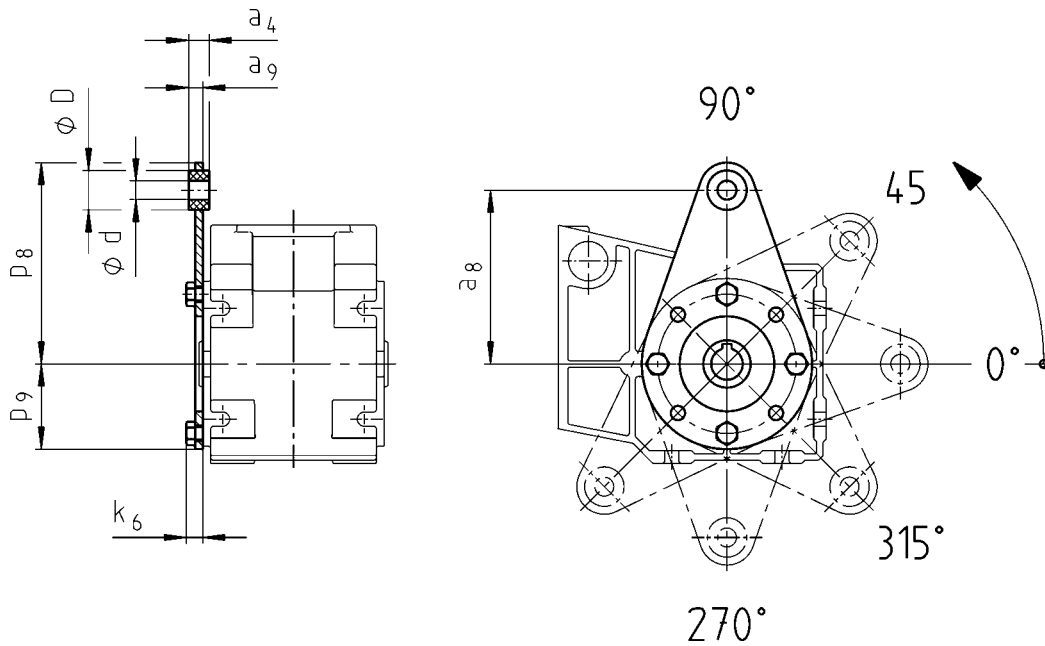
### Rubber buffer for torque plate



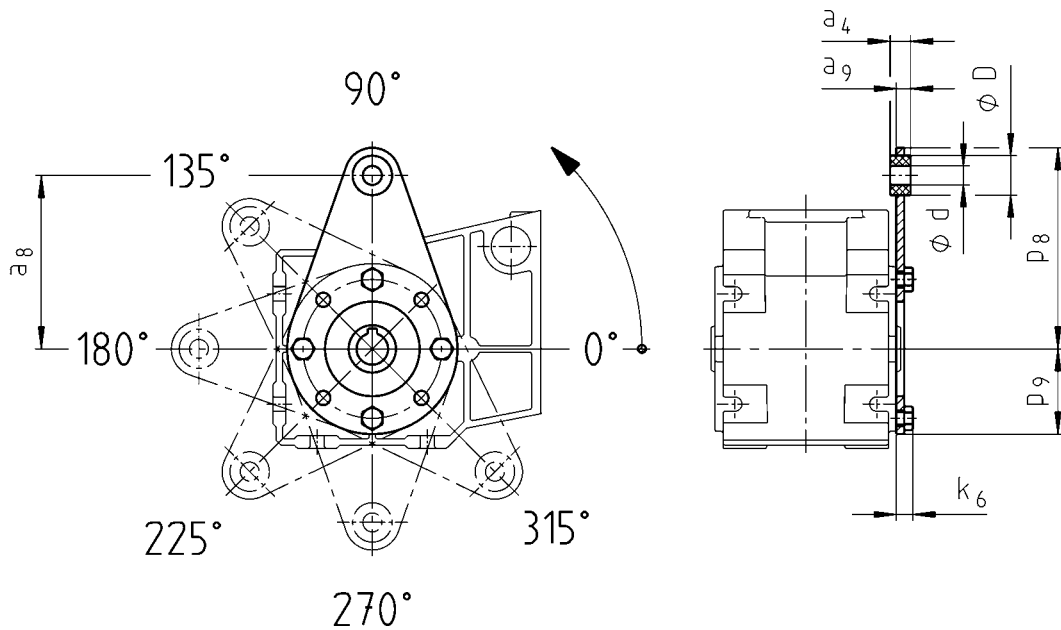
	d	D	c	a <sub>7</sub>	a <sub>8</sub>
GKR03...	10	25	13	66	39
GKR04...				88	65



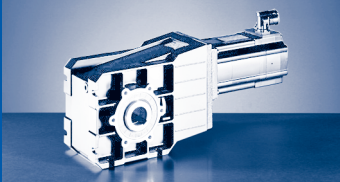
**GKR03/04**  
Torque plate at threaded hole circle in position 3



**GKR03/04**  
Torque plate at threaded hole circle in position 5



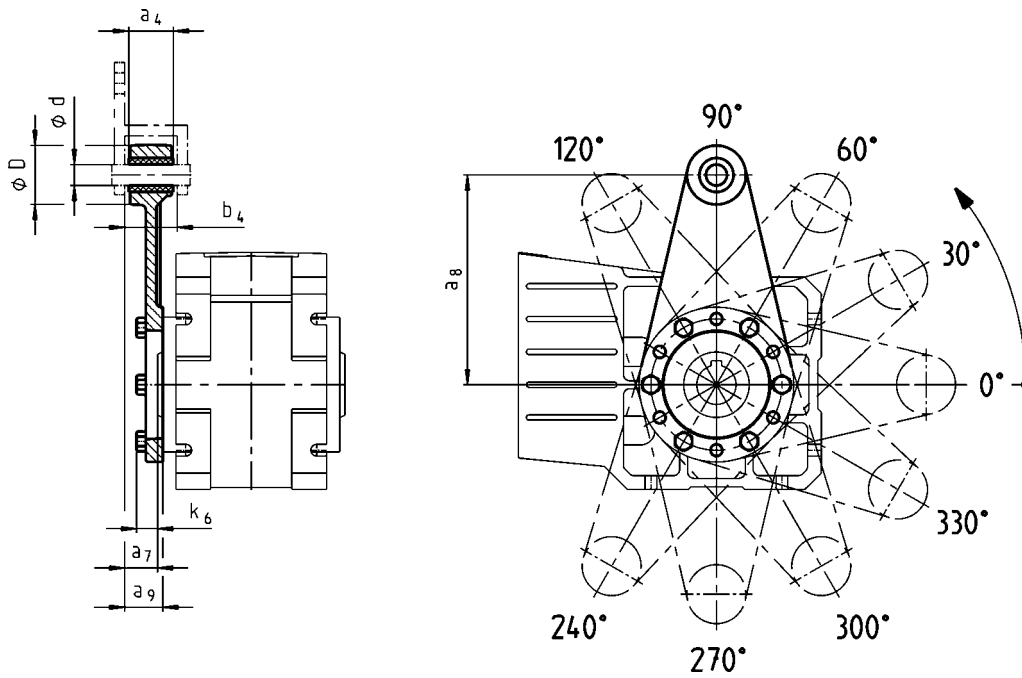
	a <sub>4</sub>	a <sub>8</sub>	a <sub>9</sub>	d	D	k <sub>6</sub>	P <sub>8</sub>	P <sub>9</sub>
GKR03...	12	100	8	8	20	9	115	42
GKR04...	13	110	9	10	25	11	128	52



# GKR & [mm]

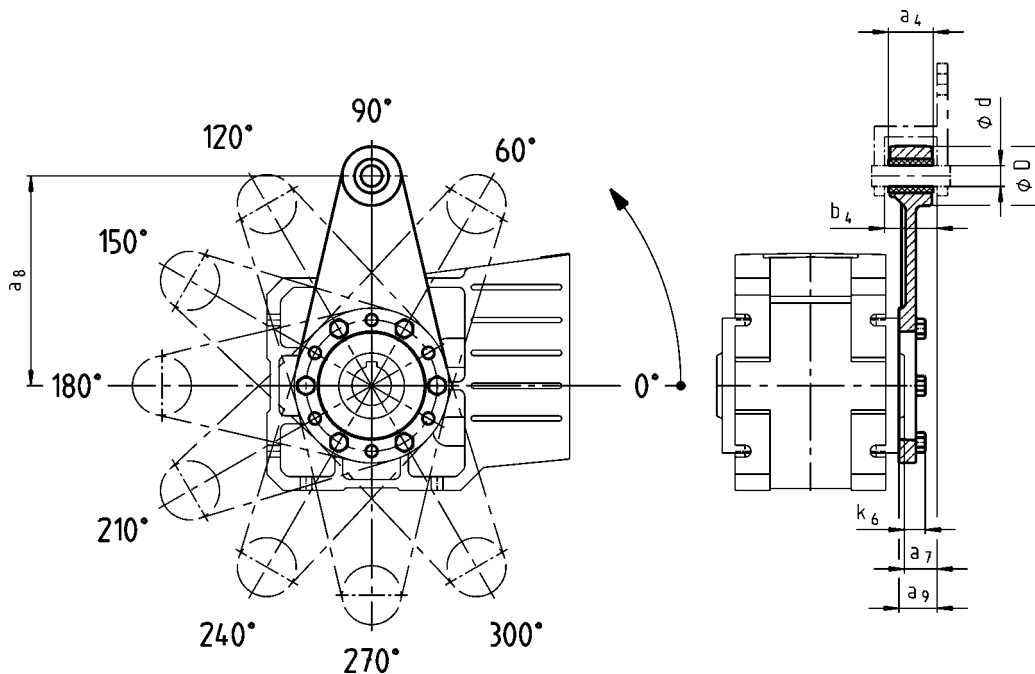
## GKR05/06

Torque plate at threaded hole circle in position 3



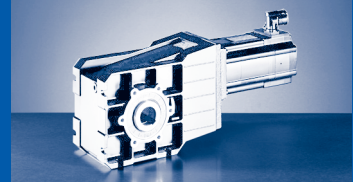
## GKR05/06

Torque plate at threaded hole circle in position 5

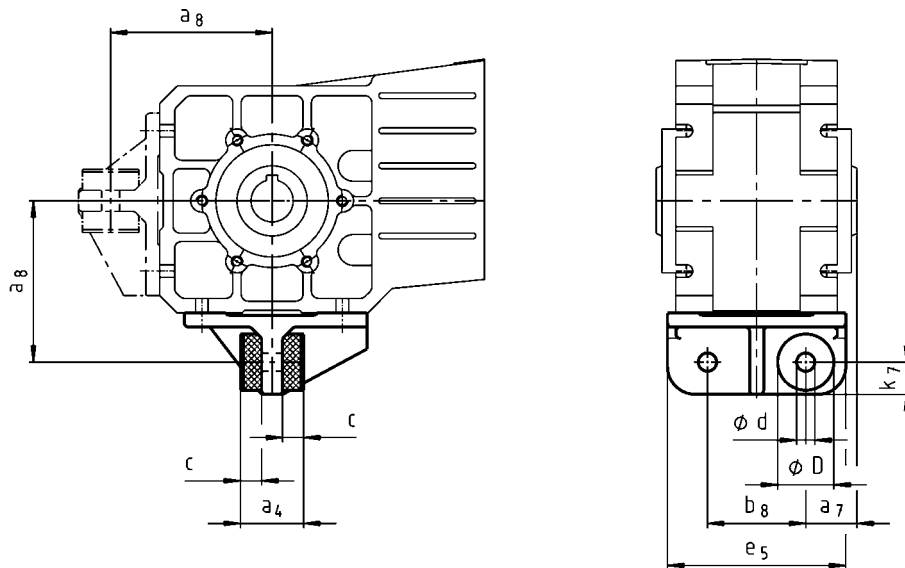


	Installation space							
	a <sub>7</sub>	b <sub>4</sub>	a <sub>4</sub>	a <sub>8</sub>	a <sub>9</sub>	d	D	k <sub>6</sub>
GKR05...	23.5	38.5	34	160	27.5	16	45	15
GKR06...	28	44.5	40	200	33	20	50	18



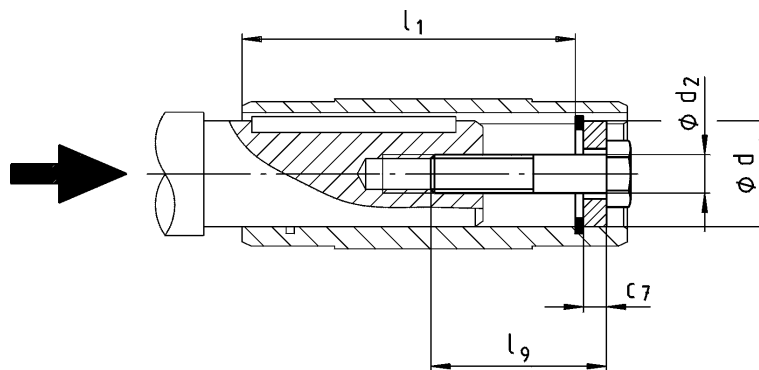


**GKR05 / 06**  
Torque plate at casing foot in position 4 or 6

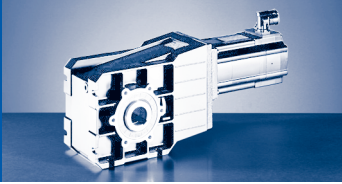


	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	b <sub>8</sub>	c	d	D	e <sub>5</sub>	k <sub>7</sub>
GKR05...	45	36.5	115	70	15	13	40	127	25
GKR06...	72	45	145	80	27	17	50	145	28

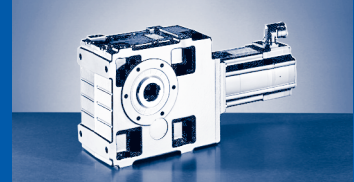
**Mounting set for hollow shaft circlip**  
Proposed design for auxiliary tools



	Hollow shaft		Hollow shaft circlip mounting set (Assembly auxiliaries)		
	d	l <sub>1</sub>	d <sub>2</sub>	l <sub>9</sub>	c <sub>7</sub>
	H7				
GKR03...	18	85	M6	40	4
GKR04...	20				
GKR05...	25	127	M10	50	5
	30				6
GKR06...	35	150	M12	60	7
	40				8
	45				9



GKR & [mm]



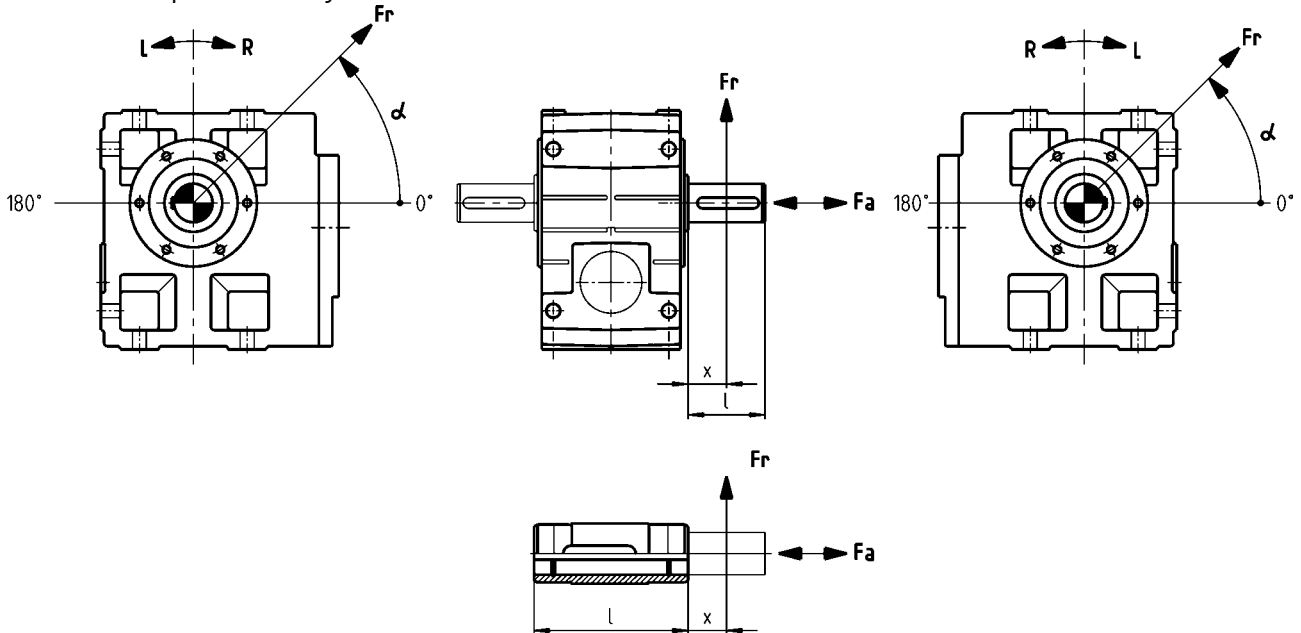
**Permissible radial force**

$$Fr_{zul} = \min(f_w \times f_{\alpha} \times Fr_{Tab}; f_w \times Fr_{max})$$

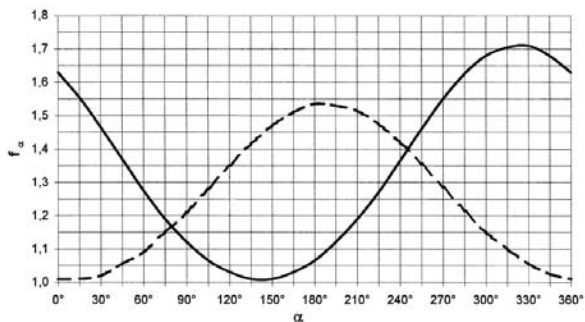
**Permissible axial force**

$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$

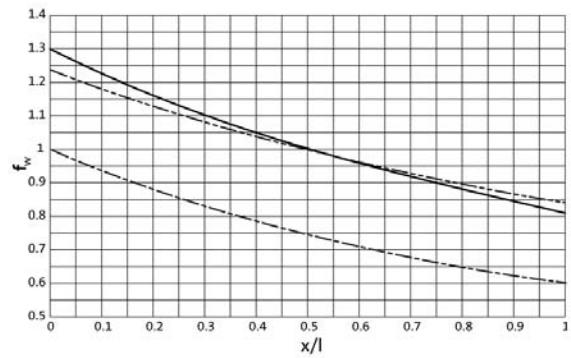
At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office.



**Effective direction factor  $f_{\alpha}$  at output shaft**

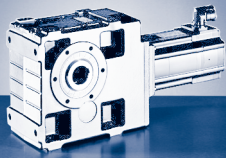


**Additional load factor  $f_w$  at output shaft**



- Direction of rotation R
- - - - Direction of rotation L

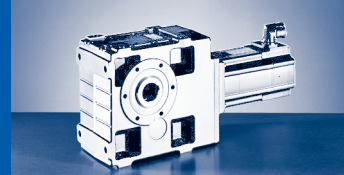
- Solid shaft (V□R)
- - - - Solid shaft with flange (V□K)
- · - · Hollow shaft (H□□)



Solid shaft without flange (V□R)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GKS04-3		GKS05-3/4		GKS06-3/4		GKS07-3/4		GKS09-3/4 <sup>1)</sup>		GKS11-3/4 <sup>1)</sup>		GKS14-3/4	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
630	2400	3300	2200	2800	2700	3500	-	-	-	-	-	-	-	-
400	3000	4200	2800	3500	3700	4440	4000	4900	6200	6500	7100	7000	57900	35000
250	3400	5000	3200	4240	4300	5580	4900	6230	6400	7400	7500	8000	61000	35000
160	3600	5500	3600	5090	4900	6930	5800	7820	7100	8000	8200	9200	64100	35000
100	3600	5500	4100	6160	5300	8710	6600	9940	8400	10500	10000	12000	65000	35000
63	3600	5500	4900	6600	6200	10000	8000	12600	9500	13000	11200	14500	65000	35000
40	3600	5500	5800	6600	7900	10000	9600	14000	11800	17000	13000	18500	65000	35000
25	3600	5500	5800	6600	9000	10000	12000	14000	16000	21000	19000	27000	65000	35000
≤ 16	3600	5500	5800	6600	9000	10000	12000	14000	18000	21000	23000	27000	65000	35000
Fr <sub>max</sub>	3600	-	5800	-	9000	-	12000	-	18000	-	23000	-	65000	-

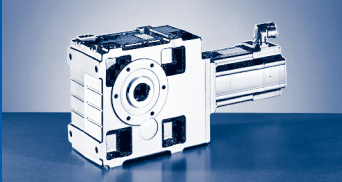
<sup>1)</sup> Reinforced output shaft bearings are available on request for V□R versions.

Solid shaft with flange (V□K)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GKS04-3		GKS05-3/4		GKS06-3/4		GKS07-3/4		GKS09-3/4		GKS11-3/4		GKS14-3/4	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
630	3100	3300	3800	2900	4700	3700	-	-	-	-	-	-	-	-
400	3800	4200	4640	3630	6400	4660	7000	5700	9900	6000	14500	7000	20500	8400
250	4300	4400	5420	4440	7500	5880	8250	7000	10500	6600	16000	7500	23700	10000
160	4600	4400	6280	5420	8800	7320	9630	8500	12000	7600	17600	8500	27200	11500
100	4600	4400	7000	6600	9800	9230	11000	10400	14000	10000	21000	10500	31300	13000
63	4600	4400	7000	6600	10000	10000	13000	11500	15000	12000	24500	13000	35000	15000
40	4600	4400	7000	6600	10000	10000	14000	11500	15000	15000	28000	17500	41000	19000
25	4600	4400	7000	6600	10000	10000	14000	11500	15000	17000	30000	27000	43000	28000
≤ 16	4600	4400	7000	6600	10000	10000	14000	11500	15000	17000	30000	27000	43000	35000
Fr <sub>max</sub>	4600	-	7000	-	10000	-	14000	-	15000	-	30000	-	43000	-



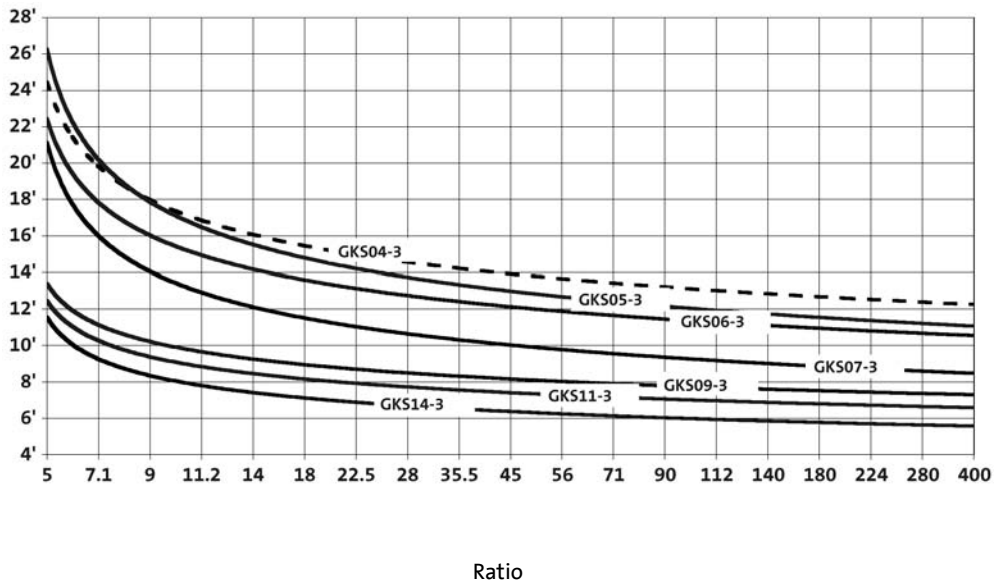
Hollow shaft (H□□)														
Application of force $F_r$ : on hollow shaft end face ( $x = 0$ )														
$F_{a_{Tab}}$ only valid for $F_r = 0$														
	GKS04-3		GKS05-3/4		GKS06-3/4		GKS07-3/4		GKS09-3/4		GKS11-3/4		GKS14-3/4	
$n_2$ [r/min]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]	$F_{r_{Tab}}$ [N]	$F_{a_{Tab}}$ [N]
630	3100	3300	2400	2800	3000	3500	-	-	-	-	-	-	-	-
400	3900	4200	3500	3500	4600	4440	5400	4900	7500	6500	9000	7000	15000	6000
250	4500	5000	4200	4240	5600	5580	6300	6230	8200	7400	10000	8000	15500	8000
160	5100	5500	4630	5090	6400	6930	7400	7820	9400	8000	11000	9200	16500	10000
100	5900	5500	5000	6160	7000	8710	8700	9940	10600	10500	14000	12000	17500	13000
63	6800	5500	6200	6600	8200	10000	10500	12600	12200	13000	16000	14500	18500	16000
40	7000	5500	7300	6600	10400	10000	12500	14000	15500	17000	18500	18500	21000	20000
25	7000	5500	7300	6600	12000	10000	15100	14000	21000	21000	25000	27000	28000	28000
≤ 16	7000	5500	7300	6600	12000	10000	16000	14000	24000	21000	30000	27000	40000	35000
$F_{r_{max}}$	7000	-	7300	-	12000	-	16000	-	24000	-	30000	-	45000	-

- ▶ Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).

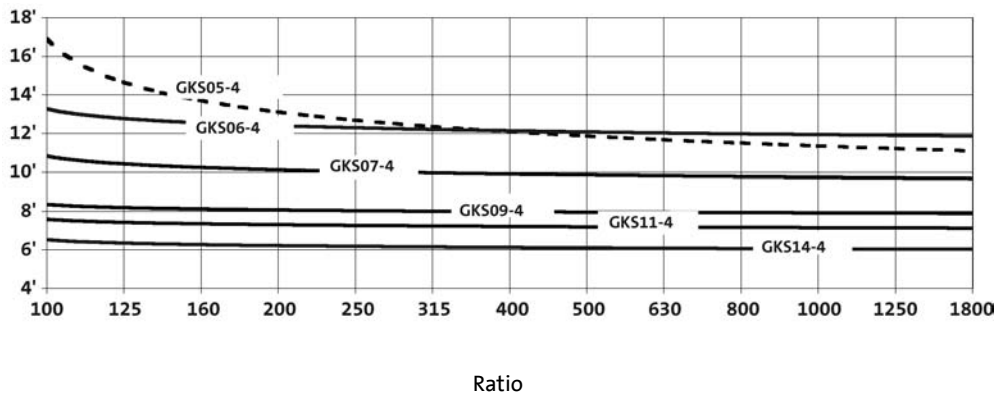


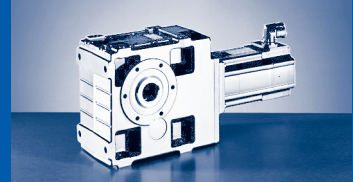
Output backlash in angular minutes

GKS04...14-3



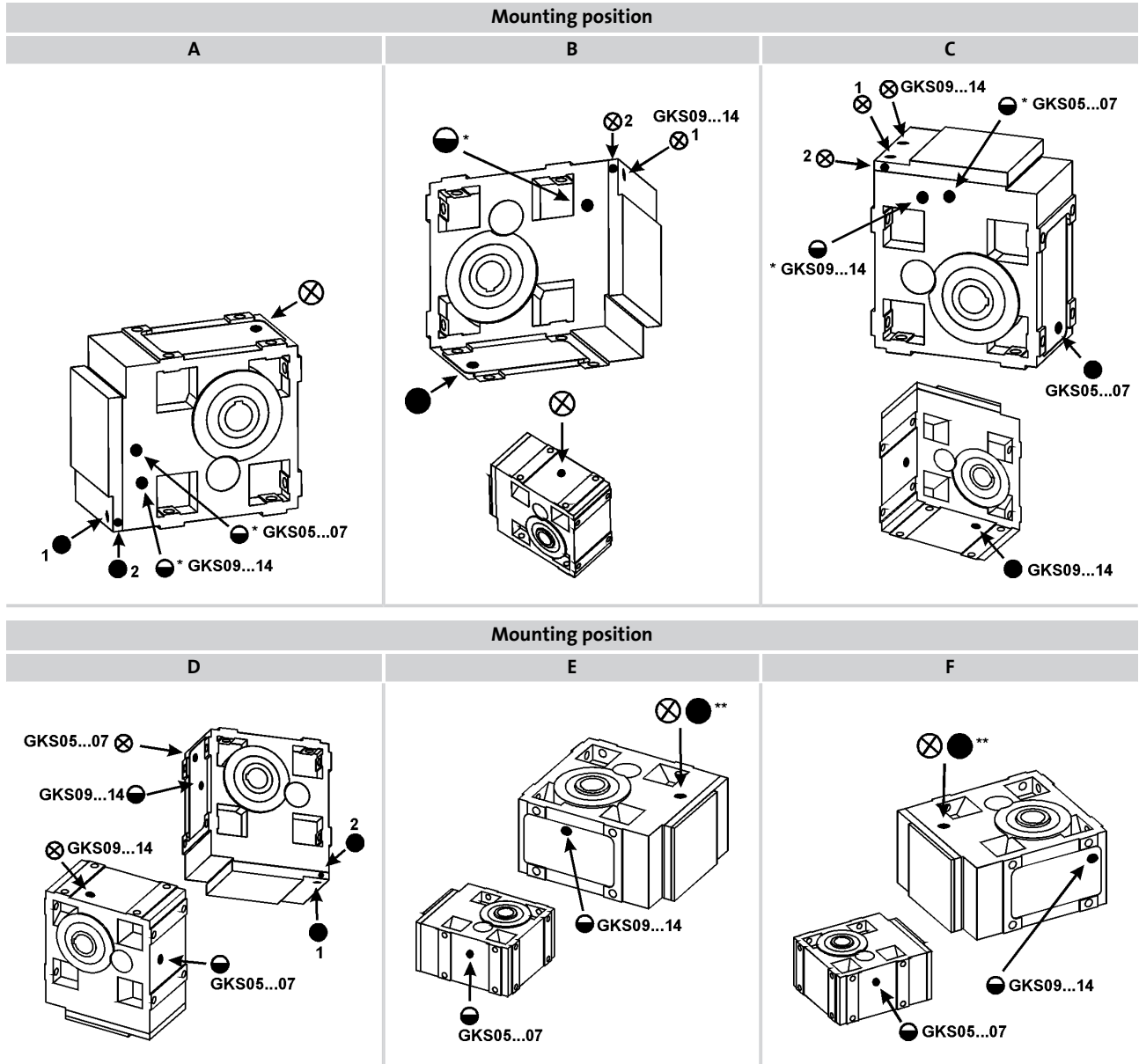
GKS05...14-4





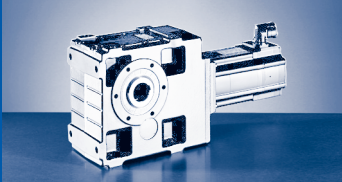
**Position of ventilation, sealing elements and oil control**

**GKS05...14-3**



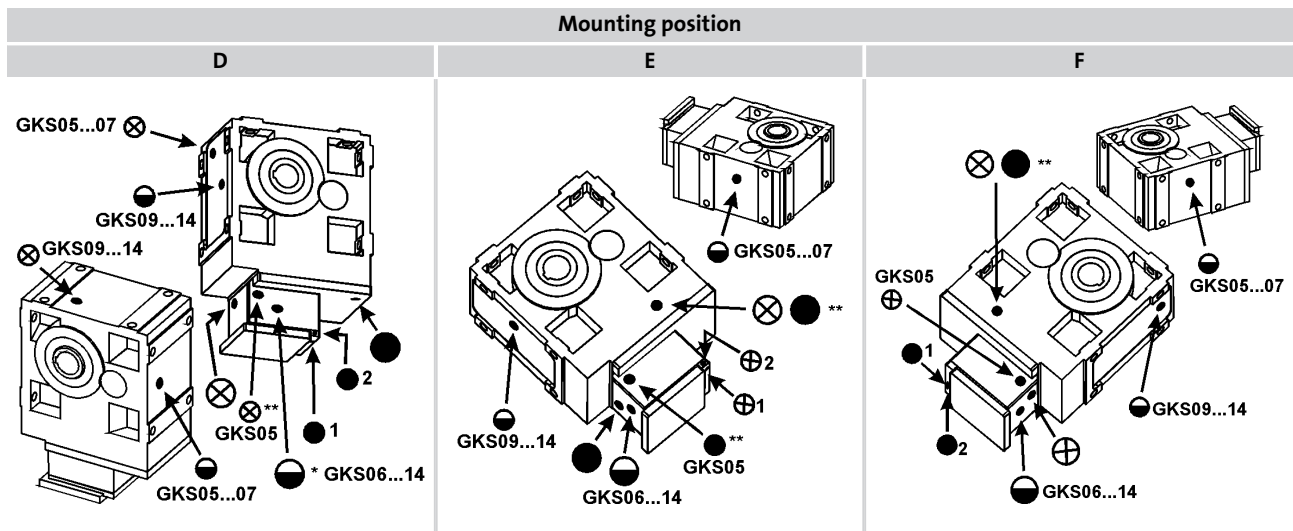
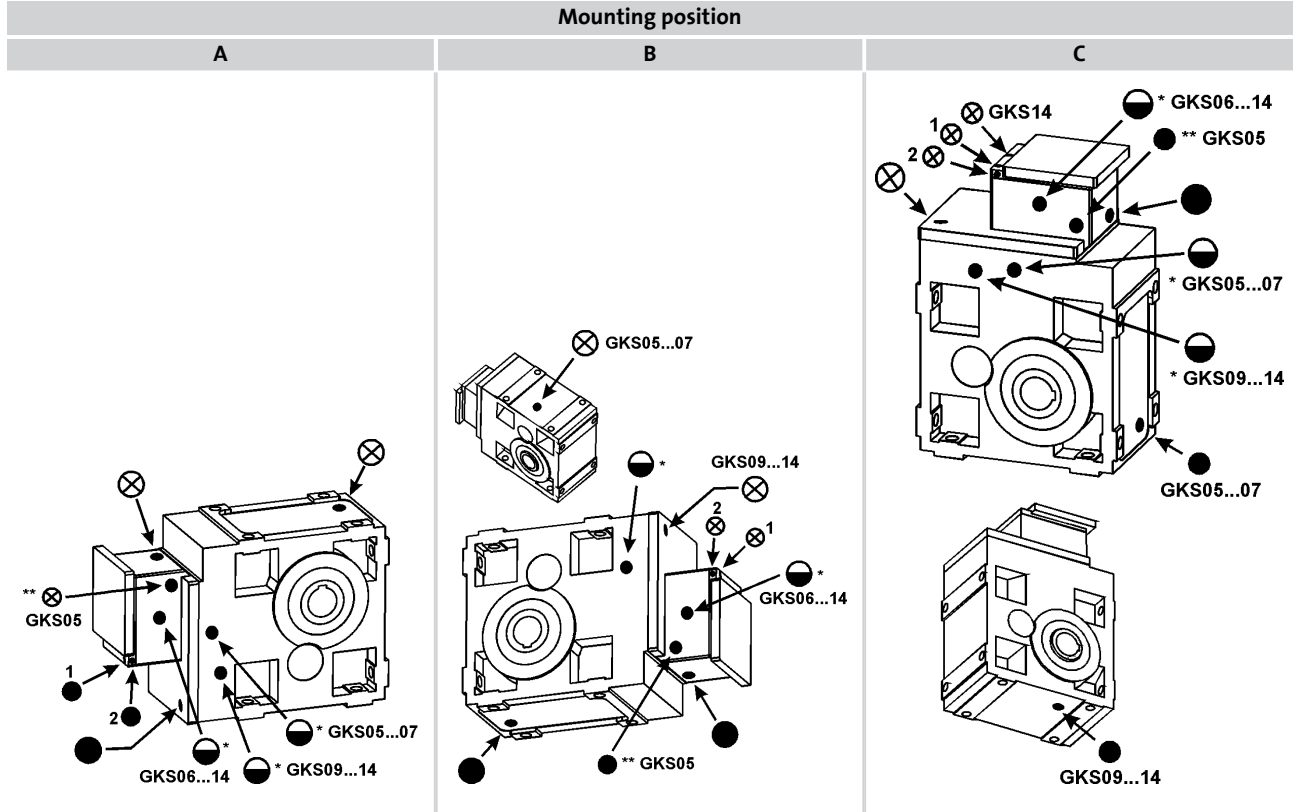
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GKS05-3A □□□ 14LC□□



Position of ventilation, sealing elements and oil control

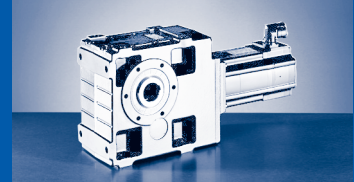
GKS05...14-4



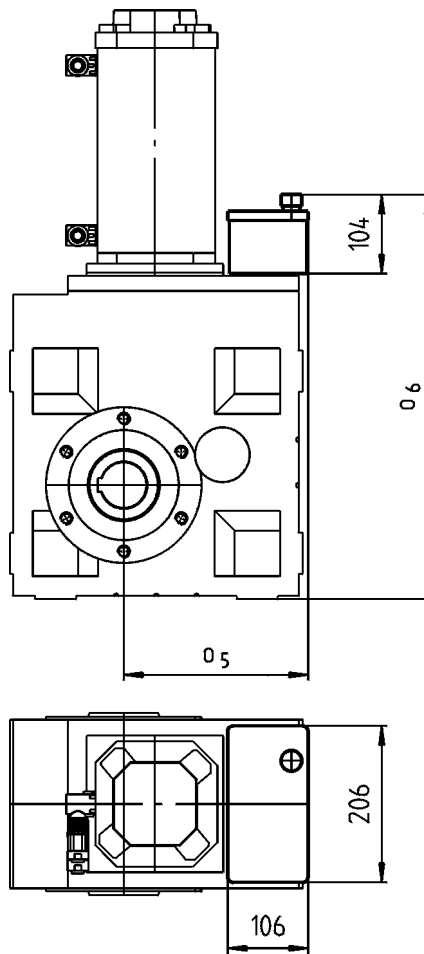
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GKS07-4A □□□ 14LC□□



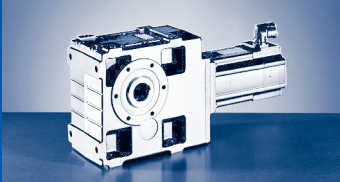


## Compensation reservoir for mounting position C



GKS□□-3A...		14LC□□ <sup>1)</sup>	17NC□□ <sup>1)</sup>	19SC□□ <sup>1)</sup>	21XC□□ <sup>1)</sup>	GKS□□-3S...		12□C□□	14□C□□	19□C□□
GKS09...	o <sub>5</sub>	243		265	282	GKS09...	o <sub>5</sub>	243		282
	o <sub>6</sub>	533					o <sub>6</sub>	533		
GKS11...	o <sub>5</sub>	258		280	304	GKS11...	o <sub>5</sub>	258		304
	o <sub>6</sub>	626		630			o <sub>6</sub>	626		630
GKS14...	o <sub>5</sub>			313	343	GKS14...	o <sub>5</sub>			343
	o <sub>6</sub>			739			o <sub>6</sub>			739

<sup>1)</sup> Connector/terminal box position 4 is not permitted.



## GKS [kg]

### GKS□□-3S HAR/HBR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKS04...	14	15		17	18	19	21							
GKS05...	23		24	25	26	27	29			32		35		
GKS06...	38		39	40	41	42	44	43		46		49		
GKS07...				66	67	68	70	69		73		76		
GKS09...								119		122		125		

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GKS06...	48		53		58		63							
GKS07...	75		79		84		89		91		98		108	
GKS09...	124		129		133		138		140		147		157	
GKS11...	224		229		233		238		239		246		256	
GKS14...								409		416		426		

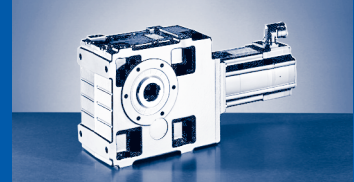
### GKS□□-4S HAR/HBR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKS05...	25		26	28	29	30	32							
GKS06...	42		43	45	46	47	49							
GKS07...	71		72	73	74	75	77			80		83		
GKS09...	125		126	127	128	129	131	130		133		137		
GKS11...				235	236	237	239	238		242		245		
GKS14...								425		428		431		

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GKS09...	135		140		145		150							
GKS11...	244		249		253		258		261		268		278	
GKS14...	430		435		439		444		446		453		463	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GKS□□-3A HAR/HBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS04...	18	23	24						
GKS05...	28	32	34		38		40		
GKS06...	42	46	48		52		54		60
GKS07...	68	72	74		78		80		86
GKS09...					126		128		134
GKS11...					226		228		234
GKS14...									

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GKS05...										
GKS06...	63									
GKS07...	88		109		112		126		129	
GKS09...	137		157		160		175		178	
GKS11...	236		256		259		273		276	
GKS14...			427		430		441		445	

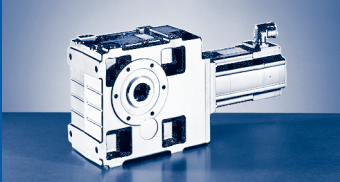
## GKS□□-4A HAR/HBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS05...	29	33	35						
GKS06...	46	50	52						
GKS07...	76	80	82		86		88		
GKS09...	129	133	135		139		141		147
GKS11...	237	241	243		247		249		255
GKS14...					432		434		440

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GKS09...	150									
GKS11...	257		278		282		295		299	
GKS14...	443		463		466		481		484	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GKS [kg]

### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8				0.9						
...P2				0.5				1.2						
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2				0.3						

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
...P1	1.9						1.5							
...P2	3.1									4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN							0.3							

### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6				0.7	

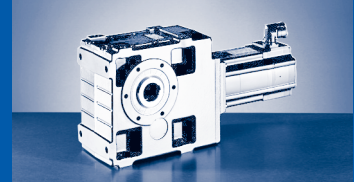
  

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
...P1/P5	2.4		4.8				5.0			
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0				1.1			

### Additional weights gearbox

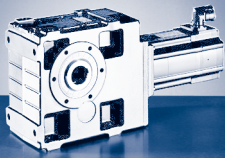
	Solid shaft	2nd output shaft end	Hollow shaft with shrink disc	Flange	Casing foot torque plate	Threaded hole circle torque plate
	V□□	V□□	S□□	□□K		
GKS04...	0.6	0.2	0.6	2.5	1.3	0.9
GKS05...	1	0.3	0.8	4	2.2	1.3
GKS06...	2.5	0.8	1	7	3.7	2.1
GKS07...	5	1.5	1.5	11	6.6	3.7
GKS09...	8	2.7	3	16	13	
GKS11...	16	6.3	5	24	23	
GKS14...	33	12	11	33	44	

Weights in [kg]



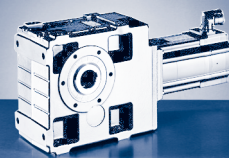
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GKS04-3	5.123	67620	13200
	7.025	77280	11000
	8.167	73500	9000
	8.991	83076	9240
	9.836	108192	11000
	11.730	77420	6600
	13.067	78400	6000
	14.333	90300	6300
	16.087	88480	5500
	17.920	89600	5000
	20.588	95116	4620
	22.522	123872	5500
	25.088	125440	5000
	28.727	132720	4620
	32.000	134400	4200
	35.191	139356	3960
	39.200	141120	3600
	44.240	145992	3300
	50.943	168112	
	56.976	150416	2640
	64.978	180120	2772
	72.210	174748	2420
	79.598	189126	2376
	90.491	179172	1980
	100.067	198132	
	111.467	200640	1800
	128.874	204136	1584
	143.556	206720	1440
	163.332	237158	1452
	181.939	240160	1320
204.682	243162	1188	
228.000	246240	1080	
269.660	249166	924	
300.381	252320	840	
GKS05-3	6.863	73500	10710
	9.412	84000	8925
	10.569	80850	7650
	11.667	83300	7140
	13.176	117600	8925
	14.494	92400	6375
	16.000	95200	5950
	17.054	86975	5100
	19.216	88200	4590
	23.388	99400	4250
26.353	100800	3825	



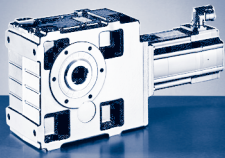
►  $i_g = z_g / z_t$

	i	z <sub>g</sub>	z <sub>t</sub>
GKS05-3	29.931	106855	3570
	32.744	139160	4250
	36.894	141120	3825
	41.765	149100	3570
	47.059	151200	3213
	51.162	156555	3060
	57.647	158760	2754
	66.592	203770	3060
	75.033	206640	2754
	82.833	168980	2040
	93.333	171360	1836
	107.196	218680	2040
	120.784	221760	1836
	130.097	221165	1700
	146.588	224280	1530
	166.276	226135	1360
	187.353	229320	1224
	211.200	228096	1080
	227.484	227484	1000
	256.320	230688	900
290.745	232596	800	
327.600	235872	720	
GKS05-4	95.238	8568000	89964
	114.987	8796480	76500
	126.933	9063040	71400
	146.667	9424800	64260
	161.905	9710400	59976
	185.547	9462880	51000
	209.067	9596160	
	225.867	10367280	45900
	236.667	10138800	42840
	289.917	10645740	36720
	326.667	10795680	33048
	364.467	11152680	30600
	410.667	11309760	27540
	469.389	11490640	24480
	510.000	13109040	25704
	528.889	11652480	22032
	594.894	13349420	22440
	670.303	13537440	20196
	820.760	11818944	14400
	924.800	11985408	12960
1040.215	13730832	13200	
1172.073	13924224	11880	
1303.560	14078448	10800	



$$\triangleright i_g = z_g / z_t$$

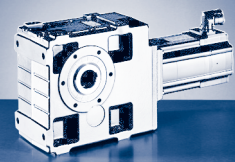
	i	z <sub>g</sub>	z <sub>t</sub>
GKS05-4	1468.800	14276736	9720
	1717.389	14426064	8400
	1935.086	14629248	7560
GKS06-3	6.485	66150	10200
	9.196	70350	7650
	10.147	72450	7140
	11.382	81270	
	12.612	80400	6375
	14.824	75600	5100
	16.699	76650	4590
	17.809	89010	4998
	20.329	86400	4250
	22.902	87600	3825
	26.017	92880	3570
	28.461	120960	4250
	32.063	122640	3825
	36.303	129600	3570
	41.472	103680	2500
	44.471	136080	3060
	53.074	111456	2100
	57.882	177120	3060
	65.207	179580	2754
	72.000	146880	2040
	81.111	148920	1836
	93.176	190080	2040
	104.967	192720	1836
	113.082	192240	1700
	127.392	194910	1530
	142.941	194400	1360
	161.029	197100	1224
	190.080	228096	1200
	214.133	231264	1080
	230.688	230688	1000
259.880	233892	900	
291.600	233280	800	
328.500	236520	720	
GKS06-4	103.721	7776000	74970
	113.205	10184400	89964
	127.059	8164800	64260
	140.816	8445600	59976
	155.647	8573040	55080
	174.336	11202840	64260
	202.588	11158560	55080
	224.524	11542320	51408
	252.000	9253440	36720



►  $i_g = z_g / z_t$

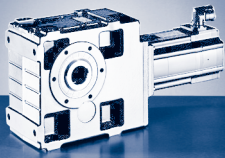
	i	$z_g$	$z_t$
GKS06-4	279.286	9571680	34272
	316.800	9694080	30600
	361.429	12386880	34272
	408.000	9987840	24480
	458.067	14390640	31416
	517.091	11603520	22440
	555.927	14554170	26180
	640.800	13072320	20400
	696.668	14922630	21420
	812.137	15186960	18700
	914.907	15397890	16830
	1017.741	15571440	15300
	1146.529	15787710	13770
	1340.834	15955920	11900
	1510.507	16177530	10710
GKS07-3	5.955	65280	10962
	8.254	74880	9072
	9.171	71808	7830
	10.124	73984	7308
	11.378	107520	9450
	12.711	82368	6480
	14.798	77248	5220
	16.674	78336	4698
	17.270	91392	5292
	20.511	88608	4320
	23.111	89856	3888
	25.244	95424	3780
	28.274	127232	4500
	31.858	129024	4050
	36.063	136320	3780
	40.906	107991	2640
	44.178	143136	3240
	50.345	116298	2310
	57.501	186304	3240
	64.790	188928	2916
	70.474	152224	2160
	79.407	154368	1944
	92.563	199936	2160
	104.296	202752	1944
	112.338	202208	1800
126.578	205056	1620	
140.548	185523	1320	
158.364	188136	1188	
184.600	243672	1320	
208.000	247104	1188	





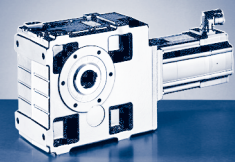
$$\triangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GKS07-3	224.037	246441	1100
	252.436	249912	990
	283.193	249210	880
	319.091	252720	792
GKS07-4	103.039	8179200	79380
	112.391	10705920	95256
	126.222	8588160	68040
	137.748	8747520	63504
	154.622	9017568	58320
	179.201	14631424	81648
	201.254	11737152	58320
	222.909	12133376	54432
	246.659	9590112	38880
	273.199	9913856	36288
	321.049	12482368	38880
	358.829	13021184	36288
	399.353	10351232	25920
	464.367	16850944	36288
	516.810	13395712	25920
	563.572	17042432	30240
	636.581	13750144	21600
	683.972	17236096	25200
	823.810	17794304	21600
	928.237	18044928	19440
999.806	17996512	18000	
1126.542	18249984	16200	
1277.842	18400928	14400	
1439.822	18660096	12960	
GKS09-3	12.283	87516	7125
	13.360	88842	6650
	16.122	96492	5985
	17.536	97954	5586
	19.541	92820	4750
	22.022	94146	4275
	25.649	102340	3990
	29.228	133280	4560
	32.940	135184	4104
	35.193	140420	3990
	39.662	142426	3591
	43.146	147560	3420
	48.625	149668	3078
	58.456	199920	3420
	65.879	202776	3078
	70.982	161840	2280
79.996	164152	2052	



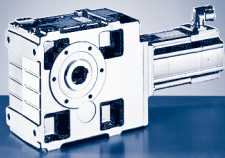
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GKS09-3	91.860	209440	2280
	103.524	212432	2052
	111.484	211820	1900
	125.641	214846	1710
	140.921	214200	1520
	158.816	217260	1368
	182.000	240240	1320
	205.111	243672	1188
	220.882	242970	1100
	248.930	246441	990
	279.205	245700	880
	314.659	249210	792
	GKS09-4	100.551	8425200
113.320		8545560	75411
123.275		8853600	71820
138.929		8980080	64638
151.012		9296280	61560
170.188		9429084	55404
204.596		12594960	61560
230.577		12774888	55404
248.439		10195920	41040
279.986		10341576	36936
323.365		13270880	41040
364.427		13460464	36936
402.234		11005120	27360
453.311		11162336	24624
520.538		14241920	27360
586.638		14445376	24624
631.744		14403760	22800
711.965		14609528	20520
817.551		18640160	22800
921.367		18906448	20520
992.209		18851980	19000
1118.204	19121294	17100	
1254.197	19063800	15200	
1413.461	19336140	13680	
GKS11-3	12.094	95238	7875
	13.154	96681	7350
	15.874	105006	6615
	17.265	106597	6174
	19.515	102453	5250
	21.989	103896	4725
	25.615	112961	4410
	28.021	147112	5250
	31.573	149184	4725



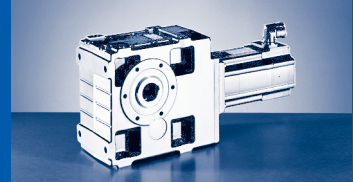
$$\triangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GKS11-3	35.741	157620	4410
	40.272	159840	3969
	43.783	165501	3780
	49.333	167832	3402
	57.683	218041	3780
	64.995	221112	3402
	70.887	178636	2520
	79.873	181152	2268
	91.737	231176	2520
	103.365	234432	2268
	111.335	233803	2100
	125.448	237096	1890
	140.732	236430	1680
	158.571	239760	1512
	186.572	268664	1440
	210.222	272448	1296
	226.431	271717	1200
	255.133	275544	1080
	286.219	274770	960
	322.500	278640	864
GKS11-4	102.119	9457200	92610
	115.063	9590400	83349
	125.095	9930060	79380
	140.952	10069920	71442
	153.242	10426563	68040
	172.667	10573416	61236
	201.890	13736583	68040
	227.481	13930056	61236
	248.106	11254068	45360
	279.556	11412576	40824
	322.931	14648152	45360
	363.866	14854464	40824
	395.787	11968612	30240
	445.958	12137184	27216
	512.196	15488792	30240
	577.122	15706944	27216
	621.619	15664801	25200
	700.416	15885432	22680
	816.455	20574664	25200
	919.949	20864448	22680
990.879	20808467	21000	
1116.484	21101544	18900	
1252.516	21042270	16800	
1411.286	21338640	15120	



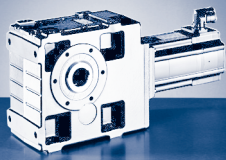
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GKS14-3	12.435	102960	8280
	13.525	104520	7728
	16.646	112560	6762
	18.311	147400	8050
	20.065	110760	5520
	22.609	112320	4968
	24.696	119280	4830
	27.165	156200	5750
	30.609	158400	5175
	34.692	167560	4830
	39.089	169920	4347
	42.531	176080	4140
	47.923	178560	3726
	56.251	232880	4140
	63.382	236160	3726
	68.942	190280	2760
	77.681	192960	2484
	90.551	249920	2760
	102.029	253440	2484
	109.896	252760	2300
	123.826	256320	2070
	138.913	255600	1840
	156.522	259200	1656
	186.572	268664	1440
	210.222	272448	1296
	226.431	271717	1200
255.133	275544	1080	
286.219	274770	960	
322.500	278640	864	
GKS14-4	97.467	9886040	101430
	109.822	10025280	91287
	119.493	10388720	86940
	134.640	10535040	78246
	158.039	13739920	86940
	178.072	13933440	78246
	193.754	14438560	74520
	218.315	14641920	67068
	237.467	11797360	49680
	267.568	11963520	44712
	321.729	15983520	49680
	362.512	16208640	44712
	390.671	12939040	33120
	440.193	13121280	29808
	513.121	16994560	33120
	578.164	17233920	29808



►  $i_g = z_g / z_t$

	<b>i</b>	<b><math>z_g</math></b>	<b><math>z_t</math></b>
<b>GKS14-4</b>	<b>622.742</b>	17187680	27600
	<b>701.681</b>	17429760	24840
	<b>805.901</b>	22242880	27600
	<b>908.058</b>	22556160	24840
	<b>978.071</b>	22495640	23000
	<b>1102.052</b>	22812480	20700
	<b>1236.326</b>	22748400	18400
	<b>1393.043</b>	23068800	16560



# GKS [Nm]

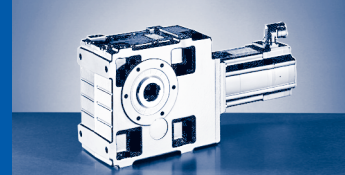
## GKS□□-□S (MCS)

$M_{2GN} \leq 187 \text{ Nm}$

GKS04-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
5.123	81	1.17	$M_2$				11	15	18	22
			c				5.2	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				791	732	791	791
			$n_{2 \text{ th}}$				708	674	646	625
7.025	93	0.68	$M_2$				15	20	25	30
			c				4.3	3.3	2.6	2.2
			$n_{2 \text{ Eck}}$				577	534	577	577
			$n_{2 \text{ th}}$				554	529	508	493
8.167	128	0.86	$M_2$				17	23	29	34
			c				5.2	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				496	459	496	496
			$n_{2 \text{ th}}$				444	423	405	392
8.991	103	0.44	$M_2$			12	19	26	32	38
			c			5.8	3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$			451	451	417	451	451
			$n_{2 \text{ th}}$			450	450	417	450	440
9.836	106	0.38	$M_2$			13	21	28	35	42
			c			5.5	3.6	2.7	2.2	1.8
			$n_{2 \text{ Eck}}$			412	412	381	412	412
			$n_{2 \text{ th}}$			412	412	381	412	406
11.730	180	0.73	$M_2$				25	34	41	49
			c				5.0	3.8	3.1	2.6
			$n_{2 \text{ Eck}}$				345	320	345	345
			$n_{2 \text{ th}}$				308	293	281	271
13.067	165	0.70	$M_2$				28	38	46	55
			c				4.2	3.2	2.5	2.1
			$n_{2 \text{ Eck}}$				310	287	310	310
			$n_{2 \text{ th}}$				267	254	242	234
14.333	164	0.35	$M_2$			19	30	41	51	61
			c			5.8	3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$			283	283	262	283	283
			$n_{2 \text{ th}}$			283	283	262	283	276
16.087	181	0.44	$M_2$			22	34	46	57	68
			c			5.7	3.7	2.8	2.2	1.9
			$n_{2 \text{ Eck}}$			252	252	233	252	252
			$n_{2 \text{ th}}$			252	236	225	216	206
17.920	166	0.43	$M_2$		19	25	38	52	64	76
			c		5.8	4.7	3.1	2.3	1.8	1.6
			$n_{2 \text{ Eck}}$		226	226	226	209	226	226
			$n_{2 \text{ th}}$		226	220	205	195	183	169
20.588	182	0.30	$M_2$		22	28	44	60	74	88
			c		5.6	4.5	2.9	2.2	1.8	1.5
			$n_{2 \text{ Eck}}$		197	197	197	182	197	197
			$n_{2 \text{ th}}$		197	197	197	182	183	168
22.522	182	0.26	$M_2$		25	31	48	66	81	96
			c		5.1	4.1	2.7	2.0	1.6	1.4
			$n_{2 \text{ Eck}}$		180	180	180	167	180	180
			$n_{2 \text{ th}}$		180	180	180	167	167	154
25.088	167	0.25	$M_2$		28	35	54	73	90	107
			c		4.2	3.4	2.2	1.7	1.3	1.1
			$n_{2 \text{ Eck}}$		161	161	161	150	161	161
			$n_{2 \text{ th}}$		161	161	161	149	137	128

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

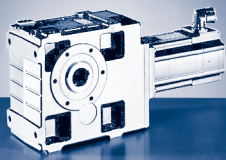


$M_{2GN} \leq 187 \text{ Nm}$

GKS04-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
28.727	183	0.18	$M_2$		32	40	62	84	103	123
			c		4.0	3.2	2.1	1.6	1.3	1.1
			$n_{2 \text{ Eck}}$		141	141	141	131	141	141
			$n_{2 \text{ th}}$		141	141	141	131	135	127
32.000	167	0.18	$M_2$		36	45	69	94	115	
			c		3.3	2.6	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		127	127	127	117	127	
			$n_{2 \text{ th}}$		127	127	127	117	113	
35.191	183	0.14	$M_2$		39	49	76	103	127	
			c		3.3	2.6	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		115	115	115	107	115	
			$n_{2 \text{ th}}$		115	115	115	107	115	
39.200	168	0.13	$M_2$	21	44	55	85	115		
			c	5.4	2.7	2.2	1.4	1.1		
			$n_{2 \text{ Eck}}$	103	103	103	103	96		
			$n_{2 \text{ th}}$	103	103	103	103	96		
44.240	185	0.09	$M_2$	24	49	62				
			c	6.0	3.0	2.4				
			$n_{2 \text{ Eck}}$	92	92	92				
			$n_{2 \text{ th}}$	92	92	92				
50.943	182	0.18	$M_2$	28	57	72	111	150		
			c	5.1	2.6	2.1	1.3	1.0		
			$n_{2 \text{ Eck}}$	80	80	80	80	74		
			$n_{2 \text{ th}}$	80	80	80	68	61		
56.976	187	0.06	$M_2$	31	64	80				
			c	4.7	2.4	1.9				
			$n_{2 \text{ Eck}}$	71	71	71				
			$n_{2 \text{ th}}$	71	71	71				
64.978	183	0.13	$M_2$	36	73	92	142			
			c	4.0	2.0	1.6	1.1			
			$n_{2 \text{ Eck}}$	62	62	62	62			
			$n_{2 \text{ th}}$	62	62	62	56			
79.598	183	0.10	$M_2$	44	90	113				
			c	3.3	1.7	1.3				
			$n_{2 \text{ Eck}}$	51	51	51				
			$n_{2 \text{ th}}$	51	51	51				
100.067	185	0.07	$M_2$	56	114	142				
			c	2.7	1.3	1.1				
			$n_{2 \text{ Eck}}$	41	41	41				
			$n_{2 \text{ th}}$	40	40	40				
111.467	170	0.07	$M_2$	63	127					
			c	2.4	1.2					
			$n_{2 \text{ Eck}}$	36	36					
			$n_{2 \text{ th}}$	36	36					
128.874	187	0.05	$M_2$	72	147					
			c	2.3	1.2					
			$n_{2 \text{ Eck}}$	31	31					
			$n_{2 \text{ th}}$	31	31					
143.556	172	0.05	$M_2$	81						
			c	1.9						
			$n_{2 \text{ Eck}}$	28						
			$n_{2 \text{ th}}$	28						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GKS [Nm]

## GKS□□-□S (MCS)

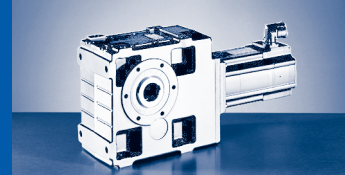
$M_{2GN} \leq 331 \text{ Nm}$

GKS05-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
6.863	147	1.90	$M_2$					19	24	29
			c				5.4	4.3	3.6	
			$n_2$ Eck				546	590	590	
			$n_2$ th				446	427	413	
9.412	165	1.17	$M_2$				20	27	33	39
			c				5.8	4.4	3.5	2.9
			$n_2$ Eck				430	398	430	430
			$n_2$ th				385	366	351	339
10.569	227	1.60	$M_2$					30	37	44
			c				5.4	4.3	3.6	
			$n_2$ Eck				355	383	383	
			$n_2$ th				289	277	268	
11.667	251	1.65	$M_2$					33	41	48
			c				5.4	4.3	3.6	
			$n_2$ Eck				321	347	347	
			$n_2$ th				262	251	243	
13.176	165	0.71	$M_2$				28	38	47	56
			c				4.1	3.1	2.5	2.1
			$n_2$ Eck				307	285	307	307
			$n_2$ th				292	279	268	260
14.494	254	1.05	$M_2$				30	41	51	61
			c				5.8	4.4	3.5	2.9
			$n_2$ Eck				279	259	279	279
			$n_2$ th				250	238	228	220
16.000	280	1.04	$M_2$				33	45	56	67
			c				5.8	4.4	3.5	2.9
			$n_2$ Eck				253	234	253	253
			$n_2$ th				226	215	206	200
17.054	314	1.51	$M_2$					48	60	71
			c				4.6	3.7	3.1	
			$n_2$ Eck				220	238	238	
			$n_2$ th				174	166	161	
19.216	297	1.47	$M_2$				40	55	68	81
			c				5.1	3.9	3.1	2.6
			$n_2$ Eck				211	195	211	211
			$n_2$ th				157	149	143	138
23.388	329	0.96	$M_2$				49	67	83	99
			c				4.6	3.5	2.8	2.4
			$n_2$ Eck				173	160	173	173
			$n_2$ th				149	141	135	131
26.353	298	0.95	$M_2$				56	76	94	112
			c				3.7	2.8	2.3	1.9
			$n_2$ Eck				154	142	154	154
			$n_2$ th				127	120	115	109
29.931	330	0.67	$M_2$			41	64	87	107	127
			c			5.6	3.6	2.8	2.2	1.9
			$n_2$ Eck			135	135	125	135	135
			$n_2$ th			131	122	116	111	105
32.744	331	0.58	$M_2$			45	70	95	117	139
			c			5.1	3.3	2.5	2.0	1.7
			$n_2$ Eck			124	124	115	124	124
			$n_2$ th			122	113	108	104	96

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



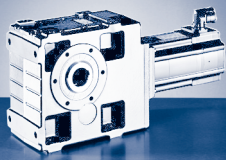


$M_{2GN} \leq 331 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GKS05-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
35	27	64	51	48	88	71	c	1.90	147	6.863
3.8	3.8	2.3	2.2	2.3	1.5	1.5	$n_{2 \text{ Eck}}$			
284	590	219	437	514	284	590	$n_{2 \text{ th}}$			
284	416	219	373	374	284	309	$M_2$			
48	38	89	71	66	120	98	c	1.17	165	9.412
3.1	3.1	1.8	1.8	1.9	1.3	1.2	$n_{2 \text{ Eck}}$			
207	430	159	319	375	207	430	$n_{2 \text{ th}}$			
207	342	159	299	301	207	240	$M_2$			
54	42	99	79	74	135	110	c	1.60	227	10.569
3.8	3.8	2.3	2.2	2.3	1.5	1.5	$n_{2 \text{ Eck}}$			
185	383	142	284	334	185	383	$n_{2 \text{ th}}$			
185	270	142	242	243	185	201	$M_2$			
59	46	109	87	82	149	121	c	1.65	251	11.667
3.8	3.8	2.3	2.2	2.3	1.5	1.5	$n_{2 \text{ Eck}}$			
167	347	129	257	302	167	347	$n_{2 \text{ th}}$			
167	245	129	219	220	167	182	$M_2$			
68	53	125	100	94			c	0.71	165	13.176
2.2	2.2	1.3	1.3	1.3			$n_{2 \text{ Eck}}$			
148	307	114	228	268			$n_{2 \text{ th}}$			
148	262	114	212	213			$M_2$			
74	58	136	109	102	185	151	c	1.05	254	14.494
3.1	3.1	1.8	1.8	1.9	1.3	1.2	$n_{2 \text{ Eck}}$			
135	279	104	207	243	135	279	$n_{2 \text{ th}}$			
135	222	103	194	195	135	156	$M_2$			
82	64	151	121	113	205	167	c	1.04	280	16.000
3.1	3.1	1.8	1.8	1.9	1.3	1.2	$n_{2 \text{ Eck}}$			
122	253	94	188	220	122	253	$n_{2 \text{ th}}$			
122	201	94	176	177	122	141	$M_2$			
87	68	160	128	120	218	178	c	1.51	314	17.054
3.2	3.2	1.9	1.9	1.9	1.3	1.3	$n_{2 \text{ Eck}}$			
114	238	88	176	207	114	238	$n_{2 \text{ th}}$			
114	162	88	144	145	114	115	$M_2$			
99	77	181	145	136	246	201	c	1.47	297	19.216
2.7	2.7	1.6	1.6	1.6	1.1	1.1	$n_{2 \text{ Eck}}$			
102	211	78	156	183	102	211	$n_{2 \text{ th}}$			
101	139	78	116	116	96	94	$M_2$			
120	94	221	177	166	300		c	0.96	329	23.388
2.5	2.5	1.5	1.5	1.5	1.0		$n_{2 \text{ Eck}}$			
83	173	64	128	151	83		$n_{2 \text{ th}}$			
83	132	64	107	107	83		$M_2$			
136	107	250	200	187			c	0.95	298	26.353
2.0	2.0	1.2	1.2	1.2			$n_{2 \text{ Eck}}$			
74	154	57	114	134			$n_{2 \text{ th}}$			
74	112	57	85	85			$M_2$			
155	121	284	227	213			c	0.67	330	29.931
1.9	1.9	1.2	1.2	1.2			$n_{2 \text{ Eck}}$			
65	135	50	100	118			$n_{2 \text{ th}}$			
65	108	50	84	85			$M_2$			
170	133	311	249	233			c	0.58	331	32.744
1.8	1.8	1.1	1.1	1.1			$n_{2 \text{ Eck}}$			
60	124	46	92	108			$n_{2 \text{ th}}$			
60	98	46	79	79						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

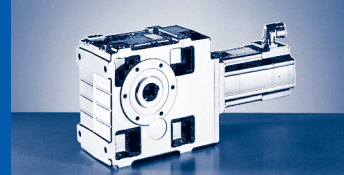
## GKS□□-□S (MCS)

$M_{2GN} \leq 331 \text{ Nm}$

GKS05-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
36.894	302	0.58	$M_2$		40	51	79	107	132	157
			c		5.2	4.1	2.7	2.1	1.6	1.4
			$n_{2 \text{ Eck}}$		110	110	110	102	110	110
			$n_{2 \text{ th}}$		108	104	97	92	83	77
41.765	331	0.42	$M_2$		46	58	90	122	150	178
			c		5.0	4.0	2.6	2.0	1.6	1.3
			$n_{2 \text{ Eck}}$		97	97	97	90	97	97
			$n_{2 \text{ th}}$		97	97	97	90	86	79
47.059	304	0.41	$M_2$		52	65	101	137	169	201
			c		4.6	3.7	2.4	1.8	1.5	1.2
			$n_{2 \text{ Eck}}$		86	86	86	80	86	86
			$n_{2 \text{ th}}$		86	86	86	80	74	68
51.162	331	0.32	$M_2$		56	71	110	149	184	218
			c		4.6	3.7	2.4	1.8	1.5	1.2
			$n_{2 \text{ Eck}}$		79	79	79	73	79	79
			$n_{2 \text{ th}}$		79	79	79	73	76	71
57.647	307	0.32	$M_2$		64	80	125	169	208	246
			c		3.8	3.1	2.0	1.5	1.2	1.0
			$n_{2 \text{ Eck}}$		70	70	70	65	70	70
			$n_{2 \text{ th}}$		70	70	70	65	62	59
66.592	331	0.20	$M_2$		74	93	144	195	240	
			c		3.6	2.9	1.9	1.4	1.1	
			$n_{2 \text{ Eck}}$		61	61	61	56	61	
			$n_{2 \text{ th}}$		61	61	61	56	61	
75.033	310	0.20	$M_2$	41	84	105	163	221		
			c	5.9	3.0	2.4	1.5	1.2		
			$n_{2 \text{ Eck}}$	54	54	54	54	50		
			$n_{2 \text{ th}}$	54	54	54	54	50		
82.833	331	0.14	$M_2$	45	93	116	180	244		
			c	5.7	2.9	2.3	1.5	1.1		
			$n_{2 \text{ Eck}}$	49	49	49	49	45		
			$n_{2 \text{ th}}$	49	49	49	49	45		
93.333	315	0.14	$M_2$	51	105	132	203			
			c	4.8	2.4	1.9	1.3			
			$n_{2 \text{ Eck}}$	43	43	43	43			
			$n_{2 \text{ th}}$	43	43	43	43			
107.196	331	0.09	$M_2$	59	121	151				
			c	4.4	2.2	1.8				
			$n_{2 \text{ Eck}}$	38	38	38				
			$n_{2 \text{ th}}$	38	38	38				
120.784	315	0.09	$M_2$	67	136	171				
			c	4.1	2.1	1.7				
			$n_{2 \text{ Eck}}$	34	34	34				
			$n_{2 \text{ th}}$	34	34	34				
130.097	331	0.07	$M_2$	72	147	184				
			c	4.0	2.0	1.6				
			$n_{2 \text{ Eck}}$	31	31	31				
			$n_{2 \text{ th}}$	31	31	31				
146.588	315	0.07	$M_2$	81	166	208				
			c	3.4	1.7	1.4				
			$n_{2 \text{ Eck}}$	28	28	28				
			$n_{2 \text{ th}}$	28	28	28				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

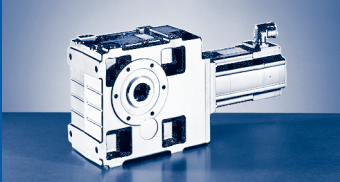


$M_{2GN} \leq 331 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GKS05-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
192	150						c			
1.4	1.4						$n_{2 \text{ Eck}}$	0.58	302	36.894
53	110						$n_{2 \text{ th}}$			
53	79						$M_2$			
217	170						c			
1.4	1.4						$n_{2 \text{ Eck}}$	0.42	331	41.765
47	97						$n_{2 \text{ th}}$			
47	81						$M_2$			
245	192						c			
1.2	1.3						$n_{2 \text{ Eck}}$	0.41	304	47.059
41	86						$n_{2 \text{ th}}$			
41	70						$M_2$			
267	208						c			
1.2	1.3						$n_{2 \text{ Eck}}$	0.32	331	51.162
38	79						$n_{2 \text{ th}}$			
38	72						$M_2$			
301	235						c			
1.0	1.1						$n_{2 \text{ Eck}}$	0.32	307	57.647
34	70						$n_{2 \text{ th}}$			
34	60						$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.20	331	66.592
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.20	310	75.033
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.14	331	82.833
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.14	315	93.333
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.09	331	107.196
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.09	315	120.784
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.07	331	130.097
							$n_{2 \text{ th}}$			
							$M_2$			
							c			
							$n_{2 \text{ Eck}}$	0.07	315	146.588
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

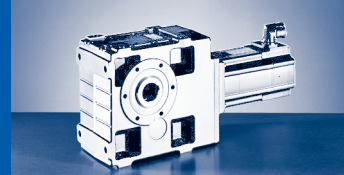
## GKS□□-□S (MCS)

$M_{2GN} \leq 331 \text{ Nm}$

GKS05-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
211.200	314	0.08	$M_2$	119	240					
			c	2.4	1.2					
			$n_{2 \text{ Eck}}$	19	19					
			$n_{2 \text{ th}}$	19	19					
227.484	278	0.06	$M_2$	128						
			c	1.9						
			$n_{2 \text{ Eck}}$	18						
			$n_{2 \text{ th}}$	18						
256.320	313	0.06	$M_2$	145						
			c	1.9						
			$n_{2 \text{ Eck}}$	16						
			$n_{2 \text{ th}}$	16						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

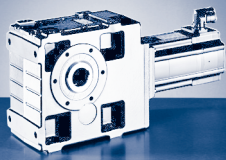


$M_{2GN} \leq 331 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GKS05-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
							$c$	0.08	314	211.200
							$n_2 \text{ Eck}$			
							$n_2 \text{ th}$			
							$M_2$			
							$c$	0.06	278	227.484
							$n_2 \text{ Eck}$			
							$n_2 \text{ th}$			
							$M_2$			
							$c$	0.06	313	256.320
							$n_2 \text{ Eck}$			
							$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

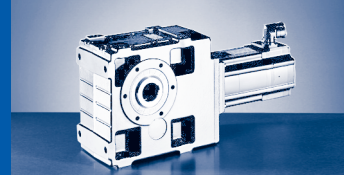
## GKS□□-□S (MCS)

$M_{2GN} \leq 331 \text{ Nm}$

GKS05-4S				06CC41	06FC41	06IC41
				...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
95.238	167	0.14	$M_2$	52	106	133
			c	2.6	1.3	1.0
			$n_{2 \text{ Eck}}$	43	43	43
			$n_{2 \text{ th}}$	43	43	43
114.987	256	0.20	$M_2$	63	128	160
			c	3.6	1.8	1.4
			$n_{2 \text{ Eck}}$	35	35	35
			$n_{2 \text{ th}}$	35	35	35
126.933	283	0.20	$M_2$	69	141	177
			c	3.6	1.8	1.4
			$n_{2 \text{ Eck}}$	32	32	32
			$n_{2 \text{ th}}$	32	32	32
146.667	256	0.14	$M_2$	81	164	205
			c	2.8	1.4	1.1
			$n_{2 \text{ Eck}}$	28	28	28
			$n_{2 \text{ th}}$	28	28	28
161.905	283	0.14	$M_2$	89	181	226
			c	2.8	1.4	1.1
			$n_{2 \text{ Eck}}$	25	25	25
			$n_{2 \text{ th}}$	25	25	25
185.547	331	0.20	$M_2$	102	207	259
			c	2.9	1.4	1.2
			$n_{2 \text{ Eck}}$	22	22	22
			$n_{2 \text{ th}}$	22	22	22
209.067	315	0.20	$M_2$	115	234	
			c	2.4	1.2	
			$n_{2 \text{ Eck}}$	19	19	
			$n_{2 \text{ th}}$	19	19	
225.867	256	0.07	$M_2$	125		
			c	1.8		
			$n_{2 \text{ Eck}}$	18		
			$n_{2 \text{ th}}$	18		
236.667	331	0.14	$M_2$	131	265	
			c	2.3	1.1	
			$n_{2 \text{ Eck}}$	17	17	
			$n_{2 \text{ th}}$	17	17	
289.917	331	0.11	$M_2$	161		
			c	1.8		
			$n_{2 \text{ Eck}}$	14		
			$n_{2 \text{ th}}$	14		
326.667	315	0.11	$M_2$	182		
			c	1.6		
			$n_{2 \text{ Eck}}$	12		
			$n_{2 \text{ th}}$	12		
364.467	331	0.07	$M_2$	203		
			c	1.4		
			$n_{2 \text{ Eck}}$	11		
			$n_{2 \text{ th}}$	11		
410.667	315	0.07	$M_2$	229		
			c	1.2		
			$n_{2 \text{ Eck}}$	10		
			$n_{2 \text{ th}}$	10		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

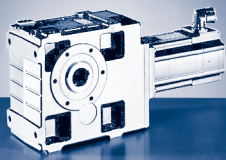


$M_{2GN} \leq 331 \text{ Nm}$

GKS05-4S				06CC41	06FC41	06IC41
				...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50
			$n_1$	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2
			$I_{M400}$	1.3	1.5	1.6
			$P_N$	0.25	0.51	0.64
			$J_M$	0.17	0.25	0.33
			$M_2$	263		
469.389	331	0.05	c	1.1		
			$n_{2 \text{ Eck}}$	9		
			$n_{2 \text{ th}}$	9		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□S (MCS)

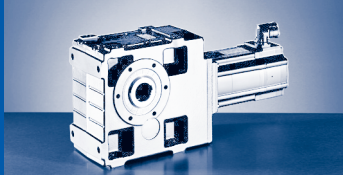
$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
6.485	263	5.87	$M_2$										59	48	
			c										4.3	4.2	
			$n_{2 \text{ Eck}}$											231	463
			$n_{2 \text{ th}}$											231	381
9.196	373	5.05	$M_2$										84	67	
			c										4.3	4.2	
			$n_{2 \text{ Eck}}$											163	326
			$n_{2 \text{ th}}$											163	269
10.147	412	4.86	$M_2$										93	74	
			c										4.3	4.2	
			$n_{2 \text{ Eck}}$											148	296
			$n_{2 \text{ th}}$											148	244
11.382	331	2.49	$M_2$						39	47	57	44	106	85	
			c						5.8	4.9	5.1	5.1	3.1	3.0	
			$n_{2 \text{ Eck}}$						356	356	171	356	132	264	
			$n_{2 \text{ th}}$						309	300	171	302	132	264	
12.612	426	3.20	$M_2$								62	49	117	93	
			c								5.9	5.9	3.6	3.5	
			$n_{2 \text{ Eck}}$								155	321	119	238	
			$n_{2 \text{ th}}$								155	243	119	219	
14.824	600	4.29	$M_2$										136	109	
			c										4.3	4.2	
			$n_{2 \text{ Eck}}$										101	202	
			$n_{2 \text{ th}}$										101	167	
16.699	604	4.16	$M_2$										154	123	
			c										3.8	3.8	
			$n_{2 \text{ Eck}}$										90	180	
			$n_{2 \text{ th}}$										90	144	
17.809	518	2.13	$M_2$						61	73	89	70	165	132	
			c						5.8	4.9	5.1	5.1	3.1	3.0	
			$n_{2 \text{ Eck}}$						227	227	110	227	84	169	
			$n_{2 \text{ th}}$						198	192	109	193	84	168	
20.329	665	2.79	$M_2$								101	79	188	151	
			c								5.7	5.8	3.5	3.4	
			$n_{2 \text{ Eck}}$								96	199	74	148	
			$n_{2 \text{ th}}$								96	150	74	135	
22.902	606	2.73	$M_2$								115	90	213	171	
			c								4.6	4.7	2.8	2.8	
			$n_{2 \text{ Eck}}$								85	177	66	131	
			$n_{2 \text{ th}}$								85	128	66	115	
26.017	679	1.94	$M_2$						90	107	131	102	243	194	
			c						5.2	4.4	4.6	4.6	2.8	2.7	
			$n_{2 \text{ Eck}}$						156	156	75	156	58	115	
			$n_{2 \text{ th}}$						133	128	75	130	58	115	
28.461	682	1.67	$M_2$					79	99	118	144	112	266	213	
			c					6.0	4.8	4.0	4.2	4.2	2.5	2.5	
			$n_{2 \text{ Eck}}$					132	142	142	69	142	53	105	
			$n_{2 \text{ th}}$					128	123	119	69	120	53	105	
32.063	610	1.63	$M_2$					91	112	134	163	128	301	241	
			c					4.8	3.8	3.2	3.3	3.4	2.0	2.0	
			$n_{2 \text{ Eck}}$					117	126	126	61	126	47	94	
			$n_{2 \text{ th}}$					109	105	101	61	102	47	92	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



