

**STÖBER**

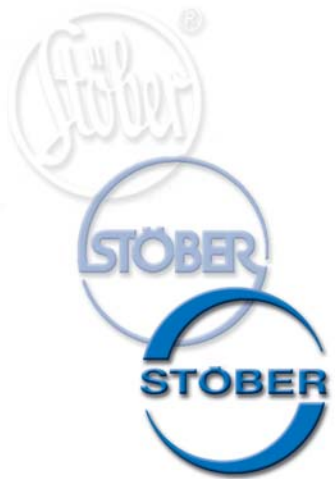
**MGS**

**Speed Reducers**

STOBER MGS Speed Reducers ZU-H

Geared to a higher standard®





**STÖBER**





# STÖBER

## MGS® Speed Reducers

### The Difference

#### STAINLESS STEEL HELICAL/BEVEL

Stainless steel housing and hardware  
 Suitable for the most extreme washdown applications  
 USDA/FDA compliant  
 Standard delivery — 1 day

#### FOOD DUTY

Stainless steel hardware  
 Suitable for the most severe washdown applications  
 Multilayered 316 stainless steel pigmented coating with anti-microbial clear coat  
 USDA/FDA compliant  
 Standard delivery — 1 day  
 Available as right angle helical/bevel, concentric helical, and offset helical.

#### BEVERAGE DUTY

Stainless steel hardware  
 Suitable for moderate washdown applications  
 316 stainless steel pigmented coating  
 Standard delivery — 1 day  
 Available as right angle helical/bevel, concentric helical, and offset helical.

#### BAKERY WHITE

Plated hardware  
 Suitable for mild washdown applications  
 Gloss white epoxy coating  
 "BISC" compliant  
 Standard delivery — 1 day  
 Available as right angle helical/bevel, concentric helical, and offset helical.

#### STANDARD

Non-plated hardware  
 Not suitable for washdown applications  
 Gloss gray coating  
 Standard delivery — 1 day  
 Available as concentric helical, offset helical, right angle helical/bevel, and right angle helical/worm.

#### IP69K Certification



Pages with this symbol indicate that units on the page meet this certification.

No expedite charge for next day delivery applies to all.



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# MGS™ Speed Reducers

## The STOBBER difference = VALUE for you!



### Engineered – Structural Rigidity



### Engineered – Precision Gearing Process



- blanked
- turned
- rough milled
- case hardened (61 RC)
- grinding
  - bearing seat
  - pinion outside diameter



## 3 and 5 YEAR WARRANTY



### Engineered – High Quality Bearings

- Tight Tolerance – Reduced Clearance
- Crowned cage for optimal lubricant flow
  - improved ball guidance
  - fast lubrication film formation
  - reduced friction
  - lower running noise
  - eliminates cage ejections



### Attention to Detail – Robustness

- NEMA C-face adapter with O-ring
- dual output seals
- flexible coupling eliminates misalignment, motor easily removed
- long-life input seals
- stainless steel oil plugs
- magnetic drain plugs
- gears supported with dual bearings in one-piece housing for structural rigidity



# MGS™ Speed Reducers

## Reliability, Adaptability, Maintainability

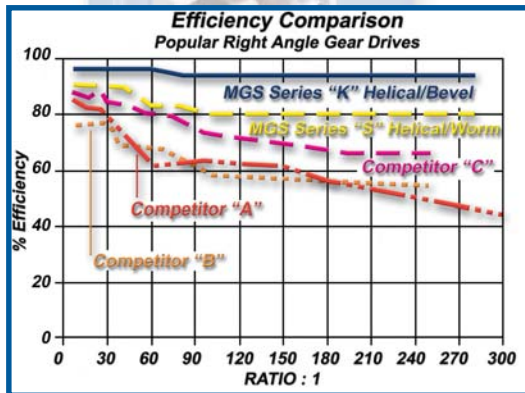
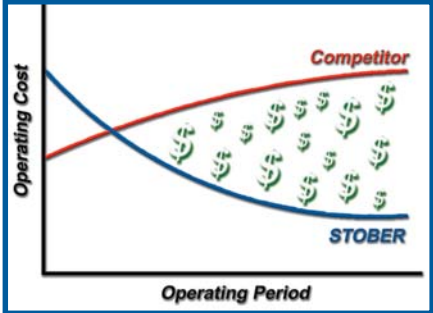


**3 WAY**  
**After Sale Service**  
 3 Day Factory Service  
 Field Service  
 Training Support

**SHIPS in 1 DAY**

**SAME DAY EMERGENCY SHIPPING**

**3 Rings**  
 To get competent,  
 "one-stop" shopping!



# MGS™ Speed Reducers 3 Year Warranty – Standard



**3 YEAR WARRANTY**

## ***Standard Warranty Includes:***

- Lubricated for Life***
- Application Specific Mounting Position - 6 Choices***  
*(Food and Beverage Units are ANY Horizontal Output)*
- Choice of 4 Coatings or Stainless Steel (KSS)***
- Maintenance Free***





# MGST<sup>™</sup> Speed Reducers 5 Year Warranty – Long Life



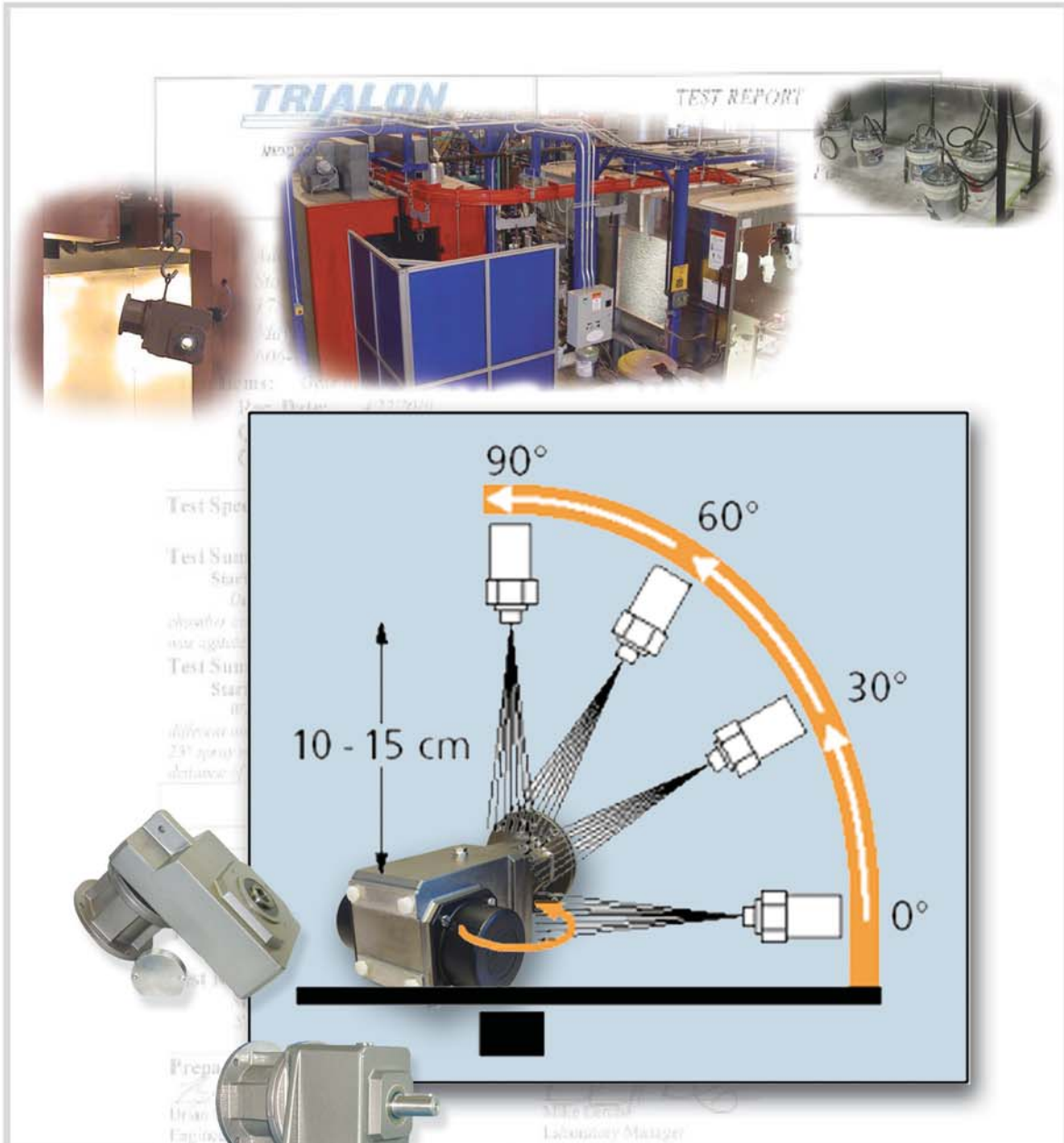
**5 YEAR WARRANTY**  
*includes bearings and seals*



## ***Long Life Warranty Includes:***

- Improved Input***
- Synthetic Oil***
- Application Specific Mounting Position - 3 Choices***
- Choice of 4 Coatings***
- Maintenance Free***

# MGST<sup>™</sup> Speed Reducers IP69K Certified



Value	pH	Substance
-1.8	Hydrochloric Acid	
0.5	Batteries	
1	Tomato Juice	
1.5 - 2.0	Gastric & Citric Acid	
2.4	Lemon Juice	
2.5	Cola	
2.9	Vinegar, Wine	
3.5	Apple, Orange Juice	
4.5	Beer	
5	Coffee	
5.5	Tea	
6.5	Milk	
7	Pure Water	
6.5 - 7.5	Human Saliva & Blood	
7.7 - 8.3	Sea Water	
9.0 - 10.0	Detergent & Soap	
11.5	Ammonia	
12.5	Chlorine	
13.5	Lye	
14	Caustic Soda	

**IP69K Certified**



Reliability Technical Center  
1815 Touhy Pike  
Evanston, IL 60201  
Phone: 708.477.1000





# MGS™ Speed Reducers Coating – Understand the Difference

STOBER can meet your needs in any of these areas:

## Beverage Duty – Moderately Wet Areas

- Stainless Steel Hardware — Plastic Covers
- Suitable for **Moderate** washdown applications
- 316 Stainless Steel Pigmented Finish



## Standard – Dry Areas

- Non-plated hardware
- **Not** suitable for washdown applications
- Gloss gray finish



## Food Duty – Severely Wet Areas

- Stainless Steel Hardware — Plastic Covers
- Suitable for the **Most Severe** washdown applications
- Multilayered 316 Stainless Steel Pigmented Finish
- Antimicrobial clear top coat
- USDA Compliant
- **IP69K Option**



## Stainless Steel – Extremely Harsh Areas

- Stainless Steel Hardware — Plastic Covers
- Suitable for the **Harshest** washdown applications
- USDA Compliant
- **IP69K Option**

# MGS™ Speed Reducers TOP® – Total Operational Performance



**Low Deposit Formation**

**Low Wear**

**Potential Energy Efficiency**

**Industry performance specifications**

**DIN Gear Performance**

**Halal**

**Kosher**

**Allergens**  
Not formulated to contain wheat, nuts, gluten

**H1 Registration**

**NSF**

**Canadian Food Safety Directorate - M060**

**Gluten Free**

**Potential Productivity Benefit**

**Equipment protection**

**Additional food benefits**

**Incidental Food Contact**

Characteristics of STOBER Standard Lubricants

Mobil Industrial Lubricants	Mobilgear 600XP220	Mobil SHC Cibus 220-H1 Food Grade	Mobil SHC 630
	Anti-Foaming Additives	✓	✓
Corrosion Protection	✓	Optimum	Optimum
Friction and Wear Reducing Characteristics	✓	Excellent	Superior
Oxidation Protection	✓	Enhanced	Enhanced
Wide Temperature Range		✓	✓



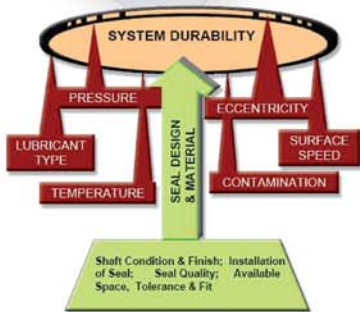
# MGS™ Speed Reducers TOP® – Total Operational Performance



**SKF**

**5 YEAR WARRANTY**

**simrit®**



**System Sealing - A Balancing Act**

**SILVER BULLET AM™**

# MGS Speed Reducer

## Suggested Service Factor



**Table No. 1 Service Class**

Type of Equipment	Service Class Hours per Day	
	3-10	>10
<b>Agitators</b>		
Pure Liquids	I	II
Semi-Liquids, variable Density	II	II
Solids	III	III
<b>Brewing and Distilling</b>		
Bottling Machinery	I	II
Brew Kettles (continuous Duty)	II	II
Cookers (continuous Duty)	II	II
Mash Tubs (continuous Duty)	II	II
Scale Hopper (frequent Starts)	II	II
Can Filling Machines	I	II
Car Dumpers	III	III
Clarifiers	I	II
Classifiers	II	II
<b>Conveyors (uniform load and fed)</b>		
Apron	II	II
Assembly Belt (bucket or pan)	II	II
Chain - Flight	II	II
Oven - Live Roll - Screw	I	II
<b>Conveyors (non-uniform load and fed)</b>		
Apron	II	III
Assembly Belt (bucket or pan)	II	II
Chain - Flight	II	II
Live Roll	*	*
Oven - Screw	II	II
Reciprocating - Shaker	III	III
<b>Elevators</b>		
Bucket (uniform load)	I	II
Bucket (nonuniform load - heavy duty)	II	III
centrifugal Discharge	I	II
Frieght	II	II
Gravity Discharge	I	II
<b>Food Industry</b>		
Slicer	II	III
Bottling, Can Filling Machines	I	II
Cereal Cooker	I	II
Mixer, Grinder	III	III
<b>Line Shafts</b>		
Uniform load	I	II
Nonuniform, Heavy Duty	II	III
<b>Machine Tools</b>		
Auxiliary Drive	I	II
Main Drive - uniform load	II	II
Main Drive - nonuniform Load	III	III
<b>Table Conveyors (non reversing)</b>		
Group Drives	II	III
Individual Drives	III	III
Wire Drawing, Flattening, or winding	II	III
<b>Mixers</b>		
Concrete - Continuous	II	III
Concrete - Intermittent	III	III
Constant Density	II	III
Semi-Liquid	III	III
<b>Sewage Disposal Equipment</b>		
Bar Screens	I	II
Chemical Feeders	I	II
Collectors	I	II
Dewatering Screws	II	II
Scum Breakers	II	III
Slow or Rapid Mixers	III	III
Thickeners	II	II
Vacuum Filters	II	II
<b>Screens</b>		
Air Washing	I	II
Rotary - Stone or Gravel	II	II
Traveling Water Intake	I	II
Skip Hoists	II	III
Slab Pushers	II	III
Stokers	II	II
<b>Textile Industry</b>		
Batchers or Calenders	II	II
Cards	I	II
Card Machines	III	III
Dry Cans and dryers	II	II
Dyeing Machines	*	III
Looms	*	*
Mangles, Nappers and Pads	II	II
Soapers, Tenner Frames	II	II
Sinners, Washers, Winders	II	II
Tumbling Barrels	III	III
Windlass	II	III

**Table No. 2 Suggested Service Factor Based on Service Class**

Service Class	Service Factor	Operating Conditions — not all inclusive. Each application should be checked to determine if any unusual conditions are present. See also Tables 4-6.
I	1.25	Moderate Shock — not more that 15 minutes in 2 hours. Uniform Load — not more than 10 hours per day.
II	1.40	Moderate Shock — not more that 10 hours per day. Uniform Load — more than 10 hours per day.
	1.50	Heavy Shock — not more that 15 minutes in 2 hours. Moderate Shock — more that 10 hours per day.
III	1.75	Heavy Shock — not more than 10 hours per day.
	2.00	Heavy Shock — more that 10 hours per day.

To establish a Service Factor (SF) when the driven equipment and service class are known, use [Table 1 and 2](#).

Service Factor should be determined for conditions such as non-uniform load, hours of service, and elevated ambient temperature. (For applications powered by an AC motor, a Service Factor of 2.0 is normally sufficient.)

To establish a Service Factor (SF) when conditions are known but the service class is NOT, use the information in [Tables 3 —6](#).

$$SF = f_B \times f_T \times f_L \times f_V$$

Choose an MGS reducer that will meet or exceed: HP x SF or Torque (in./lbs.) x SF

**NOTE: DO NOT SERVICE FACTOR THE MOTOR.**

**Table No. 3**

**Load Factor (f<sub>B</sub>)**

Uniform Load	1.0
Non-uniform Load	1.25
Medium Shock	1.4
Severe Shock	1.6

Contact STOBER Technical Support for selection assistance on applications requiring frequent starts and stops.

**Table No. 4**

**Ambient Temperature Factor (f<sub>T</sub>)**

Temp. (°F)	32	50	70	85	100	120
f <sub>T</sub>	1.15	1.15	1.0	1.0	1.15	1.3

For temperatures less than 32° or greater than 120°, contact STOBER Technical Support.

**Table No. 5**

**Hours of Service Factor (f<sub>L</sub>)**

Hours	2	4	6	8	12	16	24
f <sub>L</sub>	.75	.85	.95	1.0	1.10	1.15	1.20

**Table No. 6**

**Torque Characteristic Factor (f<sub>V</sub>)**

Use for Frequency Converter Only

Constant Torque over the Entire Speed Variation	1.0
Increasing Output Torque from 87 — 50 Hz	1.7

\* Contact STOBER Drives.



# MGS Speed Reducer Selection Procedure

## Selection Requirements

To select an MGS speed reducer for any application the following **must** be known:

- Input Speed - Revolutions per Minute
- Output Speed - Revolutions per Minute
- Input Horsepower or Output Torque (in. lbs.)
- Application Information to determine the Service Factor

If you have any questions regarding speed reducer selection, contact your STOBER representative or STOBER Technical Support for assistance.

## Horsepower or Torque

MGS speed reducers can be selected by either HP or Output Torque. The following formulas can be used to convert horsepower to torque or torque to horsepower.

$$HP = \frac{\text{Torque (in./lbs.)} \times \text{Output Speed (RPM)}}{63,025}$$

$$\text{Torque (in./lbs.)} = \frac{HP \times 63,025}{\text{Output Speed (RPM)}}$$

## Overhung Loads

Pulling forces or overhung load of pulleys, sheaves, sprockets, etc. on the reducer input and output shaft must not exceed the allowable limits shown in the MGS Selection Data tables.

The overhung load shown in the selection tables is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a overhung load rating is required, use 50% of the published overhung load from the Selection Data. Contact STOBER Technical Support, if assistance is needed.

The following formula can be used to determine actual overhung load for a given drive.

$$OHL = \frac{126,000 \times HP \times K}{D \times RPM}$$

where

- OHL = Overhung Load (lbs.)
- HP = Horsepower
- D = Pitch Dia. of Sprocket, Gear, Sheave, Pulley, etc.
- RPM = Maximum Speed
- K = 1.00 Chain Drives  
1.25 Gear Drives  
1.25 Gearbelt Drives  
1.50 V-Belt Drives  
2.50 Flat Belt Drives

No overhung load is encountered when an MGS reducer is flange mounted and/or coupling connected to another unit. However, the shafts of all components must be accurately aligned and secured to prevent pre-loading of the bearings and premature bearing failure.

## Speed Reducer Selection

- Under the Input RPM heading, find **Nominal Output RPM** nearest the requirement.
- In the **Input HP** column locate the rating that is greater than or equal to the required HP. (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)
- When HP or Torque rating is located, read across that row to select the **Base Module, Input Option** and **Overhung Loads**.
  - Complete Base Module Number by adding Housing and Output Style. See overview pages for housing and output options available.
  - Select Input Option (Motor Adapter or Input Shaft) and add to completed Part Number.
- Check **Overhung Load**.
- If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

The following additional information should be known when selecting and must be known when ordering an MGS Reducer:

- Mounting position.
- Shaft side extension on right angle units.
- Bushing side when a single side bushing kit is needed.

## Selection Example:

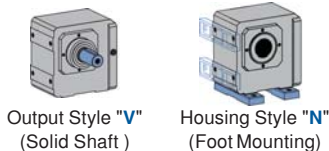
A foot mounted right angle reducer is needed for a non-uniformly loaded belt conveyor. It will be driven by a 2 HP, 1750 RPM, 143/145TC NEMA frame motor mounted to the reducer. The output shaft size is undetermined but the output speed required is 130 RPM. The drive will operate 12 hours per day, 5 days per week.

Determine the Service Factor (SF). Non-uniform load belt conveyor operating 12 hours per day  
Load Factor = **1.25 (f<sub>B</sub>)** Hours of Service = **1.10 (f<sub>L</sub>)**

The required HP rating for the reducer is: 1.25 (f<sub>B</sub>) x 1.10 (f<sub>L</sub>) = **1.375 SF**. 2 HP Motor x 1.375 SF = **2.75 HP**

- From the Selection Data pages for "K" Series reducers, under the 1750 Input RPM heading (A<sup>1</sup>), find **125 RPM Output (Approximate)** (A<sup>2</sup>) which is the closest to 130.
- In the **Input HP** column (B<sup>1</sup>), locate the rating that is equal to or greater than 2.75 HP. The first unit available is rated at **2.99 HP** (B<sup>2</sup>).
- Read across the row to select the **Base Module** and **Motor Adapter**
  - The Base Module is **K202\_0140**.  
The Motor Adapter is **MR160/**. Add **140** for the 143/145TC frame.
  - Complete the Base Module Part Number by adding **Output** and **Housing Style**.

Example: K202VN0140

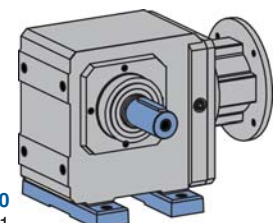


- Check **Overhung Load**.  
852 lbs. — with the load at the center of the output shaft
- If the exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**. 1750 Input RPM / 13.851 Exact Ratio = 126.34 Output RPM

Since the Output Style "V" is available as a single or double output shaft, the shaft side must be designated. In this example, we will specify the shaft on the left, with the mounting feet on the bottom, and the mounting position as standard horizontal. For more information on mounting position see the "K" Series section.

The complete part number description for ordering must include the **mounting position, shaft side, and feet side** designations.

1750 RPM Input		Base Module		Input Options <sup>2)</sup>		Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.
Input HP	Output Torque in. lbs.	1)	1)	Motor Adapter	Input Shaft		
				Size <sup>3)</sup>	NEMA C-Frame		
<b>125 RPM Output (Approximate)</b>							
1.65	816	K102_0140	MR140/	50	AW140/010	14.114	713
1.65	816	K102_0140	MR160/	050, 140	AW160/012	14.114	713
2.44	1,181	K202_0140	MR140/	050	AW140/010	13.851	852
2.99	1,447	K202_0140	MR160/	050, 140	AW160/012	13.851	852
2.99	1,447	K202_0140	MR200/	180	AW200/014	13.851	852
5.22	2,540	K302_0140	MR160/	050, 140	AW160/012	13.885	1,590
5.22	2,540	K302_0140	MR200/	180	AW200/014	13.885	1,590
7.85	3,806	K402_0140	MR160/	050, 140	AW160/012	13.885	1,590
7.85	3,806	K402_0140	MR200/	180	AW200/014	13.885	1,590
7.85	3,806	K402_0140	MR250/	180, 210	AW250/102	13.885	1,590
<b>120 RPM Output (Approximate)</b>							



The Part Number to order is **K202VN0140 MR160/140**  
EL1, Shaft Side 4, Feet Side 1

# MGS® Speed Reducers Output Options



## Output – Solid Shaft and Hollow Bore Diameter

**Table No. 1** The diameters shown **BOLD BLUE** are readily available from inventory. Contact STOBER Drives for delivery on other output sizes.

Carbon Steel				Unit Size	Stainless Steel			
Inches		Metric			Inches		Metric	
Shaft	Hollow	Shaft	Hollow		Shaft	Hollow	Shaft	Hollow
.75	—	20	—	<b>C002</b>	.75	—	—	—
.75, <b>1.00</b>	—	25	—	<b>C102/C103</b>	1.00, 1.25	—	20, <b>25</b>	—
1.25	—	30	—	<b>C202/C203</b>	1.25	—	—	—
1.25	—	30	—	<b>C302/C303</b>	1.25, 1.375	—	<b>25</b>	—
1.625	—	25, 38, 42, 40	—	<b>C402/C403</b>	1.625	—	—	—
1.625	—	40	—	<b>C502/C503</b>	1.625	—	—	—
2.125	—	50	—	<b>C612/C613</b>	2.125	—	—	—
2.375	—	60	—	<b>C712/C713</b>	2.375	—	—	—
2.875	—	70	—	<b>C812/C813</b>	2.875	—	—	—
3.625	—	90	—	<b>C912/C913</b>	—	—	—	—
1.00	.75	25	20	<b>F102</b>	—	—	—	—
1.25	1.00	30	25	<b>F202/F203</b>	—	1.00	—	—
1.375	1.25	35	30	<b>F302/F303</b>	—	1.25	—	—
1.625	1.4375, 1.500	40	40	<b>F402/F403</b>	—	—	—	—
2.125	2.00	50	50	<b>F602/F603</b>	—	—	—	—
—	—	—	—	<b>KSS102</b>	1.00	1.00	25	25
—	—	—	—	<b>KSS202</b>	1.25	1.125, 1.1875, 1.25	30	30
—	—	—	—	<b>KSS302/KSS303</b>	1.25	1.25, 1.375	40	35
.75	.75	20	20	<b>KL202</b>	.75	.75	—	—
1.00	1.00	25	25	<b>K102</b>	1.00	1.00	25	25
1.25	1.1875, 1.25	30	30	<b>K202/K203</b>	1.25	1.125, 1.1875, 1.25	30	30
1.25	1.375, 1.4375	30	35	<b>K302/K303</b>	1.25	1.25, 1.375	40	35
1.375	1.4375, 1.500	40	40	<b>K402/K403</b>	1.375	1.375, 1.500	—	<b>40</b>
1.75	2.00	45	50	<b>K513/K514</b>	1.75	1.4375, 1.9375, 2.00	45	<b>40, 50</b>
1.75	2.00	50	50	<b>K613/K614</b>	1.75	1.4375, 1.9375, 2.00, 2.1875	—	40, 50, 60
2.375	2.375	60	60	<b>K713/K714</b>	2.375	1.9375, 2.00, 2.1875, 2.375	—	<b>60</b>
2.875	2.75	70	70	<b>K813/K814</b>	2.875	2.1875, 2.375, 2.50, 2.6875, 2.75	70	60, <b>70</b>
3.625	3.25	90	70, 80, 90	<b>K913/K914</b>	—	2.6875, 2.9375, 3.00, 3.25, 3.4375	90	90
4.375	4.00	110	100	<b>K1013/K1014</b>	—	3.4375, 4.000	—	—
1.00	.75, 1.00	25	20, 25	<b>S102</b>	—	—	—	—
1.25	1.375	30	35	<b>S202/S203</b>	—	—	—	—
1.375	1.50	40	40	<b>S302/S303</b>	—	—	—	—
1.75	1.75	45	50	<b>S402/S403</b>	—	—	—	—





# MGs® Speed Reducers Bushings Bore Options

## Output – Wobble Free Bushing

**Table No. 2 Stainless Steel "WFB" Double Side or "WF" Single Side Bushings – Inches**

Unit	Stock Bores Sizes																
	¾	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2	2 <sup>3</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>
KL2	x	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
K1	–	x	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
K2	–	x	x	–	–	–	–	–	–	–	–	–	–	–	–	–	–
K3	–	x	x	x	x	x	x	–	–	–	–	–	–	–	–	–	–
K4	–	x	x	x	x	x	x	–	–	–	–	–	–	–	–	–	–
K5	–	–	–	–	–	x	x	x	x	x	x	x	x	–	–	–	–
K6	–	–	–	–	–	x	x	x	x	x	–	x	x	x	–	–	–
K7	–	–	–	–	–	–	–	–	–	–	–	x	x	x	x	–	–
K8	–	–	–	–	–	–	–	–	–	–	–	–	–	x	x	x	x

**Table No. 3 Stainless Steel – Metric  
"WFB" and "WF" Bushings**

	Double Side				Unit	Single Side		
	25	30	35	40		25	30	35
	x	–	–	–		K1	x	–
x	x	–	–	K2	–	x	–	
–	x	x	–	K3	–	x	x	
–	–	–	x	K4	–	–	–	
–	–	–	x	K5	–	–	–	
–	–	–	x	K6	–	–	–	

**Table No. 4 Carbon Steel – Inches  
"SWFC" Double Side Bushings**

Unit	Stock Bores Sizes					
	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>
K3	x	x	x	x	x	x

**Table No. 5 "WFBSS"  
Double Side Bushings – Inches**

Unit	Stock Bores Sizes					
	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>
KSS1	x	–	–	–	–	–
KSS2	x	x	x	x	x	x
KSS3	x	x	x	x	x	x



# Food and Beverage Duty MGS Speed Reducers

Food & Beverage



**IP69K**

**3 or 5 YEAR WARRANTY AVAILABLE**

**SHIPS in  
1 DAY**



**STOBER**

[www.stober.com](http://www.stober.com)

# Food and Beverage Duty MGS Speed Reducers



Food and Beverage Duty units are available in "C", "F", and "K" Series and all are supplied with a stainless steel output and stainless steel paint. These unit have several features and options that make them virtually MAINTENANCE FREE in a **wet** or **dry** environment.

- Lubricated for Life — with Mobil 600XP220 (3 Year Warranty) or SHC 630 (5 Year Warranty)
- Totally Enclosed — no breather to allow contaminants in or oil out and double output seals (dual lip outer seal and a single lip inner seal)
- The high quality helical gearing (and spiral bevel gearing in the "K" Series) is case hardened to 58-62 Rockwell C and precision finished for low noise and long service life. With an efficiency of 97%, these reliable drives provide cost savings in energy and maintenance.
- NEMA C-face Input — with an O-ring between the motor and reducer and an easy mount maintenance free coupling
- Mounts in ANY horizontal output position without changing oil levels (other positions are optional or warranty specific)
- ALL stainless steel hardware and stainless steel nameplate
- Standard Coating layers: **FOOD** — 1, Primer; 2, Industrial 316 Stainless Steel Epoxy; 1, Silver Bullet Anti-Microbial® Epoxy  
**BEVERAGE** — 1, Primer; 2, Industrial 316 Stainless Steel Epoxy  
**BAKERY (BISC)** — 1, Primer; 1, White Epoxy



Inside Split Cover Cap — enables easy assembly onto the shaft

Outside Closed Cover Cap — with O-ring to protect seals from high pressure washing

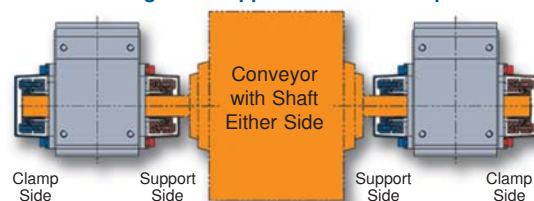
The "K" Series Helical/Bevel MGS Food and Beverage Duty unit is supplied with a patented<sup>(1)</sup> double side stainless steel wobble free bushing system. This unique design allows the unit to be mounted on the shaft from either side of the reducer. Featuring a distinct support side and a clamp side, the dual tapered cones will overcome a wide range of tolerances normally found with standard shaft materials and easily mounts onto standard cold finished, ground, or stainless shafting.. The clamp side is determined by the customer but is usually the outside bushing.

Each case size can be provided with a variety of bushing bore sizes. The bushing is not installed into the unit at the factory, but with easy to follow assemble instructions, the unit and bushing can be mounted on the machinery quickly — without any special tools. The bore size in the unit can be changed any time during the life of the unit simply by changing the bushing kit.

Silver Bullet AM® is a registered trademark of Burke Industrial Coating.

<sup>(1)</sup> U.S. Patent Number 5,496,127

### Interchangeable Support Side and Clamp Side





# "KSS" Series – Stainless Steel Right Angle Helical/Bevel MGS Reducer

STOBER Drives Inc. is proud to offer our quality-proven, high-efficiency MGS "K" Series Helical/Bevel speed reducer in a stainless steel housing. The adaptability of the well known double wobble-free bushing, with expanded bore sizes, makes this unit necessary for the toughest washdown applications. The footprint is smaller (30% less) than the standard MGS unit but the "KSS" uses the same high quality helical gearing which is case hardened to 58-62 Rockwell C and precision finished for low noise and long service life. The high efficiency (97%) assures reliability plus cost savings in energy and maintenance.

### Performance Specifications:

- Up to 3 HP
- Output Bore Diameters up to 1 1/2 inch
- Ratios up to 70:1
- NEMA C-face for 56C and 143/145TC
- Totally Enclosed — no breather to allow contaminants in or oil out
- 3 Year Warranty Standard
- Maintenance free — Lubricated for Life
- Application Specific Mounting Position
- Bushing allows mounting from either side
- Shipped filled with Mobile CIBUS SHC 220-H1 Food Grade Oil
- ALL Stainless Steel Hardware, Laser Etched Nameplate Data

NEMA C-face Input Adapter with O-Ring between the motor and reducer.

Gears Supported with Dual Bearings in one piece housing for structural rigidity

Stainless Steel Oil Fill Plug

Double Sealed on Both Sides in one piece housing for structural rigidity



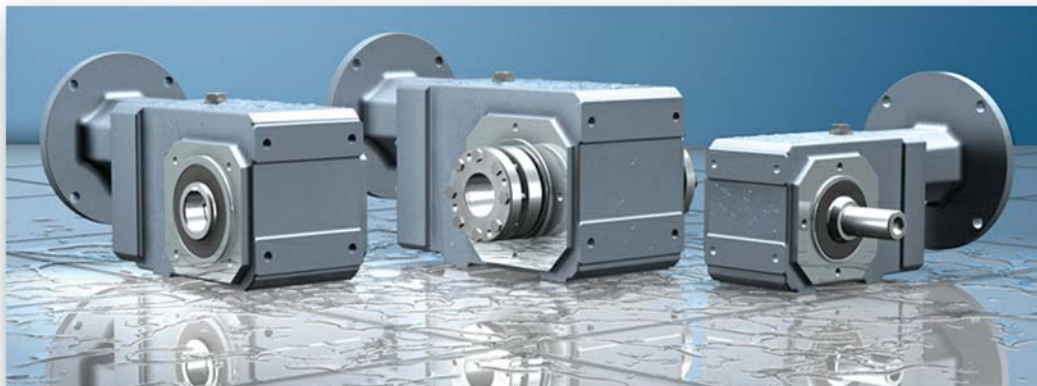
Easy Mount, Maintenance Free Flexible Input Coupling

High efficiency spiral bevel gearing provides quiet operation and excellent torque carrying capacity

Nylon bolts on Side 1 (bottom) and Side 5 for protection during application assembly

Bushing Covers Meet Safety Standards  
– Outside Closed Cover — protects seals from high pressure washing  
– Inside Split Cover Cap — enables easy assembly onto the shaft

Uses the patented (U.S. Patent Number 5,496,127) Stainless Steel Double Side Bushing mounted into stainless steel output quill — easily installs onto standard stainless steel shafting



# Part No. Configurator

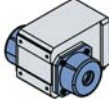





## “KSS” Series – Stainless Steel Helical/Bevel



### Part No. Explanation

**KSS** **3** **0** **2** **W** **G** **0100** **MS3R** **140** **E12**

Series      Size      Generation      No. of Gear Stages      Output Style      Housing Style      Ratio:1      Motor Adapter      NEMA Frame Size      Mounting Position Must be Specified

Series	<b>KSS</b>	Stainless Right Angle Helical/Bevel (output is at a right angle to input; gears are helical and spiral bevel; housing is stainless steel)
Size	<b>3</b>	Sizes available: KSS1, KSS2, <b>KSS3</b>
Generation	<b>0</b>	Design generation: first generation 0, second generation <b>1</b> , etc.
No. of Gear Stages	<b>2</b>	Number of gear stages: 2, <b>3</b> (determined by the ratio)
Output Style	<b>W</b>	Double wobble free bushing output 
	<b>A</b>	Hollow output 
	<b>V</b>	Shaft output  <b>SPECIFY:</b> Shaft Side 3 or Side 4.
Housing Style	<b>G</b>	Tapped holes around the output 
	<b>F</b>	Output flange  <b>SPECIFY:</b> Flange Side 3 or Side 4 (shown).
	<b>N</b>	Foot mounting  <b>SPECIFY:</b> Feet Side 1 (shown) or Side 5.
Ratio	<b>0100</b>	Approximate ratio: <b>0350</b> = 10.135:1 (4:1 up to 179:1)
Motor Adapter	<b>MS3R</b>	Motor adapter to fit unit size: MS1R, MS2R, <b>MS3R</b>
NEMA Frame Size	<b>140</b>	Motor frame size: 050 (56C), <b>140</b> (143/145TC)
Mounting Position	<b>E12</b>	Mounting position must be specified.

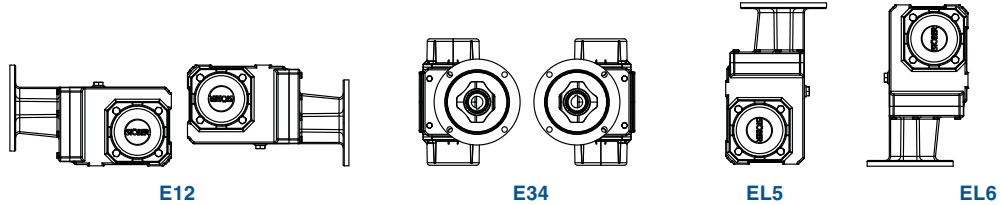


# Part No. Configurator

## “KSS” Series – Stainless Steel Helical/Bevel

### Mounting Positions – Standard 3 Year Warranty

Mounting Position **MUST BE SPECIFIED**  
 Standard Oil: Food Grade (Mobil SHC CIBUS 220)  
 Optional Oil: Mobilgear 600XP220 or Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- E5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.
- EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

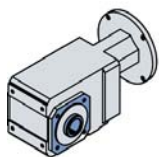
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free.

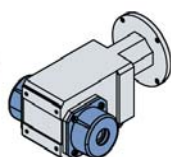
# SHIPS in 1 DAY



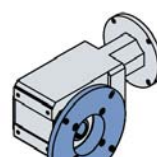
Style AG  
Hollow Output  
Tapped Holes



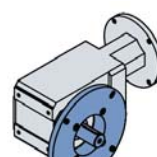
Style VG  
Solid Output  
Tapped Holes



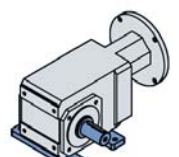
Style WG  
Bushing  
Tapped Holes



Style AF  
Hollow Output  
Flange Mount



Style VF  
Solid Output  
Flange Mount



Style VN  
Solid Output  
Foot Mount



# "KSS" Series – Stainless Steel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		PART NUMBER		NEMA C-Frame	Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
<b>435 RPM Output (Approximate)</b>							<b>360 RPM</b>		<b>290 RPM</b>	
2.64	369	KSS102_0040	MS1R050	56C	4.000	520	2.19	369	1.75	369
6.84	957	KSS202_0040	MS2R050	56C	4.000	624	6.04	1,018	5.20	1,097
6.84	957	KSS202_0040	MS2R140	143/145TC	4.000	624	6.04	1,018	5.20	1,097
9.84	1,375	KSS302_0040	MS3R050	56C	4.000	728	8.15	1,375	6.52	1,375
9.84	1,375	KSS302_0040	MS3R140	143/145TC	4.000	728	8.15	1,375	6.52	1,375
<b>400 RPM Output (Approximate)</b>							<b>330 RPM</b>		<b>265 RPM</b>	
6.46	985	KSS202_0044	MS2R050	56C	4.364	638	5.70	1,048	4.91	1,129
6.46	985	KSS202_0044	MS2R140	143/145TC	4.364	638	5.70	1,048	4.91	1,129
9.84	1,500	KSS302_0044	MS3R050	56C	4.364	744	8.15	1,500	6.52	1,500
9.84	1,500	KSS302_0044	MS3R140	143/145TC	4.364	744	8.15	1,500	6.52	1,500
<b>340 RPM Output (Approximate)</b>							<b>280 RPM</b>		<b>225 RPM</b>	
5.76	1,042	KSS202_0052	MS2R050	56C	5.177	666	5.08	1,110	4.38	1,196
5.76	1,042	KSS202_0052	MS2R140	143/145TC	5.177	666	5.08	1,110	4.38	1,196
<b>325 RPM Output (Approximate)</b>							<b>270 RPM</b>		<b>215 RPM</b>	
9.84	1,847	KSS302_0054	MS3R050	56C	5.375	784	8.15	1,847	6.52	1,847
9.84	1,847	KSS302_0054	MS3R140	143/145TC	5.375	784	8.15	1,847	6.52	1,847
<b>315 RPM Output (Approximate)</b>							<b>260 RPM</b>		<b>210 RPM</b>	
2.64	514	KSS102_0056	MS1R050	56C	5.568	565	2.19	514	1.75	514
<b>290 RPM Output (Approximate)</b>							<b>240 RPM</b>		<b>195 RPM</b>	
2.50	524	KSS102_0060	MS1R050	56C	6.000	576	2.07	524	1.66	524
5.22	1,095	KSS202_0060	MS2R050	56C	6.000	691	4.61	1,166	3.97	1,256
5.22	1,095	KSS202_0060	MS2R140	143/145TC	6.000	691	4.61	1,166	3.97	1,256
9.15	1,918	KSS302_0060	MS2R050	56C	6.000	806	8.07	2,042	6.52	2,062
9.15	1,918	KSS302_0060	MS2R140	143/145TC	6.000	806	8.07	2,042	6.52	2,062
<b>260 RPM Output (Approximate)</b>							<b>215 RPM</b>		<b>175 RPM</b>	
2.46	571	KSS102_0066	MS1R050	56C	6.644	591	2.04	571	1.63	571
4.86	1,135	KSS202_0067	MS2R050	56C	6.683	710	4.29	1,208	3.70	1,302
4.86	1,135	KSS202_0067	MS2R140	143/145TC	6.683	710	4.29	1,208	3.70	1,302
8.46	1,994	KSS302_0067	MS3R050	56C	6.740	830	7.47	2,123	6.44	2,286
8.46	1,994	KSS302_0067	MS3R140	143/145TC	6.740	830	7.47	2,123	6.44	2,286
<b>245 RPM Output (Approximate)</b>							<b>200 RPM</b>		<b>160 RPM</b>	
4.66	1,159	KSS202_0071	MS2R050	56C	7.118	721	4.11	1,234	3.54	1,329
4.66	1,159	KSS202_0071	MS2R140	143/145TC	7.118	721	4.11	1,234	3.54	1,329
<b>235 RPM Output (Approximate)</b>							<b>195 RPM</b>		<b>155 RPM</b>	
7.96	2,056	KSS302_0074	MS3R050	56C	7.391	849	7.02	2,189	6.05	2,358
7.96	2,056	KSS302_0074	MS3R140	143/145TC	7.391	849	7.02	2,189	6.05	2,358
<b>210 RPM Output (Approximate)</b>							<b>170 RPM</b>		<b>140 RPM</b>	
2.35	684	KSS102_0083	MS1R050	56C	8.309	625	1.97	689	1.57	689
4.17	1,225	KSS202_0084	MS2R050	56C	8.397	751	3.68	1,304	3.17	1,405
4.17	1,225	KSS202_0084	MS2R140	143/145TC	8.397	751	3.68	1,304	3.17	1,405
7.28	2,149	KSS302_0084	MS3R050	56C	8.444	878	6.43	2,288	5.54	2,465
7.28	2,149	KSS302_0084	MS3R140	143/145TC	8.444	878	6.43	2,288	5.54	2,465

\* For thermal HP capacity, see rating below.

Base Module	KSS1	KSS2	KSS3
Thermal Capacity	2.95	5.36	7.38





# "KSS" Series – Stainless Steel MGS Reducer – Selection Data



- NOTE:**
- 1) Complete Base Module Part Number by adding the ratio. Example: KSS202WG0040.
  - 2) Select the NEMA C-Face Motor Adapter and add to Part Number. Example **MS2R050** for 56C.
  - 3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		PART NUMBER		NEMA C-Frame	Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
<b>190 RPM Output (Approximate)</b>										
2.19	708	KSS102_0092	MS1R050	56C	9.249	641	1.93	754	1.63	795
3.93	1,262	KSS202_0092	MS2R050	56C	9.190	769	3.47	1,344	2.99	1,448
3.93	1,262	KSS202_0092	MS2R140	143/145TC	9.190	769	3.47	1,344	2.99	1,448
6.85	2,217	KSS302_0093	MS3R050	56C	9.267	898	6.04	2,360	5.20	2,542
6.85	2,217	KSS302_0093	MS3R140	143/145TC	9.267	898	6.04	2,360	5.20	2,542
<b>170 RPM Output (Approximate)</b>										
2.06	730	KSS102_0100	MS1R050	56C	10.140	656	1.82	778	1.52	814
3.70	1,301	KSS202_0100	MS2R050	56C	10.073	786	3.26	1,386	2.81	1,493
3.70	1,301	KSS202_0100	MS2R140	143/145TC	10.073	786	3.26	1,386	2.81	1,493
6.45	2,284	KSS302_0100	MS3R050	56C	10.135	919	5.69	2,432	4.90	2,619
6.45	2,284	KSS302_0100	MS3R140	143/145TC	10.135	919	5.69	2,432	4.90	2,619
<b>150 RPM Output (Approximate)</b>										
1.89	763	KSS102_0115	MS1R050	56C	11.565	678	1.67	813	1.44	875
3.38	1,362	KSS202_0115	MS2R050	56C	11.546	814	2.98	1,450	2.57	1,562
3.38	1,362	KSS202_0115	MS2R140	143/145TC	11.546	814	2.98	1,450	2.57	1,562
5.89	2,390	KSS302_0115	MS3R050	56C	11.610	951	5.20	2,544	4.48	2,741
5.89	2,390	KSS302_0115	MS3R140	143/145TC	11.610	951	5.20	2,544	4.48	2,741
<b>140 RPM Output (Approximate)</b>										
1.78	786	KSS102_0125	MS1R050	56C	12.618	693	1.57	836	1.35	901
3.17	1,406	KSS202_0125	MS2R050	56C	12.705	833	2.79	1,497	2.41	1,613
3.17	1,406	KSS202_0125	MS2R140	143/145TC	12.705	833	2.79	1,497	2.41	1,613
5.58	2,454	KSS302_0125	MS3R050	56C	12.577	970	4.93	2,613	4.25	2,815
5.58	2,454	KSS302_0125	MS3R140	143/145TC	12.577	970	4.93	2,613	4.25	2,815
<b>125 RPM Output (Approximate)</b>										
1.65	816	KSS102_0140	MS1R050	56C	14.114	713	1.46	868	1.26	935
2.99	1,447	KSS202_0140	MS2R050	56C	13.851	852	2.64	1,541	2.27	1,660
2.99	1,447	KSS202_0140	MS2R140	143/145TC	13.851	852	2.64	1,541	2.27	1,660
5.22	2,540	KSS302_0140	MS3R050	56C	13.935	995	4.60	2,704	3.97	2,913
5.22	2,540	KSS302_0140	MS3R140	143/145TC	13.935	995	4.60	2,704	3.97	2,913
<b>105 RPM Output (Approximate)</b>										
1.48	863	KSS102_0165	MS1R050	56C	16.714	744	1.30	919	1.11	974
2.62	1,545	KSS202_0170	MS2R050	56C	16.858	894	2.31	1,645	1.99	1,772
2.62	1,545	KSS202_0170	MS2R140	143/145TC	16.858	894	2.31	1,645	1.99	1,772
4.58	2,710	KSS302_0170	MS3R050	56C	16.939	1,045	4.04	2,886	3.47	3,100
4.58	2,710	KSS302_0170	MS3R140	143/145TC	16.939	1,045	4.04	2,886	3.47	3,100
<b>100 RPM Output (Approximate)</b>										
1.43	877	KSS102_0175	MS1R050	56C	17.563	753	1.26	934	1.09	1,006
2.56	1,564	KSS202_0175	MS2R050	56C	17.469	902	2.26	1,665	1.92	1,772
2.56	1,564	KSS202_0175	MS2R140	143/145TC	17.469	902	2.26	1,665	1.92	1,772
4.52	2,729	KSS302_0175	MS3R050	56C	17.293	1,050	3.98	2,906	3.40	3,100
4.52	2,729	KSS302_0175	MS3R050	143/145TC	17.293	1,050	3.98	2,906	3.40	3,100

See Page 16 for Part No. Configurator. Mounting position MUST be specified.



# "KSS" Series – Stainless Steel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		PART NUMBER		NEMA C-Frame	Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
<b>85 RPM Output (Approximate)</b>										
1.30	918	KSS102_0200	MS1R050	56C	20.150	779	1.15	974	0.92	974
2.32	1,645	KSS202_0200	MS2R050	56C	20.327	937	2.04	1,751	1.65	1,772
2.32	1,645	KSS202_0200	MS2R140	143/145TC	20.327	937	2.04	1,751	1.65	1,772
4.06	2,878	KSS302_0200	MS3R050	56C	20.278	1,093	3.58	3,064	2.90	3,100
4.06	2,878	KSS302_0200	MS3R140	143/145TC	20.278	1,093	3.58	3,064	2.90	3,100
<b>75 RPM Output (Approximate)</b>										
1.19	963	KSS102_0230	MS1R050	56C	23.265	808	1.05	1,026	0.87	1,063
2.12	1,718	KSS202_0230	MS2R050	56C	23.180	969	1.81	1,772	1.45	1,772
2.12	1,718	KSS202_0230	MS2R140	143/145TC	23.180	969	1.81	1,772	1.45	1,772
3.70	3,014	KSS302_0230	MS3R050	56C	23.292	1,131	3.16	3,100	2.53	3,100
3.70	3,014	KSS302_0230	MS3R140	143/145TC	23.292	1,131	3.16	3,100	2.53	3,100
<b>70 RPM Output (Approximate)</b>										
0.97	851	KSS102_0250	MS1R050	56C	25.220	824	0.80	851	0.64	851
2.01	1,765	KSS202_0250	MS2R050	56C	25.130	988	1.67	1,772	1.34	1,772
2.01	1,765	KSS202_0250	MS2R140	143/145TC	25.130	988	1.67	1,772	1.34	1,772
3.48	3,070	KSS302_0250	MS3R050	56C	25.259	1,154	2.88	3,070	2.31	3,070
3.48	3,070	KSS302_0250	MS3R140	143/145TC	25.259	1,154	2.88	3,070	2.31	3,070
<b>60 RPM Output (Approximate)</b>										
1.05	1,025	KSS102_0280	MS1R050	56C	28.048	846	0.90	1,063	0.72	1,063
1.81	1,772	KSS202_0280	MS2R050	56C	27.950	1,015	1.50	1,772	1.20	1,772
1.81	1,772	KSS202_0280	MS2R140	143/145TC	27.950	1,015	1.50	1,772	1.20	1,772
3.18	3,100	KSS302_0280	MS3R140	56C	27.883	1,183	2.64	3,100	2.11	3,100
3.18	3,100	KSS302_0280	MS3R050	143/145TC	27.883	1,183	2.64	3,100	2.11	3,100
<b>55 RPM Output (Approximate)</b>										
2.76	3,100	KSS303_0330	MS3R050	56C	32.649	1,231	2.29	3,100	1.83	3,100
2.76	3,100	KSS303_0330	MS3R140	143/145TC	32.649	1,231	2.29	3,100	1.83	3,100
<b>52 RPM Output (Approximate)</b>										
0.55	647	KSS102_0340	MS1R050	56C	33.707	886	0.45	647	0.36	647
1.16	1,364	KSS202_0340	MS2R050	56C	33.618	1,063	0.96	1,364	0.77	1,364
1.16	1,364	KSS202_0340	MS2R140	143/145TC	33.618	1,063	0.96	1,364	0.77	1,364
1.89	2,217	KSS302_0340	MS3R050	56C	33.618	1,240	1.56	2,217	1.25	2,217
1.89	2,217	KSS302_0340	MS3R140	143/145TC	33.618	1,240	1.56	2,217	1.25	2,217
<b>50 RPM Output (Approximate)</b>										
0.87	1,063	KSS102_0350	MS1R050	56C	35.105	895	0.72	1,063	0.57	1,063
1.47	1,772	KSS202_0350	MS2R050	56C	34.554	1,070	1.22	1,772	0.97	1,772
1.47	1,772	KSS202_0350	MS2R140	143/145TC	34.554	1,070	1.22	1,772	0.97	1,772
2.51	3,100	KSS303_0360	MS3R050	56C	35.833	1,260	2.08	3,100	1.67	3,100
2.51	3,100	KSS303_0360	MS3R140	143/145TC	35.833	1,260	2.08	3,100	1.67	3,100
2.55	3,100	KSS302_0350	MS3R050	56C	34.731	1,250	2.12	3,100	1.69	3,100
2.55	3,100	KSS302_0350	MS3R140	143/145TC	34.731	1,250	2.12	3,100	1.69	3,100
<b>45 RPM Output (Approximate)</b>										
2.30	3,100	KSS303_0390	MS3R050	56C	39.187	1,288	1.90	3,100	1.52	3,100
2.30	3,100	KSS303_0390	MS3R140	143/145TC	39.187	1,288	1.90	3,100	1.52	3,100

\* For thermal HP capacity, see rating below.

Base Module	KSS1	KSS2	KSS3
Thermal Capacity	2.95	5.36	7.38



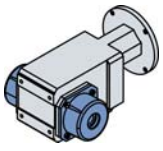
# "KSS" Series – Stainless Steel MGS Reducer – Selection Data



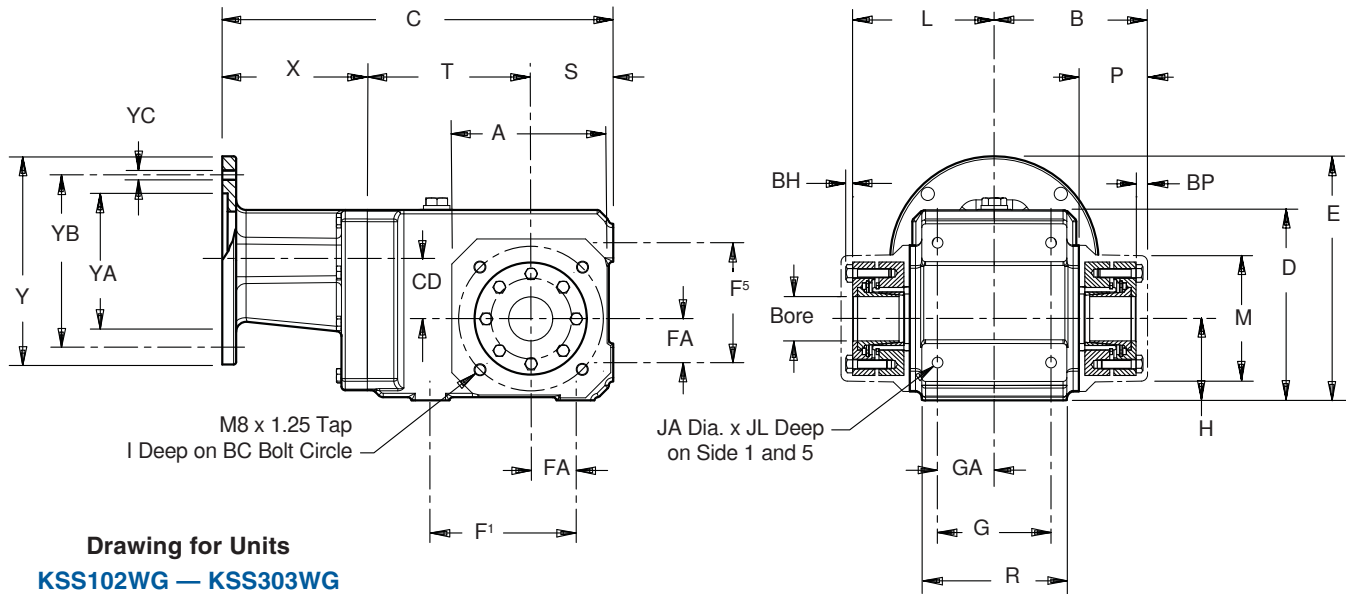
- NOTE:** 1) Complete Base Module Part Number by adding the ratio. Example: KSS202WG0040.  
 2) Select the NEMA C-Face Motor Adapter and add to Part Number. Example **MS2R050** for 56C.  
 3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		PART NUMBER		NEMA C-Frame	Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
<b>43 RPM Output (Approximate)</b>							<b>36 RPM</b>		<b>29 RPM</b>	
0.39	544	KSS102_0400	MS1R050	56C	40.300	927	0.32	544	0.26	544
1.20	1,705	KSS302_0410	MS3R050	56C	40.512	1,299	1.00	1,705	0.80	1,705
1.20	1,705	KSS302_0410	MS3R140	143/145TC	40.512	1,299	1.00	1,705	0.80	1,705
<b>40 RPM Output (Approximate)</b>							<b>32 RPM</b>		<b>26 RPM</b>	
1.10	1,772	KSS202_0460	MS2R050	56C	46.225	1,151	0.91	1,772	0.73	1,772
1.10	1,772	KSS202_0460	MS2R140	143/145TC	46.225	1,151	0.91	1,772	0.73	1,772
1.89	3,048	KSS302_0460	MS3R050	56C	46.225	1,343	1.56	3,048	1.25	3,048
1.89	3,048	KSS302_0460	MS3R140	143/145TC	46.225	1,343	1.56	3,048	1.25	3,048
2.01	3,100	KSS303_0450	MS3R050	56C	44.892	1,333	1.66	3,100	1.33	3,100
2.01	3,100	KSS303_0450	MS3R140	143/145TC	44.892	1,333	1.66	3,100	1.33	3,100
<b>35 RPM Output (Approximate)</b>							<b>28 RPM</b>		<b>23 RPM</b>	
0.25	442	KSS102_0500	MS1R050	56C	50.310	980	0.21	442	0.17	442
0.55	900	KSS102_0470	MS1R050	56C	46.918	963	0.45	900	0.36	900
1.85	3,100	KSS303_0490	MS3R050	56C	48.631	1,360	1.53	3,100	1.23	3,100
1.85	3,100	KSS303_0490	MS3R140	143/145TC	48.631	1,360	1.53	3,100	1.23	3,100
<b>30 RPM Output (Approximate)</b>							<b>25 RPM</b>		<b>20 RPM</b>	
0.39	758	KSS102_0560	MS1R050	56C	56.095	1,007	0.32	758	0.26	758
1.20	2,345	KSS302_0560	MS3R050	56C	55.705	1,407	1.00	2,345	0.80	2,345
1.20	2,345	KSS302_0560	MS3R140	143/145TC	55.705	1,407	1.00	2,345	0.80	2,345
1.67	3,100	KSS303_0540	MS3R050	56C	53.883	1,395	1.39	3,100	1.11	3,100
1.67	3,100	KSS303_0540	MS3R140	143/145TC	53.883	1,395	1.39	3,100	1.11	3,100
<b>27 RPM Output (Approximate)</b>							<b>22 RPM</b>		<b>18 RPM</b>	
1.38	3,100	KSS303_0650	MS3R050	56C	65.499	1,465	1.14	3,100	0.91	3,100
1.38	3,100	KSS303_0650	MS3R140	143/145TC	65.499	1,465	1.14	3,100	0.91	3,100
<b>25 RPM Output (Approximate)</b>							<b>21 RPM</b>		<b>17 RPM</b>	
0.25	616	KSS102_0700	MS1R050	56C	70.029	1,064	0.21	616	0.17	616
1.35	3,100	KSS303_0670	MS3R050	56C	66.868	1,473	1.12	3,100	0.89	3,100
1.35	3,100	KSS303_0670	MS3R140	143/145TC	66.868	1,473	1.12	3,100	0.89	3,100
<b>22 RPM Output (Approximate)</b>							<b>18 RPM</b>		<b>15 RPM</b>	
1.15	3,100	KSS303_0780	MS3R050	56C	78.410	1,532	0.95	3,100	0.76	3,100
1.15	3,100	KSS303_0780	MS3R140	143/145TC	78.410	1,532	0.95	3,100	0.76	3,100
<b>19 RPM Output (Approximate)</b>							<b>16 RPM</b>		<b>12.5 RPM</b>	
1.00	3,100	KSS303_0900	MS3R050	56C	90.061	1,575	0.83	3,100	0.66	3,100
1.00	3,100	KSS303_0900	MS3R140	143/145TC	90.061	1,575	0.83	3,100	0.66	3,100
<b>16 RPM Output (Approximate)</b>							<b>13 RPM</b>		<b>10 RPM</b>	
0.84	3,100	KSS303_1080	MS3R050	56C	107.814	1,575	0.69	3,100	0.55	3,100
0.84	3,100	KSS303_1080	MS3R140	143/145TC	107.814	1,575	0.69	3,100	0.55	3,100
<b>13 RPM Output (Approximate)</b>							<b>11 RPM</b>		<b>8.5 RPM</b>	
0.67	3,100	KSS303_1340	MS3R050	56C	134.292	1,575	0.56	3,100	0.44	3,100
0.67	3,100	KSS303_1340	MS3R140	143/145TC	134.292	1,575	0.56	3,100	0.44	3,100
<b>10 RPM Output (Approximate)</b>							<b>8 RPM</b>		<b>7 RPM</b>	
0.50	3,048	KSS303_1790	MS3R050	56C	178.737	1,575	0.41	3,048	0.33	3,048
0.50	3,048	KSS303_1790	MS3R140	143/145TC	178.737	1,575	0.41	3,048	0.33	3,048

See Page 16 for Part No. Configurator. Mounting position MUST be specified.



# "KSS" Series – Stainless Steel MGS Reducer Tapped Hole – "G" Housing Double Bushing – Dimensional Data



Drawing for Units  
KSS102WG — KSS303WG

Table No. 1 "KSS" Series – Double Wobble Free Bushing – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F <sup>1</sup>	F <sup>5</sup>	G	H	I	L	M	P	R
KSS102WG_MS1R050	56C	4.53	4.06	10.55	4.96	7.00	3.54	2.95	2.76	2.36	.51	3.66	3.06	1.97	3.54
KSS202WG_MS2R050	56C	4.96	4.72	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	4.30	3.92	2.09	4.41
KSS202WG_MS2R140	143/145TC	4.96	4.72	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	4.30	3.92	2.09	4.41
KSS302WG_MS3R050	56C	5.20	4.98	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	4.54	3.78	2.09	5.51
KSS302WG_MS3R140	143/145TC	5.20	4.98	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	4.54	3.78	2.09	5.51
KSS303WG_MS3R050	56C	5.20	4.98	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	4.54	3.78	2.09	5.51
KSS303WG_MS3R140	143/145TC	5.20	4.98	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	4.54	3.78	2.09	5.51

Table No. 2 "KSS" Series – Double Wobble Free Bushing – Dimensions (Inches)

Unit with Motor Adapter	S	T	X	Y	BC	BP	BH	CD	FA	GA	JA	JL	YA	YB	YC	Wt. lbs.
KSS102WG_MS1R050	2.36	4.37	3.81	6.50	3.54	.39	.16	1.42	1.18	1.38	M8 x 1.25	.51	4.500	5.87	.41	29
KSS202WG_MS2R050	2.56	5.12	4.53	6.50	4.53	.42	.16	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS202WG_MS2R140	2.56	5.12	4.53	6.50	4.53	.42	.16	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS302WG_MS3R050	2.95	5.91	4.37	6.50	4.53	.43	.16	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS302WG_MS3R140	2.95	5.91	4.37	6.50	4.53	.43	.16	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303WG_MS3R050	2.95	5.91	4.00	6.50	4.53	.43	.16	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303WG_MS3R140	2.95	5.91	4.00	6.50	4.53	.43	.16	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55

Table No. 3 "WFBSS" Double Side Bushings – Inches

Unit	Stock Bores Sizes					
	1	1 <sup>9</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>
KSS1	WFBSS1-100	—	—	—	—	—
KSS2	WFBSS2-100	WFBSS2-103	WFBSS2-104	WFBSS2-106	WFBSS2-107	WFBSS2-108
KSS3	WFBSS3-100	WFBSS3-103	WFBSS3-104	WFBSS3-106	WFBSS3-107	WFBSS3-108

Table No. 4 "WFBSS" – Double Side Bushings – Metric

Unit	Stock Bores Sizes — mm		
	25	30	35
KSS1	WFBSS1-25	—	—
KSS2	—	WFBSS2-30	WFBSS2-35
KSS3	—	WFBSS2-30	WFBSS2-35

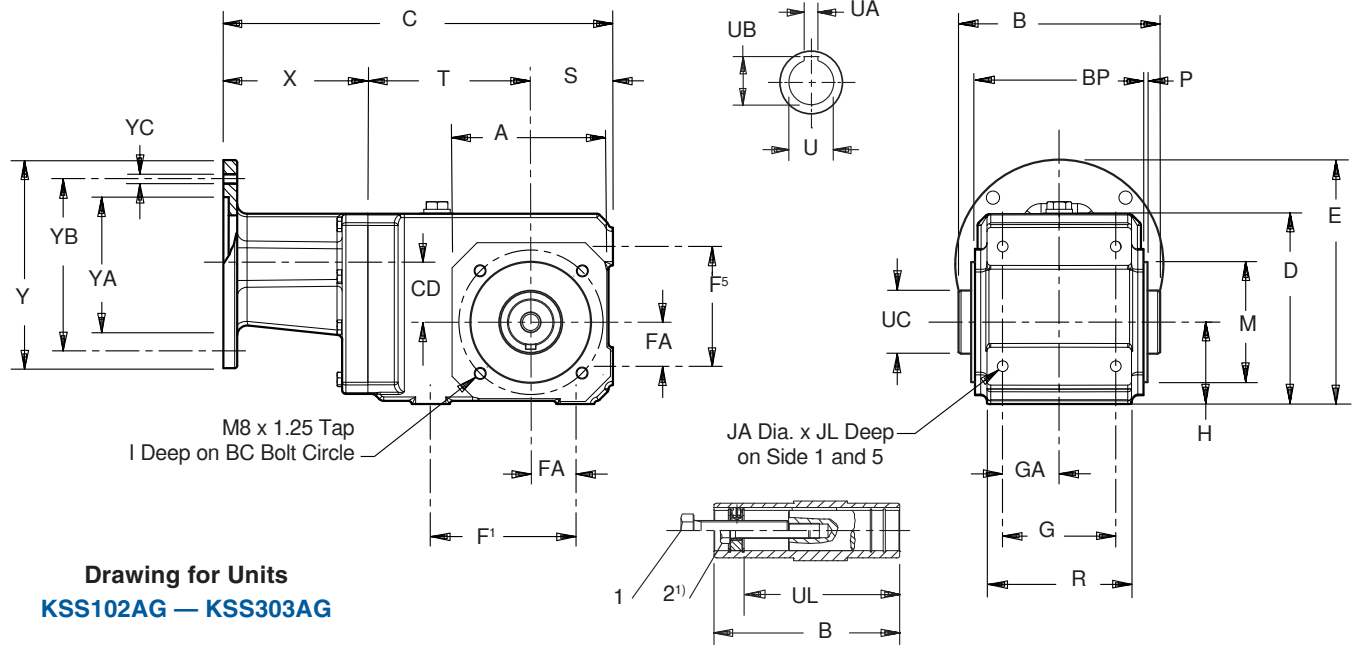
**Part No. Example**

Stainless Steel Unit  
143TC Frame Motor Adapter  
and 1<sup>7</sup>/<sub>16</sub> Bushing Bore  
**KSS202WG0100 MS2R140**  
**WFBSS2-107**

All weights are approximate.



# "KSS" Series – Stainless Steel MGS Reducer Tapped Hole – "G" Housing Hollow Output – Dimensional Data



Drawing for Units  
KSS102AG – KSS303AG

Table No. 1 "KSS" Series – Hollow Output – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F <sup>1</sup>	F <sup>5</sup>	G	H	I	M	P	R	S
KSS102AG_MS1R050	56C	4.53	4.72	10.55	4.96	7.00	3.54	2.95	2.76	2.36	.51	2.95	.12	3.54	2.36
KSS202AG_MS2R050	56C	4.96	5.83	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	3.74	.12	4.41	2.56
KSS202AG_MS2R140	143/145TC	4.96	5.83	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	3.74	.12	4.41	2.56
KSS302AG_MS3R050	56C	5.20	6.30	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	3.74	.12	5.51	2.95
KSS302AG_MS3R140	143/145TC	5.20	6.30	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	3.74	.12	5.51	2.95
KSS303AG_MS3R050	56C	5.20	6.30	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	3.74	.12	5.51	2.95
KSS303AG_MS3R140	143/145TC	5.20	6.30	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	3.74	.12	5.51	2.95

Table No. 2 "KSS" Series – Hollow Output – Dimensions (Inches)

Unit with Motor Adapter	T	X	Y	BC	BP	CD	FA	GA	JA	JL	YA	YB	YC	Wt. lbs.
KSS102AG_MS1R050	4.37	3.81	6.50	3.54	4.17	1.42	1.18	1.38	M8 x 1.25	.51	4.500	5.87	.41	29
KSS202AG_MS2R050	5.12	4.53	6.50	4.53	5.28	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS202AG_MS2R140	5.12	4.53	6.50	4.53	5.28	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS302AG_MS3R050	5.91	4.37	6.50	4.53	5.75	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS302AG_MS3R140	5.91	4.37	6.50	4.53	5.75	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303AG_MS3R050	5.91	4.00	6.50	4.53	5.75	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303AG_MS3R140	5.91	4.00	6.50	4.53	5.75	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55

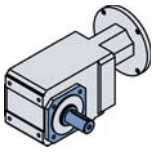
Table No. 3 Standard Bore – Inches

Base Module	U	UA	UB	UC	UL	1
KSS102	1.000	.250	1.11	1.57	3.86	1/2-13
KSS202	1.250	.250	1.37	1.97	4.44	5/8-11
KSS302/303	1.375	.312	1.52	1.97	4.92	5/8-11

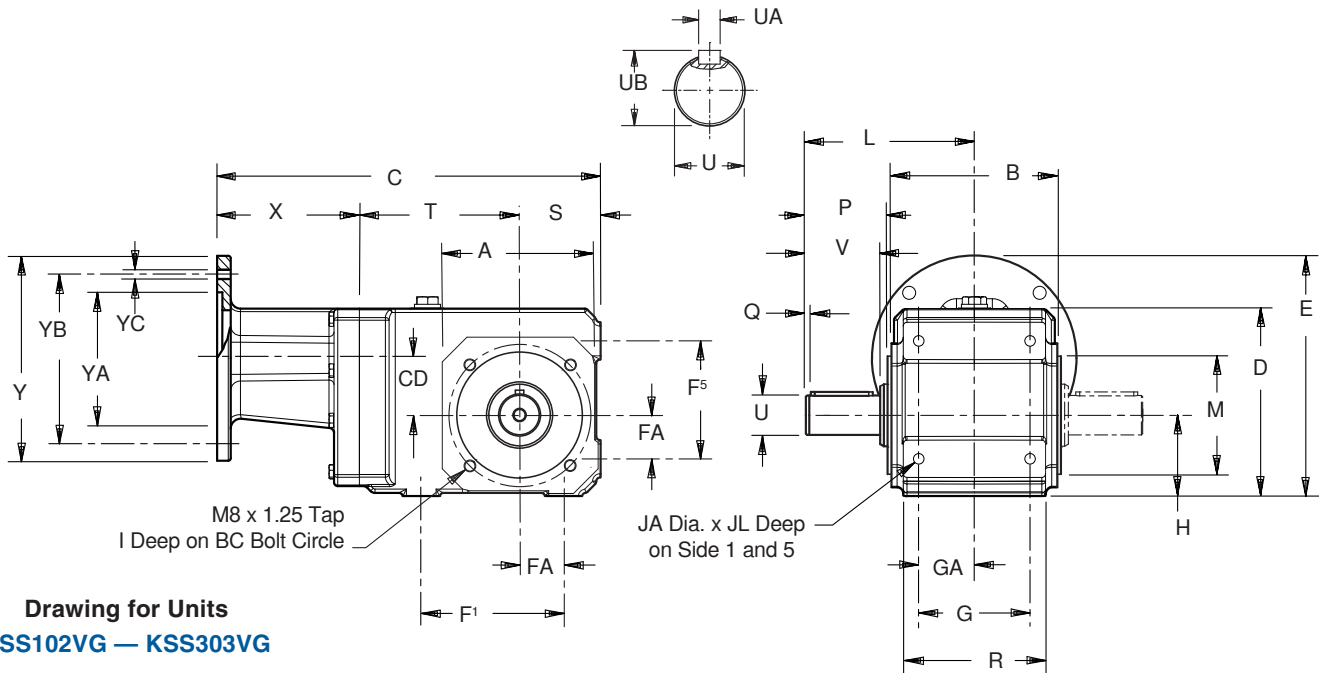
Part No. Example

Hollow Bore Stainless Steel Unit  
143TC Frame Motor Adapter  
KSS202AG0100 MS2R140

<sup>1)</sup>Removal bolt, supplied by customer, must be smaller than mounting bolt.  
All weights are approximate.



# "KSS" Series – Stainless Steel MGS Reducer Tapped Hole – "G" Housing Shaft Output – Dimensional Data



Drawing for Units  
KSS102VG – KSS303VG

Table No. 1 "KSS" Series – Shaft Output – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F <sup>1</sup>	F <sup>5</sup>	G	H	I	L	M	P	Q	R
KSS102VG_MS1R050	56C	4.53	4.17	10.55	4.96	7.00	3.54	2.95	2.76	2.36	.51	4.53	2.95	2.32	.16	3.54
KSS202VG_MS2R050	56C	4.96	5.28	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	5.36	3.74	2.60	.16	4.41
KSS202VG_MS2R140	143/145TC	4.96	5.28	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	5.36	3.74	2.60	.16	4.41
KSS302VG_MS3R050	56C	5.20	5.98	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51
KSS302VG_MS3R140	143/145TC	5.20	5.98	13.23	6.56	8.27	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51
KSS303VG_MS3R050	56C	5.20	5.98	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51
KSS303VG_MS3R140	143/145TC	5.20	5.98	15.22	6.56	6.83	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51

Table No. 2 "KSS" Series – Shaft Output – Dimensions (Inches)

Unit with Motor Adapter	S	T	V	X	Y	BC	CD	FA	GA	JA	JL	YA	YB	YC	Wt. lbs.
KSS102VG_MS1R050	2.36	4.37	1.97	3.81	6.50	3.54	1.42	1.18	1.38	M8 x 1.25	.51	4.500	5.87	.41	29
KSS202VG_MS2R050	2.56	5.12	2.36	4.53	6.50	4.53	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS202VG_MS2R140	2.56	5.12	2.36	4.53	6.50	4.53	1.81	1.38	1.77	M10 x 1.50	.63	4.500	5.87	.41	40
KSS302VG_MS3R050	2.95	5.91	2.36	4.37	6.50	4.53	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS302VG_MS3R140	2.95	5.91	2.36	4.37	6.50	4.53	2.07	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303VG_MS3R050	2.95	5.91	2.36	4.00	6.50	4.53	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303VG_MS3R140	2.95	5.91	2.36	4.00	6.50	4.53	.63	1.58	2.07	M10 x 1.50	.63	4.500	5.87	.41	55

Table No. 3 Standard Shaft – Inches

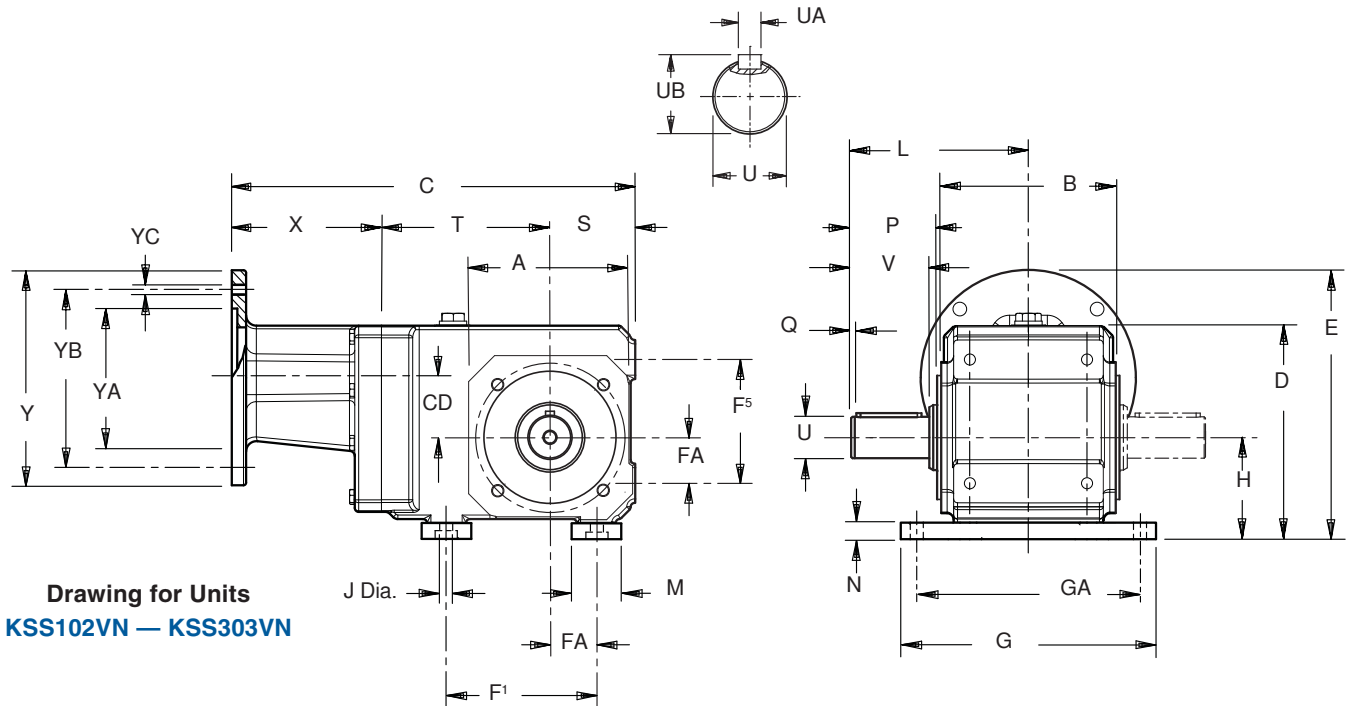
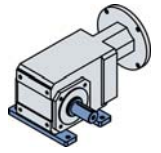
Base Module	U	UA - Key	UB
KSS102	1.000	1/4x1/4x1 <sup>9</sup> / <sub>16</sub>	1.11
KSS202	1.250	1/4x1/4x1 <sup>15</sup> / <sub>16</sub>	1.36
KSS302/303	1.250	1/4x1/4x1 <sup>15</sup> / <sub>16</sub>	1.36

### Part No. Example

Solid Shaft Stainless Steel Unit  
143TC Frame Motor Adapter  
**KSS202VG0100 MS2R140**  
(Shaft shown on Side 3)



# "KSS" Series – Stainless Steel MGS Reducer Foot Mount – "N" Housing Shaft Output – Dimensional Data



Drawing for Units  
KSS102VN – KSS303VN

Table No. 1 "KSS" Series – Shaft Output – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F <sup>1</sup>	F <sup>5</sup>	G	H	J	L	M	N
KSS102VN_MS1R050	56C	4.53	4.17	10.55	4.96	7.00	3.54	2.95	5.51	2.36	.33	4.53	1.50	.50
KSS202VN_MS2R050	56C	4.96	5.28	12.20	6.44	8.10	4.53	3.74	7.72	3.06	.39	5.36	1.50	.50
KSS202VN_MS2R140	143/145TC	4.96	5.28	12.20	6.44	8.10	4.53	3.74	7.72	3.06	.39	5.36	1.50	.50
KSS302VN_MS3R050	56C	5.20	5.98	13.23	7.06	8.77	5.12	4.13	7.72	3.45	.39	5.59	1.50	.50
KSS302VN_MS3R140	143/145TC	5.20	5.98	13.23	7.06	8.77	5.12	4.13	7.72	3.45	.39	5.59	1.50	.50
KSS303VN_MS3R050	56C	5.20	5.98	15.22	7.06	7.33	5.12	4.13	7.72	3.45	.39	5.59	1.50	.50
KSS303VN_MS3R140	143/145TC	5.20	5.98	15.22	7.06	7.33	5.12	4.13	7.72	3.45	.39	5.59	1.50	.50

Table No. 2 "KSS" Series – Shaft Output – Dimensions (Inches)

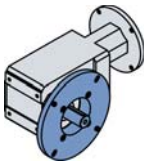
Unit with Motor Adapter	P	Q	S	T	V	X	Y	CD	FA	GA	YA	YB	YC	Wt. lbs.
KSS102VN_MS1R050	2.32	.16	2.36	4.37	1.97	3.81	6.50	1.42	1.18	4.53	4.500	5.87	.41	29
KSS202VN_MS2R050	2.60	.16	2.56	5.12	2.36	4.53	6.50	1.81	1.38	6.73	4.500	5.87	.41	40
KSS202VN_MS2R140	2.60	.16	2.56	5.12	2.36	4.53	6.50	1.81	1.38	6.73	4.500	5.87	.41	40
KSS302VN_MS3R050	2.60	.16	2.95	5.91	2.36	4.37	6.50	2.07	1.58	6.73	4.500	5.87	.41	55
KSS302VN_MS3R140	2.60	.16	2.95	5.91	2.36	4.37	6.50	2.07	1.58	6.73	4.500	5.87	.41	55
KSS303VN_MS3R050	2.60	.16	2.95	5.91	2.36	4.00	6.50	.63	1.58	6.73	4.500	5.87	.41	55
KSS303VN_MS3R140	2.60	.16	2.95	5.91	2.36	4.00	6.50	.63	1.58	6.73	4.500	5.87	.41	55

Table No. 3 Standard Shaft – Inches

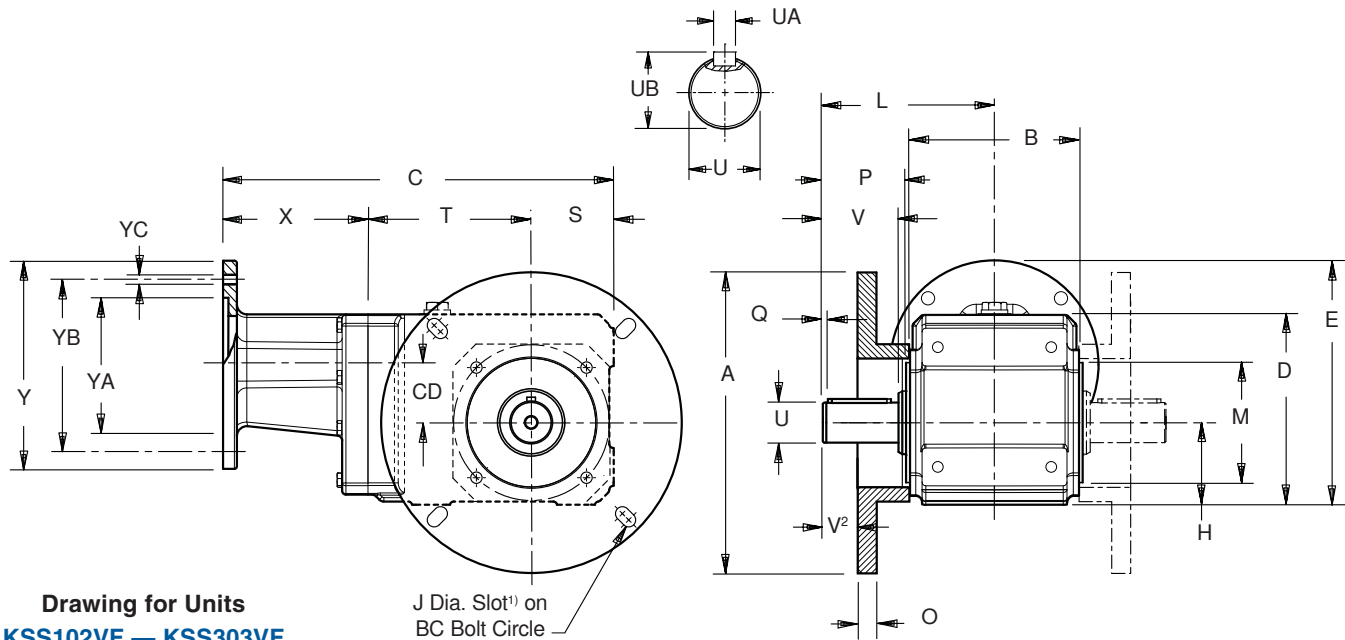
Base Module	U	UA - Key	UB
KSS102	1.000	1/4x1/4x1 <sup>9</sup> / <sub>16</sub>	1.11
KSS202	1.250	1/4x1/4x1 <sup>15</sup> / <sub>16</sub>	1.36
KSS302/303	1.250	1/4x1/4x1 <sup>15</sup> / <sub>16</sub>	1.36

### Part No. Example

Solid Shaft, Foot Mounted  
Stainless Steel Unit  
143TC Frame Motor Adapter  
**KSS202VN0100 MS2R140**  
(Shaft shown on Side 3)



# "KSS" Series – Stainless Steel MGS Reducer Flange Mount – "F" Housing Shaft Output – Dimensional Data



Drawing for Units  
KSS102VF — KSS303VF

Table No. 1 "KSS" Series – Shaft Output – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	G	H	J ¹)	L	M	O	P	Q	S	T
KSS102VF_MS1R050	56C	6.75	4.17	10.55	4.96	7.00	2.76	2.36	.33	4.53	2.95	.55	2.32	.16	2.36	4.37
KSS202VF_MS2R050	56C	8.74	5.28	12.20	5.94	7.60	3.54	2.56	.41	5.36	3.74	.55	2.60	.16	2.56	5.12
KSS202VF_MS2R140	143/145TC	8.74	5.28	12.20	5.94	7.60	3.54	2.56	.41	5.36	3.74	.55	2.60	.16	2.56	5.12
KSS302VF_MS3R050	56C	8.74	5.98	13.23	6.56	8.27	4.13	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS302VF_MS3R140	143/145TC	8.74	5.98	13.23	6.56	8.27	4.13	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS303VF_MS3R050	56C	8.74	5.98	15.22	6.56	6.83	4.13	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS303VF_MS3R140	143/145TC	8.74	5.98	15.22	6.56	6.83	4.13	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91

Table No. 2 "KSS" Series – Shaft Output – Dimensions (Inches)

Unit with Motor Adapter	V	V²	X	Y	BC		CD	YA	YB	YC	Wt. lbs.
					Min.	Max.					
KSS102VF_MS1R050	1.97	.81	3.81	6.50	5.87	—	1.42	4.500	5.87	.41	29
KSS202VF_MS2R050	2.36	1.10	4.53	6.50	7.48	8.00	1.81	4.500	5.87	.41	40
KSS202VF_MS2R140	2.36	1.10	4.53	6.50	7.48	8.00	1.81	4.500	5.87	.41	40
KSS302VF_MS3R050	2.36	1.10	4.37	6.50	7.48	8.00	2.07	4.500	5.87	.41	55
KSS302VF_MS3R140	2.36	1.10	4.37	6.50	7.48	8.00	2.07	4.500	5.87	.41	55
KSS303VF_MS3R050	2.36	1.10	4.00	6.50	7.48	8.00	.63	4.500	5.87	.41	55
KSS303VF_MS3R140	2.36	1.10	4.00	6.50	7.48	8.00	.63	4.500	5.87	.41	55

Table No. 3 Standard Shaft – Inches

Base Module	U	UA - Key	UB
KSS102	1.000	1/4X1/4X1 9/16	1.11
KSS202	1.250	1/4X1/4X1 15/16	1.36
KSS302/303	1.250	1/4X1/4X1 15/16	1.36

### Part No. Example

Solid Shaft, Flange Mounted  
Stainless Steel Unit

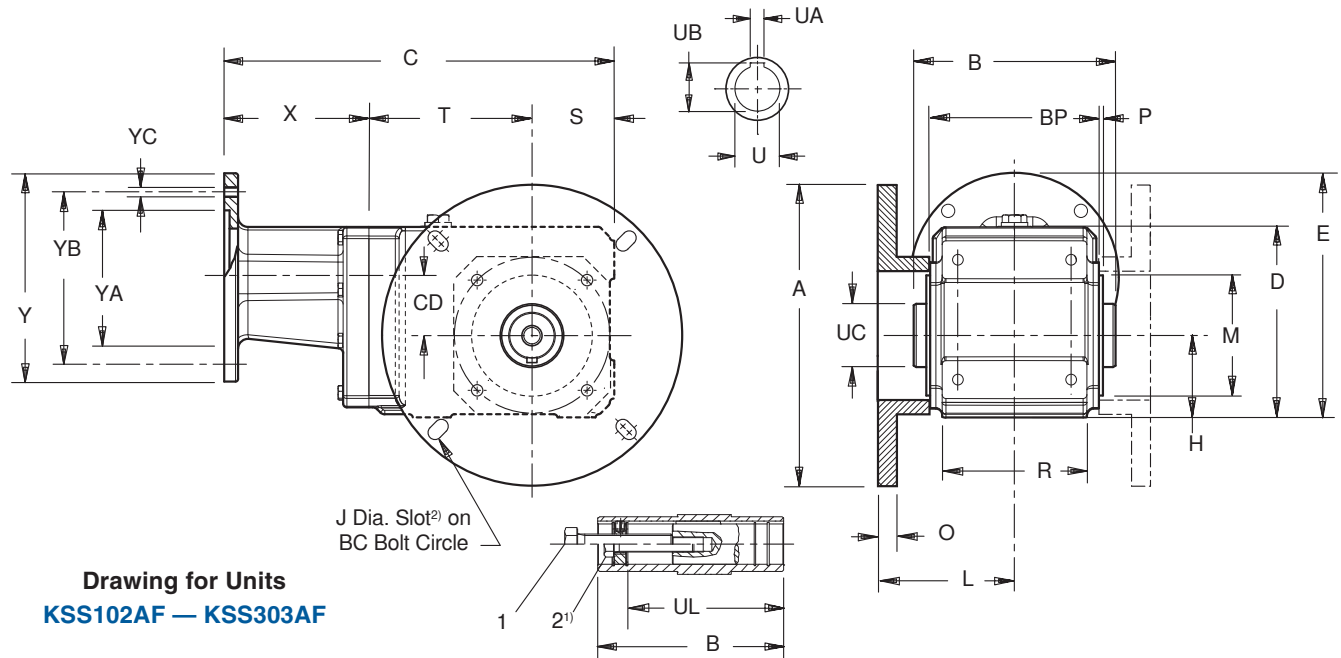
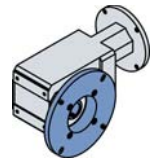
143TC Frame Motor Adapter  
**KSS202VF0100 MS2R140**  
(Shaft shown on Side 3)

¹) KSS1 mounting bolt hole is not a slot.  
All weights are approximate.





