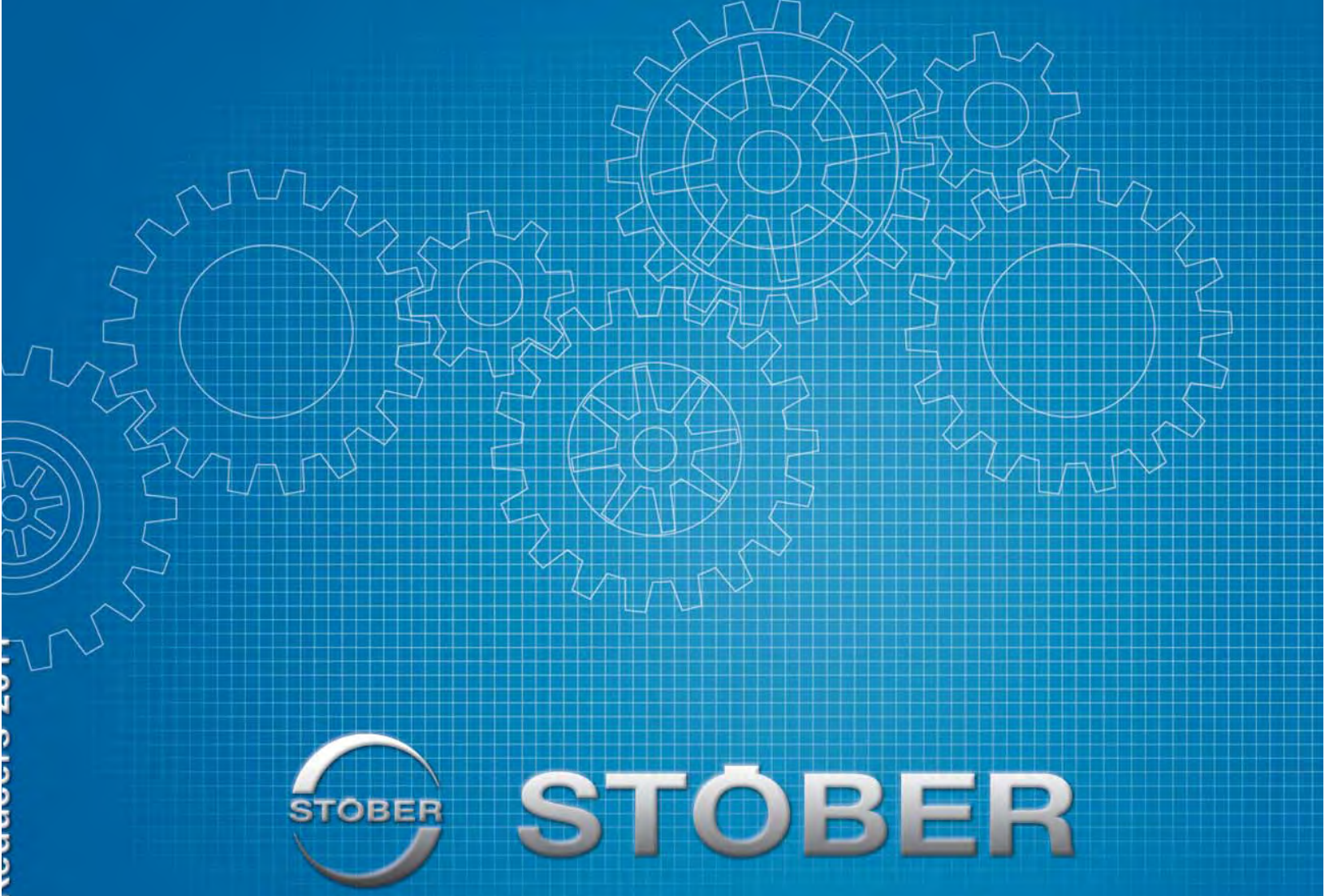


STÖBER

MGS
Speed Reducers

Geared to a higher standard®

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
IP69K Pages with this symbol indicate that units on the page meet this certification.

No expedite charge for next day delivery applys to all.

Table of Contents

MGS Speed Reducer
Suggested Service Factor

Table No. 1 Service Class

Type of Equipment	Service Class Hours per Day 3-10	>10
Agitators		
Pure Liquids	I	II
Semi-Liquids, variable Density	II	II
Solids	III	III
Brewing and Destilling		
Bottling Machinery	I	II
Brew Kettles (continuous Duty)		II
Cookers (continuous Duty)		II
Mash Tubs (continuous Duty)		II
Scale Hopper (frequent Starts)	II	II
Can Filling Machines	I	II
Car Dumpers	III	III
Clarifiers	I	II
Classifiers	II	II
Conveyors (uniform load and fed)		
Apron	II	II
Assembly Belt (bucket or pan)	II	II
Chain - Flight	II	II
Oven - Live Roll - Screw	I	II
Conveyors (non-uniform load and fed)		
Apron	II	III
Assembly Belt (bucket or pan)	II	II
Chain - Flight	II	II
Live Roll	*	*
Oven - Screw	II	II
Reciprocating - Shaker	III	III
Elevators		
Bucket (uniform load)	I	II
Bucket (nonuniform load - heavy duty)	II	III
centrifugal Discharge	I	II
Frieght	II	II
Gravity Discharge	I	II
Food Industry		
Slicer	II	III
Bottling, Can Filling Machines	I	II
Cereal Cooker	I	II
Mixer, Grinder	III	III
Line Shafts		
Uniform load	I	II
Nonuniform, Heavy Duty	II	III
Machine Tools		
Auxiliary Drive	I	II
Main Drive - uniform load	II	II
Main Drive - nonunform Load	III	III
Table Conveyors (non reversing)		
Group Drives	II	III
Individual Drives	III	III
Wire Drawing, Flatttening, or winding	II	III
Mixers		
Concrete - Continuous	II	III
Concrete - Intermittent	III	III
Constant Density	II	III
Semi-Liquid	III	III
Sewage Disposal Equipment		
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
Thickners	II	II
Vacuum Filters	II	II
Screens		
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
Textile Industry		
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

* Contact STOBE

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_B)

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_T)

Temp. (°F)	32	50	70	85	100	120
f_T	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_L)

Hours	2	4	6	8	12	16	24
f_L	.75	.85	.95	1.0	1.10	1.15	1.20

Table No. 6
Torque Characteristic Factor (f_V)
Use for Frequency Convertor Only

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

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

A. Under the Input RPM heading, find **Nominal 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 **Base Module**, **Input Option** and **Overhung Loads**.
1. Complete Base Module Number by adding Housing and Output Style. See overview pages for housing and output options available.
2. Select Input Option (Motor Adapter or Input Shaft) and add to completed Part Number.
D. Check **Overhung Load**.
E. 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:

1. Mounting position.
2. Shaft side extension on right angle units.
3. 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_B) Hours of Service = **1.10** (f_L)

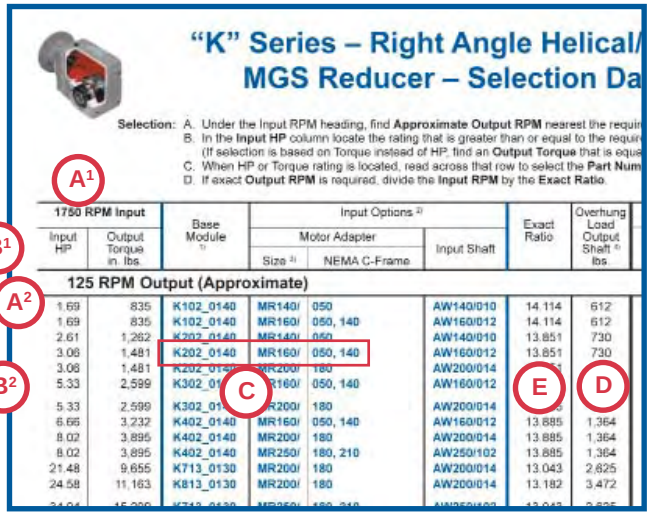
The required HP rating for the reducer is: 1.25 (f_B) x 1.10 (f_L) = **1.375** SF. 2 HP Motor x 1.375 SF = **2.75** HP

A. From the Selection Data pages for "K" Series reducers, under the 1750 Input RPM heading (A^1), find **125 RPM Output (Approximate)** (A^2) which is the closest to 130.
B. In the **Input HP** column (B^1), locate the rating that is equal to or greater than 2.75 HP. The first unit available is rated at **3.06 HP** (B^2).
C. Read across the row to select the **Base Module** and **Motor Adapter**
1. The Base Module is **K202_0140**.
The Motor Adapter is **MR160/**. Add **140** for the 143/145TC frame.
2. Complete the Base Module Part Number by adding **Output** and **Housing Style**.

Example: K202**VN**0140

Output Style "**V**" (Solid Shaft)

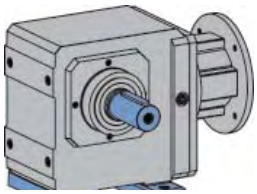
Housing Style "**N**" (Foot Mounting)



D. Check **Overhung Load**.
730 lbs. – with the load at the center of the output shaft
E. 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.



The Part Number to order is: **K202VN0140 MR160/140 EL1 Mounting**

MGS® Speed Reducers
Output Options

Output – Solid Shaft and Hollow Bore Diameter

Table No. 1

Standard shaft and output diameters are shown with an asterisk (*). The diameters shown **BOLD BLUE** are readily available from inventory.
Contact STOBER Drives for delivery for other output options.

Carbon Steel					Stainless Steel			
Inches		Metric			Inches		Metric	
Shaft	Hollow	Shaft	Hollow	Unit Size	Shaft	Hollow	Shaft	Hollow
.75*	–	**20**	–	**C002**	**.75***	–	–	–
.75, **1.00***	–	**25**	–	**C102/C103**	**1.00***	–	20, 25	–
1.25*	–	**30**	–	**C202/C203**	**1.25***	–	–	–
1.25*	–	**30**	–	**C302/C303**	**1.25*, 1.375**	–	**25**	–
1.625*	–	25, 38, 42, **40**	–	**C402/C403**	**1.625***	–	–	–
1.625*	–	**40**	–	**C502/C503**	**1.625***	–	–	–
2.125*	–	**50**	–	**C612/C613**	**2.125***	–	–	–
2.375*	–	**60**	–	**C712/C713**	**2.375***	–	–	–
2.875*	–	**70**	–	**C812/C813**	**2.875***	–	–	–
3.625*	–	**90**	–	**C912/C913**	–	–	–	–
1.00*	**.75***	25	**20, 25**	**F102**	–	–	–	–
1.25*	**1.00***	30	**25**	**F202/F203**	–	**1.00***	–	–
1.375*	**1.25***	35	**30**	**F302/F303**	–	**1.25***	–	–
1.625*	1.4375, **1.50***	40	**40**	**F402/F403**	–	**1.50***	–	–
2.125	**2.00***	50	**50**	**F602/F603**	–	–	–	–
–	–	–	–	**KSS102**	**1.00***	**1.00***	–	–
–	–	–	–	**KSS202**	**1.25***	**1.25*, 1.375**	–	–
–	–	–	–	**KSS302/KSS303**	**1.25***	**1.00, 1.250, 1.375*, 1.4375**	–	–
.75*	**.75***	**20**	**20**	**KL202**	**.75***	**.75***	**20**	–
1.00*	**1.00***	**25**	**25**	**K102**	**1.00***	**1.00***	**25**	**25**
1.25*	**1.1875***, 1.25	**30**	**20, 30**	**K202/K203**	**1.25***	**1.125, 1.25***	**30**	**30**
1.25*	**1.375***, 1.4375	**30**	**30, 35**	**K302/K303**	**1.25***	**1.00, 1.25, 1.375*, 1.4375**	40	**35**
1.375*	1.4375, **1.50***	**40**	**40**	**K402/K403**	**1.375***	**1.50***	–	**40**
1.75*	**2.00***	45	**45, 50**	**K513/K514**	**1.75***	1.4375, **1.50**, 1.9375, **2.00***	**45**	**40, 50**
1.75*	**2.00***	**50**	**50**	**K613/K614**	**1.75***	1.4375. 1.9375, **2.00***, 2.1875	–	40, 50, 60
2.375*	**2.375***	60	**60**	**K713/K714**	**2.375***	1.9375, 2.00, 2.1875, 2.375	–	**60**
2.875*	**2.75***	70	**70**	**K813/K814**	**2.875***	2.1875, 2.375, 2.50, 2.6875, 2.75	70	60, **70**
3.625*	**3.25***	**90**	**70**, 80, 90	**K913/K914**	**3.625***	2.6875, **2.9375**, **3.00**, 3.25, **3.4375**	90	**75**, 90
4.375*	**4.00***	110	100	**K1013/K1014**	–	3.4375, 4.00	–	–
1.00*	.75, **1.00***	**25**	**20, 25**	**S102**	–	–	–	–
1.25	**1.375***	**30**	**35**	**S202/S203**	–	–	–	–
1.375*	**1.50***	40	**40**	**S302/S303**	–	–	–	–
1.75*	**1.75***	45	**50**	**S402/S403**	–	–	–	–

MGS® Speed Reducers
Bushing Bore Options

Output – Wobble Free Bushing

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

	Stock Bores Sizes																
Unit	3/4	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
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					Single Side		
25	30	35	40	Unit	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

	Stock Bores Sizes					
Unit	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2
K3	x	x	x	x	x	x

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

	Stock Bores Sizes					
Unit	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2
KSS1	x	—	—	—	—	—
KSS2	x	x	x	x	x	x
KSS3	x	x	x	x	x	x

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 comtaminates 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

SILVER BULLET AM™

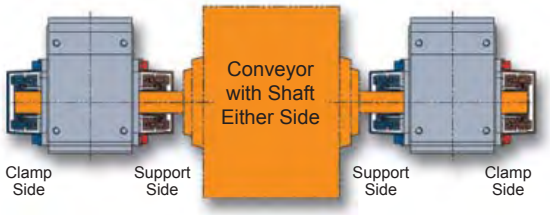
Inside Split Cover Cap – enables easy assembly onto the shaft

Outside Closed Cover Cap – protects seals from high pressure washing

The “K” Series Helical/Bevel MGS Food and Beverage Duty unit is supplied with a patented(1) 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.

Interchangeable Support Side and Clamp Side



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

(1) U.S. Patent Number 5,496,127

“KSS” Series – Stainless Steel Right Angle Helical/Bevel MGS Reducer

Food & Beverage

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 realibility plus cost savings in energy and maintenance.

Performance Specifications:

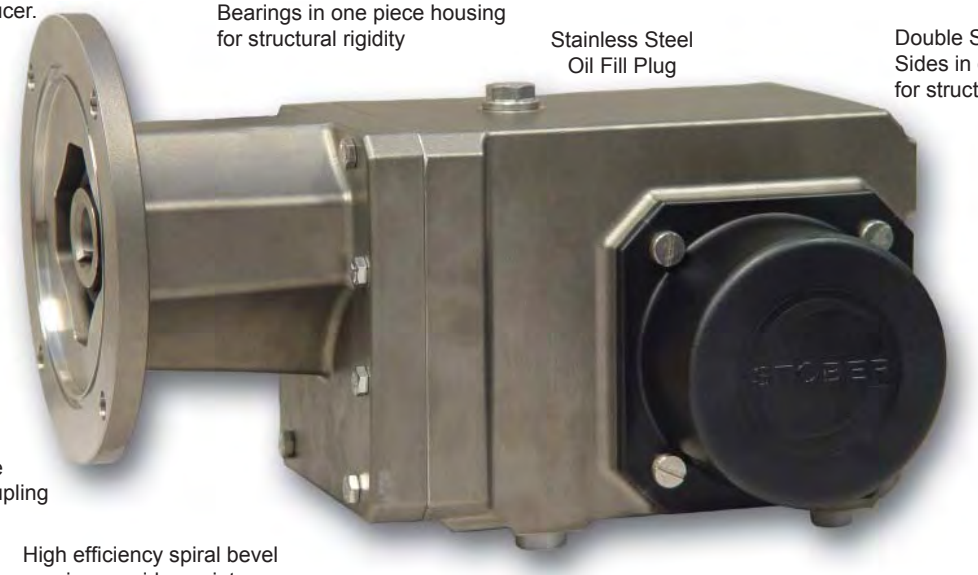
- Up to 3 HP
- Output Bore Diameters up to 1½ inch
- Ratios up to 70:1
- NEMA C-face for 56C and 143/145TC
- Totally Enclosed – no breather to allow contaminates in or oil out
- 3 Year Warranty Standard
- Maintenance free – Lubricated for Life
- Application Specific Mounting Position
- Bushing allows mounting from either side
- Shipped filled with Mobil SHC CIBUS 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

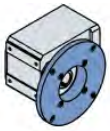
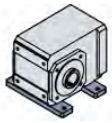
Bushing Covers Meet Safety Standards
– Outside Closed Cover – protects seals from high pressure washing
– Inside Split Cover Cap – enables easy assembly onto the shaft

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

Part No. Configurator
"KSS" Series – Stainless Steel Helical/Bevel

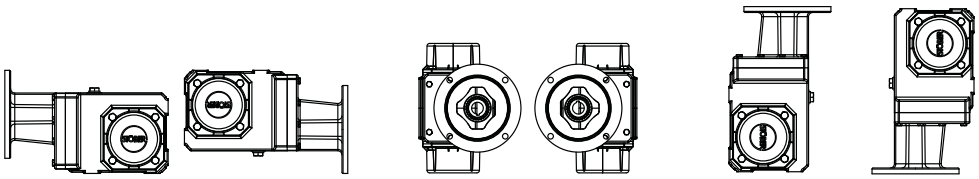
Food & Beverage

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 E34 EL5 EL6

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.

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.

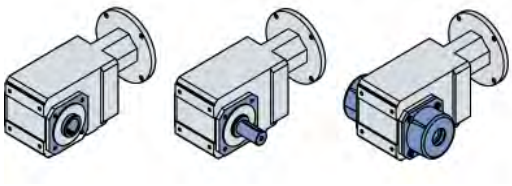
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

For oil quantity in each size and mounting position, see our web site: ***us.stober.com/lubrication-quantity/index.html***.

Maintenance

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

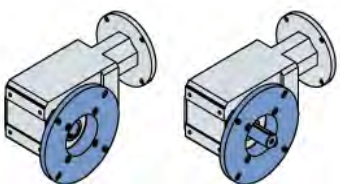
SHIPS in 1 DAY



Style AG
Hollow Output
Tapped Holes

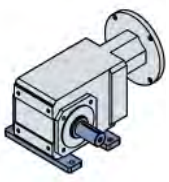
Style VG
Solid Output
Tapped Holes

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

STOBER

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	Exact	Overhung Load Output	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	C-Frame	Ratio	Shaft [4] lbs.	Input HP	Output Torque in. lbs.	Input HP in. lbs.	Output Torque
435 RPM Output (Approximate)							**360 RPM**		**290 RPM**	
2.61	364	KSS102_0040	MS1R050	56C	4.000	402	2.16	364	1.73	364
7.00*	979	KSS202_0040	MS2R050	56C	4.000	483	6.10	1,030	4.88	1,030
7.00*	979	KSS202_0040	MS2R140	143/145TC	4.000	483	6.10	1,030	4.88	1,030
9.22*	1,289	KSS302_0040	MS3R050	56C	4.000	563	7.64	1,289	6.11	1,289
9.22*	1,289	KSS302_0040	MS3R140	143/145TC	4.000	563	7.64	1,289	6.11	1,289
400 RPM Output (Approximate)							**330 RPM**		**265 RPM**	
6.60*	1,008	KSS202_0044	MS2R050	56C	4.364	497	5.76	1,061	4.61	1,061
6.60*	1,008	KSS202_0044	MS2R140	143/145TC	4.364	497	5.76	1,061	4.61	1,061
9.22*	1,406	KSS302_0044	MS3R050	56C	4.364	580	7.64	1,406	6.11	1,406
9.22*	1,406	KSS302_0044	MS3R140	143/145TC	4.364	580	7.64	1,406	6.11	1,406
340 RPM Output (Approximate)							**280 RPM**		**225 RPM**	
5.89*	1,067	KSS202_0052	MS2R050	56C	5.177	526	5.14	1,123	4.11	1,123
5.89*	1,067	KSS202_0052	MS2R140	143/145TC	5.177	526	5.14	1,123	4.11	1,123
325 RPM Output (Approximate)							**270 RPM**		**215 RPM**	
8.73*	1,640	KSS302_0054	MS3R050	56C	5.375	621	7.64	1,732	6.11	1,732
8.73*	1,640	KSS302_0054	MS3R140	143/145TC	5.375	621	7.64	1,732	6.11	1,732
315 RPM Output (Approximate)							**260 RPM**		**210 RPM**	
2.61	507	KSS102_0056	MS1R050	56C	5.568	449	2.16	507	1.73	507
290 RPM Output (Approximate)							**240 RPM**		**195 RPM**	
2.61	546	KSS102_0060	MS1R050	56C	6.000	460	2.16	546	1.73	546
5.34	1,120	KSS202_0060	MS2R050	56C	6.000	553	4.66	1,180	3.73	1,180
5.34	1,120	KSS202_0060	MS2R140	143/145TC	6.000	553	4.66	1,180	3.73	1,180
9.22*	1,933	KSS302_0060	MS3R050	56C	6.000	645	7.64	1,933	6.11	1,933
9.22*	1,933	KSS302_0060	MS3R140	143/145TC	6.000	645	7.64	1,933	6.11	1,933
260 RPM Output (Approximate)							**215 RPM**		**175 RPM**	
2.61	605	KSS102_0066	MS1R050	56C	6.644	476	2.16	605	1.73	605
4.97	1,161	KSS202_0067	MS2R050	56C	6.683	573	4.34	1,223	3.47	1,223
4.97	1,161	KSS202_0067	MS2R140	143/145TC	6.683	573	4.34	1,223	3.47	1,223
7.92*	1,865	KSS302_0067	MS3R050	56C	6.740	670	6.98	1,986	6.02	2,139
7.92*	1,865	KSS302_0067	MS3R140	143/145TC	6.740	670	6.98	1,986	6.02	2,139
245 RPM Output (Approximate)							**200 RPM**		**160 RPM**	
4.77	1,186	KSS202_0071	MS2R050	56C	7.118	585	4.16	1,249	3.33	1,249
4.77	1,186	KSS202_0071	MS2R140	143/145TC	7.118	585	4.16	1,249	3.33	1,249
235 RPM Output (Approximate)							**195 RPM**		**155 RPM**	
8.14*	2,104	KSS302_0074	MS3R050	56C	7.391	691	7.10	2,215	5.68	2,215
8.14*	2,104	KSS302_0074	MS3R140	143/145TC	7.391	691	7.10	2,215	5.68	2,215
210 RPM Output (Approximate)							**170 RPM**		**140 RPM**	
2.41	699	KSS102_0083	MS1R050	56C	8.309	513	2.10	736	1.68	736
4.27	1,253	KSS202_0084	MS2R050	56C	8.397	618	3.72	1,319	2.98	1,319
4.27	1,253	KSS202_0084	MS2R140	143/145TC	8.397	618	3.72	1,319	2.98	1,319
6.87	2,029	KSS302_0084	MS3R050	56C	8.444	722	6.06	2,160	5.20	2,315
6.87	2,029	KSS302_0084	MS3R140	143/145TC	8.444	722	6.06	2,160	5.20	2,315

* For thermal HP capacity, see rating below.

Base Module	KSS1	KSS2	KSS3
Thermal Capacity	2.95	5.36	7.38

NEMA Frame Size, TEFC, 1750 RPM		
	050	140
C-Frame	56C	143/145TC

IP69K

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

Food & Beverage

NOTE: [1] Complete Base Module Part Number by adding the ratio. Example: KSS202WG**0040**.
[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			Exact Ratio	Overhung Load Output Shaft [4]	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame		lbs.	Input HP	Output Torque in. lbs.	Input HP in. lbs.	Output Torque
190 RPM Output (Approximate)							**155 RPM**		**125 RPM**	
2.24	725	KSS102_0092	MS1R050	56C	9.249	532	1.96	763	1.56	763
4.02	1,292	KSS202_0092	MS2R050	56C	9.190	637	3.51	1,360	2.81	1,360
4.02	1,292	KSS202_0092	MS2R140	143/145TC	9.190	637	3.51	1,360	2.81	1,360
7.00	2,268	KSS302_0093	MS3R050	56C	9.267	745	6.11	2,388	4.89	2,388
7.00	2,268	KSS302_0093	MS3R140	143/145TC	9.267	745	6.11	2,388	4.89	2,388
170 RPM Output (Approximate)							**140 RPM**		**115 RPM**	
2.11	747	KSS102_0100	MS1R050	56C	10.140	548	1.84	787	1.47	787
3.78	1,332	KSS202_0100	MS2R050	56C	10.073	657	3.30	1,402	2.64	1,402
3.78	1,332	KSS202_0100	MS2R140	143/145TC	10.073	657	3.30	1,402	2.64	1,402
5.98	2,117	KSS302_0100	MS3R050	56C	10.135	768	5.27	2,254	4.54	2,428
5.98	2,117	KSS302_0100	MS3R140	143/145TC	10.135	768	5.27	2,254	4.54	2,428
150 RPM Output (Approximate)							**125 RPM**		**100 RPM**	
1.93	781	KSS102_0115	MS1R050	56C	11.565	573	1.68	822	1.35	822
3.45	1,394	KSS202_0115	MS2R050	56C	11.546	687	3.01	1,467	2.41	1,467
3.45	1,394	KSS202_0115	MS2R140	143/145TC	11.546	687	3.01	1,467	2.41	1,467
6.02	2,445	KSS302_0115	MS3R050	56C	11.610	803	5.25	2,574	4.20	2,574
6.02	2,445	KSS302_0115	MS3R140	143/145TC	11.610	803	5.25	2,574	4.20	2,574
140 RPM Output (Approximate)							**115 RPM**		**90 RPM**	
1.82	804	KSS102_0125	MS1R050	56C	12.618	590	1.59	846	1.27	846
3.24	1,439	KSS202_0125	MS2R050	56C	12.705	710	2.83	1,515	2.26	1,515
3.24	1,439	KSS202_0125	MS2R140	143/145TC	12.705	710	2.83	1,515	2.26	1,515
5.12	2,251	KSS302_0125	MS3R050	56C	12.577	825	4.52	2,397	3.89	2,582
5.12	2,251	KSS302_0125	MS3R140	143/145TC	12.577	825	4.52	2,397	3.89	2,582
125 RPM Output (Approximate)							**105 RPM**		**85 RPM**	
1.69	835	KSS102_0140	MS1R050	56C	14.114	612	1.48	879	1.18	879
3.06	1,481	KSS202_0140	MS2R050	56C	13.851	730	2.67	1,559	2.13	1,559
3.06	1,481	KSS202_0140	MS2R140	143/145TC	13.851	730	2.67	1,559	2.13	1,559
5.33	2,599	KSS302_0140	MS3R050	56C	13.935	854	4.65	2,736	3.72	2,736
5.33	2,599	KSS302_0140	MS3R140	143/145TC	13.935	854	4.65	2,736	3.72	2,736
105 RPM Output (Approximate)							**85 RPM**		**70 RPM**	
1.51	883	KSS102_0165	MS1R050	56C	16.714	648	1.32	929	1.05	929
2.68	1,581	KSS202_0170	MS2R050	56C	16.858	780	2.34	1,664	1.87	1,664
2.68	1,581	KSS202_0170	MS2R140	143/145TC	16.858	780	2.34	1,664	1.87	1,664
4.03	2,389	KSS302_0170	MS3R050	56C	16.939	911	3.56	2,544	3.07	2,740
4.03	2,389	KSS302_0170	MS3R140	143/145TC	16.939	911	3.56	2,544	3.07	2,740
100 RPM Output (Approximate)							**82 RPM**		**65 RPM**	
1.46	898	KSS102_0175	MS1R050	56C	17.563	659	1.28	945	1.02	945
2.62	1,600	KSS202_0175	MS2R050	56C	17.469	789	2.29	1,684	1.83	1,684
2.62	1,600	KSS202_0175	MS2R140	143/145TC	17.469	789	2.29	1,684	1.83	1,684
4.62	2,793	KSS302_0175	MS3R050	56C	17.293	917	4.03	2,940	3.22	2,940
4.62	2,793	KSS302_0175	MS3R140	143/145TC	17.293	917	4.03	2,940	3.22	2,940