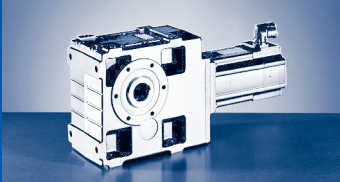


$M_{2GN} \leq 702 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS06-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
45	82	66	55	45	97	85	140	105	184	129	c	5.87	263	6.485
4.3	2.9	2.8	4.6	4.3	2.7	2.4	1.9	1.9	1.4	1.6	$n_{2 \text{ Eck}}$			
544	301	625	231	555	231	497	231	497	208	497	$n_{2 \text{ th}}$			
382	301	348	231	381	231	335	231	317	208	282	$M_2$			
63	116	94	77	63	137	121	199	149	261	182	c	5.05	373	9.196
4.3	2.9	2.8	4.6	4.3	2.7	2.4	1.9	1.9	1.4	1.6	$n_{2 \text{ Eck}}$			
383	212	440	163	392	163	351	163	351	147	351	$n_{2 \text{ th}}$			
269	212	246	163	269	163	236	163	223	147	199	$M_2$			
70	128	104	85	70	152	133	220	164	288	201	c	4.86	412	10.147
4.3	2.9	2.8	4.6	4.3	2.7	2.4	1.9	1.9	1.4	1.6	$n_{2 \text{ Eck}}$			
347	192	399	148	355	148	318	148	318	133	318	$n_{2 \text{ th}}$			
244	192	222	148	244	148	214	148	202	133	180	$M_2$			
79	144	118	97	79	171	150	248	185	324	227	c	2.49	331	11.382
3.1	2.1	2.0	3.3	3.1	1.9	1.7	1.3	1.4	1.0	1.1	$n_{2 \text{ Eck}}$			
310	171	356	132	316	132	283	132	283	119	283	$n_{2 \text{ th}}$			
274	171	249	132	273	132	227	132	203	119	183	$M_2$			
87	159	130	107	87	189	166	274	205	359	251	c	3.20	426	12.612
3.6	2.4	2.3	3.9	3.5	2.2	2.0	1.6	1.6	1.2	1.3	$n_{2 \text{ Eck}}$			
280	155	321	119	286	119	256	119	256	107	256	$n_{2 \text{ th}}$			
220	155	200	119	219	119	193	119	171	107	154	$M_2$			
102	186	152	125	102	221	194	321	240	421	294	c	4.29	600	14.824
4.3	2.9	2.8	4.6	4.3	2.7	2.4	1.9	1.9	1.4	1.6	$n_{2 \text{ Eck}}$			
238	132	273	101	243	101	218	101	218	91	218	$n_{2 \text{ th}}$			
167	132	152	101	167	101	147	101	138	91	123	$M_2$			
115	211	172	141	115	250	219	362	271	475	332	c	4.16	604	16.699
3.8	2.6	2.5	4.1	3.8	2.4	2.1	1.7	1.7	1.3	1.4	$n_{2 \text{ Eck}}$			
211	117	243	90	216	90	193	90	193	81	193	$n_{2 \text{ th}}$			
145	117	132	90	145	90	127	90	115	81	103	$M_2$			
124	226	184	152	124	268	235	388	290	507	355	c	2.13	518	17.809
3.1	2.1	2.0	3.3	3.1	1.9	1.7	1.3	1.4	1.0	1.1	$n_{2 \text{ Eck}}$			
198	110	227	84	202	84	181	84	181	76	181	$n_{2 \text{ th}}$			
175	109	159	84	175	84	145	84	130	76	117	$M_2$			
141	257	210	173	141	305	268	442	330	578	404	c	2.79	665	20.329
3.5	2.3	2.3	3.8	3.4	2.2	1.9	1.5	1.6	1.2	1.3	$n_{2 \text{ Eck}}$			
173	96	199	74	177	74	159	74	159	66	159	$n_{2 \text{ th}}$			
135	96	123	74	135	74	117	74	104	66	94	$M_2$			
160	291	237	196	160	345	303	499	373		457	c	2.73	606	22.902
2.8	1.9	1.8	3.0	2.8	1.7	1.5	1.2	1.3		1.0	$n_{2 \text{ Eck}}$			
154	85	177	66	157	66	141	66	141		141	$n_{2 \text{ th}}$			
115	85	101	66	115	66	92	66	83		76	$M_2$			
182	331	270	223	182	392	344	567	424		519	c	1.94	679	26.017
2.8	1.9	1.8	3.0	2.7	1.7	1.5	1.2	1.2		1.0	$n_{2 \text{ Eck}}$			
136	75	156	58	138	58	124	58	124		124	$n_{2 \text{ th}}$			
117	75	103	58	117	58	94	58	84		76	$M_2$			
199	362	295	244	200	430	377	621	464			c	1.67	682	28.461
2.5	1.7	1.7	2.7	2.5	1.6	1.4	1.1	1.1			$n_{2 \text{ Eck}}$			
124	69	142	53	127	53	113	53	113			$n_{2 \text{ th}}$			
109	69	93	53	109	53	85	53	77			$M_2$			
226	410	334	277	226	486	426					c	1.63	610	32.063
2.0	1.4	1.3	2.2	2.0	1.3	1.1					$n_{2 \text{ Eck}}$			
110	61	126	47	112	47	101					$n_{2 \text{ th}}$			
92	61	73	47	92	47	68								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GKS [Nm]

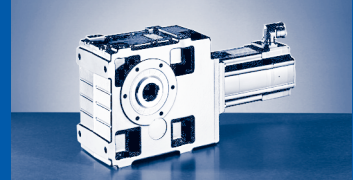
## GKS□□-□S (MCS)

$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
36.303	685	1.18	$M_2$					103	127	152	185	145	341	273	
			c				4.7	3.8	3.2	3.3	3.3	2.0	2.0		
			$n_2$ Eck				103	112	112	54	112	41	83		
			$n_2$ th				103	102	99	54	100	41	83		
41.472	689	2.11	$M_2$								212	166	391	313	
			c								2.9	2.9	1.8	1.7	
			$n_2$ Eck								47	98	36	72	
			$n_2$ th								47	64	36	54	
44.471	689	0.90	$M_2$				92	126	156	186	228	178	420	335	
			c				5.8	4.4	3.5	3.0	3.0	3.1	1.6	1.8	
			$n_2$ Eck				91	84	91	91	44	91	34	68	
			$n_2$ th				91	84	91	91	44	91	34	67	
53.074	695	1.52	$M_2$				111	152	188	223	273	213	502	401	
			c				4.9	3.7	3.0	2.5	2.5	2.6	1.4	1.6	
			$n_2$ Eck				76	71	76	76	37	76	28	57	
			$n_2$ th				64	61	58	56	37	57	28	46	
57.882	695	0.58	$M_2$				122	166	205	244	298	233	548	438	
			c				4.5	3.4	2.7	2.3	2.3	2.4	1.3	1.4	
			$n_2$ Eck				70	65	70	70	34	70	26	52	
			$n_2$ th				70	65	70	70	34	70	26	52	
65.207	624	0.57	$M_2$			89	139	189	232	276	338	264	619	495	
			c			5.5	3.6	2.7	2.2	1.8	1.8	1.9	1.0	1.1	
			$n_2$ Eck			62	62	58	62	62	30	62	23	46	
			$n_2$ th			62	62	58	62	62	30	62	23	46	
72.000	666	0.42	$M_2$			98									
			c			5.3									
			$n_2$ Eck			56									
			$n_2$ th			56									
72.000	702	0.42	$M_2$				153	208	257	305	373	291	684	546	
			c				3.6	2.8	2.2	1.9	1.9	2.0	1.0	1.2	
			$n_2$ Eck				56	52	56	56	27	56	21	42	
			$n_2$ th				56	52	56	56	27	56	21	42	
81.111	630	0.42	$M_2$		88	111	174	236	290	345	422	329			
			c		5.6	4.5	2.9	2.2	1.8	1.5	1.6				
			$n_2$ Eck		50	50	50	46	50	24	50				
			$n_2$ th		50	50	50	46	50	24	50				
93.176	691	0.26	$M_2$		101	128									
			c		5.3	4.3									
			$n_2$ Eck		44	44									
			$n_2$ th		43	43									
93.176	702	0.26	$M_2$				200	271	334	396					
			c				2.8	2.1	1.7	1.4					
			$n_2$ Eck				44	40	44	44					
			$n_2$ th				43	40	43	43					
104.967	635	0.25	$M_2$		115	146	226	307	377	448					
			c		4.3	3.5	2.3	1.7	1.4	1.2					
			$n_2$ Eck		39	39	39	36	39	39					
			$n_2$ th		39	39	39	36	39	39					
113.082	700	0.19	$M_2$		124	156									
			c		4.9	3.9									
			$n_2$ Eck		36	36									
			$n_2$ th		36	36									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

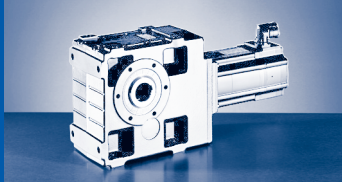


$M_{2GN} \leq 702 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS06-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
256	464	378	313	256	550	482					c	1.18	685	36.303
2.0	1.4	1.3	2.2	2.0	1.2	1.1					$n_{2 \text{ Eck}}$			
97	54	112	41	99	41	89					$n_{2 \text{ th}}$			
91	54	74	41	91	41	69					$M_2$			
293	531	433	359	293	630						c	2.11	689	41.472
1.8	1.2	1.1	1.9	1.7	1.1						$n_{2 \text{ Eck}}$			
85	47	98	36	87	36						$n_{2 \text{ th}}$			
55	45	44	36	55	36						$M_2$			
314	569	464	385	314	676	591					c	0.90	689	44.471
1.9	1.2	1.2	1.8	1.9	1.0	1.0					$n_{2 \text{ Eck}}$			
79	44	91	34	81	34	73					$n_{2 \text{ th}}$			
79	44	68	34	81	34	63					$M_2$			
376	680	554	461	376							c	1.52	695	53.074
1.6	1.0	1.0	1.5	1.6							$n_{2 \text{ Eck}}$			
66	37	76	28	68							$n_{2 \text{ th}}$			
47	37	38	28	47							$M_2$			
410											c	0.58	695	57.882
1.4											$n_{2 \text{ Eck}}$			
61											$n_{2 \text{ th}}$			
61											$M_2$			
464											c	0.57	624	65.207
1.2											$n_{2 \text{ Eck}}$			
54											$n_{2 \text{ th}}$			
54											$M_2$			
											c	0.42	666	72.000
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
512											$M_2$			
1.2											c	0.42	702	72.000
49											$n_{2 \text{ Eck}}$			
49											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.42	630	81.111
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.26	691	93.176
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.26	702	93.176
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.25	635	104.967
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.19	700	113.082
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



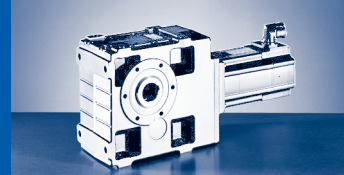
**GKS [Nm]**  
GKS□□-□S (MCS)

$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
113.082	702	0.19	$M_2$				243	330	406	482					
			c				2.6	2.0	1.6	1.3					
			$n_2$ Eck				36	33	36	36					
			$n_2$ th				36	33	36	36					
127.392	635	0.19	$M_2$		141	177	275	373	459	544					
			c		4.0	3.2	2.1	1.6	1.3	1.1					
			$n_2$ Eck		32	32	32	29	32	32					
			$n_2$ th		32	32	32	29	32	32					
142.941	691	0.12	$M_2$		158	199									
			c		3.8	3.1									
			$n_2$ Eck		28	28									
			$n_2$ th		28	28									
161.029	635	0.12	$M_2$		179	226									
			c		3.1	2.5									
			$n_2$ Eck		25	25									
			$n_2$ th		25	25									
190.080	702	0.23	$M_2$	103	212	267	413	559							
			c	5.9	2.9	2.4	1.5	1.2							
			$n_2$ Eck	21	21	21	21	20							
			$n_2$ th	21	21	21	21	20							
214.133	635	0.23	$M_2$	117	241	302	467								
			c	4.7	2.4	1.9	1.2								
			$n_2$ Eck	19	19	19	19								
			$n_2$ th	19	19	19	19								
230.688	702	0.17	$M_2$	126	259	325	503								
			c	4.8	2.4	1.9	1.3								
			$n_2$ Eck	18	18	18	18								
			$n_2$ th	18	18	18	18								
259.880	635	0.17	$M_2$	144	293	368	568								
			c	3.9	1.9	1.6	1.0								
			$n_2$ Eck	16	16	16	16								
			$n_2$ th	16	16	16	16								
291.600	702	0.11	$M_2$	161	329	413									
			c	3.8	1.9	1.5									
			$n_2$ Eck	14	14	14									
			$n_2$ th	14	14	14									
328.500	635	0.11	$M_2$	183	372	467									
			c	3.1	1.5	1.2									
			$n_2$ Eck	12	12	12									
			$n_2$ th	12	12	12									

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]

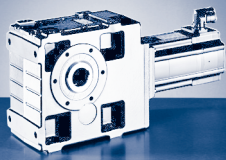


$M_{2GN} \leq 702 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS06-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	0.19	702	113.082
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.19	635	127.392
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.12	691	142.941
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.12	635	161.029
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.23	702	190.080
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.23	635	214.133
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.17	702	230.688
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.17	635	259.880
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.11	702	291.600
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.11	635	328.500
											c			
											$n_2$ Eck			
											$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

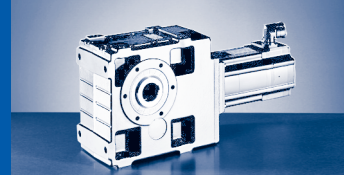
## GKS□□-□S (MCS)

$M_{2GN} \leq 702 \text{ Nm}$

GKS06-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
103.721	685	0.30	$M_2$		111	141	219	297	366	434
			c		4.8	3.9	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$		39	39	39	36	39	39
			$n_{2 \text{ th}}$		39	39	39	36	39	39
113.205	537	0.23	$M_2$		123	155	241	326	401	476
			c		3.8	3.1	2.0	1.5	1.2	1.0
			$n_{2 \text{ Eck}}$		36	36	36	33	36	36
			$n_{2 \text{ th}}$		36	36	36	33	36	36
127.059	689	0.26	$M_2$		137	173	269	365	449	533
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		32	32	32	30	32	32
			$n_{2 \text{ th}}$		32	32	32	30	32	32
140.816	537	0.21	$M_2$		154	194	300	407		
			c		3.1	2.5	1.6	1.2		
			$n_{2 \text{ Eck}}$		29	29	29	27		
			$n_{2 \text{ th}}$		29	29	29	27		
155.647	689	0.19	$M_2$		170	214	331	448	551	
			c		3.6	2.9	1.9	1.4	1.1	
			$n_{2 \text{ Eck}}$		26	26	26	24	26	
			$n_{2 \text{ th}}$		26	26	26	24	26	
174.336	537	0.11	$M_2$	94	192	242				
			c	5.0	2.5	2.0				
			$n_{2 \text{ Eck}}$	23	23	23				
			$n_{2 \text{ th}}$	23	23	23				
202.588	695	0.17	$M_2$	108	223	280	433	586		
			c	5.5	2.8	2.2	1.5	1.1		
			$n_{2 \text{ Eck}}$	20	20	20	20	19		
			$n_{2 \text{ th}}$	20	20	20	20	19		
224.524	537	0.07	$M_2$	122	249	313				
			c	3.9	1.9	1.6				
			$n_{2 \text{ Eck}}$	18	18	18				
			$n_{2 \text{ th}}$	18	18	18				
252.000	702	0.16	$M_2$	136	279	350	540			
			c	4.5	2.3	1.8	1.2			
			$n_{2 \text{ Eck}}$	16	16	16	16			
			$n_{2 \text{ th}}$	16	16	16	16			
279.286	537	0.07	$M_2$	153	311	390				
			c	3.1	1.6	1.2				
			$n_{2 \text{ Eck}}$	15	15	15				
			$n_{2 \text{ th}}$	15	15	15				
316.800	702	0.10	$M_2$	173	352	442				
			c	3.6	1.8	1.4				
			$n_{2 \text{ Eck}}$	13	13	13				
			$n_{2 \text{ th}}$	13	13	13				
361.429	537	0.06	$M_2$	199	404					
			c	2.4	1.2					
			$n_{2 \text{ Eck}}$	11	11					
			$n_{2 \text{ th}}$	11	11					
408.000	702	0.07	$M_2$	224	455	571				
			c	2.8	1.4	1.1				
			$n_{2 \text{ Eck}}$	10	10	10				
			$n_{2 \text{ th}}$	10	10	10				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

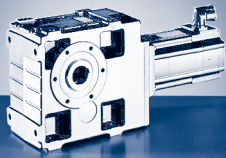


$M_{2GN} \leq 702 \text{ Nm}$

GKS06-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
640.800	702	0.06	$M_2$	356						
			c	1.8						
			$n_{2 \text{ Eck}}$	6						
			$n_{2 \text{ th}}$	6						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□S (MCS)

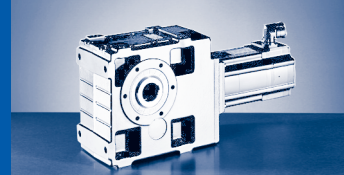
$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
5.955	471	19.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
8.254	541	11.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
9.171	725	16.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
10.124	800	15.88	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
11.378	515	7.02	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							104	83	78	142	116	
										4.8	4.7	4.8	3.2	3.1	
										132	264	310	171	356	
										132	257	258	171	236	
11.378	613	7.02	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
12.711	832	10.16	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
14.798	1040	14.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
16.674	1071	13.97	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
17.270	826	7.26	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							157	126	118	216	176	
										5.0	5.0	5.1	3.4	3.3	
										87	174	204	113	235	
										87	165	165	113	151	
17.270	998	7.26	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
20.511	1110	9.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
23.111	1168	8.91	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												192
															5.8
															65
															65

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



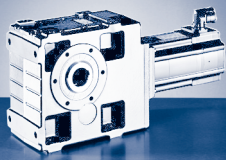


$M_{2GN} \leq 1330 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS07-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
	87	76	127	94	167	116	149	116	224	162	287	179	c	19.30	471	5.955
	5.2	4.6	3.6	3.8	2.8	3.1	3.1	3.1	2.1	2.3	1.6	2.1	$n_2 \text{ Eck}$			
	252	542	252	542	227	542	239	504	239	504	227	504	$n_2 \text{ th}$			
	252	361	252	345	227	329	239	331	239	305	227	298				
	121	107	177	132	232	162	208	162	311	225	398	249	$M_2$	11.80	541	8.254
	4.3	3.8	3.0	3.1	2.3	2.5	2.6	2.6	1.7	1.9	1.4	1.7	c			
	182	391	182	391	164	391	173	364	173	364	164	364	$n_2 \text{ Eck}$			
	182	288	182	275	164	263	173	265	173	241	164	227	$n_2 \text{ th}$			
	133	117	195	145	256	179	230	179	344	249	441	276	$M_2$	16.00	725	9.171
	5.2	4.6	3.6	3.8	2.8	3.1	3.1	3.1	2.1	2.3	1.6	2.1	c			
	164	352	164	352	147	352	155	327	155	327	147	327	$n_2 \text{ Eck}$			
	164	234	164	224	147	214	155	215	155	198	147	193	$n_2 \text{ th}$			
	147	130	215	161	283	198	254	197	380	275	487	304	$M_2$	15.88	800	10.124
	5.2	4.6	3.6	3.8	2.8	3.1	3.1	3.1	2.1	2.3	1.6	2.1	c			
	148	319	148	319	133	319	141	296	141	296	133	296	$n_2 \text{ Eck}$			
	148	212	148	203	133	194	141	195	141	180	133	175	$n_2 \text{ th}$			
													$M_2$	7.02	515	11.378
													c			
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
77	168	148	245	183	321	224	288	224	430	312	551	344	$M_2$	7.02	613	11.378
5.7	3.6	3.1	2.5	2.6	1.9	2.1	2.1	2.1	1.4	1.6	1.1	1.4	c			
316	132	284	132	284	119	284	125	264	125	264	119	264	$n_2 \text{ Eck}$			
266	132	237	132	226	119	216	125	194	125	186	119	177	$n_2 \text{ th}$			
	186	164	272	203	357	249	321	249	479	347	613	383	$M_2$	10.16	832	12.711
	4.3	3.8	3.0	3.1	2.3	2.5	2.6	2.6	1.7	1.9	1.4	1.7	c			
	118	254	118	254	106	254	112	236	112	236	106	236	$n_2 \text{ Eck}$			
	118	187	118	179	106	171	112	172	112	157	106	148	$n_2 \text{ th}$			
	216	190	316	236	415	290	373	290	557	403	713	446	$M_2$	14.31	1040	14.798
	4.6	4.1	3.2	3.3	2.5	2.7	2.7	2.8	1.9	2.0	1.5	1.8	c			
	101	218	101	218	91	218	96	203	96	203	91	203	$n_2 \text{ Eck}$			
	101	142	101	135	91	129	96	129	96	119	91	113	$n_2 \text{ th}$			
	245	215	357	267	469	327	421	327	629	455	805	503	$M_2$	13.97	1071	16.674
	4.2	3.7	2.9	3.1	2.3	2.5	2.5	2.6	1.7	1.9	1.3	1.7	c			
	90	193	90	193	81	193	86	180	86	180	81	180	$n_2 \text{ Eck}$			
	90	123	90	117	81	112	85	112	85	101	81	95	$n_2 \text{ th}$			
													$M_2$	7.26	826	17.270
													c			
													$n_2 \text{ Eck}$			
													$n_2 \text{ th}$			
	255	224	371	277	487	340	437	340	653	472	835	522	$M_2$	7.26	998	17.270
	3.8	3.4	2.7	2.7	2.0	2.3	2.3	2.3	1.5	1.7	1.2	1.5	c			
	87	187	87	187	78	187	83	174	83	174	78	174	$n_2 \text{ Eck}$			
	87	152	87	145	78	138	83	128	83	121	78	114	$n_2 \text{ th}$			
139	303	267	441	330	579	404	520	404	776	562	992	621	$M_2$	9.08	1110	20.511
5.7	3.6	3.2	2.5	2.6	1.9	2.1	2.1	2.2	1.4	1.6	1.1	1.4	c			
176	73	157	73	157	66	157	70	146	70	146	66	146	$n_2 \text{ Eck}$			
126	73	111	73	106	66	101	69	102	69	87	66	82	$n_2 \text{ th}$			
157	343	301	498	372	653	456	587	456	875	634	1119	700	$M_2$	8.91	1168	23.111
5.3	3.3	3.0	2.3	2.4	1.8	2.0	2.0	2.0	1.3	1.5	1.0	1.3	c			
156	65	140	65	140	58	140	62	130	62	130	58	130	$n_2 \text{ Eck}$			
110	65	97	65	93	58	88	62	89	62	74	58	70	$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

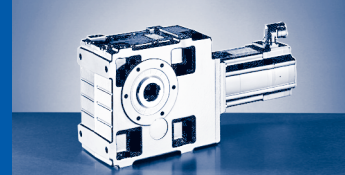
## GKS□□-□S (MCS)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
25.244	1177	6.72	$M_2$							230	184	172	316	258	211
			c						4.9	4.9	4.9	3.3	3.2	5.3	
			$n_{2 \text{ Eck}}$							59	119	140	77	160	59
			$n_{2 \text{ th}}$							59	112	112	77	103	59
28.274	1202	5.57	$M_2$							259	207	194	355	289	237
			c						4.5	4.4	4.5	3.0	2.9	4.9	
			$n_{2 \text{ Eck}}$							53	106	125	69	143	53
			$n_{2 \text{ th}}$							53	102	102	69	94	53
31.858	1172	5.47	$M_2$							293	235	220	402	328	269
			c						3.9	3.8	3.9	2.6	2.5	4.2	
			$n_{2 \text{ Eck}}$							47	94	111	61	127	47
			$n_{2 \text{ th}}$							47	88	88	61	81	47
36.063	1068	3.65	$M_2$			123	148								
			c			5.9	5.0								
			$n_{2 \text{ Eck}}$			112	112								
			$n_{2 \text{ th}}$			99	96								
36.063	1290	3.65	$M_2$							333	266	249	455	371	305
			c							3.8	3.7	3.8	2.6	2.5	4.1
			$n_{2 \text{ Eck}}$							42	83	98	54	112	42
			$n_{2 \text{ th}}$							42	83	91	54	83	42
40.906	1290	6.93	$M_2$												348
			c												3.6
			$n_{2 \text{ Eck}}$												37
			$n_{2 \text{ th}}$												37
44.178	1300	2.78	$M_2$					220	171	410	327	306	559	455	376
			c					5.6	5.9	3.1	3.5	3.5	2.3	2.3	3.4
			$n_{2 \text{ Eck}}$					44	92	34	68	80	44	92	34
			$n_{2 \text{ th}}$					44	87	34	68	80	44	73	34
50.345	1300	5.30	$M_2$					252	197	470	374	351	639	520	431
			c					4.9	5.2	2.7	3.1	3.1	2.0	2.0	3.0
			$n_{2 \text{ Eck}}$					39	80	30	60	70	39	80	30
			$n_{2 \text{ th}}$					39	57	30	51	51	39	46	30
57.501	1174	1.75	$M_2$		161	200	238								
			c		5.8	4.6	3.9								
			$n_{2 \text{ Eck}}$		65	70	70								
			$n_{2 \text{ th}}$		65	70	70								
57.501	1310	1.75	$M_2$					290	226	538	429	402	731	596	494
			c					4.4	4.6	2.4	2.7	2.7	1.8	1.8	2.6
			$n_{2 \text{ Eck}}$					34	70	26	52	61	34	70	26
			$n_{2 \text{ th}}$					34	70	26	52	61	34	63	26
64.790	1195	1.73	$M_2$		182	226	270	329	257	609	486	456	827	674	560
			c		5.2	4.2	3.5	3.5	3.7	1.9	2.2	2.2	1.4	1.4	2.1
			$n_{2 \text{ Eck}}$		58	63	63	30	63	23	46	54	30	63	23
			$n_{2 \text{ th}}$		58	63	63	30	63	23	46	54	30	50	23
70.474	1230	1.30	$M_2$		199	246	294								
			c		5.0	4.0	3.3								
			$n_{2 \text{ Eck}}$		53	58	58								
			$n_{2 \text{ th}}$		53	57	57								
70.474	1320	1.30	$M_2$					358	280	663	529	495	899	733	608
			c					3.6	3.7	2.0	2.2	2.3	1.5	1.5	2.1
			$n_{2 \text{ Eck}}$					28	58	21	43	50	28	58	21
			$n_{2 \text{ th}}$					28	57	21	43	50	28	53	21

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

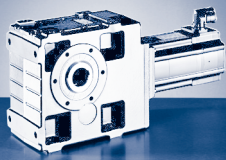


$M_{2GN} \leq 1330 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS07-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
172	375	330	545	407	715	499	642	499	957	693		766	c	6.72	1177	25.244
4.9	3.1	2.7	2.1	2.2	1.6	1.8	1.8	1.9	1.2	1.3			$n_2$ Eck			
143	59	128	59	128	54	128	57	119	57	119			$n_2$ th			
112	59	99	59	94	53	87	56	88	56	73						
194	422	370	612	457	802	560	720	560	1073	777		858	$M_2$	5.57	1202	28.274
4.5	2.8	2.5	2.0	2.0	1.5	1.7	1.7	1.7	1.1	1.2			c			
127	53	114	53	114	48	114	50	106	50	106			$n_2$ Eck			
102	53	90	53	86	48	78	50	78	50	66			$n_2$ th			
220	477	419	691	516	905	633	813	632		877			$M_2$	5.47	1172	31.858
3.9	2.4	2.1	1.7	1.8	1.3	1.4	1.4	1.5		1.1			c			
113	47	101	47	101	42	101	45	94		94			$n_2$ Eck			
88	47	78	47	71	42	64	45	64		55			$n_2$ th			
													$M_2$	3.65	1068	36.063
													c			
													$n_2$ Eck			
													$n_2$ th			
249	540	474	783	585	1025	716							$M_2$	3.65	1290	36.063
3.8	2.4	2.1	1.6	1.7	1.3	1.4							c			
100	42	89	42	89	37	89							$n_2$ Eck			
90	42	80	42	72	37	65							$n_2$ th			
284	615	539	889	665	1164	814	1047	814					$M_2$	6.93	1290	40.906
3.3	2.1	1.8	1.4	1.5	1.1	1.2	1.2	1.3					c			
88	37	79	37	79	33	79	35	73					$n_2$ Eck			
56	37	48	37	43	33	38	35	39					$n_2$ th			
306	665	582	962	717	1258	878							$M_2$	2.78	1300	44.178
3.5	1.9	2.0	1.4	1.6	1.0	1.3							c			
82	34	73	34	73	31	73							$n_2$ Eck			
79	34	71	34	63	31	58							$n_2$ th			
351	760	664	1098	819		1003	1291	1002					$M_2$	5.30	1300	50.345
3.1	1.7	1.7	1.2	1.4		1.1	1.0	1.2					c			
72	30	64	30	64		64	28	60					$n_2$ Eck			
51	30	42	30	37		34	28	34					$n_2$ th			
													$M_2$	1.75	1174	57.501
													c			
													$n_2$ Eck			
													$n_2$ th			
402	869	761	1256	937		1147							$M_2$	1.75	1310	57.501
2.7	1.5	1.5	1.0	1.2		1.0							c			
63	26	56	26	56		56							$n_2$ Eck			
62	26	56	26	52		48							$n_2$ th			
456	982	860											$M_2$	1.73	1195	64.790
2.2	1.2	1.2											c			
56	23	50											$n_2$ Eck			
55	23	46											$n_2$ th			
													$M_2$	1.30	1230	70.474
													c			
													$n_2$ Eck			
													$n_2$ th			
496	1068	935		1151									$M_2$	1.30	1320	70.474
2.2	1.2	1.2		1.0									c			
51	21	46		46									$n_2$ Eck			
51	21	46		45									$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GKS [Nm]

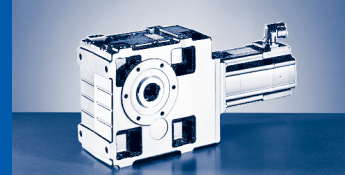
## GKS□□-□S (MCS)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
79.407	1205	1.28	$M_2$	165	226	279	333	407	317	750	598	561	1016	828	689
			c	5.7	4.3	3.4	2.9	2.9	3.0	1.6	1.8	1.8	1.2	1.2	1.7
			$n_{2 \text{ Eck}}$	51	47	51	51	25	51	19	38	44	25	51	19
			$n_{2 \text{ th}}$	51	47	51	51	25	51	19	38	44	25	43	19
92.563	1264	0.81	$M_2$	193	264	327	389								
			c	5.1	3.9	3.1	2.6								
			$n_{2 \text{ Eck}}$	44	41	44	44								
			$n_{2 \text{ th}}$	44	41	44	44								
92.563	1330	0.81	$M_2$					475	371	874	698	654	1185	966	
			c					2.8	2.9	1.5	1.7	1.7	1.1	1.1	
			$n_{2 \text{ Eck}}$					21	44	16	32	38	21	44	
			$n_{2 \text{ th}}$					21	44	16	32	38	21	44	
104.296	1215	0.80	$M_2$	220	300	370	440	538	420	988	789	740			
			c	4.4	3.3	2.6	2.2	2.2	2.3	1.2	1.4	1.4			
			$n_{2 \text{ Eck}}$	39	36	39	39	19	39	14	29	34			
			$n_{2 \text{ th}}$	39	36	39	39	19	39	14	29	34			
112.338	1279	0.59	$M_2$	236	322	398	473								
			c	4.7	3.6	2.9	2.4								
			$n_{2 \text{ Eck}}$	36	33	36	36								
			$n_{2 \text{ th}}$	36	33	36	36								
112.338	1330	0.59	$M_2$					579	451	1064	849	795		1173	
			c					2.3	2.6	1.3	1.6	1.6		1.0	
			$n_{2 \text{ Eck}}$					17	36	13	27	31		36	
			$n_{2 \text{ th}}$					17	36	13	27	31		36	
126.578	1215	0.59	$M_2$	268	365	450	535	655	511	1202	959	899			
			c	4.0	3.0	2.4	2.0	1.8	2.1	1.0	1.3	1.3			
			$n_{2 \text{ Eck}}$	32	30	32	32	15	32	12	24	28			
			$n_{2 \text{ th}}$	32	30	32	32	15	32	12	24	28			
140.548	1330	1.11	$M_2$	298	405	500	594	728	567		1065	999			1227
			c	3.9	3.0	2.4	2.0	1.8	2.1	1.3	1.3				1.1
			$n_{2 \text{ Eck}}$	29	27	29	29	14	29	21	25				11
			$n_{2 \text{ th}}$	29	27	29	29	14	29	21	25				11
158.364	1215	1.11	$M_2$	338	459	566	672	823	642		1203	1128			
			c	3.2	2.4	1.9	1.6	1.5	1.7		1.0	1.0			
			$n_{2 \text{ Eck}}$	26	24	26	26	12	26		19	22			
			$n_{2 \text{ th}}$	26	24	26	25	12	25		19	20			
184.600	1330	0.69	$M_2$	395	536	661	785	961	749						
			c	3.0	2.3	1.8	1.5	1.4	1.6						
			$n_{2 \text{ Eck}}$	22	20	22	22	11	22						
			$n_{2 \text{ th}}$	22	20	22	22	11	22						
208.000	1215	0.69	$M_2$	448	607	747	887	1085	847						
			c	2.4	1.8	1.5	1.2	1.1	1.3						
			$n_{2 \text{ Eck}}$	20	18	20	20	9	20						
			$n_{2 \text{ th}}$	19	18	19	19	9	19						
224.037	1330	0.51	$M_2$	482	654	805	955	1169	912						
			c	2.5	1.9	1.5	1.3	1.1	1.3						
			$n_{2 \text{ Eck}}$	18	17	18	18	9	18						
			$n_{2 \text{ th}}$	18	17	18	18	9	18						
252.436	1215	0.51	$M_2$	546	739	909	1079		1030						
			c	2.0	1.5	1.2	1.0		1.1						
			$n_{2 \text{ Eck}}$	16	15	16	16		16						
			$n_{2 \text{ th}}$	16	15	16	16		16						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

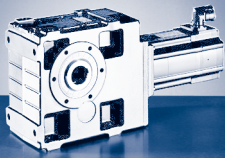


$M_{2GN} \leq 1330 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS07-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
561		1056											$M_2$			
1.8		1.0											c	1.28	1205	79.407
45		41											$n_2$ Eck			
45		40											$n_2$ th			
													$M_2$			
													c	0.81	1264	92.563
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.81	1330	92.563
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.80	1215	104.296
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.59	1279	112.338
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.59	1330	112.338
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.59	1215	126.578
													$n_2$ Eck			
													$n_2$ th			
999													$M_2$			
1.3													c	1.11	1330	140.548
26													$n_2$ Eck			
25													$n_2$ th			
1128													$M_2$			
1.0													c	1.11	1215	158.364
23													$n_2$ Eck			
20													$n_2$ th			
													$M_2$			
													c	0.69	1330	184.600
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.69	1215	208.000
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.51	1330	224.037
													$n_2$ Eck			
													$n_2$ th			
													$M_2$			
													c	0.51	1215	252.436
													$n_2$ Eck			
													$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

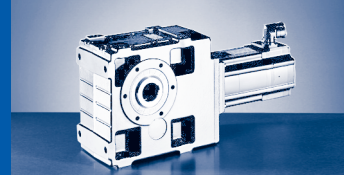
## GKS□□-□S (MCS)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
283.193	1330	0.33	$M_2$	613	830	1020									
			c	2.0	1.5	1.2									
			$n_{2 \text{ Eck}}$	14	13	14									
			$n_{2 \text{ th}}$	14	13	14									
319.091	1215	0.33	$M_2$	693	938										
			c	1.6	1.2										
			$n_{2 \text{ Eck}}$	13	12										
			$n_{2 \text{ th}}$	13	12										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

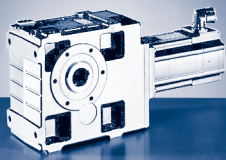


$M_{2GN} \leq 1330 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS07-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$			
													c	0.33	1330	283.193
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.33	1215	319.091
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□S (MCS)

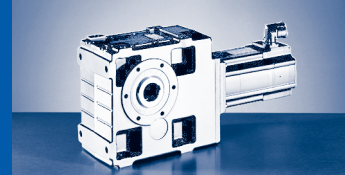
$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	
103.039	1290	0.84	$M_2$				212	290	358	426	521	407	959	765	717	
			c				4.8	3.6	2.9	2.4	2.4	2.5	1.3	1.5	1.5	
			$n_{2 \text{ Eck}}$				39	36	39	39	39	19	39	15	29	34
			$n_{2 \text{ th}}$				39	36	39	39	39	19	39	15	29	34
112.391	1053	0.63	$M_2$				234	318	393	467	572	446	1049	837	785	
			c				4.0	3.0	2.4	2.0	1.8	2.1	1.0	1.3	1.3	
			$n_{2 \text{ Eck}}$				36	33	36	36	17	36	13	27	31	
			$n_{2 \text{ th}}$				36	33	36	36	17	36	13	27	31	
126.222	1300	0.73	$M_2$				261	356	440	523	641	500	1177	939	880	
			c				4.3	3.3	2.6	2.2	2.0	2.3	1.1	1.4	1.4	
			$n_{2 \text{ Eck}}$				32	30	32	32	16	32	12	24	28	
			$n_{2 \text{ th}}$				32	30	32	32	15	32	12	24	28	
137.748	1053	0.57	$M_2$			185	289	393	484	575	704	549		1029	964	
			c			4.9	3.2	2.5	2.0	1.7	1.5	1.7		1.0	1.0	
			$n_{2 \text{ Eck}}$			29	29	27	29	29	14	29		22	26	
			$n_{2 \text{ th}}$			29	29	27	29	29	14	29		22	26	
154.622	1300	0.53	$M_2$			206	323	439	542	644	789	615		1153	1081	
			c			5.4	3.5	2.7	2.1	1.8	1.6	1.9		1.1	1.1	
			$n_{2 \text{ Eck}}$			26	26	24	26	26	13	26		19	23	
			$n_{2 \text{ th}}$			26	26	24	26	26	13	26		19	23	
179.201	1053	0.28	$M_2$		193	243	379	514	632	751						
			c		4.8	3.8	2.5	1.9	1.5	1.3						
			$n_{2 \text{ Eck}}$		23	23	23	21	23	23						
			$n_{2 \text{ th}}$		23	23	23	21	23	23						
201.254	1310	0.45	$M_2$		215	272	424	576	709	842	1031	804				
			c		5.3	4.2	2.7	2.1	1.7	1.4	1.3	1.5				
			$n_{2 \text{ Eck}}$		20	20	20	19	20	20	10	20				
			$n_{2 \text{ th}}$		20	20	20	19	20	20	10	20				
222.909	1053	0.20	$M_2$		242	305	474	642	789	936						
			c		3.8	3.1	2.0	1.5	1.2	1.0						
			$n_{2 \text{ Eck}}$		18	18	18	17	18	18						
			$n_{2 \text{ th}}$		18	18	18	17	18	18						
246.659	1320	0.42	$M_2$		267	336	523	708	872	1035	1266	988				
			c		4.3	3.5	2.3	1.7	1.4	1.2	1.0	1.2				
			$n_{2 \text{ Eck}}$		16	16	16	15	16	16	8	16				
			$n_{2 \text{ th}}$		16	16	16	15	16	16	8	16				
273.199	1053	0.18	$M_2$		299	377	583	789								
			c		3.1	2.5	1.6	1.2								
			$n_{2 \text{ Eck}}$		15	15	15	14								
			$n_{2 \text{ th}}$		15	15	15	14								
321.049	1320	0.26	$M_2$		351	442	684	926	1139							
			c		3.3	2.7	1.7	1.3	1.1							
			$n_{2 \text{ Eck}}$		13	13	13	12	13							
			$n_{2 \text{ th}}$		13	13	13	12	13							
358.829	1053	0.17	$M_2$	193	396	498	769									
			c	4.7	2.4	1.9	1.2									
			$n_{2 \text{ Eck}}$	11	11	11	11									
			$n_{2 \text{ th}}$	11	11	11	11									
399.353	1320	0.18	$M_2$	213	439	553	854	1155								
			c	5.3	2.7	2.1	1.4	1.1								
			$n_{2 \text{ Eck}}$	10	10	10	10	9								
			$n_{2 \text{ th}}$	10	10	10	10	9								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



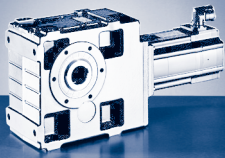


$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	
464.367	1053	0.11	$M_2$	253	516	647										
			c	3.7	1.8	1.5										
			$n_{2 \text{ Eck}}$	9	9	9										
			$n_{2 \text{ th}}$	9	9	9										
516.810	1320	0.11	$M_2$	280	572	719										
			c	4.1	2.1	1.7										
			$n_{2 \text{ Eck}}$	8	8	8										
			$n_{2 \text{ th}}$	8	8	8										
563.572	1053	0.10	$M_2$	309	628	788										
			c	3.0	1.5	1.2										
			$n_{2 \text{ Eck}}$	7	7	7										
			$n_{2 \text{ th}}$	7	7	7										
636.581	1330	0.16	$M_2$	348	708	888										
			c	3.4	1.7	1.4										
			$n_{2 \text{ Eck}}$	6	6	6										
			$n_{2 \text{ th}}$	6	6	6										
683.972	1053	0.07	$M_2$	377	764											
			c	2.5	1.2											
			$n_{2 \text{ Eck}}$	6	6											
			$n_{2 \text{ th}}$	6	6											
823.810	1330	0.10	$M_2$	454	920	1153										
			c	2.6	1.3	1.0										
			$n_{2 \text{ Eck}}$	5	5	5										
			$n_{2 \text{ th}}$	5	5	5										
928.237	1215	0.10	$M_2$	514	1039											
			c	2.1	1.1											
			$n_{2 \text{ Eck}}$	4	4											
			$n_{2 \text{ th}}$	4	4											
999.806	1330	0.07	$M_2$	553	1119											
			c	2.2	1.1											
			$n_{2 \text{ Eck}}$	4	4											
			$n_{2 \text{ th}}$	4	4											
1126.542	1215	0.07	$M_2$	626												
			c	1.7												
			$n_{2 \text{ Eck}}$	4												
			$n_{2 \text{ th}}$	4												

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GKS [Nm]

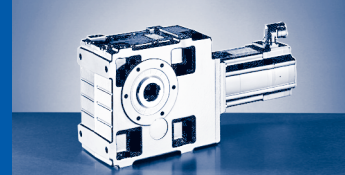
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
12.283	1615	34.20	$M_2$ c $n_2$ Eck $n_2$ th										
13.360	1757	33.40	$M_2$ c $n_2$ Eck $n_2$ th										
16.122	1506	22.60	$M_2$ c $n_2$ Eck $n_2$ th										
16.122	1801	22.60	$M_2$ c $n_2$ Eck $n_2$ th										
17.536	1638	22.20	$M_2$ c $n_2$ Eck $n_2$ th										
17.536	1958	22.20	$M_2$ c $n_2$ Eck $n_2$ th										
19.541	2570	30.60	$M_2$ c $n_2$ Eck $n_2$ th										
22.022	2672	29.90	$M_2$ c $n_2$ Eck $n_2$ th										
25.649	2396	20.50	$M_2$ c $n_2$ Eck $n_2$ th										
25.649	2862	20.50	$M_2$ c $n_2$ Eck $n_2$ th										
29.228	2500	15.90	$M_2$ c $n_2$ Eck $n_2$ th										423 5.6 51 51
29.228	2914	15.90	$M_2$ c $n_2$ Eck $n_2$ th										
32.940	2818	15.60	$M_2$ c $n_2$ Eck $n_2$ th										476 5.6 46 46

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

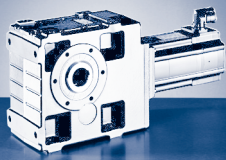


$M_{2GN} \leq 3080 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
					301	234	455	328	584	364	c	34.20	1615	12.283
					5.1	5.2	3.5	3.8	2.7	3.4	$n_{2 \text{ Eck}}$			
					116	244	116	244	110	244	$n_{2 \text{ th}}$			
					116	166	116	155	110	152				
					328	255	494	357	636	396	$M_2$			
					5.1	5.2	3.5	3.8	2.7	3.4	c	33.40	1757	13.360
					107	225	107	225	101	225	$n_{2 \text{ Eck}}$			
					107	153	107	143	101	139	$n_{2 \text{ th}}$			
204	340	254	448	313							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	22.60	1506	16.122
200	93	200	84	200							$n_{2 \text{ Eck}}$			
145	93	139	84	133							$n_{2 \text{ th}}$			
					399	310	600	434	770	480	$M_2$			
					4.4	4.4	2.9	3.2	2.3	2.9	c	22.60	1801	16.122
					88	186	88	186	84	186	$n_{2 \text{ Eck}}$			
					88	137	88	130	84	127	$n_{2 \text{ th}}$			
222	370	276	488	340							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	22.20	1638	17.536
184	86	184	77	184							$n_{2 \text{ Eck}}$			
133	86	128	77	122							$n_{2 \text{ th}}$			
					434	337	653	472	838	522	$M_2$			
					4.4	4.4	2.9	3.2	2.3	2.9	c	22.20	1958	17.536
					81	171	81	171	77	171	$n_{2 \text{ Eck}}$			
					81	126	81	119	77	117	$n_{2 \text{ th}}$			
					479	372	723	522	930	579	$M_2$			
					5.1	5.2	3.5	3.8	2.7	3.4	c	30.60	2570	19.541
					73	154	73	154	69	154	$n_{2 \text{ Eck}}$			
					73	105	73	97	69	95	$n_{2 \text{ th}}$			
					543	422	817	591	1050	654	$M_2$			
					4.7	4.8	3.2	3.5	2.5	3.2	c	29.90	2672	22.022
					65	136	65	136	61	136	$n_{2 \text{ Eck}}$			
					65	91	65	85	61	83	$n_{2 \text{ th}}$			
325	541	404	713	497							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	20.50	2396	25.649
126	59	126	53	126							$n_{2 \text{ Eck}}$			
91	58	87	53	84							$n_{2 \text{ th}}$			
					635	493	955	690	1225	764	$M_2$			
					4.4	4.4	2.9	3.2	2.3	2.9	c	20.50	2862	25.649
					56	117	56	117	53	117	$n_{2 \text{ Eck}}$			
					56	86	56	81	53	80	$n_{2 \text{ th}}$			
372	619	462	815	569							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	15.90	2500	29.228
110	51	110	46	110							$n_{2 \text{ Eck}}$			
86	51	82	46	79							$n_{2 \text{ th}}$			
					727	565	1092	789	1400	873	$M_2$			
					3.9	4.0	2.6	2.9	2.1	2.6	c	15.90	2914	29.228
					49	103	49	103	46	103	$n_{2 \text{ Eck}}$			
					49	76	49	76	46	75	$n_{2 \text{ th}}$			
420	698	521	919	641							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	15.60	2818	32.940
98	46	98	41	98							$n_{2 \text{ Eck}}$			
76	46	73	41	70							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

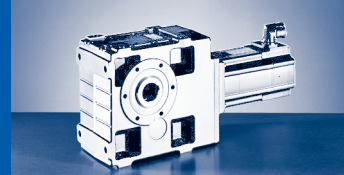
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
32.940	2984	15.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
35.193	1686	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			320 5.0 43 43	256 5.0 85 81	240 5.1 100 81	440 3.4 55 55	359 3.3 115 74			
35.193	2638	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										513 4.9 43 43
35.193	3029	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
39.662	1900	12.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			361 5.0 38 38	289 5.0 76 72	270 5.1 89 72	496 3.4 49 49	404 3.3 102 66			
39.662	2973	12.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										578 4.9 38 38
39.662	3002	12.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
43.146	2776	9.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										633 4.2 35 35
43.146	3024	9.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
48.625	3017	8.87	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										715 4.1 31 31
58.456	1882	5.54	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			541 3.4 26 26	431 3.8 51 51	404 3.9 60 60	738 2.5 33 33	601 2.5 69 56			
58.456	2940	5.54	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								485 5.8 26 26	395 6.0 62 61	867 3.3 26 26
65.879	2121	5.47	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			610 3.4 23 23	486 3.8 46 46	455 3.9 54 54	831 2.5 30 30	677 2.5 62 50			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

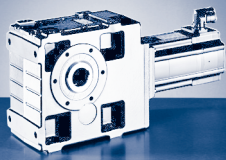


$M_{2GN} \leq 3080 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
					822	639	1233	892	1581	987	c	15.60	2984	32.940
					3.5	3.6	2.4	2.6	1.9	2.4	$n_{2 \text{ Eck}}$			
					43	91	43	91	41	91	$n_{2 \text{ th}}$			
					43	67	43	66	41	65	$M_2$			
											c	12.20	1686	35.193
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
451	749	560	986	688							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	12.20	2638	35.193
92	43	92	38	92							$n_{2 \text{ Eck}}$			
79	43	75	38	72							$n_{2 \text{ th}}$			
					880	684	1319	954	1691	1056	$M_2$			
					3.4	3.4	2.3	2.5	1.8	2.3	c	12.20	3029	35.193
					41	85	41	85	38	85	$n_{2 \text{ Eck}}$			
					40	63	40	63	38	63	$n_{2 \text{ th}}$			
											$M_2$			
											c	12.00	1900	39.662
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
509	844	631	1111	775							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	12.00	2973	39.662
81	38	81	34	81							$n_{2 \text{ Eck}}$			
70	38	67	34	64							$n_{2 \text{ th}}$			
					996	774	1491	1079	1910	1193	$M_2$			
					3.0	3.0	2.0	2.2	1.6	2.0	c	12.00	3002	39.662
					36	76	36	76	34	76	$n_{2 \text{ Eck}}$			
					36	56	36	56	34	56	$n_{2 \text{ th}}$			
554	923	687	1213	844							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	9.00	2776	43.146
75	35	75	31	75							$n_{2 \text{ Eck}}$			
69	35	66	31	64							$n_{2 \text{ th}}$			
					1086	841	1625	1172	2080	1297	$M_2$			
					2.7	3.2	1.9	2.3	1.5	2.1	c	9.00	3024	43.146
					33	70	33	70	31	70	$n_{2 \text{ Eck}}$			
					33	51	33	51	31	51	$n_{2 \text{ th}}$			
625	1042	775	1368	952	1228	951	1835	1325	2349	1465	$M_2$			
4.1	2.8	3.3	2.2	2.7	2.4	2.8	1.6	2.0	1.3	1.8	c	8.87	3017	48.625
66	31	66	28	66	29	62	29	62	28	62	$n_{2 \text{ Eck}}$			
61	31	59	28	56	29	45	29	45	28	45	$n_{2 \text{ th}}$			
											$M_2$			
											c	5.54	1882	58.456
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
758	1260	938	1652	1151							$M_2$			
3.3	2.3	2.7	1.8	2.2							c	5.54	2940	58.456
55	26	55	23	55							$n_{2 \text{ Eck}}$			
55	26	55	23	55							$n_{2 \text{ th}}$			
											$M_2$			
											c	5.47	2121	65.879
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

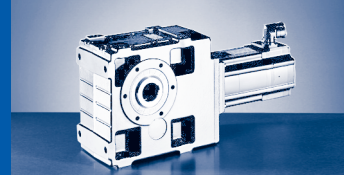
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00		
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500		
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8						
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6		
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50		
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32		
65.879	3048	5.47	$M_2$								550	447	980		
			c									5.3	5.5	3.0	
			$n_{2 \text{ Eck}}$										23	55	23
			$n_{2 \text{ th}}$										23	55	23
70.982	1959	4.14	$M_2$	354	276	661	526	493	899	733					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_{2 \text{ Eck}}$	28	57	21	42	50	28	57					
			$n_{2 \text{ th}}$	27	57	21	42	50	27	53					
70.982	3031	4.14	$M_2$								595	484	1058		
			c									4.9	5.1	2.8	
			$n_{2 \text{ Eck}}$										21	51	21
			$n_{2 \text{ th}}$										21	51	21
79.996	2207	4.10	$M_2$	399	311	745	593	556	1013	826					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_{2 \text{ Eck}}$	24	51	19	38	44	24	51					
			$n_{2 \text{ th}}$	24	51	19	38	44	24	47					
79.996	3071	4.10	$M_2$								674	548	1196		
			c									4.4	4.6	2.5	
			$n_{2 \text{ Eck}}$										19	45	19
			$n_{2 \text{ th}}$										19	45	19
91.860	2032	2.63	$M_2$	464	362	860	686	643	1169	952					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_{2 \text{ Eck}}$	21	44	16	33	38	21	44					
			$n_{2 \text{ th}}$	21	44	16	33	38	21	44					
91.860	3031	2.63	$M_2$								779	634	1379		
			c									3.8	3.9	2.2	
			$n_{2 \text{ Eck}}$										16	39	16
			$n_{2 \text{ th}}$										16	39	16
103.524	2290	2.61	$M_2$	522	408	970	773	725	1317	1073					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_{2 \text{ Eck}}$	19	39	15	29	34	19	39					
			$n_{2 \text{ th}}$	19	39	14	29	34	19	39					
103.524	3080	2.61	$M_2$								882	718	1557		
			c									3.4	3.5	2.0	
			$n_{2 \text{ Eck}}$										15	35	15
			$n_{2 \text{ th}}$										14	35	14
111.484	2058	1.92	$M_2$	567	441	1048	834	782	1423	1158					
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6					
			$n_{2 \text{ Eck}}$	18	36	14	27	32	18	36					
			$n_{2 \text{ th}}$	17	36	13	27	32	17	36					
111.484	3031	1.92	$M_2$								953	773	1680		
			c									3.1	3.6	1.8	
			$n_{2 \text{ Eck}}$										14	32	14
			$n_{2 \text{ th}}$										13	32	13
125.641	2319	1.90	$M_2$	639	496	1182	940	881	1604	1304					
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6					
			$n_{2 \text{ Eck}}$	16	32	12	24	28	16	32					
			$n_{2 \text{ th}}$	16	32	12	24	28	16	32					
125.641	3080	1.90	$M_2$								1077	874	1897		
			c									2.8	3.2	1.6	
			$n_{2 \text{ Eck}}$										12	29	12
			$n_{2 \text{ th}}$										12	29	12

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

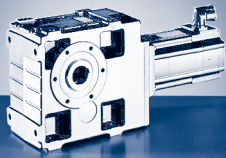


$M_{2GN} \leq 3080 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
857	1422	1059	1865	1300							c	5.47	3048	65.879
3.1	2.1	2.5	1.6	2.0							$n_{2 \text{ Eck}}$			
49	23	49	21	49							$n_{2 \text{ th}}$			
49	23	49	20	48							$M_2$			
											c	4.14	1959	70.982
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
926	1535	1144	2012	1403							$M_2$			
2.8	2.0	2.3	1.5	1.9							c	4.14	3031	70.982
45	21	45	19	45							$n_{2 \text{ Eck}}$			
45	21	45	19	45							$n_{2 \text{ th}}$			
											$M_2$			
											c	4.10	2207	79.996
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1047	1734	1292	2271	1584							$M_2$			
2.5	1.8	2.1	1.4	1.7							c	4.10	3071	79.996
40	19	40	17	40							$n_{2 \text{ Eck}}$			
40	19	40	17	40							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.63	2032	91.860
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1206	1996	1488	2613	1824							$M_2$			
2.2	1.5	1.8	1.2	1.5							c	2.63	3031	91.860
35	16	35	15	35							$n_{2 \text{ Eck}}$			
35	16	35	15	35							$n_{2 \text{ th}}$			
											$M_2$			
											c	2.61	2290	103.524
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1363	2253	1681	2949	2058							$M_2$			
2.0	1.4	1.6	1.0	1.3							c	2.61	3080	103.524
31	15	31	13	31							$n_{2 \text{ Eck}}$			
31	14	31	13	31							$n_{2 \text{ th}}$			
											$M_2$			
											c	1.92	2058	111.484
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1467	2429	1809		2216							$M_2$			
2.0	1.2	1.6		1.3							c	1.92	3031	111.484
29	14	29		29							$n_{2 \text{ Eck}}$			
29	13	29		29							$n_{2 \text{ th}}$			
											$M_2$			
											c	1.90	2319	125.641
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1657	2741	2043		2501							$M_2$			
1.8	1.1	1.5		1.2							c	1.90	3080	125.641
26	12	26		26							$n_{2 \text{ Eck}}$			
26	12	26		26							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

## GKS□□-□S (MCS)

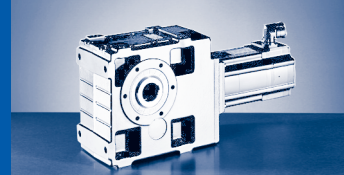
$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00	
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500	
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6	
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50	
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32	
140.921	2084	1.26	$M_2$	722	562	1331	1060	994	1804	1468				
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3				
			$n_{2 \text{ Eck}}$	14	29	11	21	25	14	29				
			$n_{2 \text{ th}}$	14	29	11	21	25	14	29				
158.816	2349	1.25	$M_2$	814	633	1500	1195	1120	2033	1654				
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3				
			$n_{2 \text{ Eck}}$	12	26	9	19	22	12	26				
			$n_{2 \text{ th}}$	12	26	9	19	22	12	26				
182.000	3031	2.25	$M_2$	929	722	1715	1366	1280	2326	1893	1575	1280	2763	
			c	3.2	3.7	1.8	2.2	2.2	1.3	1.4	1.9	2.2	1.1	
			$n_{2 \text{ Eck}}$	11	22	8	17	19	11	22	8	20	8	
			$n_{2 \text{ th}}$	11	22	8	16	19	11	20	8	20	8	
205.111	3080	2.24	$M_2$	1050	817	1936	1543	1446	2625	2136	1779	1446		
			c	2.9	3.3	1.6	2.0	2.0	1.2	1.3	1.7	2.0		
			$n_{2 \text{ Eck}}$	10	20	7	15	17	10	20	7	18		
			$n_{2 \text{ th}}$	10	20	7	15	17	10	20	7	18		
220.882	3031	1.66	$M_2$	1134	883	2088	1664	1560	2830	2303	1919	1560		
			c	2.6	3.0	1.5	1.8	1.8	1.1	1.2	1.6	1.8		
			$n_{2 \text{ Eck}}$	9	18	7	14	16	9	18	7	16		
			$n_{2 \text{ th}}$	9	18	7	14	16	9	18	7	16		
248.930	3080	1.65	$M_2$	1282	998	2357	1879	1761		2599	2166	1762		
			c	2.4	2.7	1.3	1.6	1.7		1.1	1.4	1.6		
			$n_{2 \text{ Eck}}$	8	16	6	12	14		16	6	15		
			$n_{2 \text{ th}}$	8	16	6	12	14		16	6	14		
279.205	3031	1.10	$M_2$	1442	1124	2648	2112	1980						
			c	2.1	2.4	1.1	1.4	1.4						
			$n_{2 \text{ Eck}}$	7	15	5	11	13						
			$n_{2 \text{ th}}$	7	15	5	11	13						
314.659	3080	1.10	$M_2$	1629	1269	2988	2384	2234						
			c	1.9	2.2	1.0	1.3	1.3						
			$n_{2 \text{ Eck}}$	6	13	5	10	11						
			$n_{2 \text{ th}}$	6	13	5	10	11						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



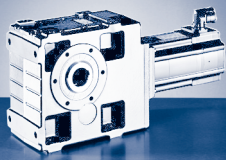


$M_{2GN} \leq 3080 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS09-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
											c	1.26	2084	140.921
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	1.25	2349	158.816
											c			
											$n_2$ Eck			
											$n_2$ th			
2415											$M_2$	2.25	3031	182.000
1.2											c			
18											$n_2$ Eck			
18											$n_2$ th			
2725											$M_2$	2.24	3080	205.111
1.1											c			
16											$n_2$ Eck			
16											$n_2$ th			
2937											$M_2$	1.66	3031	220.882
1.0											c			
15											$n_2$ Eck			
15											$n_2$ th			
											$M_2$	1.65	3080	248.930
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	1.10	3031	279.205
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	1.10	3080	314.659
											c			
											$n_2$ Eck			
											$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

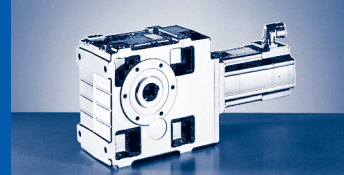
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
100.551	2358	2.48	$M_2$						340	406				
			c						5.4	4.6				
			$n_{2 \text{ Eck}}$						40	40				
			$n_{2 \text{ th}}$						40	40				
100.551	3029	2.48	$M_2$								489		916	730
			c								5.9		3.2	3.6
			$n_{2 \text{ Eck}}$								19		15	30
			$n_{2 \text{ th}}$								19		15	30
113.320	2658	2.46	$M_2$						381	455				
			c						6.0	5.1				
			$n_{2 \text{ Eck}}$						36	36				
			$n_{2 \text{ th}}$						36	36				
113.320	3002	2.46	$M_2$								556	431	1037	823
			c								5.2	6.0	2.8	3.6
			$n_{2 \text{ Eck}}$								17	36	13	27
			$n_{2 \text{ th}}$								17	36	13	26
123.275	2891	2.11	$M_2$						414	495				
			c						6.0	5.1				
			$n_{2 \text{ Eck}}$						33	33				
			$n_{2 \text{ th}}$						33	33				
123.275	3024	2.11	$M_2$								607	471	1131	898
			c								4.8	5.5	2.6	3.3
			$n_{2 \text{ Eck}}$								16	33	12	24
			$n_{2 \text{ th}}$								16	33	12	24
138.929	3017	2.09	$M_2$						469	561	689	535	1279	1017
			c						5.5	4.7	4.2	4.9	2.3	2.9
			$n_{2 \text{ Eck}}$						29	29	14	29	11	22
			$n_{2 \text{ th}}$						29	29	14	29	11	22
151.012	3024	1.52	$M_2$						512	612	751	583	1393	1108
			c						5.1	4.3	3.9	4.5	2.2	2.7
			$n_{2 \text{ Eck}}$						27	27	13	27	10	20
			$n_{2 \text{ th}}$						27	27	13	27	10	20
170.188	3017	1.51	$M_2$					468	581	694	851	661	1574	1253
			c					5.7	4.5	3.8	3.5	4.0	1.9	2.4
			$n_{2 \text{ Eck}}$					22	24	24	12	24	9	18
			$n_{2 \text{ th}}$					22	24	24	11	24	9	18
204.596	3031	1.24	$M_2$					568	704	839	1029	801	1898	1512
			c					4.8	3.8	3.2	2.9	3.3	1.6	2.0
			$n_{2 \text{ Eck}}$					18	20	20	10	20	7	15
			$n_{2 \text{ th}}$					18	20	20	10	20	7	15
230.577	3048	1.24	$M_2$				471	644	797	950	1164	906	2143	1708
			c				5.6	4.2	3.4	2.9	2.6	3.0	1.4	1.8
			$n_{2 \text{ Eck}}$				18	16	18	18	9	18	7	13
			$n_{2 \text{ th}}$				18	16	18	18	8	18	7	13
248.439	3031	1.13	$M_2$				510	697	862	1026	1257	979	2312	1843
			c				5.1	3.9	3.1	2.6	2.4	2.8	1.3	1.6
			$n_{2 \text{ Eck}}$				16	15	16	16	8	16	6	12
			$n_{2 \text{ th}}$				16	15	16	16	8	16	6	12
279.986	3071	1.13	$M_2$				578	789	974	1159	1420	1106	2609	2081
			c				4.6	3.5	2.8	2.4	2.1	2.5	1.2	1.5
			$n_{2 \text{ Eck}}$				15	13	15	15	7	15	5	11
			$n_{2 \text{ th}}$				14	13	14	14	7	14	5	11

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

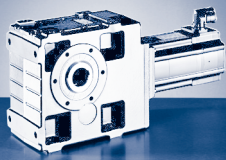


$M_{2GN} \leq 3080 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS09-4S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	2.48	2358	100.551
											$n_2$			
											$n_2$			
											$n_2$			
684	1249	1017	841	684	1486	1300	2150	1604	2814	1964	$M_2$			
3.7	2.4	2.4	3.5	3.7	2.0	2.0	1.4	1.7	1.1	1.4	c	2.48	3029	100.551
35	19	40	15	36	15	32	15	32	13	32	$n_2$			
35	19	40	15	36	15	32	15	32	13	32	$n_2$			
											$M_2$			
											c	2.46	2658	113.320
											$n_2$			
											$n_2$			
											$n_2$			
772	1412	1147	952	772	1679	1466	2428	1808		2214	$M_2$			
3.6	2.1	2.3	3.1	3.6	1.8	2.0	1.2	1.6		1.3	c	2.46	3002	113.320
31	17	36	13	32	13	29	13	29		29	$n_2$			
31	17	36	13	32	13	28	13	28		28	$n_2$			
											$M_2$			
											c	2.11	2891	123.275
											$n_2$			
											$n_2$			
											$n_2$			
842	1538	1250	1038	842	1829	1597	2643	1969		2411	$M_2$			
3.3	2.0	2.2	2.9	3.3	1.6	1.8	1.1	1.5		1.2	c	2.11	3024	123.275
29	16	33	12	29	12	26	12	26		26	$n_2$			
29	16	33	12	29	12	26	12	26		26	$n_2$			
953	1738	1413	1174	953	2065	1804	2983	2224		2722	$M_2$			
2.9	1.7	1.9	2.5	2.9	1.5	1.6	1.0	1.3		1.1	c	2.09	3017	138.929
25	14	29	11	26	11	23	11	23		23	$n_2$			
25	14	29	11	26	11	23	11	23		23	$n_2$			
1038	1892	1538	1279	1038	2248	1964		2420			$M_2$			
2.7	1.6	1.8	2.3	2.7	1.3	1.5		1.2			c	1.52	3024	151.012
23	13	27	10	24	10	21		21			$n_2$			
23	13	27	10	24	10	21		21			$n_2$			
1174	2136	1737	1445	1174	2537	2217		2731			$M_2$			
2.4	1.4	1.6	2.1	2.4	1.2	1.3		1.1			c	1.51	3017	170.188
21	12	24	9	21	9	19		19			$n_2$			
21	11	24	9	21	9	19		19			$n_2$			
1417	2574	2095	1744	1418		2671					$M_2$			
2.0	1.2	1.3	1.7	2.0		1.1					c	1.24	3031	204.596
17	10	20	7	18		16					$n_2$			
17	10	20	7	18		16					$n_2$			
1601	2905	2364	1969	1601							$M_2$			
1.8	1.1	1.2	1.5	1.8							c	1.24	3048	230.577
15	9	18	7	16							$n_2$			
15	8	18	7	16							$n_2$			
1728		2550	2125	1728							$M_2$			
1.7		1.1	1.4	1.6							c	1.13	3031	248.439
14		16	6	15							$n_2$			
14		16	6	14							$n_2$			
1951			2398	1951							$M_2$			
1.5			1.3	1.5							c	1.13	3071	279.986
13			5	13							$n_2$			
13			5	13							$n_2$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

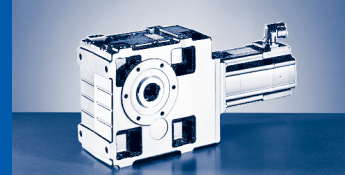
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
323.365	3031	0.71	$M_2$				673	916	1130	1344	1646	1283	3019	2409
			c			4.0	3.0	2.4	2.0	1.8	2.1	1.0	1.3	
			$n_{2 \text{ Eck}}$			13	12	13	13	13	6	13	5	9
			$n_{2 \text{ th}}$			13	12	13	13	13	6	13	5	9
364.427	3071	0.71	$M_2$			486	761	1036	1277	1518	1859	1449		2718
			c			5.4	3.6	2.7	2.2	1.8	1.6	1.9		1.1
			$n_{2 \text{ Eck}}$			11	11	10	11	11	5	11		8
			$n_{2 \text{ th}}$			11	11	10	11	11	5	11		8
402.234	3031	0.51	$M_2$			540	844	1147	1413	1679	2055	1603		3004
			c			4.9	3.2	2.4	1.9	1.6	1.5	1.7		1.0
			$n_{2 \text{ Eck}}$			10	10	9	10	10	5	10		8
			$n_{2 \text{ th}}$			10	10	9	10	10	5	10		7
453.311	3071	0.51	$M_2$		484	612	954	1296	1596	1895	2320	1810		
			c		5.5	4.4	2.9	2.2	1.7	1.5	1.3	1.5		
			$n_{2 \text{ Eck}}$		9	9	9	8	9	9	4	9		
			$n_{2 \text{ th}}$		9	9	9	8	9	9	4	9		
520.538	3031	0.47	$M_2$		560	707	1100	1493	1837	2181	2669	2083		
			c		4.7	3.8	2.5	1.9	1.5	1.3	1.1	1.3		
			$n_{2 \text{ Eck}}$		8	8	8	7	8	8	4	8		
			$n_{2 \text{ th}}$		8	8	8	7	8	8	4	8		
586.638	3080	0.47	$M_2$		634	801	1243	1686	2074	2461	3012	2351		
			c		4.2	3.4	2.2	1.7	1.3	1.1	1.0	1.2		
			$n_{2 \text{ Eck}}$		7	7	7	6	7	7	3	7		
			$n_{2 \text{ th}}$		7	7	7	6	7	7	3	7		
631.744	3031	0.44	$M_2$		686	865	1342	1818	2236	2653		2534		
			c		3.9	3.1	2.0	1.5	1.2	1.0		1.1		
			$n_{2 \text{ Eck}}$		6	6	6	6	6	6		6		
			$n_{2 \text{ th}}$		6	6	6	6	6	6		6		
711.965	3080	0.44	$M_2$		776	978	1516	2052	2523					
			c		3.5	2.8	1.8	1.4	1.1					
			$n_{2 \text{ Eck}}$		6	6	6	5	6					
			$n_{2 \text{ th}}$		6	6	6	5	6					
817.551	3031	0.28	$M_2$	434	896	1128	1745	2362						
			c	6.0	3.0	2.4	1.6	1.2						
			$n_{2 \text{ Eck}}$	5	5	5	5	5						
			$n_{2 \text{ th}}$	5	5	5	5	5						
921.367	3080	0.28	$M_2$	492	1014	1274	1970	2665						
			c	5.4	2.7	2.2	1.4	1.1						
			$n_{2 \text{ Eck}}$	4	4	4	4	4						
			$n_{2 \text{ th}}$	4	4	4	4	4						
992.209	3031	0.20	$M_2$	532	1094	1375	2124							
			c	4.9	2.5	2.0	1.3							
			$n_{2 \text{ Eck}}$	4	4	4	4							
			$n_{2 \text{ th}}$	4	4	4	4							
1118.204	3080	0.20	$M_2$	603	1236	1553	2397							
			c	4.5	2.2	1.8	1.2							
			$n_{2 \text{ Eck}}$	4	4	4	4							
			$n_{2 \text{ th}}$	4	4	4	4							
1254.197	3031	0.13	$M_2$	681	1391	1746								
			c	3.9	2.0	1.6								
			$n_{2 \text{ Eck}}$	3	3	3								
			$n_{2 \text{ th}}$	3	3	3								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

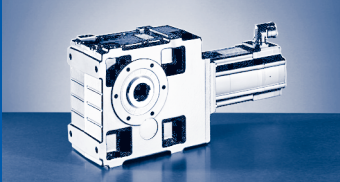


$M_{2GN} \leq 3080 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS09-4S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
2258											c	0.71	3031	323.365
1.3											$n_{2 \text{ Eck}}$			
11											$n_{2 \text{ th}}$			
11											$M_2$			
2548											c	0.71	3071	364.427
1.1											$n_{2 \text{ Eck}}$			
10											$n_{2 \text{ th}}$			
10											$M_2$			
2816											c	0.51	3031	402.234
1.0											$n_{2 \text{ Eck}}$			
9											$n_{2 \text{ th}}$			
9											$M_2$			
											c	0.51	3071	453.311
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.47	3031	520.538
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.47	3080	586.638
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.44	3031	631.744
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.44	3080	711.965
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.28	3031	817.551
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.28	3080	921.367
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.20	3031	992.209
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.20	3080	1118.204
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
											$M_2$			
											c	0.13	3031	1254.197
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

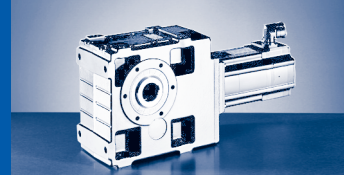
## GKS□□-□S (MCS)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-4S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
			$M_2$	770	1571	1971								
1413.461	3080	0.13	c	3.5	1.8	1.4								
			$n_{2 \text{ Eck}}$	3	3	3								
			$n_{2 \text{ th}}$	3	3	3								

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

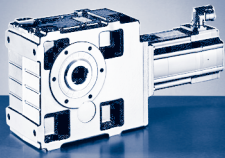


$M_{2GN} \leq 3080 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS09-4S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											$c$	0.13	3080	1413.461
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□S (MCS)

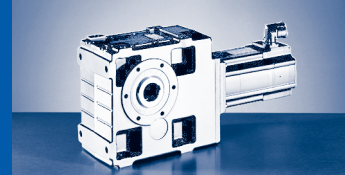
$M_{2GN} \leq 6032 \text{ Nm}$

GKS11-3S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
12.094	2592	104.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
13.154	2819	101.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
15.874	2868	68.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
17.265	3119	66.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
19.515	4182	90.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
21.989	4712	90.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
25.615	4628	61.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
28.021	4791	52.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
31.573	5398	51.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
35.741	3314	36.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				453 5.4 90 65	754 4.2 42 42	563 4.4 90 63	994 3.3 38 38
35.741	5147	36.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
40.272	3734	36.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				511 5.4 80 58	850 4.2 37 37	634 4.4 80 56	1120 3.3 34 34
40.272	5799	36.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



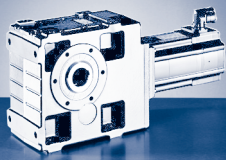


$M_{2GN} \leq 6032 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS11-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
			437		565	350	c			
			5.6		4.4	5.6	$n_{2 \text{ Eck}}$	104.00	2592	12.094
			118		112	248	$n_{2 \text{ th}}$			
			118		112	144				
			475		614	380	$M_2$			
			5.6		4.4	5.6	c	101.00	2819	13.154
			108		103	228	$n_{2 \text{ Eck}}$			
			108		103	132	$n_{2 \text{ th}}$			
			579	418	747	464	$M_2$			
			4.8	5.2	3.7	4.7	c	68.00	2868	15.874
			90	189	85	189	$n_{2 \text{ Eck}}$			
			90	125	85	123	$n_{2 \text{ th}}$			
			630	455	812	504	$M_2$			
			4.8	5.2	3.7	4.7	c	66.50	3119	17.265
			83	174	78	174	$n_{2 \text{ Eck}}$			
			83	115	78	113	$n_{2 \text{ th}}$			
			705		911	564	$M_2$			
			5.6		4.4	5.6	c	90.30	4182	19.515
			73		69	154	$n_{2 \text{ Eck}}$			
			73		69	89	$n_{2 \text{ th}}$			
			795		1027	636	$M_2$			
			5.6		4.4	5.6	c	90.40	4712	21.989
			65		61	136	$n_{2 \text{ Eck}}$			
			65		61	79	$n_{2 \text{ th}}$			
			935	674	1205	748	$M_2$			
			4.8	5.2	3.7	4.7	c	61.20	4628	25.615
			56	117	53	117	$n_{2 \text{ Eck}}$			
			56	78	53	76	$n_{2 \text{ th}}$			
			1025	740	1321	821	$M_2$			
			4.5	4.9	3.5	4.5	c	52.20	4791	28.021
			51	107	48	107	$n_{2 \text{ Eck}}$			
			51	72	48	71	$n_{2 \text{ th}}$			
			1155	834	1489	925	$M_2$			
			4.5	4.9	3.5	4.5	c	51.30	5398	31.573
			45	95	43	95	$n_{2 \text{ Eck}}$			
			45	64	43	63	$n_{2 \text{ th}}$			
693							$M_2$			
3.6							c	36.80	3314	35.741
90							$n_{2 \text{ Eck}}$			
60							$n_{2 \text{ th}}$			
	872	677	1318	952	1695	1055	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	36.80	5147	35.741
	40	84	40	84	38	84	$n_{2 \text{ Eck}}$			
	40	62	40	62	38	61	$n_{2 \text{ th}}$			
781							$M_2$			
3.6							c	36.20	3734	40.272
80							$n_{2 \text{ Eck}}$			
53							$n_{2 \text{ th}}$			
	983	763	1485	1073	1910	1189	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	36.20	5799	40.272
	35	75	35	75	34	75	$n_{2 \text{ Eck}}$			
	35	55	35	55	34	54	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

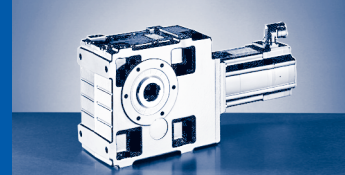
## GKS□□-□S (MCS)

$M_{2GN} \leq 6032 \text{ Nm}$

GKS11-3S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
43.783	5419	27.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
49.333	5923	27.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
57.683	3683	17.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			847 4.2 26 26	741 4.2 56 52	1235 2.9 26 26	918 3.4 56 50	1622 2.2 23 23
57.683	5726	17.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
64.995	4149	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			954 4.2 23 23	835 4.2 50 46	1391 2.9 23 23	1035 3.4 50 44	1828 2.2 21 21
64.995	5992	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
70.887	3776	13.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			1049 3.5 21 21	918 3.5 46 45	1525 2.4 21 21	1135 2.9 46 45	2002 1.9 19 19
70.887	5867	13.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
79.873	4255	12.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			1182 3.5 19 19	1034 3.5 40 40	1719 2.4 19 19	1279 2.9 40 40	2255 1.9 17 17
79.873	6032	12.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
91.737	3915	8.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	769 4.9 16 16	625 5.1 39 39	1368 2.8 16 16	1196 2.8 35 35	1984 2.0 16 16	1478 2.3 35 35	2600 1.5 15 15
103.365	4411	8.21	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	866 4.9 15 15	705 5.1 35 35	1541 2.8 15 15	1348 2.8 31 31	2236 2.0 15 15	1666 2.3 31 31	2930 1.5 13 13
111.335	3963	6.05	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	941 4.1 14 13	762 4.7 32 32	1668 2.3 14 13	1455 2.6 29 29	2416 1.6 14 13	1797 2.1 29 29	3164 1.3 12 12