# "KSS" Series – Stainless Steel MGS Reducer Tapped Hole – "F" Housing Hollow Output – Dimensional Data



Drawing for Units  
KSS102AF — KSS303AF

Table No. 1 "KSS" Series – Hollow Output – Dimensions (Inches)

Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	H	J <sup>1)</sup>	L	M	O	P	R
KSS102AF_MS1R050	56C	6.75	4.72	10.55	4.96	7.00	2.36	.33	3.89	2.95	.55	.12	3.54
KSS202AF_MS2R050	56C	8.74	5.83	12.20	5.94	7.60	2.56	.41	4.14	3.74	.55	.12	4.41
KSS202AF_MS2R140	143/145TC	8.74	5.83	12.20	5.94	7.60	2.56	.41	4.14	3.74	.55	.12	4.41
KSS302AF_MS3R050	56C	8.74	6.30	13.23	6.56	8.27	2.95	.41	4.38	3.74	.55	.12	5.51
KSS302AF_MS3R140	143/145TC	8.74	6.30	13.23	6.56	8.27	2.95	.41	4.38	3.74	.55	.12	5.51
KSS303AF_MS3R050	56C	8.74	6.30	15.22	6.56	6.83	2.95	.41	4.38	3.74	.55	.12	5.51
KSS303AF_MS3R140	143/145TC	8.74	6.30	15.22	6.56	6.83	2.95	.41	4.38	3.74	.55	.12	5.51

Table No. 2 "KSS" Series – Hollow Output – Dimensions (Inches)

Unit with Motor Adapter	S	T	X	Y	BC		BP	CD	YA	YB	YC	Wt. lbs.
					Min.	Max						
KSS102AF_MS1R050	2.36	4.37	3.81	6.50	5.87	—	4.17	1.42	4.500	5.87	.41	29
KSS202AF_MS2R050	2.56	5.12	4.53	6.50	7.48	8.00	5.28	1.81	4.500	5.87	.41	40
KSS202AF_MS2R140	2.56	5.12	4.53	6.50	7.48	8.00	5.28	1.81	4.500	5.87	.41	40
KSS302AF_MS3R050	2.95	5.91	4.37	6.50	7.48	8.00	5.75	2.07	4.500	5.87	.41	55
KSS302AF_MS3R140	2.95	5.91	4.37	6.50	7.48	8.00	5.75	2.07	4.500	5.87	.41	55
KSS303AF_MS3R050	2.95	5.91	4.00	6.50	7.48	8.00	5.75	.63	4.500	5.87	.41	55
KSS303AF_MS3R140	2.95	5.91	4.00	6.50	7.48	8.00	5.75	.63	4.500	5.87	.41	55

Table No. 3 Standard Bore – Inches

Base Module	U	UA	UB	UC	UL	1
KSS102	1.000	.250	1.11	1.57	3.86	1/2-13
KSS202	1.250	.250	1.37	1.97	4.44	5/8-11
KSS302/303	1.375	.312	1.52	1.97	4.92	5/8-11

<sup>1)</sup>Removal bolt, supplied by customer, must be smaller than mounting bolt.

<sup>2)</sup> KSS1 mounting bolt hole is not a slot.

All weights are approximate.

**Part No. Example**  
Hollow Bore, Flange Mounted  
Stainless Steel Unit  
143TC Frame Motor Adapter  
**KSS202AF0100 MS2R140**

# Part No. Configurator








## “K” Series – Food and Beverage Duty



### Part No. Explanation

**K 4 0 3 W G 0350 MR160/ 140 B LL E12**

Series    Size    Generation    No. of Gear Stages    Output Style    Housing Style    Ratio:1    Motor Adapter    NEMA Frame Size    Beverage Duty    Long Life Option    Mounting Position Must be Specified

Series	<b>K</b>	Right Angle Helical/Bevel (output is at a right angle to input; gears are helical and spiral bevel)											
Size	<b>4</b>	Sizes available: KL2, K1, K2, K3, K4, <b>K5</b> , K6, K7, K8, K9, K10											
Generation	<b>0</b>	Design generation: first generation 0, second generation <b>1</b> , etc.											
No. of Gear Stages	<b>3</b>	Number of gear stages: 2, <b>3</b> , 4 (determined by the ratio)											
Output Style	<b>W</b>	Single or double wobble free bushing output											
		<b>SPECIFY:</b> Single or Double Bushing <b>IF</b> Single Bushing — <b>SPECIFY:</b> Side 3 or Side 4 (shown).											
		<b>A</b> — Hollow output		Metric output available in some sizes.									
		<b>V</b> — Shaft output		<b>SPECIFY:</b> Shaft Side 3 or Side 4 (shown).									
Housing Style	<b>G</b>	Tapped holes around the output											
		<b>F</b> — Output flange		<b>SPECIFY:</b> Flange Side 3 or Side 4 (shown).									
		<b>GD</b> — Torque arm bucket mounting		<b>SPECIFY:</b> Side 1 or Side 5 (also Side 2 on K1).									
		<b>N</b> — Foot mounting		<b>SPECIFY:</b> Side 1 or Side 5 (also Side 2 on K1).									
Ratio	<b>0350</b>	Approximate ratio: <b>0350</b> = 35:1 (4:1 up to 381:1)											
Motor Adapter	<b>MR160/</b>	Motor adapter size from Selection Data: MR140, <b>MR160</b> , MR200, MR250											
NEMA Frame Size	<b>140</b>	Motor frame size determined by motor adapter: 050 (56C), <b>140</b> (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)											
Duty	<b>B</b>	Beverage Duty											
		<b>F</b> - Food Duty											

Completed part number for standard warranty unit.

Output options: metric available in some sizes

Long Life Option **LL** Added ONLY with long life warranty option.

Mounting Position **E12** The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

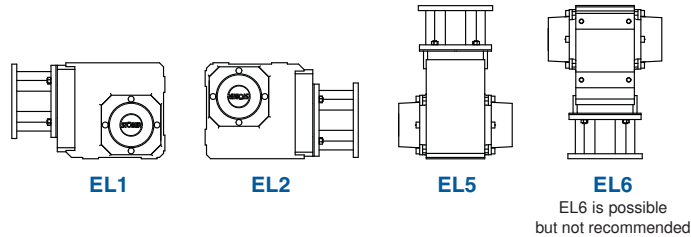
## “K” Series – Food and Beverage Duty

### Mounting Positions – Standard 3 Year Warranty

One Standard Unit for ALL Horizontal Mounting Positions Without Changing the Oil Level.

Standard Oil: Mobile 600XP220

Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC 630)



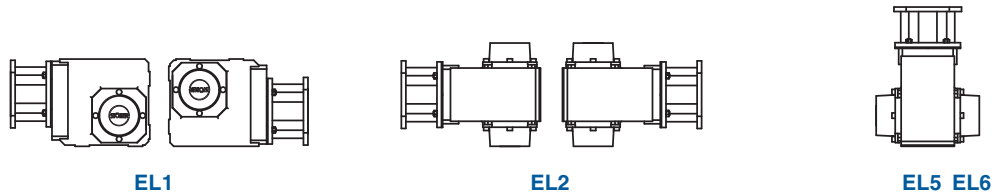
“K” units have the shaft on Side 3 and/or Side 4 (shown). **Shaft side must be specified.**

- EL1** Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2. (The unit is up-side-down.)
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.
- EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

### Mounting Positions – Long Life 5 Year Warranty

**Mounting Position MUST BE SPECIFIED.**

Standard Oil: Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

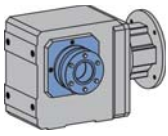
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

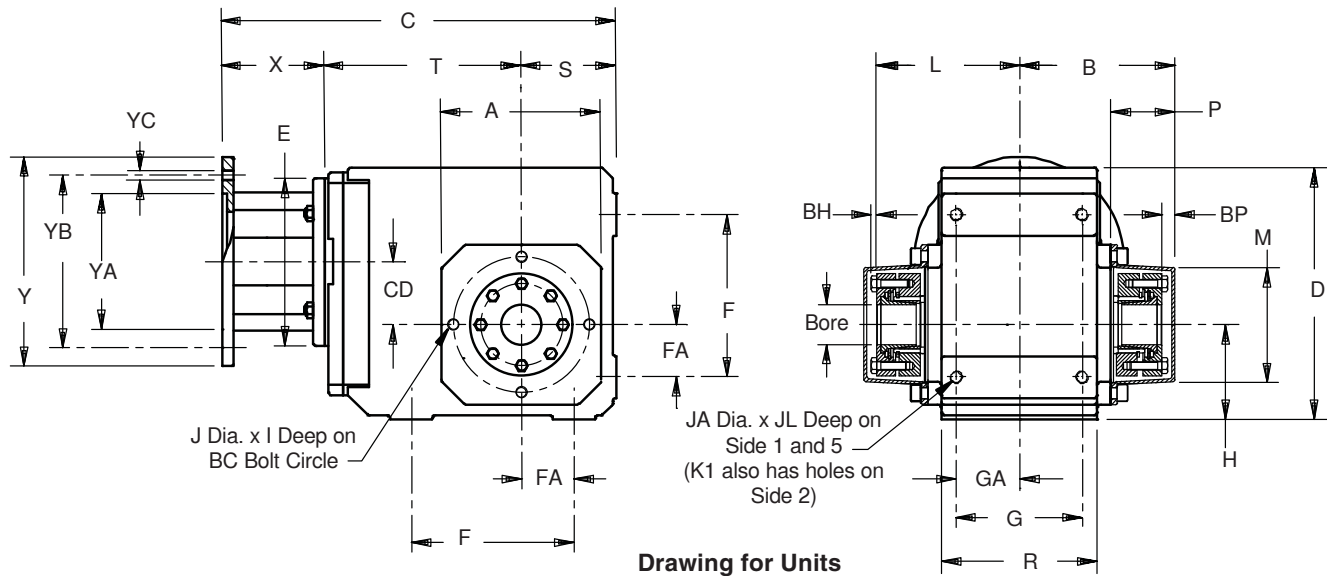
#### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free.

**Selection Data begins on Page 92.**



# Food and Beverage Duty "K" Series – MGS Reducer Tapped Hole – "G" Housing – Double Bushing



**Drawing for Units  
KL202WG – K403WG**

**Table No. 1 "K" Series – Double Wobble Free – Unit Dimensions (Inches)**

Base Module	A	B	D	F	G	H	I	J	L	M	P	R	S	Z <sub>1</sub>	BC	BP	BH	FA	GA	JA	JL
<b>KL202</b>	3.80	3.50	4.25	2.16	2.56	2.16	.43	M6 x1	3.28	2.96	1.58	3.62	2.16	—	2.95	.22	.16	1.08	1.28	M8x1.25	.43
<b>K102</b>	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8x1.25	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8x1.25	.51
<b>K202/203</b>	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8x1.25	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10x1.5	.63
<b>K302/303</b>	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8x1.25	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10x1.5	.63
<b>K402/403</b>	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10x1.5	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12x1.75	.75
<b>K513/514</b>	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10x1.5	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16x2.0	1.02
<b>K613/614</b>	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10x1.5	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16x2.0	1.02
<b>K713/714</b>	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12x1.75	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20x2.5	1.22
<b>K813/814</b>	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12x1.75	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24x3	1.50

**Table No. 2 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>ML2R050</b>	56C	5.51	2.99	6.50	4.500	5.87	.41	7
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

**Part No. Example**

Food Duty Unit  
143TC Frame Motor Adapter  
and 17/16 Bushing Bore

**K303WG0650 MR160/140F  
WFB3-107**

Beverage Duty Unit

**K303WG0650 MR160/140B  
WFB3-107**

Also available in Housing Styles  
"N" and "GD".

**Table No. 3 "WFB" – Double Bushings – Metric**

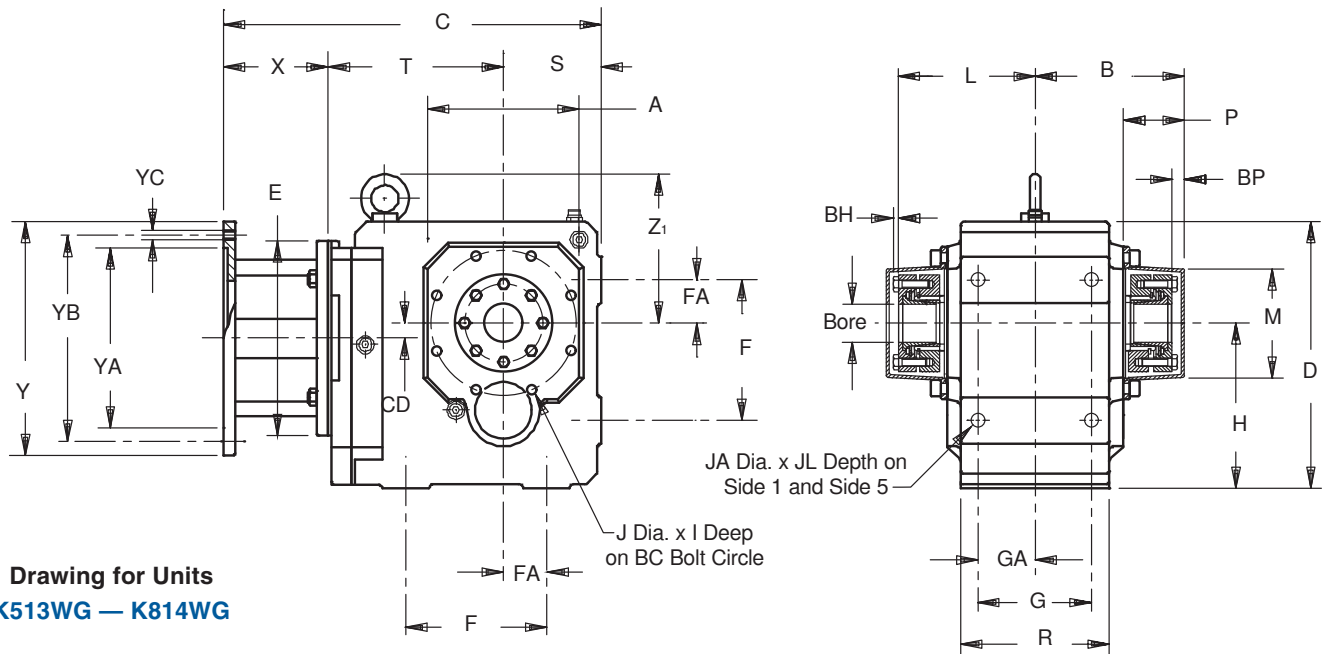
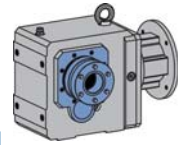
Unit	Stock Bore Sizes — mm			
	25	30	35	40
<b>K1</b>	<b>WFB1-25</b>	—	—	—
<b>K2</b>	<b>WFB2-25</b>	<b>WFB2-30</b>	—	—
<b>K3</b>	—	<b>WFB3-30</b>	<b>WFB3-35</b>	—
<b>K4</b>	—	—	—	<b>WFB4-40</b>
<b>K5</b>	—	—	—	<b>WFB5-40</b>
<b>K6</b>	—	—	—	<b>WFB6-40</b>

**Table No. 4 "WFB" Double Side Bushings – Inches**

Unit	Stock Bore Sizes						
	3/4	1	1 1/16	1 1/4	1 3/8	1 7/16	1 1/2
<b>KL2</b>	<b>WFBKL2-012</b>	<b>WFB1-100</b>	—	—	—	—	—
<b>K1</b>	—	<b>WFB1-100</b>	—	—	—	—	—
<b>K2</b>	—	<b>WFB2-100</b>	<b>WFB2-103</b>	—	—	—	—
<b>K3</b>	—	<b>WFB3-100</b>	<b>WFB3-103</b>	<b>WFB3-104</b>	<b>WFB3-106</b>	<b>WFB3-107</b>	<b>WFB3-108</b>
<b>K4</b>	—	<b>WFB4-100</b>	<b>WFB4-103</b>	<b>WFB4-104</b>	<b>WFB4-106</b>	<b>WFB4-107</b>	<b>WFB4-108</b>



# Food and Beverage Duty "K" Series – MGS Reducer Tapped Hole – "G" Housing – Double Bushing



Drawing for Units  
K513WG — K814WG

Table No. 5 "K" Series – Double Wobble Free – Unit Dimensions (Inches)

Base	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
KL202	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
K102	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
K302	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	67
K303	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	73
K402	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	93
K403	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	100
K513	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	106
K514	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	109
K613	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	170
K614	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	177
K713	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	221
K714	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	234
K813	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	309
K814	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	331

<sup>1)</sup> Also available as MR160/050 for a NEMA 56C frame motor.

<sup>2)</sup> Also available as MR250/180 for a NEMA 182/184TC frame motor.

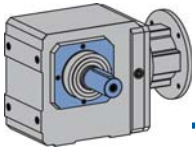
<sup>3)</sup> Also available as MR300/180 for NEMA 182/184TC, MR300/210 for NEMA 213/215TC, and MR300/280 for NEMA 284/286TC frame motor.

All weights are approximate.

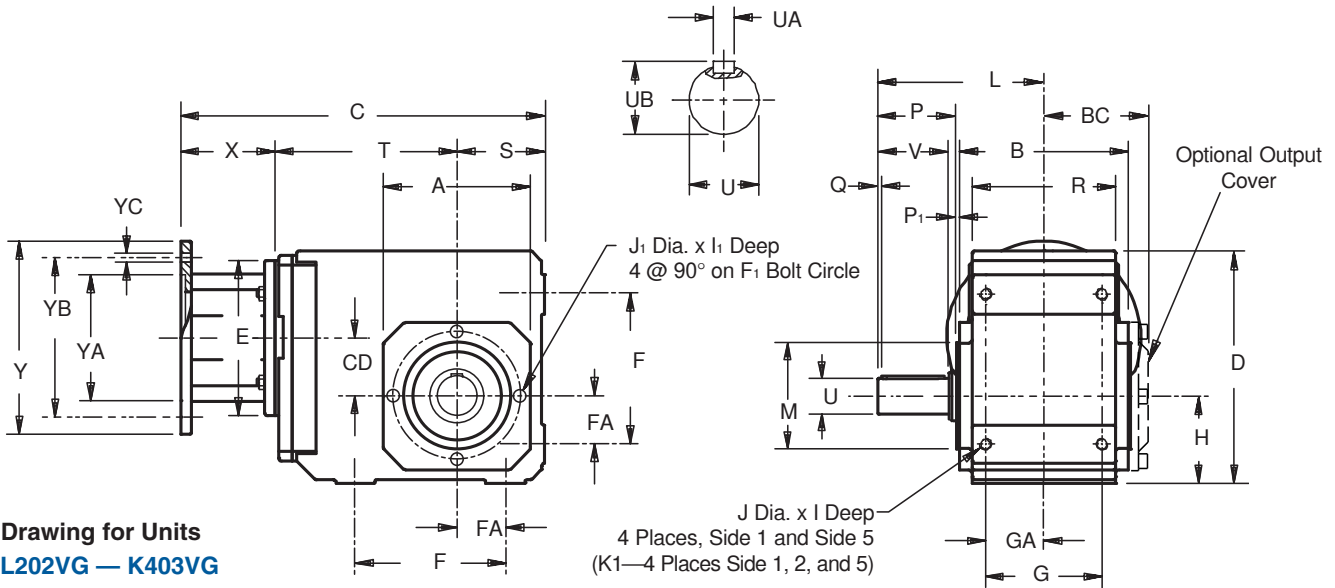
**NOTE:** A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers. The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 6 "WFB" Double Side Bushings – Inches

Unit	Stock Bores Sizes — Inches											
	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2	2 <sup>3</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-111	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	—	—	—
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	WFB8-212



# Food and Beverage Duty "K" Series – MGS Reducer Tapped Holes – "G" Housing – Shaft Output



Drawing for Units  
KL202VG — K403VG

**Table No. 1 "K" Series – Unit Dimensions (Inches) – "G" Housing Style**

Base Module	A	B	BC	D	F	F <sub>1</sub>	FA	G	GA	H	I	I <sub>1</sub>	J	J <sub>1</sub>	L
KL202	3.80	3.85	—	4.25	5.90	2.95	1.08	2.16	1.28	2.56	.43	.43	M6×1	M6×1	3.66
K102	4.13	4.17	2.64	6.30	3.54	3.54	1.18	2.76	1.38	2.36	.51	.51	M8×1.25	M8×1.25	4.53
K202/203	4.57	5.28	3.23	7.48	4.53	3.94	1.38	3.54	1.77	2.56	.63	.51	M10×1.5	M8×1.25	5.31
K302/303	5.20	5.75	3.46	8.39	5.12	4.53	1.57	4.13	2.07	2.95	.63	.51	M10×1.5	M8×1.25	5.59
K402/403	5.98	6.81	4.08	9.45	6.10	5.12	1.97	4.72	2.36	3.54	.75	.63	M12×1.75	M10×1.5	6.93
K513/514	5.71	7.28	4.31	10.24	5.51	5.12	1.57	4.92	2.46	6.30	1.02	.63	M16×2.0	M10×1.5	8.74
K613/614	7.09	7.87	4.61	12.20	6.30	6.50	1.97	5.12	2.56	7.48	1.02	.63	M16×2.0	M10×1.5	9.29
K713/714	7.68	8.90	5.08	13.46	7.09	7.28	2.17	5.71	2.85	8.35	1.22	.75	M20×2.5	M12×1.75	10.91
K813/814	8.90	11.10	6.26	16.14	9.45	8.46	2.95	7.28	3.64	10.43	1.50	.75	M24×3.0	M12×1.75	12.83

**Table No. 2**

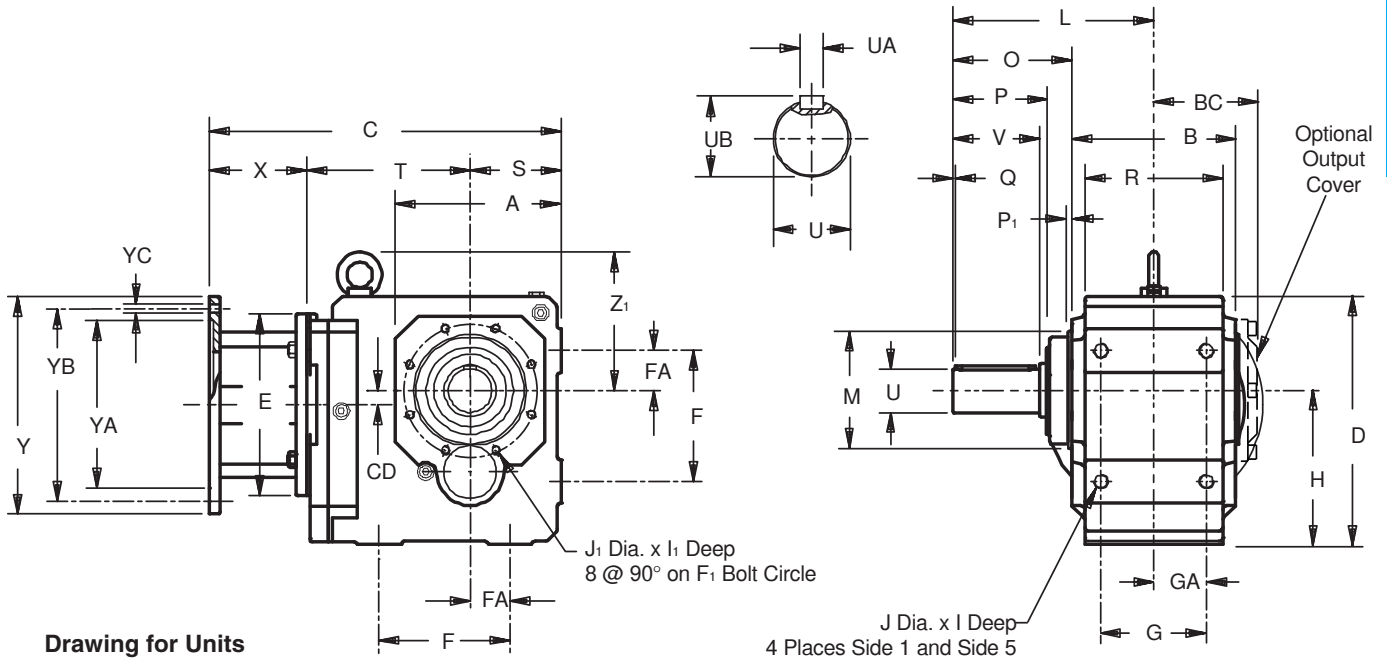
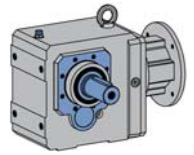
Base Module	M	O	P	P <sub>1</sub>	R	Q	S	U	UA—Key	UB	V	Z <sub>1</sub>
KL202	2.953	—	1.57	.16	3.62	.12	2.17	.750	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{1}{4}$	1.11	1.57	—
K102	2.953	—	2.32	.12	3.54	.16	2.36	1.000	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11	1.97	—
K202/203	3.228	—	2.56	.12	4.53	.16	2.56	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	2.36	—
K302/303	3.740	—	2.60	.12	5.12	.16	2.95	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	2.36	—
K402/403	4.331	—	3.39	.14	5.83	.16	3.54	1.375	$\frac{5}{16} \times \frac{5}{16} \times 2\frac{5}{16}$	1.51	2.76	—
K513/514	4.331	5.10	3.90	.14	6.30	.16	3.94	1.750	$\frac{3}{8} \times \frac{3}{8} \times 3\frac{5}{32}$	1.92	3.54	5.98
K613/614	5.512	5.35	4.31	.14	6.61	.16	4.72	1.750	$\frac{3}{8} \times \frac{3}{8} \times 3\frac{5}{32}$	1.92	3.94	6.77
K713/714	6.102	6.46	5.14	.14	7.48	.16	4.92	2.375	$\frac{5}{8} \times \frac{5}{8} \times 3\frac{15}{16}$	2.65	4.72	7.52
K813/814	7.283	7.28	5.94	.16	9.25	.20	5.71	2.875	$\frac{3}{4} \times \frac{3}{4} \times 4\frac{5}{16}$	3.21	5.51	8.11

**Table No. 2 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
ML2R050	56C	5.51	2.99	6.50	4.500	5.87	.41	7
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75



# Food and Beverage Duty "K" Series – MGS Reducer Tapped Holes – "G" Housing – Shaft Output



**Drawing for Units  
K513VG — K814VG**

**Table No. 4 "K" Series – Double Wobble Free – Unit Dimensions (Inches)**

Base	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
KL202	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
K102	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
K302	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	67
K303	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	73
K402	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	93
K403	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	100
K513	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	106
K514	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	109
K613	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	170
K614	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	177
K713	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	221
K714	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	234
K813	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	309
K814	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	331

<sup>1)</sup> Also available as MR160/050 for a NEMA 56C frame motor.

<sup>2)</sup> Also available as MR250/180 for a NEMA 182/184TC frame motor.

<sup>3)</sup> Also available as MR300/180 for a NEMA 182/184TC, MR300/210 for a NEMA 213/215TC, and MR300/280 for a NEMA 284/286TC frame motor. All weights are approximate.

### Part No. Example

Food Duty Unit  
with 143TC Frame Motor Adapter and Output Shaft

**K303VG0650 MR160/140F**

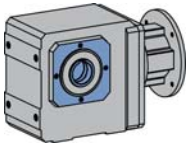
**Specify: Shaft Side**

Beverage Duty Unit

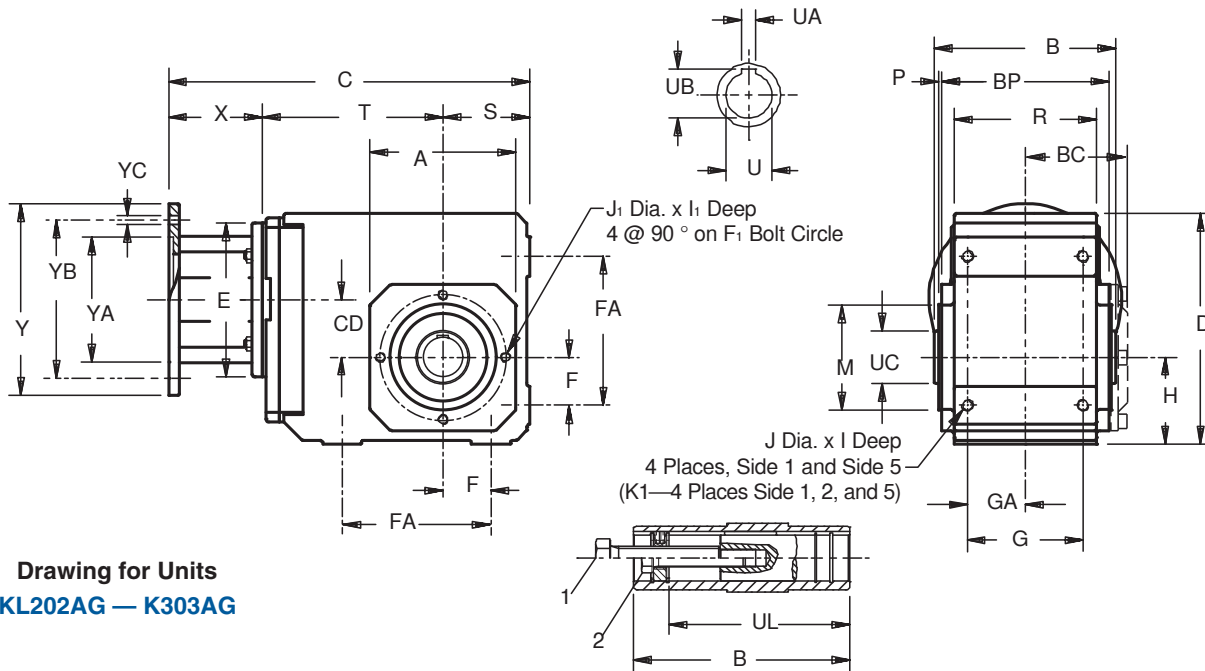
**K303VG0650 MR160/140B**

**Specify: Shaft Side**

Also available in Housing Styles "N", "F", and "GD".



# Food and Beverage Duty "K" Series – MGS Reducers Tapped Hole – "G" Housing – Hollow Output



Drawing for Units  
KL202AG – K303AG

Table No. 1 "K" Series – Unit Dimensions (Inches) – "G" Housing Style

Base Module	A	B	D	F	F <sub>1</sub>	G	H	I	I <sub>1</sub>	J	J <sub>1</sub>	M	P	R	S	BC	BP	FA	GA
KL202	3.80	4.17	4.25	2.16	2.95	2.56	2.16	.43	.43	M6×1	M6×1	2.953	.16	3.62	2.16	—	3.85	1.08	1.28
K102	4.13	4.72	6.30	3.54	3.54	2.76	2.36	.51	.51	M8×1.25	M8×1.25	2.953	.12	3.54	2.36	2.49	4.17	1.18	1.38
K202/203	4.57	5.83	7.48	4.53	3.94	3.54	2.56	.63	.51	M10×1.5	M8×1.25	3.228	.12	4.53	2.56	3.25	5.28	1.38	1.77
K302/303	5.20	6.30	8.39	5.12	4.53	4.13	2.95	.63	.51	M10×1.5	M8×1.25	3.740	.12	5.12	2.95	3.47	5.75	1.57	2.07

Table No. 2 Standard Bore (Inches)

Base Module	U	UA	UB	UC	UL	1
KL202	.750	.188	.84	1.18	3.13	<sup>3</sup> / <sub>8</sub> -16
K102	1.000	.250	1.12	1.57	3.86	<sup>1</sup> / <sub>2</sub> -13
K202/203	1.250	.250	1.37	1.77	4.78	<sup>1</sup> / <sub>2</sub> -13
K302/303	1.250	.250	1.37	1.97	4.92	<sup>5</sup> / <sub>8</sub> -11
	1.375	.312	1.52	1.97	4.92	<sup>5</sup> / <sub>8</sub> -11

1. Removal Bolt – not supplied.
  2. Mounting Bolt – must be smaller than removal bolt.
- All weights are approximate.

Table No. 3 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
ML2R050	56C	5.51	2.99	6.50	4.500	5.87	.41	7
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23

Table No. 4 "K" Series – Unit Dimensions (Inches)

Base Module	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
KL202	0	5.64	3.48	—	—	—	—	—	—	—	—	—	12
K102	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	31
K202	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	40
K302	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	53
K302	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	67
K303	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	73

<sup>1)</sup> Also available as MR160/050 for a NEMA 56C frame motor.

### Part No. Example

Food Duty  
Tapped Holes Housing and Hollow Output

**K303AG0650 MR160/140F**  
Specify Bore Size (K3 ONLY)

Beverage Duty  
**K303AG0650 MR160/140B**  
Specify Bore Size (K3 ONLY)

Also available in Housing Styles "N" and "F".



"K" Series Food Duty hollow output units have bore sizes designed specifically for the poultry industry.





# Part No. Configurator

## Wobble Free Bushing

### Part No. Explanation

## WFB 3 - 108

Series

Size

Bushing Bore

Series **WFB** Stainless Steel **W**obble **F**ree Double Side Bushing with Covers  
Used with food and **B**everage units in wet applications.

Size **3** Sizes available: K1, K2, **K3**, K4, K5, K6, K7, K8

Bushing Bore **108** Bushing bore in inches: **108**— 1 and <sup>8</sup>/<sub>16</sub> or 1<sup>1</sup>/<sub>2</sub>

## SWF 3 C - 108

Series

Size

Covers

Bushing Bore

Series **SWF** **S**tandard **C**arbon **S**teel **W**obble **F**ree Double Side Bushing with Covers  
Used with food and beverage units in dry applications.

Size **3** Sizes available: **K3** (only)

Covers **C** Covers included

Bushing Bore **108** Bushing bore in inches: **108**— 1 and <sup>8</sup>/<sub>16</sub> or 1<sup>1</sup>/<sub>2</sub>

## WF 3 - 108

Series

Size

Bushing Bore

Series **WF** Stainless Steel **W**obble **F**ree Single Side Bushing

Size **3** Sizes available: K1, K2, **K3**, K4, K5, K6, K7, K8

Bushing Bore **108** Bushing bore in inches: **108**— 1 and <sup>8</sup>/<sub>16</sub> or 1<sup>1</sup>/<sub>2</sub>

## SWF 3 - 108

Series

Size

Bushing Bore

Series **SWF** **S**tandard **C**arbon **S**teel **W**obble **F**ree Single Side **B**ushing

Size **3** Sizes available: **K3** (only)

Bushing Bore **108** Bushing bore in inches: **108**— 1 and <sup>8</sup>/<sub>16</sub> or 1<sup>1</sup>/<sub>2</sub>

## WFB KL2 - 012

Series

Size

Bushing Bore

Series **WFB** Stainless Steel **W**obble **F**ree Double Side Bushing with Covers  
Used with food and **B**everage units in wet applications.

Size **KL2** Sizes available: **KL2** (only)


Bushing Bore **012** Bushing bore in inches: **012**—<sup>12</sup>/<sub>16</sub> or <sup>3</sup>/<sub>4</sub>

# Part No. Configurator

## “F” Series – Food and Beverage Reducers



### Part No. Explanation

<b>F</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>A</b>	<b>G</b>	<b>0560</b>	<b>MR160/</b>	<b>140</b>	<b>F</b>	<b>LL</b>	<b>E34</b>
Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size	Food Duty	Long Life Option	Mounting Position Must be Specified
Series	<b>F</b>	Offset Helical (output is offset from the input and the gears are all helical)									
Size	<b>4</b>	Sizes available: F1, F2, F3, <b>F4</b> , F6									
Generation	<b>0</b>	Design generation: first generation <b>0</b> , second generation 1, etc.									
No. of Gear Stages	<b>2</b>	Number of gear stages: <b>2</b> , 3, (determined by the ratio)									
Output Style	<b>A</b>	Hollow output 									
Housing Style	<b>G</b>	Tapped holes around the output									
Ratio	<b>0560</b>	Approximate ratio: 00560 = 55.972:1 (2:1 up to 276:1)									
Motor Adapter	<b>MR160/</b>	Motor adapter size from Selection Data: MR140, <b>MR160</b> , MR200, MR250									
NEMA Frame Size	<b>140</b>	Motor frame size determined by motor adapter: 050 (56C), <b>140</b> (143/145TC), 180 (182/184TC), 210 (213/215TC)									
Duty	<b>F</b>	Food Duty									
	<b>B</b>	— Beverage Duty									

Completed part number for standard warranty unit.

Coating options: white or stainless steel

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Long Life Option	<b>LL</b>	Added <u>ONLY</u> with long life warranty option.
Mounting Position	<b>E34</b>	The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

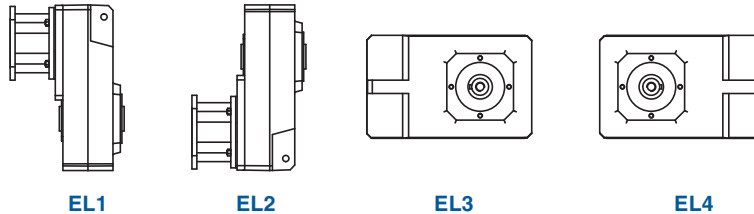
## “F” Series – Food and Beverage Reducers

### Mounting Positions – Standard 3 Year Warranty

One Standard Unit for ALL Horizontal Mounting Positions Without Changing the Oil Level.

Standard Oil: Mobile 600XP220

Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC 630)

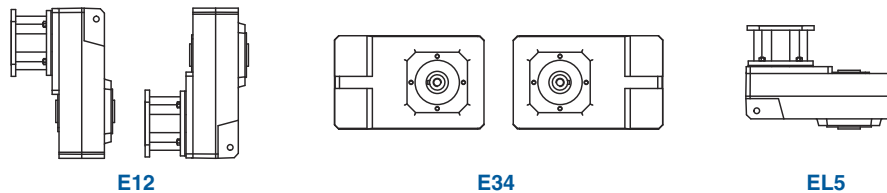


- EL1** Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2 . (The unit is up-side-down.)
- EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.
- EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.

### Mounting Positions – Long Life 5 Year Warranty

Mounting Positions **MUST BE SPECIFIED.**

Standard Oil: Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- E5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

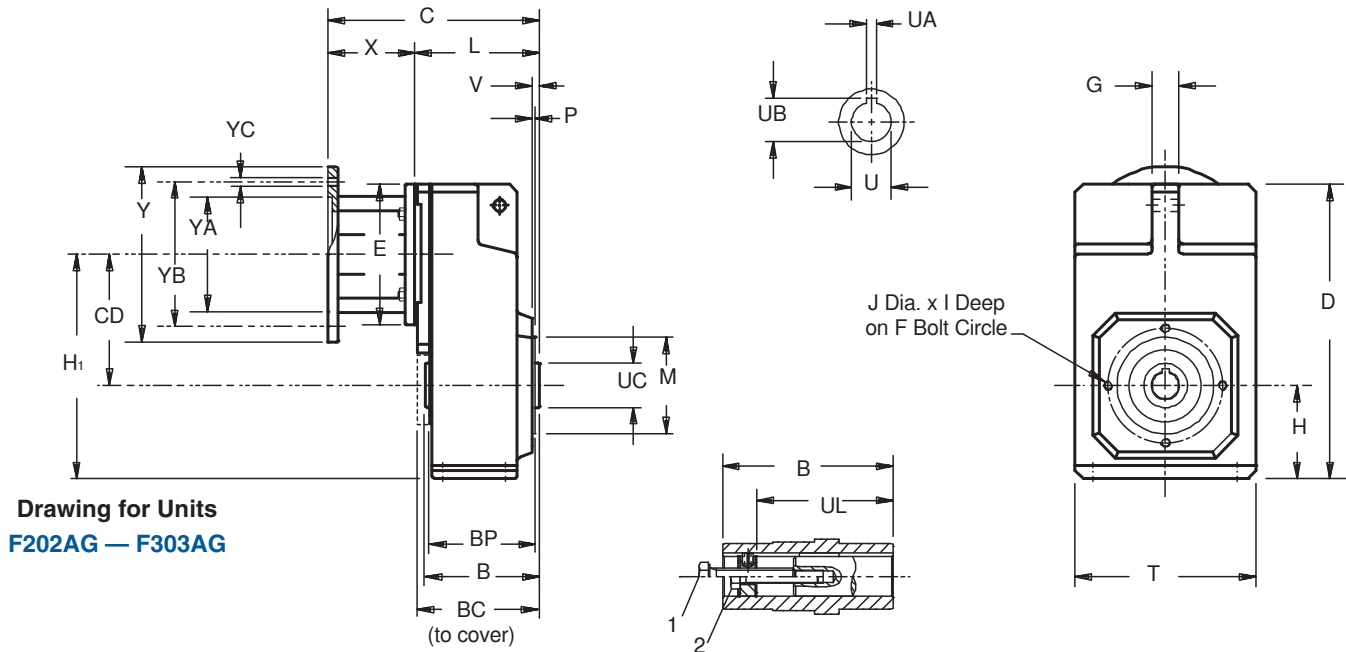
For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.



“F” Series Food Duty hollow output units have bore sizes designed specifically for the poultry industry.



# Food and Beverage Duty "F" Series – MGS Reducer Tapped Hole – "G" Housing – Hollow Output



**Table No. 1 "F" Series – Unit Dimensions (Inches) – "G" Housing Style**

Base Module	CD	B	D	F	G	H	H <sub>1</sub>	I	J	M	P	T	U	V	BC	BP	UA	UB	UC	UL	1
<b>F2</b>	5.16	4.53	11.77	4.53	.87	3.66	8.82	.51	M8x1.25	3.740	.12	7.09	1.000	.31	4.76	4.13	.250	1.12	1.77	3.62	1/2-13
<b>F3</b>	5.89	5.12	13.23	5.12	1.18	4.17	10.06	.63	M10x1.5	4.331	.14	8.11	1.250	.33	5.45	4.72	.250	1.37	1.97	4.06	1/2-13

**Table No. 2 "F" Series – Unit Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23

**Table No. 3 "F" Series Unit Dimensions (Inches)**

Base Module	<b>MR140/050</b>		<b>MR160/140</b> <sup>1)</sup>		<b>MR200/180</b>		Approx. Wt. lbs.
	C	L	C	L	C	L	
<b>F202</b>	8.15	4.84	8.86	5.00	9.88	5.08	51
<b>F203</b>	9.61	6.30	—	—	—	—	64
<b>F302</b>	8.74	5.43	9.45	5.59	10.47	5.67	67
<b>F303</b>	10.20	6.89	—	—	—	—	73

<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

**Part No. Example**

Food Duty Unit  
Tapped Hole Housing with Motor Adapter

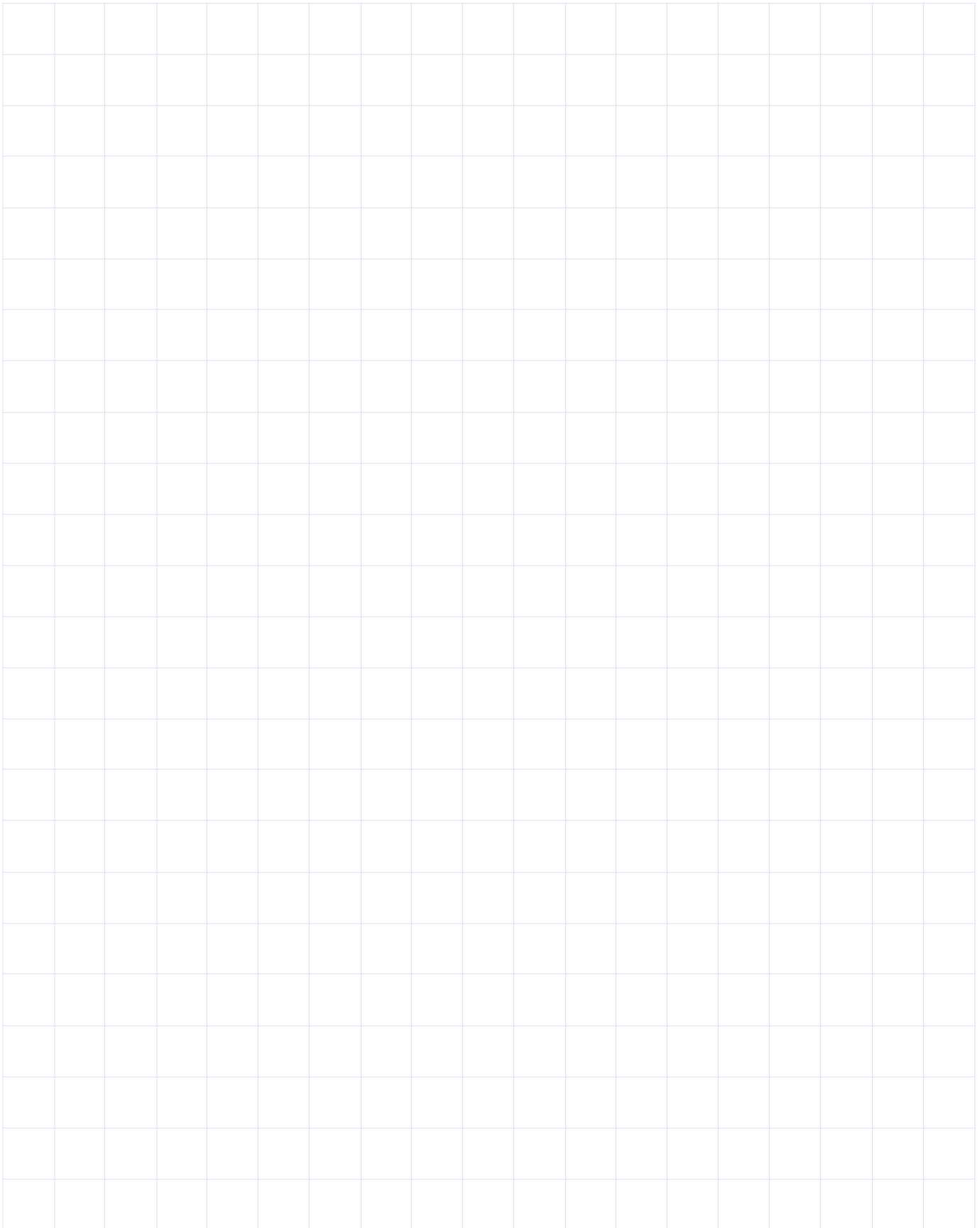
**F302AG0560 MR160/140F**

Beverage Duty Unit

**F302AG0560 MR160/140B**

Also available in Housing Styles "N" and "F".

1. Removal Bolt – not supplied.
  2. Mounting Bolt – must be smaller than removal bolt.
- All weights are approximate.



# Part No. Configurator

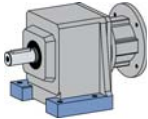
## “C” Series – Food and Beverage Reducers



### Part No. Explanation

**C 4 0 2 N 0135 MR160/ 140 F LL E34**

Series      Size      Generation      No. of Gear Stages      Housing Style      Ratio:1      Motor Adapter      NEMA Frame Size      Beverage Duty      Long Life Option      Mounting Position Must be Specified

Series	<b>C</b>	Concentric Helical (output and input in line/gears are all helical)	
Size	<b>4</b>	C1, C2, C3, <b>C4</b> , C5, C6	
Generation	<b>0</b>	First generation <b>0</b> , second generation 1, etc.	
No. of Gear Stages	<b>2</b>	<b>2</b> , 3, 4 (determined by the ratio)	
Housing Style	<b>N</b>	Foot Mounting	
Ratio	<b>0135</b>	Approximate: <b>0135</b> = 13.5:1 (range of 2:1 up to 276:1)	
Motor Adapter	<b>MR160/</b>	MR140/, <b>MR160/</b> , MR200/, MR250/, MR300/	
NEMA Frame Size	<b>140</b>	050 (56C), <b>140</b> (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC)	
Duty	<b>F</b>	Food Duty	
		<b>B</b> — Beverage Duty	

Completed part number for standard warranty unit.

Coating options: white or stainless steel

Output options: metric available in some sizes



Long Life Option	<b>LL</b>	Added <u>ONLY</u> with long life warranty option.
Mounting Position	<b>E34</b>	The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

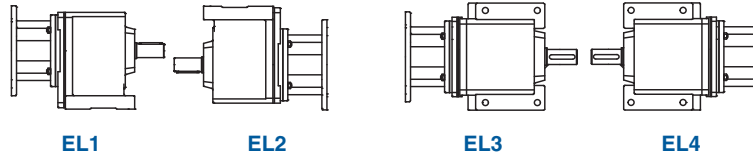
## “C” Series – Food and Beverage Reducers

### Mounting Positions – Standard 3 Year Warranty

One Standard Unit for ALL Horizontal Mounting Positions Without Changing the Oil Level.

Standard Oil: Mobile 600XP220

Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC 630)

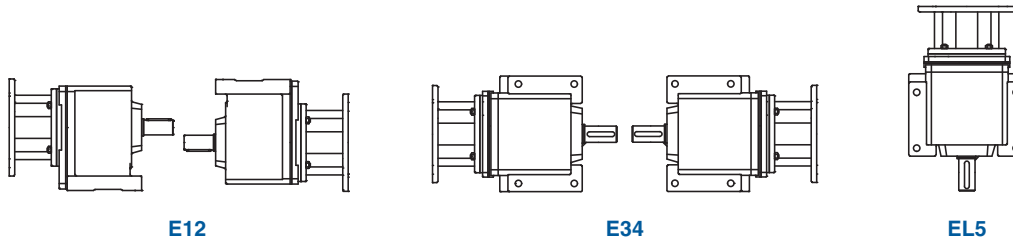


- EL1** Side 1 is the bottom side (mounting feet side) when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2. (The unit is up-side-down.)
- EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.
- EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.

### Mounting Positions – Long Life 5 Year Warranty

Mounting Positions **MUST BE SPECIFIED.**

Standard Oil: Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

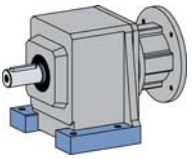
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

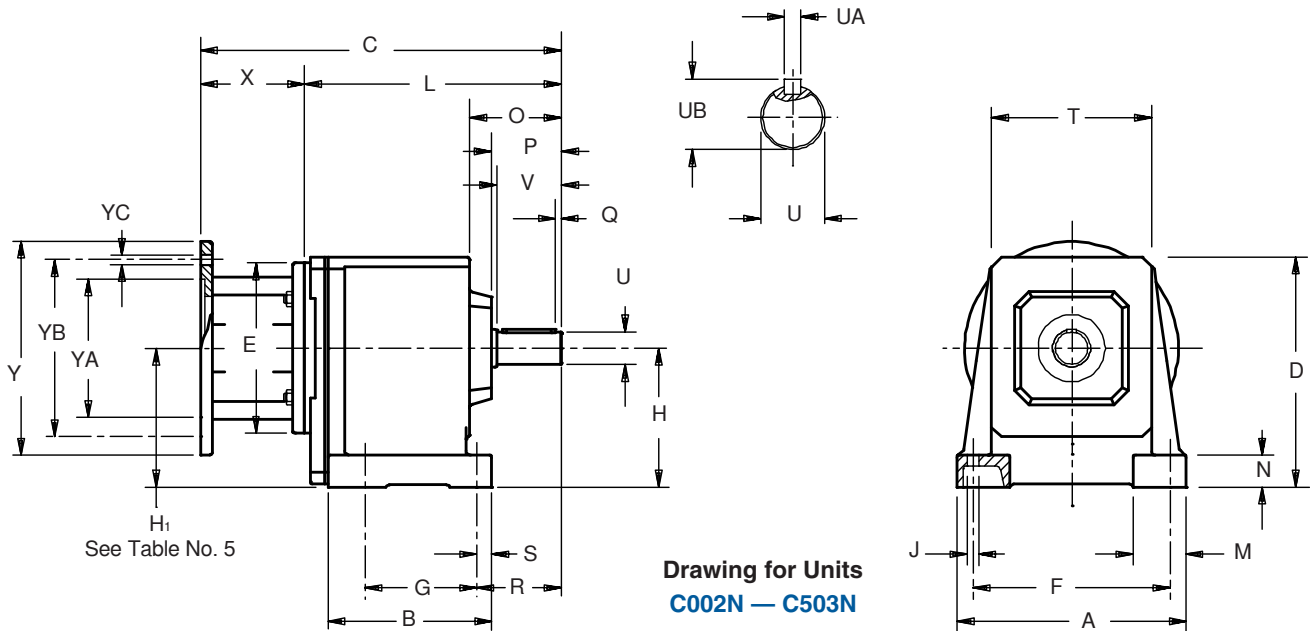
### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free.

*Selection Data begins on Page 48.*



# Food and Beverage Duty "C" Series – MGS Reducer Foot Mount – "N" Housing



**Table No. 1 "C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	A	B	D	F	G	H	J	M	N	O	P	Q	R
<b>C002</b>	5.20	3.74	5.67	4.33	2.44	3.23	.28	1.38	.79	2.24	1.73	.16	2.17
<b>C102/C103</b>	6.93	4.65	6.97	5.91	2.76	4.02	.35	1.65	.98	2.72	2.13	.16	2.64
<b>C202/C203</b>	7.87	5.31	7.68	6.69	3.35	4.53	.43	1.97	1.18	3.39	2.56	.16	3.11
<b>C302/C303</b>	8.46	6.06	8.46	7.28	4.13	5.12 <sup>1)</sup>	.43	1.97	1.18	3.35	2.56	.16	3.11
<b>C402/C403</b>	10.04	7.09	9.65	8.66	4.33	5.71	.55	2.36	1.38	4.17	3.39	.16	4.13
<b>C502/C503</b>	11.42	7.76	11.42	9.65	5.12	6.69	.71	2.76	1.57	4.21	3.39	.16	4.25
<b>C612/C613</b>	11.81	10.43	12.40	9.65	8.46	7.87 <sup>1)</sup>	.71	2.95	1.57	6.02	4.17	.20	5.12

<sup>1)</sup> See Table 5.

**Table No. 2**

Base Module	S	T	U	V	Z <sub>1</sub>	UA—Key	UB
<b>C002</b>	.43	3.62	.7500	1.57	—	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{7}{32}$	.83
<b>C102/C103</b>	.51	4.88	1.0000	1.97	—	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11
<b>C202/C203</b>	.55	5.43	1.2500	2.36	—	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36
<b>C302/C303</b>	.55	5.91	1.2500	2.36	—	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36
<b>C402/C403</b>	.75	6.89	1.6250	3.15	—	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79
<b>C502/C503</b>	.87	7.56	1.6250	3.15	—	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79
<b>C612/C613</b>	.98	6.97	2.1250	3.94	6.57	$\frac{1}{2} \times \frac{1}{2} \times 3\frac{5}{32}$	2.35

**Table No. 3**

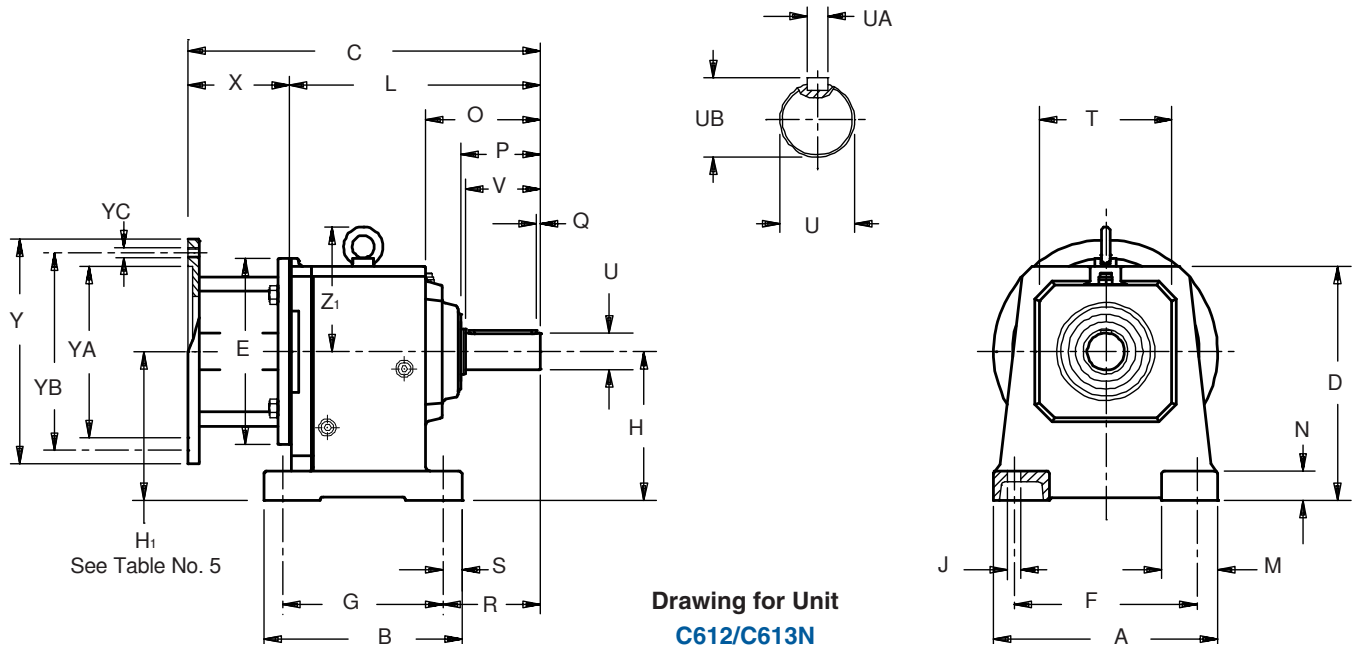
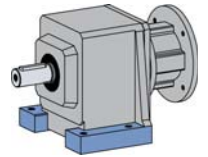
**"C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75





# Food and Beverage Duty "C" Series – MGS Reducer Foot Mount – "N" Housing



**Table No. 4 "C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		MR300/250 <sup>4)</sup>		Approx. Wt. (lbs.)
	C	L	C	L	C	L	C	L	C	L	
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	38
C203	13.23	9.92	14.17	10.31	—	—	—	—	—	—	45
C302	—	—	13.23	9.37	14.25	9.45	14.88	9.57	—	—	49
C303	13.98	10.67	14.92	11.06	—	—	—	—	—	—	56
C402	—	—	15.12	11.26	16.14	11.34	16.77	11.46	—	—	71
C403	—	—	16.81	12.95	—	—	—	—	—	—	78
C502	—	—	15.95	12.09	16.97	12.17	17.59	12.28	19.33	12.83	95
C503	—	—	17.64	13.78	—	—	—	—	—	—	111
C612	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	115
C613	—	—	18.62	14.76	20.35	15.55	—	—	—	—	159

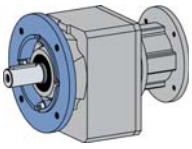
<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor. "H" dimension on the input side of a C303 with an MR160/050 or MR160/140 is 3.66.  
<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.  
<sup>4)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.  
 All weights are approximate.

**Table No. 5 "C" Series – Input Dimension (Inches)**

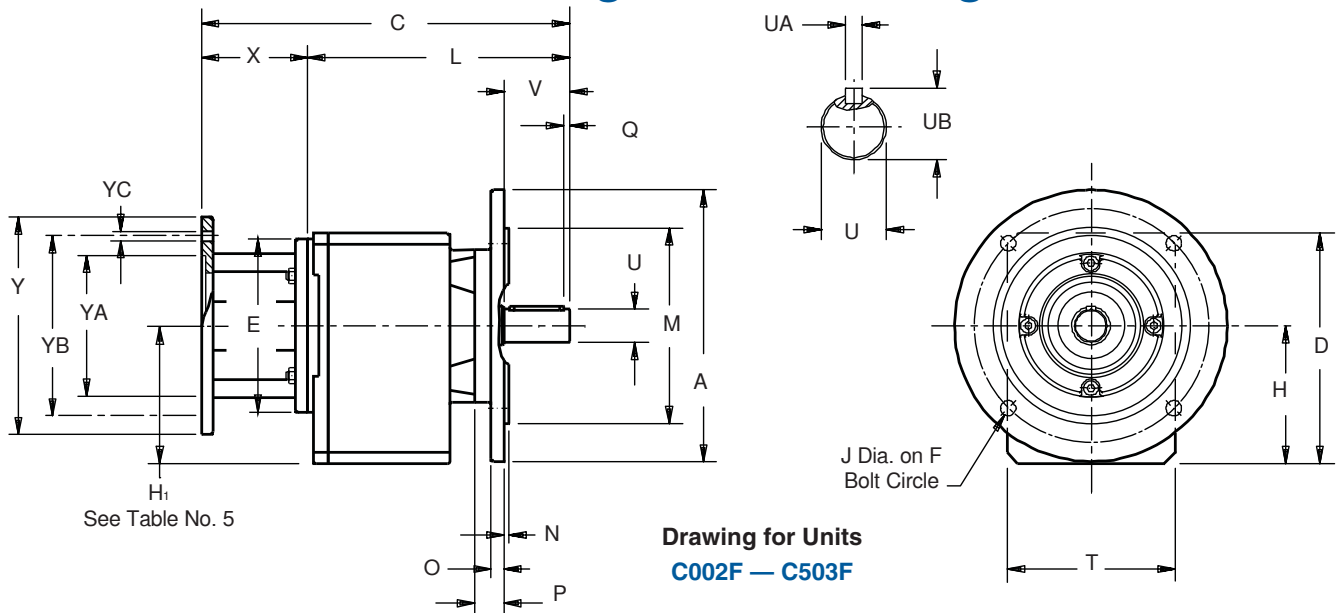
Base Module	MR160/050 <sup>2)</sup>	MR200/180	MR250/210	MR300/250
	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>
C303	3.66	—	—	—
C612	—	7.63	7.63	7.63
C613	—	—	7.63	—

**Part No. Example**  
 Food Duty Unit  
 Foot Mounting with Motor Adapter  
**C302N0620 MR160/140F**  
 Beverage Duty Unit  
**C302N0620 MR160/140B**

Also available in Housing Styles "G", "F", and "Q".



# Food and Beverage Duty "C" Series – MGS Reducer Round Flange – "F" Housing



**Table No. 1 "C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	A <sup>1)</sup>	D	F	H	J	M	N	O	P	Q	T	V	Z <sub>1</sub>
<b>C002</b>	6.30	5.55	5.12	3.11	.35	4.331	.12	.39	.71	.16	3.82	1.57	—
<b>C102/C103</b>	7.87	6.89	6.50	3.94	.43	5.118	.14	.47	.83	.16	5.12	1.97	—
<b>C202/C203</b>	7.87	7.56	6.50	4.41	.43	5.118	.14	.47	1.06	.16	5.59	2.36	—
<b>C302/C303</b>	9.84	8.35	8.46	5.00 <sup>2)</sup>	.55	7.087	.16	.47	1.06	.16	6.06	2.36	—
<b>C402/C403</b>	9.84	9.55	8.46	5.61	.55	7.087	.16	.55	1.10	.16	7.01	3.15	—
<b>C502/C503</b>	11.81	11.26	10.43	6.54	.55	9.055	.16	.63	1.14	.16	7.68	3.15	—
<b>C612/C613</b>	11.81	11.97	10.43	7.44 <sup>2)</sup>	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57

<sup>1)</sup> See Page 74 for other available output flanges.

<sup>2)</sup> See Table No. 5

\* C912 and C913 have 8 mounting holes in the output flange instead of 4 as shown in the drawing.

**Table No. 2 Metric output available on request**

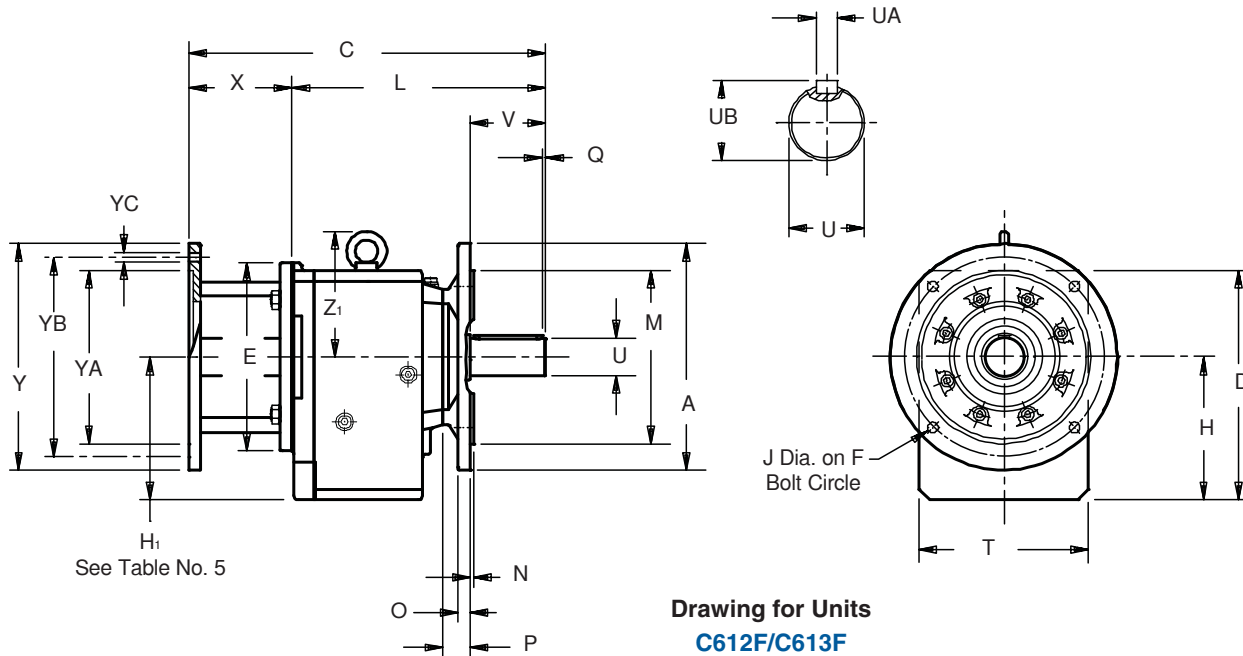
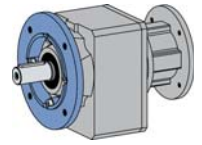
Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>C002</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{7}{32}$	.83	20 <sub>k6</sub>	A6x6x32	22.5
<b>C102/C103</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11	25 <sub>k6</sub>	A8x7x40	28
<b>C202/C203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C302/C303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C402/C403</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C502/C503</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C612/C613</b>	2.125	$\frac{1}{2} \times \frac{1}{2} \times 3\frac{3}{32}$	2.35	50 <sub>k6</sub>	A14x9x90	53.5

**Table No. 3 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75



# Food and Beverage Duty "C" Series – MGS Reducer Round Flange – "F" Housing



**Table No. 4 "C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		MR300/250 <sup>4)</sup>		Approx. Wt.(lbs.)
	C	L	C	L	C	L	C	L	C	L	
<b>C002</b>	9.37	6.06	10.08	6.22	—	—	—	—	—	—	18
<b>C102</b>	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	29
<b>C103</b>	12.13	8.82	—	—	—	—	—	—	—	—	34
<b>C202</b>	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	38
<b>C203</b>	13.23	9.92	14.17	10.31	—	—	—	—	—	—	45
<b>C302</b>	—	—	13.23	9.37	14.25	9.45	14.88	9.57	—	—	49
<b>C303</b>	13.98	10.67	14.92	11.06	—	—	—	—	—	—	56
<b>C402</b>	—	—	15.12	11.26	16.14	11.34	16.77	11.46	—	—	71
<b>C403</b>	—	—	16.81	12.95	—	—	—	—	—	—	78
<b>C502</b>	—	—	15.95	12.09	16.97	12.17	17.59	12.28	19.33	12.83	95
<b>C503</b>	—	—	17.64	13.78	—	—	—	—	—	—	111
<b>C612</b>	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	115
<b>C613</b>	—	—	18.62	14.76	20.35	15.55	—	—	—	—	159

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor. "H" dimension on the input side of a C303 with an MR160/050 or MR160/140 is 3.66.

<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

<sup>4)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

All weights are approximate.

**Table No. 5 "C" Series – Input Dimension (Inches)**

Base Module	MR160/050 <sup>2)</sup>	MR200/180	MR250/210	MR300/250
	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>
<b>C303</b>	3.54	—	—	—
<b>C612</b>	—	7.44	7.44	7.44
<b>C613</b>	—	—	7.44	—

<sup>2)</sup> See Table No. 5

<sup>3)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>4)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

<sup>5)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>6)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.

**Part No. Example**  
Food Duty Unit  
Foot Mounting with Motor Adapter  
**C302F0620 MR160/140F**  
Beverage Duty Unit  
**C302F0620 MR160/140B**

**Also available in Housing  
Styles "G", "N", and "Q".**

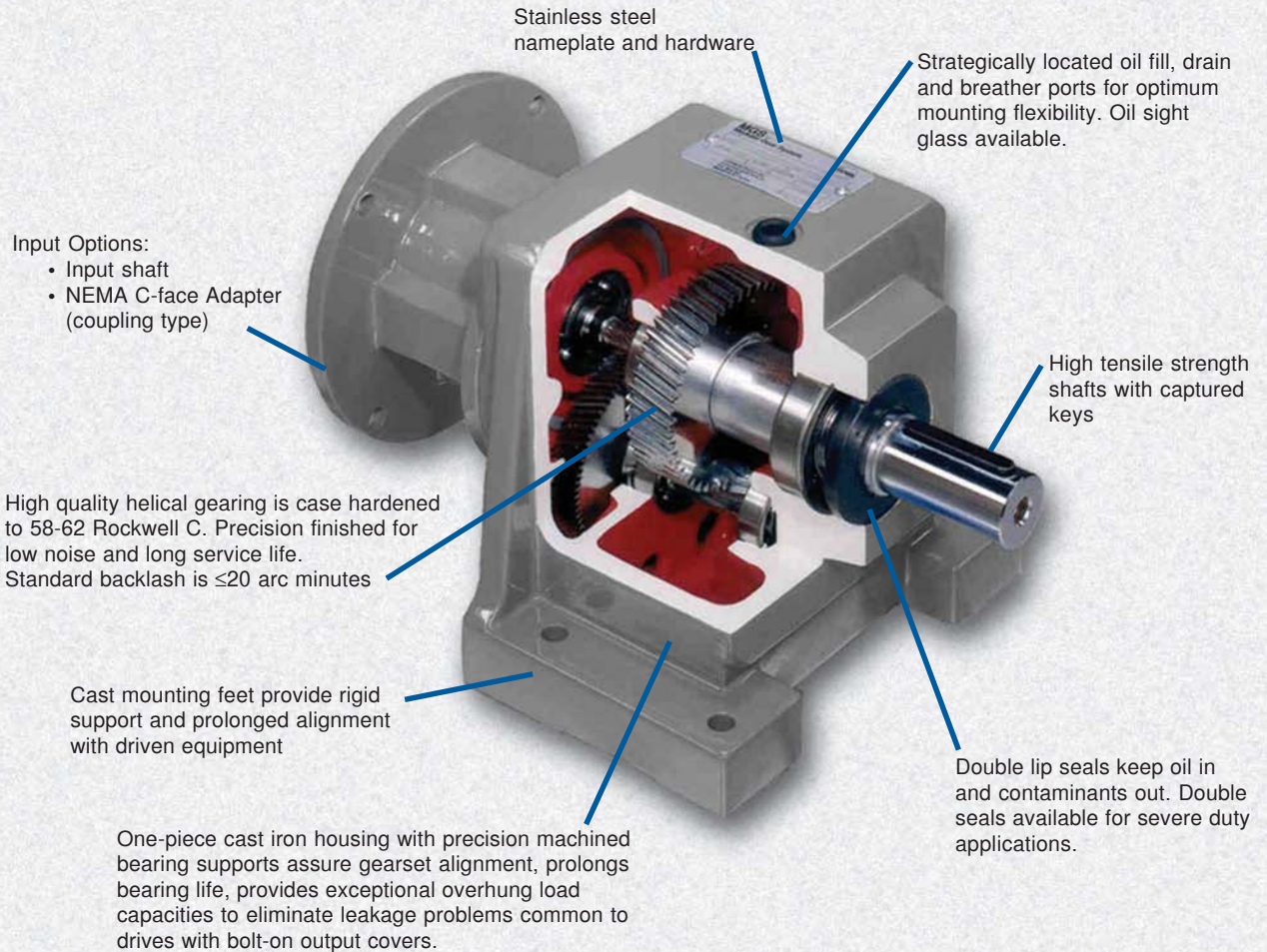



# "C" Series – Concentric Helical MGS Speed Reducers

These versatile gear drives offer you performance, durability, and economy for a wide range of constant speed applications. High efficiency helical gearing keeps motor size to a minimum while conserving energy.

#### Performance Specifications:

- Horsepower ratings from 1/8 to 165
- Output torques to 62,000 in. lbs.
- Output speeds available from 875 to 6.3 RPM
- Speed reducer ratios from 2.0:1 to 276:1
- 3 year warranty standard with option for 5 years



Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

**3 or 5 YEAR WARRANTY AVAILABLE**

**SHIPS in 1 DAY**



**STÖBER**

[www.stober.com](http://www.stober.com)

# Part No. Configurator

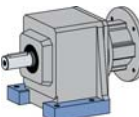
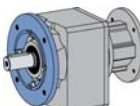
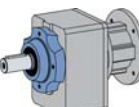
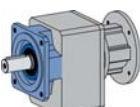
## “C” Series – MGS Speed Reducers



### Part No. Explanation

**C**   **4**   **0**   **2**   **N**   **0135**   **MR160/**   **140**   **LL**   **E34**

Series   Size   Generation   No. of Gear Stages   Housing Style   Ratio:1   Motor Adapter   NEMA Frame Size   Long Life Option   Mounting Position Must be Specified

Series	<b>C</b>	Concentric Helical (output and input in line/gears are all helical)
Size	<b>4</b>	C1, C2, C3, <b>C4</b> , C5, C6, C7, C8, C9
Generation	<b>0</b>	First generation <b>0</b> , second generation 1, etc.
No. of Gear Stages	<b>2</b>	<b>2</b> , 3, 4 (determined by the ratio)
Housing Style	<b>N</b>	Foot Mounting  Also available F, G, and Q.
	<b>F</b>	Round output flange 
	<b>G</b>	Tapped holes around the output 
	<b>Q</b>	Square output flange (not bolt on type) 
Ratio	<b>0135</b>	Approximate: 0135 = 13.5:1 (range of 2:1 up to 276:1)
Motor Adapter	<b>MR160/</b>	MR140/, <b>MR160/</b> , MR200/, MR250/, MR300/, MR350/
NEMA Frame Size	<b>140</b>	050 (56C), <b>140</b> (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)

Completed part number for standard warranty unit.