See Page 8 for Part No. Co

"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	Exact	Overhung Load	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	C-Frame	Ratio	Output Shaft [4] lbs.	Input HP	Output Torque in. lbs.	Input HP in. lbs.	Output Torque
85 RPM Output (Approximate)							**70 RPM**		**55 RPM**	
1.33	940	KSS102_0200	MS1R050	56C	20.150	690	1.15	974	0.92	974
2.37	1,683	KSS202_0200	MS2R050	56C	20.327	830	2.07	1,772	1.65	1,772
2.37	1,683	KSS202_0200	MS2R140	143/145TC	20.327	830	2.07	1,772	1.65	1,772
3.56	2,526	KSS302_0200	MS3R050	56C	20.278	967	3.14	2,690	2.71	2,898
3.56	2,526	KSS302_0200	MS3R140	143/145TC	20.278	967	3.14	2,690	2.71	2,898
75 RPM Output (Approximate)							**60 RPM**		**50 RPM**	
1.21	986	KSS102_0230	MS1R050	56C	23.265	723	1.06	1,038	0.85	1,038
2.17	1,758	KSS202_0230	MS2R050	56C	23.180	867	1.81	1,772	1.45	1,772
2.17	1,758	KSS202_0230	MS2R140	143/145TC	23.180	867	1.81	1,772	1.45	1,772
3.79	3,084	KSS302_0230	MS3R050	56C	23.292	1,013	3.15	3,100	2.52	3,100
3.79	3,084	KSS302_0230	MS3R140	143/145TC	23.292	1,013	3.15	3,100	2.52	3,100
70 RPM Output (Approximate)							**55 RPM**		**45 RPM**	
0.96	851	KSS102_0250	MS1R050	56C	25.220	743	0.80	851	0.64	851
2.02	1,772	KSS202_0250	MS2R050	56C	25.130	891	1.67	1,772	1.34	1,772
2.02	1,772	KSS202_0250	MS2R140	143/145TC	25.130	891	1.67	1,772	1.34	1,772
2.91	2,566	KSS302_0250	MS3R050	56C	25.259	1,041	2.56	2,732	2.21	2,943
2.91	2,566	KSS302_0250	MS3R140	143/145TC	25.259	1,041	2.56	2,732	2.21	2,943
60 RPM Output (Approximate)							**50 RPM**		**40 RPM**	
1.07	1,049	KSS102_0280	MS1R050	56C	28.048	770	0.90	1,063	0.72	1,063
1.81	1,772	KSS202_0280	MS2R050	56C	27.950	923	1.50	1,772	1.20	1,772
1.81	1,772	KSS202_0280	MS2R140	143/145TC	27.950	923	1.50	1,772	1.20	1,772
3.18	3,100	KSS302_0280	MS3R050	56C	27.883	1,076	2.64	3,100	2.11	3,100
3.18	3,100	KSS302_0280	MS3R140	143/145TC	27.883	1,076	2.64	3,100	2.11	3,100
55 RPM Output (Approximate)							**45 RPM**		**36 RPM**	
2.76	3,100	KSS303_0330	MS3R050	56C	32.649	1,134	2.28	3,100	1.83	3,100
2.76	3,100	KSS303_0330	MS3R140	143/145TC	32.649	1,134	2.28	3,100	1.83	3,100
52 RPM Output (Approximate)							**43 RPM**		**35 RPM**	
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
50 RPM Output (Approximate)							**40 RPM**		**33 RPM**	
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
45 RPM Output (Approximate)							**38 RPM**		**30 RPM**	
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

NEMA Frame Size, TEFC, 1750 RPM		
	050	140
C-Frame	56C	143/145TC

IP69K

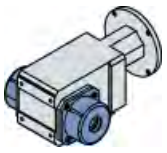
"KSS" Series – Stainless Steel MGS Reducer – Selection Data

Food & Beverage

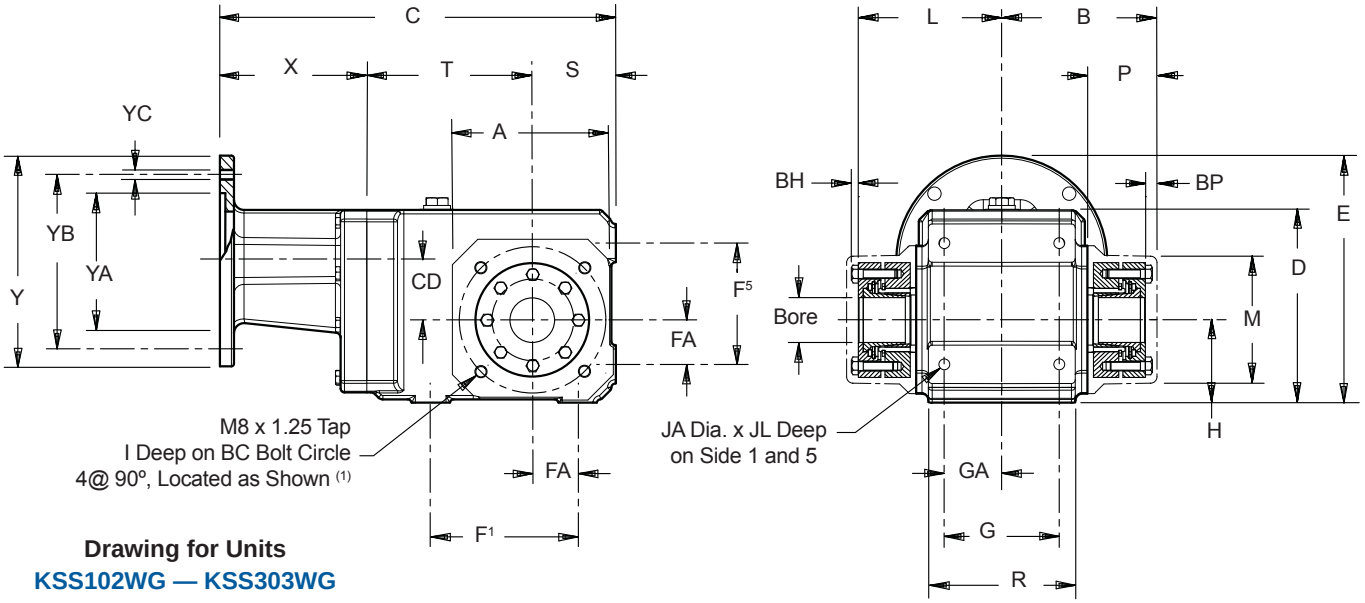
NOTE: [1] Complete Base Module Part Number by adding the ratio. Example: KSS202WG**0040**.
[2] Select the NEMA C-Face Motor Adapter and add to Part Number. Example **MS2R050** for 56C.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.

1750 RPM Input		PART NUMBER		NEMA	Exact	Overhung Load	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	C-Frame	Ratio	Output Shaft [4] lbs.	Input HP	Output Torque in. lbs.	Input HP in. lbs.	Output Torque
43 RPM Output (Approximate)							**36 RPM**		**29 RPM**	
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
40 RPM Output (Approximate)							**32 RPM**		**26 RPM**	
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
35 RPM Output (Approximate)							**28 RPM**		**23 RPM**	
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
30 RPM Output (Approximate)							**25 RPM**		**20 RPM**	
0.38	753	KSS102_0560	MS1R050	56C	56.095	970	0.32	753	0.26	753
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
27 RPM Output (Approximate)							**22 RPM**		**18 RPM**	
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
25 RPM Output (Approximate)							**21 RPM**		**17 RPM**	
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
22 RPM Output (Approximate)							**18 RPM**		**15 RPM**	
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
19 RPM Output (Approximate)							**16 RPM**		**12.5 RPM**	
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
16 RPM Output (Approximate)							**13 RPM**		**10 RPM**	
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
13 RPM Output (Approximate)							**11 RPM**		**8.5 RPM**	
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
10 RPM Output (Approximate)							**8 RPM**		**7 RPM**	
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 8 for Part No. Co



"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)**

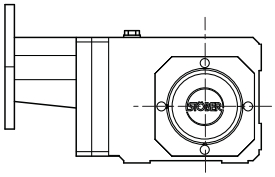
Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F1	F5	G	H	I	L	M	P	R
KSS102WG_MS1R050	56C	4.53	4.06	10.55	4.96	7.00	3.54	2.95	2.76	2.36	.51	3.54	3.07	1.97	3.54
KSS202WG_MS2R050	56C	4.96	4.72	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	4.30	3.92	2.09	4.41
KSS202WG_MS2R140	143/145TC	4.96	4.72	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	4.30	3.92	2.09	4.41
KSS302WG_MS3R050	56C	5.20	4.96	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	4.96	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	4.96	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	4.96	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	2.09	1.38	2.09	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	2.09	1.38	2.09	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	1.38	2.09	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	1.38	2.09	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 3/16	1 1/4	1 3/8	1 7/16	1 1/2
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



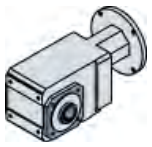
(1) KSS1 and KSS3 holes are located as shown here.

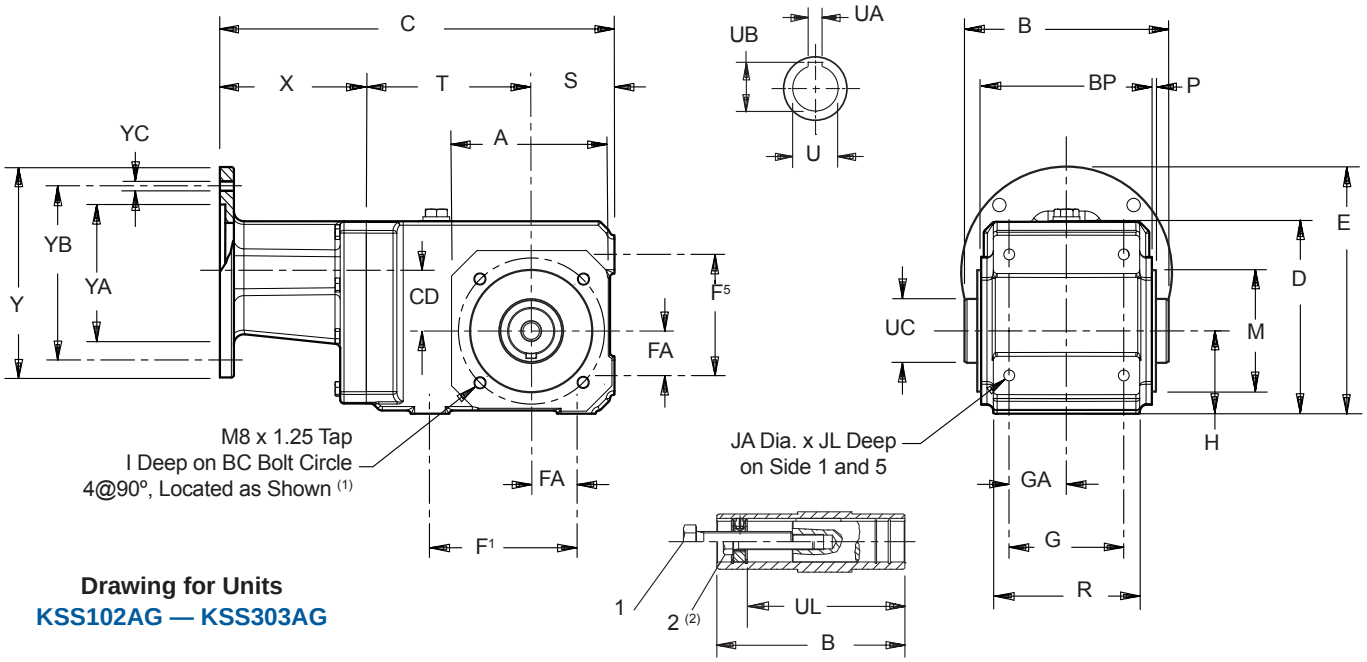
Table No. 4
"WFBSS" – Double Side Bushings – Metric

Unit	Stock Bores Sizes – mm		
	25	30	35
KSS1	WFBSS1-25	—	—
KSS2	—	WFBSS2-30	WFBSS2-35
KSS3	—	WFBSS3-30	WFBSS3-35

Part No. Example
Stainless Steel Unit
143TC Frame Motor Adapter
and 1 7/16 Bushing Bore
KSS202WG0100 MS2R140
WFBSS2-107

"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)**

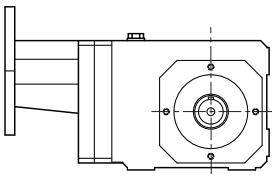
Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F1	F5	G	H	I	M	P	R	S
KSS102AG_MS1R050	56C	4.53	4.72	10.55	4.96	7.00	3.54	2.95	2.76	2.36	.51	2.95	.12	3.54	2.36
KSS202AG_MS2R050	56C	4.96	5.83	12.20	5.94	7.60	4.53	3.74	3.54	2.56	.51	3.74	.12	4.41	2.56
KSS202AG_MS2R140	143/145TC	4.96	5.83	12.20	5.94	7.60	4.53	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	2.09	1.38	2.09	M10 x 1.50	.63	4.500	5.87	.41	55
KSS302AG_MS3R140	5.91	4.37	6.50	4.53	5.75	2.09	1.38	2.09	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303AG_MS3R050	5.91	4.00	6.50	4.53	5.75	.63	1.38	2.09	M10 x 1.50	.63	4.500	5.87	.41	55
KSS303AG_MS3R140	5.91	4.00	6.50	4.53	5.75	.63	1.38	2.09	M10 x 1.50	.63	4.500	5.87	.41	55

Table No. 3 **Standard Bore – Inches**

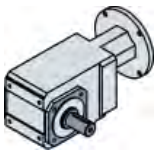
Base Module	U	UA	UB	UC	UL	1 Removal Bolt
KSS102	1.000	.250	1.11	1.57	3.86	1/2-13
KSS202	1.250	.250	1.37	1.97	4.78	1/2-13
KSS302/303	1.375	.312	1.52	1.97	4.92	5/8-11



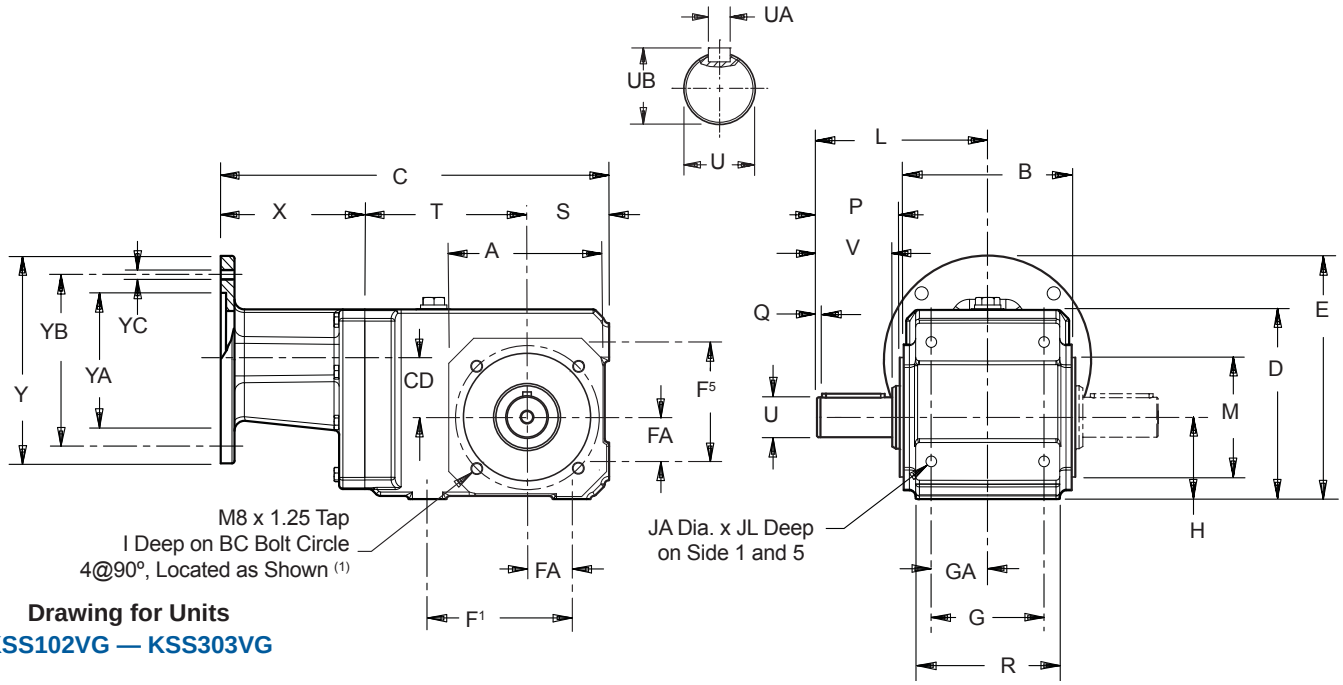
(1) KSS1 and KSS3 holes are located as shown here.

Part No. Example
Hollow Bore Stainless Steel Unit
143TC Frame Motor Adapter

(2) Mounting bolt, supplied by customer, must be smaller than Removal 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)**

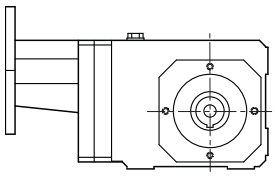
Unit with Motor Adapter	NEMA C-Face	A	B	C	D	E	F¹	F⁵	G	H	I	L	M	P	Q	R
KSS102VG_MS1R050	56C	4.53	4.17	10.55	4.96	7.03	3.54	2.95	2.76	2.36	.51	4.53	2.95	2.32	.16	3.54
KSS202VG_MS2R050	56C	4.96	5.28	12.20	5.94	7.62	4.53	3.74	3.54	2.56	.51	5.35	3.74	2.60	.16	4.41
KSS202VG_MS2R140	143/145TC	4.96	5.28	12.20	5.94	7.62	4.53	3.74	3.54	2.56	.51	5.35	3.74	2.60	.16	4.41
KSS302VG_MS3R050	56C	5.20	5.75	13.23	6.56	8.29	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51
KSS302VG_MS3R140	143/145TC	5.20	5.75	13.23	6.56	8.29	5.12	4.13	4.13	2.95	.55	5.59	3.74	2.60	.16	5.51
KSS303VG_MS3R050	56C	5.20	5.75	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	5.75	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	2.09	1.38	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	2.09	1.38	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	1.38	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	1.38	2.07	M10 x 1.50	.63	4.500	5.87	.41	55

Table No. 3 **Standard Shaft – Inches**

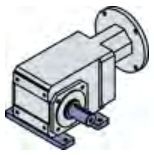
Base Module	U	UA - Key	UB
KSS102	1.000	$^1/_4$x$^1/_4$x1$^9/_{16}$	1.11
KSS202	1.250	$^1/_4$x$^1/_4$x1$^{15}/_{16}$	1.36
KSS302/303	1.250	$^1/_4$x$^1/_4$x1$^{15}/_{16}$	1.36



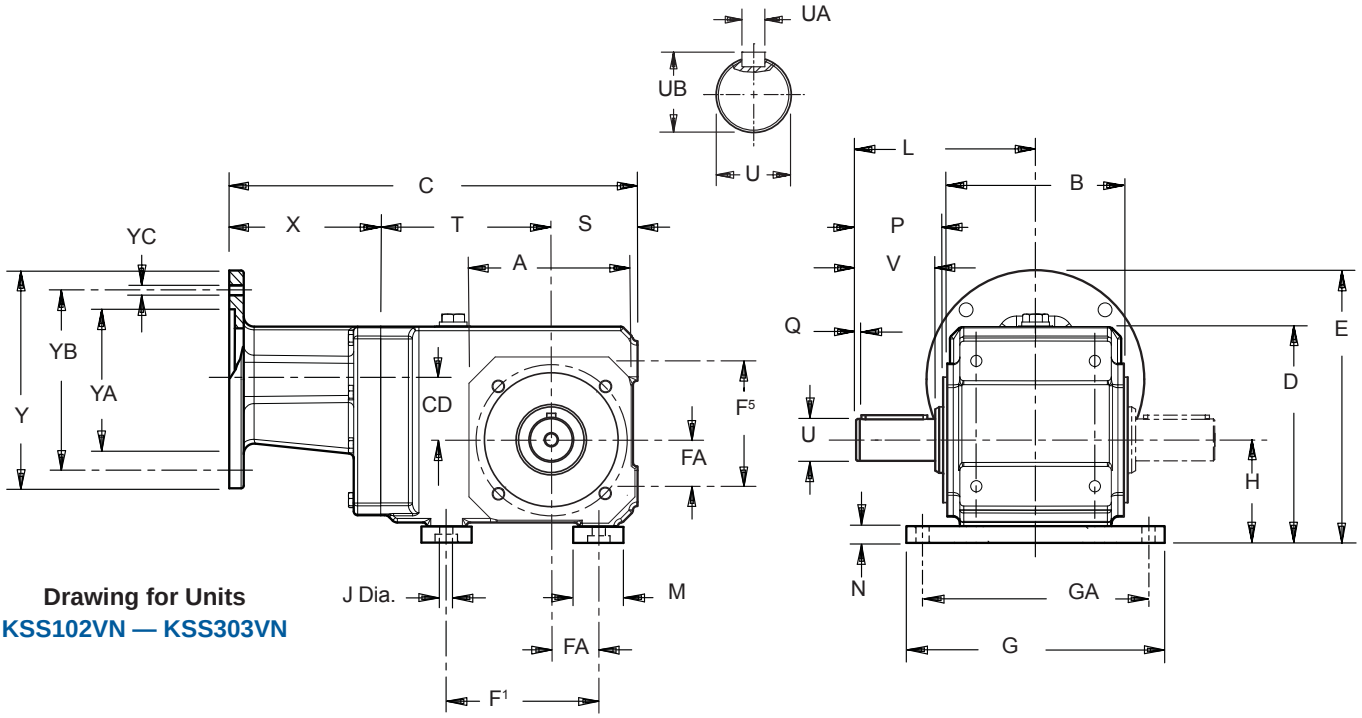
(1) KSS1 and KSS3 holes are located as shown here.

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



Food & Beverage



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	F1	F5	G	H	J	L	M	N
KSS102VN_MS1R050	56C	4.53	4.17	10.55	4.96	7.03	3.54	2.95	5.51	2.36	.33	4.53	1.50	.50
KSS202VN_MS2R050	56C	4.96	5.28	12.20	6.46	8.10	4.53	3.74	7.72	3.07	.39	5.35	1.50	.50
KSS202VN_MS2R140	143/145TC	4.96	5.28	12.20	6.46	8.10	4.53	3.74	7.72	3.07	.39	5.35	1.50	.50
KSS302VN_MS3R050	56C	5.20	5.75	13.23	7.07	8.77	5.12	4.13	7.72	3.44	.39	5.59	1.50	.50
KSS302VN_MS3R140	143/145TC	5.20	5.75	13.23	7.07	8.77	5.12	4.13	7.72	3.44	.39	5.59	1.50	.50
KSS303VN_MS3R050	56C	5.20	5.75	15.22	7.07	7.33	5.12	4.13	7.72	3.44	.39	5.59	1.50	.50
KSS303VN_MS3R140	143/145TC	5.20	5.75	15.22	7.07	7.33	5.12	4.13	7.72	3.44	.39	5.59	1.50	.50

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

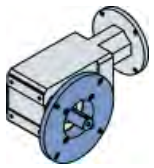
Unit with Motor Adapter	P	Q	S	T	V	X	Y	CD	FA	GA	YA	YB	YC	Wt. lbs.
KSS102VN_MS1R050	2.32	.16	2.36	4.37	1.97	3.81	6.50	1.42	1.18	4.53	4.500	5.87	.41	29
KSS202VN_MS2R050	2.60	.16	2.56	5.12	2.36	4.53	6.50	1.81	1.38	6.73	4.500	5.87	.41	40
KSS202VN_MS2R140	2.60	.16	2.56	5.12	2.36	4.53	6.50	1.81	1.38	6.73	4.500	5.87	.41	40
KSS302VN_MS3R050	2.60	.16	2.95	5.91	2.36	4.37	6.50	2.09	1.38	6.73	4.500	5.87	.41	55
KSS302VN_MS3R140	2.60	.16	2.95	5.91	2.36	4.37	6.50	2.09	1.38	6.73	4.500	5.87	.41	55
KSS303VN_MS3R050	2.60	.16	2.95	5.91	2.36	4.00	6.50	.63	1.38	6.73	4.500	5.87	.41	55
KSS303VN_MS3R140	2.60	.16	2.95	5.91	2.36	4.00	6.50	.63	1.38	6.73	4.500	5.87	.41	55

Table No. 3 **Standard Shaft – Inches**

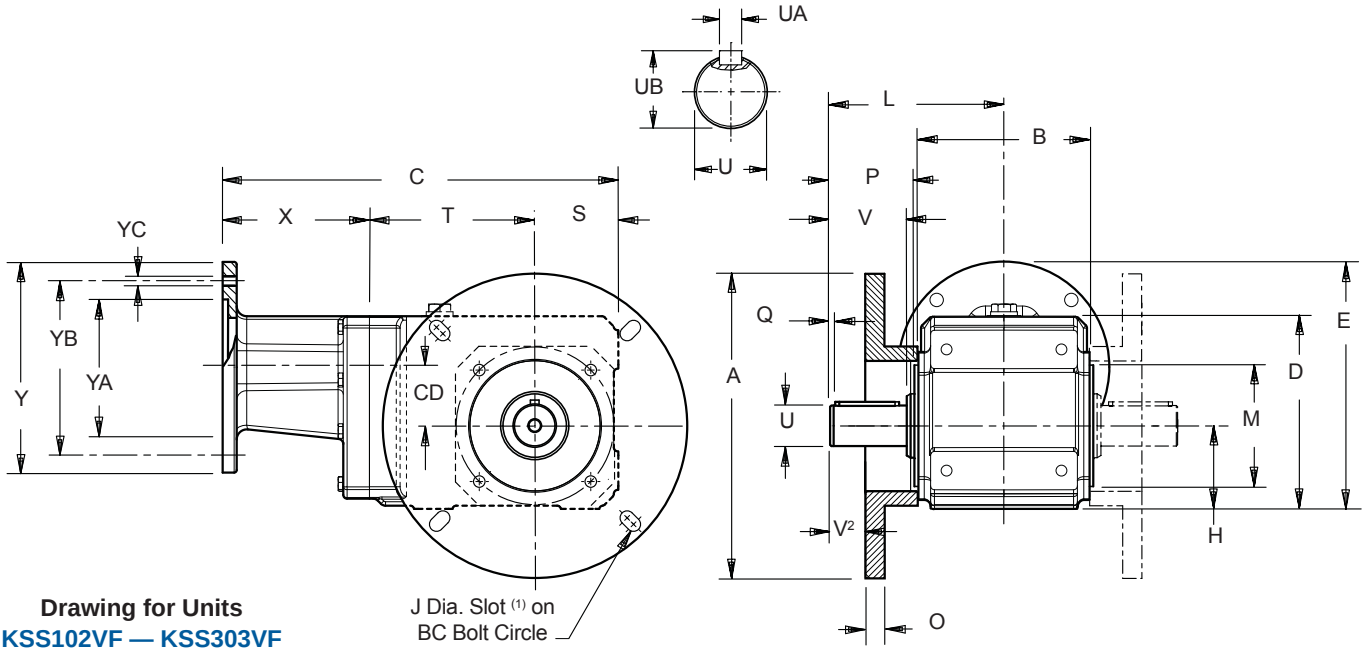
Base Module	U	UA - Key	UB
KSS102	1.000	$^1/_4$x$^1/_4$x1$^9/_{16}$	1.11
KSS202	1.250	$^1/_4$x$^1/_4$x1$^{15}/_{16}$	1.36
KSS302/303	1.250	$^1/_4$x$^1/_4$x1$^{15}/_{16}$	1.36

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	H	J (1)	L	M	O	P	Q	S	T
KSS102VF_MS1R050	56C	6.75	4.17	10.55	4.96	7.03	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	7.62	2.56	.41	5.35	3.74	.55	2.60	.16	2.56	5.12
KSS202VF_MS2R140	143/145TC	8.74	5.28	12.20	5.94	7.62	2.56	.41	5.35	3.74	.55	2.60	.16	2.56	5.12
KSS302VF_MS3R050	56C	8.74	5.75	13.23	6.56	8.29	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS302VF_MS3R140	143/145TC	8.74	5.75	13.23	6.56	8.29	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS303VF_MS3R050	56C	8.74	5.75	15.22	6.56	6.83	2.95	.41	5.59	3.74	.55	2.60	.16	2.95	5.91
KSS303VF_MS3R140	143/145TC	8.74	5.75	15.22	6.56	6.83	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 Min.	BC Max.	CD	YA	YB	YC	Wt. lbs.
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	2.09	4.500	5.87	.41	55
KSS302VF_MS3R140	2.36	1.10	4.37	6.50	7.48	8.00	2.09	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	$^1/_4$x$^1/_4$x$^{19}/_{16}$	1.11
KSS202	1.250	$^1/_4$x$^1/_4$x$1^{15}/_{16}$	1.36
KSS302/303	1.250	$^1/_4$x$^1/_4$x$1^{15}/_{16}$	1.36

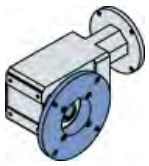
Part No. Example

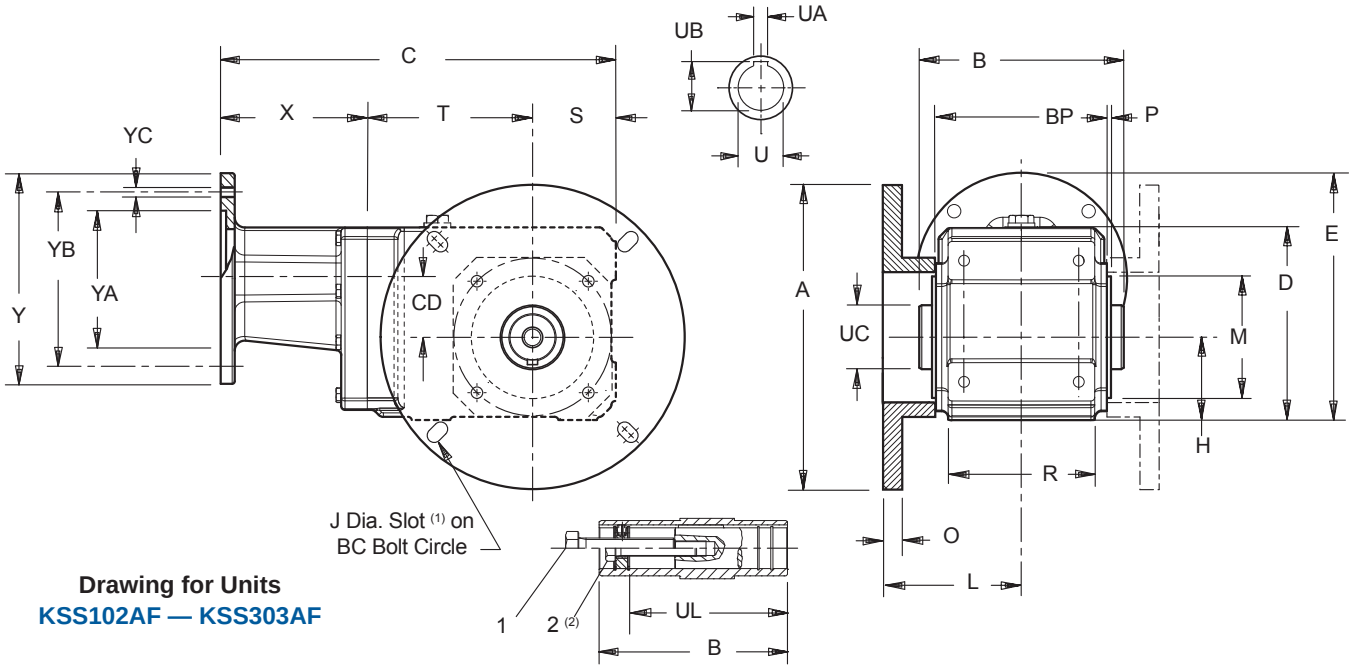
Solid Shaft, Flange Mounted Stainless Steel Unit
143TC Frame Motor Adapter
KSS202VF0100 MS2R140
(Shaft shown on Side 2)

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

IP69K

"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 (1)	L	M	O	P	R
KSS102AF_MS1R050	56C	6.75	4.72	10.09	4.96	7.03	2.36	.33	3.59	2.95	.55	.12	3.54
KSS202AF_MS2R050	56C	8.74	5.83	12.20	5.94	7.62	2.56	.41	4.14	3.74	.55	.12	4.41
KSS202AF_MS2R140	143/145TC	8.74	5.83	12.20	5.94	7.62	2.56	.41	4.14	3.74	.55	.12	4.41
KSS302AF_MS3R050	56C	8.74	6.30	13.23	6.56	8.29	2.95	.41	4.37	3.74	.55	.12	5.51
KSS302AF_MS3R140	143/145TC	8.74	6.30	13.23	6.56	8.29	2.95	.41	4.37	3.74	.55	.12	5.51
KSS303AF_MS3R050	56C	8.74	6.30	15.22	6.56	6.83	2.95	.41	4.37	3.74	.55	.12	5.51
KSS303AF_MS3R140	143/145TC	8.74	6.30	15.22	6.56	6.83	2.95	.41	4.37	3.74	.55	.12	5.51

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

Unit with Motor Adapter	S	T	X	Y	BC Min.	BC Max	BP	CD	YA	YB	YC	Wt. lbs.
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	2.09	4.500	5.87	.41	55
KSS302AF_MS3R140	2.95	5.91	4.37	6.50	7.48	8.00	5.75	2.09	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 Removal Bolt
KSS102	1.000	.250	1.11	1.57	3.86	1/2-13
KSS202	1.250	.250	1.37	1.97	4.78	1/2-13
KSS302/303	1.375	.312	1.52	1.97	4.92	5/8-11

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

(1) KSS1 mounting bolt hole is not a slot.
(2) Mounting bolt, supplied by customer, must be smaller than Removal bolt.
All weights are approximate.