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

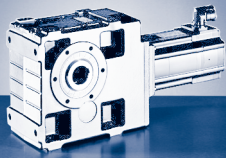


$M_{2GN} \leq 6032 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS11-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
	1078	831	1624	1167	2086	1293	c	27.90	5419	43.783
	4.8	5.6	3.3	4.1	2.6	3.7	$n_{2 \text{ Eck}}$			
	33	69	33	69	31	69	$n_{2 \text{ th}}$			
	33	50	33	50	31	50				
	1216	938	1832	1317	2353	1459	$M_2$	27.50	5923	49.333
	4.7	5.4	3.2	3.9	2.5	3.6	c			
	29	61	29	61	27	61	$n_{2 \text{ Eck}}$			
	29	45	29	45	27	45	$n_{2 \text{ th}}$			
1129							$M_2$	17.70	3683	57.683
2.8							c			
56							$n_{2 \text{ Eck}}$			
48							$n_{2 \text{ th}}$			
	1435	1108	2154	1551	2763	1717	$M_2$	17.70	5726	57.683
	3.9	4.5	2.6	3.3	2.1	3.0	c			
	25	52	25	52	23	52	$n_{2 \text{ Eck}}$			
	25	38	25	38	23	38	$n_{2 \text{ th}}$			
1272							$M_2$	17.50	4149	64.995
2.8							c			
50							$n_{2 \text{ Eck}}$			
42							$n_{2 \text{ th}}$			
	1621	1253	2432	1752	3119	1939	$M_2$	17.50	5992	64.995
	3.6	4.2	2.4	3.0	1.9	2.7	c			
	22	46	22	46	21	46	$n_{2 \text{ Eck}}$			
	22	34	22	34	21	34	$n_{2 \text{ th}}$			
1394							$M_2$	13.00	3776	70.887
2.4							c			
46							$n_{2 \text{ Eck}}$			
44							$n_{2 \text{ th}}$			
	1775	1373	2660	1918	3408	2122	$M_2$	13.00	5867	70.887
	3.2	3.7	2.2	2.7	1.7	2.5	c			
	20	42	20	42	19	42	$n_{2 \text{ Eck}}$			
	20	31	20	31	19	31	$n_{2 \text{ th}}$			
1571							$M_2$	12.90	4255	79.873
2.4							c			
40							$n_{2 \text{ Eck}}$			
39							$n_{2 \text{ th}}$			
	2007	1553	3003	2166	3847	2396	$M_2$	12.90	6032	79.873
	3.0	3.4	2.0	2.5	1.6	2.2	c			
	18	38	18	38	17	38	$n_{2 \text{ Eck}}$			
	18	28	18	28	17	28	$n_{2 \text{ th}}$			
1813							$M_2$	8.30	3915	91.737
1.9							c			
35							$n_{2 \text{ Eck}}$			
35							$n_{2 \text{ th}}$			
2043							$M_2$	8.21	4411	103.365
1.9							c			
31							$n_{2 \text{ Eck}}$			
31							$n_{2 \text{ th}}$			
2203							$M_2$	6.05	3963	111.335
1.7							c			
29							$n_{2 \text{ Eck}}$			
29							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

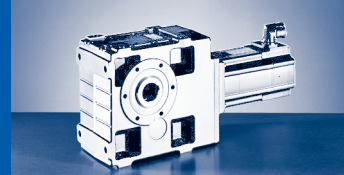
## GKS□□-□S (MCS)

$M_{2GN} \leq 6032 \text{ Nm}$

GKS11-3S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
125.448	4465	5.99	$M_2$	1061	859	1880	1640	2722	2025	3565
			c	4.1	4.7	2.3	2.6	1.6	2.1	1.3
			$n_{2 \text{ Eck}}$	12	29	12	26	12	26	11
			$n_{2 \text{ th}}$	12	29	12	26	12	26	11
140.732	4010	3.96	$M_2$	1201	973	2119	1850	3065	2282	4010
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	11	26	11	23	11	23	10
			$n_{2 \text{ th}}$	11	26	11	23	11	23	10
158.571	4519	3.93	$M_2$	1353	1097	2388	2084	3453	2572	4519
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	10	23	10	20	10	20	9
			$n_{2 \text{ th}}$	9	23	9	20	9	20	9
186.572	5975	7.07	$M_2$	1585	1284	2802	2446	4056	3019	5310
			c	3.7	4.2	2.1	2.4	1.5	1.9	1.1
			$n_{2 \text{ Eck}}$	8	19	8	17	8	17	7
			$n_{2 \text{ th}}$	8	19	8	17	8	17	7
210.222	5892	7.05	$M_2$	1794	1455	3167	2764	4579	3410	
			c	3.2	3.7	1.8	2.1	1.3	1.7	
			$n_{2 \text{ Eck}}$	7	17	7	15	7	15	
			$n_{2 \text{ th}}$	7	17	7	15	7	15	
226.431	5975	5.21	$M_2$	1937	1571	3415	2981	4936	3677	
			c	3.0	3.5	1.7	1.9	1.2	1.6	
			$n_{2 \text{ Eck}}$	7	16	7	14	7	14	
			$n_{2 \text{ th}}$	7	16	7	14	7	14	
255.133	5892	5.20	$M_2$	2191	1778	3856	3368	5571	4152	
			c	2.6	3.1	1.5	1.7	1.1	1.4	
			$n_{2 \text{ Eck}}$	6	14	6	13	6	13	
			$n_{2 \text{ th}}$	6	14	6	13	6	13	
286.219	5975	3.44	$M_2$	2465	2001	4333	3785		4664	
			c	2.4	2.8	1.4	1.5		1.3	
			$n_{2 \text{ Eck}}$	5	13	5	11		11	
			$n_{2 \text{ th}}$	5	13	5	11		11	
322.500	5892	3.43	$M_2$	2786	2263	4891	4273		5264	
			c	2.1	2.4	1.2	1.3		1.1	
			$n_{2 \text{ Eck}}$	5	11	5	10		10	
			$n_{2 \text{ th}}$	5	11	5	10		10	

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

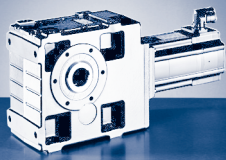


$M_{2GN} \leq 6032 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS11-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
2483							c			
1.7							$n_{2\text{ Eck}}$	5.99	4465	125.448
26							$n_{2\text{ th}}$			
26							$M_2$			
2796							c			
1.4							$n_{2\text{ Eck}}$	3.96	4010	140.732
23							$n_{2\text{ th}}$			
23							$M_2$			
3150							c			
1.4							$n_{2\text{ Eck}}$	3.93	4519	158.571
20							$n_{2\text{ th}}$			
20							$M_2$			
3699							c			
1.6							$n_{2\text{ Eck}}$	7.07	5975	186.572
17							$n_{2\text{ th}}$			
17							$M_2$			
4177							c			
1.4							$n_{2\text{ Eck}}$	7.05	5892	210.222
15							$n_{2\text{ th}}$			
15							$M_2$			
4503							c			
1.3							$n_{2\text{ Eck}}$	5.21	5975	226.431
14							$n_{2\text{ th}}$			
14							$M_2$			
5082							c			
1.1							$n_{2\text{ Eck}}$	5.20	5892	255.133
13							$n_{2\text{ th}}$			
13							$M_2$			
5708							c			
1.0							$n_{2\text{ Eck}}$	3.44	5975	286.219
11							$n_{2\text{ th}}$			
11							$M_2$			
							c			
							$n_{2\text{ Eck}}$	3.43	5892	322.500
							$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

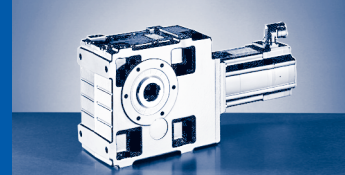
## GKS□□-□S (MCS)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-4S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
102.119	2972	7.28	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				408 5.7 40 40					
102.119	3825	7.28	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						923 4.0 15 15	734 4.5 29 29	688 4.6 35 35	
102.119	5292	7.28	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
115.063	4309	7.21	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						1040 4.0 13 13	823 5.0 26 26	771 5.1 31 31	
115.063	5869	7.21	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
125.095	4685	6.23	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						1130 4.0 12 12	894 5.0 24 24	838 5.1 28 28	
125.095	5800	6.23	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
140.952	5279	6.19	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						1274 4.0 11 11	1008 5.0 21 21	944 5.1 25 25	
140.952	5923	6.19	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
153.242	4931	4.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						1393 3.5 10 10	1104 4.3 20 20	1035 4.4 23 23	
153.242	5800	4.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									
172.667	5556	4.47	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						1570 3.5 9 9	1244 4.3 17 17	1166 4.4 20 20	
172.667	5923	4.47	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

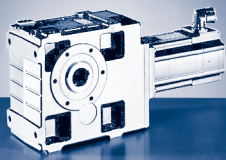


$M_{2GN} \leq 6072 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS11-4S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$i_{M230}$			
11.8										$i_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
										c	7.28	2972	102.119
										$n_2$ Eck			
										$n_2$ th			
1260	1027									$M_2$	7.28	3825	102.119
3.0	3.0									c			
19	40									$n_2$ Eck			
19	40									$n_2$ th			
				1485	1299	2160	1608	2834	1974	$M_2$	7.28	5292	102.119
				3.5	3.5	2.4	2.8	1.9	2.3	c			
				15	32	15	32	13	32	$n_2$ Eck			
				15	32	15	32	13	32	$n_2$ th			
1420	1153									$M_2$	7.21	4309	115.063
3.0	3.3									c			
17	35									$n_2$ Eck			
17	35									$n_2$ th			
		936		1675	1459	2435	1806	3195	2219	$M_2$	7.21	5869	115.063
		5.9		3.4	3.8	2.4	3.1	1.8	2.5	c			
		13		13	28	13	28	12	28	$n_2$ Eck			
		13		13	28	13	28	12	28	$n_2$ th			
1544	1253									$M_2$	6.23	4685	125.095
3.0	3.3									c			
16	32									$n_2$ Eck			
16	32									$n_2$ th			
		1024		1827	1592	2653	1970	3480	2418	$M_2$	6.23	5800	125.095
		5.4		3.1	3.5	2.2	2.8	1.7	2.3	c			
		12		12	26	12	26	11	26	$n_2$ Eck			
		12		12	26	12	26	11	26	$n_2$ th			
1739	1412									$M_2$	6.19	5279	140.952
3.0	3.3									c			
14	29									$n_2$ Eck			
14	29									$n_2$ th			
		1160	938	2065	1800	2996	2226	3927	2731	$M_2$	6.19	5923	140.952
		4.9	5.7	2.8	3.1	2.0	2.6	1.5	2.1	c			
		11	26	11	23	11	23	10	23	$n_2$ Eck			
		11	25	11	23	11	23	10	23	$n_2$ th			
1900	1543									$M_2$	4.50	4931	153.242
2.6	2.8									c			
13	26									$n_2$ Eck			
13	26									$n_2$ th			
		1268	1026	2252	1964	3264	2427	4276	2976	$M_2$	4.50	5800	153.242
		4.4	5.1	2.5	2.8	1.8	2.3	1.4	1.9	c			
		10	24	10	21	10	21	9	21	$n_2$ Eck			
		10	23	10	21	10	21	9	21	$n_2$ th			
2140	1739									$M_2$	4.47	5556	172.667
2.6	2.8									c			
11	24									$n_2$ Eck			
11	23									$n_2$ th			
		1436	1162	2544	2219	3684	2741	4825	3360	$M_2$	4.47	5923	172.667
		4.0	4.6	2.3	2.6	1.6	2.1	1.2	1.7	c			
		9	21	9	19	9	19	8	19	$n_2$ Eck			
		9	21	9	19	9	19	8	19	$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

## GKS□□-□S (MCS)

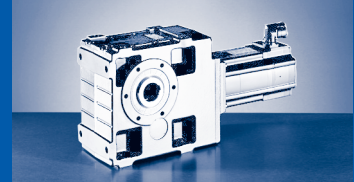
$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-4S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
201.890	5972	3.74	$M_2$					984		1841	1460	1368
			c					5.8		3.2	4.0	4.0
			$n_{2 \text{ Eck}}$					10		7	15	18
			$n_{2 \text{ th}}$					10		7	15	17
227.481	5992	3.72	$M_2$					1117	865	2083	1653	1549
			c					5.1	5.9	2.8	3.5	3.6
			$n_{2 \text{ Eck}}$					9	18	7	13	16
			$n_{2 \text{ th}}$					9	18	7	13	16
248.106	5973	3.36	$M_2$					1224	949	2277	1809	1695
			c					4.7	5.4	2.6	3.2	3.3
			$n_{2 \text{ Eck}}$					8	16	6	12	14
			$n_{2 \text{ th}}$					8	16	6	12	14
279.556	6032	3.34	$M_2$					1386	1076	2574	2046	1917
			c					4.2	4.9	2.3	2.9	2.9
			$n_{2 \text{ Eck}}$					7	15	5	11	13
			$n_{2 \text{ th}}$					7	14	5	11	13
322.931	5973	2.09	$M_2$		885	1100	1314	1612	1253	2984	2374	2225
			c		5.9	4.7	4.0	3.6	4.2	2.0	2.5	2.5
			$n_{2 \text{ Eck}}$		12	13	13	6	13	5	9	11
			$n_{2 \text{ th}}$		12	13	13	6	13	5	9	11
363.866	6032	2.08	$M_2$		1005	1246	1487	1824	1418	3369	2682	2514
			c		5.3	4.2	3.6	3.2	3.7	1.8	2.2	2.2
			$n_{2 \text{ Eck}}$		10	11	11	5	11	4	8	10
			$n_{2 \text{ th}}$		10	11	11	5	11	4	8	10
395.787	5973	1.52	$M_2$		1098	1361	1623	1990	1548	3671	2924	2741
			c		4.8	3.9	3.3	2.9	3.4	1.6	2.0	2.0
			$n_{2 \text{ Eck}}$		10	10	10	5	10	4	8	9
			$n_{2 \text{ th}}$		9	10	10	5	10	4	8	9
445.958	6032	1.52	$M_2$	910	1245	1541	1835	2250	1751	4144	3302	3095
			c	5.7	4.3	3.5	2.9	2.6	3.1	1.5	1.8	1.8
			$n_{2 \text{ Eck}}$	9	8	9	9	4	9	3	7	8
			$n_{2 \text{ th}}$	9	8	9	9	4	9	3	7	8
512.196	5975	1.39	$M_2$	1054	1439	1779	2117	2595	2021	4770	3803	3565
			c	4.9	3.7	3.0	2.5	2.3	2.6	1.3	1.6	1.6
			$n_{2 \text{ Eck}}$	8	7	8	8	4	8	3	6	7
			$n_{2 \text{ th}}$	8	7	8	8	4	8	3	6	7
577.122	6072	1.38	$M_2$	1194	1628	2011	2392	2930	2283	5381	4292	4023
			c	4.4	3.4	2.7	2.3	2.1	2.4	1.1	1.4	1.4
			$n_{2 \text{ Eck}}$	7	7	7	7	3	7	3	5	6
			$n_{2 \text{ th}}$	7	7	7	7	3	7	3	5	6
621.619	5975	1.31	$M_2$	1291	1759	2171	2582	3162	2465	5802	4629	4339
			c	4.1	3.1	2.5	2.1	1.9	2.2	1.0	1.3	1.3
			$n_{2 \text{ Eck}}$	7	6	7	7	3	7	2	5	6
			$n_{2 \text{ th}}$	7	6	7	7	3	7	2	5	6
700.416	6072	1.31	$M_2$	1461	1989	2453	2916	3570	2783		5223	4896
			c	3.7	2.8	2.2	1.9	1.7	2.0		1.2	1.2
			$n_{2 \text{ Eck}}$	6	5	6	6	3	6		4	5
			$n_{2 \text{ th}}$	6	5	6	6	3	6		4	5
816.455	5975	0.82	$M_2$	1714	2329	2870	3409	4174	3255			
			c	3.1	2.4	1.9	1.6	1.4	1.7			
			$n_{2 \text{ Eck}}$	5	5	5	5	2	5			
			$n_{2 \text{ th}}$	5	5	5	5	2	5			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



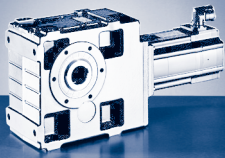


$M_{2GN} \leq 6072 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS11-4S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
11.8										$I_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
2508	2038	1689	1369	2984	2605	4318	3215	5652	3939	$c$	3.74	5972	201.890
2.4	2.6	3.4	4.0	2.0	2.2	1.4	1.8	1.1	1.5	$n_{2\text{ Eck}}$			
10	20	7	18	7	16	7	16	7	16	$n_{2\text{ th}}$			
10	20	7	18	7	16	7	16	7	16				
2834	2303	1911	1550	3371	2943	4873	3630		4446	$M_2$			
2.1	2.3	3.1	3.5	1.8	2.0	1.2	1.6		1.3	$c$	3.72	5992	227.481
9	18	7	16	7	14	7	14		14	$n_{2\text{ Eck}}$			
9	18	7	16	7	14	7	14		14	$n_{2\text{ th}}$			
3097	2518	2090	1696	3682	3216	5321	3965		4855	$M_2$			
1.9	2.1	2.8	3.2	1.6	1.8	1.1	1.5		1.2	$c$	3.36	5973	248.106
8	16	6	15	6	13	6	13		13	$n_{2\text{ Eck}}$			
8	16	6	14	6	13	6	13		13	$n_{2\text{ th}}$			
3497	2844	2363	1918	4157	3630	6003	4475		5477	$M_2$			
1.7	1.9	2.5	2.9	1.4	1.6	1.0	1.3		1.1	$c$	3.34	6032	279.556
7	15	5	13	5	12	5	12		12	$n_{2\text{ Eck}}$			
7	14	5	13	5	12	5	12		12	$n_{2\text{ th}}$			
4050	3294	2740	2225	4812	4204		5179			$M_2$			
1.5	1.6	2.2	2.5	1.2	1.4		1.1			$c$	2.09	5973	322.931
6	13	5	11	5	10		10			$n_{2\text{ Eck}}$			
6	13	5	11	5	10		10			$n_{2\text{ th}}$			
4571	3719	3095	2515	5430	4744		5843			$M_2$			
1.3	1.5	1.9	2.2	1.1	1.2		1.0			$c$	2.08	6032	363.866
5	11	4	10	4	9		9			$n_{2\text{ Eck}}$			
5	11	4	10	4	9		9			$n_{2\text{ th}}$			
4978	4051	3372	2741	5912	5167					$M_2$			
1.2	1.3	1.8	2.0	1.0	1.1					$c$	1.52	5973	395.787
5	10	4	9	4	8					$n_{2\text{ Eck}}$			
5	10	4	9	4	8					$n_{2\text{ th}}$			
5617	4571	3807	3096		5829					$M_2$			
1.1	1.2	1.6	1.8		1.0					$c$	1.52	6032	445.958
4	9	3	8		7					$n_{2\text{ Eck}}$			
4	9	3	8		7					$n_{2\text{ th}}$			
	5259	4383	3565							$M_2$			
	1.0	1.4	1.6							$c$	1.39	5975	512.196
	8	3	7							$n_{2\text{ Eck}}$			
	8	3	7							$n_{2\text{ th}}$			
		4946	4024							$M_2$			
		1.2	1.4							$c$	1.38	6072	577.122
		3	6							$n_{2\text{ Eck}}$			
		3	6							$n_{2\text{ th}}$			
		5333	4340							$M_2$			
		1.1	1.3							$c$	1.31	5975	621.619
		2	6							$n_{2\text{ Eck}}$			
		2	6							$n_{2\text{ th}}$			
		6016	4896							$M_2$			
		1.0	1.2							$c$	1.31	6072	700.416
		2	5							$n_{2\text{ Eck}}$			
		2	5							$n_{2\text{ th}}$			
										$M_2$			
										$c$	0.82	5975	816.455
										$n_{2\text{ Eck}}$			
										$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

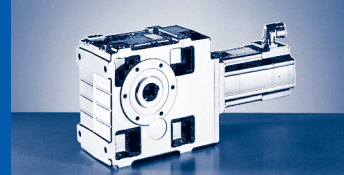
## GKS□□-□S (MCS)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-4S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35
				...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42
919.949	6072	0.82	$M_2$	1938	2631	3240	3848	4710	3674			
			c	2.8	2.1	1.7	1.4	1.3	1.5			
			$n_{2 \text{ Eck}}$	4	4	4	4	2	4			
			$n_{2 \text{ th}}$	4	4	4	4	2	4			
990.879	5975	0.60	$M_2$	2093	2839	3496	4150	5079	3963			
			c	2.5	1.9	1.5	1.3	1.2	1.4			
			$n_{2 \text{ Eck}}$	4	4	4	4	2	4			
			$n_{2 \text{ th}}$	4	4	4	4	2	4			
1116.484	6072	0.60	$M_2$	2365	3206	3945	4683	5730	4472			
			c	2.3	1.7	1.4	1.2	1.1	1.2			
			$n_{2 \text{ Eck}}$	4	3	4	4	2	4			
			$n_{2 \text{ th}}$	4	3	4	4	2	4			
1252.516	5975	0.39	$M_2$	2661	3605	4434	5261					
			c	2.0	1.5	1.2	1.0					
			$n_{2 \text{ Eck}}$	3	3	3	3					
			$n_{2 \text{ th}}$	3	3	3	3					
1411.286	6072	0.39	$M_2$	3004	4068	5002						
			c	1.8	1.4	1.1						
			$n_{2 \text{ Eck}}$	3	3	3						
			$n_{2 \text{ th}}$	3	3	3						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

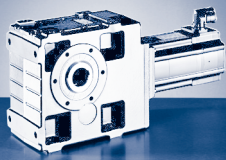


$M_{2GN} \leq 6072 \text{ Nm}$

12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GKS11-4S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$i_{M230}$			
11.8										$i_{M400}$			
5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
										c	0.82	6072	919.949
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$	0.60	5975	990.879
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$	0.60	6072	1116.484
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$	0.39	5975	1252.516
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$	0.39	6072	1411.286
										c			
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

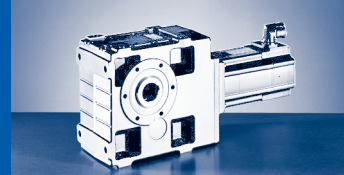
## GKS□□-□S (MCS)

$M_{2GN} \leq 11609 \text{ Nm}$

GKS14-3S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
16.646	3765	198.00	$M_2$			599		775	480
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			86		81	180
			$n_{2 \text{ th}}$			86		81	103
18.311	3889	173.00	$M_2$			662		855	530
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			78		74	164
			$n_{2 \text{ th}}$			78		74	95
24.696	5585	183.00	$M_2$			889		1150	712
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			58		55	122
			$n_{2 \text{ th}}$			58		55	69
27.165	5770	159.00	$M_2$			982		1269	786
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			53		50	110
			$n_{2 \text{ th}}$			52		50	64
30.609	6501	156.00	$M_2$			1107		1430	886
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			47		44	98
			$n_{2 \text{ th}}$			47		44	57
34.692	6208	111.00	$M_2$			1267	914	1633	1014
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			41	87	39	87
			$n_{2 \text{ th}}$			41	57	39	56
39.089	6995	109.00	$M_2$			1427	1030	1840	1142
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			37	77	35	77
			$n_{2 \text{ th}}$			36	51	35	50
42.531	6541	82.40	$M_2$	1033		1564	1122	2013	1244
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	34		34	71	32	71
			$n_{2 \text{ th}}$	34		34	52	32	51
47.923	7370	81.10	$M_2$	1164		1762	1264	2268	1402
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	30		30	63	28	63
			$n_{2 \text{ th}}$	30		30	46	28	45
56.251	6887	54.20	$M_2$	1385	1068	2087	1500	2681	1662
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	25	53	25	53	24	53
			$n_{2 \text{ th}}$	25	39	25	39	24	39
63.382	7760	53.50	$M_2$	1561	1204	2352	1691	3021	1873
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	23	47	23	47	21	47
			$n_{2 \text{ th}}$	22	35	22	35	21	35
68.942	7217	38.90	$M_2$	1711	1321	2571	1851	3299	2049
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	21	44	21	44	20	44
			$n_{2 \text{ th}}$	21	32	21	32	20	32
77.681	8131	38.40	$M_2$	1928	1489	2897	2085	3717	2309
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	18	39	18	39	17	39
			$n_{2 \text{ th}}$	18	28	18	28	17	28

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

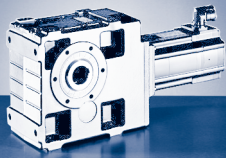


$M_{2GN} \leq 11609 \text{ Nm}$

GKS14-3S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
90.551	7420	25.10	$M_2$	2269	1755	3399	2450	4355	2711
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_{2 \text{ Eck}}$	16	33	16	33	15	33
			$n_{2 \text{ th}}$	16	24	16	24	15	24
102.029	8361	24.90	$M_2$	2556	1977	3829	2761	4907	3055
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_{2 \text{ Eck}}$	14	29	14	29	13	29
			$n_{2 \text{ th}}$	14	22	14	22	13	22
109.896	7512	18.30	$M_2$	2769	2144	4140	2988	5301	3304
			c	2.7	3.1	1.8	2.2	1.4	2.0
			$n_{2 \text{ Eck}}$	13	27	13	27	12	27
			$n_{2 \text{ th}}$	13	20	13	20	12	20
123.826	8464	18.10	$M_2$	3120	2407	4665	3358	5973	3714
			c	2.7	3.4	1.8	2.5	1.4	2.3
			$n_{2 \text{ Eck}}$	12	24	12	24	11	24
			$n_{2 \text{ th}}$	12	18	12	18	11	18
186.572	11609	21.60	$M_2$	4713	3639	7041	5071	9011	5608
			c	2.4	3.1	1.6	2.3	1.3	2.1
			$n_{2 \text{ Eck}}$	8	16	8	16	7	16
			$n_{2 \text{ th}}$	8	12	8	12	7	12
210.222	11555	21.50	$M_2$	5327	4116	7950	5730	10169	6335
			c	2.1	2.8	1.5	2.0	1.1	1.8
			$n_{2 \text{ Eck}}$	7	14	7	14	6	14
			$n_{2 \text{ th}}$	7	11	7	11	6	11
226.431	11609	15.90	$M_2$	5746	4442	8571	6181	10962	6833
			c	2.0	2.6	1.4	1.9	1.1	1.7
			$n_{2 \text{ Eck}}$	6	13	6	13	6	13
			$n_{2 \text{ th}}$	6	10	6	10	6	10
255.133	11555	15.80	$M_2$	6490	5021	9674	6980		7715
			c	1.8	2.3	1.2	1.6		1.5
			$n_{2 \text{ Eck}}$	6	12	6	12		12
			$n_{2 \text{ th}}$	6	9	6	9		9

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



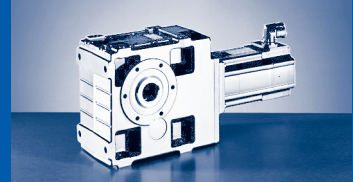
**GKS [Nm]**  
GKS□□-□S (MCS)

**M<sub>2GN</sub> ≤ 11639 Nm**

GKS14-4S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	M <sub>2GN</sub>	J <sub>G</sub>	M <sub>1</sub>	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			n <sub>1</sub>	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			I <sub>M230</sub>	5.2	8.8	7.6	10.5		11.8				
			I <sub>M400</sub>	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			P <sub>N</sub>	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			J <sub>M</sub>	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
97.467	4589	23.47	M <sub>2</sub>			871	692	648	1193	972			
			c			5.0	5.7	5.8	3.7	3.7			
			n <sub>2 Eck</sub>			15	31	36	20	42			
			n <sub>2 th</sub>			15	31	36	20	36			
97.467	7182	23.47	M <sub>2</sub>										1395
			c										4.9
			n <sub>2 Eck</sub>										15
			n <sub>2 th</sub>										15
97.467	10019	23.47	M <sub>2</sub>										
			c										
			n <sub>2 Eck</sub>										
			n <sub>2 th</sub>										
109.822	5170	23.23	M <sub>2</sub>			981	779	730	1344	1095			
			c			5.0	5.7	5.8	3.7	3.7			
			n <sub>2 Eck</sub>			14	27	32	18	37			
			n <sub>2 th</sub>			14	27	32	18	32			
109.822	8093	23.23	M <sub>2</sub>										1572
			c										4.9
			n <sub>2 Eck</sub>										14
			n <sub>2 th</sub>										14
109.822	10937	23.23	M <sub>2</sub>										
			c										
			n <sub>2 Eck</sub>										
			n <sub>2 th</sub>										
119.493	5626	19.94	M <sub>2</sub>			1067			1462	1186			
			c			5.0			3.7	4.2			
			n <sub>2 Eck</sub>			13			16	34			
			n <sub>2 th</sub>			13			16	30			
119.493	8805	19.94	M <sub>2</sub>										1710
			c										4.9
			n <sub>2 Eck</sub>										13
			n <sub>2 th</sub>										13
119.493	10787	19.94	M <sub>2</sub>										
			c										
			n <sub>2 Eck</sub>										
			n <sub>2 th</sub>										
134.640	6339	19.78	M <sub>2</sub>			1203			1647	1336			
			c			5.0			3.7	4.2			
			n <sub>2 Eck</sub>			11			15	30			
			n <sub>2 th</sub>			11			14	26			
134.640	9921	19.78	M <sub>2</sub>										1927
			c										4.9
			n <sub>2 Eck</sub>										11
			n <sub>2 th</sub>										11
134.640	11261	19.78	M <sub>2</sub>										
			c										
			n <sub>2 Eck</sub>										
			n <sub>2 th</sub>										
158.039	7440	16.44	M <sub>2</sub>			1412			1934	1568			
			c			5.0			3.7	4.2			
			n <sub>2 Eck</sub>			10			12	26			
			n <sub>2 th</sub>			9			12	23			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]

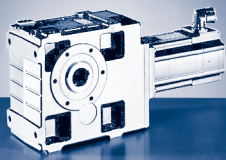


$M_{2GN} \leq 11639 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS14-4S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
											$M_2$ c	23.47	4589	97.467
											$n_2$ Eck			
											$n_2$ th			
1220	2039	1514	2682	1864							$M_2$ c	23.47	7182	97.467
5.0	3.4	4.0	2.6	3.3							$n_2$ Eck			
33	15	33	14	33							$n_2$ th			
33	15	33	14	33							$n_2$ th			
					2377	1835	3572	2571	4584	2847	$M_2$ c	23.47	10019	97.467
					4.1	4.7	2.7	3.4	2.2	3.1	$n_2$ Eck			
					15	31	15	31	14	31	$n_2$ th			
					15	23	15	23	14	23	$n_2$ th			
											$M_2$ c	23.23	5170	109.822
											$n_2$ Eck			
											$n_2$ th			
1375	2297	1706	3023	2100							$M_2$ c	23.23	8093	109.822
5.0	3.4	4.0	2.6	3.3							$n_2$ Eck			
29	14	29	12	29							$n_2$ th			
29	14	29	12	29							$n_2$ th			
					2681	2071	4028	2900	5169	3211	$M_2$ c	23.23	10937	109.822
					4.0	4.6	2.7	3.3	2.1	3.0	$n_2$ Eck			
					13	27	13	27	12	27	$n_2$ th			
					13	20	13	20	12	20	$n_2$ th			
											$M_2$ c	19.94	5626	119.493
											$n_2$ Eck			
											$n_2$ th			
1487	2499	1848	3289	2276							$M_2$ c	19.94	8805	119.493
5.5	3.4	4.5	2.6	3.7							$n_2$ Eck			
27	13	27	11	27							$n_2$ th			
27	13	27	11	27							$n_2$ th			
					2930	2253	4396	3155	5636	3494	$M_2$ c	19.94	10787	119.493
					3.6	4.6	2.4	3.3	1.9	3.0	$n_2$ Eck			
					12	25	12	25	11	25	$n_2$ th			
					12	19	12	19	11	19	$n_2$ th			
											$M_2$ c	19.78	6339	134.640
											$n_2$ Eck			
											$n_2$ th			
1675	2816	2082	3706	2565							$M_2$ c	19.78	9921	134.640
5.5	3.4	4.5	2.6	3.7							$n_2$ Eck			
24	11	24	10	24							$n_2$ th			
24	11	24	10	24							$n_2$ th			
					3310	2548	4962	3564	6360	3945	$M_2$ c	19.78	11261	134.640
					3.3	4.3	2.2	3.1	1.8	2.8	$n_2$ Eck			
					11	22	11	22	10	22	$n_2$ th			
					11	16	11	16	10	16	$n_2$ th			
											$M_2$ c	16.44	7440	158.039
											$n_2$ Eck			
											$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GKS [Nm]

## GKS□□-□S (MCS)

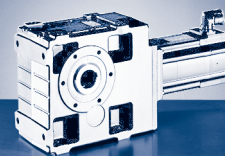
$M_{2GN} \leq 11639 \text{ Nm}$

GKS14-4S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
158.039	11522	16.44	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										2263 4.9 10 9
178.072	8383	16.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			1591 5.0 8 8			2179 3.7 11 11	1767 4.2 23 20			
178.072	11477	16.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										2566 4.3 8 8
193.754	11522	12.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										2802 4.0 8 8
218.315	11477	12.02	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										3174 3.5 7 7
237.467	11454	10.87	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								1939 5.6 6 6		3463 3.2 6 6
267.568	11520	10.83	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								2200 5.0 6 6	1778 5.8 14 13	3917 2.9 6 6
321.729	10184	6.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			2927 3.4 5 5	2320 4.2 9 9	2174 4.3 11 11	3990 2.5 6 6	3241 2.8 13 13			
321.729	11454	6.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								2671 4.1 5 5	2162 4.8 11 11	4735 2.4 5 5
362.512	11475	6.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			3298 3.4 4 4	2614 4.2 8 8	2449 4.3 10 10	4496 2.5 5 5	3652 2.8 11 11			
362.512	11520	6.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								3024 3.7 4 4	2450 4.3 10 10	5350 2.1 4 4
390.671	10597	4.75	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	1914 5.3 5 5		3573 2.9 4 4	2836 3.6 8 8	2658 3.7 9 9	4864 2.2 5 5	3953 2.4 10 10			
390.671	11454	4.75	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								3269 3.4 4 4	2650 3.9 9 9	5776 2.0 4 4

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



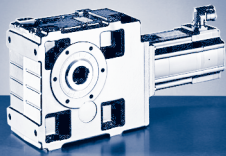


$M_{2GN} \leq 11639 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS14-4S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
1968	3307	2445	4351	3012	3903	3009	5842	4202	7483	4649	c	16.44	11522	158.039
5.4	3.4	4.4	2.6	3.6	2.9	3.7	2.0	2.7	1.5	2.4	$n_{2 \text{ Eck}}$			
20	10	20	9	20	9	19	9	19	9	19	$n_{2 \text{ th}}$			
20	9	20	9	20	9	14	9	14	9	14	$M_2$			
											c	16.35	8383	178.072
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
2233	3742	2770	4919	3409	4414	3406	6599	4751	8448	5255	$M_2$			
4.8	3.0	3.9	2.3	3.2	2.6	3.3	1.7	2.4	1.4	2.2	c	16.35	11477	178.072
18	8	18	8	18	8	17	8	17	8	17	$n_{2 \text{ Eck}}$			
18	8	18	8	18	8	12	8	12	8	12	$n_{2 \text{ th}}$			
2439	4082	3025	5362	3719	4814	3716	7191	5179	9202	5728	$M_2$			
4.4	2.8	3.6	2.1	3.0	2.4	3.0	1.6	2.2	1.3	2.0	c	12.08	11522	193.754
17	8	17	7	17	7	16	7	16	7	16	$n_{2 \text{ Eck}}$			
17	8	17	7	17	7	11	7	11	7	11	$n_{2 \text{ th}}$			
2764	4616	3424	6058	4207	5440	4204	8118	5852	10384	6470	$M_2$			
3.9	2.5	3.2	1.9	2.6	2.1	2.7	1.4	1.9	1.1	1.8	c	12.02	11477	218.315
15	7	15	6	15	7	14	7	14	6	14	$n_{2 \text{ Eck}}$			
15	7	15	6	15	7	10	7	10	6	10	$n_{2 \text{ th}}$			
3018	5032	3735	6600	4586	5928	4583	8841	6376	11306	7049	$M_2$			
3.6	2.3	2.9	1.7	2.4	1.9	2.5	1.3	1.8	1.0	1.6	c	10.87	11454	237.467
14	6	14	6	14	6	13	6	13	6	13	$n_{2 \text{ Eck}}$			
14	6	14	6	14	6	9	6	9	6	9	$n_{2 \text{ th}}$			
3415	5684	4223	7452	5182	6694	5179	9977	7199		7957	$M_2$			
3.2	2.0	2.6	1.5	2.1	1.7	2.2	1.2	1.6		1.4	c	10.83	11520	267.568
12	6	12	5	12	5	11	5	11		11	$n_{2 \text{ Eck}}$			
12	6	12	5	12	5	8	5	8		8	$n_{2 \text{ th}}$			
											$M_2$			
											c	6.42	10184	321.729
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
4131	6861	5103	8986	6256							$M_2$			
2.7	1.7	2.2	1.3	1.8							c	6.42	11454	321.729
10	5	10	4	10							$n_{2 \text{ Eck}}$			
10	5	10	4	10							$n_{2 \text{ th}}$			
											$M_2$			
											c	6.40	11475	362.512
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
4669	7745	5764	10140	7064							$M_2$			
2.4	1.5	1.9	1.1	1.6							c	6.40	11520	362.512
9	4	9	4	9							$n_{2 \text{ Eck}}$			
9	4	9	4	9							$n_{2 \text{ th}}$			
											$M_2$			
											c	4.75	10597	390.671
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
5042	8357	6222	10938	7623							$M_2$			
2.2	1.4	1.8	1.1	1.5							c	4.75	11454	390.671
8	4	8	4	8							$n_{2 \text{ Eck}}$			
8	4	8	3	8							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

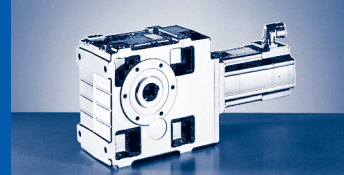
## GKS□□-□S (MCS)

$M_{2GN} \leq 11639 \text{ Nm}$

GKS14-4S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00	
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500	
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6	
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50	
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32	
440.193	11520	4.73	$M_2$	2161	1675	4031	3200	2999	5485	4458	3698	3000	6523	
			c	5.1	5.9	2.8	3.5	3.5	2.1	2.3	3.1	3.5	1.8	
			$n_{2 \text{ Eck}}$	4	9	3	7	8	4	9	3	8	3	3
			$n_{2 \text{ th}}$	4	9	3	7	8	4	9	3	8	3	3
513.121	11488	4.33	$M_2$	2540	1971	4719	3751	3515	6414	5215	4332	3516	7625	
			c	4.4	5.1	2.4	3.0	3.0	1.8	2.0	2.6	3.0	1.5	
			$n_{2 \text{ Eck}}$	4	8	3	6	7	4	8	3	7	3	
			$n_{2 \text{ th}}$	4	8	3	6	7	4	8	3	7	3	
578.164	11639	4.32	$M_2$	2876	2233	5332	4240	3974	7241	5889	4895	3975	8605	
			c	3.9	4.5	2.2	2.7	2.7	1.6	1.8	2.3	2.7	1.4	
			$n_{2 \text{ Eck}}$	3	7	3	5	6	3	7	3	6	3	
			$n_{2 \text{ th}}$	3	7	3	5	6	3	7	3	6	3	
622.742	11488	4.12	$M_2$	3109	2416	5754	4578	4291	7811	6353	5284	4292	9280	
			c	3.6	4.2	2.0	2.5	2.5	1.5	1.6	2.2	2.5	1.2	
			$n_{2 \text{ Eck}}$	3	7	2	5	6	3	7	2	6	2	
			$n_{2 \text{ th}}$	3	7	2	5	6	3	7	2	6	2	
701.681	11639	4.12	$M_2$	3517	2735	6497	5173	4848	8815	7171	5967	4849	10470	
			c	3.2	3.7	1.8	2.2	2.3	1.3	1.5	1.9	2.2	1.1	
			$n_{2 \text{ Eck}}$	3	6	2	4	5	3	6	2	5	2	
			$n_{2 \text{ th}}$	3	6	2	4	5	3	6	2	5	2	
805.901	11488	2.62	$M_2$	4060	3159	7482	5961	5587	10144	8255	6874	5588		
			c	2.8	3.2	1.5	1.9	1.9	1.1	1.3	1.7	1.9		
			$n_{2 \text{ Eck}}$	2	5	2	4	4	2	5	2	5		
			$n_{2 \text{ th}}$	2	5	2	4	4	2	5	2	4		
908.058	11639	2.62	$M_2$	4589	3572	8445	6731	6309	11444	9314	7759	6310		
			c	2.5	2.9	1.4	1.7	1.7	1.0	1.1	1.5	1.7		
			$n_{2 \text{ Eck}}$	2	5	2	3	4	2	5	2	4		
			$n_{2 \text{ th}}$	2	4	2	3	4	2	4	2	4		
978.071	11488	1.91	$M_2$	4954	3858	9107	7261	6806		10042	8369	6807		
			c	2.3	2.7	1.3	1.6	1.6		1.0	1.4	1.6		
			$n_{2 \text{ Eck}}$	2	4	2	3	4		4	2	4		
			$n_{2 \text{ th}}$	2	4	2	3	4		4	2	4		
1102.052	11639	1.91	$M_2$	5595	4359	10276	8196	7682			9444	7683		
			c	2.1	2.4	1.1	1.4	1.4			1.2	1.4		
			$n_{2 \text{ Eck}}$	2	4	1	3	3			1	3		
			$n_{2 \text{ th}}$	2	4	1	3	3			1	3		
1236.326	11488	1.26	$M_2$	6294	4906		9211	8634						
			c	1.8	2.1		1.2	1.3						
			$n_{2 \text{ Eck}}$	2	3		2	3						
			$n_{2 \text{ th}}$	2	3		2	3						
1393.043	11639	1.26	$M_2$	7106	5540		10392	9742						
			c	1.6	1.9		1.1	1.1						
			$n_{2 \text{ Eck}}$	1	3		2	3						
			$n_{2 \text{ th}}$	1	3		2	3						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

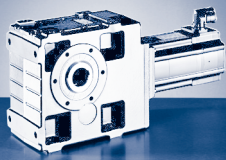


$M_{2GN} \leq 11639 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GKS14-4S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
5695	9431	7025		8603							c			
2.0	1.2	1.6		1.3							$n_{2 \text{ Eck}}$	4.73	11520	440.193
7	3	7		7							$n_{2 \text{ th}}$			
7	3	7		7							$M_2$			
6659	11014	8209		10049							c			
1.7	1.0	1.4		1.1							$n_{2 \text{ Eck}}$	4.33	11488	513.121
6	3	6		6							$n_{2 \text{ th}}$			
6	3	6		6							$M_2$			
7517		9263		11336							c			
1.5		1.2		1.0							$n_{2 \text{ Eck}}$	4.32	11639	578.164
6		6		6							$n_{2 \text{ th}}$			
6		6		6							$M_2$			
8108		9988									c			
1.4		1.1									$n_{2 \text{ Eck}}$	4.12	11488	622.742
5		5									$n_{2 \text{ th}}$			
5		5									$M_2$			
9149		11268									c			
1.2		1.0									$n_{2 \text{ Eck}}$	4.12	11639	701.681
5		5									$n_{2 \text{ th}}$			
5		5									$M_2$			
10527											c			
1.1											$n_{2 \text{ Eck}}$	2.62	11488	805.901
4											$n_{2 \text{ th}}$			
4											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.62	11639	908.058
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.91	11488	978.071
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.91	11639	1102.052
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.26	11488	1236.326
											$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.26	11639	1393.043
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

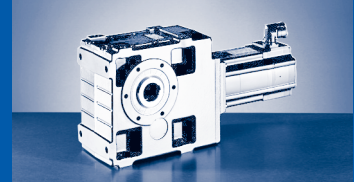
## GKS□□-□A (MCA)

$M_{2GN} \leq 187 \text{ Nm}$

GKS04-3A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
5.123	81	1.17	$M_2$	9	30	19
			c	6.0	2.0	3.0
			$n_{2 \text{ Eck}}$	771	666	791
			$n_{2 \text{ th}}$	727	593	639
			$M_2$	13	42	26
7.025	93	0.68	c	5.0	1.7	2.5
			$n_{2 \text{ Eck}}$	562	485	577
			$n_{2 \text{ th}}$	562	445	503
			$M_2$	15	48	30
			c	6.0	2.0	3.0
8.167	128	0.86	$n_{2 \text{ Eck}}$	484	418	496
			$n_{2 \text{ th}}$	456	372	401
			$M_2$	16	54	34
			c	4.4	1.5	2.2
			$n_{2 \text{ Eck}}$	439	379	451
8.991	103	0.44	$n_{2 \text{ th}}$	439	379	450
			$M_2$	18	59	37
			c	4.1	1.4	2.0
			$n_{2 \text{ Eck}}$	402	347	412
			$n_{2 \text{ th}}$	402	347	412
9.836	106	0.38	$M_2$	21	69	44
			c	5.9	2.0	2.9
			$n_{2 \text{ Eck}}$	337	291	345
			$n_{2 \text{ th}}$	316	256	278
			$M_2$	24	78	49
11.730	180	0.73	c	4.8	1.6	2.4
			$n_{2 \text{ Eck}}$	302	261	310
			$n_{2 \text{ th}}$	274	206	240
			$M_2$	26	85	54
			c	4.4	1.5	2.2
13.067	165	0.70	$n_{2 \text{ Eck}}$	276	238	283
			$n_{2 \text{ th}}$	276	238	283
			$M_2$	30	96	60
			c	4.3	1.4	2.1
			$n_{2 \text{ Eck}}$	246	212	252
14.333	164	0.35	$n_{2 \text{ th}}$	242	181	214
			$M_2$	33	107	68
			c	3.5	1.2	1.8
			$n_{2 \text{ Eck}}$	220	190	226
			$n_{2 \text{ th}}$	210	150	178
16.087	181	0.44	$M_2$	38	123	78
			c	3.4	1.1	1.7
			$n_{2 \text{ Eck}}$	192	166	197
			$n_{2 \text{ th}}$	192	148	178
			$M_2$	42	135	85
16.087	181	0.44	c	3.1	1.0	1.5
			$n_{2 \text{ Eck}}$	175	151	180
			$n_{2 \text{ th}}$	175	138	163
			$M_2$	47		95
			c	2.5		1.3
17.920	166	0.43	$n_{2 \text{ Eck}}$	158		161
			$n_{2 \text{ th}}$	157		134

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]

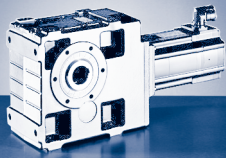


$M_{2GN} \leq 187 \text{ Nm}$

GKS04-3A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
28.727	183	0.18	$M_2$	54		109
			c	2.4		1.2
			$n_{2 \text{ Eck}}$	138		141
			$n_{2 \text{ th}}$	138		133
			$M_2$	60		
32.000	167	0.18	c	2.0		
			$n_{2 \text{ Eck}}$	123		
			$n_{2 \text{ th}}$	123		
			$M_2$	66		
35.191	183	0.14	c	2.0		
			$n_{2 \text{ Eck}}$	112		
			$n_{2 \text{ th}}$	112		
39.200	168	0.13	$M_2$	74		
			c	1.6		
			$n_{2 \text{ Eck}}$	101		
44.240	185	0.09	$n_{2 \text{ th}}$	101		
			$M_2$	83		
			c	1.8		
50.943	182	0.18	$n_{2 \text{ Eck}}$	89		
			$n_{2 \text{ th}}$	89		
			$M_2$	96		
56.976	187	0.06	c	1.4		
			$n_{2 \text{ Eck}}$	69		
			$n_{2 \text{ th}}$	69		
64.978	183	0.13	$M_2$	123		
			c	1.2		
			$n_{2 \text{ Eck}}$	61		
			$n_{2 \text{ th}}$	59		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

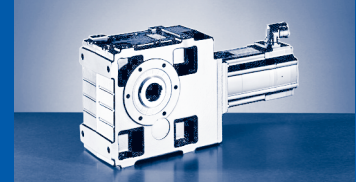
## GKS□□-□A (MCA)

$M_{2GN} \leq 331 \text{ Nm}$

GKS05-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
6.863	147	1.90	$M_2$		40	25	78	43	70	34
			c		2.7	4.1	1.8	3.1	1.6	3.0
			$n_{2 \text{ Eck}}$		497	590	238	291	503	597
			$n_{2 \text{ th}}$		389	422	238	291	321	397
9.412	165	1.17	$M_2$		56	35	107	59	96	48
			c		2.2	3.3	1.5	2.5	1.3	2.4
			$n_{2 \text{ Eck}}$		362	430	174	213	367	436
			$n_{2 \text{ th}}$		320	347	174	213	248	327
10.569	227	1.60	$M_2$		62	39	119	66	108	53
			c		2.7	4.1	1.8	3.1	1.6	3.0
			$n_{2 \text{ Eck}}$		323	383	155	189	327	388
			$n_{2 \text{ th}}$		253	274	155	189	209	258
11.667	251	1.65	$M_2$		69	43	132	73	119	59
			c		2.7	4.1	1.8	3.1	1.6	3.0
			$n_{2 \text{ Eck}}$		292	347	140	171	296	351
			$n_{2 \text{ th}}$		229	248	140	171	189	234
13.176	165	0.71	$M_2$	24	78	49	150	83		67
			c	4.8	1.6	2.4	1.1	1.8		1.8
			$n_{2 \text{ Eck}}$	300	259	307	124	152		311
			$n_{2 \text{ th}}$	300	231	266	124	152		242
14.494	254	1.05	$M_2$		86	54	164	91	148	73
			c		2.2	3.3	1.5	2.5	1.3	2.4
			$n_{2 \text{ Eck}}$		235	279	113	138	238	283
			$n_{2 \text{ th}}$		208	225	113	138	161	212
16.000	280	1.04	$M_2$		95	59	181	100	164	81
			c		2.2	3.3	1.5	2.5	1.3	2.4
			$n_{2 \text{ Eck}}$		213	253	102	125	216	256
			$n_{2 \text{ th}}$		188	204	102	125	146	192
17.054	314	1.51	$M_2$		101	63	193	107	174	86
			c		2.3	3.5	1.6	2.6	1.4	2.6
			$n_{2 \text{ Eck}}$		200	238	96	117	203	240
			$n_{2 \text{ th}}$		151	165	96	117	119	155
19.216	297	1.47	$M_2$		114	72	218	121	197	97
			c		2.0	2.9	1.3	2.2	1.1	2.2
			$n_{2 \text{ Eck}}$		178	211	85	104	180	213
			$n_{2 \text{ th}}$		129	141	85	104	98	132
23.388	329	0.96	$M_2$		139	87	266	147	240	119
			c		1.8	2.7	1.2	2.0	1.0	2.0
			$n_{2 \text{ Eck}}$		146	173	70	86	148	175
			$n_{2 \text{ th}}$		119	134	70	86	90	125
26.353	298	0.95	$M_2$		157	99		167		134
			c		1.4	2.1		1.6		1.6
			$n_{2 \text{ Eck}}$		129	154		76		156
			$n_{2 \text{ th}}$		94	113		76		98
29.931	330	0.67	$M_2$	55	178	112		189		153
			c	4.2	1.4	2.1		1.6		1.5
			$n_{2 \text{ Eck}}$	132	114	135		67		137
			$n_{2 \text{ th}}$	125	92	110		67		96
32.744	331	0.58	$M_2$	60	195	123		207		167
			c	3.9	1.3	1.9		1.4		1.4
			$n_{2 \text{ Eck}}$	121	104	124		61		125
			$n_{2 \text{ th}}$	116	85	102		61		88

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

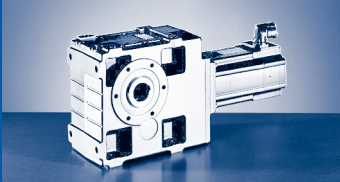


$M_{2GN} \leq 331 \text{ Nm}$

GKS05-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	69	221	139		234		189
			$n_{2 \text{ Eck}}$	3.1	1.0	1.6		1.2		1.1
			$n_{2 \text{ th}}$	107	92	110		54		111
			$M_2$	100	69	82		54		72
			c	78	250	158		265		214
			$n_{2 \text{ Eck}}$	3.0	1.0	1.5		1.1		1.1
			$n_{2 \text{ th}}$	95	82	97		48		98
			$M_2$	95	71	84		48		73
			c	88		178		299		241
			$n_{2 \text{ Eck}}$	2.8		1.4		1.0		1.0
			$n_{2 \text{ th}}$	84		86		43		87
			$M_2$	84		72		43		63
			c	95		194		326		262
			$n_{2 \text{ Eck}}$	2.8		1.4		1.0		1.0
			$n_{2 \text{ th}}$	77		79		39		80
			$M_2$	77		74		39		66
			c	108		219				
			$n_{2 \text{ Eck}}$	2.3		1.1				
			$n_{2 \text{ th}}$	69		70				
			$M_2$	69		61				
			c	125		253				
			$n_{2 \text{ Eck}}$	2.2		1.1				
			$n_{2 \text{ th}}$	59		61				
			$M_2$	59		61				
			c	141						
			$n_{2 \text{ Eck}}$	1.8						
			$n_{2 \text{ th}}$	53						
			$M_2$	53						
			c	156						
			$n_{2 \text{ Eck}}$	1.7						
			$n_{2 \text{ th}}$	48						
			$M_2$	48						
			c	176						
			$n_{2 \text{ Eck}}$	1.5						
			$n_{2 \text{ th}}$	42						
			$M_2$	42						
			c	203						
			$n_{2 \text{ Eck}}$	1.3						
			$n_{2 \text{ th}}$	37						
			$M_2$	37						
			c	229						
			$n_{2 \text{ Eck}}$	1.3						
			$n_{2 \text{ th}}$	33						
			$M_2$	33						
			c	247						
			$n_{2 \text{ Eck}}$	1.2						
			$n_{2 \text{ th}}$	30						
			$M_2$	30						
			c	278						
			$n_{2 \text{ Eck}}$	1.0						
			$n_{2 \text{ th}}$	27						
			$M_2$	27						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

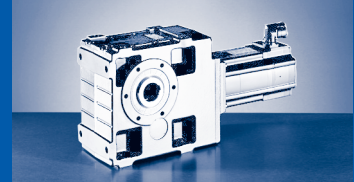
$M_{2GN} \leq 283 \text{ Nm}$

GKS05-4A				10IC40
				...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00
			$n_1$	3950
			$I_{M400}$	2.4
			$P_N$	0.80
			$J_M$	2.44
			$M_2$	215
114.987	256	0.20	c	1.1
			$n_{2 \text{ Eck}}$	34
			$n_{2 \text{ th}}$	34
			$M_2$	237
126.933	283	0.20	c	1.1
			$n_{2 \text{ Eck}}$	31
			$n_{2 \text{ th}}$	31

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



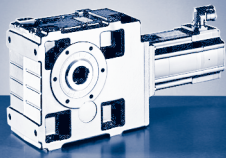


$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
6.485	263	5.87	$M_2$				72	39	65	32	131	65	116	57
			c				3.5	5.8	3.0	5.7	1.9	3.4	1.7	3.2
			$n_{2 \text{ Eck}}$				252	308	533	632	259	355	537	634
			$n_{2 \text{ th}}$				252	308	354	404	259	355	294	359
9.196	373	5.05	$M_2$				102	56	92	45	186	92	165	81
			c				3.5	5.8	3.0	5.7	1.9	3.4	1.7	3.2
			$n_{2 \text{ Eck}}$				178	218	376	446	183	250	378	447
			$n_{2 \text{ th}}$				178	217	249	285	183	250	207	253
10.147	412	4.86	$M_2$				113	61	102	49	205	101	182	89
			c				3.5	5.8	3.0	5.7	1.9	3.4	1.7	3.2
			$n_{2 \text{ Eck}}$				161	197	341	404	166	227	343	405
			$n_{2 \text{ th}}$				161	197	226	258	166	227	188	230
11.382	331	2.49	$M_2$		66	41	128	70	115	57	232	115	205	101
			c		3.7	5.5	2.5	4.2	2.2	4.1	1.4	2.5	1.2	2.3
			$n_{2 \text{ Eck}}$		300	356	144	176	304	360	148	202	306	361
			$n_{2 \text{ th}}$		284	306	144	176	253	289	148	202	190	257
12.612	426	3.20	$M_2$				141	77	127	62	256	127	227	112
			c				2.9	4.8	2.5	4.7	1.6	2.9	1.4	2.7
			$n_{2 \text{ Eck}}$				130	159	274	325	133	182	276	326
			$n_{2 \text{ th}}$				130	159	203	232	133	182	160	207
14.824	600	4.29	$M_2$				165	90	149	72	300	148	266	131
			c				3.5	5.8	3.0	5.7	1.9	3.4	1.7	3.2
			$n_{2 \text{ Eck}}$				110	135	233	277	113	155	235	277
			$n_{2 \text{ th}}$				110	135	155	177	113	155	129	157
16.699	604	4.16	$M_2$				186	102	168	82	339	168	300	148
			c				3.1	5.2	2.7	5.0	1.7	3.1	1.5	2.9
			$n_{2 \text{ Eck}}$				98	120	207	246	101	138	208	246
			$n_{2 \text{ th}}$				98	120	134	153	101	138	107	136
17.809	518	2.13	$M_2$		104	64	200	110	180	88	362	180	321	158
			c		3.7	5.5	2.5	4.2	2.2	4.1	1.4	2.5	1.2	2.3
			$n_{2 \text{ Eck}}$		192	227	92	112	194	230	94	129	195	231
			$n_{2 \text{ th}}$		182	196	92	112	162	185	94	129	122	165
20.329	665	2.79	$M_2$				227	124	205	100	413	205	365	180
			c				2.8	4.7	2.4	4.6	1.5	2.8	1.4	2.6
			$n_{2 \text{ Eck}}$				80	98	170	202	83	113	171	202
			$n_{2 \text{ th}}$				80	98	125	143	83	113	98	127
22.902	606	2.73	$M_2$				258	141	233	114	466	232	413	204
			c				2.3	3.8	2.0	3.7	1.3	2.2	1.1	2.1
			$n_{2 \text{ Eck}}$				71	87	151	179	73	100	152	180
			$n_{2 \text{ th}}$				71	87	106	122	73	100	78	108
26.017	679	1.94	$M_2$		152	95	293	161	264	130	530	264	469	232
			c		3.3	4.9	2.2	3.7	1.9	3.6	1.2	2.2	1.1	2.1
			$n_{2 \text{ Eck}}$		131	156	63	77	133	158	65	88	134	158
			$n_{2 \text{ th}}$		122	131	63	77	107	124	65	88	79	110
28.461	682	1.67	$M_2$		167	104	321	177	290	142	580	289	514	254
			c		3.1	4.5	2.0	3.4	1.8	3.3	1.1	2.0	1.0	1.9
			$n_{2 \text{ Eck}}$		120	142	58	70	121	144	59	81	122	144
			$n_{2 \text{ th}}$		113	122	57	70	97	115	59	81	73	101
32.063	610	1.63	$M_2$		189	118	363	200	328	162		327		288
			c		2.4	3.6	1.6	2.7	1.4	2.7		1.6		1.5
			$n_{2 \text{ Eck}}$		106	126	51	62	108	128		72		128
			$n_{2 \text{ th}}$		96	104	51	62	76	98		72		79

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

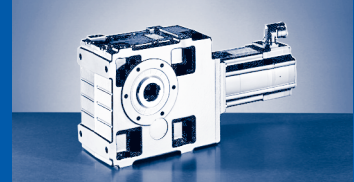
## GKS□□-□A (MCA)

$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
36.303	685	1.18	$M_2$		214	134	411	227	371	183		370		326
			c		2.4	3.6	1.6	2.7	1.4	2.6		1.6		1.5
			$n_{2 \text{ Eck}}$		94	112	45	55	95	113		63		113
			$n_{2 \text{ th}}$		94	101	45	55	76	96		63		79
41.472	689	2.11	$M_2$				471	260	424	210		424		373
			c				1.4	2.4	1.2	2.3		1.4		1.3
			$n_{2 \text{ Eck}}$				39	48	83	99		56		99
			$n_{2 \text{ th}}$				39	48	45	61		49		47
44.471	689	0.90	$M_2$		263	165	505	279	455	225		454		400
			c		2.2	3.3	1.4	2.4	1.3	2.5		1.5		1.4
			$n_{2 \text{ Eck}}$		77	91	37	45	78	92		52		92
			$n_{2 \text{ th}}$		77	91	37	45	70	81		52		70
53.074	695	1.52	$M_2$		315	198	604	334	544	269		543		478
			c		1.9	2.8	1.2	2.1	1.1	2.1		1.3		1.2
			$n_{2 \text{ Eck}}$		64	76	31	38	65	77		43		77
			$n_{2 \text{ th}}$		52	58	31	38	39	54		41		40
57.882	695	0.58	$M_2$	105	344	216	659	365	594	294				
			c	5.2	1.7	2.6	1.1	1.9	1.0	1.9				
			$n_{2 \text{ Eck}}$	68	59	70	28	35	60	71				
			$n_{2 \text{ th}}$	68	59	70	28	35	58	62				
65.207	624	0.57	$M_2$	120	389	245		413		333				
			c	4.2	1.4	2.1		1.5		1.5				
			$n_{2 \text{ Eck}}$	61	52	62		31		63				
			$n_{2 \text{ th}}$	61	52	62		31		55				
72.000	702	0.42	$M_2$	132	429	270		456		367				
			c	4.2	1.4	2.1		1.5		1.6				
			$n_{2 \text{ Eck}}$	55	47	56		28		57				
			$n_{2 \text{ th}}$	55	47	56		28		50				
81.111	630	0.42	$M_2$	150	485	306		515		415				
			c	3.4	1.1	1.7		1.2		1.2				
			$n_{2 \text{ Eck}}$	49	42	50		25		51				
			$n_{2 \text{ th}}$	49	42	50		25		44				
93.176	702	0.26	$M_2$	173	557	352								
			c	3.3	1.1	1.6								
			$n_{2 \text{ Eck}}$	42	37	44								
			$n_{2 \text{ th}}$	42	37	43								
104.967	635	0.25	$M_2$	196		398								
			c	2.6		1.3								
			$n_{2 \text{ Eck}}$	38		39								
			$n_{2 \text{ th}}$	38		39								
113.082	702	0.19	$M_2$	210		427								
			c	3.0		1.5								
			$n_{2 \text{ Eck}}$	35		36								
			$n_{2 \text{ th}}$	35		36								
127.392	635	0.19	$M_2$	238		483								
			c	2.4		1.2								
			$n_{2 \text{ Eck}}$	31		32								
			$n_{2 \text{ th}}$	31		32								
142.941	702	0.12	$M_2$	268										
			c	2.4										
			$n_{2 \text{ Eck}}$	28										
			$n_{2 \text{ th}}$	28										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

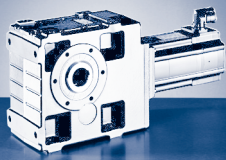


$M_{2GN} \leq 702 \text{ Nm}$

GKS06-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41		
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00		
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50		
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110		
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2		
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10		
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04		
161.029	635	0.12	$M_2$	303												
			c	1.9												
			$n_2$ Eck	25												
			$n_2$ th	25												
190.080	702	0.23	$M_2$	358												
			c	1.8												
			$n_2$ Eck	21												
			$n_2$ th	21												
214.133	635	0.23	$M_2$	405												
			c	1.4												
			$n_2$ Eck	19												
			$n_2$ th	18												
230.688	702	0.17	$M_2$	436												
			c	1.5												
			$n_2$ Eck	17												
			$n_2$ th	17												
259.880	635	0.17	$M_2$	493												
			c	1.2												
			$n_2$ Eck	15												
			$n_2$ th	15												
291.600	702	0.11	$M_2$	553												
			c	1.2												
			$n_2$ Eck	14												
			$n_2$ th	14												

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

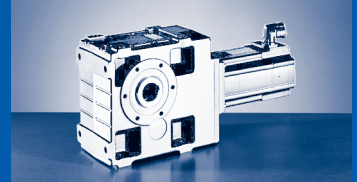
$M_{2GN} \leq 702 \text{ Nm}$

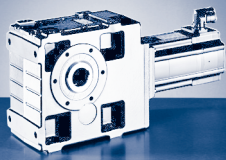
GKS06-4A				10IC40	13IC41
				...500	...500
i	$M_{2GN}$	$J_G$	$M_1$		
			$n_1$	3950	4050
			$I_{M400}$	2.4	4.4
			$P_N$	0.80	1.70
			$J_M$	2.44	8.34
103.721	685	0.30	$M_2$	190	386
			c	2.9	1.4
			$n_{2 \text{ Eck}}$	38	39
			$n_{2 \text{ th}}$	38	39
113.205	537	0.23	$M_2$	208	422
			c	2.3	1.2
			$n_{2 \text{ Eck}}$	35	36
			$n_{2 \text{ th}}$	35	36
127.059	689	0.26	$M_2$	233	473
			c	2.7	1.3
			$n_{2 \text{ Eck}}$	31	32
			$n_{2 \text{ th}}$	31	32
140.816	537	0.21	$M_2$	261	
			c	1.9	
			$n_{2 \text{ Eck}}$	28	
			$n_{2 \text{ th}}$	28	
155.647	689	0.19	$M_2$	287	581
			c	2.2	1.1
			$n_{2 \text{ Eck}}$	25	26
			$n_{2 \text{ th}}$	25	26
174.336	537	0.11	$M_2$	324	
			c	1.5	
			$n_{2 \text{ Eck}}$	23	
			$n_{2 \text{ th}}$	23	
202.588	695	0.17	$M_2$	376	
			c	1.7	
			$n_{2 \text{ Eck}}$	20	
			$n_{2 \text{ th}}$	20	
224.524	537	0.07	$M_2$	419	
			c	1.2	
			$n_{2 \text{ Eck}}$	18	
			$n_{2 \text{ th}}$	18	
252.000	702	0.16	$M_2$	469	
			c	1.4	
			$n_{2 \text{ Eck}}$	16	
			$n_{2 \text{ th}}$	16	
316.800	702	0.10	$M_2$	591	
			c	1.1	
			$n_{2 \text{ Eck}}$	13	
			$n_{2 \text{ th}}$	12	

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

GKS [Nm]  
GKS□□-□A (MCA)





# GKS [Nm]

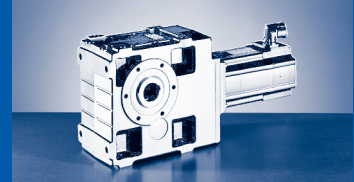
## GKS□□-□A (MCA)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	
5.955	471	19.30	$M_2$								118		
			c								3.7		
			$n_2$ Eck									282	
			$n_2$ th									282	
8.254	541	11.80	$M_2$								165	81	
			c								3.1	5.5	
			$n_2$ Eck									204	279
			$n_2$ th									204	279
9.171	725	16.00	$M_2$								182		
			c								3.7		
			$n_2$ Eck									183	
			$n_2$ th									183	
10.124	800	15.88	$M_2$								201		
			c								3.7		
			$n_2$ Eck									166	
			$n_2$ th									166	
11.378	613	7.02	$M_2$				125		113		229	112	
			c				4.6		4.0		2.5	4.6	
			$n_2$ Eck				144		304		148	202	
			$n_2$ th				144		248		148	202	
12.711	832	10.16	$M_2$								254	124	
			c								3.1	5.5	
			$n_2$ Eck								132	181	
			$n_2$ th								132	181	
14.798	1040	14.31	$M_2$								295	144	
			c								3.3	5.9	
			$n_2$ Eck								114	155	
			$n_2$ th								114	153	
16.674	1071	13.97	$M_2$								333	163	
			c								3.0	5.4	
			$n_2$ Eck								101	138	
			$n_2$ th								101	134	
17.270	998	7.26	$M_2$				189		171		346	170	
			c				4.9		4.3		2.7	4.9	
			$n_2$ Eck				95		200		97	133	
			$n_2$ th				95		159		97	133	
20.511	1110	9.08	$M_2$								412	202	
			c								2.6	4.6	
			$n_2$ Eck								82	112	
			$n_2$ th								82	112	
23.111	1168	8.91	$M_2$								465	229	
			c								2.4	4.3	
			$n_2$ Eck								73	100	
			$n_2$ th								73	100	
25.244	1177	6.72	$M_2$				279		252		509	251	
			c				4.0		3.4		2.2	3.9	
			$n_2$ Eck				65		137		67	91	
			$n_2$ th				65		104		67	91	
28.274	1202	5.57	$M_2$				313		284	137	571	282	
			c				3.6		3.1	5.9	2.0	3.6	
			$n_2$ Eck				58		122	145	59	81	
			$n_2$ th				58		95	108	59	81	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

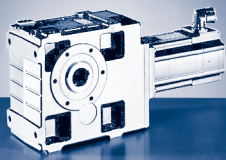


$M_{2GN} \leq 1330 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GKS07-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
105		203	89	202	65	346	136	311	94	$c$			
3.3		2.2	4.4	1.7	4.9	1.3	2.9	1.1	3.5	$n_{2\text{Eck}}$	19.30	471	5.955
584		286	393	589	697	287	418	591	699	$n_{2\text{th}}$			
335		285	357	273	367	230	323	215	338				
146	71	282	124	281	91	481	190		131	$M_2$			
2.7	5.2	1.8	3.7	1.4	4.1	1.1	2.4		2.9	$c$	11.80	541	8.254
422	498	206	284	425	503	207	302		504	$n_{2\text{Eck}}$			
268	307	206	284	206	292	178	244		244	$n_{2\text{th}}$			
161		312	137	311	100	533	210	478	144	$M_2$			
3.3		2.2	4.4	1.7	4.9	1.3	2.9	1.1	3.5	$c$	16.00	725	9.171
380		185	255	383	453	187	272	384	454	$n_{2\text{Eck}}$			
217		185	232	177	238	150	210	140	220	$n_{2\text{th}}$			
178		345	151	343	111	589	232	528	159	$M_2$			
3.3		2.2	4.4	1.7	4.9	1.3	2.9	1.1	3.5	$c$	15.88	800	10.124
344		168	231	347	410	169	246	348	411	$n_{2\text{Eck}}$			
197		168	210	160	216	135	190	127	199	$n_{2\text{th}}$			
203	99	390	172	388	126		263		181	$M_2$			
2.3	4.3	1.5	3.0	1.2	3.4		2.0		2.4	$c$	7.02	613	11.378
306	361	149	206	309	365		219		366	$n_{2\text{Eck}}$			
220	252	149	206	162	215		177		177	$n_{2\text{th}}$			
225	110	434	191	433	140	741	293		201	$M_2$			
2.7	5.2	1.8	3.7	1.4	4.1	1.1	2.4		2.9	$c$	10.16	832	12.711
274	323	134	184	276	327	135	196		327	$n_{2\text{Eck}}$			
174	199	134	184	134	190	116	158		158	$n_{2\text{th}}$			
262	127	505	222	503	163	862	340	773	234	$M_2$			
2.9	5.6	2.0	3.9	1.6	4.4	1.2	2.5	1.0	3.1	$c$	14.31	1040	14.798
235	278	115	158	237	280	116	168	238	281	$n_{2\text{Eck}}$			
131	151	115	140	102	144	87	126	82	133	$n_{2\text{th}}$			
296	144	570	251	568	184	972	384		264	$M_2$			
2.7	5.1	1.8	3.6	1.4	4.0	1.1	2.3		2.8	$c$	13.97	1071	16.674
209	247	102	140	211	249	103	149		250	$n_{2\text{Eck}}$			
114	132	99	122	86	125	74	110		115	$n_{2\text{th}}$			
307	150	592	261	589	191		399		274	$M_2$			
2.4	4.6	1.6	3.2	1.3	3.6		2.1		2.6	$c$	7.26	998	17.270
202	238	98	136	203	240		144		241	$n_{2\text{Eck}}$			
141	162	98	136	104	142		117		117	$n_{2\text{th}}$			
365	179	703	311	700	228		474		326	$M_2$			
2.3	4.3	1.5	3.0	1.2	3.4		2.0		2.4	$c$	9.08	1110	20.511
170	200	83	114	171	202		121		203	$n_{2\text{Eck}}$			
103	119	83	110	75	113		98		98	$n_{2\text{th}}$			
412	202	793	351	789	257		535		368	$M_2$			
2.1	4.0	1.4	2.8	1.1	3.2		1.8		2.2	$c$	8.91	1168	23.111
151	178	74	101	152	180		108		180	$n_{2\text{Eck}}$			
90	104	73	96	65	99		84		87	$n_{2\text{th}}$			
451	221	868	384	863	282		586		403	$M_2$			
2.0	3.7	1.3	2.6	1.0	2.9		1.7		2.1	$c$	6.72	1177	25.244
138	163	67	93	139	164		99		165	$n_{2\text{Eck}}$			
91	106	67	93	64	97		80		80	$n_{2\text{th}}$			
506	249	973	431		317		657		452	$M_2$			
1.8	3.4	1.2	2.4		2.7		1.5		1.9	$c$	5.57	1202	28.274
123	145	60	83		147		88		147	$n_{2\text{Eck}}$			
81	97	60	83		87		71		71	$n_{2\text{th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

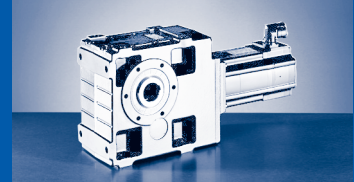
$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
31.858	1172	5.47	$M_2$				355	194	321	156	646	320
			c				3.1	5.3	2.7	5.1	1.7	3.1
			$n_{2 \text{ Eck}}$				51	63	109	129	53	72
			$n_{2 \text{ th}}$				51	63	82	93	53	72
36.063	1290	3.65	$M_2$		208		402	220	364	177	731	362
			c		4.6		3.1	5.1	2.6	5.0	1.7	3.0
			$n_{2 \text{ Eck}}$		95		45	56	96	114	47	64
			$n_{2 \text{ th}}$		94		45	55	84	96	47	64
40.906	1290	6.93	$M_2$								831	412
			c								1.5	2.7
			$n_{2 \text{ Eck}}$								41	56
			$n_{2 \text{ th}}$								41	54
44.178	1300	2.78	$M_2$				495	270	446	218	898	444
			c				2.6	4.6	2.5	4.7	1.4	2.8
			$n_{2 \text{ Eck}}$				37	45	78	93	38	52
			$n_{2 \text{ th}}$				37	45	74	81	38	52
50.345	1300	5.30	$M_2$				566	310	510	250	1025	508
			c				2.3	4.1	2.2	4.1	1.3	2.5
			$n_{2 \text{ Eck}}$				33	40	69	81	33	46
			$n_{2 \text{ th}}$				32	40	47	54	33	46
57.501	1310	1.75	$M_2$		336	210	649	356	584	287	1173	582
			c		3.3	4.9	2.0	3.6	1.9	3.6	1.1	2.2
			$n_{2 \text{ Eck}}$		59	70	28	35	60	71	29	40
			$n_{2 \text{ th}}$		59	70	28	35	60	62	29	40
64.790	1195	1.73	$M_2$		381	238	734	404	661	326		659
			c		2.7	4.0	1.6	2.9	1.6	2.9		1.8
			$n_{2 \text{ Eck}}$		53	63	25	31	53	63		36
			$n_{2 \text{ th}}$		53	63	25	31	52	55		36
70.474	1320	1.30	$M_2$		414	259	798	439	719	354		717
			c		2.7	4.0	1.6	2.9	1.6	3.0		1.8
			$n_{2 \text{ Eck}}$		48	58	23	28	49	58		33
			$n_{2 \text{ th}}$		48	57	23	28	49	51		33
79.407	1205	1.28	$M_2$		469	295	902	498	812	401		811
			c		2.2	3.3	1.3	2.4	1.3	2.4		1.5
			$n_{2 \text{ Eck}}$		43	51	21	25	44	52		29
			$n_{2 \text{ th}}$		43	51	21	25	44	45		29
92.563	1330	0.81	$M_2$		548	344	1052	581	948	468		
			c		2.1	3.1	1.3	2.3	1.2	2.3		
			$n_{2 \text{ Eck}}$		37	44	18	22	37	44		
			$n_{2 \text{ th}}$		37	44	18	22	37	39		
104.296	1215	0.80	$M_2$	190	620	390	1189	658		530		
			c	5.1	1.7	2.5	1.0	1.8		1.9		
			$n_{2 \text{ Eck}}$	38	33	39	16	19		39		
			$n_{2 \text{ th}}$	38	33	39	16	19		34		
112.338	1330	0.59	$M_2$	203	666	419	1280	708	1151	570		
			c	5.7	1.9	2.8	1.0	1.9	1.1	2.1		
			$n_{2 \text{ Eck}}$	35	30	36	15	18	31	37		
			$n_{2 \text{ th}}$	35	30	36	15	18	31	32		
126.578	1215	0.59	$M_2$	231	753	474		801		645		
			c	4.6	1.5	2.3		1.5		1.7		
			$n_{2 \text{ Eck}}$	31	27	32		16		32		
			$n_{2 \text{ th}}$	31	27	32		16		28		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



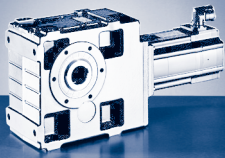


$M_{2GN} \leq 1330 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GKS07-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
572	282	1098	488		358		742		511	$c$	5.47	1172	31.858
1.5	2.9	1.0	2.1		2.3		1.3		1.6	$n_{2 \text{ Eck}}$			
109	129	53	74		130		78		131	$n_{2 \text{ th}}$			
66	83	53	73		77		61		63				
647	319		553		406					$M_2$			
1.5	2.8		2.0		2.2					$c$	3.65	1290	36.063
97	114		65		115					$n_{2 \text{ Eck}}$			
67	86		65		68					$n_{2 \text{ th}}$			
736	363		628		461		954		658	$M_2$			
1.3	2.5		1.8		2.0		1.1		1.4	$c$	6.93	1290	40.906
85	101		57		102		61		102	$n_{2 \text{ Eck}}$			
40	53		47		50		37		41	$n_{2 \text{ th}}$			
794	392		678		498					$M_2$			
1.4	2.7		1.9		2.1					$c$	2.78	1300	44.178
79	93		53		94					$n_{2 \text{ Eck}}$			
60	70		53		55					$n_{2 \text{ th}}$			
906	448		774		569		1176		810	$M_2$			
1.2	2.3		1.6		1.8		1.1		1.3	$c$	5.30	1300	50.345
69	82		47		82		50		83	$n_{2 \text{ Eck}}$			
35	48		41		44		33		36	$n_{2 \text{ th}}$			
1037	513									$M_2$			
1.1	2.1									$c$	1.75	1310	57.501
61	72									$n_{2 \text{ Eck}}$			
49	54									$n_{2 \text{ th}}$			
	581									$M_2$			
	1.7									$c$	1.73	1195	64.790
	63									$n_{2 \text{ Eck}}$			
	48									$n_{2 \text{ th}}$			
	631									$M_2$			
	1.7									$c$	1.30	1320	70.474
	58									$n_{2 \text{ Eck}}$			
	44									$n_{2 \text{ th}}$			
	714									$M_2$			
	1.4									$c$	1.28	1205	79.407
	52									$n_{2 \text{ Eck}}$			
	39									$n_{2 \text{ th}}$			
										$M_2$			
										$c$	0.81	1330	92.563
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$	0.80	1215	104.296
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$	0.59	1330	112.338
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			
										$M_2$			
										$c$	0.59	1215	126.578
										$n_{2 \text{ Eck}}$			
										$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