Coating options: white, stainless steel, or standard gray

Output options: metric and stainless steel in some sizes

**Mounting Position must be specified.**

- Long Life Option **LL** Added ONLY with long life warranty option.
- Mounting Position **E34** The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

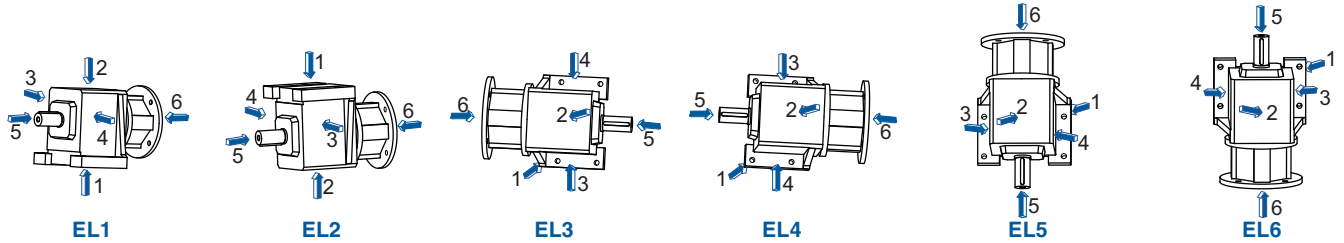
## “C” Series – MGS Speed Reducers

### Mounting Positions – Standard 3 Year Warranty

Mounting Positions **MUST BE SPECIFIED.**

Standard Oil: Mobilegear 600XP220

Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC630)

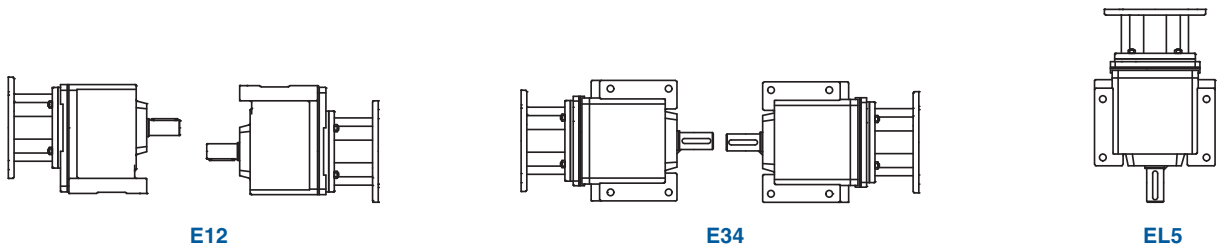


- EL1** Side 1 is the bottom side (mounting feet side) when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2. (The unit is up-side-down.)
- EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.
- EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.
- EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

### Mounting Positions – Long Life 5 Year Warranty

Mounting Positions **MUST BE SPECIFIED.**

Standard Oil: Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free. Breathers are provided on these standard units: C612 through C913. STOBER recommends that the lubrication be changed in units supplied with breathers according to the following schedule:

- Normal Operating Conditions — after 10,000 Hours
- Wet Operating Conditions — after 5,000 Hours.



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>875 RPM Output (Approximate)</b>											
							<b>725 RPM</b>		<b>580 RPM</b>		
2.64	184	C002_0020	MR140/	050	AW140/010	1.997	166	2.19	184	1.75	184
2.78	196	C102_0020	MR140/	050	AW140/010	2.018	237	2.30	196	1.84	196
4.08*	285	C002_0020	MR160/	050, 140	AW160/012	1.997	166	3.60	303	3.10	327
8.11*	572	C102_0020	MR160/	050, 140	AW160/012	2.018	237	7.15	609	6.16	655
8.11*	572	C102_0020	MR200/	180	AW200/014	2.018	237	7.15	609	6.16	655
9.84*	690	C202_0020	MR160/	050, 140	AW160/012	2.009	333	8.15	690	6.52	690
9.84	694	C302_0020	MR160/	050, 140	AW160/012	2.020	496	8.15	694	6.52	694
12.42*	872	C202_0020	MR200/	180	AW200/014	2.009	333	10.95	928	9.44	1,000
20.25*	1,429	C302_0020	MR200/	180	AW200/014	2.020	496	17.86	1,522	15.39	1,639
20.25*	1,429	C302_0020	MR250/	180, 210	AW250/102	2.020	496	17.86	1,522	15.39	1,639
23.36*	1,613	C502_0020	MR200/	180	AW200/014	1.976	1,038	19.36	1,613	15.48	1,613
23.36*	1,606	C402_0020	MR200/	180	AW200/014	1.968	845	19.36	1,606	15.48	1,606
29.97*	2,061	C402_0020	MR250/	180, 210	AW250/102	1.968	845	26.44	2,194	22.78	2,364
36.44*	2,516	C502_0020	MR250/	180, 210	AW250/102	1.976	1,038	30.19	2,516	24.15	2,516
46.33*	3,199	C502_0020	MR300/	180, 210, 250, 280	AW300/110	1.976	1,038	40.87	3,406	35.22	3,669
<b>795 RPM Output (Approximate)</b>											
							<b>660 RPM</b>		<b>525 RPM</b>		
2.78	211	C102_0022	MR140/	050	AW140/010	2.177	241	2.30	211	1.84	211
7.71*	586	C102_0022	MR160/	050, 140	AW160/012	2.177	241	6.80	624	5.86	672
7.71*	586	C102_0022	MR200/	180	AW200/014	2.177	241	6.80	624	5.86	672
9.84*	751	C202_0022	MR160/	050, 140	AW160/012	2.184	340	8.15	751	6.52	751
11.74*	896	C202_0022	MR200/	180	AW200/014	2.184	340	10.36	954	8.93	1,028
23.36*	1,813	C402_0022	MR200/	180	AW200/014	2.221	871	19.36	1,813	15.48	1,813
23.36*	1,834	C502_0022	MR200/	180	AW200/014	2.247	1,072	19.36	1,834	15.48	1,834
27.65*	2,146	C402_0022	MR250/	180, 210	AW250/102	2.221	871	24.39	2,285	21.02	2,461
36.44*	2,861	C502_0022	MR250/	180, 210	AW250/102	2.247	1,072	30.19	2,861	24.15	2,861
42.53*	3,339	C502_0022	MR300/	180, 210, 250, 280	AW300/110	2.247	1,072	37.51	3,555	32.33	3,829
<b>730 RPM Output (Approximate)</b>											
							<b>606 RPM</b>		<b>485 RPM</b>		
7.23*	605	C102_0024	MR160/	050, 140	AW160/012	2.394	247	6.38	644	5.50	694
7.23*	605	C102_0024	MR200/	180	AW200/014	2.394	247	6.38	644	5.50	694
<b>705 RPM Output (Approximate)</b>											
							<b>585 RPM</b>		<b>470 RPM</b>		
9.84	863	C302_0025	MR160/	050, 140	AW160/012	2.510	523	8.15	863	6.52	863
9.84*	851	C202_0025	MR160/	050, 140	AW160/012	2.475	351	8.15	851	6.52	851
10.80*	934	C202_0025	MR200/	180	AW200/014	2.475	351	9.53	995	8.18	1,068
17.52*	1,537	C302_0025	MR200/	180	AW200/014	2.510	523	15.46	1,636	13.32	1,762
17.52*	1,537	C302_0025	MR250/	180, 210	AW250/102	2.510	523	15.46	1,636	13.32	1,762
23.36*	2,005	C402_0025	MR200/	180	AW200/014	2.456	893	19.36	2,005	15.48	2,005
25.86*	2,219	C402_0025	MR250/	180, 210	AW250/102	2.456	893	22.81	2,362	19.66	2,545
35.39*	3,030	C502_0025	MR250/	180, 210	AW250/102	2.450	1,095	29.32	3,030	23.46	3,030
40.14*	3,436	C502_0025	MR300/	180, 210, 250, 280	AW300/110	2.450	1,095	35.41	3,659	30.52	3,941
<b>680 RPM Output (Approximate)</b>											
							<b>544 RPM</b>		<b>450 RPM</b>		
6.88*	620	C102_0026	MR160/	050, 140	AW160/012	2.582	252	6.07	661	5.23	712
6.88*	620	C102_0026	MR200/	180	AW200/014	2.582	252	6.07	661	5.23	712

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05





# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>650 RPM Output (Approximate)</b>											
9.84	930	C302_0027	MR160/	050, 140	AW160/012	2.705	533	8.15	930	6.52	930
9.84*	925	C202_0027	MR160/	050, 140	AW160/012	2.690	358	8.15	925	6.52	925
10.22*	961	C202_0027	MR200/	180	AW200/014	2.690	358	9.02	1,023	7.77	1,102
16.67*	1,575	C302_0027	MR200/	180	AW200/014	2.705	533	14.70	1,677	12.67	1,807
16.67*	1,575	C302_0027	MR250/	180, 210	AW250/102	2.705	533	14.70	1,677	12.67	1,807
<b>537 RPM</b>											
<b>430 RPM</b>											
<b>630 RPM Output (Approximate)</b>											
2.50	242	C002_0028	MR140/	050	AW140/010	2.769	180	2.07	242	1.66	242
3.28*	318	C002_0028	MR160/	050, 140	AW160/012	2.769	180	2.90	338	2.50	364
23.36	2,275	C502_0028	MR200/	180	AW200/014	2.787	1,131	19.36	2,275	15.48	2,275
23.36*	2,262	C402_0028	MR200/	180	AW200/014	2.771	921	19.36	2,262	15.48	2,262
23.86*	2,310	C402_0028	MR250/	180, 210	AW250/102	2.771	921	21.05	2,459	18.14	2,649
35.39*	3,447	C502_0028	MR250/	180, 210	AW250/102	2.787	1,131	29.32	3,447	23.46	3,447
36.84*	3,587	C502_0028	MR300/	180, 210, 250, 280	AW300/110	2.787	1,131	32.50	3,819	28.00	4,114
<b>520 RPM</b>											
<b>418 RPM</b>											
<b>565 RPM Output (Approximate)</b>											
2.46	264	C002_0031	MR140/	050	AW140/010	3.067	185	2.04	264	1.63	264
2.61	282	C102_0031	MR140/	050	AW140/010	3.091	263	2.16	282	1.73	282
3.07*	329	C002_0031	MR160/	050, 140	AW160/012	3.067	185	2.70	350	2.33	377
6.10*	659	C102_0031	MR160/	050, 140	AW160/012	3.091	263	5.38	701	4.64	756
6.10*	659	C102_0031	MR200/	180	AW200/014	3.091	263	5.38	701	4.64	756
9.29*	1,007	C202_0031	MR160/	050, 140	AW160/012	3.103	371	8.15	1,066	6.52	1,066
9.29*	1,007	C202_0031	MR200/	180	AW200/014	3.103	371	8.20	1,073	7.06	1,155
9.84	1,069	C302_0031	MR160/	050, 140	AW160/012	3.110	552	8.15	1,069	6.52	1,069
15.19*	1,650	C302_0031	MR200/	180	AW200/014	3.110	552	13.40	1,757	11.55	1,893
15.19*	1,650	C302_0031	MR250/	180, 210	AW250/102	3.110	552	13.40	1,757	11.55	1,893
22.14*	2,398	C402_0031	MR200/	180	AW200/014	3.099	947	19.36	2,530	15.48	2,530
22.14*	2,398	C402_0031	MR250/	180, 210	AW250/102	3.099	947	19.53	2,553	16.83	2,750
23.36*	2,512	C502_0031	MR200/	180	AW200/014	3.077	1,159	19.36	2,512	15.48	2,512
34.24*	3,682	C502_0031	MR250/	180, 210	AW250/102	3.077	1,159	28.37	3,682	22.70	3,682
34.24*	3,682	C502_0031	MR300/	180, 210, 250, 280	AW300/110	3.077	1,159	28.37	3,682	22.70	3,682
<b>470 RPM</b>											
<b>375 RPM</b>											
<b>525 RPM Output (Approximate)</b>											
2.46	285	C002_0033	MR140/	050	AW140/010	3.318	189	2.04	285	1.63	285
2.61	304	C102_0033	MR140/	050	AW140/010	3.334	268	2.16	304	1.73	304
2.91	337	C002_0033	MR160/	050, 140	AW160/012	3.318	189	2.57	359	2.21	387
5.80*	676	C102_0033	MR160/	050, 140	AW160/012	3.334	268	5.12	719	4.41	775
5.80*	676	C102_0033	MR200/	180	AW200/014	3.334	268	5.12	719	4.41	775
<b>435 RPM</b>											
<b>350 RPM</b>											
<b>520 RPM Output (Approximate)</b>											
8.79*	1,036	C202_0034	MR160/	050, 140	AW160/012	3.373	379	7.75	1,103	6.52	1,159
8.79*	1,036	C202_0034	MR200/	180	AW200/014	3.373	379	7.75	1,103	6.68	1,188
9.84	1,152	C302_0034	MR160/	050, 140	AW160/012	3.352	562	8.15	1,152	6.52	1,152
14.45*	1,692	C302_0034	MR200/	180	AW200/014	3.352	562	12.74	1,802	10.98	1,941
14.45*	1,692	C302_0034	MR250/	180, 210	AW250/102	3.352	562	12.74	1,802	10.98	1,941

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>500 RPM Output (Approximate)</b>											
20.43*	2,496	C402_0035	MR200/	180	AW200/014	3.497	976	18.02	2,658	15.48	2,854
20.43*	2,496	C402_0035	MR250/	180, 210	AW250/102	3.497	976	18.02	2,658	15.53	2,863
23.36*	2,858	C502_0035	MR200/	180	AW200/014	3.501	1,198	19.36	2,858	15.48	2,858
31.64*	3,871	C502_0035	MR250/	180, 210	AW250/102	3.501	1,198	27.91	4,121	22.70	4,189
31.64*	3,871	C502_0035	MR300/	180, 210, 250, 280	AW300/110	3.501	1,198	27.91	4,121	22.70	4,189
<b>415 RPM</b>											
<b>330 RPM</b>											
<b>450 RPM Output (Approximate)</b>											
2.37	318	C002_0038	MR140/	050	AW140/010	3.835	196	1.97	318	1.57	318
2.52	342	C102_0039	MR140/	050	AW140/010	3.883	279	2.09	342	1.67	342
2.64	354	C002_0038	MR160/	050, 140	AW160/012	3.835	196	2.33	377	2.01	406
5.24	711	C102_0039	MR160/	050, 140	AW160/012	3.883	279	4.62	757	3.98	815
5.24	711	C102_0039	MR200/	180	AW200/014	3.883	279	4.62	757	3.98	815
7.99*	1,086	C202_0039	MR160/	050, 140	AW160/012	3.888	393	7.05	1,156	6.08	1,246
7.99*	1,086	C202_0039	MR200/	180	AW200/014	3.888	393	7.05	1,156	6.08	1,246
9.84	1,338	C402_0039	MR160/	050, 140	AW160/012	3.894	1,002	8.15	1,338	6.52	1,338
9.84	1,333	C302_0039	MR160/	050, 140	AW160/012	3.878	583	8.15	1,333	6.52	1,333
13.11*	1,776	C302_0039	MR200/	180	AW200/014	3.878	583	11.56	1,891	9.97	2,037
13.11*	1,776	C302_0039	MR250/	180, 210	AW250/102	3.878	583	11.56	1,891	9.97	2,037
19.02*	2,587	C402_0039	MR200/	180	AW200/014	3.894	1,002	16.78	2,755	14.46	2,967
19.02*	2,587	C402_0039	MR250/	180, 210	AW250/102	3.894	1,002	16.78	2,755	14.46	2,967
23.36*	3,156	C502_0039	MR200/	180	AW200/014	3.867	1,228	19.36	3,156	15.48	3,156
29.61*	4,001	C502_0039	MR250/	180, 210	AW250/102	3.867	1,228	26.12	4,260	21.90	4,464
29.61*	4,001	C502_0039	MR300/	180, 210, 250, 280	AW300/110	3.867	1,228	26.12	4,260	21.90	4,464
<b>375 RPM</b>											
<b>300 RPM</b>											
<b>420 RPM Output (Approximate)</b>											
2.37	344	C002_0041	MR140/	050	AW140/010	4.149	199	1.97	344	1.57	344
2.51	363	C002_0041	MR160/	050, 140	AW160/012	4.149	199	2.21	387	1.91	417
2.52	369	C102_0042	MR140/	050	AW140/010	4.189	284	2.09	369	1.67	369
4.98	729	C102_0042	MR160/	050, 140	AW160/012	4.189	284	4.39	776	3.79	836
4.98	729	C102_0042	MR200/	180	AW200/014	4.189	284	4.39	776	3.79	836
7.56*	1,117	C202_0042	MR160/	050, 140	AW160/012	4.226	401	6.67	1,189	5.75	1,281
7.56*	1,117	C202_0042	MR200/	180	AW200/014	4.226	401	6.67	1,189	5.75	1,281
9.84	1,436	C302_0042	MR160/	050, 140	AW160/012	4.179	594	8.15	1,436	6.52	1,436
12.47*	1,821	C302_0042	MR200/	180	AW200/014	4.179	594	11.00	1,939	9.48	2,089
12.47*	1,821	C302_0042	MR250/	180, 210	AW250/102	4.179	594	11.00	1,939	9.48	2,089
23.36	3,415	C612_0042	MR200/	180	AW200/014	4.184	1,683	19.36	3,415	15.48	3,415
37.73*	5,517	C612_0042	MR250/	180, 210	AW250/102	4.184	1,683	31.27	5,517	25.01	5,517
52.15*	7,625	C612_0042	MR300/	180, 210, 250, 280	AW300/110	4.184	1,683	46.01	8,118	39.65	8,745
79.57*	11,747	C812_0042	MR300/	180, 210, 250, 280	AW300/110	4.225	3,164	65.93	11,747	52.74	11,747
122.95*	18,151	C812_0042	MR350/	320, 360	AW350/202	4.225	3,164	101.87	18,151	81.50	18,151
122.95*	17,816	C912_0041	MR350/	320, 360	AW350/202	4.147	3,884	101.87	17,816	81.50	17,816
<b>345 RPM</b>											
<b>275 RPM</b>											
<b>410 RPM Output (Approximate)</b>											
23.36	3,476	C712_0043	MR200/	180	AW200/014	4.259	2,325	19.36	3,476	15.48	3,476
39.62	5,895	C712_0043	MR250/	180, 210	AW250/102	4.259	2,325	32.82	5,895	26.26	5,895
75.70*	11,266	C712_0043	MR300/	180, 210, 250, 280	AW300/110	4.259	2,325	62.72	11,266	50.18	11,266
<b>340 RPM</b>											
<b>270 RPM</b>											

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>400 RPM Output (Approximate)</b>						<b>330 RPM</b>		<b>265 RPM</b>			
9.84	1,510	C402_0044	MR160/	050, 140	AW160/012	4.394	1,033	8.15	1,510	6.52	1,510
17.54*	2,694	C402_0044	MR200/	180	AW200/014	4.394	1,033	15.48	2,868	13.34	3,089
17.54*	2,694	C402_0044	MR250/	180, 210	AW250/102	4.394	1,033	15.48	2,868	13.34	3,089
23.36*	3,591	C502_0044	MR200/	180	AW200/014	4.399	1,268	19.36	3,591	15.48	3,591
27.17*	4,177	C502_0044	MR250/	180, 210	AW250/102	4.399	1,268	23.97	4,447	20.66	4,790
27.17*	4,177	C502_0044	MR300/	180, 210, 250, 280	AW300/110	4.399	1,268	23.97	4,447	20.66	4,790
<b>375 RPM Output (Approximate)</b>						<b>310 RPM</b>		<b>250 RPM</b>			
2.30	376	C002_0047	MR140/	050	AW140/010	4.680	206	1.90	376	1.52	376
2.31	378	C002_0047	MR160/	050, 140	AW160/012	4.680	206	2.04	403	1.76	434
2.44	397	C102_0047	MR140/	050	AW140/010	4.658	292	2.02	397	1.62	397
4.64	755	C102_0047	MR160/	050, 140	AW160/012	4.658	292	4.09	804	3.53	866
4.64	755	C102_0047	MR200/	180	AW200/014	4.658	292	4.09	804	3.53	866
7.08	1,154	C202_0047	MR160/	050, 140	AW160/012	4.667	411	6.24	1,229	5.38	1,324
7.08	1,154	C202_0047	MR200/	180	AW200/014	4.667	411	6.24	1,229	5.38	1,324
9.84	1,591	C502_0046	MR160/	050, 140	AW160/012	4.629	1,284	8.15	1,591	6.52	1,591
9.84	1,607	C302_0047	MR160/	050, 140	AW160/012	4.675	611	8.15	1,607	6.52	1,607
9.84	1,609	C402_0047	MR160/	050, 140	AW160/012	4.682	1,050	8.15	1,609	6.52	1,609
11.57	1,891	C302_0047	MR200/	180	AW200/014	4.675	611	10.21	2,013	8.80	2,168
11.57	1,891	C302_0047	MR250/	180, 210	AW250/102	4.675	611	10.21	2,013	8.80	2,168
16.82*	2,751	C402_0047	MR200/	180	AW200/014	4.682	1,050	14.84	2,929	12.79	3,155
16.82*	2,751	C402_0047	MR250/	180, 210	AW250/102	4.682	1,050	14.84	2,929	12.79	3,155
22.97*	3,715	C502_0046	MR200/	180	AW200/014	4.629	1,284	19.36	3,778	15.48	3,778
26.27*	4,248	C502_0046	MR250/	180, 210	AW250/102	4.629	1,284	23.17	4,523	19.97	4,872
26.27*	4,248	C502_0046	MR300/	180, 210, 250, 280	AW300/110	4.629	1,284	23.17	4,523	19.97	4,872
<b>345 RPM Output (Approximate)</b>						<b>285 RPM</b>		<b>230 RPM</b>			
2.19	388	C002_0051	MR140/	050	AW140/010	5.063	210	1.90	406	1.52	406
2.19	388	C002_0051	MR160/	050, 140	AW160/012	5.063	210	1.94	413	1.67	445
2.44	428	C102_0050	MR140/	050	AW140/010	5.025	297	2.02	428	1.62	428
4.41	775	C102_0050	MR160/	050, 140	AW160/012	5.025	297	3.89	825	3.35	888
4.41	775	C102_0050	MR200/	180	AW200/014	5.025	297	3.89	825	3.35	888
6.70	1,187	C202_0051	MR160/	050, 140	AW160/012	5.072	420	5.91	1,264	5.09	1,361
6.70	1,187	C202_0051	MR200/	180	AW200/014	5.072	420	5.91	1,264	5.09	1,361
9.84	1,731	C302_0050	MR160/	050, 140	AW160/012	5.037	623	8.15	1,731	6.52	1,731
11.01	1,938	C302_0050	MR200/	180	AW200/014	5.037	623	9.71	2,064	8.37	2,223
11.01	1,938	C302_0050	MR250/	180, 210	AW250/102	5.037	623	9.71	2,064	8.37	2,223
23.36	4,149	C612_0051	MR200/	180	AW200/014	5.083	1,767	19.36	4,149	15.48	4,149
36.77*	6,531	C612_0051	MR250/	180, 210	AW250/102	5.083	1,767	30.47	6,531	24.37	6,531
45.81*	8,136	C612_0051	MR300/	180, 210, 250, 280	AW300/110	5.083	1,767	40.41	8,662	34.82	9,331
<b>330 RPM Output (Approximate)</b>						<b>275 RPM</b>		<b>220 RPM</b>			
9.84	1,810	C502_0053	MR160/	050, 140	AW160/012	5.265	1,326	8.15	1,810	6.52	1,810
9.84	1,816	C402_0053	MR160/	050, 140	AW160/012	5.284	1,082	8.15	1,816	6.52	1,816
15.51*	2,865	C402_0053	MR200/	180	AW200/014	5.284	1,082	13.69	3,050	11.79	3,285
15.51*	2,865	C402_0053	MR250/	180, 210	AW250/102	5.284	1,082	13.69	3,050	11.79	3,285
22.97*	4,226	C502_0053	MR200/	180	AW200/014	5.265	1,326	19.36	4,298	15.48	4,298
23.36	4,335	C712_0053	MR200/	180	AW200/014	5.311	2,457	19.36	4,335	15.48	4,335

See Page 47 for Part No. Configurator. Mounting position MUST be specified.



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>330 RPM Output (Approximate) Continued</b>											
								<b>275 RPM</b>		<b>220 RPM</b>	
24.11*	4,435	C502_0053	MR250/	180, 210	AW250/102	5.265	1,326	21.27	4,722	18.33	5,086
24.11*	4,435	C502_0053	MR300/	210	AW300/110	5.265	1,326	21.27	4,722	18.33	5,086
38.46	7,137	C712_0053	MR250/	180, 210	AW250/102	5.311	2,457	31.87	7,137	25.49	7,137
73.49*	13,638	C712_0053	MR300/	180, 210, 250, 280	AW300/110	5.311	2,457	60.89	13,638	48.71	13,638
<b>325 RPM Output (Approximate)</b>											
								<b>270 RPM</b>		<b>215 RPM</b>	
77.01*	14,495	C812_0054	MR300/	180, 210, 250, 280	AW300/110	5.387	3,362	63.81	14,495	51.05	14,495
118.49*	22,304	C812_0054	MR350/	320, 360	AW350/202	5.387	3,362	101.87	23,143	81.50	23,143
<b>300 RPM Output (Approximate)</b>											
								<b>250 RPM</b>		<b>200 RPM</b>	
2.00	407	C002_0058	MR140/	050	AW140/010	5.824	217	1.76	433	1.46	450
2.00	407	C002_0058	MR160/	050, 140	AW160/012	5.824	217	1.76	433	1.52	467
2.35	482	C102_0059	MR140/	050	AW140/010	5.875	309	1.94	482	1.56	482
2.42	490	C202_0058	MR140/	050	AW140/010	5.791	434	2.01	490	1.61	490
3.98	816	C102_0059	MR160/	050, 140	AW160/012	5.875	309	3.51	869	3.02	936
3.98	816	C102_0059	MR200/	180	AW200/014	5.875	309	3.51	869	3.02	936
6.13	1,240	C202_0058	MR160/	050, 140	AW160/012	5.791	434	5.41	1,321	4.66	1,423
6.13	1,240	C202_0058	MR200/	180	AW200/014	5.791	434	5.41	1,321	4.66	1,423
8.89	1,820	C302_0059	MR160/	050, 140	AW160/012	5.859	647	7.84	1,938	6.52	2,014
9.84	2,011	C502_0059	MR160/	050, 140	AW160/012	5.850	1,361	8.15	2,011	6.52	2,011
9.84	2,025	C402_0059	MR160/	050, 140	AW160/012	5.891	1,112	8.15	2,025	6.52	2,025
9.96	2,038	C302_0059	MR200/	180	AW200/014	5.859	647	8.78	2,170	7.57	2,338
9.96	2,038	C302_0059	MR250/	180, 210	AW250/102	5.859	647	8.78	2,170	7.57	2,338
14.43	2,970	C402_0059	MR200/	180	AW200/014	5.891	1,112	12.73	3,162	10.97	3,407
14.43	2,970	C402_0059	MR250/	180, 210	AW250/102	5.891	1,112	12.73	3,162	10.97	3,407
19.88	4,064	C502_0059	MR200/	180	AW200/014	5.850	1,361	17.54	4,327	15.12	4,661
22.47*	4,593	C502_0059	MR250/	180, 210	AW250/102	5.850	1,361	19.82	4,890	17.08	5,268
22.47*	4,593	C502_0059	MR300/	180, 210, 250, 280	AW300/110	5.850	1,361	19.82	4,890	17.08	5,268
<b>275 RPM Output (Approximate)</b>											
								<b>230 RPM</b>		<b>185 RPM</b>	
1.90	418	C002_0063	MR140/	050	AW140/010	6.300	221	1.67	445	1.44	479
1.90	418	C002_0063	MR160/	050, 140	AW160/012	6.300	221	1.67	445	1.44	479
2.35	520	C102_0063	MR140/	050	AW140/010	6.338	315	1.94	520	1.56	520
2.42	533	C202_0063	MR140/	050	AW140/010	6.295	443	2.01	533	1.61	533
3.78	837	C102_0063	MR160/	050, 140	AW160/012	6.338	315	3.33	891	2.87	960
3.78	837	C102_0063	MR200/	180	AW200/014	6.338	315	3.33	891	2.87	960
5.80	1,275	C202_0063	MR160/	050, 140	AW160/012	6.295	443	5.12	1,358	4.41	1,463
5.80	1,275	C202_0063	MR200/	180	AW200/014	6.295	443	5.12	1,358	4.41	1,463
8.89	1,962	C302_0063	MR160/	050, 140	AW160/012	6.314	659	7.84	2,089	6.52	2,170
9.47	2,090	C302_0063	MR200/	180	AW200/014	6.314	659	8.36	2,225	7.20	2,397
9.47	2,090	C302_0063	MR250/	180, 210	AW250/102	6.314	659	8.36	2,225	7.20	2,397
<b>265 RPM Output (Approximate) Continued Next Page</b>											
								<b>220 RPM</b>		<b>175 RPM</b>	
9.84	2,285	C402_0066	MR160/	140	AW160/012	6.648	1,146	8.15	2,285	6.52	2,285
9.84	2,287	C502_0067	MR160/	050, 140	AW160/012	6.655	1,406	8.15	2,287	6.52	2,287
13.31	3,092	C402_0066	MR200/	180	AW200/014	6.648	1,146	11.74	3,292	10.12	3,547
13.31	3,092	C402_0066	MR250/	180, 210	AW250/102	6.648	1,146	11.74	3,292	10.12	3,547
19.88	4,624	C502_0067	MR200/	180	AW200/014	6.655	1,406	17.54	4,923	15.12	5,303

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>265 RPM Output (Approximate) Continued</b>						<b>220 RPM</b>		<b>175 RPM</b>			
20.62*	4,795	C502_0067	MR250/	180, 210	AW250/102	6.655	1,406	18.19	5,105	15.68	5,499
20.62*	4,795	C502_0067	MR300/	180, 210, 250, 280	AW300/110	6.655	1,406	18.19	5,105	15.68	5,499
23.36	5,320	C612_0065	MR200/	180	AW200/014	6.518	1,881	19.36	5,320	15.48	5,320
35.40*	8,062	C612_0065	MR250/	180, 210	AW250/102	6.518	1,881	29.33	8,062	23.47	8,062
38.81*	8,839	C612_0065	MR300/	180, 210, 250, 280	AW300/110	6.518	1,881	34.24	9,411	29.50	10,137
74.64*	17,397	C812_0067	MR300/	180, 210, 250, 280	AW300/110	6.670	3,547	61.85	17,397	49.48	17,397
102.76*	23,950	C812_0067	MR350/	320, 360	AW350/202	6.670	3,547	90.66	25,500	78.12	27,469
<b>255 RPM Output (Approximate)</b>						<b>210 RPM</b>		<b>170 RPM</b>			
23.36	5,560	C712_0068	MR200/	180	AW200/014	6.811	2,615	19.36	5,560	15.48	5,560
37.06	8,821	C712_0068	MR250/	180, 210	AW250/102	6.811	2,615	30.71	8,821	24.57	8,821
62.38*	14,846	C712_0068	MR300/	180, 210, 250, 280	AW300/110	6.811	2,615	55.03	15,806	46.95	16,855
<b>245 RPM Output (Approximate)</b>						<b>200 RPM</b>		<b>160 RPM</b>			
23.36	5,804	C612_0071	MR200/	180	AW200/014	7.111	1,922	19.36	5,804	15.48	5,804
23.36	6,005	C712_0074	MR200/	180	AW200/014	7.357	2,665	19.36	6,005	15.48	6,005
36.62*	9,099	C612_0071	MR250/	180, 210	AW250/102	7.111	1,922	30.47	9,136	24.37	9,136
36.62*	9,099	C612_0071	MR300/	180, 210, 250, 280	AW300/110	7.111	1,922	32.31	9,688	27.84	10,436
38.46	9,886	C712_0074	MR250/	180, 210	AW250/102	7.357	2,665	31.87	9,886	25.49	9,886
59.25*	15,232	C712_0074	MR300/	180, 210, 250, 280	AW300/110	7.357	2,665	52.27	16,218	45.05	17,470
<b>225 RPM Output (Approximate)</b>						<b>185 RPM</b>		<b>150 RPM</b>			
1.66	447	C002_0077	MR140/	050	AW140/010	7.714	233	1.46	476	1.26	512
1.66	447	C002_0077	MR160/	050, 140	AW160/012	7.714	233	1.46	476	1.26	512
2.23	607	C102_0078	MR140/	050	AW140/010	7.796	332	1.85	607	1.48	607
2.29	625	C202_0078	MR140/	050	AW140/010	7.800	467	1.90	625	1.52	625
3.29	897	C102_0078	MR160/	050, 140	AW160/012	7.796	332	2.90	955	2.50	1,029
3.29	897	C102_0078	MR200/	180	AW200/014	7.796	332	2.90	955	2.50	1,029
5.03	1,370	C202_0078	MR160/	050, 140	AW160/012	7.800	467	4.43	1,458	3.82	1,571
5.03	1,370	C202_0078	MR200/	180	AW200/014	7.800	467	4.43	1,458	3.82	1,571
6.98	1,912	C302_0078	MR160/	050, 140	AW160/012	7.841	696	6.16	2,035	5.30	2,193
8.20	2,246	C302_0078	MR200/	180	AW200/014	7.841	696	7.23	2,392	6.23	2,576
8.20	2,246	C302_0078	MR250/	180, 210	AW250/102	7.841	696	7.23	2,392	6.23	2,576
9.69	2,630	C502_0078	MR160/	050, 140	AW160/012	7.763	1,461	8.15	2,668	6.52	2,668
16.28	4,416	C502_0078	MR200/	180	AW200/014	7.763	1,461	14.36	4,702	12.38	5,065
18.61	5,047	C502_0078	MR250/	180, 210	AW250/102	7.763	1,461	16.42	5,374	14.15	5,789
18.61	5,047	C502_0078	MR300/	180, 210, 250, 280	AW300/110	7.763	1,461	16.42	5,374	14.15	5,789
<b>210 RPM Output (Approximate) Continued Next Page</b>						<b>175 RPM</b>		<b>140 RPM</b>			
1.85	531	C002_0082	MR140/	050	AW140/010	8.235	237	1.53	531	1.22	531
1.85	531	C002_0082	MR160/	050, 140	AW160/012	8.235	237	1.53	531	1.22	531
2.61	754	C102_0083	MR140/	050	AW140/010	8.263	337	2.16	754	1.73	754
3.68	1,063	C102_0083	MR160/	050, 140	AW160/012	8.263	337	3.05	1,063	2.44	1,063
3.68	1,063	C102_0083	MR200/	180	AW200/014	8.263	337	3.05	1,063	2.44	1,063
6.18	1,770	C202_0082	MR160/	050, 140	AW160/012	8.190	473	5.13	1,772	4.10	1,772
6.18	1,770	C202_0082	MR200/	180	AW200/014	8.190	473	5.13	1,772	4.10	1,772
9.57	2,758	C302_0083	MR160/	050, 140	AW160/012	8.250	704	8.15	2,835	6.52	2,835
9.57	2,758	C302_0083	MR200/	180	AW200/014	8.250	704	8.44	2,936	7.13	3,100
9.57	2,758	C302_0083	MR250/	180, 210	AW250/102	8.250	704	8.44	2,936	7.13	3,100

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>210 RPM Output (Approximate) Continued</b>											
						<b>175 RPM</b>			<b>140 RPM</b>		
16.01	4,634	C402_0083	MR200/	180	AW200/014	8.285	1,211	13.94	4,872	11.16	4,872
16.01	4,634	C402_0083	MR250/	180, 210	AW250/102	8.285	1,211	13.94	4,872	11.16	4,872
23.36	6,685	C612_0082	MR200/	180	AW200/014	8.190	1,991	19.36	6,685	15.48	6,685
23.36*	6,745	C502_0083	MR200/	180	AW200/014	8.263	1,484	19.36	6,745	15.48	6,745
24.05*	6,945	C502_0083	MR250/	180, 210	AW250/102	8.263	1,484	20.34	7,086	16.27	7,086
24.05*	6,945	C502_0083	MR300/	180, 210, 250, 280	AW300/110	8.263	1,484	20.34	7,086	16.27	7,086
33.33*	9,538	C612_0082	MR250/	180, 210	AW250/102	8.190	1,991	28.34	9,790	22.68	9,790
33.33*	9,538	C612_0082	MR300/	180, 210, 250, 280	AW300/110	8.190	1,991	29.40	10,155	25.34	10,939
122.95*	35,606	C912_0083	MR350/	320, 360	AW350/202	8.288	4,618	101.87	35,606	81.50	35,606
<b>205 RPM Output (Approximate)</b>											
						<b>170 RPM</b>			<b>135 RPM</b>		
23.36	6,930	C712_0085	MR200/	180	AW200/014	8.490	2,763	19.36	6,930	15.48	6,930
35.72	10,597	C712_0085	MR250/	180, 210	AW250/102	8.490	2,763	29.60	10,597	23.68	10,597
53.86*	15,977	C712_0085	MR300/	180, 210, 250, 280	AW300/110	8.490	2,763	47.51	17,011	40.94	18,325
<b>200 RPM Output (Approximate)</b>											
						<b>160 RPM</b>			<b>130 RPM</b>		
74.64*	23,586	C812_0090	MR300/	180, 210, 250, 280	AW300/110	9.043	3,827	61.85	23,586	49.48	23,586
83.89*	26,508	C812_0090	MR350/	320, 360	AW350/202	9.043	3,827	74.01	28,223	63.78	30,402
<b>190 RPM Output (Approximate)</b>											
						<b>155 RPM</b>			<b>125 RPM</b>		
1.65	531	C002_0092	MR140/	050	AW140/010	9.228	244	1.37	531	1.09	531
1.65	531	C002_0092	MR160/	050, 140	AW160/012	9.228	244	1.37	531	1.09	531
2.61	851	C102_0093	MR140/	050	AW140/010	9.326	347	2.16	851	1.73	851
3.26	1,063	C102_0093	MR160/	050, 140	AW160/012	9.326	347	2.70	1,063	2.16	1,063
3.26	1,063	C102_0093	MR200/	180	AW200/014	9.326	347	2.70	1,063	2.16	1,063
5.40	1,772	C202_0094	MR160/	050, 140	AW160/012	9.387	489	4.48	1,772	3.58	1,772
5.40	1,772	C202_0094	MR200/	180	AW200/014	9.387	489	4.48	1,772	3.58	1,772
8.83	2,871	C302_0093	MR160/	050, 140	AW160/012	9.310	726	7.79	3,057	6.32	3,100
8.83	2,871	C302_0093	MR200/	180	AW200/014	9.310	726	7.79	3,057	6.32	3,100
8.83	2,871	C302_0093	MR250/	180	AW250/102	9.310	726	7.79	3,057	6.32	3,100
14.86	4,809	C402_0093	MR200/	180	AW200/014	9.261	1,245	12.47	4,872	9.98	4,872
14.86	4,809	C402_0093	MR250/	180, 210	AW250/102	9.261	1,245	12.47	4,872	9.98	4,872
21.90*	7,086	C502_0093	MR200/	180	AW200/014	9.261	1,527	18.14	7,086	14.52	7,086
21.90*	7,086	C502_0093	MR250/	180, 210	AW250/102	9.261	1,527	18.14	7,086	14.52	7,086
21.90*	7,086	C502_0093	MR300/	180, 210, 250, 280	AW300/110	9.261	1,527	18.14	7,086	14.52	7,086
23.36	7,701	C712_0094	MR200/	180	AW200/014	9.435	2,837	19.36	7,701	15.48	7,701
37.06	12,219	C712_0094	MR250/	180, 210	AW250/102	9.435	2,837	30.71	12,219	24.57	12,219
50.20*	16,549	C712_0094	MR300/	180, 210, 250, 280	AW300/110	9.435	2,837	44.28	17,620	35.62	17,716
<b>175 RPM Output (Approximate)</b>											
						<b>145 RPM</b>			<b>115 RPM</b>		
23.36	8,253	C612_0100	MR200/	180	AW200/014	10.111	2,099	19.36	8,253	15.48	8,253
23.36	8,091	C712_0099	MR200/	180	AW200/014	9.912	2,872	19.36	8,091	15.48	8,091
28.96	10,232	C612_0100	MR250/	180, 210	AW250/102	10.111	2,099	25.55	10,894	21.87	11,657
28.96	10,232	C612_0100	MR300/	180, 210, 250, 280	AW300/110	10.111	2,099	25.55	10,894	22.02	11,735
34.84	12,068	C712_0099	MR250/	180, 210	AW250/102	9.912	2,872	28.87	12,068	23.10	12,068
48.58*	16,824	C712_0099	MR300/	180, 210, 250, 280	AW300/110	9.912	2,872	42.85	17,912	36.93	19,295
69.49*	24,648	C812_0100	MR300/	180, 210, 250, 280	AW300/110	10.151	3,939	57.58	24,648	46.06	24,648
77.67*	27,549	C812_0100	MR350/	320, 360	AW350/202	10.151	3,939	68.52	29,331	59.05	31,596

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>170 RPM Output (Approximate)</b>						<b>140 RPM</b>		<b>110 RPM</b>			
1.48	531	C002_0105	MR140/	050	AW140/010	10.297	250	1.22	531	0.98	531
1.48	531	C002_0105	MR160/	050, 140	AW160/012	10.297	250	1.22	531	0.98	531
2.52	914	C102_0105	MR140/	050	AW140/010	10.383	357	2.09	914	1.67	914
2.93	1,063	C102_0105	MR160/	050, 140	AW160/012	10.383	357	2.43	1,063	1.94	1,063
2.93	1,063	C102_0105	MR200/	180	AW200/014	10.383	357	2.43	1,063	1.94	1,063
4.94	1,772	C202_0105	MR160/	050, 140	AW160/012	10.260	500	4.09	1,772	3.28	1,772
4.94	1,772	C202_0105	MR200/	180	AW200/014	10.260	500	4.09	1,772	3.28	1,772
8.26	2,968	C302_0105	MR160/	050, 140	AW160/012	10.286	744	7.15	3,100	5.72	3,100
8.26	2,968	C302_0105	MR200/	180	AW200/014	10.286	744	7.15	3,100	5.72	3,100
8.26	2,968	C302_0105	MR250/	180, 210	AW250/102	10.286	744	7.15	3,100	5.72	3,100
9.84	3,578	C402_0105	MR160/	050, 140	AW160/012	10.410	1,282	8.15	3,578	6.52	3,578
13.39	4,872	C402_0105	MR200/	180	AW200/014	10.410	1,282	11.10	4,872	8.88	4,872
13.39	4,872	C402_0105	MR250/	180, 210	AW250/102	10.410	1,282	11.10	4,872	8.88	4,872
19.53	7,086	C502_0105	MR200/	180	AW200/014	10.383	1,571	16.18	7,086	12.95	7,086
19.53	7,086	C502_0105	MR250/	180, 210	AW250/102	10.383	1,571	16.18	7,086	12.95	7,086
19.53	7,086	C502_0105	MR300/	180, 210, 250, 280	AW300/110	10.383	1,571	16.18	7,086	12.95	7,086
<b>150 RPM Output (Approximate)</b>						<b>125 RPM</b>		<b>100 RPM</b>			
1.32	531	C002_0115	MR140/	050	AW140/010	11.540	258	1.09	531	0.87	531
1.32	531	C002_0115	MR160/	050, 140	AW160/012	11.540	258	1.09	531	0.87	531
2.52	1,032	C102_0115	MR140/	050	AW140/010	11.717	367	2.09	1,032	1.67	1,032
2.60	1,063	C102_0115	MR160/	050, 140	AW160/012	11.717	367	2.15	1,063	1.72	1,063
2.60	1,063	C102_0115	MR200/	180	AW200/014	11.717	367	2.15	1,063	1.72	1,063
4.31	1,772	C202_0120	MR160/	050, 140	AW160/012	11.760	518	3.57	1,772	2.86	1,772
4.31	1,772	C202_0120	MR200/	180	AW200/014	11.760	518	3.57	1,772	2.86	1,772
7.62	3,090	C302_0115	MR160/	050, 140	AW160/012	11.607	767	6.33	3,100	5.07	3,100
7.62	3,090	C302_0115	MR200/	180	AW200/014	11.607	767	6.33	3,100	5.07	3,100
7.62	3,090	C302_0115	MR250/	180, 210	AW250/102	11.607	767	6.33	3,100	5.07	3,100
9.84	3,999	C402_0115	MR160/	050, 140	AW160/012	11.636	1,318	8.15	3,999	6.52	3,999
11.98	4,872	C402_0115	MR200/	180	AW200/014	11.636	1,318	9.93	4,872	7.94	4,872
11.98	4,872	C402_0115	MR250/	180, 210	AW250/102	11.636	1,318	9.93	4,872	7.94	4,872
17.43	7,086	C502_0115	MR200/	180	AW200/014	11.636	1,617	14.44	7,086	11.55	7,086
17.43	7,086	C502_0115	MR250/	180, 210	AW250/102	11.636	1,617	14.44	7,086	11.55	7,086
17.43	7,086	C502_0115	MR300/	180, 210, 250, 280	AW300/110	11.636	1,617	14.44	7,086	11.55	7,086
23.36	9,352	C612_0115	MR200/	180	AW200/014	11.457	2,166	19.36	9,352	15.48	9,352
23.36	9,600	C712_0120	MR200/	180	AW200/014	11.761	2,997	19.36	9,600	15.48	9,600
26.65	10,667	C612_0115	MR250/	180, 210	AW250/102	11.457	2,166	23.51	11,357	19.07	11,515
26.65	10,667	C612_0115	MR300/	180, 210, 250, 280	AW300/110	11.457	2,166	23.51	11,357	19.07	11,515
35.72	14,680	C712_0120	MR250/	180, 210	AW250/102	11.761	2,997	29.60	14,680	23.68	14,680
43.11*	17,716	C712_0120	MR300/	180, 210, 250, 280	AW300/110	11.761	2,997	35.72	17,716	28.58	17,716
71.52*	28,708	C812_0115	MR300/	180, 210, 250, 280	AW300/110	11.487	4,063	59.45	28,798	47.56	28,798
71.52*	28,708	C812_0115	MR350/	320, 360	AW350/202	11.487	4,063	63.10	30,565	52.66	31,889
122.95*	50,587	C912_0120	MR350/	320, 360	AW350/202	11.775	5,042	101.87	50,587	81.50	50,587
<b>140 RPM Output (Approximate) Continued Next Page</b>						<b>115 RPM</b>		<b>90 RPM</b>			
1.21	531	C002_0125	MR140/	050	AW140/010	12.567	263	1.00	531	0.80	531
1.21	531	C002_0125	MR160/	050, 140	AW160/012	12.567	263	1.00	531	0.80	531
2.44	1,062	C102_0125	MR140/	050	AW140/010	12.455	373	2.02	1,062	1.62	1,062
2.44	1,063	C102_0125	MR160/	050, 140	AW160/012	12.455	373	2.02	1,063	1.62	1,063
2.44	1,063	C102_0125	MR200/	180	AW200/014	12.455	373	2.02	1,063	1.62	1,063

See Page 47 for Part No. Configurator. Mounting position MUST be specified.



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>140 RPM Output (Approximate) Continued</b>											
						<b>115 RPM</b>			<b>90 RPM</b>		
4.12	1,772	C202_0125	MR160/	050, 140	AW160/012	12.315	524	3.41	1,772	2.73	1,772
4.12	1,772	C202_0125	MR200/	180	AW200/014	12.315	524	3.41	1,772	2.73	1,772
7.16	3,100	C302_0125	MR160/	050, 140	AW160/012	12.400	780	5.93	3,100	4.74	3,100
7.16	3,100	C302_0125	MR200/	180	AW200/014	12.400	780	5.93	3,100	4.74	3,100
7.16	3,100	C302_0125	MR250/	180, 210	AW250/102	12.400	780	5.93	3,100	4.74	3,100
9.84	4,303	C402_0125	MR160/	050, 140	AW160/012	12.519	1,342	8.15	4,303	6.52	4,303
11.14	4,872	C402_0125	MR200/	180	AW200/014	12.519	1,342	9.23	4,872	7.38	4,872
11.14	4,872	C402_0125	MR250/	180, 210	AW250/102	12.519	1,342	9.23	4,872	7.38	4,872
22.20	9,759	C612_0125	MR200/	180	AW200/014	12.581	2,217	19.36	10,269	15.48	10,269
25.03	11,005	C612_0125	MR250/	180, 210	AW250/102	12.581	2,217	22.08	11,717	19.03	12,622
25.03	11,005	C612_0125	MR300/	180, 210, 250, 280	AW300/110	12.581	2,217	22.08	11,717	19.03	12,622
<b>130 RPM Output (Approximate)</b>						<b>105 RPM</b>			<b>85 RPM</b>		
23.36	11,207	C712_0135	MR200/	180	AW200/014	13.730	3,115	19.36	11,207	15.48	11,207
34.84	16,716	C712_0135	MR250/	180, 210	AW250/102	13.730	3,115	28.87	16,716	23.10	16,716
36.93	17,716	C712_0135	MR300/	180, 210, 250, 280	AW300/110	13.730	3,115	30.60	17,716	24.48	17,716
40.17	18,501	C712_0130	MR300/	180, 210, 250, 280	AW300/110	13.182	3,084	35.43	19,698	30.54	21,219
<b>125 RPM Output (Approximate)</b>						<b>100 RPM</b>			<b>80 RPM</b>		
1.08	531	C002_0140	MR140/	050	AW140/010	14.083	271	0.89	531	0.72	531
1.08	531	C002_0140	MR160/	050, 140	AW160/012	14.083	271	0.89	531	0.72	531
2.16	1,063	C102_0140	MR140/	050	AW140/010	14.056	385	1.79	1,063	1.43	1,063
2.16	1,063	C102_0140	MR160/	050, 140	AW160/012	14.056	385	1.79	1,063	1.43	1,063
2.16	1,063	C102_0140	MR200/	180	AW200/014	14.056	385	1.79	1,063	1.43	1,063
3.59	1,772	C202_0140	MR160/	050, 140	AW160/012	14.115	542	2.98	1,772	2.38	1,772
3.59	1,772	C202_0140	MR200/	180	AW200/014	14.115	542	2.98	1,772	2.38	1,772
6.34	3,100	C302_0140	MR160/	050, 140	AW160/012	13.993	804	5.25	3,100	4.20	3,100
6.34	3,100	C302_0140	MR200/	180	AW200/014	13.993	804	5.25	3,100	4.20	3,100
6.34	3,100	C302_0140	MR250/	180, 210	AW250/102	13.993	804	5.25	3,100	4.20	3,100
9.84	4,787	C502_0140	MR160/	050, 140	AW160/012	13.929	1,691	8.15	4,787	6.52	4,787
9.84	4,809	C402_0140	MR160/	050, 140	AW160/012	13.993	1,380	8.15	4,809	6.52	4,809
9.96	4,872	C402_0140	MR200/	180	AW200/014	13.993	1,380	8.26	4,872	6.60	4,872
9.96	4,872	C402_0140	MR250/	180, 210	AW250/102	13.993	1,380	8.26	4,872	6.60	4,872
14.56	7,086	C502_0140	MR200/	180	AW200/014	13.929	1,691	12.06	7,086	9.65	7,086
14.56	7,086	C502_0140	MR250/	180, 210	AW250/102	13.929	1,691	12.06	7,086	9.65	7,086
14.56	7,086	C502_0140	MR300/	180, 210, 250, 280	AW300/110	13.929	1,691	12.06	7,086	9.65	7,086
23.15	11,444	C612_0140	MR200/	180	AW200/014	14.145	2,283	19.30	11,515	15.44	11,515
23.15	11,444	C612_0140	MR250/	180, 210	AW250/102	14.145	2,283	19.30	11,515	15.44	11,515
23.15	11,444	C612_0140	MR300/	180, 210, 250, 280	AW300/110	14.145	2,283	19.30	11,515	15.44	11,515
63.40*	30,491	C812_0140	MR300/	180, 210, 250, 280	AW300/110	13.763	4,251	54.94	31,889	43.95	31,889
63.40*	30,491	C812_0140	MR350/	320, 360	AW350/202	13.763	4,251	54.94	31,889	43.95	31,889
109.36*	53,148	C912_0140	MR350/	320, 360	AW350/202	13.908	5,257	90.62	53,148	72.49	53,148
<b>115 RPM Output (Approximate) Continued Next Page</b>						<b>90 RPM</b>			<b>75 RPM</b>		
0.97	531	C002_0155	MR140/	050	AW140/010	15.637	278	0.81	531	0.64	531
0.97	531	C002_0155	MR160/	050, 140	AW160/012	15.637	278	0.81	531	0.64	531
1.94	1,063	C102_0155	MR140/	050	AW140/010	15.708	395	1.60	1,063	1.28	1,063
1.94	1,063	C102_0155	MR160/	050, 140	AW160/012	15.708	395	1.60	1,063	1.28	1,063
1.94	1,063	C102_0155	MR200/	180	AW200/014	15.708	395	1.60	1,063	1.28	1,063

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05





# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** <sup>1)</sup> Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
<sup>2)</sup> Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
<sup>3)</sup> Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
<sup>4)</sup> Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>115 RPM Output (Approximate) Continued</b>						<b>90 RPM</b>		<b>75 RPM</b>			
2.42	1,294	C202_0155	MR140/	050	AW140/010	15.283	553	2.01	1,294	1.61	1,294
3.32	1,772	C202_0155	MR160/	050, 140	AW160/012	15.283	553	2.75	1,772	2.20	1,772
3.32	1,772	C202_0155	MR200/	180	AW200/014	15.283	553	2.75	1,772	2.20	1,772
5.71	3,100	C302_0155	MR160/	050, 140	AW160/012	15.543	825	4.73	3,100	3.78	3,100
5.71	3,100	C302_0155	MR200/	180	AW200/014	15.543	825	4.73	3,100	3.78	3,100
5.71	3,100	C302_0155	MR250/	180, 210	AW250/102	15.543	825	4.73	3,100	3.78	3,100
9.84	5,399	C502_0155	MR160/	050, 140	AW160/012	15.708	1,743	8.15	5,399	6.52	5,399
12.91	7,086	C502_0155	MR200/	180	AW200/014	15.708	1,743	10.70	7,086	8.56	7,086
12.91	7,086	C502_0155	MR250/	180, 210	AW250/102	15.708	1,743	10.70	7,086	8.56	7,086
12.91	7,086	C502_0155	MR300/	180, 210, 250, 280	AW300/110	15.708	1,743	10.70	7,086	8.56	7,086
<b>105 RPM Output (Approximate)</b>						<b>85 RPM</b>		<b>70 RPM</b>			
8.85	4,872	C402_0160	MR160/	050	AW160/012	15.750	1,422	7.33	4,872	5.87	4,872
8.85	4,872	C402_0160	MR200/	180	AW200/014	15.750	1,422	7.33	4,872	5.87	4,872
8.85	4,872	C402_0160	MR250/	180, 210	AW250/102	15.750	1,422	7.33	4,872	5.87	4,872
18.57	10,514	C612_0160	MR200/	180	AW200/014	16.203	2,362	16.38	11,194	14.12	12,058
21.15	11,974	C612_0160	MR250/	180, 210	AW250/102	16.203	2,362	18.66	12,748	15.04	12,844
21.15	11,974	C612_0160	MR300/	180, 210, 250, 280	AW300/110	16.203	2,362	18.66	12,748	15.04	12,844
22.20	12,980	C712_0165	MR200/	180	AW200/014	16.734	3,273	19.36	13,659	15.48	13,659
31.67	18,517	C712_0165	MR250/	180, 210	AW250/102	16.734	3,273	26.24	18,517	20.99	18,517
32.99	19,716	C812_0170	MR250/	180, 210	AW250/102	17.101	4,488	27.34	19,716	21.87	19,716
34.26	20,033	C712_0165	MR300/	180, 210, 250, 280	AW300/110	16.734	3,273	30.13	21,259	24.10	21,259
54.86*	32,780	C812_0170	MR300/	180, 210, 250, 280	AW300/110	17.101	4,488	48.39	34,901	41.27	37,204
54.86*	32,780	C812_0170	MR350/	320, 360	AW350/202	17.101	4,488	48.39	34,901	41.27	37,204
66.03	37,985	C912_0165	MR300/	180, 210, 250, 280	AW300/110	16.463	5,483	54.71	37,985	43.77	37,985
107.79*	62,006	C912_0165	MR350/	320, 360	AW350/202	16.463	5,483	89.31	62,006	71.45	62,006
<b>100 RPM Output (Approximate) Continued Next Page</b>						<b>80 RPM</b>		<b>65 RPM</b>			
0.87	531	C002_0175	MR140/	050	AW140/010	17.525	286	0.72	531	0.58	531
0.87	531	C002_0175	MR160/	050, 140	AW160/012	17.525	286	0.72	531	0.58	531
1.72	1,063	C102_0175	MR140/	050	AW140/010	17.727	408	1.42	1,063	1.14	1,063
1.72	1,063	C102_0175	MR160/	050, 140	AW160/012	17.727	408	1.42	1,063	1.14	1,063
1.72	1,063	C102_0175	MR200/	180	AW200/014	17.727	408	1.42	1,063	1.14	1,063
2.42	1,483	C202_0175	MR140/	050	AW140/010	17.517	572	2.01	1,483	1.61	1,483
2.89	1,772	C202_0175	MR160/	050, 140	AW160/012	17.517	572	2.40	1,772	1.92	1,772
2.89	1,772	C202_0175	MR200/	180	AW200/014	17.517	572	2.40	1,772	1.92	1,772
5.06	3,100	C302_0175	MR160/	050, 140	AW160/012	17.540	851	4.19	3,100	3.35	3,100
5.06	3,100	C302_0175	MR200/	180	AW200/014	17.540	851	4.19	3,100	3.35	3,100
5.06	3,100	C302_0175	MR250/	180, 210	AW250/102	17.540	851	4.19	3,100	3.35	3,100
7.92	4,872	C402_0175	MR160/	050, 140	AW160/012	17.604	1,462	6.56	4,872	5.25	4,872
7.92	4,872	C402_0175	MR200/	180	AW200/014	17.604	1,462	6.56	4,872	5.25	4,872
7.92	4,872	C402_0175	MR250/	180, 210	AW250/102	17.604	1,462	6.56	4,872	5.25	4,872
9.84	6,050	C502_0175	MR160/	050, 140	AW160/012	17.604	1,793	8.15	6,050	6.52	6,050
11.52	7,086	C502_0175	MR200/	180	AW200/014	17.604	1,793	9.55	7,086	7.64	7,086
11.52	7,086	C502_0175	MR250/	180, 210	AW250/102	17.604	1,793	9.55	7,086	7.64	7,086
11.52	7,086	C502_0175	MR300/	180, 210, 250, 280	AW300/110	17.604	1,793	9.55	7,086	7.64	7,086
18.72	11,515	C612_0175	MR200/	180	AW200/014	17.600	2,411	15.51	11,515	12.41	11,515
18.72	11,515	C612_0175	MR250/	180, 210	AW250/102	17.600	2,411	15.51	11,515	12.41	11,515

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>100 RPM Output (Approximate) Continued</b>											
								<b>80 RPM</b>		<b>65 RPM</b>	
18.72	11,515	C612_0175	MR300/	180, 210, 250, 280	AW300/110	17.600	2,411	15.51	11,515	12.41	11,515
34.84	21,046	C812_0175	MR250/	180, 210	AW250/102	17.287	4,500	28.87	21,046	23.10	21,046
52.79	31,889	C812_0175	MR300/	180, 210, 250, 280	AW300/110	17.287	4,500	43.74	31,889	34.99	31,889
52.79	31,889	C812_0175	MR350/	320, 360	AW350/202	17.287	4,500	43.74	31,889	34.99	31,889
86.19*	53,148	C912_0175	MR350/	320, 360	AW350/202	17.648	5,579	71.41	53,148	57.13	53,148
<b>90 RPM Output (Approximate)</b>											
								<b>75 RPM</b>		<b>60 RPM</b>	
15.96	10,934	C612_0195	MR200/	180	AW200/014	19.607	2,477	14.08	11,641	12.13	12,540
18.62	12,759	C612_0195	MR250/	180, 210	AW250/102	19.607	2,477	15.53	12,844	12.43	12,844
18.62	12,759	C612_0195	MR300/	180, 210, 250, 280	AW300/110	19.607	2,477	15.53	12,844	12.43	12,844
23.36	14,906	C712_0185	MR200/	180	AW200/014	18.261	3,346	19.36	14,906	15.48	14,906
27.76	17,716	C712_0185	MR250/	180, 210	AW250/102	18.261	3,346	23.01	17,716	18.40	17,716
27.76	17,716	C712_0185	MR300/	180, 210, 250, 280	AW300/110	18.261	3,346	23.01	17,716	18.40	17,716
31.90	22,576	C812_0200	MR250/	180, 210	AW250/102	20.257	4,682	26.43	22,576	21.14	22,576
49.00	34,684	C812_0200	MR300/	180, 210, 250, 280	AW300/110	20.257	4,682	43.23	36,928	34.84	37,204
49.00	34,684	C812_0200	MR350/	320, 360	AW350/202	20.257	4,682	43.23	36,928	34.84	37,204
<b>85 RPM Output (Approximate)</b>											
								<b>70 RPM</b>		<b>55 RPM</b>	
0.73	531	C002_0210	MR140/	050	AW140/010	20.714	298	0.61	531	0.49	531
0.73	531	C002_0210	MR160/	050, 140	AW160/012	20.714	298	0.61	531	0.49	531
1.46	1,063	C102_0210	MR140/	050	AW140/010	20.844	424	1.21	1,063	0.97	1,063
1.46	1,063	C102_0210	MR160/	050, 140	AW160/012	20.844	424	1.21	1,063	0.97	1,063
1.46	1,063	C102_0210	MR200/	180	AW200/014	20.844	424	1.21	1,063	0.97	1,063
2.29	1,650	C202_0210	MR140/	050	AW140/010	20.583	595	1.90	1,650	1.52	1,650
2.46	1,772	C202_0210	MR160/	050, 140	AW160/012	20.583	595	2.04	1,772	1.63	1,772
2.46	1,772	C202_0210	MR200/	180	AW200/014	20.583	595	2.04	1,772	1.63	1,772
4.27	3,100	C302_0210	MR160/	050, 140	AW160/012	20.800	888	3.53	3,100	2.83	3,100
4.27	3,100	C302_0210	MR200/	180	AW200/014	20.800	888	3.53	3,100	2.83	3,100
4.27	3,100	C302_0210	MR250/	180, 210	AW250/102	20.800	888	3.53	3,100	2.83	3,100
6.67	4,872	C402_0210	MR160/	050, 140	AW160/012	20.899	1,526	5.53	4,872	4.42	4,872
6.67	4,872	C402_0210	MR200/	180	AW200/014	20.899	1,526	5.53	4,872	4.42	4,872
6.67	4,872	C402_0210	MR250/	180, 210	AW250/102	20.899	1,526	5.53	4,872	4.42	4,872
9.69	7,061	C502_0210	MR160/	050, 140	AW160/012	20.844	1,871	8.06	7,086	6.45	7,086
9.73	7,086	C502_0210	MR200/	180	AW200/014	20.844	1,871	8.06	7,086	6.45	7,086
9.73	7,086	C502_0210	MR250/	180, 210	AW250/102	20.844	1,871	8.06	7,086	6.45	7,086
9.73	7,086	C502_0210	MR300/	180, 210, 250, 280	AW300/110	20.844	1,871	8.06	7,086	6.45	7,086
18.57	13,413	C712_0210	MR200/	180	AW200/014	20.672	3,451	16.38	14,281	14.12	15,384
29.43	21,259	C712_0210	MR250/	180	AW250/102	20.672	3,451	24.39	21,259	19.51	21,259
29.43	21,259	C712_0210	MR300/	180, 210, 250, 280	AW300/110	20.672	3,451	24.39	21,259	19.51	21,259
<b>75 RPM Output (Approximate) Continued Next Page</b>											
								<b>60 RPM</b>		<b>50 RPM</b>	
0.66	531	C002_0230	MR140/	050	AW140/010	23.214	307	0.54	531	0.43	531
0.66	531	C002_0230	MR160/	050, 140	AW160/012	23.214	307	0.54	531	0.43	531
1.29	1,063	C102_0240	MR140/	050	AW140/010	23.523	437	1.07	1,063	0.86	1,063
1.29	1,063	C102_0240	MR160/	050, 140	AW160/012	23.523	437	1.07	1,063	0.86	1,063
1.29	1,063	C102_0240	MR200/	180	AW200/014	23.523	437	1.07	1,063	0.86	1,063
2.15	1,772	C202_0240	MR140/	050	AW140/010	23.593	616	1.78	1,772	1.42	1,772
2.15	1,772	C202_0240	MR160/	050, 140	AW160/012	23.593	616	1.78	1,772	1.42	1,772

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>75 RPM Output (Approximate) Continued</b>											
								<b>60 RPM</b>		<b>50 RPM</b>	
2.15	1,772	C202_0240	MR200/	180	AW200/014	23.593	616	1.78	1,772	1.42	1,772
3.78	3,100	C302_0230	MR160/	050, 140	AW160/012	23.472	915	3.13	3,100	2.51	3,100
3.78	3,100	C302_0230	MR200/	180	AW200/014	23.472	915	3.13	3,100	2.51	3,100
3.78	3,100	C302_0230	MR250/	180, 210	AW250/102	23.472	915	3.13	3,100	2.51	3,100
5.97	4,872	C402_0230	MR160/	050, 140	AW160/012	23.359	1,569	4.95	4,872	3.96	4,872
5.97	4,872	C402_0230	MR200/	180	AW200/014	23.359	1,569	4.95	4,872	3.96	4,872
5.97	4,872	C402_0230	MR250/	180, 210	AW250/102	23.359	1,569	4.95	4,872	3.96	4,872
8.68	7,086	C502_0230	MR160/	050, 140	AW160/012	23.359	1,925	7.19	7,086	5.76	7,086
8.68	7,086	C502_0230	MR200/	180	AW200/014	23.359	1,925	7.19	7,086	5.76	7,086
8.68	7,086	C502_0230	MR250/	180, 210	AW250/102	23.359	1,925	7.19	7,086	5.76	7,086
8.68	7,086	C502_0230	MR300/	180, 210, 250, 280	AW300/110	23.359	1,925	7.19	7,086	5.76	7,086
14.54	11,515	C612_0230	MR200/	180	AW200/014	22.667	2,568	12.05	11,515	9.64	11,515
14.54	11,515	C612_0230	MR250/	180, 210	AW250/102	22.667	2,568	12.05	11,515	9.64	11,515
14.54	11,515	C612_0230	MR300/	180, 210, 250, 280	AW300/110	22.667	2,568	12.05	11,515	9.64	11,515
21.87	17,716	C712_0230	MR200/	180	AW200/014	23.182	3,551	18.12	17,716	14.50	17,716
21.87	17,716	C712_0230	MR250/	180, 210	AW250/102	23.182	3,551	18.12	17,716	14.50	17,716
21.87	17,716	C712_0230	MR300/	180, 210, 250, 280	AW300/110	23.182	3,551	18.12	17,716	14.50	17,716
32.99	26,733	C812_0230	MR250/	180, 210	AW250/102	23.188	4,843	27.34	26,733	21.87	26,733
39.36	31,889	C812_0230	MR300/	180, 210, 250, 280	AW300/110	23.188	4,843	32.61	31,889	26.09	31,889
39.36	31,889	C812_0230	MR350/	320, 360	AW350/202	23.188	4,843	32.61	31,889	26.09	31,889
65.03	53,148	C912_0230	MR300/	180, 210, 250, 280	AW300/110	23.390	5,986	53.88	53,148	43.11	53,148
65.03	53,148	C912_0230	MR350/	320, 360	AW350/202	23.390	5,986	53.88	53,148	43.11	53,148
<b>70 RPM Output (Approximate)</b>											
								<b>55 RPM</b>		<b>45 RPM</b>	
0.61	531	C002_0250	MR140/	050	AW140/010	24.972	312	0.50	531	0.40	531
0.61	531	C002_0250	MR160/	050, 140	AW160/012	24.972	312	0.50	531	0.40	531
1.21	1,063	C102_0250	MR140/	050	AW140/010	25.133	445	1.00	1,063	0.80	1,063
1.21	1,063	C102_0250	MR160/	050, 140	AW160/012	25.133	445	1.00	1,063	0.80	1,063
2.06	1,772	C202_0250	MR140/	050	AW140/010	24.641	623	1.70	1,772	1.36	1,772
2.06	1,772	C202_0250	MR160/	050, 140	AW160/012	24.641	623	1.70	1,772	1.36	1,772
2.06	1,772	C202_0250	MR200/	180	AW200/014	24.641	623	1.70	1,772	1.36	1,772
3.58	3,100	C302_0250	MR160/	050, 140	AW160/012	24.800	928	2.96	3,100	2.37	3,100
3.58	3,100	C302_0250	MR200/	180	AW200/014	24.800	928	2.96	3,100	2.37	3,100
3.58	3,100	C302_0250	MR250/	180, 210	AW250/102	24.800	928	2.96	3,100	2.37	3,100
5.59	4,872	C402_0250	MR160/	050, 140	AW160/012	24.923	1,594	4.64	4,872	3.71	4,872
5.59	4,872	C402_0250	MR200/	180	AW200/014	24.923	1,594	4.64	4,872	3.71	4,872
5.59	4,872	C402_0250	MR250/	180, 210	AW250/102	24.923	1,594	4.64	4,872	3.71	4,872
8.09	7,086	C502_0250	MR160/	050, 140	AW160/012	25.073	1,959	6.70	7,086	5.36	7,086
8.09	7,086	C502_0250	MR200/	180	AW200/014	25.073	1,959	6.70	7,086	5.36	7,086
8.09	7,086	C502_0250	MR250/	180, 210	AW250/102	25.073	1,959	6.70	7,086	5.36	7,086
8.09	7,086	C502_0250	MR300/	180, 210, 250, 280	AW300/110	25.073	1,959	6.70	7,086	5.36	7,086
13.15	11,454	C612_0250	MR200/	180	AW200/014	24.928	2,630	11.60	12,195	9.77	12,844
14.75	12,844	C612_0250	MR250/	180, 210	AW250/102	24.928	2,630	12.22	12,844	9.77	12,844
14.75	12,844	C612_0250	MR300/	180, 210, 250, 280	AW300/110	24.928	2,630	12.22	12,844	9.77	12,844
15.96	14,116	C712_0250	MR200/	180	AW200/014	25.313	3,630	14.08	15,029	12.13	16,190
24.04	21,259	C712_0250	MR250/	180, 210	AW250/102	25.313	3,630	19.92	21,259	15.93	21,259
24.04	21,259	C712_0250	MR300/	180, 210, 250, 280	AW300/110	25.313	3,630	19.92	21,259	15.93	21,259

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>60 RPM Output (Approximate)</b>											
0.54	531	C002_0280	MR140/	050	AW140/010	27.986	321	0.45	531	0.36	531
0.54	531	C002_0280	MR160/	050, 140	AW160/012	27.986	321	0.45	531	0.36	531
1.07	1,063	C102_0280	MR140/	050	AW140/010	28.364	458	0.89	1,063	0.71	1,063
1.07	1,063	C102_0280	MR160/	050, 140	AW160/012	28.364	458	0.89	1,063	0.71	1,063
1.80	1,772	C202_0280	MR140/	050	AW140/010	28.243	644	1.49	1,772	1.19	1,772
1.80	1,772	C202_0280	MR160/	050, 140	AW160/012	28.243	644	1.49	1,772	1.19	1,772
1.80	1,772	C202_0280	MR200/	180	AW200/014	28.243	644	1.49	1,772	1.19	1,772
3.17	3,100	C302_0280	MR160/	050, 140	AW160/012	27.986	956	2.63	3,100	2.10	3,100
3.17	3,100	C302_0280	MR200/	180	AW200/014	27.986	956	2.63	3,100	2.10	3,100
3.17	3,100	C302_0280	MR250/	180, 210	AW250/102	27.986	956	2.63	3,100	2.10	3,100
7.22	7,086	C502_0280	MR160/	050, 140	AW160/012	28.099	2,016	5.98	7,086	4.78	7,086
7.22	7,086	C502_0280	MR200/	180	AW200/014	28.099	2,016	5.98	7,086	4.78	7,086
7.22	7,086	C502_0280	MR250/	180, 210	AW250/102	28.099	2,016	5.98	7,086	4.78	7,086
7.22	7,086	C502_0280	MR300/	180, 210, 250, 280	AW300/110	28.099	2,016	5.98	7,086	4.78	7,086
12.01	11,515	C612_0270	MR200/	180	AW200/014	27.429	2,694	9.96	11,515	7.96	11,515
12.01	11,515	C612_0270	MR250/	180, 210	AW250/102	27.429	2,694	9.96	11,515	7.96	11,515
12.01	11,515	C612_0270	MR300/	180, 210, 250, 280	AW300/110	27.429	2,694	9.96	11,515	7.96	11,515
17.71	17,716	C712_0290	MR200/	180	AW200/014	28.636	3,744	14.67	17,716	11.74	17,716
17.71	17,716	C712_0290	MR250/	180, 210	AW250/102	28.636	3,744	14.67	17,716	11.74	17,716
17.71	17,716	C712_0290	MR300/	180, 210, 250, 280	AW300/110	28.636	3,744	14.67	17,716	11.74	17,716
30.29	27,576	C812_0260	MR250/	180, 210	AW250/102	26.058	4,986	25.09	27,576	20.08	27,576
31.90	30,612	C812_0270	MR250/	180, 210	AW250/102	27.467	5,052	26.43	30,612	21.14	30,612
33.23	31,889	C812_0270	MR300/	180, 210, 250, 280	AW300/110	27.467	5,052	27.53	31,889	22.02	31,889
33.23	31,889	C812_0270	MR350/	320, 360	AW350/202	27.467	5,052	27.53	31,889	22.02	31,889
40.86	37,204	C812_0260	MR300/	180, 210, 250, 280	AW300/110	26.058	4,986	33.86	37,204	27.08	37,204
53.13	53,148	C912_0290	MR300/	180, 210, 250, 280	AW300/110	28.631	6,296	44.02	53,148	35.22	53,148
53.13	53,148	C912_0290	MR350/	320, 360	AW350/202	28.631	6,296	44.02	53,148	35.22	53,148
<b>55 RPM Output (Approximate)</b>											
0.49	531	C002_0310	MR140/	050	AW140/010	31.256	330	0.40	531	0.32	531
0.49	531	C002_0310	MR160/	050, 140	AW160/012	31.256	330	0.40	531	0.32	531
0.98	1,063	C102_0310	MR140/	050	AW140/010	31.071	469	0.81	1,063	0.65	1,063
0.98	1,063	C102_0310	MR160/	050, 140	AW160/012	31.071	469	0.81	1,063	0.65	1,063
1.65	1,772	C202_0310	MR140/	050	AW140/010	30.692	658	1.37	1,772	1.10	1,772
1.65	1,772	C202_0310	MR160/	050, 140	AW160/012	30.692	658	1.37	1,772	1.10	1,772
2.86	3,100	C302_0310	MR160/	050, 140	AW160/012	31.040	981	2.37	3,100	1.89	3,100
2.86	3,100	C302_0310	MR200/	180	AW200/014	31.040	981	2.37	3,100	1.89	3,100
2.86	3,100	C302_0310	MR250/	180, 210	AW250/102	31.040	981	2.37	3,100	1.89	3,100
4.48	4,872	C402_0310	MR160/	050, 140	AW160/012	31.154	1,686	3.71	4,872	2.97	4,872
4.48	4,872	C402_0310	MR200/	180	AW200/014	31.154	1,686	3.71	4,872	2.97	4,872
4.48	4,872	C402_0310	MR250/	180, 210	AW250/102	31.154	1,686	3.71	4,872	2.97	4,872
6.49	7,086	C502_0310	MR160/	050, 140	AW160/012	31.231	2,070	5.38	7,086	4.30	7,086
6.49	7,086	C502_0310	MR200/	180	AW200/014	31.231	2,070	5.38	7,086	4.30	7,086
6.49	7,086	C502_0310	MR250/	180, 210	AW250/102	31.231	2,070	5.38	7,086	4.30	7,086
10.61	12,011	C612_0320	MR200/	180	AW200/014	32.406	2,808	9.36	12,788	7.52	12,844
11.34	12,844	C612_0320	MR250/	180, 210	AW250/102	32.406	2,808	9.40	12,844	7.52	12,844
11.34	12,844	C612_0320	MR300/	180, 210, 250, 280	AW300/110	32.406	2,808	9.40	12,844	7.52	12,844
54.75	61,477	C912_0320	MR300/	180, 210, 250, 280	AW300/110	32.134	6,481	45.76	62,006	36.61	62,006
55.22	62,006	C912_0320	MR350/	320, 360	AW350/202	32.134	6,481	45.76	62,006	36.61	62,006

\* For thermal HP capacity, see rating below.

Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>50 RPM Output (Approximate)</b>											
0.43	531	C002_0350	MR140/	050	AW140/010	35.028	340	0.36	531	0.29	531
0.43	531	C002_0350	MR160/	050, 140	AW160/012	35.028	340	0.36	531	0.29	531
0.87	1,063	C102_0350	MR140/	050	AW140/010	35.065	483	0.72	1,063	0.58	1,063
0.87	1,063	C102_0350	MR160/	050, 140	AW160/012	35.065	483	0.72	1,063	0.58	1,063
1.44	1,772	C202_0350	MR140/	050	AW140/010	35.179	681	1.19	1,772	0.96	1,772
1.44	1,772	C202_0350	MR160/	050, 140	AW160/012	35.179	681	1.19	1,772	0.96	1,772
2.53	3,100	C302_0350	MR160/	050, 140	AW160/012	35.028	1,011	2.10	3,100	1.68	3,100
2.53	3,100	C302_0350	MR200/	180	AW200/014	35.028	1,011	2.10	3,100	1.68	3,100
2.53	3,100	C302_0350	MR250/	180, 210	AW250/102	35.028	1,011	2.10	3,100	1.68	3,100
4.00	4,872	C402_0350	MR160/	050, 140	AW160/012	34.821	1,733	3.32	4,872	2.65	4,872
4.00	4,872	C402_0350	MR200/	180	AW200/014	34.821	1,733	3.32	4,872	2.65	4,872
4.00	4,872	C402_0350	MR250/	180, 210	AW250/102	34.821	1,733	3.32	4,872	2.65	4,872
5.79	7,086	C502_0350	MR160/	050, 140	AW160/012	35.000	2,129	4.80	7,086	3.84	7,086
5.79	7,086	C502_0350	MR200/	180	AW200/014	35.000	2,129	4.80	7,086	3.84	7,086
5.79	7,086	C502_0350	MR250/	180, 210	AW250/102	35.000	2,129	4.80	7,086	3.84	7,086
9.45	11,515	C612_0350	MR200/	180	AW200/014	34.872	2,860	7.83	11,515	6.26	11,515
9.45	11,515	C612_0350	MR250/	180, 210	AW250/102	34.872	2,860	7.83	11,515	6.26	11,515
9.45	11,515	C612_0350	MR300/	180, 210, 250, 280	AW300/110	34.872	2,860	7.83	11,515	6.26	11,515
12.55	14,816	C712_0340	MR200/	180	AW200/014	33.797	3,902	11.07	15,775	9.54	16,993
14.46	17,716	C712_0350	MR200/	180	AW200/014	35.065	3,938	11.98	17,716	9.58	17,716
14.46	17,716	C712_0350	MR250/	180, 210	AW250/102	35.065	3,938	11.98	17,716	9.58	17,716
14.46	17,716	C712_0350	MR300/	180, 210, 250, 280	AW300/110	35.065	3,938	11.98	17,716	9.58	17,716
18.00	21,259	C712_0340	MR250/	180, 210	AW250/102	33.797	3,902	14.92	21,259	11.93	21,259
18.00	21,259	C712_0340	MR300/	180, 210, 250, 280	AW300/110	33.797	3,902	14.92	21,259	11.93	21,259
26.75	31,386	C812_0340	MR250/	180, 210	AW250/102	33.585	5,313	23.59	33,417	19.11	33,839
31.70	37,204	C812_0340	MR300/	180, 210, 250, 280	AW300/110	33.585	5,313	26.27	37,204	21.01	37,204
42.24	53,148	C912_0360	MR300/	180, 210, 250, 280	AW300/110	36.005	6,668	35.00	53,148	28.00	53,148
42.24	53,148	C912_0360	MR350/	320, 360	AW350/202	36.005	6,668	35.00	53,148	28.00	53,148
<b>45 RPM Output (Approximate)</b>											
0.36	531	C002_0420	MR140/	050	AW140/010	41.774	355	0.30	531	0.24	531
0.73	1,063	C102_0420	MR140/	050	AW140/010	41.567	504	0.61	1,063	0.49	1,063
0.73	1,063	C102_0420	MR160/	050, 140	AW160/012	41.567	504	0.61	1,063	0.49	1,063
1.24	1,772	C202_0410	MR140/	050	AW140/010	40.850	707	1.03	1,772	0.82	1,772
1.24	1,772	C202_0410	MR160/	050, 140	AW160/012	40.850	707	1.03	1,772	0.82	1,772
2.15	3,100	C302_0410	MR160/	050, 140	AW160/012	41.354	1,054	1.78	3,100	1.42	3,100
3.34	4,872	C402_0420	MR160/	050, 140	AW160/012	41.751	1,814	2.77	4,872	2.21	4,872
3.34	4,872	C402_0420	MR200/	180	AW200/014	41.751	1,814	2.77	4,872	2.21	4,872
3.34	4,872	C402_0420	MR250/	180, 210	AW250/102	41.751	1,814	2.77	4,872	2.21	4,872
4.86	7,086	C502_0420	MR160/	050, 140	AW160/012	41.688	2,224	4.03	7,086	3.22	7,086
4.86	7,086	C502_0420	MR200/	180	AW200/014	41.688	2,224	4.03	7,086	3.22	7,086
4.86	7,086	C502_0420	MR250/	180, 210	AW250/102	41.688	2,224	4.03	7,086	3.22	7,086
7.85	10,812	C612_0390	MR200/	180	AW200/014	39.396	2,949	6.51	10,812	5.21	10,812
7.85	10,812	C612_0390	MR250/	180, 210	AW250/102	39.396	2,949	6.51	10,812	5.21	10,812
10.61	15,202	C712_0410	MR200/	180	AW200/014	41.016	4,096	9.36	16,186	8.06	17,435
12.95	18,554	C712_0410	MR250/	180, 210	AW250/102	41.016	4,096	10.73	18,554	8.58	18,554
12.95	18,554	C712_0410	MR300/	180, 210, 250, 280	AW300/110	41.016	4,096	10.73	18,554	8.58	18,554
23.05	32,165	C812_0400	MR250/	180, 210	AW250/102	39.938	5,548	19.91	33,527	15.92	33,527
24.02	33,527	C812_0400	MR300/	180, 210, 250, 280	AW300/110	39.938	5,548	19.91	33,527	15.92	33,527
38.77	53,230	C912_0390	MR300/	180, 210, 250, 280	AW300/110	39.298	6,815	32.12	53,230	25.70	53,230

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>40 RPM Output (Approximate)</b>											
0.32	531	<b>C002_0470</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	46.815	366	0.27	531	0.22	531
0.65	1,063	<b>C102_0470</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	46.909	520	0.54	1,063	0.43	1,063
0.65	1,063	<b>C102_0470</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	46.909	520	0.54	1,063	0.43	1,063
1.08	1,772	<b>C202_0470</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	46.822	731	0.90	1,772	0.72	1,772
1.08	1,772	<b>C202_0470</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	46.822	731	0.90	1,772	0.72	1,772
1.90	3,100	<b>C302_0470</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	46.667	1,086	1.58	3,100	1.26	3,100
2.99	4,872	<b>C402_0470</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	46.667	1,865	2.48	4,872	1.98	4,872
2.99	4,872	<b>C402_0470</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	46.667	1,865	2.48	4,872	1.98	4,872
2.99	4,872	<b>C402_0470</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	46.667	1,865	2.48	4,872	1.98	4,872
4.34	7,086	<b>C502_0470</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	46.719	2,289	3.60	7,086	2.88	7,086
4.34	7,086	<b>C502_0470</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	46.719	2,289	3.60	7,086	2.88	7,086
4.34	7,086	<b>C502_0470</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	46.719	2,289	3.60	7,086	2.88	7,086
7.27	11,515	<b>C612_0450</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	45.333	3,054	6.02	11,515	4.82	11,515
7.27	11,515	<b>C612_0450</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	45.333	3,054	6.02	11,515	4.82	11,515
7.27	11,515	<b>C612_0450</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	45.333	3,054	6.02	11,515	4.82	11,515
10.83	17,716	<b>C712_0470</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	46.818	4,234	8.97	17,716	7.18	17,716
10.83	17,716	<b>C712_0470</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	46.818	4,234	8.97	17,716	7.18	17,716
10.83	17,716	<b>C712_0470</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	46.818	4,234	8.97	17,716	7.18	17,716
20.04	31,889	<b>C812_0460</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	45.538	5,733	16.61	31,889	13.28	31,889
20.04	31,889	<b>C812_0460</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	45.538	5,733	16.61	31,889	13.28	31,889
33.32	53,148	<b>C912_0460</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	45.655	7,075	27.60	53,148	22.08	53,148
33.32	53,148	<b>C912_0460</b>	<b>MR350/</b>	<b>320, 360</b>	<b>AW350/202</b>	45.655	7,075	27.60	53,148	22.08	53,148
<b>35 RPM Output (Approximate)</b>											
0.30	531	<b>C002_0500</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	49.944	372	0.25	531	0.20	531
0.61	1,063	<b>C102_0500</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	49.944	528	0.50	1,063	0.40	1,063
1.03	1,772	<b>C202_0490</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	49.227	740	0.85	1,772	0.68	1,772
1.03	1,772	<b>C202_0490</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	49.227	740	0.85	1,772	0.68	1,772
1.78	3,100	<b>C302_0500</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	49.745	1,104	1.48	3,100	1.18	3,100
2.78	4,872	<b>C402_0500</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	50.192	1,899	2.30	4,872	1.84	4,872
4.07	7,086	<b>C502_0500</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	49.821	2,326	3.37	7,086	2.70	7,086
4.07	7,086	<b>C502_0500</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	49.821	2,326	3.37	7,086	2.70	7,086
4.07	7,086	<b>C502_0500</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	49.821	2,326	3.37	7,086	2.70	7,086
7.46	12,844	<b>C613_0490</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	49.277	3,119	6.18	12,844	4.94	12,844
11.97	21,259	<b>C713_0510</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	50.845	4,322	9.91	21,259	7.93	21,259
17.26	29,662	<b>C813_0490</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	49.176	5,844	14.30	29,662	11.44	29,662
<b>30 RPM Output (Approximate) Continued Next Page</b>											
<b>26 RPM</b>											
<b>21 RPM</b>											
0.27	531	<b>C002_0560</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	55.972	382	0.23	531	0.18	531
0.54	1,063	<b>C102_0560</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	56.364	544	0.45	1,063	0.36	1,063
0.90	1,772	<b>C202_0560</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	56.424	766	0.74	1,772	0.60	1,772
0.90	1,772	<b>C202_0560</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	56.424	766	0.74	1,772	0.60	1,772
1.58	3,100	<b>C302_0560</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	56.136	1,138	1.31	3,100	1.05	3,100
2.49	4,872	<b>C402_0560</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	56.101	1,953	2.06	4,872	1.65	4,872
3.63	7,086	<b>C502_0560</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	55.833	2,393	3.01	7,086	2.41	7,086
3.63	7,086	<b>C502_0560</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	55.833	2,393	3.01	7,086	2.41	7,086
3.63	7,086	<b>C502_0560</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	55.833	2,393	3.01	7,086	2.41	7,086
5.98	11,515	<b>C612_0550</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	55.111	3,207	4.95	11,515	3.96	11,515
5.98	11,515	<b>C612_0550</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	55.111	3,207	4.95	11,515	3.96	11,515
8.92	17,716	<b>C712_0570</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	56.818	4,443	7.39	17,716	5.91	17,716
8.92	17,716	<b>C712_0570</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	56.818	4,443	7.39	17,716	5.91	17,716

\* For thermal HP capacity, see rating below.

Base Module Thermal Capacity	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>30 RPM Output (Approximate) Continued</b>											
8.92	17,716	C712_0570	MR300/	180, 210, 250, 280	AW300/110	56.818	4,443	7.39	17,716	5.91	17,716
16.85	31,889	C812_0540	MR250/	180, 210	AW250/102	54.154	5,987	13.96	31,889	11.17	31,889
16.85	31,889	C812_0540	MR300/	180, 210, 250, 280	AW300/110	54.154	5,987	13.96	31,889	11.17	31,889
27.24	53,148	C912_0560	MR300/	180, 210, 250, 280	AW300/110	55.833	7,441	22.57	53,148	18.06	53,148
<b>26 RPM</b>											
<b>21 RPM</b>											
<b>28 RPM Output (Approximate)</b>											
0.24	531	C002_0620	MR140/	050	AW140/010	62.350	393	0.20	531	0.16	531
0.48	1,054	C102_0620	MR140/	050	AW140/010	62.431	558	0.40	1,054	0.32	1,054
0.77	1,658	C202_0610	MR140/	050	AW140/010	61.354	782	0.64	1,658	0.51	1,658
1.35	2,932	C302_0620	MR160/	050, 140	AW160/012	61.920	1,166	1.12	2,932	0.90	2,932
2.03	4,440	C402_0630	MR160/	050, 140	AW160/012	62.515	2,007	1.68	4,440	1.35	4,440
2.90	6,325	C502_0620	MR160/	050, 140	AW160/012	62.431	2,461	2.40	6,325	1.92	6,325
5.79	12,844	C613_0630	MR200/	180	AW200/014	63.462	3,322	4.80	12,844	3.84	12,844
9.43	21,259	C713_0650	MR250/	180, 210	AW250/102	64.547	4,587	7.81	21,259	6.25	21,259
15.25	35,139	C813_0660	MR250/	180, 210	AW250/102	65.963	6,290	13.37	37,204	10.70	37,204
<b>23 RPM</b>											
<b>18 RPM</b>											
<b>25 RPM Output (Approximate)</b>											
0.22	531	C002_0700	MR140/	050	AW140/010	69.875	404	0.18	531	0.14	531
0.43	1,063	C102_0700	MR140/	050	AW140/010	70.455	575	0.36	1,063	0.29	1,063
0.72	1,772	C202_0700	MR140/	050	AW140/010	70.324	810	0.60	1,772	0.48	1,772
1.27	3,100	C302_0700	MR160/	050, 140	AW160/012	69.875	1,202	1.05	3,100	0.84	3,100
2.00	4,872	C402_0700	MR160/	050, 140	AW160/012	69.875	2,063	1.65	4,872	1.32	4,872
2.90	7,086	C502_0700	MR160/	050, 140	AW160/012	69.965	2,532	2.40	7,086	1.92	7,086
4.78	11,515	C612_0690	MR200/	180	AW200/014	68.889	3,391	3.96	11,515	3.17	11,515
4.78	11,515	C612_0690	MR250/	180, 210	AW250/102	68.889	3,391	3.96	11,515	3.17	11,515
7.29	17,716	C712_0700	MR200/	180	AW200/014	69.545	4,674	6.04	17,716	4.83	17,716
7.29	17,716	C712_0700	MR250/	180, 210	AW250/102	69.545	4,674	6.04	17,716	4.83	17,716
13.25	31,889	C812_0690	MR250/	180, 210	AW250/102	68.889	6,358	10.98	31,889	8.78	31,889
13.25	31,889	C812_0690	MR300/	180, 210, 250, 280	AW300/110	68.889	6,358	10.98	31,889	8.78	31,889
21.74	53,148	C912_0700	MR300/	180, 210, 250, 280	AW300/110	69.965	7,872	18.01	53,148	14.41	53,148
<b>21 RPM</b>											
<b>17 RPM</b>											
<b>22 RPM Output (Approximate)</b>											
0.37	1,063	C103_0820	MR140/	050	AW140/010	81.638	597	0.31	1,063	0.25	1,063
0.63	1,772	C203_0810	MR140/	050	AW140/010	80.618	838	0.52	1,772	0.42	1,772
0.64	1,772	C203_0800	MR160/	050, 140	AW160/012	79.589	835	0.53	1,772	0.42	1,772
1.06	3,003	C303_0810	MR140/	050	AW140/010	81.467	1,249	0.87	3,003	0.70	3,003
1.73	4,872	C403_0810	MR160/	050, 140	AW160/012	80.810	2,140	1.43	4,872	1.14	4,872
2.52	7,086	C503_0810	MR160/	050, 140	AW160/012	80.596	2,623	2.08	7,086	1.67	7,086
4.79	12,844	C613_0770	MR200/	180	AW200/014	76.795	3,484	3.97	12,844	3.17	12,844
6.72	19,007	C713_0810	MR200/	180	AW200/014	80.965	4,855	5.93	20,237	4.98	21,259
7.63	21,259	C713_0800	MR250/	180, 210	AW250/102	79.734	4,836	6.32	21,259	5.06	21,259
13.50	36,844	C813_0780	MR250/	180, 210	AW250/102	78.133	6,562	11.29	37,204	9.03	37,204
15.60	41,738	C913_0780	MR250/	180, 210	AW250/102	77.728	8,082	13.76	44,438	11.02	44,495
<b>18 RPM</b>											
<b>15 RPM</b>											
<b>20 RPM Output (Approximate) Continued Next Page</b>											
0.33	1,063	C103_0920	MR140/	050	AW140/010	92.131	608	0.27	1,063	0.22	1,063
0.55	1,772	C203_0920	MR140/	050	AW140/010	92.404	855	0.45	1,772	0.36	1,772
0.56	1,772	C203_0910	MR160/	050, 140	AW160/012	91.225	855	0.46	1,772	0.37	1,772
0.97	3,100	C303_0920	MR140/	050	AW140/010	91.933	1,271	0.80	3,100	0.64	3,100
0.98	3,100	C303_0910	MR160/	050, 140	AW160/012	90.759	1,271	0.81	3,100	0.65	3,100
<b>16 RPM</b>											
<b>13 RPM</b>											

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – Concentric Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>20 RPM Output (Approximate) Continued</b>											
								<b>16 RPM</b>		<b>13 RPM</b>	
1.54	4,872	C403_0900	MR160/	050, 140	AW160/012	90.323	2,183	1.28	4,872	1.02	4,872
2.25	7,086	C503_0900	MR160/	050, 140	AW160/012	90.323	2,678	1.86	7,086	1.49	7,086
3.04	9,299	C613_0880	MR160/	050, 140	AW160/012	87.644	3,600	2.52	9,299	2.01	9,299
3.71	11,515	C613_0890	MR200/	180	AW200/014	88.778	3,600	3.08	11,515	2.46	11,515
5.67	17,716	C713_0890	MR250/	180, 210	AW250/102	89.416	4,950	4.70	17,716	3.76	17,716
7.85	24,905	C813_0910	MR200/	180	AW200/014	90.821	6,750	6.50	24,905	5.20	24,905
10.20	31,889	C813_0890	MR250/	180, 210	AW250/102	89.441	6,750	8.45	31,889	6.76	31,889
<b>18 RPM Output (Approximate)</b>											
								<b>14 RPM</b>		<b>11 RPM</b>	
3.76	12,844	C613_0980	MR200/	180	AW200/014	97.634	3,600	3.12	12,844	2.50	12,844
5.86	20,308	C713_0990	MR200/	180	AW200/014	99.141	4,950	5.08	21,259	4.07	21,259
6.23	21,259	C713_0980	MR250/	180, 210	AW250/102	97.634	4,950	5.16	21,259	4.13	21,259
10.59	37,204	C813_1010	MR250/	180, 210	AW250/102	100.511	6,750	8.78	37,204	7.02	37,204
<b>16 RPM Output (Approximate)</b>											
								<b>13 RPM</b>		<b>11 RPM</b>	
0.27	1,063	C103_1110	MR140/	050	AW140/010	111.091	608	0.23	1,063	0.18	1,063
0.46	1,772	C203_1090	MR160/	050, 140	AW160/012	109.206	855	0.38	1,772	0.31	1,772
0.82	3,100	C303_1080	MR160/	050, 140	AW160/012	108.213	1,271	0.68	3,100	0.54	3,100
1.29	4,872	C403_1080	MR160/	050, 140	AW160/012	107.714	2,183	1.07	4,872	0.86	4,872
1.87	7,086	C503_1090	MR160/	050, 140	AW160/012	108.649	2,678	1.55	7,086	1.24	7,086
2.92	10,835	C613_1060	MR160/	050, 140	AW160/012	106.057	3,600	2.42	10,835	1.94	10,835
3.07	11,515	C613_1070	MR200/	180	AW200/014	107.429	3,600	2.54	11,515	2.03	11,515
4.59	17,716	C713_1100	MR250/	180, 210	AW250/102	110.455	4,950	3.80	17,716	3.04	17,716
7.85	29,498	C813_1080	MR200/	180	AW200/014	107.578	6,750	6.50	29,498	5.20	29,498
13.77	53,148	C913_1100	MR250/	180, 210	AW250/102	110.434	8,325	11.41	53,148	9.13	53,148
<b>13 RPM Output (Approximate)</b>											
								<b>11 RPM</b>		<b>9 RPM</b>	
0.37	1,772	C203_1380	MR140/	050	AW140/010	137.786	855	0.30	1,772	0.24	1,772
0.37	1,772	C203_1360	MR160/	050, 140	AW160/012	136.027	855	0.31	1,772	0.25	1,772
0.65	3,100	C303_1370	MR140/	050	AW140/010	137.192	1,271	0.54	3,100	0.43	3,100
0.66	3,100	C303_1350	MR160/	050, 140	AW160/012	135.441	1,271	0.54	3,100	0.43	3,100
1.04	4,872	C403_1350	MR160/	050, 140	AW160/012	134.643	2,183	0.86	4,872	0.69	4,872
1.50	7,086	C503_1350	MR160/	050, 140	AW160/012	135.333	2,678	1.24	7,086	0.99	7,086
2.44	11,515	C613_1350	MR160/	050, 140	AW160/012	134.838	3,600	2.03	11,515	1.62	11,515
2.90	12,844	C613_1270	MR200/	180	AW200/014	126.924	3,600	2.40	12,844	1.92	12,844
3.69	17,716	C713_1370	MR200/	180	AW200/014	137.338	4,950	3.06	17,716	2.45	17,716
4.67	21,259	C713_1300	MR250/	180, 210	AW250/102	130.359	4,950	3.87	21,259	3.09	21,259
6.59	31,889	C813_1380	MR200/	180	AW200/014	138.389	6,750	5.46	31,889	4.37	31,889
6.70	31,889	C813_1360	MR250/	180, 210	AW250/102	136.286	6,750	5.55	31,889	4.44	31,889
<b>10 RPM Output (Approximate)</b>											
								<b>8 RPM</b>		<b>7 RPM</b>	
1.86	11,515	C613_1780	MR200/	180	AW200/014	177.556	3,600	1.54	11,515	1.23	11,515
1.88	11,515	C613_1750	MR160/	050, 140	AW160/012	175.289	3,600	1.56	11,515	1.25	11,515
5.12	31,889	C813_1780	MR200/	180	AW200/014	178.359	6,750	4.24	31,889	3.39	31,889
5.20	31,889	C813_1760	MR250/	180, 210	AW250/102	175.648	6,750	4.30	31,889	3.44	31,889
8.64	53,148	C913_1760	MR250/	180, 210	AW250/102	176.097	8,325	7.16	53,148	5.73	53,148

\* For thermal HP capacity, see rating below.

Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05





# "C" Series – Concentric Helical MGS Reducer – Selection Data

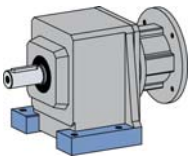


- NOTE:** 1) Complete Base Module Part Number by adding the Housing Style. Example: C302N0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft) and add to Part Number.  
 3) Select the Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
 4) Overhung Load is measured at the center of the shaft extension.

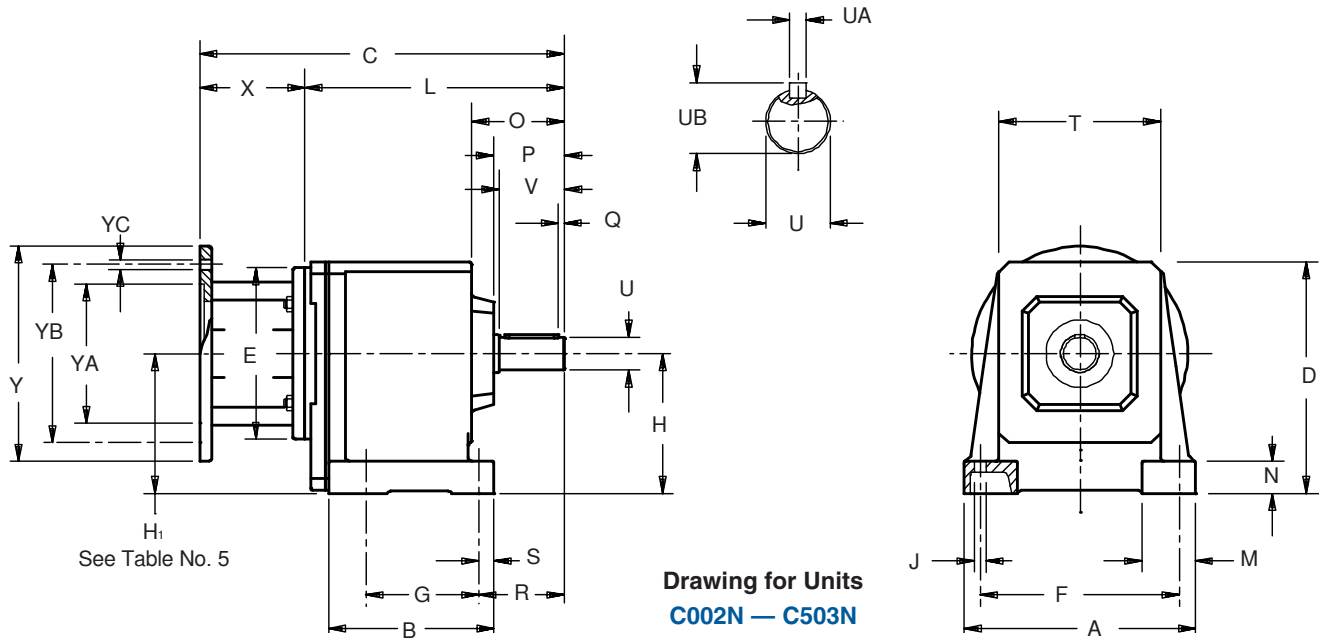
1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>9.5 RPM Output (Approximate)</b>						<b>7.5 RPM</b>		<b>6 RPM</b>			
0.17	1,063	<b>C103_1840</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	183.727	608	0.14	1,063	0.11	1,063
0.28	1,772	<b>C203_1830</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	183.387	855	0.23	1,772	0.18	1,772
0.28	1,772	<b>C203_1810</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	181.046	855	0.23	1,772	0.19	1,772
0.49	3,100	<b>C303_1830</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	182.778	1,271	0.40	3,100	0.32	3,100
0.49	3,100	<b>C303_1800</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	180.444	1,271	0.41	3,100	0.33	3,100
1.12	7,086	<b>C503_1810</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	180.646	2,678	0.93	7,086	0.74	7,086
2.76	17,716	<b>C713_1830</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	183.371	4,950	2.29	17,716	1.83	17,716
<b>8 RPM Output (Approximate)</b>						<b>7 RPM</b>		<b>5 RPM</b>			
0.14	1,063	<b>C103_2210</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	220.758	608	0.11	1,063	0.09	1,063
0.23	1,772	<b>C203_2210</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	220.995	855	0.19	1,772	0.15	1,772
0.40	3,100	<b>C303_2200</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	219.867	1,271	0.33	3,100	0.27	3,100
0.41	3,100	<b>C303_2170</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	217.061	1,271	0.34	3,100	0.27	3,100
0.64	4,872	<b>C403_2170</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	216.925	2,183	0.53	4,872	0.43	4,872
0.94	7,086	<b>C503_2160</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	215.889	2,678	0.78	7,086	0.62	7,086
1.55	11,515	<b>C613_2130</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	213.096	3,600	1.28	11,515	1.03	11,515
2.28	17,716	<b>C713_2230</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	222.538	4,950	1.89	17,716	1.51	17,716
4.37	31,889	<b>C813_2090</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	208.879	6,750	3.62	31,889	2.90	31,889
7.06	53,148	<b>C913_2150</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	215.357	8,325	5.85	53,148	4.68	53,148
<b>6 RPM Output (Approximate)</b>						<b>5 RPM</b>		<b>4 RPM</b>			
0.11	1,063	<b>C103_2760</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	275.947	608	0.09	1,063	0.07	1,063
0.18	1,772	<b>C203_2750</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	275.436	855	0.15	1,772	0.12	1,772
0.32	3,100	<b>C303_2740</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	273.677	1,271	0.27	3,100	0.21	3,100
0.52	4,872	<b>C403_2700</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	270.183	2,183	0.43	4,872	0.34	4,872
0.75	7,086	<b>C503_2710</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	270.532	2,678	0.62	7,086	0.50	7,086
1.24	11,515	<b>C613_2660</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	266.370	3,600	1.03	11,515	0.82	11,515
3.38	31,889	<b>C813_2700</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	269.815	6,750	2.80	31,889	2.24	31,889

**NOTE: For slower speeds than those listed above, units can be combined. Contact STOBER Drives Inc.**

**See Page 47 for Part No. Configurator. Mounting position MUST be specified.**



# "C" Series – MGS Reducer Foot Mount – "N" Housing Dimensional Data



**Table No. 1 "C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	A	B	D	F	G	H	J	M	N	O	P	Q	R	S	T	V	Z <sub>1</sub>
<b>C002</b>	5.20	3.74	5.67	4.33	2.44	3.23	.28	1.38	.79	2.24	1.73	.16	2.17	.43	3.62	1.57	—
<b>C102/C103</b>	6.93	4.65	6.97	5.91	2.76	4.02	.35	1.65	.98	2.72	2.13	.16	2.64	.51	4.88	1.97	—
<b>C202/C203</b>	7.87	5.31	7.68	6.69	3.35	4.53	.43	1.97	1.18	3.39	2.56	.16	3.11	.55	5.43	2.36	—
<b>C302/C303</b>	8.46	6.06	8.46	7.28	4.13	5.12 <sup>1)</sup>	.43	1.97	1.18	3.35	2.56	.16	3.11	.55	5.91	2.36	—
<b>C402/C403</b>	10.04	7.09	9.65	8.66	4.33	5.71	.55	2.36	1.38	4.17	3.39	.16	4.13	.75	6.89	3.15	—
<b>C502/C503</b>	11.42	7.76	11.42	9.65	5.12	6.69	.71	2.76	1.57	4.21	3.39	.16	4.25	.87	7.56	3.15	—
<b>C612/C613</b>	11.81	10.43	12.40	9.65	8.46	7.87 <sup>1)</sup>	.71	2.95	1.57	6.02	4.17	.20	5.12	.98	6.97	3.94	6.57
<b>C712/C713</b>	14.37	11.22	14.76	11.81	9.25	9.25 <sup>1)</sup>	.71	3.54	1.97	7.28	5.00	.20	6.42	.98	7.56	4.72	7.91
<b>C812/C813</b>	17.13	14.17	17.72	13.39	11.81	11.42	.87	3.74	2.17	8.58	5.83	.39	7.48	1.14	8.78	5.51	8.70
<b>C912/C913</b>	20.08	16.14	20.87	15.75	13.39	13.39	1.02	4.33	2.36	10.08	7.01	.39	8.74	1.34	10.91	6.69	10.24

<sup>1)</sup> See Table No. 5

**Table No. 2 Metric output available on request**

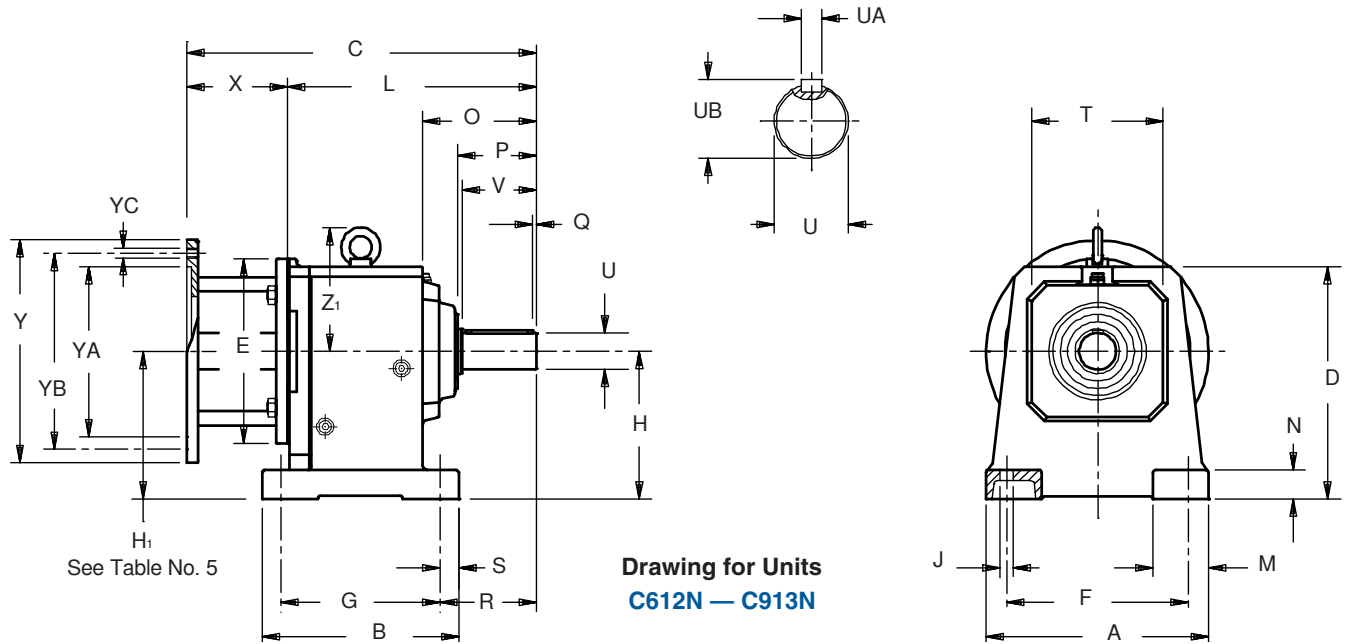
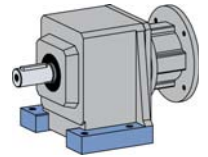
Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>C002</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times \frac{17}{32}$	.83	20 <sub>k6</sub>	A6x6x32	22.5
<b>C102/C103</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times \frac{19}{16}$	1.11	25 <sub>k6</sub>	A8x7x40	28
<b>C202/C203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times \frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C302/C303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times \frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C402/C403</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times \frac{27}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C502/C503</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times \frac{27}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C612/C613</b>	2.125	$\frac{1}{2} \times \frac{1}{2} \times \frac{35}{32}$	2.35	50 <sub>k6</sub>	A14x9x90	53.5
<b>C712/C713</b>	2.375	$\frac{5}{8} \times \frac{5}{8} \times \frac{315}{16}$	2.65	60 <sub>m6</sub>	A18x11x100	64
<b>C812/C813</b>	2.875	$\frac{3}{4} \times \frac{3}{4} \times \frac{45}{16}$	3.21	70 <sub>m6</sub>	A20x12x125	74.5
<b>C912/C913</b>	3.625	$\frac{7}{8} \times \frac{7}{8} \times \frac{51}{2}$	4.01	90 <sub>m6</sub>	A25x14x140	95

**Table No. 3 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
<b>MR350/320</b>	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
<b>MR350/360</b>	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133



# "C" Series – MGS Reducer Foot Mount – "N" Housing Dimensional Data



**Table No. 4 "C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		MR300/250 <sup>4)</sup>		MR350/320 <sup>5)</sup>		Approx. Wt. (lbs.)
	C	L	C	L	C	L	C	L	C	L	C	L	
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	—	—	38
C203	13.23	9.92	14.17	10.31	—	—	—	—	—	—	—	—	45
C302	—	—	13.23	9.37	14.25	9.45	14.88	9.57	—	—	—	—	49
C303 <sup>1)</sup>	13.98	10.67	14.92	11.06	—	—	—	—	—	—	—	—	56
C402	—	—	15.12	11.26	16.14	11.34	16.77	11.46	—	—	—	—	71
C403	—	—	16.81	12.95	—	—	—	—	—	—	—	—	78
C502	—	—	15.95	12.09	16.97	12.17	17.59	12.28	19.33	12.83	—	—	95
C503	—	—	17.64	13.78	—	—	—	—	—	—	—	—	111
C612 <sup>1)</sup>	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 <sup>1)</sup>	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 <sup>1)</sup>	—	—	—	—	22.40	17.60	23.38	18.07	—	—	—	—	221
C812	—	—	—	—	—	—	23.22	17.91	24.53	18.03	26.42	19.33	322
C813	—	—	—	—	25.04	20.24	26.02	20.71	—	—	—	—	342
C912	—	—	—	—	—	—	—	—	27.56	21.06	29.06	21.97	596
C913	—	—	—	—	—	—	27.87	22.56	—	—	—	—	678

**Table No. 5 "C" Series – Input Dimension (Inches)**

Base Module	MR160/140 <sup>2)</sup>	MR200/180	MR250/210	MR300/250
	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>
C303	3.66	—	—	—
C612	—	7.63	7.63	7.63
C613	—	—	7.63	—
C713	—	—	10.00	—

<sup>1)</sup> See Table No. 5

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

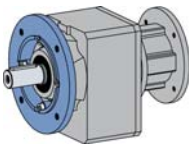
<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

<sup>4)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

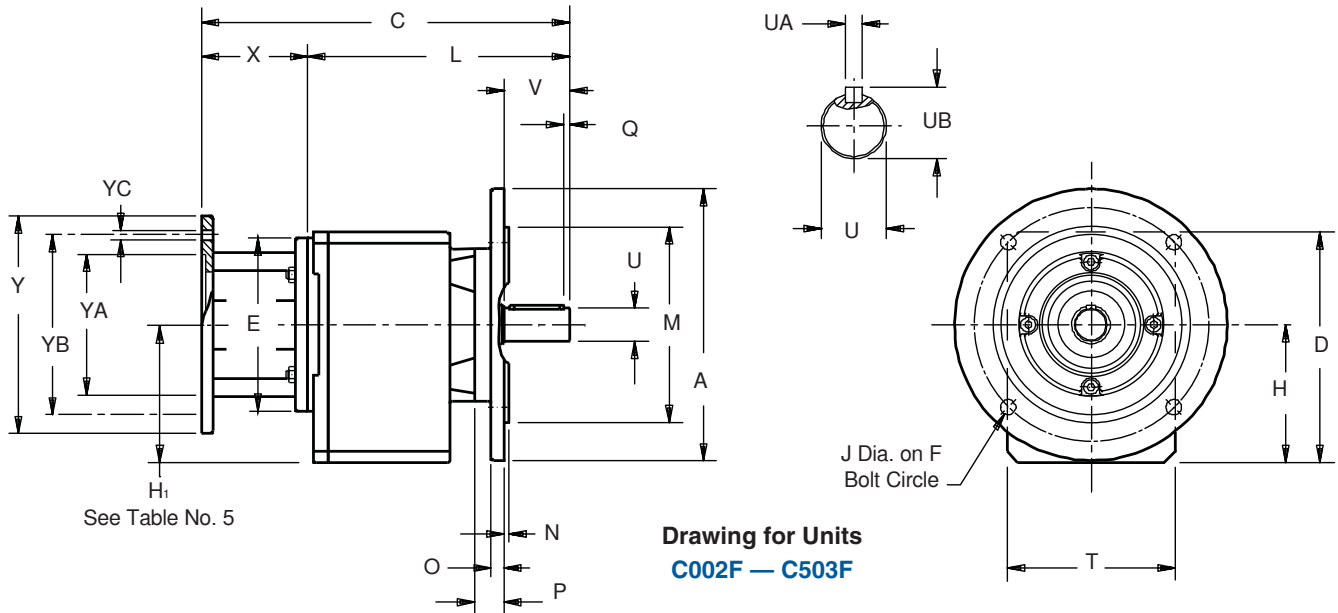
<sup>5)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.

**Part No. Example**  
Foot Mounting with Motor Adapter  
**C302N0620 MR160/140**



# "C" Series – MGS Reducer Round Flange – "F" Housing Dimensional Data



Drawing for Units  
C002F – C503F

Table No. 1 "C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style

Base Module	A <sup>1)</sup>	D	F	H	J	M	N	O	P	Q	T	V	Z <sub>1</sub>
<b>C002</b>	6.30	5.55	5.12	3.11	.35	4.331	.12	.39	.71	.16	3.82	1.57	—
<b>C102/C103</b>	7.87	6.89	6.50	3.94	.43	5.118	.14	.47	.83	.16	5.12	1.97	—
<b>C202/C203</b>	7.87	7.56	6.50	4.41	.43	5.118	.14	.47	1.06	.16	5.59	2.36	—
<b>C302/C303</b>	9.84	8.35	8.46	5.00 <sup>2)</sup>	.55	7.087	.16	.47	1.06	.16	6.06	2.36	—
<b>C402/C403</b>	9.84	9.55	8.46	5.61	.55	7.087	.16	.55	1.10	.16	7.01	3.15	—
<b>C502/C503</b>	11.81	11.26	10.43	6.54	.55	9.055	.16	.63	1.14	.16	7.68	3.15	—
<b>C612/C613</b>	11.81	11.97	10.43	7.44 <sup>2)</sup>	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57
<b>C712/C713</b>	13.78	14.61	11.81	9.09 <sup>2)</sup>	.71	9.842	.20	.71	1.73	.20	10.43	4.72	7.91
<b>C812/C813</b>	15.75	17.52	13.78	11.22	.71	11.811	.20	.79	1.77	.39	12.20	5.51	8.70
<b>C912/C913</b>	17.72	20.63	15.75 *	13.15	.71	13.780	.20	.91	1.97	.39	14.37	6.69	10.24

<sup>1)</sup> See Page 74 for other available output flanges.

<sup>2)</sup> See Table No. 5

\* C912 and C913 have 8 mounting holes in the output flange instead of 4 as shown in the drawing.

Table No. 2 Metric output available on request

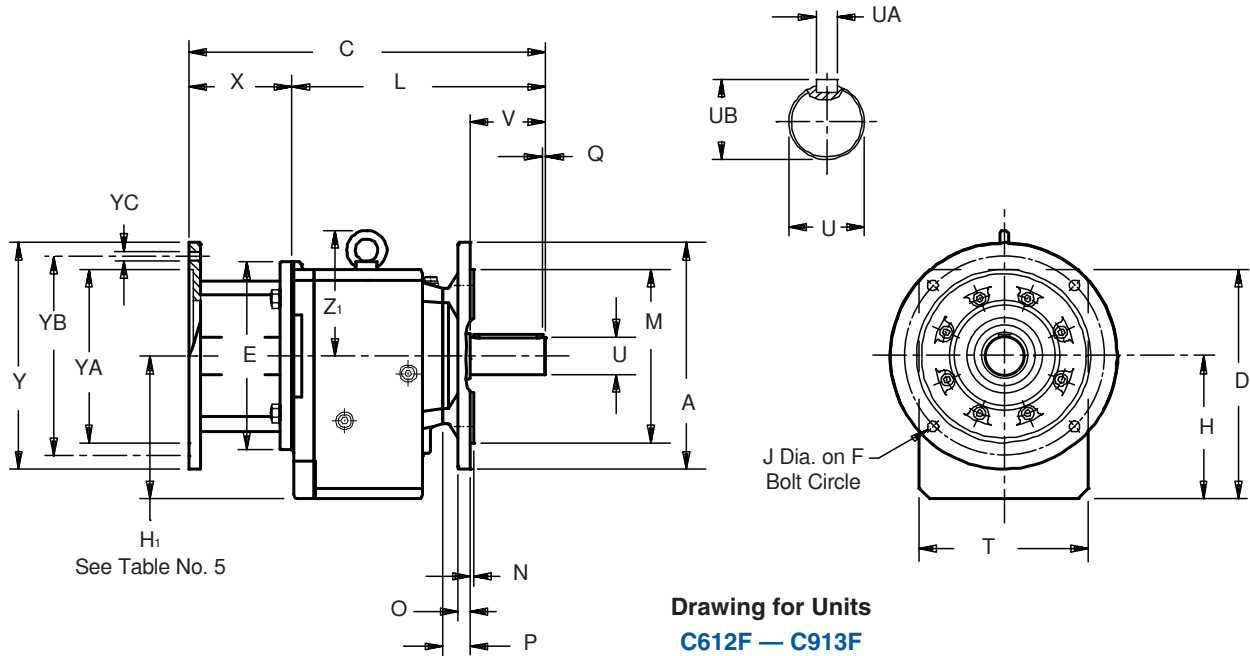
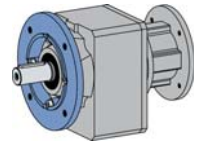
Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>C002</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{17}{32}$	.83	20 <sub>k6</sub>	A6x6x32	22.5
<b>C102/C103</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11	25 <sub>k6</sub>	A8x7x40	28
<b>C202/C203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7x50	33
<b>C302/C303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7x50	33
<b>C402/C403</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8x70	43
<b>C502/C503</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8x70	43
<b>C612/C613</b>	2.125	$\frac{1}{2} \times \frac{1}{2} \times 3\frac{5}{32}$	2.35	50 <sub>k6</sub>	A14x9x90	53.5
<b>C712/C713</b>	2.375	$\frac{5}{8} \times \frac{5}{8} \times 3\frac{15}{16}$	2.65	60 <sub>m6</sub>	A18x11x100	64
<b>C812/C813</b>	2.875	$\frac{3}{4} \times \frac{3}{4} \times 4\frac{5}{16}$	3.21	70 <sub>m6</sub>	A20x12x125	74.5
<b>C912/C913</b>	3.625	$\frac{7}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	4.01	90 <sub>m6</sub>	A25x14x140	95

Table No. 3 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
<b>MR350/320</b>	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
<b>MR350/360</b>	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133



# "C" Series – MGS Reducer Round Flange – "F" Housing Dimensional Data



**Table No. 4 "C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	MR140/050		MR160/140 <sup>3)</sup>		MR200/180		MR250/210 <sup>4)</sup>		MR300/250 <sup>5)</sup>		MR350/320 <sup>6)</sup>		Approx. Wt.(lbs.)
	C	L	C	L	C	L	C	L	C	L	C	L	
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	—	—	38
C203	13.23	9.92	14.17	10.31	—	—	—	—	—	—	—	—	45
C302	—	—	13.23	9.37	14.25	9.45	14.88	9.57	—	—	—	—	49
C303 <sup>2)</sup>	13.98	10.67	14.92	11.06	—	—	—	—	—	—	—	—	56
C402	—	—	15.12	11.26	16.14	11.34	16.77	11.46	—	—	—	—	71
C403	—	—	16.81	12.95	—	—	—	—	—	—	—	—	78
C502	—	—	15.95	12.09	16.97	12.17	17.59	12.28	19.33	12.83	—	—	95
C503	—	—	17.64	13.78	—	—	—	—	—	—	—	—	111
C612 <sup>2)</sup>	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 <sup>2)</sup>	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 <sup>2)</sup>	—	—	—	—	22.40	17.60	23.38	18.07	—	—	—	—	221
C812	—	—	—	—	—	—	23.22	17.91	24.53	18.03	26.42	19.33	322
C813	—	—	—	—	25.04	20.24	26.02	20.71	—	—	—	—	342
C912	—	—	—	—	—	—	—	—	27.56	21.06	29.06	21.97	596
C913	—	—	—	—	—	—	27.87	22.56	—	—	—	—	678

**Table No. 5 "C" Series – Input Dimension (Inches)**

Base	MR160/140 <sup>3)</sup>	MR200/180	MR250/210	MR300/250
Module	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>
C303	3.54	—	—	—
C612	—	7.44	7.44	7.44
C613	—	—	7.44	—
C713	—	—	9.84	—

**Part No. Example**  
Round Flange with Motor Adapter  
**C302F0620 MR160/140**

<sup>2)</sup> See Table No. 5

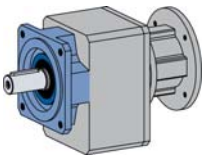
<sup>3)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>4)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

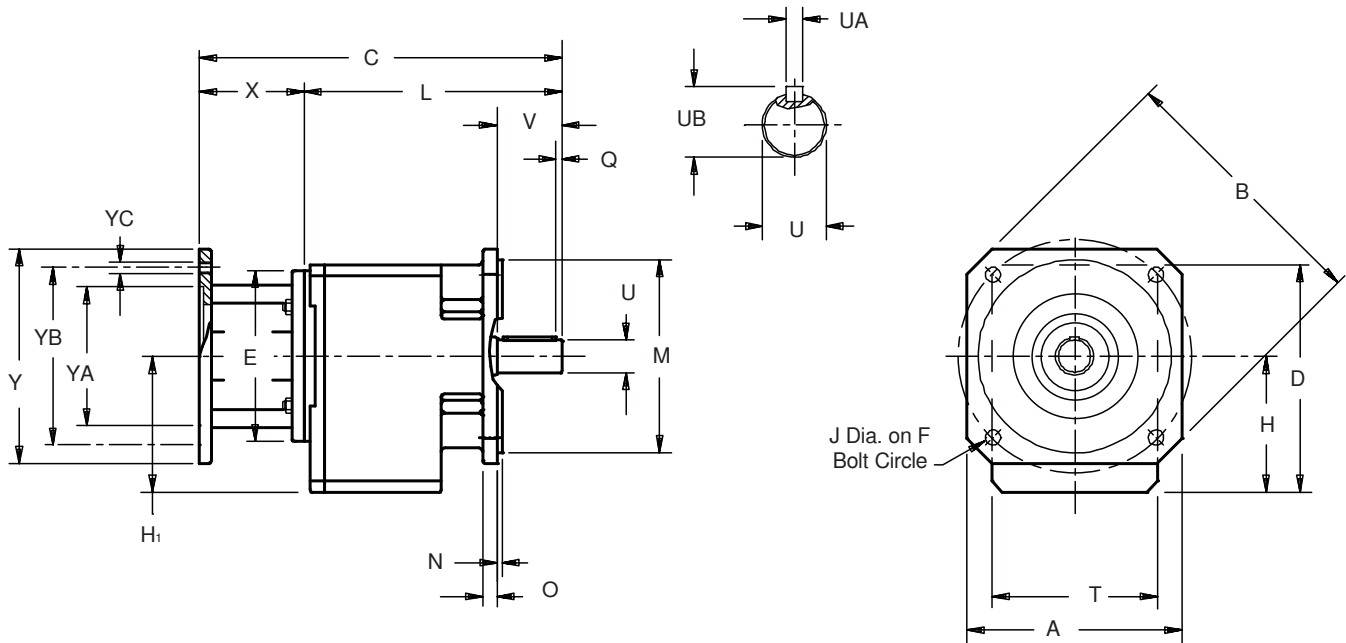
<sup>5)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>6)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.



# "C" Series – MGS Reducer Square Flange – "Q" Housing Dimensional Data



Drawing for Units  
C002Q – C403Q

Table No. 1 "C" Series – Square Flange Unit Dimensions (Inches) – "Q" Housing Style

Base Module	A	B	D	F	H	J	M	N	O	Q	T	V
<b>C002</b>	4.88	6.30	5.55	5.12	3.11	.35	4.33	.14	.35	.16	3.82	1.57
<b>C102/C103</b>	5.71	7.56	6.89	6.50	3.94	.43	5.12	.14	.43	.16	5.12	1.97
<b>C202/C203</b>	5.71	7.56	7.56	6.50	4.41	.43	5.12	.14	.43	.16	5.59	2.36
<b>C302/C303</b>	7.87	9.84	8.35	8.46	5.00 <sup>1)</sup>	.55	7.09	.16	.55	.16	6.06	2.36
<b>C402/C403</b>	7.87	9.84	9.55	8.46	5.61	.55	7.09	.16	.55	.16	7.01	3.15

<sup>1)</sup> H<sub>1</sub> dimension is 3.54 on C303.

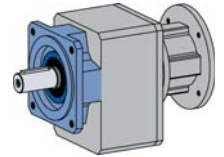
Table No. 2 Metric output available on request

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>C002</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times \frac{17}{32}$	.83	20 <sub>k6</sub>	A6x6x32	22.5
<b>C102/C103</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times \frac{19}{16}$	1.11	25 <sub>k6</sub>	A8x7x40	28
<b>C202/C203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times \frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C302/C303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times \frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C402/C403</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times \frac{27}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43

This Housing Style is available on special order.



# "C" Series – MGS Reducer Square Flange – "Q" Housing Dimensional Data



**Table No. 3 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

**Table No. 4 "C" Series – Unit Dimensions (Inches) – "Q" Housing Style**

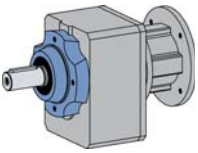
Base Module	<b>MR140/050</b>		<b>MR160/140</b> <sup>2)</sup>		<b>MR200/180</b>		<b>MR250/210</b> <sup>3)</sup>		Approx. Wt.(lbs.)
	C	L	C	L	C	L	C	L	
<b>C002</b>	9.37	6.06	10.08	6.22	—	—	—	—	18
<b>C102</b>	10.67	7.36	11.38	7.52	12.40	7.60	—	—	29
<b>C103</b>	12.13	8.82	—	—	—	—	—	—	34
<b>C202</b>	11.77	8.46	12.48	8.62	13.50	8.70	—	—	38
<b>C203</b>	13.23	9.92	14.17	10.31	—	—	—	—	45
<b>C302</b>	—	—	13.23	9.37	14.25	9.45	14.88	9.57	49
<b>C303</b> <sup>1)</sup>	13.98	10.67	14.92	11.06	—	—	—	—	56
<b>C402</b>	—	—	15.12	11.26	16.14	11.34	16.77	11.46	71
<b>C403</b>	—	—	16.81	12.95	—	—	—	—	78

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

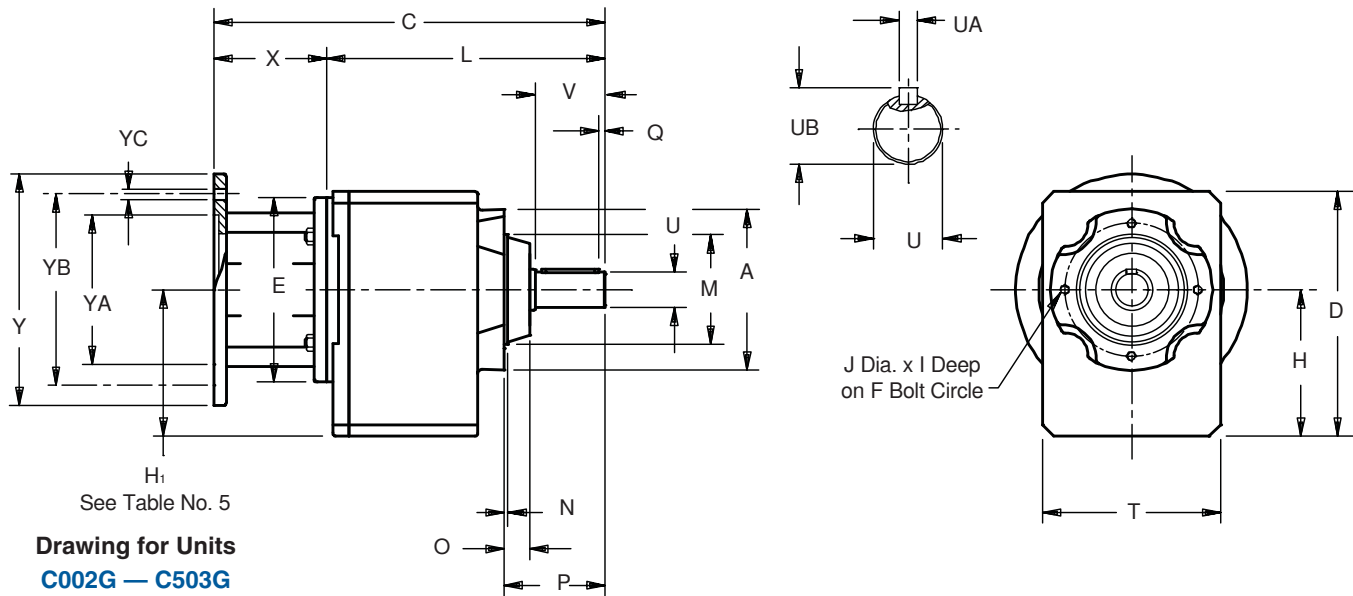
<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

All weights are approximate.

**Part No. Example**  
Square Flange with Motor Adapter  
**C302Q0620 MR160/140**



# "C" Series – MGS Reducer Tapped Holes – "G" Housing Dimensional Data



See Table No. 5

**Drawing for Units  
C002G — C503G**

**Table No. 1 "C" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style**

Base Module	A	D	F	H	I	J	M	N	O	P	Q	T	V	Z <sub>1</sub>
<b>C002</b>	3.43	5.55	2.95	3.11	.39	M6×1	2.165	.12	.55	2.28	.16	3.82	1.57	—
<b>C102/C103</b>	4.72	6.89	3.94	3.94	.51	M6×1	3.150	.12	.67	2.80	.16	5.12	1.97	—
<b>C202/C203</b>	5.51	7.56	4.53	4.41	.51	M8×1.25	3.740	.12	.87	3.43	.16	5.59	2.36	—
<b>C302/C303</b>	5.51	8.35	4.53	5.00 <sup>1)</sup>	.51	M8×1.25	3.740	.12	.87	3.43	.16	6.06	2.36	—
<b>C402/C403</b>	6.30	9.55	5.12	5.61	.63	M10×1.5	4.331	.14	.87	4.25	.16	7.01	3.15	—
<b>C502/C503</b>	7.56	11.26	6.50 <sup>2)</sup>	6.54	.63	M10×1.5	5.118	.14	.91	4.29	.16	7.68	3.15	—
<b>C612/C613</b>	7.09	11.97	6.50	7.44 <sup>1)</sup>	.63	M10×1.5	5.512	.20	1.18	5.35	.20	8.86	3.94	6.57
<b>C712/C713</b>	7.68	14.61	7.28	9.09 <sup>1)</sup>	.75	M12×1.75	6.102	.31	1.46	6.46	.20	10.43	4.72	7.91
<b>C812/C813</b>	8.90	17.52	8.46	11.22	.75	M12×1.75	7.283	.20	1.46	7.28	.39	12.20	5.51	8.70
<b>C912/C913</b>	11.02	20.63	10.43	13.15	1.02	M16×2	9.055	.20	1.65	8.66	.39	14.37	6.69	10.24

<sup>1)</sup> See Table No. 5

<sup>2)</sup> C502/C503 has 8 holes instead of 4 as shown in the drawing.

**Table No. 2 Metric output available on request**

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>C002</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{7}{32}$	.83	20 <sub>k6</sub>	A6x6x32	22.5
<b>C102/C103</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11	25 <sub>k6</sub>	A8x7x40	28
<b>C202/C203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C302/C303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8x7X50	33
<b>C402/C403</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C502/C503</b>	1.625	$\frac{3}{8} \times \frac{3}{8} \times 2\frac{7}{8}$	1.79	40 <sub>k6</sub>	A12x8X70	43
<b>C612/C613</b>	2.125	$\frac{1}{2} \times \frac{1}{2} \times 3\frac{5}{32}$	2.35	50 <sub>k6</sub>	A14x9x90	53.5
<b>C712/C713</b>	2.375	$\frac{5}{8} \times \frac{5}{8} \times 3\frac{15}{16}$	2.65	60 <sub>m6</sub>	A18x11x100	64
<b>C812/C813</b>	2.875	$\frac{3}{4} \times \frac{3}{4} \times 4\frac{5}{16}$	3.21	70 <sub>m6</sub>	A20x12x125	74.5
<b>C912/C913</b>	3.625	$\frac{7}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	4.01	90 <sub>m6</sub>	A25x14x140	95

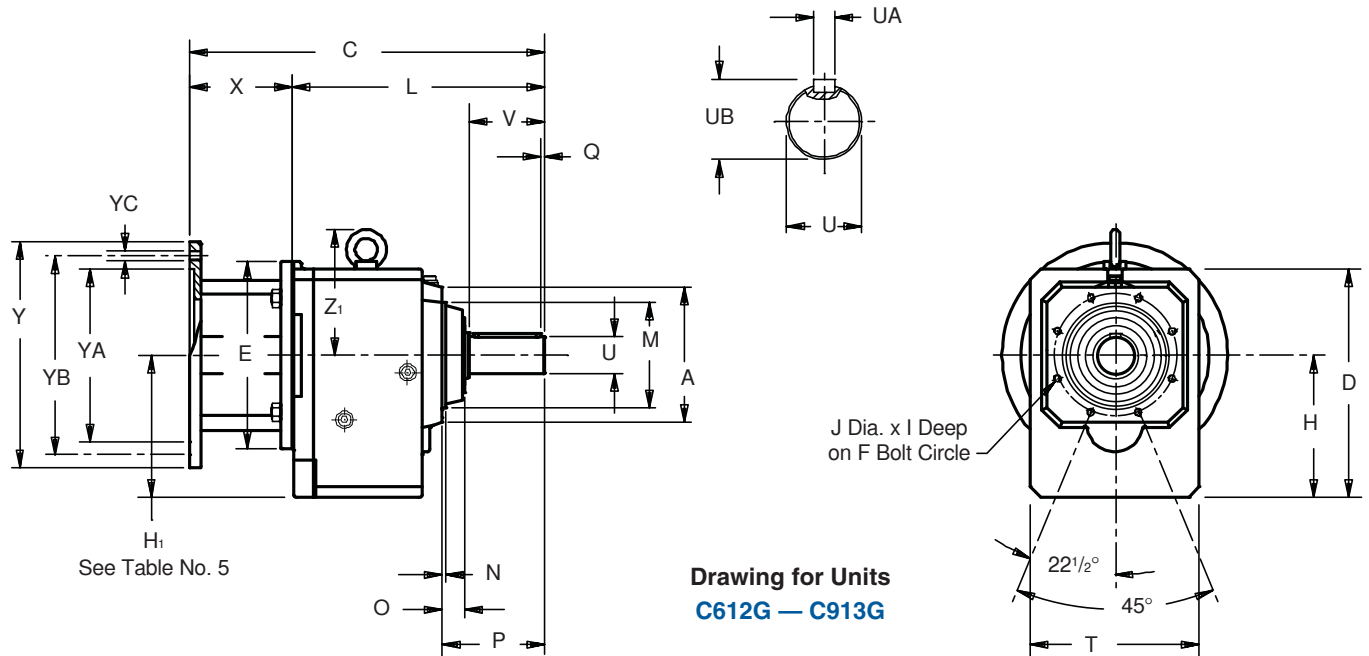
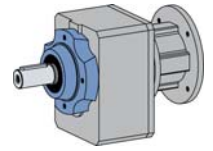
**Table No. 3 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
<b>MR350/320</b>	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
<b>MR350/360</b>	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133





# "C" Series – MGS Reducer Tapped Holes – "G" Housing Dimensional Data



**Table No. 4 "C" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style**

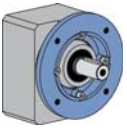
Base Module	MR140/050		MR160/140 <sup>3)</sup>		MR200/180		MR250/210 <sup>4)</sup>		MR300/250 <sup>5)</sup>		MR350/320 <sup>6)</sup>		Approx. Wt. (lbs)
	C	L	C	L	C	L	C	L	C	L	C	L	
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	—	—	38
C203	13.23	9.92	14.17	10.31	—	—	—	—	—	—	—	—	45
C302	—	—	13.23	9.37	14.25	9.45	14.88	9.57	—	—	—	—	49
C303 <sup>1)</sup>	13.98	10.67	14.92	11.06	—	—	—	—	—	—	—	—	56
C402	—	—	15.12	11.26	16.14	11.34	16.77	11.46	—	—	—	—	71
C403	—	—	16.81	12.95	—	—	—	—	—	—	—	—	78
C502	—	—	15.95	12.09	16.97	12.17	17.59	12.28	19.33	12.83	—	—	95
C503	—	—	17.64	13.78	—	—	—	—	—	—	—	—	111
C612 <sup>1)</sup>	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 <sup>1)</sup>	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 <sup>1)</sup>	—	—	—	—	22.40	17.60	23.38	18.07	—	—	—	—	221
C812	—	—	—	—	—	—	23.22	17.91	24.53	18.03	26.42	19.33	322
C813	—	—	—	—	25.04	20.24	26.02	20.71	—	—	—	—	342
C912	—	—	—	—	—	—	—	—	27.56	21.06	29.06	21.97	596
C913	—	—	—	—	—	—	27.87	22.56	—	—	—	—	678

**Table No. 5 "C" Series – Input Dimension (Inches)**

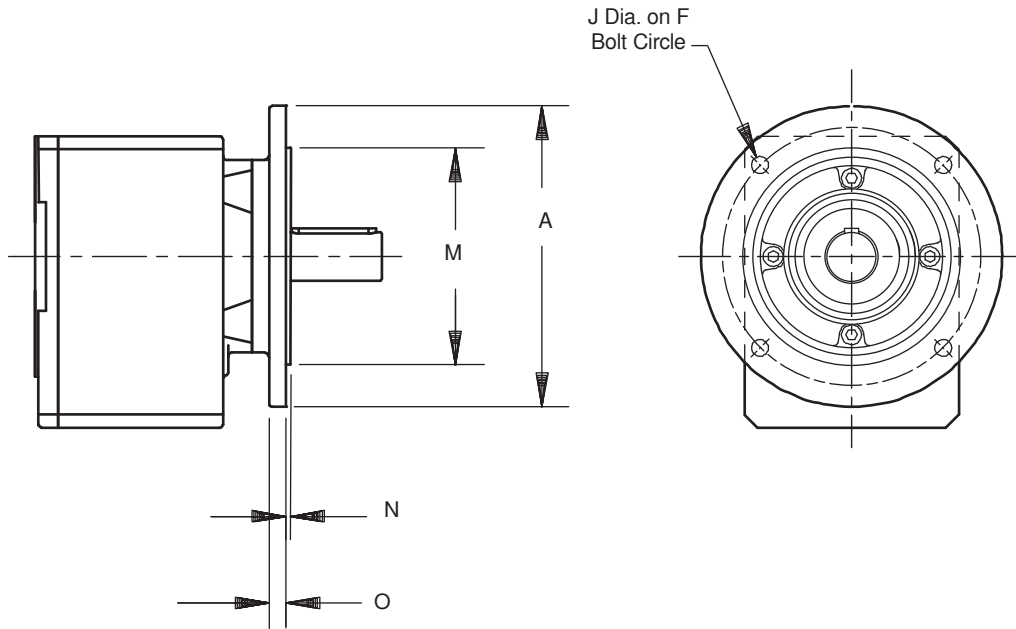
Base Module	MR160/140	MR200/180	MR250/210	MR300/250
	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>	H <sub>1</sub>
C303	3.54	—	—	—
C612	—	7.44	7.44	7.44
C613	—	—	7.44	—
C713	—	—	9.84	—

<sup>1)</sup> See Table No. 5  
<sup>3)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.  
<sup>4)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.  
<sup>5)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.  
<sup>6)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.  
 All weights are approximate.

**Part No. Example**  
 Tapped Holes Housing with Motor Adapter  
**C302G0620 MR160/140**



# "C" Series – MGS Reducer Optional Output Flanges



**Table No. 1 Flange Dimensions (Inches)**

Base Module	Flange Size	A	F	J	M	N	O
C0	120	4.724	3.93	.28	3.150 +.001/-0.004	.12	.39
	140	5.512	4.53	.35	3.740 +.001/-0.004	.12	.39
	160 *	6.300	5.12	.35	4.331 +.001/-0.004	.12	.39
C1	140	5.512	4.53	.35	3.740 +.001/-0.004	.14	.32
	160	6.300	5.12	.35	4.331 +.001/-0.004	.14	.39
	200 *	7.874	6.50	.43	5.118 +.001/-0.004	.14	.47
C2	160	6.300	5.12	.35	4.331 +.001/-0.004	.14	.39
	200 *	7.874	6.50	.43	5.118 +.001/-0.004	.14	.47
	250	9.843	8.46	.55	7.087 +.001/-0.004	.16	.47
C3	160	6.300	5.12	.35	4.331 +.001/-0.004	.14	.39
	200	7.874	6.50	.43	5.118 +.001/-0.004	.14	.47
	250 *	9.843	8.46	.55	7.087 +.001/-0.004	.16	.47
C4	200	7.874	6.50	.43	5.118 +.001/-0.004	.16	.55
	250 *	9.843	8.46	.55	7.087 +.001/-0.004	.16	.55
	300	11.811	10.43	.55	9.055 +.001/-0.001	.16	.55
C5	250	9.843	8.46	.55	7.087 +.001/-0.004	.16	.55
	300 *	11.811	10.43	.55	9.055 +.001/-0.001	.16	.63
C6	300 *	11.811	10.43	.55	9.055 +.001/-0.001	.16	.67
C7	350 *	13.780	11.81	.71	9.842 +.000/-0.001	.20	.71
C8	350	13.780	11.81	.71	9.842 +.000/-0.001	.20	.71
	400 *	15.748	13.78	.71	11.811 +.000/-0.001	.20	.79
	450	17.717	15.75	.71	13.780 +.000/-0.001	.20	.79
C9	450 *	17.717	15.75	.71	13.780 +.000/-0.001	.20	.91

\* This is the standard flange and will be shipped unless otherwise specified.  
Optional flanges are not available for all sizes.

# "F" Series – Offset Helical MGS Speed Reducers

Compact size and flexibility make these gear drives a popular choice for applications that require high performance, efficiency, and durability. Series "F" gear drives are available with a wide selection of exact ratios and output speeds to eliminate the need for expensive and maintenance prone external input drives. It's a compact package that reduces product and installation costs today—and maintenance costs tomorrow.

#### Performance Specifications:

- Horsepower ratings from 1/6 to 33
- Output torques to 9,743 in. lbs.
- Output speeds available from 406 to 3 RPM
- Speed reducer ratios from 4.3:1 to 552:1
- 3 year warranty standard with option for 5 years

#### Input Options:

- Input shaft
- NEMA C-face Adapter (coupling type)

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life. Standard backlash is  $\leq 11$  arc minutes

One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities, and eliminates leakage problems common to two-piece housings.

Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

Strategically located oil fill, drain and breather ports for optimum mounting flexibility. Oil sight glass available.

Stainless steel nameplate and hardware

#### Output Options:

- Solid shaft
- Hollow
- Wobble free bushings

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

**3 or 5 YEAR WARRANTY AVAILABLE**  
**SHIPS in 1 DAY**



# STOBER



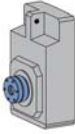
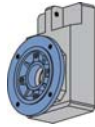
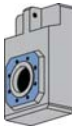
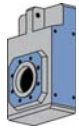
[www.stober.com](http://www.stober.com)

# Part No. Configurator

## “F” Series – MGS Speed Reducers



### Part No. Explanation

	<b>F</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>V</b>	<b>F</b>	<b>0135</b>	<b>MR200/</b>	<b>180</b>	<b>LL</b>	<b>E34</b>
	Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size	Long Life Option	Mounting Position Must be Specified
Series	<b>F</b>						Offset Helical (output is offset from the input and the gears are all helical)				
Size		<b>4</b>					Sizes available: F1, F2, F3, <b>F4</b> , F6				
Generation			<b>0</b>				Design generation: first generation <b>0</b> , second generation 1, etc.				
No. of Gear Stages				<b>2</b>			Number of gear stages: <b>2</b> , 3, (determined by the ratio)				
Output Style					<b>V</b>		Shaft output  Solid shaft output is <b>ONLY</b> possible with an output flange.				
						<b>A</b>	Hollow output  Hollow output available: imperial, metric, and stainless steel.				
							<b>W</b> — Single or double wobble free bushing output 				
							<b>SPECIFY:</b> Single or Double Bushing <b>IF</b> Single Bushing — <b>SPECIFY:</b> Side 5 (shown) or Side 6 (not possible on F203, F303, F403, F603) (Double Bushing is not possible on F203, F303, F403, F603)				
Housing Style						<b>F</b>	Output flange 				
							<b>G</b> — Tapped holes around the output 				
							<b>GN</b> — Foot mounting  (tapped holes for side mounting)				
Ratio							<b>0135</b> Approximate ratio: 0135 = 13.5:1 (2:1 up to 276:1)				
Motor Adapter							<b>MR200/</b> Motor adapter size from Selection Data: MR140, MR160, <b>MR200</b> , MR250				
NEMA Frame Size							<b>180</b> Motor frame size determined by motor adapter: 050 (56C), 140 (143/145TC), <b>180</b> (182/184TC), 210 (213/215TC)				
Completed part number for standard warranty unit.											

Coating options: white, stainless steel, or standard gray

Output options: metric and stainless steel available in some sizes

**Mounting Position must be specified.**

Long Life Option **LL** Added **ONLY** with long life warranty option.

Mounting Position **E34** The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

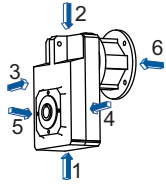
## “F” Series – MGS Speed Reducers

### Mounting Positions – Standard 3 Year Warranty

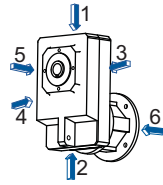
Mounting Positions **MUST BE SPECIFIED.**

Standard Oil: Mobilegear 600XP220

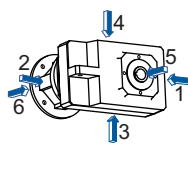
Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC630)



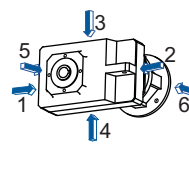
EL1



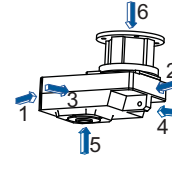
EL2



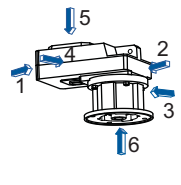
EL3



EL4



EL5



EL6

**EL1** Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.

**EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2 . (The unit is up-side-down.)

**EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.

**EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.

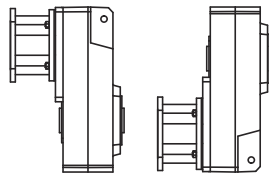
**EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

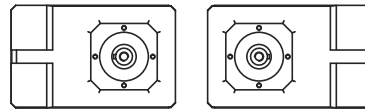
### Mounting Positions – Long Life 5 Year Warranty

Mounting Positions **MUST BE SPECIFIED.**

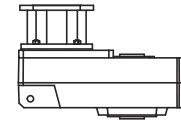
Standard Oil: Synthetic Oil (Mobil SHC630)



E12



E34



EL5

**E12** Side 1 or side 2 can be the down side with this mounting position.

**E34** Side 3 or side 4 can be the down side with this mounting position.

**EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

#### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free.



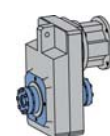
Style AF  
Hollow Output  
Flange Mount



Style VF  
Solid Output  
Flange Mount



Style AG  
Hollow Output  
Tapped Holes



Style WG  
Bushing  
Tapped Holes



# "F" Series – Offset Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>405 RPM Output (Approximate)</b>											
						<b>335 RPM</b>			<b>270 RPM</b>		
2.64	398	F102_0043	MR140/	050	AW140/010	4.308	374	2.19	398	1.75	398
3.75*	564	F102_0043	MR160/	050, 140	AW160/012	4.308	374	3.30	600	2.85	647
<b>385 RPM Output (Approximate)</b>											
						<b>319 RPM</b>			<b>255 RPM</b>		
23.36*	3,711	F602_0045	MR200/	180	AW200/014	4.546	1,129	19.36	3,711	15.48	3,711
33.04*	5,249	F602_0045	MR250/	180, 210, 250, 280	AW250/102	4.546	1,129	29.14	5,586	23.31	5,586
<b>375 RPM Output (Approximate)</b>											
						<b>319 RPM</b>			<b>255 RPM</b>		
2.78	454	F202_0047	MR140/	050	AW140/010	4.680	491	2.30	454	1.84	454
7.05*	1,154	F202_0047	MR160/	050, 140	AW160/012	4.680	491	6.22	1,228	5.36	1,323
7.05*	1,154	F202_0047	MR200/	180	AW200/014	4.680	491	6.22	1,228	5.36	1,323
9.84	1,608	F402_0047	MR160/	050, 140	AW160/012	4.678	842	8.15	1,608	6.52	1,608
19.40*	3,171	F402_0047	MR200/	180	AW200/014	4.678	842	17.11	3,376	14.75	3,636
19.40*	3,171	F402_0047	MR250/	180, 210, 250, 280	AW250/102	4.678	842	17.11	3,376	14.75	3,636
<b>315 RPM Output (Approximate)</b>											
						<b>260 RPM</b>			<b>210 RPM</b>		
6.30*	1,221	F202_0056	MR160/	050, 140	AW160/012	5.552	513	5.55	1,300	4.79	1,401
6.30*	1,221	F202_0056	MR200/	180	AW200/014	5.552	513	5.55	1,300	4.79	1,401
<b>305 RPM Output (Approximate)</b>											
						<b>250 RPM</b>			<b>200 RPM</b>		
9.84	1,998	F402_0058	MR160/	050, 140	AW160/012	5.813	889	8.15	1,998	6.52	1,998
9.84*	1,966	F302_0057	MR160/	050, 140	AW160/012	5.720	718	8.15	1,966	6.52	1,966
10.27*	2,053	F302_0057	MR200/	180	AW200/014	5.720	718	9.06	2,186	7.81	2,354
16.78*	3,409	F402_0058	MR200/	180	AW200/014	5.813	889	14.80	3,629	12.76	3,910
16.78*	3,409	F402_0058	MR250/	180, 210, 250, 280	AW250/102	5.813	889	14.80	3,629	12.76	3,910
23.36*	4,631	F602_0057	MR200/	180	AW200/014	5.673	1,193	19.36	4,631	15.48	4,631
28.51*	5,651	F602_0057	MR250/	180, 210, 250, 280	AW250/102	5.673	1,193	25.15	6,016	21.67	6,481
<b>270 RPM Output (Approximate)</b>											
						<b>224 RPM</b>			<b>180 RPM</b>		
2.50	564	F102_0065	MR140/	050	AW140/010	6.462	414	2.07	564	1.66	564
2.86	646	F102_0065	MR160/	050, 140	AW160/012	6.462	414	2.52	687	2.17	740
<b>244 RPM Output (Approximate)</b>											
						<b>200 RPM</b>			<b>160 RPM</b>		
2.46	615	F102_0072	MR140/	050	AW140/010	7.156	425	2.04	615	1.63	615
2.61	654	F202_0072	MR140/	050	AW140/010	7.167	547	2.16	654	1.73	654
2.67	668	F102_0072	MR160/	050, 140	AW160/012	7.156	425	2.36	711	2.03	766
5.31	1,330	F202_0072	MR160/	050, 140	AW160/012	7.167	547	4.68	1,416	4.04	1,525
5.31	1,330	F202_0072	MR200/	180	AW200/014	7.167	547	4.68	1,416	4.04	1,525
8.83*	2,214	F302_0072	MR160/	050, 140	AW160/012	7.172	759	7.79	2,357	6.52	2,465
8.83*	2,214	F302_0072	MR200/	180	AW200/014	7.172	759	7.79	2,357	6.72	2,539
9.84	2,475	F402_0072	MR160/	050, 140	AW160/012	7.202	937	8.15	2,475	6.52	2,475
14.55*	3,661	F402_0072	MR200/	180	AW200/014	7.202	937	12.83	3,898	11.06	4,199
14.55*	3,661	F402_0072	MR250/	180, 210, 250, 280	AW250/102	7.202	937	12.83	3,898	11.06	4,199
23.36*	5,844	F602_0072	MR200/	180	AW200/014	7.159	1,265	19.36	5,844	15.48	5,844
24.41*	6,106	F602_0072	MR250/	180, 210, 250, 280	AW250/102	7.159	1,265	21.53	6,501	18.56	7,003

\* For thermal HP capacity, see rating below.

Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75



# "F" Series – Offset Helical MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding the Output and Housing Style. Example: F302AG0560.  
 2) Select the Input Option (Motor Adapter OR Input Shaft and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example MR160/ plus 050 for 56C.  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>195 RPM Output (Approximate)</b>											
2.30	720	F102_0089	MR140/	050	AW140/010	8.948	449	1.97	742	1.57	742
2.30	720	F102_0089	MR160/	050, 140	AW160/012	8.948	449	2.03	766	1.75	825
2.52	793	F202_0090	MR140/	050	AW140/010	9.006	579	2.09	793	1.67	793
4.56	1,435	F202_0090	MR160/	050, 140	AW160/012	9.006	579	4.02	1,528	3.47	1,646
4.56	1,435	F202_0090	MR200/	180	AW200/014	9.006	579	4.02	1,528	3.47	1,646
7.60*	2,386	F302_0090	MR160/	050, 140	AW160/012	8.986	803	6.70	2,541	5.78	2,737
7.60*	2,386	F302_0090	MR200/	180	AW200/014	8.986	803	6.70	2,541	5.78	2,737
9.84	3,086	F402_0090	MR160/	050, 140	AW160/012	8.980	991	8.15	3,086	6.52	3,086
9.84	3,091	F602_0090	MR160/	050, 140	AW160/012	8.995	1,339	8.15	3,091	6.52	3,091
12.56*	3,941	F402_0090	MR200/	180	AW200/014	8.980	991	11.08	4,195	9.55	4,519
12.56*	3,941	F402_0090	MR250/	180, 210, 250, 280	AW250/102	8.980	991	11.08	4,195	9.55	4,519
20.96*	6,589	F602_0090	MR200/	180	AW200/014	8.995	1,339	18.49	7,015	15.48	7,342
20.96*	6,589	F602_0090	MR250/	180, 210, 250, 280	AW250/102	8.995	1,339	18.49	7,015	15.94	7,557
<b>160 RPM Output (Approximate)</b>											
2.02	769	F102_0110	MR140/	050	AW140/010	10.920	472	1.78	819	1.52	876
2.02	769	F102_0110	MR160/	050, 140	AW160/012	10.920	472	1.78	819	1.53	882
2.44	921	F202_0110	MR140/	050	AW140/010	10.803	606	2.02	921	1.62	921
4.04	1,525	F202_0110	MR200/	180	AW200/014	10.803	606	3.56	1,623	3.07	1,749
4.04	1,525	F202_0110	MR160/	050, 140	AW160/012	10.803	606	3.56	1,623	3.07	1,749
6.73	2,536	F302_0110	MR160/	56C	AW160/012	10.785	841	5.94	2,700	5.12	2,909
6.73	2,536	F302_0110	MR200/	180	AW200/014	10.785	841	5.94	2,700	5.12	2,909
9.84	3,718	F602_0110	MR160/	050, 140	AW160/012	10.818	1,402	8.15	3,718	6.52	3,718
9.84	3,720	F402_0110	MR160/	050, 140	AW160/012	10.825	1,038	8.15	3,720	6.52	3,720
11.09	4,194	F402_0110	MR200/	180	AW200/014	10.825	1,038	9.78	4,465	8.43	4,810
11.09	4,194	F402_0110	MR250/	180, 210, 250, 280	AW250/102	10.825	1,038	9.78	4,465	8.43	4,810
18.54*	7,007	F602_0110	MR200/	180	AW200/014	10.818	1,402	16.35	7,460	14.09	8,037
18.54*	7,007	F602_0110	MR250/	180, 210, 250, 280	AW250/102	10.818	1,402	16.35	7,460	14.09	8,037
<b>130 RPM Output (Approximate)</b>											
1.74	827	F102_0135	MR140/	050	AW140/010	13.588	499	1.54	881	1.32	949
1.74	827	F102_0135	MR160/	050, 140	AW160/012	13.588	499	1.54	881	1.32	949
2.35	1,117	F202_0135	MR140/	050	AW140/010	13.625	642	1.94	1,117	1.56	1,117
2.42	1,133	F302_0135	MR140/	050	AW140/010	13.384	887	2.01	1,133	1.61	1,133
3.46	1,647	F202_0135	MR160/	050, 140	AW160/012	13.625	642	3.05	1,754	2.63	1,889
3.46	1,647	F202_0135	MR200/	180	AW200/014	13.625	642	3.05	1,754	2.63	1,889
5.83	2,725	F302_0135	MR200/	180	AW200/014	13.384	887	5.14	2,902	4.43	3,126
5.83	2,725	F302_0135	MR160/	050, 140	AW160/012	13.384	887	5.14	2,902	4.43	3,126
8.89	4,216	F402_0135	MR160/	050, 140	AW160/012	13.569	1,098	7.84	4,489	6.52	4,664
9.54	4,522	F402_0135	MR200/	180	AW200/014	13.569	1,098	8.41	4,814	7.25	5,186
9.54	4,522	F402_0135	MR250/	180, 210, 250, 280	AW250/102	13.569	1,098	8.41	4,814	7.25	5,186
9.84	4,677	F602_0135	MR160/	050, 140	AW160/012	13.609	1,485	8.15	4,677	6.52	4,677
15.91*	7,564	F602_0135	MR250/	180, 210, 250, 280	AW250/102	13.609	1,485	14.03	8,054	12.09	8,676
15.91*	7,564	F602_0135	MR200/	180	AW200/014	13.609	1,485	14.03	8,054	12.09	8,676

See Page 75 for Part No. Configurator. Mounting position MUST be specified.



# "F" Series – Offset Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>95 RPM Output (Approximate)</b>											
1.42	916	F102_0185	MR140/	050	AW140/010	18.457	539	1.25	975	1.08	1,050
1.42	916	F102_0185	MR160/	050, 140	AW160/012	18.457	539	1.25	975	1.08	1,050
2.61	1,702	F202_0185	MR140/	050	AW140/010	18.651	694	2.16	1,702	1.73	1,702
2.81	1,829	F202_0185	MR160/	050, 140	AW160/012	18.651	694	2.48	1,947	2.13	2,098
2.81	1,829	F202_0185	MR200/	180	AW200/014	18.651	694	2.48	1,947	2.13	2,098
4.65	3,051	F302_0190	MR160/	050, 140	AW160/012	18.774	966	4.10	3,248	3.54	3,499
4.65	3,051	F302_0190	MR200/	180	AW200/014	18.774	966	4.10	3,248	3.54	3,499
7.72	5,025	F402_0185	MR160/	050, 140	AW160/012	18.620	1,189	6.81	5,350	5.87	5,763
7.72	5,025	F402_0185	MR200/	180	AW200/014	18.620	1,189	6.81	5,350	5.87	5,763
7.72	5,025	F402_0185	MR250/	180, 210, 250, 280	AW250/102	18.620	1,189	6.81	5,350	5.87	5,763
12.95	8,383	F602_0185	MR200/	180	AW200/014	18.522	1,604	11.43	8,925	9.85	9,614
12.95	8,383	F602_0185	MR250/	180, 210, 250, 280	AW250/102	18.522	1,604	11.43	8,925	9.85	9,614
<b>75 RPM Output (Approximate)</b>											
1.22	987	F102_0230	MR140/	050	AW140/010	23.080	569	1.08	1,051	0.87	1,063
1.22	987	F102_0230	MR160/	050, 140	AW160/012	23.080	569	1.08	1,051	0.87	1,063
2.41	1,974	F202_0230	MR140/	050	AW140/010	23.434	735	2.09	2,064	1.67	2,064
2.41	1,974	F202_0230	MR160/	050, 140	AW160/012	23.434	735	2.13	2,101	1.72	2,126
2.41	1,974	F202_0230	MR200/	180	AW200/014	23.434	735	2.13	2,101	1.72	2,126
4.00	3,289	F302_0240	MR160/	050, 140	AW160/012	23.520	1,022	3.53	3,501	2.86	3,543
4.00	3,289	F302_0240	MR200/	180	AW200/014	23.520	1,022	3.53	3,501	2.86	3,543
6.67	5,408	F402_0230	MR160/	050, 140	AW160/012	23.214	1,256	5.88	5,758	5.07	6,201
6.67	5,408	F402_0230	MR200/	180	AW200/014	23.214	1,256	5.88	5,758	5.07	6,201
6.67	5,408	F402_0230	MR250/	180, 210, 250, 280	AW250/102	23.214	1,256	5.88	5,758	5.07	6,201
9.84	7,998	F602_0230	MR160/	050, 140	AW160/012	23.272	1,698	8.15	7,998	6.52	7,998
11.12	9,046	F602_0230	MR200/	180	AW200/014	23.272	1,698	9.81	9,631	7.94	9,744
11.12	9,046	F602_0230	MR250/	180, 210, 250, 280	AW250/102	23.272	1,698	9.81	9,631	7.94	9,744
<b>60 RPM Output (Approximate)</b>											
2.13	2,097	F202_0280	MR200/	180	AW200/014	28.112	769	1.79	2,126	1.43	2,126
2.13	2,097	F202_0280	MR140/	050	AW140/010	28.112	769	1.79	2,126	1.43	2,126
2.13	2,097	F202_0280	MR160/	050, 140	AW160/012	28.112	769	1.79	2,126	1.43	2,126
3.54	3,495	F302_0280	MR160/	050, 140	AW160/012	28.230	1,069	2.98	3,543	2.38	3,543
3.54	3,495	F302_0280	MR200/	180	AW200/014	28.230	1,069	2.98	3,543	2.38	3,543
5.89	5,756	F402_0280	MR200/	180	AW200/014	27.986	1,316	5.19	6,128	4.20	6,201
5.89	5,756	F402_0280	MR160/	050, 140	AW160/012	27.986	1,316	5.19	6,128	4.20	6,201
5.89	5,756	F402_0280	MR250/	180, 210, 250, 280	AW250/102	27.986	1,316	5.19	6,128	4.20	6,201
9.84	9,619	F602_0280	MR160/	050, 140	AW160/012	27.986	1,779	8.15	9,619	6.52	9,619
9.84	9,619	F602_0280	MR200/	180	AW200/014	27.986	1,779	8.26	9,744	6.60	9,744
9.84	9,619	F602_0280	MR250/	180, 210, 250, 280	AW250/102	27.986	1,779	8.26	9,744	6.60	9,744
<b>50 RPM Output (Approximate)</b>											
<b>40 RPM</b>											

\* For thermal HP capacity, see rating below.

Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75





# "F" Series – Offset Helical MGS Reducer – Selection Data



- NOTE:** <sup>1)</sup> Complete Base Module Part Number by adding the Output and Housing Style. Example: F302AG0560.  
<sup>2)</sup> Select the Input Option (Motor Adapter OR Input Shaft and add to Part Number.  
<sup>3)</sup> Select Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
<sup>4)</sup> Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>50 RPM Output (Approximate)</b>						<b>40 RPM</b>		<b>30 RPM</b>			
0.87	1,063	F102_0350	MR140/	050	AW140/010	35.049	632	0.72	1,063	0.58	1,063
0.87	1,063	F102_0350	MR160/	050, 140	AW160/012	35.049	632	0.72	1,063	0.58	1,063
1.72	2,126	F202_0350	MR140/	050	AW140/010	35.455	815	1.42	2,126	1.14	2,126
1.72	2,126	F202_0350	MR160/	050, 140	AW160/012	35.455	815	1.42	2,126	1.14	2,126
1.72	2,126	F202_0350	MR200/	180	AW200/014	35.455	815	1.42	2,126	1.14	2,126
2.42	2,967	F302_0350	MR140/	050	AW140/010	35.034	1,129	2.01	2,967	1.61	2,967
2.89	3,543	F302_0350	MR160/	050, 140	AW160/012	35.034	1,129	2.40	3,543	1.92	3,543
2.89	3,543	F302_0350	MR200/	180	AW200/014	35.034	1,129	2.40	3,543	1.92	3,543
5.06	6,201	F402_0350	MR160/	050, 140	AW160/012	35.079	1,393	4.19	6,201	3.35	6,201
5.06	6,201	F402_0350	MR200/	180	AW200/014	35.079	1,393	4.19	6,201	3.35	6,201
5.06	6,201	F402_0350	MR250/	180, 210, 250, 280	AW250/102	35.079	1,393	4.19	6,201	3.35	6,201
7.92	9,744	F602_0350	MR160/	050, 140	AW160/012	35.208	1,884	6.56	9,744	5.25	9,744
7.92	9,744	F602_0350	MR200/	180	AW200/014	35.208	1,884	6.56	9,744	5.25	9,744
7.92	9,744	F602_0350	MR250/	180, 210, 250, 280	AW250/102	35.208	1,884	6.56	9,744	5.25	9,744
<b>35 RPM Output (Approximate)</b>						<b>30 RPM</b>		<b>25 RPM</b>			
0.66	1,063	F102_0460	MR140/	050	AW140/010	46.429	678	0.54	1,063	0.43	1,063
0.66	1,063	F102_0460	MR160/	050, 140	AW160/012	46.429	678	0.54	1,063	0.43	1,063
1.29	2,126	F202_0470	MR140/	050	AW140/010	47.045	875	1.07	2,126	0.86	2,126
1.29	2,126	F202_0470	MR160/	050, 140	AW160/012	47.045	875	1.07	2,126	0.86	2,126
1.29	2,126	F202_0470	MR200/	180	AW200/014	47.045	875	1.07	2,126	0.86	2,126
2.15	3,543	F302_0470	MR140/	050	AW140/010	47.185	1,216	1.78	3,543	1.42	3,543
2.15	3,543	F302_0470	MR160/	050, 140	AW160/012	47.185	1,216	1.78	3,543	1.42	3,543
2.15	3,543	F302_0470	MR200/	180	AW200/014	47.185	1,216	1.78	3,543	1.42	3,543
3.78	6,201	F402_0470	MR160/	050, 140	AW160/012	46.944	1,498	3.13	6,201	2.51	6,201
3.78	6,201	F402_0470	MR200/	180	AW200/014	46.944	1,498	3.13	6,201	2.51	6,201
3.78	6,201	F402_0470	MR250/	180, 210, 250, 280	AW250/102	46.944	1,498	3.13	6,201	2.51	6,201
5.97	9,744	F602_0470	MR160/	050, 140	AW160/012	46.719	2,022	4.95	9,744	3.96	9,744
5.97	9,744	F602_0470	MR200/	180	AW200/014	46.719	2,022	4.95	9,744	3.96	9,744
5.97	9,744	F602_0470	MR250/	180, 210, 250, 280	AW250/102	46.719	2,022	4.95	9,744	3.96	9,744
<b>30 RPM Output (Approximate)</b>						<b>25 RPM</b>		<b>20 RPM</b>			
1.07	2,126	F202_0570	MR140/	050	AW140/010	56.727	917	0.89	2,126	0.71	2,126
1.07	2,126	F202_0570	MR160/	050, 140	AW160/012	56.727	917	0.89	2,126	0.71	2,126
1.80	3,543	F302_0560	MR140/	050	AW140/010	56.486	1,272	1.49	3,543	1.19	3,543
1.80	3,543	F302_0560	MR160/	050, 140	AW160/012	56.486	1,272	1.49	3,543	1.19	3,543
1.80	3,543	F302_0560	MR200/	180	AW200/014	56.486	1,272	1.49	3,543	1.19	3,543
3.17	6,201	F402_0560	MR160/	050, 140	AW160/012	55.972	1,565	2.63	6,201	2.10	6,201
3.17	6,201	F402_0560	MR200/	180	AW200/014	55.972	1,565	2.63	6,201	2.10	6,201
3.17	6,201	F402_0560	MR250/	180, 210, 250, 280	AW250/102	55.972	1,565	2.63	6,201	2.10	6,201
5.01	9,744	F602_0560	MR160/	050, 140	AW160/012	55.714	2,113	4.15	9,744	3.32	9,744
5.01	9,744	F602_0560	MR200/	180	AW200/014	55.714	2,113	4.15	9,744	3.32	9,744
5.01	9,744	F602_0560	MR250/	180, 210, 250, 280	AW250/102	55.714	2,113	4.15	9,744	3.32	9,744

See Page 75 for Part No. Configurator. Mounting position MUST be specified.



# "F" Series – Offset Helical MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>25 RPM Output (Approximate)</b>											
0.43	1,063	F102_0700	MR140/	050	AW140/010	70.056	752	0.36	1,063	0.29	1,063
0.43	1,063	F102_0700	MR160/	050, 140	AW160/012	70.056	752	0.36	1,063	0.29	1,063
0.87	2,126	F202_0700	MR140/	050	AW140/010	70.130	967	0.72	2,126	0.58	2,126
0.87	2,126	F202_0700	MR160/	050, 140	AW160/012	70.130	967	0.72	2,126	0.58	2,126
1.44	3,543	F302_0700	MR140/	050	AW140/010	70.359	1,344	1.19	3,543	0.96	3,543
1.44	3,543	F302_0700	MR160/	050, 140	AW160/012	70.359	1,344	1.19	3,543	0.96	3,543
2.53	6,201	F402_0700	MR160/	050, 140	AW160/012	70.056	1,655	2.10	6,201	1.68	6,201
2.53	6,201	F402_0700	MR200/	180	AW200/014	70.056	1,655	2.10	6,201	1.68	6,201
2.53	6,201	F402_0700	MR250/	180, 210, 250, 280	AW250/102	70.056	1,655	2.10	6,201	1.68	6,201
4.00	9,744	F602_0700	MR160/	050, 140	AW160/012	69.643	2,234	3.32	9,744	2.65	9,744
4.00	9,744	F602_0700	MR200/	180	AW200/014	69.643	2,234	3.32	9,744	2.65	9,744
4.00	9,744	F602_0700	MR250/	180, 210, 250, 280	AW250/102	69.643	2,234	3.32	9,744	2.65	9,744
<b>20 RPM</b>											
<b>16.5 RPM</b>											
<b>19 RPM Output (Approximate)</b>											
0.32	1,063	F102_0940	MR140/	050	AW140/010	93.631	808	0.27	1,063	0.22	1,063
0.65	2,126	F202_0940	MR140/	050	AW140/010	93.818	1,040	0.54	2,126	0.43	2,126
0.65	2,126	F202_0940	MR160/	050, 140	AW160/012	93.818	1,040	0.54	2,126	0.43	2,126
1.08	3,543	F302_0940	MR140/	050	AW140/010	93.644	1,443	0.90	3,543	0.72	3,543
1.08	3,543	F302_0940	MR160/	050, 140	AW160/012	93.644	1,443	0.90	3,543	0.72	3,543
1.90	6,201	F402_0930	MR160/	050, 140	AW160/012	93.333	1,779	1.58	6,201	1.26	6,201
2.99	9,744	F602_0930	MR160/	050, 140	AW160/012	93.333	2,403	2.48	9,744	1.98	9,744
2.99	9,744	F602_0930	MR200/	180	AW200/014	93.333	2,403	2.48	9,744	1.98	9,744
2.99	9,744	F602_0930	MR250/	180, 210	AW250/102	93.333	2,403	2.48	9,744	1.98	9,744
<b>16 RPM</b>											
<b>12 RPM</b>											
<b>15 RPM Output (Approximate)</b>											
0.27	1,063	F102_1120	MR140/	050	AW140/010	111.944	845	0.23	1,063	0.18	1,063
0.54	2,126	F202_1130	MR140/	050	AW140/010	112.727	1,088	0.45	2,126	0.36	2,126
0.90	3,543	F302_1130	MR140/	050	AW140/010	112.848	1,512	0.74	3,543	0.60	3,543
0.90	3,543	F302_1130	MR160/	050, 140	AW160/012	112.848	1,512	0.74	3,543	0.60	3,543
<b>12 RPM</b>											
<b>9 RPM</b>											
<b>13 RPM Output (Approximate)</b>											
0.22	1,063	F102_1400	MR140/	050	AW140/010	139.750	893	0.18	1,063	0.14	1,063
1.27	6,201	F402_1400	MR160/	050, 140	AW160/012	139.750	1,967	1.05	6,201	0.84	6,201
2.00	9,744	F602_1400	MR160/	050, 140	AW160/012	139.750	2,659	1.65	9,744	1.32	9,744
0.43	2,126	F202_1410	MR140/	050	AW140/010	140.909	1,151	0.36	2,126	0.29	2,126
0.72	3,543	F302_1410	MR140/	050	AW140/010	140.648	1,598	0.60	3,543	0.48	3,543
<b>10 RPM</b>											
<b>8 RPM</b>											
<b>10 RPM Output (Approximate)</b>											
0.56	3,543	F303_1820	MR160/	050, 140	AW160/012	182.449	1,688	0.47	3,543	0.37	3,543
0.99	6,201	F403_1820	MR160/	050, 140	AW160/012	181.519	2,081	0.82	6,201	0.65	6,201
1.57	9,744	F603_1810	MR160/	050, 140	AW160/012	180.646	2,813	1.30	9,744	1.02	9,744
<b>8 RPM</b>											
<b>6 RPM</b>											
<b>8 RPM Output (Approximate)</b>											
0.28	2,126	F203_2220	MR140/	050	AW140/010	222.182	1,215	0.23	2,126	0.18	2,126
1.31	9,744	F603_2150	MR160/	050, 140	AW160/012	215.429	2,813	1.09	9,744	0.86	9,744
<b>7 RPM</b>											
<b>5 RPM</b>											

\* For thermal HP capacity, see rating below.

Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75



# "F" Series – Offset Helical MGS Reducer – Selection Data

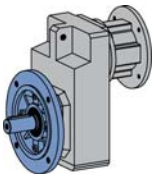


- NOTE:** <sup>1)</sup> Complete Base Module Part Number by adding the Output and Housing Style. Example: F302AG0560.  
<sup>2)</sup> Select the Input Option (Motor Adapter OR Input Shaft and add to Part Number.  
<sup>3)</sup> Select Motor Adapter Size plus required Motor Frame Size. Example **MR160/** plus **050** for 56C.  
<sup>4)</sup> Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

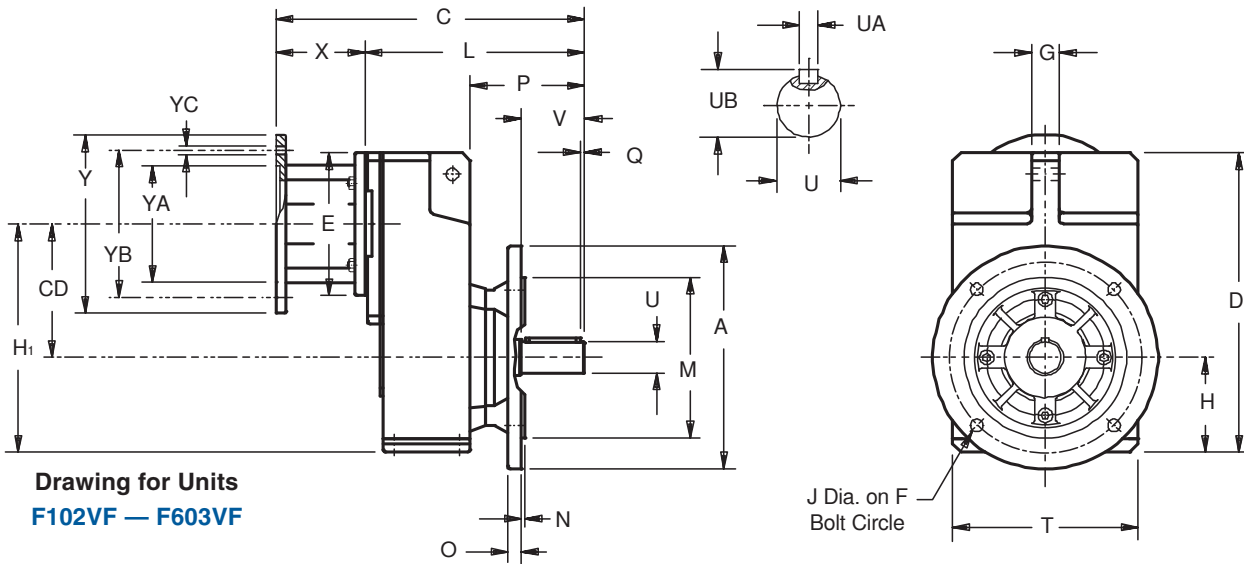
1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>6 RPM Output (Approximate)</b>							<b>5 RPM</b>		<b>4 RPM</b>		
0.22	2,126	<b>F203_2750</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	274.675	1,215	0.19	2,126	0.15	2,126
0.67	6,201	<b>F403_2710</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	270.881	2,081	0.55	6,201	0.43	6,201
<b>5 RPM Output (Approximate)</b>								<b>4 RPM</b>		<b>3 RPM</b>	
0.28	3,543	<b>F303_3670</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	366.774	1,688	0.23	3,543	0.18	3,543
0.78	9,744	<b>F603_3610</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	360.889	2,813	0.65	9,744	0.51	9,744
<b>3 RPM Output (Approximate)</b>								<b>2.5 RPM</b>		<b>2 RPM</b>	
0.11	2,126	<b>F203_5520</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	551.894	1,215	0.09	2,126	0.07	2,126
0.19	3,543	<b>F303_5510</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	550.872	1,688	0.15	3,543	0.12	3,543
0.33	6,201	<b>F403_5470</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	547.354	2,081	0.27	6,201	0.21	6,201
0.52	9,744	<b>F603_5400</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	540.367	2,813	0.43	9,744	0.34	9,744

**NOTE:** For slower speeds than those listed, units can be combined. Contact STOBER Drives Inc.

**See Page 75 for Part No. Configurator. Mounting position MUST be specified.**



# "F" Series – MGS Reducer Round Flange – "F" Housing Shaft Output – Dimensional Data



Drawing for Units  
F102VF – F603VF

Table No. 1 "F" Series – Round Flange Dimensions (Inches) – "F" Housing Style

Base Module	CD	A	D	F	G	H	H <sub>1</sub>	J	M	N	O	P	Q	T	V
<b>F102</b>	4.02	6.30	9.37	5.12	.79	2.91	6.93	.35	4.331	.14	.39	3.80	.16	5.71	1.97
<b>F202/F203</b>	5.16	7.87	11.77	6.50	.87	3.66	8.82	.43	5.118	.14	.55	4.53	.16	7.09	2.36
<b>F302/F303</b>	5.89	9.84	13.23	8.46	1.18	4.17	10.06	.55	7.087	.16	.59	5.10	.16	8.11	2.76
<b>F402/F403</b>	6.65 <sup>1)</sup>	9.84	14.57	8.46	1.18	4.57	11.22	.55	7.087	.16	.59	5.49	.16	9.06	3.15
<b>F602/F603</b>	7.72	11.81	17.64	10.43	1.38	5.39	13.11	.55	9.055	.16	.67	6.44	.20	10.43	3.94

<sup>1)</sup> C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.

Table No. 2 "F" Series – "F" Housing Style

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

Table No. 3 Metric output available on request

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>F102</b>	1.000	1/4 × 1/4 × 1 <sup>9</sup> / <sub>16</sub>	1.11	25 <sub>ks</sub>	A8x7x40	28
<b>F202/F203</b>	1.250	1/4 × 1/4 × 1 <sup>15</sup> / <sub>16</sub>	1.36	30 <sub>ks</sub>	A8x7x50	33
<b>F302/F303</b>	1.375	5/16 × 5/16 × 2 <sup>5</sup> / <sub>16</sub>	1.51	35 <sub>ks</sub>	A10x8X60	38
<b>F402/F403</b>	1.625	3/8 × 3/8 × 2 <sup>7</sup> / <sub>8</sub>	1.79	40 <sub>ks</sub>	A12x8X70	43
<b>F602/F603</b>	2.125	1/2 × 1/2 × 3 <sup>5</sup> / <sub>32</sub>	2.35	50 <sub>ks</sub>	A14x9X90	53.5

Table No. 4 Motor Adapter Dimensions (Inches)

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		Approx. Wt. lbs.
	C	L	C	L	C	L	C	L	
<b>F102</b>	10.40	7.09	11.10	7.24	—	—	—	—	38
<b>F202</b>	11.70	8.39	12.40	8.54	13.42	8.62	—	—	51
<b>F203</b>	13.15	9.84	—	—	—	—	—	—	64
<b>F302</b>	12.76	9.45	13.47	9.61	14.49	9.69	—	—	67
<b>F303</b>	14.22	10.91	15.13	11.28	—	—	—	—	73
<b>F402</b>	—	—	14.45	10.59	15.47	10.67	16.10	10.79	84
<b>F403</b>	15.20	11.89	16.14	12.28	—	—	—	—	91
<b>F602</b>	—	—	16.46	12.60	17.48	12.68	18.11	12.80	165
<b>F603</b>	—	—	18.15	14.29	—	—	—	—	177

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

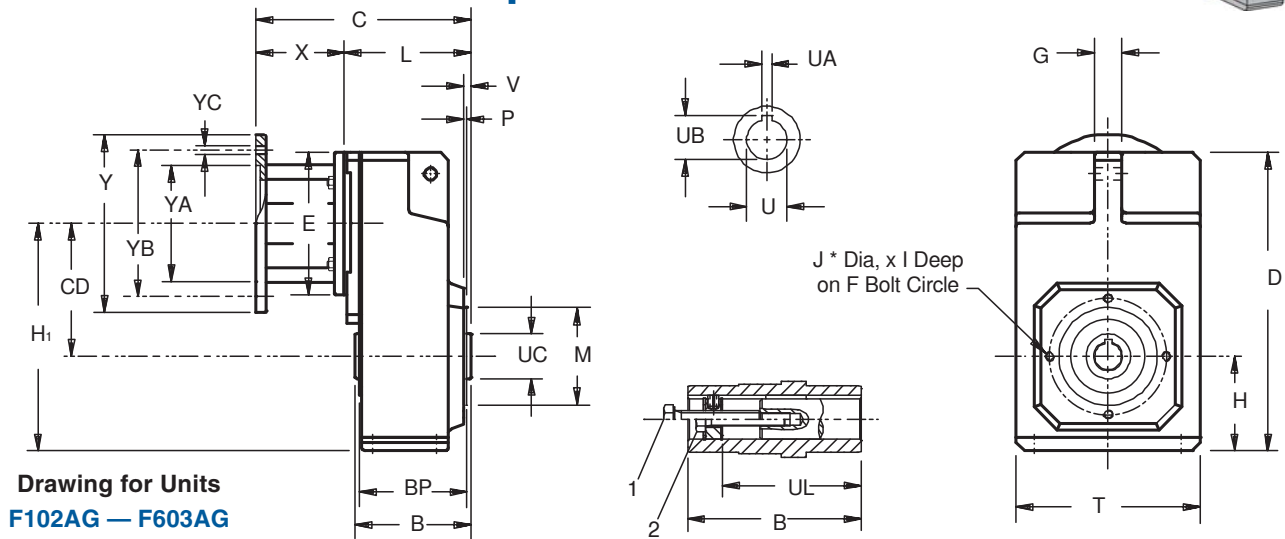
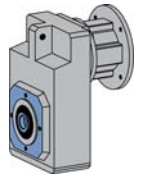
<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

All weights are approximate.

**Part No. Example**  
Round Flange with Motor Adapter  
**F302VF0620 MR160/140**



# "F" Series – MGS Reducer Tapped Holes – "G" Housing Hollow Output – Dimensional Data



Drawing for Units  
F102AG — F603AG

Table No. 1  
"F" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base Module	CD	B	D	G	H	H <sub>1</sub>	I	J*	M	P	T	V	BP
<b>F102</b>	4.02	3.74	9.37	.79	2.91	6.93	.51	M8×1.25	2.756	.10	5.71	.26	3.43
<b>F202/203</b>	5.16	4.53	11.77	.87	3.66	8.82	.51	M8×1.25	3.740	.12	7.09	.31	4.13
<b>F302/303</b>	5.89	5.12	13.23	1.18	4.17	10.06	.63	M10×1.5	4.331	.14	8.11	.33	4.72
<b>F402/403</b>	6.65 <sup>1)</sup>	5.71	14.57	1.18	4.57	11.22	.63	M10×1.5	4.331	.14	9.06	.33	5.31
<b>F602/603</b>	7.72	7.09	17.64	1.38	5.39	13.11	.63	M10×1.5	5.118	.14	10.43	.41	6.54

Table No. 2 "F" Series — "G" Housing Style

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

\*F602 and F603 has 8 tapped holes instead of 4 as shown on drawing.  
<sup>1)</sup> C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.  
 1. Removal Bolt – not supplied.  
 2. Mounting Bolt – must be smaller than removal bolt.

Table No. 3 Metric output available on request

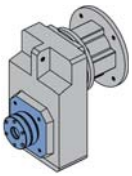
Base Module	Standard Bore - inches			Optional Bore - mm			UC	UL	1
	U	UA	UB	U	UA	UB			
<b>F102</b>	.750	.187	.84	20 <sub>H7</sub>	6 <sub>JS9</sub>	22.8	1.38	2.87	3/8-16
<b>F202/F203</b>	1.000	.250	1.12	25 <sub>H7</sub>	8 <sub>JS9</sub>	28.3	1.77	3.62	1/2-13
<b>F302/F303</b>	1.250	.250	1.37	30 <sub>H7</sub>	8 <sub>JS9</sub>	33.3	1.97	4.06	1/2-13
<b>F402/F403</b>	1.500	.375	1.67	40 <sub>H7</sub>	12 <sub>JS9</sub>	43.3	2.17	4.49	3/4-10
<b>F602/F603</b>	2.000	.500	2.23	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8	2.76	5.63	3/4-10

**Part No. Example**  
 Tapped Holes Housing with Motor Adapter  
**F302AG0620 MR160/140**

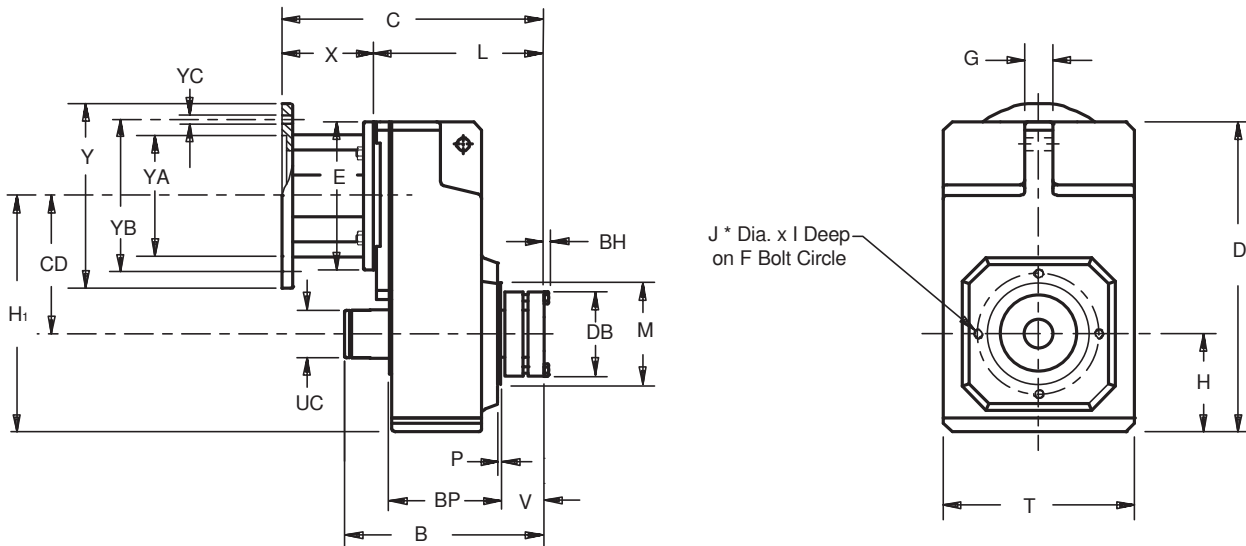
Table No. 4 Motor Adapter Dimensions (Inches)

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		Approx. Wt. lbs.
	C	L	C	L	C	L	C	L	
<b>F102</b>	7.40	4.09	8.11	4.25	—	—	—	—	38
<b>F202</b>	8.15	4.84	8.86	5.00	9.88	5.08	—	—	51
<b>F203</b>	9.61	6.30	—	—	—	—	—	—	64
<b>F302</b>	8.74	5.43	9.45	5.59	10.47	5.67	—	—	67
<b>F303</b>	10.20	6.89	11.14	7.28	—	—	—	—	73
<b>F402</b>	—	—	10.04	6.18	11.06	6.26	11.68	6.38	84
<b>F403</b>	10.79	7.48	11.73	7.87	—	—	—	—	91
<b>F602</b>	—	—	11.34	7.48	12.36	7.56	12.99	7.68	165
<b>F603</b>	—	—	13.03	9.17	—	—	—	—	177

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.  
<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.  
 All weights are approximate.



# "F" Series – MGS Reducer Tapped Holes – "G" Housing Single Bushing – Dimensional Data



**Important:** For ease of installation, a  $1/32 \times 45^\circ$  chamfer (minimum) is recommended for the output shaft end.

**Table No. 1 "F" Series – Single Side Wobble Free Bushing Unit Dimensions (Inches)**

Base Module	CD	B	D	F	G	H	H <sub>1</sub>	I	J*	M	P	T	V	BH	BP	DB	UC	Bushing Capscrews		
																		Metric No.- Size x Length	Tightening Torque in.lbs   Nm	
<b>F1</b>	4.02	6.40	9.37	3.54	.79	2.91	6.93	.51	M8×1.25	2.953	.10	5.71	1.18	.16	3.43	2.68	1.35	6-M6×1×25	89	10
<b>F2</b>	5.16	7.26	11.77	4.53	.87	3.66	8.82	.51	M8×1.25	3.740	.12	7.09	1.54	.16	4.13	3.07	1.74	8-M6×1×30	89	10
<b>F3</b>	5.89	7.95	13.23	5.12	1.18	4.17	10.06	.63	M10×1.5	4.331	.14	8.11	1.54	.16	4.72	3.31	1.90	8-M6×1×30	89	10
<b>F4</b>	6.65 <sup>1)</sup>	8.93	14.57	5.12	1.18	4.57	11.22	.63	M10×1.5	4.331	.14	9.06	1.78	.20	5.31	3.82	2.14	8-M8×1.25×30	221	25
<b>F6</b>	7.72	10.24	17.64	6.50	1.38	5.39	13.11	.63	M10×1.5	5.118	.14	10.43	1.77	.24	6.54	4.13	2.53	8-M10×1.5×35	434	49

\*F602 and F603 has 8 tapped holes instead of 4 as shown on drawing.

<sup>1)</sup> C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.

**Table No. 2 "F" Series Unit Dimensions (Inches)**

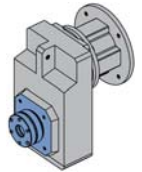
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

### Part No. Example

Unit with Motor Adapter and  $1\frac{3}{8}$ " Bore Single Bushing  
**F402WG0560 MR160/140 WF4-106**



# "F" Series – MGS Reducer Tapped Holes – "G" Housing Single Bushing – Dimensional Data



**Table No. 3 Motor Adapter Dimensions (Inches)**

Base	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		Wt.
Module	C	L	C	L	C	L	C	L	lbs.
<b>F102</b>	8.42	5.11	9.13	5.27	—	—	—	—	38
<b>F202</b>	9.50	6.19	10.21	6.35	11.23	6.43	—	—	51
<b>F203</b>	10.96	7.65	—	—	—	—	—	—	64
<b>F302</b>	10.09	6.78	10.80	6.94	11.82	7.02	—	—	67
<b>F303</b>	11.55	8.24	12.49	8.63	—	—	—	—	73
<b>F402</b>	—	—	11.63	7.77	12.65	7.85	13.28	7.97	84
<b>F403</b>	12.38	9.07	13.32	9.46	—	—	—	—	91
<b>F602</b>	—	—	12.84	8.98	13.86	9.06	14.49	9.18	165
<b>F603</b>	—	—	14.53	10.67	—	—	—	—	177

**Table No. 4 "WF" Single Side Bushings**

Base Module	Stock Bores Sizes												
	3/4	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2
<b>F102</b>	WF1-075	—	—	—	—	—	—	—	—	—	—	—	—
<b>F202/F203</b>	—	WF2-100	WF2-103	—	—	—	—	—	—	—	—	—	—
<b>F302/F303</b>	—	WF3-100	WF3-103	WF3-104	WF3-106	WF3-107	WF3-108	—	—	—	—	—	—
<b>F402/F403</b>	—	WF4-100	WF4-103	WF4-104	WF4-106	WF4-107	WF4-108	—	—	—	—	—	—
<b>F602/F603</b>	—	—	—	—	—	WF5-107	WF5-108	WF5-110	WF5-111	WF5-112	WF5-114	WF5-115	WF5-200

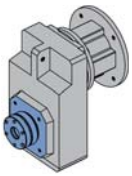
<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

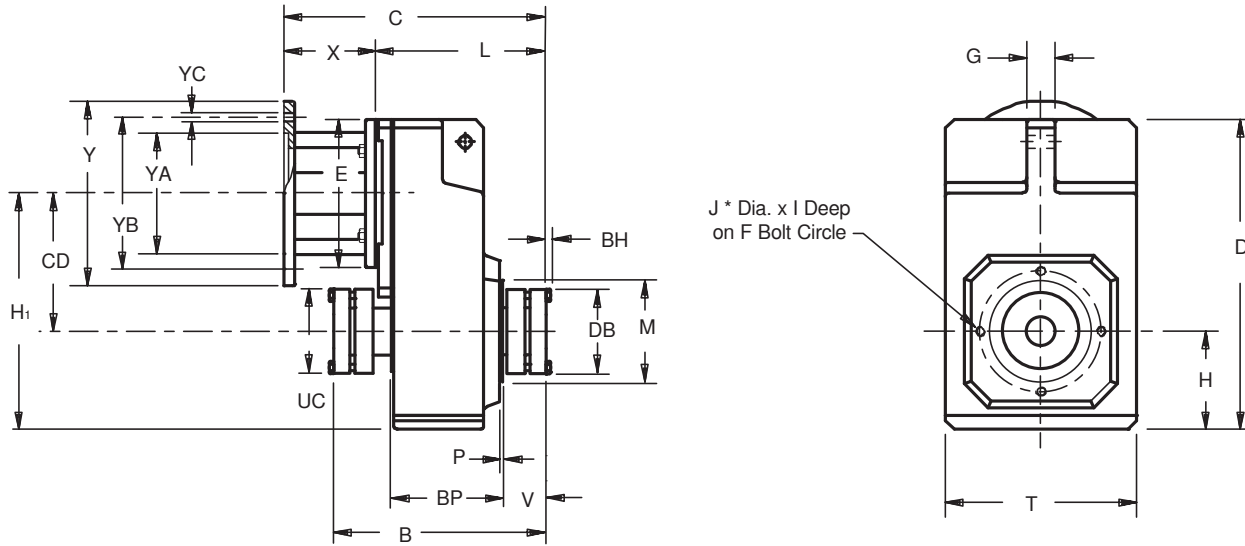
A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the MGS reducer. The bushing will accept a shaft with a tolerance of +.000/-0.005.

**NOTE: F6 units use a WF5 Bushing Kit.**

All weights are approximate.



# "F" Series – MGS Reducer Tapped Holes – "G" Housing Double Bushing – Dimensional Data



**Important:** For ease of installation, a  $1/32 \times 45^\circ$  chamfer (minimum) is recommended for the output shaft end.

**Table No. 1 "F" Series – Double Side Wobble Free Bushing Unit Dimensions (Inches)**

Base Module	CD	B	D	F	G	H	H <sub>1</sub>	I	J*	M	P	T	V	BH	BP	DB	Bushing Capscrews	
																	Metric No.- Size × Length	Tightening Torque in.lbs   Nm
<b>F102</b>	4.02	6.73	9.37	3.54	.79	2.91	6.93	.51	M8×1.25	2.953	.10	5.71	1.18	.16	3.43	2.68	6—M6×1×25	89   10
<b>F202</b>	5.16	7.77	11.77	4.53	.87	3.66	8.82	.51	M8×1.25	3.740	.12	7.09	1.54	.16	4.13	3.07	8—M6×1×30	89   10
<b>F302</b>	5.89	8.46	13.23	5.12	1.18	4.17	10.06	.63	M10×1.5	4.331	.14	8.11	1.54	.16	4.72	3.31	8—M6×1×30	89   10
<b>F402</b>	6.65 <sup>1)</sup>	9.57	14.57	5.12	1.18	4.57	11.22	.63	M10×1.5	4.331	.14	9.06	1.78	.20	5.31	3.82	8—M8×1.25×30	221   25
<b>F602</b>	7.72	10.84	17.64	6.50	1.38	5.39	13.11	.63	M10×1.5	5.118	.14	10.43	1.77	.24	6.54	4.13	8—M10×1.5×35	434   49

\*F602 has 8 tapped holes instead of 4 as shown on drawing.

<sup>1)</sup> C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.

**Table No. 2 "F" Series Unit Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

**Part No. Example**

Unit with Motor Adapter and 1<sup>3/8</sup>" Bore Double Bushing

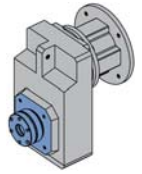
**F402WG0560 MR160/140 WFN4-106**

(WFN bushings do not have covers.)





# "F" Series – MGS Reducer Tapped Holes – "G" Housing Double Bushing – Dimensional Data



**Table No. 3 Motor Adapter Dimensions (Inches)**

Base Module	MR140/050		MR160/140 <sup>2)</sup>		MR200/180		MR250/210 <sup>3)</sup>		Wt. lbs.
	C	L	C	L	C	L	C	L	
<b>F102</b>	8.42	5.11	—	—	—	—	—	—	38
<b>F202</b>	9.50	6.19	10.21	6.35	—	—	—	—	51
<b>F302</b>	10.09	6.78	10.80	6.94	11.82	7.02	—	—	67
<b>F402</b>	—	—	11.63	7.77	12.65	7.85	—	—	84
<b>F602</b>	—	—	12.84	8.98	13.86	9.06	14.49	9.18	165

**Table No. 4 "WFN" Double Side Bushings without Covers**

Unit	Stock Bores Sizes												
	3/4	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2
<b>F102</b>	WFN1-075	—	—	—	—	—	—	—	—	—	—	—	—
<b>F202</b>	—	WFN2-100	WFN2-103	—	—	—	—	—	—	—	—	—	—
<b>F302</b>	—	WFN3-100	WFN3-103	WFN3-104	WFN3-106	WFN3-107	WFN3-108	—	—	—	—	—	—
<b>F402</b>	—	WFN4-100	WFN4-103	WFN4-104	WFN4-106	WFN4-107	WFN4-108	—	—	—	—	—	—
<b>F602</b>	—	—	—	—	—	WFN5-107	WFN5-108	WFN5-110	WFN5-111	WFN5-112	WFN5-114	WFN5-115	WFN5-200

<sup>2)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>3)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the MGS reducer. The bushing will accept a shaft with a tolerance of +.000/-0.005.

**NOTE: F6 units use a WFN5 Bushing Kit.**

All weights are approximate.

# "F" Series – MGS Reducer Tapped Holes – "GN" Housing

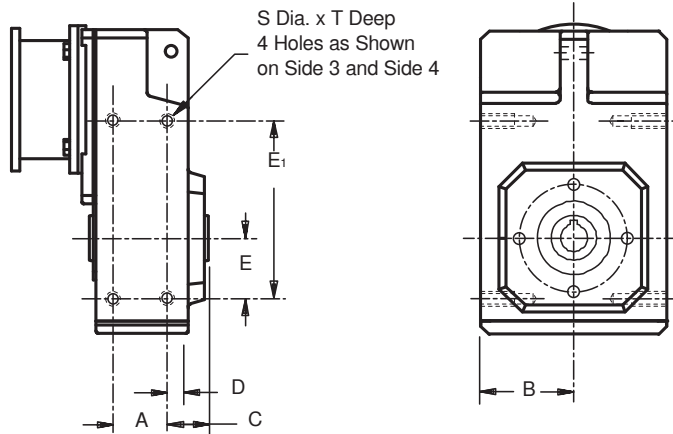


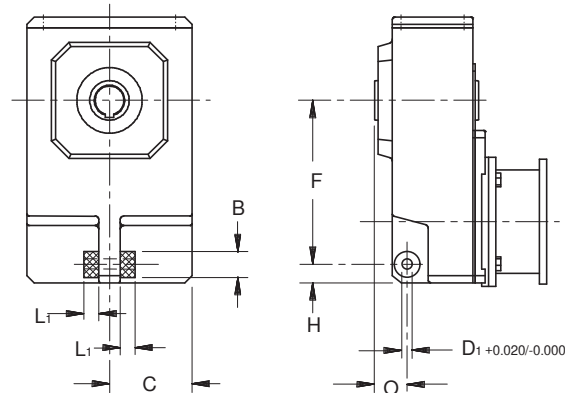
Table No. 1

"F" Series – Foot Mount "GN" Housing Dimensions (Inches)

Base Module	A	B	C	D	E	E'	S	T
<b>F102/F103</b>	1.97	2.79	1.14	.39	1.57	5.51	M6	.43
<b>F202/F203</b>	2.52	3.46	1.32	.41	2.17	6.89	M8	.51
<b>F302/F303</b>	2.83	4.02	1.48	.49	2.36	7.87	M10	.63
<b>F402/F403</b>	3.43	4.49	1.48	.49	2.76	8.66	M10	.63
<b>F602/F603</b>	4.25	5.16	1.83	.61	3.35	10.63	M12	.75



# "F" Series – MGS Reducer Rubber Buffer for Torque Arm Mounting



**Table No. 2**

**"F" Series – Rubber Buffer Dimensions (Inches)**

Base Module	A	B	C	F	H	D <sup>1</sup>	L <sup>1</sup>	O
F102/F103	<b>25192</b>	1.18	2.86	5.91	.55	.43	.59	1.38
F202/F203	<b>25192</b>	1.18	3.55	7.12	.98	.43	.59	1.57
F302/F303	<b>25193</b>	1.57	4.06	8.07	.96	.55	.79	1.77
F402/F403	<b>25193</b>	1.57	4.53	8.98	1.02	.55	.79	1.77
F602/F603	<b>25194</b>	2.36	5.22	10.63	1.02	.57	1.18	2.77

Order two (2) rubber buffers for each unit.  
Torque arms are not supplied by STOBER.



# "K" Series – Right Angle Helical/Bevel MGS Speed Reducers

Right angle helical/bevel gear drives offer higher input-to-output efficiencies than conventional worm gear drives. This added efficiency reduces your costs today through smaller gear drive and motor sizing. Tomorrow, you'll benefit through optimum energy savings.

#### Performance Specifications:

- Horsepower ratings from 1/6 to 165
- Output torques to 106,296 in. lbs.
- Output speeds available from 437 to 4.5 RPM
- Speed reducer ratios from 4:1 to 381:1
- 3 year warranty standard with option for 5 years

#### Input Options:

- Input shaft
- NEMA C-face Adapter (coupling type)

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life. Standard backlash is  $\leq 12$  arc minutes

#### Output Options:

- Solid shaft
- Hollow
- Wobble free bushings

One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities, and eliminates leakage problems common to drives with bolt-on output covers.

Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups.

Strategically located oil fill, drain and breather ports for optimum mounting flexibility. Oil sight glass available.

Stainless steel nameplate and hardware

High efficiency spiral bevel gearing provides quiet operation and excellent torque carrying capacity

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

**3 or 5 YEAR WARRANTY AVAILABLE**

**SHIPS in  
1 DAY**



**STOBER**








[www.stober.com](http://www.stober.com)

# Part No. Configurator

## “K” Series – MGS Speed Reducers



### Part No. Explanation

<b>K</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>A</b>	<b>GD</b>	<b>0580</b>	<b>MR160/</b>	<b>140</b>	<b>LL</b>	<b>E12</b>
Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size	Long Life Option	Mounting Position Must be Specified
Series	<b>K</b>	Right Angle Helical/Bevel (output is at a right angle to input; gears are helical and spiral bevel)								
Size	<b>5</b>	Sizes available: KL2, K1, K2, K3, K4, <b>K5</b> , K6, K7, K8, K9, K10								
Generation	<b>1</b>	Design generation: first generation 0, second generation <b>1</b> , etc.								
No. of Gear Stages	<b>3</b>	Number of gear stages: 2, <b>3</b> , 4 (determined by the ratio)								
Output Style	<b>A</b>	Hollow output  Hollow output available: imperial, metric, and stainless steel.								
	<b>V</b>	Shaft output  <b>SPECIFY:</b> Shaft Side 3 or Side 4 (shown).								
	<b>W</b>	Single or double wobble free bushing output  <b>SPECIFY:</b> Single or Double Bushing <b>IF</b> Single Bushing — <b>SPECIFY:</b> Side 3 or Side 4 (shown).								
Housing Style	<b>GD</b>	Torque arm bracket mounting  <b>SPECIFY:</b> Side 1 or Side 5 (also Side 2 on K1).								
	<b>F</b>	Output flange  <b>SPECIFY:</b> Side 3 or Side 4.								
	<b>G</b>	Tapped holes around the output 								
	<b>N</b>	Foot mounting  <b>SPECIFY:</b> Side 1 or Side 5 (also Side 2 on K1).								
Ratio	<b>0580</b>	Approximate ratio: <b>0580</b> = 58.297:1 (4:1 up to 381:1)								
Motor Adapter	<b>MR160/</b>	Motor adapter size from Selection Data: MR140, <b>MR160</b> , MR200, MR250								
NEMA Frame Size	<b>140</b>	Motor frame size determined by motor adapter: 050 (56C), <b>140</b> (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)								

Completed part number for standard warranty unit.

Coating options: white, stainless steel, or standard gray

Output options: metric and stainless steel available in some sizes

**Mounting Position must be specified.**

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Long Life Option	<b>LL</b>	Added <u>ONLY</u> with long life warranty option.
Mounting Position	<b>E12</b>	The long life mounting position will be stamped on the nameplate.



# Part No. Configurator

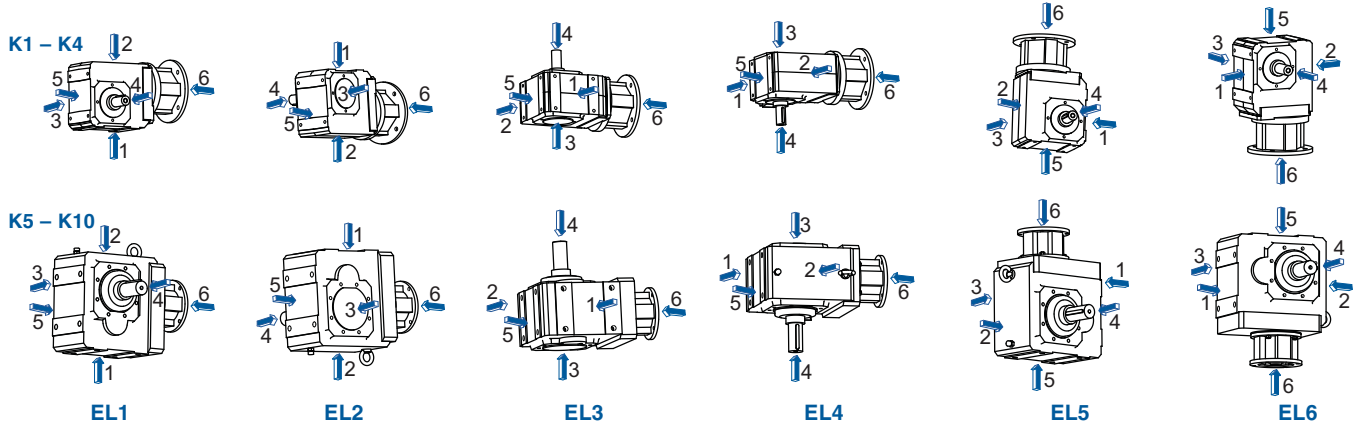
## "K" Series – MGS Speed Reducers

### Mounting Positions – Standard 3 Year Warranty

Mounting Position **MUST BE SPECIFIED.**

Standard Oil: Mobilgear 600XP220

Optional Oil: Food Grade (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC630)



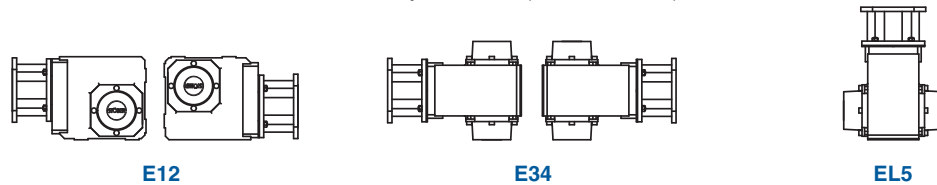
"K" units have the shaft on Side 3 and/or Side 4 (shown). **Shaft side must be specified.**

- EL1** Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2. (The unit is up-side-down.)
- EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.
- EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.
- EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

### Mounting Positions – Long Life 5 Year Warranty

Mounting Position **MUST BE SPECIFIED.**

Standard Oil: Synthetic Oil (Mobil SHC630)



- E12** Side 1 or side 2 can be the down side with this mounting position.
- E34** Side 3 or side 4 can be the down side with this mounting position.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free. Breathers are provided on these standard units: K513 through K1014. STOBER recommends that the lubrication be changed in units supplied with breathers according to the following schedule:

Normal Operating Conditions — after 10,000 Hours

Wet Operating Conditions — after 5,000 Hours.

#### K1 – K4



#### K5 – K10



- Style AN Hollow Output Foot Mount
- Style VN Solid Output Foot Mount
- Style AF Hollow Output Flange Mount
- Style VF Solid Output Flange Mount
- Style AG Hollow Output Tapped Holes
- Style VG Solid Output Tapped Holes
- Style WG Bushing Tapped Holes



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>435 RPM Output (Approximate)</b>											
2.08	291	KL202_0040	ML2R	050	–	4.000	225	1.84	310	1.49	313
2.64	369	K102_0040	MR140/	050	AW140/010	4.000	520	2.19	369	1.71	369
2.81	392	K202_0040	MR140/	050	AW140/010	4.000	624	2.32	392	1.86	392
3.83*	536	K102_0040	MR160/	050, 140	AW160/012	4.000	520	3.38	570	2.91	614
6.84*	957	K202_0040	MR160/	050, 140	AW160/012	4.000	624	6.04	1,018	5.20	1,097
6.84*	957	K202_0040	MR200/	180	AW200/014	4.000	624	6.04	1,018	5.20	1,097
9.84*	1,375	K302_0040	MR160/	050, 140	AW160/012	4.000	728	8.15	1,375	6.52	1,375
9.84*	1,375	K402_0040	MR160/	050, 140	AW160/012	4.000	1,165	8.15	1,375	6.52	1,375
11.99*	1,675	K302_0040	MR200/	180	AW200/014	4.000	728	10.57	1,784	9.11	1,921
17.99*	2,514	K402_0040	MR200/	180	AW200/014	4.000	1,165	15.87	2,677	13.67	2,883
17.99*	2,514	K402_0040	MR250/	180, 210	AW250/102	4.000	1,165	15.87	2,677	13.67	2,883
<b>400 RPM Output (Approximate)</b>											
2.78	423	K202_0044	MR140/	050	AW140/010	4.364	638	2.30	423	1.84	423
6.46*	985	K202_0044	MR160/	050, 140	AW160/012	4.364	638	5.70	1,048	4.91	1,129
6.46*	985	K202_0044	MR200/	180	AW200/014	4.364	638	5.70	1,048	4.91	1,129
9.84*	1,500	K302_0044	MR160/	050, 140	AW160/012	4.364	744	8.15	1,500	6.52	1,500
9.84	1,500	K402_0044	MR160/	050, 140	AW160/012	4.364	1,191	8.15	1,500	6.52	1,500
11.31*	1,725	K302_0044	MR200/	180	AW200/014	4.364	744	9.98	1,836	8.60	1,978
16.97*	2,588	K402_0044	MR200/	180	AW200/014	4.364	1,191	14.97	2,755	12.90	2,968
16.97*	2,588	K402_0044	MR250/	180, 210	AW250/102	4.364	1,191	14.97	2,755	12.90	2,968
<b>340 RPM Output (Approximate)</b>											
5.76*	1,042	K202_0052	MR160/	050, 140	AW160/012	5.177	666	5.08	1,110	4.38	1,196
5.76*	1,042	K202_0052	MR200/	180	AW200/014	5.177	666	5.08	1,110	4.38	1,196
<b>325 RPM Output (Approximate)</b>											
9.84*	1,847	K302_0054	MR160/	050, 140	AW160/012	5.375	784	8.15	1,847	6.52	1,847
9.84*	1,849	K302_0054	MR200/	180	AW200/014	5.375	784	8.68	1,968	7.48	2,120
9.84	1,863	K402_0054	MR160/	050, 140	AW160/012	5.422	1,257	8.15	1,863	6.52	1,863
14.69*	2,782	K402_0054	MR200/	180	AW200/014	5.422	1,257	12.95	2,962	11.16	3,191
14.69*	2,782	K402_0054	MR250/	180, 210	AW250/102	5.422	1,257	12.95	2,962	11.16	3,191
<b>315 RPM Output (Approximate)</b>											
2.64	514	K102_0056	MR140/	050	AW140/010	5.568	565	2.19	514	1.71	514
3.07*	598	K102_0056	MR160/	050, 140	AW160/012	5.568	565	2.71	637	2.34	686
<b>290 RPM Output (Approximate)</b>											
2.50	524	K102_0060	MR140/	050	AW140/010	6.000	576	2.07	524	1.66	524
2.78	582	K202_0060	MR140/	050	AW140/010	6.000	691	2.30	582	1.84	582
2.92	613	K102_0060	MR160/	050, 140	AW160/012	6.000	576	2.58	653	2.22	703
5.22	1,095	K202_0060	MR160/	050, 140	AW160/012	6.000	691	4.61	1,166	3.97	1,256
5.22	1,095	K202_0060	MR200/	180	AW200/014	6.000	691	4.61	1,166	3.97	1,256
9.15*	1,918	K302_0060	MR160/	050, 140	AW160/012	6.000	806	8.07	2,042	6.52	2,062
9.15*	1,918	K302_0060	MR200/	180	AW200/014	6.000	806	8.07	2,042	6.95	2,199
9.84	2,062	K402_0060	MR160/	050, 140	AW160/012	6.000	1,290	8.15	2,062	6.52	2,062
13.73*	2,878	K402_0060	MR200/	180	AW200/014	6.000	1,290	12.11	3,064	10.44	3,301
13.73*	2,878	K402_0060	MR250/	180, 210	AW250/102	6.000	1,290	12.11	3,064	10.44	3,301

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05





# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>260 RPM Output (Approximate)</b>											
2.46	571	K102_0066	MR140/	050	AW140/010	6.644	591	2.04	571	1.63	571
2.61	610	K202_0067	MR140/	050	AW140/010	6.683	710	2.16	610	1.73	610
2.73	634	K102_0066	MR160/	050, 140	AW160/012	6.644	591	2.41	675	2.08	728
4.86	1,135	K202_0067	MR160/	050, 140	AW160/012	6.683	710	4.29	1,208	3.70	1,302
4.86	1,135	K202_0067	MR200/	180	AW200/014	6.683	710	4.29	1,208	3.70	1,302
8.46*	1,994	K302_0067	MR160/	050, 140	AW160/012	6.740	830	7.47	2,123	6.44	2,286
8.46*	1,994	K302_0067	MR200/	180	AW200/014	6.740	830	7.47	2,123	6.44	2,286
9.84	2,309	K402_0067	MR160/	050, 140	AW160/012	6.719	1,327	8.15	2,309	6.52	2,309
12.73*	2,988	K402_0067	MR200/	180	AW200/014	6.719	1,327	11.23	3,182	9.68	3,427
12.73*	2,988	K402_0067	MR250/	180, 210	AW250/102	6.719	1,327	11.23	3,182	9.68	3,427
<b>245 RPM Output (Approximate)</b>											
4.66	1,159	K202_0071	MR160/	050, 140	AW160/012	7.118	721	4.11	1,234	3.54	1,329
4.66	1,159	K202_0071	MR200/	180	AW200/014	7.118	721	4.11	1,234	3.54	1,329
<b>235 RPM Output (Approximate)</b>											
7.96*	2,056	K302_0074	MR160/	050, 140	AW160/012	7.391	849	7.02	2,189	6.05	2,358
7.96*	2,056	K302_0074	MR200/	180	AW200/014	7.391	849	7.02	2,189	6.05	2,358
9.84	2,563	K402_0075	MR160/	050, 140	AW160/012	7.456	1,362	8.15	2,563	6.52	2,563
11.88	3,094	K402_0075	MR200/	180	AW200/014	7.456	1,362	10.48	3,294	9.03	3,548
11.88	3,094	K402_0075	MR250/	180, 210	AW250/102	7.456	1,362	10.48	3,294	9.03	3,548
22.58*	5,710	K513_0073	MR200/	180	AW200/014	7.347	1,629	19.37	5,911	15.49	5,911
22.58*	5,710	K513_0073	MR250/	180, 210	AW250/102	7.347	1,629	19.92	6,079	17.17	6,548
23.37*	5,891	K613_0073	MR200/	180	AW200/014	7.323	1,936	19.37	5,891	15.49	5,891
23.37	5,989	K813_0074	MR200/	180	AW200/014	7.445	3,524	19.37	5,989	15.49	5,989
23.37	6,084	K713_0076	MR200/	180	AW200/014	7.563	2,684	19.37	6,084	15.49	6,084
29.90*	7,536	K613_0073	MR250/	180, 210	AW250/102	7.323	1,936	26.38	8,024	22.73	8,644
29.90*	7,536	K613_0073	MR300/	180, 210, 250, 280	AW300/110	7.323	1,936	26.38	8,024	22.73	8,644
37.76*	9,828	K713_0076	MR250/	180, 210	AW250/102	7.563	2,684	31.28	9,828	25.03	9,828
47.89*	12,467	K713_0076	MR300/	180, 210, 250, 280	AW300/110	7.563	2,684	42.25	13,274	36.41	14,299
75.74*	19,409	K813_0074	MR300/	180, 210, 250, 280	AW300/110	7.445	3,524	62.76	19,409	50.21	19,409
<b>220 RPM Output (Approximate)</b>											
1.47	411	KL202_0080	ML2R	050	-	8.000	284	1.30	438	1.05	443
79.61*	21,741	K913_0079	MR300/	180, 210, 250, 280	AW300/110	7.934	8,025	65.97	21,741	52.77	21,741
123.02*	33,594	K913_0079	MR350/	320, 360	AW350/202	7.934	8,025	101.93	33,594	81.55	33,594
123.02*	33,632	K1013_0079	MR350/	320, 360	AW350/202	7.943	9,880	101.93	33,632	81.55	33,632
<b>215 RPM Output (Approximate)</b>											
21.10*	5,907	K513_0081	MR200/	180	AW200/014	8.134	1,671	18.61	6,289	15.49	6,544
21.10*	5,907	K513_0081	MR250/	180, 210	AW250/102	8.134	1,671	18.61	6,289	16.04	6,774
23.37*	6,522	K613_0081	MR200/	180	AW200/014	8.107	1,986	19.37	6,522	15.49	6,522
27.94*	7,796	K613_0081	MR300/	180, 210, 250, 280	AW300/110	8.107	1,986	24.65	8,301	21.24	8,942
27.94*	7,796	K613_0081	MR250/	180, 210	AW250/102	8.107	1,986	24.65	8,301	21.24	8,942
<b>210 RPM Output (Approximate) <span style="color: red;">Continued Next Page</span></b>											
2.35	684	K102_0083	MR140/	050	AW140/010	8.309	624	1.97	689	1.57	689
2.35	684	K102_0083	MR160/	050, 140	AW160/012	8.309	624	2.08	728	1.79	784
2.52	740	K202_0084	MR140/	050	AW140/010	8.397	751	2.09	740	1.67	740
4.17	1,225	K202_0084	MR160/	050, 140	AW160/012	8.397	751	3.68	1,304	3.17	1,405
4.17	1,225	K202_0084	MR200/	180	AW200/014	8.397	751	3.68	1,304	3.17	1,405
7.28	2,149	K302_0084	MR160/	050	AW160/012	8.444	878	6.43	2,288	5.54	2,465

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>210 RPM Output (Approximate) Continued</b>											
7.28	2,149	<b>K302_0084</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	8.444	878	6.43	2,288	5.54	2,465
9.84	2,879	<b>K402_0084</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	8.377	1,402	8.15	2,879	6.52	2,879
10.99	3,216	<b>K402_0084</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	8.377	1,402	9.69	3,424	8.35	3,689
10.99	3,216	<b>K402_0084</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	8.377	1,402	9.69	3,424	8.35	3,689
23.37	6,631	<b>K813_0082</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	8.243	3,615	19.37	6,631	15.49	6,631
23.37	6,736	<b>K713_0084</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	8.373	2,753	19.37	6,736	15.49	6,736
37.76*	10,881	<b>K713_0084</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	8.373	2,753	31.28	10,881	25.03	10,881
39.64	11,246	<b>K813_0082</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	8.243	3,615	32.84	11,246	26.27	11,246
44.75*	12,897	<b>K713_0084</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	8.373	2,753	39.48	13,732	34.02	14,792
75.74*	21,489	<b>K813_0082</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	8.243	3,615	62.76	21,489	50.21	21,489
<b>190 RPM Output (Approximate)</b>											
2.19	708	<b>K102_0092</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	9.249	641	1.93	754	1.63	795
2.19	708	<b>K102_0092</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	9.249	641	1.93	754	1.67	812
2.61	839	<b>K202_0092</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	9.190	769	2.16	839	1.73	839
3.93	1,262	<b>K202_0092</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	9.190	769	3.47	1,344	2.99	1,448
3.93	1,262	<b>K202_0092</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.190	769	3.47	1,344	2.99	1,448
6.85	2,217	<b>K302_0093</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	9.267	898	6.04	2,360	5.20	2,542
6.85	2,217	<b>K302_0093</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.267	898	6.04	2,360	5.20	2,542
9.84	3,175	<b>K402_0092</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	9.238	1,436	8.15	3,175	6.52	3,175
10.29	3,323	<b>K402_0092</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.238	1,436	9.08	3,538	7.83	3,811
10.29	3,323	<b>K402_0092</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	9.238	1,436	9.08	3,538	7.83	3,811
19.48*	6,147	<b>K513_0092</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.168	1,722	17.19	6,545	14.81	7,050
19.48*	6,147	<b>K513_0092</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	9.168	1,722	17.19	6,545	14.81	7,050
23.37*	7,306	<b>K613_0091</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.081	2,043	19.37	7,306	15.49	7,306
23.37	7,392	<b>K713_0092</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	9.188	2,818	19.37	7,392	15.49	7,392
25.91*	8,097	<b>K613_0091</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	9.081	2,043	22.85	8,621	19.69	9,286
25.91*	8,097	<b>K613_0091</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	9.081	2,043	22.85	8,621	19.69	9,286
36.79*	11,634	<b>K713_0092</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	9.188	2,818	30.48	11,634	24.39	11,634
42.07*	13,303	<b>K713_0092</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	9.188	2,818	37.11	14,163	31.98	15,257
<b>170 RPM Output (Approximate) Continued Next Page</b>											
2.06	730	<b>K102_0100</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	10.140	656	1.82	778	1.52	814
2.06	730	<b>K102_0100</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	10.140	656	1.82	778	1.57	838
2.44	859	<b>K202_0100</b>	<b>MR140/</b>	<b>050</b>	<b>AW140/010</b>	10.073	786	2.02	859	1.62	859
3.70	1,301	<b>K202_0100</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	10.073	786	3.26	1,386	2.81	1,493
3.70	1,301	<b>K202_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.073	786	3.26	1,386	2.81	1,493
6.45	2,284	<b>K302_0100</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	10.135	919	5.69	2,432	4.90	2,619
6.45	2,284	<b>K302_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.135	919	5.69	2,432	4.90	2,619
9.70	3,423	<b>K402_0100</b>	<b>MR160/</b>	<b>050, 140</b>	<b>AW160/012</b>	10.098	1,469	8.15	3,471	6.52	3,471
9.70	3,423	<b>K402_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.098	1,469	8.56	3,645	7.38	3,926
9.70	3,423	<b>K402_0100</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	10.098	1,469	8.56	3,645	7.38	3,926
18.20*	6,359	<b>K513_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.150	1,766	16.06	6,770	13.84	7,293
18.20*	6,359	<b>K513_0100</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	10.150	1,766	16.06	6,770	13.84	7,293
23.37*	8,088	<b>K613_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.054	2,096	19.37	8,088	15.49	8,088
23.37	8,269	<b>K813_0105</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.279	3,820	19.37	8,269	15.49	8,269
23.37	8,183	<b>K713_0100</b>	<b>MR200/</b>	<b>180</b>	<b>AW200/014</b>	10.172	2,890	19.37	8,183	15.49	8,183
24.21*	8,376	<b>K613_0100</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	10.054	2,096	21.35	8,918	18.40	9,607
24.21*	8,376	<b>K613_0100</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	10.054	2,096	21.35	8,918	18.40	9,607
36.79*	12,880	<b>K713_0100</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	10.172	2,890	30.48	12,880	24.39	12,880
38.48	13,613	<b>K813_0105</b>	<b>MR250/</b>	<b>180, 210</b>	<b>AW250/102</b>	10.279	3,820	31.88	13,613	25.05	13,613
39.31*	13,762	<b>K713_0100</b>	<b>MR300/</b>	<b>180, 210, 250, 280</b>	<b>AW300/110</b>	10.172	2,890	34.68	14,652	29.88	15,783

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>170 RPM Output (Approximate) Continued</b>											
67.57*	23,904	K813_0105	MR300/	180, 210, 250, 280	AW300/110	10.279	3,820	59.61	254,051	48.74	26,014
77.05*	26,830	K913_0100	MR300/	180, 210, 250, 280	AW300/110	10.117	8,528	63.84	26,830	51.07	26,830
123.02*	42,282	K1013_0100	MR350/	320, 360	AW350/202	9.986	10,462	101.93	42,282	81.55	42,282
123.02*	42,837	K913_0100	MR350/	320, 360	AW350/202	10.117	8,528	101.93	42,837	81.55	42,837
<b>150 RPM Output (Approximate)</b>											
1.89	763	K102_0115	MR140/	050	AW140/010	11.565	678	1.67	813	1.44	875
1.89	763	K102_0115	MR160/	050, 140	AW160/012	11.565	678	1.67	813	1.44	875
2.52	1,017	K202_0115	MR140/	050	AW140/010	11.546	814	2.09	1,017	1.67	1,017
3.38	1,362	K202_0115	MR160/	050, 140	AW160/012	11.546	814	2.98	1,450	2.57	1,562
3.38	1,362	K202_0115	MR200/	180	AW200/014	11.546	814	2.98	1,450	2.57	1,562
5.89	2,390	K302_0115	MR160/	050, 140	AW160/012	11.610	9,051	5.20	2,544	4.48	2,741
5.89	2,390	K302_0115	MR200/	180	AW200/014	11.610	9,051	5.20	2,544	4.48	2,741
8.89	3,577	K402_0115	MR160/	050, 140	AW160/012	11.518	1,518	7.84	3,808	6.52	3,959
8.89	3,577	K402_0115	MR200/	180	AW200/014	11.518	1,518	7.84	3,808	6.76	4,102
8.89	3,577	K402_0115	MR250/	180, 210	AW250/102	11.518	1,518	7.84	3,808	6.76	4,102
16.68*	6,643	K513_0115	MR200/	180	AW200/014	11.569	1,825	14.72	7,072	12.68	7,618
16.68*	6,643	K513_0115	MR250/	180, 210	AW250/102	11.569	1,825	14.72	7,072	12.68	7,618
22.25*	8,736	K613_0115	MR200/	180	AW200/014	11.407	2,163	19.37	9,177	15.49	9,177
22.25*	8,736	K613_0115	MR250/	180, 210	AW250/102	11.407	2,163	19.63	9,301	16.92	10,020
22.25*	8,736	K613_0115	MR300/	180, 210, 250, 280	AW300/110	11.407	2,163	19.63	9,301	16.92	10,020
23.37	9,478	K713_0120	MR200/	180	AW200/014	11.781	2,998	19.37	9,478	15.49	9,478
23.37	9,578	K813_0120	MR200/	180	AW200/014	11.906	3,963	19.37	9,578	15.49	9,578
35.42*	14,362	K713_0120	MR250/	180, 210	AW250/102	11.781	2,998	29.35	14,362	23.48	14,362
35.64*	14,452	K713_0120	MR300/	180, 210, 250, 280	AW300/110	11.781	2,998	31.44	15,387	27.10	16,575
37.08	15,196	K813_0120	MR250/	180, 210	AW250/102	11.906	3,963	30.73	15,196	24.58	15,196
61.26*	25,104	K813_0120	MR300/	180, 210, 250, 280	AW300/110	11.906	3,963	54.04	26,728	46.57	28,792
<b>140 RPM Output (Approximate)</b>											
1.78	786	K102_0125	MR140/	050	AW140/010	12.618	693	1.57	836	1.35	901
1.78	786	K102_0125	MR160/	050, 140	AW160/012	12.618	693	1.57	836	1.35	901
2.35	1,042	K202_0125	MR140/	050	AW140/010	12.705	833	1.94	1,042	1.56	1,042
2.42	1,065	K302_0125	MR140/	050	AW140/010	12.577	970	2.01	1,065	1.61	1,065
3.17	1,406	K202_0125	MR160/	050, 140	AW160/012	12.705	833	2.79	1,497	2.41	1,613
3.17	1,406	K202_0125	MR200/	180	AW200/014	12.705	833	2.79	1,497	2.41	1,613
5.58	2,454	K302_0125	MR160/	050, 140	AW160/012	12.577	970	4.93	2,613	4.25	2,815
5.58	2,454	K302_0125	MR200/	180	AW200/014	12.577	970	4.93	2,613	4.25	2,815
8.34	3,691	K402_0125	MR160/	050, 140	AW160/012	12.658	1,554	7.36	3,930	6.34	4,233
8.34	3,691	K402_0125	MR200/	180	AW200/014	12.658	1,554	7.36	3,930	6.34	4,233
8.34	3,691	K402_0125	MR250/	180, 210	AW250/102	12.658	1,554	7.36	3,930	6.34	4,233
15.59*	6,872	K513_0130	MR200/	180	AW200/014	12.808	1,872	13.75	7,316	11.81	7,881
15.59*	6,872	K513_0130	MR250/	180, 210	AW250/102	12.808	1,872	13.75	7,316	11.81	7,881
20.79*	9,038	K613_0125	MR200/	180	AW200/014	12.629	2,219	18.34	9,622	15.49	10,160
20.79*	9,038	K613_0125	MR250/	180, 210	AW250/102	12.629	2,219	18.34	9,622	15.81	10,365
20.79*	9,038	K613_0125	MR300/	180, 210, 250, 280	AW300/110	12.629	2,219	18.34	9,622	15.81	10,365
74.69*	32,196	K913_0125	MR300/	180, 210, 250, 280	AW300/110	12.525	8,996	61.88	32,196	49.05	32,196
107.05*	46,343	K913_0125	MR350/	320, 360	AW350/202	12.525	8,996	94.84	49,341	81.55	53,032
123.02*	52,846	K1013_0125	MR350/	320, 360	AW350/202	12.481	11,062	101.93	52,846	81.55	52,846

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							

125 RPM Output (Approximate)												105 RPM		85 RPM			
1.65	816	K102_0140	MR140/	50	AW140/010	14.114	713	1.46	868	1.26	935						
1.65	816	K102_0140	MR160/	050, 140	AW160/012	14.114	713	1.46	868	1.26	935						
2.44	1,181	K202_0140	MR140/	050	AW140/010	13.851	852	2.02	1,181	1.62	1,181						
2.99	1,447	K202_0140	MR160/	050, 140	AW160/012	13.851	852	2.64	1,541	2.27	1,660						
2.99	1,447	K202_0140	MR200/	180	AW200/014	13.851	852	2.64	1,541	2.27	1,660						
5.22	2,540	K302_0140	MR160/	050, 140	AW160/012	13.935	995	4.60	2,704	3.97	2,913						
5.22	2,540	K302_0140	MR200/	180	AW200/014	13.935	995	4.60	2,704	3.97	2,913						
7.85	3,806	K402_0140	MR160/	050, 140	AW160/012	13.885	1,590	6.92	4,053	5.96	4,366						
7.85	3,806	K402_0140	MR200/	180	AW200/014	13.885	1,590	6.92	4,053	5.96	4,366						
7.85	3,806	K402_0140	MR250/	180, 210	AW250/102	13.885	1,590	6.92	4,053	5.96	4,366						

120 RPM Output (Approximate)												100 RPM		80 RPM			
9.84	4,924	K513_0145	MR160/	050, 140	AW160/012	14.536	1,932	8.15	4,924	6.52	4,924						
14.33	7,168	K513_0145	MR200/	180	AW200/014	14.536	1,932	12.64	7,631	10.56	7,972						
14.33	7,168	K513_0145	MR250/	180, 210	AW250/102	14.536	1,932	12.64	7,631	10.56	7,972						
19.11	9,427	K613_0145	MR200/	180	AW200/014	14.332	2,290	16.86	10,037	14.53	10,812						
19.11	9,427	K613_0145	MR250/	180, 210	AW250/102	14.332	2,290	16.86	10,037	14.53	10,812						
19.11	9,427	K613_0145	MR300/	180, 210, 250, 280	AW300/110	14.332	2,290	16.86	10,037	14.53	10,812						
23.37	11,908	K713_0150	MR200/	180	AW200/014	14.802	3,175	19.37	11,908	15.49	11,908						
23.37	11,940	K813_0150	MR200/	180	AW200/014	14.842	4,187	19.37	11,940	15.49	11,940						
30.61*	15,595	K713_0150	MR250/	180, 210	AW250/102	14.802	3,175	27.00	16,604	22.69	17,438						
30.61*	15,595	K713_0150	MR300/	180, 210, 250, 280	AW300/110	14.802	3,175	27.00	16,604	23.27	17,886						
35.74	18,259	K813_0150	MR250/	180, 210	AW250/102	14.842	4,187	29.62	18,259	23.69	18,259						
52.89*	27,018	K813_0150	MR300/	180, 210, 250, 280	AW300/110	14.842	4,187	46.66	28,766	40.21	30,987						

110 RPM Output (Approximate)												90 RPM		75 RPM			
.79	443	KL202_0160	ML2R	050	-	16.000	358	.66	443	.52	443						
9.84	5,451	K513_0160	MR160/	050, 140	AW160/012	16.093	1,982	8.15	5,451	6.52	5,451						
13.39	7,415	K513_0160	MR200/	180	AW200/014	16.093	1,982	11.81	7,895	9.54	7,972						
13.39	7,415	K513_0160	MR250/	180, 210	AW250/102	16.093	1,982	11.81	7,895	9.54	7,972						
17.86	9,752	K613_0160	MR200/	180	AW200/014	15.868	2,349	15.75	10,383	13.58	11,185						
17.86	9,752	K613_0160	MR250/	180, 210	AW250/102	15.868	2,349	15.75	10,383	13.58	11,185						
17.86	9,752	K613_0160	MR300/	180, 210, 250, 280	AW300/110	15.868	2,349	15.75	10,383	13.58	11,185						
71.79*	39,311	K913_0160	MR300/	180, 210, 250, 280	AW300/110	15.910	9,550	59.48	39,311	47.59	39,311						
91.66*	50,190	K913_0160	MR350/	320, 360	AW350/202	15.910	9,550	80.86	53,437	69.68	57,563						
123.02*	67,221	K1013_0160	MR350/	320, 360	AW350/202	15.876	11,748	101.93	67,221	81.55	67,221						

105 RPM Output (Approximate) Continued Next Page												85 RPM		70 RPM			
1.48	863	K102_0165	MR140/	050	AW140/010	16.714	744	1.30	919	1.11	974						
1.48	863	K102_0165	MR160/	050, 140	AW160/012	16.714	744	1.30	919	1.11	974						
2.23	1,313	K202_0170	MR140/	050	AW140/010	16.858	894	1.85	1,313	1.48	1,313						
2.29	1,358	K302_0170	MR140/	050	AW140/010	16.939	1,045	1.90	1,358	1.52	1,358						
2.62	1,545	K202_0170	MR160/	050, 140	AW160/012	16.858	894	2.31	1,645	1.99	1,772						
2.62	1,545	K202_0170	MR200/	180	AW200/014	16.858	894	2.31	1,645	1.99	1,772						
4.58	2,710	K302_0170	MR160/	050, 140	AW160/012	16.939	1,045	4.04	2,886	3.47	3,100						
4.58	2,710	K302_0170	MR200/	180	AW200/014	16.939	1,045	4.04	2,886	3.47	3,100						
6.87	4,067	K402_0170	MR160/	050, 140	AW160/012	16.939	1,672	6.06	4,330	5.22	4,665						
6.87	4,067	K402_0170	MR200/	180	AW200/014	16.939	1,672	6.06	4,330	5.22	4,665						
6.87	4,067	K402_0170	MR250/	180, 210	AW250/102	16.939	1,672	6.06	4,330	5.22	4,665						
9.84	5,811	K613_0170	MR160/	050, 140	AW160/012	17.156	2,396	8.15	5,811	6.52	5,811						
16.95	10,009	K613_0170	MR200/	180	AW200/014	17.156	2,396	14.95	10,657	12.89	11,480						
16.95	10,009	K613_0170	MR250/	180, 210	AW250/102	17.156	2,396	14.95	10,657	12.89	11,480						

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:**
- 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.
  - 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.
  - 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C
  - 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>105 RPM Output (Approximate) Continued</b>											
				<b>85 RPM</b>				<b>70 RPM</b>			
16.95	10,009	K613_0170	MR300/	180, 210, 250, 280	AW300/110	17.156	2,396	14.95	10,657	12.89	11,480
23.37	13,184	K713_0165	MR200/	180	AW200/014	16.388	3,256	19.37	13,184	15.49	13,184
23.37	13,219	K813_0165	MR200/	180	AW200/014	16.432	4,295	19.37	13,219	15.49	13,219
28.60	16,133	K713_0165	MR250/	180, 210	AW250/102	16.388	3,256	25.23	17,177	21.74	180,503
28.60	16,133	K713_0165	MR300/	180, 210, 250, 280	AW300/110	16.388	3,256	25.23	17,177	21.74	180,503
35.74	20,215	K813_0165	MR250/	180, 210	AW250/102	16.432	4,295	29.62	20,215	23.69	20,215
49.42*	27,951	K813_0165	MR300/	180, 210, 250, 280	AW300/110	16.432	4,295	43.60	29,759	37.57	32,057
<b>100 RPM Output (Approximate)</b>											
				<b>82 RPM</b>				<b>65 RPM</b>			
1.43	877	K102_0175	MR140/	050	AW140/010	17.563	753	1.26	934	1.09	1,006
1.43	877	K102_0175	MR160/	050, 140	AW160/012	17.563	753	1.26	934	1.09	1,006
2.35	1,433	K202_0175	MR140/	050	AW140/010	17.469	902	1.94	1,433	1.56	1,433
2.42	1,464	K302_0175	MR140/	050	AW140/010	17.293	1,050	2.01	1,464	1.61	1,464
2.56	1,564	K202_0175	MR160/	050, 140	AW160/012	17.469	902	2.26	1,665	1.92	1,772
2.56	1,564	K202_0175	MR200/	180	AW200/014	17.469	902	2.26	1,665	1.92	1,772
4.52	2,729	K302_0175	MR160/	050, 140	AW160/012	17.293	1,050	3.98	2,906	3.40	3,100
4.52	2,729	K302_0175	MR200/	180	AW200/014	17.293	1,050	3.98	2,906	3.40	3,100
6.75	4,104	K402_0175	MR160/	050, 140	AW160/012	17.405	1,683	5.95	4,370	5.13	4,707
6.75	4,104	K402_0175	MR200/	180	AW200/014	17.405	1,683	5.95	4,370	5.13	4,707
6.75	4,104	K402_0175	MR250/	180, 210	AW250/102	17.405	1,683	5.95	4,370	5.13	4,707
9.84	5,921	K513_0175	MR160/	050, 140	AW160/012	17.481	2,023	8.15	5,921	6.52	5,921
12.67	7,622	K513_0175	MR200/	180	AW200/014	17.481	2,023	10.98	7,972	8.78	7,972
12.67	7,622	K513_0175	MR250/	180, 210	AW250/102	17.481	2,023	10.98	7,972	8.78	7,972
23.37	13,939	K813_0175	MR200/	180	AW200/014	17.327	4,353	19.37	13,939	15.49	13,939
34.86	20,791	K813_0175	MR250/	180, 210	AW250/102	17.327	4,353	28.89	20,791	23.11	20,791
47.70*	28,449	K813_0175	MR300/	180, 210, 250, 280	AW300/110	17.327	4,353	42.08	30,289	36.27	32,628
<b>95 RPM Output (Approximate)</b>											
				<b>79 RPM</b>				<b>63 RPM</b>			
23.37	14,702	K713_0185	MR200/	180	AW200/014	18.275	3,346	19.37	14,702	15.49	14,702
26.60	16,730	K713_0185	MR250/	180, 210	AW250/102	18.275	3,346	23.46	17,812	20.22	19,187
26.60	16,730	K713_0185	MR300/	180, 210, 250, 280	AW300/110	18.275	3,346	23.46	17,812	20.22	19,187
<b>90 RPM Output (Approximate)</b>											
				<b>75 RPM</b>				<b>60 RPM</b>			
9.84	6,434	K613_0190	MR160/	050, 140	AW160/012	18.994	2,457	8.15	6,434	6.52	6,434
9.84	6,555	K513_0195	MR160/	050, 140	AW160/012	19.353	2,075	8.15	6,555	6.52	6,555
11.84	7,885	K513_0195	MR200/	180	AW200/014	19.353	2,075	9.92	7,972	7.93	7,972
11.84	7,885	K513_0195	MR250/	180, 210	AW250/102	19.353	2,075	9.92	7,972	7.93	7,972
15.84	10,355	K613_0190	MR200/	180	AW200/014	18.994	2,457	13.97	11,025	12.04	11,876
15.84	10,355	K613_0190	MR250/	180, 210	AW250/102	18.994	2,457	13.97	11,025	12.04	11,876
15.84	10,355	K613_0190	MR300/	180, 210, 250, 280	AW300/110	18.994	2,457	13.97	11,025	12.04	11,876
23.37	15,432	K813_0190	MR200/	180	AW200/014	19.183	4,465	19.37	15,432	15.49	15,432
34.86	23,018	K813_0190	MR250/	180, 210	AW250/102	19.183	4,465	28.89	23,018	23.11	23,018
44.58*	29,431	K813_0190	MR300/	180, 210, 250, 280	AW300/110	19.183	4,465	39.32	31,335	33.89	33,754
69.53*	45,620	K913_0190	MR300/	180, 210, 250, 280	AW300/110	19.063	9,992	57.61	45,620	46.09	45,620
81.25*	53,308	K913_0190	MR350/	320, 360	AW350/202	19.063	9,992	71.68	56,756	61.77	61,139
123.02*	79,394	K1013_0190	MR350/	320, 360	AW350/202	18.751	12,247	101.93	79,394	81.55	79,394
<b>85 RPM Output (Approximate) Continued Next Page</b>											
				<b>70 RPM</b>				<b>55 RPM</b>			
1.30	918	K102_0200	MR140/	050	AW140/010	20.150	779	1.15	974	0.92	974
1.30	918	K102_0200	MR160/	050, 140	AW160/012	20.150	779	1.15	974	0.92	974
2.14	1,522	K202_0200	MR140/	050	AW140/010	20.327	937	1.78	1,522	1.42	1,522
2.22	1,570	K302_0200	MR140/	050	AW140/010	20.278	1,093	1.84	1,570	1.47	1,570