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

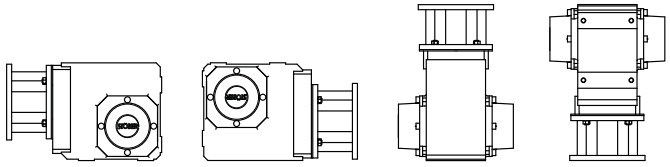
Part No. Configurator
"K" Series – Food and Beverage Duty

Mounting Positions – Standard 3 Year Warranty

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

Standard Oil: Mobil 600XP220

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



EL1 **EL2** **EL5** **EL6**

EL6 is possible but not recommended

"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.)

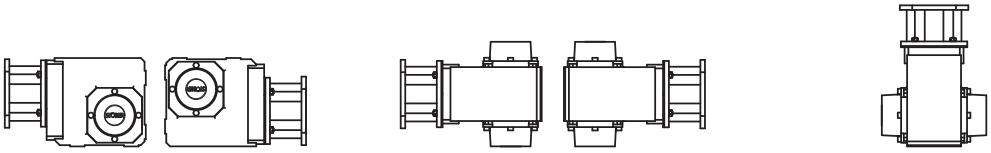
EL5 Side 5 is the side opposite the motor. Side 5 is the down side for EL5.

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 **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.

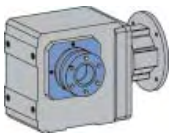
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

For oil quantity in each size and mounting position, see our web site: ***us.stober.com/lubrication-quantity/***.

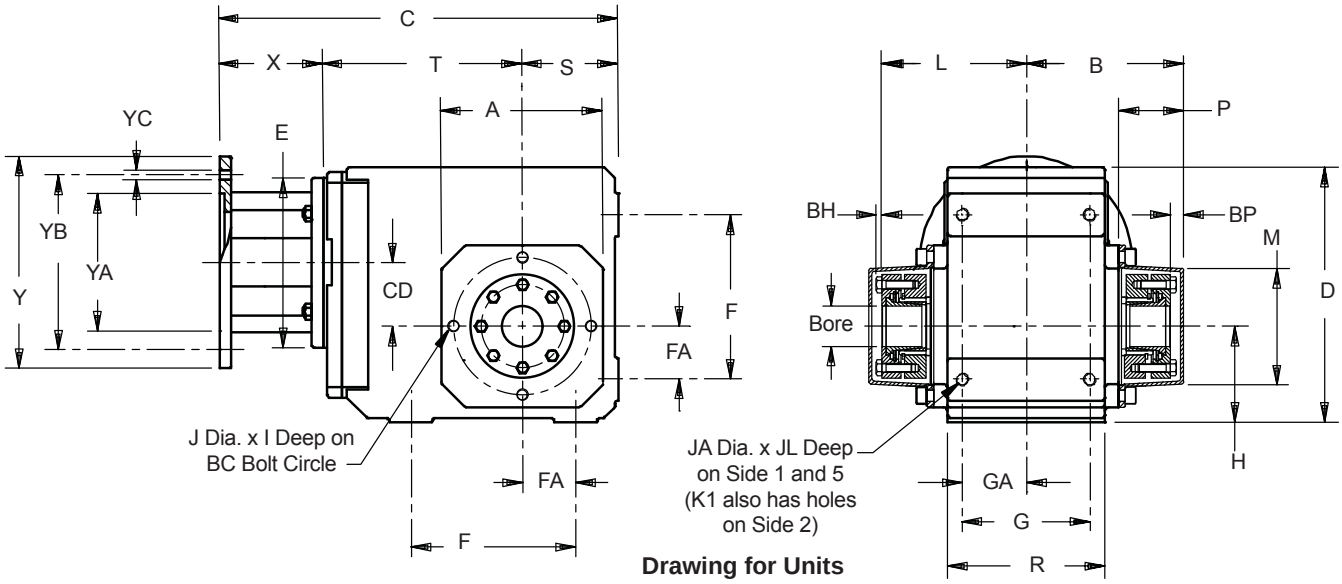
Maintenance

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 28



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_1	BC	BP	BH	FA	GA	JA	JL
KL202	3.80	3.50	4.25	2.16	2.56	2.16	.43	M6 ×1	3.28	2.96	1.58	3.62	2.16	—	2.95	.22	.16	1.08	1.28	M8×1.25	.43
K102	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8×1.25	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8×1.25	.51
K202/203	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8×1.25	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10×1.5	.63
K302/303	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8×1.25	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10×1.5	.63
K402/403	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10×1.5	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12×1.75	.75
K513/514	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10×1.5	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16×2.0	1.02
K613/614	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10×1.5	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16×2.0	1.02
K713/714	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12×1.75	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20×2.5	1.22
K813/814	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12×1.75	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24×3	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

Food Duty Unit
143TC Frame Motor Adapter
and $1^{7}/_{16}$ Bushing Bore
K303WG0650 MR160/140F
WFB3-107

Beverage Duty Unit
K303WG0650 MR160/140B
WFB3-107

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

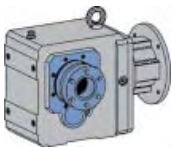
Table No. 3
"WFB" – Double Bushings – Metric

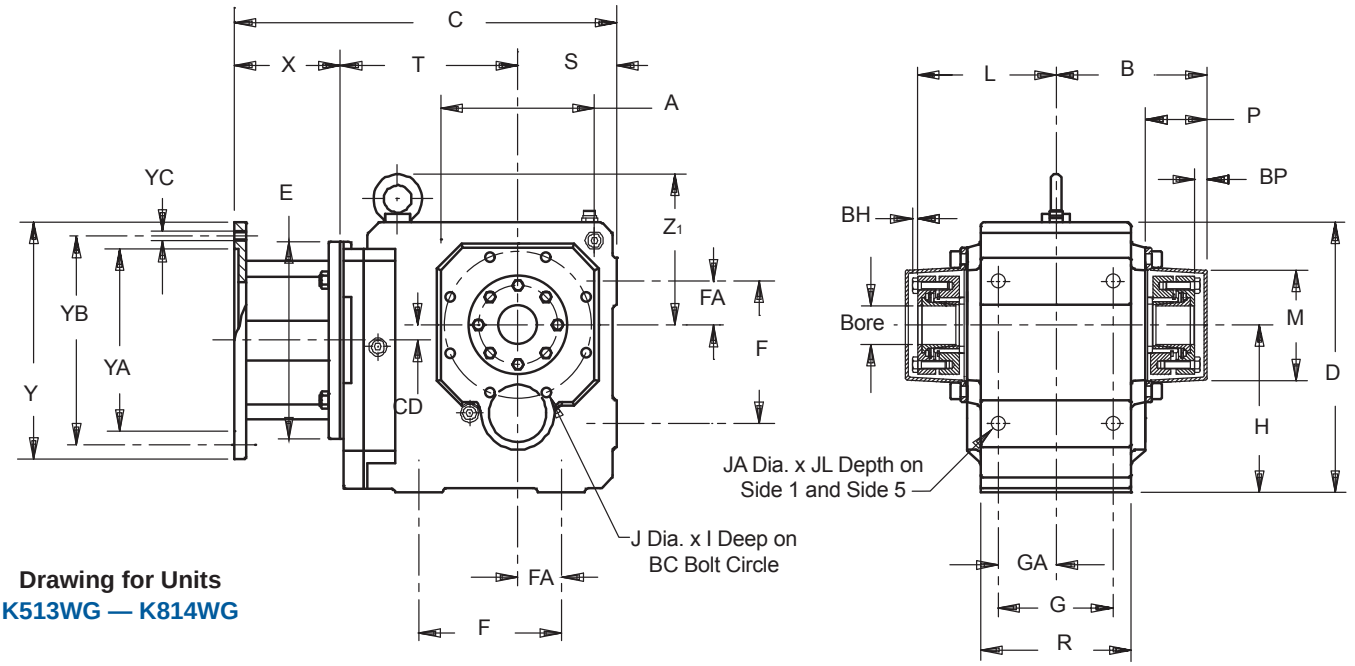
Unit	Stock Bores Sizes – mm			
	25	30	35	40
K1	WFB1-25	—	—	—
K2	WFB2-25	WFB2-30	—	—
K3	—	WFB3-30	WFB3-35	—
K4	—	—	—	WFB4-40
K5	—	—	—	WFB5-40
K6	—	—	—	WFB6-40

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

Unit	Stock Bores Sizes						
	$^{3}/_{4}$	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$
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							

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 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.

[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.

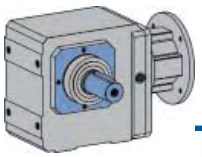
[3] Also available as **MR300/180** for NEMA 182/184TC, **MR300/210** for NEMA 213/215TC, and **MR300/280** for NEMA 284/286TC frame motor.

All weights are approximate.

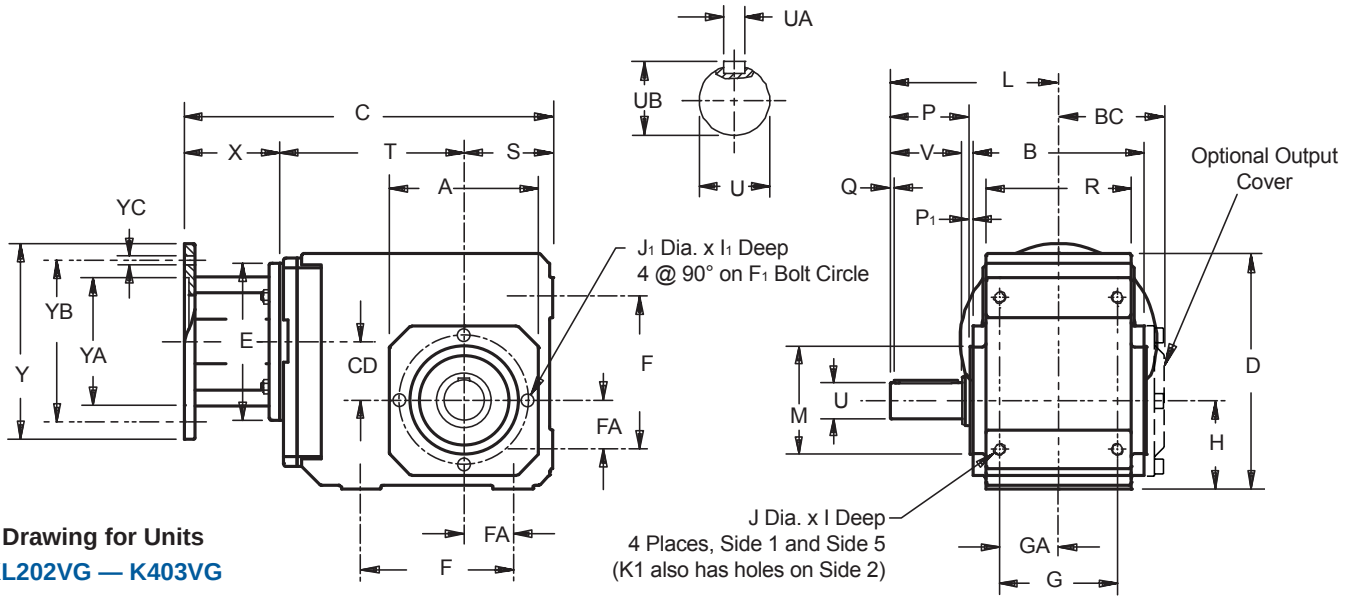
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

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

	Stock Bores Sizes – Inches											
Unit	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
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	—	—	—	—								



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_1	FA	G	GA	H	I	I_1	J	J_1	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

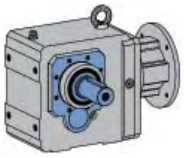
Table No. 2

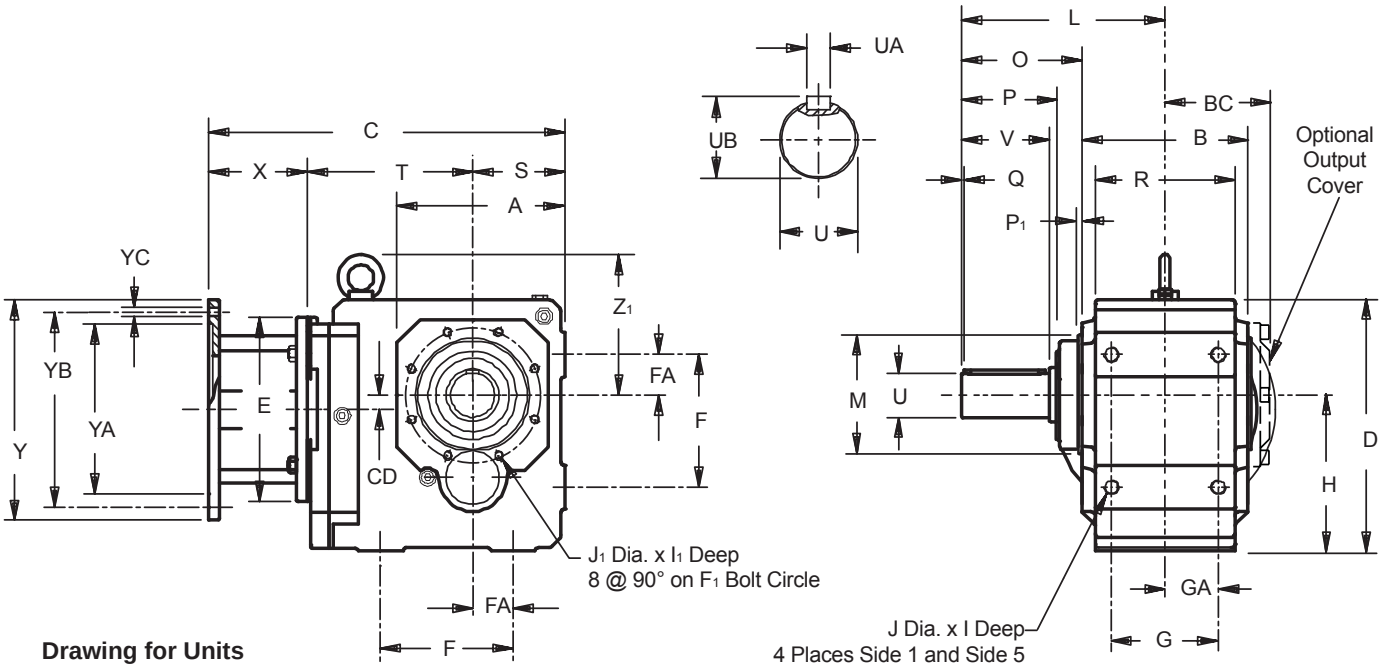
Base Module	M	O	P	P_1	R	Q	S	U	UA – Key	UB	V	Z_1
KL202	2.953	—	1.57	.16	3.62	.12	2.17	.750	$^3/_{16}\times^3/_{16}\times1^1/_4$	1.11	1.57	—
K102	2.953	—	2.32	.12	3.54	.16	2.36	1.000	$^1/_4\times^1/_4\times1^9/_{16}$	1.11	1.97	—
K202/203	3.228	—	2.56	.12	4.53	.16	2.56	1.250	$^1/_4\times^1/_4\times1^{15}/_{16}$	1.36	2.36	—
K302/303	3.740	—	2.60	.12	5.12	.16	2.95	1.250	$^1/_4\times^1/_4\times1^{15}/_{16}$	1.36	2.36	—
K402/403	4.331	—	3.39	.14	5.83	.16	3.54	1.375	$^5/_{16}\times^5/_{16}\times2^5/_{16}$	1.51	2.76	—
K513/514	4.331	5.10	3.90	.14	6.30	.16	3.94	1.750	$^3/_8\times^3/_8\times3^5/_{32}$	1.92	3.54	5.98
K613/614	5.512	5.35	4.31	.14	6.61	.16	4.72	1.750	$^3/_8\times^3/_8\times3^5/_{32}$	1.92	3.94	6.77
K713/714	6.102	6.46	5.14	.14	7.48	.16	4.92	2.375	$^5/_8\times^5/_8\times3^{15}/_{16}$	2.65	4.72	7.52
K813/814	7.283	7.28	5.94	.16	9.25	.20	5.71	2.875	$^3/_4\times^3/_4\times4^5/_{16}$	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							

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 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
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

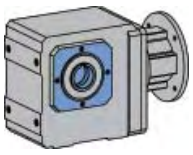
[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.
All weights are approximate.

Part No. Example

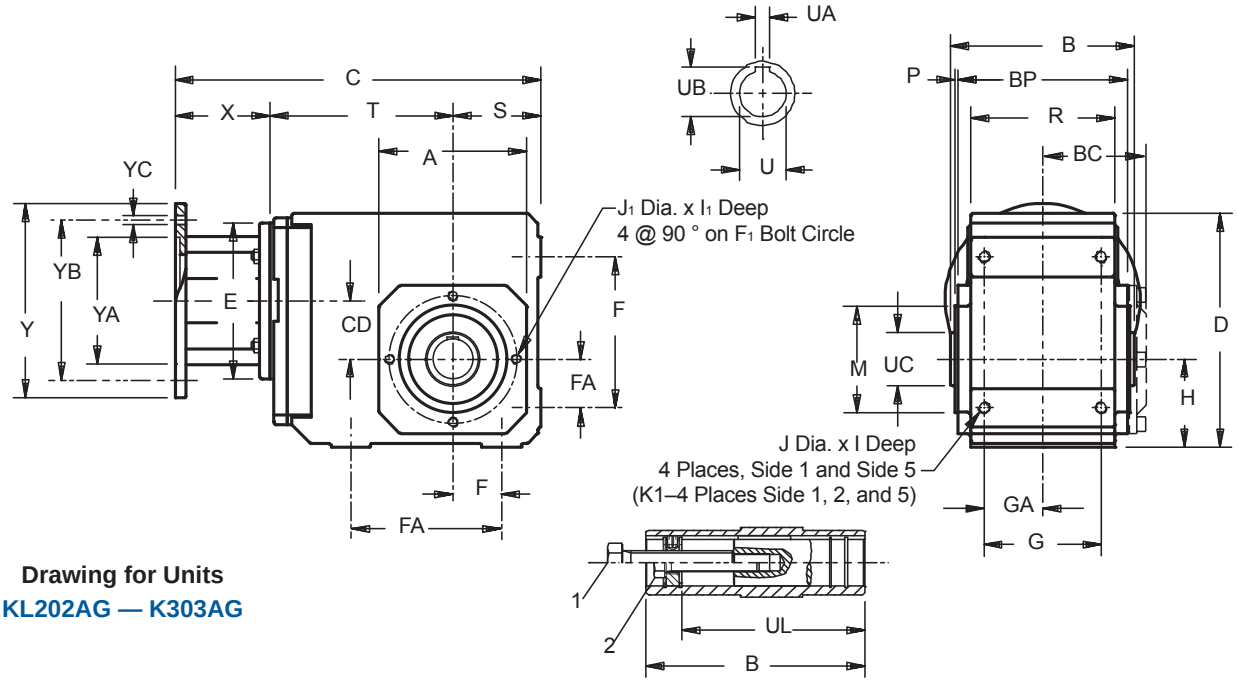
Food Duty Unit
with 143TC Frame Motor Adapter and Output Shaft
K303VG0650 MR160/140F
Specify: Shaft Side

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_1	G	H	I	I_1	J	J_1	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	3/8-16
K102	1.000	.250	1.12	.1.57	3.86	1/2-13
K202/203	1.250	250	1.37	.1.77	4.78	1/2-13
K302/303	1.250	250	1.37	1.97	4.92	5/8-11
	1.375	.312	1.52	1.97	4.92	5/8-11

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

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".

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

Base	ML2R050			MR140/050			MR160/140 [1]			MR200/180			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.

"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 (Series) **3** (Size) - **108** (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 $^{8}/_{16}$ or $1^{1}/_{2}$

SWF (Series) **3** (Size) **C** (Covers) - **108** (Bushing Bore)

Series	**SWF**	**S**tandard Carbon Steel **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 $^{8}/_{16}$ or $1^{1}/_{2}$

WF (Series) **3** (Size) - **108** (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 $^{8}/_{16}$ or $1^{1}/_{2}$

SWF (Series) **3** (Size) - **108** (Bushing Bore)

Series	**SWF**	**S**tandard Carbon Steel **W**obble **F**ree Single Side **B**ushing
Size	**3**	Sizes available: **K3** (only)
Bushing Bore	**108**	Bushing bore in inches: **108** – 1 and $^{8}/_{16}$ or $1^{1}/_{2}$

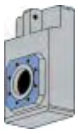
WFB (Series) **KL2** (Size) - **012** (Bushing Bore)

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 bo

Part No. Configurator
"F" Series – Food and Beverage Reducers

Part No. Explanation

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

Completed part number for standard warranty unit.

Coating options: white or stainless steel

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.

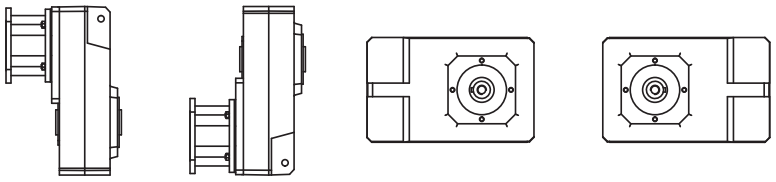
Part No. Configurator
"F" Series – Food and Beverage Reducers

Mounting Positions – Standard 3 Year Warranty

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

Standard Oil: Mobil 600XP220

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



EL1 EL2 EL3 EL4

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.)

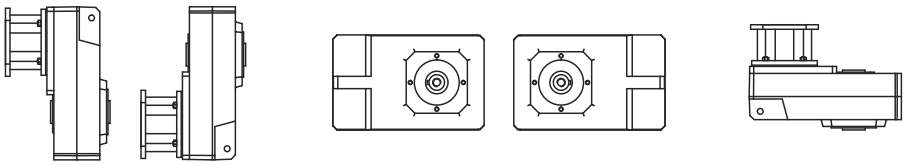
EL3 Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.

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 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.

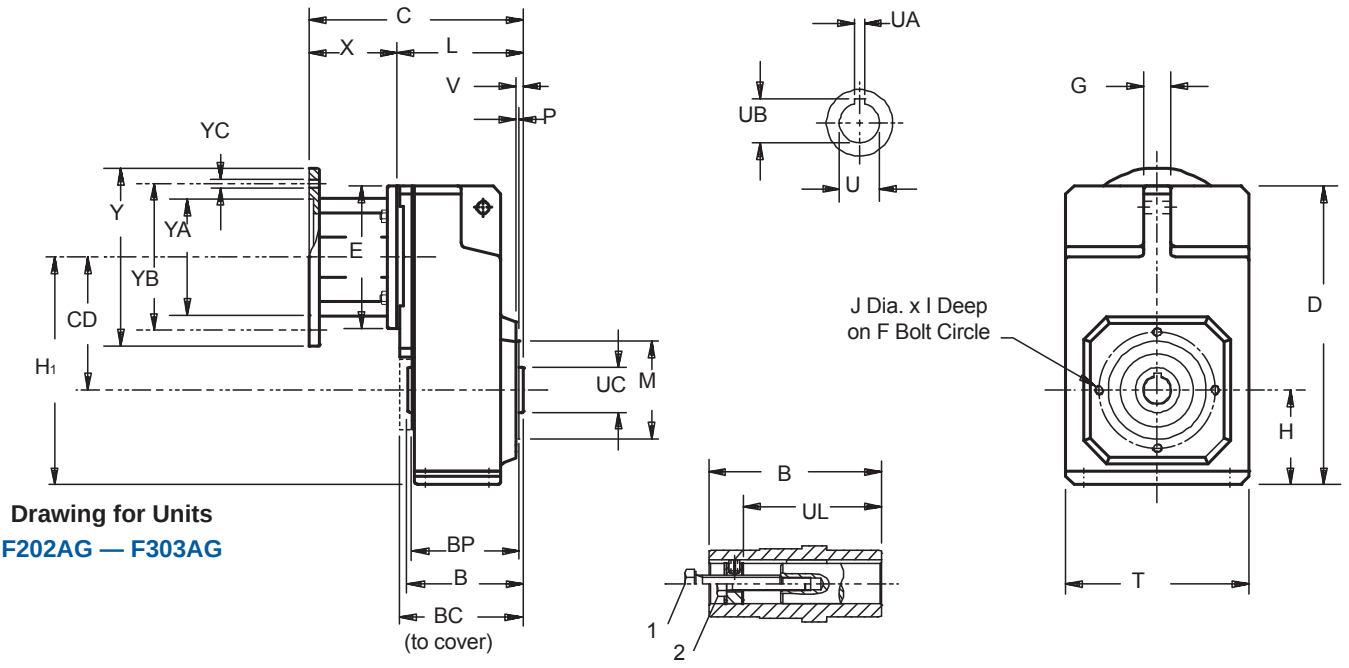
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

For oil quantity in each size and mounting position, see our web site: ***us.stober.com/lubrication-quantity/index.html***.

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

Selection Data begins on Page 72

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



Drawing for Units
F202AG — F303AG

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

Base Module	CD	B	D	F	G	H	H_1	I	J	M	P	T	U	V	BC	BP	UA	UB	UC	UL	1
F2	5.16	4.53	11.77	4.53	.87	3.66	8.82	.51	M8×1.25	3.740	.12	7.09	1.000	.31	4.76	4.13	.250	1.12	1.77	3.62	1/2-13
F3	5.89	5.12	13.23	5.12	1.18	4.17	10.06	.63	M10×1.5	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.
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. 3 **"F" Series Unit Dimensions (Inches)**

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

[1] 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.

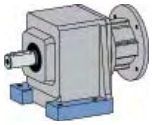
All weights are approximate.

Notes

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	**C**	Concentic Helical (output and input in-line; gears are all helical)
Size	**4**	C1, C2, C3, **C4**, C5, C6
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 
Ratio	**0135**	Approximate: **0135** = 13.5:1 (range of 2:1 up to 276:1)
Motor Adapter	**MR160/**	MR140/, **MR160/**, MR200/, MR250/, MR300/
NEMA Frame Size	**140**	050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC)
Duty	**F**	Food Duty
		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	*LL*	Added ONLY with long life warranty option.
Mounting Position	*E34*	The long life mounting position will be stamped on the nameplate.

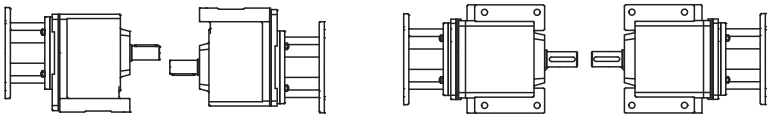
Part No. Configurator
"C" Series – Food and Beverage Reducers

Mounting Positions – Standard 3 Year Warranty

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

Standard Oil: Mobil 600XP220

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



EL1 **EL2** **EL3** **EL4**

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.)