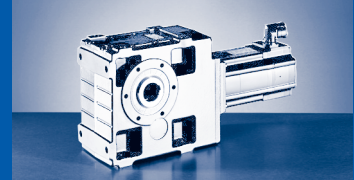
## GKS□□-□A (MCA)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...500	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
140.548	1330	1.11	$M_2$		836	527		890		716		
			c		1.5	2.3		1.5		1.7		
			$n_{2 \text{ Eck}}$		24	29		14		29		
			$n_{2 \text{ th}}$		24	29		14		26		
158.364	1215	1.11	$M_2$		945	596		1006		809		
			c		1.2	1.8		1.2		1.4		
			$n_{2 \text{ Eck}}$		22	26		13		26		
			$n_{2 \text{ th}}$		22	26		13		23		
184.600	1330	0.69	$M_2$	342	1103	696		1173		944		
			c	3.5	1.2	1.7		1.1		1.3		
			$n_{2 \text{ Eck}}$	21	19	22		11		22		
			$n_{2 \text{ th}}$	21	18	22		11		19		
208.000	1215	0.69	$M_2$	388		787				1067		
			c	2.8		1.4				1.0		
			$n_{2 \text{ Eck}}$	19		20				20		
			$n_{2 \text{ th}}$	19		19				17		
224.037	1330	0.51	$M_2$	417		848				1149		
			c	2.9		1.4				1.0		
			$n_{2 \text{ Eck}}$	18		18				18		
			$n_{2 \text{ th}}$	18		18				16		
252.436	1215	0.51	$M_2$	473		958						
			c	2.3		1.2						
			$n_{2 \text{ Eck}}$	16		16						
			$n_{2 \text{ th}}$	16		16						
283.193	1330	0.33	$M_2$	531		1075						
			c	2.3		1.1						
			$n_{2 \text{ Eck}}$	14		14						
			$n_{2 \text{ th}}$	14		14						
319.091	1215	0.33	$M_2$	601								
			c	1.8								
			$n_{2 \text{ Eck}}$	12								
			$n_{2 \text{ th}}$	12								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

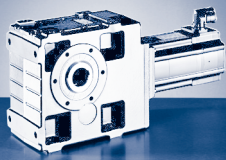


$M_{2GN} \leq 1330 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GKS07-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
										$c$			
										$n_2 \text{ Eck}$	1.11	1330	140.548
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	1.11	1215	158.364
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.69	1330	184.600
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.69	1215	208.000
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.51	1330	224.037
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.51	1215	252.436
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.33	1330	283.193
										$n_2 \text{ th}$			
										$M_2$			
										$c$			
										$n_2 \text{ Eck}$	0.33	1215	319.091
										$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

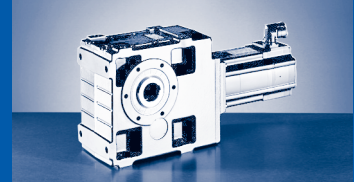
## GKS□□-□A (MCA)

$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
103.039	1290	0.84	$M_2$	183	601	378	1153	638	1038	514
			c	5.5	1.8	2.7	1.1	2.0	1.1	2.0
			$n_{2 \text{ Eck}}$	38	33	39	16	19	34	40
			$n_{2 \text{ th}}$	38	33	39	16	19	34	35
112.391	1053	0.63	$M_2$	202	657	414		699		563
			c	4.6	1.5	2.3		1.5		1.7
			$n_{2 \text{ Eck}}$	35	30	36		18		37
			$n_{2 \text{ th}}$	35	30	36		18		32
126.222	1300	0.73	$M_2$	226	737	464		784		631
			c	5.0	1.7	2.5		1.7		1.8
			$n_{2 \text{ Eck}}$	31	27	32		16		33
			$n_{2 \text{ th}}$	31	27	32		16		28
137.748	1053	0.57	$M_2$	250	808	510		860		692
			c	3.7	1.3	1.9		1.2		1.4
			$n_{2 \text{ Eck}}$	29	25	29		15		30
			$n_{2 \text{ th}}$	29	25	29		15		26
154.622	1300	0.53	$M_2$	279	906	571		964		775
			c	4.1	1.4	2.0		1.3		1.5
			$n_{2 \text{ Eck}}$	26	22	26		13		27
			$n_{2 \text{ th}}$	26	22	26		13		23
179.201	1053	0.28	$M_2$	328		666				
			c	2.9		1.4				
			$n_{2 \text{ Eck}}$	22		23				
			$n_{2 \text{ th}}$	22		23				
201.254	1310	0.45	$M_2$	367	1183	747		1258		1013
			c	3.2	1.1	1.6		1.0		1.2
			$n_{2 \text{ Eck}}$	20	17	20		10		20
			$n_{2 \text{ th}}$	20	17	20		10		18
222.909	1053	0.20	$M_2$	410		831				
			c	2.3		1.2				
			$n_{2 \text{ Eck}}$	18		18				
			$n_{2 \text{ th}}$	18		18				
246.659	1320	0.42	$M_2$	453		918				
			c	2.6		1.3				
			$n_{2 \text{ Eck}}$	16		16				
			$n_{2 \text{ th}}$	16		16				
273.199	1053	0.18	$M_2$	505						
			c	1.9						
			$n_{2 \text{ Eck}}$	15						
			$n_{2 \text{ th}}$	14						
321.049	1320	0.26	$M_2$	593						
			c	2.0						
			$n_{2 \text{ Eck}}$	12						
			$n_{2 \text{ th}}$	12						
358.829	1053	0.17	$M_2$	667						
			c	1.4						
			$n_{2 \text{ Eck}}$	11						
			$n_{2 \text{ th}}$	11						
399.353	1320	0.18	$M_2$	741						
			c	1.6						
			$n_{2 \text{ Eck}}$	10						
			$n_{2 \text{ th}}$	10						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

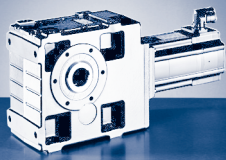


$M_{2GN} \leq 1330 \text{ Nm}$

GKS07-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	866						
464.367	1053	0.11	$n_{2 \text{ Eck}}$	1.1						
			$n_{2 \text{ th}}$	9						
			$M_2$	963						
			c	1.3						
516.810	1320	0.11	$n_{2 \text{ Eck}}$	8						
			$n_{2 \text{ th}}$	8						
			$M_2$	1189						
			c	1.0						
636.581	1330	0.16	$n_{2 \text{ Eck}}$	6						
			$n_{2 \text{ th}}$	6						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

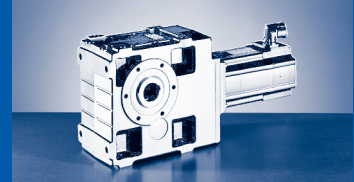
## GKS□□-□A (MCA)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c								
12.283	1615	34.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
13.360	1757	33.40	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					314		280	
			c					5.3		4.7	
16.122	1801	22.60	$n_{2 \text{ Eck}}$					104		216	
			$n_{2 \text{ th}}$					104		141	
			$M_2$					342		304	
			c					5.3		4.7	
17.536	1958	22.20	$n_{2 \text{ Eck}}$					96		199	
			$n_{2 \text{ th}}$					96		129	
			$M_2$								
			c								
19.541	2570	30.60	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
22.022	2672	29.90	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					500		445	
			c					5.3		4.7	
25.649	2862	20.50	$n_{2 \text{ Eck}}$					66		136	
			$n_{2 \text{ th}}$					66		88	
			$M_2$					574		510	
			c					4.7		4.2	
29.228	2914	15.90	$n_{2 \text{ Eck}}$					58		119	
			$n_{2 \text{ th}}$					57		83	
			$M_2$					650		577	
			c					4.3		3.8	
32.940	2984	15.60	$n_{2 \text{ Eck}}$					51		106	
			$n_{2 \text{ th}}$					51		72	
			$M_2$			344					
			c			5.6					
35.193	2670	12.20	$n_{2 \text{ Eck}}$			98					
			$n_{2 \text{ th}}$			83					
			$M_2$					696		618	
			c					4.1		3.6	
35.193	3029	12.20	$n_{2 \text{ Eck}}$					48		99	
			$n_{2 \text{ th}}$					48		75	
			$M_2$			387		788		699	339
			c			5.6		3.6		3.2	6.0
39.662	3002	12.00	$n_{2 \text{ Eck}}$			87		42		88	104
			$n_{2 \text{ th}}$			73		42		65	74
			$M_2$					859		760	
			c					3.4		3.3	
43.146	3024	9.00	$n_{2 \text{ Eck}}$					39		81	
			$n_{2 \text{ th}}$					39		66	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

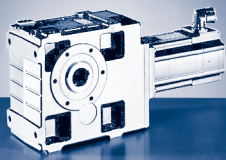


$M_{2GN} \leq 3080 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS09-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
412		412		708	276	636	188	c			
3.7		2.9		2.2	4.8	1.9	5.8	$n_{2 \text{ Eck}}$	34.20	1615	12.283
138		286		139	203	287	339	$n_{2 \text{ th}}$			
138		146		135	163	129	164				
448		448		770	300	691	205	$M_2$			
3.7		2.9		2.2	4.8	1.9	5.8	c	33.40	1757	13.360
127		263		128	186	264	311	$n_{2 \text{ Eck}}$			
127		134		124	150	119	151	$n_{2 \text{ th}}$			
544		543		932	365	837	250	$M_2$			
3.1		2.5		1.8	4.0	1.6	4.9	c	22.60	1801	16.122
105		218		106	154	218	258	$n_{2 \text{ Eck}}$			
105		122		106	125	103	125	$n_{2 \text{ th}}$			
591		590		1014	397	910	271	$M_2$			
3.1		2.5		1.8	4.0	1.6	4.9	c	22.20	1958	17.536
97		200		98	142	201	237	$n_{2 \text{ Eck}}$			
97		112		98	115	95	115	$n_{2 \text{ th}}$			
655		655		1126	439	1011	300	$M_2$			
3.7		2.9		2.2	4.8	1.9	5.8	c	30.60	2570	19.541
87		180		88	127	180	213	$n_{2 \text{ Eck}}$			
87		91		85	102	81	103	$n_{2 \text{ th}}$			
740		740		1271	496	1141	339	$M_2$			
3.4		2.7		2.0	4.4	1.8	5.4	c	29.90	2672	22.022
77		159		78	113	160	189	$n_{2 \text{ Eck}}$			
77		80		74	89	69	91	$n_{2 \text{ th}}$			
865		864		1483	580	1331	397	$M_2$			
3.1		2.5		1.8	4.0	1.6	4.9	c	20.50	2862	25.649
66		137		67	97	137	162	$n_{2 \text{ Eck}}$			
66		77		67	79	65	79	$n_{2 \text{ th}}$			
989	431	987		1693	664	1520	455	$M_2$			
2.8	5.6	2.2		1.6	3.6	1.4	4.4	c	15.90	2914	29.228
58	80	120		59	85	120	142	$n_{2 \text{ Eck}}$			
58	80	72		59	69	58	69	$n_{2 \text{ th}}$			
1118	488	1115	357	1911	751	1715	515	$M_2$			
2.5	5.1	2.0	5.7	1.5	3.3	1.3	4.0	c	15.60	2984	32.940
52	71	107	126	52	76	107	126	$n_{2 \text{ Eck}}$			
52	71	62	74	52	61	49	61	$n_{2 \text{ th}}$			
								$M_2$			
								c	12.20	2670	35.193
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1196	523	1192	383	2044	804	1834	552	$M_2$			
2.4	4.8	1.9	5.4	1.4	3.1	1.2	3.8	c	12.20	3029	35.193
48	67	100	118	49	71	100	118	$n_{2 \text{ Eck}}$			
48	66	64	70	49	57	50	57	$n_{2 \text{ th}}$			
1352	593	1347	434	2307	910	2070	625	$M_2$			
2.1	4.2	1.7	4.7	1.2	2.7	1.1	3.3	c	12.00	3002	39.662
43	59	89	105	43	63	89	105	$n_{2 \text{ Eck}}$			
43	59	53	62	43	51	42	51	$n_{2 \text{ th}}$			
1472	644	1464	471	2511	988	2251	678	$M_2$			
2.0	4.4	1.8	5.0	1.2	2.9	1.2	3.5	c	9.00	3024	43.146
39	54	81	96	40	58	82	96	$n_{2 \text{ Eck}}$			
39	54	55	57	40	47	45	47	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

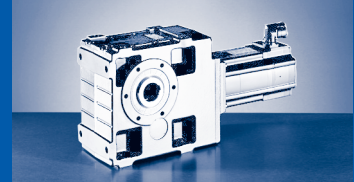
$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
48.625	3017	8.87	c					972	473	860	418
			$n_{2 \text{ Eck}}$					3.0	6.0	3.0	5.6
			$n_{2 \text{ th}}$					35	47	72	85
								35	47	57	64
58.456	2977	5.54	$M_2$	642		579					
			c	4.5		4.3					
			$n_{2 \text{ Eck}}$	28		59					
			$n_{2 \text{ th}}$	28		59					
58.456	3031	5.54	$M_2$					1174	575	1039	507
			c					2.5	5.0	2.5	4.7
			$n_{2 \text{ Eck}}$					29	39	60	70
			$n_{2 \text{ th}}$					29	39	53	53
65.879	3048	5.47	$M_2$	727		655		1327	651	1174	575
			c	4.1		3.9		2.3	4.4	2.2	4.2
			$n_{2 \text{ Eck}}$	25		52		26	35	53	62
			$n_{2 \text{ th}}$	25		52		26	35	47	47
70.982	3031	4.14	$M_2$	786		708		1433	704	1267	621
			c	3.8		3.6		2.1	4.1	2.0	3.8
			$n_{2 \text{ Eck}}$	23		49		24	32	49	58
			$n_{2 \text{ th}}$	23		49		24	32	44	44
79.996	3071	4.10	$M_2$	889		801		1619	797	1431	703
			c	3.4		3.2		1.9	3.7	1.8	3.5
			$n_{2 \text{ Eck}}$	20		43		21	29	44	51
			$n_{2 \text{ th}}$	20		43		21	29	39	39
91.860	3031	2.63	$M_2$	1026	559	925	450	1864	921	1648	812
			c	2.9	5.2	2.8	5.2	1.6	3.2	1.6	3.0
			$n_{2 \text{ Eck}}$	18	22	38	45	18	25	38	45
			$n_{2 \text{ th}}$	18	22	38	39	18	25	34	34
103.524	3080	2.61	$M_2$	1160	633	1045	510	2104	1041	1860	918
			c	2.6	4.7	2.5	4.7	1.5	2.9	1.4	2.7
			$n_{2 \text{ Eck}}$	16	19	33	40	16	22	34	40
			$n_{2 \text{ th}}$	16	19	33	35	16	22	30	30
111.484	3031	1.92	$M_2$	1252	685	1125	549	2269	1124	2003	988
			c	2.4	4.3	2.5	4.8	1.3	2.7	1.4	2.7
			$n_{2 \text{ Eck}}$	15	18	31	37	15	21	31	37
			$n_{2 \text{ th}}$	15	18	31	32	15	21	28	28
125.641	3080	1.90	$M_2$	1415	776	1272	622	2560	1270	2261	1116
			c	2.2	3.9	2.3	4.3	1.2	2.4	1.3	2.5
			$n_{2 \text{ Eck}}$	13	16	28	33	13	18	28	33
			$n_{2 \text{ th}}$	13	16	28	29	13	18	25	25
140.921	2973	1.26	$M_2$	1591	874	1430	702				
			c	1.9	3.4	2.0	3.8				
			$n_{2 \text{ Eck}}$	12	14	25	29				
			$n_{2 \text{ th}}$	12	14	25	25				
158.816	3080	1.25	$M_2$	1797	989	1615	794				
			c	1.7	3.1	1.8	3.4				
			$n_{2 \text{ Eck}}$	10	13	22	26				
			$n_{2 \text{ th}}$	10	13	22	23				
182.000	3031	2.25	$M_2$	2064	1139	1856	915		1855		1631
			c	1.5	2.6	1.6	2.9		1.6		1.7
			$n_{2 \text{ Eck}}$	9	11	19	23		13		23
			$n_{2 \text{ th}}$	9	11	19	20		13		17

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



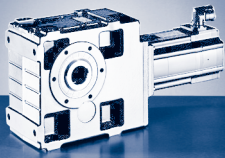


$M_{2GN} \leq 3080 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS09-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
1662	730	1653	534	2834	1118	2540	768	$c$	8.87	3017	48.625
1.8	3.9	1.6	4.4	1.1	2.6	1.0	3.1	$n_{2 \text{ Eck}}$			
35	48	72	85	35	51	72	86	$n_{2 \text{ th}}$			
35	48	46	50	35	41	38	41	$M_2$			
								$c$	5.54	2977	58.456
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
2005	883	1993	647					$M_2$			
1.5	3.3	1.3	3.7					$c$	5.54	3031	58.456
29	40	60	71					$n_{2 \text{ Eck}}$			
29	40	42	42					$n_{2 \text{ th}}$			
2263	999	2249	733					$M_2$			
1.3	2.9	1.2	3.3					$c$	5.47	3048	65.879
26	36	53	63					$n_{2 \text{ Eck}}$			
26	36	36	37					$n_{2 \text{ th}}$			
2441	1079	2425	792					$M_2$			
1.2	2.7	1.1	3.0					$c$	4.14	3031	70.982
24	33	50	59					$n_{2 \text{ Eck}}$			
24	33	35	35					$n_{2 \text{ th}}$			
2755	1220		895					$M_2$			
1.1	2.4		2.7					$c$	4.10	3071	79.996
21	29		52					$n_{2 \text{ Eck}}$			
21	29		31					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	2.63	3031	91.860
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	2.61	3080	103.524
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	1.92	3031	111.484
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	1.90	3080	125.641
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	1.26	2973	140.921
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	1.25	3080	158.816
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	2.25	3031	182.000
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

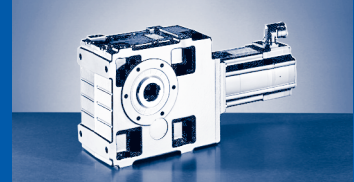
## GKS□□-□A (MCA)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
205.111	3080	2.24	c	2330	1287	2095	1034		2094		1841
			$n_{2 \text{ Eck}}$	1.3	2.4	1.4	2.6		1.5		1.5
			$n_{2 \text{ th}}$	8	10	17	20		11		20
				8	10	17	18		11		15
220.882	3031	1.66	$M_2$	2512	1389	2259	1116		2258		1985
			c	1.2	2.2	1.3	2.4		1.3		1.4
			$n_{2 \text{ Eck}}$	7	9	16	19		10		19
			$n_{2 \text{ th}}$	7	9	16	16		10		14
248.930	3080	1.65	$M_2$	2835	1568	2550	1261		2548		2241
			c	1.1	1.9	1.2	2.2		1.2		1.2
			$n_{2 \text{ Eck}}$	7	8	14	17		9		17
			$n_{2 \text{ th}}$	7	8	14	14		9		13
279.205	3031	1.10	$M_2$		1764	2864	1418				
			c		1.7	1.0	1.9				
			$n_{2 \text{ Eck}}$		7	12	15				
			$n_{2 \text{ th}}$		7	12	13				
314.659	3080	1.10	$M_2$		1991		1602				
			c		1.5		1.7				
			$n_{2 \text{ Eck}}$		6		13				
			$n_{2 \text{ th}}$		6		11				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

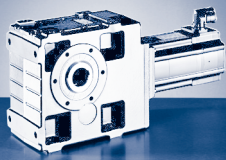


$M_{2GN} \leq 3080 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS09-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2Eck}$ $n_{2th}$	2.24	3080	205.111
								$M_2$ c $n_{2Eck}$ $n_{2th}$	1.66	3031	220.882
								$M_2$ c $n_{2Eck}$ $n_{2th}$	1.65	3080	248.930
								$M_2$ c $n_{2Eck}$ $n_{2th}$	1.10	3031	279.205
								$M_2$ c $n_{2Eck}$ $n_{2th}$	1.10	3080	314.659

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

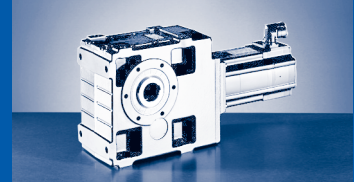
## GKS□□-□A (MCA)

$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
100.551	3029	2.48	$M_2$		570		1106	603	997	486	2008	993	1775	875
			c		4.4		2.7	4.8	2.6	4.9	1.5	2.9	1.5	2.8
			$n_{2 \text{ Eck}}$		34		16	20	34	41	17	23	35	41
			$n_{2 \text{ th}}$		34		16	20	34	36	17	23	31	31
113.320	3002	2.46	$M_2$		643		1251	684	1124	549	2267	1123	2001	987
			c		4.3		2.4	4.2	2.5	4.7	1.3	2.6	1.4	2.7
			$n_{2 \text{ Eck}}$		30		14	18	31	36	15	20	31	36
			$n_{2 \text{ th}}$		30		14	18	30	32	15	20	27	27
123.275	3024	2.11	$M_2$		702	436	1364	747	1226	599	2469	1224	2180	1076
			c		4.0	5.9	2.2	3.9	2.3	4.4	1.2	2.4	1.3	2.5
			$n_{2 \text{ Eck}}$		28	33	13	16	28	33	14	19	28	33
			$n_{2 \text{ th}}$		28	33	13	16	28	29	14	19	25	25
138.929	3017	2.09	$M_2$		795	495	1541	846	1385	679	2787	1384	2460	1216
			c		3.5	5.3	1.9	3.5	2.1	3.9	1.1	2.2	1.2	2.2
			$n_{2 \text{ Eck}}$		25	29	12	14	25	30	12	17	25	30
			$n_{2 \text{ th}}$		25	29	12	14	25	26	12	17	22	22
151.012	3024	1.52	$M_2$		867	541	1678	922	1508	740		1507	2677	1325
			c		3.3	4.9	1.8	3.2	1.9	3.6		2.0	1.1	2.0
			$n_{2 \text{ Eck}}$		23	27	11	13	23	27		15	23	27
			$n_{2 \text{ th}}$		23	27	11	13	23	24		15	21	21
170.188	3017	1.51	$M_2$		981	613	1895	1044	1704	838		1702		1497
			c		2.9	4.3	1.6	2.8	1.7	3.2		1.8		1.8
			$n_{2 \text{ Eck}}$		20	24	10	12	20	24		14		24
			$n_{2 \text{ th}}$		20	24	10	12	20	21		14		18
204.596	3031	1.24	$M_2$		1185	743	2285	1261	2054	1013		2053		1805
			c		2.4	3.6	1.3	2.4	1.4	2.7		1.5		1.5
			$n_{2 \text{ Eck}}$		17	20	8	10	17	20		11		20
			$n_{2 \text{ th}}$		17	20	8	10	17	18		11		15
230.577	3048	1.24	$M_2$		1340	841	2579	1425	2319	1146		2317		2038
			c		2.2	3.2	1.2	2.1	1.3	2.4		1.3		1.3
			$n_{2 \text{ Eck}}$		15	18	7	9	15	18		10		18
			$n_{2 \text{ th}}$		15	18	7	9	15	16		10		13
248.439	3031	1.13	$M_2$		1446	908	2781	1538	2501	1237		2500		2198
			c		2.0	3.0	1.1	2.0	1.2	2.2		1.2		1.2
			$n_{2 \text{ Eck}}$		14	16	7	8	14	17		9		17
			$n_{2 \text{ th}}$		14	16	7	8	14	14		9		13
279.986	3071	1.13	$M_2$		1633	1027		1737	2822	1397		2821		2481
			c		1.8	2.7		1.8	1.0	2.0		1.1		1.1
			$n_{2 \text{ Eck}}$		12	15		7	12	15		8		15
			$n_{2 \text{ th}}$		12	14		7	12	13		8		11
323.365	3031	0.71	$M_2$	581	1891	1191		2012		1619				
			c	4.6	1.5	2.3		1.5		1.7				
			$n_{2 \text{ Eck}}$	12	11	13		6		13				
			$n_{2 \text{ th}}$	12	11	13		6		11				
364.427	3071	0.71	$M_2$	658	2135	1346		2271		1828				
			c	4.1	1.4	2.0		1.4		1.5				
			$n_{2 \text{ Eck}}$	11	9	11		6		11				
			$n_{2 \text{ th}}$	11	9	11		5		10				
402.234	3031	0.51	$M_2$	730	2360	1489		2511		2021				
			c	3.7	1.2	1.8		1.2		1.4				
			$n_{2 \text{ Eck}}$	10	9	10		5		10				
			$n_{2 \text{ th}}$	10	8	10		5		9				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

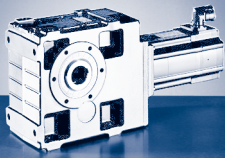


$M_{2GN} \leq 3080 \text{ Nm}$

GKS09-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
453.311	3071	0.51	$M_2$	826	2664	1681		2833		2280				
			c	3.3	1.1	1.6		1.1		1.2				
			$n_{2 \text{ Eck}}$	9	8	9		4		9				
			$n_{2 \text{ th}}$	9	8	9		4		8				
520.538	3031	0.47	$M_2$	953		1936				2623				
			c	2.9		1.4				1.0				
			$n_{2 \text{ Eck}}$	8		8				8				
			$n_{2 \text{ th}}$	8		8				7				
586.638	3080	0.47	$M_2$	1077		2185								
			c	2.6		1.3								
			$n_{2 \text{ Eck}}$	7		7								
			$n_{2 \text{ th}}$	7		7								
631.744	3031	0.44	$M_2$	1163		2355								
			c	2.3		1.2								
			$n_{2 \text{ Eck}}$	6		6								
			$n_{2 \text{ th}}$	6		6								
711.965	3080	0.44	$M_2$	1314		2658								
			c	2.1		1.1								
			$n_{2 \text{ Eck}}$	6		6								
			$n_{2 \text{ th}}$	6		6								
817.551	3031	0.28	$M_2$	1513										
			c	1.8										
			$n_{2 \text{ Eck}}$	5										
			$n_{2 \text{ th}}$	5										
921.367	3080	0.28	$M_2$	1709										
			c	1.6										
			$n_{2 \text{ Eck}}$	4										
			$n_{2 \text{ th}}$	4										
992.209	3031	0.20	$M_2$	1843										
			c	1.5										
			$n_{2 \text{ Eck}}$	4										
			$n_{2 \text{ th}}$	4										
1118.204	3080	0.20	$M_2$	2080										
			c	1.4										
			$n_{2 \text{ Eck}}$	4										
			$n_{2 \text{ th}}$	4										
1254.197	3031	0.13	$M_2$	2338										
			c	1.2										
			$n_{2 \text{ Eck}}$	3										
			$n_{2 \text{ th}}$	3										
1413.461	3080	0.13	$M_2$	2638										
			c	1.1										
			$n_{2 \text{ Eck}}$	3										
			$n_{2 \text{ th}}$	3										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

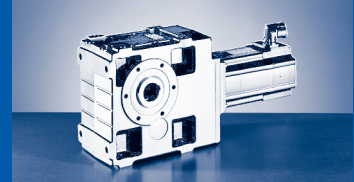
## GKS□□-□A (MCA)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c								
12.094	2770	104.00	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
13.154	3013	101.00	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
15.874	3090	68.00	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
17.265	3360	66.50	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
19.515	4470	90.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
21.989	4884	90.40	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
25.615	4985	61.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
28.021	5163	52.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
31.573	5521	51.30	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
35.741	3935	36.80	$n_{2 \text{ Eck}}$					698		621	
			$n_{2 \text{ th}}$					5.2		4.6	
			$M_2$					47		97	
			c					47		63	
			$M_2$								
			c								
35.741	5655	36.80	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$								
			c								
40.272	4434	36.20	$n_{2 \text{ Eck}}$					786		699	
			$n_{2 \text{ th}}$					5.2		4.6	
			$M_2$					42		86	
			c					42		56	
			$M_2$								
			c								
40.272	5869	36.20	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

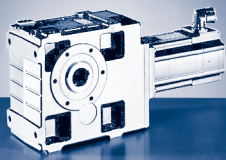


$M_{2GN} \leq 6072 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
				685		617		c			
				3.8		3.3		$n_{2\text{ Eck}}$	104.00	2770	12.094
				141		291		$n_{2\text{ th}}$			
				131		127					
				745		671		$M_2$			
				3.8		3.3		c	101.00	3013	13.154
				130		268		$n_{2\text{ Eck}}$			
				121		117		$n_{2\text{ th}}$			
				904		814		$M_2$			
				3.2		2.8		c	68.00	3090	15.874
				108		222		$n_{2\text{ Eck}}$			
				108		108		$n_{2\text{ th}}$			
				984		885		$M_2$			
				3.2		2.8		c	66.50	3360	17.265
				99		204		$n_{2\text{ Eck}}$			
				99		100		$n_{2\text{ th}}$			
				1105		995		$M_2$			
				3.8		3.3		c	90.30	4470	19.515
				88		180		$n_{2\text{ Eck}}$			
				81		79		$n_{2\text{ th}}$			
				1247		1122		$M_2$			
				3.7		3.2		c	90.40	4884	21.989
				78		160		$n_{2\text{ Eck}}$			
				72		69		$n_{2\text{ th}}$			
				1459		1313		$M_2$			
				3.2		2.8		c	61.20	4985	25.615
				67		137		$n_{2\text{ Eck}}$			
				67		67		$n_{2\text{ th}}$			
924		927		1599		1438		$M_2$			
5.1		4.1		3.0		2.7		c	52.20	5163	28.021
61		125		61		126		$n_{2\text{ Eck}}$			
61		69		61		63		$n_{2\text{ th}}$			
1044		1047		1805		1623		$M_2$			
4.9		3.9		2.9		2.5		c	51.30	5521	31.573
54		111		54		112		$n_{2\text{ Eck}}$			
54		61		54		55		$n_{2\text{ th}}$			
								$M_2$			
								c	36.80	3935	35.741
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
1188		1190		2049	794	1842		$M_2$			
4.4		3.5		2.6	5.7	2.3		c	36.80	5655	35.741
48		98		48	70	99		$n_{2\text{ Eck}}$			
48		60		48	56	54		$n_{2\text{ th}}$			
								$M_2$			
								c	36.20	4434	40.272
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
1344		1345		2314	899	2080		$M_2$			
4.1		3.2		2.4	5.3	2.1		c	36.20	5869	40.272
42		87		43	62	87		$n_{2\text{ Eck}}$			
42		52		42	50	47		$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

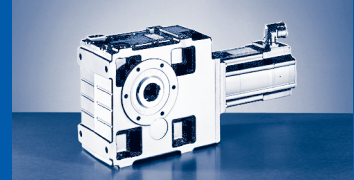
$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
43.783	5800	27.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
49.333	5923	27.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
57.683	4370	17.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					1144 3.7 29 29		1012 3.6 60 50	
57.683	5972	17.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
64.995	4924	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					1289 3.7 26 26		1141 3.6 54 45	
64.995	5992	17.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
70.887	4497	13.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					1416 3.1 24 24		1252 3.0 49 44	608 5.7 58 44
70.887	5973	13.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
79.873	5068	12.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					1595 3.1 21 21		1411 3.0 44 39	685 5.7 52 39
79.873	6032	12.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
91.737	3979	8.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	1015 3.8 18 18		915 3.6 38 38					
91.737	4660	8.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					1844 2.5 18 18	903 4.9 25 25	1631 2.4 38 34	797 4.6 45 34
91.737	5975	8.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



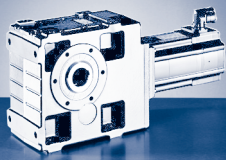


$M_{2GN} \leq 6072 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
1464		1461		2519	975	2259		c			
3.8		3.3		2.3	5.4	2.2		$n_{2 \text{ Eck}}$	27.90	5800	43.783
39		80		39	57	80		$n_{2 \text{ th}}$			
39		55		39	46	46					
1657		1651		2845	1105	2551		$M_2$			
3.5		3.0		2.1	4.9	2.0		c	27.50	5923	49.333
35		71		35	51	71		$n_{2 \text{ Eck}}$			
34		48		35	41	41		$n_{2 \text{ th}}$			
								$M_2$			
								c	17.70	4370	57.683
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1947		1939		3337	1302	2991	890	$M_2$			
3.0		2.6		1.8	4.3	1.7	5.2	c	17.70	5972	57.683
30		61		30	43	61	72	$n_{2 \text{ Eck}}$			
29		42		30	35	35	35	$n_{2 \text{ th}}$			
								$M_2$			
								c	17.50	4924	64.995
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
2202	955	2192		3767	1474	3377	1010	$M_2$			
2.7	5.8	2.3		1.6	3.8	1.5	4.6	c	17.50	5992	64.995
26	36	54		26	38	54	64	$n_{2 \text{ Eck}}$			
26	36	38		26	31	31	31	$n_{2 \text{ th}}$			
								$M_2$			
								c	13.00	4497	70.887
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
2407	1047	2396	766	4115	1613	3689	1106	$M_2$			
2.4	5.3	2.1	6.0	1.5	3.5	1.4	4.2	c	13.00	5973	70.887
24	33	50	59	24	35	50	59	$n_{2 \text{ Eck}}$			
24	33	35	35	24	28	28	28	$n_{2 \text{ th}}$			
								$M_2$			
								c	12.90	5068	79.873
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
2720	1187	2706	869	4644	1825	4162	1252	$M_2$			
2.2	4.8	1.9	5.4	1.3	3.1	1.2	3.8	c	12.90	6032	79.873
21	29	44	52	21	31	44	52	$n_{2 \text{ Eck}}$			
21	29	31	31	21	25	25	25	$n_{2 \text{ th}}$			
								$M_2$			
								c	8.30	3979	91.737
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								c	8.30	4660	91.737
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3133	1374	3116	1006					$M_2$			
1.9	4.1	1.6	4.6					c	8.30	5975	91.737
19	26	38	45					$n_{2 \text{ Eck}}$			
19	26	27	27					$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

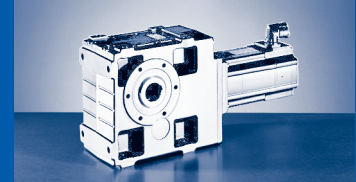
## GKS□□-□A (MCA)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c	1143		1031					
103.365	4483	8.21	$n_{2 \text{ Eck}}$	3.8		3.6					
			$n_{2 \text{ th}}$	16		33					
			$n_{2 \text{ th}}$	16		33					
			$M_2$					2078	1017	1838	898
103.365	5250	8.21	c					2.5	4.9	2.4	4.6
			$n_{2 \text{ Eck}}$					16	22	34	40
			$n_{2 \text{ th}}$					16	22	30	30
			$M_2$								
103.365	6072	8.21	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	1240	673	1114					
111.335	4042	6.05	c	3.2	5.7	3.4					
			$n_{2 \text{ Eck}}$	15	18	31					
			$n_{2 \text{ th}}$	15	18	31					
			$M_2$					2248	1104	1983	970
111.335	4734	6.05	c					2.1	4.2	2.2	4.2
			$n_{2 \text{ Eck}}$					15	21	31	37
			$n_{2 \text{ th}}$					15	21	28	28
			$M_2$								
111.335	5975	6.05	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	1397	759	1255					
125.448	4555	5.99	c	3.2	5.7	3.4					
			$n_{2 \text{ Eck}}$	13	16	28					
			$n_{2 \text{ th}}$	13	16	28					
			$M_2$					2533	1244	2234	1093
125.448	5335	5.99	c					2.1	4.2	2.2	4.2
			$n_{2 \text{ Eck}}$					13	18	28	33
			$n_{2 \text{ th}}$					13	18	25	25
			$M_2$								
125.448	6072	5.99	c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	1578	862	1418	690				
140.732	4107	3.96	c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	12	14	25	29				
			$n_{2 \text{ th}}$	12	14	25	26				
			$M_2$					2854	1408	2518	1238
140.732	4811	3.96	c					1.7	3.3	1.8	3.4
			$n_{2 \text{ Eck}}$					12	16	25	29
			$n_{2 \text{ th}}$					12	16	22	22
			$M_2$	1778	971	1597	778				
158.571	4628	3.93	c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	10	13	22	26				
			$n_{2 \text{ th}}$	10	13	22	23				
			$M_2$					3215	1587	2838	1395
158.571	5421	3.93	c					1.7	3.3	1.8	3.4
			$n_{2 \text{ Eck}}$					11	15	22	26
			$n_{2 \text{ th}}$					11	15	20	20

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

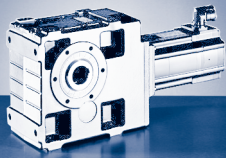


$M_{2GN} \leq 6072 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2Eck}$ $n_{2th}$	8.21	4483	103.365
								$M_2$ c $n_{2Eck}$ $n_{2th}$	8.21	5250	103.365
3538	1555	3517	1139					$M_2$ c $n_{2Eck}$ $n_{2th}$	8.21	6072	103.365
1.7	3.7	1.5	4.2					$M_2$ c $n_{2Eck}$ $n_{2th}$	6.05	4042	111.335
17	23	34	40					$M_2$ c $n_{2Eck}$ $n_{2th}$	6.05	4734	111.335
16	23	24	24					$M_2$ c $n_{2Eck}$ $n_{2th}$	6.05	5975	111.335
								$M_2$ c $n_{2Eck}$ $n_{2th}$	5.99	4555	125.448
								$M_2$ c $n_{2Eck}$ $n_{2th}$	5.99	5335	125.448
3816	1679	3787	1226					$M_2$ c $n_{2Eck}$ $n_{2th}$	5.99	6072	125.448
1.6	3.5	1.5	4.2					$M_2$ c $n_{2Eck}$ $n_{2th}$	3.96	4107	140.732
15	21	32	37					$M_2$ c $n_{2Eck}$ $n_{2th}$	3.96	4811	140.732
15	21	22	22					$M_2$ c $n_{2Eck}$ $n_{2th}$	3.93	4628	158.571
								$M_2$ c $n_{2Eck}$ $n_{2th}$	3.93	5421	158.571

$M_{...}$  [Nm]  
 $n_{...}$  [r/min]  
 $J_{...}$  [kgcm<sup>2</sup>]

$P_{...}$  [kW]  
 $I_{...}$  [A]  
 $i$  [-]  
 $c$  [-]



# GKS [Nm]

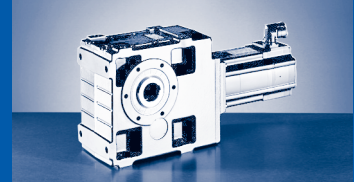
## GKS□□-□A (MCA)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
186.572	5975	7.07	c	2086	1137	1874	910	3787	1871	3343	1645
			$n_{2 \text{ Eck}}$	2.8	5.0	3.0	5.6	1.6	3.1	1.7	3.2
			$n_{2 \text{ th}}$	9	11	19	22	9	12	19	22
				9	11	19	19	9	12	17	17
210.222	5892	7.05	$M_2$	2359	1290	2120	1034	4276	2117	3775	1861
			c	2.5	4.4	2.6	4.9	1.4	2.7	1.5	2.8
			$n_{2 \text{ Eck}}$	8	10	16	20	8	11	17	20
			$n_{2 \text{ th}}$	8	10	16	17	8	11	15	15
226.431	5975	5.21	$M_2$	2545	1393	2287	1117	4610	2284	4070	2008
			c	2.3	4.2	2.5	4.6	1.3	2.6	1.4	2.6
			$n_{2 \text{ Eck}}$	7	9	15	18	7	10	15	18
			$n_{2 \text{ th}}$	7	9	15	16	7	10	14	14
255.133	5892	5.20	$M_2$	2877	1579	2586	1267	5203	2583	4594	2271
			c	2.0	3.6	2.2	4.1	1.1	2.3	1.2	2.3
			$n_{2 \text{ Eck}}$	6	8	14	16	7	9	14	16
			$n_{2 \text{ th}}$	6	8	14	14	7	9	12	12
286.219	5975	3.44	$M_2$	3234	1778	2907	1427	5844	2904	5160	2553
			c	1.8	3.3	1.9	3.7	1.0	2.0	1.1	2.1
			$n_{2 \text{ Eck}}$	6	7	12	14	6	8	12	14
			$n_{2 \text{ th}}$	6	7	12	13	6	8	11	11
322.500	5892	3.43	$M_2$	3653	2012	3284	1616		3281		2885
			c	1.6	2.9	1.7	3.2		1.8		1.8
			$n_{2 \text{ Eck}}$	5	6	11	13		7		13
			$n_{2 \text{ th}}$	5	6	11	11		7		10

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

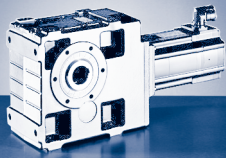


$M_{2GN} \leq 6072 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS11-3A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
	2856		2093					c			
	2.1		2.5					$n_{2Eck}$	7.07	5975	186.572
	13		22					$n_{2th}$			
	13		13					$M_2$			
	3227		2366					c			
	1.8		2.2					$n_{2Eck}$	7.05	5892	210.222
	11		20					$n_{2th}$			
	11		12					$M_2$			
	3480		2552					c			
	1.7		2.1					$n_{2Eck}$	5.21	5975	226.431
	10		18					$n_{2th}$			
	10		11					$M_2$			
	3930		2883					c			
	1.5		1.8					$n_{2Eck}$	5.20	5892	255.133
	9		16					$n_{2th}$			
	9		10					$M_2$			
								c			
								$n_{2Eck}$	3.44	5975	286.219
								$n_{2th}$			
								$M_2$			
								c			
								$n_{2Eck}$	3.43	5892	322.500
								$n_{2th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

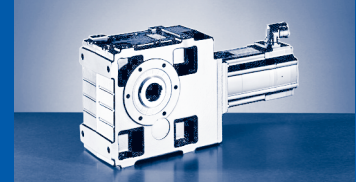
## GKS□□-□A (MCA)

$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
102.119	4012	7.28	$M_2$		570					
			c		5.8					
			$n_{2 \text{ Eck}}$		33					
			$n_{2 \text{ th}}$		33					
102.119	5655	7.28	$M_2$				1096		989	
			c				4.9		4.7	
			$n_{2 \text{ Eck}}$				16		34	
			$n_{2 \text{ th}}$				16		34	
115.063	5869	7.21	$M_2$				1240		1113	
			c				4.6		4.8	
			$n_{2 \text{ Eck}}$				14		30	
			$n_{2 \text{ th}}$				14		30	
125.095	5800	6.23	$M_2$				1355		1216	
			c				4.1		4.4	
			$n_{2 \text{ Eck}}$				13		28	
			$n_{2 \text{ th}}$				13		28	
140.952	5923	6.19	$M_2$				1533		1376	
			c				3.8		4.0	
			$n_{2 \text{ Eck}}$				12		25	
			$n_{2 \text{ th}}$				12		25	
153.242	5800	4.50	$M_2$				1673		1503	
			c				3.4		3.6	
			$n_{2 \text{ Eck}}$				11		23	
			$n_{2 \text{ th}}$				11		23	
172.667	5923	4.47	$M_2$				1892	1028	1699	
			c				3.1	5.5	3.3	
			$n_{2 \text{ Eck}}$				10	12	20	
			$n_{2 \text{ th}}$				9	12	20	
201.890	5972	3.74	$M_2$				2222	1213	1997	971
			c				2.6	4.7	2.8	5.3
			$n_{2 \text{ Eck}}$				8	10	17	20
			$n_{2 \text{ th}}$				8	10	17	18
227.481	5992	3.72	$M_2$				2512	1374	2257	1101
			c				2.4	4.2	2.5	4.7
			$n_{2 \text{ Eck}}$				7	9	15	18
			$n_{2 \text{ th}}$				7	9	15	16
248.106	5973	3.36	$M_2$				2746	1505	2468	1207
			c				2.2	3.9	2.3	4.3
			$n_{2 \text{ Eck}}$				7	8	14	17
			$n_{2 \text{ th}}$				7	8	14	14
279.556	6032	3.34	$M_2$				3101	1703	2788	1366
			c				1.9	3.5	2.0	3.9
			$n_{2 \text{ Eck}}$				6	7	12	15
			$n_{2 \text{ th}}$				6	7	12	13
322.931	5973	2.09	$M_2$		1859	1161	3593	1978	3230	1588
			c		3.0	4.5	1.7	3.0	1.8	3.3
			$n_{2 \text{ Eck}}$		11	13	5	6	11	13
			$n_{2 \text{ th}}$		11	13	5	6	11	11
363.866	6032	2.08	$M_2$		2101	1315	4056	2236	3647	1796
			c		2.7	4.0	1.5	2.7	1.6	3.0
			$n_{2 \text{ Eck}}$		9	11	5	6	10	11
			$n_{2 \text{ th}}$		9	11	4	6	10	10

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

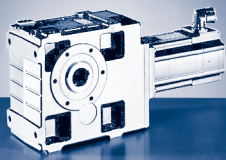


$M_{2GN} \leq 6072 \text{ Nm}$

17NC17	17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	GKS11-4A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.50	10.80	19.00	9.50	36.30	16.30	36.00	12.00	$n_1$			
1680	2300	3480	4110	1700	2340	3510	4150	$I_{M400}$			
8.5	5.5	15.8	10.2	13.9	8.2	28.7	14.0	$P_N$			
3.80	2.60	6.90	4.10	6.40	4.00	13.20	5.20	$J_M$			
36.04	36.04	36.04	36.04	72.12	72.12	72.04	72.12	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	7.28	4012	102.119
2011	981	1779	866	3438	1512	3418	1107	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	7.28	5655	102.119
2.8	5.4	2.7	5.1	1.6	3.6	1.4	4.0				
17	23	34	40	17	23	34	41				
16	23	30	30	17	23	24	24				
2272	1110	2003	975	3879	1707	3849	1247	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	7.21	5869	115.063
2.5	5.1	2.7	5.2	1.5	3.4	1.4	4.1				
15	20	30	36	15	20	31	36				
15	20	27	27	15	20	21	21				
2476	1213	2184	1066	4223	1862	4191	1361	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	6.23	5800	125.095
2.3	4.6	2.5	4.7	1.4	3.1	1.3	3.7				
13	18	28	33	14	19	28	33				
13	18	25	25	14	19	20	20				
2796	1373	2467	1207	4765	2105	4728	1539	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	6.19	5923	140.952
2.1	4.2	2.3	4.3	1.2	2.8	1.2	3.4				
12	16	25	29	12	17	25	29				
12	16	22	22	12	17	17	17				
3047	1500	2689	1318	5187	2295	5147	1680	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	4.50	5800	153.242
1.9	3.8	2.0	3.8	1.1	2.5	1.1	3.0				
11	15	23	27	11	15	23	27				
11	15	20	20	11	15	16	16				
3440	1696	3036	1491	5852	2593		1898	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	4.47	5923	172.667
1.7	3.4	1.8	3.5	1.0	2.3		2.8				
10	13	20	24	10	14		24				
10	13	18	18	10	14		14				
4032	1994	3559	1752		3042		2229	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.74	5972	201.890
1.5	2.9	1.6	3.0		1.9		2.4				
8	11	17	20		12		21				
8	11	15	15		12		12				
4551	2254	4018	1982		3435		2519	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.72	5992	227.481
1.3	2.6	1.4	2.7		1.7		2.1				
7	10	15	18		10		18				
7	10	14	14		10		11				
4970	2465	4388	2167		3753		2752	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.36	5973	248.106
1.2	2.4	1.3	2.4		1.6		1.9				
7	9	14	17		9		17				
7	9	13	13		9		10				
5608	2785	4951	2448		4236		3108	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	3.34	6032	279.556
1.1	2.1	1.2	2.2		1.4		1.7				
6	8	13	15		8		15				
6	8	11	11		8		9				
	3227		2838					$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	2.09	5973	322.931
	1.8		1.9								
	7		13								
	7		10								
	3644		3204					$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	2.08	6032	363.866
	1.6		1.7								
	6		11								
	6		9								

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

## GKS□□-□A (MCA)

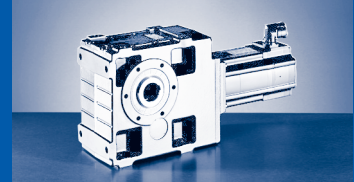
$M_{2GN} \leq 6072 \text{ Nm}$

GKS11-4A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
395.787	5973	1.52	c		2292	1436	4418	2439	3973	1959
			$n_{2 \text{ Eck}}$		2.5	3.7	1.4	2.4	1.4	2.7
			$n_{2 \text{ th}}$		9	10	4	5	9	10
					9	10	4	5	9	9
445.958	6032	1.52	$M_2$		2589	1625	4986	2755	4484	2214
			c		2.2	3.3	1.2	2.2	1.3	2.4
			$n_{2 \text{ Eck}}$		8	9	4	5	8	9
			$n_{2 \text{ th}}$		8	9	4	4	8	8
512.196	5975	1.39	$M_2$		2984	1876	5736	3175	5159	2553
			c		1.9	2.8	1.0	1.9	1.1	2.1
			$n_{2 \text{ Eck}}$		7	8	3	4	7	8
			$n_{2 \text{ th}}$		7	8	3	4	7	7
577.122	6072	1.38	$M_2$		3369	2120		3584		2882
			c		1.7	2.6		1.7		1.9
			$n_{2 \text{ Eck}}$		6	7		4		7
			$n_{2 \text{ th}}$		6	7		3		6
621.619	5975	1.31	$M_2$		3634	2289		3866		3110
			c		1.6	2.3		1.5		1.7
			$n_{2 \text{ Eck}}$		6	7		3		7
			$n_{2 \text{ th}}$		5	7		3		6
700.416	6072	1.31	$M_2$		4102	2585		4364		3511
			c		1.4	2.1		1.4		1.6
			$n_{2 \text{ Eck}}$		5	6		3		6
			$n_{2 \text{ th}}$		5	6		3		5
816.455	5975	0.82	$M_2$	1483	4793	3024		5098		4103
			c	3.6	1.2	1.8		1.2		1.3
			$n_{2 \text{ Eck}}$	5	4	5		3		5
			$n_{2 \text{ th}}$	5	4	5		2		4
919.949	6072	0.82	$M_2$	1677	5407	3414		5752		4630
			c	3.2	1.1	1.6		1.1		1.2
			$n_{2 \text{ Eck}}$	4	4	4		2		5
			$n_{2 \text{ th}}$	4	4	4		2		4
990.879	5975	0.60	$M_2$	1812		3683				4992
			c	3.0		1.5				1.1
			$n_{2 \text{ Eck}}$	4		4				4
			$n_{2 \text{ th}}$	4		4				4
1116.484	6072	0.60	$M_2$	2048		4156				
			c	2.7		1.3				
			$n_{2 \text{ Eck}}$	4		4				
			$n_{2 \text{ th}}$	4		4				
1252.516	5975	0.39	$M_2$	2306		4670				
			c	2.3		1.2				
			$n_{2 \text{ Eck}}$	3		3				
			$n_{2 \text{ th}}$	3		3				
1411.286	6072	0.39	$M_2$	2604		5269				
			c	2.1		1.0				
			$n_{2 \text{ Eck}}$	3		3				
			$n_{2 \text{ th}}$	3		3				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



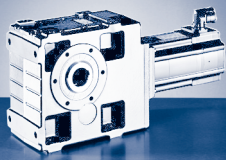


$M_{2GN} \leq 6072 \text{ Nm}$

17NC17	17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	GKS11-4A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.50	10.80	19.00	9.50	36.30	16.30	36.00	12.00	$n_1$			
1680	2300	3480	4110	1700	2340	3510	4150	$I_{M400}$			
8.5	5.5	15.8	10.2	13.9	8.2	28.7	14.0	$P_N$			
3.80	2.60	6.90	4.10	6.40	4.00	13.20	5.20	$J_M$			
36.04	36.04	36.04	36.04	72.12	72.12	72.04	72.12	$M_2$			
	3970		3491					c			
	1.5		1.5					$n_{2\text{ Eck}}$	1.52	5973	395.787
	6		10					$n_{2\text{ th}}$			
	6		8					$M_2$			
	4481		3940					c			
	1.3		1.4					$n_{2\text{ Eck}}$	1.52	6032	445.958
	5		9					$n_{2\text{ th}}$			
	5		7					$M_2$			
	5156		4534					c			
	1.2		1.2					$n_{2\text{ Eck}}$	1.39	5975	512.196
	5		8					$n_{2\text{ th}}$			
	4		6					$M_2$			
	5817		5116					c			
	1.0		1.1					$n_{2\text{ Eck}}$	1.38	6072	577.122
	4		7					$n_{2\text{ th}}$			
	4		5					$M_2$			
								c			
								$n_{2\text{ Eck}}$	1.31	5975	621.619
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	1.31	6072	700.416
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.82	5975	816.455
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.82	6072	919.949
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.60	5975	990.879
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.60	6072	1116.484
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.39	5975	1252.516
								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	0.39	6072	1411.286
								$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

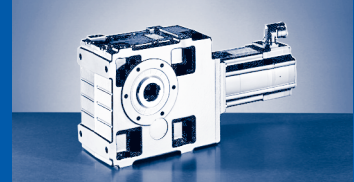
## GKS□□-□A (MCA)

$M_{2GN} \leq 11784 \text{ Nm}$

GKS14-3A				19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	
			$n_1$	1700	2340	3510	4150	1710	2490	3520	4160	
			$I_{M400}$	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	
			$P_N$	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	
			$J_M$	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	
16.646	5932	198.00	$M_2$					922		832		
			c					5.8		5.1		
			$n_{2 \text{ Eck}}$						103		212	
			$n_{2 \text{ th}}$						102		99	
18.311	6158	173.00	$M_2$					1017		918		
			c					5.5		4.8		
			$n_{2 \text{ Eck}}$						93		192	
			$n_{2 \text{ th}}$						93		92	
24.696	8801	183.00	$M_2$					1367		1234		
			c					5.8		5.1		
			$n_{2 \text{ Eck}}$						69		143	
			$n_{2 \text{ th}}$						69		67	
27.165	9135	159.00	$M_2$					1509		1362		
			c					5.5		4.8		
			$n_{2 \text{ Eck}}$						63		130	
			$n_{2 \text{ th}}$						63		62	
30.609	10132	156.00	$M_2$					1702		1536		
			c					5.4		4.8		
			$n_{2 \text{ Eck}}$						56		115	
			$n_{2 \text{ th}}$						56		55	
34.692	10019	111.00	$M_2$					1944		1752		
			c					4.7		4.1		
			$n_{2 \text{ Eck}}$						49		102	
			$n_{2 \text{ th}}$						49		55	
39.089	10937	109.00	$M_2$					2194		1977		
			c					4.6		4.0		
			$n_{2 \text{ Eck}}$						44		90	
			$n_{2 \text{ th}}$						44		48	
42.531	10787	82.40	$M_2$					2394		2149		
			c					4.3		4.1		
			$n_{2 \text{ Eck}}$						40		83	
			$n_{2 \text{ th}}$						40		47	
47.923	11261	81.10	$M_2$					2706		2429		
			c					4.0		3.9		
			$n_{2 \text{ Eck}}$						36		74	
			$n_{2 \text{ th}}$						36		42	
56.251	10874	54.20	$M_2$	1845		1846						
			c	5.6		4.8						
			$n_{2 \text{ Eck}}$	30		62						
			$n_{2 \text{ th}}$	30		44						
56.251	11522	54.20	$M_2$					3194		2866		
			c					3.5		3.4		
			$n_{2 \text{ Eck}}$						30		63	
			$n_{2 \text{ th}}$						30		36	
63.382	11477	53.50	$M_2$	2088		2087		3615		3243		
			c	5.3		4.5		3.1		3.0		
			$n_{2 \text{ Eck}}$	27		55		27		56		
			$n_{2 \text{ th}}$	27		39		27		32		
68.942	11454	38.90	$M_2$	2282		2279		3943		3537		
			c	4.8		4.2		2.9		2.7		
			$n_{2 \text{ Eck}}$	25		51		25		51		
			$n_{2 \text{ th}}$	25		36		25		29		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

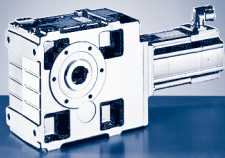


$M_{2GN} \leq 11784 \text{ Nm}$

GKS14-3A				195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00
			$n_1$	1700	2340	3510	4150	1710	2490	3520	4160
			$I_{M400}$	13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8
			$P_N$	6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40
			$J_M$	72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04
77.681	11520	38.40	$M_2$	2585		2580		4457		3997	
			c	4.3		3.7		2.5		2.4	
			$n_{2 \text{ Eck}}$	22		45		22		45	
			$n_{2 \text{ th}}$	22		32		22		26	
90.551	11488	25.10	$M_2$	3034		3025		5216	2022	4677	
			c	3.7		3.2		2.2	5.2	2.1	
			$n_{2 \text{ Eck}}$	19		39		19	28	39	
			$n_{2 \text{ th}}$	19		27		19	22	22	
102.029	11639	24.90	$M_2$	3432		3421		5891	2292	5282	1566
			c	3.3		2.9		2.0	4.7	1.9	5.7
			$n_{2 \text{ Eck}}$	17		34		17	24	35	41
			$n_{2 \text{ th}}$	17		24		17	20	20	20
109.896	11784	18.30	$M_2$	3705		3691		6353	2476	5696	1693
			c	3.1		2.7		1.8	4.4	1.8	5.4
			$n_{2 \text{ Eck}}$	16		32		16	23	32	38
			$n_{2 \text{ th}}$	15		22		16	18	18	18
123.826	11639	18.10	$M_2$	4192		4163		7175	2801	6421	1911
			c	2.7		2.6		1.6	4.0	1.7	5.2
			$n_{2 \text{ Eck}}$	14		28		14	20	28	34
			$n_{2 \text{ th}}$	14		20		14	16	16	16
138.913	11784	12.00	$M_2$	4716	2049	4682					
			c	2.5	5.5	2.4					
			$n_{2 \text{ Eck}}$	12	17	25					
			$n_{2 \text{ th}}$	12	17	18					
156.522	11639	11.90	$M_2$	5331	2326	5292	1693				
			c	2.2	4.8	2.1	5.9				
			$n_{2 \text{ Eck}}$	11	15	22	27				
			$n_{2 \text{ th}}$	11	15	16	16				
186.572	11609	21.60	$M_2$	6379	2797	6331	2039	10874	4283	9734	2935
			c	1.8	4.0	1.7	4.9	1.1	2.7	1.1	3.5
			$n_{2 \text{ Eck}}$	9	13	19	22	9	13	19	22
			$n_{2 \text{ th}}$	9	13	13	13	9	11	11	11
210.222	11555	21.50	$M_2$	7203	3167	7149	2312		4842		3321
			c	1.6	3.6	1.5	4.3		2.4		3.1
			$n_{2 \text{ Eck}}$	8	11	17	20		12		20
			$n_{2 \text{ th}}$	8	11	12	12		10		10
226.431	11609	15.90	$M_2$	7767	3420	7708	2498		5224		3585
			c	1.5	3.3	1.4	4.0		2.2		2.9
			$n_{2 \text{ Eck}}$	8	10	16	18		11		18
			$n_{2 \text{ th}}$	8	10	11	11		9		9
255.133	11555	15.80	$M_2$	8768	3870	8701	2830		5903		4054
			c	1.3	2.9	1.3	3.6		1.9		2.5
			$n_{2 \text{ Eck}}$	7	9	14	16		10		16
			$n_{2 \text{ th}}$	7	9	10	10		8		8
286.219	11609	10.50	$M_2$	9850	4356	9774	3187				
			c	1.2	2.6	1.1	3.2				
			$n_{2 \text{ Eck}}$	6	8	12	15				
			$n_{2 \text{ th}}$	6	8	9	9				
322.500	11555	10.50	$M_2$	11115	4924		3605				
			c	1.0	2.3		2.8				
			$n_{2 \text{ Eck}}$	5	7		13				
			$n_{2 \text{ th}}$	5	7		8				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GKS [Nm]

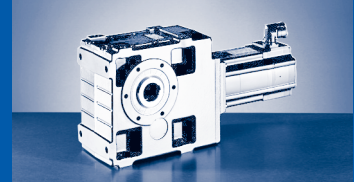
## GKS□□-□A (MCA)

$M_{2GN} \leq 11609 \text{ Nm}$

GKS14-4A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c					1886		1669	
97.467	8508	23.47	$n_{2 \text{ Eck}}$					4.4		4.2	
			$n_{2 \text{ th}}$					17		36	
			$M_2$								
			c								
97.467	10019	23.47	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					2126		1881	
			c					4.4		4.2	
109.822	9586	23.23	$n_{2 \text{ Eck}}$					15		32	
			$n_{2 \text{ th}}$					15		28	
			$M_2$								
			c								
109.822	10937	23.23	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					2313		2036	
			c					4.4		4.7	
119.493	10431	19.94	$n_{2 \text{ Eck}}$					14		29	
			$n_{2 \text{ th}}$					14		26	
			$M_2$								
			c								
119.493	10787	19.94	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					2611		2299	
			c					4.2		4.5	
134.640	11261	19.78	$n_{2 \text{ Eck}}$					13		26	
			$n_{2 \text{ th}}$					12		23	
			$M_2$					3083		2716	
			c					3.6		3.9	
158.039	11522	16.44	$n_{2 \text{ Eck}}$					11		22	
			$n_{2 \text{ th}}$					11		20	
			$M_2$	1894				3490		3076	
			c	5.8				3.2		3.5	
178.072	11477	16.35	$n_{2 \text{ Eck}}$	9				9		20	
			$n_{2 \text{ th}}$	9				9		17	
			$M_2$					3808	1851	3357	
			c					3.0	5.9	3.2	
193.754	11522	12.08	$n_{2 \text{ Eck}}$					9	12	18	
			$n_{2 \text{ th}}$					9	12	16	
			$M_2$					4307	2102	3798	1847
			c					2.6	5.2	2.8	5.3
218.315	11477	12.02	$n_{2 \text{ Eck}}$					8	11	16	19
			$n_{2 \text{ th}}$					8	11	14	14
			$M_2$					4696	2298	4141	2019
			c					2.4	4.8	2.6	4.9
237.467	11454	10.87	$n_{2 \text{ Eck}}$					7	10	15	17
			$n_{2 \text{ th}}$					7	10	13	13
			$M_2$					5306	2604	4680	2288
			c					2.2	4.3	2.3	4.4
267.568	11520	10.83	$n_{2 \text{ Eck}}$					6	9	13	15
			$n_{2 \text{ th}}$					6	9	12	12

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

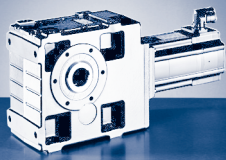


$M_{2GN} \leq 11609 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS14-4A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	23.47	8508	97.467
3232		3220		5541	2160	4968	1477	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	23.47	10019	97.467
3.0		2.6		1.8	4.3	1.7	5.2				
17		36		18	26	36	43				
17		25		18	21	21	21				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	23.23	9586	109.822
3645		3631		6246	2437	5600	1667	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	23.23	10937	109.822
2.9		2.5		1.7	4.2	1.7	5.1				
16		32		16	23	32	38				
15		22		16	18	18	18				
								$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	19.94	10431	119.493
3978	1723	3950		6809	2659	6093	1814	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	19.94	10787	119.493
2.7	5.9	2.5		1.6	3.9	1.7	5.1				
14	20	29		14	21	30	35				
14	20	20		14	17	17	17				
4492	1951	4460		7681	3005	6874	2052	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	19.78	11261	134.640
2.5	5.5	2.4		1.5	3.6	1.5	4.7				
13	17	26		13	19	26	31				
13	17	18		13	15	15	15				
5291	2308	5252	1679	9034	3546	8086	2425	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	16.44	11522	158.039
2.2	4.8	2.1	5.8	1.3	3.2	1.4	4.1				
11	15	22	26	11	16	22	26				
11	15	15	15	11	13	13	13				
5977	2616	5933	1906	10195	4011	9126	2747	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	16.35	11477	178.072
1.9	4.2	1.8	5.2	1.1	2.8	1.2	3.6				
10	13	20	23	10	14	20	23				
10	13	14	14	10	11	11	11				
6514	2857	6465	2083	11104	4375	9940	2998	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	12.08	11522	193.754
1.8	3.9	1.7	4.8	1.0	2.6	1.1	3.4				
9	12	18	21	9	13	18	22				
9	12	13	13	9	10	10	10				
7356	3235	7300	2362		4945		3392	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	12.02	11477	218.315
1.6	3.5	1.5	4.2		2.3		3.0				
8	11	16	19		11		19				
8	11	11	11		9		9				
8012	3530	7951	2579		5390		3700	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	10.87	11454	237.467
1.4	3.2	1.4	3.9		2.1		2.7				
7	10	15	18		11		18				
7	10	10	10		8		8				
9043	3993	8973	2919		6088		4182	$M_2$ c $n_{2\text{ Eck}}$ $n_{2\text{ th}}$	10.83	11520	267.568
1.3	2.8	1.2	3.5		1.9		2.4				
6	9	13	16		9		16				
6	9	9	9		8		8				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [Nm]

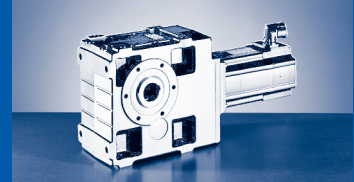
## GKS□□-□A (MCA)

$M_{2GN} \leq 11609 \text{ Nm}$

GKS14-4A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$								
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
321.729	11454	6.42	c	3521	1912	3162		6405	3156	5652	2774
			$n_{2 \text{ Eck}}$	3.2	5.7	3.4		1.8	3.5	1.9	3.6
			$n_{2 \text{ th}}$	5	6	11		5	7	11	13
				5	6	11		5	7	10	10
362.512	11520	6.40	$M_2$	3982	2169	3577	1736	7232	3571	6383	3139
			c	2.8	5.1	3.0	5.7	1.6	3.2	1.7	3.2
			$n_{2 \text{ Eck}}$	5	6	10	11	5	6	10	11
			$n_{2 \text{ th}}$	5	6	10	10	5	6	9	9
390.671	11454	4.75	$M_2$	4302	2348	3865	1880	7804	3859	6888	3392
			c	2.6	4.7	2.8	5.2	1.5	2.9	1.6	3.0
			$n_{2 \text{ Eck}}$	4	5	9	11	4	6	9	11
			$n_{2 \text{ th}}$	4	5	9	9	4	6	8	8
440.193	11520	4.73	$M_2$	4862	2660	4369	2132	8808	4363	7775	3835
			c	2.3	4.2	2.5	4.7	1.3	2.6	1.4	2.7
			$n_{2 \text{ Eck}}$	4	5	8	9	4	5	8	9
			$n_{2 \text{ th}}$	4	5	8	8	4	5	7	7
513.121	11488	4.33	$M_2$	5688	3121	5112	2504	10288	5107	9083	4489
			c	2.0	3.6	2.1	4.0	1.1	2.2	1.2	2.3
			$n_{2 \text{ Eck}}$	3	4	7	8	3	5	7	8
			$n_{2 \text{ th}}$	3	4	7	7	3	4	6	6
578.164	11639	4.32	$M_2$	6423	3531	5774	2834	11606	5768	10248	5071
			c	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.0
			$n_{2 \text{ Eck}}$	3	4	6	7	3	4	6	7
			$n_{2 \text{ th}}$	3	3	6	6	3	4	5	5
622.742	11488	4.12	$M_2$	6929	3814	6230	3063		6224		5472
			c	1.7	3.0	1.8	3.3		1.8		1.9
			$n_{2 \text{ Eck}}$	3	3	6	7		4		7
			$n_{2 \text{ th}}$	3	3	6	6		4		5
701.681	11639	4.12	$M_2$	7822	4312	7033	3463		7027		6179
			c	1.5	2.7	1.6	3.0		1.7		1.7
			$n_{2 \text{ Eck}}$	2	3	5	6		3		6
			$n_{2 \text{ th}}$	2	3	5	5		3		4
805.901	11488	2.62	$M_2$	9003	4973	8096	3996		8091		7114
			c	1.3	2.3	1.4	2.6		1.4		1.5
			$n_{2 \text{ Eck}}$	2	3	4	5		3		5
			$n_{2 \text{ th}}$	2	2	4	4		3		4
908.058	11639	2.62	$M_2$	10159	5617	9136	4515		9130		8029
			c	1.1	2.1	1.2	2.3		1.3		1.3
			$n_{2 \text{ Eck}}$	2	2	4	5		3		5
			$n_{2 \text{ th}}$	2	2	4	4		3		3
978.071	11488	1.91	$M_2$	10953	6061	9851	4873		9846		8658
			c	1.1	1.9	1.1	2.1		1.2		1.2
			$n_{2 \text{ Eck}}$	2	2	4	4		2		4
			$n_{2 \text{ th}}$	2	2	4	4		2		3
1102.052	11639	1.91	$M_2$		6843		5504		11108		9768
			c		1.7		1.9		1.1		1.1
			$n_{2 \text{ Eck}}$		2		4		2		4
			$n_{2 \text{ th}}$		2		3		2		3
1236.326	11488	1.26	$M_2$		7694		6190				
			c		1.5		1.7				
			$n_{2 \text{ Eck}}$		2		3				
			$n_{2 \text{ th}}$		2		3				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

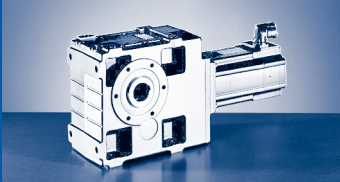


$M_{2GN} \leq 11609 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS14-4A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
10899	4826	10814	3533					c			
1.1	2.3	1.0	2.9					$n_{2 \text{ Eck}}$	6.42	11454	321.729
5	7	11	13					$n_{2 \text{ th}}$			
5	7	8	8					$M_2$			
	5453		3995					c			
	2.1		2.6					$n_{2 \text{ Eck}}$	6.40	11520	362.512
	7		12					$n_{2 \text{ th}}$			
	6		7					$M_2$			
	5887		4314					c			
	1.9		2.4					$n_{2 \text{ Eck}}$	4.75	11454	390.671
	6		11					$n_{2 \text{ th}}$			
	6		6					$M_2$			
	6648		4874					c			
	1.7		2.1					$n_{2 \text{ Eck}}$	4.73	11520	440.193
	5		9					$n_{2 \text{ th}}$			
	5		6					$M_2$			
	7770		5700					c			
	1.5		1.8					$n_{2 \text{ Eck}}$	4.33	11488	513.121
	5		8					$n_{2 \text{ th}}$			
	5		5					$M_2$			
	8769		6436					c			
	1.3		1.6					$n_{2 \text{ Eck}}$	4.32	11639	578.164
	4		7					$n_{2 \text{ th}}$			
	4		4					$M_2$			
	9456		6942					c			
	1.2		1.5					$n_{2 \text{ Eck}}$	4.12	11488	622.742
	4		7					$n_{2 \text{ th}}$			
	4		4					$M_2$			
	10669		7834					c			
	1.1		1.3					$n_{2 \text{ Eck}}$	4.12	11639	701.681
	3		6					$n_{2 \text{ th}}$			
	3		3					$M_2$			
								c			
								$n_{2 \text{ Eck}}$	2.62	11488	805.901
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	2.62	11639	908.058
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	1.91	11488	978.071
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	1.91	11639	1102.052
								$n_{2 \text{ th}}$			
								$M_2$			
								c			
								$n_{2 \text{ Eck}}$	1.26	11488	1236.326
								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GKS [Nm]

## GKS□□-□A (MCA)

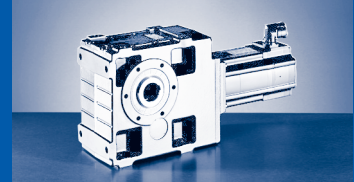
$M_{2GN} \leq 11609 \text{ Nm}$

GKS14-4A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			$M_2$		8683		6987				
1393.043	11639	1.26	c		1.3		1.5				
			$n_{2 \text{ Eck}}$		1		3				
			$n_{2 \text{ th}}$		1		3				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



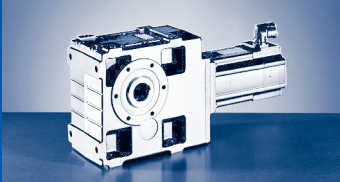


$M_{2GN} \leq 11609 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GKS14-4A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
								$c$			
								$n_{2 \text{ Eck}}$	1.26	11639	1393.043
								$n_{2 \text{ th}}$			

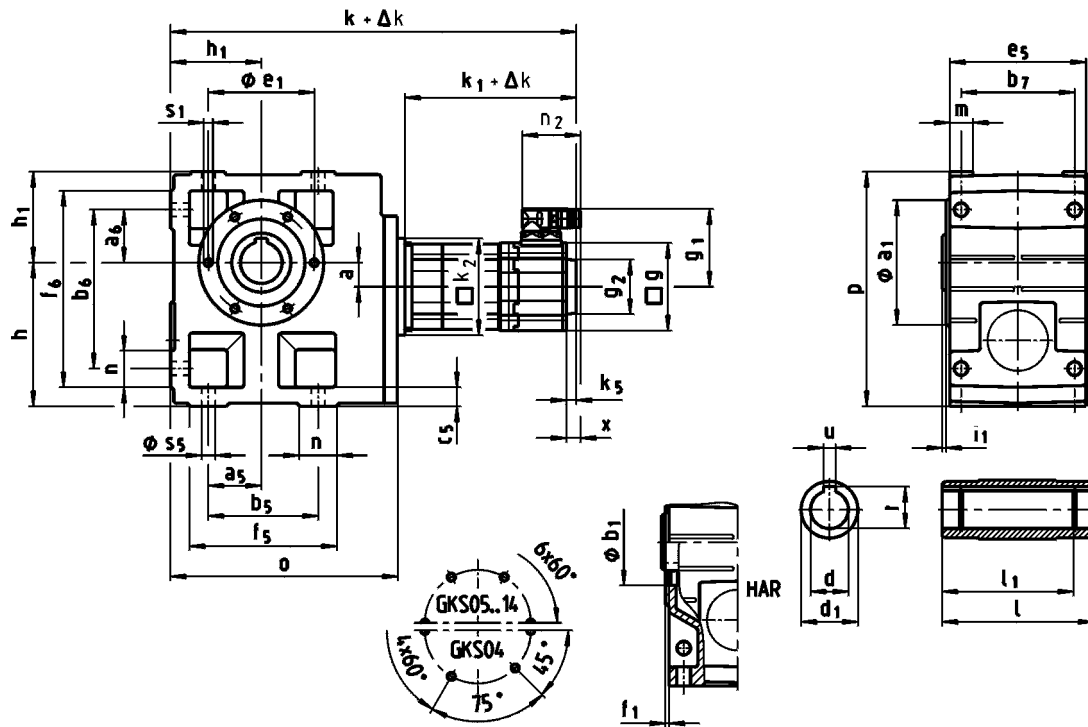
M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GKS [mm]

## GKS□□-3S (MCS)

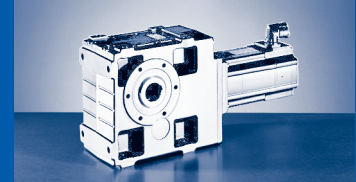


### GKS□□-3S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKS04...	k	347	377	407	399	419	439	479								
GKS05...	k	367	397	427	419	439	459	499	436			476			516	
GKS06...	k	423	453	483	475	495	515	555	492			532			572	
GKS07...	k				531	551	571	611	548			588			628	
GKS09...	k								619			659			699	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19			20											
	$k_1$	132	162	192	183	203	223	263	188		228		268			
	$k_2$	66			91				118					145 <sup>2)</sup>		
	g	62			89				116							
...RSO	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
	x	21				18										

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS05: 12DC20 ... 12LC41



GKS□□-3S H□R ... RSO

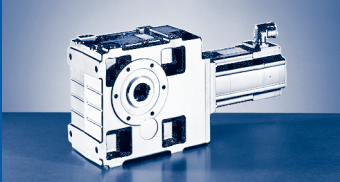
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GKS06...	k	508		548		588		628							
GKS07...	k	564		604		644		684		603		643		703	
GKS09...	k	635		675		715		755		674		714		774	
GKS11...	k	726		766		806		846		765		805		865	
GKS14...	k									864		904		964	
...RSO B0 <sup>1)</sup>	Δ k	0													
...RSO P□ <sup>2)</sup>	Δ k	28						34			44				
	k <sub>1</sub>	201		241		281		321		220		260		320	
	k <sub>2</sub>	145						195							
	g	143						192							
...RSO	k <sub>5</sub>	24						15							
	g <sub>2</sub>	Ø 78													
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94
	x	16				38		16	38	16	36	16	36	16	36

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

GKS□□-3S H□R

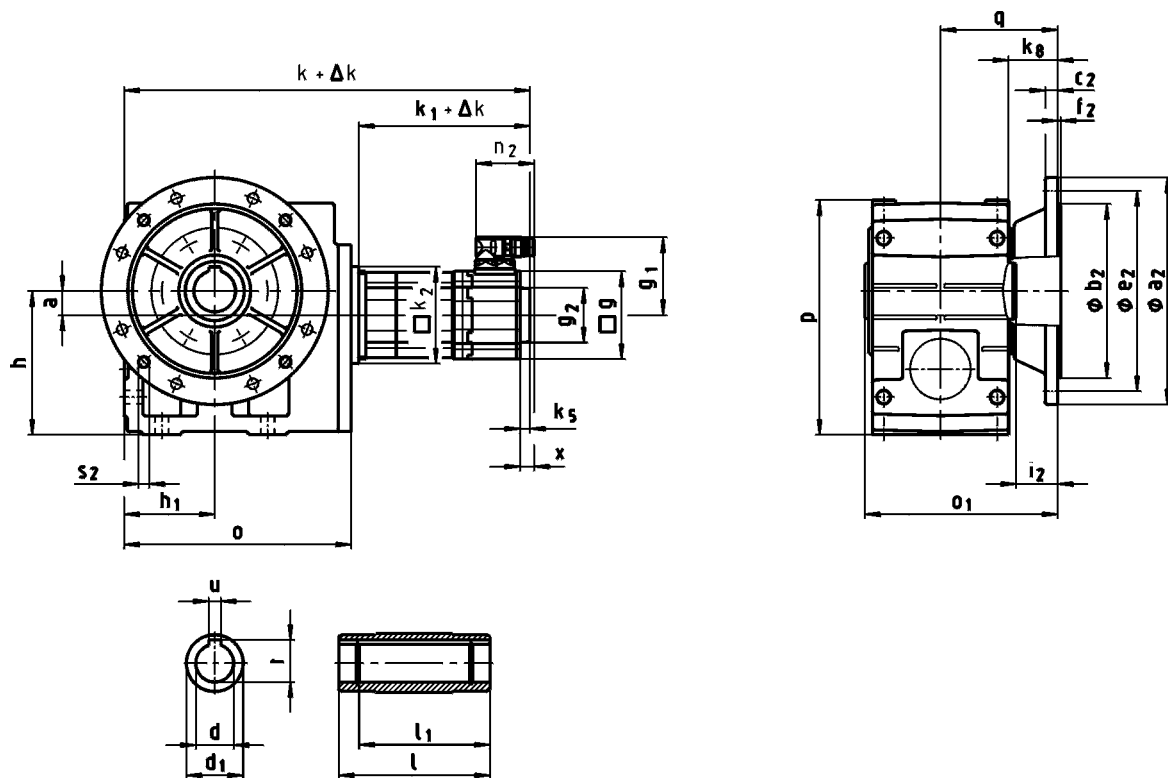
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS04...	203	171	100	71	20	45	45	110	119	85	14	105	132	141	21	22	9
GKS05...	232	205	125	80	23	47.5	47.5	115	140	105	17	127	144	169		29	11
GKS06...	291	250	150	100	28	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	354	310	190	120	34	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	429	386	236	150	41	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	527	485	300	185	54	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	636	605	375	230	67	135	135	360	415	275	50	328	442	497	52	82	33

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GKS04...	25	115	45	100	8	28.3	105	75	90	3	2.5	M6x12
	30					33.3						
GKS05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GKS06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GKS07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GKS09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GKS11...	80	290	105	250	22	85.4	240	140	205	6	6	M20x32
GKS14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35



