

EHL electronic handwheel

The low-cost alternative to conventional hand adjustment



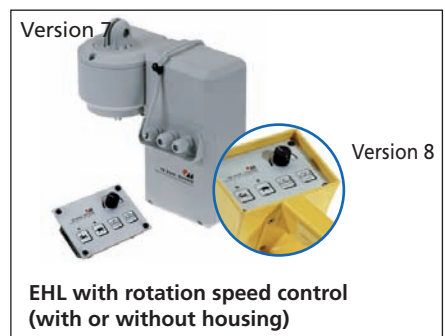
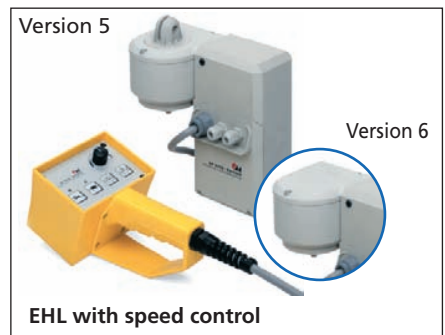
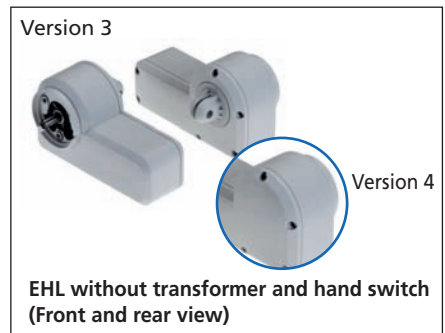
With or without clevis



Features:

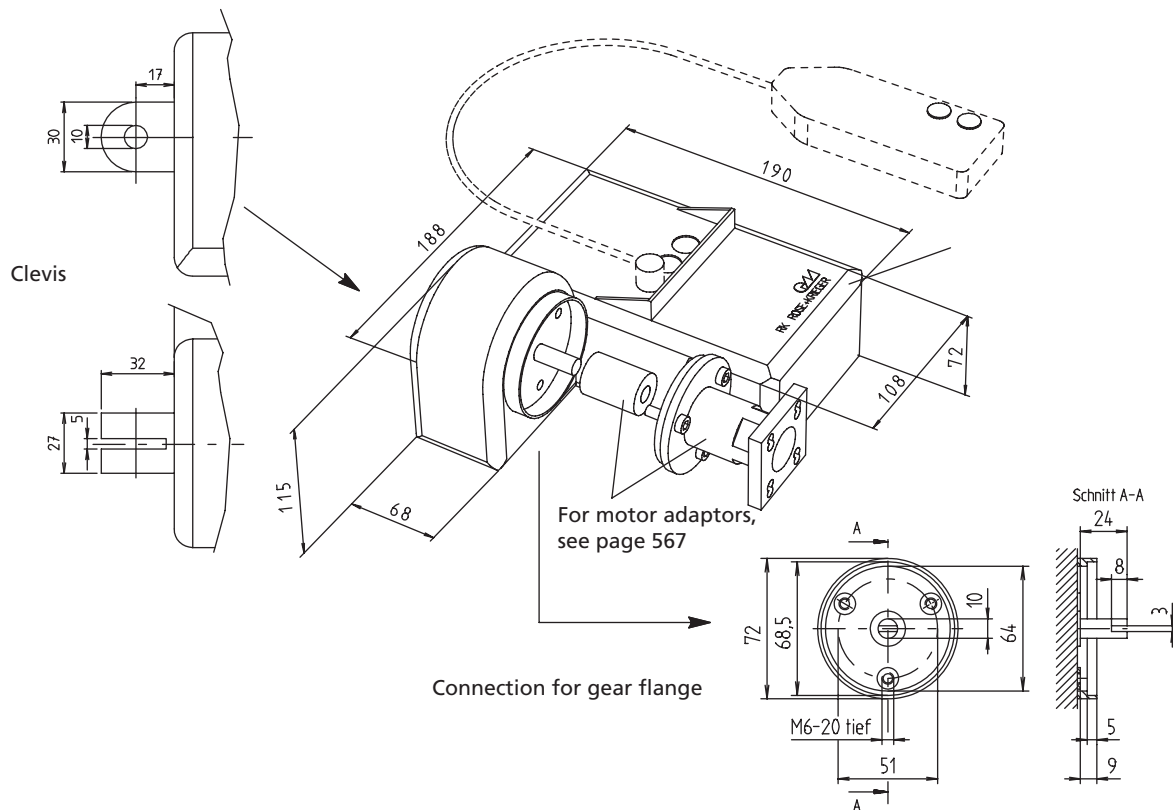
- Transformer rectifier with two different nominal speeds of 50 and 135 rpm
- Manufactured acc. to VDE, protection class II
- Wide range of versions available
- Rugged plastic housing
- Colour: Light grey, matt to RAL 7035

Versions



Options:

- Other adaptors available on request
- Other colours available on request



Note: The EHL must always be operated with limit switches. This prevents the unit getting stuck and any associated defects.

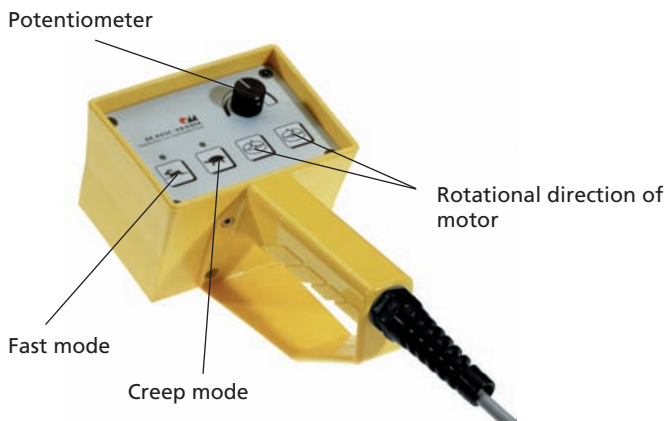
Code No.	Type	Speed [rpm]	Output torque [Nm]	Clevis	For versions see page 564
90900	EHL with transformer and hand switch	50	5.5	Yes	1
90963	EHL with transformer and hand switch	50	5.5	No	2
90911	EHL with transformer and hand switch	135	2	Yes	1
90964	EHL with transformer and hand switch	135	2	No	2
90910	EHL without transformer	50*	5.5	Yes	3
90960	EHL without transformer	50*	5.5	No	4
90912	EHL without transformer	135*	2	Yes	3
90962	EHL without transformer	135*	2	No	4
90944	EHL with rotation speed control and transformer	50	5.5	Yes	5
90965	EHL with rotation speed control and transformer	50	5.5	No	6
90945	EHL with rotation speed control and transformer	135	2	Yes	5
90966	EHL with rotation speed control and transformer	135	2	No	6
90949	EHL with rotation speed control without housing for control	50	5.5	Yes	7
90950	EHL with rotation speed control without housing for control	135	2	Yes	7
90948	Upgrade kit for all EHLs with transformer	complete with printed circuit board, rotation speed control and retrofit			8

* in connection with an RK transformer control (at a customer-provided supply voltage of 24 V, around 36 rpm)

General information/operating conditions

Duty cycle	100 %
Starting torque	5.5 Nm at 50 rpm/2 Nm at 135 rpm
Thermal protection	115 °C
Protection class	IP 20
Rotation speed control	Electronic, infinitely variable adjustment using a rotary potentiometer
Fast mode	Operating mode with nominal speed (50 or 135 rpm), rotary potentiometer <u>without</u> function
Creep mode	Infinitely variable speed adjustment using a rotary potentiometer
Drive set-up	Can be rotated in 90° increments – connecting cable must be extended

Function description - rotation speed control



The rotation speed control is an electronic solution for infinitely variable speed adjustment using a rotary potentiometer.

Fast mode: The EHL is operated at nominal speed (50 or 135 rpm). The rotary potentiometer has no function.

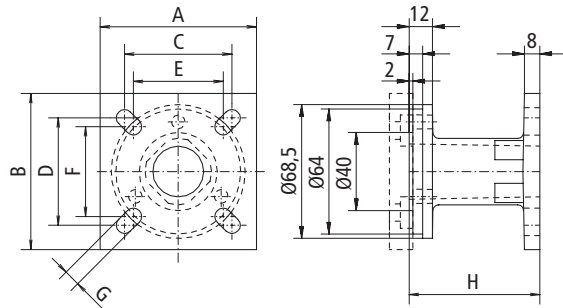
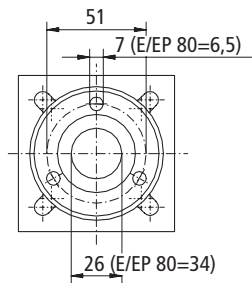
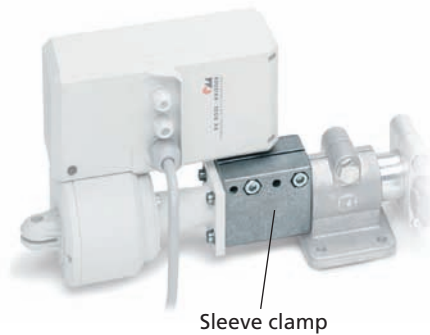
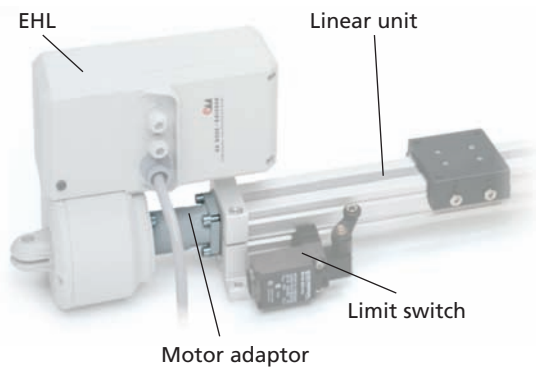
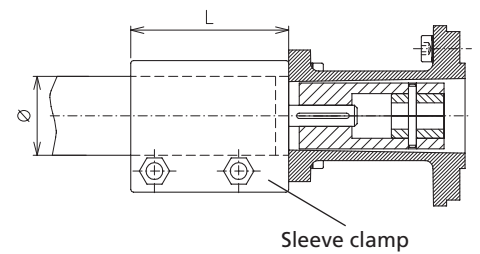
Creep mode: A rotary potentiometer enables infinitely variable adjustment of the speed (0-50 or 0-135 rpm).
e.g. in set-up mode

Set-up of drive/transformer



The position of the drive in relation to the transformer can be changed, depending on the installation conditions (can be rotated in 90° increments). However, the connecting cable must be extended for this purpose.

We can also customise the EHL to suit your individual requirements. For standard version, see photo on page 564.

Motor adaptor for linear units
Linear unit connection

EHL connection

Only for linear unit Type E


[mm]

Code No.	for linear unit	PinØ unit	A	B	C	D	E	F	G	H	L	Dia-meter
92663	E 30	8	50	50	30	40	30	30	6	67	60	30
92664	E 40	12	60	60	46	46	36	36	7	67	75	40
92665	E 50	12	65	65	46	46	-	-	9	67	90	60
949666	E 60	14	80	80	55	55	46	46	9	67	110	60
92682	E 80	20	80	80	70	70	-	-	6.2	59	-	80
92667	EP 30	8	50	50	30	40	30	30	6	67	-	-
92668	EP 40/COPAS 40	12	60	60	46	46	36	36	7	67	-	-
92669	EP 50	12	65	65	46	46	-	-	9	67	-	-
92670	EP 60	14	80	80	55	55	46	46	9	67	-	-
92683	EP 80	20	92	92	64	64	-	-	8.5	59	-	-
92680	EV/AV 30	8	40	40	29	29	-	-	6	67	-	-
92671	EV/AV 40	10	40	40	29	29	-	-	6	67	-	-
92672	EV/AV 50	12	50	50	38	38	-	-	7	67	-	-
92679	EV 60	12	60	60	46	46	36	36	7	67	-	-
92673	EV/AV 80	14	80	80	55	55	46	46	9	67	-	-
92674	COPAS 20	8	46	50	30	40	-	-	7	67	-	-
92675	COPAS 30	10	60	60	46	46	36	36	7	67	-	-
92676	PLS-II 30	6	40	40	29	29	-	-	6	67	-	-
92677	PLS-II 40	8	40	40	29	29	-	-	6	67	-	-
92678	PLS-II 50	10	50	50	38	38	-	-	7	67	-	-
92679	PLS-II 60	12	60	60	46	46	36	36	7	67	-	-
92681	PLS-II 80	14	80	80	55	55	46	46	9	67	-	-

Note: To mount the motor adaptor on a Type E linear unit, a sleeve clamp is required (this is included with the adaptor). Please note that the stroke may be limited.