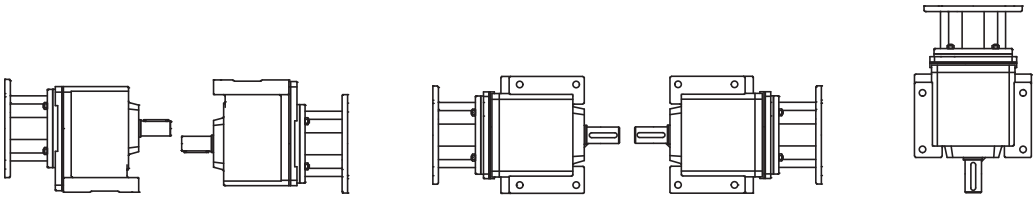
EL3 Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side 3 is the down side for EL3.

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 **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.

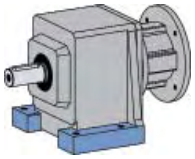
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

For oil quantity in each size and mounting position, see our web site: ***us.stober.com/lubrication-quantity***.

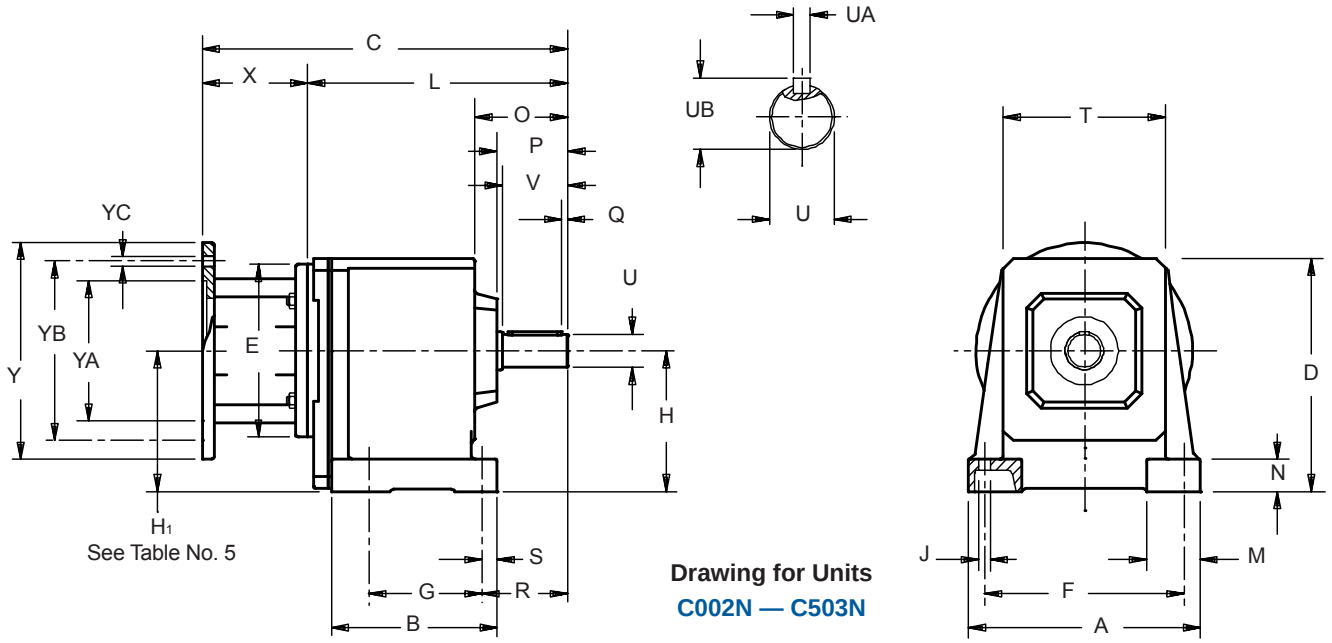
Maintenance

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 42



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



Drawing for Units
C002N — C503N

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
C002	5.20	3.74	5.67	4.33	2.44	3.23	.28	1.38	.79	2.24	1.73	.16	2.17
C102/C103	6.93	4.65	6.97	5.91	2.76	4.02	.35	1.65	.98	2.72	2.13	.16	2.64
C202/C203	7.87	5.31	7.68	6.69	3.35	4.53	.43	1.97	1.18	3.39	2.56	.16	3.11
C302/C303	8.46	6.06	8.46	7.28	4.13	5.12[1)]	.43	1.97	1.18	3.35	2.56	.16	3.11
C402/C403	10.04	7.09	9.65	8.66	4.33	5.71	.55	2.36	1.38	4.17	3.39	.16	4.13
C502/C503	11.42	7.76	11.42	9.65	5.12	6.69	.71	2.76	1.57	4.21	3.39	.16	4.25
C612/C613	11.81	10.43	12.40	9.65	8.46	7.87[1)]	.71	2.95	1.57	6.02	4.17	.20	5.12

[1)] See Table 5.

Table No. 2

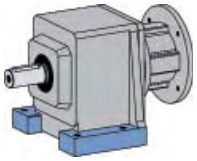
Base Module	S	T	U	V	Z_1	UA – Key	UB
C002	.43	3.62	.7500	1.57	—	$^3/_{16} \times {}^3/_{16} \times 1^{7}/_{32}$	.83
C102/C103	.51	4.88	1.0000	1.97	—	$^1/_4 \times {}^1/_4 \times 1^{9}/_{16}$	1.11
C202/C203	.55	5.43	1.2500	2.36	—	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
C302/C303	.55	5.91	1.2500	2.36	—	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
C402/C403	.75	6.89	1.6250	3.15	—	$^3/_8 \times {}^3/_8 \times 2^{7}/_8$	1.79
C502/C503	.87	7.56	1.6250	3.15	—	$^3/_8 \times {}^3/_8 \times 2^{7}/_8$	1.79
C612/C613	.98	6.97	2.1250	3.94	6.57	$^1/_2 \times {}^1/_2 \times 3^{5}/_{32}$	2.35

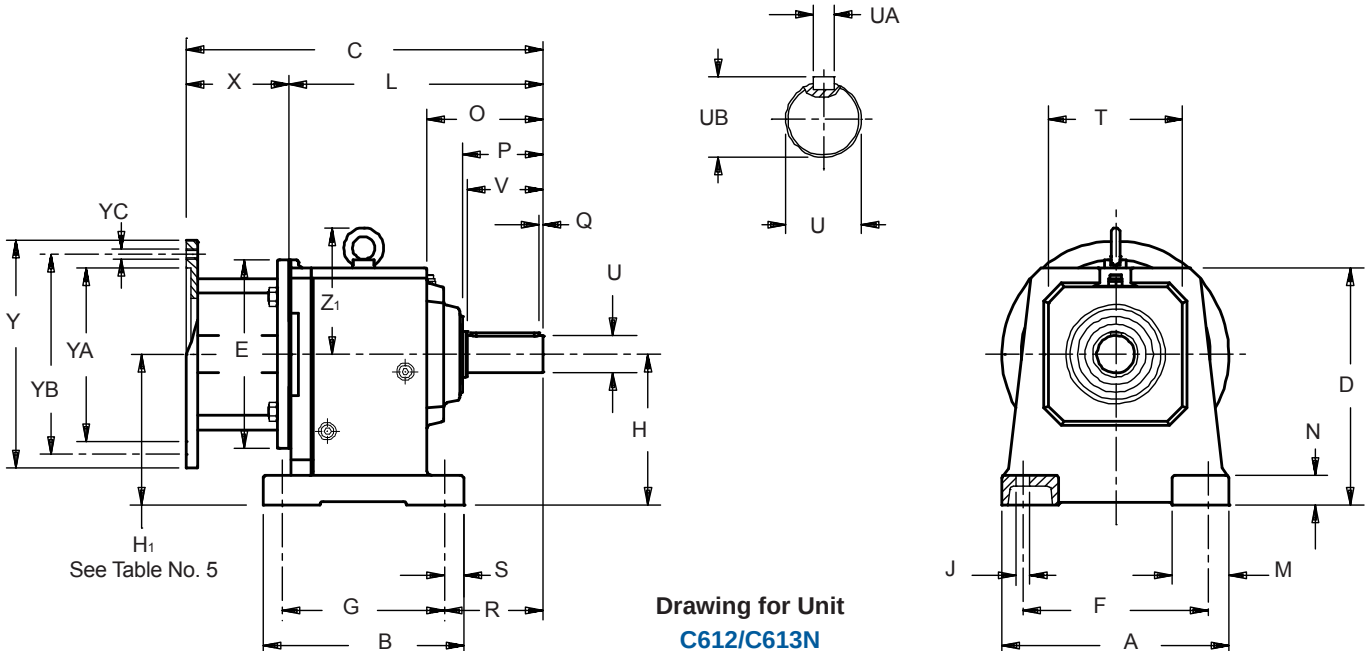
Table No. 3

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

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
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
“C” Series – MGS Reducer
Foot Mount – “N” Housing





Drawing for Unit
C612/C613N

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

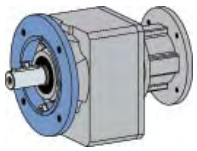
Base	MR140/050		MR160/140 [2]		MR200/180		MR250/210 [3]		MR300/250 [4]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	38
C203	13.23	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

[2] 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.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] 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.

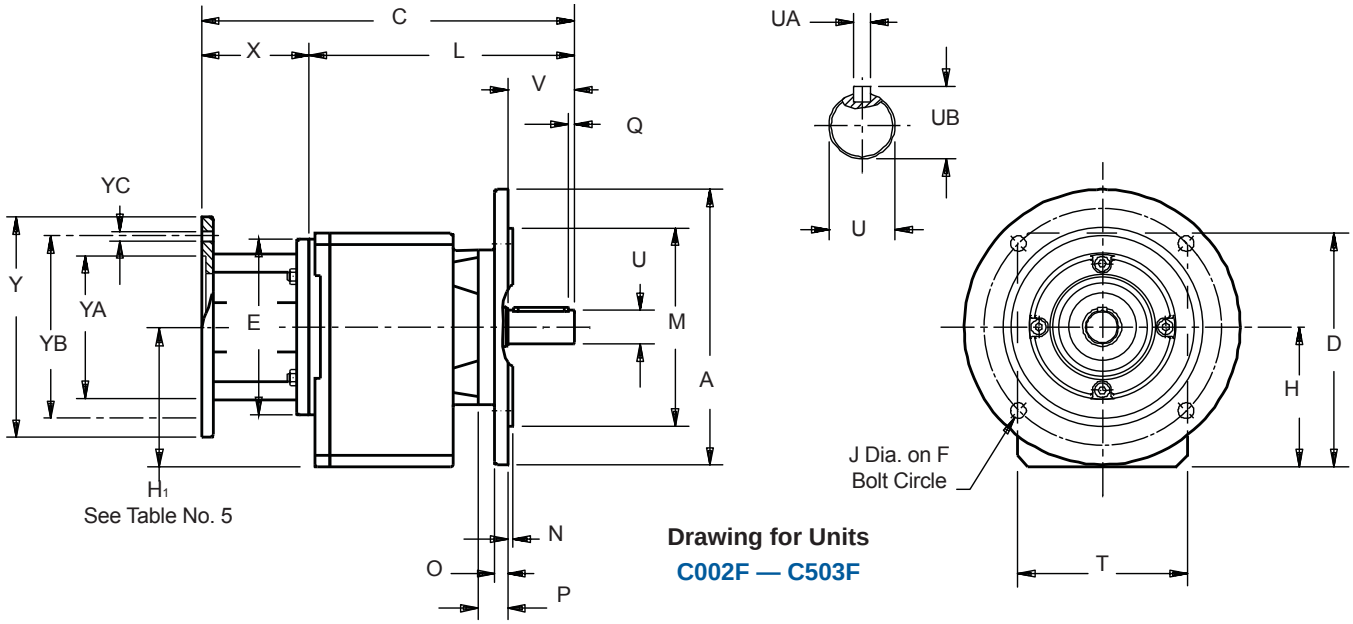
Table No. 5 “C” Series – Input Dimension (Inches)

Base	MR160/050 [2]	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
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



Drawing for Units
C002F — C503F

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

Base Module	A [1]	D	F	H	J	M	N	O	P	Q	T	V	Z_1
C002	6.30	5.55	5.12	3.11	.35	4.331	.12	.39	.71	.16	3.82	1.57	—
C102/C103	7.87	6.89	6.50	3.94	.43	5.118	.14	.47	.83	.16	5.12	1.97	—
C202/C203	7.87	7.56	6.50	4.41	.43	5.118	.14	.47	1.06	.16	5.59	2.36	—
C302/C303	9.84	8.35	8.46	5.00 [2]	.55	7.087	.16	.47	1.06	.16	6.06	2.36	—
C402/C403	9.84	9.55	8.46	5.61	.55	7.087	.16	.55	1.10	.16	7.01	3.15	—
C502/C503	11.81	11.26	10.43	6.54	.55	9.055	.16	.63	1.14	.16	7.68	3.15	—
C612/C613	11.81	11.97	10.43	7.44 [2]	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57

[1] See Page 68 for other available output flanges.
[2] See Table No. 5
* C912 and C913 have 8 mounting holes in the output flange instead of 4 as shown in the drawing.

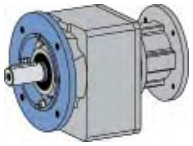
Table No. 2 **Metric output available on request**

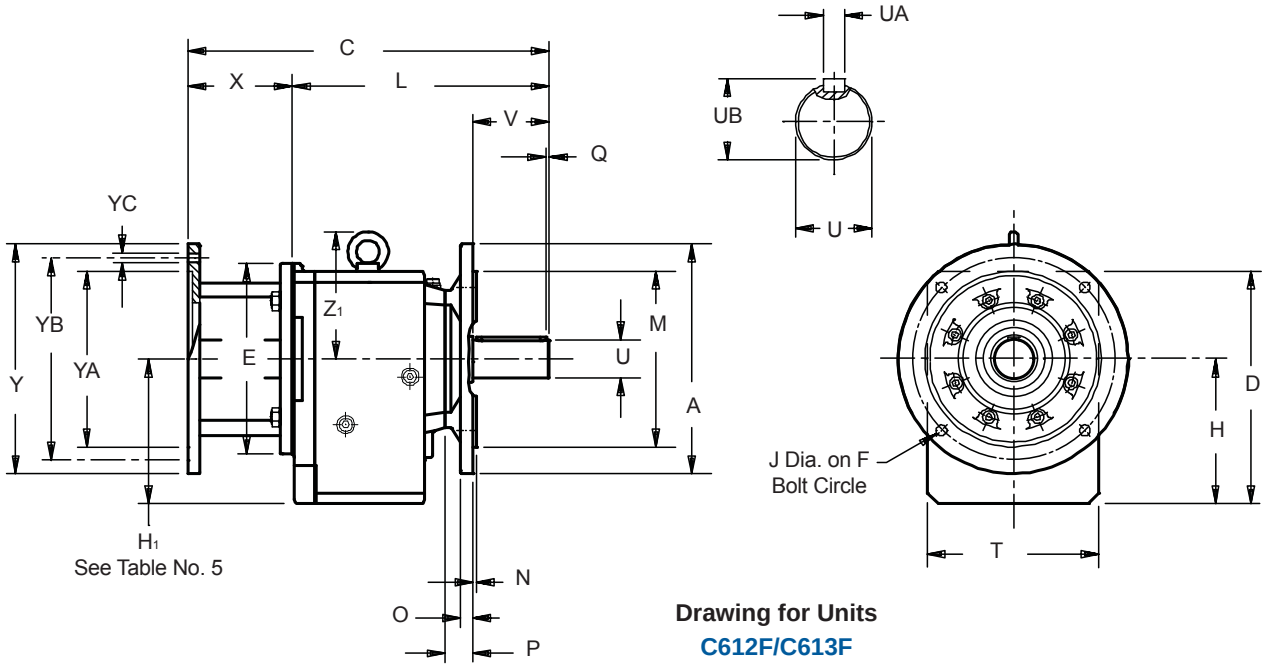
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9x90	53.5

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

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
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
"C" Series – MGS Reducer
Round Flange – "F" Housing





Drawing for Units
C612F/C613F

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

Base	MR140/050		MR160/140 [2]		MR200/180		MR250/210 [3]		MR300/250 [4]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
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

[2] 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.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] 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	MR160/050 [2]	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–

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".

[2] See Table No. 5
[3] Also available as **MR160/050** for a NEMA 56C frame motor.
[4] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[5] 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.
[6] Also available as **MR350/360** for a NEMA 364/365TC frame motor.
All weights are approximate.

Notes

“C” Series – Concentric Helical
MGS Speed Reducers

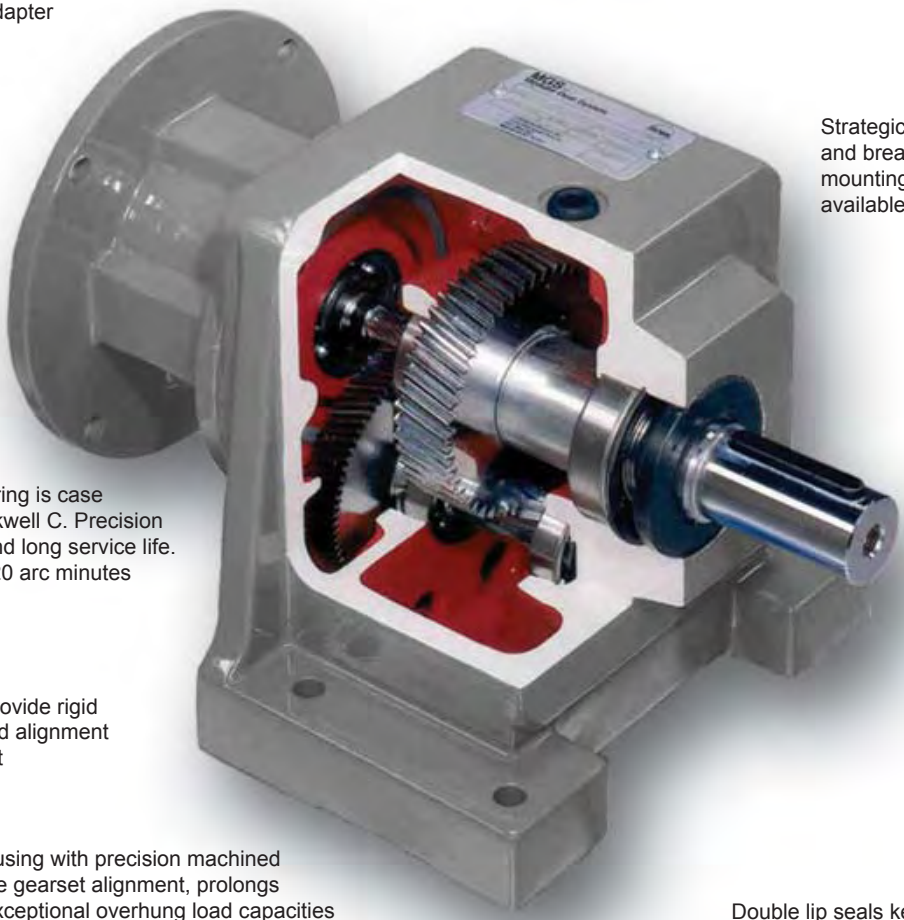
These versatile gear drives offer you performance, durability, and economy for a wide range of constant speed applications. High efficiency helical gearing keeps motor size to a minimum while conserving energy.

Performance Specifications:

- Horsepower ratings up to 105
- Output torques up to 53,000 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

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

Stainless steel nameplate and hardware



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

High tensile strength shafts with captured keys

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life. Standard backlash is ≤20 arc minutes

Cast mounting feet provide rigid support and prolonged alignment with driven equipment

One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities to eliminate 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.

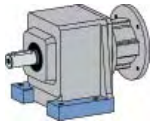
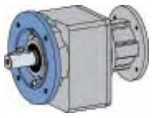
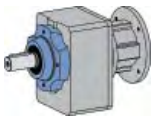
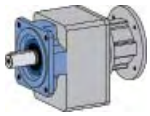
Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

SHIPS in 1 DAY

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	C	Concentic 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 
		F – Round output flange 
		G – Tapped holes around the output 
		Q – Square output flange (not bolt on type) 
Ratio	0135	Approximate: 0135 = 13.5:1 (range of 2:1 up to 276:1)
Motor Adapter	MR160/	MR140/, **MR160/**, MR200/, MR250/, MR300/, MR350/
NEMA Frame Size	140	050 (56C), **140** (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

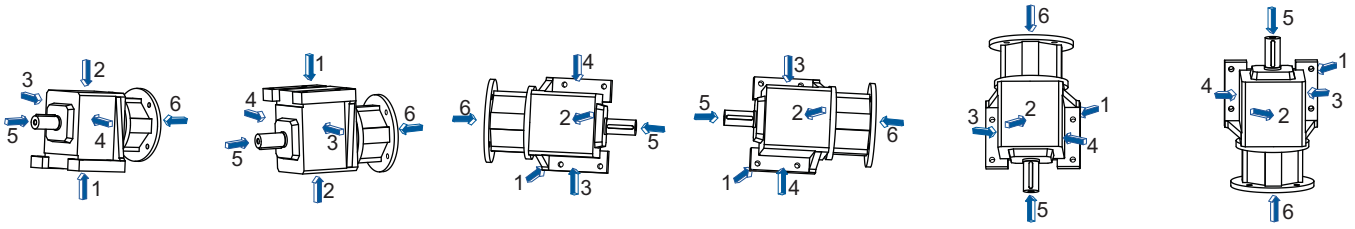
Mounting Position must be specified.

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: Mobilgear 600XP220
Optional Oil: Food Grade Oil (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC630)

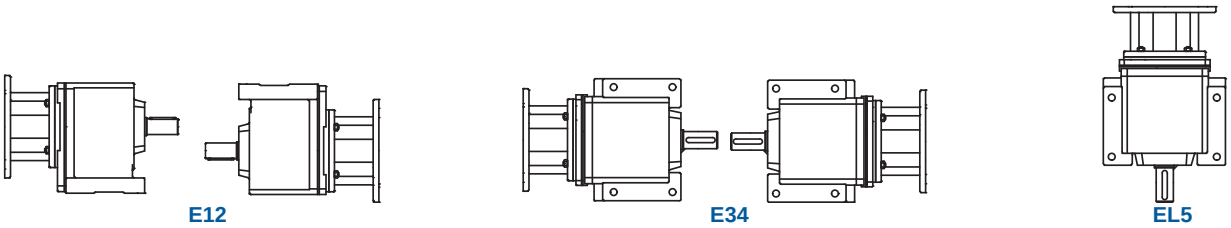


EL1 **EL2** **EL3** **EL4** **EL5** **EL6**

EL1 Side 1 is the bottom side (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 **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: ***us.stober.com/lubrication-quantity/index.html***.

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 5000 Hours
Wet Operating Conditions – after 2000 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 [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [4] lbs.	1450 RPM Input		1160 RPM Input	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
875 RPM Output (Approximate)								**725 RPM**		**580 RPM**	
2.60	182	C002_0020	MR140/	050	AW140/010	1.997	121	2.16	182	1.73	182
2.61	184	C102_0020	MR140/	050	AW140/010	2.018	218	2.16	184	1.73	184
4.17*	291	C002_0020	MR160/	050, 140	AW160/012	1.997	121	3.64	307	2.91	307
8.29*	585	C102_0020	MR160/	050, 140	AW160/012	2.018	218	7.23	616	5.78	616
8.29*	585	C102_0020	MR200/	180	AW200/014	2.018	218	7.23	616	5.78	616
9.22*	647	C202_0020	MR160/	050, 140	AW160/012	2.009	269	7.64	647	6.11	647
9.22*	651	C302_0020	MR160/	050, 140	AW160/012	2.020	362	7.64	651	6.11	651
12.70*	892	C202_0020	MR200/	180	AW200/014	2.009	269	11.08	939	8.86	939
19.97*	1,411	C302_0020	MR200/	180	AW200/014	2.020	362	17.62	1,502	14.45	1,540
20.71*	1,463	C302_0020	MR250/	180, 210	AW250/102	2.020	362	18.06	1,540	14.45	1,540
21.97*	1,512	C402_0020	MR200/	180	AW200/014	1.968	616	19.38	1,609	16.29	1,691
24.58*	1,698	C502_0020	MR200/	180	AW200/014	1.976	700	20.36	1,698	16.29	1,698
30.65*	2,109	C402_0020	MR250/	180, 210	AW250/102	1.968	616	26.73	2,220	21.39	2,220
39.32*	2,717	C502_0020	MR250/	180, 210	AW250/102	1.976	700	32.58	2,717	26.06	2,717
47.38*	3,273	C502_0020	MR300/	180, 210, 250, 280	AW300/110	1.976	700	41.33	3,446	33.06	3,446
795 RPM Output (Approximate)								**660 RPM**		**525 RPM**	
2.61	198	C102_0022	MR140/	050	AW140/010	2.177	223	2.16	198	1.73	198
7.88*	600	C102_0022	MR160/	050, 140	AW160/012	2.177	223	6.87	631	5.50	631
7.88*	600	C102_0022	MR200/	180	AW200/014	2.177	223	6.87	631	5.50	631
9.22	701	C302_0022	MR160/	050, 140	AW160/012	2.177	371	7.64	701	6.11	701
9.22	704	C202_0022	MR160/	050, 140	AW160/012	2.184	276	7.64	704	6.11	704
12.01*	917	C202_0022	MR200/	180	AW200/014	2.184	276	10.48	965	8.38	965
19.70*	1,499	C302_0022	MR200/	180	AW200/014	2.177	371	17.18	1,579	13.75	1,579
19.70*	1,499	C302_0022	MR250/	180, 210	AW250/102	2.177	371	17.18	1,579	13.75	1,579
21.97*	1,706	C402_0022	MR200/	180	AW200/014	2.221	641	19.38	1,816	16.29	1,908
24.58*	1,931	C502_0022	MR200/	180	AW200/014	2.247	730	20.36	1,931	16.29	1,931
28.28*	2,196	C402_0022	MR250/	180, 210	AW250/102	2.221	641	24.66	2,311	19.73	2,311
39.32*	3,089	C502_0022	MR250/	180, 210	AW250/102	2.247	730	32.58	3,089	26.06	3,089
43.49*	3,417	C502_0022	MR300/	180, 210, 250, 280	AW300/110	2.247	730	37.93	3,597	30.35	3,597
730 RPM Output (Approximate)								**606 RPM**		**485 RPM**	
7.40*	619	C102_0024	MR160/	050, 140	AW160/012	2.394	231	6.45	652	5.16	652
7.40*	619	C102_0024	MR200/	180	AW200/014	2.394	231	6.45	652	5.16	652
705 RPM Output (Approximate)								**585 RPM**		**470 RPM**	
8.73*	755	C202_0025	MR160/	050, 140	AW160/012	2.475	288	7.64	797	6.11	797
9.22	809	C302_0025	MR160/	050, 140	AW160/012	2.510	389	7.64	809	6.11	809
11.05*	956	C202_0025	MR200/	180	AW200/014	2.475	288	9.64	1,006	7.71	1,006
17.59*	1,544	C302_0025	MR200/	180	AW200/014	2.510	389	15.52	1,644	12.50	1,655
17.92*	1,572	C302_0025	MR250/	180, 210	AW250/102	2.510	389	15.63	1,655	12.50	1,655
19.60*	1,683	C402_0025	MR200/	180	AW200/014	2.456	663	17.29	1,791	14.90	1,930
22.41*	1,920	C502_0025	MR200/	180	AW200/014	2.450	752	19.77	2,044	16.29	2,105
26.44*	2,271	C402_0025	MR250/	180, 210	AW250/102	2.456	663	23.06	2,390	18.45	2,390
39.32*	3,368	C502_0025	MR250/	180, 210	AW250/102	2.450	752	32.58	3,368	26.06	3,368
41.05*	3,516	C502_0025	MR300/	180, 210, 250, 280	AW300/110	2.450	752	35.81	3,702	28.65	3,702
680 RPM Output (Approximate)								**544 RPM**		**450 RPM**	
7.03*	635	C102_0026	MR160/	050, 140	AW160/012	2.582	236	6.13	668	4.91	668
7.03*	635	C102_0026	MR200/	180	AW200/014	2.582	236	6.13	668	4.91	668