# GKS [mm]

## GKS□□-3S (MCS)

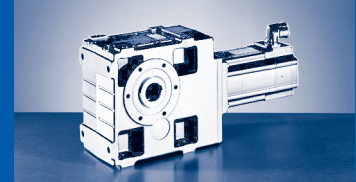


### GKS□□-3S HAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKS04...	k	347	377	407	399	419	439	479								
GKS05...	k	367	397	427	419	439	459	499	436			476			516	
GKS06...	k	423	453	483	475	495	515	555	492			532			572	
GKS07...	k				531	551	571	611	548			588			628	
GKS09...	k								619			659			699	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19			20											
...RSO	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91				118				145 <sup>2)</sup>			
	g	62			89				116							
	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64			78											
	x	21							18							

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS05: 12DC20 ... 12LC41



### GKS□□-3S HAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS06...	k	508		548		588		628											
GKS07...	k	564		604		644		684		603		643		703					
GKS09...	k	635		675		715		755		674		714		774					
GKS11...	k	726		766		806		846		765		805		865					
GKS14...	k									864		904		964					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

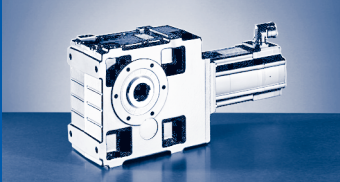
### GKS□□-3S HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS04...	203	149	171	100	71	20	91	39
GKS05...	232	174	205	125	80	23	103.5	40
GKS06...	291	203 <sup>2)</sup> 202 <sup>3)</sup>	250	150	100	28	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GKS07...	354	256	310	190	120	34	155.5	66
GKS09...	429	301	386	236	150	41	180.5	70
GKS11...	527	351	485	300	185	54	205.5	71
GKS14...	636	411	605	375	230	67	235.5	72

<sup>2)</sup> a<sub>2</sub> = 200

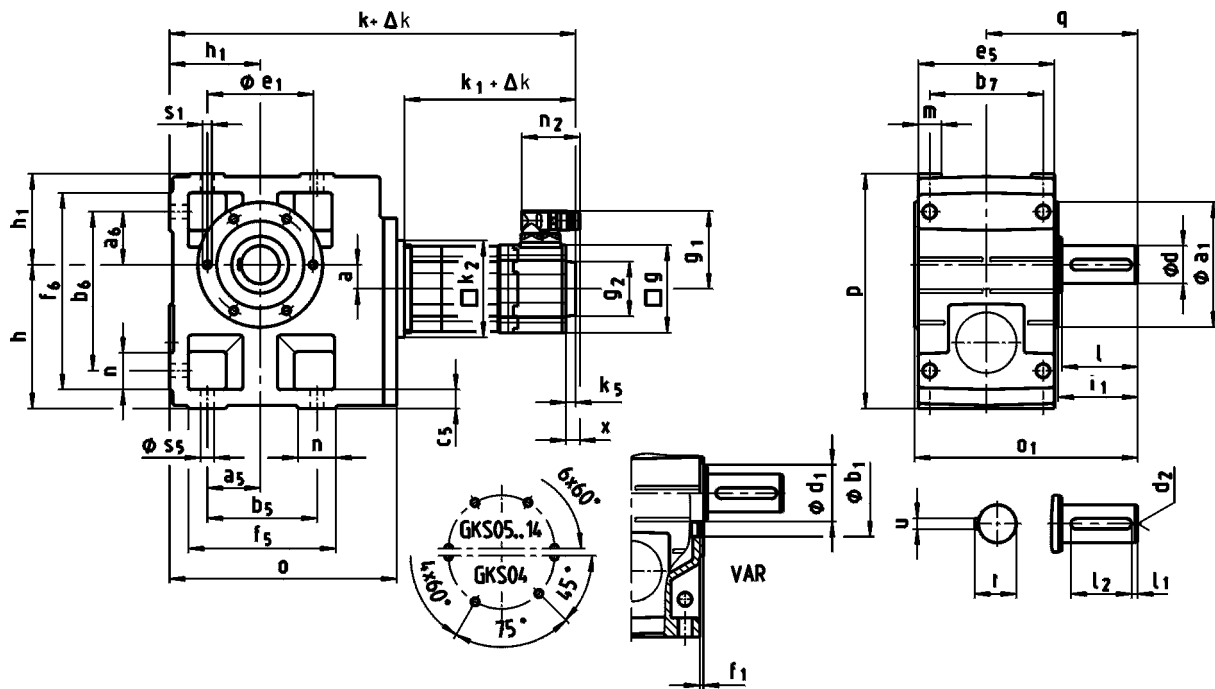
<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GKS04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GKS05...	35	140	50	124	10	38.3	200	130	12	165	4	55.5	4 x 11
	40					43.3							
GKS06...	45	160	65	140	14	48.8	250	180	15	215	5	60.5	4 x 14
	50					53.8							
GKS07...	55	200	75	175	16	59.3	300	230	17	265	5	60.5	4 x 17.5
	60					64.4							
GKS09...	70	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	80					85.4							
GKS11...	80	290	105	250	22	85.4	450	350	22	400	5	60.5	8 x 17.5
	100					106.4							
GKS14...	100	350	135	305	28	106.4							



# GKS [mm]

## GKS□□-3S (MCS)

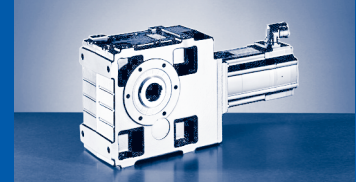


### GKS□□-3S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKS04...	k	347	377	407	399	419	439	479								
GKS05...	k	367	397	427	419	439	459	499	436		476			516		
GKS06...	k	423	453	483	475	495	515	555	492		532			572		
GKS07...	k				531	551	571	611	548		588			628		
GKS09...	k								619		659			699		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91								118	145 <sup>2)</sup>		
	g	62			89								116			
	$k_5$	0			13								14			
	$g_2$	□ 62			Ø 67								Ø 72			
	$g_1$	76			90								105			
	$n_2$	64							78							
	x					21								18		

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS05: 12DC20 ... 12LC41



GKS□□-3S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30		
GKS06...	k	508		548		588		628									
GKS07...	k	564		604		644		684		603		643		703			
GKS09...	k	635		675		715		755		674		714		774			
GKS11...	k	726		766		806		846		765		805		865			
GKS14...	k									864		904		964			
...RSO B0 <sup>1)</sup>	Δ k	0															
...RSO P□ <sup>2)</sup>	Δ k	28									34		44				
	k <sub>1</sub>	201		241		281		321		220		260		320			
	k <sub>2</sub>	145						195									
	g	143						192									
...RSO	k <sub>5</sub>	24						15									
	g <sub>2</sub>	Ø 78															
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172		
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94		
	x	16				38		16	38	16	36	16	36	16	36		

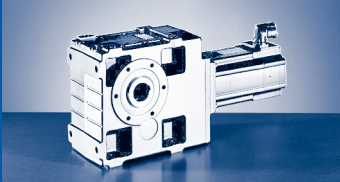
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GKS□□-3S V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS04...	203	163	171	100	71	20	107.5	45	45	110	119	85	14	105	132	141	21	22	9
GKS05...	232	197	205	125	80	23	130	47.5	47.5	115	140	105	17	127	144	169		29	11
GKS06...	291	236	250	150	100	28	160	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	354	296	310	190	120	34	200	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	429	356	386	236	150	41	240	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	527	445	485	300	185	54	305	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	636	544	605	375	230	67	375	135	135	360	415	275	50	328	442	497	52	82	33

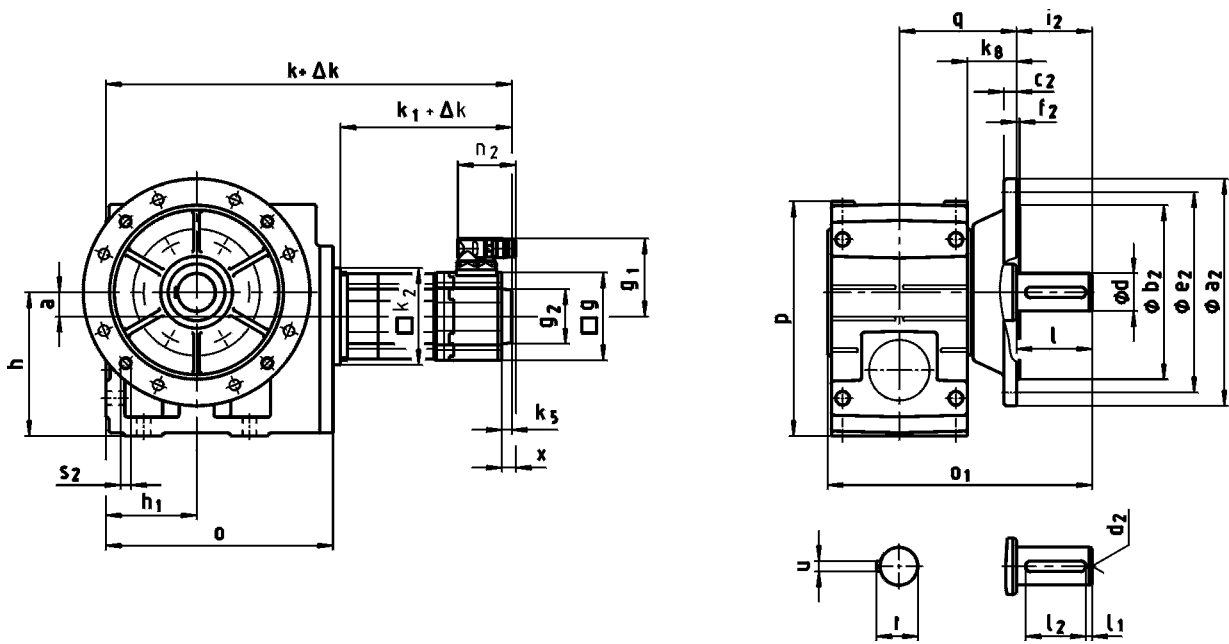
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				
GKS04...	25	50	45	4	40	M10	8	28	105	75	90	3	52.5	M6x12
GKS05...	30	60	50	6	45			33	118	80	100	4	64	M8x15
GKS06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GKS07...	50	100	75	8	80			14	53.5	165	115	140	5	105
GKS09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GKS11...	80	160	105	15	125		22	85	240	140	205		166	M20x32
GKS14...	100	200	135	18	160		M24	28	106	290	170		250	207

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

## GKS□□-3S (MCS)



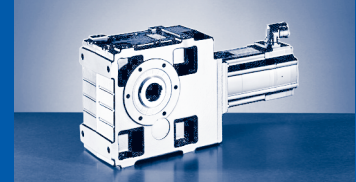
### GKS□□-3S VAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GKS04...	k	347	377	407	399	419	439	479							
GKS05...	k	367	397	427	419	439	459	499	436			476			516
GKS06...	k	423	453	483	475	495	515	555	492			532			572
GKS07...	k				531	551	571	611	548			588			628
GKS09...	k								619			659			699
...RSO B0 <sup>1)</sup>	$\Delta k$	0													
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20									
	$k_1$	132	162	192	183	203	223	263	188		228		268		
	$k_2$	66			91						118		145 <sup>2)</sup>		
	g	62				89						116			
...RSO	$k_5$	0				13						14			
	$g_2$	□ 62				Ø 67						Ø 72			
	$g_1$	76				90						105			
	$n_2$	64								78					
	x					21						18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS05: 12DC20 ... 12LC41





### GKS□□-3S VAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS06...	k	508		548		588		628											
GKS07...	k	564		604		644		684		603		643		703					
GKS09...	k	635		675		715		755		674		714		774					
GKS11...	k	726		766		806		846		765		805		865					
GKS14...	k									864		904		964					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

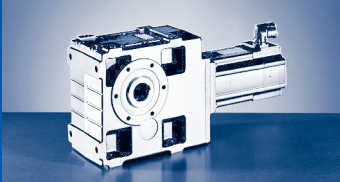
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GKS□□-3S VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS04...	203	196	171	100	71	20	91	39
GKS05...	232	230	205	125	80	23	103.5	40
GKS06...	291	277	250	150	100	28	121.5	49
GKS07...	354	351	310	190	120	34	155.5	66
GKS09...	429	416	386	236	150	41	180.5	70
GKS11...	527	505	485	300	185	54	205.5	71
GKS14...	636	604	605	375	230	67	235.5	72

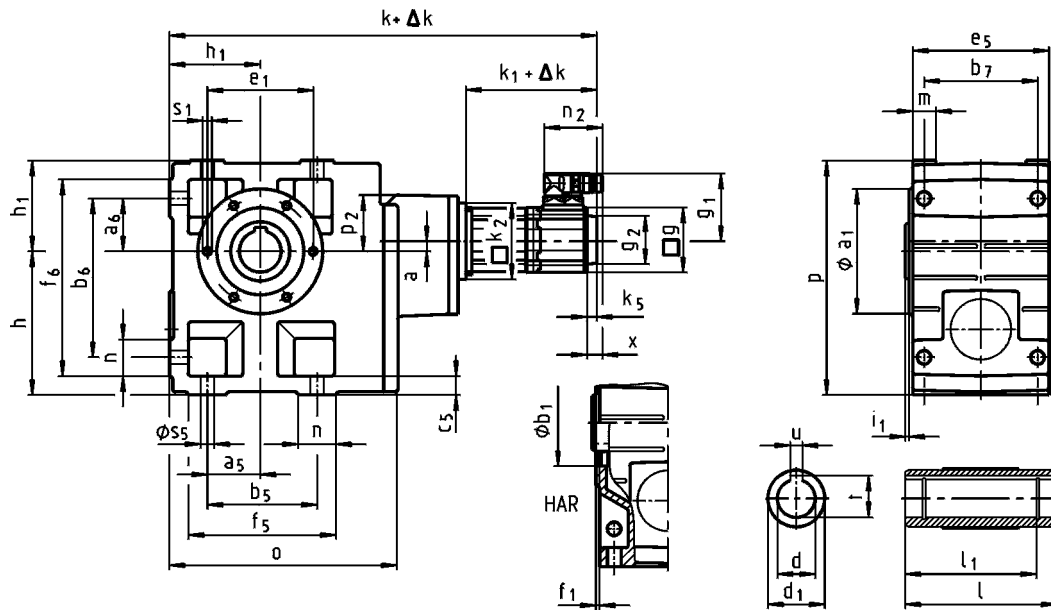
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GKS04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GKS05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GKS06...	40	80	7	63	M16	14	43	250	180	15	215	4	80	4 x 14
GKS07...	50	100	8	80			53.5						300	
GKS09...	60	120		100	M20	22	64	350	250	18	300	5	120	4 x 17.5
GKS11...	80	160	15	125			85	400	300	20	350		160	
GKS14...	100	200	18	160	M24	28	106	450	350	22	400		200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

## GKS□□-4S (MCS)

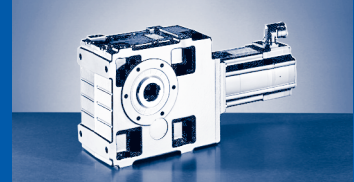


### GKS□□-4S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GKS05...	k	443	473	503	496	516	536	576									
GKS06...	k	516	546	576	569	589	609	649									
GKS07...	k	583	613	643	636	656	676	716	653		693			733			
GKS09...	k	672	702	732	725	745	765	805	742		782			822			
GKS11...	k				835	855	875	915	852		892			932			
GKS14...	k								985		1025			1065			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20											
	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91						118	145 <sup>2)</sup>					
	g	62			89						116						
...RSO	$k_5$	0			13						14						
	$g_2$	□ 62			Ø 67						Ø 72						
	$g_1$	76			90						105						
	$n_2$	64								78							
	x					21								18			

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

2) GKS07: 12DC20 ... 12LC41



GKS□□-4S H□R ... RSO

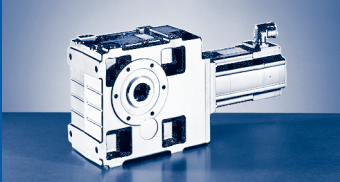
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS09...	k	757		797		837		877											
GKS11...	k	867		907		947		987		906		946		1006					
GKS14...	k	1000		1040		1080		1120		1039		1079		1139					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

GKS□□-4S H□R

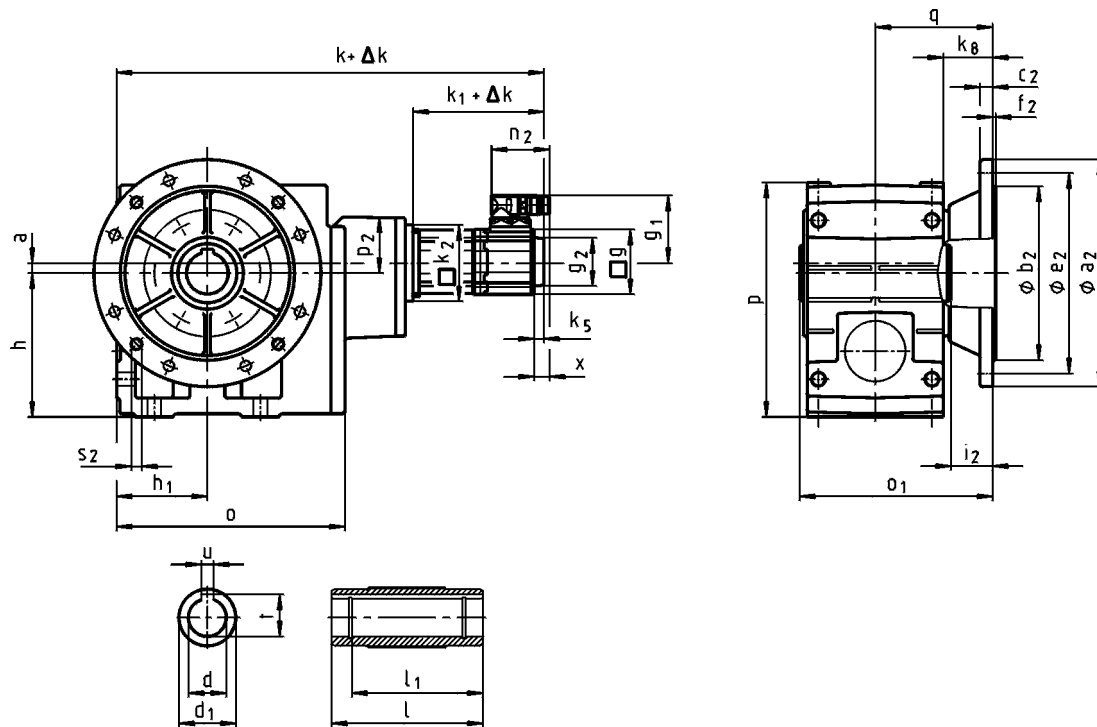
	o	p	p <sub>2</sub>	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS05...	226	205	65	125	80	13	47.5	47.5	115	140	105	17	127	144	169	21	29	11
GKS06...	288	250	61	150	100	8	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	351	310	72	190	120	11	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	426	386	92	236	150	15	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	523	485	112	300	185	16	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	632	605	139	375	230	22	135	135	360	415	275	50	328	442	497	52	82	33

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>	
	H7				JS9	+0,2		H7				6x60°	
GKS05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15	
	35				10	38.3							
GKS06...	40	160	65	140	12	43.3	140	100	120		5	5	M10x16
	45				14	48.8							
GKS07...	50	200	75	175	16	53.8	165	115	140	6	6	M12x18	
	55				18	59.3							
GKS09...	60	240	95	210	18	64.4	205	145	175	7	7	M16x24	
	70				20	74.9							
GKS11...	80	290	105	250	22	85.4	240	140	205	8	8	M20x32	
	80				22	85.4							
GKS14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35	



# GKS [mm]

## GKS□□-4S (MCS)

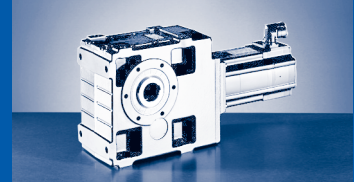


### GKS□□-4S HAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKS05...	k	443	473	503	496	516	536	576								
GKS06...	k	516	546	576	569	589	609	649								
GKS07...	k	583	613	643	636	656	676	716	653		693			733		
GKS09...	k	672	702	732	725	745	765	805	742		782			822		
GKS11...	k				835	855	875	915	852		892			932		
GKS14...	k								985		1025			1065		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91				118				145 <sup>2)</sup>			
...RSO	g	62			89				116							
	$k_5$	0			13				14							
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
	x					21				18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS07: 12DC20 ... 12LC41



### GKS□□-4S HAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS09...	k	757		797		837		877											
GKS11...	k	867		907		947		987		906		946		1006					
GKS14...	k	1000		1040		1080		1120		1039		1079		1139					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

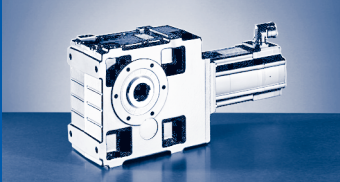
### GKS□□-4S HAK

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS05...	226	174	205	65	125	80	13	103.5	40
GKS06...	288	203 <sup>2)</sup> 202 <sup>3)</sup>	250	61	150	100	8	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GKS07...	351	256	310	72	190	120	11	155.5	66
GKS09...	426	301	386	92	236	150	15	180.5	70
GKS11...	523	351	485	112	300	185	16	205.5	71
GKS14...	632	411	605	139	375	230	22	235.5	72

<sup>2)</sup> a<sub>2</sub> = 200

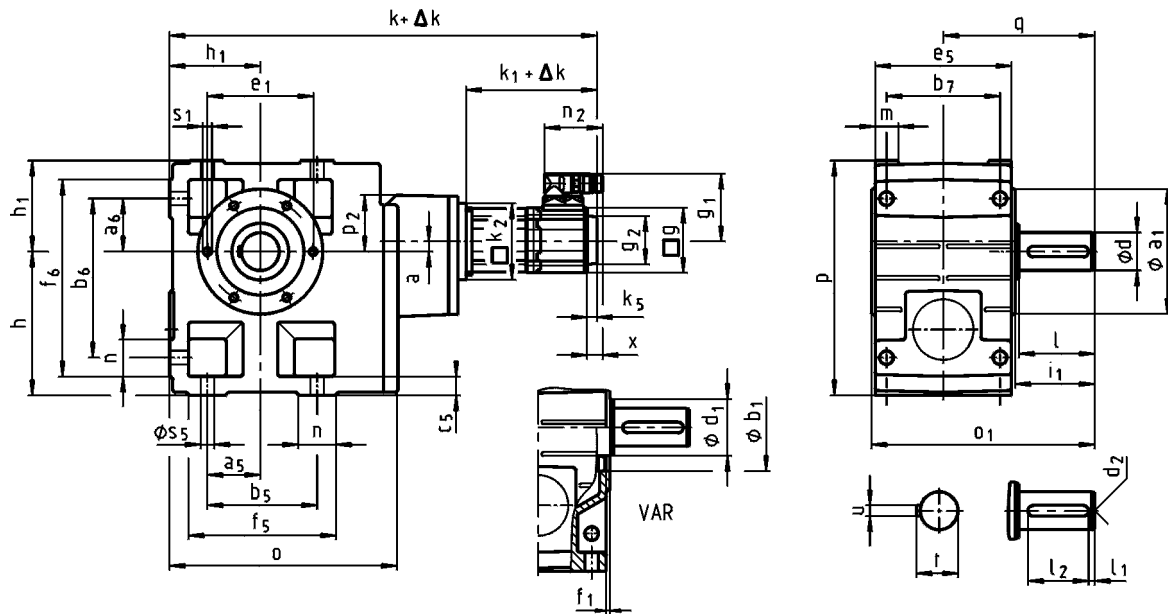
<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GKS05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GKS06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5	4 x 14
	45				14	48.8						41.5	
GKS07...	50	200	75	175	14	53.8	300	230	17	265	4	55.5	4 x 17.5
	55				16	59.3							
GKS09...	60	240	95	210	18	64.4	350	250	18	300	5	60.5	4 x 17.5
	70				20	74.9							
GKS11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	8 x 17.5
	80				22	85.4							
GKS14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GKS [mm]

## GKS□□-4S (MCS)

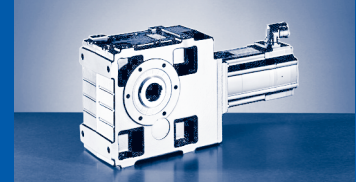


### GKS□□-4S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GKS05...	k	443	473	503	496	516	536	576									
GKS06...	k	516	546	576	569	589	609	649									
GKS07...	k	583	613	643	636	656	676	716	653		693			733			
GKS09...	k	672	702	732	725	745	765	805	742		782			822			
GKS11...	k				835	855	875	915	852		892			932			
GKS14...	k								985		1025			1065			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91								118		145 <sup>2)</sup>		
	g	62			89								116				
	$k_5$	0			13								14				
	$g_2$	□ 62			Ø 67								Ø 72				
	$g_1$	76			90								105				
	$n_2$	64							78								
	x				21								18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS07: 12DC20 ... 12LC41



GKS□□-4S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS09...	k	757		797		837		877											
GKS11...	k	867		907		947		987		906		946		1006					
GKS14...	k	1000		1040		1080		1120		1039		1079		1139					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

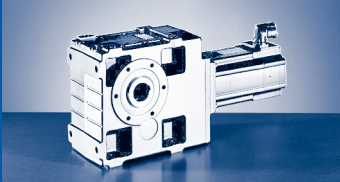
1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

GKS□□-4S V□R

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS05...	226	197	205	65	125	80	13	130	47.5	47.5	115	140	105	17	127	144	169	21	29	11
GKS06...	288	236	250	61	150	100	8	160	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	351	296	310	72	190	120	11	200	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	426	356	386	92	236	150	15	240	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	523	445	485	112	300	185	16	305	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	632	544	605	139	375	230	22	375	135	135	360	415	275	50	328	442	497	52	82	33

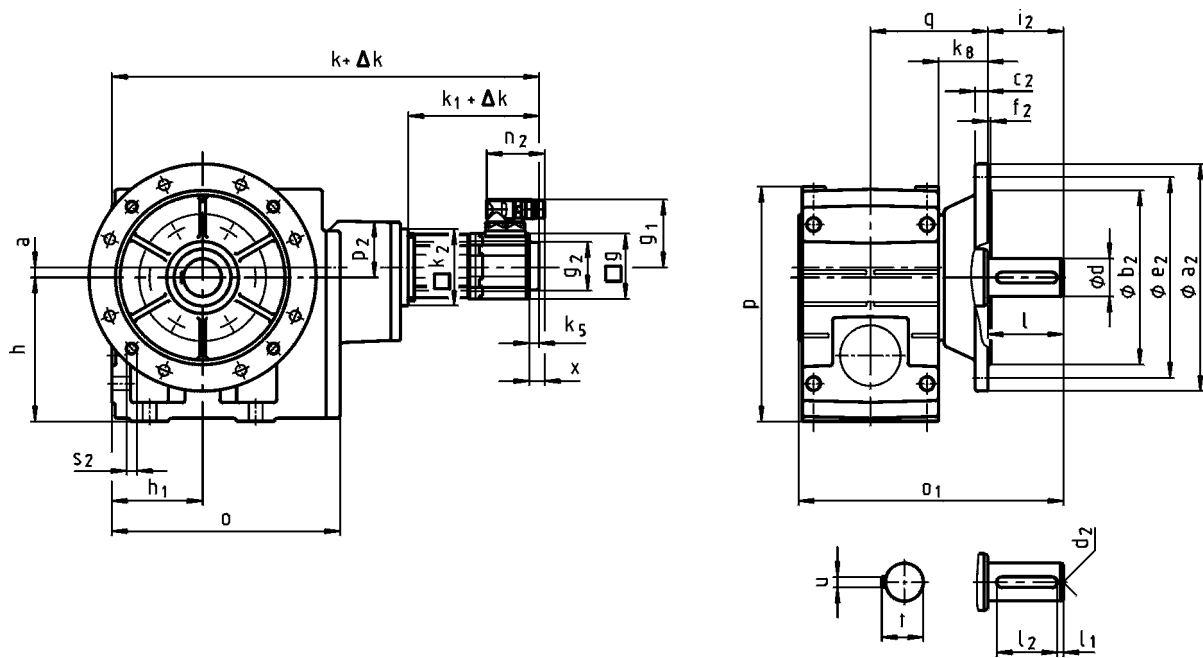
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GKS05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GKS06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GKS07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GKS09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GKS11...	80	160	105	125	22		85	240	140	205	166		M20x32	
GKS14...	100	200	135	18	160	M24	28	106	290	170	250		207	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

## GKS□□-4S (MCS)



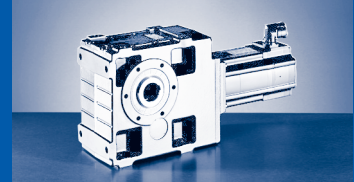
### GKS□□-4S VAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GKS05...	k	443	473	503	496	516	536	576								
GKS06...	k	516	546	576	569	589	609	649								
GKS07...	k	583	613	643	636	656	676	716	653		693			733		
GKS09...	k	672	702	732	725	745	765	805	742		782			822		
GKS11...	k				835	855	875	915	852		892			932		
GKS14...	k								985		1025			1065		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91						118		145 <sup>2)</sup>			
	g	62			89						116					
...RSO	$k_5$	0			13						14					
	$g_2$	□ 62			Ø 67						Ø 72					
	$g_1$	76			90						105					
	$n_2$	64							78							
	x	21										18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GKS07: 12DC20 ... 12LC41





### GKS□□-4S VAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GKS09...	k	757		797		837		877											
GKS11...	k	867		907		947		987		906		946		1006					
GKS14...	k	1000		1040		1080		1120		1039		1079		1139					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

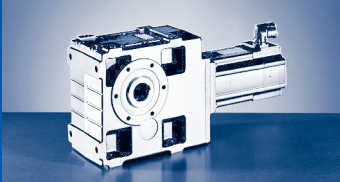
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GKS□□-4S VAK

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS05...	226	230	205	65	125	80	13	103.5	40
GKS06...	288	277	250	61	150	100	8	121.5	49
GKS07...	351	351	310	72	190	120	11	155.5	66
GKS09...	426	416	386	92	236	150	15	180.5	70
GKS11...	523	505	485	112	300	185	16	205.5	71
GKS14...	632	604	605	139	375	230	22	235.5	72

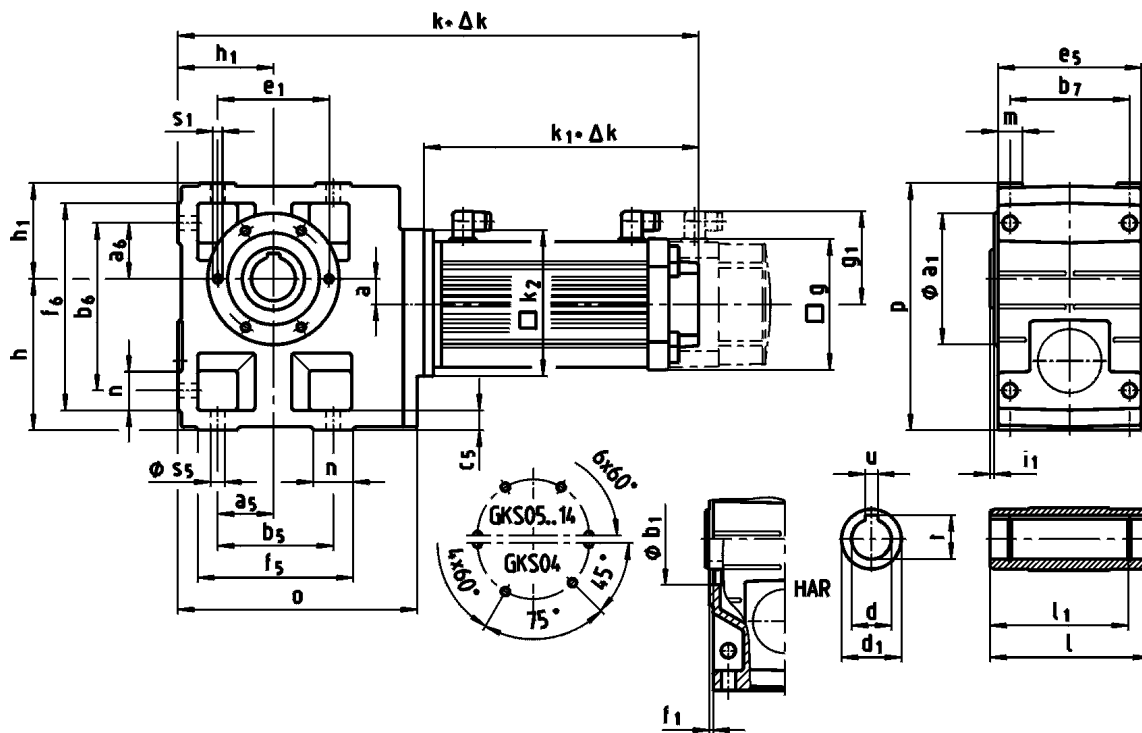
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GKS05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GKS06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GKS07...	50	100	8	80		14	53.5	300	230	17	265		100	
GKS09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GKS11...	80	160	15	125		22	85	400	300	20	350		160	
GKS14...	100	200	18	160		M24	28	106	450	350	22		400	

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

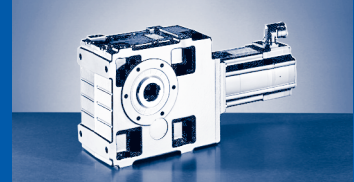
## GKS□□-3A (MCA)



### GKS□□-3A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS04...	k	475	483	551						
GKS05...	k	495	503	571	553		615			
GKS06...	k	551	559	627	609		671		648	
GKS07...	k	607	615	683	665		727		704	
GKS09...	k				736		798		775	
GKS11...	k				827		889		866	
...RSO B0 <sup>1)</sup>	Δ k	0								
...RSO P□ <sup>1)</sup>	Δ k	25	35			33			35	
	k <sub>1</sub>	258	267	335	307		369		346	
	k <sub>2</sub>	145				180				
	g	102	131			142			165	
	g <sub>1</sub>	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GKS□□-3A H□R ... RSO

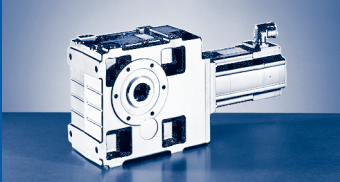
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS06...	k	737											
GKS07...	k	793		773		870		851		947			
GKS09...	k	864		844		941		922		1018			
GKS11...	k	955		935		1032		1013		1109			
GKS14...	k			1034		1131		1112		1208			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

1) →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GKS□□-3A H□R

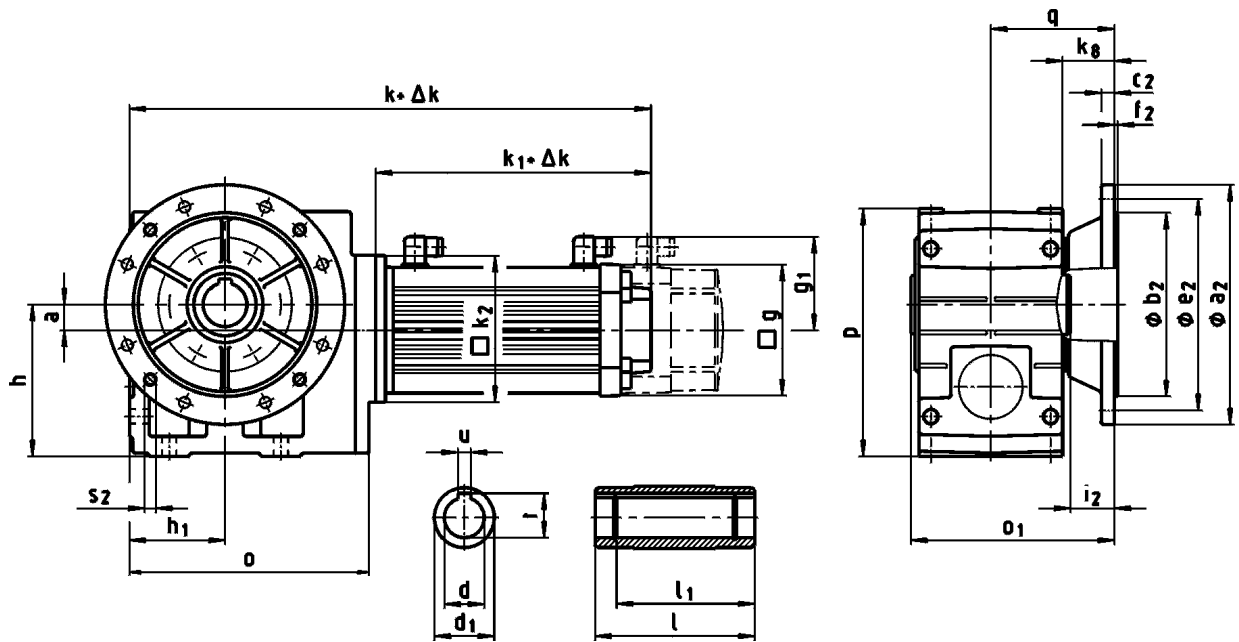
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS04...	203	171	100	71	20	45	45	110	119	85	14	105	132	141	21	22	9
GKS05...	232	205	125	80	23	47.5	47.5	115	140	105	17	127	144	169		29	11
GKS06...	291	250	150	100	28	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	354	310	190	120	34	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	429	386	236	150	41	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	527	485	300	185	54	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	636	605	375	230	67	135	135	360	415	275	50	328	442	497	52	82	33

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GKS04...	25	115	45	100	8	28.3	105	75	90	3	2.5	M6x12
	30					33.3						
GKS05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GKS06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GKS07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GKS09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GKS11...	80	290	105	250	22	85.4	240	140	205	8	8	M20x32
	100					106.4						
GKS14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35



# GKS [mm]

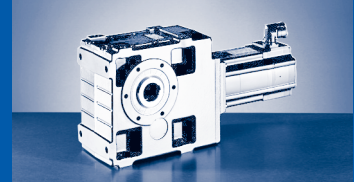
## GKS□□-3A (MCA)



### GKS□□-3A HAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS04...	k	475	483	551						
GKS05...	k	495	503	571	553		615			
GKS06...	k	551	559	627	609		671		648	
GKS07...	k	607	615	683	665		727		704	
GKS09...	k				736		798		775	
GKS11...	k				827		889		866	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>2)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145					180			
	g	102	131			142			165	
	g <sub>1</sub>	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GKS□□-3A HAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS06...	k	737											
GKS07...	k	793		773		870		851		947			
GKS09...	k	864		844		941		922		1018			
GKS11...	k	955		935		1032		1013		1109			
GKS14...	k			1034		1131		1112		1208			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

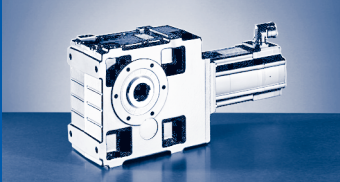
GKS□□-3A HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GKS04...	203	149	171	100	71	20	91	39
GKS05...	232	174	205	125	80	23	103.5	40
GKS06...	291	203 <sup>2)</sup> 202 <sup>3)</sup>	250	150	100	28	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GKS07...	354	256	310	190	120	34	155.5	66
GKS09...	429	301	386	236	150	41	180.5	70
GKS11...	527	351	485	300	185	54	205.5	71
GKS14...	636	411	605	375	230	67	235.5	72

<sup>2)</sup> a<sub>2</sub> = 200

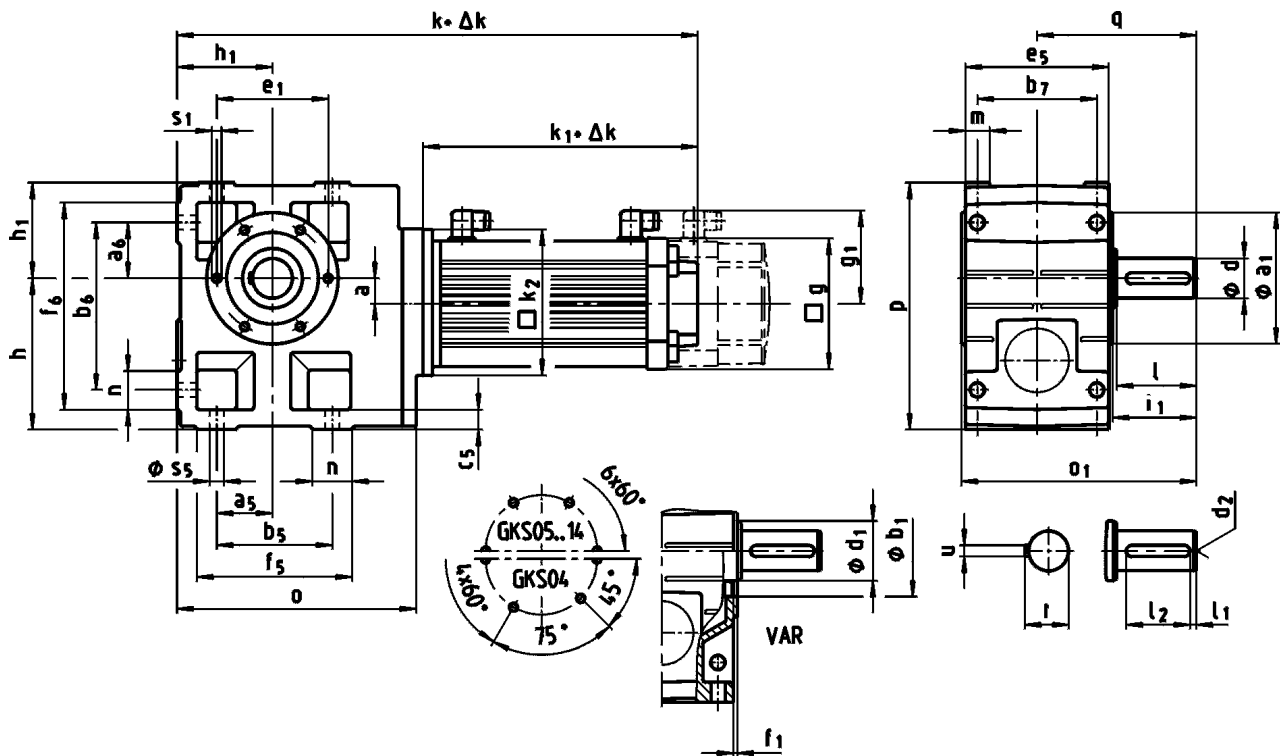
<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GKS04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GKS05...	35	140	50	124	10	38.3	200	130	12	165	4	55.5	4 x 11
	40					43.3							
GKS06...	45	160	65	140	14	48.8	250	180	15	215	4	60.5	4 x 14
	50					53.8							
GKS07...	55	200	75	175	16	59.3	300	230	17	265	5	60.5	4 x 17.5
	60					64.4							
GKS09...	70	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	80					85.4							
GKS11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	4 x 17.5
	100					106.4							
GKS14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GKS [mm]

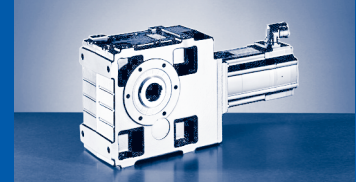
## GKS□□-3A (MCA)



### GKS□□-3A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS04...	k	475	483	551						
GKS05...	k	495	503	571		553		615		
GKS06...	k	551	559	627		609		671		648
GKS07...	k	607	615	683		665		727		704
GKS09...	k					736		798		775
GKS11...	k					827		889		866
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35				33			35
	$k_1$	258	267	335		307		369		346
	$k_2$		145					180		
	g	102	131				142			165
	$g_1$	90	102				109			118

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GKS□□-3A V□R ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS06...	k	737											
GKS07...	k	793		773		870		851		947			
GKS09...	k	864		844		941		922		1018			
GKS11...	k	955		935		1032		1013		1109			
GKS14...	k			1034		1131		1112		1208			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38				42				
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180		222				265					
	g	165		192				214					
	g <sub>1</sub>	118		161				172					

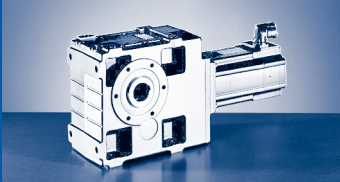
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GKS□□-3A V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS04...	203	163	171	100	71	20	107.5	45	45	110	119	85	14	105	132	141	21	22	9
GKS05...	232	197	205	125	80	23	130	47.5	47.5	115	140	105	17	127	144	169		29	11
GKS06...	291	236	250	150	100	28	160	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	354	296	310	190	120	34	200	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	429	356	386	236	150	41	240	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	527	445	485	300	185	54	305	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	636	544	605	375	230	67	375	135	135	360	415	275	50	328	442	497	52	82	33

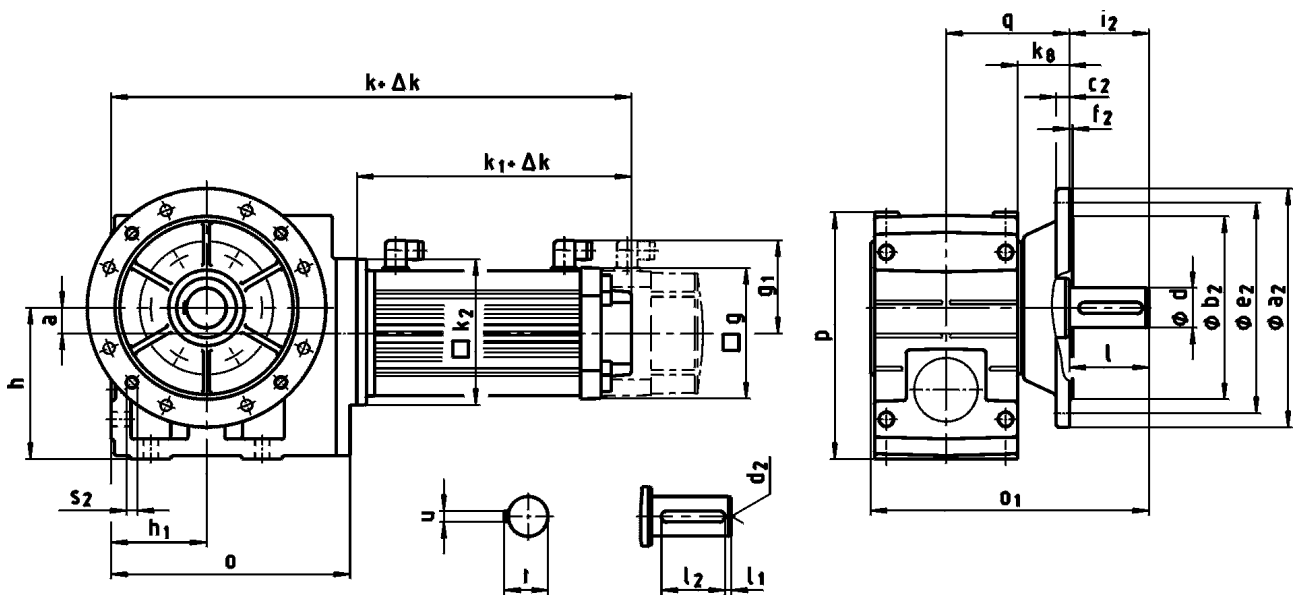
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				
GKS04...	25	50	45	4	40	M10	8	28	105	75	90	3	52.5	M6x12
GKS05...	30	60	50	6	45			33	118	80	100	4	64	M8x15
GKS06...	40	80	65	7	63	M16	14	43	140	100	120		85	M10x16
GKS07...	50	100	75	8	80			53.5	165	115	140	5	105	M12x18
GKS09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GKS11...	80	160	105	125	22			85	240	140	205		166	M20x32
GKS14...	100	200	135	18	160	M24	28	106	290	170	250	207	M24x35	

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

## GKS□□-3A (MCA)

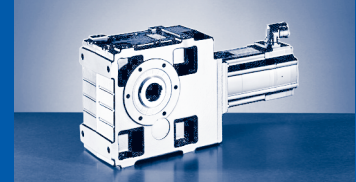


### GKS□□-3A VAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS04...	k	475	483	551						
GKS05...	k	495	503	571	553		615			
GKS06...	k	551	559	627	609		671		648	
GKS07...	k	607	615	683	665		727		704	
GKS09...	k				736		798		775	
GKS11...	k				827		889		866	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35		33			35		
	$k_1$	258	267	335	307		369		346	
	$k_2$	145			180					
	g	102	131		142			165		
	$g_1$	90	102		109			118		

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





### GKS□□-3A VAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS06...	k	737											
GKS07...	k	793		773		870		851		947			
GKS09...	k	864		844		941		922		1018			
GKS11...	k	955		935		1032		1013		1109			
GKS14...	k			1034		1131		1112		1208			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

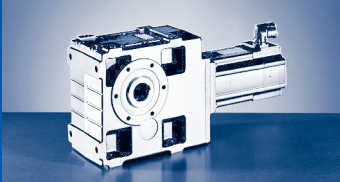
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GKS□□-3A VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GKS04...	203	196	171	100	71	20	91	39
GKS05...	232	230	205	125	80	23	103.5	40
GKS06...	291	277	250	150	100	28	121.5	49
GKS07...	354	351	310	190	120	34	155.5	66
GKS09...	429	416	386	236	150	41	180.5	70
GKS11...	527	505	485	300	185	54	205.5	71
GKS14...	636	604	605	375	230	67	235.5	72

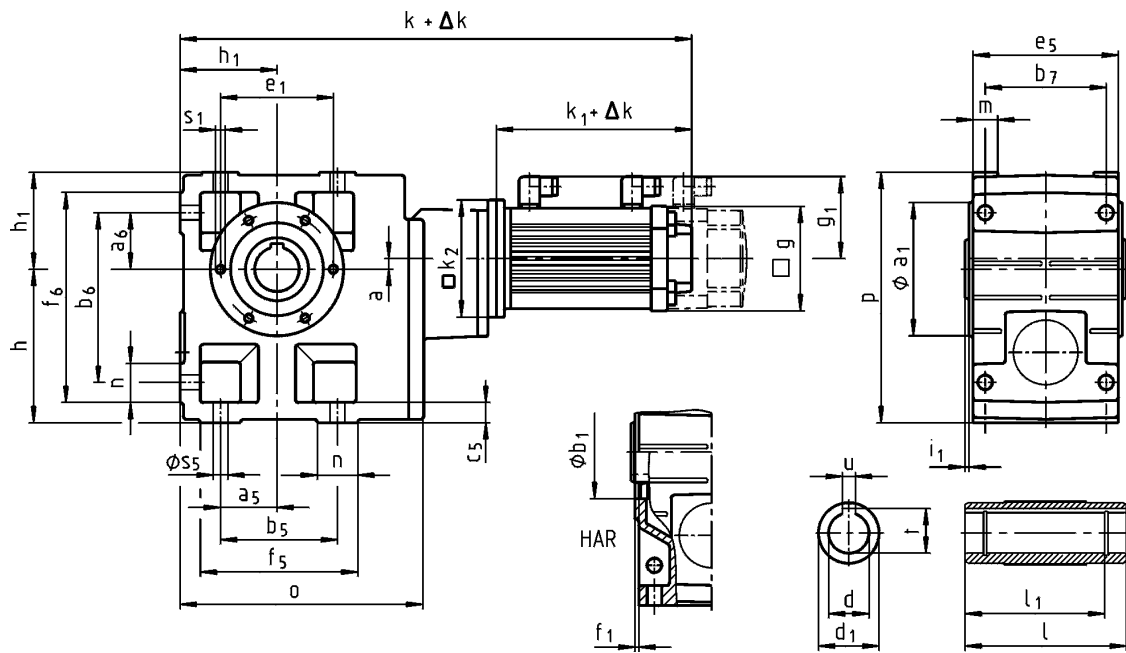
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GKS04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GKS05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GKS06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GKS07...	50	100	8	80			53.5	300	230	17	265		100	
GKS09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GKS11...	80	160	15	125			85	400	300	20	350		160	
GKS14...	100	200	18	160	M24	28	106	450	350	22	400		200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

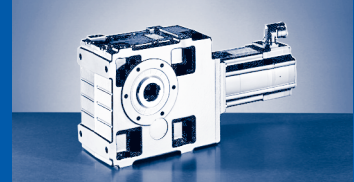
## GKS□□-4A (MCA)



### GKS□□-4A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS05...	k	571	580	648						
GKS06...	k	644	653	721						
GKS07...	k	711	720	788	770		832			
GKS09...	k	800	809	877	859		921		898	
GKS11...	k	910	919	987	969		1031		1008	
GKS14...	k				1102		1164		1141	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GKS□□-4A H□R ... RSO

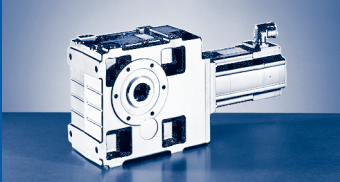
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS09...	k	987											
GKS11...	k	1097		1076		1173		1155		1251			
GKS14...	k	1230		1209		1306		1288		1384			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

1) → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GKS□□-4A H□R

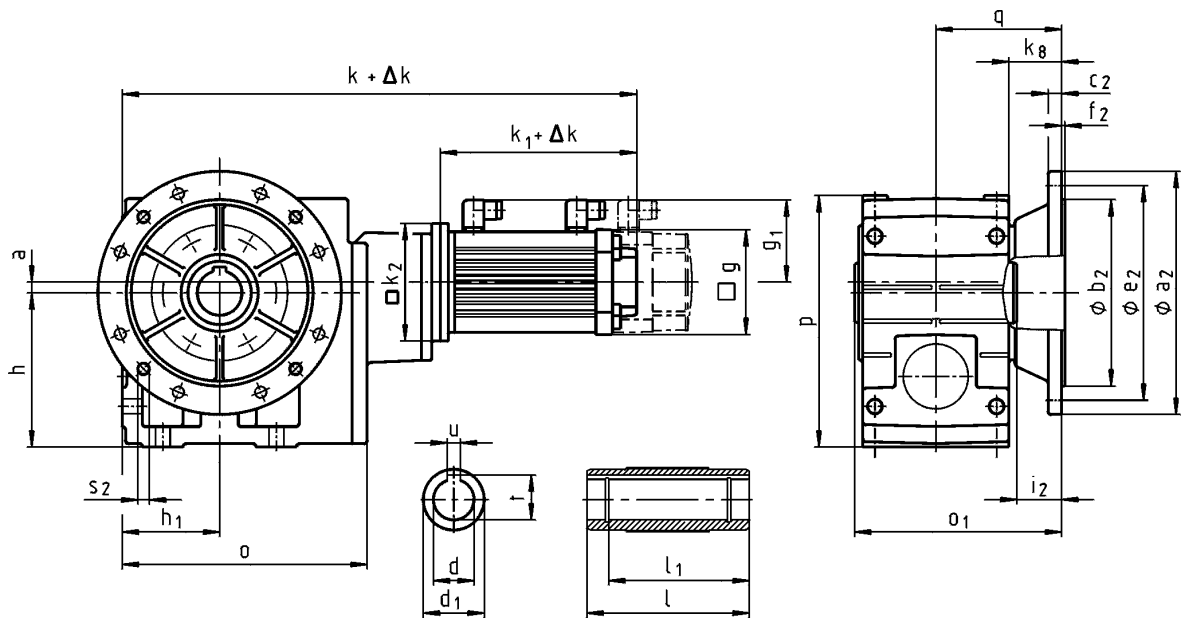
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS05...	226	205	125	80	13	47.5	47.5	115	140	105	17	127	144	169	21	29	11
GKS06...	288	250	150	100	8	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	351	310	190	120	11	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	426	386	236	150	15	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	523	485	300	185	16	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	632	605	375	230	22	135	135	360	415	275	50	328	442	497	52	82	33

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GKS05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GKS06...	40	160	65	140	12	43.3	140	100	120	5	5	M10x16
	45				14	48.8						
GKS07...	50	200	75	175	14	53.8	165	115	140	6	6	M12x18
	55				16	59.3						
GKS09...	60	240	95	210	18	64.4	205	145	175	7	7	M16x24
	70				20	74.9						
GKS11...	80	290	105	250	22	85.4	240	140	205	8	8	M20x32
	80				22	85.4						
GKS14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35



# GKS [mm]

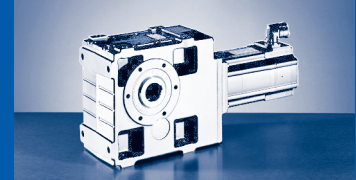
## GKS□□-4A (MCA)



### GKS□□-4A HAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS05...	k	571	580	648						
GKS06...	k	644	653	721						
GKS07...	k	711	720	788		770		832		
GKS09...	k	800	809	877		859		921		898
GKS11...	k	910	919	987		969		1031		1008
GKS14...	k					1102		1164		1141
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335		307		369		346
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GKS□□-4A HAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GKS09...	k	987									
GKS11...	k	1097		1076		1173		1155		1251	
GKS14...	k	1230		1209		1306		1288		1384	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

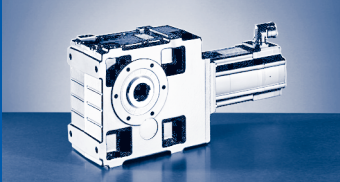
### GKS□□-4A HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS05...	226	174	205	125	80	13	103.5	40
GKS06...	288	203 <sup>2)</sup> 202 <sup>3)</sup>	250	150	100	8	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GKS07...	351	256	310	190	120	11	155.5	66
GKS09...	426	301	386	236	150	15	180.5	70
GKS11...	523	351	485	300	185	16	205.5	71
GKS14...	632	411	605	375	230	22	235.5	72

<sup>2)</sup> a<sub>2</sub> = 200

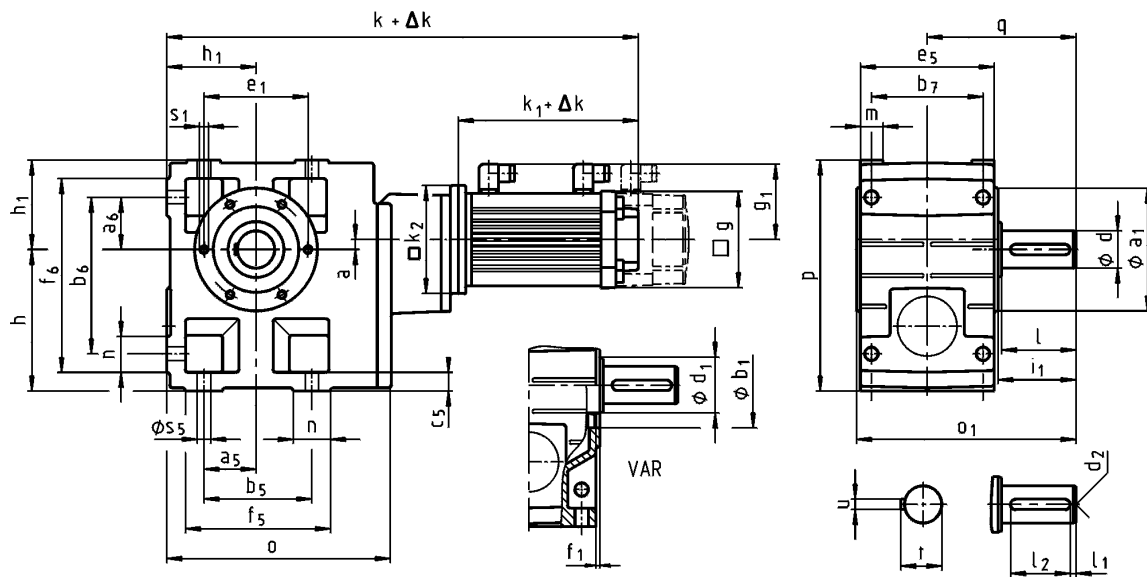
<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GKS05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GKS06...	40	160	65	140	12	43.3	250	180	15	215	4	41.5	4 x 14
	45				14	48.8							
GKS07...	50	200	75	175	16	53.8	300	230	17	265	4	55.5	4 x 17.5
	55				18	64.4							
GKS09...	60	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	70				22	85.4							
GKS11...	80	290	105	250	28	106.4	450	350	22	400	5	60.5	8 x 17.5
	100				28	106.4							



# GKS [mm]

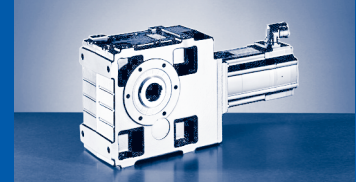
## GKS□□-4A (MCA)



### GKS□□-4A V□R ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS05...	k	571	580	648						
GKS06...	k	644	653	721						
GKS07...	k	711	720	788	770		832			
GKS09...	k	800	809	877	859		921		898	
GKS11...	k	910	919	987	969		1031		1008	
GKS14...	k				1102		1164		1141	
...RSO B0 <sup>1)</sup>	$\Delta k$				0					
...RSO P□ <sup>2)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GKS□□-4A V□R ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GKS09...	k	987											
GKS11...	k	1097		1076		1173		1155		1251			
GKS14...	k	1230		1209		1306		1288		1384			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

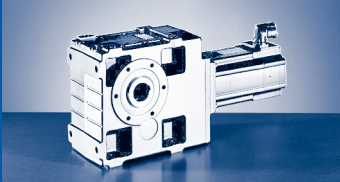
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GKS□□-4A V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GKS05...	226	197	205	125	80	13	130	47.5	47.5	115	140	105	17	127	144	169	21	29	11
GKS06...	288	236	250	150	100	8	160	60	60	155	170	120	20	145	191	206	23	36	14
GKS07...	351	296	310	190	120	11	200	70	70	190	210	150	25	180	235	255	28	45	18
GKS09...	426	356	386	236	150	15	240	90	90	240	266	185	30	222	300	326	37	60	22
GKS11...	523	445	485	300	185	16	305	105	105	290	325	225	40	270	363	398	43	73	26
GKS14...	632	544	605	375	230	22	375	135	135	360	415	275	50	328	442	497	52	82	33

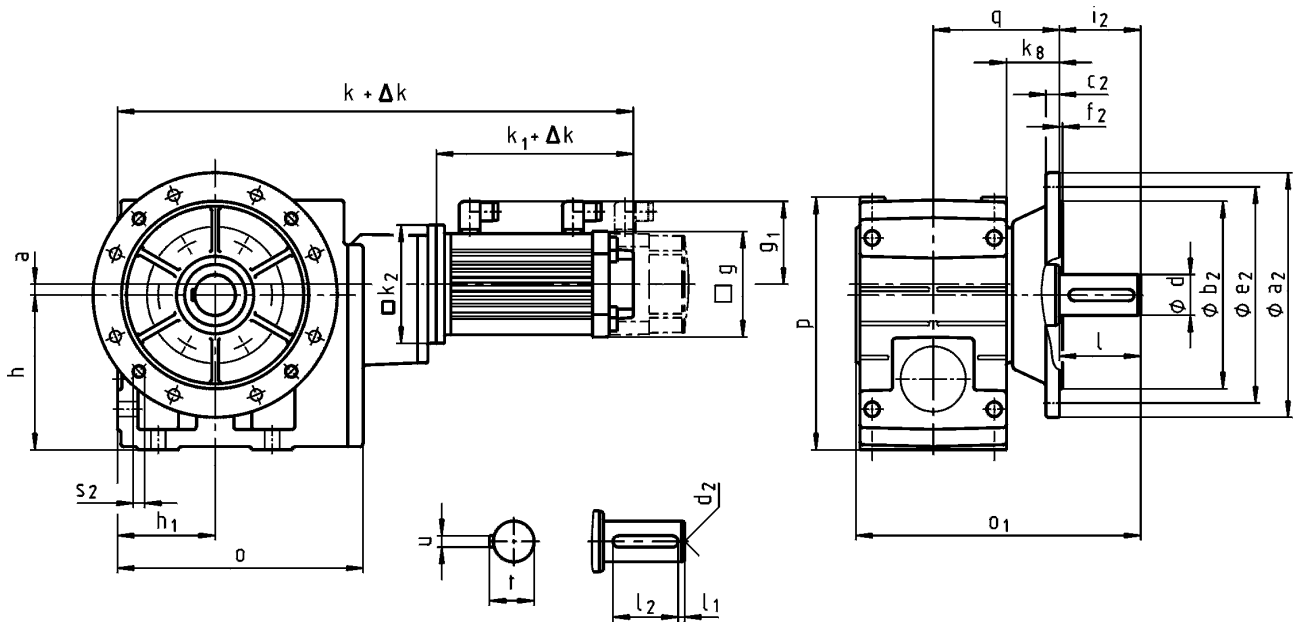
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GKS05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GKS06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GKS07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GKS09...	60	120	95		100	M20	18	64	205	145	175		125	M16x24
GKS11...	80	160	105	15	125		22	85	240	140	205	6	166	M20x32
GKS14...	100	200	135	18	160	M24	28	106	290	170	250		207	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GKS [mm]

## GKS□□-4A (MCA)

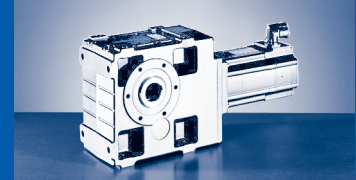


### GKS□□-4A VAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GKS05...	k	571	580	648						
GKS06...	k	644	653	721						
GKS07...	k	711	720	788	770		832			
GKS09...	k	800	809	877	859		921		898	
GKS11...	k	910	919	987	969		1031		1008	
GKS14...	k				1102		1164		1141	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





### GKS□□-4A VAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GKS09...	k	987									
GKS11...	k	1097		1076		1173		1155		1251	
GKS14...	k	1230		1209		1306		1288		1384	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

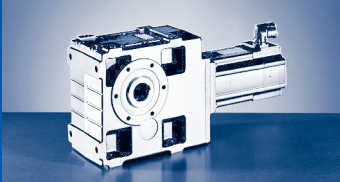
### GKS□□-4A VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>g</sub>
GKS05...	226	230	205	125	80	13	103.5	40
GKS06...	288	277	250	150	100	8	121.5	49
GKS07...	351	351	310	190	120	11	155.5	66
GKS09...	426	416	386	236	150	15	180.5	70
GKS11...	523	505	485	300	185	16	205.5	71
GKS14...	632	604	605	375	230	22	235.5	72

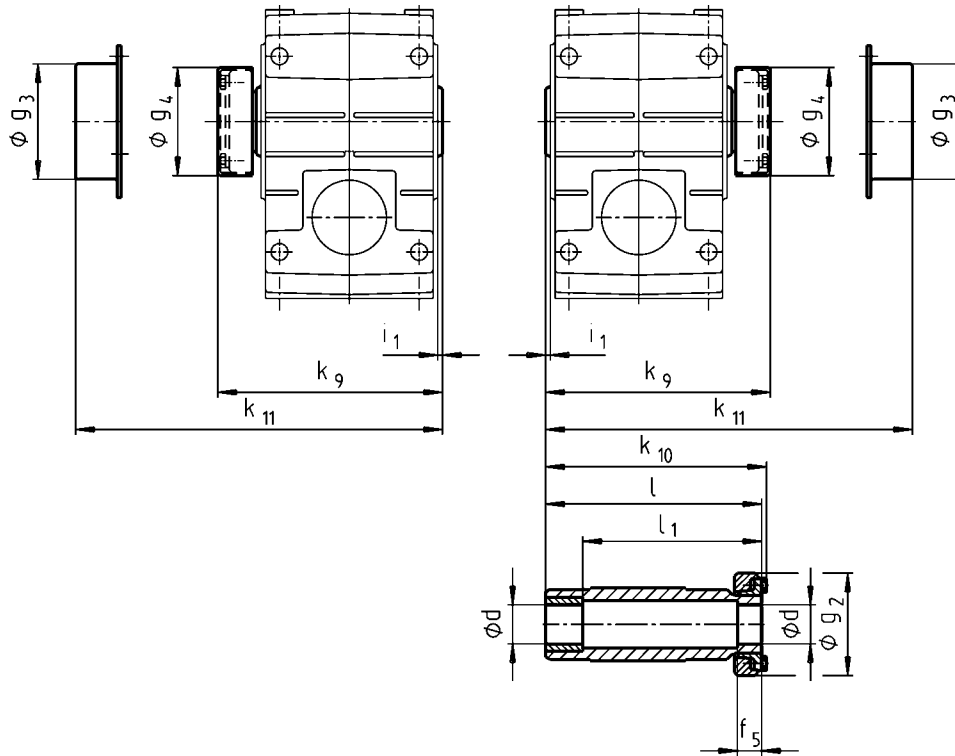
  

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GKS05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GKS06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GKS07...	50	100	8	80		14	53.5						300	
GKS09...	60	120			100	M20	18	64	350	250	18		300	120
GKS11...	80	160	15	125	M24		22	85	400	300	20	350	5	160
GKS14...	100	200	18	160		28	106	450	350	22	400	200		

d ≤ 50 mm: k6; d > 50 mm: m6

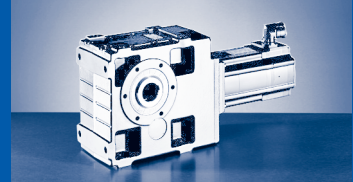


Hollow shaft with shrink disc

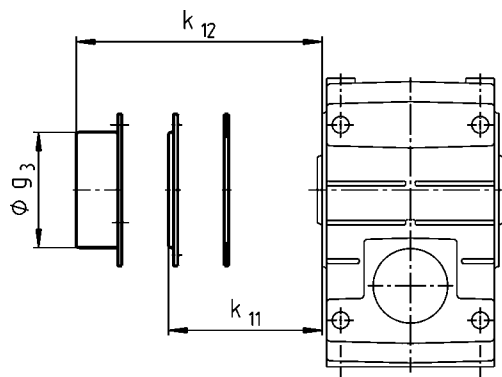


	Machine shaft	Hollow shaft with shrink disc						Protective cap		Cover	
	d	i <sub>1</sub>	k <sub>10</sub>	g <sub>2</sub>	l	l <sub>1</sub>	f <sub>5</sub>	k <sub>9</sub>	g <sub>4</sub>	k <sub>11</sub>	g <sub>3</sub>
	h6										
GKS04...	25 30	2.5	148	72	142	122	26	150	76	154	79
GKS05...	35	4	174	80	168	148	28	176	84	179	90
GKS06...	40	5	200	90	194	164	30	202	94	204	100
GKS07...	50		238	110	232	192	26	241	116	244	124
GKS09...	65		285	141	278	228	30	288	147	287	159
GKS11...	80	6	344	170	338	238	42	347	176	349	191
GKS14...	100	7	415	215	407	307	55	418	221	421	253

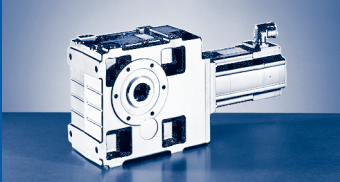
- ▶ Ensure that the strength of the shaft material is adequate in shrink disc designs.  
When using typical steels (e.g. C45, 42CrMo4), the torques listed in the selection tables can be used without restriction. When using material that is considerably weaker, please consult us. Medium surface roughness Rz must not exceed 15 µm (turning operation is sufficient).



## Hoseproof hollow shaft cover

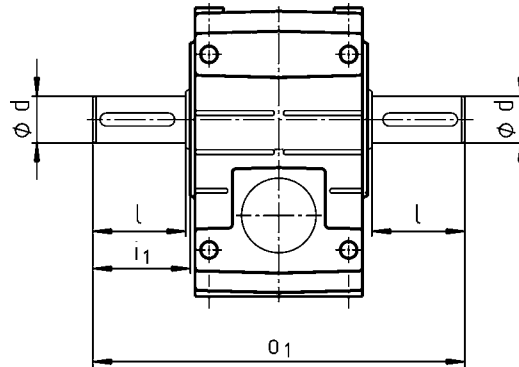


	Cover including seal		
	$k_{11}$	$k_{12}$	$g_3$
GKS04...	9		
GKS05...	10		
GKS06...	11		
GKS07...			
GKS09...		54	159
GKS11...		67	191
GKS14...		80	253

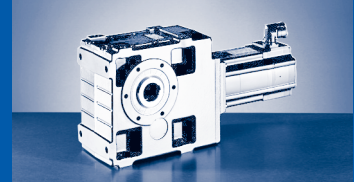


# GKS & [mm]

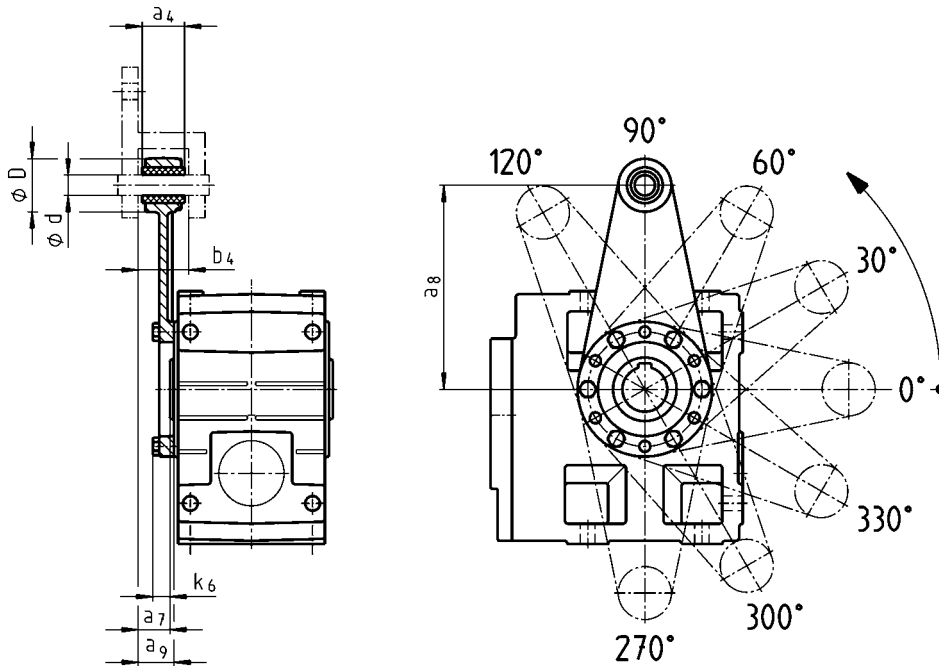
## Gearbox with 2nd output shaft end



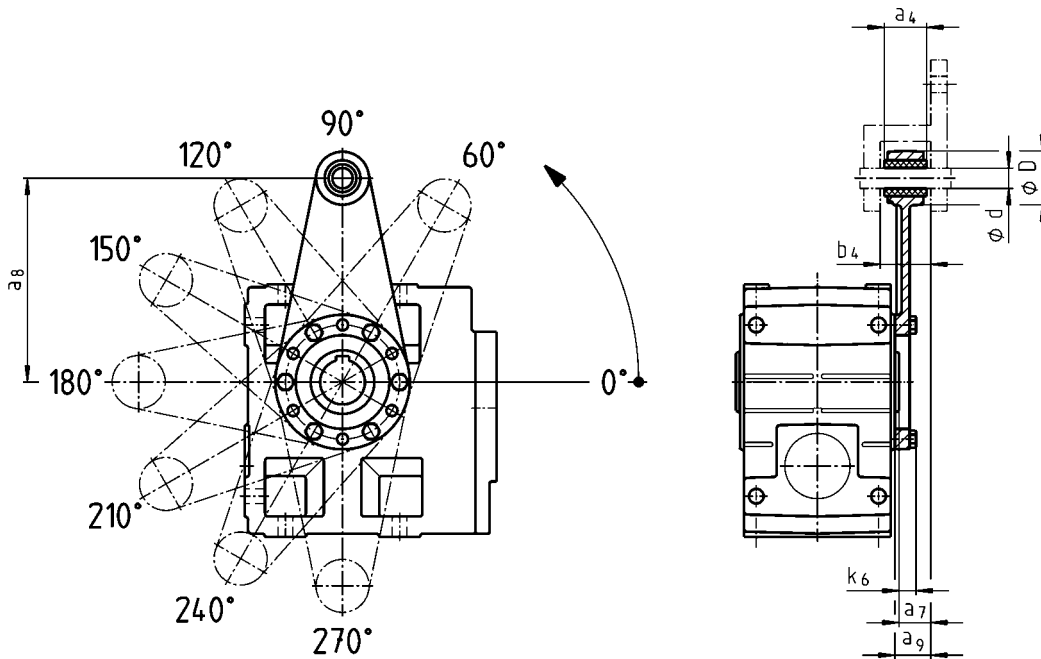
	d	l	i <sub>1</sub>	o <sub>1</sub>
GKS04...	25	50	52.5	215
GKS05...	30	60	64	260
GKS06...	40	80	85	320
GKS07...	50	100	105	400
GKS09...	60	120	125	480
GKS11...	80	160	166	610
GKS14...	100	200	207	750



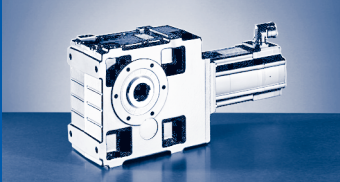
Torque plate at threaded pitch circle in position 3



Torque plate at threaded pitch circle in position 5

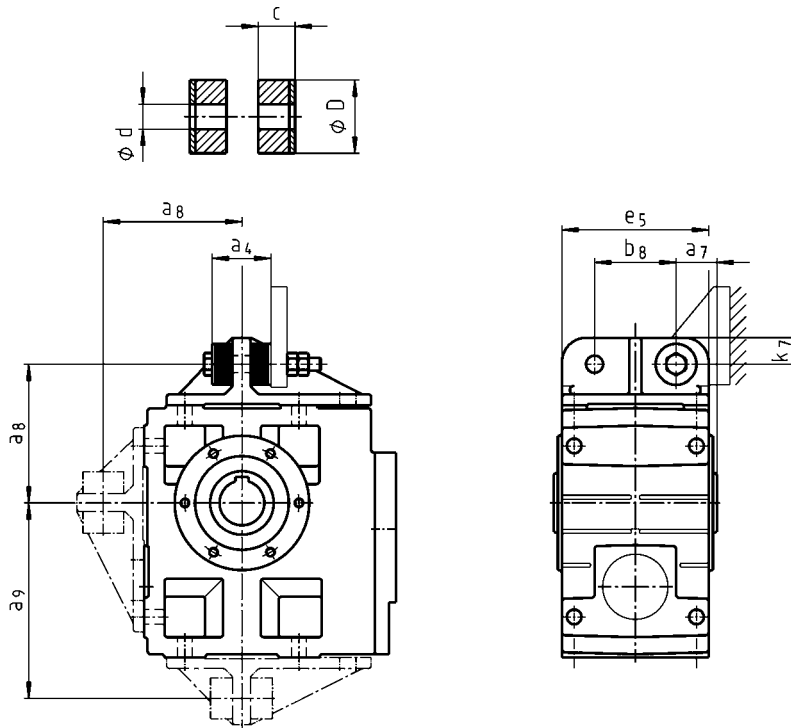


	Installation space							
	a <sub>7</sub>	b <sub>4</sub>	a <sub>4</sub>	a <sub>8</sub>	a <sub>9</sub>	d	D	k <sub>6</sub>
GKS04...	24	34.5	30	130	26.5	12	35	16
GKS05...	23.5	38.5	34	160	27.5	16	45	15
GKS06...	28	44.5	40	200	33	20	50	18
GKS07...	32.5	50.5	46	250	37.5	25	65	21

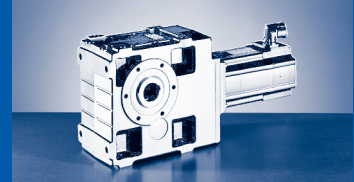


# GKS & [mm]

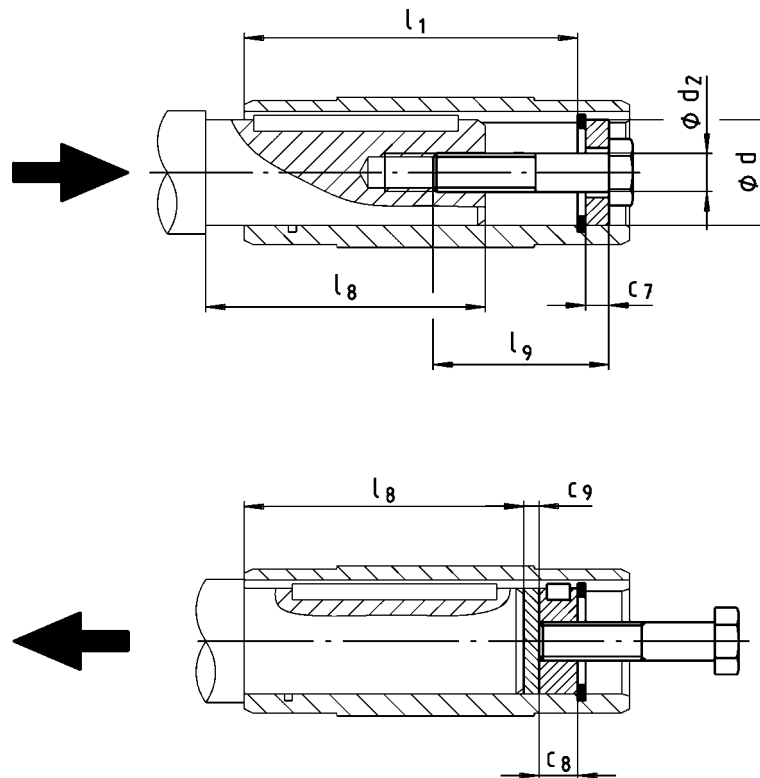
## Torque plate at casing foot in position 2, 4 or 6



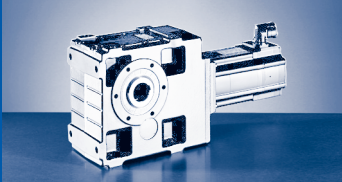
	$a_4$	$a_7$	$a_8$	$a_9$	$b_8$	$c$	$d$	$D$	$e_5$	$k_7$
GKS04...	41	27.5	106	135	60	14.5	11	30	100	20
GKS05...	45	35	115	160	70	15	13	40	127	25
GKS06...	72	40	145	195	80	27	17	50	145	28
GKS07...	78	50	170	240	100	28	21	60	180	35
GKS09...	86	60	214	300	120	29	26	72	222	46
GKS11...	94	72.5	260	375	145	30	33	92	270	55
GKS14...	100	85	320	465	180		39	110	328	70



### Mounting set for hollow shaft circlip Proposed design for auxiliary tools

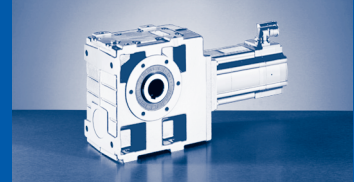


	Hollow shaft		Hollow shaft circlip mounting set (Assembly auxiliaries)			Auxiliary tools Disassembly		Machine shaft
	d	l <sub>1</sub>	d <sub>2</sub>	l <sub>9</sub>	c <sub>7</sub>	c <sub>8</sub>	c <sub>9</sub>	max l <sub>8</sub>
	H7							
GKS04...	25	100	M10	40	5	10	3	85
GKS05...	30				6			
	35	124	M12	50	7	12	4	107
GKS06...	40				8			
	45	140	M16	60	9	16	5	118
GKS07...	50				10			
	55	175	M20	80	11	20	6	148
GKS09...	60				13			
	70	210	M20	80	14	20	6	182
GKS11...	80				16			
GKS14...	100	305	M24	100	20	24	8	221



GKS & [mm]





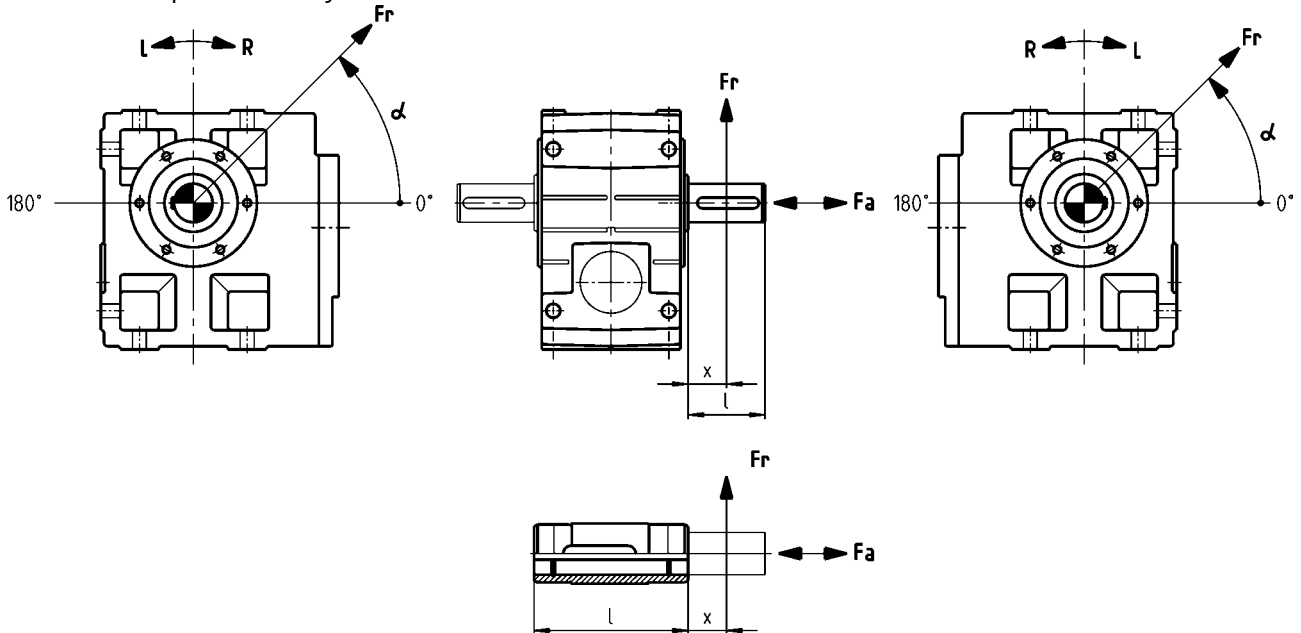
**Permissible radial force**

$$Fr_{zul} = \min(f_w \times f_{\alpha} \times Fr_{Tab}; f_w \times Fr_{max})$$

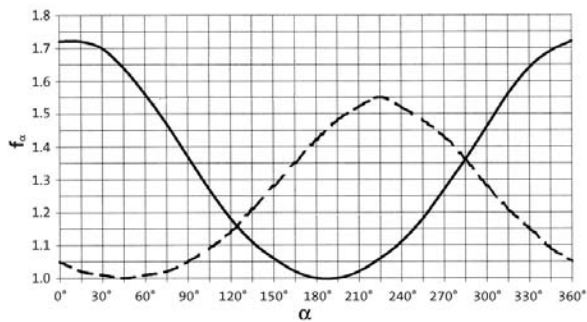
**Permissible axial force**

$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$

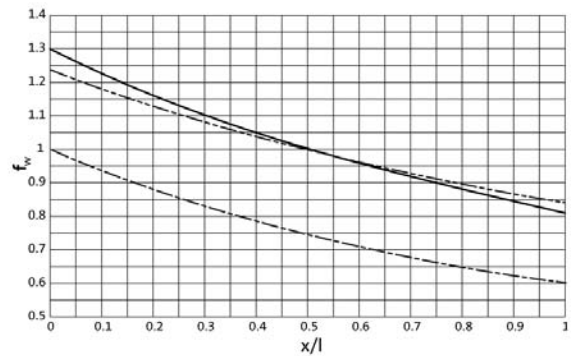
At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office.