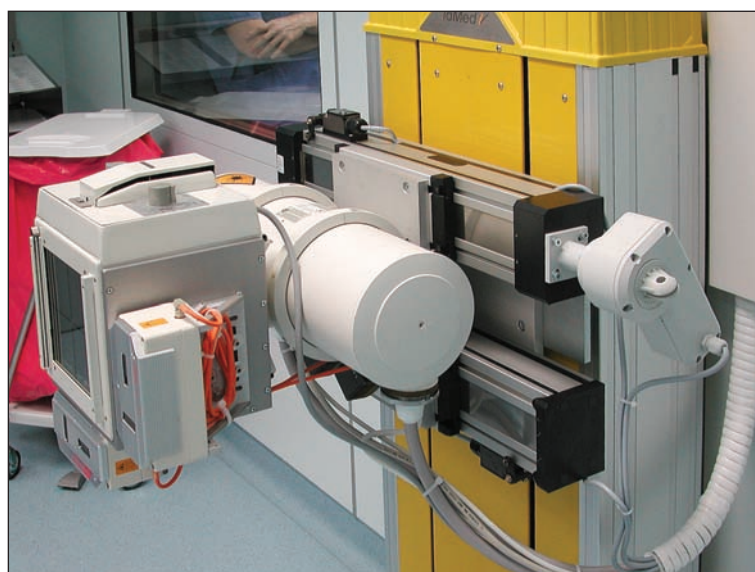
EHL – Position determination

Mechanical limit switch

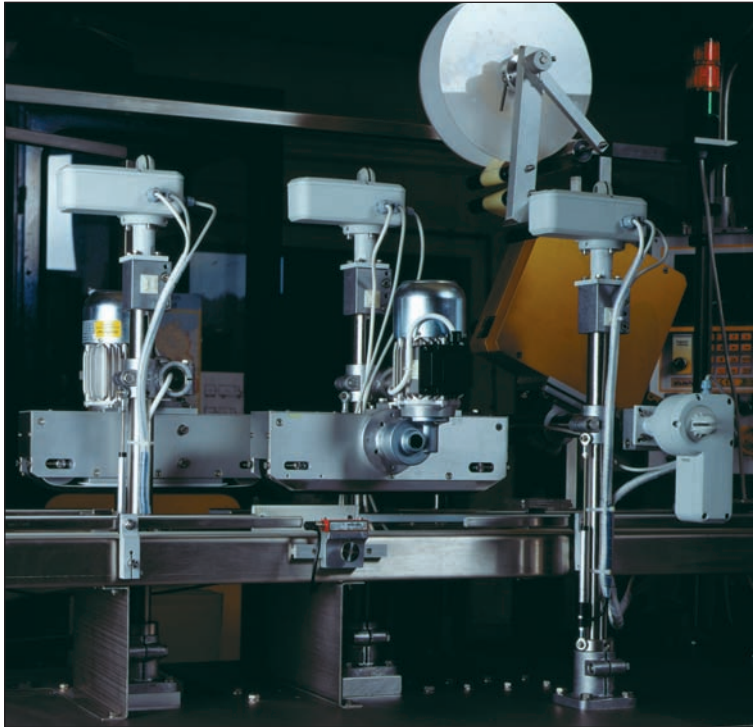


Max. voltage	250 V AC
Max. switching current	6 A
Max. starting current	16 A
Operating cycles	Max. 6000/h
Mechanical lifetime	1 x 10 ⁷ switching cycles
Axis lever adjustment	locking by 360°
Protection class	IP 65
Ambient temperature	-30°C to +80°C

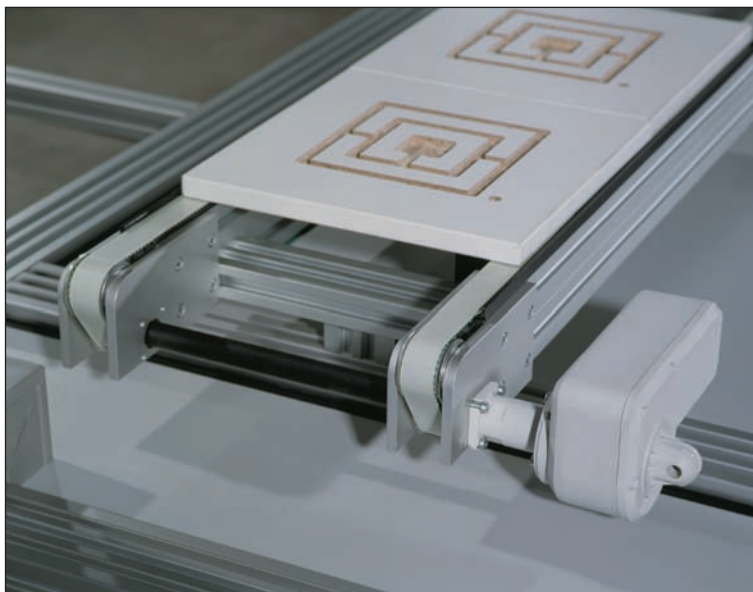
Code No.	Type
91900	NC contact/NO contact
91901	Connecting cable 3 m for limit switches, with PG gland



X-ray machine: lateral adjustment via EHL with RK DuoLine S, height adjustment via RK Easylift.



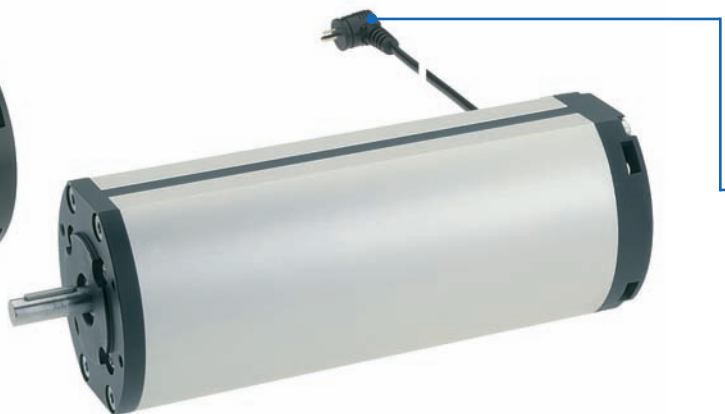
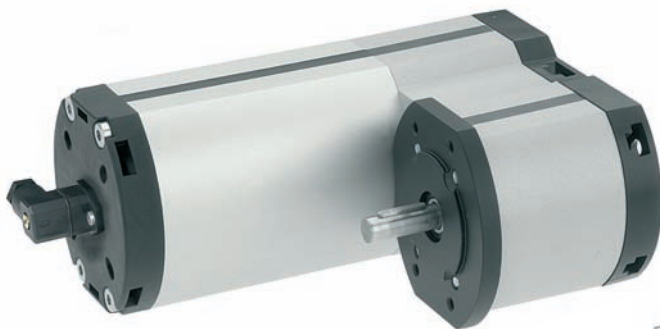
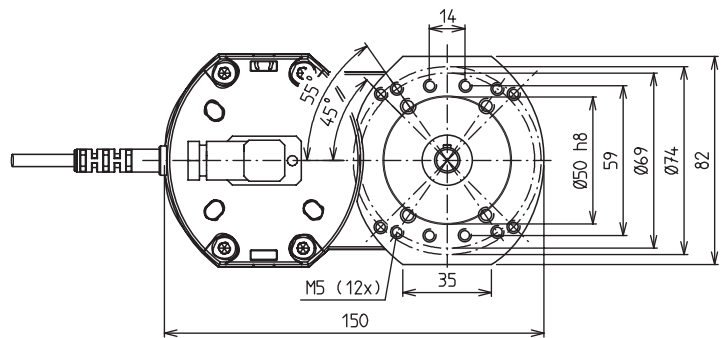
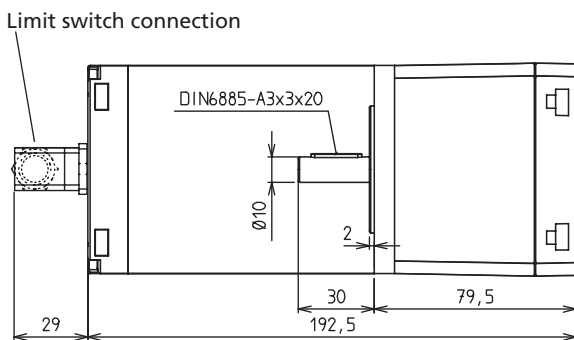
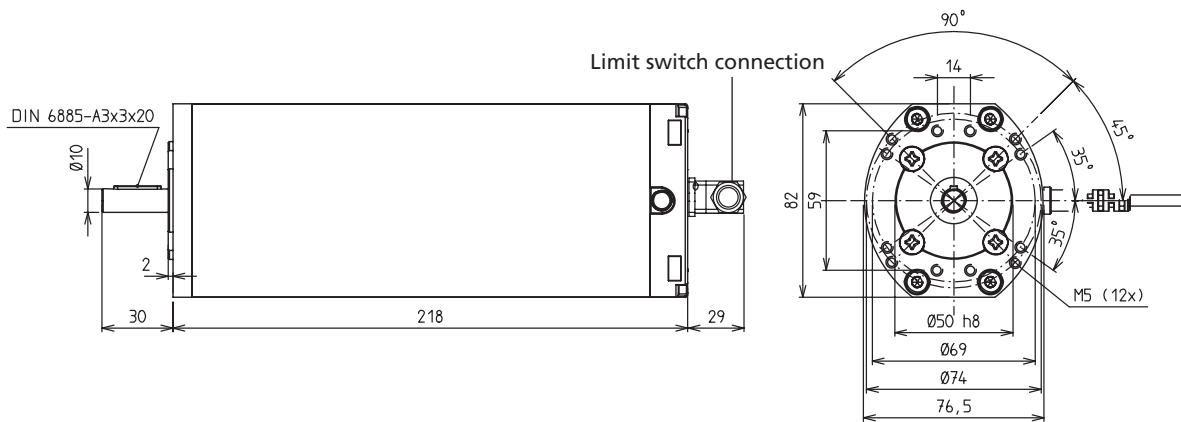
Labelling machine: The height adjustment is controlled by a series linear unit with EHL.



Transfer system: drive for material feed.

LZ S/P – Drive unit/technical data

The high-performance drive units of the LZ S series (rod shaped) and LZ P (parallel mounted motor) for the control of linear axes



Features:

- Rotation speed control with MultiControl mono supported (with elec. connection "a")
- RK synchronous control supports storage of up to 25 memory positions (with elec. connection "c")
- Synchronous travel supported

- Compact design
- Housing made of aluminium
- Attractive design

Options:

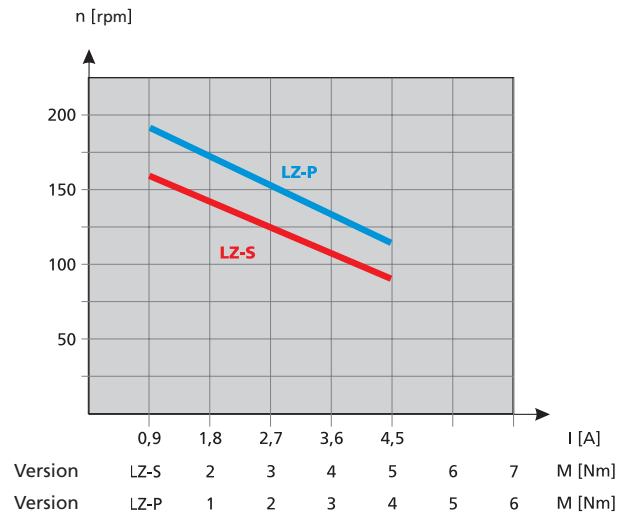
- Three different options for electrical connection
- Various adaptors available on request

General information/operating conditions

Voltage	24-36 V DC
Current consumption	Max. 4.5 A
Protection class	IP 54
Ambient temperature	-10°C to +60°C
Duty cycle	at nominal load, 20% (max. 5 mins operating time, 20 mins rest time)

Power diagram*

*All data were determined using an RK transformer control (at room temperature). If the unit is operated from a fixed voltage source, these values may vary slightly.