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>85 RPM Output (Approximate) Continued</b>											
2.32	1,645	K202_0200	MR160/	050, 140	AW160/012	20.327	937	2.04	17,051	1.65	1,772
4.06	2,878	K302_0200	MR160/	050, 140	AW160/012	20.278	1,093	3.58	3,064	2.90	3,100
4.06	2,878	K302_0200	MR200/	180	AW200/014	20.278	1,093	3.58	3,064	2.90	3,100
6.11	4,313	K402_0200	MR160/	050, 140	AW160/012	20.197	1,747	5.39	4,592	4.58	4,872
6.11	4,313	K402_0200	MR200/	180	AW200/014	20.197	1,747	5.39	4,592	4.58	4,872
6.11	4,313	K402_0200	MR250/	180, 210	AW250/102	20.197	1,747	5.39	4,592	4.58	4,872
23.37	16,277	K713_0200	MR200/	180	AW200/014	20.233	3,433	19.37	16,277	15.49	16,277
24.85	17,307	K713_0200	MR250/	180, 210	AW250/102	20.233	3,433	21.92	18,427	18.89	19,850
24.85	17,307	K713_0200	MR300/	180, 210, 250, 280	AW300/110	20.233	3,433	21.92	18,427	18.89	19,850
<b>80 RPM Output (Approximate)</b>											
9.84	7,449	K513_0220	MR160/	050, 140	AW160/012	21.992	2,143	8.15	7,449	6.52	7,449
9.84	7,345	K613_0220	MR160/	050, 140	AW160/012	21.684	2,540	8.15	7,345	6.52	7,345
10.53	7,972	K513_0220	MR200/	180	AW200/014	21.992	2,143	8.73	7,972	6.98	7,972
10.53	7,972	K513_0220	MR250/	180, 210	AW250/102	21.992	2,143	8.73	7,972	6.98	7,972
14.05	10,822	K613_0220	MR200/	180	AW200/014	21.684	2,540	12.79	11,522	11.02	12,412
14.05	10,822	K613_0220	MR250/	180, 210	AW250/102	21.684	2,540	12.79	11,522	11.02	12,412
14.05	10,822	K613_0220	MR300/	180, 210, 250, 280	AW300/110	21.684	2,540	12.79	11,522	11.02	12,412
<b>75 RPM Output (Approximate)</b>											
1.18	963	K102_0230	MR140/	050	AW140/010	23.265	808	1.05	1,026	0.87	1,063
1.18	963	K102_0230	MR160/	050, 140	AW160/012	23.265	808	1.05	1,026	0.87	1,063
2.12	1,718	K202_0230	MR140/	050	AW140/010	23.180	969	1.81	1,772	1.45	1,772
2.12	1,718	K202_0230	MR160/	050, 140	AW160/012	23.180	969	1.81	1,772	1.45	1,772
2.12	1,718	K202_0230	MR200/	180	AW200/014	23.180	969	1.81	1,772	1.45	1,772
2.29	1,867	K302_0230	MR140/	050	AW140/010	23.292	1,131	1.90	1,867	1.52	1,867
3.70	3,014	K302_0230	MR160/	050, 140	AW160/012	23.292	1,131	3.16	3,100	2.52	3,100
3.70	3,014	K302_0230	MR200/	180	AW200/014	23.292	1,131	3.16	3,100	2.52	3,100
5.56	4,523	K402_0230	MR160/	050, 140	AW160/012	23.292	1,810	4.90	4,815	3.97	4,872
5.56	4,523	K402_0230	MR200/	180	AW200/014	23.292	1,810	4.90	4,815	3.97	4,872
5.56	4,523	K402_0230	MR250/	180, 210	AW250/102	23.292	1,810	4.90	4,815	3.97	4,872
22.21	17,383	K713_0230	MR200/	180	AW200/014	22.739	3,534	19.37	18,293	15.49	18,293
22.99	17,994	K713_0230	MR250/	180, 210	AW250/102	22.739	3,534	20.28	19,158	17.48	20,637
22.99	17,994	K713_0230	MR300/	180, 210, 250, 280	AW300/110	22.739	3,534	20.28	19,158	17.48	20,637
23.37	18,539	K813_0230	MR200/	180	AW200/014	23.044	4,674	19.37	18,539	15.49	18,539
33.01	26,184	K813_0230	MR250/	180, 210	AW250/102	23.044	4,674	27.35	26,184	21.88	26,184
39.45	31,286	K813_0230	MR300/	180, 210, 250, 280	AW300/110	23.044	4,674	34.80	33,310	29.99	35,882
<b>73 RPM Output (Approximate)</b>											
9.51	7,972	K513_0240	MR160/	050, 140	AW160/012	24.348	2,198	7.88	7,972	6.31	7,972
9.51	7,972	K513_0240	MR200/	180	AW200/014	24.348	2,198	7.88	7,972	6.31	7,972
9.51	7,972	K513_0240	MR250/	180, 210	AW250/102	24.348	2,198	7.88	7,972	6.31	7,972
9.84	8,132	K613_0240	MR160/	050, 140	AW160/012	24.007	2,605	8.15	8,132	6.52	8,132
13.55	11,196	K613_0240	MR200/	180	AW200/014	24.007	2,605	11.95	11,920	10.30	12,840
13.55	11,196	K613_0240	MR250/	180, 210	AW250/102	24.007	2,605	11.95	11,920	10.30	12,840
13.55	11,196	K613_0240	MR300/	180, 210, 250, 280	AW300/110	24.007	2,605	11.95	11,920	10.30	12,840
34.86	28,729	K913_0240	MR250/	180, 210	AW250/102	23.943	10,578	28.89	28,729	23.11	28,729
66.62*	54,898	K913_0240	MR300/	180, 210, 250, 280	AW300/110	23.943	10,578	55.20	54,898	44.16	54,898
69.79*	57,516	K913_0240	MR350/	320, 360	AW350/202	23.943	10,578	61.57	61,236	49.88	62,006
123.02*	100,743	K1013_0240	MR350/	320, 360	AW350/202	23.793	12,998	101.93	100,743	81.55	100,743

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:**
- 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.
  - 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.
  - 3) Select Motor Adapter Size plus required Motor Frame Size. Example: **MR160/** plus **050** for 56C
  - 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							

70 RPM Output (Approximate)						55 RPM		45 RPM			
0.97	851	K102_0250	MR140/	050	AW140/010	25.220	824	0.80	8,051	0.64	8,051
0.97	851	K102_0250	MR160/	050, 140	AW160/012	25.220	824	0.80	8,051	0.64	8,051
2.01	1,765	K202_0250	MR140/	050	AW140/010	25.130	988	1.67	1,772	1.34	1,772
2.01	1,765	K202_0250	MR160/	050, 140	AW160/012	25.130	988	1.67	1,772	1.34	1,772
2.13	1,877	K302_0250	MR140/	050	AW140/010	25.259	1,154	1.76	1,877	1.41	1,877
3.48	3,070	K302_0250	MR160/	050, 140	AW160/012	25.259	1,154	2.88	3,070	2.31	3,070
5.02	4,434	K402_0250	MR160/	050, 140	AW160/012	25.279	1,848	4.16	4,434	3.33	4,434
5.02	4,434	K402_0250	MR200/	180	AW200/014	25.279	1,848	4.16	4,434	3.33	4,434
5.02	4,434	K402_0250	MR250/	180, 210	AW250/102	25.279	1,848	4.16	4,434	3.33	4,434
21.48	18,615	K713_0250	MR200/	180	AW200/014	25.175	3,625	18.95	19,819	15.49	20,253
21.48	18,615	K713_0250	MR250/	180, 210	AW250/102	25.175	3,625	18.95	19,819	16.26	21,259
21.48	18,615	K713_0250	MR300/	180, 210, 250, 280	AW300/110	25.175	3,625	18.95	19,819	16.26	21,259
23.37	20,525	K813_0260	MR200/	180	AW200/014	25.513	4,795	19.37	20,525	15.49	20,525
33.01	28,989	K813_0260	MR250/	180, 210	AW250/102	25.513	4,795	27.35	28,989	21.88	28,989
36.86	32,365	K813_0260	MR300/	180, 210, 250, 280	AW300/110	25.513	4,795	32.52	34,459	28.02	37,120

60 RPM Output (Approximate)						50 RPM		40 RPM			
1.05	1,025	K102_0280	MR140/	050	AW140/010	28.048	846	0.90	1,063	0.72	1,063
1.05	1,025	K102_0280	MR160/	050, 140	AW160/012	28.048	846	0.90	1,063	0.72	1,063
1.81	1,772	K202_0280	MR140/	050	AW140/010	27.950	1,015	1.05	1,772	1.20	1,772
1.81	1,772	K202_0280	MR160/	050, 140	AW160/012	27.950	1,015	1.05	1,772	1.20	1,772
2.22	2,159	K302_0280	MR140/	050	AW140/010	27.883	1,183	1.84	2,159	1.47	2,159
3.18	3,100	K302_0280	MR160/	050, 140	AW160/012	27.883	1,183	2.64	3,100	2.11	3,100
3.18	3,100	K302_0280	MR200/	180	AW200/014	27.883	1,183	2.64	3,100	2.11	3,100
4.94	4,796	K402_0280	MR160/	050, 140	AW160/012	27.771	1,891	4.16	4,872	3.33	4,872
4.94	4,796	K402_0280	MR200/	180	AW200/014	27.771	1,891	4.16	4,872	3.33	4,872
4.94	4,796	K402_0280	MR250/	180, 210	AW250/102	27.771	1,891	4.16	4,872	3.33	4,872
7.94	7,972	K513_0290	MR160/	050, 140	AW160/012	29.181	2,300	6.58	7,972	5.26	7,972
7.94	7,972	K513_0290	MR200/	180	AW200/014	29.181	2,300	6.58	7,972	5.26	7,972
7.94	7,972	K513_0290	MR250/	180, 210	AW250/102	29.181	2,300	6.58	7,972	5.26	7,972
9.70	9,606	K613_0290	MR160/	050, 140	AW160/012	28.772	2,726	8.15	9,746	6.52	9,746
12.01	11,892	K613_0290	MR200/	180	AW200/014	28.772	2,726	10.59	12,661	8.60	12,844
12.01	11,892	K613_0290	MR250/	180, 210	AW250/102	28.772	2,726	10.59	12,661	8.60	12,844
12.01	11,892	K613_0290	MR300/	180, 210, 250, 280	AW300/110	28.772	2,726	10.59	12,661	8.60	12,844
18.58	18,728	K713_0290	MR200/	180	AW200/014	29.285	3,765	16.39	19,939	13.98	21,259
19.42	19,577	K713_0290	MR250/	180, 210	AW250/102	29.285	3,765	17.13	20,844	13.98	21,259
19.42	19,577	K713_0290	MR300/	180, 210, 250, 280	AW300/110	29.285	3,765	17.13	20,844	13.98	21,259
22.21	22,364	K813_0290	MR200/	180	AW200/014	29.254	4,962	19.37	23,534	15.49	23,534
31.69	31,904	K813_0290	MR250/	180, 210	AW250/102	29.254	4,962	26.25	31,904	21.00	31,904
33.64	33,876	K813_0290	MR300/	180, 210, 250, 280	AW300/110	29.254	4,962	29.68	36,067	24.49	37,204

55 RPM Output (Approximate) <i>Continued Next Page</i>						45 RPM		36 RPM			
.40	443	KL202_0320	ML2R	050	-	32.000	450	.33	443	.26	443
2.76	3,100	K303_0330	MR160/	050, 140	AW160/012	32.649	1,231	2.29	3,100	1.83	3,100
3.13	3,489	K403_0320	MR160/	050, 140	AW160/012	32.390	1,966	2.59	3,489	2.07	3,489
7.17	7,972	K513_0320	MR160/	050, 140	AW160/012	32.308	2,359	5.94	7,972	4.75	7,972
7.17	7,972	K513_0320	MR200/	180	AW200/014	32.308	2,359	5.94	7,972	4.75	7,972
7.17	7,972	K513_0320	MR250/	180, 210	AW250/102	32.308	2,359	5.94	7,972	4.75	7,972
9.70	10,635	K613_0320	MR160/	050, 140	AW160/012	31.855	2,796	8.15	10,790	6.52	10,790
11.22	12,302	K613_0320	MR200/	180	AW200/014	31.855	2,796	9.71	12,844	7.77	12,844
11.22	12,302	K613_0320	MR250/	180, 210	AW250/102	31.855	2,796	9.71	12,844	7.77	12,844
11.22	12,302	K613_0320	MR300/	180, 210, 250, 280	AW300/110	31.855	2,796	9.71	12,844	7.77	12,844

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)		Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input		
Input HP	Output Torque in. lbs.		Motor Adapter				Input Shaft	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							

55 RPM Output (Approximate) <i>Continued</i>					45 RPM			36 RPM			
18.15	20,253	K713_0320	MR200/	180	AW200/014	32.423	3,862	15.78	21,259	12.63	21,259
18.15	20,253	K713_0320	MR250/	180, 210	AW250/102	32.423	3,862	15.78	21,259	12.63	21,259
18.15	20,253	K713_0320	MR300/	180, 210, 250, 280	AW300/110	32.423	3,862	15.78	21,259	12.63	21,259
22.21	24,760	K813_0320	MR200/	180	AW200/014	32.389	5,090	19.37	26,056	15.49	26,056
31.44	35,045	K813_0320	MR250/	180, 210	AW250/102	32.389	5,090	26.25	35,323	21.00	35,323
31.44	35,045	K813_0320	MR300/	180, 210, 250, 280	AW300/110	32.389	5,090	27.65	37,204	22.12	37,204
33.01	36,492	K913_0320	MR250/	180, 210	AW250/102	32.116	11,383	27.35	36,492	21.88	36,492
56.10*	62,006	K913_0320	MR300/	180, 210, 250, 280	AW300/110	32.116	11,383	46.48	62,006	37.18	62,006
56.10*	62,006	K913_0320	MR350/	320, 360	AW350/202	32.116	11,383	46.48	62,006	37.18	62,006
97.94*	106,296	K1013_0320	MR350/	320, 360	AW350/202	31.535	13,947	81.15	106,296	64.92	106,296

52 RPM Output (Approximate)					43 RPM			35 RPM			
0.55	647	K102_0340	MR140/	050	AW140/010	33.707	886	0.45	647	0.36	647
1.16	1,364	K202_0340	MR140/	050	AW140/010	33.618	1,063	0.96	1,364	0.77	1,364
1.16	1,364	K202_0340	MR160/	050, 140	AW160/012	33.618	1,063	0.96	1,364	0.77	1,364
1.89	2,217	K302_0340	MR140/	050	AW140/010	33.618	1,240	1.56	2,217	1.21	2,217
1.89	2,217	K302_0340	MR160/	050, 140	AW160/012	33.618	1,240	1.56	2,217	1.21	2,217
2.93	3,445	K402_0340	MR160/	050, 140	AW160/012	33.678	1,985	2.43	3,445	1.94	3,445

50 RPM Output (Approximate)					40 RPM			33 RPM			
0.87	1,063	K102_0350	MR140/	050	AW140/010	35.105	895	0.72	1,063	0.57	1,063
0.87	1,063	K102_0350	MR160/	050, 140	AW160/012	35.105	895	0.72	1,063	0.57	1,063
1.47	1,772	K202_0350	MR140/	050	AW140/010	34.554	1,070	1.22	1,772	0.97	1,772
1.47	1,772	K202_0350	MR160/	050, 140	AW160/012	34.554	1,070	1.22	1,772	0.97	1,772
2.13	2,581	K302_0350	MR140/	050	AW140/010	34.731	1,250	1.76	2,581	1.41	2,581
2.51	3,100	K303_0360	MR160/	050, 140	AW160/012	35.833	1,260	2.08	3,100	1.67	3,100
2.55	3,100	K302_0350	MR160/	050, 140	AW160/012	34.731	1,250	2.12	3,100	1.69	4,872
3.24	3,985	K403_0360	MR160/	050, 140	AW160/012	35.721	2,014	2.69	3,985	2.15	4,872
4.01	4,872	K402_0350	MR160/	050, 140	AW160/012	34.758	2,001	3.32	4,872	2.66	4,872
4.01	4,872	K402_0350	MR200/	180	AW200/014	34.758	2,001	3.32	4,872	2.66	7,972
4.01	4,872	K402_0350	MR250/	180, 210	AW250/102	34.758	2,001	3.32	4,872	2.66	7,972
6.66	7,972	K513_0350	MR160/	050, 140	AW160/012	34.800	2,403	5.51	7,972	4.41	7,972
6.66	7,972	K513_0350	MR200/	180	AW200/014	34.800	2,403	5.51	7,972	4.41	11,138
6.66	7,972	K513_0350	MR250/	180, 210	AW250/102	34.800	2,403	5.51	7,972	4.41	12,844
8.15	9,711	K613_0350	MR160/	050, 140	AW160/012	34.610	2,855	7.19	10,339	6.20	12,844
10.62	12,647	K613_0350	MR200/	180	AW200/014	34.610	2,855	8.93	12,844	7.15	12,844
10.62	12,647	K613_0350	MR250/	180, 210	AW250/102	34.610	2,855	8.93	12,844	7.15	21,259
10.62	12,647	K613_0350	MR300/	180, 210, 250, 280	AW300/110	34.610	2,855	8.93	12,844	7.15	21,259
15.97	19,477	K713_0350	MR200/	180	AW200/014	35.438	3,949	14.09	20,737	11.55	21,259
17.10	20,862	K713_0350	MR250/	180, 210	AW250/102	35.438	3,949	14.44	21,259	11.55	3,100
17.10	20,862	K713_0350	MR300/	180, 210, 250, 280	AW300/110	35.438	3,949	14.44	21,259	11.55	3,985
18.58	23,110	K813_0360	MR200/	180	AW200/014	36.138	5,231	16.39	24,605	14.13	260,505
29.22	36,348	K813_0360	MR300/	180, 210, 250, 280	AW300/110	36.138	5,231	24.78	37,204	19.83	37,204
29.22	36,348	K813_0360	MR250/	180, 210	AW250/102	36.138	5,231	24.78	37,204	19.83	37,204

45 RPM Output (Approximate) <i>Continued Next Page</i>					38 RPM			30 RPM			
1.07	1,455	K203_0390	MR140/	050	AW140/010	39.454	1,106	0.89	1,455	0.71	1,455
2.30	3,100	K303_0390	MR160/	050, 140	AW160/012	39.187	1,288	1.90	3,100	1.52	3,100
3.03	4,077	K403_0390	MR160/	050, 140	AW160/012	39.047	2,060	2.51	4,077	2.01	4,077
6.01	7,972	K513_0390	MR160/	050, 140	AW160/012	38.529	2,465	4.98	7,972	3.98	7,972
6.01	7,972	K513_0390	MR200/	180	AW200/014	38.529	2,465	4.98	7,972	3.98	7,972
6.01	7,972	K513_0390	MR250/	180, 210	AW250/102	38.529	2,465	4.98	7,972	3.98	7,972

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05





# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>45 RPM Output (Approximate) Continued</b>											
8.15	10,752	K613_0380	MR160/	050, 140	AW160/012	38.319	2,929	7.19	11,448	6.20	12,331
9.74	12,844	K613_0380	MR200/	180	AW200/014	38.319	2,929	8.07	12,844	6.46	12,844
9.74	12,844	K613_0380	MR250/	180, 210	AW250/102	38.319	2,929	8.07	12,844	6.46	12,844
9.74	12,844	K613_0380	MR300/	180, 210, 250, 280	AW300/110	38.319	2,929	8.07	12,844	6.46	12,844
15.74	21,259	K713_0390	MR200/	180	AW200/014	39.234	40,051	13.04	21,259	10.44	21,259
15.74	21,259	K713_0390	MR250/	180, 210	AW250/102	39.234	40,051	13.04	21,259	10.44	21,259
15.74	21,259	K713_0390	MR300/	180, 210, 250, 280	AW300/110	39.234	40,051	13.04	21,259	10.44	21,259
31.91	41,786	K913_0380	MR250/	180, 210	AW250/102	38.042	11,876	26.44	41,786	21.15	41,786
47.36	62,006	K913_0380	MR300/	180, 210, 250, 280	AW300/110	38.042	11,876	39.24	62,006	31.39	62,006
47.36	62,006	K913_0380	MR350/	320, 360	AW350/202	38.042	11,876	39.24	62,006	31.39	62,006
<b>43 RPM Output (Approximate)</b>											
0.39	544	K102_0400	MR140/	050	AW140/010	40.300	927	0.32	544	0.26	544
0.72	1,023	K202_0400	MR140/	050	AW140/010	40.394	1,113	0.60	1,023	0.48	1,023
1.20	1,705	K302_0410	MR140/	050	AW140/010	40.512	1,299	1.00	1,705	0.80	1,705
1.20	1,705	K302_0410	MR160/	050, 140	AW160/012	40.512	1,299	1.00	1,705	0.80	1,705
1.93	2,729	K402_0410	MR160/	050, 140	AW160/012	40.512	2,079	1.60	2,729	1.28	2,729
18.58	25,586	K813_0400	MR200/	180	AW200/014	40.009	5,366	16.39	27,241	14.13	29,344
27.02	37,204	K813_0400	MR250/	180, 210	AW250/102	40.009	5,366	22.39	37,204	17.91	37,204
27.02	37,204	K813_0400	MR300/	180, 210, 250, 280	AW300/110	40.009	5,366	22.39	37,204	17.91	37,204
<b>40 RPM Output (Approximate)</b>											
0.55	900	K102_0470	MR140/	050	AW140/010	46.918	963	0.45	900	0.36	900
1.07	1,667	K203_0450	MR140/	050	AW140/010	45.223	1,145	0.89	1,667	0.71	1,667
1.10	1,772	K202_0460	MR140/	050	AW140/010	46.225	1,151	0.91	1,772	0.73	1,772
1.10	1,772	K202_0460	MR160/	050, 140	AW160/012	46.225	1,151	0.91	1,772	0.73	1,772
1.89	3,048	K302_0460	MR140/	050	AW140/010	46.225	1,343	1.56	3,048	1.25	3,048
1.89	3,048	K302_0460	MR160/	050, 140	AW160/012	46.225	1,343	1.56	3,048	1.25	3,048
2.01	3,100	K303_0450	MR160/	050, 140	AW160/012	44.892	1,333	1.66	3,100	1.33	3,100
2.93	4,737	K402_0460	MR160/	050, 140	AW160/012	46.308	2,149	2.43	4,737	1.94	4,737
3.13	4,798	K403_0450	MR160/	050, 140	AW160/012	44.536	2,129	2.59	4,798	2.07	4,798
4.81	7,972	K513_0480	MR160/	050, 140	AW160/012	48.161	2,607	3.98	7,972	3.19	7,972
4.81	7,972	K513_0480	MR200/	180	AW200/014	48.161	2,607	3.98	7,972	3.19	7,972
4.81	7,972	K513_0480	MR250/	180, 210	AW250/102	48.161	2,607	3.98	7,972	3.19	7,972
5.32	7,972	K513_0440	MR160/	050, 140	AW160/012	43.500	2,541	4.41	7,972	3.53	7,972
5.32	7,972	K513_0440	MR200/	180	AW200/014	43.500	2,541	4.41	7,972	3.53	7,972
5.32	7,972	K513_0440	MR250/	180, 210	AW250/102	43.500	2,541	4.41	7,972	3.53	7,972
6.81	10,099	K613_0430	MR160/	050, 140	AW160/012	43.111	3,016	6.00	10,752	5.17	11,582
6.81	11,181	K613_0480	MR160/	050, 140	AW160/012	47.730	3,094	6.00	11,904	5.17	12,823
7.82	12,844	K613_0480	MR200/	180	AW200/014	47.730	3,094	6.48	12,844	5.18	12,844
7.82	12,844	K613_0480	MR250/	180, 210	AW250/102	47.730	3,094	6.48	12,844	5.18	12,844
8.66	12,844	K613_0430	MR200/	180	AW200/014	43.111	3,016	7.17	12,844	5.74	12,844
8.66	12,844	K613_0430	MR250/	180, 210	AW250/102	43.111	3,016	7.17	12,844	5.74	12,844
13.16	20,403	K713_0450	MR200/	180	AW200/014	45.054	4,193	11.36	21,259	9.09	21,259
13.71	21,259	K713_0450	MR250/	180, 210	AW250/102	45.054	4,193	11.36	21,259	9.09	21,259
13.71	21,259	K713_0450	MR300/	180, 210, 250, 280	AW300/110	45.054	4,193	11.36	21,259	9.09	21,259
15.97	24,320	K813_0440	MR200/	180	AW200/014	44.250	5,502	14.09	25,894	12.14	27,893
24.43	37,204	K813_0440	MR250/	180, 210	AW250/102	44.250	5,502	20.24	37,204	16.19	37,204
24.43	37,204	K813_0440	MR300/	180, 210, 250, 280	AW300/110	44.250	5,502	20.24	37,204	16.19	37,204

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							

35 RPM Output (Approximate)					28 RPM			23 RPM			
0.25	442	K102_0500	MR140/	050	AW140/010	50.310	980	0.21	442	0.17	442
0.48	853	K202_0500	MR140/	050	AW140/010	50.492	1,177	0.40	853	0.32	853
0.77	1,364	K302_0500	MR140/	050	AW140/010	50.492	1,373	0.64	1,364	0.51	1,364
1.02	1,772	K203_0500	MR140/	050	AW140/010	49.759	1,172	0.84	1,772	0.68	1,772
1.07	1,816	K303_0490	MR140/	050	AW140/010	49.260	1,364	0.89	1,816	0.71	1,816
1.35	2,387	K402_0500	MR160/	050, 140	AW160/012	50.427	2,196	1.12	2,387	0.90	2,387
1.85	3,100	K303_0490	MR160/	050, 140	AW160/012	48.631	1,360	1.53	3,100	1.23	3,100
2.89	4,872	K403_0490	MR160/	050, 140	AW160/012	48.944	2,179	2.40	4,872	1.92	4,872
12.38	21,259	K713_0500	MR200/	180	AW200/014	49.881	4,301	10.26	21,259	8.21	21,259
12.38	21,259	K713_0500	MR250/	180, 210	AW250/102	49.881	4,301	10.26	21,259	8.21	21,259
12.38	21,259	K713_0500	MR300/	180, 210, 250, 280	AW300/110	49.881	4,301	10.26	21,259	8.21	21,259
15.97	26,926	K813_0490	MR200/	180	AW200/014	48.991	5,644	14.09	28,668	12.14	30,882
22.06	37,204	K813_0490	MR250/	180, 210	AW250/102	48.991	5,644	18.28	37,204	14.63	37,204
22.06	37,204	K813_0490	MR300/	180, 210, 250, 280	AW300/110	48.991	5,644	18.28	37,204	14.63	37,204
30.30	51,041	K913_0490	MR250/	180, 210	AW250/102	48.937	12,647	25.11	51,041	20.09	51,041
36.81	62,006	K913_0490	MR300/	180, 210, 250, 280	AW300/110	48.937	12,647	30.05	62,006	24.40	62,006
60.30	100,751	K1013_0490	MR300/	180, 210, 250, 280	AW300/110	48.543	15,535	49.96	100,751	39.97	100,751
63.62	106,296	K1013_0490	MR350/	320, 360	AW350/202	48.543	15,535	52.71	106,296	42.17	106,296

30 RPM Output (Approximate)					25 RPM			20 RPM			
0.39	758	K102_0560	MR140/	050	AW140/010	56.095	1,007	0.32	758	0.26	758
0.72	1,407	K202_0560	MR140/	050	AW140/010	55.542	1,205	0.60	1,407	0.48	1,407
0.95	1,772	K203_0540	MR140/	050	AW140/010	54.250	1,198	0.79	1,772	0.63	1,772
1.07	2,012	K303_0550	MR140/	050	AW140/010	54.579	1,400	0.89	2,012	0.71	2,012
1.20	2,345	K302_0560	MR140/	050	AW140/010	55.705	1,407	1.00	2,345	0.80	2,345
1.20	2,345	K302_0560	MR160/	050, 140	AW160/012	55.705	1,407	1.00	2,345	0.80	2,345
1.67	3,100	K303_0540	MR160/	050, 140	AW160/012	53.883	1,395	1.39	3,100	1.11	3,100
1.93	3,752	K402_0560	MR160/	050, 140	AW160/012	55.705	2,251	1.60	3,752	1.28	3,752
2.64	4,872	K403_0540	MR160/	050, 140	AW160/012	53.690	2,230	2.18	4,872	1.75	4,872
3.97	7,972	K513_0580	MR160/	050, 140	AW160/012	58.297	2,734	3.29	7,972	2.63	7,972
3.97	7,972	K513_0580	MR200/	180	AW200/014	58.297	2,734	3.29	7,972	2.63	7,972
3.97	7,972	K513_0580	MR250/	180, 210	AW250/102	58.297	2,734	3.29	7,972	2.63	7,972
5.27	10,436	K613_0580	MR160/	050, 140	AW160/012	57.545	3,242	4.65	11,111	4.01	11,969
6.48	12,844	K613_0580	MR200/	180	AW200/014	57.545	3,242	5.37	12,844	4.30	12,844
6.48	12,844	K613_0580	MR250/	180, 210	AW250/102	57.545	3,242	5.37	12,844	4.30	12,844
10.55	21,259	K713_0590	MR200/	180	AW200/014	58.570	4,477	8.74	21,259	6.99	21,259
10.55	21,259	K713_0590	MR250/	180, 210	AW250/102	58.570	4,477	8.74	21,259	6.99	21,259
10.55	21,259	K713_0590	MR300/	180, 210, 250, 280	AW300/110	58.570	4,477	8.74	21,259	6.99	21,259
12.55	25,527	K813_0590	MR200/	180	AW200/014	59.082	5,915	11.07	27,179	9.54	29,277
18.30	37,204	K813_0590	MR250/	180, 210	AW250/102	59.082	5,915	15.16	37,204	12.13	37,204
18.30	37,204	K813_0590	MR300/	180, 210, 250, 280	AW300/110	59.082	5,915	15.16	37,204	12.13	37,204

27 RPM Output (Approximate)					22 RPM			18 RPM			
0.75	1,772	K203_0680	MR140/	050	AW140/010	68.419	1,269	0.62	1,772	0.50	1,772
0.78	1,772	K203_0660	MR140/	050	AW140/010	66.027	1,258	0.65	1,772	0.52	1,772
1.07	2,446	K303_0660	MR140/	050	AW140/010	66.346	1,470	0.89	2,446	0.71	2,446
1.07	2,497	K303_0680	MR140/	050	AW140/010	67.733	1,477	0.89	2,497	0.71	2,497
1.35	3,100	K303_0670	MR160/	050, 140	AW160/012	66.868	1,473	1.12	3,100	0.89	3,100
1.38	3,100	K303_0650	MR160/	050, 140	AW160/012	65.499	1,465	1.14	3,100	0.91	3,100
2.10	4,872	K403_0670	MR160/	050, 140	AW160/012	67.298	2,360	1.74	4,872	1.39	4,872
2.16	4,872	K403_0650	MR160/	050, 140	AW160/012	65.499	2,344	1.79	4,872	1.43	4,872
3.59	7,972	K513_0650	MR160/	050, 140	AW160/012	64.544	2,805	2.97	7,972	2.38	7,972

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>27 RPM Output (Approximate) Continued</b>											
3.59	7,972	K513_0650	MR200/	180	AW200/014	64.544	2,805	2.97	7,972	2.38	7,972
3.59	7,972	K513_0650	MR250/	180, 210	AW250/102	64.544	2,805	2.97	7,972	2.38	7,972
5.27	11,554	K613_0640	MR160/	050, 140	AW160/012	63.710	3,325	4.65	12,301	3.88	12,844
5.86	12,844	K613_0640	MR200/	180	AW200/014	63.710	3,325	4.85	12,844	3.88	12,844
5.86	12,844	K613_0640	MR250/	180, 210	AW250/102	63.710	3,325	4.85	12,844	3.88	12,844
9.53	21,259	K713_0650	MR200/	180	AW200/014	64.846	4,593	7.89	21,259	6.31	21,259
9.53	21,259	K713_0650	MR250/	180, 210	AW250/102	64.846	4,593	7.89	21,259	6.31	21,259
9.53	21,259	K713_0650	MR300/	180, 210, 250, 280	AW300/110	64.846	4,593	7.89	21,259	6.31	21,259
12.55	28,262	K813_0650	MR200/	180	AW200/014	65.412	6,067	11.07	30,091	9.54	32,414
16.42	37,204	K814_0670	MR250/	180, 210	AW250/102	66.833	6,100	13.61	37,204	10.88	37,204
16.53	37,204	K813_0650	MR250/	180, 210	AW250/102	65.412	6,067	13.69	37,204	10.95	37,204
16.53	37,204	K813_0650	MR300/	180, 210, 250, 280	AW300/110	65.412	6,067	13.69	37,204	10.95	37,204
26.76	58,091	K913_0630	MR250/	180, 210	AW250/102	63.071	13,476	23.61	61,849	18.93	62,006
28.56	62,006	K913_0630	MR300/	180, 210, 250, 280	AW300/110	63.071	13,476	23.67	62,006	18.93	62,006
50.17	106,296	K1013_0620	MR300/	180, 210, 250, 280	AW300/110	61.553	16,485	41.57	106,296	33.26	106,296
50.17	106,296	K1013_0620	MR350/	320, 360	AW350/202	61.553	16,485	41.57	106,296	33.26	106,296
<b>25 RPM Output (Approximate)</b>											
0.25	616	K102_0700	MR140/	050	AW140/010	70.029	1,064	0.21	616	0.17	616
0.48	1,172	K202_0690	MR140/	050	AW140/010	69.427	1,274	0.40	1,172	0.32	1,172
0.77	1,876	K302_0690	MR140/	050	AW140/010	69.427	1,486	0.64	1,876	0.51	1,876
1.35	3,283	K402_0690	MR160/	050, 140	AW160/012	69.338	2,378	1.12	3,283	0.90	3,283
3.01	7,268	K513_0700	MR160/	050, 140	AW160/012	70.083	2,863	2.50	7,268	2.00	7,268
4.60	10,894	K613_0690	MR160/	050, 140	AW160/012	68.772	3,390	4.06	11,599	3.26	11,639
4.92	11,639	K613_0690	MR200/	180	AW200/014	68.772	3,390	4.07	11,639	3.26	11,639
4.92	11,639	K613_0690	MR250/	180, 210	AW250/102	68.772	3,390	4.07	11,639	3.26	11,639
7.85	19,244	K713_0710	MR200/	180	AW200/014	71.203	4,701	6.05	19,244	5.21	19,244
7.85	19,244	K713_0710	MR250/	180, 210	AW250/102	71.203	4,701	6.05	19,244	5.21	19,244
10.61	26,191	K813_0720	MR200/	180	AW200/014	71.701	6,208	9.36	27,886	8.07	30,039
12.94	31,935	K813_0720	MR250/	180, 210	AW250/102	71.701	6,208	10.72	31,935	8.58	31,935
12.94	31,935	K813_0720	MR300/	180, 210, 250, 280	AW300/110	71.701	6,208	10.72	31,935	8.58	31,935
<b>23 RPM Output (Approximate)</b>											
4.60	12,061	K613_0760	MR160/	050, 140	AW160/012	76.140	3,477	4.06	12,841	3.25	12,844
4.90	12,844	K613_0760	MR200/	180	AW200/014	76.140	3,477	4.06	12,844	3.25	12,844
4.90	12,844	K613_0760	MR250/	180, 210	AW250/102	76.140	3,477	4.06	12,844	3.25	12,844
23.06	59,535	K913_0750	MR250/	180, 210	AW250/102	75.004	14,072	19.90	62,006	15.92	62,006
24.02	62,006	K913_0750	MR300/	180, 210, 250, 280	AW300/110	75.004	14,072	19.90	62,006	15.92	62,006
38.76	100,417	K1013_0750	MR300/	180, 210, 250, 280	AW300/110	75.276	17,335	32.11	100,417	25.69	100,417
<b>22 RPM Output (Approximate)</b>											
0.65	1,772	K203_0800	MR140/	050	AW140/010	79.615	1,318	0.54	1,772	0.43	1,772
1.07	2,916	K403_0790	MR140/	050	AW140/010	79.105	2,457	0.89	2,916	0.71	2,916
1.07	2,928	K303_0790	MR140/	050	AW140/010	79.424	1,537	0.89	2,928	0.71	2,928
1.15	3,100	K303_0780	MR160/	050, 140	AW160/012	78.410	1,532	0.95	3,100	0.76	3,100
1.81	4,872	K403_0780	MR160/	050, 140	AW160/012	78.095	2,449	1.05	4,872	1.20	4,872
2.99	7,972	K513_0780	MR160/	050, 140	AW160/012	77.592	2,937	2.47	7,972	1.98	7,972
7.84	21,259	K713_0790	MR200/	180	AW200/014	78.832	4,823	6.49	21,259	5.19	21,259
7.84	21,259	K713_0790	MR250/	180, 210	AW250/102	78.832	4,823	6.49	21,259	5.19	21,259
10.61	28,998	K813_0790	MR200/	180	AW200/014	79.384	6,368	9.36	30,874	8.07	33,258
12.94	35,365	K813_0790	MR250/	180, 210	AW250/102	79.384	6,368	10.72	35,365	8.58	35,365
12.94	35,365	K813_0790	MR300/	180, 210, 250, 280	AW300/110	79.384	6,368	10.72	35,365	8.58	35,365

See Page 91 for Part No. Configurator. Mounting position MUST be specified.



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							

20 RPM Output (Approximate)					17 RPM			13 RPM			
2.03	6,105	K513_0870	MR160/	050, 140	AW160/012	87.290	3,024	1.68	6,105	1.35	6,105
2.77	7,972	K514_0850	MR160/	050, 140	AW160/012	85.034	3,005	2.29	7,972	1.83	7,972
2.90	8,600	K613_0860	MR160/	050, 140	AW160/012	86.178	3,586	2.40	8,600	1.92	8,600
3.14	8,919	K614_0840	MR160/	050, 140	AW160/012	83.843	3,562	2.60	8,919	2.08	8,919
4.83	14,803	K713_0890	MR200/	180	AW200/014	89.004	4,950	4.00	14,803	3.20	14,803
4.83	14,803	K713_0890	MR250/	180, 210	AW250/102	89.004	4,950	4.00	14,803	3.20	14,803
7.04	21,259	K714_0890	MR200/	180	AW200/014	89.061	4,950	5.83	21,259	4.67	21,259
8.22	24,838	K813_0880	MR200/	180	AW200/014	87.763	6,525	6.81	24,838	5.41	24,838
8.22	24,838	K813_0880	MR250/	180, 210	AW250/102	87.763	6,525	6.81	24,838	5.41	24,838
12.35	37,204	K814_0890	MR250/	180, 210	AW250/102	88.885	6,525	10.23	37,204	8.18	37,204

19 RPM Output (Approximate)					16 RPM			12.5 RPM			
0.57	1,772	K203_0910	MR140/	050	AW140/010	90.787	1,350	0.47	1,772	0.38	1,772
0.99	3,100	K303_0910	MR140/	050	AW140/010	91.226	1,575	0.82	3,100	0.65	3,100
1.00	3,100	K303_0900	MR160/	050, 140	AW160/012	90.061	1,575	0.83	3,100	0.66	3,100
1.07	3,363	K403_0910	MR140/	050	AW140/010	91.226	2,520	0.89	3,363	0.71	3,363
1.57	4,872	K403_0900	MR160/	050, 140	AW160/012	90.061	2,520	1.30	4,872	1.04	4,872
2.50	7,972	K514_0940	MR160/	050, 140	AW160/012	94.145	3,026	2.07	7,972	1.66	7,972
3.14	9,874	K614_0930	MR160/	050, 140	AW160/012	92.826	3,600	2.60	9,874	2.08	9,874
17.53	54,901	K914_0920	MR250/	180, 210	AW250/102	92.352	14,625	14.53	54,901	11.62	54,901
25.52	82,844	K1013_0940	MR300/	180, 210, 250, 280	AW300/110	94.329	18,000	21.14	82,844	16.91	82,844
30.25	95,723	K1014_0930	MR300/	180, 210, 250, 280	AW300/110	93.343	18,000	25.06	95,723	20.05	95,723

18 RPM Output (Approximate)					15 RPM			12 RPM			
2.03	6,761	K513_0970	MR160/	050, 140	AW160/012	96.642	3,026	1.68	6,761	1.35	6,761
2.90	9,524	K613_0950	MR160/	050, 140	AW160/012	95.412	3,600	2.40	9,524	1.92	9,524
4.83	16,394	K713_0990	MR200/	180	AW200/014	98.540	4,950	4.01	16,394	3.20	16,394
4.83	16,394	K713_0990	MR250/	180, 210	AW250/102	98.540	4,950	4.01	16,394	3.20	16,394
6.36	21,259	K714_0990	MR200/	180	AW200/014	98.604	4,950	5.27	21,259	4.22	21,259
8.22	27,506	K813_0970	MR200/	180	AW200/014	97.166	6,525	6.81	27,506	5.45	27,506
8.22	27,506	K813_0970	MR250/	180, 210	AW250/102	97.166	6,525	6.81	27,506	5.45	27,506
11.15	37,204	K814_0980	MR250/	180, 210	AW250/102	98.408	6,525	9.24	37,204	7.39	37,204
14.05	47,620	K913_0950	MR250/	180, 210	AW250/102	95.412	14,625	12.01	47,620	9.61	47,620
14.05	47,620	K913_0950	MR300/	180, 210, 250, 280	AW300/110	95.412	14,625	12.01	47,620	9.61	47,620

16 RPM Output (Approximate)					13 RPM			10 RPM			
0.47	1,772	K203_1090	MR140/	050	AW140/010	109.471	1,350	0.39	1,772	0.31	1,772
0.82	3,100	K303_1090	MR140/	050	AW140/010	109.208	1,575	0.68	3,100	0.55	3,100
0.84	3,100	K303_1080	MR160/	050, 140	AW160/012	107.814	1,575	0.69	3,100	0.55	3,100
1.07	4,010	K403_1090	MR140/	050	AW140/010	108.769	2,520	0.89	4,010	0.71	4,010
1.32	4,872	K403_1070	MR160/	050, 140	AW160/012	107.381	2,520	1.09	4,872	0.87	4,872
2.08	7,972	K514_1130	MR160/	050, 140	AW160/012	112.834	3,026	1.73	7,972	1.38	7,972
2.98	11,257	K614_1110	MR160/	050, 140	AW160/012	111.254	3,600	2.47	11,257	1.98	11,257
5.47	21,259	K714_1150	MR200/	180	AW200/014	114.700	4,950	4.53	21,259	3.62	21,259
9.73	37,204	K814_1130	MR250/	180, 210	AW250/102	112.838	6,525	8.06	37,204	6.45	37,204

14 RPM Output (Approximate) <i>Continued Next Page</i>					12 RPM			9 RPM			
1.88	7,972	K514_1250	MR160/	050, 140	AW160/012	124.924	3,026	1.56	7,972	1.25	7,972
2.98	12,464	K614_1230	MR160/	050, 140	AW160/012	123.174	3,600	2.47	12,464	1.98	12,464
3.08	13,110	K714_1250	MR160/	050, 140	AW160/012	125.368	4,950	2.56	13,110	2.04	13,110
4.94	21,259	K714_1270	MR200/	180	AW200/014	126.990	4,950	4.09	21,259	3.27	21,259
7.97	34,290	K814_1270	MR200/	180	AW200/014	126.855	6,525	6.61	34,290	5.29	34,290

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: K402VG0690.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>14 RPM Output (Approximate) Continued</b>						<b>12 RPM</b>		<b>9 RPM</b>			
8.78	37,204	K814_1250	MR250/	180, 210	AW250/102	124.927	6,525	7.28	37,204	5.82	37,204
14.76	62,006	K914_1240	MR250/	180, 210	AW250/102	123.877	14,625	12.23	62,006	9.79	62,006
<b>13 RPM Output (Approximate)</b>						<b>11 RPM</b>		<b>8.5 RPM</b>			
0.38	1,772	K203_1350	MR140/	050	AW140/010	135.335	1,350	0.32	1,772	0.25	1,772
0.66	3,100	K303_1360	MR140/	050	AW140/010	136.029	1,575	0.55	3,100	0.44	3,100
0.67	3,100	K303_1340	MR160/	050, 140	AW160/012	134.292	1,575	0.56	3,100	0.44	3,100
1.04	4,872	K403_1360	MR140/	050	AW140/010	136.137	2,520	0.86	4,872	0.69	4,872
1.05	4,872	K403_1340	MR160/	050, 140	AW160/012	134.399	2,520	0.87	4,872	0.70	4,872
1.75	7,972	K514_1350	MR160/	050, 140	AW160/012	134.560	3,026	1.45	7,972	1.16	7,972
2.83	12,844	K614_1340	MR160/	050, 140	AW160/012	133.827	3,600	2.35	12,844	1.88	12,844
2.97	13,797	K714_1370	MR160/	050, 140	AW160/012	137.025	4,950	2.46	13,797	1.97	13,797
4.52	21,259	K714_1390	MR200/	180	AW200/014	138.797	4,950	3.74	21,259	2.99	21,259
7.87	37,204	K814_1390	MR250/	180, 210	AW250/102	139.387	6,525	6.52	37,204	5.22	37,204
<b>12 RPM Output (Approximate)</b>						<b>10 RPM</b>		<b>8 RPM</b>			
1.58	7,972	K514_1490	MR160/	050, 140	AW160/012	148.977	3,026	1.31	7,972	1.05	7,972
2.56	12,844	K614_1480	MR160/	050, 140	AW160/012	148.165	3,600	2.12	12,844	1.69	12,844
2.97	15,275	K714_1520	MR160/	050, 140	AW160/012	151.706	4,950	2.46	15,275	1.97	15,275
6.82	32,748	K814_1420	MR200/	180	AW200/014	141.539	6,525	6.02	34,866	5.14	37,204
12.47	62,006	K914_1470	MR250/	180, 210	AW250/102	146.732	14,625	10.33	62,006	8.26	62,006
15.61	78,797	K1014_1490	MR250/	180, 210	AW250/102	148.889	18,000	13.77	83,894	11.03	84,001
20.70	106,296	K1014_1510	MR300/	180, 210, 250, 280	AW300/110	151.435	18,000	17.16	106,296	13.72	106,296
<b>11 RPM Output (Approximate)</b>						<b>9 RPM</b>		<b>7.5 RPM</b>			
4.08	21,259	K714_1540	MR200/	180	AW200/014	153.668	4,950	3.38	21,259	2.70	21,259
6.82	36,257	K814_1570	MR200/	180	AW200/014	156.703	6,525	5.80	37,204	4.64	37,204
7.11	37,204	K814_1540	MR250/	180, 210	AW250/102	154.322	6,525	5.89	37,204	4.71	37,204
<b>10 RPM Output (Approximate)</b>						<b>8 RPM</b>		<b>7 RPM</b>			
0.28	1,772	K203_1810	MR140/	050	AW140/010	181.048	1,350	0.24	1,772	0.19	1,772
0.49	3,048	K303_1810	MR140/	050	AW140/010	181.048	1,575	0.41	3,048	0.32	3,048
0.50	3,048	K303_1790	MR160/	050, 140	AW160/012	178.737	1,575	0.41	3,048	0.33	3,048
0.76	4,737	K403_1810	MR140/	050	AW140/010	181.372	2,520	0.63	4,737	0.05	4,737
0.77	4,737	K403_1790	MR160/	050, 140	AW160/012	179.056	2,520	0.64	4,737	0.05	4,737
1.40	7,972	K514_1680	MR160/	050, 140	AW160/012	168.200	3,026	1.16	7,972	0.93	7,972
2.27	12,844	K614_1670	MR160/	050, 140	AW160/012	166.694	3,600	1.88	12,844	1.05	12,844
2.84	16,753	K714_1740	MR160/	050, 140	AW160/012	174.209	4,950	2.31	16,753	1.88	16,753
3.55	21,259	K714_1760	MR200/	180	AW200/014	176.462	4,950	2.94	21,259	2.36	21,259
5.95	34,989	K814_1730	MR200/	180	AW200/014	173.313	6,525	5.25	37,204	4.20	37,204
6.43	37,204	K814_1710	MR250/	180, 210	AW250/102	170.679	6,525	5.33	37,204	4.26	37,204
<b>9 RPM Output (Approximate)</b>						<b>7.5 RPM</b>		<b>6 RPM</b>			
1.26	7,972	K514_1860	MR160/	050, 140	AW160/012	186.221	3,026	1.05	7,972	0.84	7,972
2.05	12,844	K614_1850	MR160/	050, 140	AW160/012	184.554	3,600	1.70	12,844	1.36	12,844
2.84	18,548	K714_1930	MR160/	050, 140	AW160/012	192.874	4,950	2.31	18,548	1.88	18,548
3.21	21,259	K714_1950	MR200/	180	AW200/014	195.368	4,950	2.66	21,259	2.13	21,259
5.72	37,204	K814_1920	MR200/	180	AW200/014	191.882	6,525	4.74	37,204	3.79	37,204
5.81	37,204	K814_1890	MR250/	180, 210	AW250/102	188.966	6,525	4.81	37,204	3.85	37,204
9.69	62,006	K914_1890	MR250/	180, 210	AW250/102	188.757	14,625	8.03	62,006	6.42	62,006
13.17	83,571	K1014_1870	MR250/	180, 210	AW250/102	187.236	18,000	11.61	88,978	10.01	95,848
16.46	106,296	K1014_1900	MR300/	180, 210, 250, 280	AW300/110	190.437	18,000	13.64	106,296	10.91	106,296

**See Page 91 for Part No. Configurator. Mounting position MUST be specified.**



# "K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>8 RPM Output (Approximate)</b>											
0.05	3,752	K403_2150	MR160/	050, 140	AW160/012	215.391	2,520	0.42	3,752	0.34	3,752
0.19	1,407	K203_2180	MR140/	050	AW140/010	217.538	1,350	0.16	1,407	0.12	1,407
0.31	2,345	K303_2180	MR140/	050	AW140/010	218.176	1,575	0.26	2,345	0.21	2,345
0.50	3,752	K403_2180	MR140/	050	AW140/010	218.176	2,520	0.41	3,752	0.33	3,752
1.04	7,972	K514_2250	MR160/	050, 140	AW160/012	225.417	3,026	0.86	7,972	0.69	7,972
1.70	12,844	K614_2230	MR160/	050, 140	AW160/012	222.051	3,600	1.41	12,844	1.13	12,844
2.59	19,872	K714_2260	MR160/	050, 140	AW160/012	226.472	4,950	2.22	20,589	1.78	20,589
2.73	21,259	K714_2290	MR200/	180	AW200/014	229.400	4,950	2.26	21,259	1.81	21,259
4.74	37,204	K814_2310	MR200/	180	AW200/014	231.404	6,525	3.93	37,204	3.14	37,204
4.82	37,204	K814_2280	MR250/	180, 210	AW250/102	227.887	6,525	3.99	37,204	3.19	37,204
<b>7 RPM Output (Approximate)</b>											
0.94	7,972	K514_2500	MR160/	050, 140	AW160/012	249.569	3,026	0.78	7,972	0.62	7,972
1.29	11,639	K614_2660	MR160/	050, 140	AW160/012	265.917	3,600	1.07	11,639	0.86	11,639
1.54	12,844	K614_2460	MR160/	050, 140	AW160/012	246.347	3,600	1.27	12,844	1.02	12,844
2.05	21,259	K714_2510	MR160/	050, 140	AW160/012	205.737	4,950	2.07	21,259	1.66	21,259
2.47	21,259	K714_2540	MR200/	180	AW200/014	253.979	4,950	2.05	21,259	1.64	21,259
4.28	37,204	K814_2560	MR200/	180	AW200/014	256.198	6,525	3.55	37,204	2.84	37,204
4.35	37,204	K814_2520	MR250/	180, 210	AW250/102	252.304	6,525	3.60	37,204	2.88	37,204
5.72	47,896	K914_2470	MR200/	180	AW200/014	247.029	14,625	5.05	50,994	4.35	54,932
7.52	62,006	K914_2430	MR250/	180, 210	AW250/102	243.275	14,625	6.23	62,006	4.98	62,006
11.16	89,859	K1014_2370	MR250/	180, 210	AW250/102	237.418	18,000	9.85	95,672	8.49	103,060
<b>6 RPM Output (Approximate)</b>											
0.13	1,172	K203_2720	MR140/	050	AW140/010	271.923	1,350	0.10	1,172	0.08	1,172
0.20	1,876	K303_2720	MR140/	050	AW140/010	271.923	1,575	0.17	1,876	0.13	1,876
0.35	3,283	K403_2720	MR140/	050	AW140/010	271.572	2,520	0.29	3,283	0.23	3,283
0.78	7,972	K514_3000	MR160/	050, 140	AW160/012	300.023	3,026	0.65	7,972	0.52	7,972
0.79	7,268	K514_2710	MR160/	050, 140	AW160/012	270.989	3,026	0.66	7,268	0.52	7,268
1.29	12,844	K614_2940	MR160/	050, 140	AW160/012	294.408	3,600	1.07	12,844	0.85	12,844
2.06	21,259	K714_3050	MR160/	050, 140	AW160/012	304.817	4,950	1.70	21,259	1.36	21,259
2.06	19,244	K714_2750	MR160/	050, 140	AW160/012	275.319	4,950	1.71	19,244	1.37	19,244
3.35	35,365	K814_3110	MR200/	180	AW200/014	310.919	6,525	2.78	35,365	2.22	35,365
5.00	49,821	K914_2940	MR200/	180	AW200/014	293.764	14,625	4.41	53,044	3.80	57,140
9.53	93,852	K1014_2900	MR250/	180, 210	AW250/102	290.350	18,000	8.41	99,923	6.76	100,417
<b>5 RPM Output (Approximate)</b>											
0.53	6,105	K514_3380	MR160/	050, 140	AW160/012	337.521	3,026	0.44	6,105	0.35	6,105
0.53	6,761	K514_3740	MR160/	050, 140	AW160/012	373.684	3,026	0.44	6,761	0.35	6,761
0.76	8,600	K614_3330	MR160/	050, 140	AW160/012	333.223	3,600	0.63	8,600	0.05	8,600
0.76	9,524	K614_3690	MR160/	050, 140	AW160/012	368.926	3,600	0.63	9,524	0.05	9,524
1.27	14,803	K714_3440	MR160/	050, 140	AW160/012	344.148	4,950	1.05	14,803	0.84	14,803
1.27	16,394	K714_3810	MR160/	050, 140	AW160/012	381.021	4,950	1.05	16,394	0.84	16,394
3.76	47,620	K914_3740	MR200/	180	AW200/014	373.696	14,625	3.11	47,620	2.49	47,620
<b>4.5 RPM Output (Approximate)</b>											
0.53	6,105	K514_3380	MR160/	050, 140	AW160/012	337.521	3,026	0.44	6,105	0.35	6,105
0.53	6,761	K514_3740	MR160/	050, 140	AW160/012	373.684	3,026	0.44	6,761	0.35	6,761
0.76	8,600	K614_3330	MR160/	050, 140	AW160/012	333.223	3,600	0.63	8,600	0.05	8,600
0.76	9,524	K614_3690	MR160/	050, 140	AW160/012	368.926	3,600	0.63	9,524	0.05	9,524
1.27	14,803	K714_3440	MR160/	050, 140	AW160/012	344.148	4,950	1.05	14,803	0.84	14,803
1.27	16,394	K714_3810	MR160/	050, 140	AW160/012	381.021	4,950	1.05	16,394	0.84	16,394
3.76	47,620	K914_3740	MR200/	180	AW200/014	373.696	14,625	3.11	47,620	2.49	47,620

**NOTE: For slower speeds than those shown, units can be combined. Contact STOBER Drives Inc.**

\* For thermal HP capacity, see rating below.

Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

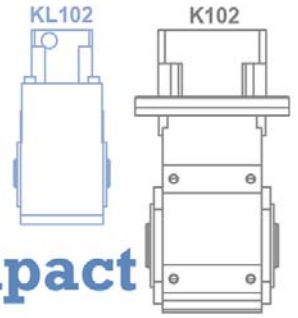


# Introducing "KL" Right Angle Helical/Bevel MGS Speed Reducer

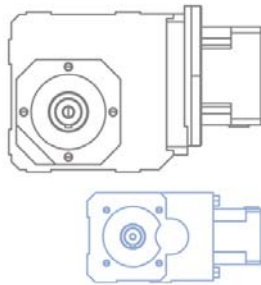
**High Efficiency**

*Long Life*

**Compact**



**Quiet**

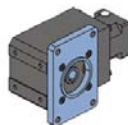


**Symmetrical**

**Maintenance Free**



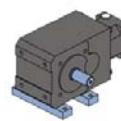
Style AG  
Hollow Output  
Tapped Holes



Style AF  
Hollow Output  
Flange Mount



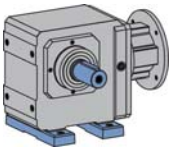
Style VF  
Solid Output  
Flange Mount



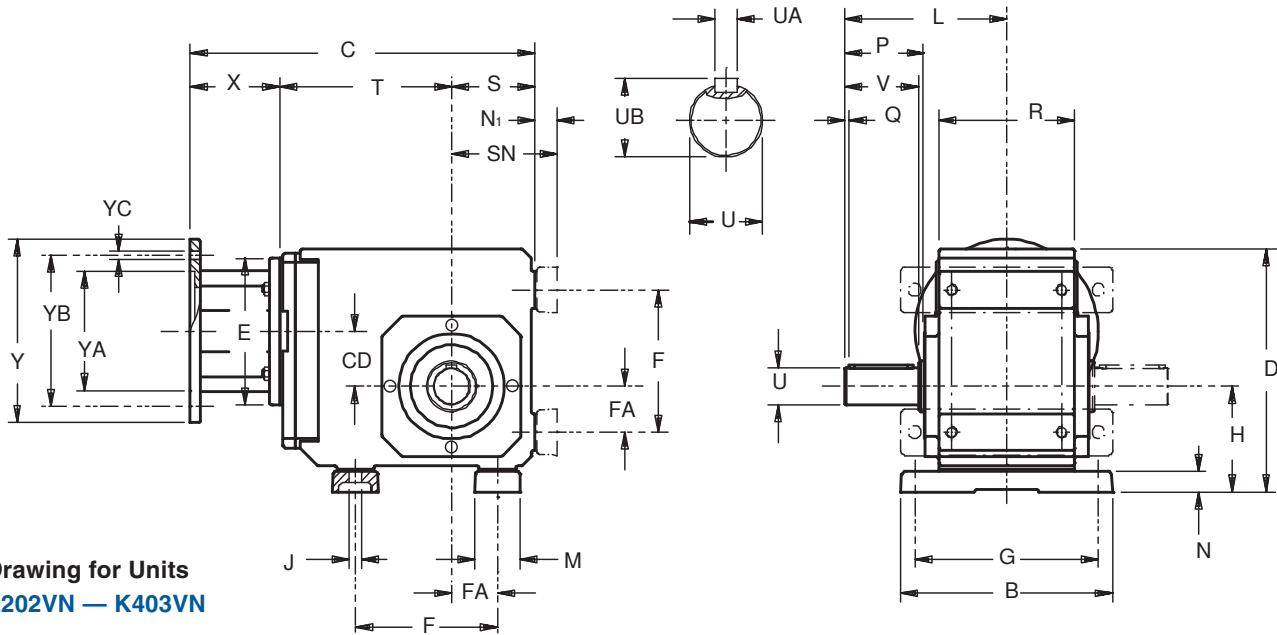
Style VN  
Solid Output  
Foot Mount



Style WG  
Bushing  
Tapped Holes



# "K" Series – MGS Reducer Foot Mount – "N" Housing Shaft Output – Dimensional Data



Drawing for Units  
KL202VN – K403VN

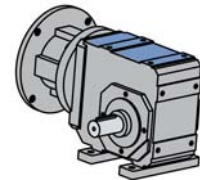
Table No. 1 "K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style

Base Module	B	D	F	G	H	J	L	M	N	O	P	Q	R	S	V	Z <sub>1</sub>	BO	FA	N <sub>1</sub>	SN
KL202	4.88	4.72	2.76	4.41	2.64	.26	3.66	.98	.47	–	1.57	.12	3.62	2.17	1.57	–	–	1.38	.47	2.64
K102	5.51	6.81	3.54*	4.53	2.95	.35	4.53	1.18	.51	–	2.32	.16	3.54	2.36	1.97	–	–	1.18	.59	2.95
K202/203	7.28	8.39	4.53	6.10	3.46	.43	5.31	1.57	.79	–	2.56	.16	4.53	2.56	2.36	–	–	1.38	.91	3.46
K302/303	7.87	9.29	5.12	6.69	3.86	.43	5.59	1.77	.79	–	2.60	.16	5.12	2.95	2.36	–	–	1.57	.91	3.86
K402/403	9.06	10.43	6.10	7.87	4.53	.55	6.93	1.97	.87	–	3.39	.16	5.83	3.54	2.76	–	–	1.97	.98	4.53
K513/514	9.45	11.42	5.51	7.87	7.48	.71	8.74	2.36	1.06	5.10	3.90	.16	6.30	3.94	3.54	5.98	7.28	1.57	1.18	5.12
K613/614	9.84	13.39	6.30	8.27	8.66	.71	9.29	2.56	1.06	5.35	4.31	.16	6.61	4.72	3.94	6.77	7.87	1.97	1.18	5.91
K713/714	11.42	14.96	7.09	9.45	9.84	.87	10.91	2.76	1.38	6.46	5.14	.16	7.48	4.92	4.72	7.52	8.90	2.17	1.50	6.42
K813/814	14.17	17.91	9.45	11.81	12.20	1.02	12.83	3.35	1.61	7.28	5.94	.20	9.25	5.71	5.51	8.11	11.10	2.95	1.77	7.48
K913/914	16.93	21.46	11.02	14.17	14.37	1.30	15.16	3.74	1.81	8.66	7.13	.31	11.22	7.09	6.69	9.84	12.99	3.74	1.97	9.06
K1013/1014	15.75	23.27	13.78	12.99	14.76	1.54	16.46	4.72	1.77	9.45	8.66	.59	15.75	–	8.27	12.01	14.02	4.53	1.77	8.86

\* Mounting holes are also located on Side 2 (top) of the K1 unit ONLY.

Table No. 2 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
ML2R050	56C	5.51	2.99	6.50	4.500	5.87	.41	7
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
MR350/320	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
MR350/360	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133



K1 Housing with tapped holes on Side 1, Side 2, and Side 5. Shown with mounting feet on Side 1.

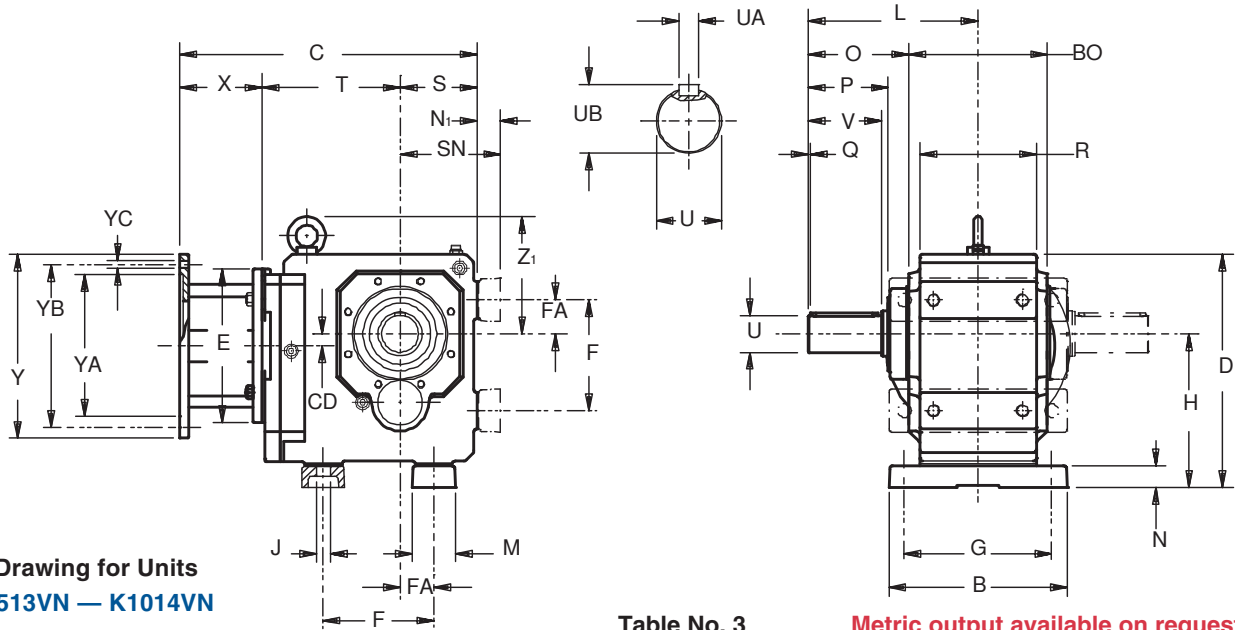
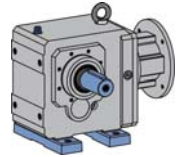
Part No. Example

Foot Mounting with Motor Adapter  
K303VN0650 MR160/140

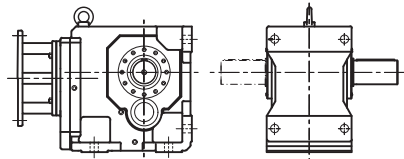




# "K" Series – MGS Reducer Foot Mount – "N" Housing Shaft Output – Dimensional Data



Drawing for Units  
K513VN — K1014VN



Mounting feet are integral in the K10 housing.

Table No. 3 Metric output available on request.

Base Module	Standard Shaft — inches			Optional Shaft — mm		
	U	UA—Key	UB	U	UA—Key	UB
<b>KL202</b>	.750	$\frac{3}{16} \times \frac{3}{16} \times 1\frac{1}{4}$	1.11	20 <sub>k6</sub>	A5 × 5×32	22.5
<b>K102</b>	1.000	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{9}{16}$	1.11	25 <sub>k6</sub>	A8 × 7×40	28
<b>K202/203</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8 × 7×50	33
<b>K302/303</b>	1.250	$\frac{1}{4} \times \frac{1}{4} \times 1\frac{15}{16}$	1.36	30 <sub>k6</sub>	A8 × 7×50	33
<b>K402/403</b>	1.375	$\frac{5}{16} \times \frac{5}{16} \times 2\frac{5}{16}$	1.51	40 <sub>k6</sub>	A12 × 8×70	43
<b>K513/514</b>	1.750	$\frac{3}{8} \times \frac{3}{8} \times 3\frac{5}{32}$	1.92	45 <sub>k6</sub>	A14 × 9×80	48.5
<b>K613/614</b>	1.750	$\frac{3}{8} \times \frac{3}{8} \times 3\frac{5}{32}$	1.92	50 <sub>k6</sub>	A14 × 9×90	53.5
<b>K713/714</b>	2.375	$\frac{5}{8} \times \frac{5}{8} \times 3\frac{15}{16}$	2.65	60 <sub>k6</sub>	A18 × 11×110	64
<b>K813/814</b>	2.875	$\frac{3}{4} \times \frac{3}{4} \times 4\frac{5}{16}$	3.21	70 <sub>m6</sub>	A20 × 12×125	74.5
<b>K913/914</b>	3.625	$\frac{7}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	4.01	90 <sub>m6</sub>	A25 × 14×140	95
<b>K1013/1014</b>	4.375	$1 \times 1 \times 7\frac{1}{8}$	4.82	110 <sub>m6</sub>	A28 × 16×180	116

Table No. 4 "K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style

Base Module	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			MR350/320 <sup>4)</sup>			Wt. lbs.	
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T		
<b>KL202</b>	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
<b>K102</b>	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	—	31
<b>K202</b>	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	—	40
<b>K203</b>	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53
<b>K302</b>	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	—	—	—	—	67
<b>K303</b>	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	—	—	—	—	73
<b>K402</b>	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	—	—	—	—	93
<b>K403</b>	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	—	—	—	—	100
<b>K513</b>	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	—	—	—	—	106
<b>K514</b>	—	—	—	—	—	—	—	16.26	8.46	—	—	—	—	—	—	—	—	—	—	—	—	—	109
<b>K613</b>	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	—	—	—	—	170
<b>K614</b>	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	—	—	—	—	177
<b>K713</b>	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	—	—	—	—	221
<b>K714</b>	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	—	—	—	—	234
<b>K813</b>	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	—	—	—	—	309
<b>K814</b>	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	—	—	—	—	331
<b>K913</b>	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	—	—	—	—	508
<b>K914</b>	—	—	—	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	—	530
<b>K1013</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	—	913
<b>K1014</b>	—	—	—	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	—	993

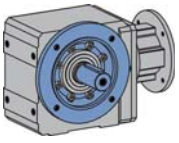
<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

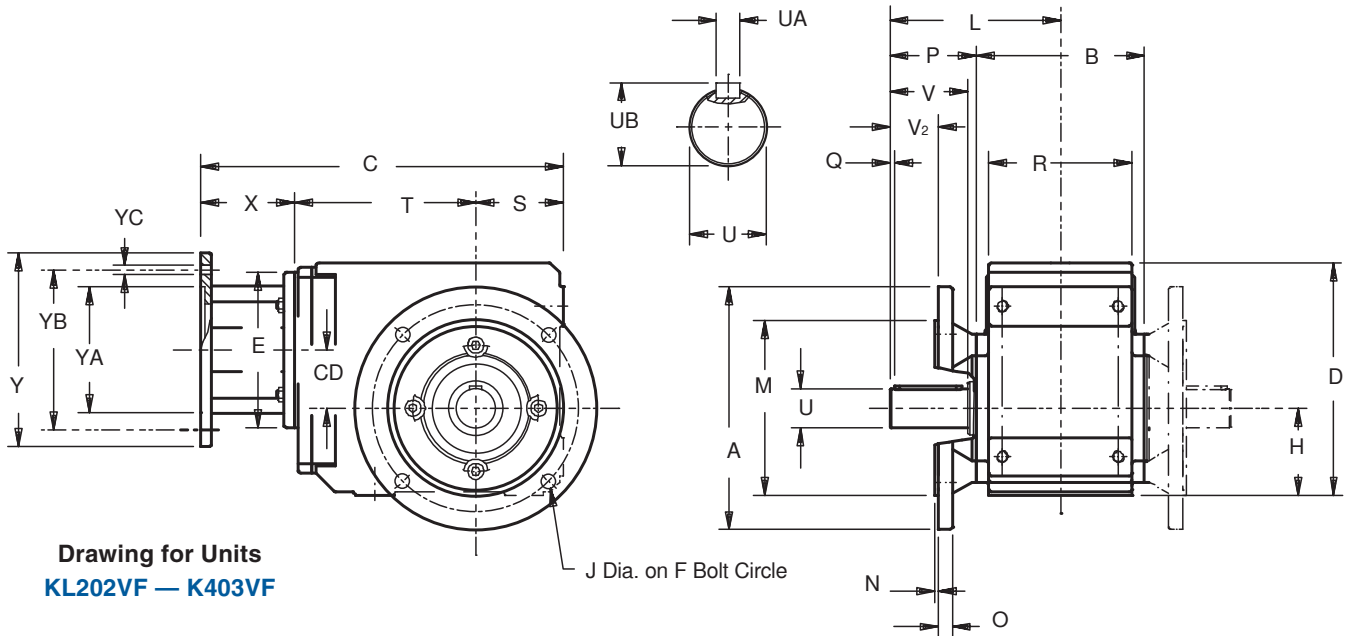
<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>4)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.



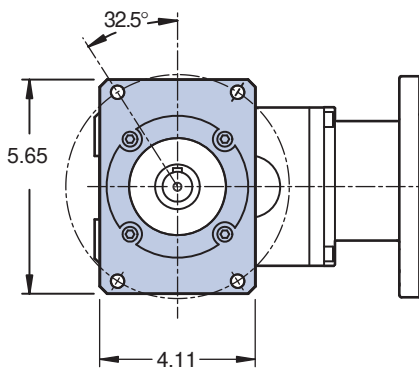
# "K" Series – MGS Reducer Flange Mount – "F" Housing Shaft Output – Dimensional Data



**Table No. 1 "K" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	A <sup>1)</sup>	B	D	F	H	J	L	M	N	O	P	Q	R	S	V	V <sub>2</sub>	Z <sub>1</sub>
<b>KL202</b>	5.65	3.85	4.25	5.90	2.16	.35	3.66	3.740 +.0005/-0.0004	.12	.45	1.57	.12	2.56	2.16	1.57	1.40	—
<b>K102</b>	6.30	4.17	6.30	5.12	2.36	.35	4.53	4.331 +.0005/-0.0004	.14	.39	2.44	.16	3.54	2.36	1.97	1.18	—
<b>K202/203</b>	7.87	5.28	7.48	6.50	2.56	.43	5.31	5.118 +.0006/-0.0004	.14	.47	2.68	.16	4.53	2.56	2.36	1.42	—
<b>K302/303</b>	7.87	5.75	8.39	6.50	2.95	.43	5.59	5.118 +.0006/-0.0004	.14	.55	2.72	.16	5.12	2.95	2.36	1.22	—
<b>K402/403</b>	9.84	6.81	9.45	8.46	3.54	.55	6.93	7.087 +.0006/-0.0005	.16	.59	3.52	.16	5.83	3.54	2.76	1.95	—
<b>K513/514</b>	9.84	7.28	10.24	8.46	6.30	.55	8.74	7.087 +.0006/-0.0005	.16	.59	5.10	.16	6.30	3.94	3.54	—	5.98
<b>K613/614</b>	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.0006/-0.0005	.16	.67	5.35	.16	6.61	4.72	3.94	—	6.77
<b>K713/714</b>	13.78	8.90	13.46	11.81	8.35	.71	10.91	9.842 +.000/-0.001	.20	.71	6.46	.16	7.48	4.92	4.72	—	7.52
<b>K813/814</b>	15.75	11.10	16.14	13.78	10.43	.71	12.83	11.811 +.000/-0.001	.20	.79	7.28	.20	9.25	5.71	5.51	—	8.11
<b>K913/914</b>	17.72	12.99	19.49	15.75	12.40	.71	15.16	13.780 +.000/-0.001	.20	.91	8.66	.31	11.22	7.09	6.69	—	9.84
<b>K1013/1014</b>	21.65	14.02	23.27	19.69	14.76	.71	18.35	17.716 +.000/-0.002	.20	.98	11.34	.59	15.75	8.86	8.27	—	12.01

<sup>1)</sup> See Page 122 for other flange sizes. Optional flanges are not available for all sizes. KL flange is not round. See drawing below.



KL flange mounting hole locations.

**Table No. 2 Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>ML2R050</b>	56C	5.51	2.99	6.50	4.500	5.87	.41	7
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
<b>MR350/320</b>	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
<b>MR350/360</b>	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133

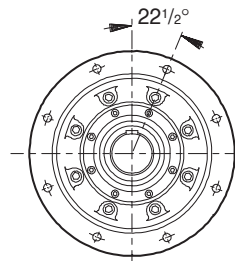
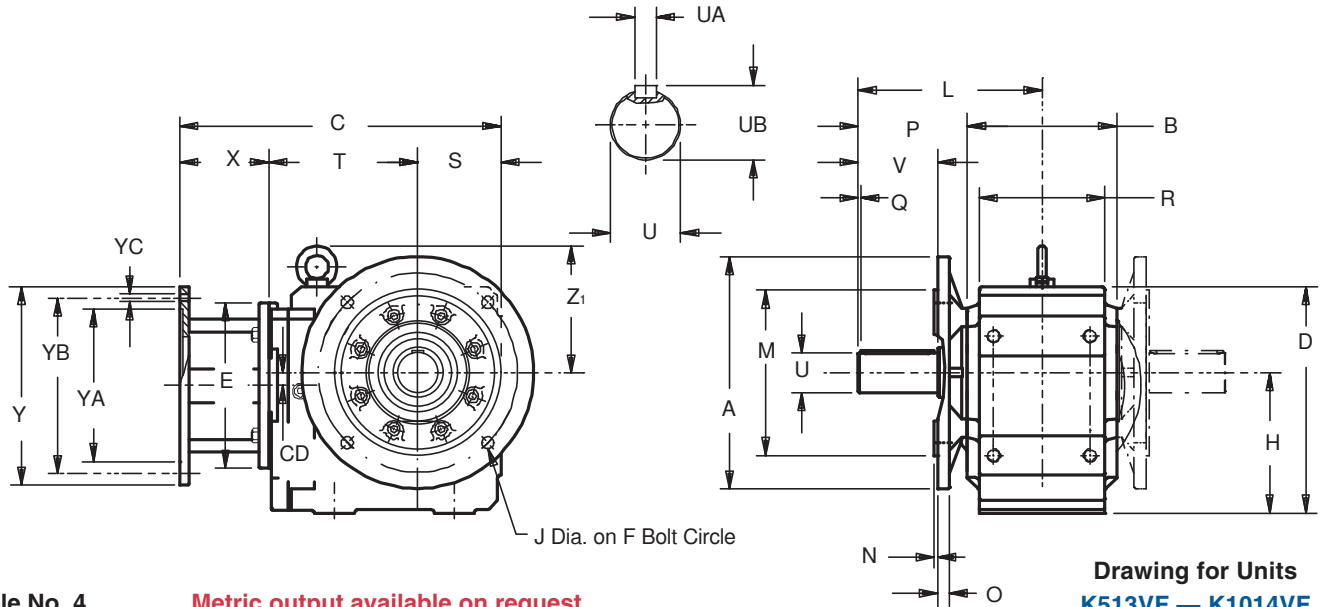
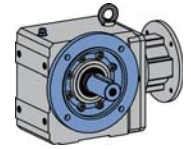
**Part No. Example**

Round Flange with Motor Adapter

**K303VF0650 MR160/140**



# "K" Series – MGS Reducer Flange Mount – "F" Housing Shaft Output – Dimensional Data



K913 thru K1014 has 8 mounting holes in the output flange located as shown.

**Table No. 4 Metric output available on request.**

Base Module	Standard Shaft — inches			Optional Shaft — mm		
	U	UA—Key	UB	U	UA—Key	UB
<b>KL202</b>	.750	3/16 × 3/16 × 1/4	1.11	20 <sub>k6</sub>	A5 × 5 × 32	22.5
<b>K102</b>	1.000	1/4 × 1/4 × 19/16	1.11	25 <sub>k6</sub>	A8 × 7 × 40	28
<b>K202/203</b>	1.250	1/4 × 1/4 × 1 15/16	1.36	30 <sub>k6</sub>	A8 × 7 × 50	33
<b>K302/303</b>	1.250	1/4 × 1/4 × 1 15/16	1.36	30 <sub>k6</sub>	A8 × 7 × 50	33
<b>K402/403</b>	1.375	5/16 × 5/16 × 2 5/16	1.51	40 <sub>k6</sub>	A12 × 8 × 70	43
<b>K513/514</b>	1.750	3/8 × 3/8 × 3 5/32	1.92	45 <sub>k6</sub>	A14 × 9 × 80	48.5
<b>K613/614</b>	1.750	3/8 × 3/8 × 3 5/32	1.92	50 <sub>k6</sub>	A14 × 9 × 90	53.5
<b>K713/714</b>	2.375	5/8 × 5/8 × 3 15/16	2.65	60 <sub>k6</sub>	A18 × 11 × 110	64
<b>K813/814</b>	2.875	3/4 × 3/4 × 4 5/16	3.21	70 <sub>m6</sub>	A20 × 12 × 125	74.5
<b>K913/914</b>	3.625	7/8 × 7/8 × 5 1/2	4.01	90 <sub>m6</sub>	A25 × 14 × 140	95
<b>K1013/1014</b>	4.375	1 × 1 × 7 1/8	4.82	110 <sub>m6</sub>	A28 × 16 × 180	116

**Table No. 5 "K" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			MR350/320 <sup>4)</sup>			Wt. lbs.	
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T		
<b>KL202</b>	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
<b>K102</b>	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	—	31
<b>K202</b>	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	—	40
<b>K203</b>	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53
<b>K302</b>	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	—	—	—	—	67
<b>K303</b>	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	—	—	—	—	73
<b>K402</b>	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	—	—	—	—	93
<b>K403</b>	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	—	—	—	—	100
<b>K513</b>	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	—	—	—	—	106
<b>K514</b>	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	—	—	—	—	109
<b>K613</b>	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	—	—	—	—	170
<b>K614</b>	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	—	—	—	—	177
<b>K713</b>	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	—	—	—	—	221
<b>K714</b>	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	—	—	—	—	234
<b>K813</b>	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	—	—	—	—	309
<b>K814</b>	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	—	—	—	—	331
<b>K913</b>	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	—	—	—	—	508
<b>K914</b>	—	—	—	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	—	530
<b>K1013</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	—	913
<b>K1014</b>	—	—	—	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	—	993

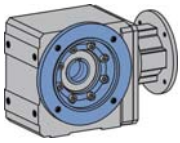
<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

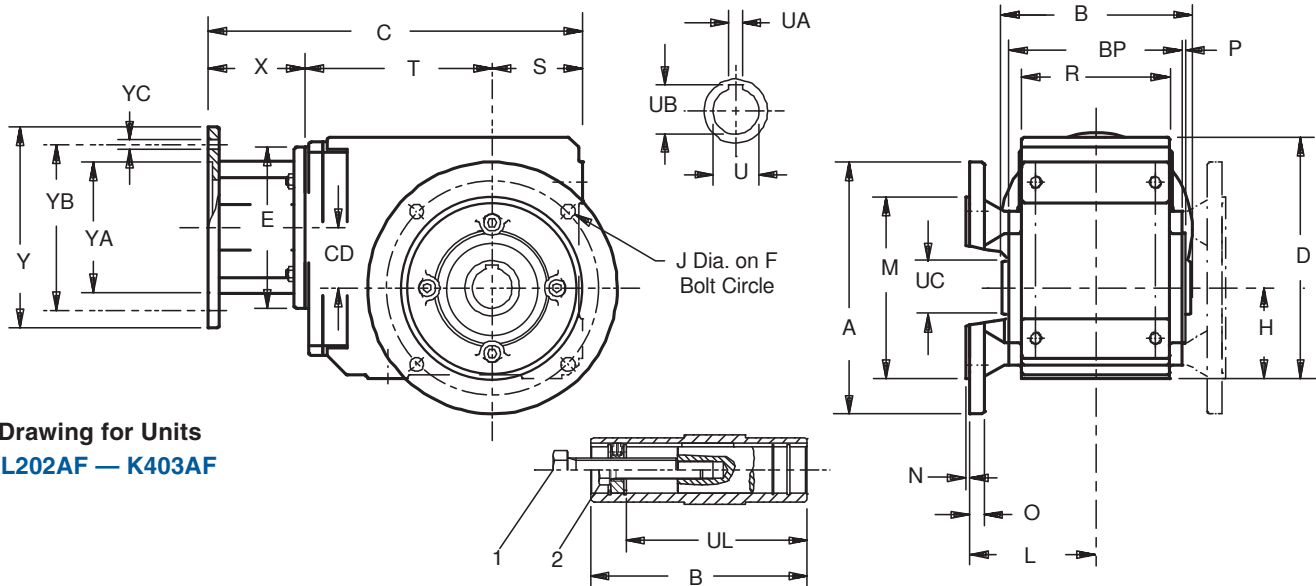
<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>4)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.