**Effective direction factor  $f_{\alpha}$  at output shaft**

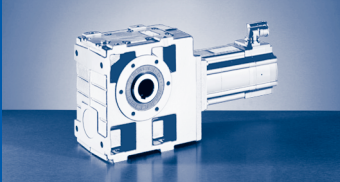


**Additional load factor  $f_w$  at output shaft**



— Direction of rotation R  
 - - - Direction of rotation L

— Solid shaft (V□R)  
 - - - Solid shaft with flange (V□K)  
 - · - Hollow shaft (H□□)



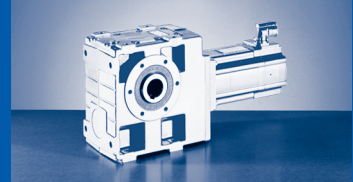
# GSS [N]

Solid shaft without flange (V□R) Application of force Fr: centre of shaft journal (x = l/2) Fa <sub>Tab</sub> only valid for Fr = 0								
	GSS04-2		GSS05-2/3		GSS06-2/3		GSS07-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
630	2200	2200	2300	1600	3400	1900	3700	1800
400	2400	2900	2500	2200	3500	2500	4000	2400
250	3000	3700	2900	2800	3600	3200	4200	3100
160	3500	4200	3400	3500	4200	4100	5100	4100
100	4100	4900	4000	4400	5000	5200	6300	5500
63	4200	5500	4300	5500	5900	6500	7700	7200
40	4200	5500	4300	6000	6900	8200	9300	9500
25	4200	5500	4300	6000	8200	9000	11300	12500
≤ 16	4200	5500	4300	6000	8500	9000	12000	12500
Fr <sub>max</sub>	4200	-	4300	-	8500	-	12000	-

Solid shaft with flange (V□K) Application of force Fr: centre of shaft journal (x = l/2) Fa <sub>Tab</sub> only valid for Fr = 0								
	GSS04-2		GSS05-2/3		GSS06-2/3		GSS07-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
630	2750	2100	3450	1500	5100	1600	5500	1400
400	3000	2800	3750	2000	5250	2200	6000	1900
250	4100	3500	4900	2500	7000	2800	7900	2400
160	4400	4000	4900	3100	8100	3500	9100	3200
100	4700	4200	4900	4000	9400	4500	10600	4300
63	4700	4200	4900	4900	9400	5700	12400	5900
40	4700	4200	4900	5500	9400	7300	14000	8000
25	4700	4200	4900	5500	9400	8800	14000	10000
≤ 16	4700	4200	4900	5500	9400	8800	14000	10000
Fr <sub>max</sub>	4700	-	4900	-	9400	-	14000	-

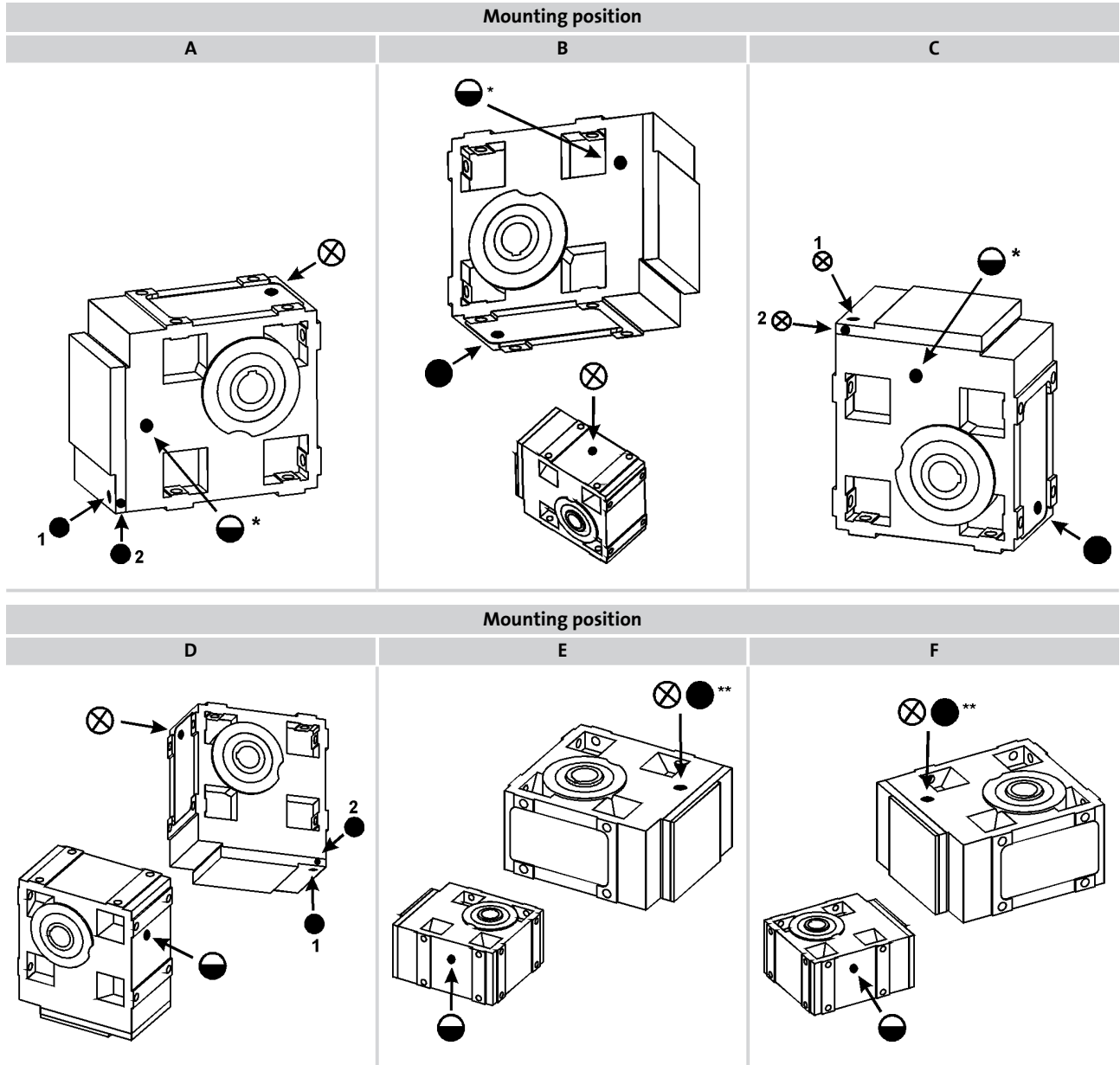
Hollow shaft (H□□) Application of force Fr: on hollow shaft end face (x = 0) Fa <sub>Tab</sub> only valid for Fr = 0								
	GSS04-2		GSS05-2/3		GSS06-2/3		GSS07-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
630	2800	2200	3000	1600	4400	1900	4600	1800
400	3000	2900	3200	2200	4600	2500	5100	2400
250	3800	3700	3600	2800	4800	3200	5600	3100
160	4500	4200	4300	3500	5600	4100	6700	4100
100	5300	4900	5100	4400	6600	5200	8200	5500
63	6000	5500	6000	5500	7700	6500	10000	7200
40	6000	5500	7000	6000	9100	8200	12100	9500
25	6000	5500	7500	6000	10700	9000	14800	12500
≤ 16	6000	5500	7500	6000	11500	9000	16000	12500
Fr <sub>max</sub>	6000	-	7500	-	11500	-	16000	-

- ▶ Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).



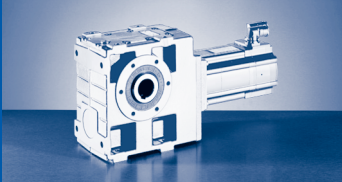
**Position of ventilation, sealing elements and oil control**

GSS05...07-2



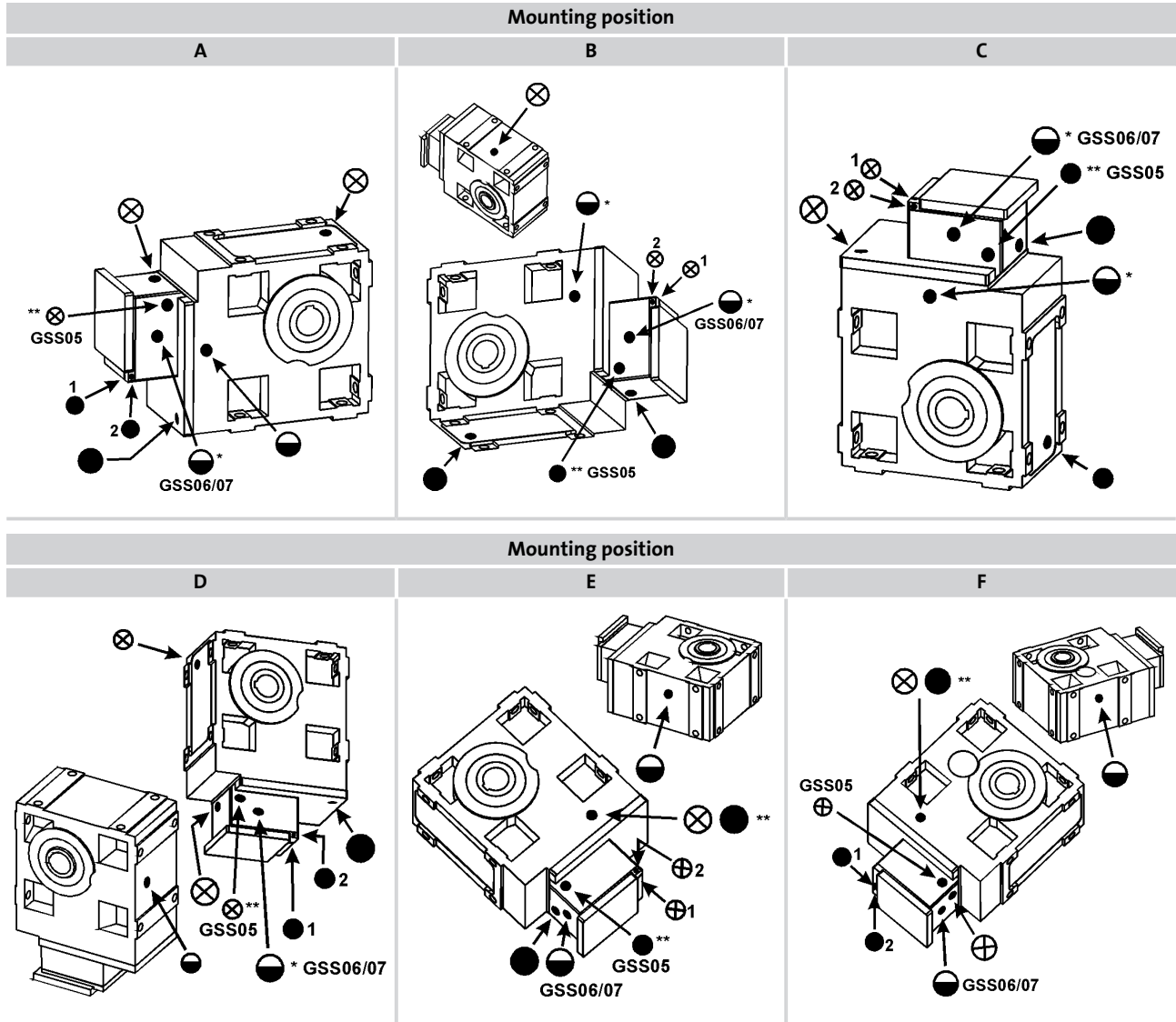
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ◐ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GSS05-2A □□□ 14LC□□



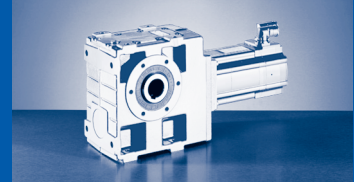
Position of ventilation, sealing elements and oil control

GSS05...07-3



- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ⊖ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GSS07-3A □□□ 14LC□□



## GSS□□-2S HAR/HBR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GSS04...	14	15		17	18	19	21							
GSS05...	22	23		25	26	27	29	28			32			35
GSS06...	35	36		38	39	40	42	41			44			47
GSS07...				63	64	65	67	66			69			72

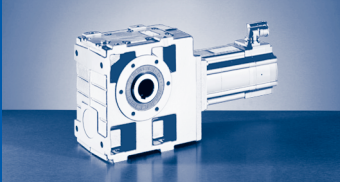
	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GSS06...	46		51		55		60							
GSS07...	71		76		81		86		88		95			105

## GSS□□-3S HAR/HBR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GSS05...	25		26	28		29	31							
GSS06...	40		41	43		44	46							
GSS07...	67	68	69	70	71	72		74			77			80

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GSS [kg]

### GSS□□-2A HAR/HBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GSS04...	18	23	24						
GSS05...	28	32	33	37		39			
GSS06...	40	44	45	50		52		58	
GSS07...	65	69	70	75		77		82	

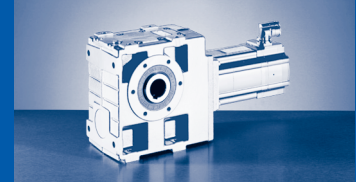
	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GSS06...	60									
GSS07...	85		106		109		123		126	

### GSS□□-3A HAR/HBR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10
GSS05...	28	33	35				
GSS06...	44	48	50				
GSS07...	73	77	78		82		84

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8			0.9							
...P2				0.5			1.2							
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2			0.3							

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
...P1	1.9						1.5							
...P2	3.1									4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN	0.3													

### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6			0.7		

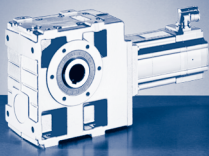
  

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
...P1/P5	2.4		4.8			5.0				
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0			1.1				

### Additional weights gearbox

	Solid shaft	2nd output shaft end	Hollow shaft with shrink disc	Flange	Casing foot torque plate	Threaded hole circle torque plate
	V□□	V□□	S□□	□□K		
GSS04...	0.6	0.2	0.6	2.5	1.3	0.9
GSS05...	1	0.3	0.8	4	2.2	1.3
GSS06...	2.5	0.8	1	7	3.7	2.1
GSS07...	5	1.5	1.5	11	6.6	3.7

Weights in [kg]

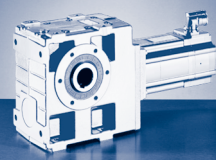


# GSS [ i ]

►  $i_g = z_g / z_t$

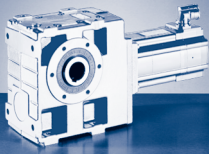
	i	$z_g$	$z_t$
GSS04-2	5.639	1015	180
	7.733	1160	150
	9.042	1085	120
	9.897	1247	126
	10.827	1624	150
	12.400	1240	100
	13.810	1740	126
	15.869	1333	84
	17.360	1736	100
	20.417	1225	60
	22.143	1860	84
	24.800	1240	50
	27.125	1953	72
	31.738	1333	42
	34.100	2046	60
	39.200	1960	50
	43.917	2108	48
	50.000	2100	42
	54.250	1953	36
	61.250	2205	
	68.200	2046	30
	77.000	2310	
	87.833	2108	24
	99.167	2380	
111.318	2449	22	
125.682	2765		
139.500	2511	18	
157.500	2835		
183.786	2573	14	
207.500	2905		
GSS05-2	5.639	1015	180
	7.733	1160	150
	9.042	1085	120
	9.897	1247	126
	10.827	1624	150
	12.400	1240	100
	13.810	1740	126
	15.869	1333	84
	17.360	1736	100
	20.417	1225	60
	22.143	1860	84
	24.800	1240	50
	27.125	1953	72
	31.738	1333	42
	35.306	2542	72
	39.200	1960	50





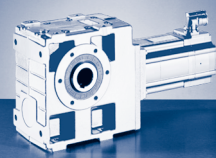
$$\triangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
GSS05-2	43.917	2108	48
	50.000	2100	42
	54.250	1953	
	61.250	2205	
	70.611	2542	36
	79.722	2870	
	87.833	2108	
	99.167	2380	
	113.667	2728	24
	128.333	3080	
	137.950	2759	
	155.750	3115	20
	176.313	2821	
	199.063	3185	16
GSS05-3	125.476	126480	1008
	153.708	132804	864
	193.233	139128	720
	222.133	133280	600
	250.952	126480	
	283.333	142800	504
	307.417	132804	
	347.083	149940	432
	386.467	139128	
	436.333	157080	360
	497.722	143344	
	561.944	161840	288
	630.803	166532	
	712.197	188020	264
	790.500	170748	
	892.500	192780	216
	1041.452	174964	
	1175.833	197540	168
GSS06-2	5.833	1050	180
	8.000	1200	150
	9.042	1085	120
	10.238	1290	126
	11.200	1680	150
	12.400	1240	100
	14.286	1800	126
	15.869	1333	84
	17.360	1736	100
	20.417	1225	60
	22.143	1860	84
	24.800	1240	50
	27.125	1953	72
	31.738	1333	42



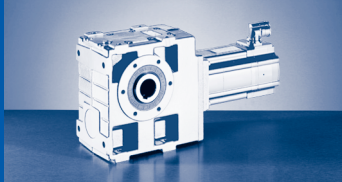
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$	
GSS06-2	35.306	2542	72	
	39.200	1960	50	
	43.917	2108	48	
	50.000	2100	42	
	54.250	1953	36	
	61.250	2205		
	70.611	2542		
	79.722	2870	24	
	87.833	2108		
	99.167	2380		
	113.667	2728	20	
	128.333	3080		
	137.950	2759		
	155.750	3115	16	
	174.375	2790		
	196.875	3150		
	GSS06-3	126.531	111600	882
		142.857	126000	756
155.000		117180		
175.000		132300		
194.857		122760	630	
220.000		138600		
238.700		128898		
269.500		145530	540	
310.689		167772		
350.778		189420		
386.467		139128	360	
436.333		157080		
497.722		143344		
561.944		161840	288	
630.803		166532		
712.197		188020		
816.333		215512	264	
921.667		243320		
1023.000		220968		
1155.000		249480	216	
1241.550	223479			
1401.750	252315			
1635.693	228997	180		
1846.750	258545			
5.862	1020		174	
GSS07-2	8.125	1170	144	
	9.086	1054	116	
	10.000	1260	126	
	11.200	1680	150	
	12.594	1209	96	
	14.286	1800	126	



$$\blacktriangleright i_g = z_g / z_t$$

	i	$z_g$	$z_t$
<b>GSS07-2</b>	15.500	1302	84
	17.360	1736	100
	20.517	1190	58
	22.143	1860	84
	25.188	1209	48
	27.125	1953	72
	31.000	1302	42
	35.306	2542	72
	39.200	1960	50
	43.271	2077	48
	50.000	2100	42
	54.250	1953	
	61.250	2205	36
	70.611	2542	
	79.722	2870	
	86.542	2077	
	97.708	2345	
	113.667	2728	24
	128.333	3080	
	137.950	2759	
155.750	3115	20	
174.375	2790		
196.875	3150	16	
<b>GSS07-3</b>	126.531	111600	882
	142.857	126000	
	155.000	117180	
	175.000	132300	
	201.746	152520	756
	227.778	172200	
	247.139	160146	
	279.028	180810	
	321.673	208444	648
	363.179	235340	
	394.245	170314	
	445.116	192290	432
	490.403	141236	
	553.681	159460	
	634.639	182776	
	716.528	206360	288
	833.556	240064	
	941.111	271040	
	1011.633	242792	240
	1142.167	274120	
1227.755	245551		
1386.175	277235	200	
1569.181	251069		
1771.656	283465	160	



# GSS [Nm]

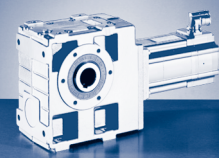
## GSS□□-□S (MCS)

$M_{2GN} \leq 180 \text{ Nm}$

GSS04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
5.639	86	1.12	$M_2$			7				
			c			5.8				
			$n_{2 \text{ Eck}}$			718				
			$n_{2 \text{ th}}$			718				
5.639	144	1.12	$M_2$				11	15	19	22
			c				3.8	2.8	2.3	2.0
			$n_{2 \text{ Eck}}$				718	665	718	718
			$n_{2 \text{ th}}$				718	665	718	718
7.733	158	0.65	$M_2$				15	21	26	31
			c				4.7	3.5	2.8	2.4
			$n_{2 \text{ Eck}}$				524	485	524	524
			$n_{2 \text{ th}}$				524	485	524	524
9.042	154	0.81	$M_2$				18	24	30	35
			c				5.3	3.9	3.2	2.7
			$n_{2 \text{ Eck}}$				448	415	448	448
			$n_{2 \text{ th}}$				448	415	448	448
9.897	161	0.43	$M_2$				20	27	33	39
			c				5.0	3.7	3.0	2.5
			$n_{2 \text{ Eck}}$				409	379	409	409
			$n_{2 \text{ th}}$				409	379	409	409
10.827	161	0.37	$M_2$				21	29	36	43
			c				5.0	3.7	3.0	2.6
			$n_{2 \text{ Eck}}$				374	346	374	374
			$n_{2 \text{ th}}$				374	346	374	374
12.400	170	0.49	$M_2$				24	33	41	49
			c				4.8	3.5	2.9	2.4
			$n_{2 \text{ Eck}}$				327	302	327	327
			$n_{2 \text{ th}}$				327	302	327	327
13.810	163	0.25	$M_2$				27	38	46	55
			c				5.0	3.7	3.0	2.6
			$n_{2 \text{ Eck}}$				293	272	293	293
			$n_{2 \text{ th}}$				293	272	293	293
15.869	180	0.33	$M_2$				31	43	53	63
			c				4.1	3.0	2.5	2.1
			$n_{2 \text{ Eck}}$				255	236	255	255
			$n_{2 \text{ th}}$				255	236	255	255
17.360	180	0.28	$M_2$			22	34	47	58	69
			c			5.9	3.8	2.9	2.3	2.0
			$n_{2 \text{ Eck}}$			233	233	216	233	233
			$n_{2 \text{ th}}$			233	233	216	233	233
20.417	153	0.67	$M_2$		19	24	37	50	62	73
			c		5.4	4.3	2.8	2.1	1.7	1.4
			$n_{2 \text{ Eck}}$		198	198	198	184	198	198
			$n_{2 \text{ th}}$		198	198	198	184	198	198
22.143	180	0.20	$M_2$			28	44	60	74	87
			c			5.0	3.3	2.4	2.0	1.7
			$n_{2 \text{ Eck}}$			183	183	169	183	183
			$n_{2 \text{ th}}$			183	183	169	183	183
24.800	171	0.42	$M_2$		23	30	46	63	77	91
			c		4.9	3.9	2.6	1.9	1.6	1.3
			$n_{2 \text{ Eck}}$		163	163	163	151	163	163
			$n_{2 \text{ th}}$		163	163	163	151	163	163

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

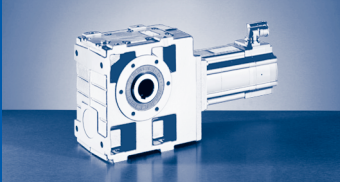


$M_{2GN} \leq 180 \text{ Nm}$

GSS04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
27.125	180	0.14	$M_2$		27	35	54	73	90	107
			c		5.5	4.4	2.9	2.1	1.7	1.5
			$n_2$ Eck		149	149	149	138	149	149
			$n_2$ th		149	149	149	138	149	149
31.738	180	0.29	$M_2$		30	38	59	80	99	117
			c		4.2	3.3	2.2	1.6	1.3	1.1
			$n_2$ Eck		128	128	128	118	128	128
			$n_2$ th		128	128	128	118	128	128
34.100	180	0.10	$M_2$		34	44				
			c		4.7	3.8				
			$n_2$ Eck		119	119				
			$n_2$ th		119	119				
39.200	180	0.25	$M_2$		37	46	72	97	119	
			c		3.6	2.9	1.9	1.4	1.1	
			$n_2$ Eck		103	103	103	96	103	
			$n_2$ th		103	103	103	96	103	
43.917	180	0.06	$M_2$		45	56				
			c		3.9	3.1				
			$n_2$ Eck		92	92				
			$n_2$ th		92	92				
50.000	180	0.17	$M_2$		47	59	91	123		
			c		3.1	2.4	1.6	1.2		
			$n_2$ Eck		81	81	81	75		
			$n_2$ th		81	81	81	75		
54.250	180	0.13	$M_2$	25	52	65	101	136		
			c	5.9	3.0	2.4	1.6	1.2		
			$n_2$ Eck	75	75	75	75	69		
			$n_2$ th	75	75	75	75	69		
61.250	180	0.13	$M_2$	28	57	72	111	150		
			c	5.4	2.7	2.2	1.4	1.0		
			$n_2$ Eck	66	66	66	66	61		
			$n_2$ th	66	66	66	66	61		
68.200	180	0.09	$M_2$	31	65	81				
			c	5.1	2.6	2.1				
			$n_2$ Eck	59	59	59				
			$n_2$ th	59	59	59				
77.000	180	0.09	$M_2$	35	71	90				
			c	4.7	2.3	1.9				
			$n_2$ Eck	53	53	53				
			$n_2$ th	53	53	53				
87.833	180	0.06	$M_2$	40	83	104				
			c	4.3	2.1	1.7				
			$n_2$ Eck	46	46	46				
			$n_2$ th	46	46	46				
99.167	180	0.06	$M_2$	45	92	115				
			c	3.9	1.9	1.6				
			$n_2$ Eck	41	41	41				
			$n_2$ th	41	41	41				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GSS [Nm]

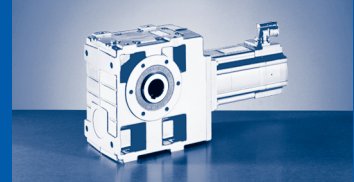
## GSS□□-□S (MCS)

$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	
				...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	
5.639	175	2.82	$M_2$						18	22	
			c						5.7	4.8	
			$n_{2 \text{ Eck}}$							718	718
			$n_{2 \text{ th}}$							718	718
5.639	223	2.82	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
7.733	212	1.66	$M_2$						25	30	
			c						5.2	4.4	
			$n_{2 \text{ Eck}}$						524	524	
			$n_{2 \text{ th}}$						524	524	
7.733	267	1.66	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
9.042	251	2.01	$M_2$				17	23	29	34	
			c				5.8	4.3	3.5	3.0	
			$n_{2 \text{ Eck}}$				448	415	448	448	
			$n_{2 \text{ th}}$				448	415	448	448	
9.897	228	1.10	$M_2$					26	33	39	
			c					5.9	4.8	4.1	
			$n_{2 \text{ Eck}}$					379	409	409	
			$n_{2 \text{ th}}$					379	409	409	
9.897	271	1.10	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
10.827	238	0.94	$M_2$					29	36	43	
			c					5.7	4.7	4.0	
			$n_{2 \text{ Eck}}$					346	374	374	
			$n_{2 \text{ th}}$					346	374	374	
10.827	272	0.94	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
12.400	279	1.24	$M_2$					32	40	48	
			c					4.9	4.0	3.4	
			$n_{2 \text{ Eck}}$					302	327	327	
			$n_{2 \text{ th}}$					302	327	327	
13.810	256	0.64	$M_2$					37	46	55	
			c					5.3	4.4	3.7	
			$n_{2 \text{ Eck}}$					272	293	293	
			$n_{2 \text{ th}}$					272	293	293	
13.810	275	0.64	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
15.869	301	0.84	$M_2$					42	51	61	
			c					4.9	4.0	3.4	
			$n_{2 \text{ Eck}}$					236	255	255	
			$n_{2 \text{ th}}$					236	255	255	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

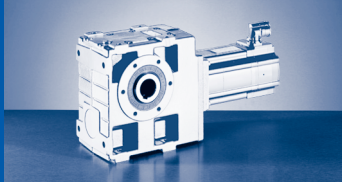


$M_{2GN} \leq 360 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GSS05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c			
							$n_{2\text{ Eck}}$	2.82	175	5.639
							$n_{2\text{ th}}$			
	21	50	40	37	68	55	$M_2$ c			
	5.1	4.4	3.4	2.9	2.5	2.0	$n_{2\text{ Eck}}$	2.82	223	5.639
	718	266	532	625	346	718	$n_{2\text{ th}}$			
	718	266	532	625	346	718	$M_2$ c			
							$n_{2\text{ Eck}}$	1.66	212	7.733
							$n_{2\text{ th}}$			
37	29	69	55	51	94	76	$M_2$ c			
5.7	4.6	3.8	3.0	2.6	2.3	1.8	$n_{2\text{ Eck}}$	1.66	267	7.733
252	524	194	388	456	252	524	$n_{2\text{ th}}$			
252	524	194	388	456	252	524	$M_2$ c			
42	33	78	62	58	106	86	$n_{2\text{ Eck}}$	2.01	251	9.042
5.1	3.1	3.1	2.6	1.8	2.1	1.2	$n_{2\text{ th}}$			
216	448	166	332	390	216	448	$M_2$ c			
216	448	166	332	390	216	448	$n_{2\text{ Eck}}$	1.10	228	9.897
							$n_{2\text{ th}}$			
47	37	89	71	66	120	98	$M_2$ c			
5.2	4.2	3.0	2.8	2.4	2.1	1.7	$n_{2\text{ Eck}}$	1.10	271	9.897
197	409	152	303	356	197	409	$n_{2\text{ th}}$			
197	409	152	303	356	197	409	$M_2$ c			
							$n_{2\text{ Eck}}$	0.94	238	10.827
							$n_{2\text{ th}}$			
52	41	97	77	73	132	107	$M_2$ c			
4.9	4.1	2.8	2.8	2.4	2.0	1.6	$n_{2\text{ Eck}}$	0.94	272	10.827
180	374	139	277	326	180	374	$n_{2\text{ th}}$			
180	374	139	277	326	180	374	$M_2$ c			
58	45	108	86	81	147	119	$n_{2\text{ Eck}}$	1.24	279	12.400
4.1	3.5	2.5	2.5	2.0	1.7	1.4	$n_{2\text{ th}}$			
157	327	121	242	284	157	327	$M_2$ c			
157	327	121	242	284	157	327	$n_{2\text{ Eck}}$	0.64	256	13.810
							$n_{2\text{ th}}$			
67	52	125	99	93	170	138	$M_2$ c			
3.9	3.8	2.2	2.6	2.2	1.6	1.5	$n_{2\text{ Eck}}$	0.64	275	13.810
141	293	109	217	255	141	293	$n_{2\text{ th}}$			
141	293	109	217	255	141	293	$M_2$ c			
75	58	139	111	104	189	153	$n_{2\text{ Eck}}$	0.84	301	15.869
3.5	3.5	2.1	2.1	2.0	1.4	1.4	$n_{2\text{ th}}$			
123	255	95	189	222	123	255	$M_2$ c			
123	255	95	189	222	123	255	$n_{2\text{ Eck}}$			
							$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□S (MCS)

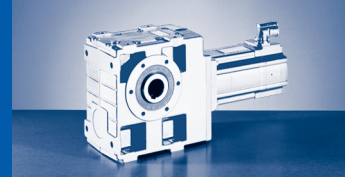
$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41		
				...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50		
			$n_1$	4050	4050	4050	4050	3750	4050	4050		
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4		
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90		
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83		
17.360	311	0.72	$M_2$					46	56	67		
			c				4.6	3.8	3.2			
			$n_{2 \text{ Eck}}$				216	233	233			
			$n_{2 \text{ th}}$				216	233	233			
20.417	253	1.60	$M_2$				35	48	59	70		
			c				3.6	2.6	2.2	1.8		
			$n_{2 \text{ Eck}}$				198	184	198	198		
			$n_{2 \text{ th}}$				198	184	198	198		
22.143	337	0.50	$M_2$				43	59	73	87		
			c				5.3	3.9	3.2	2.7		
			$n_{2 \text{ Eck}}$				183	169	183	183		
			$n_{2 \text{ th}}$				183	169	183	183		
24.800	280	1.06	$M_2$				44	61	75	89		
			c				3.8	2.9	2.3	2.0		
			$n_{2 \text{ Eck}}$				163	151	163	163		
			$n_{2 \text{ th}}$				163	151	163	163		
27.125	360	0.38	$M_2$				53	73	90	107		
			c				4.6	3.4	2.8	2.4		
			$n_{2 \text{ Eck}}$				149	138	149	149		
			$n_{2 \text{ th}}$				149	138	149	149		
31.738	306	0.73	$M_2$			37	58	79	97	115		
			c				5.4	3.5	2.6	2.1	1.8	
			$n_{2 \text{ Eck}}$				128	128	118	128	128	
			$n_{2 \text{ th}}$				128	128	118	128	128	
35.306	296	0.23	$M_2$			44						
			c				5.9					
			$n_{2 \text{ Eck}}$				115					
			$n_{2 \text{ th}}$				115					
35.306	360	0.23	$M_2$				70	95	117	139		
			c				3.9	2.9	2.4	2.0		
			$n_{2 \text{ Eck}}$				115	106	115	115		
			$n_{2 \text{ th}}$				115	106	115	115		
39.200	323	0.61	$M_2$		35	45	70	96	118	140		
			c				5.9	4.7	3.1	2.3	1.9	1.6
			$n_{2 \text{ Eck}}$				103	103	96	103	103	
			$n_{2 \text{ th}}$				103	103	96	103	103	
43.917	306	0.17	$M_2$			56						
			c				5.1					
			$n_{2 \text{ Eck}}$				92					
			$n_{2 \text{ th}}$				92					
43.917	360	0.17	$M_2$				87	119	146	174		
			c				3.4	2.5	2.0	1.7		
			$n_{2 \text{ Eck}}$				92	85	92	92		
			$n_{2 \text{ th}}$				92	85	92	92		
50.000	353	0.44	$M_2$		46	58	91	123	152	181		
			c				5.0	4.0	2.6	1.9	1.6	1.3
			$n_{2 \text{ Eck}}$				81	81	81	81	81	
			$n_{2 \text{ th}}$				81	81	81	81	81	
54.250	360	0.34	$M_2$		51	65	101	137	169	200		
			c				4.8	3.8	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$				75	75	75	69	75	75
			$n_{2 \text{ th}}$				75	75	75	69	75	75

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



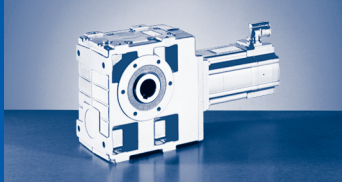


$M_{2GN} \leq 360 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GSS05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
83	64	152	122	114	207	168	c	0.72	311	17.360
3.3	3.3	2.0	2.0	1.9	1.3		$n_{2\text{Eck}}$			
112	233	86	173	203	112	233	$n_{2\text{th}}$			
112	233	86	173	203	112	233	$M_2$			
88	67	163	128	118	220		c	1.60	253	20.417
2.5	1.9	1.5	1.4	1.1	1.0		$n_{2\text{Eck}}$			
96	198	74	147	173	96		$n_{2\text{th}}$			
96	198	73	147	173	96		$M_2$			
106	83	195	156	146	265	215	c	0.50	337	22.143
2.8	2.8	1.7	1.7	1.6	1.1	1.1	$n_{2\text{Eck}}$			
88	183	68	136	159	88	183	$n_{2\text{th}}$			
88	183	68	135	159	88	183	$M_2$			
110	85	203	161	150			c	1.06	280	24.800
2.2	2.1	1.4	1.3	1.2			$n_{2\text{Eck}}$			
79	163	61	121	142			$n_{2\text{th}}$			
79	163	60	121	142			$M_2$			
130	102	240	192	180			c	0.38	360	27.125
2.4	2.5	1.5	1.5	1.4			$n_{2\text{Eck}}$			
72	149	55	111	130			$n_{2\text{th}}$			
72	149	55	111	130			$M_2$			
142	110	261	208	194			c	0.73	306	31.738
1.9	1.9	1.2	1.1	1.1			$n_{2\text{Eck}}$			
61	128	47	95	111			$n_{2\text{th}}$			
61	128	47	95	111			$M_2$			
							c	0.23	296	35.306
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
							$M_2$			
							c	0.23	360	35.306
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
173	134	317					$M_2$			
1.6	1.6	1.0					c	0.61	323	39.200
50	103	38					$n_{2\text{Eck}}$			
50	103	38					$n_{2\text{th}}$			
							$M_2$			
							c	0.17	306	43.917
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
							$M_2$			
							c	0.17	360	43.917
							$n_{2\text{Eck}}$			
							$n_{2\text{th}}$			
221	172						$M_2$			
1.4	1.4						c	0.44	353	50.000
39	81						$n_{2\text{Eck}}$			
39	81						$n_{2\text{th}}$			
245	191						$M_2$			
1.3	1.3						c	0.34	360	54.250
36	75						$n_{2\text{Eck}}$			
36	75						$n_{2\text{th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

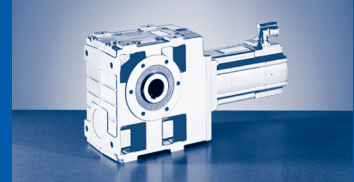
## GSS□□-□S (MCS)

$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
61.250	360	0.33	$M_2$		57	72	112	152	187	222
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		66	66	66	61	66	66
			$n_{2 \text{ th}}$		66	66	66	61	66	66
70.611	360	0.21	$M_2$		67	85	132	179	220	262
			c		4.1	3.2	2.1	1.6	1.3	1.1
			$n_{2 \text{ Eck}}$		57	57	57	53	57	57
			$n_{2 \text{ th}}$		57	57	57	53	57	57
79.722	360	0.21	$M_2$		75	94	147	199	245	
			c		3.7	3.0	1.9	1.4	1.2	
			$n_{2 \text{ Eck}}$		51	51	51	47	51	
			$n_{2 \text{ th}}$		51	51	51	47	51	
87.833	360	0.15	$M_2$		84	106	165	223	275	
			c		3.5	2.8	1.8	1.4	1.1	
			$n_{2 \text{ Eck}}$		46	46	46	43	46	
			$n_{2 \text{ th}}$		46	46	46	43	46	
99.167	360	0.15	$M_2$		94	118	183	248	305	
			c		3.2	2.6	1.7	1.3	1.0	
			$n_{2 \text{ Eck}}$		41	41	41	38	41	
			$n_{2 \text{ th}}$		41	41	41	38	41	
113.667	360	0.10	$M_2$	53	110	138				
			c	6.0	3.0	2.4				
			$n_{2 \text{ Eck}}$	36	36	36				
			$n_{2 \text{ th}}$	36	36	36				
128.333	360	0.09	$M_2$	59	122	154				
			c	5.5	2.8	2.2				
			$n_{2 \text{ Eck}}$	32	32	32				
			$n_{2 \text{ th}}$	32	32	32				
137.950	360	0.07	$M_2$	65	134	168				
			c	5.3	2.6	2.1				
			$n_{2 \text{ Eck}}$	29	29	29				
			$n_{2 \text{ th}}$	29	29	29				
155.750	360	0.07	$M_2$	72	149	187				
			c	4.8	2.4	1.9				
			$n_{2 \text{ Eck}}$	26	26	26				
			$n_{2 \text{ th}}$	26	26	26				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

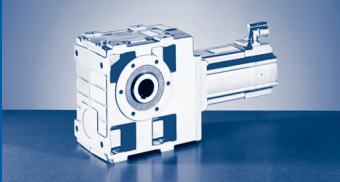


$M_{2GN} \leq 360 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GSS05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
272	212						c	0.33	360	61.250
1.2	1.2						$n_{2 \text{ Eck}}$			
32	66						$n_{2 \text{ th}}$			
32	66						$M_2$			
							c	0.21	360	70.611
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.21	360	79.722
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.15	360	87.833
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.15	360	99.167
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.10	360	113.667
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.09	360	128.333
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.07	360	137.950
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.07	360	155.750
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□S (MCS)

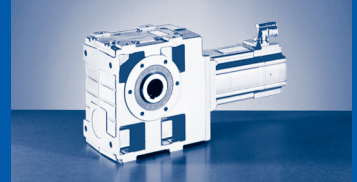
$M_{2GN} \leq 360 \text{ Nm}$

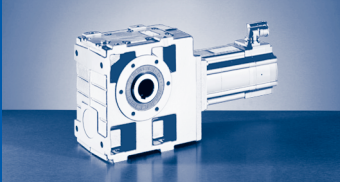
GSS05-3S				06CC41	06FC41	06IC41	09DC41
				...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$				
			$n_1$	4050	4050	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6
			$I_{M400}$	1.3	1.5	1.6	2.3
			$P_N$	0.25	0.51	0.64	1.00
			$J_M$	0.17	0.25	0.33	1.13
125.476	339	0.15	$M_2$	63	129	163	251
			c	4.0	2.0	1.6	1.0
			$n_2$ Eck	32	32	32	32
			$n_2$ th	32	32	32	32
153.708	356	0.12	$M_2$	77	158	198	
			c	3.5	1.7	1.4	
			$n_2$ Eck	26	26	26	
			$n_2$ th	26	26	26	
193.233	360	0.08	$M_2$	97	197	247	
			c	3.0	1.5	1.2	
			$n_2$ Eck	21	21	21	
			$n_2$ th	21	21	21	
222.133	360	0.21	$M_2$	103	210	263	
			c	3.4	1.7	1.4	
			$n_2$ Eck	18	18	18	
			$n_2$ th	18	18	18	
250.952	360	0.15	$M_2$	118	240	301	
			c	3.0	1.5	1.2	
			$n_2$ Eck	16	16	16	
			$n_2$ th	16	16	16	
283.333	360	0.15	$M_2$	130	265	332	
			c	2.7	1.3	1.1	
			$n_2$ Eck	14	14	14	
			$n_2$ th	14	14	14	
307.417	360	0.12	$M_2$	143	291		
			c	2.5	1.2		
			$n_2$ Eck	13	13		
			$n_2$ th	13	13		
347.083	360	0.11	$M_2$	158	321		
			c	2.2	1.1		
			$n_2$ Eck	12	12		
			$n_2$ th	12	12		
386.467	360	0.08	$M_2$	178			
			c	2.0			
			$n_2$ Eck	11			
			$n_2$ th	10			
436.333	360	0.08	$M_2$	197			
			c	1.8			
			$n_2$ Eck	9			
			$n_2$ th	9			
497.722	360	0.05	$M_2$	226			
			c	1.6			
			$n_2$ Eck	8			
			$n_2$ th	8			
561.944	360	0.05	$M_2$	249			
			c	1.4			
			$n_2$ Eck	7			
			$n_2$ th	7			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

**GSS [Nm]**  
GSS□□-□S (MCS)





# GSS [Nm]

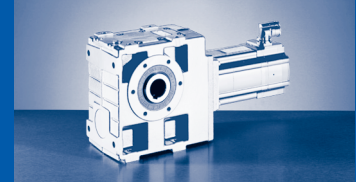
## GSS□□-□S (MCS)

$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
5.833	308	6.97	$M_2$								22	51	41	
			c								5.4	5.8	4.5	
			$n_{2 \text{ Eck}}$								694	257	514	
5.833	356	6.97	$n_{2 \text{ th}}$								694	257	514	
			$M_2$											
			c											
8.000	353	4.22	$n_{2 \text{ Eck}}$									71	56	
			$n_{2 \text{ th}}$										4.8	4.6
			$M_2$										188	375
8.000	489	4.22	c									188	375	
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
9.042	417	5.54	$M_2$								33	77	63	
			c								5.9	5.1	3.9	
			$n_{2 \text{ Eck}}$								448	166	332	
10.238	380	2.81	$n_{2 \text{ th}}$								448	166	332	
			c										91	72
			$n_{2 \text{ Eck}}$									4.0	4.4	
10.238	522	2.81	$n_{2 \text{ th}}$									147	293	
			c									147	293	
			$n_{2 \text{ Eck}}$											
11.200	308	2.39	$n_{2 \text{ th}}$						44					
			c						6.0					
			$n_{2 \text{ Eck}}$						362					
11.200	398	2.39	$n_{2 \text{ th}}$									100	79	
			c									3.9	4.2	
			$n_{2 \text{ Eck}}$									134	268	
11.200	524	2.39	$n_{2 \text{ th}}$									134	268	
			c											
			$n_{2 \text{ Eck}}$											
12.400	523	3.46	$n_{2 \text{ th}}$								46	107	87	
			c								5.3	4.7	3.6	
			$n_{2 \text{ Eck}}$								327	121	242	
14.286	331	1.63	$n_{2 \text{ th}}$								327	121	242	
			c							56				
			$n_{2 \text{ Eck}}$							5.6				
14.286	428	1.63	$n_{2 \text{ th}}$									284	284	
			c								69	53	129	102
			$n_{2 \text{ Eck}}$								5.9	5.9	3.3	4.1
14.286	428	1.63	$n_{2 \text{ th}}$									105	210	
			c								137	284	105	210
			$n_{2 \text{ Eck}}$								137	284	105	210

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

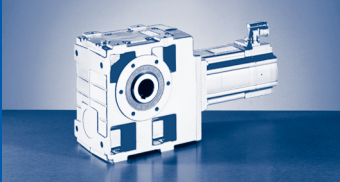


$M_{2GN} \leq 720 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GSS06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
38	70	57									c	6.97	308	5.833
3.7	3.9	2.1									$n_{2 \text{ Eck}}$			
604	334	694									$n_{2 \text{ th}}$			
604	334	694												
				39	83	73	121	90	158	110	$M_2$			
				3.1	4.2	2.0	2.9	1.6	2.2	1.3	c	6.97	356	5.833
				617	257	553	257	553	231	553	$n_{2 \text{ Eck}}$			
				615	257	553	257	553	231	553	$n_{2 \text{ th}}$			
53	96	79									$M_2$			
4.1	3.6	2.4									c	4.22	353	8.000
441	244	506									$n_{2 \text{ Eck}}$			
441	244	506									$n_{2 \text{ th}}$			
				53	114	101	166	124	218	152	$M_2$			
				3.5	4.2	2.2	2.9	1.8	2.2	1.5	c	4.22	489	8.000
				450	188	403	188	403	169	403	$n_{2 \text{ Eck}}$			
				449	188	403	188	403	169	403	$n_{2 \text{ th}}$			
59	107	88	71	59	127	112	184	139	242	170	$M_2$			
3.7	3.0	2.3	5.6	3.4	3.2	2.0	2.2	1.6	1.7	1.3	c	5.54	417	9.042
390	216	448	166	398	166	357	166	357	149	357	$n_{2 \text{ Eck}}$			
390	216	448	166	397	166	357	166	357	149	357	$n_{2 \text{ th}}$			
68	124	101									$M_2$			
4.0	3.0	2.5									c	2.81	380	10.238
344	191	396									$n_{2 \text{ Eck}}$			
344	190	396									$n_{2 \text{ th}}$			
				68	147	129	214	160	280	195	$M_2$			
				3.6	3.5	2.2	2.4	1.8	1.9	1.4	c	2.81	522	10.238
				352	147	315	147	315	132	315	$n_{2 \text{ Eck}}$			
				351	147	315	147	315	132	315	$n_{2 \text{ th}}$			
											$M_2$			
											c	2.39	308	11.200
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
74	136	111									$M_2$			
4.0	2.9	2.4									c	2.39	398	11.200
315	174	362									$n_{2 \text{ Eck}}$			
315	174	362									$n_{2 \text{ th}}$			
			90	75	161	142	234	175	307	214	$M_2$			
			5.5	3.6	3.2	2.1	2.2	1.7	1.7	1.4	c	2.39	524	11.200
			134	321	134	288	134	288	121	288	$n_{2 \text{ Eck}}$			
			134	321	134	288	134	288	121	288	$n_{2 \text{ th}}$			
81	147	121	98	82	174	155	252	191	331	234	$M_2$			
3.3	2.7	2.1	5.1	3.1	2.9	1.8	2.1	1.5	1.6	1.2	c	3.46	523	12.400
284	157	327	121	290	121	260	121	260	109	260	$n_{2 \text{ Eck}}$			
284	157	327	121	290	121	260	121	260	109	260	$n_{2 \text{ th}}$			
											$M_2$			
											c	1.63	331	14.286
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
95	175	142									$M_2$			
3.7	2.4	2.3									c	1.63	428	14.286
247	137	284									$n_{2 \text{ Eck}}$			
247	137	284									$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GSS [Nm]

## GSS□□-□S (MCS)

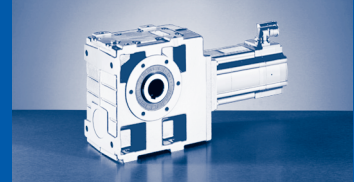
$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
14.286	528	1.63	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
15.869	443	2.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					51 5.6 255 255	62 4.8 255 255				
15.869	572	2.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							59 5.0 255 255	137 4.0 95 95	111 3.3 189 189	
15.869	605	2.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
17.360	462	2.01	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					56 5.5 233 233	67 4.6 233 233				
17.360	597	2.01	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							64 4.9 233 233	150 3.9 86 86	122 3.3 173 173	
17.360	624	2.01	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
20.417	488	4.17	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							90 4.1 96 96	71 3.3 198 198	166 2.9 147 147	134 2.2 147 147
22.143	494	1.39	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					72 5.1 183 183	86 4.3 183 183				
22.143	638	1.39	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							103 5.6 88 88	82 4.5 183 183	192 3.3 68 68	155 3.0 136 135
22.143	673	1.39	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
24.800	561	3.06	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							110 4.0 79 79	88 3.1 163 163	202 2.7 61 60	165 2.1 121 121
27.125	518	1.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				71 5.9 138 138	88 4.9 149 149	106 4.1 149 149				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



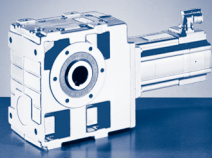


$M_{2GN} \leq 720 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GSS06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
			117	96	208	182	301	224	394	274	c	1.63	528	14.286
			4.4	3.4	2.5	2.0	1.7	1.6	1.3	1.3	$n_{2 \text{ Eck}}$			
			105	252	105	226	105	226	95	226	$n_{2 \text{ th}}$			
			105	251	105	226	105	226	95	226	$M_2$			
											c	2.35	443	15.869
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
105	189	155									$M_2$			
3.1	2.6	2.0									c	2.35	572	15.869
222	123	255									$n_{2 \text{ Eck}}$			
222	123	255									$n_{2 \text{ th}}$			
			125	105	223	198	323	244	423	299	$M_2$			
			4.6	2.9	2.7	1.7	1.9	1.4	1.4	1.1	c	2.35	605	15.869
			95	227	95	203	95	203	85	203	$n_{2 \text{ Eck}}$			
			95	226	95	203	95	203	85	203	$n_{2 \text{ th}}$			
											$M_2$			
											c	2.01	462	17.360
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
114	206	170									$M_2$			
3.0	2.5	1.9									c	2.01	597	17.360
203	112	233									$n_{2 \text{ Eck}}$			
203	112	233									$n_{2 \text{ th}}$			
			137	115	244	217	353	267	463	327	$M_2$			
			4.4	2.8	2.5	1.6	1.8	1.3	1.3	1.1	c	2.01	624	17.360
			86	207	86	186	86	186	78	186	$n_{2 \text{ Eck}}$			
			86	207	86	186	86	186	78	186	$n_{2 \text{ th}}$			
125	227	185	152	125	268	236	388				$M_2$			
2.1	1.7	1.3	3.1	1.9	1.8	1.1	1.3				c	4.17	488	20.417
173	96	198	74	176	74	158	74				$n_{2 \text{ Eck}}$			
173	96	198	73	176	73	158	73				$n_{2 \text{ th}}$			
											$M_2$			
											c	1.39	494	22.143
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
146	263	217									$M_2$			
2.8	2.3	1.8									c	1.39	638	22.143
159	88	183									$n_{2 \text{ Eck}}$			
159	88	183									$n_{2 \text{ th}}$			
			175	146	310	277	450	341	589	417	$M_2$			
			3.7	2.6	2.1	1.5	1.5	1.2	1.1	1.0	c	1.39	673	22.143
			68	163	68	146	68	146	61	146	$n_{2 \text{ Eck}}$			
			68	162	68	146	68	146	61	146	$n_{2 \text{ th}}$			
155	279	229	186	155	328	292	474				$M_2$			
2.0	1.6	1.2	3.0	1.8	1.7	1.1	1.2				c	3.06	561	24.800
142	79	163	61	145	61	130	61				$n_{2 \text{ Eck}}$			
142	79	163	60	145	60	130	60				$n_{2 \text{ th}}$			
											$M_2$			
											c	1.04	518	27.125
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

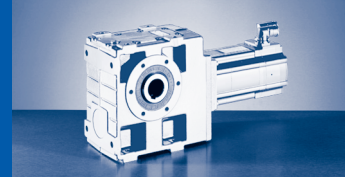
## GSS□□-□S (MCS)

$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
27.125	669	1.04	$M_2$							127	101	235	190	
			c							4.8	4.3	2.8	2.9	
			$n_{2 \text{ Eck}}$								72	149	55	111
			$n_{2 \text{ th}}$								72	149	55	111
27.125	718	1.04	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
31.738	609	2.10	$M_2$			58	80	99	118	141	112	259	211	
			c			5.5	4.1	3.3	2.8	3.7	2.9	2.3	2.0	
			$n_{2 \text{ Eck}}$			128	118	128	128	61	128	47	95	
			$n_{2 \text{ th}}$			128	118	128	128	61	128	47	95	
35.306	537	0.66	$M_2$				93	115	138					
			c				5.5	4.5	3.8					
			$n_{2 \text{ Eck}}$				106	115	115					
			$n_{2 \text{ th}}$				106	115	115					
35.306	693	0.66	$M_2$							166	131	306	248	
			c							4.1	4.0	2.2	2.5	
			$n_{2 \text{ Eck}}$								55	115	43	85
			$n_{2 \text{ th}}$								55	115	42	85
39.200	637	1.64	$M_2$			71	98	121	144	173	137	317	258	
			c			5.1	3.8	3.1	2.6	3.2	2.7	2.0	1.8	
			$n_{2 \text{ Eck}}$			103	96	103	103	50	103	38	77	
			$n_{2 \text{ th}}$			103	96	103	103	50	103	38	77	
43.917	554	0.48	$M_2$				116	144	172					
			c				4.7	3.8	3.2					
			$n_{2 \text{ Eck}}$				85	92	92					
			$n_{2 \text{ th}}$				85	92	92					
43.917	715	0.48	$M_2$							207	163	380	308	
			c							3.4	3.6	1.9	2.1	
			$n_{2 \text{ Eck}}$								44	92	34	68
			$n_{2 \text{ th}}$								44	92	34	68
50.000	693	1.16	$M_2$			91	125	154	183	221	175	403	328	
			c			4.8	3.5	2.9	2.4	2.7	2.5	1.7	1.7	
			$n_{2 \text{ Eck}}$			81	75	81	81	39	81	30	60	
			$n_{2 \text{ th}}$			81	75	81	81	39	81	30	60	
54.250	720	0.96	$M_2$			100	136	168	200	241	191	440	359	
			c			4.7	3.5	2.9	2.4	2.7	2.5	1.6	1.6	
			$n_{2 \text{ Eck}}$			75	69	75	75	36	75	28	55	
			$n_{2 \text{ th}}$			75	69	75	75	36	75	28	55	
61.250	720	0.89	$M_2$			112	153	188	224	270	214	492	402	
			c			4.5	3.3	2.7	2.3	2.4	2.4	1.5	1.5	
			$n_{2 \text{ Eck}}$			66	61	66	66	32	66	25	49	
			$n_{2 \text{ th}}$			66	61	66	66	32	66	24	49	
70.611	720	0.61	$M_2$			130	177	218	260	314	248	569	465	
			c			4.2	3.1	2.5	2.1	2.2	2.2	1.3	1.4	
			$n_{2 \text{ Eck}}$			57	53	57	57	28	57	21	43	
			$n_{2 \text{ th}}$			57	53	57	57	28	57	21	42	
79.722	720	0.57	$M_2$		93	146	199	245	291	351	278	635	520	
			c		5.8	3.8	2.8	2.3	1.9	2.0	2.0	1.1	1.2	
			$n_{2 \text{ Eck}}$		51	51	47	51	51	25	51	19	38	
			$n_{2 \text{ th}}$		51	51	47	51	51	24	51	19	38	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

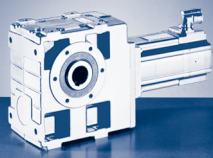


$M_{2GN} \leq 720 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GSS06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
179	322	265									c	1.04	669	27.125
2.7	2.0	1.7									$n_{2 \text{ Eck}}$			
130	72	149									$n_{2 \text{ th}}$			
130	72	149									$M_2$			
			215	179	380	339	550	417			c	1.04	718	27.125
			3.3	2.5	1.9	1.4	1.3	1.2			$n_{2 \text{ Eck}}$			
			55	133	55	119	55	119			$n_{2 \text{ th}}$			
			55	132	55	119	55	119			$M_2$			
198	355	293	237	199	418		604				c	2.10	609	31.738
1.8	1.5	1.1	2.5	1.7	1.5		1.0				$n_{2 \text{ Eck}}$			
111	61	128	47	113	47		47				$n_{2 \text{ th}}$			
111	61	128	47	113	47		47				$M_2$			
											c	0.66	537	35.306
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
233	419	345									$M_2$			
2.5	1.7	1.6									c	0.66	693	35.306
100	55	115									$n_{2 \text{ Eck}}$			
100	55	115									$n_{2 \text{ th}}$			
242	435	358	291	243	512						$M_2$			
1.7	1.3	1.1	2.2	1.6	1.2						c	1.64	637	39.200
90	50	103	38	92	38						$n_{2 \text{ Eck}}$			
90	50	103	38	92	38						$n_{2 \text{ th}}$			
											$M_2$			
											c	0.48	554	43.917
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
290	521	428									$M_2$			
2.1	1.4	1.4									c	0.48	715	43.917
80	44	92									$n_{2 \text{ Eck}}$			
80	44	92									$n_{2 \text{ th}}$			
309	553		370	309	650						$M_2$			
1.6	1.1		1.9	1.5	1.1						c	1.16	693	50.000
71	39		30	72	30						$n_{2 \text{ Eck}}$			
71	39		30	72	30						$n_{2 \text{ th}}$			
337	604		404	338	710						$M_2$			
1.6	1.1		1.8	1.5	1.0						c	0.96	720	54.250
65	36		28	66	28						$n_{2 \text{ Eck}}$			
65	36		28	66	28						$n_{2 \text{ th}}$			
378			452	378							$M_2$			
1.4			1.6	1.4							c	0.89	720	61.250
58			25	59							$n_{2 \text{ Eck}}$			
58			24	59							$n_{2 \text{ th}}$			
437											$M_2$			
1.3											c	0.61	720	70.611
50											$n_{2 \text{ Eck}}$			
50											$n_{2 \text{ th}}$			
490											$M_2$			
1.2											c	0.57	720	79.722
44											$n_{2 \text{ Eck}}$			
44											$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

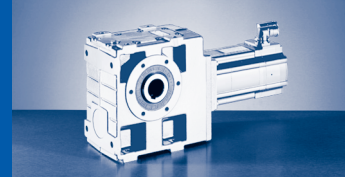
## GSS□□-□S (MCS)

$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
87.833	684	0.44	$M_2$		103								
			c		5.6								
			$n_{2 \text{ Eck}}$		46								
			$n_{2 \text{ th}}$		46								
87.833	720	0.44	$M_2$			162	220	272	323	389	308	702	577
			c			3.7	2.7	2.2	1.9	1.8	2.0	1.0	1.2
			$n_{2 \text{ Eck}}$			46	43	46	46	22	46	17	34
			$n_{2 \text{ th}}$			46	43	46	46	22	46	17	34
99.167	720	0.42	$M_2$		116	181	247	304	362	434	345		645
			c		5.1	3.3	2.5	2.0	1.7	1.7	1.8		1.1
			$n_{2 \text{ Eck}}$		41	41	38	41	41	20	41		30
			$n_{2 \text{ th}}$		41	41	38	41	41	20	41		30
113.667	699	0.28	$M_2$	105	134								
			c	5.9	4.8								
			$n_{2 \text{ Eck}}$	36	36								
			$n_{2 \text{ th}}$	36	36								
113.667	720	0.28	$M_2$			209	285	351	417				
			c			3.1	2.3	1.9	1.6				
			$n_{2 \text{ Eck}}$			36	33	36	36				
			$n_{2 \text{ th}}$			36	33	36	36				
128.333	720	0.26	$M_2$	118	150	234	319	393	466				
			c	5.4	4.3	2.8	2.1	1.7	1.4				
			$n_{2 \text{ Eck}}$	32	32	32	29	32	32				
			$n_{2 \text{ th}}$	32	32	32	29	32	32				
137.950	700	0.20	$M_2$	128	162								
			c	5.3	4.2								
			$n_{2 \text{ Eck}}$	29	29								
			$n_{2 \text{ th}}$	29	29								
137.950	720	0.20	$M_2$			253	345	424	504				
			c			2.7	2.0	1.7	1.4				
			$n_{2 \text{ Eck}}$			29	27	29	29				
			$n_{2 \text{ th}}$			29	27	29	29				
155.750	720	0.19	$M_2$	144	182	283	385	474	563				
			c	4.8	3.8	2.5	1.8	1.5	1.3				
			$n_{2 \text{ Eck}}$	26	26	26	24	26	26				
			$n_{2 \text{ th}}$	26	26	26	24	26	26				
174.375	681	0.13	$M_2$	162	205								
			c	4.2	3.4								
			$n_{2 \text{ Eck}}$	23	23								
			$n_{2 \text{ th}}$	23	23								
196.875	720	0.12	$M_2$	182	229								
			c	3.8	3.0								
			$n_{2 \text{ Eck}}$	21	21								
			$n_{2 \text{ th}}$	21	21								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

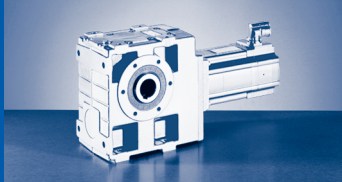


$M_{2GN} \leq 720 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GSS06-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c	0.44	684	87.833
											$n_2$ Eck			
											$n_2$ th			
543											$M_2$	0.44	720	87.833
1.2											c			
40											$n_2$ Eck			
40											$n_2$ th			
607											$M_2$	0.42	720	99.167
1.1											c			
36											$n_2$ Eck			
36											$n_2$ th			
											$M_2$	0.28	699	113.667
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.28	720	113.667
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.26	720	128.333
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.20	700	137.950
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.20	720	137.950
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.19	720	155.750
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.13	681	174.375
											c			
											$n_2$ Eck			
											$n_2$ th			
											$M_2$	0.12	720	196.875
											c			
											$n_2$ Eck			
											$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

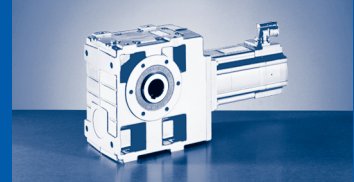
## GSS□□-□S (MCS)

$M_{2GN} \leq 720 \text{ Nm}$

GSS06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80
			$n_1$	4050	4050	4050	4050	3750	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93
126.531	720	0.31	$M_2$		116	146	226	306	376
			c		3.2	2.5	1.7	1.2	1.0
			$n_{2 \text{ Eck}}$		32	32	32	30	32
			$n_{2 \text{ th}}$		32	32	32	30	32
142.857	720	0.30	$M_2$		129	162	252	341	419
			c		3.2	2.5	1.7	1.2	1.0
			$n_{2 \text{ Eck}}$		28	28	28	26	28
			$n_{2 \text{ th}}$		28	28	28	26	28
155.000	720	0.27	$M_2$	68	141	178	275	372	
			c	5.6	2.8	2.3	1.5	1.1	
			$n_{2 \text{ Eck}}$	26	26	26	26	24	
			$n_{2 \text{ th}}$	26	26	26	26	24	
175.000	720	0.26	$M_2$	76	157	197	306	414	
			c	5.6	2.8	2.3	1.5	1.1	
			$n_{2 \text{ Eck}}$	23	23	23	23	21	
			$n_{2 \text{ th}}$	23	23	23	23	21	
194.857	720	0.14	$M_2$	85	176	222			
			c	4.7	2.4	1.9			
			$n_{2 \text{ Eck}}$	21	21	21			
			$n_{2 \text{ th}}$	21	21	21			
220.000	720	0.14	$M_2$	95	196	246			
			c	4.7	2.4	1.9			
			$n_{2 \text{ Eck}}$	18	18	18			
			$n_{2 \text{ th}}$	18	18	18			
238.700	720	0.13	$M_2$	104	214	269			
			c	4.2	2.1	1.7			
			$n_{2 \text{ Eck}}$	17	17	17			
			$n_{2 \text{ th}}$	17	17	17			
269.500	720	0.12	$M_2$	116	238	299			
			c	4.2	2.1	1.7			
			$n_{2 \text{ Eck}}$	15	15	15			
			$n_{2 \text{ th}}$	15	15	15			
310.689	720	0.11	$M_2$	136	277	348			
			c	2.8	1.4	1.1			
			$n_{2 \text{ Eck}}$	13	13	13			
			$n_{2 \text{ th}}$	13	13	13			
350.778	720	0.11	$M_2$	151	307	385			
			c	2.8	1.4	1.1			
			$n_{2 \text{ Eck}}$	12	12	12			
			$n_{2 \text{ th}}$	12	12	12			
386.467	720	0.10	$M_2$	168	341				
			c	2.4	1.2				
			$n_{2 \text{ Eck}}$	11	11				
			$n_{2 \text{ th}}$	10	10				
436.333	720	0.10	$M_2$	186	379				
			c	2.4	1.2				
			$n_{2 \text{ Eck}}$	9	9				
			$n_{2 \text{ th}}$	9	9				
497.722	720	0.07	$M_2$	214	434				
			c	2.0	1.0				
			$n_{2 \text{ Eck}}$	8	8				
			$n_{2 \text{ th}}$	8	8				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

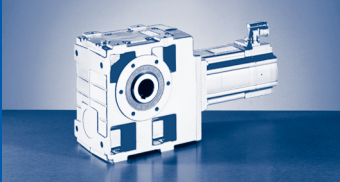


$M_{2GN} \leq 720 \text{ Nm}$

GSS06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80
			$n_1$	4050	4050	4050	4050	3750	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93
561.944	720	0.07	$M_2$	238	482				
			c	2.0	1.0				
			$n_{2 \text{ Eck}}$	7	7				
			$n_{2 \text{ th}}$	7	7				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□S (MCS)

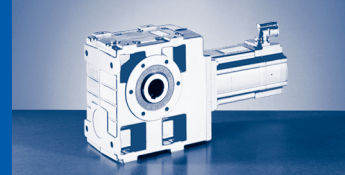
$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
5.862	539	21.36	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
8.125	685	12.75	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
9.086	628	17.44	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
10.000	468	9.14	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							89 5.0 150 150			122 3.7 195 195	99 3.8 405 405	
10.000	734	9.14	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
10.000	797	9.14	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
11.200	496	7.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							100 4.8 134 134	79 6.0 268 268	74 5.9 315 315	137 3.5 174 174	111 3.7 362 362	
11.200	771	7.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
11.200	866	7.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
12.594	799	10.71	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
14.286	533	4.84	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							129 4.0 105 105	101 5.0 210 210	95 5.4 247 247	175 3.0 137 137	142 3.4 284 284	
14.286	737	4.84	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
15.500	704	7.79	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							134 5.0 97 97	107 5.0 194 194	101 4.7 227 227	183 3.7 126 126	151 3.0 261 261	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



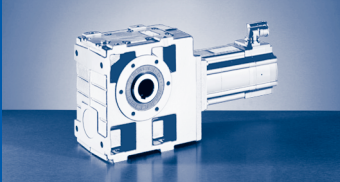


$M_{2GN} \leq 1250 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GSS07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
		73	120	91	159	111	142	111	214	155	274	171	c	21.36	539	5.862
		3.8	4.3	3.1	3.3	2.5	3.7	2.9	2.5	2.1	2.0	1.9	$n_2$ Eck			
		550	256	550	230	550	243	512	243	512	230	512	$n_2$ th			
		550	256	550	230	550	243	377	243	377	230	377				
53	115	102	168	126	221	155	198	155	298	216	381	238	$M_2$			
5.9	5.7	3.4	4.0	2.8	3.0	2.3	3.4	2.6	2.3	1.9	1.8	1.7	c	12.75	685	8.125
443	185	397	185	397	166	397	175	369	175	369	166	369	$n_2$ Eck			
442	185	397	185	397	166	397	175	272	175	272	166	272	$n_2$ th			
58	126	112	184	139	242	170	217	170	325	236	417	261	$M_2$			
5.7	4.8	3.3	3.3	2.7	2.6	2.2	2.8	2.4	1.9	1.7	1.5	1.6	c	17.44	628	9.086
396	165	355	165	355	149	355	157	330	157	330	149	330	$n_2$ Eck			
395	165	355	165	355	149	355	157	243	157	243	149	243	$n_2$ th			
													$M_2$			
													c	9.14	468	10.000
													$n_2$ Eck			
													$n_2$ th			
66	142	126	208	156	274	192							$M_2$			
5.5	4.9	3.3	3.4	2.6	2.6	2.2							c	9.14	734	10.000
360	150	323	150	323	135	323							$n_2$ Eck			
359	150	323	150	323	135	323							$n_2$ th			
							245	191	367	266	470	294	$M_2$			
							3.2	2.5	2.2	1.8	1.7	1.6	c	9.14	797	10.000
							143	300	143	300	135	300	$n_2$ Eck			
							143	221	143	221	135	221	$n_2$ th			
													$M_2$			
													c	7.50	496	11.200
													$n_2$ Eck			
													$n_2$ th			
74	160	142	234	175	307	215							$M_2$			
5.4	4.6	3.2	3.2	2.6	2.5	2.1							c	7.50	771	11.200
321	134	288	134	288	121	288							$n_2$ Eck			
321	134	288	134	288	121	288							$n_2$ th			
							275	215	411	298	527	330	$M_2$			
							3.1	2.4	2.1	1.7	1.6	1.6	c	7.50	866	11.200
							127	268	127	268	121	268	$n_2$ Eck			
							127	197	127	197	121	197	$n_2$ th			
82	175	156	256	193	336	237	302	237	451	329	578	363	$M_2$			
4.9	4.4	2.8	3.1	2.3	2.3	1.9	2.6	2.1	1.8	1.5	1.4	1.4	c	10.71	799	12.594
286	119	256	119	256	107	256	113	238	113	238	107	238	$n_2$ Eck			
285	119	256	119	256	107	256	113	176	113	176	107	176	$n_2$ th			
													$M_2$			
													c	4.84	533	14.286
													$n_2$ Eck			
													$n_2$ th			
95	207	181	301	224	395	275							$M_2$			
5.0	3.5	2.9	2.4	2.4	1.9	2.0							c	4.84	737	14.286
252	105	226	105	226	95	226							$n_2$ Eck			
251	105	226	105	226	95	226							$n_2$ th			
													$M_2$			
													c	7.79	704	15.500
													$n_2$ Eck			
													$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

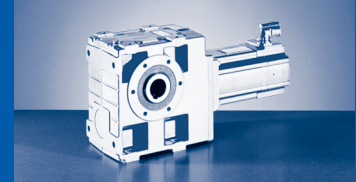
## GSS□□-□S (MCS)

$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
15.500	931	7.79	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
17.360	746	6.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							150 4.8 86 86	120 4.8 173 173	113 4.5 203 203	206 3.5 112 112	169 2.9 233 233	
17.360	1012	6.42	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
20.517	764	13.58	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												152 4.8 73 73
22.143	797	4.18	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							192 4.0 68 68	154 4.5 136 135	145 4.2 159 159	264 3.0 88 88	216 2.6 183 183	
22.143	1103	4.18	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												
25.188	913	9.59	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												189 4.6 60 60
27.125	837	3.13	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							236 3.5 55 55	189 4.3 111 111	178 4.0 130 130	324 2.6 72 72	265 2.5 149 149	
27.125	1250	3.13	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												212 5.6 55 55
31.000	1065	7.05	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					137 5.7 63 63	109 4.7 131 131	254 4.1 48 48	206 3.0 97 97	194 2.9 114 114	351 2.3 63 63	288 1.8 131 131	233 4.4 48 48
35.306	676	1.96	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			115 5.7 115 115	137 4.8 115 115								
35.306	870	1.96	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					166 5.0 55 55	130 6.0 115 115	309 2.8 43 42	248 3.5 85 85	232 3.7 100 100	422 2.1 55 55	345 2.3 115 115	
35.306	1250	1.96	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$												279 4.3 43 42