Electrical connection
Choice of:

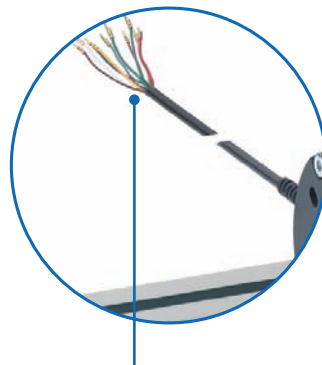
External control

✓ Connecting cable is fed out of the cylinder and connects to a control (range of connecting options)



Elec. connection "a"

✓ Connection (2.5 m) to RK transformer control, MultiControl mono or external fixed voltage source. Only power cable is fed out.



Elec. connection "b"

✓ All connecting cables (approx. 1 m) fed directly out of the unit (motor, 2-channel Hall sensor) e.g for connection to a PLC



Elec. connection "c"

✓ Connection (2.5 m) to PM synchronous control

Note: The drive units must not be driven against the mechanical stops! All versions support the connection of customer-supplied limit switches. While it is possible to operate the units without limit switches, we do not recommend it.

Code No.	Type	Electrical connection	Max. output torque [Nm]	Max. speed 2500 rpm	Weight [kg]
90980	LZ S	a	5	160	1.8
90981	LZ S	b	5	160	1.8
90984	LZ S	c	5	160	1.8
90982	LZ P	a	4	196	3.0
90983	LZ P	b	4	196	3.0
90985	LZ P	c	4	196	3.0

LZ S/P – Drive

Controls

For dimensions and other technical data, please refer to the chapter "Motors and controls"

- Input voltage 230 V AC
- Output voltage 24/36 V DC

Transformer control
120 VA



approx. 24 V DC

MultiControl



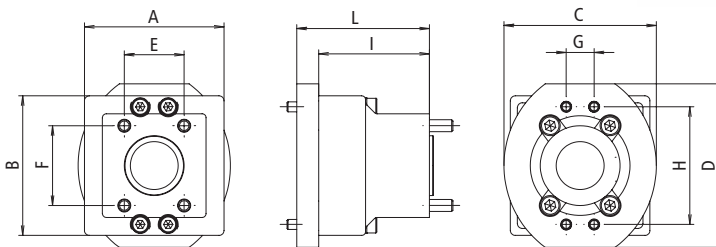
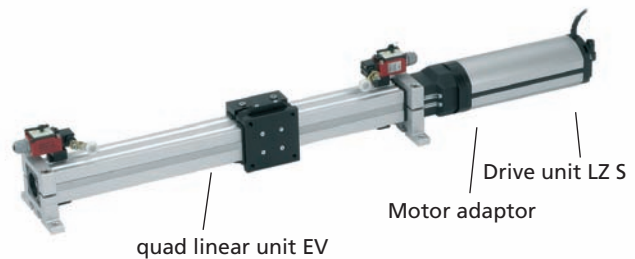
approx. 36 V DC

Code No.	Version	
QZA07C13BQ021	Transformer control 120 VA, up to max. I = 3 A current output at 10% duty cycle	Controls up to 2 drives
QST35C01AA000	RK MultiControl mono, up to max. I = 10 A current output at 15% duty cycle, 24/36 V DC	Controls up to 2 drives
QST35C02AA000*	Synchronous control RK MultiControl duo, up to max. I = 12 A current output at 15% duty cycle	1-2 drives synchronised
QST35C04AA000*	Synchronous control RK MultiControl quadro, up to max. I = 12 A current output at 15% duty cycle	1-4 drives synchronised

*For connection of a synchronous control, the drive unit must be fitted with electrical connection "c"

Motor adaptor for linear units

Further adaptors available on request



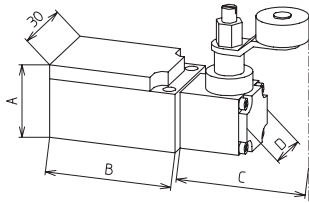
Application example:
Synchronous operation of two quad linear units by means of drive units LZ S

[mm]

Linear unit	LZ S Code No.	LZ P Code No.	Coupling Code No.	A	B	C	D	E	F	G	H	I	L
E 30	949700	949701	9109200810	56	74	76.4	82	-	-	56.5	39.6	65	134
E 40	949702	949703	9114301012	89.2	66	76.4	82	-	-	56.5	39.6	78	129
E 50	949704	949705	9114301012	66	84	76.4	82	-	-	56.5	39.6	78	129
E 60	949706	-	9114301014	80	103	76.4	82	-	-	52.3	52.3	92	143
E 80	on request		9119401020	on request									
EP(X)30	949710	949711	9109200810	70	70	76.4	82	30	40	14	59	55.5	66.5
EP(X)40	949712	949713	9114301012	70	70	76.4	82	46	46	52.3	52.3	73.5	81.5
EP(X)50	949714	-	9114301012	70	70	76.4	82	46	46	52.3	52.3	73	81
EP(X)60	949716	-	9114301014	80	80	76.4	82	55	55	52.3	52.3	68	81
EP(X)80	949717	-	9119401020	on request									
EV 30	949720	949721	9109200810	70	70	76.4	82	21	21	14	59	54.5	65.5
EV 40	949722	949723	9114301010	70	70	76.4	82	29	29	14	59	61	72
EV 50	949724	949725	9114301012	70	70	76.4	82	38	38	14	59	60	73
EV 60	949726	949727	9114301012	70	70	76.4	82	43	43	14	59	62	73
EV 80	949728	949729	9114301014	80	80	76.4	82	64	64	52.3	52.3	68.5	81.5

Mechanical limit switch

Material:
thermoplastic, fully insulated

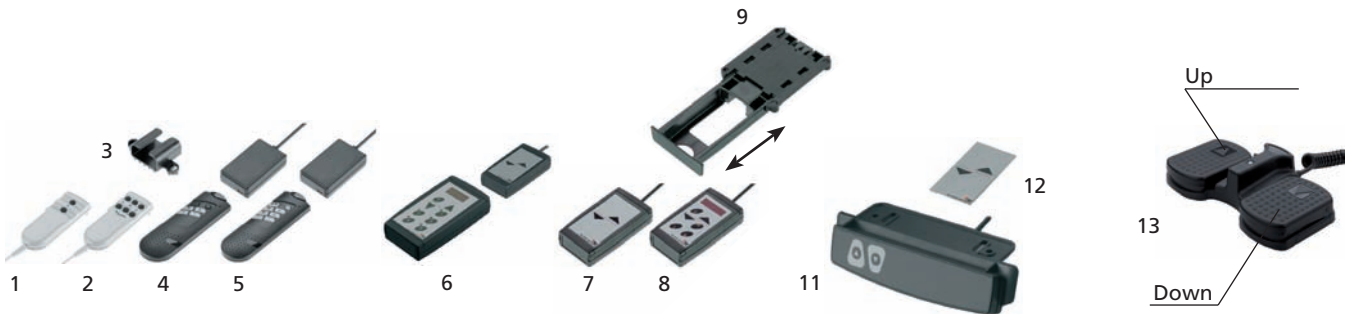


Type	18-60
Max. voltage	250 V AC
Max. switching current	6 A
Max. starting current	16 A
Operating frequency	Max. 6000/h
Mechanical lifetime	10 million switching cycles
Axis lever adjustment	locking at 10° increments
Protection class	IP 65
Ambient temperature	-30°C to +80°C

Code No.	Type	Switching function	A	B	C	D
91905	18-60	NC contact/NO contact	26.5	45	45.5	21

[mm]

Hand switches/accessories



Code No.	Version	Fig.
Hand switch for transformer control		
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	2
QZB02C03AB011	Infra-red remote control – 2 function keys	4
QZB02C03AD011	Infra-red remote control – 6 function keys	5
Hand switch for transformer or synchronous control		
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	1
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	7
QZB00A00AB051	Table hand switch with 1 m cable – 2 function keys	11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	12
QZB02C01AE114	Foot switch – 2 function keys	13
Hand switch for synchronous control		
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys	8
QZD070305	Radio-controlled hand switch – 8 function keys, range 15 m	6
Accessories for hand switches with spiral cable		
QZD000072	Bracket for hand switch	3
QZD000074	Hand switch drawer	9

3-phase motors – Technical data



General information/operating conditions

Type	90 W	120 W	180 W	250 W
Motor speed [rpm]	1400	2800	1400	2800
Torque without gear unit [Ncm]	28	41	68	68
Braking voltage [V]	220	220	220	220
Nominal current [A]	0.4	0.45	0.7	0.81
Permitted dynamic shaft load [N]				
axial	80	80	100	100
radial	120	120	150	150
Protection class	IP 54	IP 54	IP 54	IP 54
Weight [kg]	4.5	4.5	6.5	6.0
Weight with brake [kg]	5.3	5.3	7.3	7.0

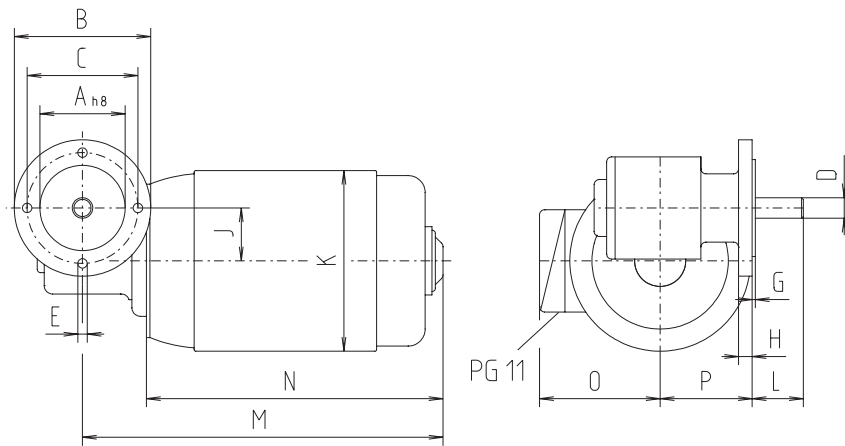
Code No.	Type
9121 _ _ _ _	90 W
9123 _ _ _ _	120 W
9124 _ _ _ _	180 W
9125 _ _ _ _	250 W

Order example:
 Three-phase motor 120 W
 2:1 pole-changing, gear 7:1
 9123 2 07

Gear selection (see next page)

05 = gear 5:1
 07 = gear 7:1
 10 = gear 10:1
 11 = gear 11:1
 15 = gear 15:1
 17 = gear 17:1
 18 = gear 18:1
 : = :
 : = :

0 = Standard
 1 = Brake
 2 = 2:1 pole-changing (not with 90 W)



[mm]

Motor	Connection dimensions						Dimensions						Shaft dimensions	
	A	B	C	E	G	H	J	K	M	N	O	P	D	L
90 W, 380/220 V	50	80	65	5.5	2.5	8	31	110	203	166	92	54	12	30
90 W, with brake	50	80	65	5.5	2.5	8	31	110	238	201	92	54	12	30
120 W, 380/220 V	50	80	65	5.5	2.5	8	31	110	203	166	92	54	12	30
120 W, with brake	50	80	65	5.5	2.5	8	31	110	238	201	92	54	12	30
120 W, pole-changing	50	80	65	5.5	2.5	8	31	110	238	201	92	54	12	30
180 W, 380/220 V	80	120	100	M6	3	10	33	124	232	190	108	66	14	33
180 W, with brake	80	120	100	M6	3	10	33	124	268	226	108	66	14	33
180 W, pole-changing	80	120	100	M6	3	10	33	124	268	226	108	66	14	33
250 W, 380/220 V	80	120	100	M6	3	10	33	124	232	190	108	66	14	33
250 W, with brake	80	120	100	M6	3	10	33	124	268	226	108	66	14	33
250 W, pole-changing	80	120	100	M6	3	10	33	124	268	226	108	66	14	33