# "K" Series – MGS Reducer Flange Mount – "F" Housing Hollow Output – Dimensional Data



Drawing for Units  
KL202AF — K403AF

Table No. 1 "K" Series – Hollow Output, Round Flange Unit Dimensions (Inches) – "F" Housing Style

Base Module	A <sup>1)</sup>	B	D	F	H	J	L	M	N	O	P	R	S	Z <sub>1</sub>	BP	UC	UL	1
<b>KL202</b>	5.65	4.17	4.25	5.90	2.16	.35	2.26	3.740 +.0005/-.0004	.12	.45	.16	3.62	2.16	—	3.85	1.18	3.13	3/8-16
<b>K102</b>	6.30	4.72	6.30	5.12	2.36	.35	3.35	4.331 +.0005/-.0004	.14	.39	.12	3.54	2.36	—	4.17	1.57	3.86	1/2-13
<b>K202/203</b>	7.87	5.83	7.48	6.50	2.56	.43	3.90	5.118 +.0006/-.0004	.14	.47	.12	4.53	2.56	—	5.28	1.77	4.78	1/2-13
<b>K302/303</b>	7.87	6.30	8.39	6.50	2.95	.43	4.37	5.118 +.0006/-.0004	.14	.55	.12	5.12	2.95	—	5.75	1.97	4.92	5/8-11
<b>K402/403</b>	9.84	7.40	9.45	8.46	3.54	.55	4.98	7.087 +.0006/-.0004	.16	.59	.14	5.83	3.54	—	6.81	2.17	6.18	3/4-10
<b>K513/514</b>	9.84	7.87	10.24	8.46	6.30	.55	5.20	7.087 +.0006/-.0004	.16	.59	.14	6.30	3.94	5.98	7.28	2.56	6.46	3/4-10
<b>K613/614</b>	11.81	8.46	12.20	10.43	7.48	.55	5.35	9.055 +.0006/-.0005	.16	.67	.14	6.61	4.72	6.77	7.87	2.76	7.05	3/4-10
<b>K713/714</b>	13.78	9.53	13.46	11.81	8.35	.71	6.18	9.842 +.000/-0.001	.20	.71	.14	7.48	4.92	7.52	8.90	3.35	8.43	1-8
<b>K813/814</b>	15.75	11.81	16.14	13.78	10.43	.71	7.32	11.811 +.000/-0.001	.20	.79	.16	9.25	5.71	8.11	11.10	3.94	10.35	1-8
<b>K913/914</b>	17.72	13.78	19.49	15.75	12.40	.71	8.46	13.780 +.000/-0.001	.20	.91	.20	11.22	7.09	9.84	12.99	4.33	11.89	1-8
<b>K1013/1014</b>	21.65	16.14	23.27	19.69	14.76	.71	10.08	17.716 +.000/-0.002	.20	.98	.28	15.75	8.86	12.01	15.60	5.12	14.25	1 1/4-7

<sup>1)</sup> See Page 122 for other flange sizes. Optional flanges are not available for all sizes. KL flange is not round. See graphic below.

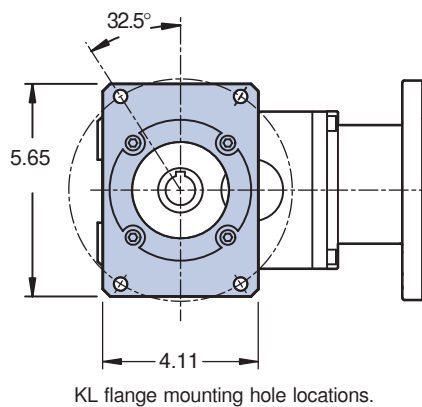


Table No. 2 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>ML2R050</b>	56C	5.51	2.99	6.50	4.500	5.87	.41	7
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
<b>MR350/320</b>	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
<b>MR350/360</b>	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133

### Part No. Example

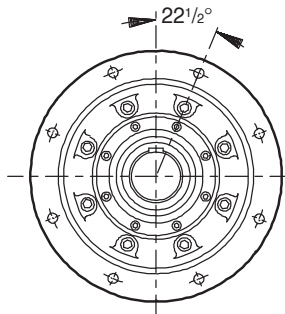
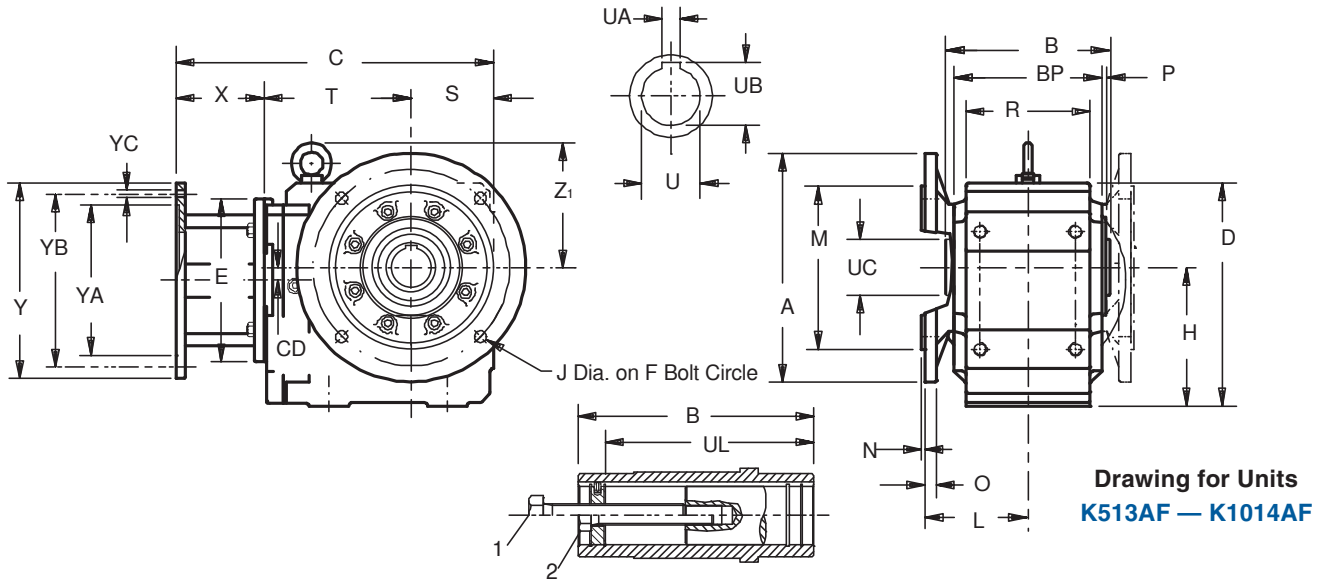
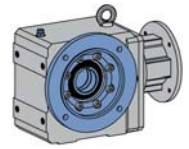
Hollow Output, Flanged Housing with Motor Adapter

**K303AF0650 MR160/140**

STOBER Drives Inc. • MGS2011 • [www.stober.com](http://www.stober.com)



# "K" Series – MGS Reducer Flange Mount – "F" Housing Hollow Output – Dimensional Data



K913 thru K1014 has 8 mounting holes in the output flange located as shown.

**Table No. 4 Metric output available on request.**

Base Module	Standard Bore - inches			Optional Bore - mm		
	U	UA	UB	U	UA	UB
<b>KL202</b>	.750	.188	.84	20 <sub>G7</sub>	6 <sub>JS9</sub>	22.8
<b>K102</b>	1.000	.250	1.11	25 <sub>H7</sub>	8 <sub>JS9</sub>	28.3
<b>K202/203</b>	1.1875	.250	1.31	30 <sub>H7</sub>	8 <sub>JS9</sub>	33.3
<b>K302/303</b>	1.375	.312	1.52	35 <sub>H7</sub>	10 <sub>JS9</sub>	38.3
<b>K402/403</b>	1.500	.375	1.67	40 <sub>H7</sub>	12 <sub>JS9</sub>	43.3
<b>K513/514</b>	2.000	.500	2.13	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8
<b>K613/614</b>	2.000	.500	2.23	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8
<b>K713/714</b>	2.375	.625	2.66	60 <sub>H7</sub>	18 <sub>JS9</sub>	64.4
<b>K813/814</b>	2.750	.625	3.03	70 <sub>H7</sub>	20 <sub>JS9</sub>	74.9
<b>K913/914</b>	3.250	.750	3.59	90 <sub>H7</sub>	25 <sub>JS9</sub>	95.4
<b>K1013/1014</b>	4.000	1.000	4.31	100 <sub>H7</sub>	28 <sub>JS9</sub>	116

**Table No. 5 "K" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			MR350/320 <sup>4)</sup>			Wt. lbs.	
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T		
<b>KL202</b>	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
<b>K102</b>	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	—	31
<b>K202</b>	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	—	40
<b>K203</b>	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53
<b>K302</b>	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	—	—	—	—	67
<b>K303</b>	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	—	—	—	—	73
<b>K402</b>	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	—	—	—	—	93
<b>K403</b>	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	—	—	—	—	100
<b>K513</b>	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	—	—	—	—	106
<b>K514</b>	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	—	—	—	—	109
<b>K613</b>	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	—	—	—	—	170
<b>K614</b>	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	—	—	—	—	177
<b>K713</b>	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	—	—	—	—	221
<b>K714</b>	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	—	—	—	—	234
<b>K813</b>	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	—	—	—	—	309
<b>K814</b>	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	—	—	—	—	331
<b>K913</b>	—	—	—	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	—	508
<b>K914</b>	—	—	—	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	—	530
<b>K1013</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	—	913
<b>K1014</b>	—	—	—	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	—	993

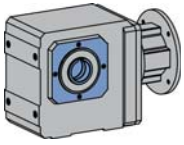
<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

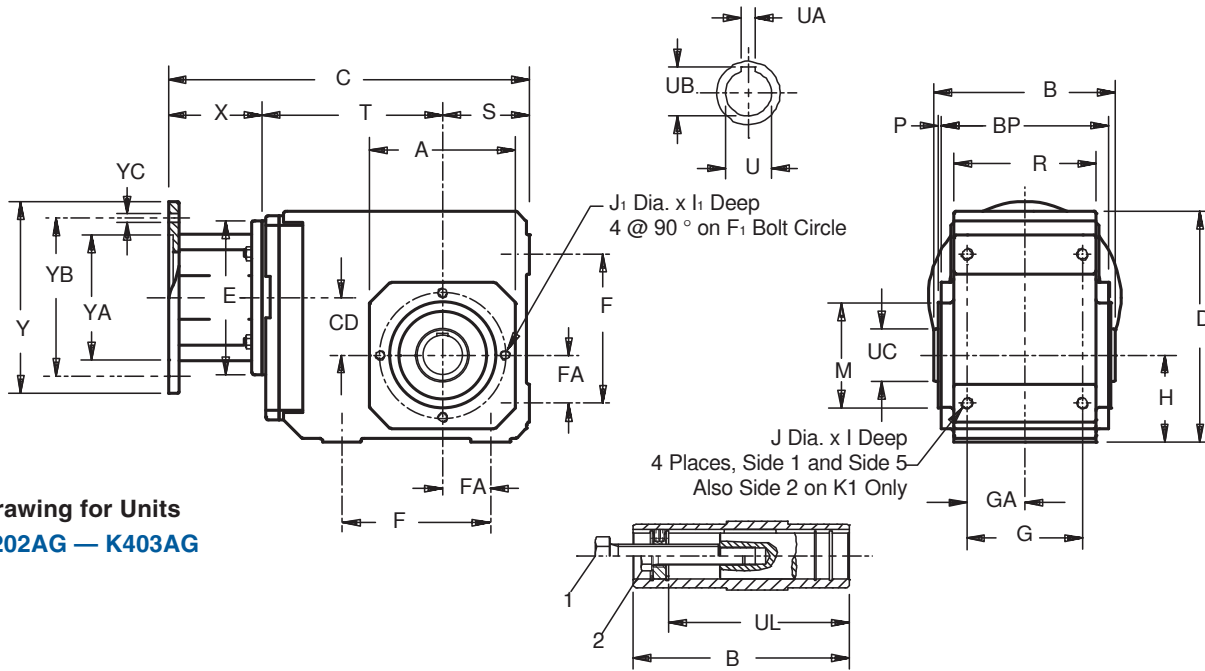
<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>4)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.



# "K" Series – MGS Reducer Tapped Holes – "G" Housing Hollow Output – Dimensional Data



Drawing for Units  
KL202AG – K403AG

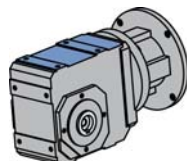
Table No. 1 "K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style

Base Module	A	B	D	F	F <sub>1</sub>	G	H	I	I <sub>1</sub>	J	J <sub>1</sub>	M	j <sub>6</sub>	P	R	S	Z <sub>1</sub>
KL202	3.80	4.17	4.25	2.16	2.95	2.56	2.16	.43	.43	M6×1	M6×1	2.953	+0.0005/-0.0003	.16	3.62	2.16	—
K102	4.13	4.72	6.30	3.54	3.54	2.76	2.36	.51	.51	M8×1.25	M8×1.25	2.953	+0.0005/-0.0003	.12	3.54	2.36	—
K202/203	4.57	5.83	7.48	4.53	3.94	3.54	2.56	.63	.51	M10×1.5	M8×1.25	3.228	+0.0005/-0.0004	.12	4.53	2.56	—
K302/303	5.20	6.30	8.39	5.12	4.53	4.13	2.95	.63	.51	M10×1.5	M8×1.25	3.740	+0.0005/-0.0004	.12	5.12	2.95	—
K402/403	5.98	7.40	9.45	6.10	5.12	4.72	3.54	.75	.63	M12×1.75	M10×1.5	4.331	+0.0005/-0.0004	.14	5.83	3.54	—
K513/514	5.71	7.87	10.24	5.51	5.12	4.92	6.30	1.02	.63	M16×2.0	M10×1.5	4.331	+0.0005/-0.0004	.14	6.30	3.94	5.98
K613/614	7.09	8.46	12.20	6.30	6.50	5.12	7.48	1.02	.63	M16×2.0	M10×1.5	5.512	+0.0006/-0.0004	.14	6.61	4.72	6.77
K713/714	7.68	9.53	13.46	7.09	7.28	5.71	8.35	1.22	.75	M20×2.5	M12×1.75	6.102	+0.0006/-0.0004	.14	7.48	4.92	7.52
K813/814	8.90	11.81	16.14	9.45	8.46	7.28	10.43	1.50	.75	M24×3	M12×1.75	7.283	+0.0006/-0.0005	.16	9.25	5.71	8.11
K913/914	11.02	13.78	19.49	11.02	10.43	8.86	12.40	1.89	1.02	M30×3.5	M16×2	9.055	+0.0006/-0.0005	.20	11.22	7.09	9.84
K1013/1014	13.38	16.14	23.27	11.81	11.81	12.99	14.76	1.77	1.30	1.54	M20×2.5	9.843	+0.0006/-0.0005	.28	15.59	8.86	12.01

Table No. 2

Base Module	BP	FA	GA	UC	UL	1
KL202	3.85	1.08	1.28	1.18	3.13	3/8-16
K102	4.17	1.18	1.38	1.57	3.86	1/2-13
K202/203	5.28	1.38	1.77	1.77	4.78	1/2-13
K302/303	5.75	1.57	2.07	1.97	4.92	5/8-11
K402/403	6.81	1.97	2.36	2.17	6.18	3/4-10
K513/514	7.28	1.57	2.46	2.56	6.46	3/4-10
K613/614	7.87	1.97	2.56	2.76	7.05	3/4-10
K713/714	8.90	2.17	2.85	3.35	8.43	1-8
K813/814	11.10	2.95	3.64	3.94	10.35	1-8
K913/914	12.99	3.74	4.43	4.33	11.89	1-8
K1013/1014	15.60	4.53	6.50	5.12	14.25	1 1/4-7

1. Removal Bolt – not supplied.
2. Mounting Bolt – must be smaller than removal bolt.



K1 Housing with tapped holes on Side 1, Side 2, and Side 5.

Table No. 3 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
ML2R050	56C	5.51	2.99	6.50	4.500	5.87	.41	7
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75
MR350/320	324/326TC	13.78	7.09	13.37	12.500	11.00	.70	133
MR350/360	364/365TC	13.78	7.09	13.37	12.500	11.00	.70	133

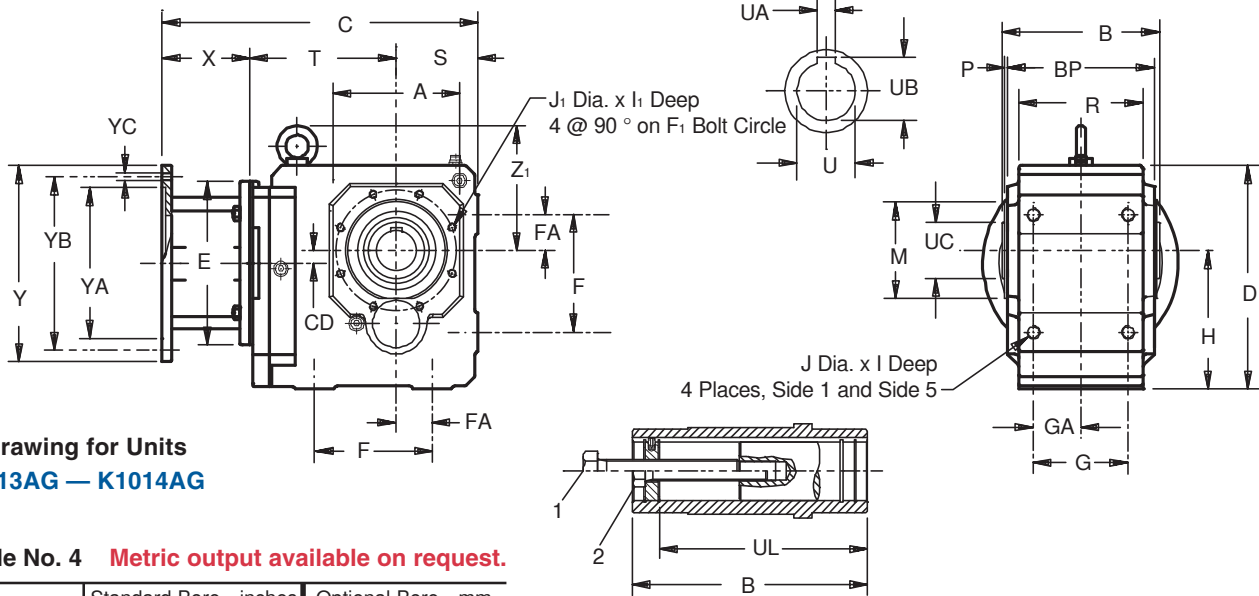
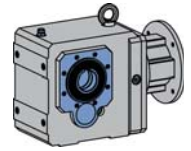
## Part No. Example

Tapped Holes Housing with Motor Adapter

**K303AG0650 MR160/140**



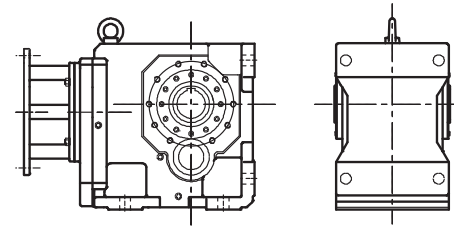
# "K" Series – MGS Reducer Tapped Holes – "G" Housing Hollow Output – Dimensional Data



Drawing for Units  
K513AG – K1014AG

Table No. 4 Metric output available on request.

Base Module	Standard Bore - inches			Optional Bore - mm		
	U	UA	UB	U	UA	UB
<b>KL202</b>	.750	.188	.84	20 <sub>G7</sub>	6 <sub>JS9</sub>	22.8
<b>K102</b>	1.000	.250	1.11	25 <sub>H7</sub>	8 <sub>JS9</sub>	28.3
<b>K202/203</b>	1.1875	.250	1.31	30 <sub>H7</sub>	8 <sub>JS9</sub>	33.3
<b>K302/303</b>	1.375	.312	1.52	35 <sub>H7</sub>	10 <sub>JS9</sub>	38.3
<b>K402/403</b>	1.500	.375	1.67	40 <sub>H7</sub>	12 <sub>JS9</sub>	43.3
<b>K513/514</b>	2.000	.500	2.13	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8
<b>K613/614</b>	2.000	.500	2.23	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8
<b>K713/714</b>	2.375	.625	2.66	60 <sub>H7</sub>	18 <sub>JS9</sub>	64.4
<b>K813/814</b>	2.750	.625	3.03	70 <sub>H7</sub>	20 <sub>JS9</sub>	74.9
<b>K913/914</b>	3.250	.750	3.59	90 <sub>H7</sub>	25 <sub>JS9</sub>	95.4
<b>K1013/1014</b>	4.000	1.000	4.31	100 <sub>H7</sub>	28 <sub>JS9</sub>	116



Typical K10 housing.

Table No. 5 "K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style

Base Module	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			MR350/320 <sup>4)</sup>			Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
<b>KL202</b>	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
<b>K102</b>	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	31
<b>K202</b>	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	40
<b>K203</b>	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	53
<b>K302</b>	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	—	—	—	67
<b>K303</b>	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	—	—	—	73
<b>K402</b>	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	—	—	—	93
<b>K403</b>	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	—	—	—	100
<b>K513</b>	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	—	—	—	106
<b>K514</b>	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	—	—	—	109
<b>K613</b>	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	—	—	—	170
<b>K614</b>	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	—	—	—	177
<b>K713</b>	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	—	—	—	221
<b>K714</b>	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	—	—	—	234
<b>K813</b>	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	—	—	—	309
<b>K814</b>	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	—	—	—	331
<b>K913</b>	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	—	—	—	508
<b>K914</b>	—	—	—	—	—	—	—	—	—	.98	26.77	14.37	—	—	—	—	—	—	—	—	—	530
<b>K1013</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	913
<b>K1014</b>	—	—	—	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	993

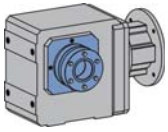
<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

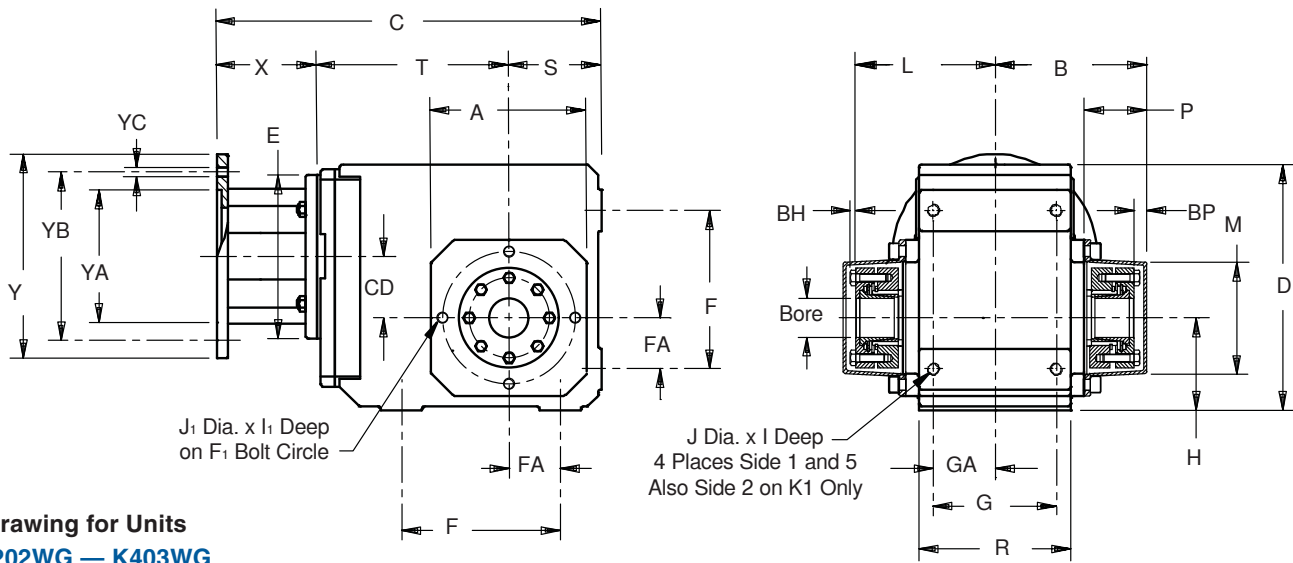
<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

<sup>4)</sup> Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.



# "K" Series – MGS Reducer Tapped Holes – "G" Housing Double Bushing – Dimensional Data



Drawing for Units  
KL202WG – K403WG

Table No. 1 "K" Series – Double Wobble Free – Unit Dimensions (Inches)

Base Module	A	B	D	F	G	H	I	J	L	M	P	R	S	Z <sub>1</sub>	BC	BP	BH	FA	GA	JA	JL
KL202	3.80	3.50	4.25	2.16	2.56	2.16	.43	M6 x 1	3.28	2.96	1.58	3.62	2.16	—	2.95	.22	.16	1.08	1.28	M8x1.25	.43
K102	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8x1.25	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8x1.25	.51
K202/203	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8x1.25	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10x1.5	.63
K302/303	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8x1.25	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10x1.5	.63
K402/403	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10x1.5	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12x1.75	.75
K513/514	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10x1.5	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16x2.0	1.02
K613/614	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10x1.5	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16x2.0	1.02
K713/714	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12x1.75	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20x2.5	1.22
K813/814	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12x1.75	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24x3	1.50

Table No. 2 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
ML2R050	56C	5.51	2.99	6.50	4.500	5.87	.41	7
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

**Part No. Example**  
143TC Frame Motor Adapter  
and 17/16 Bushing Bore  
**K303WG0650 MR160/140**  
**WFB3-107**

Table No. 3 "WFB" – Double Bushings – Metric

Unit	Stock Bores Sizes — mm			
	25	30	35	40
K1	WFB1-25	—	—	—
K2	WFB2-25	WFB2-30	—	—
K3	—	WFB3-30	WFB3-35	—
K4	—	—	—	WFB4-40
K5	—	—	—	WFB5-40
K6	—	—	—	WFB6-40

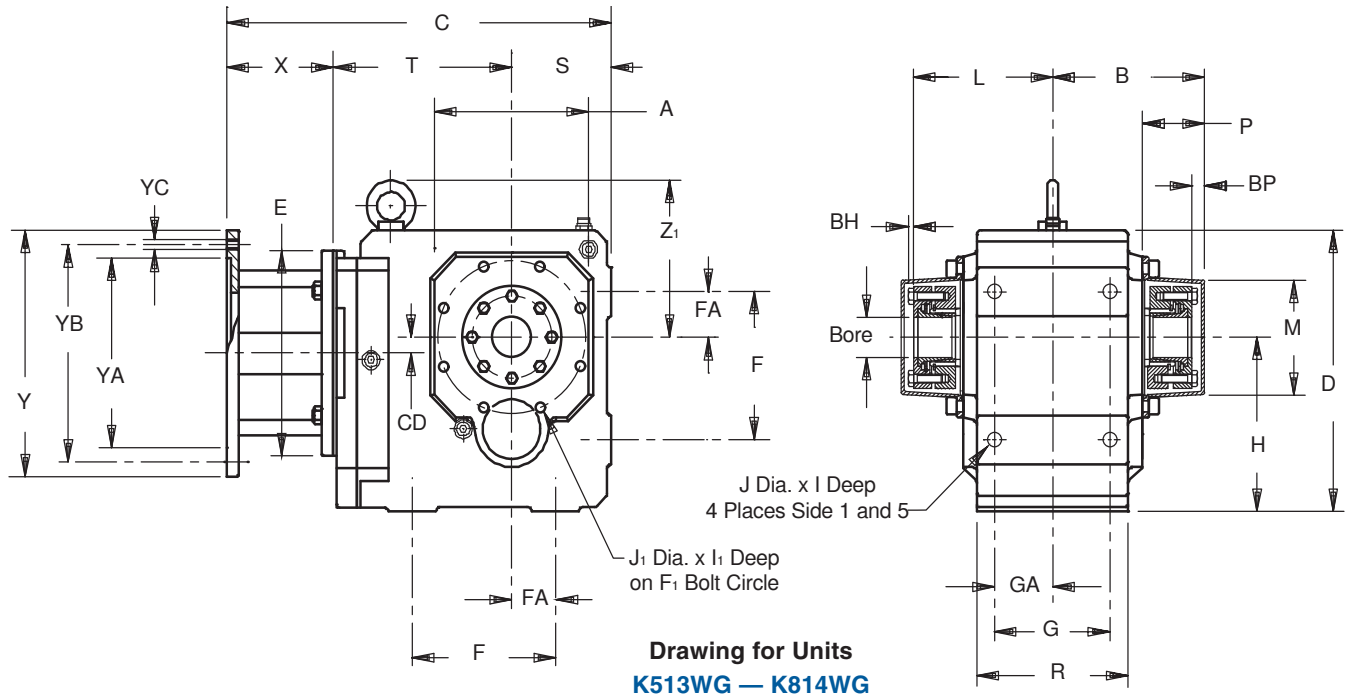
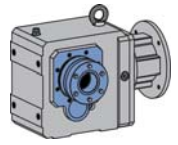
Table No. 4 "WFB" Double Side Bushings – Inches

Unit	Stock Bores Sizes						
	3/4	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>
KL2	WFBKL2-012	WFB1-100	—	—	—	—	—
K1	—	WFB1-100	—	—	—	—	—
K2	—	WFB2-100	WFB2-103	—	—	—	—
K3	—	WFB3-100	WFB3-103	WFB3-104	WFB3-106	WFB3-107	WFB3-108
K4	—	WFB4-100	WFB4-103	WFB4-104	WFB4-106	WFB4-107	WFB4-108





# "K" Series – MGS Reducer Tapped Holes – "G" Housing Double Bushing – Dimensional Data



**Table No. 5 "K" Series – Double Wobble Free – Unit Dimensions (Inches)**

Base	ML2R050			MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			Wt. lbs.	
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T		
KL202	0	5.64	3.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12
K102	—	—	—	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	31
K202	—	—	—	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	40
K203	—	—	—	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	—	53
K302	—	—	—	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	—	67
K303	—	—	—	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	—	73
K402	—	—	—	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	—	93
K403	—	—	—	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	—	100
K513	—	—	—	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	—	106
K514	—	—	—	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	—	109
K613	—	—	—	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	—	170
K614	—	—	—	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	—	177
K713	—	—	—	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	—	221
K714	—	—	—	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	—	234
K813	—	—	—	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	—	309
K814	—	—	—	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	—	331

<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

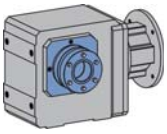
<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

All weights are approximate.

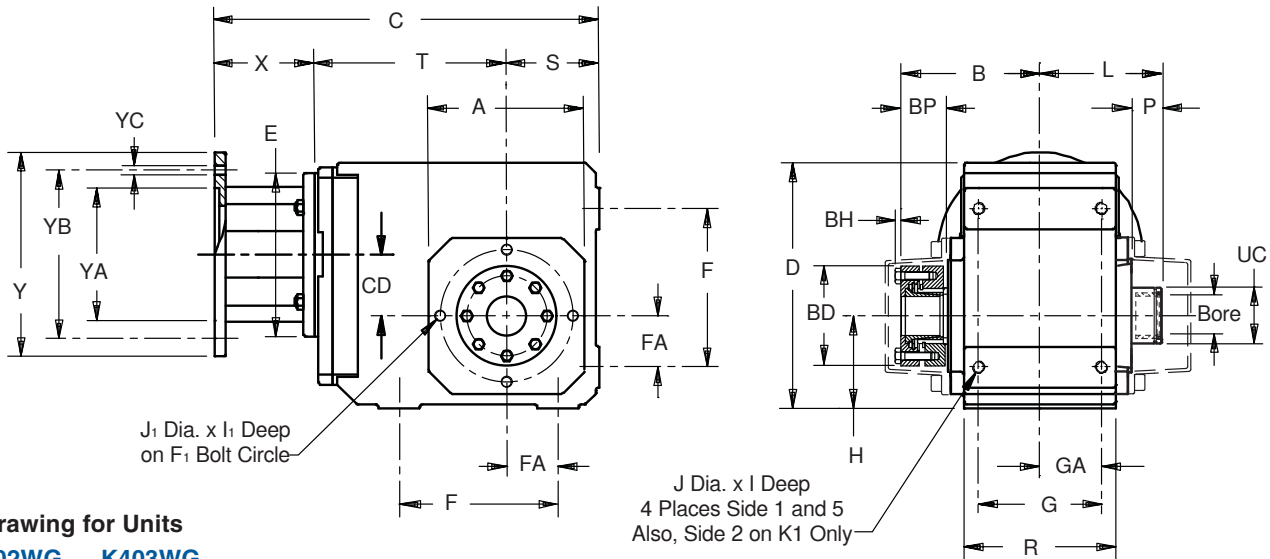
**NOTE:** A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers. The bushing will accept a shaft with a tolerance of +.000/-.005.

**Table No. 6 "WFB" Double Side Bushings – Inches**

Unit	Stock Bore Sizes — Inches											
	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2	2 <sup>9</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-111	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	—	—	—
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB8-207	WFB8-212



# "K" Series – MGS Reducer Tapped Holes – "G" Housing Single Bushing – Dimensional Data



Drawing for Units  
K102WG – K403WG

Table No. 1 "K" Series – Single Side Wobble Free Bushing – Unit Dimensions (Inches)

Base Module	A	B	D	F	F <sub>1</sub>	G	H	I	I <sub>1</sub>	J	J <sub>1</sub>	L	P	R	S	Z <sub>1</sub>
<b>K102</b>	4.13	3.66	6.30	3.54	3.54	2.76	2.36	.51	.51	M8×1.25	M8×1.25	3.15	1.97	3.54	2.36	–
<b>K202/203</b>	4.57	4.29	7.48	4.53	3.94	3.54	2.567	.63	.51	M10×1.5	M8×1.25	3.78	2.05	4.53	2.56	–
<b>K302/303</b>	5.20	4.54	8.39	5.12	4.53	4.13	2.95	.63	.51	M10×1.5	M8×1.25	4.02	2.09	5.12	2.95	–
<b>K402/403</b>	5.98	5.33	9.45	6.10	5.12	4.72	3.54	.75	.63	M12×1.75	M10×1.5	4.69	2.40	5.83	3.54	–
<b>K513/514</b>	5.71	5.61	10.24	5.51	5.12	4.92	6.30	1.02	.63	M16×2	M10×1.5	4.96	2.40	6.30	3.94	5.98
<b>K613/614</b>	7.09	6.10	12.20	6.30	6.50	5.12	7.48	1.02	.63	M16×2	M10×1.5	5.12	2.68	6.61	4.72	6.77
<b>K713/714</b>	7.68	7.29	13.46	7.09	7.28	5.71	8.35	1.22	.75	M20×2.5	M12×1.75	6.20	2.91	7.48	4.92	7.52
<b>K813/814</b>	8.90	8.70	16.14	9.45	8.46	7.28	10.43	1.50	.75	M24×3	M12×1.75	7.58	3.43	9.25	5.71	8.11

Table No. 2 Dimensions (Inches)

Base Module	BD	BP	BH	FA	GA	UC
<b>K102</b>	2.76	1.62	.16	1.18	1.38	1.54
<b>K202/203</b>	3.07	1.54	.16	1.38	1.7	1.73
<b>K302/303</b>	3.31	1.55	.16	1.57	2.07	1.93
<b>K402/403</b>	3.82	1.83	.20	1.97	2.36	2.13
<b>K513/514</b>	4.13	1.87	.20	1.57	2.46	2.56
<b>K613/614</b>	4.65	2.11	.24	1.97	2.56	2.91
<b>K713/714</b>	5.43	2.70	.24	2.17	2.85	3.35
<b>K813/814</b>	6.22	2.99	.31	2.95	3.64	3.94

Table No. 3 Motor Adapter Dimensions (Inches)

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR300/180</b>	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/210</b>	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/250</b>	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
<b>MR300/280</b>	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

Part No. Example

143TC Frame Motor Adapter  
and 1<sup>7</sup>/<sub>16</sub> Bushing Bore

**K303WG0650 MR160/140  
WF3-107**

Table No. 4

"WF" Single Side Bushing – Metric

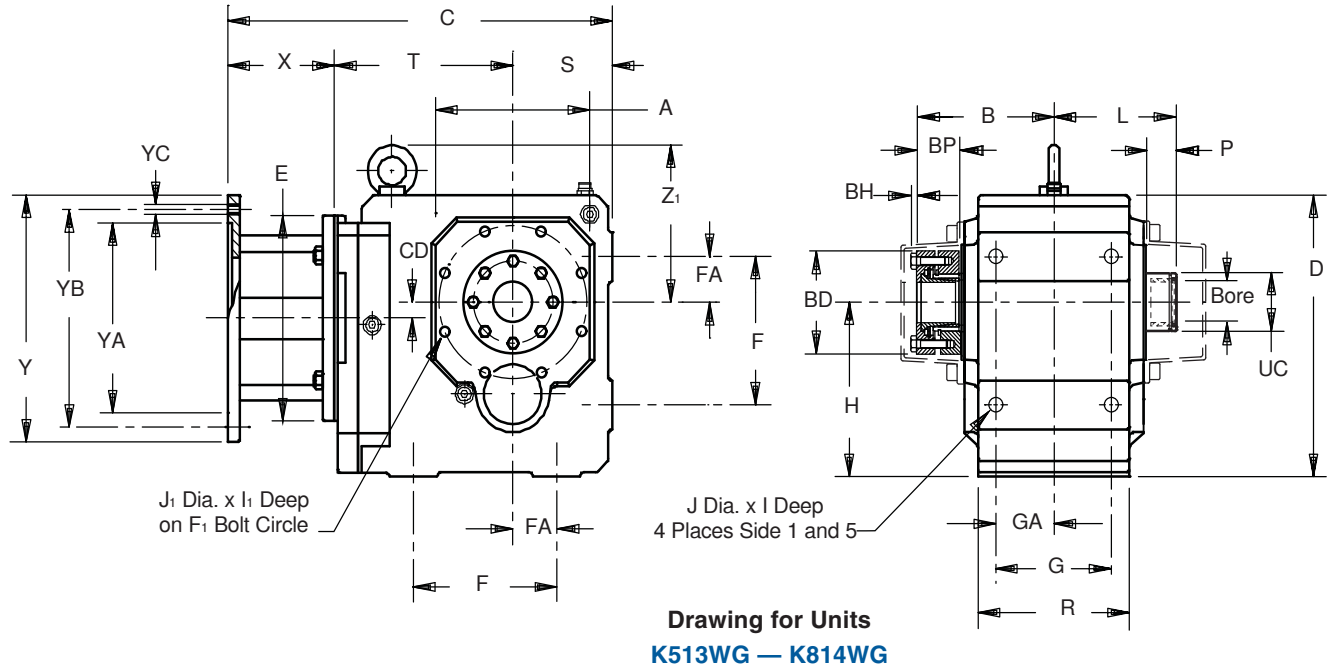
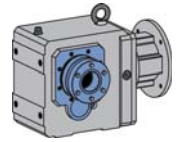
Unit	Stock Bores Sizes — mm		
	25	30	35
<b>K1</b>	<b>WF1-25</b>	–	–
<b>K2</b>	–	<b>WF2-30</b>	–
<b>K3</b>	–	<b>WF3-30</b>	<b>WF3-35</b>

Table No. 5 "WF" Single Side Bushings

Unit	Stock Bores Sizes					
	1	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>
<b>K1</b>	<b>WF1-100</b>	–	–	–	–	–
<b>K2</b>	<b>WF2-100</b>	<b>WF2-103</b>	–	–	–	–
<b>K3</b>	<b>WF3-100</b>	<b>WF3-103</b>	<b>WF3-104</b>	<b>WF3-106</b>	<b>WF3-107</b>	<b>WF3-108</b>
<b>K4</b>	<b>WF4-100</b>	<b>WF4-103</b>	<b>WF4-104</b>	<b>WF4-106</b>	<b>WF4-107</b>	<b>WF4-108</b>



# "K" Series – MGS Reducer Tapped Holes – "G" Housing Single Bushing – Dimensional Data



**Table No. 6 "K" Series – Single Side Wobble Free Bushing – Unit Dimensions (Inches)**

Base	MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			MR300/250 <sup>3)</sup>			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
K302	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	—	—	—	—	—	—	67
K303	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	—	—	—	—	—	—	73
K402	—	—	—	2.36	14.76	7.36	2.36	15.74	7.44	2.36	16.41	7.56	—	—	—	93
K403	2.36	15.51	8.66	.91	16.46	9.06	—	—	—	—	—	—	—	—	—	100
K513	—	—	—	.59	14.57	6.77	.59	15.59	6.85	.59	16.22	6.97	—	—	—	106
K514	—	—	—	.59	16.26	8.46	—	—	—	—	—	—	—	—	—	109
K613	—	—	—	.71	16.10	7.52	.71	17.12	7.60	.71	17.75	7.72	.71	19.49	8.27	170
K614	—	—	—	.71	17.79	9.21	—	—	—	—	—	—	—	—	—	177
K713	—	—	—	—	—	—	.79	18.42	8.70	.79	19.05	8.82	.79	20.75	9.33	221
K714	—	—	—	.79	19.13	10.35	.79	20.86	11.14	—	—	—	—	—	—	234
K813	—	—	—	—	—	—	.94	20.23	9.72	.94	20.82	9.80	.94	22.52	10.31	309
K814	—	—	—	—	—	—	.94	22.64	12.13	—	—	—	—	—	—	331

<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

<sup>3)</sup> Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.

All weights are approximate.

**NOTE:** Single side bushing kits include 1 each of the pressure and locking ring, tapered cone, support ring, and all hardware to mount the kit into the MGS reducer. The WF1 bushing does not use a tapered cone. Covers are optional. The bushing will accept a shaft with a tolerance of +.000/-0.005.

**Table No. 7 "WF" Single Side Bushings**

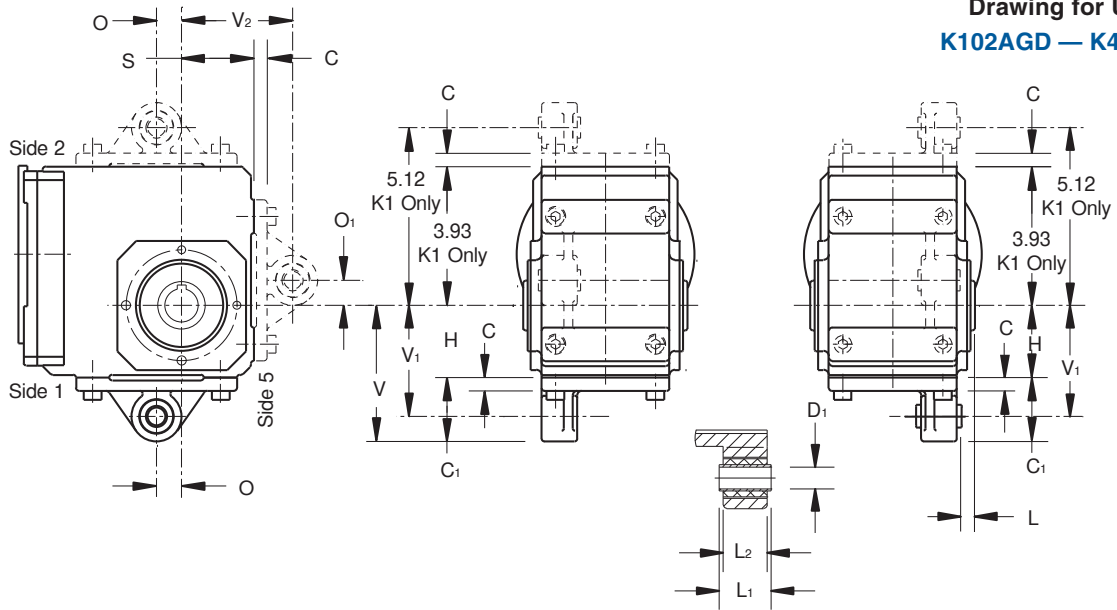
Unit	Stock Bore Sizes											
	1 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	2	2 <sup>3</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>
K5	WF5-107	WF5-108	WF5-110	WF5-111	WF5-112	WF5-114	WF5-115	WF5-200	—	—	—	—
K6	WF6-107	WF6-108	WF6-110	WF6-111	WF6-112	—	WF6-115	WF6-200	WF6-203	—	—	—
K7	—	—	—	—	—	—	WF7-115	WF7-200	WF7-203	WF7-206	—	—
K8	—	—	—	—	—	—	—	—	WF8-203	WF8-206	WF8-207	WF8-212



# "K" Series – MGS Reducer Torque Arm Bracket (torque arm supplied by others)

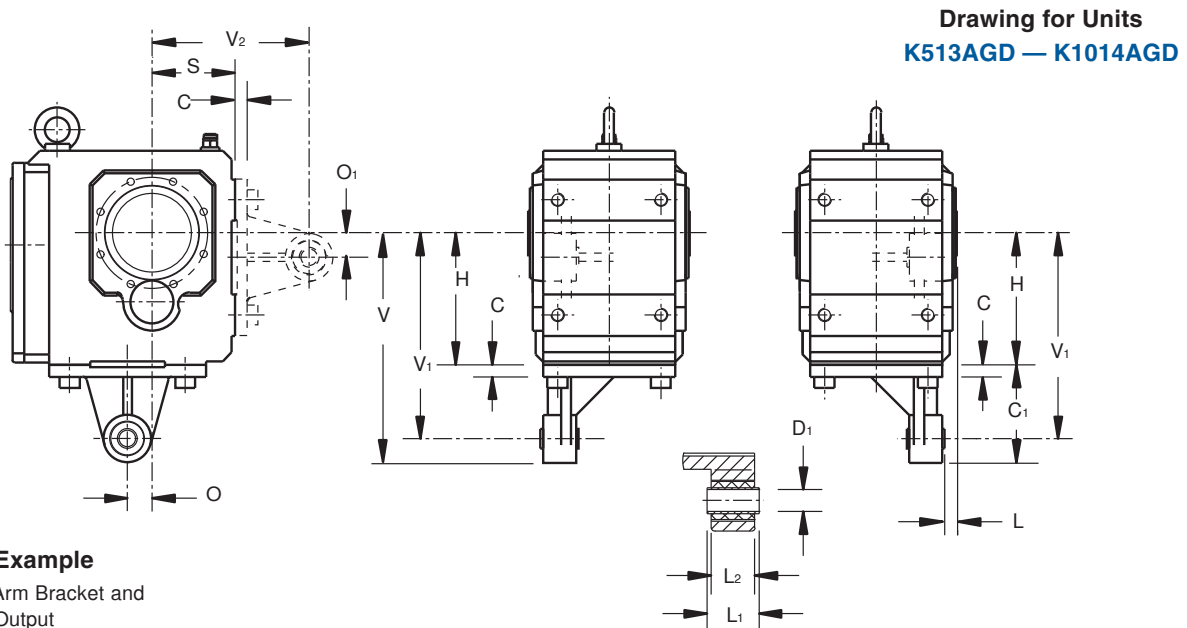


All brackets can be mounted on all units K102 through K1014 on Side 1 and Side 5.  
The bracket can be mounted on the top side (Side 2) of K102 ONLY.



**Table No. 1 "K" Series — Torque Arm Bracket Dimensions (Inches)**

Base Module	C	C <sub>1</sub>	D <sub>1</sub>	H <sub>9</sub>	H	L	L <sub>1</sub>	L <sub>2</sub>	O	O <sub>1</sub>	S	V	V <sub>1</sub>	V <sub>2</sub>
<b>K102</b>	.39	2.03	.47	+0.017/-0.000	2.36	.51	1.10	.94	.59	.59	2.36	4.39	3.54	3.54
<b>K202/K203</b>	.47	2.26	.63	+0.017/-0.000	2.56	.53	1.50	1.26	.89	.89	2.56	4.82	3.93	3.93
<b>K302/K303</b>	.47	2.66	.63	+0.017/-0.000	2.95	.47	1.50	1.26	.98	.98	2.95	5.61	4.72	4.72
<b>K402/K403</b>	.55	3.46	.79	+0.020/-0.000	3.54	.67	1.81	1.57	1.08	1.08	3.54	7.00	5.91	5.91
<b>K513/K514</b>	.59	4.68	.79	+0.020/-0.000	6.30	.67	1.81	1.57	1.18	1.18	3.93	10.98	9.84	7.48
<b>K613/K614</b>	.59	3.50	.79	+0.020/-0.000	7.48	.81	1.81	1.57	1.18	1.18	4.72	10.98	9.84	7.09
<b>K713/K714</b>	.67	4.80	.79	+0.020/-0.000	8.35	.91	2.76	2.52	1.38	1.38	4.92	13.15	11.81	8.39
<b>K813/K814</b>	.67	4.77	.94	+0.020/-0.000	10.43	1.02	4.53	4.02	1.77	1.77	5.71	15.20	13.78	9.06
<b>K913/K914</b>	.79	6.80	.94	+0.020/-0.000	12.40	1.02	4.53	4.02	1.77	1.77	7.09	19.20	17.72	12.40
<b>K1013/K1014</b>	1.65	9.25	1.57	+0.024/-0.000	14.76	.24	4.88	4.65	2.36	2.17	8.86	24.01	21.65	15.75

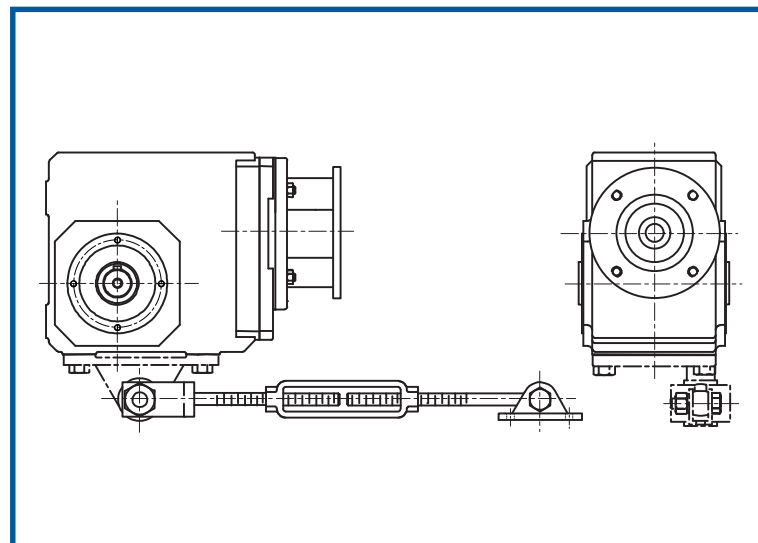
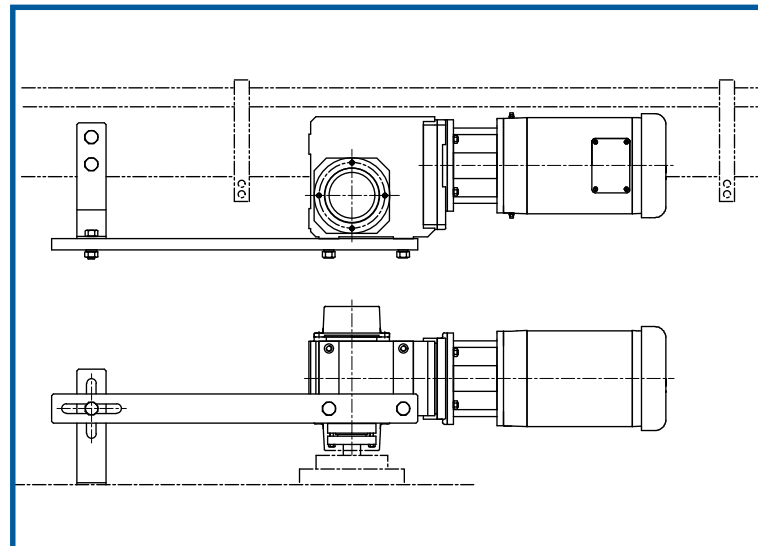
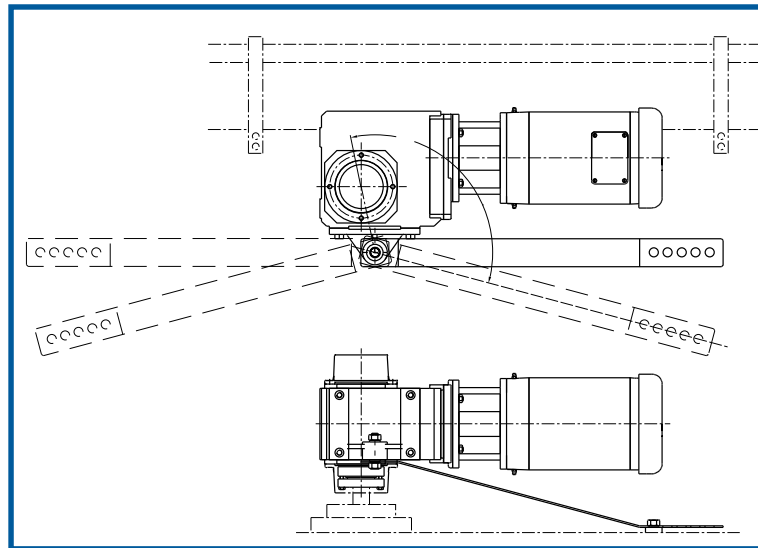


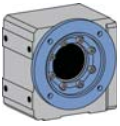
**Part No. Example**

Unit with Torque Arm Bracket and  
Hollow Output  
**K513AGD0650**

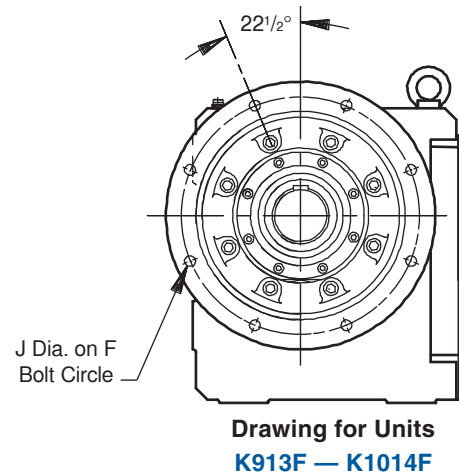
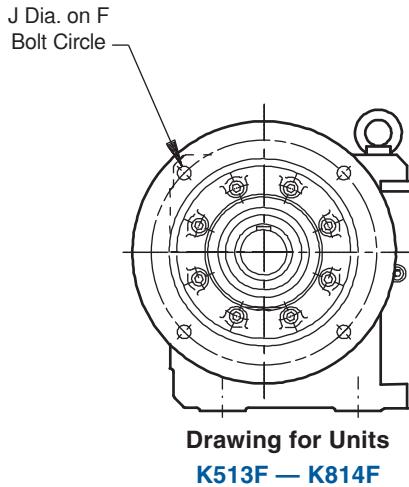
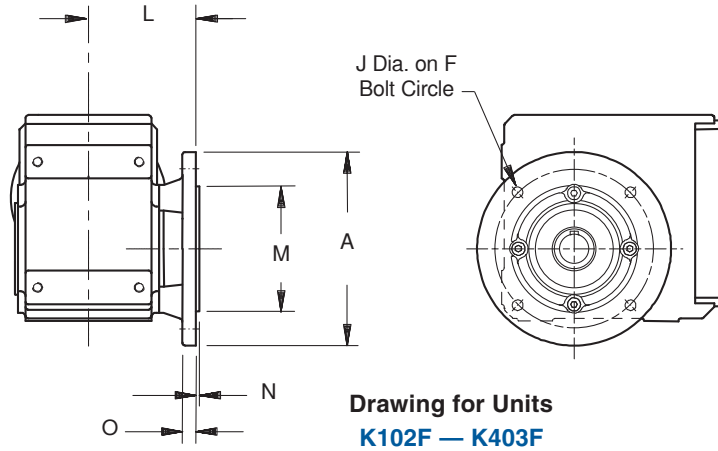


# "K" Series – MGS Reducer Torque Arm Mounting Method (torque arm supplied by others)





# "K" Series – MGS Reducer Optional Round Flanges



**Table No. 1 Flange Dimensions (Inches) – Standard and Optional**

Base Module	Flange Size	A	F	J	L	M	N	O
<b>K102</b>	140	5.512	4.53	.35	3.35	3.740 +.001/-0.004	.12	.39
	<b>160 *</b>	6.300	5.12	.35	4.53	4.331 +.001/-0.004	.14	.39
<b>K202/K203</b>	160	6.300	5.12	.35	3.90	4.331 +.001/-0.004	.14	.47
	<b>200 *</b>	7.874	6.50	.43	5.31	5.118 +.001/-0.004	.14	.47
<b>K302/K303</b>	160	6.300	5.12	.35	4.37	4.331 +.001/-0.004	.14	.55
	<b>200 *</b>	7.874	6.50	.43	5.59	5.118 +.001/-0.004	.14	.55
<b>K402/K403</b>	<b>250 *</b>	9.843	8.46	.55	6.93	7.087 +.001/-0.004	.16	.59
	<b>K513/K514</b>	<b>250 *</b>	9.843	8.46	.55	8.74	7.087 +.001/-0.004	.16
<b>K613/K614</b>	<b>300 *</b>	11.811	12.20	.55	9.29	9.055 +.001/-0.001	.16	.67
	<b>K713/K714</b>	<b>300 *</b>	11.811	10.43	.55	6.18	9.055 +.001/-0.001	.20
<b>K813/K814</b>	<b>350 *</b>	13.780	11.81	.71	10.91	9.842 +.000/-0.001	.20	.71
	<b>350</b>	13.780	11.81	.71	7.32	9.842 +.000/-0.001	.20	.79
	<b>400 *</b>	15.748	13.78	.71	7.32	11.811 +.000/-0.001	.20	.79
<b>K913/K914</b>	<b>450 *</b>	17.717	15.75	.71	7.32	13.781 +.000/-0.001	.20	.79
	<b>450</b>	17.717	15.75	.71	8.46	13.780 +.000/-0.001	.20	.91
<b>K1013/K1014</b>	<b>550 *</b>	21.654	19.69	.71	10.08	17.717 +.000/-0.002	.20	.98

\* This is the standard flange and will be shipped unless otherwise specified. Optional flanges are not available for all sizes.

# "S" Series – Right Angle Helical/Worm MGS Speed Reducers

These durable units combine economy and versatility for a wide range of applications. MGS helical-before-worm gearing offers twice the efficiency of two-stage worm drives.

#### Performance Specifications:

- Horsepower ratings from .12 to 8.19
- Output torques to 7,086 in. lbs.
- Output speeds available from 190 to 2.5 RPM
- Speed reducer ratios from 9.2:1 to 683:1
- 3 year warranty—your assurance of satisfactory product performance

High quality first stage helical gearing is case hardened to 58-62 Rockwell C. Precision finished with minimum backlash for low noise and long service life. Standard backlash is  $\leq 20$  arc minutes

Centrifugally cast bronze worm gear and precision worm provide excellent torque carrying capacity and high efficiency

Stainless steel nameplate and hardware

Strategically located oil fill, drain and breather ports for optimum mounting flexibility. Oil sight glass available.

#### Input Options:

- Input shaft
- NEMA C-face Adapter (coupling type)

#### Output Options:

- Solid shaft
- Hollow

**3 YEAR WARRANTY**

One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities, and eliminates leakage problems common to drives with bolt-on output covers.

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications

Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

**SHIPS in  
1 DAY**



**STOBER**







[www.stober.com](http://www.stober.com)

# Part No. Configurator

## “S” Series – MGS Speed Reducers



### Part No. Explanation

<u>S</u>	<u>4</u>	<u>0</u>	<u>2</u>	<u>A</u>	<u>N</u>	<u>0280</u>	<u>MR200/</u>	<u>180</u>
Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size
Series	<u>S</u>	Right Angle Helical/Worm (output is at a right angle to input; gears are helical and a worm gear set)						
Size	<u>4</u>	Sizes available: S1, S2, S3, <b>S4</b>						
Generation	<u>0</u>	Design generation: first generation 0, second generation <b>1</b> , etc.						
No. of Gear Stages	<u>2</u>	Number of gear stages: <b>2</b> , 3, (determined by the ratio)						
Output Style	<u>A</u>	Hollow output		Hollow output available: imperial and metric in some sizes.				
	<u>V</u>	Shaft output		<b>SPECIFY:</b> Shaft Side 3 or Side 4 (shown) or double.				
	<u>N</u>	Foot mounting		<b>SPECIFY:</b> Side 1 or Side 5				
	<u>F</u>	Output flange		<b>SPECIFY:</b> Side 3 or Side 4 (shown).				
	<u>G</u>	Tapped holes around the output						
	<u>GD</u>	Torque arm mounting		<b>SPECIFY:</b> Side 1 or Side 5				
Ratio	<u>0280</u>	Approximate ratio: <b>0280</b> = 27.9:1 (9.2:1 up to 683:1)						
Motor Adapter	<u>MR200/</u>	Motor adapter size from Selection Data: MR140, MR160, <b>MR200</b> , MR250						
NEMA Frame Size	<u>180</u>	Motor frame size determined by motor adapter: 050 (56C), 140 (143/145TC), <b>180</b> (182/184TC), 210 (213/215TC), 250 (254/256TC)						

Completed part number for standard warranty unit.

Coating options: white, stainless steel, or standard gray

Output options: metric available in some sizes

**Mounting Position must be specified.**





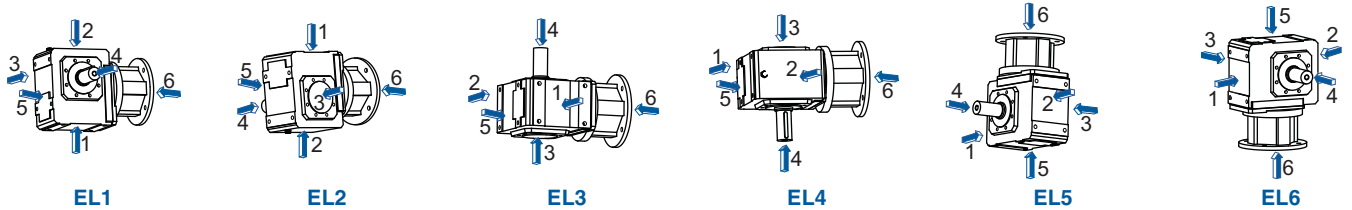
# Part No. Configurator

## “S” Series – MGS Speed Reducers

### Mounting Positions – Standard 3 Year Warranty

Mounting Position **MUST BE SPECIFIED.**

Standard Oil: Mobilgear 600XP220



“S” units have the shaft on Side 3 and/or Side 4 (shown). **Shaft side must be specified.**

- EL1** Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.
- EL2** Side 2 is the top of the unit. Side 2 is the down side for EL2 . (The unit is up-side-down.)
- EL3** Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.
- EL4** Side 4 is the left side when facing the input with the unit in a normal position (EL1). Side 4 is the down side for EL4.
- EL5** Side 5 is the side opposite the motor. Side 5 is the down side for EL5.
- EL6** Side 6 is the input or motor side. Side 6 is the down side for EL6.

**DO NOT MOUNT any STOBER reducer in a position other than specified on the order.**

All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered.**

For oil quantity in each size and mounting position, see our web site: <http://www.stober.com/pages/lubrication-quantity>.

### Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions. Units supplied without breathers are lubricated for life and maintenance free. Breathers are provided on these standard units: S102 through S403.

STOBER recommends that the lubrication be changed in units supplied with breathers according to the following schedule:

Normal Operating Conditions — after 5000 Hours  
Wet Operating Conditions — after 2000 Hours.Maintenance



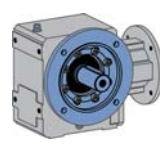
Style AN  
Hollow Output



Style VN  
Solid Output



Style AF  
Hollow Output



Style VF  
Solid Output



Style AG  
Hollow Output



Style VG  
Solid Output



# "S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>190 RPM Output (Approximate)</b>											
				<b>155 RPM</b>				<b>125 RPM</b>			
1.78	511	S102_0092	MR140/	050	AW140/010	9.200	593	1.69	589	1.60	684
1.78	511	S102_0092	MR160/	050, 140	AW160/012	9.200	593	1.69	589	1.60	684
3.26	939	S202_0092	MR140/	050	AW140/010	9.232	862	2.67	933	2.16	928
3.47	998	S202_0092	MR160/	050, 140	AW160/012	9.232	862	3.27	1,145	3.08	1,320
3.47	998	S202_0092	MR200/	180	AW200/014	9.232	862	3.27	1,145	3.08	1,320
5.17	1,499	S302_0093	MR160/	050, 140	AW160/012	9.310	1,078	5.20	1,834	4.25	1,836
5.17	1,499	S302_0093	MR200/	180	AW200/014	9.310	1,078	5.20	1,834	5.23	2,261
<b>150 RPM Output (Approximate)</b>											
				<b>125 RPM</b>				<b>100 RPM</b>			
1.68	598	S102_0115	MR140/	050	AW140/010	11.500	627	1.59	691	1.43	760
1.68	598	S102_0115	MR160/	050, 140	AW160/012	11.500	627	1.59	691	1.43	760
3.16	1,131	S202_0115	MR140/	050	AW140/010	11.600	912	2.58	1,125	2.10	1,118
3.26	1,165	S202_0115	MR160/	050, 140	AW160/012	11.600	912	3.07	1,337	2.89	1,541
3.26	1,165	S202_0115	MR200/	180	AW200/014	11.600	912	3.07	1,337	2.89	1,541
5.20	1,877	S302_0115	MR160/	050, 140	AW160/012	11.660	1,141	5.23	2,298	4.88	2,625
<b>125 RPM Output (Approximate)</b>											
				<b>100 RPM</b>				<b>80 RPM</b>			
1.61	689	S102_0140	MR140/	050	AW140/010	14.040	657	1.45	758	1.27	812
1.61	689	S102_0140	MR160/	050, 140	AW160/012	14.040	657	1.45	758	1.27	812
3.04	1,307	S202_0140	MR140/	050	AW140/010	13.910	956	2.48	1,299	2.01	1,292
3.07	1,319	S202_0140	MR160/	050, 140	AW160/012	13.910	956	2.89	1,513	2.57	1,651
3.07	1,319	S202_0140	MR200/	180	AW200/014	13.910	956	2.89	1,513	2.57	1,651
5.20	2,253	S302_0140	MR160/	050, 140	AW160/012	14.000	1,196	4.86	2,563	3.94	2,549
5.20	2,253	S302_0140	MR200/	180	AW160/012	14.000	1,196	4.93	2,602	4.31	2,790
8.00	3,479	S402_0140	MR160/	050, 140	AW160/012	13.950	1,554	7.77	4,110	6.79	4,407
8.00	3,479	S402_0140	MR200/	180	AW200/014	13.950	1,554	7.77	4,110	6.79	4,407
8.00	3,479	S402_0140	MR250/	180, 210	AW250/102	13.950	1,554	7.77	4,110	6.79	4,407
<b>100 RPM Output (Approximate)</b>											
				<b>80 RPM</b>				<b>65 RPM</b>			
1.43	762	S102_0175	MR140/	050	AW140/010	17.470	695	1.26	815	1.10	874
1.43	762	S102_0175	MR160/	050, 140	AW160/012	17.470	695	1.26	815	1.10	874
2.89	1,544	S202_0175	MR140/	050	AW140/010	17.550	1,011	2.41	1,567	1.96	1,559
2.89	1,544	S202_0175	MR160/	050, 140	AW160/012	17.550	1,011	2.56	1,664	2.24	1,784
3.02	1,625	S302_0175	MR140/	050	AW140/010	17.370	1,264	2.46	1,617	2.00	1,608
4.85	2,614	S302_0175	MR160/	050, 140	AW160/012	17.370	1,264	4.26	2,796	3.73	2,998
4.85	2,614	S302_0175	MR200/	180	AW200/014	17.370	1,264	4.26	2,796	3.73	2,998
7.67	4,143	S402_0175	MR160/	050, 140	AW160/012	17.490	1,644	6.74	4,432	5.89	4,752
7.67	4,143	S402_0175	MR200/	180	AW200/014	17.490	1,644	6.74	4,432	5.89	4,752
7.67	4,143	S402_0175	MR250/	180, 210	AW250/102	17.490	1,644	6.74	4,432	5.89	4,752
<b>75 RPM Output (Approximate)</b>											
				<b>60 RPM</b>				<b>50 RPM</b>			
1.19	837	S102_0230	MR140/	050	AW140/010	23.140	747	1.04	895	0.91	960
1.19	837	S102_0230	MR160/	050, 140	AW160/012	23.140	747	1.04	895	0.91	960
2.42	1,709	S202_0230	MR140/	050	AW140/010	23.290	1,087	2.12	1,828	1.85	1,954
2.42	1,709	S202_0230	MR160/	050, 140	AW160/012	23.290	1,087	2.12	1,828	1.85	1,960
2.88	2,056	S302_0230	MR140/	050	AW140/010	23.400	1,359	2.36	2,046	1.91	2,037
4.05	2,887	S302_0230	MR160/	050, 140	AW160/012	23.400	1,359	3.55	3,088	3.11	3,311
4.05	2,887	S302_0230	MR200/	180	AW200/014	23.400	1,359	3.55	3,088	3.11	3,311
6.38	4,566	S402_0230	MR160/	050, 140	AW160/012	23.400	1,767	5.61	4,883	4.90	5,236
6.38	4,566	S402_0230	MR200/	180	AW200/014	23.400	1,767	5.61	4,883	4.90	5,236
6.38	4,566	S402_0230	MR250/	180	AW250/102	23.400	1,767	5.61	4,883	4.90	5,236

For thermal HP capacity, see rating below.

Base Module	S1	S2	S3	S4
Thermal Capacity	2.95	5.36	7.38	12.34



# "S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data



- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: S302VG0590.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>60 RPM Output (Approximate)</b>											
1.06	890	S102_0280	MR140/	050	AW140/010	27.900	782	0.93	952	0.81	1,021
1.06	890	S102_0280	MR160/	050, 140	AW160/012	27.900	782	0.93	952	0.81	1,021
2.15	1,819	S202_0280	MR140/	050	AW140/010	28.080	1,138	1.89	1,946	1.65	2,087
2.15	1,819	S202_0280	MR160/	050, 140	AW160/012	28.080	1,138	1.89	1,946	1.65	2,087
2.78	2,369	S302_0280	MR140/	050	AW140/010	28.010	1,422	2.27	2,359	1.84	2,348
3.60	3,065	S302_0280	MR160/	050, 140	AW160/012	28.010	1,422	3.16	3,278	2.76	3,515
3.60	3,065	S302_0280	MR200/	180	AW200/014	28.010	1,422	3.16	3,278	2.76	3,515
5.39	4,610	S402_0280	MR160/	050, 140	AW160/012	27.900	1,849	4.41	4,588	3.57	4,566
5.66	4,841	S402_0280	MR200/	180	AW200/014	27.900	1,849	4.97	5,178	4.35	5,552
<b>50 RPM Output (Approximate)</b>											
0.92	960	S102_0350	MR140/	050	AW140/010	34.920	826	0.78	992	0.63	988
0.92	960	S102_0350	MR160/	050, 140	AW160/012	34.920	826	0.78	992	0.63	988
1.86	1,953	S202_0350	MR140/	050	AW140/010	34.710	1,202	1.64	2,089	1.39	2,176
1.86	1,953	S202_0350	MR160/	050, 140	AW160/012	34.710	1,202	1.64	2,089	1.39	2,176
2.67	2,820	S302_0350	MR140/	050	AW140/010	34.890	1,503	2.18	2,808	1.77	2,796
3.12	3,298	S302_0350	MR160/	050, 140	AW160/012	34.890	1,503	2.74	3,527	2.27	3,591
4.92	5,217	S402_0350	MR160/	050, 140	AW160/012	34.920	1,954	4.04	5,219	3.28	5,197
4.92	5,217	S402_0350	MR200/	180	AW200/014	34.920	1,954	4.04	5,219	3.28	5,197
<b>40 RPM Output (Approximate)</b>											
0.82	995	S102_0440	MR140/	050	AW140/010	43.680	874	0.73	1,065	0.65	1,161
0.82	995	S102_0440	MR160/	050, 140	AW160/012	43.680	874	0.73	1,065	0.65	1,161
1.42	1,751	S202_0440	MR140/	050	AW140/010	43.880	1,272	1.25	1,876	1.13	2,075
1.42	1,751	S202_0440	MR160/	050, 140	AW160/012	43.880	1,272	1.25	1,876	1.13	2,075
2.63	3,301	S302_0430	MR160/	050, 140	AW160/012	43.440	1,590	2.33	3,557	2.10	3,910
3.86	4,893	S402_0440	MR160/	050, 140	AW160/012	43.710	2,067	3.43	5,267	3.08	5,799
3.86	4,893	S402_0440	MR200/	180	AW200/014	43.710	2,067	3.43	5,267	3.08	5,799
3.86	4,893	S402_0440	MR250/	180	AW250/102	43.710	2,067	3.43	5,267	3.08	5,799
<b>30 RPM Output (Approximate)</b>											
0.69	1,100	S102_0580	MR140/	050	AW140/010	57.860	940	0.61	1,189	0.53	1,261
0.69	1,100	S102_0580	MR160/	050, 140	AW140/010	57.860	940	0.61	1,189	0.53	1,261
1.19	1,945	S202_0580	MR140/	050	AW140/010	58.220	1,367	1.08	2,141	0.95	2,306
1.19	1,945	S202_0580	MR160/	050, 140	AW160/012	58.220	1,367	1.08	2,141	0.95	2,306
2.25	3,725	S302_0590	MR140/	050	AW140/010	58.500	1,709	2.01	4,040	1.75	4,306
2.25	3,725	S302_0590	MR160/	050, 140	AW160/012	58.500	1,709	2.01	4,040	1.75	4,306
3.29	5,500	S402_0590	MR160/	050, 140	AW160/012	58.500	2,222	2.95	5,984	2.57	6,393
3.29	5,500	S402_0590	MR200/	180	AW200/014	58.500	2,222	2.95	5,984	2.57	6,393
3.29	5,500	S402_0590	MR250/	180	AW250/102	58.500	2,222	2.95	5,984	2.57	6,393
<b>25 RPM Output (Approximate)</b>											
0.62	1,183	S102_0700	MR140/	050	AW140/010	69.750	983	0.54	1,254	0.46	1,314
0.62	1,183	S102_0700	MR160/	050, 140	AW160/012	69.750	983	0.54	1,254	0.46	1,314
1.09	2,128	S202_0700	MR140/	050	AW140/010	70.200	1,431	0.97	2,290	0.84	2,426
1.09	2,128	S202_0700	MR160/	050, 140	AW160/012	70.200	1,431	0.97	2,290	0.84	2,426
2.03	4,009	S302_0700	MR140/	050	AW140/010	70.030	1,789	1.78	4,272	1.53	4,494
2.03	4,009	S302_0700	MR160/	050, 140	AW160/012	70.030	1,789	1.78	4,272	1.53	4,494
2.97	5,927	S402_0700	MR160/	050, 140	AW160/012	69.750	2,325	2.61	6,333	2.25	6,676

**See Page 123 for Part No. Configurator. Mounting position MUST be specified.**



# "S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data



- Selection:** A. Under the Input RPM heading, find **Approximate Output RPM** nearest the requirement.  
 B. In the **Input HP** column locate the rating that is greater than or equal to the required HP.  
 (If selection is based on Torque instead of HP, find an **Output Torque** that is equal to or greater than required.)  
 C. When HP or Torque rating is located, read across that row to select the **Part Number**. Check the **Overhung Load**.  
 D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Overhung Load Output Shaft 4) lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size 3)	NEMA C-Frame							
<b>20 RPM Output (Approximate)</b>											
0.54	1,262	S102_0870	MR140/	050	AW140/010	87.300	1,039	0.46	1,318	0.39	1,366
0.54	1,262	S102_0870	MR160/	050, 140	AW160/012	87.300	1,039	0.46	1,318	0.39	1,366
0.95	2,297	S202_0870	MR140/	050	AW140/010	86.790	1,512	0.83	2,428	0.71	2,538
0.95	2,297	S202_0870	MR160/	050, 140	AW160/012	86.790	1,512	0.83	2,428	0.71	2,538
1.76	4,293	S302_0870	MR140/	050	AW140/010	87.230	1,890	1.52	4,504	1.29	4,682
1.76	4,293	S302_0870	MR160/	050, 140	AW160/012	87.230	1,890	1.52	4,504	1.29	4,682
2.59	6,374	S402_0870	MR160/	050, 140	AW160/012	87.300	2,457	2.23	6,698	1.90	6,972
<b>15 RPM Output (Approximate)</b>											
0.43	1,340	S102_1170	MR140/	050	AW140/010	116.700	1,117	0.37	1,382	0.31	1,417
0.78	2,478	S202_1160	MR140/	050	AW140/010	116.100	1,625	0.66	2,575	0.56	2,657
0.78	2,478	S202_1160	MR160/	050, 140	AW160/012	116.100	1,625	0.66	2,575	0.56	2,657
1.42	4,580	S302_1160	MR140/	050	AW140/010	116.100	2,031	1.21	4,738	1.01	4,872
1.42	4,580	S302_1160	MR160/	050, 140	AW160/012	116.100	2,031	1.21	4,738	1.01	4,872
2.09	6,817	S402_1160	MR160/	050, 140	AW160/012	116.300	2,640	1.78	7,060	1.46	7,086
<b>12 RPM Output (Approximate)</b>											
0.38	1,378	S102_1400	MR140/	050	AW140/010	139.500	1,164	0.32	1,407	0.26	1,401
0.68	2,557	S203_1360	MR140/	050	AW140/010	136.300	1,693	0.58	2,640	0.47	2,657
0.69	2,567	S202_1400	MR140/	050	AW140/010	139.500	1,693	0.58	2,649	0.47	2,657
1.21	4,584	S302_1400	MR140/	050	AW140/010	139.900	2,117	0.99	4,562	0.80	4,542
1.21	4,584	S302_1400	MR160/	050, 140	AW160/012	139.900	2,117	0.99	4,562	0.80	4,542
1.83	7,000	S403_1350	MR160/	050, 140	AW160/012	134.900	2,752	1.52	7,086	1.24	7,086
1.84	7,041	S402_1400	MR160/	050, 140	AW160/012	139.900	2,752	1.52	7,086	1.24	7,086
<b>10 RPM Output (Approximate)</b>											
0.25	1,143	S102_1740	MR140/	050	AW140/010	174.100	1,230	0.21	1,138	0.17	1,134
0.57	2,651	S203_1720	MR140/	050	AW140/010	171.800	1,789	0.47	2,657	0.38	2,657
1.03	4,848	S303_1680	MR160/	050, 140	AW160/012	167.900	2,236	0.85	4,872	0.69	4,872
1.03	4,855	S303_1700	MR140/	050	AW140/010	170.100	2,236	0.85	4,872	0.69	4,872
1.49	7,086	S403_1690	MR160/	050, 140	AW160/012	169.000	2,907	1.23	7,086	1.00	7,086
<b>7 RPM Output (Approximate)</b>											
0.26	1,253	S102_2420	MR140/	050	AW140/010	242.000	1,237	0.22	1,306	0.19	1,350
0.43	2,657	S203_2280	MR140/	050	AW140/010	228.000	1,800	0.35	2,657	0.29	2,657
0.78	4,872	S303_2260	MR160/	050, 140	AW160/012	226.200	2,250	0.64	4,872	0.52	4,872
1.12	7,086	S403_2290	MR140/	050	AW140/010	229.100	2,925	0.92	7,086	0.75	7,086
1.12	7,086	S403_2260	MR160/	050, 140	AW160/012	226.200	2,925	0.92	7,086	0.75	7,086
<b>6 RPM Output (Approximate)</b>											
0.22	1,300	S102_2890	MR140/	050	AW140/010	289.300	1,237	0.19	1,344	0.16	1,381
0.36	2,657	S203_2750	MR140/	050	AW140/010	275.000	1,800	0.30	2,657	0.24	2,657
0.65	4,872	S303_2740	MR140/	050	AW140/010	274.300	2,250	0.54	4,872	0.44	4,872
0.65	4,872	S303_2710	MR160/	050, 140	AW160/012	270.800	2,250	0.54	4,872	0.44	4,872
0.94	7,086	S403_2730	MR140/	050	AW140/010	273.200	2,925	0.77	7,086	0.63	7,086
<b>5 RPM Output (Approximate)</b>											
0.19	1,348	S102_3610	MR140/	050	AW140/010	361.200	1,237	0.16	1,383	0.13	1,413
0.29	2,657	S203_3400	MR140/	050	AW140/010	339.900	1,800	0.24	2,657	0.19	2,657
0.53	4,872	S303_3370	MR160/	050, 140	AW160/012	337.300	2,250	0.43	4,872	0.35	4,872
0.53	4,872	S303_3420	MR140/	050	AW140/010	341.700	2,250	0.43	4,872	0.35	4,872
0.76	7,086	S403_3380	MR160/	050, 140	AW160/012	337.600	2,925	0.62	7,086	0.51	7,086
0.76	7,086	S403_3420	MR140/	050	AW140/010	341.900	2,925	0.62	7,086	0.51	7,086

For thermal HP capacity, see rating below.