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
650 RPM Output (Approximate)								**537 RPM**		**430 RPM**	
8.73*	821	C202_0027	MR160/	050, 140	AW160/012	2.690	296	7.64	867	6.11	867
9.22	872	C302_0027	MR160/	050, 140	AW160/012	2.705	399	7.64	872	6.11	872
10.45*	983	C202_0027	MR200/	180	AW200/014	2.690	296	9.12	1,035	7.29	1,035
17.04*	1,612	C302_0027	MR200/	180	AW200/014	2.705	399	14.87	1,697	11.89	1,697
17.04*	1,612	C302_0027	MR250/	180, 210	AW250/102	2.705	399	14.87	1,697	11.89	1,697
630 RPM Output (Approximate)								**520 RPM**		**418 RPM**	
2.61	252	C002_0028	MR140/	050	AW140/010	2.769	135	2.16	252	1.73	252
3.36*	325	C002_0028	MR160/	050, 140	AW160/012	2.769	135	2.93	342	2.34	342
19.60*	1,898	C402_0028	MR200/	180	AW200/014	2.771	691	17.29	2,021	14.90	2,177
22.41*	2,184	C502_0028	MR200/	180	AW200/014	2.787	785	19.77	2,325	16.29	2,395
24.40*	2,364	C402_0028	MR250/	180, 210	AW250/102	2.771	691	21.28	2,488	17.02	2,488
37.67*	3,671	C502_0028	MR250/	180, 210	AW250/102	2.787	785	32.58	3,831	26.06	3,831
37.67*	3,671	C502_0028	MR300/	180, 210, 250, 280	AW300/110	2.787	785	32.86	3,864	26.29	3,864
565 RPM Output (Approximate)								**470 RPM**		**375 RPM**	
2.61	279	C002_0031	MR140/	050	AW140/010	3.067	140	2.16	279	1.73	279
2.61	282	C102_0031	MR140/	050	AW140/010	3.091	251	2.16	282	1.73	282
3.14*	336	C002_0031	MR160/	050, 140	AW160/012	3.067	140	2.73	354	2.19	354
6.24*	674	C102_0031	MR160/	050, 140	AW160/012	3.091	251	5.44	710	4.35	710
6.24*	674	C102_0031	MR200/	180	AW200/014	3.091	251	5.44	710	4.35	710
7.92*	859	C202_0031	MR160/	050, 140	AW160/012	3.103	310	6.98	914	6.02	985
8.73	949	C302_0031	MR160/	050, 140	AW160/012	3.110	418	7.64	1,002	6.11	1,002
9.50*	1,031	C202_0031	MR200/	180	AW200/014	3.103	310	8.29	1,085	6.63	1,085
15.28*	1,661	C302_0031	MR200/	180	AW200/014	3.110	418	13.48	1,769	10.84	1,778
15.53*	1,689	C302_0031	MR250/	180, 210	AW250/102	3.110	418	13.55	1,778	10.84	1,778
17.04*	1,846	C402_0031	MR200/	180	AW200/014	3.099	717	15.03	1,965	12.95	2,117
19.60	2,108	C502_0031	MR200/	180	AW200/014	3.077	811	17.29	2,244	14.90	2,418
22.64*	2,454	C402_0031	MR250/	180, 210	AW250/102	3.099	717	19.75	2,583	15.80	2,583
34.42*	3,703	C502_0031	MR250/	180, 210	AW250/102	3.077	811	30.37	3,943	24.61	3,994
35.26*	3,794	C502_0031	MR300/	180, 210, 250, 280	AW300/110	3.077	811	30.76	3,994	24.61	3,994
525 RPM Output (Approximate)								**435 RPM**		**350 RPM**	
2.61	302	C002_0033	MR140/	050	AW140/010	3.318	144	2.16	302	1.73	302
2.61	304	C102_0033	MR140/	050	AW140/010	3.334	257	2.16	304	1.73	304
2.97*	345	C002_0033	MR160/	050, 140	AW160/012	3.318	144	2.60	363	2.08	363
5.93*	691	C102_0033	MR160/	050, 140	AW160/012	3.334	257	5.17	728	4.14	728
5.93*	691	C102_0033	MR200/	180	AW200/014	3.334	257	5.17	728	4.14	728
520 RPM Output (Approximate)								**430 RPM**		**345 RPM**	
7.92*	933	C202_0034	MR160/	050, 140	AW160/012	3.373	319	6.98	994	6.02	1,070
8.73	1,023	C302_0034	MR160/	050, 140	AW160/012	3.352	429	7.64	1,080	6.11	1,080
8.99*	1,060	C202_0034	MR200/	180	AW200/014	3.373	319	7.84	1,116	6.27	1,116
14.77*	1,732	C302_0034	MR200/	180	AW200/014	3.352	429	12.89	1,823	10.31	1,823
14.77*	1,732	C302_0034	MR250/	180, 210	AW250/102	3.352	429	12.89	1,823	10.31	1,823
500 RPM Output (Approximate)								**415 RPM**		**330 RPM**	
17.04*	2,083	C402_0035	MR200/	180	AW200/014	3.497	746	15.03	2,218	12.95	2,389
19.60	2,399	C502_0035	MR200/	180	AW200/014	3.501	847	17.29	2,554	14.90	2,751
20.89*	2,554	C402_0035	MR250/	180, 210	AW250/102	3.497	746	18.22	2,689	14.58	2,689
32.36*	3,961	C502_0035	MR250/	180, 210	AW250/102	3.501	847	28.22	4,170	22.58	4,170
32.36*	3,961	C502_0035	MR300/	180, 210, 250, 280	AW300/110	3.501	847	28.22	4,170	22.58	4,170

* 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

See Page 40 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
450 RPM Output (Approximate)								**375 RPM**		**300 RPM**	
2.60	349	C002_0038	MR140/	050	AW140/010	3.835	151	2.16	349	1.73	349
2.61	354	C102_0039	MR140/	050	AW140/010	3.883	271	2.16	354	1.73	354
2.70	362	C002_0038	MR160/	050, 140	AW160/012	3.835	151	2.36	381	1.89	381
5.36	727	C102_0039	MR160/	050, 140	AW160/012	3.883	271	4.67	766	3.74	766
5.36	727	C102_0039	MR200/	180	AW200/014	3.883	271	4.67	766	3.74	766
6.87	934	C202_0039	MR160/	050, 140	AW160/012	3.888	335	6.06	995	5.23	1,072
7.70	1,044	C302_0039	MR160/	050, 140	AW160/012	3.878	450	6.80	1,112	5.86	1,198
8.18*	1,111	C202_0039	MR200/	180	AW200/014	3.888	335	7.13	1,170	5.71	1,170
8.46	1,151	C402_0039	MR160/	050, 140	AW160/012	3.894	773	7.46	1,226	6.11	1,255
13.41*	1,818	C302_0039	MR200/	180	AW200/014	3.878	450	11.69	1,914	9.36	1,914
13.41*	1,818	C302_0039	MR250/	180, 210	AW250/102	3.878	450	11.69	1,914	9.36	1,914
14.86*	2,024	C402_0039	MR200/	180	AW200/014	3.894	773	13.11	2,154	11.30	2,321
17.24	2,330	C502_0039	MR200/	180	AW200/014	3.867	875	15.21	2,481	13.10	2,673
19.45*	2,648	C402_0039	MR250/	180, 210	AW250/102	3.894	773	16.96	2,787	13.57	2,787
30.22*	4,086	C502_0039	MR250/	180, 210	AW250/102	3.867	875	26.41	4,310	21.13	4,310
30.28*	4,094	C502_0039	MR300/	180, 210, 250, 280	AW300/110	3.867	875	26.41	4,310	21.13	4,310
420 RPM Output (Approximate)								**345 RPM**		**275 RPM**	
2.56	372	C002_0041	MR140/	050	AW140/010	4.149	155	2.16	378	1.73	378
2.56	372	C002_0041	MR160/	050, 140	AW160/012	4.149	155	2.24	391	1.79	391
2.60	382	C102_0042	MR140/	050	AW140/010	4.189	278	2.16	382	1.73	382
5.09	746	C102_0042	MR160/	050, 140	AW160/012	4.189	278	4.44	785	3.56	785
5.09	746	C102_0042	MR200/	180	AW200/014	4.189	278	4.44	785	3.56	785
6.87	1,016	C202_0042	MR160/	050, 140	AW160/012	4.226	344	6.06	1,081	5.23	1,165
7.70	1,125	C302_0042	MR160/	050, 140	AW160/012	4.179	461	6.80	1,198	5.86	1,291
7.73*	1,143	C202_0042	MR200/	180	AW200/014	4.226	344	6.75	1,203	5.40	1,203
12.75*	1,864	C302_0042	MR200/	180	AW200/014	4.179	461	11.13	1,962	8.90	1,962
12.75*	1,864	C302_0042	MR250/	180, 210	AW250/102	4.179	461	11.13	1,962	8.90	1,962
24.58	3,595	C612_0042	MR200/	180	AW200/014	4.184	1,307	20.36	3,595	16.29	3,595
39.32*	5,752	C612_0042	MR250/	180, 210	AW250/102	4.184	1,307	32.58	5,752	26.06	5,752
53.33*	7,802	C612_0042	MR300/	180, 210, 250, 280	AW300/110	4.184	1,307	46.52	8,213	37.22	8,213
73.72*	10,891	C812_0042	MR300/	180, 210, 250, 280	AW300/110	4.225	2,458	61.09	10,891	48.87	10,891
105.20*	15,541	C812_0042	MR350/	320, 360	AW350/202	4.225	2,458	87.17	15,541	69.74	15,541
105.20*	15,254	C912_0041	MR350/	320, 360	AW350/202	4.147	3,013	87.17	15,254	69.74	15,254
410 RPM Output (Approximate)								**340 RPM**		**270 RPM**	
8.46	1,299	C402_0044	MR160/	050, 140	AW160/012	4.394	805	7.46	1,383	6.11	1,416
14.86*	2,283	C402_0044	MR200/	180	AW200/014	4.394	805	13.11	2,431	11.30	2,619
17.24	2,651	C502_0044	MR200/	180	AW200/014	4.399	913	15.21	2,823	13.10	3,040
17.94*	2,756	C402_0044	MR250/	180, 210	AW250/102	4.394	805	15.65	2,902	12.52	2,902
24.58	3,659	C712_0043	MR200/	180	AW200/014	4.259	1,807	20.36	3,659	16.29	3,659
27.79*	4,274	C502_0044	MR250/	180, 210	AW250/102	4.399	913	24.24	4,499	19.39	4,499
27.79*	4,274	C502_0044	MR300/	180, 210, 250, 280	AW300/110	4.399	913	24.24	4,499	19.39	4,499
39.32	5,855	C712_0043	MR250/	180, 210	AW250/102	4.259	1,807	32.58	5,855	26.06	5,855
73.72*	10,978	C712_0043	MR300/	180, 210, 250, 280	AW300/110	4.259	1,807	61.09	10,978	48.87	10,978
375 RPM Output (Approximate) Continued Next Page								**310 RPM**		**250 RPM**	
2.37	387	C002_0047	MR140/	050	AW140/010	4.680	161	2.06	407	1.65	407
2.37	387	C002_0047	MR160/	050, 140	AW160/012	4.680	161	2.06	407	1.65	407
2.61	424	C102_0047	MR140/	050	AW140/010	4.658	288	2.16	424	1.73	424
4.75	773	C102_0047	MR160/	050, 140	AW160/012	4.658	288	4.14	814	3.31	814
4.75	773	C102_0047	MR200/	180	AW200/014	4.658	288	4.14	814	3.31	814

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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							
375 RPM Output (Approximate) Continued								**310 RPM**		**250 RPM**	
5.98	975	C202_0047	MR160/	050, 140	AW160/012	4.667	356	5.27	1,038	4.54	1,118
6.66	1,088	C302_0047	MR160/	050, 140	AW160/012	4.675	479	5.87	1,159	5.06	1,248
7.24	1,181	C202_0047	MR200/	180	AW200/014	4.667	356	6.31	1,243	5.05	1,243
7.57	1,238	C402_0047	MR160/	050, 140	AW160/012	4.682	822	6.67	1,318	5.75	1,420
8.68	1,404	C502_0046	MR160/	050, 140	AW160/012	4.629	929	7.64	1,492	6.11	1,492
11.62	1,899	C302_0047	MR200/	180	AW200/014	4.675	479	10.25	2,022	8.26	2,037
11.84	1,935	C302_0047	MR250/	180, 210	AW250/102	4.675	479	10.32	2,037	8.26	2,037
13.28	2,174	C402_0047	MR200/	180	AW200/014	4.682	822	11.72	2,315	10.10	2,494
15.25	2,468	C502_0046	MR200/	180	AW200/014	4.629	929	13.45	2,627	11.59	2,830
17.20*	2,815	C402_0047	MR250/	180, 210	AW250/102	4.682	822	15.00	2,964	12.00	2,964
26.64*	4,312	C502_0046	MR250/	180, 210	AW250/102	4.629	929	23.43	4,576	18.74	4,576
26.86*	4,347	C502_0046	MR300/	180, 210, 250, 280	AW300/110	4.629	929	23.43	4,576	18.74	4,576
345 RPM Output (Approximate)								**285 RPM**		**230 RPM**	
2.25	397	C002_0051	MR140/	050	AW140/010	5.063	165	1.96	418	1.57	418
2.25	397	C002_0051	MR160/	050, 140	AW160/012	5.063	165	1.96	418	1.57	418
2.61	458	C102_0050	MR140/	050	AW140/010	5.025	295	2.16	458	1.73	458
4.51	793	C102_0050	MR160/	050, 140	AW160/012	5.025	295	3.94	834	3.15	834
4.51	793	C102_0050	MR200/	180	AW200/014	5.025	295	3.94	834	3.15	834
5.98	1,060	C202_0051	MR160/	050, 140	AW160/012	5.072	366	5.27	1,128	4.54	1,215
6.66	1,173	C302_0050	MR160/	050, 140	AW160/012	5.038	491	5.87	1,249	5.06	1,345
6.85	1,214	C202_0051	MR200/	180	AW200/014	5.072	366	5.97	1,278	4.78	1,278
11.26	1,983	C302_0050	MR200/	180	AW200/014	5.038	491	9.82	2,088	7.86	2,088
11.26	1,983	C302_0050	MR250/	180, 210	AW250/102	5.038	491	9.82	2,088	7.86	2,088
24.58	4,367	C612_0051	MR200/	180	AW200/014	5.083	1,394	20.36	4,367	16.29	4,367
39.32*	6,988	C612_0051	MR250/	180, 210	AW250/102	5.083	1,394	32.58	6,988	26.06	6,988
46.84*	8,325	C612_0051	MR300/	180, 210, 250, 280	AW300/110	5.083	1,394	40.86	8,764	32.69	8,764
330 RPM Output (Approximate)								**275 RPM**		**220 RPM**	
7.57	1,397	C402_0053	MR160/	050, 140	AW160/012	5.284	856	6.67	1,488	5.75	1,603
8.68	1,597	C502_0053	MR160/	050, 140	AW160/012	5.265	970	7.64	1,696	6.11	1,696
13.28	2,454	C402_0053	MR200/	180	AW200/014	5.284	856	11.72	2,613	10.10	2,814
15.25	2,807	C502_0053	MR200/	180	AW200/014	5.265	970	13.45	2,988	11.59	3,219
15.87*	2,931	C402_0053	MR250/	180, 210	AW250/102	5.284	856	13.84	3,086	11.07	3,086
24.58	4,563	C712_0053	MR200/	180	AW200/014	5.311	1,945	20.36	4,563	16.29	4,563
24.65*	4,538	C502_0053	MR250/	180, 210	AW250/102	5.265	970	21.50	4,777	17.20	4,777
24.65*	4,538	C502_0053	MR300/	180, 210, 250, 280	AW300/110	5.265	970	21.50	4,777	17.20	4,777
39.32	7,301	C712_0053	MR250/	180, 210	AW250/102	5.311	1,945	32.58	7,301	26.06	7,301
73.72*	13,690	C712_0053	MR300/	180, 210, 250, 280	AW300/110	5.311	1,945	61.09	13,690	48.87	13,690
325 RPM Output (Approximate)								**270 RPM**		**215 RPM**	
73.72*	13,886	C812_0054	MR300/	180, 210, 250, 280	AW300/110	5.387	2,665	61.09	13,886	48.87	13,886
105.20*	19,815	C812_0054	MR350/	320, 360	AW350/202	5.387	2,665	87.17	19,815	69.74	19,815
300 RPM Output (Approximate) Continued Next Page								**250 RPM**		**200 RPM**	
2.05	416	C002_0058	MR140/	050	AW140/010	5.824	173	1.78	438	1.43	438
2.05	416	C002_0058	MR160/	050, 140	AW160/012	5.824	173	1.78	438	1.43	438
2.61	527	C202_0058	MR140/	050	AW140/010	5.791	382	2.16	527	1.73	527
2.61	535	C102_0059	MR140/	050	AW140/010	5.875	311	2.16	535	1.73	535
4.07	835	C102_0059	MR160/	050, 140	AW160/012	5.875	311	3.55	879	2.84	879
4.07	835	C102_0059	MR200/	180	AW200/014	5.875	311	3.55	879	2.84	879
5.12	1,036	C202_0058	MR160/	050, 140	AW160/012	5.791	382	4.52	1,103	3.89	1,189

* 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

See Page 40 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
300 RPM Output (Approximate) Continued								**250 RPM**		**200 RPM**	
5.86	1,201	C302_0059	MR160/	050, 140	AW160/012	5.859	516	5.17	1,279	4.46	1,377
6.27	1,269	C202_0058	MR200/	180	AW200/014	5.791	382	5.47	1,336	4.37	1,336
6.36	1,309	C402_0059	MR160/	050, 140	AW160/012	5.891	888	5.61	1,394	4.83	1,502
7.39	1,510	C502_0059	MR160/	050, 140	AW160/012	5.850	1,005	6.52	1,608	5.61	1,732
10.18	2,086	C302_0059	MR200/	180	AW200/014	5.859	516	8.88	2,196	7.11	2,196
10.18	2,086	C302_0059	MR250/	180, 210	AW250/102	5.859	516	8.88	2,196	7.11	2,196
11.15	2,296	C402_0059	MR200/	180	AW200/014	5.891	888	9.83	2,444	8.47	2,633
12.98	2,656	C502_0059	MR200/	180	AW200/014	5.850	1,005	11.45	2,828	9.87	3,046
14.76*	3,039	C402_0059	MR250/	180, 210	AW250/102	5.891	888	12.87	3,200	10.30	3,200
22.70*	4,642	C502_0059	MR250/	180, 210	AW250/102	5.850	1,005	20.02	4,943	16.03	4,948
22.98*	4,700	C502_0059	MR300/	180, 210, 250, 280	AW300/110	5.850	1,005	20.04	4,948	16.03	4,948
275 RPM Output (Approximate)								**230 RPM**		**185 RPM**	
1.94	427	C002_0063	MR140/	050	AW140/010	6.300	178	1.69	450	1.35	450
1.94	427	C002_0063	MR160/	050, 140	AW160/012	6.300	178	1.69	450	1.35	450
2.61	573	C202_0063	MR140/	050	AW140/010	6.295	393	2.16	573	1.73	573
2.61	577	C102_0063	MR140/	050	AW140/010	6.338	319	2.16	577	1.73	577
3.87	856	C102_0063	MR160/	050, 140	AW160/012	6.338	319	3.37	902	2.70	902
3.87	856	C102_0063	MR200/	180	AW200/014	6.338	319	3.37	902	2.70	902
5.12	1,127	C202_0063	MR160/	050, 140	AW160/012	6.295	393	4.52	1,200	3.89	1,292
5.86	1,294	C302_0063	MR160/	050, 140	AW160/012	6.314	529	5.17	1,378	4.46	1,484
5.93	1,305	C202_0063	MR200/	180	AW200/014	6.295	393	5.17	1,374	4.14	1,374
9.69	2,138	C302_0063	MR200/	180	AW200/014	6.314	529	8.45	2,251	6.76	2,251
9.69	2,138	C302_0063	MR250/	180, 210	AW250/102	6.314	529	8.45	2,251	6.76	2,251
265 RPM Output (Approximate)								**220 RPM**		**175 RPM**	
6.36	1,478	C402_0066	MR160/	050, 140	AW160/012	6.648	924	5.61	1,573	4.83	1,695
7.39	1,718	C502_0067	MR160/	050, 140	AW160/012	6.655	1,049	6.52	1,829	5.61	1,971
11.15	2,591	C402_0066	MR200/	180	AW200/014	6.648	924	9.83	2,759	8.47	2,972
12.98	3,021	C502_0067	MR200/	180	AW200/014	6.655	1,049	11.45	3,217	9.87	3,465
13.61	3,164	C402_0066	MR250/	180, 210	AW250/102	6.648	924	11.88	3,331	9.50	3,331
21.09*	4,906	C502_0067	MR250/	180, 210	AW250/102	6.655	1,049	18.39	5,165	14.71	5,165
21.09*	4,906	C502_0067	MR300/	180, 210, 250, 280	AW300/110	6.655	1,049	18.39	5,165	14.71	5,165
21.48	4,895	C612_0065	MR200/	180	AW200/014	6.518	1,515	18.95	5,212	16.29	5,600
37.98*	8,656	C612_0065	MR250/	180, 210	AW250/102	6.518	1,515	32.58	8,961	26.06	8,961
39.69*	9,045	C612_0065	MR300/	180, 210, 250, 280	AW300/110	6.518	1,515	34.62	9,521	27.69	9,521
73.72*	17,193	C812_0067	MR300/	180, 210, 250, 280	AW300/110	6.670	2,862	61.09	17,193	48.87	17,193
105.09*	24,508	C812_0067	MR350/	320, 360	AW350/202	6.670	2,862	87.17	24,535	69.74	24,535
255 RPM Output (Approximate)								**210 RPM**		**170 RPM**	
4.58	5,852	C712_0068	MR200/	180	AW200/014	6.811	2,114	20.36	5,852	16.29	5,852
39.32	9,363	C712_0068	MR250/	180, 210	AW250/102	6.811	2,114	32.58	9,363	26.06	9,363
63.79*	15,191	C712_0068	MR300/	180, 210, 250, 280	AW300/110	6.811	2,114	55.64	15,992	44.51	15,992
245 RPM Output (Approximate)								**200 RPM**		**160 RPM**	
24.58	6,110	C612_0071	MR200/	180	AW200/014	7.111	1,559	20.36	6,110	16.29	6,110
24.58	6,321	C712_0074	MR200/	180	AW200/014	7.357	2,169	20.36	6,321	16.29	6,321
37.45*	9,311	C612_0071	MR250/	180, 210	AW250/102	7.111	1,559	32.58	9,776	26.06	9,776
37.45*	9,311	C612_0071	MR300/	180, 210, 250, 280	AW300/110	7.111	1,559	32.67	9,802	26.13	9,802
39.32	10,114	C712_0074	MR250/	180, 210	AW250/102	7.357	2,169	32.58	10,114	26.06	10,114
60.59*	15,587	C712_0074	MR300/	180, 210, 250, 280	AW300/110	7.357	2,169	52.85	16,409	42.28	16,409
73.72*	18,827	C812_0073	MR300/	180, 210, 250, 280	AW300/110	7.304	2,950	61.09	18,827	48.87	18,827
98.92*	25,261	C812_0073	MR350/	320, 360	AW350/202	7.304	2,950	86.28	26,593	69.02	26,593

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
225 RPM Output (Approximate)								**185 RPM**		**150 RPM**	
1.70	457	C002_0077	MR140/	050	AW140/010	7.714	190	1.48	481	1.18	481
1.70	457	C002_0077	MR160/	050, 140	AW160/012	7.714	190	1.48	481	1.18	481
2.44	665	C102_0078	MR140/	050	AW140/010	7.796	342	2.15	709	1.73	710
2.61	710	C202_0078	MR140/	050	AW140/010	7.800	422	2.16	710	1.73	710
3.37	918	C102_0078	MR160/	050, 140	AW160/012	7.796	342	2.94	966	2.35	966
3.37	918	C102_0078	MR200/	180	AW200/014	7.796	342	2.94	966	2.35	966
4.03	1,100	C202_0078	MR160/	050, 140	AW160/012	7.800	422	3.56	1,171	3.07	1,262
4.65	1,274	C302_0078	MR160/	050, 140	AW160/012	7.841	569	4.10	1,357	3.53	1,462
5.11	1,396	C402_0078	MR160/	050, 140	AW160/012	7.816	976	4.51	1,486	3.88	1,601
5.11	1,396	C402_0078	MR160	050, 140	AW160/012	7.816	976	4.51	1,486	3.88	1,601
5.14	1,402	C202_0078	MR200/	180	AW200/014	7.800	422	4.48	1,476	3.59	1,476
5.97	1,621	C502_0078	MR160/	050, 140	AW160/012	7.763	1,104	5.27	1,726	4.54	1,860
8.08	2,216	C302_0078	MR200/	180	AW200/014	7.841	569	7.13	2,359	5.85	2,420
8.38	2,299	C302_0078	MR250/	180, 210	AW250/102	7.841	569	7.31	2,420	5.85	2,420
8.95	2,446	C402_0078	MR200/	180	AW200/014	7.816	976	7.89	2,604	6.80	2,805
10.48	2,846	C502_0078	MR200/	180	AW200/014	7.763	1,104	9.25	3,030	7.97	3,264
12.22	3,340	C402_0078	MR250/	180, 210	AW250/102	7.816	976	10.66	3,516	8.53	3,516
18.30	4,966	C502_0078	MR250/	180, 210	AW250/102	7.763	1,104	16.14	5,287	13.28	5,437
19.03	5,165	C502_0078	MR300/	180, 210, 250, 280	AW300/110	7.763	1,104	16.60	5,437	13.28	5,437
210 RPM Output (Approximate)								**175 RPM**		**140 RPM**	
1.85	531	C002_0082	MR140/	050	AW140/010	8.235	194	1.53	531	1.22	531
1.85	531	C002_0082	MR160/	050, 140	AW160/012	8.235	194	1.53	531	1.22	531
2.61	753	C102_0083	MR140/	050	AW140/010	8.263	348	2.16	753	1.73	753
3.68	1,063	C102_0083	MR160/	050, 140	AW160/012	8.263	348	3.05	1,063	2.44	1,063
3.68	1,063	C102_0083	MR200/	180	AW200/014	8.263	348	3.05	1,063	2.44	1,063
6.19	1,772	C202_0082	MR160/	050, 140	AW160/012	8.190	429	5.13	1,772	4.10	1,772
6.19	1,772	C202_0082	MR200/	180	AW200/014	8.190	429	5.13	1,772	4.10	1,772
8.73	2,518	C302_0083	MR160/	050, 140	AW160/012	8.250	579	7.64	2,658	6.11	2,658
9.78	2,822	C302_0083	MR200/	180	AW200/014	8.250	579	8.53	2,971	6.83	2,971
9.78	2,822	C302_0083	MR250/	180, 210	AW250/102	8.250	579	8.53	2,971	6.83	2,971
16.37*	4,742	C402_0083	MR200/	180	AW200/014	8.285	995	13.94	4,872	11.15	4,872
16.37*	4,742	C402_0083	MR250/	180, 210	AW250/102	8.285	995	13.94	4,872	11.15	4,872
18.92	5,418	C612_0082	MR200/	180	AW200/014	8.190	1,635	16.69	5,768	14.38	6,213
19.60	5,661	C502_0083	MR200/	180	AW200/014	8.263	1,127	17.29	6,027	14.90	6,493
24.53*	7,086	C502_0083	MR250/	180, 210	AW250/102	8.263	1,127	20.32	7,086	16.26	7,086
24.53*	7,086	C502_0083	MR300/	180, 210, 250, 280	AW300/110	8.263	1,127	20.32	7,086	16.26	7,086
33.39*	9,560	C612_0082	MR250/	180, 210	AW250/102	8.190	1,635	29.45	10,179	23.78	10,274
34.08*	9,760	C612_0082	MR300/	180, 210, 250, 280	AW300/110	8.190	1,635	29.73	10,274	23.78	10,274
105.20*	30,486	C912_0083	MR350/	320, 360	AW350/202	8.288	3,795	87.17	30,486	69.74	30,486
205 RPM Output (Approximate)								**170 RPM**		**135 RPM**	
22.11	6,564	C712_0085	MR200/	180	AW200/014	8.490	2,275	19.51	6,988	16.29	7,295
39.12	11,612	C712_0085	MR250/	180, 210	AW250/102	8.490	2,275	32.58	11,672	26.06	11,672
55.08*	16,349	C712_0085	MR300/	180, 210, 250, 280	AW300/110	8.490	2,275	48.04	17,211	38.43	17,211
73.72*	21,838	C812_0085	MR300/	180, 210, 250, 280	AW300/110	8.472	3,100	61.09	21,838	48.87	21,838
195 RPM Output (Approximate) Continued Next Page								**160 RPM**		**130 RPM**	
21.48	6,848	C612_0091	MR200/	180	AW200/014	9.118	1,694	18.95	7,291	16.29	7,834
31.73*	10,115	C612_0091	MR250/	180, 210	AW250/102	9.118	1,694	27.68	10,649	22.14	10,649