Gear selection

	Eff. torque [Nm]														
Transmission:	100:1	75:1	55:1	50:1	38:1	30:1	24:1	20:1	18:1	15:1	12:1	10:1	7:1	5:1	2.5:1
90/1400 rpm	18	13	15	11	11	9	7.2	7.5	6.7	6.1	5.2	4.3	3.3	2.4	1.3
120/1400 rpm	14	10	10	8.2	8.1	6.5	5.3	5.2	4.8	4.2	3.6	3.0	2.3	1.7	0.9
Transmission:	75:1	56:1	38:1	32:1	30:1	24:1	20:1	17:1	15:1	11:1	7:1	5:1			
180/1400 rpm	23	21	20	19	17	15	14	13	11	9.3	6.4	4.8			
250/1400 rpm	18	16	15	14	13	11	10	9.6	8.3	6.8	4.6	3.5			

Chain-type motor connecting cable



Code No.	Type
957050	Motor cable 4 x 1.5 + 2 x (2 x 0.75) mm for connection to a frequency converter, any length

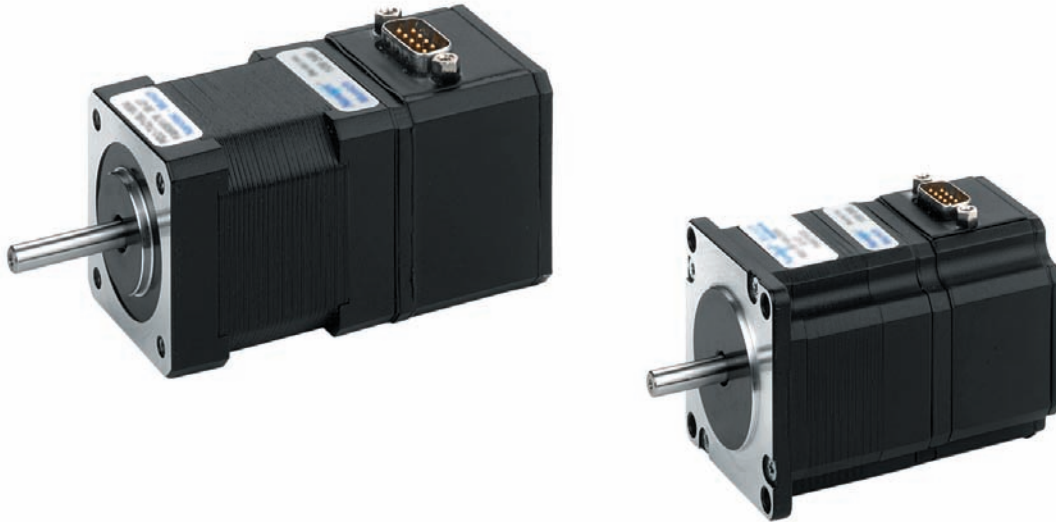


- Length:**
- 0 2 5 = 2.5 m
 - 0 5 0 = 5.0 m
 - 0 7 5 = 7.5 m
 - 1 0 0 = 10.0 m
 - 1 2 5 = 12.5 m
 - 1 5 0 = 15.0 m
 - 2 0 0 = 20.0 m
 - 2 5 0 = 25.0 m

Stepper motors

Order information:

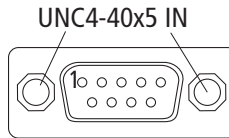
- Further stepper motors available on request



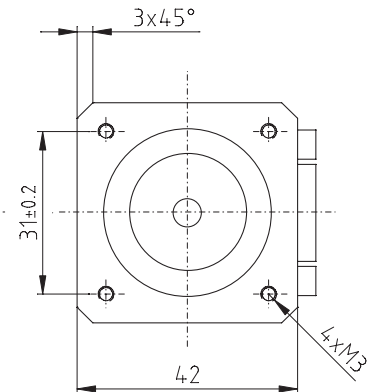
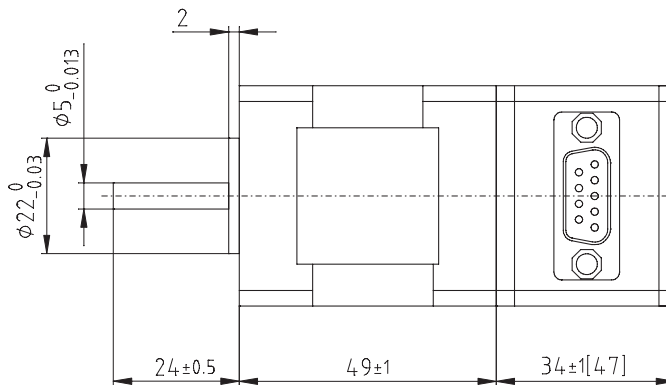
General information/operating conditions

Type	PD 42	PD 56
No. of steps	200/400/800/1000/1600/2000	
Max. torque [Ncm]	36	34
Holding torque [Ncm]	40	38
Max. starting frequency [kHz]	1.2	1.7
Nominal current/feeder [A]	1.8	1.8
Weight [kg]	0.43	0.60

PD 42

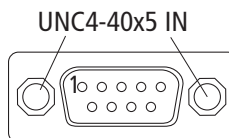


- | PIN No. | Function |
|---------|-----------------------------------|
| 1 - | POW + 24 V |
| 2 - | DIR (rotational direction) + 5 V |
| 3 - | CLK Clock + 5 V |
| 4 - | CLK Clock + 24 V |
| 5 - | POW GND |
| 6 - | DIR (rotational direction) |
| 7 - | DIR (rotational direction) + 24 V |
| 8 - | CLK Clock |
| 9 - | NC |

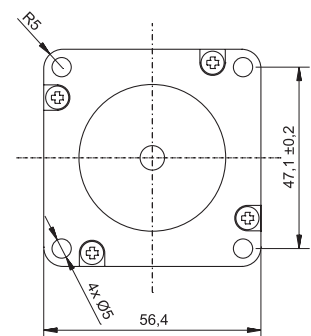
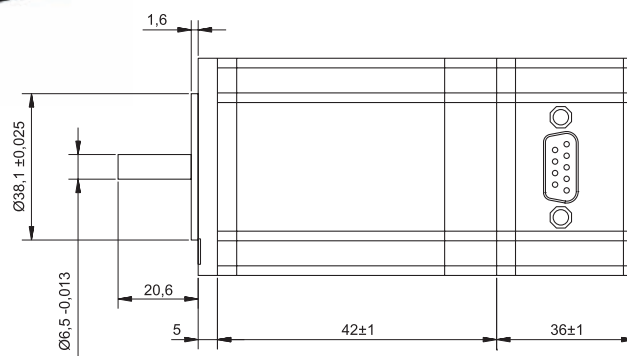


Code No.	Type
95842PD2	PD2-T42
957030050	Motor cable PD42/56, 5 m

PD 56



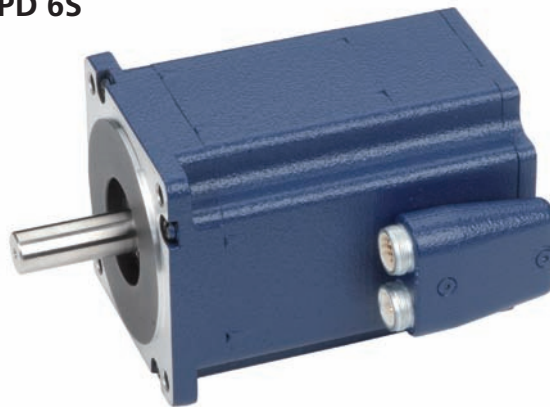
- | PIN No. | Function |
|---------|-----------------------------------|
| 1 - | POW + 24 V |
| 2 - | DIR (rotational direction) + 5 V |
| 3 - | CLK Clock + 5 V |
| 4 - | CLK Clock + 24 V |
| 5 - | POW GND |
| 6 - | DIR (rotational direction) |
| 7 - | DIR (rotational direction) + 24 V |
| 8 - | CLK Clock |
| 9 - | NC |



Code No.	Type
95856PD2	PD2-T56
957030050	Motor cable PD42/56, 5 m

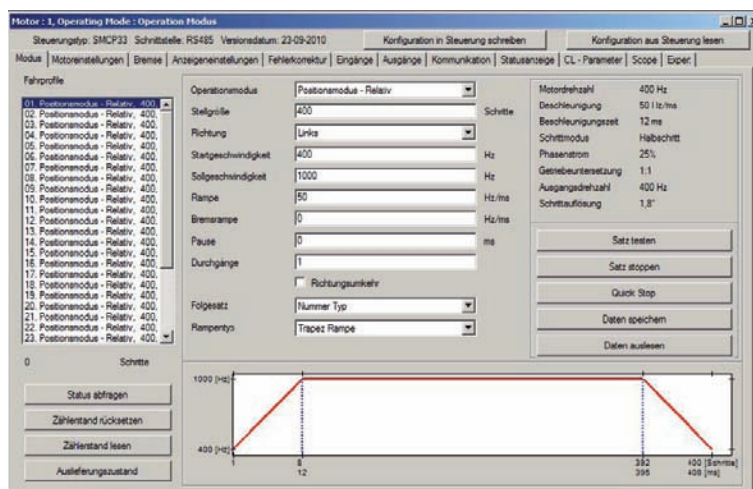
Plug & Drive stepper motor PDS6 with integrated power electronics

PD 6S



Features:

- Up to 16 motion sequences (position and speed profiles) can be stored in the motor, selected via digital inputs, stopped and started.
- Using an analogue input, the speed, position and torque can also be controlled.
- Motor programming via RS485.
- Standard protocol as per CANopen/DSP 402 via CAN bus.
- Simple start-up and configuration using free Windows software.
- Position feedback and monitoring with integrated encoders with 500 pulses per motorrevolution.



Input of various motion sequences in the clearly structured programming software

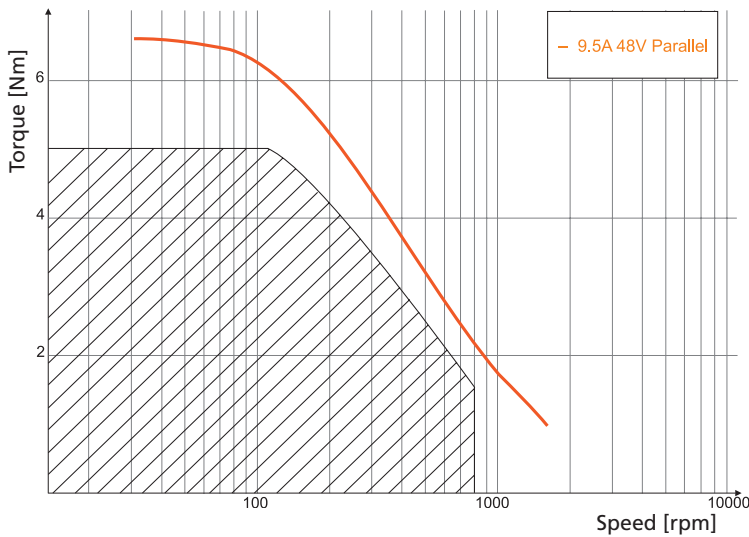
Relative and absolute positions can be saved in the set table. Travel speed and acceleration and deceleration ramp can be freely selected for any position.