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

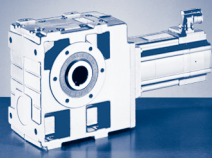


$M_{2GN} \leq 1250 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GSS07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
101	216	193	315	238	414	292	372	292	555	405	711	447	$c$	7.79	931	15.500
4.4	4.2	2.5	2.9	2.1	2.2	1.7	2.5	1.9	1.7	1.4	1.3	1.3	$n_{2 \text{ Eck}}$			
232	97	208	97	208	87	208	92	194	92	194	87	194	$n_{2 \text{ th}}$			
232	97	208	97	208	87	208	92	143	92	143	87	143	$M_2$			
													$c$	6.42	746	17.360
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
114	242	216	353	267	463	328	416	327	622	454	796	501	$M_2$			
4.2	4.0	2.4	2.8	2.0	2.2	1.6	2.4	1.8	1.6	1.3	1.3	1.2	$c$	6.42	1012	17.360
207	86	186	86	186	78	186	82	173	82	173	78	173	$n_{2 \text{ Eck}}$			
207	86	186	86	186	78	186	82	127	82	127	78	127	$n_{2 \text{ th}}$			
126	272	240	394	296	517	362	465	362	693				$M_2$			
3.3	2.8	1.9	1.9	1.5	1.5	1.3	1.6	1.4	1.1				$c$	13.58	764	20.517
176	73	157	73	157	66	157	70	146	70				$n_{2 \text{ Eck}}$			
175	73	157	73	157	66	157	69	108	69				$n_{2 \text{ th}}$			
													$M_2$			
													$c$	4.18	797	22.143
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
145	309	276	450	341	591	418							$M_2$			
3.9	3.5	2.3	2.4	1.8	1.9	1.5							$c$	4.18	1103	22.143
163	68	146	68	146	61	146							$n_{2 \text{ Eck}}$			
162	68	146	68	146	61	146							$n_{2 \text{ th}}$			
157	336	298	488	367	639	450	574	449	856				$M_2$			
3.0	2.7	1.7	1.9	1.4	1.4	1.1	1.6	1.2	1.1				$c$	9.59	913	25.188
143	60	128	60	128	54	128	57	119	57				$n_{2 \text{ Eck}}$			
143	60	128	60	128	54	128	57	88	57				$n_{2 \text{ th}}$			
													$M_2$			
													$c$	3.13	837	27.125
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
178	379	339	551	418	723	512							$M_2$			
3.7	3.2	2.2	2.2	1.8	1.7	1.4							$c$	3.13	1250	27.125
133	55	119	55	119	50	119							$n_{2 \text{ Eck}}$			
132	55	119	55	119	50	119							$n_{2 \text{ th}}$			
194	414	367	600	453	786	555	706	554	1052				$M_2$			
2.7	2.5	1.5	1.8	1.3	1.4	1.0	1.5	1.2	1.0				$c$	7.05	1065	31.000
116	48	104	48	104	44	104	46	97	46				$n_{2 \text{ Eck}}$			
116	48	104	48	104	44	104	46	71	46				$n_{2 \text{ th}}$			
													$M_2$			
													$c$	1.96	676	35.306
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													$c$	1.96	870	35.306
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
233	495	441	718	544	941	667							$M_2$			
3.4	2.5	2.0	1.7	1.6	1.3	1.3							$c$	1.96	1250	35.306
102	43	91	43	91	38	91							$n_{2 \text{ Eck}}$			
102	42	91	42	91	38	91							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□S (MCS)

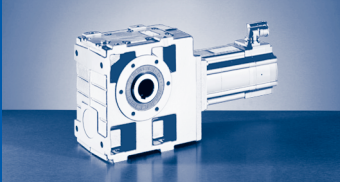
$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
39.200	1175	5.37	$M_2$					172	137	319	260	244	440	362	292
			c				5.3	4.2	3.6	2.8	2.6	2.2	1.6	3.9	
			$n_{2 \text{ Eck}}$				50	103	38	77	90	50	103	38	
			$n_{2 \text{ th}}$				50	103	38	77	90	50	103	38	
43.271	706	1.43	$M_2$		114	142	169								
			c		5.9	4.8	4.1								
			$n_{2 \text{ Eck}}$		87	94	94								
			$n_{2 \text{ th}}$		87	94	94								
43.271	908	1.43	$M_2$					205	159	378	304	285	518	423	
			c				4.3	5.5	2.4	3.0	3.2	1.8	2.2		
			$n_{2 \text{ Eck}}$				45	94	35	69	82	45	94		
			$n_{2 \text{ th}}$				45	94	35	69	81	45	94		
43.271	1250	1.43	$M_2$												343
			c												3.5
			$n_{2 \text{ Eck}}$												35
			$n_{2 \text{ th}}$												35
50.000	1250	3.53	$M_2$		124	154	184	220	176	407	331	311	560	462	374
			c		5.4	4.4	3.7	4.9	3.9	3.0	2.6	2.4	2.0	1.5	3.3
			$n_{2 \text{ Eck}}$		75	81	81	39	81	30	60	71	39	81	30
			$n_{2 \text{ th}}$		75	81	81	39	81	30	60	71	39	81	30
54.250	1250	2.89	$M_2$					241	192	446	362	341	613	505	409
			c				4.8	3.9	2.8	2.6	2.4	1.9	1.5	3.0	
			$n_{2 \text{ Eck}}$				36	75	28	55	65	36	75	28	
			$n_{2 \text{ th}}$				36	75	28	55	65	36	75	28	
61.250	1250	2.70	$M_2$					271	215	500	405	381	686	565	459
			c				4.3	3.7	2.5	2.5	2.3	1.8	1.4	2.7	
			$n_{2 \text{ Eck}}$				32	66	25	49	58	32	66	25	
			$n_{2 \text{ th}}$				32	66	24	49	58	32	66	24	
70.611	1250	1.81	$M_2$		177	220	262	316	250	579	471	443	796	656	531
			c		5.0	4.1	3.5	3.8	3.6	2.1	2.4	2.3	1.6	1.4	2.3
			$n_{2 \text{ Eck}}$		53	57	57	28	57	21	43	50	28	57	21
			$n_{2 \text{ th}}$		53	57	57	28	57	21	42	50	28	57	21
79.722	1250	1.70	$M_2$		199	246	293	354	280	649	527	496	891	734	596
			c		4.8	3.9	3.3	3.4	3.4	1.9	2.2	2.2	1.4	1.3	2.1
			$n_{2 \text{ Eck}}$		47	51	51	25	51	19	38	44	25	51	19
			$n_{2 \text{ th}}$		47	51	51	24	51	19	38	44	24	51	19
86.542	1250	1.34	$M_2$		217	269	321	387	306	707	577	543	972	803	649
			c		4.8	3.9	3.3	3.2	3.5	1.8	2.1	2.1	1.3	1.4	1.9
			$n_{2 \text{ Eck}}$		43	47	47	23	47	17	35	41	23	47	17
			$n_{2 \text{ th}}$		43	47	47	23	47	17	35	41	23	47	17
97.708	1250	1.26	$M_2$		244	302	360	435	343	791	646	608	1089	898	727
			c		4.5	3.6	3.1	2.8	3.2	1.6	1.9	1.9	1.2	1.3	1.7
			$n_{2 \text{ Eck}}$		38	42	42	20	42	15	31	36	20	42	15
			$n_{2 \text{ th}}$		38	41	41	20	41	15	31	36	20	41	15
113.667	1250	0.83	$M_2$	208	286	354	422	508	402	924	756	712		1051	
			c	5.6	4.1	3.4	2.9	2.4	3.0	1.4	1.6	1.7		1.2	
			$n_{2 \text{ Eck}}$	36	33	36	36	17	36	13	26	31		36	
			$n_{2 \text{ th}}$	36	33	36	36	17	36	13	26	31		36	
128.333	1250	0.79	$M_2$	234	321	397	472	569	451	1030	847	797		1176	
			c	5.1	3.8	3.1	2.6	2.2	2.7	1.2	1.5	1.6		1.1	
			$n_{2 \text{ Eck}}$	32	29	32	32	15	32	12	23	28		32	
			$n_{2 \text{ th}}$	32	29	32	32	15	32	12	23	27		32	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]





# GSS [Nm]

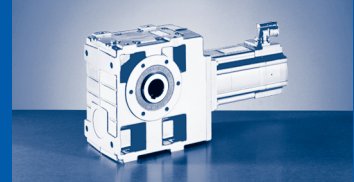
## GSS□□-□S (MCS)

$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
137.950	1250	0.61	$M_2$	254	348	429	511	615	488	1116	914	862			
			c	4.7	3.5	2.8	2.4	2.0	2.5	1.1	1.4	1.4			
			$n_{2 \text{ Eck}}$	29	27	29	29	14	29	11	22	26			
			$n_{2 \text{ th}}$	29	27	29	29	14	29	11	22	26			
155.750	1250	0.58	$M_2$	286	390	482	573	687	547	1241	1024	965			
			c	4.2	3.1	2.5	2.1	1.8	2.2	1.0	1.2	1.3			
			$n_{2 \text{ Eck}}$	26	24	26	26	13	26	10	19	23			
			$n_{2 \text{ th}}$	26	24	26	26	13	26	10	19	23			
174.375	1250	0.39	$M_2$	322	439	542	644								
			c	3.7	2.8	2.3	1.9								
			$n_{2 \text{ Eck}}$	23	22	23	23								
			$n_{2 \text{ th}}$	23	22	23	23								
196.875	1250	0.37	$M_2$	362	493	607	722								
			c	3.3	2.5	2.0	1.7								
			$n_{2 \text{ Eck}}$	21	19	21	21								
			$n_{2 \text{ th}}$	21	19	21	21								

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

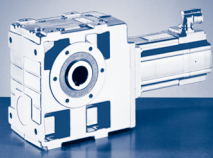


$M_{2GN} \leq 1250 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GSS07-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.61	1250	137.950
													$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.58	1250	155.750
													$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.39	1250	174.375
													$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.37	1250	196.875

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□S (MCS)

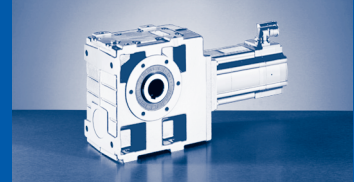
$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525	
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	
126.531	1250	0.86	$M_2$			145	227	309	381	453	539	432	979	802	761	
			c			5.1	3.3	2.5	2.0	1.7	2.3	1.8	1.3	1.6	1.0	
			$n_{2 \text{ Eck}}$			32	32	30	32	32	32	15	32	12	24	28
			$n_{2 \text{ th}}$			32	32	30	32	32	32	15	32	12	24	28
142.857	1250	0.82	$M_2$			162	254	346	426	507	603	484	1090	899		
			c			4.9	3.2	2.4	1.9	1.6	2.1	1.7	1.2	1.4		
			$n_{2 \text{ Eck}}$			28	28	26	28	28	14	28	11	21		
			$n_{2 \text{ th}}$			28	28	26	28	28	14	28	11	21		
155.000	1250	0.74	$M_2$			176	276	376	464	552	658	527	1195	978		
			c			4.9	3.2	2.4	1.9	1.6	1.9	1.7	1.1	1.3		
			$n_{2 \text{ Eck}}$			26	26	24	26	26	13	26	10	19		
			$n_{2 \text{ th}}$			26	26	24	26	26	13	26	10	19		
175.000	1250	0.72	$M_2$		156	198	310	422	520	618	734	590		1095		
			c		5.8	4.6	3.0	2.2	1.8	1.5	1.7	1.6		1.1		
			$n_{2 \text{ Eck}}$		23	23	23	21	23	23	11	23		17		
			$n_{2 \text{ th}}$		23	23	23	21	23	23	11	23		17		
201.746	1250	0.37	$M_2$		181	229	358	487	600	712						
			c		5.3	4.2	2.8	2.1	1.7	1.4						
			$n_{2 \text{ Eck}}$		20	20	20	19	20	20						
			$n_{2 \text{ th}}$		20	20	20	19	20	20						
227.778	1250	0.36	$M_2$		203	257	401	545	671	797						
			c		5.0	4.0	2.6	2.0	1.6	1.3						
			$n_{2 \text{ Eck}}$		18	18	18	17	18	18						
			$n_{2 \text{ th}}$		18	18	18	16	18	18						
247.139	1250	0.33	$M_2$		222	280	437	594	731	868						
			c		4.6	3.7	2.4	1.8	1.5	1.2						
			$n_{2 \text{ Eck}}$		16	16	16	15	16	16						
			$n_{2 \text{ th}}$		16	16	16	15	16	16						
279.028	1250	0.32	$M_2$		248	313	488	662	815	968						
			c		4.4	3.5	2.3	1.7	1.4	1.2						
			$n_{2 \text{ Eck}}$		15	15	15	13	15	15						
			$n_{2 \text{ th}}$		15	15	15	13	15	15						
321.673	1250	0.28	$M_2$		291	367	569	771	947							
			c		3.2	2.6	1.7	1.2	1.0							
			$n_{2 \text{ Eck}}$		13	13	13	12	13							
			$n_{2 \text{ th}}$		13	13	13	12	13							
363.179	1250	0.28	$M_2$		323	407	631	855	1051							
			c		3.2	2.6	1.7	1.2	1.0							
			$n_{2 \text{ Eck}}$		11	11	11	10	11							
			$n_{2 \text{ th}}$		11	11	11	10	11							
394.245	1250	0.26	$M_2$	171	355	447	693	939								
			c	5.7	2.9	2.3	1.5	1.1								
			$n_{2 \text{ Eck}}$	10	10	10	10	10								
			$n_{2 \text{ th}}$	10	10	10	10	10								
445.116	1250	0.26	$M_2$	189	393	495	767	1038								
			c	5.7	2.9	2.3	1.5	1.1								
			$n_{2 \text{ Eck}}$	9	9	9	9	8								
			$n_{2 \text{ th}}$	9	9	9	9	8								
490.403	1250	0.18	$M_2$	211	436	548	848									
			c	5.0	2.5	2.0	1.3									
			$n_{2 \text{ Eck}}$	8	8	8	8									
			$n_{2 \text{ th}}$	8	8	8	8									

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



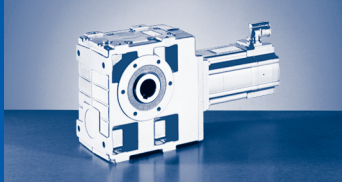


$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50		
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	3525		
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5			
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80		
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42		
553.681	1250	0.18	$M_2$	235	485	610	943										
			c	4.8	2.4	1.9	1.3										
			$n_{2 \text{ Eck}}$	7	7	7	7										
			$n_{2 \text{ th}}$	7	7	7	7										
634.639	1250	0.11	$M_2$	272	559	703											
			c	4.2	2.1	1.7											
			$n_{2 \text{ Eck}}$	6	6	6											
			$n_{2 \text{ th}}$	6	6	6											
716.528	1250	0.11	$M_2$	303	622	782											
			c	3.7	1.9	1.5											
			$n_{2 \text{ Eck}}$	6	6	6											
			$n_{2 \text{ th}}$	6	6	6											
833.556	1250	0.11	$M_2$	357	728	914											
			c	3.0	1.5	1.2											
			$n_{2 \text{ Eck}}$	5	5	5											
			$n_{2 \text{ th}}$	5	5	5											
941.111	1250	0.11	$M_2$	396	807	1013											
			c	2.9	1.4	1.2											
			$n_{2 \text{ Eck}}$	4	4	4											
			$n_{2 \text{ th}}$	4	4	4											
1011.633	1250	0.08	$M_2$	428	872	1093											
			c	2.6	1.3	1.1											
			$n_{2 \text{ Eck}}$	4	4	4											
			$n_{2 \text{ th}}$	4	4	4											
1142.167	1250	0.08	$M_2$	475	966												
			c	2.4	1.2												
			$n_{2 \text{ Eck}}$	4	4												
			$n_{2 \text{ th}}$	4	4												
1227.755	1250	0.07	$M_2$	513	1042												
			c	2.2	1.1												
			$n_{2 \text{ Eck}}$	3	3												
			$n_{2 \text{ th}}$	3	3												
1386.175	1250	0.07	$M_2$	569	1154												
			c	2.0	1.0												
			$n_{2 \text{ Eck}}$	3	3												
			$n_{2 \text{ th}}$	3	3												

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

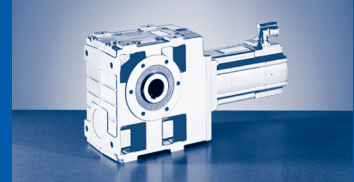
## GSS□□-□A (MCA)

$M_{2GN} \leq 180 \text{ Nm}$

GSS04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
5.639	108	1.12	$M_2$	10		
			c	4.4		
			$n_{2 \text{ Eck}}$	701		
			$n_{2 \text{ th}}$	700		
			$M_2$		31	20
5.639	149	1.12	c		1.7	2.2
			$n_{2 \text{ Eck}}$		605	718
			$n_{2 \text{ th}}$		605	718
			$M_2$	13		
			c	5.4		
7.733	149	0.65	$n_{2 \text{ Eck}}$	511		
			$n_{2 \text{ th}}$	511		
			$M_2$		43	27
			c		2.0	2.7
			$n_{2 \text{ Eck}}$		441	524
7.733	158	0.65	$n_{2 \text{ th}}$		441	524
			$M_2$		50	31
			c		2.1	3.1
			$n_{2 \text{ Eck}}$		377	448
			$n_{2 \text{ th}}$		377	448
9.042	154	0.81	$M_2$	17	55	35
			c	5.7	2.1	2.9
			$n_{2 \text{ Eck}}$	399	345	409
			$n_{2 \text{ th}}$	399	345	409
			$M_2$	18	61	38
10.827	161	0.37	c	5.7	2.1	2.9
			$n_{2 \text{ Eck}}$	365	315	374
			$n_{2 \text{ th}}$	365	315	374
			$M_2$	21	69	43
			c	5.5	1.8	2.7
12.400	170	0.49	$n_{2 \text{ Eck}}$	319	275	327
			$n_{2 \text{ th}}$	319	275	327
			$M_2$	24	78	49
			c	5.8	1.9	2.9
			$n_{2 \text{ Eck}}$	286	247	293
13.810	163	0.25	$n_{2 \text{ th}}$	286	247	293
			$M_2$	27	88	55
			c	4.7	1.6	2.3
			$n_{2 \text{ Eck}}$	249	215	255
			$n_{2 \text{ th}}$	249	215	255
15.869	180	0.33	$M_2$	30	96	61
			c	4.4	1.5	2.2
			$n_{2 \text{ Eck}}$	228	196	233
			$n_{2 \text{ th}}$	228	196	233
			$M_2$	32	103	65
20.417	153	0.67	c	3.2	1.1	1.6
			$n_{2 \text{ Eck}}$	194	167	198
			$n_{2 \text{ th}}$	193	167	198
			$M_2$	38	123	78
			c	3.8	1.2	1.9
22.143	180	0.20	$n_{2 \text{ Eck}}$	178	154	183
			$n_{2 \text{ th}}$	178	154	183

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

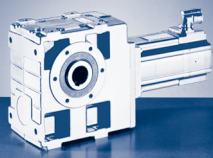


$M_{2GN} \leq 180 \text{ Nm}$

GSS04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
24.800	171	0.42	$M_2$	40		81
			c	2.9		1.5
			$n_{2 \text{ Eck}}$	159		163
			$n_{2 \text{ th}}$	159		163
			$M_2$	47	150	95
27.125	180	0.14	c	3.3	1.1	1.6
			$n_{2 \text{ Eck}}$	146	126	149
			$n_{2 \text{ th}}$	146	126	149
			$M_2$	51		104
			c	2.5		1.3
31.738	180	0.29	$n_{2 \text{ Eck}}$	125		128
			$n_{2 \text{ th}}$	124		128
			$M_2$	59		
			c	2.8		
			$n_{2 \text{ Eck}}$	116		
34.100	180	0.10	$n_{2 \text{ th}}$	116		
			$M_2$	62		126
			c	2.1		1.1
			$n_{2 \text{ Eck}}$	101		103
			$n_{2 \text{ th}}$	101		103
43.917	180	0.06	$M_2$	76		
			c	2.3		
			$n_{2 \text{ Eck}}$	90		
			$n_{2 \text{ th}}$	90		
			$M_2$	79		
50.000	180	0.17	c	1.8		
			$n_{2 \text{ Eck}}$	79		
			$n_{2 \text{ th}}$	79		
			$M_2$	87		
			c	1.8		
54.250	180	0.13	$n_{2 \text{ Eck}}$	73		
			$n_{2 \text{ th}}$	73		
			$M_2$	96		
			c	1.6		
			$n_{2 \text{ Eck}}$	65		
61.250	180	0.13	$n_{2 \text{ th}}$	64		
			$M_2$	109		
			c	1.5		
			$n_{2 \text{ Eck}}$	58		
			$n_{2 \text{ th}}$	58		
68.200	180	0.09	$M_2$	120		
			c	1.4		
			$n_{2 \text{ Eck}}$	51		
			$n_{2 \text{ th}}$	51		
			$M_2$	140		
77.000	180	0.09	c	1.3		
			$n_{2 \text{ Eck}}$	45		
			$n_{2 \text{ th}}$	45		
			$M_2$	154		
			c	1.2		
87.833	180	0.06	$n_{2 \text{ Eck}}$	40		
			$n_{2 \text{ th}}$	40		
			$M_2$	154		
			c	1.2		
			$n_{2 \text{ Eck}}$	40		
99.167	180	0.06	$n_{2 \text{ th}}$	40		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



# GSS [Nm]

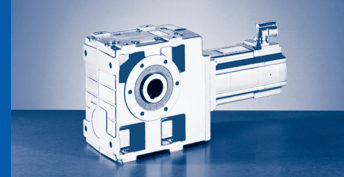
## GSS□□-□A (MCA)

$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
5.639	219	2.82	$M_2$		31	19				
			c		3.8	5.4				
			$n_{2 \text{ Eck}}$		605	718				
			$n_{2 \text{ th}}$		605	718				
5.639	223	2.82	$M_2$				60	33	54	26
			c				3.2	5.1	2.2	4.0
			$n_{2 \text{ Eck}}$				290	355	613	727
			$n_{2 \text{ th}}$				290	355	613	637
7.733	267	1.66	$M_2$		43	27	83	45	75	37
			c		3.4	4.9	2.9	4.7	2.0	3.6
			$n_{2 \text{ Eck}}$		441	524	211	259	447	530
			$n_{2 \text{ th}}$		441	524	211	259	447	464
9.042	251	2.01	$M_2$		48	30	94	52	84	41
			c		2.6	3.3	2.5	4.2	1.5	2.5
			$n_{2 \text{ Eck}}$		377	448	181	221	382	454
			$n_{2 \text{ th}}$		377	448	181	221	382	397
9.897	271	1.10	$M_2$		55	35	107	58	96	47
			c		3.2	4.6	2.5	4.3	1.8	3.4
			$n_{2 \text{ Eck}}$		345	409	165	202	349	414
			$n_{2 \text{ th}}$		345	409	165	202	349	363
10.827	272	0.94	$M_2$		61	38	117	64	105	52
			c		3.1	4.4	2.3	4.0	1.8	3.3
			$n_{2 \text{ Eck}}$		315	374	151	185	319	379
			$n_{2 \text{ th}}$		315	374	151	185	319	332
12.400	279	1.24	$M_2$		67	42	130	72	117	57
			c		2.7	3.8	2.0	3.4	1.6	2.8
			$n_{2 \text{ Eck}}$		275	327	132	161	279	331
			$n_{2 \text{ th}}$		275	327	132	161	279	290
13.810	275	0.64	$M_2$		78	49	151	83	135	66
			c		2.9	4.1	1.8	3.2	1.7	3.1
			$n_{2 \text{ Eck}}$		247	293	118	145	250	297
			$n_{2 \text{ th}}$		247	293	118	145	250	260
15.869	301	0.84	$M_2$		87	54	168	92	150	74
			c		2.5	3.8	1.7	2.9	1.5	2.8
			$n_{2 \text{ Eck}}$		215	255	103	126	218	258
			$n_{2 \text{ th}}$		215	255	103	126	218	226
17.360	311	0.72	$M_2$		95	60	184	101	165	81
			c		2.4	3.6	1.6	2.7	1.4	2.7
			$n_{2 \text{ Eck}}$		196	233	94	115	199	236
			$n_{2 \text{ th}}$		196	233	94	115	199	207
20.417	253	1.60	$M_2$		99	62	196	108		85
			c		1.4	2.1	1.2	2.0		1.5
			$n_{2 \text{ Eck}}$		167	198	80	98		201
			$n_{2 \text{ th}}$		167	198	80	98		176
22.143	337	0.50	$M_2$		122	77	235	130	211	104
			c		2.0	3.1	1.3	2.3	1.2	2.3
			$n_{2 \text{ Eck}}$		154	183	74	90	156	185
			$n_{2 \text{ th}}$		154	183	74	90	156	162
24.800	280	1.06	$M_2$		125	79	245	135		107
			c		1.6	2.2	1.1	1.8		1.6
			$n_{2 \text{ Eck}}$		138	163	66	81		165
			$n_{2 \text{ th}}$		138	163	66	81		145

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

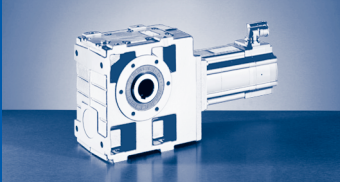


$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	46	150	94	288	160	260	128
			$n_2 \text{ Eck}$	5.3	1.8	2.7	1.2	2.0	1.0	2.0
			$n_2 \text{ th}$	146	126	149	60	74	127	151
			$n_2 \text{ th}$	146	126	149	60	74	127	132
			$M_2$	50	162	102		174		139
			c	4.1	1.3	2.0		1.5		1.5
			$n_2 \text{ Eck}$	125	107	128		63		129
			$n_2 \text{ th}$	124	107	128		63		113
			$M_2$	60	196	124				
			c	4.5	1.5	2.2				
			$n_2 \text{ Eck}$	112	97	115				
			$n_2 \text{ th}$	112	97	115				
			$M_2$	61	198	125		211		169
			c	3.5	1.2	1.8		1.3		1.3
			$n_2 \text{ Eck}$	101	87	103		51		105
			$n_2 \text{ th}$	101	87	103		51		92
			$M_2$	76	245	154				
			c	3.9	1.3	1.9				
			$n_2 \text{ Eck}$	90	78	92				
			$n_2 \text{ th}$	90	78	92				
			$M_2$	79		160		271		217
			c	3.0		1.5		1.2		1.1
			$n_2 \text{ Eck}$	79		81		40		82
			$n_2 \text{ th}$	79		81		40		72
			$M_2$	87		178		299		241
			c	2.9		1.4		1.1		1.1
			$n_2 \text{ Eck}$	73		75		37		76
			$n_2 \text{ th}$	73		75		37		66
			$M_2$	97		197		332		
			c	2.6		1.3		1.0		
			$n_2 \text{ Eck}$	65		66		33		
			$n_2 \text{ th}$	64		66		33		
			$M_2$	114		232				
			c	2.4		1.2				
			$n_2 \text{ Eck}$	56		57				
			$n_2 \text{ th}$	56		57				
			$M_2$	127		258				
			c	2.2		1.1				
			$n_2 \text{ Eck}$	50		51				
			$n_2 \text{ th}$	50		51				
			$M_2$	143		289				
			c	2.1		1.1				
			$n_2 \text{ Eck}$	45		46				
			$n_2 \text{ th}$	45		46				
			$M_2$	159						
			c	2.0						
			$n_2 \text{ Eck}$	40						
			$n_2 \text{ th}$	40						
			$M_2$	186						
			c	1.8						
			$n_2 \text{ Eck}$	35						
			$n_2 \text{ th}$	35						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

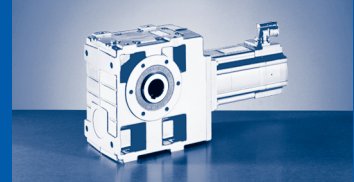
## GSS□□-□A (MCA)

$M_{2GN} \leq 360 \text{ Nm}$

GSS05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	206						
128.333	360	0.09	$n_{2 \text{ Eck}}$	1.7						
			$n_{2 \text{ th}}$	31						
			$M_2$	31						
			c	226						
137.950	360	0.07	$n_{2 \text{ Eck}}$	1.6						
			$n_{2 \text{ th}}$	29						
			$M_2$	29						
			c	251						
155.750	360	0.07	$n_{2 \text{ Eck}}$	1.4						
			$n_{2 \text{ th}}$	25						
			$M_2$	25						
			c							

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

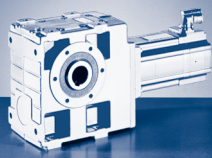


$M_{2GN} \leq 360 \text{ Nm}$

GSS05-3A				10IC40
				...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00
			$n_1$	3950
			$I_{M400}$	2.4
			$P_N$	0.80
			$J_M$	2.44
125.476	339	0.15	$M_2$	218
			c	1.2
			$n_{2 \text{ Eck}}$	32
			$n_{2 \text{ th}}$	31
			$M_2$	265
153.708	356	0.12	c	1.0
			$n_{2 \text{ Eck}}$	26
			$n_{2 \text{ th}}$	26
			$M_2$	353
			c	1.0
222.133	360	0.21	$n_{2 \text{ Eck}}$	18
			$n_{2 \text{ th}}$	18

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□A (MCA)

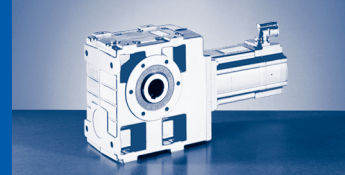
$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
5.833	356	6.97	$M_2$				61		56	27	113	56	100	49
			c			4.9		2.6	4.3	2.7	3.9	1.5	2.4	
			$n_2$ Eck			280		592	703	288	394	597	705	
			$n_2$ th			280		592	615	288	394	533	533	
8.000	489	4.22	$M_2$				85		77	38	155	77	137	68
			c			4.4		2.8	4.9	2.4	3.8	1.6	2.8	
			$n_2$ Eck			204		432	513	210	288	435	514	
			$n_2$ th			204		432	449	210	288	389	389	
9.042	417	5.54	$M_2$				95		86	42	173	86	153	76
			c			3.8		2.6	4.7	2.1	3.2	1.5	2.7	
			$n_2$ Eck			181		382	454	186	254	385	455	
			$n_2$ th			181		382	397	186	254	344	344	
10.238	397	2.81	$M_2$		57									
			c		4.8									
			$n_2$ Eck		333									
			$n_2$ th		333									
10.238	522	2.81	$M_2$				109		99	48	199	99	177	87
			c			4.5		2.8	5.0	2.5	3.5	1.6	2.9	
			$n_2$ Eck			160		338	401	164	225	340	401	
			$n_2$ th			160		337	351	164	225	304	304	
11.200	440	2.39	$M_2$		62									
			c		4.7									
			$n_2$ Eck		305									
			$n_2$ th		304									
11.200	524	2.39	$M_2$				119		109	53	218	108	193	95
			c			4.2		2.8	5.0	2.4	3.4	1.6	2.8	
			$n_2$ Eck			146		309	366	150	205	311	367	
			$n_2$ th			146		308	321	150	205	278	278	
12.400	523	3.46	$M_2$				130	71	119	58	237	118	211	104
			c			3.4	5.5	2.3	4.3	1.9	2.9	1.3	2.4	
			$n_2$ Eck			132	161	279	331	136	186	281	332	
			$n_2$ th			132	161	279	290	135	185	251	251	
14.286	513	1.63	$M_2$		80									
			c		4.4									
			$n_2$ Eck		239									
			$n_2$ th		239									
14.286	528	1.63	$M_2$				154	83	139	68	281	138	248	122
			c			3.3	6.0	2.6	4.7	1.9	3.5	1.5	2.7	
			$n_2$ Eck			115	140	242	287	118	161	244	288	
			$n_2$ th			114	140	242	251	118	161	218	218	
15.869	597	2.35	$M_2$		87	54								
			c		3.7	5.4								
			$n_2$ Eck		215	255								
			$n_2$ th		215	255								
15.869	605	2.35	$M_2$				166	91	152	75	303	151	270	134
			c			3.2	5.2	2.2	4.0	1.8	2.7	1.2	2.3	
			$n_2$ Eck			103	126	218	258	106	145	219	259	
			$n_2$ th			103	126	218	226	106	145	196	196	
17.360	624	2.01	$M_2$		95	60	182	100	166	82	331	165	296	146
			c		3.6	5.2	3.1	5.0	2.1	3.9	1.8	2.7	1.2	2.2
			$n_2$ Eck		196	233	94	115	199	236	97	133	201	237
			$n_2$ th		196	233	94	115	199	207	97	132	179	179

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



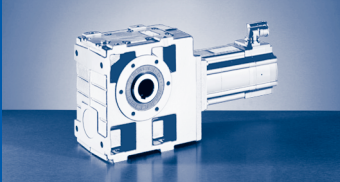


$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
20.417	488	4.17	$M_2$				201	111	182	89	364	182		160
			c				2.1	3.4	1.4	2.6	1.2	1.8		1.5
			$n_{2 \text{ Eck}}$				80	98	169	201	82	113		201
			$n_{2 \text{ th}}$				80	98	169	176	82	113		152
22.143	673	1.39	$M_2$		122	76	232	127	212	104	422	211	377	187
			c		3.4	4.9	2.7	4.6	2.0	3.6	1.5	2.5	1.1	2.1
			$n_{2 \text{ Eck}}$		154	183	74	90	156	185	76	104	157	186
			$n_{2 \text{ th}}$		154	183	74	90	156	162	76	104	141	141
24.800	561	3.06	$M_2$				246	136	225	111	445	223		197
			c				2.0	3.3	1.4	2.5	1.1	1.7		1.4
			$n_{2 \text{ Eck}}$				66	81	139	165	68	93		166
			$n_{2 \text{ th}}$				66	81	139	145	68	93		125
27.125	718	1.04	$M_2$		149	93	285	156	260	128	516	258	462	229
			c		3.2	4.6	2.3	4.0	1.9	3.4	1.3	2.3	1.1	1.9
			$n_{2 \text{ Eck}}$		126	149	60	74	127	151	62	85	128	152
			$n_{2 \text{ th}}$		126	149	60	74	127	132	62	85	115	115
31.738	609	2.10	$M_2$		166	104	314	173	287	142	568	285		253
			c		2.2	3.1	1.8	3.0	1.3	2.3	1.0	1.6		1.3
			$n_{2 \text{ Eck}}$		107	128	52	63	109	129	53	73		130
			$n_{2 \text{ th}}$		107	128	52	63	109	113	53	72		98
35.306	720	0.66	$M_2$		195	122	371	204	338	166				
			c		2.9	4.3	1.9	3.3	1.7	3.2				
			$n_{2 \text{ Eck}}$		97	115	46	57	98	116				
			$n_{2 \text{ th}}$		97	115	46	57	98	102				
39.200	637	1.64	$M_2$		203	127	385	213	351	174		349		309
			c		2.0	2.9	1.6	2.6	1.2	2.2		1.5		1.2
			$n_{2 \text{ Eck}}$		87	103	42	51	88	105		59		105
			$n_{2 \text{ th}}$		87	103	42	51	88	92		59		79
43.917	720	0.48	$M_2$		242	152	460	255	420	207				
			c		2.6	3.8	1.6	2.8	1.5	2.9				
			$n_{2 \text{ Eck}}$		78	92	37	46	79	93				
			$n_{2 \text{ th}}$		78	92	37	46	79	82				
50.000	693	1.16	$M_2$	79	258	162	488	271	447	221		444		393
			c	5.5	1.9	2.7	1.3	2.2	1.1	2.0		1.3		1.2
			$n_{2 \text{ Eck}}$	79	68	81	33	40	69	82		46		82
			$n_{2 \text{ th}}$	79	68	81	33	40	69	72		46		62
54.250	720	0.96	$M_2$		282	177	534	296	488	242		484		429
			c		1.9	2.7	1.3	2.2	1.1	2.0		1.2		1.1
			$n_{2 \text{ Eck}}$		63	75	30	37	64	76		42		76
			$n_{2 \text{ th}}$		63	75	30	37	64	66		42		57
61.250	720	0.89	$M_2$		316	199	596	331	547	270		542		480
			c		1.7	2.6	1.2	2.0	1.0	1.9		1.1		1.1
			$n_{2 \text{ Eck}}$		56	66	27	33	56	67		38		67
			$n_{2 \text{ th}}$		56	66	27	33	56	59		38		51
70.611	720	0.61	$M_2$	112	366	230	690	384		313				
			c	4.8	1.6	2.4	1.0	1.8		1.8				
			$n_{2 \text{ Eck}}$	56	48	57	23	28		58				
			$n_{2 \text{ th}}$	56	48	57	23	28		51				
79.722	720	0.57	$M_2$	126	410	258		429		351				
			c	4.4	1.5	2.2		1.7		1.6				
			$n_{2 \text{ Eck}}$	50	43	51		25		51				
			$n_{2 \text{ th}}$	50	43	51		25		45				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GSS [Nm]

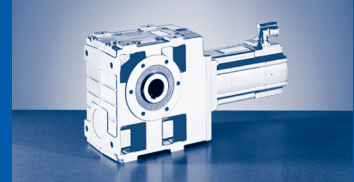
## GSS□□-□A (MCA)

$M_{2GN} \leq 720 \text{ Nm}$

GSS06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
87.833	720	0.44	$M_2$	140	455	286		475		389				
			c	4.2	1.4	2.1		1.5		1.6				
			$n_{2 \text{ Eck}}$	45	39	46		23		47				
			$n_{2 \text{ th}}$	45	39	46		23		41				
99.167	720	0.42	$M_2$	157	509	321		531		436				
			c	3.8	1.3	1.9		1.4		1.4				
			$n_{2 \text{ Eck}}$	40	34	41		20		41				
			$n_{2 \text{ th}}$	40	34	41		20		36				
113.667	720	0.28	$M_2$	181	587	370								
			c	3.6	1.2	1.8								
			$n_{2 \text{ Eck}}$	35	30	36								
			$n_{2 \text{ th}}$	35	30	36								
128.333	720	0.26	$M_2$	203	656	414								
			c	3.2	1.1	1.6								
			$n_{2 \text{ Eck}}$	31	27	32								
			$n_{2 \text{ th}}$	31	27	32								
137.950	720	0.20	$M_2$	219	709	447								
			c	3.2	1.0	1.6								
			$n_{2 \text{ Eck}}$	29	25	29								
			$n_{2 \text{ th}}$	29	25	29								
155.750	720	0.19	$M_2$	245		499								
			c	2.9		1.4								
			$n_{2 \text{ Eck}}$	25		26								
			$n_{2 \text{ th}}$	25		26								
174.375	720	0.13	$M_2$	276										
			c	2.5										
			$n_{2 \text{ Eck}}$	23										
			$n_{2 \text{ th}}$	23										
196.875	720	0.12	$M_2$	309										
			c	2.3										
			$n_{2 \text{ Eck}}$	20										
			$n_{2 \text{ th}}$	20										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

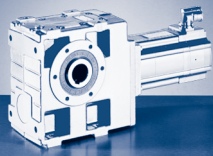


$M_{2GN} \leq 720 \text{ Nm}$

GSS06-3A				10IC40	13IC34
				...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$		
			$n_1$	2.00	6.30
			$I_{M400}$	3950	3410
			$P_N$	2.4	6.0
			$J_M$	0.80	2.20
			$M_2$	2.44	8.34
126.531	720	0.31	c	196	623
			$n_{2 \text{ Eck}}$	1.9	1.1
			$n_{2 \text{ th}}$	31	27
			$M_2$	218	695
142.857	720	0.30	c	1.9	1.0
			$n_{2 \text{ Eck}}$	28	24
			$n_{2 \text{ th}}$	28	24
			$M_2$	238	
155.000	720	0.27	c	1.7	
			$n_{2 \text{ Eck}}$	26	
			$n_{2 \text{ th}}$	25	
			$M_2$	265	
175.000	720	0.26	c	1.7	
			$n_{2 \text{ Eck}}$	23	
			$n_{2 \text{ th}}$	23	
			$M_2$	297	
194.857	720	0.14	c	1.4	
			$n_{2 \text{ Eck}}$	20	
			$n_{2 \text{ th}}$	20	
			$M_2$	331	
220.000	720	0.14	c	1.4	
			$n_{2 \text{ Eck}}$	18	
			$n_{2 \text{ th}}$	18	
			$M_2$	361	
238.700	720	0.13	c	1.3	
			$n_{2 \text{ Eck}}$	17	
			$n_{2 \text{ th}}$	17	
			$M_2$	401	
269.500	720	0.12	c	1.3	
			$n_{2 \text{ Eck}}$	15	
			$n_{2 \text{ th}}$	15	

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

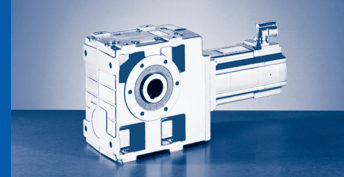
## GSS□□-□A (MCA)

$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	
5.862	539	21.36	$M_2$								113		
			c								4.1		
			$n_2$ Eck									287	
			$n_2$ th									287	
8.125	685	12.75	$M_2$								157	77	
			c								3.7	5.6	
			$n_2$ Eck									207	283
			$n_2$ th									207	283
9.086	628	17.44	$M_2$								173	85	
			c								3.1	5.0	
			$n_2$ Eck									185	253
			$n_2$ th									185	253
10.000	746	9.14	$M_2$						96				
			c						4.2				
			$n_2$ Eck						346				
			$n_2$ th						346				
10.000	797	9.14	$M_2$								194	95	
			c								3.5	5.3	
			$n_2$ Eck									168	230
			$n_2$ th									168	230
11.200	775	7.50	$M_2$						108				
			c						4.1				
			$n_2$ Eck						309				
			$n_2$ th						308				
11.200	866	7.50	$M_2$								218	107	
			c								3.4	5.1	
			$n_2$ Eck									150	205
			$n_2$ th									150	205
12.594	799	10.71	$M_2$								240	119	
			c								2.9	4.3	
			$n_2$ Eck									133	183
			$n_2$ th									133	183
14.286	832	4.84	$M_2$				152		139				
			c				5.2		3.8				
			$n_2$ Eck				115		242				
			$n_2$ th				114		242				
14.286	973	4.84	$M_2$								279	137	
			c								3.2	4.8	
			$n_2$ Eck									118	161
			$n_2$ th									118	161
14.286	1036	4.84	$M_2$										
			c										
			$n_2$ Eck										
			$n_2$ th										
15.500	931	7.79	$M_2$				161		148		295	146	
			c				4.9		3.3		2.7	4.1	
			$n_2$ Eck				106		223		108	148	
			$n_2$ th				105		223		108	148	
17.360	1012	6.42	$M_2$				180		166	80	331	164	
			c				4.7		3.1	5.8	2.6	4.0	
			$n_2$ Eck				94		199	236	97	133	
			$n_2$ th				94		199	207	97	132	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

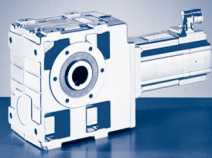


$M_{2GN} \leq 1250 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC42	GSS07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	$M_2$			
100	49	194	85	193	63	332	131	90	c	21.36	539	5.862
2.8	5.1	2.4	4.1	1.5	4.0	1.4	2.7	2.8	$n_{2 \text{ Eck}}$			
594	701	290	399	599	708	292	425	710	$n_{2 \text{ th}}$			
531	531	290	399	418	418	292	343	343	$M_2$	12.75	685	8.125
140	68	270	119	269	87	461	182	125	c			
2.5	4.6	2.2	3.7	1.3	3.7	1.3	2.5	2.6	$n_{2 \text{ Eck}}$			
428	506	209	288	432	511	211	307	512	$n_{2 \text{ th}}$	17.44	628	9.086
383	383	209	288	301	301	210	248	248	$M_2$			
154	75	296	131	295	96	504	199	137	c			
2.4	4.5	1.8	3.3	1.3	3.6	1.1	2.2	2.5	$n_{2 \text{ Eck}}$	9.14	746	10.000
383	452	187	258	386	457	188	274	458	$n_{2 \text{ th}}$			
342	342	187	258	269	269	188	222	222	$M_2$			
									c	9.14	797	10.000
173	85	333	147	332	108	568	225	155	$n_{2 \text{ Eck}}$			
2.4	4.4	2.1	3.5	1.3	3.5	1.2	2.3	2.5	$n_{2 \text{ th}}$			
348	411	170	234	351	415	171	249	416	$M_2$	7.50	775	11.200
311	311	170	234	245	245	171	201	201	c			
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$	7.50	866	11.200
194	95	373	165	372	121	637	252	174	$M_2$			
2.3	4.2	2.0	3.4	1.2	3.4	1.2	2.3	2.4	c			
311	367	152	209	313	371	153	222	371	$n_{2 \text{ Eck}}$	10.71	799	12.594
278	278	152	209	219	219	153	180	180	$n_{2 \text{ th}}$			
214	105	410	182	410	134		278	191	$M_2$			
2.1	3.9	1.7	2.9	1.1	3.1		1.9	2.2	c	4.84	832	14.286
276	326	135	186	279	330		198	330	$n_{2 \text{ Eck}}$			
247	247	135	186	194	194		160	160	$n_{2 \text{ th}}$			
									$M_2$	4.84	973	14.286
248	122								c			
2.2	4.0								$n_{2 \text{ Eck}}$			
244	288								$n_{2 \text{ th}}$	4.84	1036	14.286
218	218								$M_2$			
		477	211	476	155				c			
		1.9	3.2	1.1	3.1				$n_{2 \text{ Eck}}$	7.79	931	15.500
		119	164	246	291				$n_{2 \text{ th}}$			
		119	164	171	171				$M_2$			
264	130	505	224		165		342	236	c	6.42	1012	17.360
1.9	3.5	1.6	2.7		2.8		1.8	2.0	$n_{2 \text{ Eck}}$			
225	265	110	151		268		161	268	$n_{2 \text{ th}}$			
201	201	110	151		158		130	130	$M_2$	6.42	1012	17.360
296	145	565	251		185		383	265	c			
1.8	3.3	1.6	2.6		2.6		1.7	1.9	$n_{2 \text{ Eck}}$			
201	237	98	135		239		143	240	$n_{2 \text{ th}}$			
179	179	98	135		141		116	116				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

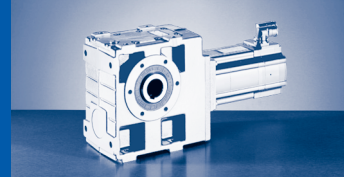
## GSS□□-□A (MCA)

$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	
20.517	764	13.58	$M_2$								370	183	
			c								1.8	2.9	
			$n_{2 \text{ Eck}}$									82	112
			$n_{2 \text{ th}}$									82	112
22.143	836	4.18	$M_2$		121								
			c		5.0								
			$n_{2 \text{ Eck}}$		154								
			$n_{2 \text{ th}}$		154								
22.143	1211	4.18	$M_2$				230		212	103	421	210	
			c				4.4		2.9	5.4	2.5	3.7	
			$n_{2 \text{ Eck}}$				74		156	185	76	104	
			$n_{2 \text{ th}}$				74		156	162	76	104	
25.188	913	9.59	$M_2$								458	228	
			c								1.7	2.6	
			$n_{2 \text{ Eck}}$								67	91	
			$n_{2 \text{ th}}$								67	91	
27.125	1250	3.13	$M_2$				282		260	126	516	257	
			c				4.2		2.8	5.1	2.4	3.5	
			$n_{2 \text{ Eck}}$				60		127	151	62	85	
			$n_{2 \text{ th}}$				60		127	132	62	85	
31.000	1065	7.05	$M_2$				309	169	282	138	562	280	
			c				2.9	4.7	2.0	3.7	1.6	2.5	
			$n_{2 \text{ Eck}}$				53	65	112	132	54	74	
			$n_{2 \text{ th}}$				53	65	111	116	54	74	
35.306	1052	1.96	$M_2$		193								
			c		4.5								
			$n_{2 \text{ Eck}}$		97								
			$n_{2 \text{ th}}$		97								
35.306	1250	1.96	$M_2$				369	201	338	165	673	334	
			c				3.3	5.9	2.6	4.8	1.8	3.3	
			$n_{2 \text{ Eck}}$				46	57	98	116	48	65	
			$n_{2 \text{ th}}$				46	57	98	102	48	65	
39.200	1175	5.37	$M_2$				388	213	355	174	704	352	
			c				2.7	4.3	1.8	3.3	1.5	2.3	
			$n_{2 \text{ Eck}}$				42	51	88	105	43	59	
			$n_{2 \text{ th}}$				42	51	88	92	43	59	
43.271	1090	1.43	$M_2$		237								
			c		4.2								
			$n_{2 \text{ Eck}}$		79								
			$n_{2 \text{ th}}$		79								
43.271	1250	1.43	$M_2$				454	248	414	202	824	410	
			c				2.7	4.8	2.5	4.5	1.5	3.0	
			$n_{2 \text{ Eck}}$				38	46	80	95	39	53	
			$n_{2 \text{ th}}$				38	46	80	83	39	53	
50.000	1250	3.53	$M_2$		260	163	495	271	452	223	897	449	
			c		2.9	4.2	2.4	4.0	1.7	3.1	1.3	2.1	
			$n_{2 \text{ Eck}}$		68	81	33	40	69	82	34	46	
			$n_{2 \text{ th}}$		68	81	33	40	69	72	34	46	
54.250	1250	2.89	$M_2$				541	297	495	244	981	491	
			c				2.3	3.9	1.7	3.1	1.3	2.1	
			$n_{2 \text{ Eck}}$				30	37	64	76	31	42	
			$n_{2 \text{ th}}$				30	37	64	66	31	42	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

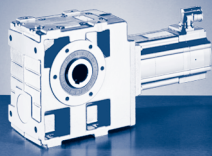


$M_{2GN} \leq 1250 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC42	GSS07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	$M_2$			
327	161	629	280		205		425	292	c	13.58	764	20.517
1.4	2.6	1.1	1.9		2.1		1.3	1.5	$n_{2 \text{ Eck}}$			
170	200	83	114		202		121	203	$n_{2 \text{ th}}$			
152	152	83	114		119		98	98	$M_2$			
									c	4.18	836	22.143
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
378	186	720	321		237				$M_2$			
1.7	3.1	1.5	2.5		2.4				c	4.18	1211	22.143
157	186	77	106		187				$n_{2 \text{ Eck}}$			
141	141	77	106		111				$n_{2 \text{ th}}$			
406	201	779	347		255		527	363	$M_2$			
1.2	2.3	1.0	1.7		1.9		1.1	1.3	c	9.59	913	25.188
138	163	68	93		165		99	165	$n_{2 \text{ Eck}}$			
124	124	67	93		97		80	80	$n_{2 \text{ th}}$			
463	228	880	393		290				$M_2$			
1.6	2.9	1.4	2.3		2.3				c	3.13	1250	27.125
128	152	63	86		153				$n_{2 \text{ Eck}}$			
115	115	63	86		90				$n_{2 \text{ th}}$			
501	248		427		314		649	448	$M_2$			
1.1	2.1		1.6		1.7		1.1	1.2	c	7.05	1065	31.000
112	133		76		134		80	134	$n_{2 \text{ Eck}}$			
100	100		75		79		65	65	$n_{2 \text{ th}}$			
									$M_2$			
									c	1.96	1052	35.306
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
602	297								$M_2$			
1.5	2.7								c	1.96	1250	35.306
99	116								$n_{2 \text{ Eck}}$			
88	88								$n_{2 \text{ th}}$			
630	312		536		396		814	563	$M_2$			
1.0	1.9		1.5		1.5		1.0	1.1	c	5.37	1175	39.200
89	105		60		106		64	106	$n_{2 \text{ Eck}}$			
79	79		60		62		51	51	$n_{2 \text{ th}}$			
									$M_2$			
									c	1.43	1090	43.271
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
737	364								$M_2$			
1.4	2.6								c	1.43	1250	43.271
80	95								$n_{2 \text{ Eck}}$			
72	72								$n_{2 \text{ th}}$			
	398		683		505				$M_2$			
	1.8		1.4		1.4				c	3.53	1250	50.000
	82		47		83				$n_{2 \text{ Eck}}$			
	62		47		49				$n_{2 \text{ th}}$			
	435		747		552				$M_2$			
	1.8		1.4		1.4				c	2.89	1250	54.250
	76		43		77				$n_{2 \text{ Eck}}$			
	57		43		45				$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

## GSS□□-□A (MCA)

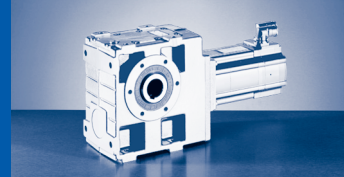
$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04
61.250	1250	2.70	$M_2$				606	333	554	273	1097	549
			c				2.0	3.6	1.6	2.9	1.1	2.0
			$n_{2 \text{ Eck}}$				27	33	56	67	27	38
			$n_{2 \text{ th}}$				27	33	56	59	27	38
70.611	1250	1.81	$M_2$		370	232	703	388	643	317		638
			c		2.7	3.9	1.8	3.1	1.6	2.9		1.9
			$n_{2 \text{ Eck}}$		48	57	23	28	49	58		33
			$n_{2 \text{ th}}$		48	57	23	28	49	51		33
79.722	1250	1.70	$M_2$		414	260	787	435	719	354		714
			c		2.6	3.7	1.6	2.8	1.5	2.7		1.7
			$n_{2 \text{ Eck}}$		43	51	21	25	43	51		29
			$n_{2 \text{ th}}$		43	51	21	25	43	45		29
86.542	1250	1.34	$M_2$		454	284	858	475	788	388		781
			c		2.5	3.7	1.5	2.6	1.5	2.7		1.6
			$n_{2 \text{ Eck}}$		39	47	19	23	40	47		27
			$n_{2 \text{ th}}$		39	47	19	23	40	41		27
97.708	1250	1.26	$M_2$		508	318	961	533	881	434		874
			c		2.3	3.5	1.3	2.3	1.3	2.6		1.4
			$n_{2 \text{ Eck}}$		35	42	17	21	35	42		24
			$n_{2 \text{ th}}$		35	41	17	20	35	37		24
113.667	1250	0.83	$M_2$		596	373	1119	622	1032	509		
			c		2.1	3.2	1.1	2.0	1.2	2.4		
			$n_{2 \text{ Eck}}$		30	36	14	18	30	36		
			$n_{2 \text{ th}}$		30	36	14	18	30	32		
128.333	1250	0.79	$M_2$	202	667	418		697	1154	570		
			c	5.8	1.9	2.9		1.8	1.1	2.2		
			$n_{2 \text{ Eck}}$	31	27	32		16	27	32		
			$n_{2 \text{ th}}$	31	27	32		16	27	28		
137.950	1250	0.61	$M_2$	219	722	453		752	1247	616		
			c	5.4	1.7	2.7		1.7	1.0	2.0		
			$n_{2 \text{ Eck}}$	29	25	29		15	25	30		
			$n_{2 \text{ th}}$	29	25	29		15	25	26		
155.750	1250	0.58	$M_2$	247	808	508		841		691		
			c	4.8	1.5	2.4		1.5		1.8		
			$n_{2 \text{ Eck}}$	25	22	26		13		26		
			$n_{2 \text{ th}}$	25	22	26		13		23		
174.375	1250	0.39	$M_2$	278	908	571						
			c	4.3	1.4	2.2						
			$n_{2 \text{ Eck}}$	23	20	23						
			$n_{2 \text{ th}}$	23	20	23						
196.875	1250	0.37	$M_2$	313	1017	640						
			c	3.8	1.2	1.9						
			$n_{2 \text{ Eck}}$	20	17	21						
			$n_{2 \text{ th}}$	20	17	21						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



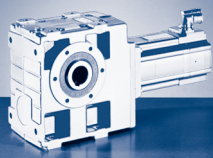


$M_{2GN} \leq 1250 \text{ Nm}$

17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC42	GSS07-2A			
...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	16.30	36.00	12.00	61.40	24.60	17.00	$n_1$			
3480	4110	1700	2340	3510	4150	1710	2490	4160	$I_{M400}$			
15.8	10.2	13.9	8.2	28.7	14.0	22.5	13.5	19.8	$P_N$			
6.90	4.10	6.40	4.00	13.20	5.20	11.00	6.40	7.40	$J_M$			
36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	180.04	$M_2$			
	487		835		617				c	2.70	1250	61.250
	1.7		1.3		1.3				$n_{2 \text{ Eck}}$			
	67		38		68				$n_{2 \text{ th}}$			
	51		38		40				$M_2$			
	565								c	1.81	1250	70.611
	1.6								$n_{2 \text{ Eck}}$			
	58								$n_{2 \text{ th}}$			
	44								$M_2$			
	632								c	1.70	1250	79.722
	1.6								$n_{2 \text{ Eck}}$			
	52								$n_{2 \text{ th}}$			
	39								$M_2$			
	692								c	1.34	1250	86.542
	1.6								$n_{2 \text{ Eck}}$			
	48								$n_{2 \text{ th}}$			
	36								$M_2$			
	774								c	1.26	1250	97.708
	1.5								$n_{2 \text{ Eck}}$			
	42								$n_{2 \text{ th}}$			
	32								$M_2$			
									c	0.83	1250	113.667
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.79	1250	128.333
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.61	1250	137.950
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.58	1250	155.750
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.39	1250	174.375
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.37	1250	196.875
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [Nm]

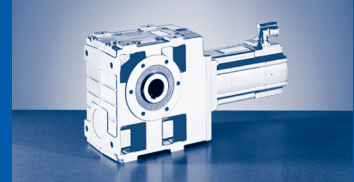
## GSS□□-□A (MCA)

$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...500	...F10	...500	...F10	...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	196	632	402	1186	660	1095	545
126.531	1250	0.86	$n_2 \text{ Eck}$	3.8	2.0	1.9	1.1	1.9	1.1	1.4
			$n_2 \text{ th}$	31	27	32	13	16	27	32
				31	27	32	13	16	27	28
			$M_2$	220	708	449		738	1225	610
142.857	1250	0.82	c	3.7	1.8	1.8		1.7	1.0	1.4
			$n_2 \text{ Eck}$	28	24	28		14	24	29
			$n_2 \text{ th}$	28	24	28		14	24	25
			$M_2$	239	772	489		805		664
155.000	1250	0.74	c	3.7	1.6	1.8		1.5		1.4
			$n_2 \text{ Eck}$	26	22	26		13		27
			$n_2 \text{ th}$	25	22	26		13		23
			$M_2$	268	866	548		898		743
175.000	1250	0.72	c	3.5	1.4	1.7		1.4		1.3
			$n_2 \text{ Eck}$	23	20	23		11		23
			$n_2 \text{ th}$	23	19	23		11		21
			$M_2$	310	999	632				
201.746	1250	0.37	c	3.2	1.3	1.6				
			$n_2 \text{ Eck}$	20	17	20				
			$n_2 \text{ th}$	20	17	20				
			$M_2$	347	1119	707				
227.778	1250	0.36	c	3.0	1.1	1.5				
			$n_2 \text{ Eck}$	17	15	18				
			$n_2 \text{ th}$	17	15	18				
			$M_2$	378	1218	770				
247.139	1250	0.33	c	2.8	1.0	1.4				
			$n_2 \text{ Eck}$	16	14	16				
			$n_2 \text{ th}$	16	14	16				
			$M_2$	422		859				
279.028	1250	0.32	c	2.7		1.3				
			$n_2 \text{ Eck}$	14		15				
			$n_2 \text{ th}$	14		15				
			$M_2$	493						
321.673	1250	0.28	c	1.9						
			$n_2 \text{ Eck}$	12						
			$n_2 \text{ th}$	12						
			$M_2$	547						
363.179	1250	0.28	c	1.9						
			$n_2 \text{ Eck}$	11						
			$n_2 \text{ th}$	11						
			$M_2$	601						
394.245	1250	0.26	c	1.7						
			$n_2 \text{ Eck}$	10						
			$n_2 \text{ th}$	10						
			$M_2$	665						
445.116	1250	0.26	c	1.7						
			$n_2 \text{ Eck}$	9						
			$n_2 \text{ th}$	9						
			$M_2$	735						
490.403	1250	0.18	c	1.5						
			$n_2 \text{ Eck}$	8						
			$n_2 \text{ th}$	8						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

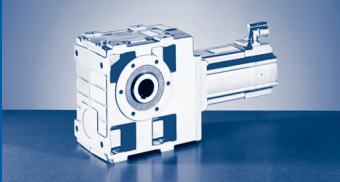


$M_{2GN} \leq 1250 \text{ Nm}$

GSS07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c	818						
553.681	1250	0.18	$n_{2 \text{ Eck}}$	1.4						
			$n_{2 \text{ th}}$	7						
			$M_2$	7						
			c	7						
634.639	1250	0.11	$n_{2 \text{ Eck}}$	943						
			$n_{2 \text{ th}}$	1.3						
			$M_2$	6						
			c	6						
			$n_{2 \text{ Eck}}$	6						
			$n_{2 \text{ th}}$	6						
716.528	1250	0.11	$M_2$	1048						
			c	1.1						
			$n_{2 \text{ Eck}}$	6						
			$n_{2 \text{ th}}$	6						

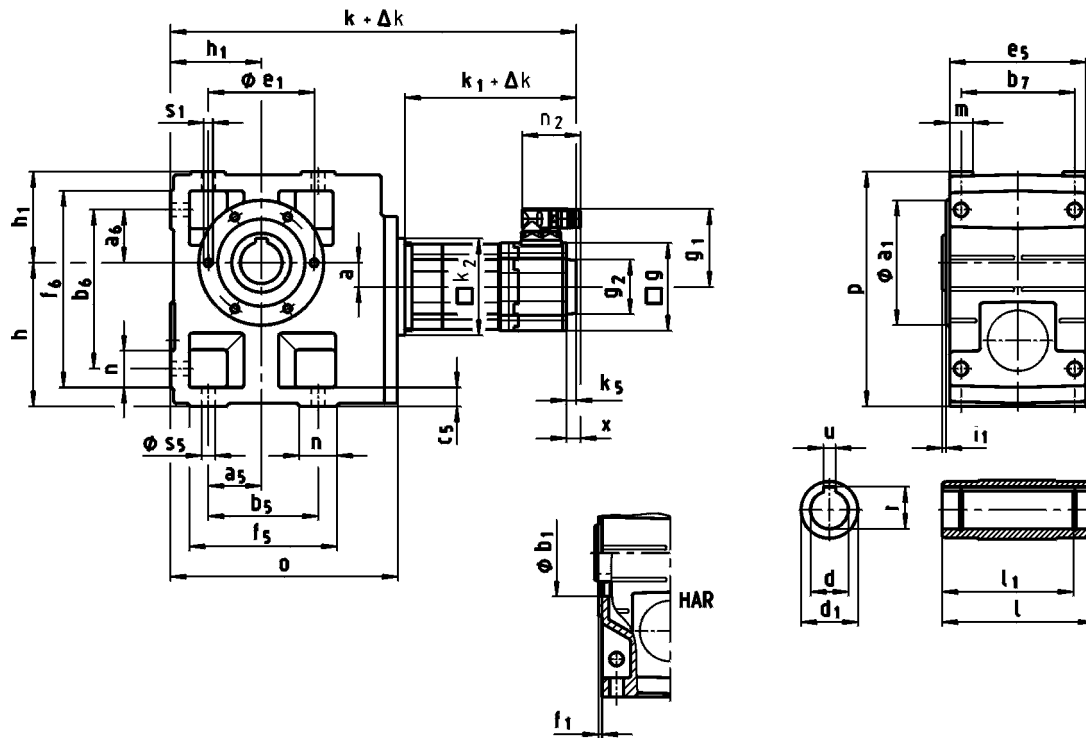
M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GSS [mm]

## GSS□□-2S (MCS)

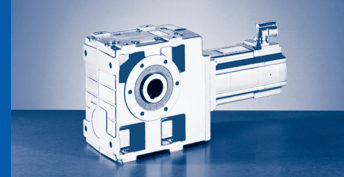


### GSS□□-2S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS04...	k	325	355	385	378	398	418	458								
GSS05...	k	347	377	407	399	419	439	479	416			456			496	
GSS06...	k	387	417	447	439	459	479	519	456			496			536	
GSS07...	k				482	502	522	562	499			539			579	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91							118	145 <sup>2)</sup>			
	g	62				89						116				
...RSO	$k_5$	0				13						14				
	$g_2$	□ 62			Ø 67						Ø 72					
	$g_1$	76				90						105				
	$n_2$	64								78						
	x	21							18							

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GSS05: 12DC20 ... 12LC41



### GSS□□-2S H□R ... RSO

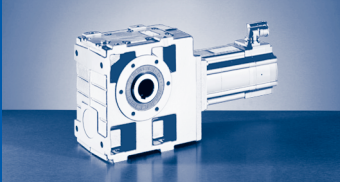
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GSS06...	k	472		512		552		592											
GSS07...	k	515		555		595		635		554		594		654					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GSS□□-2S H□R

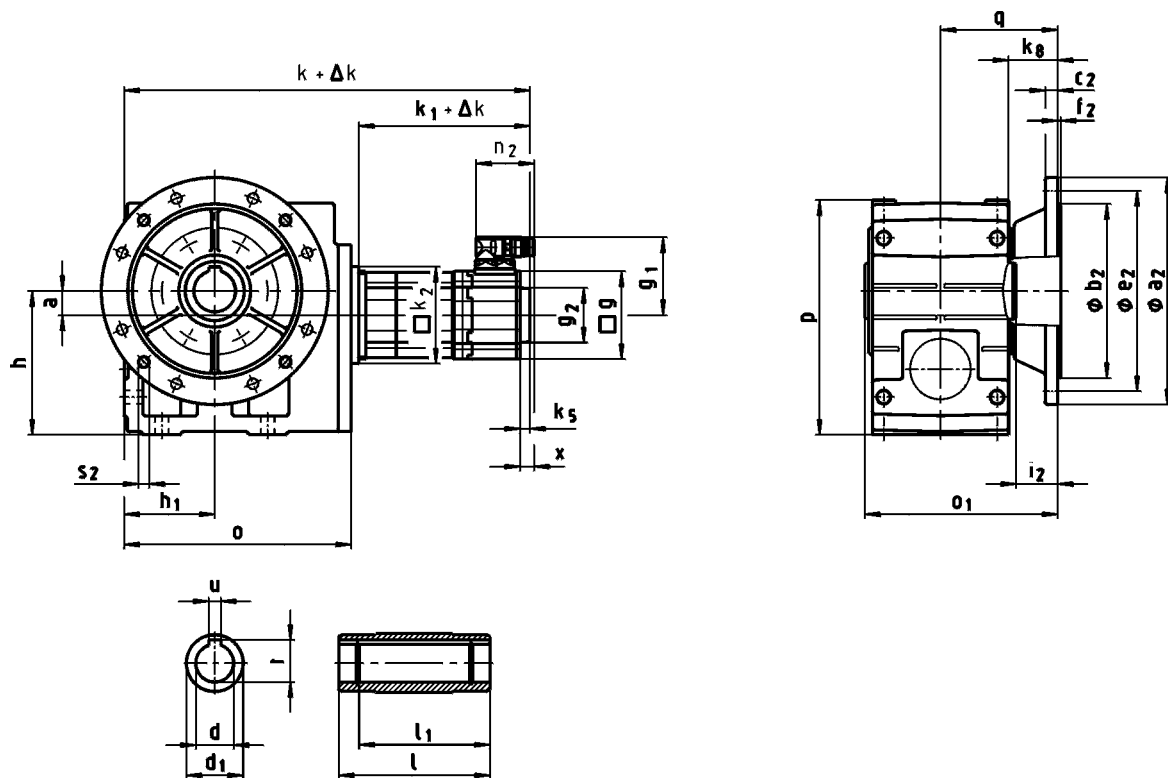
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS04...	181	171	100	71	20	45	45	90	119	85	14	100	112	141	20	22	9
GSS05...	212	205	125	80	23	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	255	250	150	100	26	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	305	310	190	120	33	70	70	140	210	150	25	180	185	255	28	45	18

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GSS04...	25	115	45	100	8	28.3	105	75	90	3	2.5	M6x12
	30					33.3						
GSS05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GSS06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GSS07...	55	200	75	175	16	59.3	165	115	140	5	5	M12x18



# GSS [mm]

## GSS□□-2S (MCS)

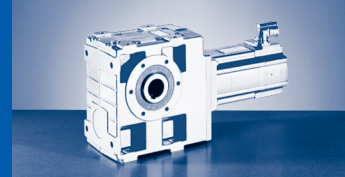


### GSS□□-2S HAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS04...	k	325	355	385	378	398	418	458								
GSS05...	k	347	377	407	399	419	439	479	416		456			496		
GSS06...	k	387	417	447	439	459	479	519	456		496			536		
GSS07...	k				482	502	522	562	499		539			579		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91							118	145 <sup>2)</sup>			
...RSO	g	62			89							116				
	$k_5$	0			13							14				
	g <sub>2</sub>	□ 62			Ø 67							Ø 72				
	g <sub>1</sub>	76			90							105				
	$n_2$	64			78											
	x	21						18								

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GSS05: 12DC20 ... 12LC41



### GSS□□-2S HAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GSS06...	k	472		512		552		592											
GSS07...	k	515		555		595		635		554		594		654					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>2)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GSS□□-2S HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS04...	181	149	171	100	71	20	91	41
GSS05...	212	174	205	125	80	23	103.5	40
GSS06...	255	203 <sup>2)</sup> 202 <sup>3)</sup>	250	150	100	26	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GSS07...	305	256	310	190	120	33	155.5	66

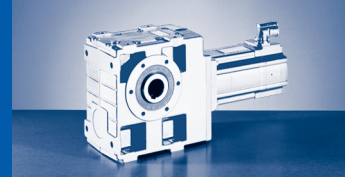
<sup>2)</sup> a<sub>2</sub> = 200

<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GSS04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GSS05...	35	140	50	124	10	38.3	200	130	12	165	3.5	33.5	4 x 11
	40					43.3							
GSS06...	45	160	65	140	14	48.8	250	180	15	215	4	33.5	4 x 14
	50					53.8							
GSS07...	55	200	75	175	16	59.3	300	230	17	265	4	33.5	4 x 14







### GSS□□-2S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GSS06...	k	472		512		552		592								
GSS07...	k	515		555		595		635		554		594		654		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147	116	147	141	172	141	172	141	172	141	172
	n <sub>2</sub>	78				94	78	94	78	94	78	94	78	94	78	94
	x	16				38	16	38	16	36	16	36	16	36	16	36

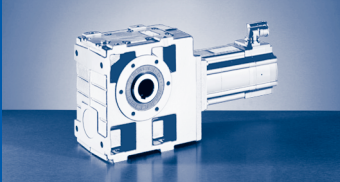
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GSS□□-2S V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS04...	181	163	171	100	71	20	107.5	45	45	90	119	85	14	100	112	141	20	22	9
GSS05...	212	197	205	125	80	23	130	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	255	236	250	150	100	26	160	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	305	296	310	190	120	33	200	70	70	140	210	150	25	180	185	255	28	45	18

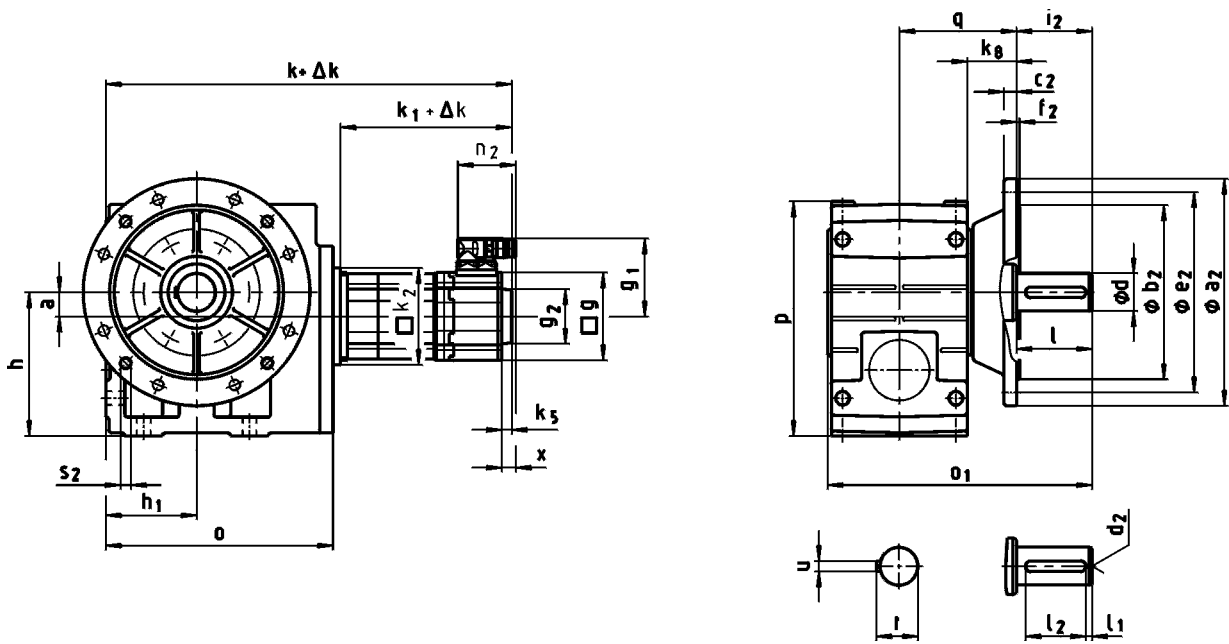
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GSS04...	25	50	45	4	40	M10	8	28	105	75	90	3	52.5	M6x12
GSS05...	30	60	50	6	45			33	118	80	100	4	64	M8x15
GSS06...	40	80	65	7	63	M16	14	43	140	100	120		85	M10x16
GSS07...	50	100	75	8	80			53.5	165	115	140	5	105	M12x18

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

## GSS□□-2S (MCS)

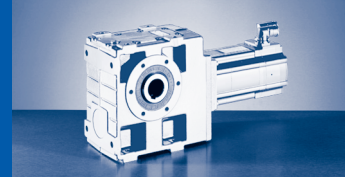


### GSS□□-2S VAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS04...	k	325	355	385	378	398	418	458								
GSS05...	k	347	377	407	399	419	439	479	416			456			496	
GSS06...	k	387	417	447	439	459	479	519	456			496			536	
GSS07...	k				482	502	522	562	499			539			579	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91							118		145 <sup>2)</sup>		
	g	62				89							116			
...RSO	$k_5$	0				13							14			
	$g_2$	□ 62										Ø 72				
	$g_1$	76										105				
	$n_2$	64							78							
	x	21												18		

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GSS05: 12DC20 ... 12LC41



### GSS□□-2S VAK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GSS06...	k	472		512		552		592											
GSS07...	k	515		555		595		635		554		594		654					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

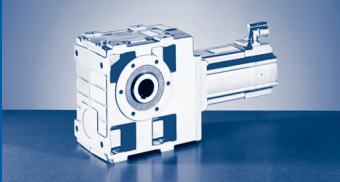
### GSS□□-2S VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS04...	181	196	171	100	71	20	91	41
GSS05...	212	230	205	125	80	23	103.5	40
GSS06...	255	277	250	150	100	26	121.5	49
GSS07...	305	351	310	190	120	33	155.5	66

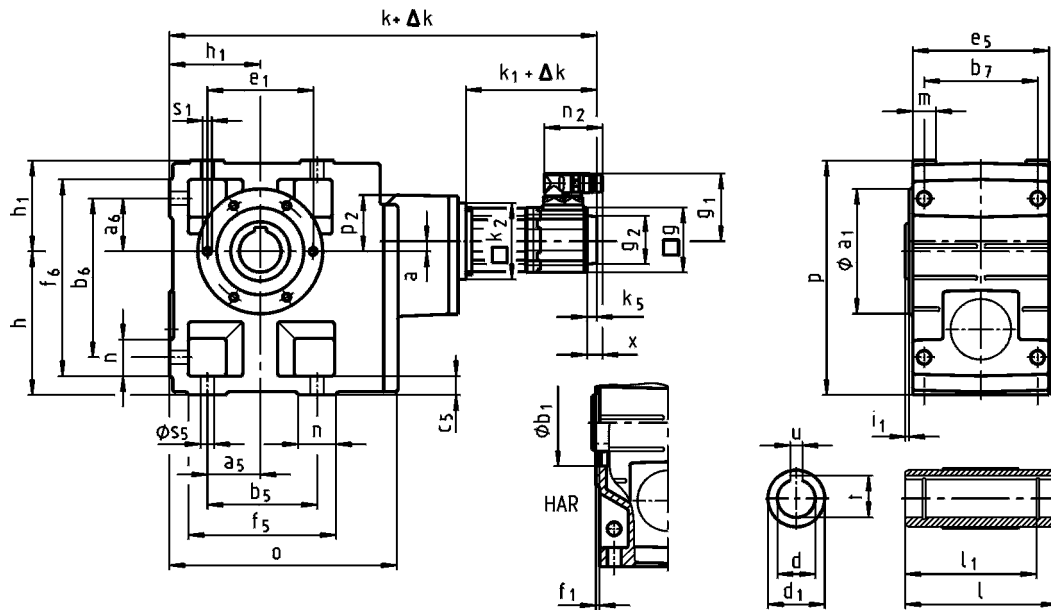
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GSS04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GSS05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GSS06...	40	80	7	63	M16	14	43	250	180	15	215	4	80	4 x 14
GSS07...	50	100	8	80			53.5						300	

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

## GSS□□-3S (MCS)

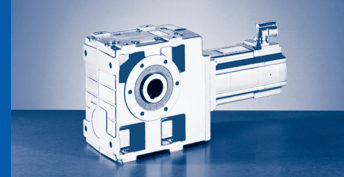


### GSS□□-3S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS05...	k	423	453	483	476	496	516	556								
GSS06...	k	480	510	540	533	553	573	613								
GSS07...	k	534	564	594	587	607	627	667	604		644			684		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188		228		268			
	$k_2$	66			91				118					145 <sup>2)</sup>		
...RSO	g	62				89				116						
	$k_5$	0				13				14						
	$g_2$	□ 62			Ø 67				Ø 72							
	$g_1$	76			90				105							
	$n_2$	64							78							
	x					21								18		