* 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

See Page 40 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							
195 RPM Output (Approximate) Continued								**160 RPM**		**130 RPM**	
31.73*	10,115	C612_0091	MR300/	180, 210, 250, 280	AW300/110	9.118	1,694	27.68	10,649	22.14	10,649
73.72*	23,310	C812_0090	MR300/	180, 210, 250, 280	AW300/110	9.043	3,168	61.09	23,310	48.87	23,310
85.79*	27,125	C812_0090	MR350/	320, 360	AW350/202	9.043	3,168	74.83	28,555	59.86	28,555
190 RPM Output (Approximate)								**155 RPM**		**125 RPM**	
1.65	531	C002_0092	MR140/	050	AW140/010	9.228	202	1.37	531	1.09	531
1.65	531	C002_0092	MR160/	050, 140	AW160/012	9.228	202	1.37	531	1.09	531
2.61	849	C102_0093	MR140/	050	AW140/010	9.326	363	2.16	849	1.73	849
3.26	1,063	C102_0093	MR160/	050, 140	AW160/012	9.326	363	2.70	1,063	2.16	1,063
3.26	1,063	C102_0093	MR200/	180	AW200/014	9.326	363	2.70	1,063	2.16	1,063
5.40	1,772	C202_0094	MR160/	050, 140	AW160/012	9.387	449	4.47	1,772	3.58	1,772
5.40	1,772	C202_0094	MR200/	180	AW200/014	9.387	449	4.47	1,772	3.58	1,772
8.73	2,841	C302_0093	MR160/	050, 140	AW160/012	9.310	602	7.64	3,000	6.11	3,000
9.03	2,938	C302_0093	MR200/	180	AW200/014	9.310	602	7.87	3,093	6.30	3,093
9.03	2,938	C302_0093	MR250/	180, 210	AW250/102	9.310	602	7.87	3,093	6.30	3,093
15.05*	4,872	C402_0093	MR200/	180	AW200/014	9.261	1,032	12.47	4,872	9.97	4,872
15.05*	4,872	C402_0093	MR250/	180, 210	AW250/102	9.261	1,032	12.47	4,872	9.97	4,872
19.60	6,345	C502_0093	MR200/	180	AW200/014	9.261	1,171	17.29	6,755	14.51	7,086
21.89*	7,086	C502_0093	MR250/	180, 210	AW250/102	9.261	1,171	18.13	7,086	14.51	7,086
21.89*	7,086	C502_0093	MR300/	180, 210, 250, 280	AW300/110	9.261	1,171	18.13	7,086	14.51	7,086
24.58	8,107	C712_0094	MR200/	180	AW200/014	9.435	2,356	20.36	8,107	16.29	8,107
39.32	12,971	C712_0094	MR250/	180, 210	AW250/102	9.435	2,356	32.58	12,971	26.06	12,971
51.34*	16,934	C712_0094	MR300/	180, 210, 250, 280	AW300/110	9.435	2,356	44.50	17,716	35.60	17,716
175 RPM Output (Approximate)								**145 RPM**		**115 RPM**	
15.67	5,538	C612_0100	MR200/	180	AW200/014	10.111	1,753	13.82	5,896	11.91	6,352
19.85	6,879	C712_0099	MR200/	180	AW200/014	9.912	2,395	17.51	7,324	15.09	7,890
27.75	9,810	C612_0100	MR250/	180, 210	AW250/102	10.111	1,753	24.48	10,445	20.67	11,022
29.62*	10,470	C612_0100	MR300	180, 210, 250, 280	AW300/110	10.111	1,753	25.83	11,022	20.67	11,022
35.15	12,183	C712_0099	MR250/	180, 210	AW250/102	9.912	2,395	31.01	12,971	26.06	13,627
49.68*	17,215	C712_0099	MR300/	180, 210, 250, 280	AW300/110	9.912	2,395	43.33	18,123	34.66	18,123
73.72*	26,166	C812_0100	MR300/	180, 210, 250, 280	AW300/110	10.151	3,292	61.09	26,166	48.87	26,166
79.43*	28,190	C812_0100	MR350/	320, 360	AW350/202	10.151	3,292	69.28	29,676	55.43	29,676
170 RPM Output (Approximate)								**140 RPM**		**110 RPM**	
1.48	531	C002_0105	MR140/	050	AW140/010	10.297	209	1.22	531	0.98	531
1.48	531	C002_0105	MR160/	050, 140	AW160/012	10.297	209	1.22	531	0.98	531
2.61	946	C102_0105	MR140/	050	AW140/010	10.383	376	2.16	946	1.73	946
2.93	1,063	C102_0105	MR160/	050, 140	AW160/012	10.383	376	2.43	1,063	1.94	1,063
2.93	1,063	C102_0105	MR200/	180	AW200/014	10.383	376	2.43	1,063	1.94	1,063
4.94	1,772	C202_0105	MR160/	050, 140	AW160/012	10.260	463	4.09	1,772	3.27	1,772
4.94	1,772	C202_0105	MR200/	180	AW200/014	10.260	463	4.09	1,772	3.27	1,772
7.70	2,770	C302_0105	MR160/	050, 140	AW160/012	10.286	623	6.80	2,949	5.71	3,100
8.45	3,037	C302_0105	MR200/	180	AW200/014	10.286	623	7.14	3,100	5.71	3,100
8.45	3,037	C302_0105	MR250/	180, 210	AW250/102	10.286	623	7.14	3,100	5.71	3,100
8.46	3,077	C402_0105	MR160/	050, 140	AW160/012	10.410	1,073	7.46	3,276	6.11	3,354
13.39	4,872	C402_0105	MR200/	180	AW200/014	10.410	1,073	11.09	4,872	8.87	4,872
13.39	4,872	C402_0105	MR250/	180, 210	AW250/102	10.410	1,073	11.09	4,872	8.87	4,872
17.24	6,257	C502_0105	MR200/	180	AW200/014	10.383	1,216	15.21	6,662	12.94	7,086
19.52	7,086	C502_0105	MR250/	180, 210	AW250/102	10.383	1,216	16.17	7,086	12.94	7,086
19.52	7,086	C502_0105	MR300/	180, 210, 250, 280	AW300/110	10.383	1,216	16.17	7,086	12.94	7,086

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
150 RPM Output (Approximate)								**125 RPM**		**100 RPM**	
1.32	531	C002_0115	MR140/	050	AW140/010	11.540	218	1.09	531	0.87	531
1.32	531	C002_0115	MR160/	050, 140	AW160/012	11.540	218	1.09	531	0.87	531
2.60	1,063	C102_0115	MR140/	050	AW140/010	11.717	391	2.15	1,063	1.72	1,063
2.60	1,063	C102_0115	MR160/	050, 140	AW160/012	11.717	391	2.15	1,063	1.72	1,063
2.60	1,063	C102_0115	MR200/	180	AW200/014	11.717	391	2.15	1,063	1.72	1,063
4.31	1,772	C202_0120	MR160/	050, 140	AW160/012	11.760	484	3.57	1,772	2.86	1,772
4.31	1,772	C202_0120	MR200/	180	AW200/014	11.760	484	3.57	1,772	2.86	1,772
7.64	3,100	C302_0115	MR160/	050, 140	AW160/012	11.607	648	6.33	3,100	5.06	3,100
7.64	3,100	C302_0115	MR200/	180	AW200/014	11.607	648	6.33	3,100	5.06	3,100
7.64	3,100	C302_0115	MR250/	180, 210	AW250/102	11.607	648	6.33	3,100	5.06	3,100
8.46	3,440	C402_0115	MR160/	050, 140	AW160/012	11.636	1,114	7.46	3,662	6.11	3,749
11.98	4,872	C402_0115	MR200/	180	AW200/014	11.636	1,114	9.92	4,872	7.94	4,872
11.98	4,872	C402_0115	MR250/	180, 210	AW250/102	11.636	1,114	9.92	4,872	7.94	4,872
17.24	7,012	C502_0115	MR200/	180	AW200/014	11.636	1,263	14.43	7,086	11.55	7,086
17.42	7,086	C502_0115	MR250/	180, 210	AW250/102	11.636	1,263	14.43	7,086	11.55	7,086
17.42	7,086	C502_0115	MR300/	180, 210, 250, 280	AW300/110	11.636	1,263	14.43	7,086	11.55	7,086
18.92	7,579	C612_0115	MR200/	180	AW200/014	11.457	1,828	16.69	8,069	14.38	8,692
22.11	9,093	C712_0120	MR200/	180	AW200/014	11.761	2,536	19.51	9,681	16.29	10,105
27.25	10,915	C612_0115	MR250/	180, 210	AW250/102	11.457	1,828	23.77	11,491	19.01	11,491
27.25	10,915	C612_0115	MR300/	180, 210, 250, 280	AW300/110	11.457	1,828	23.77	11,491	19.01	11,491
39.12	16,086	C712_0120	MR250/	180, 210	AW250/102	11.761	2,536	32.58	16,169	26.06	16,169
43.08*	17,716	C712_0120	MR300/	180, 210, 250, 280	AW300/110	11.761	2,536	35.70	17,716	28.56	17,716
73.14*	29,376	C812_0115	MR300/	180, 210, 250, 280	AW300/110	11.487	3,431	61.09	29,610	48.87	29,610
73.14*	29,376	C812_0115	MR350/	320, 360	AW350/202	11.487	3,431	63.80	30,925	51.04	30,925
105.20*	43,313	C912_0120	MR350/	320, 360	AW350/202	11.775	4,266	87.17	43,313	69.74	43,313
140 RPM Output (Approximate)								**115 RPM**		**90 RPM**	
1.21	531	C002_0125	MR140/	050	AW140/010	12.567	224	1.00	531	0.80	531
1.21	531	C002_0125	MR160/	050, 140	AW160/012	12.567	224	1.00	531	0.80	531
2.44	1,063	C102_0125	MR140/	050	AW140/010	12.455	399	2.02	1,063	1.62	1,063
2.44	1,063	C102_0125	MR160/	050, 140	AW160/012	12.455	399	2.02	1,063	1.62	1,063
2.44	1,063	C102_0125	MR200/	180	AW200/014	12.455	399	2.02	1,063	1.62	1,063
4.11	1,772	C202_0125	MR160/	050, 140	AW160/012	12.315	492	3.41	1,772	2.73	1,772
4.11	1,772	C202_0125	MR200/	180	AW200/014	12.315	492	3.41	1,772	2.73	1,772
6.66	2,887	C302_0125	MR160/	050, 140	AW160/012	12.400	663	5.87	3,073	4.74	3,100
7.15	3,100	C302_0125	MR200/	180	AW200/014	12.400	663	5.93	3,100	4.74	3,100
7.15	3,100	C302_0125	MR250/	180, 210	AW250/102	12.400	663	5.93	3,100	4.74	3,100
7.57	3,311	C402_0125	MR160/	050, 140	AW160/012	12.519	1,141	6.67	3,525	5.75	3,797
8.68	3,771	C502_0125	MR160/	050, 140	AW160/012	12.429	1,291	7.64	4,005	6.11	4,005
11.13	4,872	C402_0125	MR200/	180	AW200/014	12.519	1,141	9.22	4,872	7.38	4,872
11.13	4,872	C402_0125	MR250/	180, 210	AW250/102	12.519	1,141	9.22	4,872	7.38	4,872
13.54	5,956	C612_0125	MR200/	180	AW200/014	12.581	1,886	11.94	6,341	10.29	6,831
15.25	6,626	C502_0125	MR200/	180	AW200/014	12.429	1,291	13.45	7,055	10.81	7,086
16.31	7,086	C502_0125	MR250/	180, 210	AW250/102	12.429	1,291	13.51	7,086	10.81	7,086
16.31	7,086	C502_0125	MR300/	180, 210, 250, 280	AW300/110	12.429	1,291	13.51	7,086	10.81	7,086
23.91	10,518	C612_0125	MR250/	180, 210	AW250/102	12.581	1,886	21.09	11,198	17.87	11,855
25.60	11,261	C612_0125	MR300/	180, 210, 250, 280	AW300/110	12.581	1,886	22.33	11,855	17.87	11,855
35.15	15,670	C812_0125	MR250/	180, 210	AW250/102	12.749	3,552	31.01	16,684	25.57	17,196
62.77*	27,978	C812_0125	MR300/	180, 210, 250, 280	AW300/110	12.749	3,552	55.37	29,788	47.61	32,018
68.23*	30,415	C812_0125	MR350/	320, 360	AW350/202	12.749	3,552	59.52	32,018	47.61	32,018

* 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

See Page 40 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
130 RPM Output (Approximate)								**105 RPM**		**85 RPM**	
15.67	7,220	C712_0130	MR200/	180	AW200/014	13.182	2,634	13.82	7,687	11.91	8,281
19.85	9,529	C712_0135	MR200/	180	AW200/014	13.730	2,670	17.51	10,145	15.09	10,929
27.75	12,790	C712_0130	MR250/	180, 210	AW250/102	13.182	2,634	24.48	13,618	21.10	14,669
35.15	16,876	C712_0135	MR250/	180, 210	AW250/102	13.730	2,670	30.58	17,716	24.46	17,716
36.90	17,716	C712_0135	MR300/	180, 210, 250, 280	AW300/110	13.730	2,670	30.58	17,716	24.46	17,716
41.08*	18,932	C712_0130	MR300/	180, 210, 250, 280	AW300/110	13.182	2,634	35.83	19,930	28.66	19,930
125 RPM Output (Approximate)								**100 RPM**		**80 RPM**	
1.08	531	C002_0140	MR140/	050	AW140/010	14.083	233	0.89	531	0.72	531
1.08	531	C002_0140	MR160/	050, 140	AW160/012	14.083	233	0.89	531	0.72	531
2.16	1,063	C102_0140	MR140/	050	AW140/010	14.056	416	1.79	1,063	1.43	1,063
2.16	1,063	C102_0140	MR160/	050, 140	AW160/012	14.056	416	1.79	1,063	1.43	1,063
2.16	1,063	C102_0140	MR200/	180	AW200/014	14.056	416	1.79	1,063	1.43	1,063
3.59	1,772	C202_0140	MR160/	050, 140	AW160/012	14.115	514	2.97	1,772	2.38	1,772
3.59	1,772	C202_0140	MR200/	180	AW200/014	14.115	514	2.97	1,772	2.38	1,772
6.34	3,100	C302_0140	MR160/	050, 140	AW160/012	13.993	690	5.25	3,100	4.20	3,100
6.34	3,100	C302_0140	MR200/	180	AW200/014	13.993	690	5.25	3,100	4.20	3,100
6.34	3,100	C302_0140	MR250/	180, 210	AW250/102	13.993	690	5.25	3,100	4.20	3,100
7.57	3,701	C402_0140	MR160/	050, 140	AW160/012	13.993	1,185	6.67	3,940	5.75	4,244
8.68	4,226	C502_0140	MR160/	050, 140	AW160/012	13.929	1,341	7.64	4,488	6.11	4,488
9.96	4,872	C402_0140	MR200/	180	AW200/014	13.993	1,185	8.25	4,872	6.60	4,872
9.96	4,872	C402_0140	MR250/	180, 210	AW250/102	13.993	1,185	8.25	4,872	6.60	4,872
14.55	7,086	C502_0140	MR200/	180	AW200/014	13.929	1,341	12.06	7,086	9.64	7,086
14.55	7,086	C502_0140	MR250/	180, 210	AW250/102	13.929	1,341	12.06	7,086	9.64	7,086
14.55	7,086	C502_0140	MR300/	180, 210, 250, 280	AW300/110	13.929	1,341	12.06	7,086	9.64	7,086
15.67	7,748	C612_0140	MR200/	180	AW200/014	14.145	1,961	13.82	8,249	11.91	8,886
23.28	11,515	C612_0140	MR250/	180, 210	AW250/102	14.145	1,961	19.29	11,515	15.43	11,515
23.28	11,515	C612_0140	MR300/	180, 210, 250, 280	AW300/110	14.145	1,961	19.29	11,515	15.43	11,515
64.84*	31,201	C812_0140	MR300/	180, 210, 250, 280	AW300/110	13.763	3,644	54.91	31,889	43.93	31,889
64.84*	31,201	C812_0140	MR350/	320, 360	AW350/202	13.763	3,644	54.91	31,889	43.93	31,889
105.20*	51,158	C912_0140	MR350/	320, 360	AW350/202	13.908	4,510	87.17	51,158	69.74	51,158
115 RPM Output (Approximate)								**90 RPM**		**75 RPM**	
0.97	531	C002_0155	MR140/	050	AW140/010	15.637	241	0.81	531	0.65	531
0.97	531	C002_0155	MR160/	050, 140	AW160/012	15.637	241	0.81	531	0.65	531
1.94	1,063	C102_0155	MR140/	050	AW140/010	15.708	432	1.60	1,063	1.28	1,063
1.94	1,063	C102_0155	MR160/	050, 140	AW160/012	15.708	432	1.60	1,063	1.28	1,063
1.94	1,063	C102_0155	MR200/	180	AW200/014	15.708	432	1.60	1,063	1.28	1,063
2.61	1,392	C202_0155	MR140/	050	AW140/010	15.283	528	2.16	1,392	1.73	1,392
3.32	1,772	C202_0155	MR160/	050, 140	AW160/012	15.283	528	2.75	1,772	2.20	1,772
3.32	1,772	C202_0155	MR200/	180	AW200/014	15.283	528	2.75	1,772	2.20	1,772
5.71	3,100	C302_0155	MR160/	050, 140	AW160/012	15.543	715	4.73	3,100	3.78	3,100
5.71	3,100	C302_0155	MR200/	180	AW200/014	15.543	715	4.73	3,100	3.78	3,100
5.71	3,100	C302_0155	MR250/	180, 210	AW250/102	15.543	715	4.73	3,100	3.78	3,100
7.39	4,056	C502_0155	MR160/	050, 140	AW160/012	15.708	1,396	6.52	4,318	5.61	4,651
12.90	7,086	C502_0155	MR200/	180	AW200/014	15.708	1,396	10.69	7,086	8.55	7,086
12.90	7,086	C502_0155	MR250/	180, 210	AW250/102	15.708	1,396	10.69	7,086	8.55	7,086
12.90	7,086	C502_0155	MR300/	180, 210, 250, 280	AW300/110	15.708	1,396	10.69	7,086	8.55	7,086

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
105 RPM Output (Approximate)								**85 RPM**		**70 RPM**	
6.36	3,501	C402_0160	MR160/	050	AW160/012	15.750	1,232	5.61	3,727	4.83	4,015
8.85	4,872	C402_0160	MR200/	180	AW200/014	15.750	1,232	7.33	4,872	5.86	4,872
8.85	4,872	C402_0160	MR250/	180, 210	AW250/102	15.750	1,232	7.33	4,872	5.86	4,872
11.33	6,419	C612_0160	MR200/	180	AW200/014	16.203	2,052	10.00	6,834	8.61	7,362
13.54	7,922	C712_0165	MR200/	180	AW200/014	16.734	2,852	11.94	8,435	10.29	9,086
19.95	11,300	C612_0160	MR250/	180, 210	AW250/102	16.203	2,052	17.60	12,031	15.03	12,844
21.63	12,252	C612_0160	MR300/	180, 210, 250, 280	AW300/110	16.203	2,052	18.79	12,844	15.03	12,844
23.91	13,989	C712_0165	MR250/	180, 210	AW250/102	16.734	2,852	21.09	14,894	18.18	16,044
27.75	16,592	C812_0170	MR250/	180, 210	AW250/102	17.101	3,917	24.48	17,666	21.10	19,030
35.04	20,499	C712_0165	MR300/	180, 210, 250, 280	AW300/110	16.734	2,852	30.11	21,259	24.08	21,259
49.56	29,635	C812_0170	MR300/	180, 210, 250, 280	AW300/110	17.101	3,917	43.72	31,552	37.68	33,988
56.10*	33,543	C812_0170	MR350/	320, 360	AW350/202	17.101	3,917	48.93	35,311	39.15	35,311
58.79	33,841	C912_0165	MR300/	180, 210, 250, 280	AW300/110	16.463	4,770	51.87	36,030	44.70	38,812
78.29*	45,063	C912_0165	MR350/	320, 360	AW350/202	16.463	4,770	69.06	47,978	59.52	51,683
100 RPM Output (Approximate)								**80 RPM**		**65 RPM**	
0.87	531	C002_0175	MR140/	050	AW140/010	17.525	250	0.72	531	0.58	531
0.87	531	C002_0175	MR160/	050, 140	AW160/012	17.525	250	0.72	531	0.58	531
1.72	1,063	C102_0175	MR140/	050	AW140/010	17.727	449	1.42	1,063	1.14	1,063
1.72	1,063	C102_0175	MR160/	050, 140	AW160/012	17.727	449	1.42	1,063	1.14	1,063
1.72	1,063	C102_0175	MR200/	180	AW200/014	17.727	449	1.42	1,063	1.14	1,063
2.61	1,595	C202_0175	MR140/	050	AW140/010	17.517	553	2.16	1,595	1.73	1,595
2.89	1,772	C202_0175	MR160/	050, 140	AW160/012	17.517	553	2.40	1,772	1.92	1,772
2.89	1,772	C202_0175	MR200/	180	AW200/014	17.517	553	2.40	1,772	1.92	1,772
5.06	3,100	C302_0175	MR160/	050, 140	AW160/012	17.540	744	4.19	3,100	3.35	3,100
5.06	3,100	C302_0175	MR200/	180	AW200/014	17.540	744	4.19	3,100	3.35	3,100
5.06	3,100	C302_0175	MR250/	180, 210	AW250/102	17.540	744	4.19	3,100	3.35	3,100
6.36	3,913	C402_0175	MR160/	050, 140	AW160/012	17.604	1,279	5.61	4,166	4.83	4,488
7.39	4,545	C502_0175	MR160/	050, 140	AW160/012	17.604	1,450	6.52	4,839	5.61	5,213
7.92	4,872	C402_0175	MR200/	180	AW200/014	17.604	1,279	6.56	4,872	5.25	4,872
7.92	4,872	C402_0175	MR250/	180, 210	AW250/102	17.604	1,279	6.56	4,872	5.25	4,872
11.51	7,086	C502_0175	MR200/	180	AW200/014	17.604	1,450	9.54	7,086	7.63	7,086
11.51	7,086	C502_0175	MR250/	180, 210	AW250/102	17.604	1,450	9.54	7,086	7.63	7,086
11.51	7,086	C502_0175	MR300/	180, 210, 250, 280	AW300/110	17.604	1,450	9.54	7,086	7.63	7,086
13.54	8,332	C612_0175	MR200/	180	AW200/014	17.600	2,109	11.94	8,871	10.29	9,556
18.71	11,515	C612_0175	MR250/	180, 210	AW250/102	17.600	2,109	15.51	11,515	12.40	11,515
18.71	11,515	C612_0175	MR300/	180, 210, 250, 280	AW300/110	17.600	2,109	15.51	11,515	12.40	11,515
35.15	21,248	C812_0175	MR250/	180, 210	AW250/102	17.287	3,931	31.01	22,622	25.57	23,317
52.76	31,889	C812_0175	MR300/	180, 210, 250, 280	AW300/110	17.287	3,931	43.72	31,889	34.97	31,889
52.76	31,889	C812_0175	MR350/	320, 360	AW350/202	17.287	3,931	43.72	31,889	34.97	31,889
86.13*	53,148	C912_0175	MR350/	320, 360	AW350/202	17.648	4,882	71.37	53,148	57.09	53,148
90 RPM Output (Approximate) Continued Next Page								**75 RPM**		**60 RPM**	
9.98	6,844	C612_0195	MR200/	180	AW200/014	19.607	2,187	8.81	7,286	7.59	7,849
15.67	10,002	C712_0185	MR200/	180	AW200/014	18.261	2,936	13.82	10,649	11.91	11,472
17.49	11,987	C612_0195	MR250/	180, 210	AW250/102	19.607	2,187	15.43	12,763	12.42	12,844
18.74	12,844	C612_0195	MR300/	180, 210, 250, 280	AW300/110	19.607	2,187	15.52	12,844	12.42	12,844
24.72	17,511	C812_0200	MR250/	180, 210	AW250/102	20.257	4,145	21.81	18,644	18.80	20,084
27.75	17,716	C712_0185	MR250/	180, 210	AW250/102	18.261	2,936	22.99	17,716	18.39	17,716

* 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

See Page 40 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
90 RPM Output (Approximate) Continued								**75 RPM**		**60 RPM**	
27.75	17,716	C712_0185	MR300/	180, 210, 250, 280	AW300/110	18.261	2,936	22.99	17,716	18.39	17,716
43.99	31,156	C812_0200	MR300/	180, 210, 250, 280	AW300/110	20.257	4,145	38.81	33,172	33.44	35,733
50.11	35,491	C812_0200	MR350/	320, 360	AW350/202	20.257	4,145	43.52	37,204	34.82	37,204
50.44	35,541	C912_0200	MR300/	180, 210, 250, 280	AW300/110	20.152	5,103	44.50	37,840	38.35	40,762
85 RPM Output (Approximate)								**70 RPM**		**55 RPM**	
0.73	531	C002_0210	MR140/	050	AW140/010	20.714	264	0.61	531	0.49	531
0.73	531	C002_0210	MR160/	050, 140	AW160/012	20.714	264	0.61	531	0.49	531
1.46	1,063	C102_0210	MR140/	050	AW140/010	20.844	474	1.21	1,063	0.97	1,063
1.46	1,063	C102_0210	MR160/	050, 140	AW160/012	20.844	474	1.21	1,063	0.97	1,063
1.46	1,063	C102_0210	MR200/	180	AW200/014	20.844	474	1.21	1,063	0.97	1,063
2.46	1,772	C202_0210	MR140/	050	AW140/010	20.583	583	2.04	1,772	1.63	1,772
2.46	1,772	C202_0210	MR160/	050, 140	AW160/012	20.583	583	2.04	1,772	1.63	1,772
2.46	1,772	C202_0210	MR200/	180	AW200/014	20.583	583	2.04	1,772	1.63	1,772
4.26	3,100	C302_0210	MR160/	050, 140	AW160/012	20.800	787	3.53	3,100	2.83	3,100
4.26	3,100	C302_0210	MR200/	180	AW200/014	20.800	787	3.53	3,100	2.83	3,100
4.26	3,100	C302_0210	MR250/	180, 210	AW250/102	20.800	787	3.53	3,100	2.83	3,100
5.11	3,732	C402_0210	MR160/	050, 140	AW160/012	20.899	1,354	4.51	3,974	3.88	4,281
5.97	4,353	C502_0210	MR160/	050, 140	AW160/012	20.844	1,534	5.27	4,635	4.54	4,993
6.67	4,872	C402_0210	MR200/	180	AW200/014	20.899	1,354	5.53	4,872	4.42	4,872
6.67	4,872	C402_0210	MR250/	180, 210	AW250/102	20.899	1,354	5.53	4,872	4.42	4,872
9.72	7,086	C502_0210	MR200/	180	AW200/014	20.844	1,534	8.06	7,086	6.45	7,086
9.72	7,086	C502_0210	MR250/	180, 210	AW250/102	20.844	1,534	8.06	7,086	6.45	7,086
9.72	7,086	C502_0210	MR300/	180, 210, 250, 280	AW300/110	20.844	1,534	8.06	7,086	6.45	7,086
11.33	8,189	C712_0210	MR200/	180	AW200/014	20.672	3,060	10.00	8,719	8.61	9,392
19.95	14,416	C712_0210	MR250/	180, 210	AW250/102	20.672	3,060	17.60	15,349	15.16	16,534
29.41	21,259	C712_0210	MR300/	180, 210, 250, 280	AW300/110	20.672	3,060	24.37	21,259	19.50	21,259
75 RPM Output (Approximate) Continued Next Page								**60 RPM**		**50 RPM**	
0.65	531	C002_0230	MR140/	050	AW140/010	23.214	275	0.54	531	0.43	531
0.65	531	C002_0230	MR160/	050, 140	AW160/012	23.214	275	0.54	531	0.43	531
1.29	1,063	C102_0240	MR140/	050	AW140/010	23.523	494	1.07	1,063	0.86	1,063
1.29	1,063	C102_0240	MR160/	050, 140	AW160/012	23.523	494	1.07	1,063	0.86	1,063
1.29	1,063	C102_0240	MR200/	180	AW200/014	23.523	494	1.07	1,063	0.86	1,063
2.15	1,772	C202_0240	MR140/	050	AW140/010	23.593	611	1.78	1,772	1.42	1,772
2.15	1,772	C202_0240	MR160/	050, 140	AW160/012	23.593	611	1.78	1,772	1.42	1,772
2.15	1,772	C202_0240	MR200/	180	AW200/014	23.593	611	1.78	1,772	1.42	1,772
3.78	3,100	C302_0230	MR160/	050, 140	AW160/012	23.472	820	3.13	3,100	2.50	3,100
3.78	3,100	C302_0230	MR200/	180	AW200/014	23.472	820	3.13	3,100	2.50	3,100
3.78	3,100	C302_0230	MR250/	180, 210	AW250/102	23.472	820	3.13	3,100	2.50	3,100
5.11	4,172	C402_0230	MR160/	050, 140	AW160/012	23.359	1,405	4.51	4,441	3.88	4,784
5.97	4,872	C402_0230	MR200/	180	AW200/014	23.359	1,405	4.94	4,872	3.96	4,872
5.97	4,872	C402_0230	MR250/	180, 210	AW250/102	23.359	1,405	4.94	4,872	3.96	4,872
5.97	4,879	C502_0230	MR160/	050, 140	AW160/012	23.359	1,594	5.27	5,194	4.54	5,596
8.68	7,086	C502_0230	MR200/	180	AW200/014	23.359	1,594	7.19	7,086	5.75	7,086
8.68	7,086	C502_0230	MR250/	180, 210	AW250/102	23.359	1,594	7.19	7,086	5.75	7,086
8.68	7,086	C502_0230	MR300/	180, 210, 250, 280	AW300/110	23.359	1,594	7.19	7,086	5.75	7,086
11.33	8,979	C612_0230	MR200/	180	AW200/014	22.667	2,295	10.00	9,560	8.61	10,299
13.54	10,975	C712_0230	MR200/	180	AW200/014	23.182	3,179	11.94	11,685	10.29	12,587
14.53	11,515	C612_0230	MR250/	180, 210	AW250/102	22.667	2,295	12.04	11,515	9.63	11,515
14.53	11,515	C612_0230	MR300/	180, 210, 250, 280	AW300/110	22.667	2,295	12.04	11,515	9.63	11,515
21.86	17,716	C712_0230	MR250/	180, 210	AW250/102	23.182	3,179	18.11	17,716	14.49	17,716