Code No.	Type
958200PD6S	PD 6S

General information/operating conditions

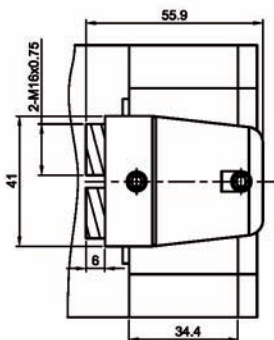
Operating voltage	24 to 48V / DC
Interface:	RS485 or CANopen
Operating modes	Position, speed, flag position, clock direction
Operating mode	1/1, 1/2, 1/4, 1/5, 1/8, 1/10, 1/32, 1/64, adaptive (1/128)
Position monitoring	Automatic error correction up to 0.9°
Inputs	6 optocoupler inputs (5-24V) / 1 analogue input
Outputs	3 open drains
Rotor moment of inertia	1.9 kg cm ²
Temperature range	0°C to +40°C
Motor weight	3.4 kg

Torque curve

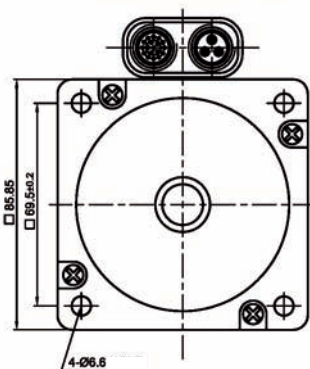


Optimal operating conditions at 48V and continuous operation
 Maximum value

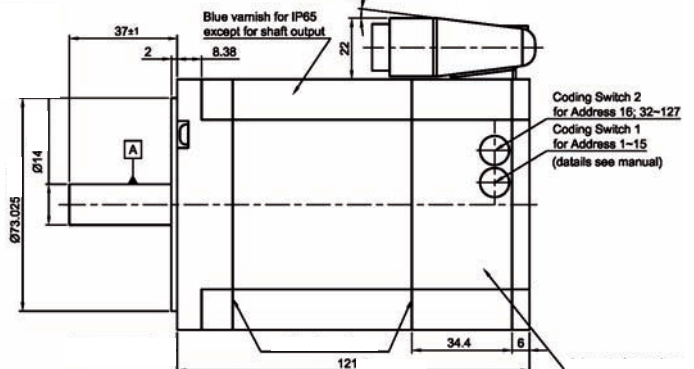
Top view A



Front view and mounting



Side view



Integrated encoder and controller

Stepper motor PD6S - Accessories

Programming cable



Code No.	Type	Length
957038	USB auf RS485	1,8m

Circuit capacitor



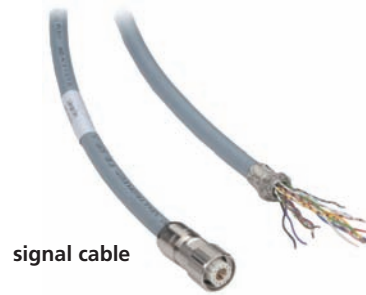
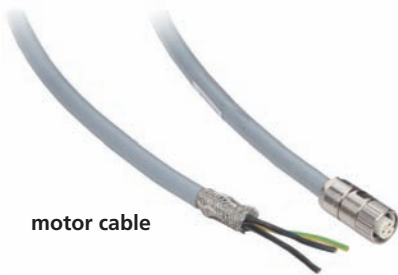
Code No.	Type	
957039	Circuit capacitor 10.000µf / 63V	PD 6S

Switching power supply

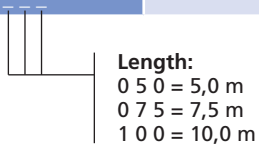


Code No.	Type	
957035	Switching power supply 48V / 10A output current	Power electronic PD 6S (1 motor)
957036	Switching power supply 48V / 20A output current	Power electronic PD 6S (2-3 motors)
957037	Switching power supply 24V / DC 2,5A	Control electronics PD 6S (1-3 motors)

Motor cable / signal cable

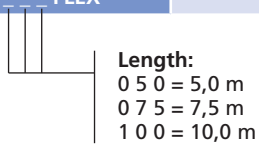


Code No.	Type	
957051 _ _ _	motor cable	PD 6S, choice of lengths
957053	signal cable	PD 6S, choice of lengths



Cables for use in cable drag chains

Code No.	Type	
957052 _ _ _ FLEX	motor cable	PD 6S, choice of lengths
957054 _ _ _ FLEX	signal cable	PD 6S, choice of lengths

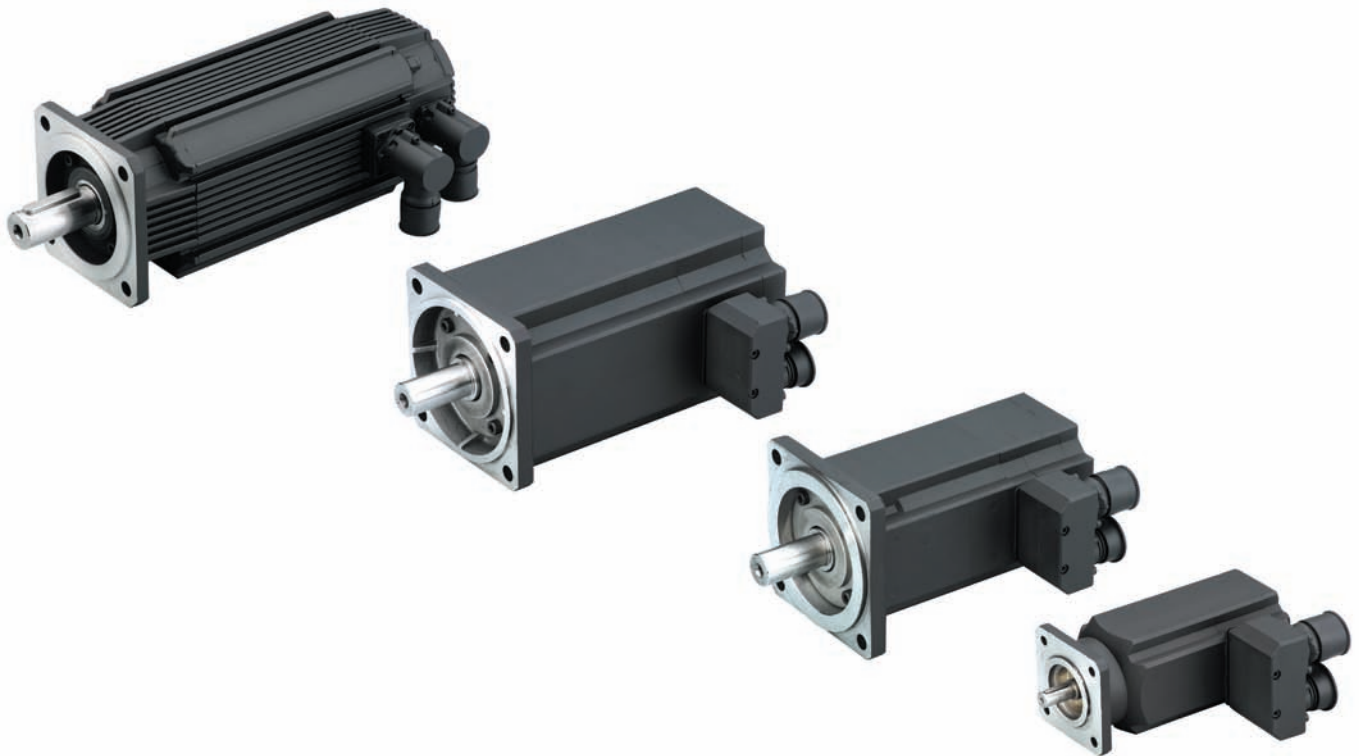


Note: Other cable lengths on request

Servo motors

Order information:

- Further motors available on request

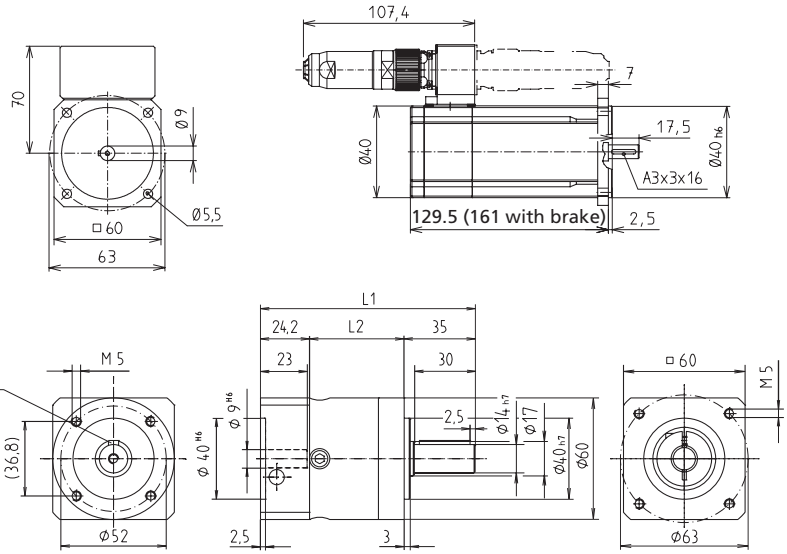


General information/operating conditions

Type	RK-AC 112	RK-AC 118	RK-AC 210	RK-AC 240	RK-AC 260	RK-AC 345	RK-AC 470	RK-AC 800	RK-AC 1252	RK-AC 1776	RK-AC 2521	
Nominal speed [rpm]	6000	3300	2500	3300	4300	4500	3000	3000	3000	3000	2000	
Torque [Nm]	1.12	1.18	2.10	2.4	2.6	3.45	4.7	8	12.52	17.76	25.21	
Nominal current [A]	2.4	1.46	2.0	2.8	2.8	5.4	4.6	4.8	7.38	10.35	9.95	
Nominal output [KW]	0.7	0.49	0.55	0.83	1.17	1.625	1.48	2.51	3.93	5.57	5.51	
Moment of inertia [kgmm ²]	30.2	30.2	190	140	140	336	336	900	1600	2150	2700	
Brake torque [Nm]	2.2	2.2	10	5	5	11	11	11	28	28	28	
Continuous standstill torque [Nm]	1.4	1.4	2.2	3	3	6	6	10	14.99	22.01	27.99	
Torque constant [Nm/A]	0.81	0.81	1.1	0.85	0.68	0.64	1.02	1.66	1.78	1.80	2.65	
Weight [kg]	without brake	1.5	1.5	4.9	3.5	3.5	4.7	4.7	7.7	17.5	22.7	28
	with brake	1.8	1.8	7.9	4.2	4.2	5.3	5.3	9.7	22.5	27.7	33
Suitable for:	RK-Control 2S 2.5 A			RK-Control 2S 6.3 A			RK-Control 2S 7.5 A		RK-Control 2S 15 A			



RK-AC 112



Gear unit

1-step $i = 3:1/5:1/8:1$

2-step $i = 9:1/12:1/15:1/20:1/25:1$

Code No.	Type
95811 SMH	RK-AC 112

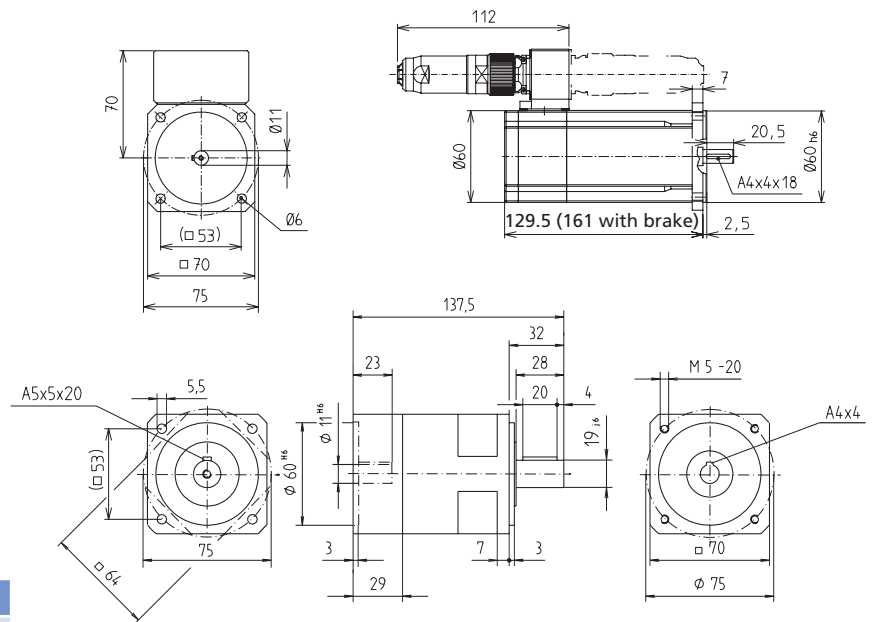
Gear selection:

- 03 = gear 3:1
- 05 = gear 5:1
- 08 = gear 8:1
- 09 = gear 9:1
- 12 = gear 12:1
- 15 = gear 15:1
- 20 = gear 20:1
- 25 = gear 25:1

- 0 = Standard
- 1 = with brake

	PLE	1-step	2-step
Backlash		< 16 arcmin	< 20 arcmin
		4,500 rpm	4,500 rpm
L1		106	118.5
L2		47	59.5

RK-AC 118



Gear unit

$i = 3:1/5:1/10:1$

Code No.	Type
95801 SMH	RK-AC 118

Gear selection:

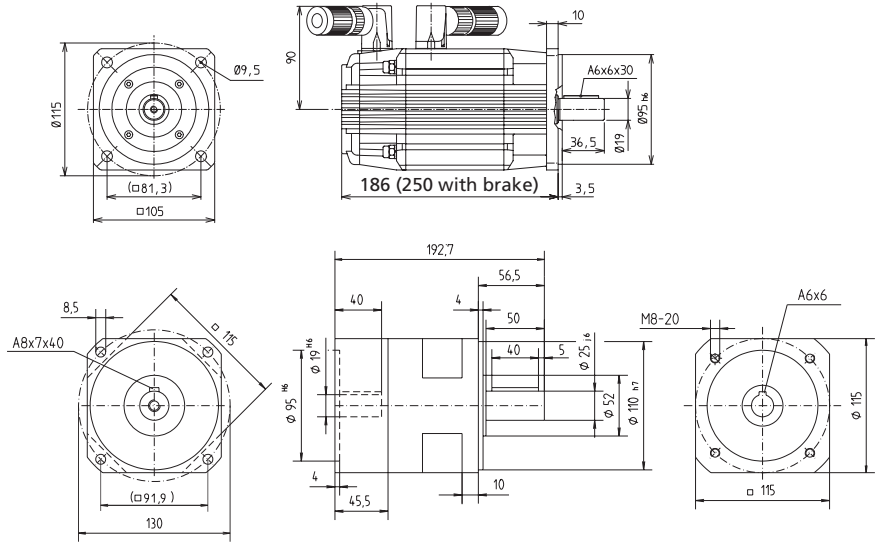
- 00 = without gear
- 03 = gear 3:1
- 05 = gear 5:1
- 10 = gear 10:1

- 0 = Standard
- 1 = with brake

	PLN	1-step
Backlash		< 3 arcmin
Max. average input speed		Gear 3:1 = 2,580 rpm Gear 5:1 = 3,100 rpm Gear 10:1 = 5,210 rpm

Servo motors

RK-AC 210



Gear unit
 $i = 3:1/5:1/10:1$

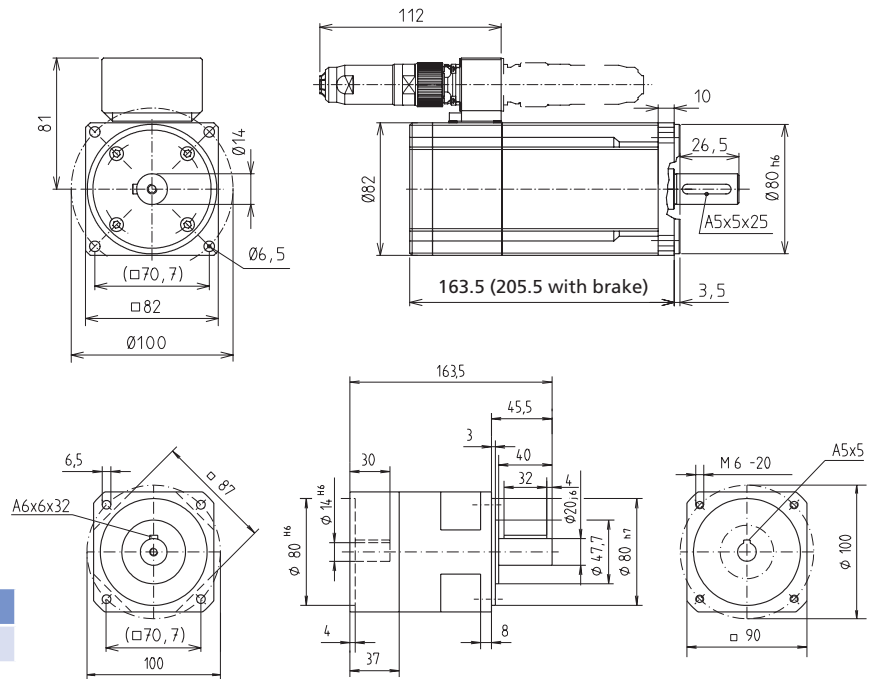
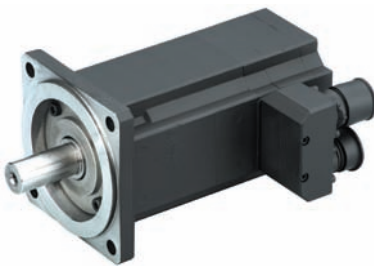
Code No.	Type
95807 SMH	RK-AC 210

Gear selection:
 00 = without gear
 03 = gear 3:1
 05 = gear 5:1
 10 = gear 10:1

0 = Standard
 1 = with brake

PLN	1-step
Backlash	< 3 arcmin
Max. average input speed	Gear 3:1 = 1,880 rpm Gear 5:1 = 2,410 rpm Gear 10:1 = 4,860 rpm

RK-AC 240



Gear unit
 $i = 3:1/5:1/10:1$

Code No.	Type
95802 SMH	RK-AC 240

Gear selection:
 00 = without gear
 03 = gear 3:1
 05 = gear 5:1
 10 = gear 10:1

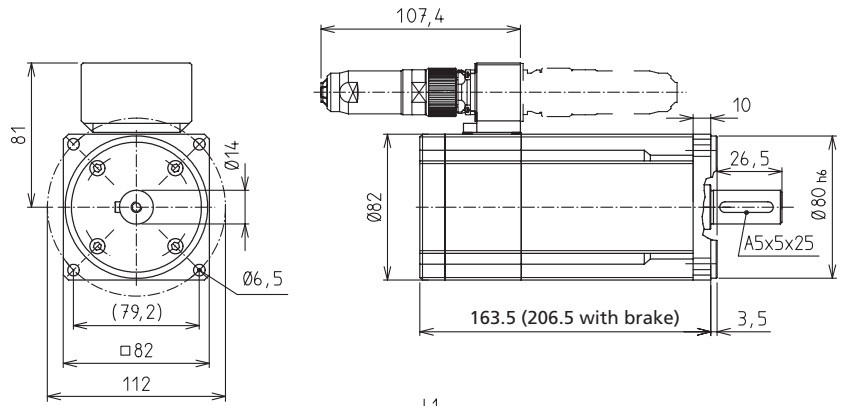
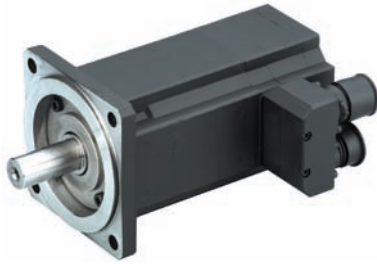
0 = Standard
 1 = with brake

PLN	1-step
Backlash	< 3 arcmin
Max. average input speed	Gear 3:1 = 2,500 rpm Gear 5:1 = 2,990 rpm Gear 10:1 = 6,050 rpm



Servo motors

RK-AC 260



Gear unit

1-step $i = 3:1/5:1/8:1$

2-step $i = 9:1/12:1/15:1/20:1/25:1$

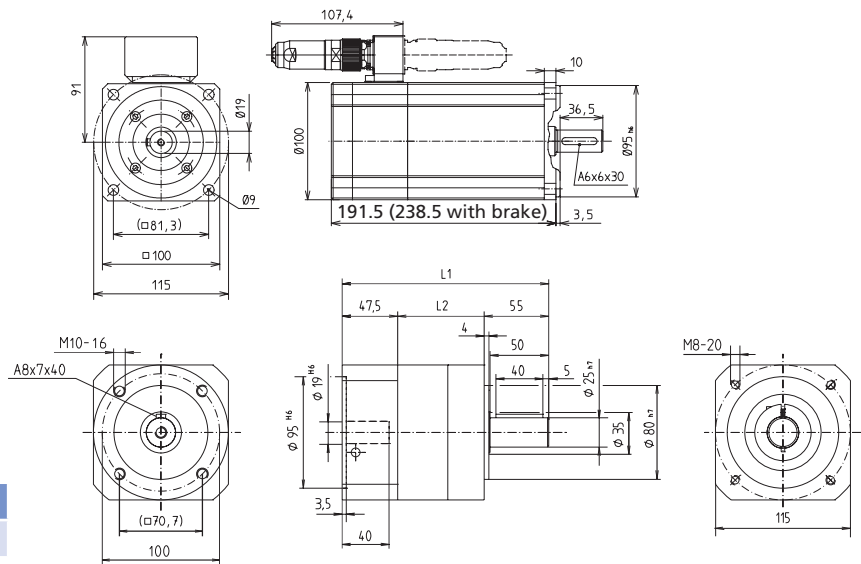
Code No.	Type
95812 SMH	RK-AC 260

Gear selection:
 03 = gear 3:1
 05 = gear 5:1
 08 = gear 8:1
 09 = gear 9:1
 12 = gear 12:1
 15 = gear 15:1
 20 = gear 20:1
 25 = gear 25:1

0 = Standard
 1 = with brake

PLE	1-step	2-step
Backlash	< 9 arcmin	< 14 arcmin
Max. average input speed	4,000 rpm	4,000 rpm
L1	133.5	151
L2	60	77.5

RK-AC 345



Gear unit

1-step $i = 3:1/5:1/8:1$

2-step $i = 9:1/12:1/15:1/20:1/25:1$

Code No.	Type
95813 SMH	RK-AC 345

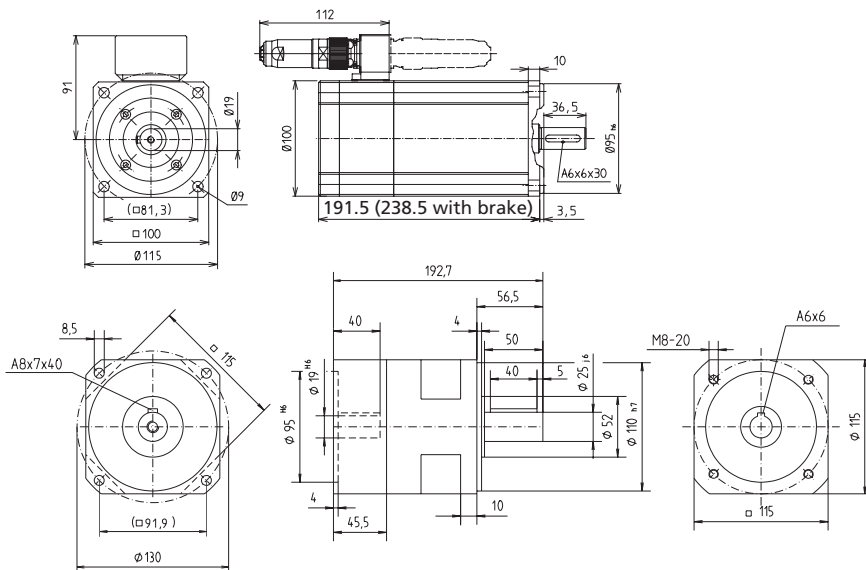
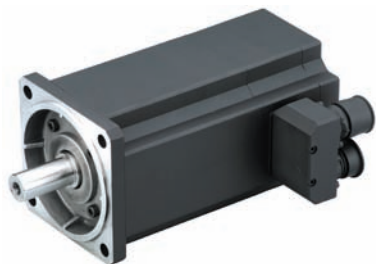
Gear selection:
 03 = gear 3:1
 05 = gear 5:1
 08 = gear 8:1
 09 = gear 9:1
 12 = gear 12:1
 15 = gear 15:1
 20 = gear 20:1
 25 = gear 25:1

0 = Standard
 1 = with brake

PLE	1-step	2-step
Backlash	< 8 arcmin	< 12 arcmin
Max. average input speed	3,500 rpm	3,500 rpm
L1	176.5	203.5
L2	74	101