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

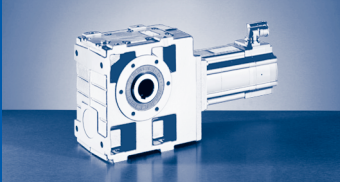
<sup>2)</sup> GSS07: 12DC20 ... 12LC41



GSS□□-3S H□R

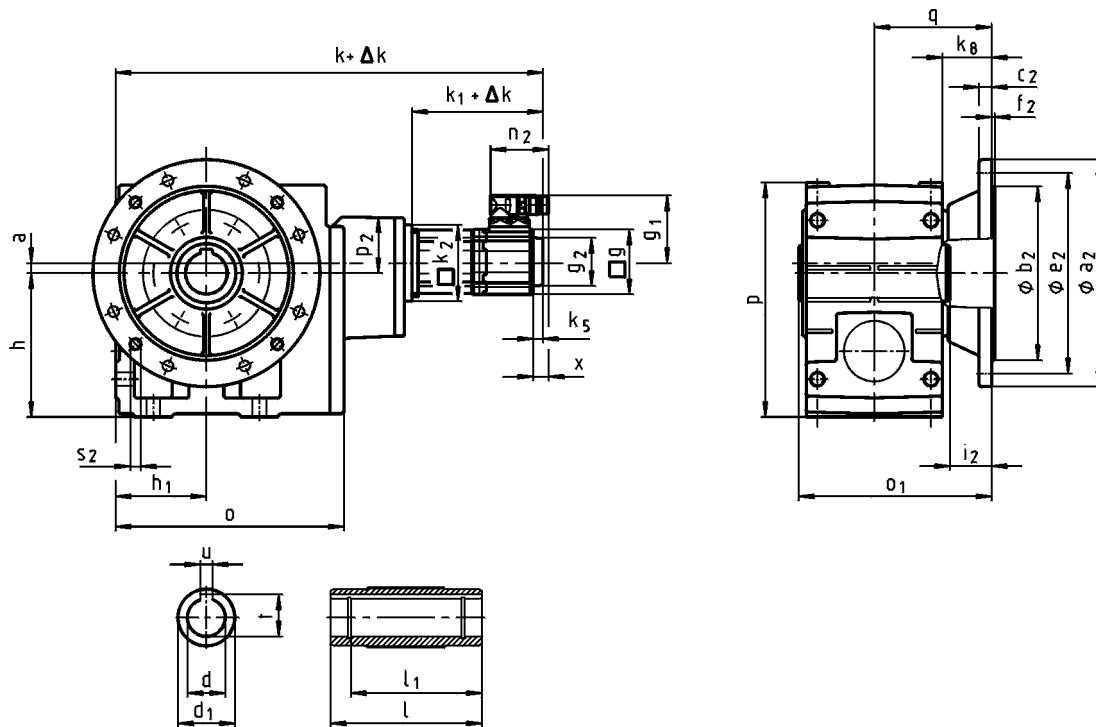
	o	p	p <sub>2</sub>	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS05...	209	205	65	125	80	13	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	252	250	63	150	100	10	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	299	310	73	190	120	12	70	70	140	210	150	25	180	185	255	28	45	18

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>	
	H7				JS9	+0,2		H7				6x60°	
GSS05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15	
	35				10	38.3							
GSS06...	40	160	65	140	12	43.3	140	100	120		5	5	M10x16
	45				14	48.8							
GSS07...	50	200	75	175	14	53.8	165	115	140	5	5	M12x18	
	55				16	59.3							



# GSS [mm]

## GSS□□-3S (MCS)

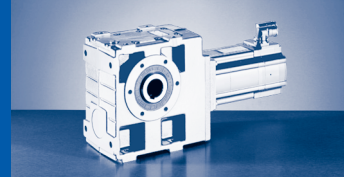


### GSS□□-3S HAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS05...	k	423	453	483	476	496	516	556								
GSS06...	k	480	510	540	533	553	573	613								
GSS07...	k	534	564	594	587	607	627	667	604		644			684		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	19			20											
	k <sub>1</sub>	132	162	192	183	203	223	263	188		228			268		
	k <sub>2</sub>	66			91							118		145 <sup>2)</sup>		
...RSO	g	62			89							116				
	k <sub>5</sub>	0			13							14				
	g <sub>2</sub>	□ 62			Ø 67							Ø 72				
	g <sub>1</sub>	76			90							105				
	n <sub>2</sub>	64								78						
	x				21										18	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GSS07: 12DC20 ... 12LC41



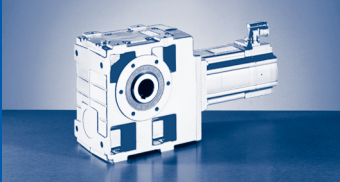
GSS□□-3S HAK

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS05...	209	174	205	65	125	80	13	103.5	40
GSS06...	252	203 <sup>1)</sup> 202 <sup>2)</sup>	250	63	150	100	10	122.5 <sup>1)</sup> 121.5 <sup>2)</sup>	50 <sup>1)</sup> 49 <sup>2)</sup>
GSS07...	299	256	310	73	190	120	12	155.5	66

<sup>1)</sup> a<sub>2</sub> = 200

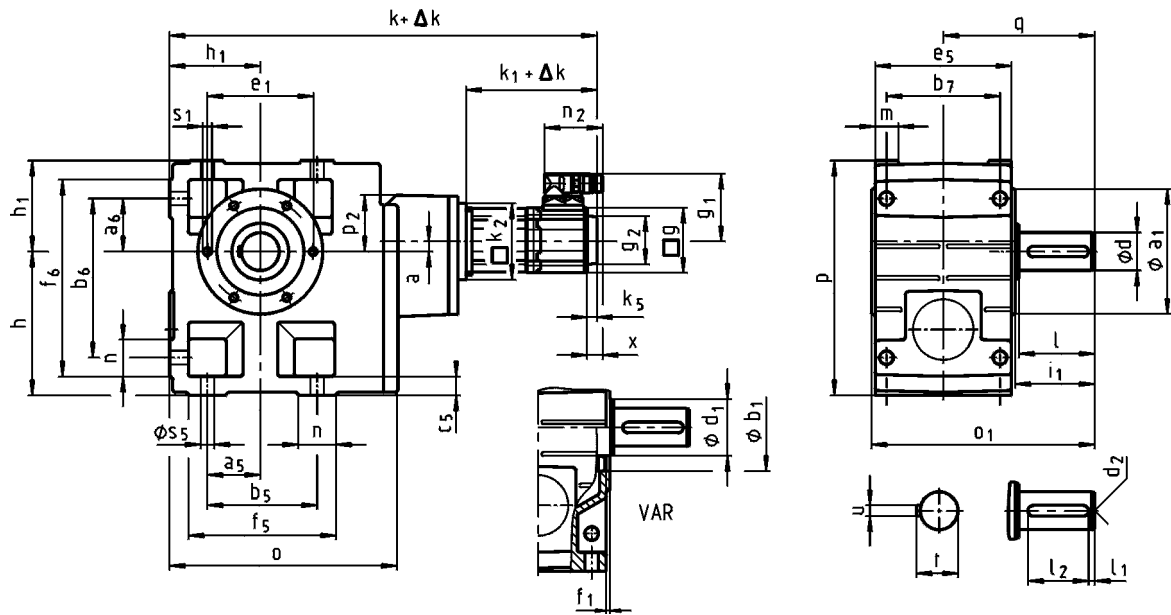
<sup>2)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GSS05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GSS06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5	4 x 14
	45				14	48.8							
GSS07...	50	200	75	175		53.8	300	230	17	265	4	55.5	4 x 14
	55				16	59.3							



# GSS [mm]

## GSS□□-3S (MCS)



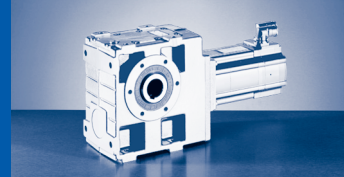
### GSS□□-3S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS05...	k	423	453	483	476	496	516	556								
GSS06...	k	480	510	540	533	553	573	613								
GSS07...	k	534	564	594	587	607	627	667	604		644			684		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19			20											
	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91							118				145 <sup>2)</sup>
	g	62			89							116				
...RSO	$k_5$	0			13							14				
	$g_2$	□ 62			Ø 67							Ø 72				
	$g_1$	76			90							105				
	$n_2$	64								78						
	x				21											18

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GSS07: 12DC20 ... 12LC41



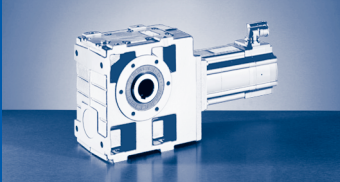


GSS□□-3S V□R

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS05...	209	197	205	65	125	80	13	130	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	252	236	250	63	150	100	10	160	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	299	296	310	73	190	120	12	200	70	70	140	210	150	25	180	185	255	28	45	18

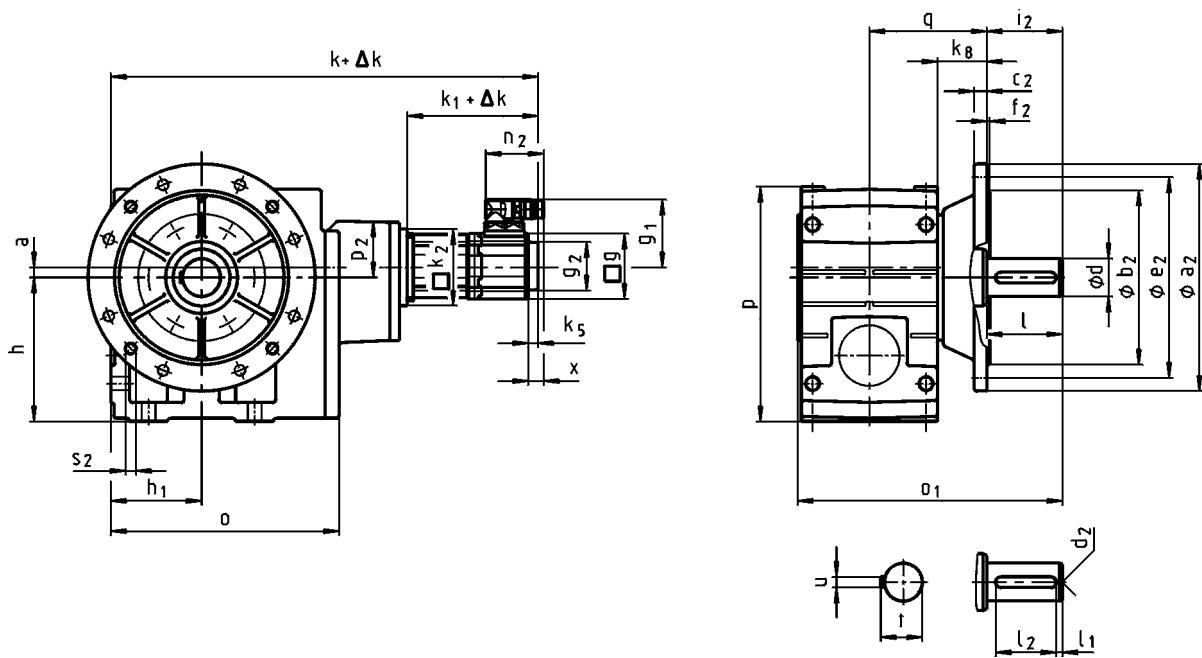
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GSS05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GSS06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GSS07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

## GSS□□-3S (MCS)

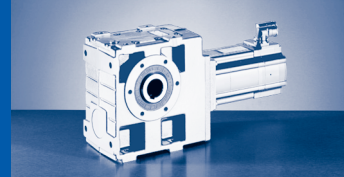


### GSS□□-3S VAK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GSS05...	k	423	453	483	476	496	516	556								
GSS06...	k	480	510	540	533	553	573	613								
GSS07...	k	534	564	594	587	607	627	667	604		644			684		
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19				20										
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268		
	$k_2$	66			91						118 145 <sup>2)</sup>					
	g	62				89						116				
	$k_5$	0				13						14				
	$g_2$	□ 62				Ø 67						Ø 72				
	$g_1$	76				90						105				
	$n_2$	64				78										
	x	21												18		

1) → 801 - SRS/SRM/ECN/EQN/EQI/C20

2) GSS07: 12DC20 ... 12LC41



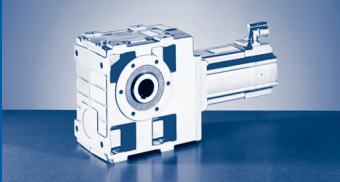
GSS□□-3S VAK

	o	o <sub>1</sub>	p	p <sub>2</sub>	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS05...	209	230	205	65	125	80	13	103.5	40
GSS06...	252	277	250	63	150	100	10	121.5	49
GSS07...	299	351	310	73	190	120	12	155.5	66

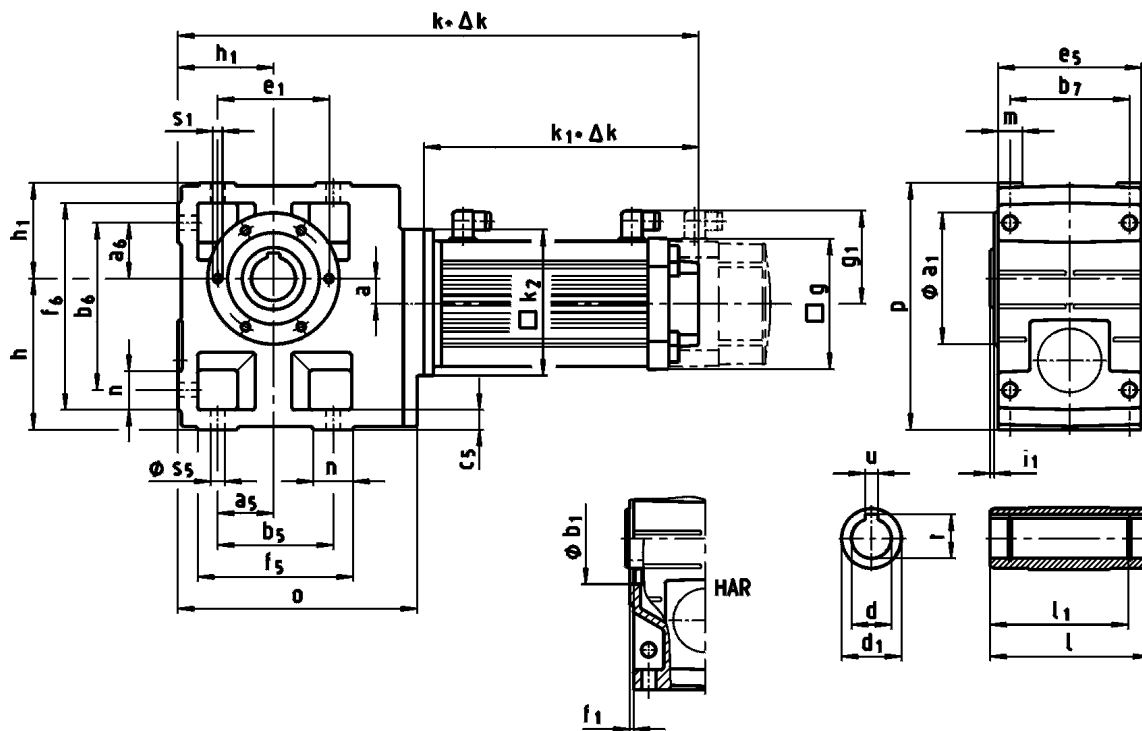
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GSS05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GSS06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GSS07...	50	100	8	80		14	53.5						300	

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

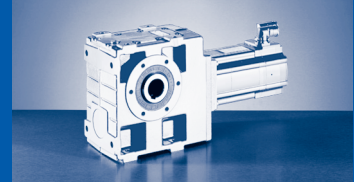
## GSS□□-2A (MCA)



### GSS□□-2A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GSS04...	k	453	462	530						
GSS05...	k	475	483	551	533		595			
GSS06...	k	515	523	591	573		635		612	
GSS07...	k	558	566	634	616		678		655	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GSS□□-2A H□R ... RSO

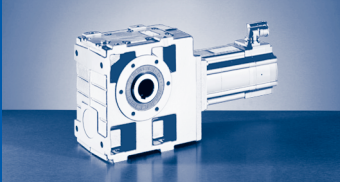
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GSS06...	k	701				821		802		898	
GSS07...	k	744		724		821		802		898	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GSS□□-2A H□R

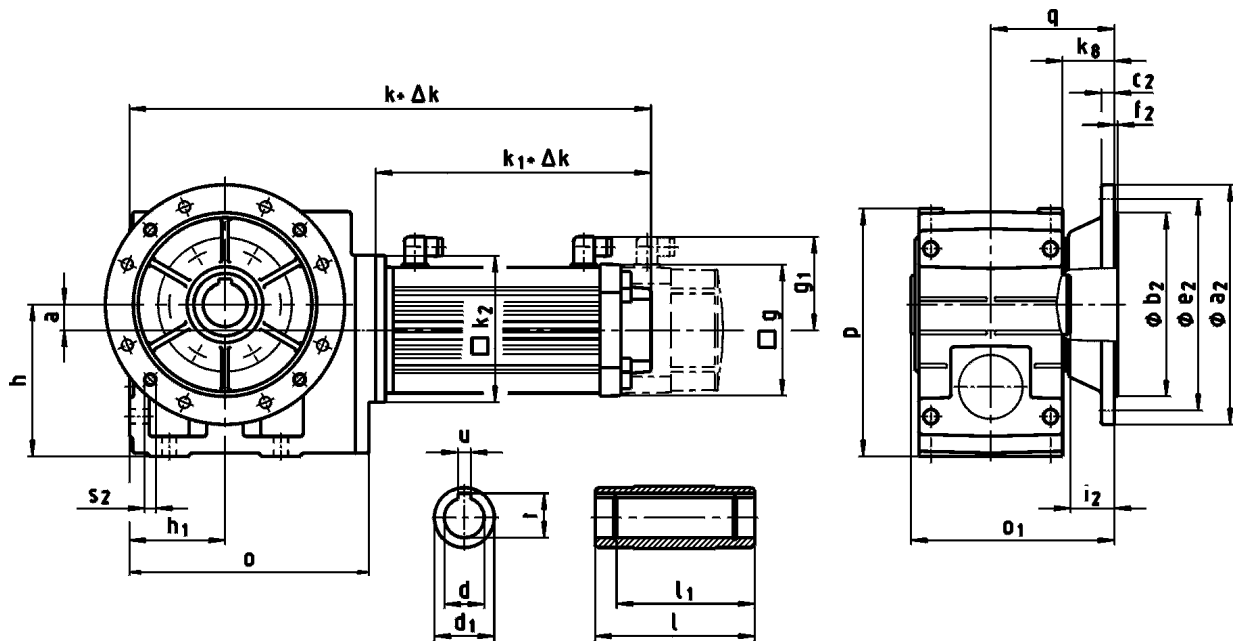
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS04...	181	171	100	71	20	45	45	90	119	85	14	100	112	141	20	22	9
GSS05...	212	205	125	80	23	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	255	250	150	100	26	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	305	310	190	120	33	70	70	140	210	150	25	180	185	255	28	45	18

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GSS04...	25	115	45	100	8	28.3	105	75	90	3	2.5	M6x12
	30					33.3						
GSS05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GSS06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GSS07...	55	200	75	175	16	59.3	165	115	140	5	5	M12x18



# GSS [mm]

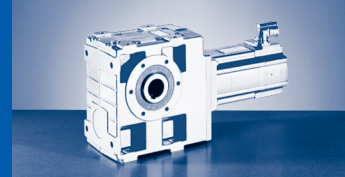
## GSS□□-2A (MCA)



### GSS□□-2A HAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GSS04...	k	453	462	530						
GSS05...	k	475	483	551	533		595			
GSS06...	k	515	523	591	573		635		612	
GSS07...	k	558	566	634	616		678		655	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GSS□□-2A HAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GSS06...	k	701				821		802		898	
GSS07...	k	744		724		821		802		898	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

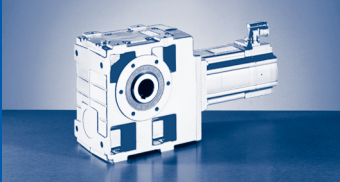
### GSS□□-2A HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS04...	181	149	171	100	71	20	91	41
GSS05...	212	174	205	125	80	23	103.5	40
GSS06...	255	203 <sup>2)</sup> 202 <sup>3)</sup>	250	150	100	26	122.5 <sup>2)</sup> 121.5 <sup>3)</sup>	50 <sup>2)</sup> 49 <sup>3)</sup>
GSS07...	305	256	310	190	120	33	155.5	66

<sup>2)</sup> a<sub>2</sub> = 200

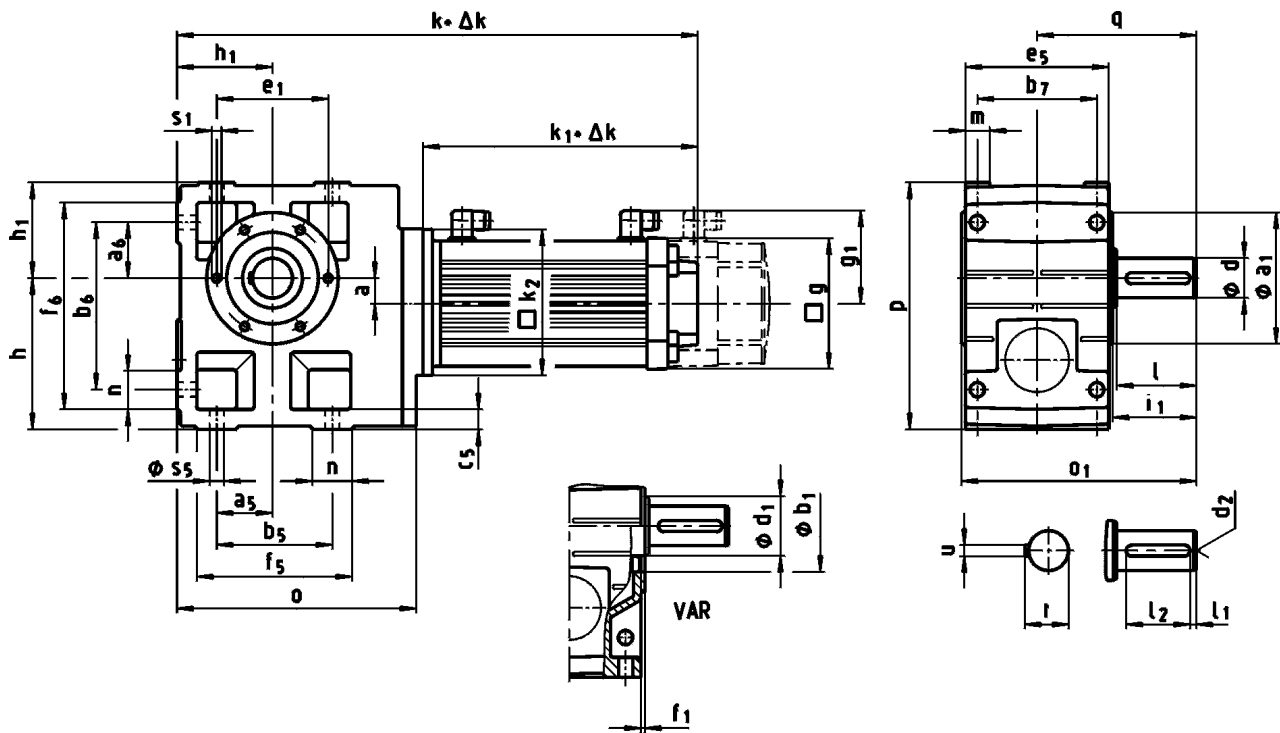
<sup>3)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GSS04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GSS05...	35	140	50	124	10	38.3	200	130	12	165	3.5	33.5	4 x 11
	40					43.3							
GSS06...	45	160	65	140	14	48.8	250	180	15	215	4	41.5	4 x 14
	50					53.8							
GSS07...	55	200	75	175	16	59.3	300	230	17	265	4	55.5	4 x 14



# GSS [mm]

## GSS□□-2A (MCA)

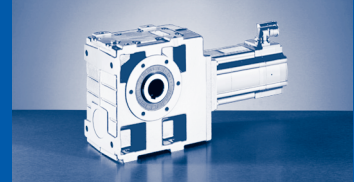


### GSS□□-2A V□□ ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GSS04...	k	453	462	530						
GSS05...	k	475	483	551	533		595			
GSS06...	k	515	523	591	573		635		612	
GSS07...	k	558	566	634	616		678		655	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35		33			35		
	$k_1$	258	267	335	307		369		346	
	$k_2$	145			180					
	g	102	131		142				165	
	g <sub>1</sub>	90	102		109				118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD





GSS□□-2A V□R ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GSS06...	k	701				821		802		898	
GSS07...	k	744		724		821		802		898	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

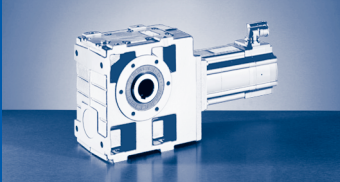
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GSS□□-2A V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS04...	181	163	171	100	71	20	107.5	45	45	90	119	85	14	100	112	141	20	22	9
GSS05...	212	197	205	125	80	23	130	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	255	236	250	150	100	26	160	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	305	296	310	190	120	33	200	70	70	140	210	150	25	180	185	255	28	45	18

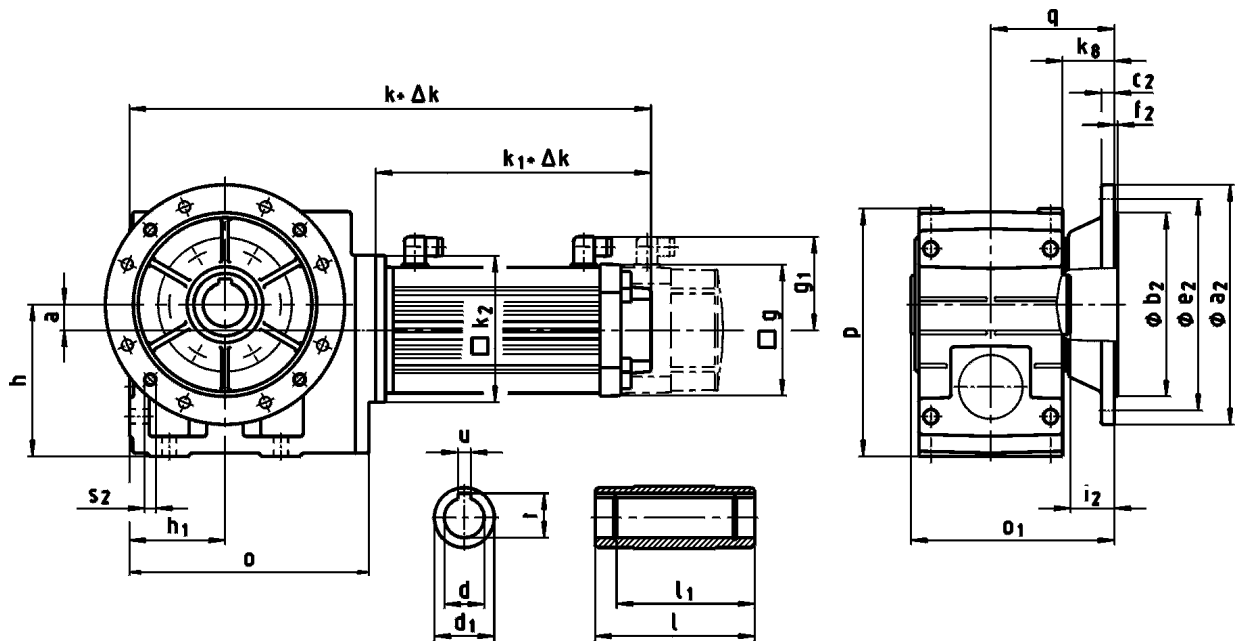
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GSS04...	25	50	45	4	40	M10	8	28	105	75	90	3	52.5	M6x12
GSS05...	30	60	50	6	45			33	118	80	100	4	64	M8x15
GSS06...	40	80	65	7	63	M16	14	43	140	100	120	5	85	M10x16
GSS07...	50	100	75	8	80			53.5	165	115	140	5	105	M12x18

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

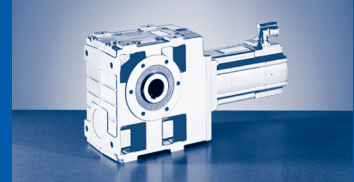
## GSS□□-2A (MCA)



### GSS□□-2A VAK ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GSS04...	k	453	462	530						
GSS05...	k	475	483	551	533		595			
GSS06...	k	515	523	591	573		635		612	
GSS07...	k	558	566	634	616		678		655	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$	145				180				
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GSS□□-2A VAK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GSS06...	k	701				821		802		898	
GSS07...	k	744		724		821		802		898	
...RSO B0 <sup>1)</sup>	$\Delta k$	0									
...RSO P□ <sup>1)</sup>	$\Delta k$	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

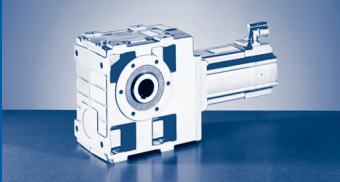
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GSS□□-2A VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS04...	181	196	171	100	71	20	91	41
GSS05...	212	230	205	125	80	23	103.5	40
GSS06...	255	277	250	150	100	26	121.5	49
GSS07...	305	351	310	190	120	33	155.5	66

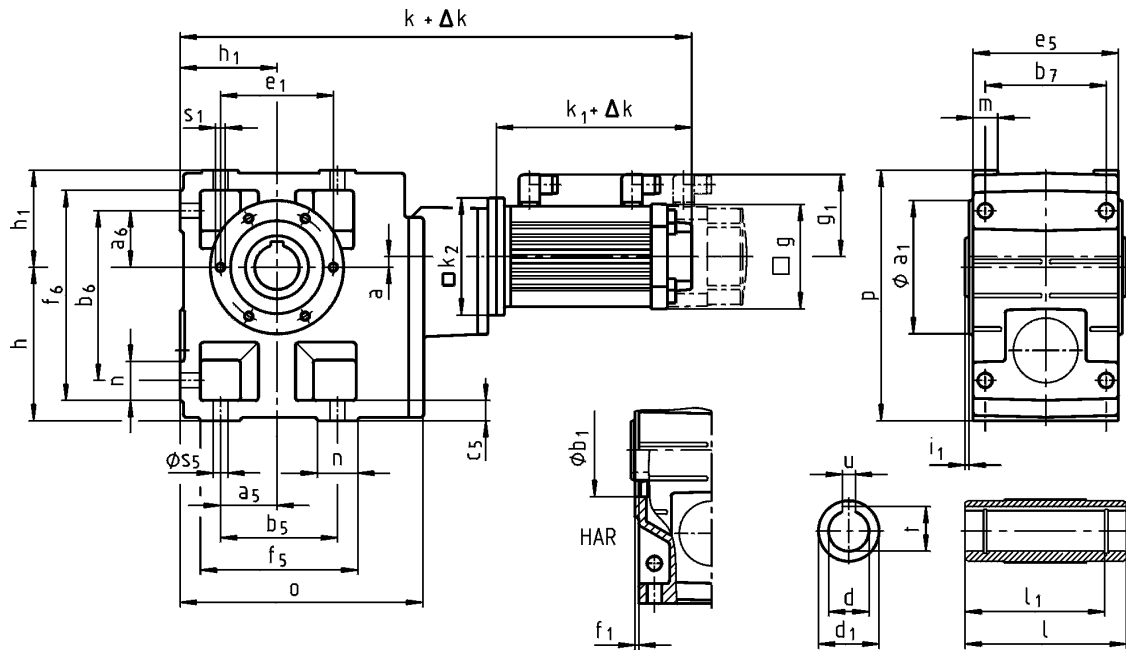
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GSS04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GSS05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GSS06...	40	80	7	63	M16	14	43	250	180	15	215	4	80	4 x 14
GSS07...	50	100	8	80			53.5						300	

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

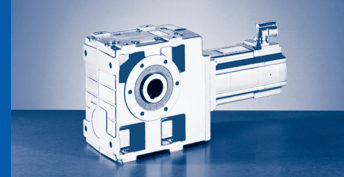
## GSS□□-3A (MCA)



### GSS□□-3A H□R ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10
GSS05...	k	551	560	628				
GSS06...	k	608	617	685				
GSS07...	k	662	671	739		721		783
...RSO B0 <sup>1)</sup>	$\Delta k$				0			
...RSO P□ <sup>1)</sup>	$\Delta k$		35			33		
	$k_1$	258	267	335		307		369
	$k_2$		145			180		
	g	102		131		142		
	$g_1$	90		102		109		

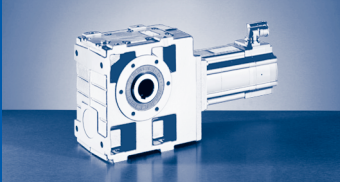
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GSS□□-3A H□R

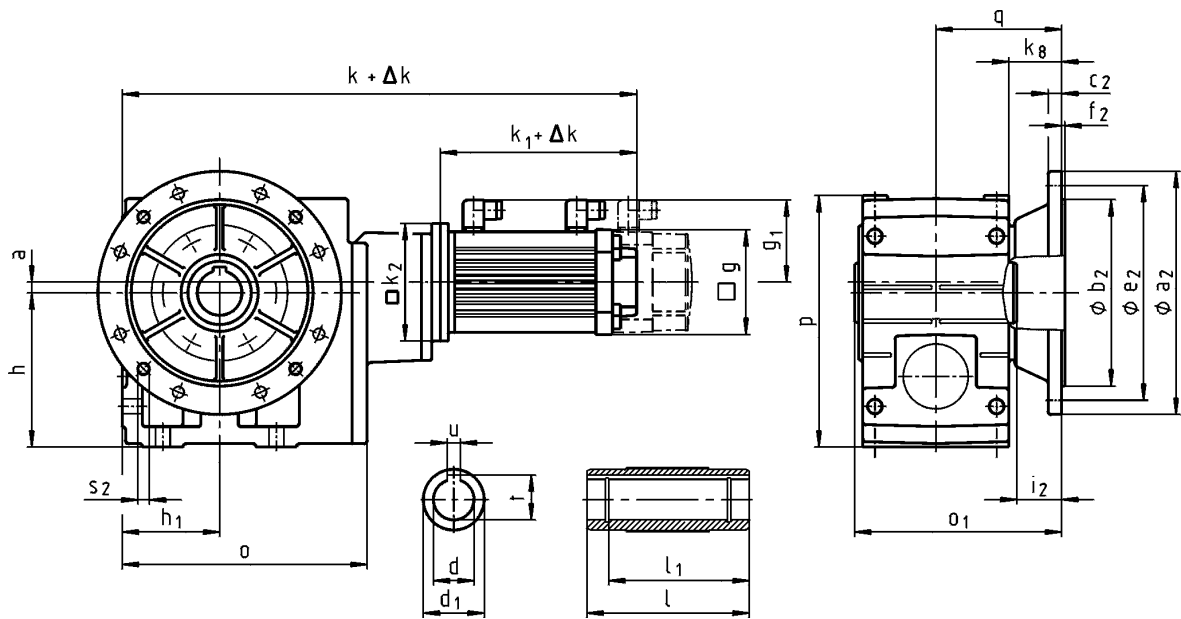
	o	p	h	h <sub>1</sub>	a	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS05...	209	205	125	80	13	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	252	250	150	100	10	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	299	310	190	120	12	70	70	140	210	150	25	180	185	255	28	45	18

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GSS05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GSS06...	40	160	65	140	12	43.3	140	100	120		5	M10x16
	45				14	48.8						
GSS07...	50	200	75	175	14	53.8	165	115	140	5	M12x18	
	55				16	59.3						



# GSS [mm]

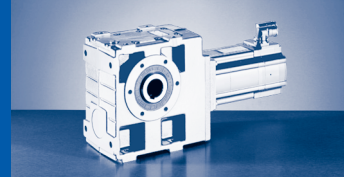
## GSS□□-3A (MCA)



### GSS□□-3A HAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10
GSS05...	k	551	560	628				
GSS06...	k	608	617	685				
GSS07...	k	662	671	739		721		783
...RSO B0 <sup>1)</sup>	$\Delta k$	0						
...RSO P□ <sup>1)</sup>	$\Delta k$	25		35			33	
	$k_1$	258	267	335		307		369
	$k_2$		145				180	
	g	102		131			142	
	$g_1$	90		102			109	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



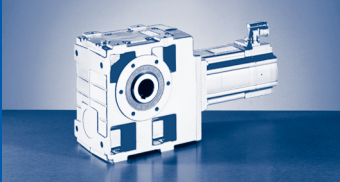
GSS□□-3A HAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS05...	209	174	205	125	80	13	103.5	40
GSS06...	252	203 <sup>1)</sup> 202 <sup>2)</sup>	250	150	100	10	122.5 <sup>1)</sup> 121.5 <sup>2)</sup>	50 <sup>1)</sup> 49 <sup>2)</sup>
GSS07...	299	256	310	190	120	12	155.5	66

<sup>1)</sup> a<sub>2</sub> = 200

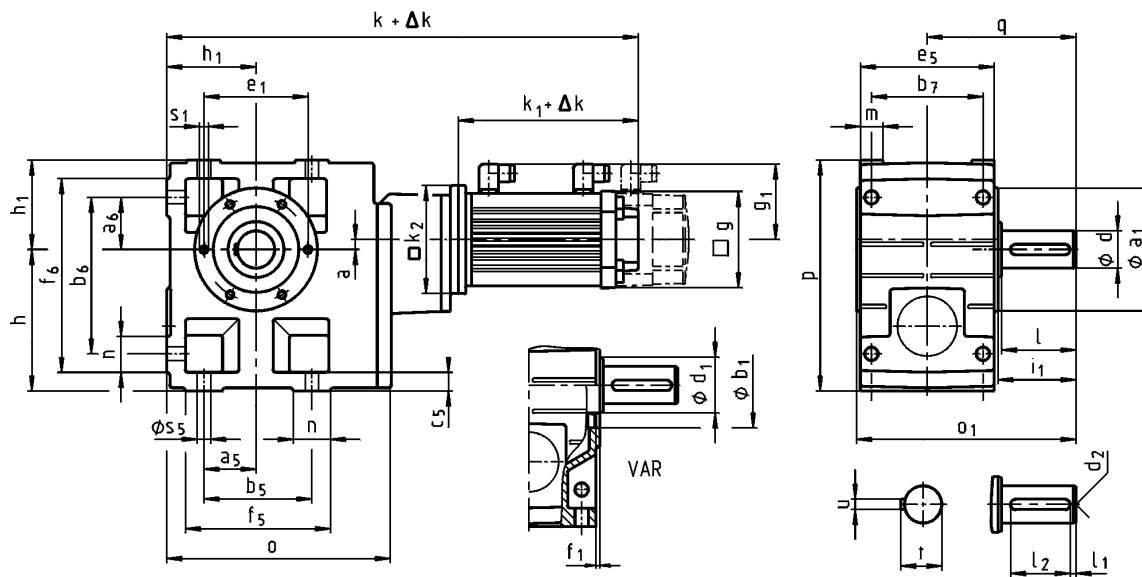
<sup>2)</sup> a<sub>2</sub> = 250

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GSS05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				10	38.3							
GSS06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5	4 x 14
	45				14	48.8							
GSS07...	50	200	75	175	14	53.8	300	230	17	265	4	41.5	4 x 14
	55				16	59.3						55.5	



# GSS [mm]

## GSS□□-3A (MCA)

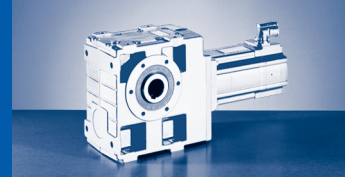


### GSS□□-3A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10
GSS05...	k	551	560	628				
GSS06...	k	608	617	685				
GSS07...	k	662	671	739	721		783	
...RSO B0 <sup>1)</sup>	$\Delta k$	0						
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33		
	$k_1$	258	267	335	307		369	
	$k_2$	145				180		
	g	102	131			142		
	$g_1$	90	102			109		

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



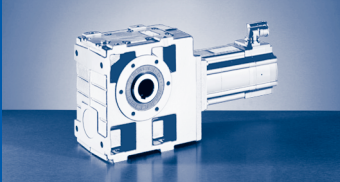


GSS□□-3A V□R

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	a <sub>5</sub>	a <sub>6</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	f <sub>6</sub>	m	n	s <sub>5</sub>
GSS05...	209	197	205	125	80	13	130	47.5	47.5	95	140	105	17	127	124	169	21	29	11
GSS06...	252	236	250	150	100	10	160	60	60	120	170	120	20	145	156	206	23	36	14
GSS07...	299	296	310	190	120	12	200	70	70	140	210	150	25	180	185	255	28	45	18

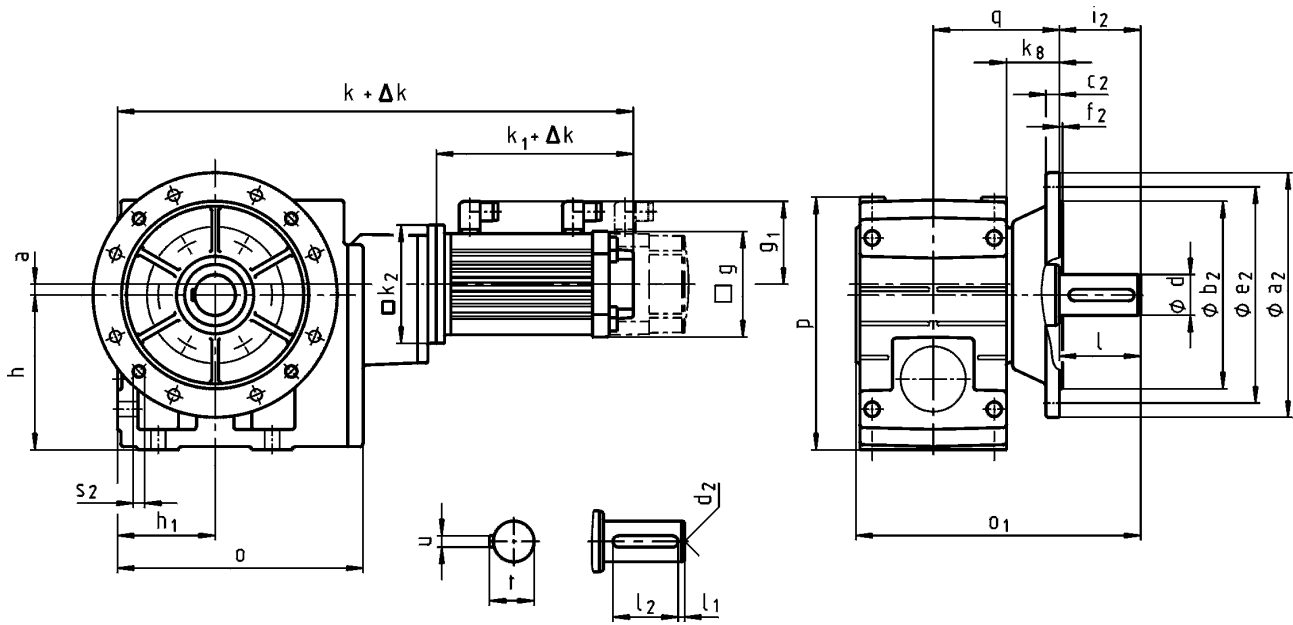
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GSS05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GSS06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GSS07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18

d ≤ 50 mm: k6; d > 50 mm: m6



# GSS [mm]

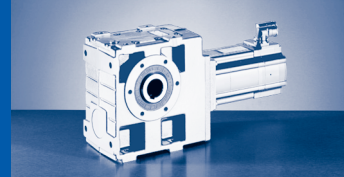
## GSS□□-3A (MCA)



### GSS□□-3A VAK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10
GSS05...	k	551	560	628				
GSS06...	k	608	617	685				
GSS07...	k	662	671	739		721		783
...RSO B0 <sup>1)</sup>	$\Delta k$	0						
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33		
	$k_1$	258	267	335	307		369	
	$k_2$	145			180			
	g	102	131		142			
	g <sub>1</sub>	90	102		109			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



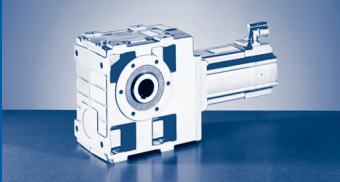
GSS□□-3A VAK

	o	o <sub>1</sub>	p	h	h <sub>1</sub>	a	q	k <sub>8</sub>
GSS05...	209	230	205	125	80	13	103.5	40
GSS06...	252	277	250	150	100	10	121.5	49
GSS07...	299	351	310	190	120	12	155.5	66

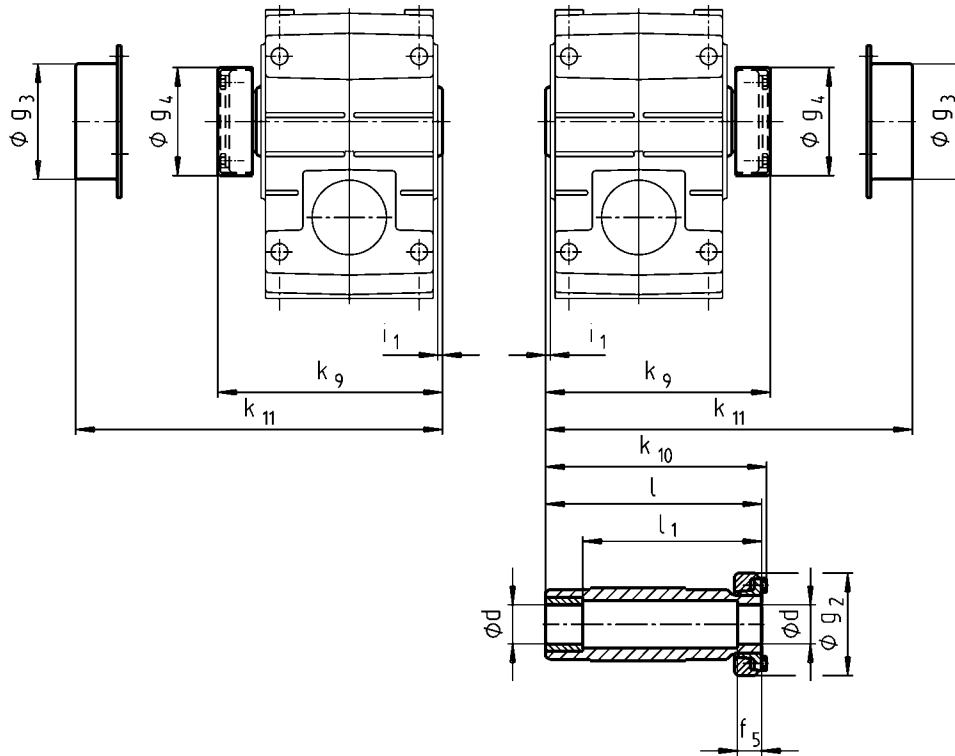
  

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
GSS05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GSS06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GSS07...	50	100	8	80		14	53.5						300	

d ≤ 50 mm: k6; d > 50 mm: m6

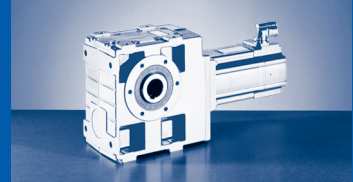


Hollow shaft with shrink disc

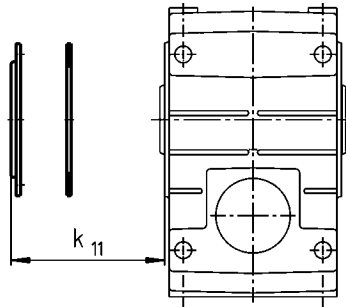


	Machine shaft	Hollow shaft with shrink disc						Protective cap		Cover	
	d	$i_1$	$k_{10}$	$g_2$	l	$l_1$	$f_5$	$k_9$	$g_4$	$k_{11}$	$g_3$
	h6										
GSS04...	25 30	2.5	148	72	142	122	26	150	76	154	79
GSS05...	35	4	174	80	168	148	28	176	84	179	90
GSS06...	40	5	200	90	194	164	30	202	94	204	100
GSS07...	50		238	110	232	192	26	241	116	244	124

- ▶ Ensure that the strength of the shaft material is adequate in shrink disc designs.  
When using typical steels (e.g. C45, 42CrMo4), the torques listed in the selection tables can be used without restriction. When using material that is considerably weaker, please consult us. Medium surface roughness Rz must not exceed 15  $\mu\text{m}$  (turning operation is sufficient).

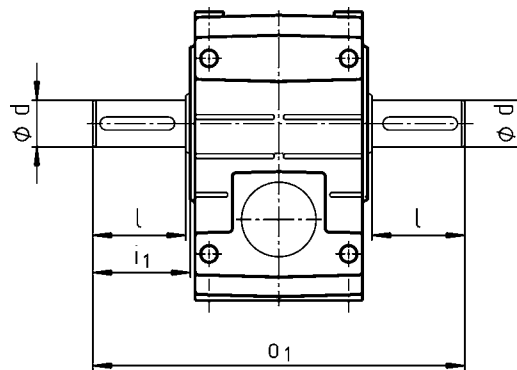


### Hoseproof hollow shaft cover

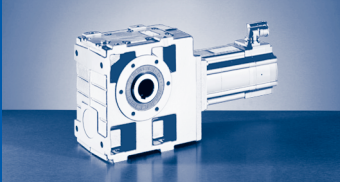


	Cover including seal
	$k_{11}$
GSS04...	9
GSS05...	10
GSS06...	11
GSS07...	

### Gearbox with 2nd output shaft end

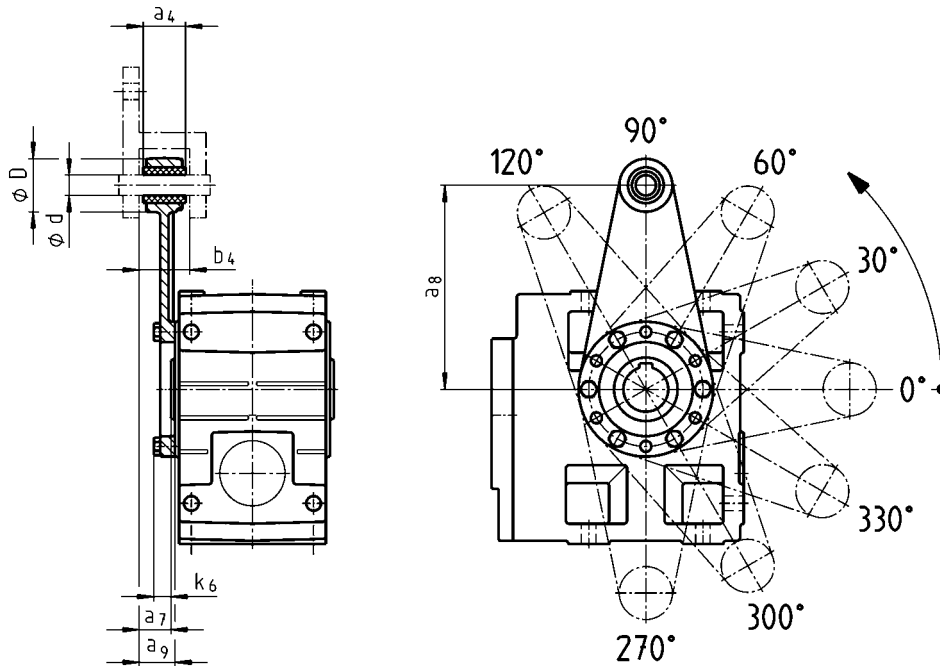


	d	l	$i_1$	$o_1$
GSS04...	25	50	52.5	215
GSS05...	30	60	64	260
GSS06...	40	80	85	320
GSS07...	50	100	105	400

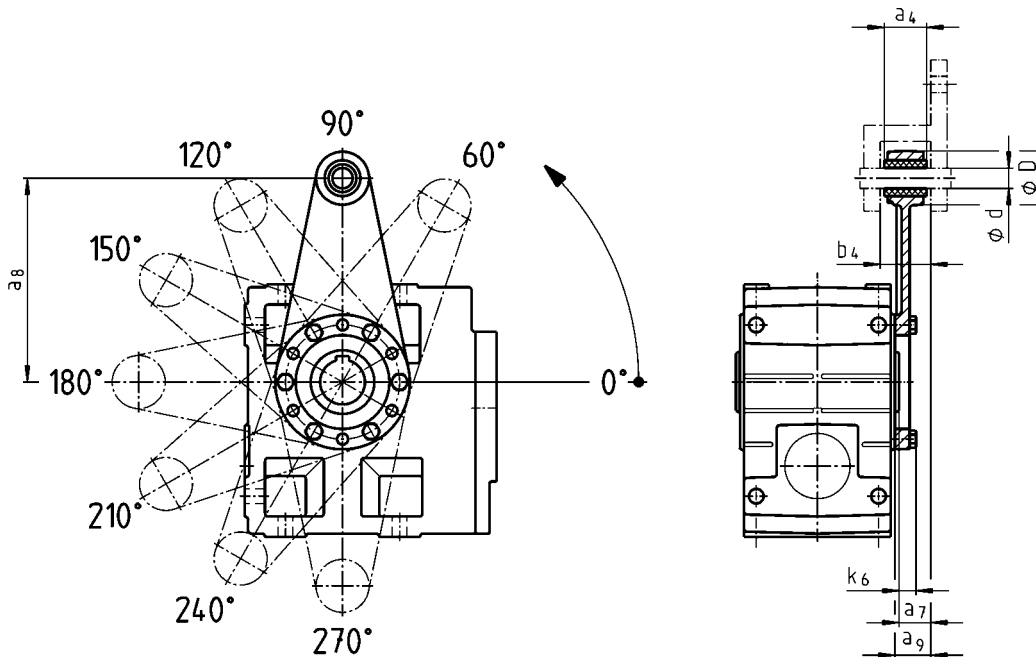


# GSS & [mm]

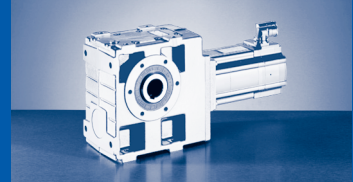
## Torque plate at threaded pitch circle in position 3



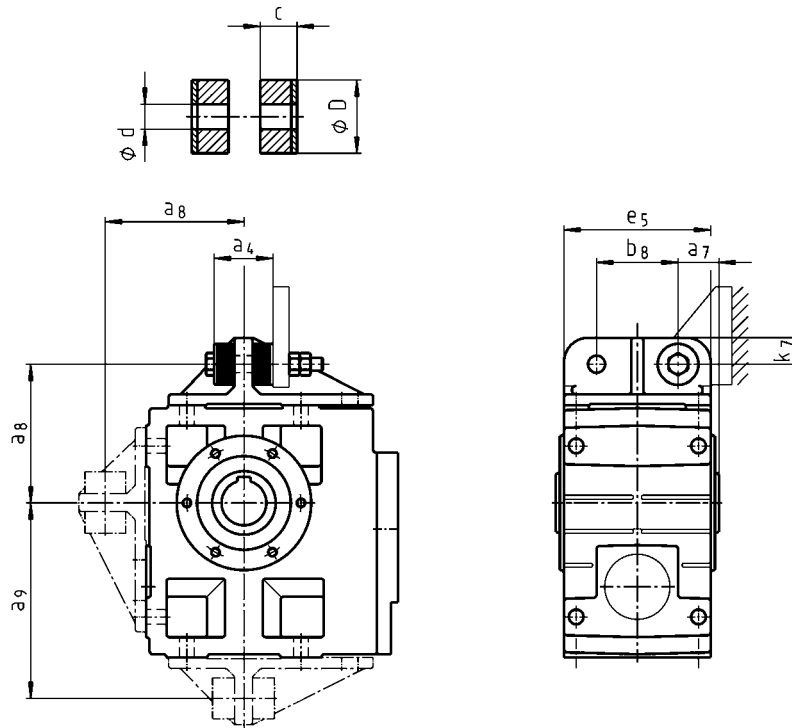
## Torque plate at threaded pitch circle in position 5



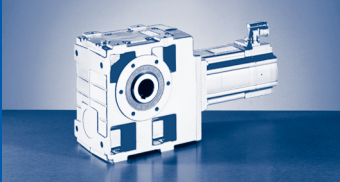
	Installation space							
	a <sub>7</sub>	b <sub>4</sub>	a <sub>4</sub>	a <sub>8</sub>	a <sub>9</sub>	d	D	k <sub>6</sub>
GSS04...	24	34.5	30	130	26.5	12	35	16
GSS05...	23.5	38.5	34	160	27.5	16	45	15
GSS06...	28	44.5	40	200	33	20	50	18
GSS07...	32.5	50.5	46	250	37.5	25	65	21



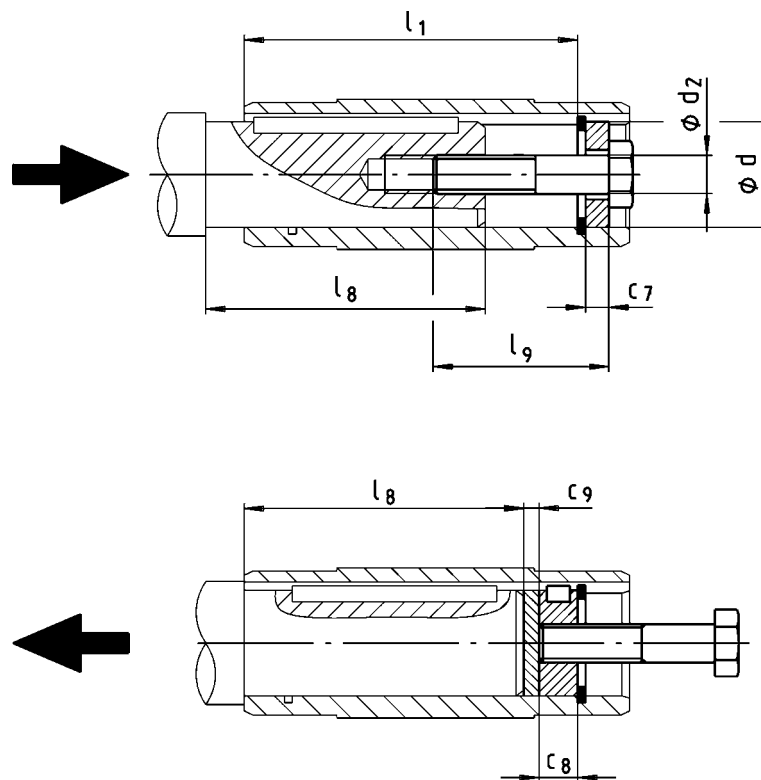
## Torque plate at casing foot in position 2, 4 or 6



	$a_4$	$a_7$	$a_8$	$a_9$	$b_8$	$c$	$d$	$D$	$e_5$	$k_7$
<b>GSS04...</b>	41	27.5	106	135	60	14.5	11	30	100	20
<b>GSS05...</b>	45	35	115	160	70	15	13	40	127	25
<b>GSS06...</b>	72	40	145	195	80	27	17	50	145	28
<b>GSS07...</b>	78	50	170	240	100	28	21	60	180	35

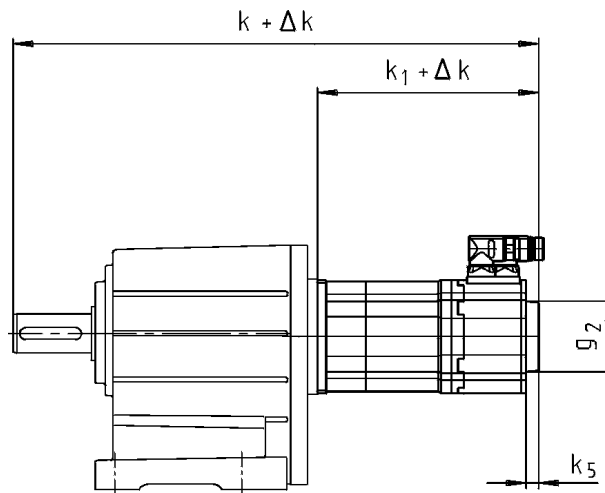
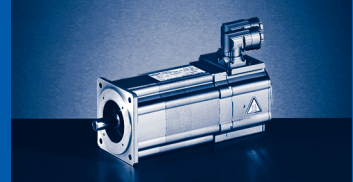


Mounting set for hollow shaft circlip  
Proposed design for auxiliary tools



	Hollow shaft		Hollow shaft circlip mounting set (Assembly auxiliaries)			Auxiliary tools Disassembly		Machine shaft
	d	l <sub>1</sub>	d <sub>2</sub>	l <sub>9</sub>	c <sub>7</sub>	c <sub>8</sub>	c <sub>9</sub>	max l <sub>8</sub>
	H7							
GSS04...	25	100	M10	40	5	10	3	85
GSS05...	30				6			
	35	124	M12	50	7	12		107
GSS06...	40	140	M16	60	8	16	4	118
	45				9			
GSS07...	50	175	M20	80	10	20	5	148
	55				11			





G□□...SRS / SRM / ECN / EQN / EQI / C20

		06C □41	06F □41	06I □41	09D □41	09F □38	09H □41	09L □41	12D □20	12D □41	12H □15	12H □30	12H □35	12L □20	12L □41
...SRS/SRM/ECN B0 ...EQN/EQI/C20 B0	Δ k	82			51			49							
...SRS/SRM/ECN P□ ...EQN/EQI/C20 P□	Δ k	100			71			69							
...S□□/E□□/C20	g <sub>2</sub>	□ 86			Ø 81			Ø 89							
...SR□ / E□□ / C40	k <sub>5</sub>	82			64			63							

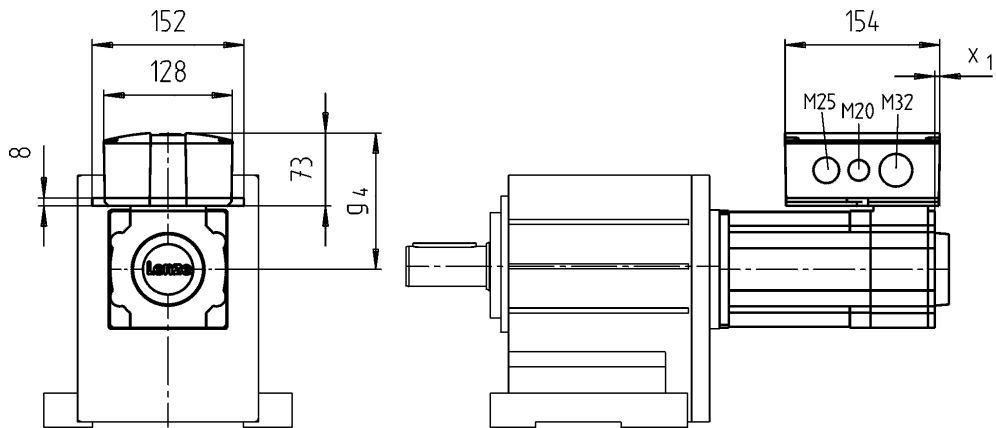
  

		14D □15	14D □36	14H □15	14H □32	14L □15	14L □32	14P □14	14P □32	19F □14	19F □30	19J □14	19J □30	19P □14	19P □30
...SRS/SRM/ECN B0 ...EQN/EQI/C20 B0	Δ k	50						49							
...SRS/SRM/ECN P□ ...EQN/EQI/C20 P□	Δ k	78						83		93					
...S□□/E□□/C20	g <sub>2</sub>	Ø 101													
...SR□ / E□□ / C40	k <sub>5</sub>	74						64							

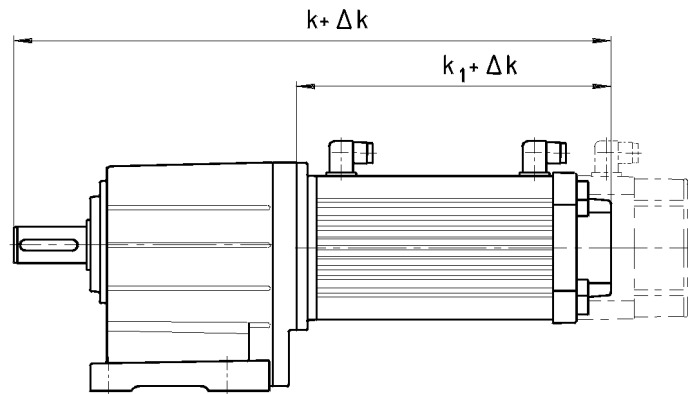


# MCS & [mm]

## Terminal box for motor connection



	09D □41	09F □38	09H □41	09L □41	12D □20	12D □41	12H □15	12H □30	12H □35	12L □20	12L □41			
g <sub>4</sub>	121				136									
x <sub>1</sub>	8				5									
	14D □15	14D □36	14H □15	14H □32	14L □15	14L □32	14P □14	14P □32	19F □14	19F □30	19J □14	19J □30	19P □14	19P □30
g <sub>4</sub>	147							172						
x <sub>1</sub>								3						



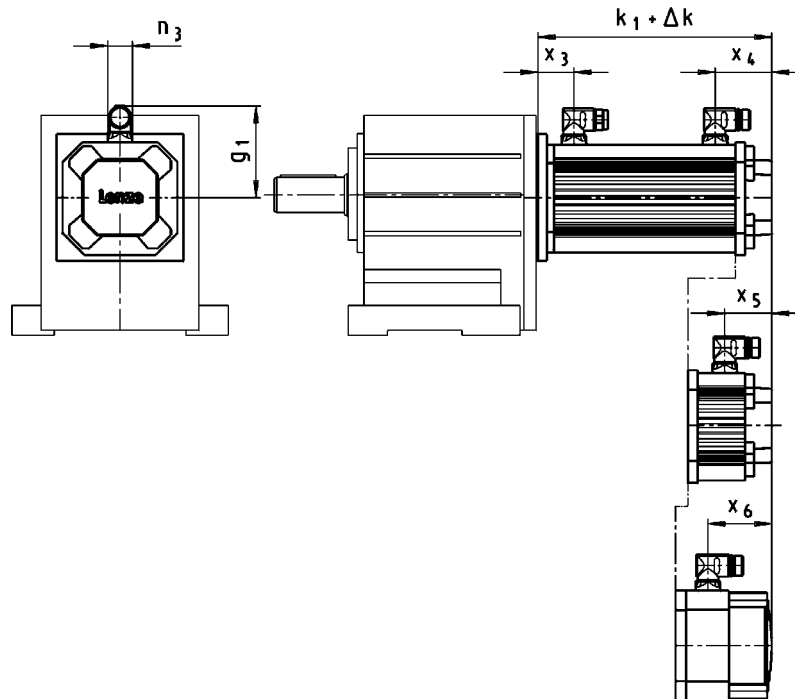
G□□...SRS / SRM / ECN / EQN / EQI / S20 / T20 / CDD

		<b>10I</b> □40 ...S00	<b>13I</b> □41 ...S00	<b>13I</b> □34 ...F10	<b>14L</b> □20 ...S00	<b>14L</b> □41 ...S00	<b>14L</b> □16 ...F10	<b>14L</b> □35 ...F10	<b>17N</b> □23 ...S00	<b>17N</b> □41 ...S00	
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	Δ k	54			55			54			
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	Δ k	79	89		88			89			
		<b>17N</b> □17 ...F10	<b>17N</b> □35 ...F10	<b>19S</b> □23 ...S00	<b>19S</b> □42 ...S00	<b>19S</b> □17 ...F10	<b>19S</b> □35 ...F10	<b>21X</b> □25 ...S00	<b>21X</b> □42 ...S00	<b>21X</b> □17 ...F10	<b>21X</b> □35 ...F10
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	Δ k	54		50			49				
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	Δ k	89		88			91				



# MCA & [mm]

## Connectors for motor connection



### GST/GFL/GKR/GKS/GSS□□-□A

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	
	$k_1$	258	267	335	307		369		346		
	$g_1$	90	102		109				118		
	$n_3$					28					
	$x_6$	-		73	-		67		-		
...RSO B0	$\Delta k$					0					
	$x_3$	33	41		46				49		
	$x_4$	61	65	133	73	135		73			
...RSO P□	$\Delta k$	25	35		33				35		
	$x_3$	55	68		73				81		
	$x_4$	61	65	133	73	135		73			
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$\Delta k$	54				55		54			
	$x_3$	33	41		46				49		
	$x_4$	-	119	187	127	189		127			
	$x_5$	54			-						
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	79	89		88				89		
	$x_3$	55	68		73				81		
	$x_4$	-	119	187	127	189		127			
	$x_5$	54			-						



## Connectors for motor connection

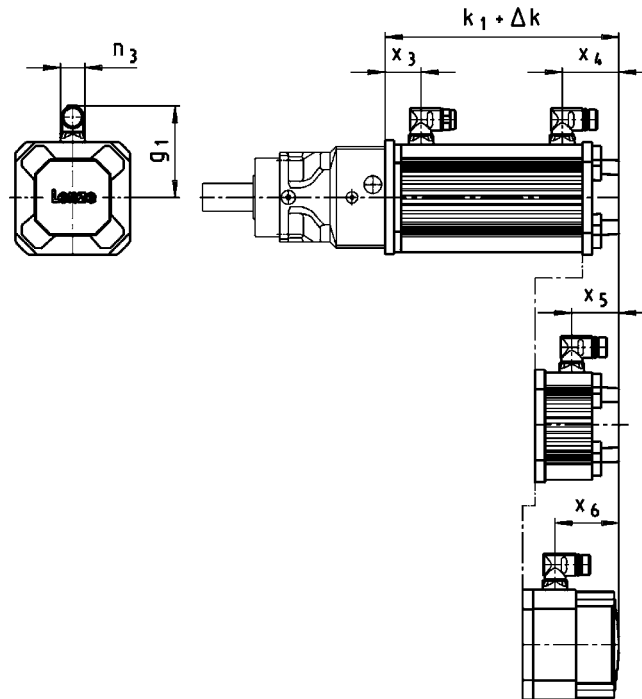
## GST/GFL/GKR/GKS/GSS□□-□A

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
	$k_1$	435		408		505		479		575	
	$g_1$	118			161				172		
	$n_3$	28					45				
	$x_6$	95		-		103		-		96	
...RSO B0	$\Delta k$					0					
	$x_3$	49			63				71		
	$x_4$	162		73		170		78		174	
...RSO P□	$\Delta k$	35			38			42			
	$x_3$	81			98				111		
	$x_4$	162		73		170		78		174	
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$\Delta k$	54			50				49		
	$x_3$	49			63				71		
	$x_4$	216		123		220		126		222	
	$x_5$					-					
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	89			88				91		
	$x_3$	81			98				111		
	$x_4$	216		123		220		126		222	
	$x_5$					-					



# MCA & [mm]

## Connectors for motor connection



### GPA□□-□A

		10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00	
	$k_1$	262	271	339	302		364		340		
	$g_1$	90	102		109				118		
	$n_3$					28					
	$x_6$	-		73	-		67		-		
...RSO B0	$\Delta k$					0					
	$x_3$	37	45		41				43		
	$x_4$	61	65	133	73	135		73			
...RSO P□	$\Delta k$	25	35		33				35		
	$x_3$	59	72		68				75		
	$x_4$	61	65	133	73	135		73			
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$\Delta k$	54		55				54			
	$x_3$	37	45		41				43		
	$x_4$	-	119	187	127	189		127			
	$x_5$	54				-					
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	79	89		88				89		
	$x_3$	59	72		68				75		
	$x_4$	-	119	187	127	189		127			
	$x_5$	54				-					



## Connectors for motor connection

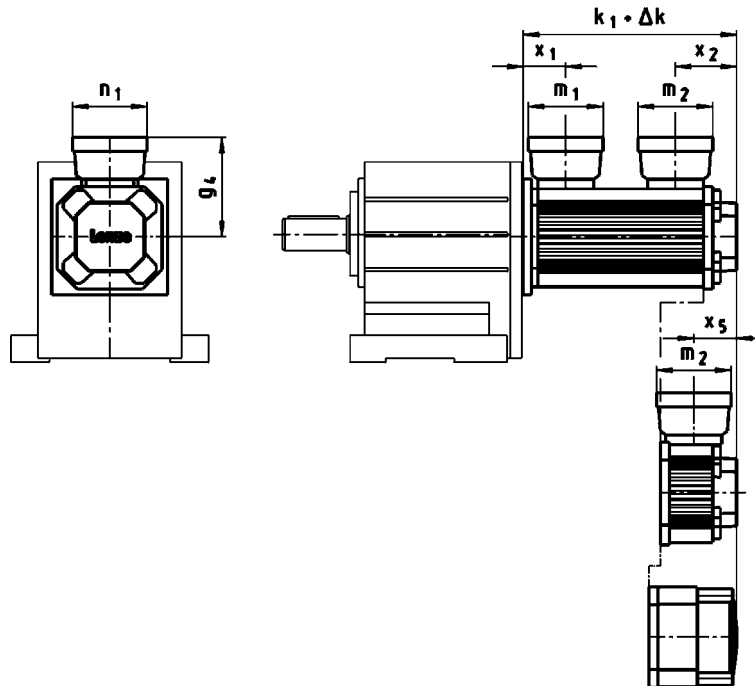
## GPA□□-□A

		17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
	$k_1$	429		401		498		470		566	
	$g_1$	118			161				172		
	$n_3$	28					45				
	$x_6$	95		-		103		-		96	
...RSO B0	$\Delta k$					0					
	$x_3$	43			56				62		
	$x_4$	162		73		170		78		174	
...RSO P□	$\Delta k$	35			38			42			
	$x_3$	75			91				102		
	$x_4$	162		73		170		78		174	
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$\Delta k$	54			50				49		
	$x_3$	43			56				62		
	$x_4$	216		123		220		126		222	
	$x_5$					-					
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	89			88				91		
	$x_3$	75			91				102		
	$x_4$	216		123		220		126		222	
	$x_5$					-					



# MCA & [mm]

## Terminal box for motor connection



### GST/GFL/GKR/GKS/GSS□□-□A

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00	
	$k_1$	258	267	335	307		369		346		
	$g_4$	113	125		132				140		
	$m_1$					93					
	$m_2$					93					
	$n_1$					93					
	$x_1$	60	53		58				61		
...RSO B0	$\Delta k$					0					
...RSO P□	$x_2$	78	77	145	85		147		85		
	$\Delta k$	25	35		33				35		
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$x_2$	78	77	145	85		147		85		
	$\Delta k$	54			55				54		
	$x_2$	-	131	199	139		201		139		
	$x_5$	50					-				
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	79	89		88				89		
	$x_2$	-	131	199	139		201		139		
Terminal box in position 2 Cable glands in position 5	$x_5$	50					-				
						1 x M16x1.5		1 x M20x1.5			





## Terminal box for motor connection

## GST/GFL/GKR/GKS/GSS□□-□A

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
	$k_1$	435		408		505		479		575	
	$g_4$	140			158				169		
	$m_1$	93					120				
	$m_2$	93		93 <sup>1)</sup> 120 <sup>2)</sup>		93		93 <sup>1)</sup> 120 <sup>2)</sup>		93	
	$n_1$	93					109				
	$x_1$	61			80				93		
...RSO B0	$\Delta k$					0					
	$x_2$	174		93 <sup>1)</sup> 87 <sup>2)</sup>		190		97 <sup>1)</sup> 92 <sup>2)</sup>		193	
	$\Delta k$	35			38				42		
	$x_2$	174		93 <sup>1)</sup> 87 <sup>2)</sup>		190		97 <sup>1)</sup> 92 <sup>2)</sup>		193	
	$\Delta k$	54			50				49		
	$x_2$	228		143 <sup>1)</sup> 137 <sup>2)</sup>		240		146 <sup>1)</sup> 140 <sup>2)</sup>		242	
	$x_5$					-					
	$\Delta k$	89			88				91		
	$x_2$	228		143 <sup>1)</sup> 137 <sup>2)</sup>		240		146 <sup>1)</sup> 140 <sup>2)</sup>		242	
	$x_5$					-					
	Terminal box in position 2 Cable glands in position 5	1 x M16x1.5 1 x M20x1.5		1 x M16x1.5 <sup>1)</sup> 1 x M20x1.5 <sup>1)</sup> 1 x M25x1.5 <sup>2)</sup> 1 x M32x1.5 <sup>2)</sup>		1 x M16x1.5 1 x M20x1.5		1 x M16x1.5 <sup>1)</sup> 1 x M20x1.5 <sup>1)</sup> 1 x M25x1.5 <sup>2)</sup> 1 x M32x1.5 <sup>2)</sup>		1 x M16x1.5 1 x M20x1.5	

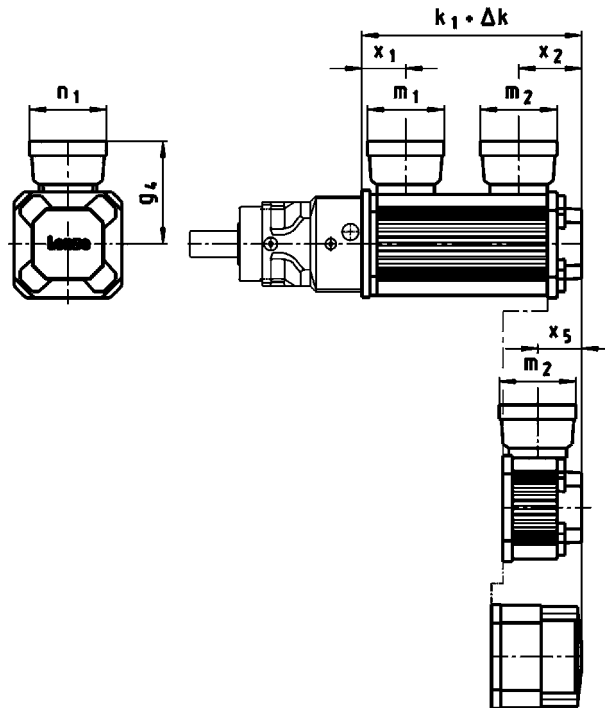
1) IP 54

2) IP 65



## MCA & [mm]

### Terminal box for motor connection



### GPA□□-□A

		10I N40 ...S00	13I N41 ...S00	13I N34 ...F10	14L N20 ...S00	14L N41 ...S00	14L N16 ...F10	14L N35 ...F10	17N N23 ...S00	17N N41 ...S00	
	$k_1$	262	271	339	302		364		340		
	$g_4$	113	125		132				140		
	$m_1$					93					
	$m_2$					93					
	$n_1$					93					
	$x_1$	54	57		53				55		
...RSO B0	$\Delta k$					0					
	$x_2$	78	77	145	85		147		85		
...RSO P□	$\Delta k$	25	35		33				35		
	$x_2$	78	77	145	85		147		85		
...SRS/SRM/ECN/EQN B0 ...EQI/S20/T20/CDD B0	$\Delta k$	54				55				54	
	$x_2$	-	131	199	139		201		139		
	$x_5$	50									
...SRS/SRM/ECN/EQN P□ ...EQI/S20/T20/CDD P□	$\Delta k$	79	89		88				89		
	$x_2$	-	131	199	139		201		139		
	$x_5$	50									
Terminal box in position 2 Cable glands in position 5						1 x M16x1.5 1 x M20x1.5					



## Terminal box for motor connection

GPA□□-□A

		17N N17 ...F10	17N N35 ...F10	19S N23 ...S00	19S N42 ...S00	19S N17 ...F10	19S N35 ...F10	21X N25 ...S00	21X N42 ...S00	21X N17 ...F10	21X N35 ...F10
	$k_1$	429		401		498		470		566	
	$g_4$	140			158			169			
	$m_1$	93				120					
	$m_2$	93		93 <sup>1)</sup> 120 <sup>2)</sup>		93		93 <sup>1)</sup> 120 <sup>2)</sup>		93	
	$n_1$	93				109					
	$x_1$	55			73			84			
...RSO B0	$\Delta k$					0					
	$x_2$	174		93 <sup>1)</sup> 87 <sup>2)</sup>		190		97 <sup>1)</sup> 92 <sup>2)</sup>		193	
	$\Delta k$	35			38			42			
	$x_2$	174		93 <sup>1)</sup> 87 <sup>2)</sup>		190		97 <sup>1)</sup> 92 <sup>2)</sup>		193	
	$\Delta k$	54			50			49			
	$x_2$	228		143 <sup>1)</sup> 137 <sup>2)</sup>		240		146 <sup>1)</sup> 140 <sup>2)</sup>		242	
	$x_5$					-					
	$\Delta k$	89			88			91			
	$x_2$	228		143 <sup>1)</sup> 137 <sup>2)</sup>		240		146 <sup>1)</sup> 140 <sup>2)</sup>		242	
	$x_5$					-					
	Terminal box in position 2 Cable glands in position 5	1 x M16x1.5 1 x M20x1.5		1 x M16x1.5 <sup>1)</sup> 1 x M20x1.5 <sup>1)</sup> 1 x M25x1.5 <sup>2)</sup> 1 x M32x1.5 <sup>2)</sup>		1 x M16x1.5 1 x M20x1.5		1 x M16x1.5 <sup>1)</sup> 1 x M20x1.5 <sup>1)</sup> 1 x M25x1.5 <sup>2)</sup> 1 x M32x1.5 <sup>2)</sup>		1 x M16x1.5 1 x M20x1.5	

1) IP 54

2) IP 65



MCA & [mm]





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