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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							
75 RPM Output (Approximate) Continued								**60 RPM**		**50 RPM**	
21.86	17,716	C712_0230	MR300/	180, 210, 250, 280	AW300/110	23.182	3,179	18.11	17,716	14.49	17,716
27.75	22,498	C812_0230	MR250/	180, 210	AW250/102	23.188	4,336	24.48	23,954	21.10	25,804
39.33	31,889	C812_0230	MR300/	180, 210, 250, 280	AW300/110	23.188	4,336	32.59	31,889	26.07	31,889
39.33	31,889	C812_0230	MR350/	320, 360	AW350/202	23.188	4,336	32.59	31,889	26.07	31,889
58.79	48,080	C912_0230	MR300/	180, 210, 250, 280	AW300/110	23.390	5,363	51.87	51,190	43.08	53,148
64.99	53,148	C912_0230	MR350/	320, 360	AW350/202	23.390	5,363	53.85	53,148	43.08	53,148
70 RPM Output (Approximate)								**55 RPM**		**45 RPM**	
0.61	531	C002_0250	MR140/	050	AW140/010	24.972	281	0.50	531	0.40	531
0.61	531	C002_0250	MR160/	050, 140	AW160/012	24.972	281	0.50	531	0.40	531
1.21	1,063	C102_0250	MR140/	050	AW140/010	25.133	505	1.00	1,063	0.80	1,063
1.21	1,063	C102_0250	MR160/	050, 140	AW160/012	25.133	505	1.00	1,063	0.80	1,063
1.21	1,063	C102_0250	MR200/	180	AW200/014	25.133	505	1.00	1,063	0.80	1,063
2.06	1,772	C202_0250	MR140/	050	AW140/010	24.641	619	1.70	1,772	1.36	1,772
2.06	1,772	C202_0250	MR160/	050, 140	AW160/012	24.641	619	1.70	1,772	1.36	1,772
2.06	1,772	C202_0250	MR200/	180	AW200/014	24.641	619	1.70	1,772	1.36	1,772
3.58	3,100	C302_0250	MR160/	050, 140	AW160/012	24.800	835	2.96	3,100	2.37	3,100
3.58	3,100	C302_0250	MR200/	180	AW200/014	24.800	835	2.96	3,100	2.37	3,100
3.58	3,100	C302_0250	MR250/	180, 210	AW250/102	24.800	835	2.96	3,100	2.37	3,100
4.50	3,925	C402_0250	MR160/	050, 140	AW160/012	24.923	1,436	3.97	4,179	3.43	4,502
5.11	4,478	C502_0250	MR160/	050, 140	AW160/012	25.073	1,632	4.51	4,767	3.88	5,136
5.59	4,872	C402_0250	MR200/	180	AW200/014	24.923	1,436	4.63	4,872	3.71	4,872
5.59	4,872	C402_0250	MR250/	180, 210	AW250/102	24.923	1,436	4.63	4,872	3.71	4,872
8.00	6,971	C612_0250	MR200/	180	AW200/014	24.928	2,369	7.06	7,422	6.08	7,995
8.08	7,086	C502_0250	MR200/	180	AW200/014	25.073	1,632	6.70	7,086	5.36	7,086
8.08	7,086	C502_0250	MR250/	180, 210	AW250/102	25.073	1,632	6.70	7,086	5.36	7,086
8.08	7,086	C502_0250	MR300/	180, 210, 250, 280	AW300/110	25.073	1,632	6.70	7,086	5.36	7,086
9.98	8,835	C712_0250	MR200/	180	AW200/014	25.313	3,274	8.81	9,407	7.59	10,133
14.04	12,235	C612_0250	MR250/	180, 210	AW250/102	24.928	2,369	12.21	12,844	9.77	12,844
14.74	12,844	C612_0250	MR300/	180, 210, 250, 280	AW300/110	24.928	2,369	12.21	12,844	9.77	12,844
17.49	15,476	C712_0250	MR250/	180, 210	AW250/102	25.313	3,274	15.43	16,477	13.29	17,749
19.95	18,173	C812_0260	MR250/	180, 210	AW250/102	26.058	4,508	17.60	19,348	15.16	20,842
24.02	21,259	C712_0250	MR300/	180, 210, 250, 280	AW300/110	25.313	3,274	19.90	21,259	15.92	21,259
35.44	32,285	C812_0260	MR300/	180, 210, 250, 280	AW300/110	26.058	4,508	31.26	34,374	26.94	37,028
41.49	36,763	C912_0250	MR300/	180, 210, 250, 280	AW300/110	25.342	5,508	36.60	39,141	31.54	42,163
60 RPM Output (Approximate) Continued Next Page								**50 RPM**		**40 RPM**	
0.54	531	C002_0280	MR140/	050	AW140/010	27.986	292	0.45	531	0.36	531
0.54	531	C002_0280	MR160/	050, 140	AW160/012	27.986	292	0.45	531	0.36	531
1.07	1,063	C102_0280	MR140/	050	AW140/010	28.364	526	0.89	1,063	0.71	1,063
1.07	1,063	C102_0280	MR160/	050, 140	AW160/012	28.364	526	0.89	1,063	0.71	1,063
1.07	1,063	C102_0280	MR200/	180	AW200/014	28.364	526	0.89	1,063	0.71	1,063
1.79	1,772	C202_0280	MR140/	050	AW140/010	28.243	648	1.49	1,772	1.19	1,772
1.79	1,772	C202_0280	MR160/	050, 140	AW160/012	28.243	648	1.49	1,772	1.19	1,772
1.79	1,772	C202_0280	MR200/	180	AW200/014	28.243	648	1.49	1,772	1.19	1,772
3.17	3,100	C302_0280	MR160/	050, 140	AW160/012	27.986	869	2.63	3,100	2.10	3,100
3.17	3,100	C302_0280	MR200/	180	AW200/014	27.986	869	2.63	3,100	2.10	3,100
3.17	3,100	C302_0280	MR250/	180, 210	AW250/102	27.986	869	2.63	3,100	2.10	3,100
4.50	4,388	C402_0280	MR160/	050, 140	AW160/012	27.857	1,490	3.97	4,671	3.32	4,872

* 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

See Page 40 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							
60 RPM Output (Approximate) Continued								**50 RPM**		**40 RPM**	
5.00	4,872	C402_0280	MR200/	180	AW200/014	27.857	1,490	4.15	4,872	3.32	4,872
5.00	4,872	C402_0280	MR250/	180, 210	AW250/102	27.857	1,490	4.15	4,872	3.32	4,872
5.11	5,018	C502_0280	MR160/	050, 140	AW160/012	28.099	1,695	4.51	5,343	3.88	5,755
7.21	7,086	C502_0280	MR200/	180	AW200/014	28.099	1,695	5.98	7,086	4.78	7,086
7.21	7,086	C502_0280	MR250/	180, 210	AW250/102	28.099	1,695	5.98	7,086	4.78	7,086
7.21	7,086	C502_0280	MR300/	180, 210, 250, 280	AW300/110	28.099	1,695	5.98	7,086	4.78	7,086
9.98	9,574	C612_0270	MR200/	180	AW200/014	27.429	2,446	8.81	10,193	7.59	10,980
11.33	11,344	C712_0290	MR200/	180	AW200/014	28.636	3,411	10.00	12,078	8.61	13,011
12.01	11,515	C612_0270	MR250/	180, 210	AW250/102	27.429	2,446	9.95	11,515	7.96	11,515
12.01	11,515	C612_0270	MR300/	180, 210, 250, 280	AW300/110	27.429	2,446	9.95	11,515	7.96	11,515
17.69	17,716	C712_0290	MR250/	180, 210	AW250/102	28.636	3,411	14.66	17,716	11.73	17,716
17.69	17,716	C712_0290	MR300/	180, 210, 250, 280	AW300/110	28.636	3,411	14.66	17,716	11.73	17,716
24.72	23,744	C812_0270	MR250/	180, 210	AW250/102	27.467	4,587	21.81	25,280	18.80	27,232
33.21	31,889	C812_0270	MR300/	180, 210, 250, 280	AW300/110	27.467	4,587	27.51	31,889	22.01	31,889
33.21	31,889	C812_0270	MR350/	320, 360	AW350/202	27.467	4,587	27.51	31,889	22.01	31,889
50.44	50,495	C912_0290	MR300/	180, 210, 250, 280	AW300/110	28.631	5,737	43.99	53,148	35.19	53,148
53.09	53,148	C912_0290	MR350/	320, 360	AW350/202	28.631	5,737	43.99	53,148	35.19	53,148
55 RPM Output (Approximate)								**45 RPM**		**37 RPM**	
0.49	531	C002_0310	MR140/	050	AW140/010	31.256	303	0.40	531	0.32	531
0.49	531	C002_0310	MR160/	050, 140	AW160/012	31.256	303	0.40	531	0.32	531
0.98	1,063	C102_0310	MR140/	050	AW140/010	31.071	542	0.81	1,063	0.65	1,063
0.98	1,063	C102_0310	MR160/	050, 140	AW160/012	31.071	542	0.81	1,063	0.65	1,063
0.98	1,063	C102_0310	MR200/	180	AW200/014	31.071	542	0.81	1,063	0.65	1,063
1.65	1,772	C202_0310	MR140/	050	AW140/010	30.692	666	1.37	1,772	1.09	1,772
1.65	1,772	C202_0310	MR160/	050, 140	AW160/012	30.692	666	1.37	1,772	1.09	1,772
1.65	1,772	C202_0310	MR200/	180	AW200/014	30.692	666	1.37	1,772	1.09	1,772
2.86	3,100	C302_0310	MR160/	050, 140	AW160/012	31.040	900	2.37	3,100	1.89	3,100
2.86	3,100	C302_0310	MR200/	180	AW200/014	31.040	900	2.37	3,100	1.89	3,100
2.86	3,100	C302_0310	MR250/	180, 210	AW250/102	31.040	900	2.37	3,100	1.89	3,100
3.74	4,071	C402_0310	MR160/	050, 140	AW160/012	31.154	1,547	3.30	4,335	2.84	4,669
4.22	4,602	C502_0310	MR160/	050, 140	AW160/012	31.231	1,756	3.72	4,900	3.20	5,279
4.47	4,872	C402_0310	MR200/	180	AW200/014	31.154	1,547	3.71	4,872	2.97	4,872
4.47	4,872	C402_0310	MR250/	180, 210	AW250/102	31.154	1,547	3.71	4,872	2.97	4,872
6.42	7,270	C612_0320	MR200/	180	AW200/014	32.406	2,585	5.66	7,740	4.88	8,337
6.49	7,086	C502_0310	MR200/	180	AW200/014	31.231	1,756	5.38	7,086	4.30	7,086
6.49	7,086	C502_0310	MR250/	180, 210	AW250/102	31.231	1,756	5.38	7,086	4.30	7,086
11.26	12,755	C612_0320	MR250/	180, 210	AW250/102	32.406	2,585	9.39	12,844	7.51	12,844
11.34	12,844	C612_0320	MR300/	180, 210, 250, 280	AW300/110	32.406	2,585	9.39	12,844	7.51	12,844
34.03	38,232	C912_0320	MR300/	180, 210, 250, 280	AW300/110	32.134	5,962	30.02	40,705	25.87	43,848
50 RPM Output (Approximate) Continued Next Page								**40 RPM**		**33 RPM**	
0.43	531	C002_0350	MR140/	050	AW140/010	35.028	315	0.36	531	0.29	531
0.43	531	C002_0350	MR160/	050, 140	AW160/012	35.028	315	0.36	531	0.29	531
0.87	1,063	C102_0350	MR140/	050	AW140/010	35.065	564	0.72	1,063	0.58	1,063
0.87	1,063	C102_0350	MR160/	050, 140	AW160/012	35.065	564	0.72	1,063	0.58	1,063
0.87	1,063	C102_0350	MR200/	180	AW200/014	35.065	564	0.72	1,063	0.58	1,063
1.44	1,772	C202_0350	MR140/	050	AW140/010	35.179	697	1.19	1,772	0.96	1,772
1.44	1,772	C202_0350	MR160/	050, 140	AW160/012	35.179	697	1.19	1,772	0.96	1,772

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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 Size [3]	Motor Adapter NEMA C-Frame	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
50 RPM Output (Approximate) Continued								**40 RPM**		**33 RPM**	
1.44	1,772	C202_0350	MR200/	180	AW200/014	35.179	697	1.19	1,772	0.96	1,772
2.53	3,100	C302_0350	MR160/	050, 140	AW160/012	35.028	937	2.10	3,100	1.68	3,100
2.53	3,100	C302_0350	MR200/	180	AW200/014	35.028	937	2.10	3,100	1.68	3,100
2.53	3,100	C302_0350	MR250/	180, 210	AW250/102	35.028	937	2.10	3,100	1.68	3,100
3.74	4,551	C402_0350	MR160/	050, 140	AW160/012	34.821	1,605	3.30	4,845	2.65	4,872
4.00	4,872	C402_0350	MR200/	180	AW200/014	34.821	1,605	3.32	4,872	2.65	4,872
4.00	4,872	C402_0350	MR250/	180, 210	AW250/102	34.821	1,605	3.32	4,872	2.65	4,872
4.22	5,158	C502_0350	MR160/	050, 140	AW160/012	35.000	1,824	3.72	5,491	3.20	5,916
5.79	7,086	C502_0350	MR200/	180	AW200/014	35.000	1,824	4.80	7,086	3.84	7,086
5.79	7,086	C502_0350	MR250/	180, 210	AW250/102	35.000	1,824	4.80	7,086	3.84	7,086
7.37	8,714	C712_0340	MR200/	180	AW200/014	33.797	3,605	6.51	9,278	5.61	9,994
8.00	9,751	C612_0350	MR200/	180	AW200/014	34.872	2,649	7.06	10,382	6.08	11,184
9.45	11,515	C612_0350	MR250/	180, 210	AW250/102	34.872	2,649	7.83	11,515	6.26	11,515
9.45	11,515	C612_0350	MR300/	180, 210, 250, 280	AW300/110	34.872	2,649	7.83	11,515	6.26	11,515
9.98	12,239	C712_0350	MR200/	180	AW200/014	35.065	3,649	8.81	13,031	7.59	14,037
13.00	15,356	C712_0340	MR250/	180, 210	AW250/102	33.797	3,605	11.46	16,349	9.88	17,612
14.45	17,716	C712_0350	MR250/	180, 210	AW250/102	35.065	3,649	11.97	17,716	9.58	17,716
14.45	17,716	C712_0350	MR300/	180, 210, 250, 280	AW300/110	35.065	3,649	11.97	17,716	9.58	17,716
15.85	18,615	C812_0340	MR250/	180, 210	AW250/102	33.585	4,905	13.99	19,820	12.05	21,350
17.99	21,259	C712_0340	MR300/	180, 210, 250, 280	AW300/110	33.797	3,605	14.91	21,259	11.93	21,259
19.95	24,641	C812_0350	MR250/	180, 210	AW250/102	35.333	4,989	17.60	26,235	15.16	28,261
25.81	31,889	C812_0350	MR300/	180, 210, 250, 280	AW300/110	35.333	4,989	21.39	31,889	17.11	31,889
28.20	33,114	C812_0340	MR300/	180, 210, 250, 280	AW300/110	33.585	4,905	24.88	35,256	21.00	37,204
41.49	52,231	C912_0360	MR300/	180, 210, 250, 280	AW300/110	36.005	6,192	34.98	53,148	27.99	53,148
42.22	53,148	C912_0360	MR350/	320, 360	AW350/202	36.005	6,192	34.98	53,148	27.99	53,148
45 RPM Output (Approximate)								**35 RPM**		**30 RPM**	
0.36	531	C002_0420	MR140/	050	AW140/010	41.774	334	0.30	531	0.24	531
0.73	1,063	C102_0420	MR140/	050	AW140/010	41.567	597	0.61	1,063	0.49	1,063
0.73	1,063	C102_0420	MR160/	050, 140	AW160/012	41.567	597	0.61	1,063	0.49	1,063
1.24	1,772	C202_0410	MR140/	050	AW140/010	40.850	733	1.03	1,772	0.82	1,772
1.24	1,772	C202_0410	MR160/	050, 140	AW160/012	40.850	733	1.03	1,772	0.82	1,772
1.24	1,772	C202_0410	MR200/	180	AW200/014	40.850	733	1.03	1,772	0.82	1,772
2.14	3,100	C302_0410	MR160/	050, 140	AW160/012	41.354	990	1.78	3,100	1.42	3,100
2.14	3,100	C302_0410	MR200/	180	AW200/014	41.354	990	1.78	3,100	1.42	3,100
2.84	4,141	C402_0420	MR160/	050, 140	AW160/012	41.751	1,705	2.50	4,409	2.16	4,750
3.34	4,872	C402_0420	MR200/	180	AW200/014	41.751	1,705	2.77	4,872	2.21	4,872
3.34	4,872	C402_0420	MR250/	180, 210	AW250/102	41.751	1,705	2.77	4,872	2.21	4,872
3.36	4,894	C502_0420	MR160/	050, 140	AW160/012	41.688	1,933	2.96	5,211	2.55	5,613
4.86	7,086	C502_0420	MR200/	180	AW200/014	41.688	1,933	4.03	7,086	3.22	7,086
4.86	7,086	C502_0420	MR250/	180, 210	AW250/102	41.688	1,933	4.03	7,086	3.22	7,086
5.47	7,530	C612_0390	MR200/	180	AW200/014	39.396	2,759	4.82	8,017	4.16	8,637
6.42	9,201	C712_0410	MR200/	180	AW200/014	41.016	3,845	5.66	9,796	4.88	10,553
7.85	10,812	C612_0390	MR250/	180, 210	AW250/102	39.396	2,759	6.50	10,812	5.20	10,812
11.26	16,144	C712_0410	MR250	180, 210	AW250/102	41.016	3,845	9.93	17,188	8.56	18,515
12.94	18,554	C712_0410	MR300/	180, 210, 250, 280	AW300/110	41.016	3,845	10.72	18,554	8.58	18,554
14.04	19,603	C812_0400	MR250/	180, 210	AW250/102	39.938	5,197	12.38	20,871	10.67	22,482
23.56	32,904	C812_0400	MR300/	180, 210, 250, 280	AW300/110	39.938	5,197	19.53	32,904	15.62	32,904
28.20	38,747	C912_0390	MR300/	180, 210, 250, 280	AW300/110	39.298	6,375	24.88	41,253	21.44	44,439

* 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

See Page 40 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							
40 RPM Output (Approximate)								**30 RPM**		**25 RPM**	
0.33	531	C002_0470	MR140/	050	AW140/010	46.815	347	0.27	531	0.22	531
0.65	1,063	C102_0470	MR140/	050	AW140/010	46.909	621	0.54	1,063	0.43	1,063
0.65	1,063	C102_0470	MR160/	050, 140	AW160/012	46.909	621	0.54	1,063	0.43	1,063
1.08	1,772	C202_0470	MR140/	050	AW140/010	46.822	767	0.90	1,772	0.72	1,772
1.08	1,772	C202_0470	MR160/	050, 140	AW160/012	46.822	767	0.90	1,772	0.72	1,772
1.08	1,772	C202_0470	MR200/	180	AW200/014	46.822	767	0.90	1,772	0.72	1,772
1.90	3,100	C302_0470	MR160/	050, 140	AW160/012	46.667	1,031	1.57	3,100	1.26	3,100
1.90	3,100	C302_0470	MR200/	180	AW200/014	46.667	1,031	1.57	3,100	1.26	3,100
2.84	4,629	C402_0470	MR160/	050, 140	AW160/012	46.667	1,770	2.47	4,872	1.98	4,872
2.99	4,872	C402_0470	MR200/	180	AW200/014	46.667	1,770	2.47	4,872	1.98	4,872
2.99	4,872	C402_0470	MR250/	180, 210	AW250/102	46.667	1,770	2.47	4,872	1.98	4,872
3.36	5,485	C502_0470	MR160/	050, 140	AW160/012	46.719	2,008	2.96	5,839	2.55	6,290
4.34	7,086	C502_0470	MR200/	180	AW200/014	46.719	2,008	3.59	7,086	2.88	7,086
4.34	7,086	C502_0470	MR250/	180, 210	AW250/102	46.719	2,008	3.59	7,086	2.88	7,086
6.42	10,169	C612_0450	MR200/	180	AW200/014	45.333	2,891	5.66	10,827	4.82	11,515
7.27	11,515	C612_0450	MR250/	180, 210	AW250/102	45.333	2,891	6.02	11,515	4.82	11,515
7.27	11,515	C612_0450	MR300/	180, 210, 250, 280	AW300/110	45.333	2,891	6.02	11,515	4.82	11,515
7.37	12,071	C712_0470	MR200/	180	AW200/014	46.818	4,019	6.51	12,852	5.61	13,845
10.82	17,716	C712_0470	MR250/	180, 210	AW250/102	46.818	4,019	8.97	17,716	7.17	17,716
10.82	17,716	C712_0470	MR300/	180, 210, 250, 280	AW300/110	46.818	4,019	8.97	17,716	7.17	17,716
15.85	25,241	C812_0460	MR250/	180, 210	AW250/102	45.538	5,429	13.99	26,874	12.05	28,949
20.03	31,889	C812_0460	MR300/	180, 210, 250, 280	AW300/110	45.538	5,429	16.60	31,889	13.28	31,889
33.29	53,148	C912_0460	MR300/	180, 210, 250, 280	AW300/110	45.655	6,702	27.59	53,148	22.07	53,148
35 RPM Output (Approximate)								**29 RPM**		**23 RPM**	
0.30	531	C002_0500	MR140/	050	AW140/010	49.944	355	0.25	531	0.20	531
0.61	1,063	C102_0500	MR140/	050	AW140/010	49.944	635	0.50	1,063	0.40	1,063
1.03	1,772	C202_0490	MR140/	050	AW140/010	49.227	780	0.85	1,772	0.68	1,772
1.03	1,772	C202_0490	MR160/	050, 140	AW160/012	49.227	780	0.85	1,772	0.68	1,772
1.78	3,100	C302_0500	MR160/	050, 140	AW160/012	49.745	1,053	1.48	3,100	1.18	3,100
1.78	3,100	C302_0500	MR200/	180	AW200/014	49.745	1,053	1.48	3,100	1.18	3,100
2.43	4,270	C402_0500	MR160/	050, 140	AW160/012	50.192	1,813	2.15	4,547	1.84	4,872
2.78	4,872	C402_0500	MR200/	180	AW200/014	50.192	1,813	2.30	4,872	1.84	4,872
2.84	4,942	C502_0500	MR160/	050, 140	AW160/012	49.821	2,051	2.50	5,261	2.16	5,668
4.07	7,086	C502_0500	MR200/	180	AW200/014	49.821	2,051	3.37	7,086	2.70	7,086
4.07	7,086	C502_0500	MR250/	180, 210	AW250/102	49.821	2,051	3.37	7,086	2.70	7,086
6.54	11,105	C613_0490	MR200/	180	AW200/014	49.277	2,973	5.77	11,823	4.97	12,736
12.13	21,259	C713_0510	MR250/	180, 210	AW250/102	50.845	4,131	10.05	21,259	8.04	21,259
15.22	25,789	C813_0490	MR250/	180, 210	AW250/102	49.176	5,570	13.43	27,458	11.57	29,578
30 RPM Output (Approximate) Continued Next Page								**26 RPM**		**21 RPM**	
0.27	531	C002_0560	MR140/	050	AW140/010	55.972	368	0.23	531	0.18	531
0.54	1,063	C102_0560	MR140/	050	AW140/010	56.364	661	0.45	1,063	0.36	1,063
0.90	1,772	C202_0560	MR140/	050	AW140/010	56.424	816	0.74	1,772	0.60	1,772
0.90	1,772	C202_0560	MR160/	050, 140	AW160/012	56.424	816	0.74	1,772	0.60	1,772
1.58	3,100	C302_0560	MR160/	050, 140	AW160/012	56.136	1,096	1.31	3,100	1.05	3,100
1.58	3,100	C302_0560	MR200/	180	AW200/014	56.136	1,096	1.31	3,100	1.05	3,100
2.43	4,773	C402_0560	MR160/	050, 140	AW160/012	56.101	1,882	2.06	4,872	1.65	4,872
2.48	4,872	C402_0560	MR200/	180	AW200/014	56.101	1,882	2.06	4,872	1.65	4,872
2.84	5,538	C502_0560	MR160/	050, 140	AW160/012	55.833	2,131	2.50	5,896	2.16	6,352
3.63	7,086	C502_0560	MR200/	180	AW200/014	55.833	2,131	3.01	7,086	2.41	7,086
3.63	7,086	C502_0560	MR250/	180, 210	AW250/102	55.833	2,131	3.01	7,086	2.41	7,086

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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 Size [3]	Motor Adapter NEMA C-Frame	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
30 RPM Output (Approximate) Continued								**26 RPM**		**21 RPM**	
5.47	10,534	C612_0550	MR200/	180	AW200/014	55.111	3,086	4.82	11,216	3.96	11,515
5.98	11,515	C612_0550	MR250/	180, 210	AW250/102	55.111	3,086	4.95	11,515	3.96	11,515
6.42	12,746	C712_0570	MR200/	180	AW200/014	56.818	4,286	5.66	13,570	4.88	14,618
8.92	17,716	C712_0570	MR250/	180, 210	AW250/102	56.818	4,286	7.39	17,716	5.91	17,716
8.92	17,716	C712_0570	MR300/	180, 210, 250, 280	AW300/110	56.818	4,286	7.39	17,716	5.91	17,716
14.04	26,581	C812_0540	MR250/	180, 210	AW250/102	54.154	5,752	12.38	28,300	10.67	30,485
16.84	31,889	C812_0540	MR300/	180, 210, 250, 280	AW300/110	54.154	5,752	13.95	31,889	11.16	31,889
27.23	53,148	C912_0560	MR300/	180, 210, 250, 280	AW300/110	55.833	7,167	22.56	53,148	18.05	53,148
28 RPM Output (Approximate)								**23 RPM**		**18 RPM**	
0.24	531	C002_0620	MR140/	050	AW140/010	62.35	382	0.20	531	0.16	531
0.48	1,054	C102_0620	MR140/	050	AW140/010	62.431	684	0.40	1,054	0.32	1,054
0.77	1,658	C202_0610	MR140/	050	AW140/010	61.354	840	0.64	1,658	0.51	1,658
1.35	2,932	C302_0620	MR160/	050, 140	AW160/012	61.920	1,133	1.12	2,932	0.90	2,932
1.98	4,335	C402_0630	MR160/	050, 140	AW160/012	62.515	1,951	1.68	4,440	1.35	4,440
2.03	4,440	C402_0630	MR200/	180	AW200/014	62.515	1,951	1.68	4,440	1.35	4,440
2.32	5,054	C502_0620	MR160/	050, 140	AW160/012	62.431	2,212	2.04	5,380	1.76	5,796
2.90	6,325	C502_0620	MR200/	180	AW200/014	62.431	2,212	2.40	6,325	1.92	6,325
5.87	12,844	C613_0630	MR200/	180	AW200/014	63.462	3,234	4.87	12,844	3.89	12,844
9.56	21,259	C713_0650	MR250/	180, 210	AW250/102	64.547	4,473	7.92	21,259	6.34	21,259
15.22	34,593	C813_0660	MR250/	180, 210	AW250/102	65.963	6,143	13.43	36,831	10.82	37,094
25 RPM Output (Approximate)								**21 RPM**		**17 RPM**	
0.22	531	C002_0700	MR140/	050	AW140/010	69.875	397	0.18	531	0.15	531
0.43	1,063	C102_0700	MR140/	050	AW140/010	70.455	712	0.36	1,063	0.29	1,063
0.72	1,772	C202_0700	MR140/	050	AW140/010	70.324	879	0.60	1,772	0.48	1,772
1.27	3,100	C302_0700	MR160/	050, 140	AW160/012	69.875	1,179	1.05	3,100	0.84	3,100
1.98	4,845	C402_0700	MR160/	050, 140	AW160/012	69.875	2,025	1.65	4,872	1.32	4,872
1.99	4,872	C402_0700	MR200/	180	AW200/014	69.875	2,025	1.65	4,872	1.32	4,872
2.32	5,664	C502_0700	MR160/	050, 140	AW160/012	69.965	2,297	2.04	6,030	1.76	6,496
2.90	7,086	C502_0700	MR200/	180	AW200/014	69.965	2,297	2.40	7,086	1.92	7,086
4.44	10,686	C612_0690	MR200/	180	AW200/014	68.889	3,324	3.91	11,378	3.17	11,515
4.78	11,515	C612_0690	MR250/	180, 210	AW250/102	68.889	3,324	3.96	11,515	3.17	11,515
5.47	13,293	C712_0700	MR200/	180	AW200/014	69.545	4,585	4.82	14,153	4.16	15,246
7.29	17,716	C712_0700	MR250/	180, 210	AW250/102	69.545	4,585	6.04	17,716	4.83	17,716
11.26	27,115	C812_0690	MR250/	180, 210	AW250/102	68.889	6,233	9.93	28,869	8.56	31,098
13.24	31,889	C812_0690	MR300/	180, 210, 250, 280	AW300/110	68.889	6,233	10.97	31,889	8.78	31,889
20.18	49,367	C912_0700	MR300/	180, 210, 250, 280	AW300/110	69.965	7,727	16.72	49,367	13.38	49,367
22 RPM Output (Approximate) Continued Next Page								**18 RPM**		**15 RPM**	
0.38	1,063	C103_0820	MR140/	050	AW140/010	81.638	748	0.31	1,063	0.25	1,063
0.64	1,772	C203_0810	MR140/	050	AW140/010	80.618	920	0.53	1,772	0.42	1,772
0.65	1,772	C203_0800	MR160/	050, 140	AW160/012	79.589	916	0.54	1,772	0.43	1,772
1.11	3,100	C303_0810	MR140/	050	AW140/010	81.467	1,241	0.92	3,100	0.73	3,100
1.12	3,100	C303_0800	MR160/	050, 140	AW160/012	80.427	1,236	0.93	3,100	0.74	3,100
1.75	4,872	C403_0810	MR160/	050, 140	AW160/012	80.810	2,125	1.45	4,872	1.16	4,872
2.55	7,086	C503_0810	MR160/	050, 140	AW160/012	80.596	2,408	2.12	7,086	1.69	7,086
3.10	8,085	C613_0760	MR160/	050, 140	AW160/012	75.814	3,432	2.56	8,085	2.05	8,085
4.85	12,844	C613_0770	MR200/	180	AW200/014	76.795	3,447	4.02	12,844	3.22	12,844
6.54	17,879	C813_0790	MR200/	180	AW200/014	79.339	6,533	5.77	19,036	4.97	20,506
6.54	18,245	C713_0810	MR200/	180	AW200/014	80.965	4,824	5.77	19,426	4.68	19,701
7.74	21,259	C713_0800	MR250/	180, 210	AW250/102	79.734	4,799	6.41	21,259	5.13	21,259