Servo motors

RK-AC 470



Gear unit
i = 3:1/5:1/10:1

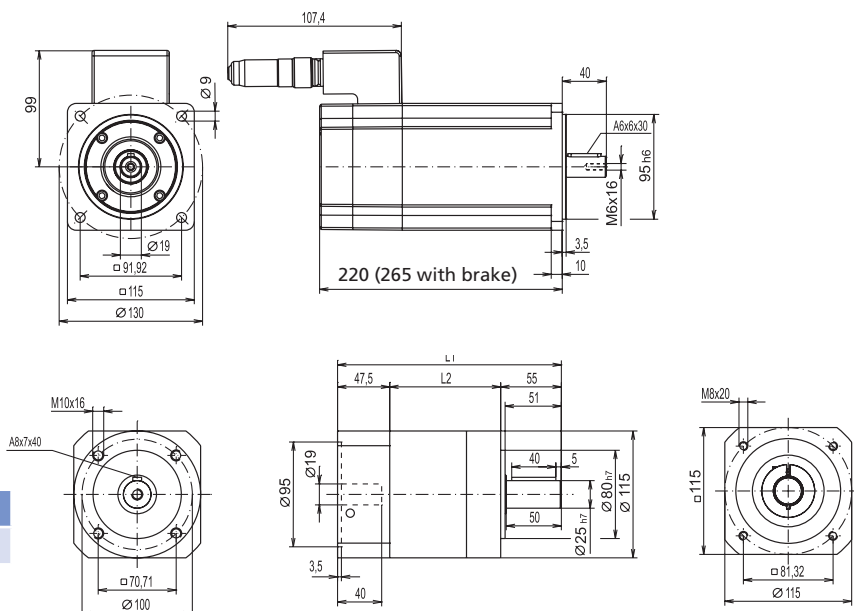
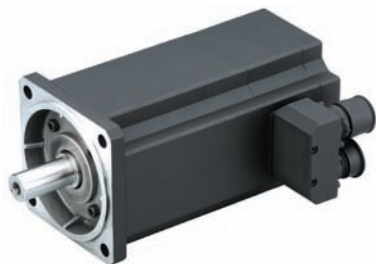
Code No.	Type
95803 SMH	RK-AC 470

Gear selection:
00 = without gear
03 = gear 3:1
05 = gear 5:1
10 = gear 10:1

0 = Standard
1 = with brake

PLN	1-step
Backlash	< 3 arcmin
Max. average input speed	Gear 3:1 = 1,880 rpm Gear 5:1 = 2,410 rpm Gear 10:1 = 4,860 rpm

RK-AC 800



Gear unit
1-step i = 3:1/5:1/8:1
2-step i = 9:1/12:1/15:1/20:1

Code No.	Type
95814 SMH	RK-AC 800

Gear selection:
03 = gear 3:1
05 = gear 5:1
08 = gear 8:1
09 = gear 9:1
12 = gear 12:1
15 = gear 15:1
20 = gear 20:1

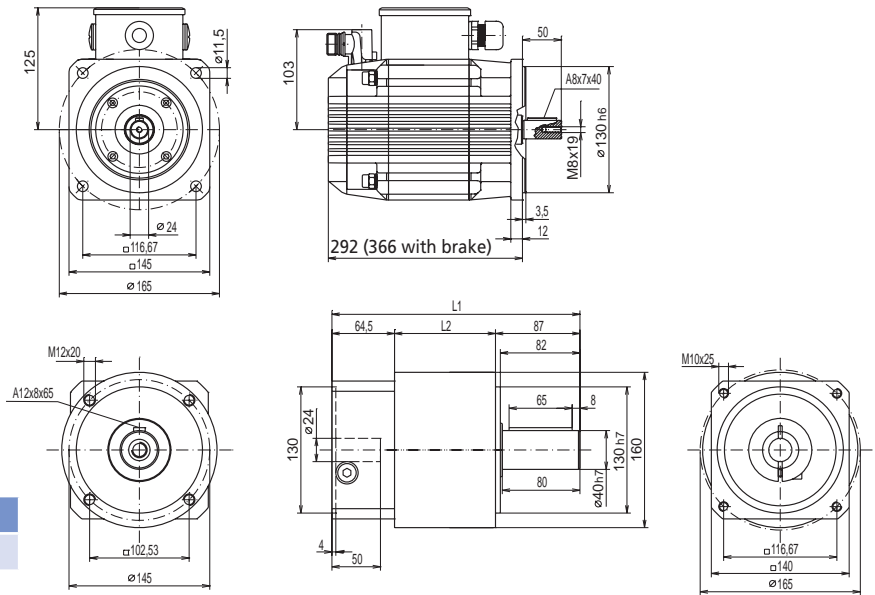
0 = Standard
1 = with brake

PLE	1-step	2-step
Backlash	< 8 arcmin	< 12 arcmin
Max. average input speed	3,500 rpm	3,500 rpm
L1	176.5	203.5
L2	74	101



Servo motors

RK-AC 1252



Gear unit
 1-step $i = 3:1/5:1/8:1$
 2-step $i = 9:1/12:1/15:1/20:1$

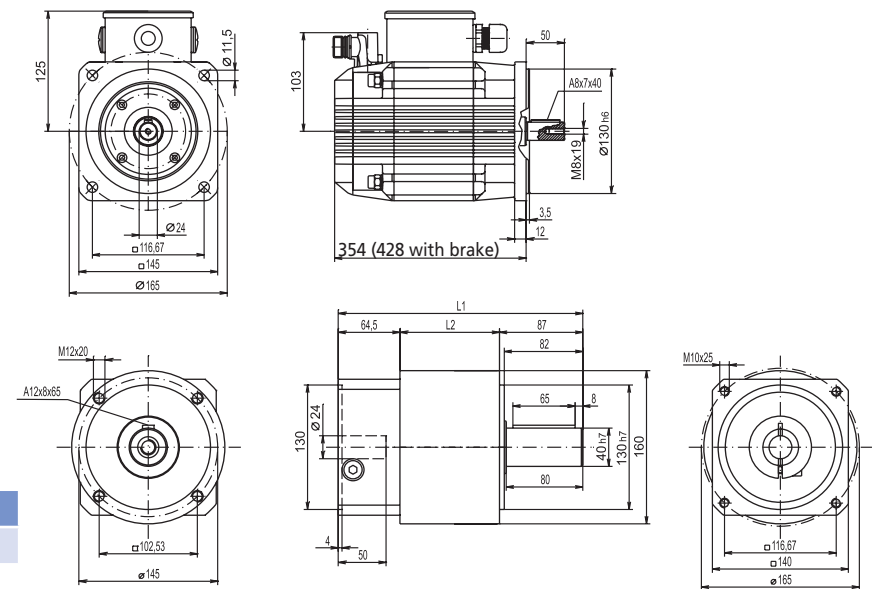
Code No.	Type
95815 SMH	RK-AC 1252

Gear selection:
 03 = gear 3:1
 05 = gear 5:1
 08 = gear 8:1
 09 = gear 9:1
 12 = gear 12:1
 15 = gear 15:1
 20 = gear 20:1

0 = Standard
 1 = with brake

PLE	1-step	2-step
Backlash	< 6 arcmin	< 10 arcmin
Max. average input speed	1,700-2,900 rpm	1,950-3,000 rpm
L1	255.5	305
L2	104	153.5

RK-AC 1776



Gear unit
 1-step $i = 3:1/5:1/8:1$
 2-step $i = 9:1/12:1/15:1/20:1$

Code No.	Type
95816 SMH	RK-AC 1776

Gear selection:
 03 = gear 3:1
 05 = gear 5:1
 08 = gear 8:1
 09 = gear 9:1
 12 = gear 12:1
 15 = gear 15:1
 20 = gear 20:1

0 = Standard
 1 = with brake

PLE	1-step	2-step
Backlash	< 6 arcmin	< 10 arcmin
Max. average input speed	1,700-2,900 rpm	1,950-3,000 rpm
L1	255.5	305
L2	104	153.5

Servo motors

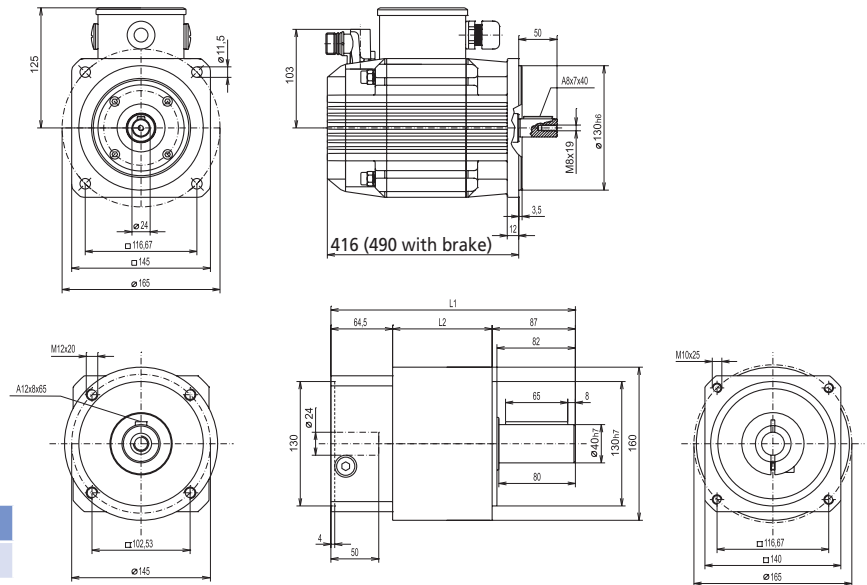
RK-AC 2521



Gear unit

1-step $i = 3:1/5:1/8:1$

2-step $i = 9:1/12:1/15:1/20:1$



Code No.	Type
95817 SMH	RK-AC 2521

Gear selection:

03 = gear	3:1
05 = gear	5:1
08 = gear	8:1
09 = gear	9:1
12 = gear	12:1
15 = gear	15:1
20 = gear	20:1

0 = Standard
1 = with brake

PLE	1-step	2-step
Backlash	< 6 arcmin	< 10 arcmin
Max. average input speed	1,700-2,000 rpm	1,950-2,000 rpm
L1	255.5	305
L2	104	153.5

Motor cables/resolver cables



Code No.	Type	
957025 _ _ _	Motor cable	RK-AC 112-800, choice of lengths
957026	Resolver cable	RK-AC 112-800, choice of lengths

- Length:
- 0 2 5 = 2.5 m
 - 0 5 0 = 5.0 m
 - 0 7 5 = 7.5 m
 - 1 0 0 = 10.0 m
 - 1 2 5 = 12.5 m
 - 1 5 0 = 15.0 m
 - 2 0 0 = 20.0 m
 - 2 5 0 = 25.0 m
 - : :
 - : :

Cables for use in cable drag chains

Code No.	Type	
957025 _ _ _ FLEX	Motor cable	RK-AC 112-800, choice of lengths
957026 _ _ _ FLEX	Resolver cable	RK-AC 112-800, choice of lengths

- Length:
- 0 2 5 = 2.5 m
 - 0 5 0 = 5.0 m
 - 0 7 5 = 7.5 m
 - 1 0 0 = 10.0 m
 - 1 2 5 = 12.5 m
 - 1 5 0 = 15.0 m
 - 2 0 0 = 20.0 m
 - 2 5 0 = 25.0 m
 - : :
 - : :

3-phase motors – Drive

Motor adaptors/couplings for 3-phase motors

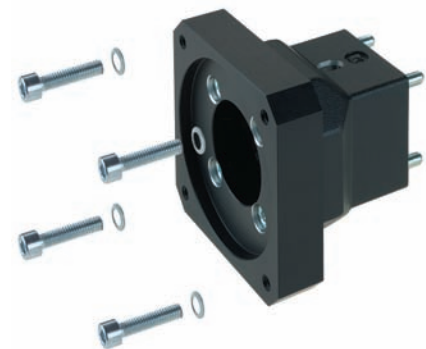
Type	Three-phase motor	
	90/120 W	180/250 W
EP(X) 30	949623	–
	911940 0812	–
EP(X) 40	949614	94914
	911430 1212	911430 1214
EP(X) 50	949614	949414
	911430 1212	911430 1214
EP(X) 60	–	949616
	–	911940 1414
EP(X) 80	–	949909
	–	911940 1420
COPAS 20	949623	–
	911940 0812	–
COPAS 30	949614	949048
	911430 1012	911430 1014
COPAS 40	949614	949048
	911430 1212	911430 1214
EV 30	949603	–
	910920 0812	–
EV 40	94937	94916
	911430 1012	911430 1014
EV 50	949605	94935
	911940 1212	911430 1214
EV 60	94976	949077
	911940 1212	911430 1214

Type	Three-phase motor	
	90/120 W	180/250 W
EV 80	94958	94940
	911940 1214	911940 1414
PLS 30	94981	–
	910920 0612	–
PLS 40	949100	949101
	911430 0812	911430 0814
PLS 50	949605	94935
	911430 1012	911430 1014
PLS 60	949107	949108
	911430 1212	911430 1214
PLS 80	94958	94940
	911940 1214	911940 1414
RK DuoLine S 50	949981	949982
	911430 0812	911430 0814
RK DuoLine S 80	949859	949858
	911940 1212	911430 1214
DuoLine S 80 x 120	949060	949061
	911940 1212	911430 1214
PLZ 30	94995	949948
	910920 1012	911430 1014
PLZ 40	94987	94988
	911430 1012	911430 1014
PLZ 50	94905	949527
	911430 1214	911430 1414

Code No. Motor adaptor:
94976

Code No. Coupling with
specification of pin dia-
meter
1st end = 12 mm
2nd end = 25 mm:
911940 1225

For further details of dimen-
sions, please refer to the chapter
on the relevant linear unit.