Base Module	S1	S2	S3	S4
Thermal Capacity	2.95	5.36	7.38	12.34



# "S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data

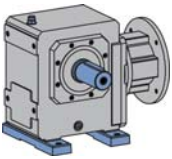


- NOTE:** 1) Complete Base Module Part Number by adding Housing and Output Style. Example: S302VG0590.  
 2) Select Input Option (Motor Adapter or Input Shaft) and add to Part Number.  
 3) Select Motor Adapter Size plus required Motor Frame Size. Example: MR160/ plus 050 for 56C  
 4) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

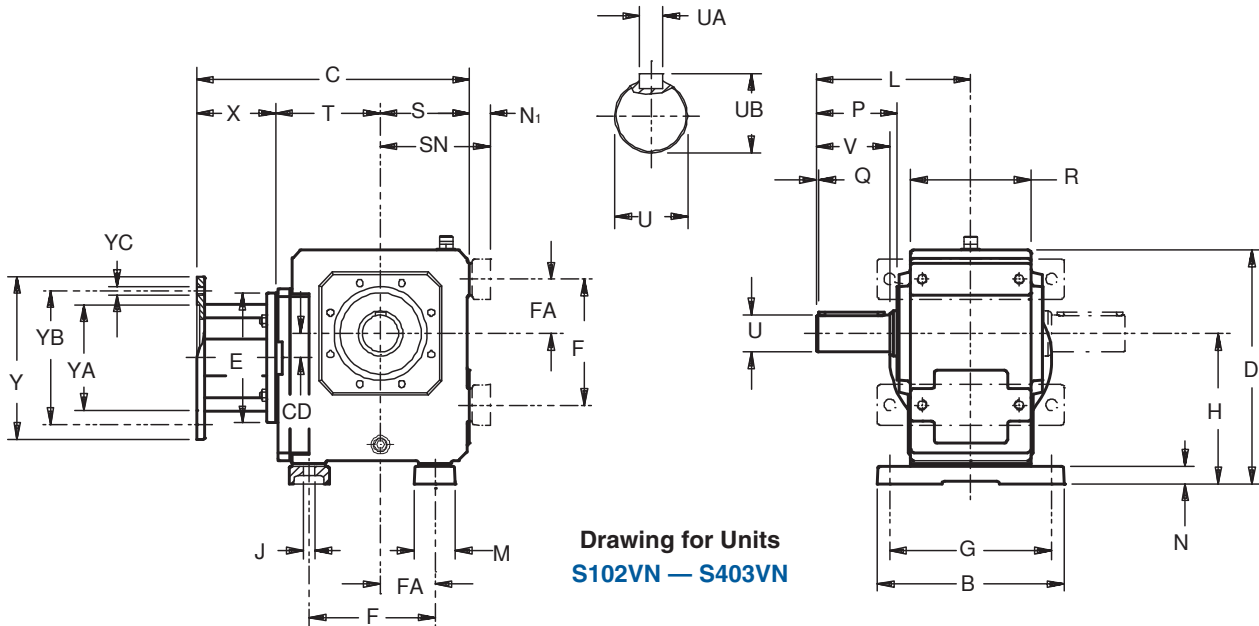
1750 RPM Input		Base Module <sup>1)</sup>	Input Options <sup>2)</sup>			Exact Ratio	Overhung Load Output Shaft <sup>4)</sup> lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter		Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
			Size <sup>3)</sup>	NEMA C-Frame							
<b>4 RPM Output (Approximate)</b>				<b>3 RPM</b>				<b>2.5 RPM</b>			
0.22	2,657	S203_4550	MR140/	050	AW140/010	454.700	1,800	0.18	2,657	0.15	2,657
0.40	4,872	S303_4550	MR140/	050	AW140/010	454.700	2,250	0.33	4,872	0.26	4,872
0.40	4,872	S303_4490	MR160/	050, 140	AW160/012	448.900	2,250	0.33	4,872	0.26	4,872
0.57	7,086	S403_4560	MR140/	050	AW140/010	455.500	2,925	0.47	7,086	0.38	7,086
<b>3 RPM Output (Approximate)</b>				<b>2.5 RPM</b>				<b>2 RPM</b>			
0.18	2,655	S203_5460	MR140/	050	AW140/010	546.400	1,800	0.15	2,650	0.12	2,645
0.30	4,475	S303_5480	MR140/	050	AW140/010	548.000	2,250	0.25	4,465	0.20	4,457
0.48	7,086	S403_5410	MR160/	050, 140	AW160/012	541.000	2,925	0.39	7,086	0.32	7,086
<b>2.5 RPM Output (Approximate)</b>				<b>2 RPM</b>				<b>1.5 RPM</b>			
0.12	2,208	S203_6830	MR140/	050	AW140/010	683.000	1,800	0.10	2,204	0.08	2,201
0.34	6,303	S403_6820	MR140/	050	AW140/010	682.100	2,925	0.28	6,291	0.23	6,280

**NOTE: For slower speeds than those listed above, units can be combined. Contact STOBER Drives Inc.**

See Page 123 for Part No. Configurator. Mounting position MUST be specified.



# "S" Series – MGS Reducer Foot Mount – "N" Housing Shaft Output – Dimensional Data



**Table No. 1 "S" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	B	D	F	G	H	J	L	M	N	N <sub>1</sub>	P	Q	R	S	V	FA	SN
<b>S102</b>	5.51	7.17	3.54	4.53	4.53	.35	4.53	1.18	.51	.59	2.32	.16	3.54	2.76	1.97	1.57	3.35
<b>S202/203</b>	7.28	8.78	4.53	6.10	5.63	.43	5.43	1.57	.79	.91	2.64	.16	4.53	3.35	2.36	2.05	4.25
<b>S302/303</b>	7.87	10.08	5.12	6.69	6.42	.43	6.69	1.77	.79	.91	3.54	.16	5.12	3.94	3.15	2.05	4.84
<b>S402/403</b>	9.06	11.34	6.10	7.87	7.28	.55	7.48	1.97	.87	.98	3.94	.16	5.83	4.33	3.54	2.64	5.31

**Table No. 2 Metric output available on request.**

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>S102</b>	1.000	1/4 x 1/4 x 1 1/2	1.11	25 <sub>k6</sub>	A8x7x40	28.0
<b>S202/203</b>	1.250	1/4 x 1/4 x 1 15/16	1.36	30 <sub>k6</sub>	A8x7x50	33.0
<b>S302/303</b>	1.375	5/16 x 5/16 x 2 5/16	1.51	40 <sub>k6</sub>	A12x8X70	43.0
<b>S402/403</b>	1.750	3/8 x 3/8 x 3 5/32	1.92	45 <sub>k6</sub>	A14x9x80	48.5

**Part No. Example**  
Foot Mounting with Motor Adapter  
**S302VN0620 MR160/140**

**Table No. 3**

**"S" Series – Foot Mounting Dimensions (Inches) – "N" Housing Style**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

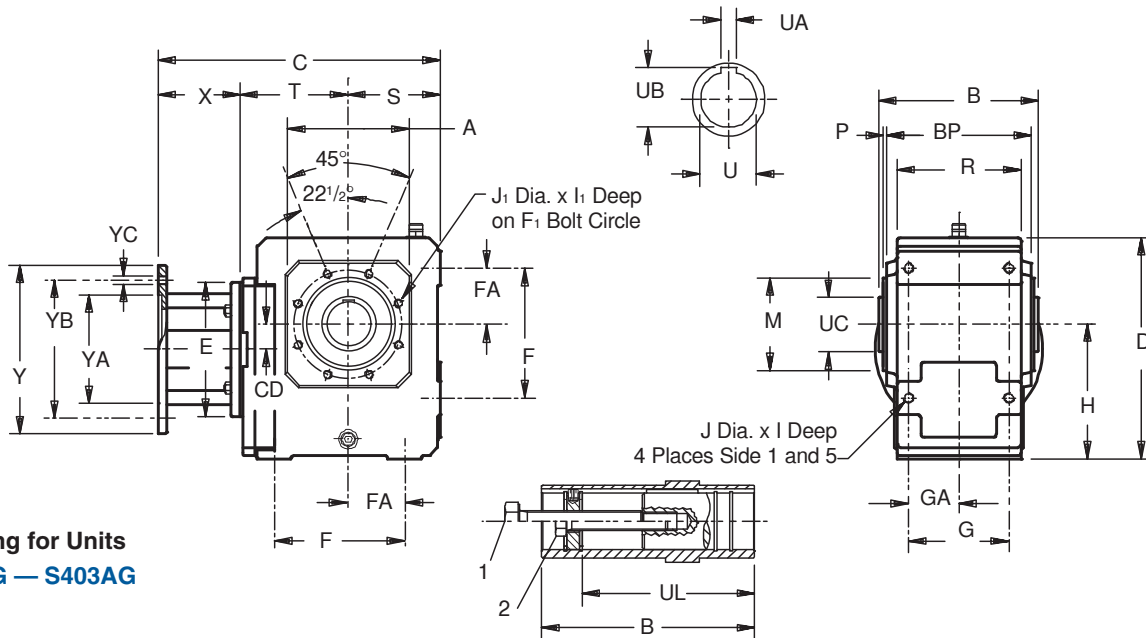
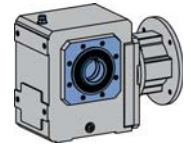
**Table No. 4 "S" Series – Foot Mounting Dimensions (Inches) – "N" Housing Style**

Base Module	MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			Approx. Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
<b>S102</b>	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
<b>S202</b>	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
<b>S203</b>	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
<b>S302</b>	1.00	11.70	4.45	1.00	12.41	4.61	1.00	13.43	4.69	—	—	—	60
<b>S303</b>	1.00	13.16	5.91	—	—	—	—	—	—	—	—	—	67
<b>S402</b>	—	—	—	1.18	13.27	5.08	1.18	14.29	5.16	1.18	14.88	5.24	80
<b>S403</b>	1.18	14.02	6.38	2.64	14.96	6.77	—	—	—	—	—	—	95

<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.  
<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.  
All weights are approximate.



# "S" Series – MGS Reducer Tapped Holes – "G" Housing Hollow Output – Dimensional Data



Drawing for Units  
S102AG – S403AG

Table No. 1 "S" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base Module	A	B	D	F	F <sub>1</sub>	G	H	I	I <sub>1</sub>	J	J <sub>1</sub> <sup>1)</sup>	M	P	R	S	BP	FA	GA
S102	4.13	4.72	6.57	3.54	3.54	2.76	3.94	.51	.51	M8×1.25	M8×1.25	2.953	.12	3.54	2.76	4.17	1.57	1.38
S202/203	5.20	5.91	7.87	4.53	4.53	3.54	4.72	.63	.51	M10×1.5	M8×1.25	3.740	.16	4.53	3.35	5.28	2.05	1.77
S302/303	5.98	6.61	9.17	5.12	5.12	4.13	5.51	.63	.63	M10×1.5	M10×1.5	4.331	.14	5.12	3.94	6.02	2.05	2.05
S402/403	5.71	7.48	10.35	6.10	5.12	4.72	6.30	.75	.63	M12×1.75	M10×1.5	4.331	.14	5.83	4.33	6.81	2.64	2.36

<sup>1)</sup> S102 through S303 has 4 tapped holes instead of 8 as shown on drawing.

Table No. 2 Metric output available on request.

Base Module	Standard Bore - inches			Optional Bore - mm			UC	UL	1
	U	UA	UB	U	UA	UB			
S102	1.000	.250	1.11	25 <sub>H7</sub>	8 <sub>JS9</sub>	28.3	1.57	3.86	1/2-13
S202/203	1.375	.312	1.52	35 <sub>H7</sub>	10 <sub>JS9</sub>	38.3	1.97	4.69	5/8-11
S302/303	1.500	.375	1.67	40 <sub>H7</sub>	12 <sub>JS9</sub>	43.3	2.17	5.39	3/4-10
S402/403	1.750	.375	1.92	50 <sub>H7</sub>	14 <sub>JS9</sub>	53.8	2.56	6.24	3/4-10

1. Removal Bolt – not supplied.
2. Mounting Bolt – must be smaller than removal bolt.

### Part No. Example

Tapped Holes Housing with Motor Adapter

S302AG0620 MR160/140

Table No. 3

### "S" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

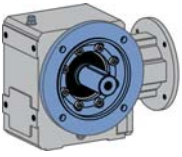
Table No. 4 "S" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base Module	MR140/050			MR160/140 <sup>2)</sup>			MR200/180			MR250/210 <sup>3)</sup>			Approx. Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
S102	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
S202	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
S203	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
S302	1.00	11.70	4.45	1.00	12.41	4.61	1.00	13.43	4.69	—	—	—	60
S303	1.00	13.16	5.91	2.44	14.10	6.30	—	—	—	—	—	—	67
S402	—	—	—	1.18	13.27	5.08	1.18	14.29	5.16	1.18	14.88	5.24	80
S403	1.18	14.02	6.38	2.64	14.96	6.77	—	—	—	—	—	—	95

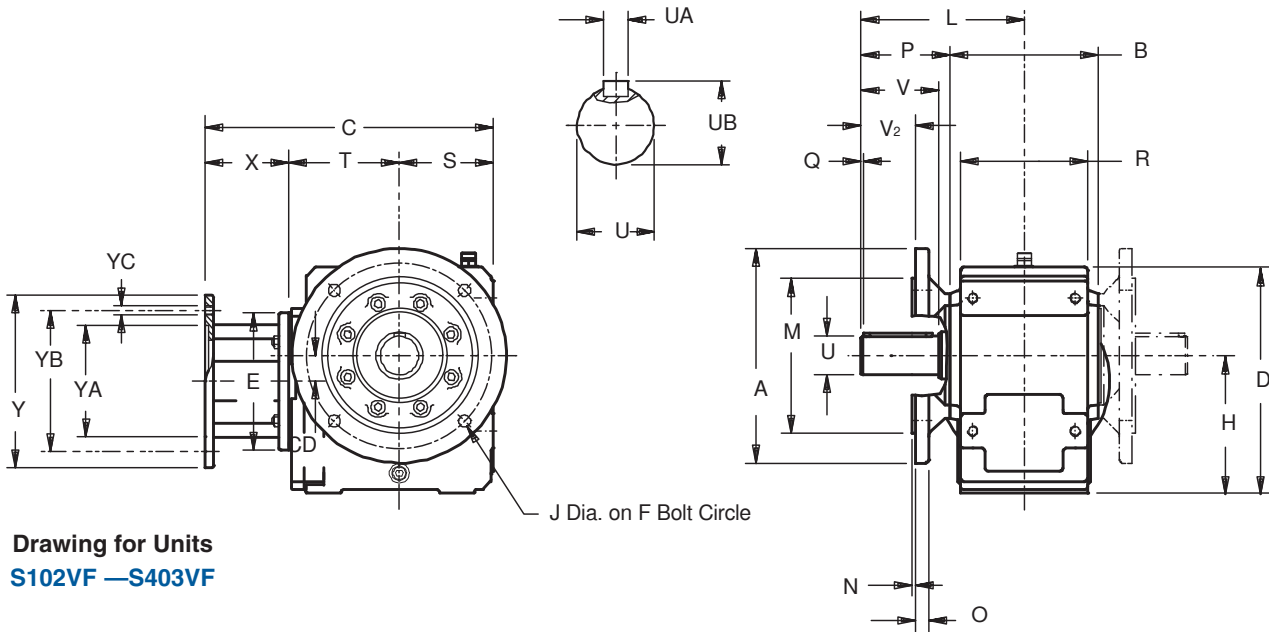
<sup>2)</sup> Also available as MR160/050 for a NEMA 56C frame motor.

<sup>3)</sup> Also available as MR250/180 for a NEMA 182/184TC frame motor.

All weights are approximate.



# "S" Series – MGS Reducer Flange Mount – "F" Housing Shaft Output – Dimensional Data



Drawing for Units  
S102VF – S403VF

Table No. 1 "S" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style

Base Module	A <sup>1)</sup>	B	D	F	H	J	L	M	N	O	P	Q	R	S	V	V <sub>2</sub>
<b>S102</b>	6.30	4.17	6.57	5.12	3.94	.35	4.53	4.331	.14	.39	2.44	.16	3.54	2.76	1.97	1.18
<b>S202/203</b>	7.87	5.28	7.87	6.50	4.72	.43	5.43	5.118	.14	.55	2.80	.16	4.53	3.35	2.36	1.30
<b>S302/303</b>	9.84	6.02	9.17	8.46	5.51	.55	6.69	7.087	.16	.59	3.68	.16	5.12	3.94	3.15	2.11
<b>S402/403</b>	9.84	6.81	10.35	8.46	6.30	.55	7.48	7.087	.16	.59	4.07	.16	5.83	4.33	3.54	2.52

<sup>1)</sup> See Page 133 for other flange sizes. Optional flanges are not available for all sizes.

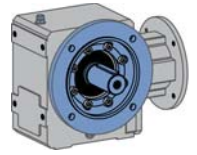
Table No. 2 Metric output available on request.

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
<b>S102</b>	1.000	1/4 × 1/4 × 1 1/2	1.11	25 <sub>k6</sub>	A8x7x40	28.0
<b>S202/203</b>	1.250	1/4 × 1/4 × 1 15/16	1.36	30 <sub>k6</sub>	A8x7x50	33.0
<b>S302/303</b>	1.375	5/16 × 5/16 × 2 5/16	1.51	40 <sub>k6</sub>	A12x8X70	43.0
<b>S402/403</b>	1.750	3/8 × 3/8 × 3 5/32	1.92	45 <sub>k6</sub>	A14x9x80	48.5





# "S" Series – MGS Reducer Flange Mount – "F" Housing Shaft Output – Dimensional Data



**Table No. 3**

**"S" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
<b>MR140/050</b>	56C	5.51	3.31	6.50	4.500	5.87	.41	9
<b>MR160/050</b>	56C	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR160/140</b>	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
<b>MR200/180</b>	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
<b>MR250/180</b>	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
<b>MR250/210</b>	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36

**Table No. 4 "S" Series– Round Flange Unit Dimensions (Inches) –"F" Housing Style**

Base Module	MR140/050			MR160/140 <sup>1)</sup>			MR200/180			MR250/210 <sup>2)</sup>			Approx Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
<b>S102</b>	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
<b>S202</b>	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
<b>S203</b>	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
<b>S302</b>	1.00	11.70	4.45	1.00	12.41	4.61	1.00	13.43	4.69	—	—	—	60
<b>S303</b>	1.00	13.16	5.91	2.44	14.10	6.30	—	—	—	—	—	—	67
<b>S402</b>	—	—	—	1.18	13.27	5.08	1.18	14.29	5.16	1.18	14.88	5.24	80
<b>S403</b>	1.18	14.02	6.38	2.64	14.96	6.77	—	—	—	—	—	—	95

<sup>1)</sup> Also available as **MR160/050** for a NEMA 56C frame motor.

<sup>2)</sup> Also available as **MR250/180** for a NEMA 182/184TC frame motor.

All weights are approximate.

**Part No. Example**

Round Flange with Motor Adapter

**S302VF0620 MR160/140**



# "S" Series – MGS Reducer Torque Arm Bracket – "GD" Housing

(torque arm supplied by others)

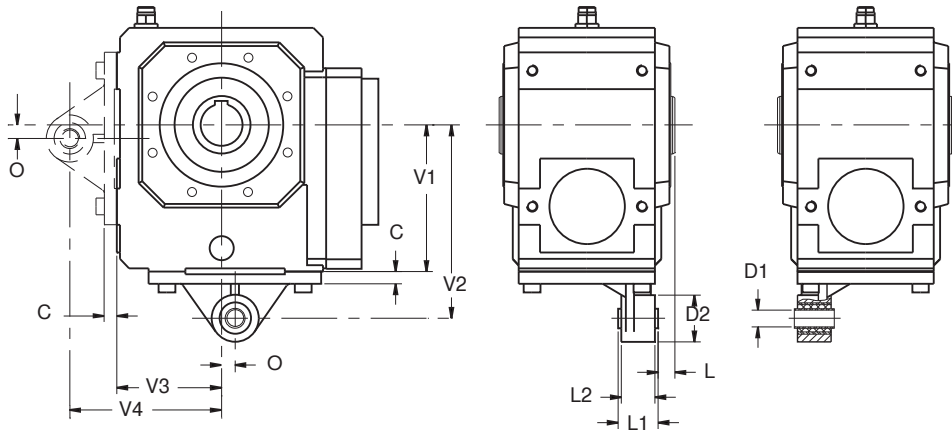


Table No. 1 "S" Series – Torque Arm Bracket Dimensions (Inches)

Base Module	C	D1	H9	D2	L	L1	L2	O	V1	V2	V3	V4
<b>S102</b>	.39	.47	+0.017/-0.000	1.69	.51	1.10	.94	.20	3.93	5.12	2.76	3.93
<b>S202/S203</b>	.47	.63	+0.017/-0.000	1.77	.57	1.50	1.26	.22	4.72	6.10	3.35	4.72
<b>S302/S303</b>	.47	.63	+0.017/-0.000	1.77	.63	1.50	1.26	.51	5.51	7.28	3.93	5.71
<b>S402/S403</b>	.55	.79	+0.020/-0.000	2.17	.71	1.81	1.57	.41	6.30	8.66	4.33	6.69

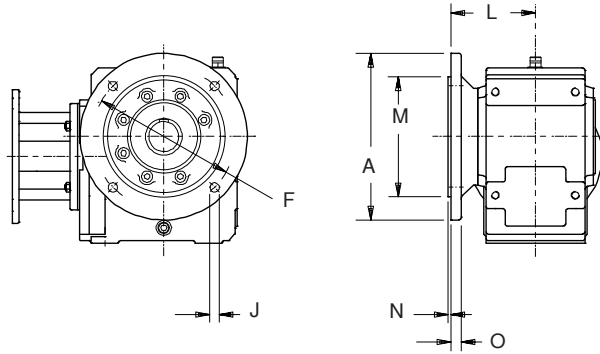
**Part No. Example**

Unit with Torque Arm Bracket  
Hollow Output

**S302AGD0620**



# "S" Series – MGS Reducer Optional Output Flange



Drawing for Units  
S102F — S403F

Table No. 1 Flange Dimensions (Inches) – Standard and Optional

Base Module	Flange Size	A	F	J	L	M	N	O
S1	140	5.512	4.53	.35	3.35	3.740 <sup>+0.001/-0.0004</sup>	.12	.39
	160 *	6.300	5.12	.35	4.53	4.331 <sup>+0.001/-0.0004</sup>	.14	.39
S2	160	6.300	5.12	.35	4.13	4.331 <sup>+0.001/-0.0004</sup>	.14	.55
	200 *	7.874	6.50	.43	4.13	5.118 <sup>+0.001/-0.0004</sup>	.14	.55
S3	250*	9.843	8.46	.55	4.58	7.087 <sup>+0.001/-0.0004</sup>	.16	.59
S4	250 *	9.843	8.46	.55	4.96	7.087 <sup>+0.001/-0.0004</sup>	.16	.59

\* This is the standard flange and will be shipped unless otherwise specified.  
Optional flanges are not available for all sizes.

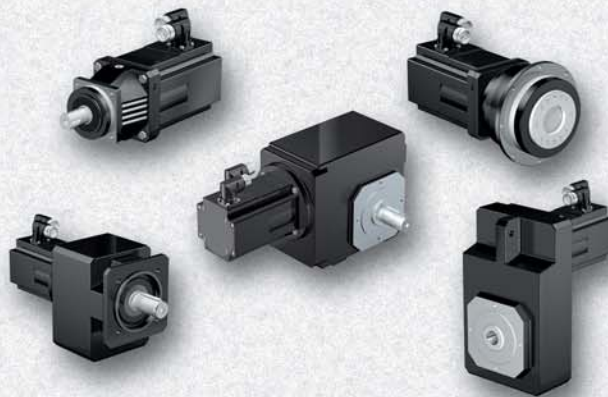


# Miscellaneous

## *Other Products Available*



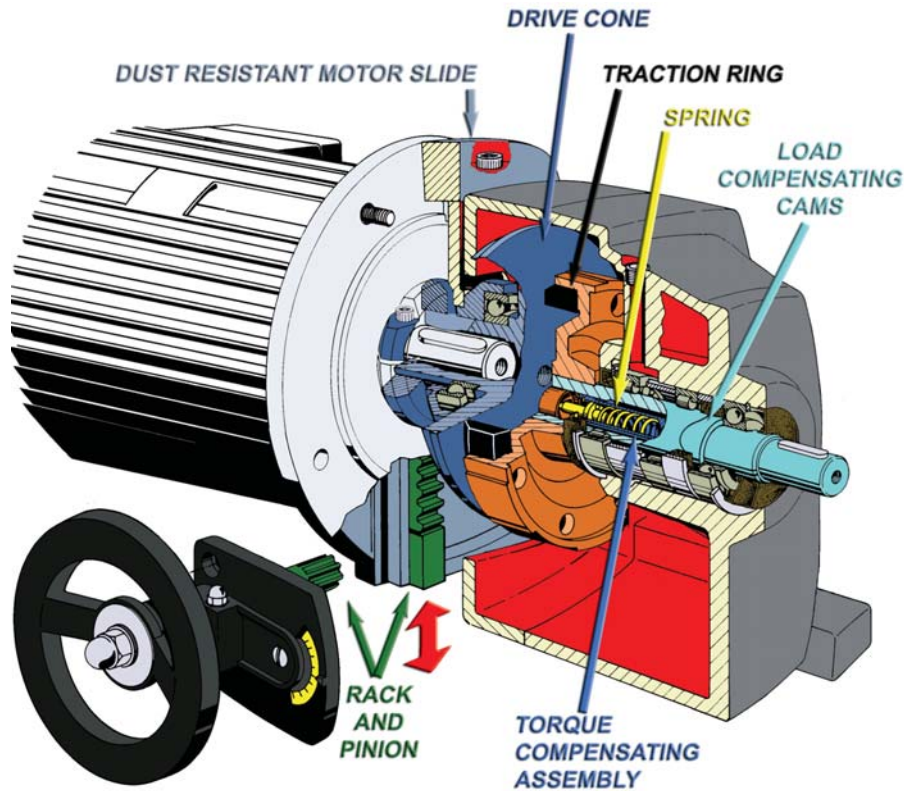
***STÖBER has a wide variety of gearheads in many configurations and styles to fit your servo applications. Contact Technical Support.***



**STÖBER**

[www.stober.com](http://www.stober.com)

# ComTrac® Adjustable Speed Drives Operating Characteristics



## Operation:

The ComTrac drive is an adjustable speed traction drive. Its operation is based upon the transfer of power between the motor mounted **drive cone** and the **traction ring**. The **drive cone** and the **traction ring** are forced together to transmit torque through the use of a **spring loaded torque compensator assembly**.

At rest, the **spring** inside the **torque compensator** produces only a small contact pressure between the **drive cone** and **traction ring**. Unlike other mechanical drives, the minimal spring pressure allows speed changes to be made while the drive is at rest.

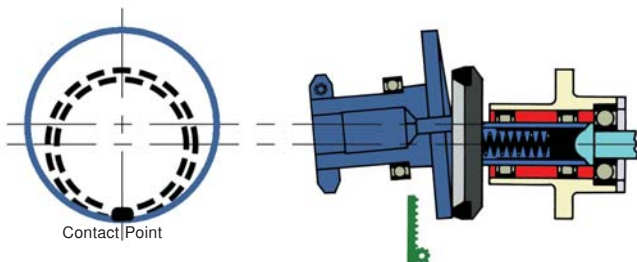
As the drive is started, the **load compensating cams** move against each other to increase pressure between the **drive cone** and **traction ring**. During operation, the **load compensating cams** maintain the proper amount of pressure between the **drive cone** and **traction ring** in proportion to the output load torque required.

Speed changes are made by changing the relative running diameters of the **drive cone** and the **traction ring**. As the motor and **drive cone** are moved upward, the contact point between the **cone** and **ring** moves to the faster running outer diameter of the **drive cone** and output speed increases. As the motor and **drive cone** are lowered, the contact point between the **cone** and **ring** moves to the slower running center of the **drive cone** and output speed decreases.

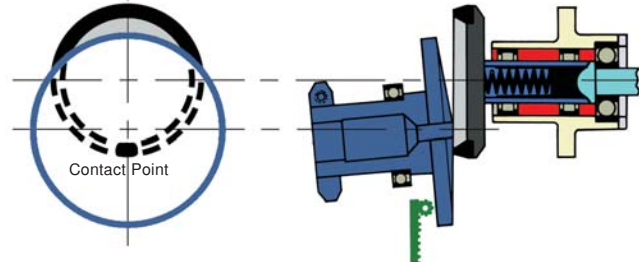
Movement of the motor and **drive cone** are accomplished through the use of a **handwheel** attached to a **rack and pinion**. By turning the **handwheel**, the motor is easily raised or lowered on the **dust resistant motor slide**. Speed changes can also be made through the use of an optional electric remote control which replaces the **handwheel**.

## Speed Control Made Simple!

- Turn the handwheel — pinion moves the rack on the motor slide — up or down.



Maximum speed — motor slide up.



Minimum speed — motor slide down.



# MGS and ComTrac® Adjustable Speed Drives

## MGS Adjustable Speed Standard Duty:

STÖBER can offer a wider variety of sizes, ratios, and mounting positions than ever before by utilizing MGS Reducers and ComTrac Adjustable Speed Drives. These versatile gear drives offer you performance, durability, and economy for a wide range of variable speed applications. High efficiency helical gearing keeps motor size to a minimum while conserving energy.

### “C” Series – Performance Specifications:

- Horsepower ratings — from 1/2 to 10
- Output speeds — available from 1,139 to 1.2 RPM
- Speed range — 5:1 to 7:1
- Output torques — up to 59,782 in.lbs.
- NEMA frames — from 56C to 215TC



STÖBER's versatility continues with MGS Reducers and ComTrac Adjustable Speed Drives when using the Offset Helical Series. Compact size and flexibility make these gear drives a popular choice for applications that require high performance, efficiency, and durability.

### “F” Series – Performance Specifications:

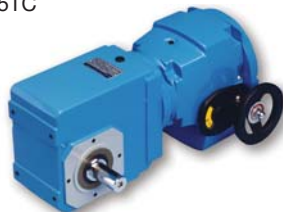
- Horsepower ratings — from 1/2 to 7 1/2
- Output speeds — available from 528 to .6 RPM
- Speed range — 5:1 to 7:1
- Output torques — up to 9,744 in.lbs.
- NEMA frames — from 56C to 215TC



With the many mounting options available, ComTrac Adjustable Speed Drives and MGS Helical/Bevel Speed Reducers offer consistent, higher input-to-output efficiencies and a configurations for almost any application situation. This added efficiency reduces your costs today through smaller gear drive and motor sizing. Tomorrow, you'll benefit through optimum energy savings.

### “K” Series – Performance Specifications:

- Horsepower ratings — from 1/2 to 10
- Output speeds — available from 569 to .9 RPM
- Speed range — 5:1 to 7:1
- Output torques — up to 99,227 in.lbs.
- NEMA frames — from 56C to 215TC



## ComTrac Washdown Advantages:

STÖBER has developed a severe duty protection package for ComTrac drives which significantly improves the drives' ability to withstand the effects of outdoor use, exposure to excessively humid or acidic environments, or spray washed with water or caustic fluids.



The ComTrac severe duty package includes corrosion protection for all functional components and housings including:

- Drive cone
- Motor clamping ring
- Motor slide and rack
- Bearing housing
- Main housing cover

To prevent corrosion, these components are protected by a special heat treatment process similar to chrome plating.

### Features:

**Drive cone** — Corrosion protected drive cone extends cone and ring life.

**Speed adjustment** — The protected motor slide, stainless steel control shaft with pinion, and greased rack and slideway assure the proper speed adjustment.

**NEMA C-face input** — ComTrac's patented corrosion resistant collet clamp ring assures ease of motor replacement.

**External surface** — All external surfaces are protected with a special acid-resistant epoxy paint to prevent corrosion and lubricant contamination.

**Internal surface** — All internal surfaces and bearing housing are protected with a special anticorrosion paint.

**Double seals** — Double output seals can be provided for maximum protection in very harsh environments.

**Mounting position** — ComTrac drives in a vertical mounting position (output shaft down) must be adapted to allow water to drain.

**Stainless steel nameplate** — Other features of the severe duty unit are: stainless steel nameplate, rivets, and chrome plated bolts.

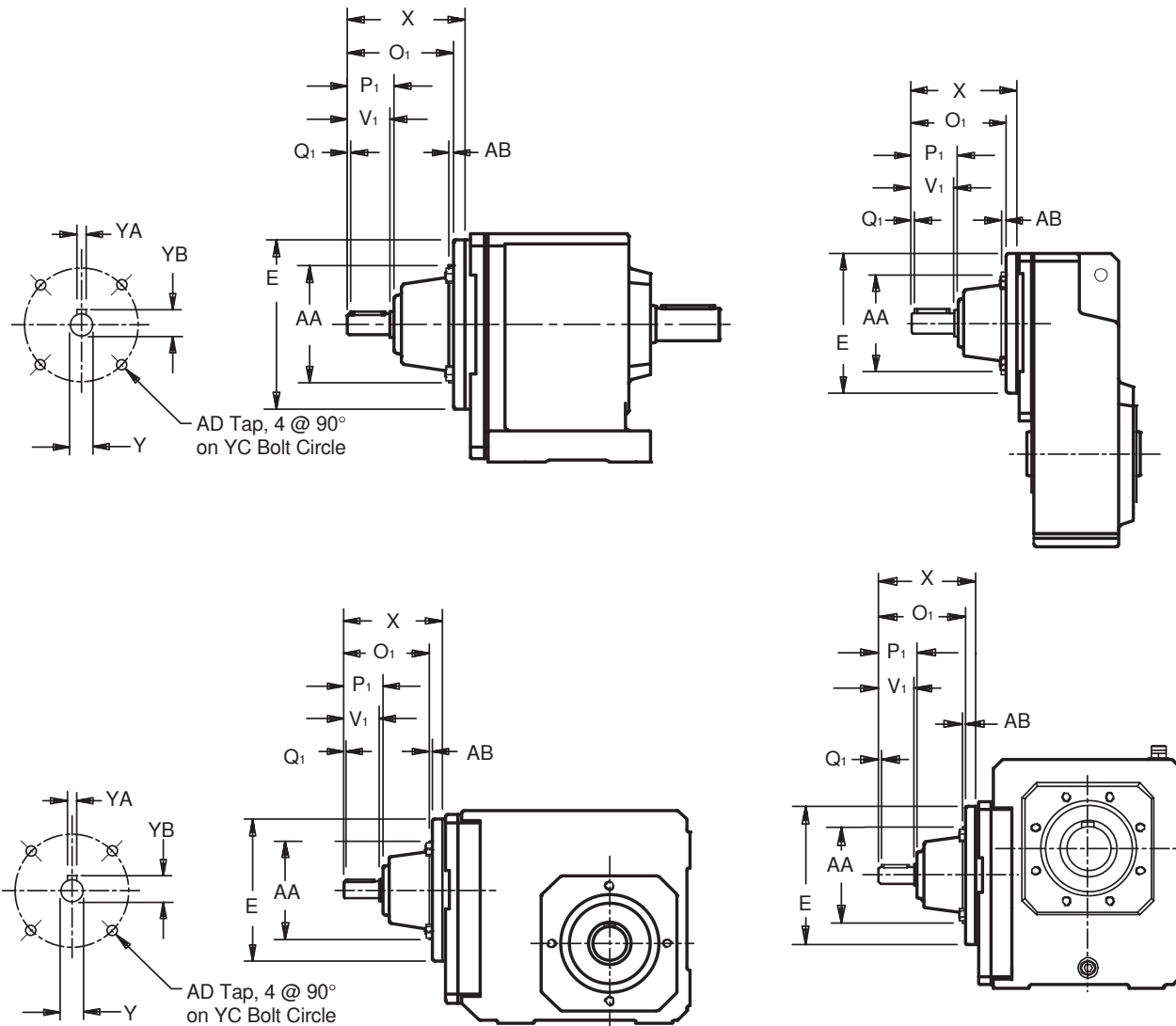
**Two year warranty** — Like the standard drive, this ComTrac unit is also backed by a two-year warranty.

**Delivery** — ComTrac units are shipped in 3 days or less.

**WARNING:** ComTrac units operate with friction between the traction ring and drive cone. ComTrac drives must **NEVER** be used in an explosive application.

# SHIPS in 1 DAY

# MGS Reducer AW Input Shaft Dimensional Data



### Part No. Example

Tapped Holes, Hollow Output with  
Input Shaft

**S302AG0620 AW160/012**

**Table No. 1**

**“AW” Input (Inches)**

Part No. Input Shaft	E	O <sub>1</sub>	P <sub>1</sub>	Q <sub>1</sub>	V <sub>1</sub>	X	Y	AA	AB	AD	YA—Key	YB	YC	Wt. lbs.	Overhung Load lbs.
<b>AW140/010</b>	5.51	3.58	1.38	.12	1.25	4.02	.6250	3.740	.16	M8×1.25	$\frac{3}{16} \times \frac{3}{16} \times \frac{31}{32}$	.71	4.53	8	98
<b>AW160/012</b>	6.30	4.21	1.69	.12	1.50	4.69	.7500	4.331	.18	M8×1.25	$\frac{3}{16} \times \frac{3}{16} \times \frac{17}{32}$	.83	5.12	12	196
<b>AW200/014</b>	7.87	5.00	1.97	.16	1.75	5.51	.8750	5.118	.16	M10×1.5	$\frac{3}{16} \times \frac{3}{16} \times \frac{17}{16}$	.96	6.50	18	333
<b>AW250/102</b>	9.84	7.20	2.48	.20	2.25	7.80	1.1250	7.087	.16	M12×1.75	$\frac{1}{4} \times \frac{1}{4} \times \frac{15}{16}$	1.24	8.46	31	680
<b>AW300/110</b>	11.81	8.39	3.54	.24	3.25	9.02	1.6250	9.055	.20	M12×1.75	$\frac{3}{8} \times \frac{3}{8} \times \frac{27}{8}$	1.79	10.43	51	1,072
<b>AW350/202</b>	13.78	10.83	4.88	.28	4.50	11.61	2.1250	9.842	.24	M16×2	$\frac{1}{2} \times \frac{1}{2} \times \frac{315}{16}$	2.35	11.81	100	1,569





# Part No. Configurator

## AW Input Shaft – MGS Speed Reducer

### Part No. Explanation

**C** **4** **0** **2** **N** **0135** **AW160/** **012**

Series      Size      Generation      No. of Gear Stages      Housing Style      Ratio:1      Input Adapter      Input Shaft Size

Series <sup>(1)</sup>      **C**      Concentric Helical (output and input in line/gears are all helical)

Size      **4**      C1, C2, C3, **C4**, C5, C6, C7, C8, C9

Generation      **0**      First generation **0**, second generation 1, etc.

No. of Gear Stages      **2**      2, 3, 4 (determined by the ratio)

Housing Style      **N**      Foot Mounting



See each Series section for the housing styles available.

Ratio      **0135**      Approximate: 0135 = 13.5:1 (range of 2:1 up to 276:1)

Input Adapter      **AW160/**      MR140/, **MR160/**, MR200/, MR250/, MR300/, MR350/

Input Shaft Size      **012**      010 ( $1^{10}/_{16} = 5/8$ ), **012** ( $1^{12}/_{16} = 3/4$ ), 014 ( $1^{14}/_{16} = 7/8$ ), 102 ( $1^2/_{16} = 1^{1}/_8$ ), 110 ( $1^{10}/_{16} = 1^{5}/_8$ ), 202 ( $2^2/_{16} = 2^{1}/_8$ )

<sup>(1)</sup> The AW input is available with the standard housing and output styles in MGS Series, “C”, “F”, “K”, and “S”. See the Selection Tables for the size that is available in each ratio.

Mounting distance information is required the same as when using a motor adapter.

An AW input is not available with the Long Life warranty or food and beverage.



# MGS Speed Reducer Backstops

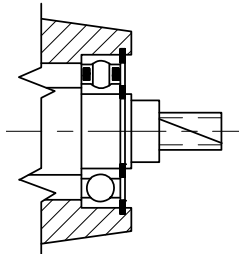


**DO NOT USE BACKSTOPS ON MAN LIFTS!**

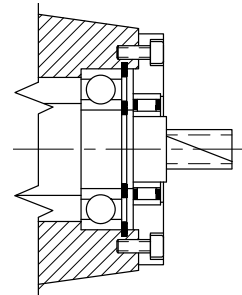
The direction of rotation of the OUTPUT *must* be specified when ordering a unit with a backstop.

See the illustration of standard direction of rotation. (Examples shown are EL1 mounting.)

If the backstop is assembled for the standard rotation, but rotates in the opposite direction at startup, **DAMAGE TO THE BACKSTOP IS CERTAIN.**



Backstop for all units using: AWB140/010, AWB160/012, MRB140/050, MRB160/050 and MRB160/140.



Backstop for AWB200/ 014 through AWB350/202 and MRB200/050 through MRB350/360.

These backstops cannot be assembled in: C613, C713, C813, C913, K714, K814, K914, and K1014

**Table No. 1 AW with Backstop**

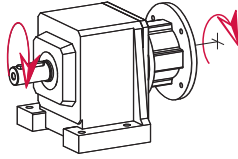
Input Part No.	Shaft Size	Max. HP * @ 1750 RPM
<b>AWB140/010</b>	.625	2.1
<b>AWB160/012</b>	.750	10.4
<b>AWB200/014</b>	.875	18.2
<b>AWB250/102</b>	1.125	29.1
<b>AWB300/110</b>	1.625	40.5
<b>AWB350/202</b>	2.125	54.0

**Table No. 2 MR with Backstop**

Adapter Part No.	NEMA Frame	Max. HP * @ 1750 RPM
<b>MRB140/050</b>	56C	2.1
<b>MRB160/050</b>	56C	10.4
<b>MRB160/140</b>	143/145TC	10.4
<b>MRB200/050</b>	56C	18.2
<b>MRB200/140</b>	143/145TC	18.2
<b>MRB200/180</b>	182/184TC	18.2
<b>MRB250/180</b>	182/184TC	29.1
<b>MRB250/210</b>	213/215TC	29.1
<b>MRB300/180</b>	182/184TC	40.5
<b>MRB300/210</b>	213/215TC	40.5
<b>MRB300/250</b>	254/256TC	40.5
<b>MRB300/280</b>	284/286TC	40.5
<b>MRB350/320</b>	324/326TC	54.0
<b>MRB350/360</b>	364/365TC	54.0

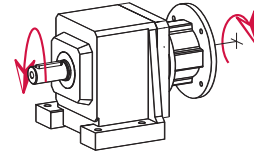
\* HP ratings shown are based on 2.0 Service Factor. Maximum HP must not be exceeded.

### "C" Series – Concentric Helical



**C002 – C912**

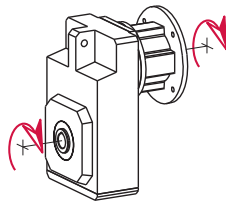
Input and Output Rotate the Same Direction



**C103 – C913**

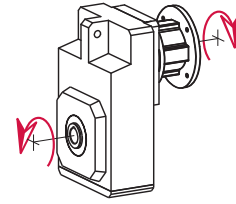
Input and Output Rotate Opposite Direction

### "F" Series – Offset Helical



**F102 – F602**

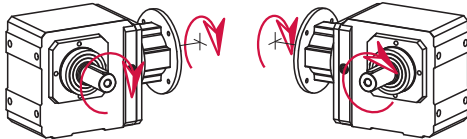
Input and Output Rotate the Same Direction



**F203 – F603**

Input and Output Rotate Opposite Direction

### "K" Series – Right Angle Helical/Bevel

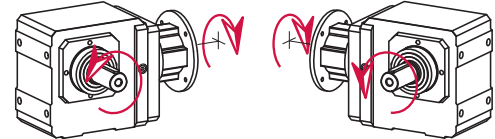


Shaft Side 4

Shaft Side 3

**K102 – K402**

CCW Input and CW Single Output

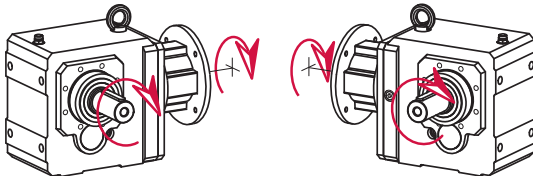


Shaft Side 4

Shaft Side 3

**K203 – K403**

CCW Input and CCW Single Output

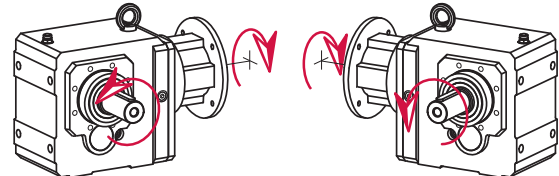


Shaft Side 4

Shaft Side 3

**K513 – K1013**

CCW Input and CW Single Output



Shaft Side 4

Shaft Side 3

**K514 – K1014**

CCW Input and CCW Single Output

### "S" Series – Right Angle Helical/Worm



Shaft Side 4 — CCW

Shaft Side 3 — CW

**S102 – S402**

CCW Input and Single Output Rotation



Shaft Side 4 — CW

Shaft Side 3 — CCW

**S203 – S403**

CCW Input and Single Output

**REMINDER:** A "K" or "S" unit with a double output, the shaft rotation when viewed from Side 3 (CW) will rotate in the opposite direction (CCW) when viewed from Side 4.



# MGS Reducer Installation Tolerances, Conversions, and Formulas



**Table No. 1 Conversions**

Imperial to Metric			
1 inch	x	25.4	= mm
1 in <sup>2</sup>	x	645.16	= mm <sup>2</sup>
1 lb	x	.453	= kg
1 US gal	x	3.785	= L
1 HP	x	.746	= kW
1 lb	x	4.45	= N
1 lb in	x	.113	= Nm
1 lb ft	x	1.36	= Nm
1 lb ft	x	.1383	= kgm
1 lb in	x	.0115	= kgm
1 lb in <sup>2</sup>	x	.00029	= kgm <sup>2</sup>
1 PSI	x	.0689	= bar
1 PSI	x	.00689	= N/mm <sup>2</sup>
		°F	= 32 + <sup>9</sup> / <sub>5</sub> x °C

Metric to Imperial			
mm	x	.03937	= inch
1 mm <sup>2</sup>	x	.0015	= in <sup>2</sup>
1 kg	x	2.205	= lb
1 L	x	.264	= US gal
1 kW	x	1.341	= HP
1 N	x	.225	= lb
1 Nm	x	8.85	= lb in
1 Nm	x	.737	= lb ft
1 kgm	x	7.233	= lb ft
1 kgm	x	86.798	= lb in
1 kgm <sup>2</sup> (J)	x	3418.0	= lb in <sup>2</sup> (WR <sup>2</sup> )
1 bar	x	14.5	= PSI
1 N/mm <sup>2</sup>	x	145.04	= PSI
		°C	= <sup>5</sup> / <sub>9</sub> (°F-32)

**Table No. 2 Formulas**

1 HP	=	54 in.lbs @ 1160 RPM
1 HP	=	36 in.lbs @ 1750 RPM
HP	=	$\frac{\text{Force} \times \text{FPM}}{33,000}$
HP	=	$\frac{\text{T in.lbs.} \times \text{RPM}}{63,025}$
HP	=	$\frac{\text{T ft.lbs.} \times \text{RPM}}{5,252}$
T in.lbs.	=	$\frac{63,025 \times \text{HP}}{\text{RPM}}$
T ft.lbs.	=	$\frac{5,252 \times \text{HP}}{\text{RPM}}$
FPM	=	.2618 x Dia. x RPM
RPM	=	$\frac{\text{FPM}}{.2618 \times \text{Dia.}}$
RPM	=	$\frac{63,025 \times \text{HP}}{\text{Torque}}$
T	=	Force x Lever Arm
F	=	$\frac{\text{Torque}}{\text{Radius}}$

## All Series Reducers

**Table No. 3 Solid Shaft — "U" Dimension**

Bore Range	Tolerance	Bore Range	Tolerance
.39 — .71	+0.000 / -.0005	1.97 — 3.15	+0.000 / -.0008
.71 — 1.18	+0.000 / -.0006	3.15 Up	+0.000 / -.0009
1.18 — 1.97	+0.000 / -.0007		

## "F", "K", and "S" Series Reducers

**Table No. 4 Hollow Output — "U" Dimension**

Bore Range	Tolerance	Bore Range	Tolerance
.39 — .71	+0.0007 / -.0000	1.97 — 3.15	+0.0012 / -.0000
.71 — 1.18	+0.0008 / -.0000	3.15 Up	+0.0014 / -.0000
1.18 — 1.97	+0.0010 / -.0000		

## All Series Reducers with Input Shaft

**Table No. 5 Pilot Diameter — "AA" Dimension**

Dia. Range	Tolerance	Dia. Range	Tolerance
3.15 — 4.72	+0.0007 / -.0005	9.06 — 12.40	+0.0012 / -.0008
4.72 — 7.09	+0.0008 / -.0006	12.40 Up	+0.0014 / -.0009
7.09 — 9.06	+0.0010 / -.0007		

## All Series Flange Mounting Reducers

**Table No. 6 Pilot Diameter — "M" Dimension**

Dia. Range	Tolerance	Dia. Range	Tolerance
>1.96 to 3.15	+0.0005 / -.0003	>7.09 to 9.84	+0.0006 / -.0005
>3.15 to 4.72	+0.0005 / -.0004	>9.84 to 12.40	+0.0006 / -.0006
>4.72 to 7.09	+0.0006 / -.0004	>12.40 to 15.74	+0.0007 / -.0007

## All Series Reducers with Motor Adapter

**Table No. 7 Pilot Bore Diameter — "YA" Dimension**

Bore Range	Tolerance	Bore Range	Tolerance
1.96 — 3.15	+0.0007 / -.0005	7.09 — 9.84	+0.0012 / -.0008
3.15 — 4.72	+0.0008 / -.0006	9.84 — 12.40	+0.0014 / -.0009
4.72 — 7.09	+0.0010 / -.0007		

## All Series Reducers

**Table No. 8 Keyway Width — "UA" Dimension**

Bore Range	Tolerance
All Sizes	+0.0019 / -.0000

**Table No. 9 Thermal Ratings**

HP	kW	Base Modules			
2.95	2.2	C0	F1	K1	S1
5.36	4.0	C1	F2	K2	S2
7.38	5.5	C2	F3	K3	S3
12.34	9.2	C3	F4	K4	S4
14.75	11.0	C4	F6	K5	—
20.12	15.0	C5	—	K6	—
29.50	22.0	C6	—	K7	—
40.23	30.0	C7	—	K8	—
53.64	40.0	C8	—	K9	—
67.05	50.0	C9	—	K10	—

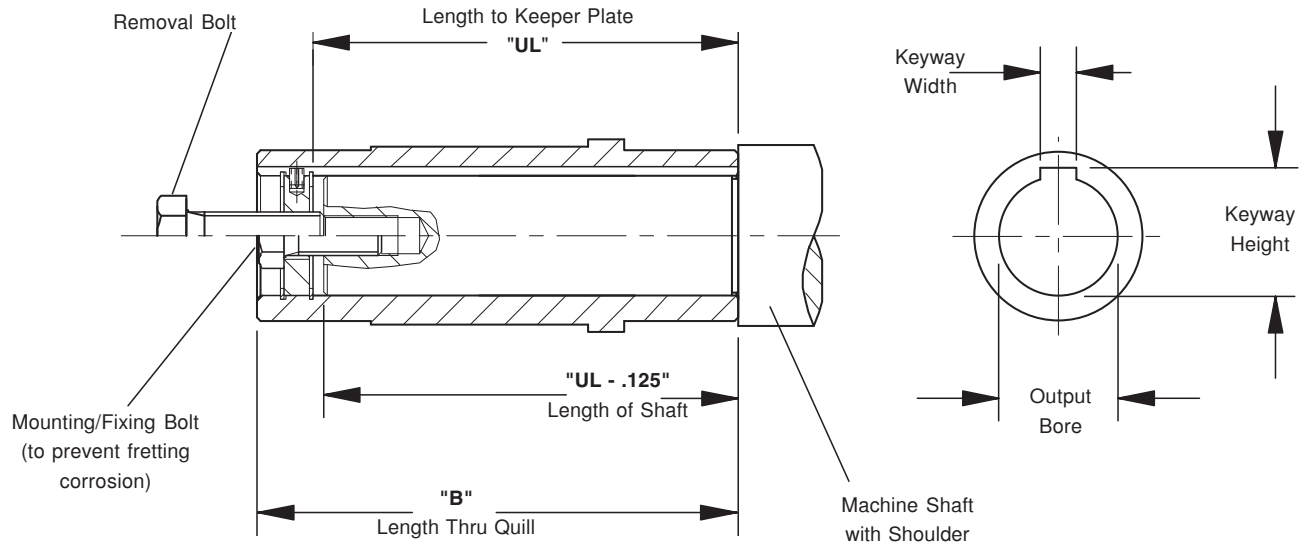
**Table No. 10 Backlash**

Series	Measured in arc minutes*
C	≤ 20
F	≤ 11
K	≤ 12
S	≤ 20

\* These measurements were taken from actual test of each series.



# MGS Reducer Installation Any Unit with Hollow Output



## Mounting Hollow Output Reducers

A STOBER hollow output reducer can be mounted from either side. The tolerance for the hollow bore is shown in the table below and the shaft should be toleranced to fit this bore accordingly.

A keeper plate inside the quill is provided with each unit to prevent axial movement. This keeper plate is held in place with snap rings and can be easily removed for location on either end. A spring pin in the keeper plate mounts into the keyway of the quill and prevents rotation. The keeper plate center hole is tapped to fit the removal bolt.

Before installation, brush the inside of the quill with rust inhibiting grease. When mounting the unit onto the shaft, avoid hammering as this may damage the bearings. Do not mount the reducer dry as removal may be impossible.

The drawing above shows a mounting or fixing bolt and a removal bolt. The mounting/fixing bolt should be smaller in size than the removal bolt. See Table No. 1.

To use the keeper plate with a mounting/fixing bolt, drill and tap the end of the shaft that will be mounted into the reducer. Insert the mounting/fixing bolt through the keeper plate and thread into the shaft end. The machine shaft length should not be longer than the "UL" dimension. A shaft length of "UL minus .125" will allow the shaft shoulder to pull against the face of the quill of the reducer.

## Removal of Hollow Output Reducers

To dismantle the unit from the shaft, remove the mounting bolt. Thread the removal bolt into the keeper plate to press against the shaft and loosen the shaft from the unit. Removal of the reducer will be easier if the quill is greased before installation.

**Table No. 1 "UL" Dimension and Removal Bolt Size**

Unit	Bore	UL	Bolt	Unit	Bore	UL	Bolt	Unit	Bore	UL	Bolt
<b>F1</b>	.750	2.67	3/8-16 NC	<b>KL2</b>	.750	3.13	3/8-16 NC	<b>S1</b>	1.000	3.86	1/2-13 NC
<b>F2</b>	1.000	3.62	1/2-13 NC	<b>K1</b>	1.000	3.86	1/2-13 NC	<b>S2</b>	1.375	4.69	5/8-11 NC
<b>F3</b>	1.250	4.06	1/2-13 NC	<b>K2</b>	1.187	4.78	1/2-13 NC	<b>S3</b>	1.500	5.39	3/4-10 NC
<b>F4</b>	1.500	4.49	3/4-10 NC	<b>K3</b>	1.375	4.92	5/8-11 NC	<b>S4</b>	1.750	6.24	3/4-10 NC
<b>F6</b>	2.000	5.63	3/4-10 NC	<b>K4</b>	1.500	6.18	3/4-10 NC				
				<b>K5</b>	2.000	6.46	3/4-10 NC				
				<b>K6</b>	2.000	7.05	3/4-10 NC				
				<b>K7</b>	2.375	8.43	1-8 NC				
				<b>K8</b>	2.750	10.35	1-8 NC				
				<b>K9</b>	3.250	11.89	1-8 NC				
				<b>K10</b>	4.000	14.25	1 1/4-7 NC				

**Table No. 2 Hollow Shaft — "U" Dimension**

Bore Range	Tolerance	Bore Range	Tolerance
.39 — .71	+ .0007 / - .0000	1.97 — 3.15	+ .0012 / - .0000
.71 — 1.18	+ .0008 / - .0000	3.15 Up	+ .0014 / - .0000
1.18 — 1.97	+ .0010 / - .0000		



# MGS Speed Reducer Motor Mounting Instructions



**CAUTION:** If the motor coupling is not installed correctly, the input bearing may fail due to pre-load. This will void the warranty of the reducer and possibly fail the motor.

## Step 1. Locate the Motor Coupling on the Motor Shaft



Accurate placement of the motor coupling on the shaft is vital to mounting the motor correctly. Mount the coupling with the hub projection toward the step or shoulder of the motor. The motor coupling should be located from the motor face the "XL" distance shown in Table No. 1.

**Table No. 1 Location of "MR" Motor Coupling**

Adapter Part No.	"XL"		Adapter Part No.	"XL"	
	mm	inches		mm	inches
<b>MR140/050</b>	24.5	.96	<b>MR250/210</b>	34	1.3
<b>MR160/050</b>	28	1.1	<b>MR300/180</b>	56	2.2
<b>MR160/140</b>	26	1.0	<b>MR300/210</b>	54	2.1
<b>MR200/050</b>	39	1.5	<b>MR300/250</b>	52	2.0
<b>MR200/140</b>	41	1.6	<b>MR300/280</b>	52	2.0
<b>MR200/180</b>	31	1.2	<b>MR350/320</b>	64	2.5
<b>MR250/180</b>	36	1.4	<b>MR350/360</b>	64	2.5

**Location of "MS-R" Motor Coupling**

<b>MS_1R050</b>	24.5	.96	<b>MS_3R050</b>	28	1.1
<b>MS_2R050</b>	28	1.1	<b>MS_3R140</b>	26	1.0
<b>MS_2R140</b>	26	1.0			

**Location of "ML" Motor Coupling**

<b>ML2R050</b>	24.5	.96
----------------	------	-----

"XL" Tolerance = +1mm / -0mm (+0.040 / -0.000 inches)

## Step 2. Tighten the Setscrew

With the coupling hub located at the correct distance, tighten the setscrew in the coupling.



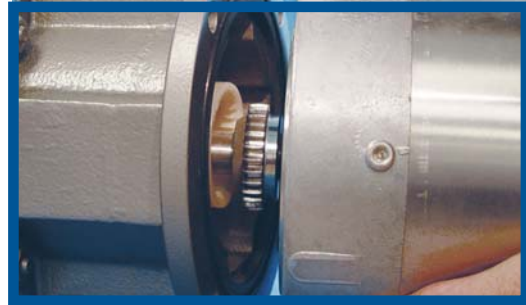
## Step 3. Secure the Motor Key



For ease of installation, secure the motor shaft key. Staking near the end of the keyway, on the sides of the key, or a temporary adhesive works well.

## Step 4. Mount the Motor

With the coupling secure, insert the motor shaft into the motor adapter. The coupling sleeve is already installed on the mating reducer coupling hub inside the motor adapter. **The sleeve should move freely in an axial direction.** (Axial displacement  $\pm$ .040 inches.)



With the motor in place, install and tighten all motor bolts.

Some motor manufacturers provide a weep hole in the mounting face of washdown motors. In some mounting positions, water or other material can enter the reducer through this hole and fail the motor adapter bearing.



Be sure the motor weep hole is plugged during washing or when the unit is in a wet environment. This illustration shows the method that STOBER assembly personnel use to plug the hole.

## WHEN INSTALLING A FOOD DUTY REDUCER:

WARNING

The included labels must be affixed onto or near the gear reducer during reducer installation to properly warn the equipment operator of potential danger.

These labels must be clearly visible to the operator when he/she is near the reducer.

Form No. 2030A

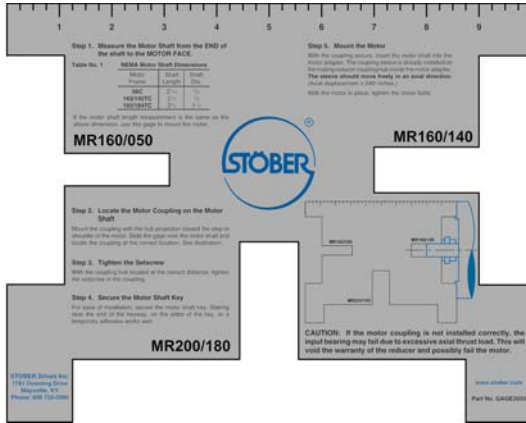


# MGS Speed Reducer Motor Mounting Instructions



## Alternate Method for Mounting the Motor

For ease of motor coupling hub location and installation, as an option, STOBER has available a motor hub mounting gage (Part No. GAGE2033) to fit the most popular sizes of motor adapter (MR160/050, MR160/140 and MR200/180).



This simple-to-use gage rapidly positions the motor coupling hub on the shaft.

### Step 1.

Locate the side of the gage that matches the motor adapter of the reducer. The part number on the nameplate will indicate this number.

### Step 2.

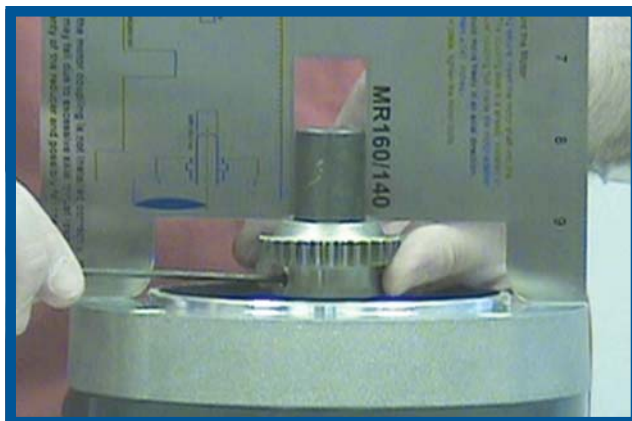
Place the coupling hub on the motor shaft.

### Step 3.

Place the gage on the motor face, over the motor shaft, and hold the coupling flush with the counterbore of the gage.

### Step 4.

Tighten the setscrew.



To order a gage, contact [sales@stober.com](mailto:sales@stober.com).

Shown in Table No. 2 is the motor coupling hub and sleeve part number for the STOBER MGS® motor adapter. These parts, with a coupling shaft component that is part of the reducer, make a complete coupling to connect the motor to the reducer.

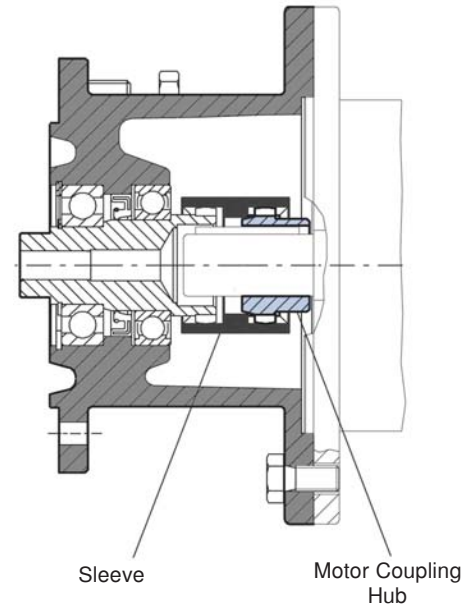


Table No. 2

### Couplings Used with MR Motor Adapters

Adapter	NEMA Frame	Motor Hub	Sleeve
<b>MR140/050</b>	56C	<b>M-19 x 5/8</b>	<b>M-19</b>
<b>MR160/050</b>	56C	<b>M-24 x 5/8</b>	<b>M-24</b>
<b>MR160/140</b>	143/145TC	<b>M-24 x 7/8</b>	<b>M-24</b>
<b>MR200/050</b>	56C	<b>M-32 x 5/8</b>	<b>M-32</b>
<b>MR200/140</b>	143/145TC	<b>M-32 x 7/8</b>	<b>M-32</b>
<b>MR200/180</b>	182/184TC	<b>M-32 x 1 1/8</b>	<b>M-32</b>
<b>MR250/180</b>	182/184TC	<b>M-38 x 1 1/8</b>	<b>M-38</b>
<b>MR250/210</b>	213/215TC	<b>M-38 x 1 3/8</b>	<b>M-38</b>
<b>MR300/180</b>	182/184TC	<b>M-48 x 1 1/8</b>	<b>M-48</b>
<b>MR300/210</b>	213/215TC	<b>M-48 x 1 3/8</b>	<b>M-48</b>
<b>MR300/250</b>	254/256TC	<b>M-48 x 1 5/8</b>	<b>M-48</b>
<b>MR300/280</b>	284/286TC	<b>M-48 x 1 7/8</b>	<b>M-48</b>
<b>MR350/320</b>	324/326TC	<b>M-65 x 2 1/8</b>	<b>M-65</b>
<b>MR350/360</b>	364/365TC	<b>M-65 x 2 3/8</b>	<b>M-65</b>

### Couplings Used with MS\_R Motor Adapters

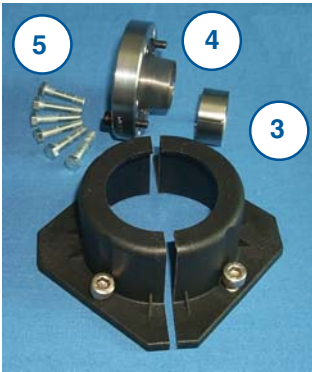
<b>MS1R050</b>	56C	<b>M-19 x 5/8</b>	<b>M-19</b>
<b>MS2R050</b>	56C	<b>M-24 x 5/8</b>	<b>M-24</b>
<b>MS2R140</b>	143/145TC	<b>M-24 x 7/8</b>	<b>M-24</b>
<b>MS3R050</b>	56C	<b>M-24 x 5/8</b>	<b>M-24</b>
<b>MS3R140</b>	143/145TC	<b>M-24 x 7/8</b>	<b>M-24</b>

### Couplings Used with ML Motor Adapters

<b>ML2R050</b>	56C	<b>M-19 x 5/8</b>	<b>M-19</b>
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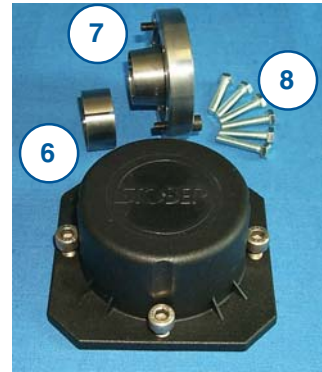
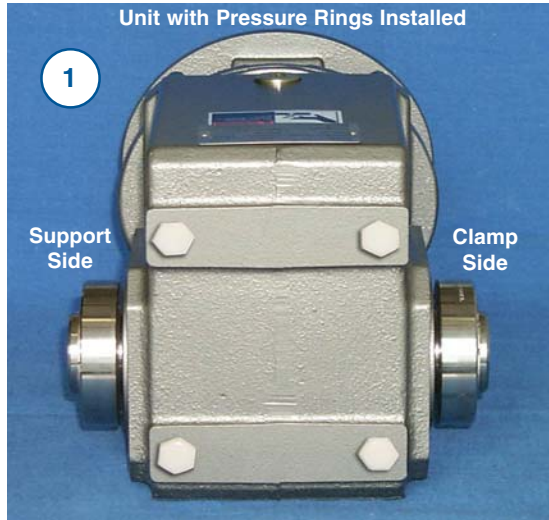


# "K" Series – MGS Helical/Bevel Reducer "WFB" – Wobble Free Bushing Installation Instructions



**Support Side Bushing Components**

The Support Side is the bushing with the coating on the cone. Do NOT use cleaner on the coated cone.



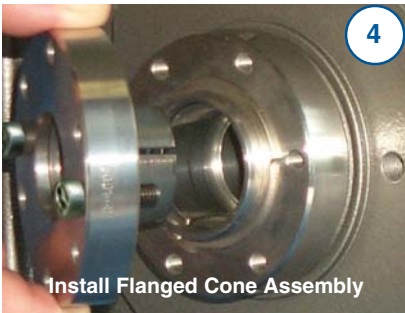
**Clamp Side Bushing Components**

## Support Side Installation



**Insert Tapered Cone**

K1 units do not have a tapered cone.

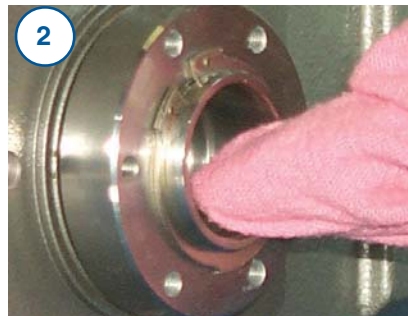


**Install Flanged Cone Assembly**

Install the Flanged Cone Assembly (4) with its slot opposite the slot in the tapered cone (3).



**Hand Tighten Capscrews**



Be sure the inside of the quill is free of grease and oil before installing the tapered cones.



The "U" distance (between the rings) determined by the spacer bolts (see Table 1) must be maintained throughout assembly of the bushing and mounting onto the shaft. Therefore, **DO NOT** tighten the capscrews or remove the spacer bolts until the unit is mounted on the shaft.



## Clamp Side Installation



**Insert Tapered Cone**

K1 units do not have a tapered cone.



**Install Flanged Cone Assembly**

Install the Flanged Cone Assembly (7) with its slot opposite the slot in the tapered cone (6).

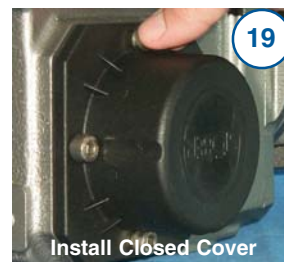
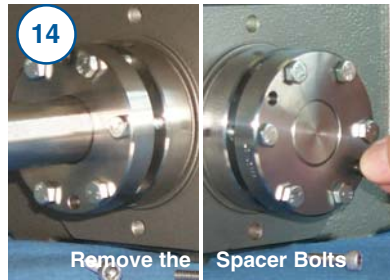


**Hand Tighten Capscrews**





# "K" Series – MGS Helical/Bevel Reducer "WFB" – Wobble Free Bushing Installation Instructions

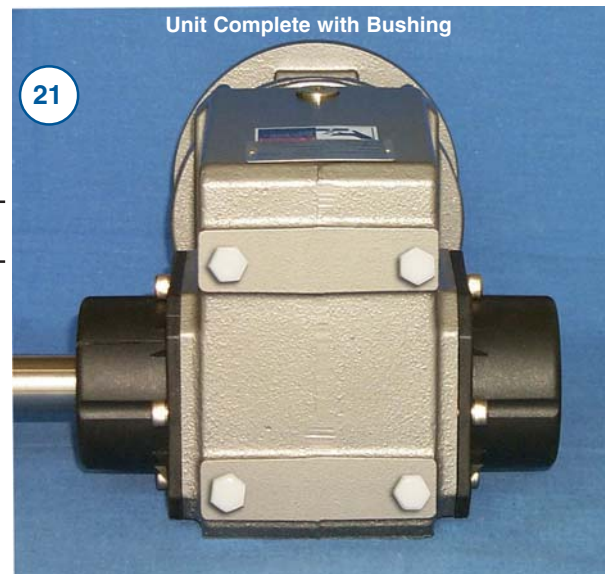


Tighten all capscrews to the torque shown in Table 1. Use a torque wrench. The tightening should be done gradually in a rotating sequence and will require more than one rotation.

After two hours (minimum) running time, check capscrews and retighten, if necessary.

**Table No. 1**

Base Module	Bushing Capscrews		Tightening Torque		U		Spacer Bolts
	Qty.	Size x Length	Nm.	in. lbs.	mm	ins.	
KL202	5	M5×0.8×25	6	53	4	.15	M5×0.8×20
KSS102	6	M6×1×25	10	89	5	.20	M6×1×20
KSS202	8	M6×1×30	10	89	5	.20	M6×1×20
KSS302/303	8	M6×1×30	10	89	5	.20	M6×1×20
K102	6	M6×1×25	10	89	5	.20	M6×1×20
K202/K203	6	M6×1×30	10	89	5	.20	M6×1×20
K302/K303	8	M6×1×30	10	89	5	.20	M6×1×20
K402/K403	8	M8×1.25×30	25	221	6	.24	M8×1.25×20
K513/K514	8	M8×1.25×30	25	221	7	.28	M8×1.25×25
K613/K614	8	M10×1.5×35	49	434	8.5	.33	M10×1.5×25
K713/K714	8	M10×1.5×40	49	434	5.5	.22	M10×1.5×25
K813/K814	8	M12×1.75×40	85	752	7	.28	M12×1.75×45



# Terms and Conditions of Sale



1. **GENERAL.** All orders for products supplied by STOBER DRIVES INC. ("STOBER") shall be subject to these terms and conditions of sales. All transactions shall be governed by the laws of the Commonwealth of Kentucky. No modifications hereto will be binding unless agreed to in writing by STOBER.

2. **CUSTOMER.** The term "Customer," as used herein, means the distributor, resale dealer, original equipment manufacturer or first end-user customer that purchases the STOBER products.

3. **WARRANTY.** STOBER products shall be free from defects in material and workmanship for a maximum of 5-years (single shift operation or 30 months multiple shift operation) for ServoFit products (ServoFit Modular System, ServoFit Precision Planetary Gearheads, and ServoFit Geared Motors) and MGS Long Life products; 3-years (single shift operation or 18 months multiple shift operation) for other MGS products; 2-years (single shift operation or 12 months multiple shift operation) for ComTrac products, from the date of shipment to the Customer. For ServoFit products, the motor on ServoFit Geared Motors, as well as all normal wear items, including oil seals and bearings, shall be covered for a period of 2-years (single shift operation or 12 months multiple shift operation). In the event that a product proves to be defective, STOBER's sole obligation shall be, at its option, to repair or replace the product. The repaired or replacement product will be shipped F.O.B. STOBER's facilities, freight prepaid by STOBER.

No employee, agent or representative of STOBER has the authority to waive, alter, vary or add to the terms hereof without the prior written approval of an officer of STOBER. It is expressly agreed that (a) this section constitutes the final expression of the parties' understanding with respect to the warranty and (b) this section is a complete and exclusive statement of the terms of the warranty.

STOBER shall have no obligation under the warranty set forth above in the event that:

(a) The Customer fails, within the warranty period to notify STOBER in writing and provide STOBER with evidence satisfactory to STOBER of the alleged defect within five (5) days after it becomes known to the customer;

(b) After inspection of a product, STOBER determines, in its sole discretion, that it is not defective in material or workmanship;

(c) Repair or replacement of a product is required through normal wear and tear;

(d) Any part in a product or any ingredient contained in a product requires replacement or repair through routine usage or normal wear and tear;

(e) A product is not maintained or used in accordance with STOBER's applicable operating and/or maintenance manuals, whether by the Customer or any third party;

(f) A product has been subject to misuse, misapplication, negligence, neglect (including, but not limited to, improper maintenance or storage), accident, catastrophe, improper installation, modification, adjustment, repair or lubrication, whether by the Customer or any third party, without the prior written consent of STOBER. Misuse shall include, but not be limited to, deterioration in a product due to chemical action and wear caused by the presence of abrasive materials;

(g) The system of connected rotating parts into which the product becomes incorporated is not compatible with the product, or it is not free from critical speed or torsional or other type of vibration within the specified operating range, no matter how induced; or

(h) The transmitted load and imposed torsional thrust and overhung loads are not within the published capacity limits for the unit sold.

Items manufactured by other parties but installed in or affixed to STOBER's products are not warranted by STOBER and bear only those warranties, express or implied, which are given by the manufacturer of such items, if any.

THE WARRANTY SET FORTH ABOVE IS INTENDED SOLELY FOR THE BENEFIT OF THE Customer AND DOES NOT APPLY TO ANY THIRD PARTY. ALL CLAIMS MUST BE MADE BY THE Customer AND MAY NOT BE MADE BY ANY THIRD PARTY. THIS WARRANTY MAY NOT BE TRANSFERRED OR ASSIGNED, IN WHOLE OR IN PART, BY THE Customer FOR ANY REASON WHATSOEVER. ANY SUCH ATTEMPTED TRANSFER OR ASSIGNMENT SHALL BE NULL AND VOID.

THIS WARRANTY TAKES THE PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH ARE HEREBY DISCLAIMED AND EXCLUDED BY STOBER, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF USE AND ALL OBLIGATIONS OR LIABILITIES ON THE PART OF STOBER FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE, REPAIR OR PERFORMANCE OF THE PRODUCTS.

4. **MODIFICATIONS.** STOBER reserves the right, without notice to the Customer, to (a) change the specifications of any product, (b) improve a product in any manner that STOBER deems necessary or appropriate and (c) discontinue the manufacture of any product.

5. **PURCHASE ORDERS.** The Customer will submit purchase orders for the products to STOBER in writing, whether by mail or telefax, which shall set forth, at a minimum: (a) an identification of the products ordered, (b) prices for such products, (c) quantities, (d) requested delivery dates and (e) shipping instructions and shipping addresses.

6. **ACCEPTANCE OF ORDERS.** All purchase orders received from the Customer are subject to acceptance by STOBER in writing.

7. **MODIFICATION OF ORDERS.** No accepted purchase order shall be modified or canceled except upon the written agreement of STOBER and the Customer. Mutually agreed cancellations shall be subject to reasonable charges based upon expenses already incurred by STOBER and commitments made by STOBER. Mutually agreed change orders shall be subject to all provisions of these Terms and Conditions of Sale.

8. **PRICE INCREASES.** STOBER may increase its prices for the products by providing the original purchaser of the products with at least thirty (30) days' prior written notice. Increased prices for products shall not apply to purchase orders accepted prior to the effective date of the price increase unless such orders provide for delivery more than thirty (30) days after the date of acceptance of the order.

9. **PRICING AND DELIVERY TERMS.** In accordance with KRS 355.2-319(1)(b), all products are delivered F.O.B. STOBER's warehouse facility in Maysville, Kentucky, or such other facility as STOBER may designate. Orders are then shipped per Customer's shipping instructions as set forth in Customer's purchase order. **CATALOG PRICING DOES NOT INCLUDE SHIPPING, HANDLING AND TAXES.** Once delivered to a common carrier of the Customer's choosing [or of STOBER's choosing if Customer has failed to specify a common carrier on or before five (5) days prior to the requested delivery date] STOBER shall have no further responsibility for the products and all risk of damage, loss or delay shall pass to the Customer. A handling fee is added to freight costs by STOBER to cover the cost of having to pay the carrier within seven (7) days when the terms with the Customer are net 30. The Customer has the option of shipping collect with our carrier or the carrier of choice.

10. **PAYMENT TERMS.** Net 30 days. All orders will be shipped either prepaid by the Customer or C.O.D., at STOBER's option, unless the Customer has established a previously approved credit line. If STOBER approves a credit line for the Customer, all payments shall be due within thirty (30) days of the date of the invoice. If any invoice is not paid in full within such thirty (30) day period, then finance charges shall be assessed at the rate of one and one-half

percent (1½%) per month (eighteen percent (18%) per year). If such rate is deemed to be usurious at any time, it shall be reduced to the maximum rate permitted by applicable law. STOBER may stop or withhold shipment of products if the Customer does not fulfill its payment obligations. If STOBER is insecure about payment for any reason, STOBER may require full or partial payment in advance and as a condition to the continuation of its delivery of products.

11. **SECURITY INTEREST.** Unless and until the products are paid for in full, STOBER reserves a security interest in them to secure the unpaid balance of the purchase price. The Customer hereby grants to STOBER a power of attorney, coupled with an interest, to execute and file on behalf of the Customer all necessary financing statements and other documents required or appropriate to protect the security interest granted herein.

12. **ACCEPTANCE OF PRODUCTS.** The Customer will conduct any incoming inspection tests as soon as possible upon arrival of the products, but in no event later than ten (10) days after the date of receipt. Any products not rejected by written notice to STOBER within such period shall be deemed accepted by the Customer. STOBER shall not be liable for any additional costs, expenses or damages incurred by the Customer, directly or indirectly, as a result of any shortage, damage or discrepancy in a shipment.

#### 13. LIMITATION OF REMEDIES.

(a) STOBER SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY DELAY IN FURNISHING THE CUSTOMER WITH PRODUCTS.

(b) IN NO EVENT SHALL STOBER'S LIABILITY INCLUDE ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES, EVEN IF STOBER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE.

14. **MADE-TO-ORDER PRODUCTS.** STOBER reserves the right to revoke and amend any price quotations offered to the Customer for made-to-order products, provided that such price quotations have not been accepted by the Customer prior to the date of revocation or amendment.

15. **DIES, TOOLS AND EQUIPMENT.** Charges incurred by the Customer for dies, tools and other equipment shall not confer ownership or the right to possession therein by the Customer. All such dies, tools and equipment shall remain the property of STOBER, and STOBER shall have the exclusive right to possession thereof. STOBER shall maintain such tools and equipment in good working order.

16. **REGULATORY LAWS AND STANDARDS.** STOBER makes no representation that its products conform to state or local laws, ordinances, regulations, codes or standards except as may be otherwise agreed to in writing by STOBER.

17. **SIZES AND WEIGHTS.** STOBER's products are made only in the sizes and to the specifications set forth in its catalogs and other literature. If any alteration is requested, such altered product will be treated as a made-to-order item. STOBER assumes no responsibility for typographical errors which may appear in its catalogs or literature, and cannot accept alteration charges caused by such errors. Since weights shown in STOBER's catalogs are approximate, they cannot be used in determining freight allowances set forth in its catalogs and other literature. Freight allowances will be determined at the time of shipment and shall be based on actual shipping weight.

18. **SYSTEM DESIGN.** Responsibility for system design to ensure proper use and application of STOBER's products within their published specifications and ratings rests solely with the Customer. This includes, but is not limited to, an analysis of loads created by torsional vibrations within the entire system, regardless of how induced.

#### STOBER DRIVES INC.

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