Motor adaptors/couplings for 3-phase motors

Type	Three-phase motor	
	90/120 W	180/250 W
PLZ 60	94956	94950
	911940 1220	911940 1420
PLZ 80	949329	949114
	912855 1225	912855 1425
PLZ-i 30	949504	–
	910920 0612	–
PLZ-i 40	949516	949517
	911430 0812	911430 0814
PLZ-i 50	949526	949527
	911940 1012	911940 1014
PLZ-i 60	949547	949548
	911940 1212	911430 1214
PLZ-i 80	949547	949567
	911940 1214	911430 1414
SQZ 30	94995	–
	910920 1012	–
SQZ 40, 40 x 80	94987	94988
	911430 1012	911430 1014
SQZ 60, 60 x 120	949029	949030
	911940 1215	911940 1415
SQZ 80 x 160	94956	94950
	911940 1220	911940 1420
SQZ 80	949695	949697
	912855 1225	912855 1425

Type	Three-phase motor	
	90/120 W	180/250 W
SQ MT 30	949913	949949
	910920 1012	911430 1014
SQ MT 40, 40 x 80	949920	949921
	911430 1012	911430 1014
SQ MT 50, 50 x 100	949928	949929
	911430 1214	911430 1414
SQ MT 60, 60 x 120	949938	949939
	911940 1220	911940 1420
SQ MT 80, 80 x 160	949944	949945
	912855 1225	912855 2025
LMZ	949039	949114
	912855 1225	912855 1425
DuoLine Z 50	949974	949975
	911940 1012	911940 1014
DuoLine Z 80	949958	949959
	911940 1220	911940 1420
DuoLine Z 120 x 80	949043	949808
	912855 1225	912855 1425
MultiLine	949968	949969
	912855 1230	912855 1430



Code No. Motor adaptor:
949695

Code No. Coupling with
specification of pin dia-
meter
1st end = 12 mm
2nd end = 25 mm:
912855 1225

Motor adaptors/couplings for stepper motors

Type	Stepper motor	
	PD 42	PD 56
PLM	91462	91472
	910714 0505	910714 0506
RK Kompakt 80	91301	91302
	910714 0505	910714 0506
RK Kompakt 120	91303	91309
	910714 0505	910714 0506

Code No. Motor adaptor:
91472

Code No. Coupling with
specification of pin dia-
meter
1st end = 5 mm
2nd end = 6 mm:
910714 0506

Servo motors – Drive

Motor adaptors/couplings for servo motors*

Type	Servo motor									
	RK-AC 112 with gear unit	RK-AC 118		RK-AC 240	RK-AC 260			RK-AC 345		RK-AC 210/470
			with gear unit		with gear unit	with gear unit	with gear unit	with gear unit		with gear unit
EP(X) 30	–	949200	949275	–	–	–	–	–	–	–
	–	911430 0811	911430 0816	–	–	–	–	–	–	–
EP(X) 40	–	949201	949276	949221	949296	–	–	–	–	–
	–	911430 1112	911430 1216	911430 1214	9119401220	–	–	–	–	–
EP(X) 50	–	949202	949277	949222	949297	–	–	–	–	–
	–	911430 1112	911430 1216	911430 1214	911940 1220	–	–	–	–	–
EP(X) 60	–	949203	949278	949223	949298	–	–	949239	949313	–
	–	911430 1114	911940 1416	911940 1414	911940 1420	–	–	911940 1419	912855 1425	–
EP(X) 80	–	949901	949902	949903	949904	–	–	949905	949906	–
	–	911940 1120	911940 1620	911940 1420	911940 2020	–	–	911940 1920	912855 2025	–
COPAS 20	–	949218	949293	949328	–	–	–	949327	–	–
	–	911430 0811	911430 0816	911940 0814	–	–	–	911940 0819	–	–
COPAS 30	–	949220	949294	949238	949324	–	–	949084	–	–
	–	911430 1011	911430 1016	911430 1014	911940 1020	–	–	911430 1019	–	–
COPAS 40	–	949220	949294	949238	949324	–	–	949051	–	–
	–	911430 1112	911430 1216	911430 1214	911940 1220	–	–	911940 1920	–	–
EV 30	–	949204	949279	–	–	–	–	–	–	–
	–	911430 0811	911430 0816	–	–	–	–	–	–	–
EV 40	–	949205	949224	949280	949299	–	–	–	–	–
	–	911430 1011	911430 1016	911430 1014	911940 1020	–	–	–	–	–
EV 50	–	949206	949281	949225	949300	–	–	–	–	–
	–	911430 1112	911430 1216	911430 1214	911940 1220	–	–	–	–	–
EV 60	–	949052	949086	949087	949081	–	–	949080	949079	–
	–	911430 1112	911430 1216	911940 1214	911940 1220	–	–	911940 1219	912855 1225	–
EV 80	–	949401	949331	949226	949301	–	–	949240	949314	–
	–	911430 1114	911940 1416	911940 1414	911940 1420	–	–	911940 1419	912855 1425	–
PLS 30	–	949207	949282	–	–	–	–	–	–	–
	–	911430 0611	911430 0616	–	–	–	–	–	–	–
PLS 40	–	949208	949283	949227	949302	–	–	–	–	–
	–	911430 0811	911430 0816	911430 0814	911940 0820	–	–	–	–	–
PLS 50	–	949209	949284	949228	949303	–	–	–	–	–
	–	911430 1011	911430 1016	911430 1014	911940 1020	–	–	–	–	–
PLS 60	–	949210	949285	949229	949304	–	–	949241	949315	–
	–	911430 1112	911430 1216	911940 1214	911940 1220	–	–	911940 1219	912855 1225	–
PLS 80	–	949404	949332	949230	949305	–	–	949242	949316	–
	–	911430 1114	911940 1416	911940 1414	911940 1420	–	–	911940 1419	912855 1425	–
DuoLine S 50	–	949976	949977	949978	949979	–	–	–	–	–
	–	911430 0811	911430 0816	911430 0814	911940 0820	–	–	–	–	–
DuoLine S 80	–	949850	949851	949852	949853	–	–	949854	949855	–
	–	911430 1112	911430 1216	911940 1214	911940 1220	–	–	911940 1219	912855 1225	–
DuoLine S 80 x 120	–	949053	949054	949055	949056	–	–	949057	949058	–
	–	911430 1112	911430 1216	911940 1214	911940 1220	–	–	911940 1219	912855 1225	–
PLZ 30	949426	949211	949286	–	–	–	–	–	–	–
	911430 1014	910920 1011	911430 1016	–	–	–	–	–	–	–
PLZ 40	949427	949212	949287	949231	949306	949428	–	–	–	–
	911430 1014	911430 1011	911430 1016	911430 1014	911940 1020	911940 1020	–	–	–	–
PLZ 50	949429	949213	949288	949232	949307	949430	–	–	–	–
	911940 1414	911430 1114	911430 1416	911430 1414	911940 1420	911940 1420	–	–	–	–
PLZ 60	949431	949214	949289	949233	949308	949432	949433	949243	949317	–
	911940 1420	911940 1120	911940 1620	911940 1420	911940 2020	911940 2020	912855 2025	911940 1920	912855 2025	–

* Motor adaptors and couplings for servo motors
 RK-AC 800, RK-AC 1252, RK-AC 1776 and
 RK-AC 2552 are available on request.

Motor adaptors/couplings for servo motors*

Type	Servo motor								
	RK-AC 112 with gear unit	RK-AC 118		RK-AC 240		RK-AC 260	RK-AC 345	RK-AC 210/470	
			with gear unit		with gear unit	with gear unit	with gear unit		with gear unit
PLZ 80	949434	–	949417	949234	949309	949435	949436	949244	949318
	912855 14225	–	912855 1625	912855 1425	912855 2025	912855 2025	912855 2525	912855 1925	912855 2525
PLZ-i 30	–	949501	949502	–	–	–	–	–	–
	–	911430 0611	911430 0616	–	–	–	–	–	–
PLZ-i 40	–	949510	949511	949512	949513	–	–	–	–
	–	911430 0811	911430 0816	911430 0814	911940 0820	–	–	–	–
PLZ-i 50	–	949520	949521	949522	949523	–	–	–	–
	–	911430 1011	911430 1016	911430 1014	911940 1020	–	–	–	–
PLZ-i 60	–	949540	949541	949542	949543	–	–	949544	949545
	–	911430 1112	911430 1216	911940 1214	911940 1220	–	–	911940 1219	912855 1225
PLZ-i 80	–	–	949409	949560	949561	–	–	949562	949563
	–	–	911940 1416	911940 1414	611940 1420	–	–	911940 1419	912855 1425
SQZ 30	–	949215	949290	–	–	–	–	–	–
	–	911430 1011	911430 1016	–	–	–	–	–	–
SQZ 40 40 x 80	949438	949216	949291	949235	949310	949439	–	–	–
	911430 1014	911430 1011	911430 1016	911430 1014	911940 1020	911940 1020	–	–	–
SQZ 60 60 x 120	949440	949217	949292	949236	949311	949441	949442	949245	949319
	911940 1415	911430 1115	911940 1516	911940 1415	911940 1520	911940 1520	912855 2025	911430 1519	912855 1525
SQZ 80 x 160	949443	–	949001	949237	949312	949444	949445	949246	949320
	912855 1420	–	911940 1620	911940 1420	911940 2020	912855 2020	912855 2025	911940 1920	912855 2025
SQZ 80	949681	–	949682	949683	949684	949685	949686	949687	949688
	912855 1425	–	912855 1625	912855 1425	912855 2025	912855 2025	912855 2525	912855 1925	912855 2525
SQ MT 30	–	949910	949911	–	–	–	–	–	–
	–	911430 1011	911430 1016	–	–	–	–	–	–
SQ MT 40 40 x 80	–	949915	949916	949917	949918	–	–	–	–
	–	911430 1011	911430 1016	911430 1014	911940 1020	–	–	–	–
SQ MT 50 50 x 100	–	949922	949923	949924	949925	–	–	–	–
	–	911430 1114	911430 1416	911430 1414	911940 1420	–	–	–	–
SQ MT 60 60 x 120	–	949930	949931	949932	949933	–	–	949934	949935
	–	911430 1120	911940 1620	911940 1420	911940 2020	–	–	911430 1920	912855 20925
SQ MT 80 80 x 160	–	–	949408	949940	949941	–	–	949942	949943
	–	–	912855 1625	912855 1425	912855 2025	–	–	912855 1925	912855 2525
LMZ	949449	–	949411	949037	949309	949450	949451	949038	949318
	912855 1425	–	912855 1625	912855 1425	912855 2025	912855 2025	912855 2525	91285 1925	912855 2525
DuoLine Z 50	949452	949971	949972	–	–	–	–	–	–
	911430 1014	911940 1011	911940 1016	–	–	–	–	–	–
DuoLine Z 80	949453	–	949951	949952	949953	949454	–	949954	949955
	911940 1420	–	9119401620	911940 1420	911940 2020	911940 2020	–	911940 1920	911940 2025
DuoLine Z 120 x 80	949455	–	949415	949041	949806	949456	949457	949042	949807
	912855 1425	–	912855 1625	912855 1425	912855 2025	912855 2025	912855 2525	912855 1925	912855 2525
MultiLine	949446	–	949961	949962	949963	949447	949448	949964	949965
	912855 1430	–	912855 1630	912855 1430	912855 2030	912855 2030	912855 2530	912855 1930	912855 2530



Code No. Motor adaptor:
949446

Code No. Coupling with
 specification of pin dia-
 meter
 1st end = 14 mm
 2nd end = 30 mm:
912855 1430

For further details of dimensions, please refer to
 the chapter on the relevant linear unit.