* 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

See Page 40 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
22 RPM Output (Approximate) Continued								**18 RPM**		**15 RPM**	
13.67	36,804	C813_0780	MR250/	180, 210	AW250/102	78.133	6,500	11.45	37,204	9.16	37,204
15.22	40,763	C913_0780	MR250/	180, 210	AW250/102	77.728	8,003	13.43	43,400	10.94	44,185
20 RPM Output (Approximate)								**16 RPM**		**13 RPM**	
0.34	1,063	C103_0920	MR140/	050	AW140/010	92.131	765	0.28	1,063	0.22	1,063
0.56	1,772	C203_0920	MR140/	050	AW140/010	92.404	945	0.46	1,772	0.37	1,772
0.56	1,772	C203_0910	MR160/	050, 140	AW160/012	91.225	945	0.47	1,772	0.37	1,772
0.98	3,100	C303_0920	MR140/	050	AW140/010	91.933	1,271	0.81	3,100	0.65	3,100
0.99	3,100	C303_0910	MR160/	050, 140	AW160/012	90.759	1,271	0.82	3,100	0.66	3,100
1.57	4,872	C403_0900	MR160/	050, 140	AW160/012	90.323	2,183	1.30	4,872	1.04	4,872
2.28	7,086	C503_0900	MR160/	050, 140	AW160/012	90.323	2,475	1.89	7,086	1.51	7,086
3.34	10,101	C613_0880	MR160/	050, 140	AW160/012	87.644	3,600	2.78	10,145	2.23	10,145
3.76	11,515	C613_0890	MR200/	180	AW200/014	88.778	3,600	3.12	11,515	2.50	11,515
5.75	17,716	C713_0890	MR250/	180, 210	AW250/102	89.416	4,950	4.77	17,716	3.81	17,716
6.54	20,466	C813_0910	MR200/	180	AW200/014	90.821	6,750	5.77	21,791	4.97	23,474
10.35	31,889	C813_0890	MR250/	180, 210	AW250/102	89.441	6,750	8.57	31,889	6.86	31,889
15.22	47,314	C913_0900	MR250/	180, 210	AW250/102	90.219	8,325	13.43	50,374	11.33	53,148
18 RPM Output (Approximate)								**14 RPM**		**11 RPM**	
3.82	12,844	C613_0980	MR200/	180	AW200/014	97.634	3,600	3.16	12,844	2.53	12,844
5.80	19,811	C713_0990	MR200/	180	AW200/014	99.141	4,950	5.06	20,855	4.05	20,855
6.32	21,259	C713_0980	MR250/	180, 210	AW250/102	97.634	4,950	5.24	21,259	4.19	21,259
10.74	37,204	C813_1010	MR250/	180, 210	AW250/102	100.511	6,750	8.90	37,204	7.12	37,204
16 RPM Output (Approximate)								**13 RPM**		**11 RPM**	
0.28	1,063	C103_1110	MR140/	050	AW140/010	111.091	765	0.23	1,063	0.18	1,063
0.47	1,772	C203_1110	MR140/	050	AW140/010	110.619	945	0.39	1,772	0.31	1,772
0.47	1,772	C203_1090	MR160/	050, 140	AW160/012	109.206	945	0.39	1,772	0.31	1,772
0.82	3,100	C303_1100	MR140/	050	AW140/010	109.612	1,271	0.68	3,100	0.54	3,100
0.83	3,100	C303_1080	MR160/	050, 140	AW160/012	108.213	1,271	0.69	3,100	0.55	3,100
1.31	4,872	C403_1080	MR160/	050, 140	AW160/012	107.714	2,183	1.09	4,872	0.87	4,872
1.89	7,086	C503_1090	MR160/	050, 140	AW160/012	108.649	2,475	1.57	7,086	1.26	7,086
3.10	11,310	C613_1060	MR160/	050, 140	AW160/012	106.057	3,600	2.56	11,310	2.05	11,310
3.11	11,515	C613_1070	MR200/	180	AW200/014	107.429	3,600	2.58	11,515	2.06	11,515
4.66	17,716	C713_1100	MR250/	180, 210	AW250/102	110.455	4,950	3.86	17,716	3.09	17,716
6.54	24,243	C813_1080	MR200/	180	AW200/014	107.578	6,750	5.77	25,811	4.97	27,805
8.74	31,889	C813_1060	MR250/	180, 210	AW250/102	105.943	6,750	7.24	31,889	5.79	31,889
13.97	53,148	C913_1100	MR250/	180, 210	AW250/102	110.434	8,325	11.57	53,148	9.26	53,148
13 RPM Output (Approximate) Continued Next Page								**11 RPM**		**9 RPM**	
0.22	1,063	C103_1370	MR140/	050	AW140/010	137.338	765	0.19	1,063	0.15	1,063
0.37	1,772	C203_1380	MR140/	050	AW140/010	137.786	945	0.31	1,772	0.25	1,772
0.38	1,772	C203_1360	MR160/	050, 140	AW160/012	136.027	945	0.31	1,772	0.25	1,772
0.66	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	0.55	3,100	0.44	3,100
1.05	4,872	C403_1350	MR160/	050, 140	AW160/012	134.643	2,183	0.87	4,872	0.70	4,872
1.52	7,086	C503_1350	MR160/	050, 140	AW160/012	135.333	2,475	1.26	7,086	1.01	7,086
2.45	11,515	C613_1370	MR200/	180	AW200/014	136.581	3,600	2.03	11,515	1.62	11,515
2.48	11,515	C613_1350	MR160/	050, 140	AW160/012	134.838	3,600	2.05	11,515	1.64	11,515
2.94	12,844	C613_1270	MR200/	180	AW200/014	126.924	3,600	2.43	12,844	1.95	12,844
3.74	17,716	C713_1370	MR200/	180	AW200/014	137.338	4,950	3.10	17,716	2.48	17,716
3.80	17,716	C713_1350	MR250/	180, 210	AW250/102	135.25	4,950	3.15	17,716	2.52	17,716

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	1			

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

NOTE: [1] Complete Base Module Part Number by adding the Housing Style. Example: C302**N**0560.
[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.

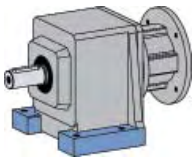
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [4] lbs.	1450 RPM Input		1160 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter Size [3]	Motor Adapter NEMA C-Frame	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
13 RPM Output (Approximate) Continued								**11 RPM**		**9 RPM**	
4.59	20,942	C713_1320	MR200/	180	AW200/014	132.371	4,950	3.86	21,259	3.09	21,259
4.73	21,259	C713_1300	MR250/	180, 210	AW250/102	130.359	4,950	3.92	21,259	3.14	21,259
6.54	31,186	C813_1380	MR200/	180	AW200/014	138.389	6,750	5.54	31,889	4.43	31,889
6.79	31,889	C813_1360	MR250/	180, 210	AW250/102	136.286	6,750	5.63	31,889	4.50	31,889
8.33	37,204	C813_1300	MR250/	180, 210	AW250/102	129.541	6,750	6.91	37,204	5.53	37,204
11.11	53,148	C913_1390	MR250/	180, 210	AW250/102	138.876	8,325	9.20	53,148	7.36	53,148
10 RPM Output (Approximate)								**8 RPM**		**7 RPM**	
1.88	11,515	C613_1780	MR200/	180	AW200/014	177.556	3,600	1.56	11,515	1.25	11,515
1.91	11,515	C613_1750	MR160/	050, 140	AW160/012	175.289	3,600	1.58	11,515	1.26	11,515
5.19	31,889	C813_1780	MR200/	180	AW200/014	178.359	6,750	4.30	31,889	3.44	31,889
5.27	31,889	C813_1760	MR250/	180, 210	AW250/102	175.648	6,750	4.37	31,889	3.49	31,889
8.76	53,148	C913_1760	MR250/	180, 210	AW250/102	176.097	8,325	7.26	53,148	5.81	53,148
9.5 RPM Output (Approximate)								**7.5 RPM**		**6 RPM**	
0.17	1,063	C103_1840	MR140/	050	AW140/010	183.727	765	0.14	1,063	0.11	1,063
0.28	1,772	C203_1830	MR140/	050	AW140/010	183.387	945	0.23	1,772	0.19	1,772
0.28	1,772	C203_1810	MR160/	050, 140	AW160/012	181.046	945	0.24	1,772	0.19	1,772
0.49	3,100	C303_1830	MR140/	050	AW140/010	182.778	1,271	0.41	3,100	0.33	3,100
0.50	3,100	C303_1800	MR160/	050, 140	AW160/012	180.444	1,271	0.41	3,100	0.33	3,100
0.78	4,872	C403_1800	MR160/	050, 140	AW160/012	180.444	2,183	0.65	4,872	0.52	4,872
1.14	7,086	C503_1810	MR160/	050, 140	AW160/012	180.646	2,475	0.94	7,086	0.76	7,086
2.80	17,716	C713_1830	MR200/	180	AW200/014	183.371	4,950	2.32	17,716	1.86	17,716
2.85	17,716	C713_1810	MR250/	180, 210	AW250/102	180.584	4,950	2.36	17,716	1.89	17,716
8 RPM Output (Approximate)								**7 RPM**		**5 RPM**	
0.14	1,063	C103_2210	MR140/	050	AW140/010	220.758	765	0.12	1,063	0.09	1,063
0.23	1,772	C203_2210	MR140/	050	AW140/010	220.995	945	0.19	1,772	0.15	1,772
0.41	3,100	C303_2200	MR140/	050	AW140/010	219.867	1,271	0.34	3,100	0.27	3,100
0.41	3,100	C303_2170	MR160/	050, 140	AW160/012	217.061	1,271	0.34	3,100	0.28	3,100
0.65	4,872	C403_2170	MR160/	050, 140	AW160/012	216.925	2,183	0.54	4,872	0.43	4,872
0.95	7,086	C503_2160	MR160/	050, 140	AW160/012	215.889	2,475	0.79	7,086	0.63	7,086
1.57	11,515	C613_2130	MR160/	050, 140	AW160/012	213.096	3,600	1.30	11,515	1.04	11,515
2.31	17,716	C713_2230	MR200/	180	AW200/014	222.538	4,950	1.91	17,716	1.53	17,716
2.35	17,716	C713_2190	MR250/	180, 210	AW250/102	219.156	4,950	1.94	17,716	1.56	17,716
4.36	31,889	C813_2120	MR200/	180	AW200/014	212.103	6,750	3.62	31,889	2.89	31,889
4.43	31,889	C813_2090	MR250/	180, 210	AW250/102	208.879	6,750	3.67	31,889	2.94	31,889
7.16	53,148	C913_2150	MR250/	180, 210	AW250/102	215.357	8,325	5.93	53,148	4.75	53,148
6 RPM Output (Approximate)								**5 RPM**		**4 RPM**	
0.11	1,063	C103_2760	MR140/	050	AW140/010	275.947	765	0.09	1,063	0.07	1,063
0.19	1,772	C203_2750	MR140/	050	AW140/010	275.436	945	0.15	1,772	0.12	1,772
0.33	3,100	C303_2740	MR140/	050	AW140/010	273.677	1,271	0.27	3,100	0.22	3,100
0.52	4,872	C403_2700	MR160/	050, 140	AW160/012	270.183	2,183	0.43	4,872	0.35	4,872
0.76	7,086	C503_2710	MR160/	050, 140	AW160/012	270.532	2,475	0.63	7,086	0.50	7,086
1.26	11,515	C613_2660	MR160/	050, 140	AW160/012	266.37	3,600	1.04	11,515	0.83	11,515
3.43	31,889	C813_2700	MR200/	180	AW200/014	269.815	6,750	2.84	31,889	2.27	31,889
3.48	31,889	C813_2660	MR250/	180, 210	AW250/102	265.714	6,750	2.89	31,889	2.31	31,889

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

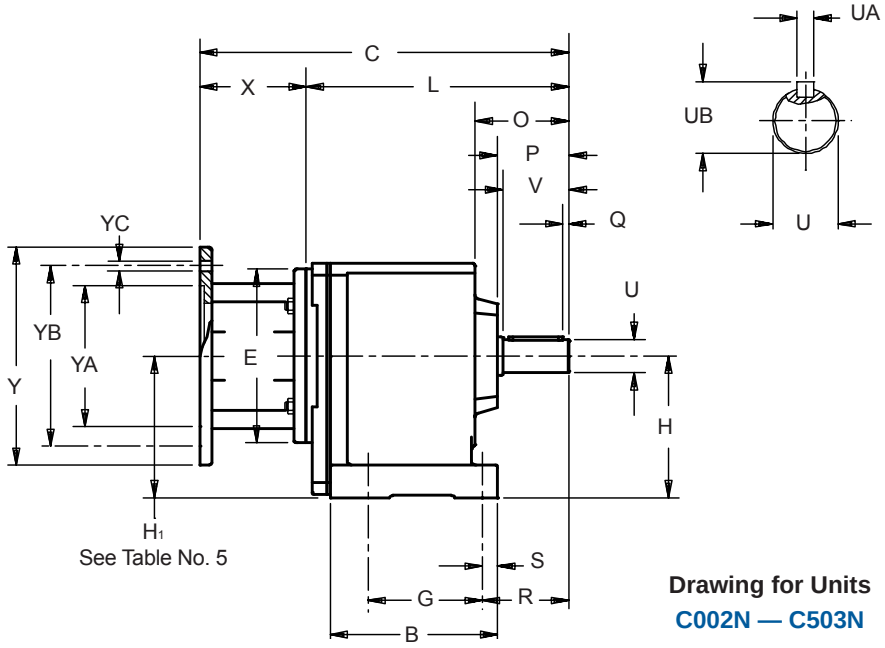
* For thermal HP capacity, see rating below.

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

See Page 40 for Part No. Configurator. Mounting position MUST be specified



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



Drawing for Units
C002N — C503N

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_1
C002	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	—
C102/C103	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	—
C202/C203	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	—
C302/C303	8.46	6.06	8.46	7.28	4.13	5.12 [1]	.43	1.97	1.18	3.35	2.56	.16	3.11	.55	5.91	2.36	—
C402/C403	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	—
C502/C503	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	—
C612/C613	11.81	10.43	12.40	9.65	8.46	7.87 [1]	.71	2.95	1.57	6.02	4.17	.20	5.12	.98	6.97	3.94	6.57
C712/C713	14.37	11.22	14.76	11.81	9.25	9.25 [1]	.71	3.54	1.97	7.28	5.00	.20	6.42	.98	7.56	4.72	7.91
C812/C813	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
C912/C913	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

[1] See Table No. 5

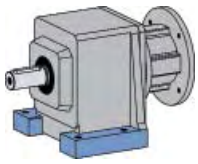
Table No. 2 **Metric output available on request**

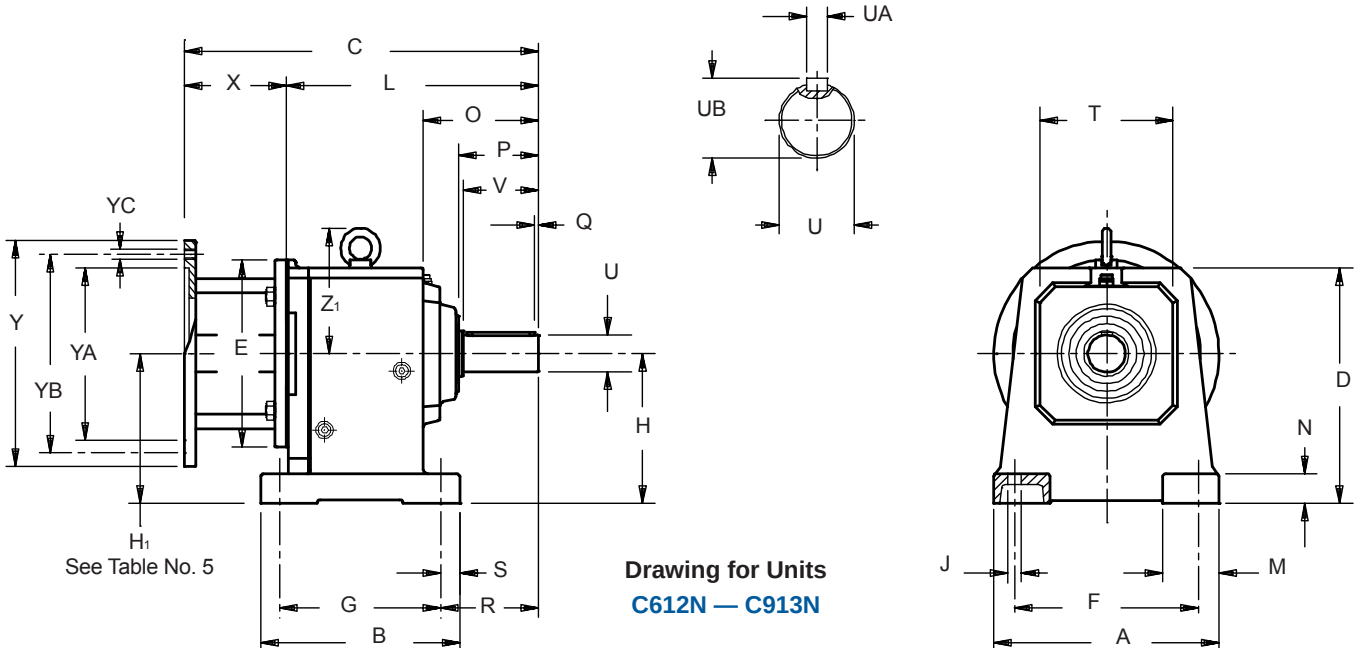
Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9x90	53.5
C712/C713	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{m6}	A18x11x100	64
C812/C813	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	A20x12x125	74.5
C912/C913	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	A25x14x140	95

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

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
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

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





Drawing for Units
C612N — C913N

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

Base	MR140/050		MR160/140 [2]		MR200/180		MR250/210 [3]		MR300/250 [4]		MR350/320 [5]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
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 [1]	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 [1]	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 [1]	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 [1]	—	—	—	—	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

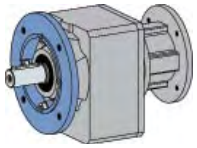
Table No. 5 "C" Series – Input Dimension (Inches)

Base	MR160/140[2]	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
C303	3.66	–	–	–
C612	–	7.63	7.63	7.63
C613	–	–	7.63	–
C713	–	–	10.00	–

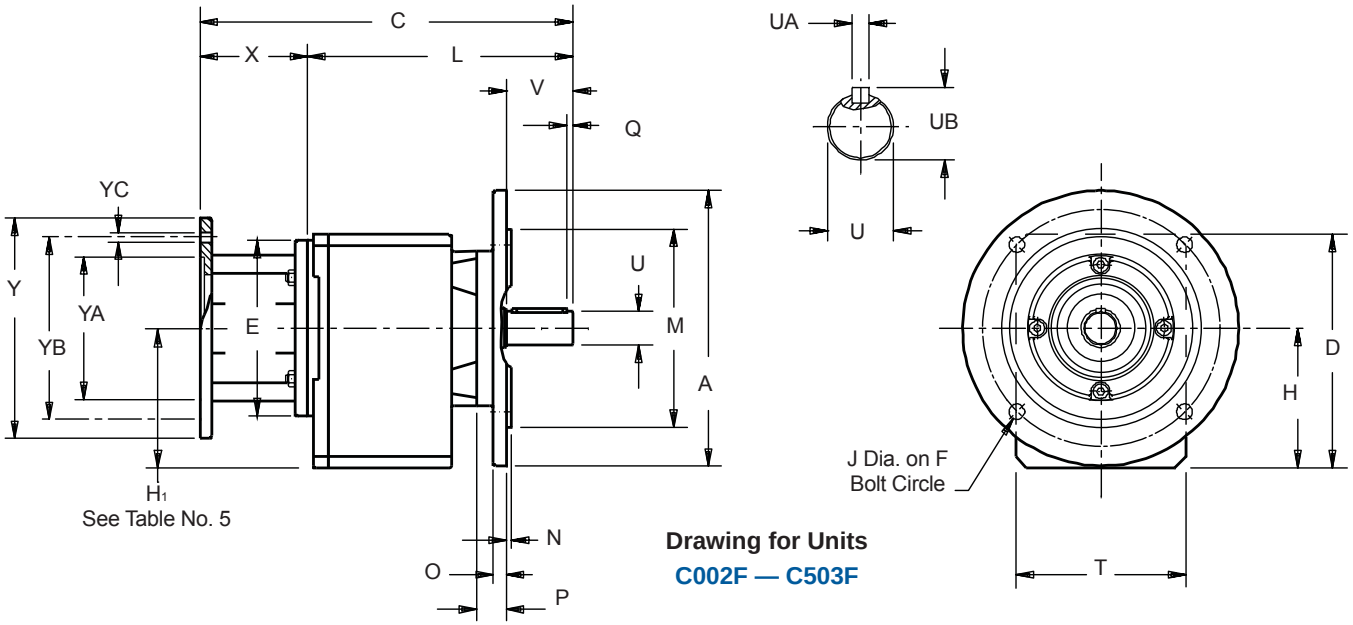
[1] See Table No. 5
[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.
[5] Also available as **MR350/360** for a NEMA 364/365TC frame motor.

All weights are approximate.

Part No. Example
Foot Mounting with Motor Adapter



"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 [1]	D	F	H	J	M	N	O	P	Q	T	V	Z_1
C002	6.30	5.55	5.12	3.11	.35	4.331	.12	.39	.71	.16	3.82	1.57	—
C102/C103	7.87	6.89	6.50	3.94	.43	5.118	.14	.47	.83	.16	5.12	1.97	—
C202/C203	7.87	7.56	6.50	4.41	.43	5.118	.14	.47	1.06	.16	5.59	2.36	—
C302/C303	9.84	8.35	8.46	5.00 [2]	.55	7.087	.16	.47	1.06	.16	6.06	2.36	—
C402/C403	9.84	9.55	8.46	5.61	.55	7.087	.16	.55	1.10	.16	7.01	3.15	—
C502/C503	11.81	11.26	10.43	6.54	.55	9.055	.16	.63	1.14	.16	7.68	3.15	—
C612/C613	11.81	11.97	10.43	7.44 [2]	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57
C712/C713	13.78	14.61	11.81	9.09 [2]	.71	9.842	.20	.71	1.73	.20	10.43	4.72	7.91
C812/C813	15.75	17.52	13.78	11.22	.71	11.811	.20	.79	1.77	.39	12.20	5.51	8.70
C912/C913	17.72	20.63	15.75 *	13.15	.71	13.780	.20	.91	1.97	.39	14.37	6.69	10.24

[1] See Page 68 for other available output flanges.
[2] See Table No. 5
* C912 and C913 have 8 mounting holes in the output flange instead of 4 as shown in the drawing.

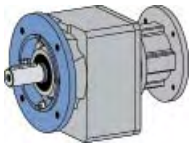
Table No. 2 **Metric output available on request**

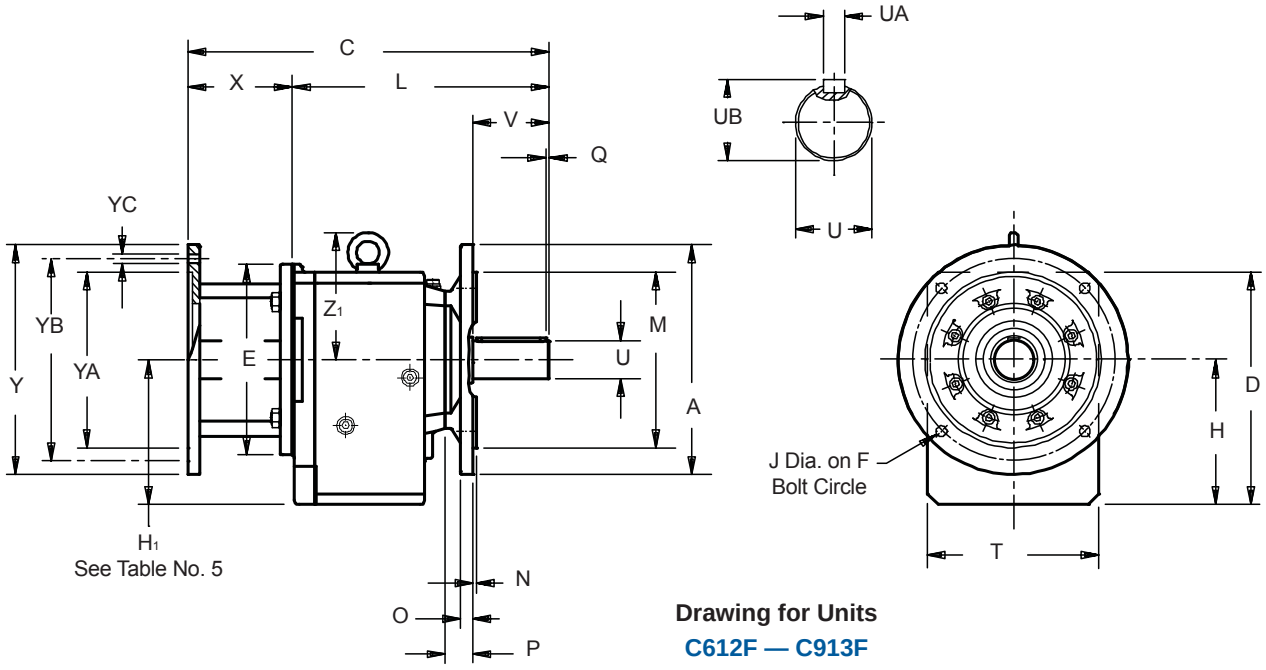
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9x90	53.5
C712/C713	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{m6}	A18x11x100	64
C812/C813	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	A20x12x125	74.5
C912/C913	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	A25x14x140	95

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

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
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						

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





Drawing for Units
C612F — C913F

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

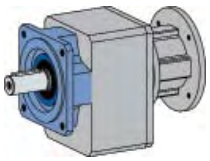
Base Module	MR140/050		MR160/140 [3]		MR200/180		MR250/210 [4]		MR300/250 [5]		MR350/320 [6]		Approx.
	C	L	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	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 [2]	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 [2]	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 [2]	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 [2]	—	—	—	—	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)

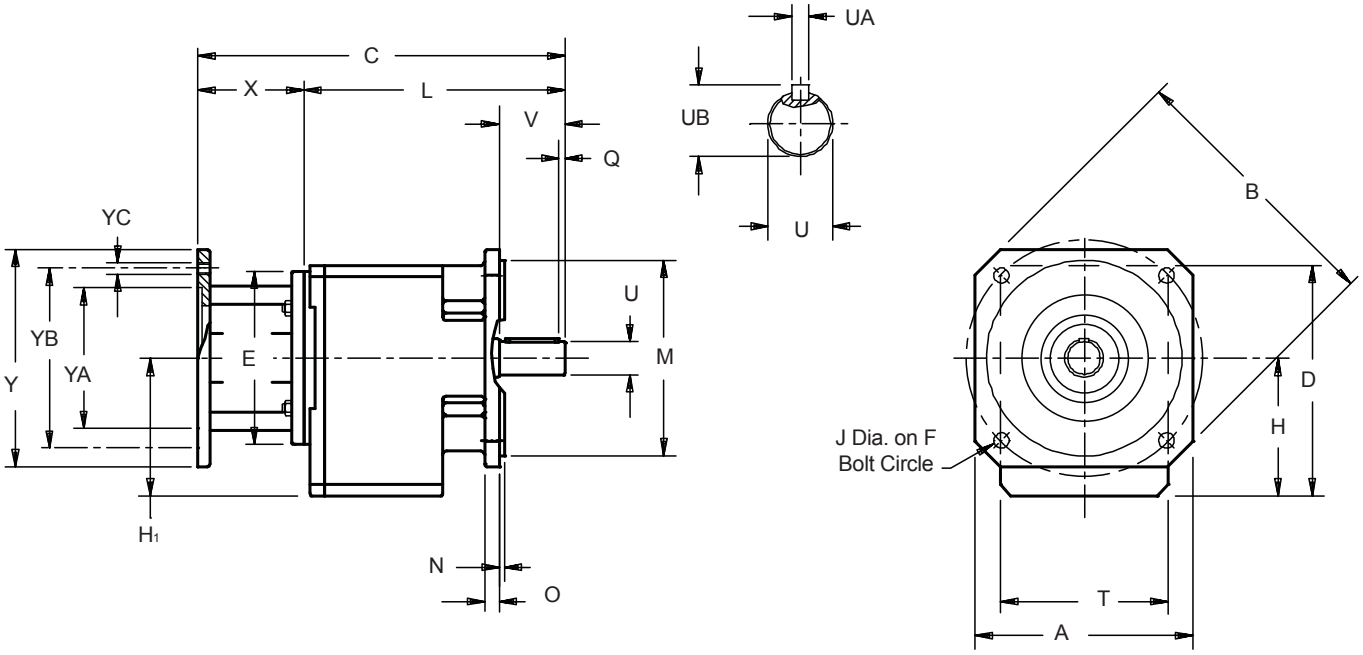
Base Module	MR160/140[3]	MR200/180	MR250/210	MR300/250
	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–
C713	–	–	9.84	–

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

[2] See Table No. 5
[3] Also available as **MR160/050** for a NEMA 56C frame motor.
[4] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[5] 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.
[6] 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
C002	4.88	6.30	5.55	5.12	3.11	.35	4.33	.14	.35	.16	3.82	1.57
C102/C103	5.71	7.56	6.89	6.50	3.94	.43	5.12	.14	.43	.16	5.12	1.97
C202/C203	5.71	7.56	7.56	6.50	4.41	.43	5.12	.14	.43	.16	5.59	2.36
C302/C303	7.87	9.84	8.35	8.46	5.00 [1]	.55	7.09	.16	.55	.16	6.06	2.36
C402/C403	7.87	9.84	9.55	8.46	5.61	.55	7.09	.16	.55	.16	7.01	3.15

[1] H_1 dimension is 3.54 on C303.

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

	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43

This Housing Style is available on special order.

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

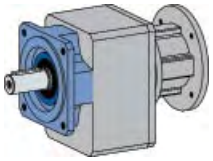


Table No. 3 **Motor Adapter Dimensions (Inches)**

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
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

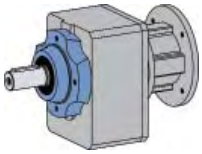
Table No. 4 **"C" Series – Unit Dimensions (Inches) – "Q" Housing Style**

Base	**MR140/050**		**MR160/140** [2]		**MR200/180**		**MR250/210** [3]		Approx.
Module	C	L	C	L	C	L	C	L	Wt.(lbs.)
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 [1]	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

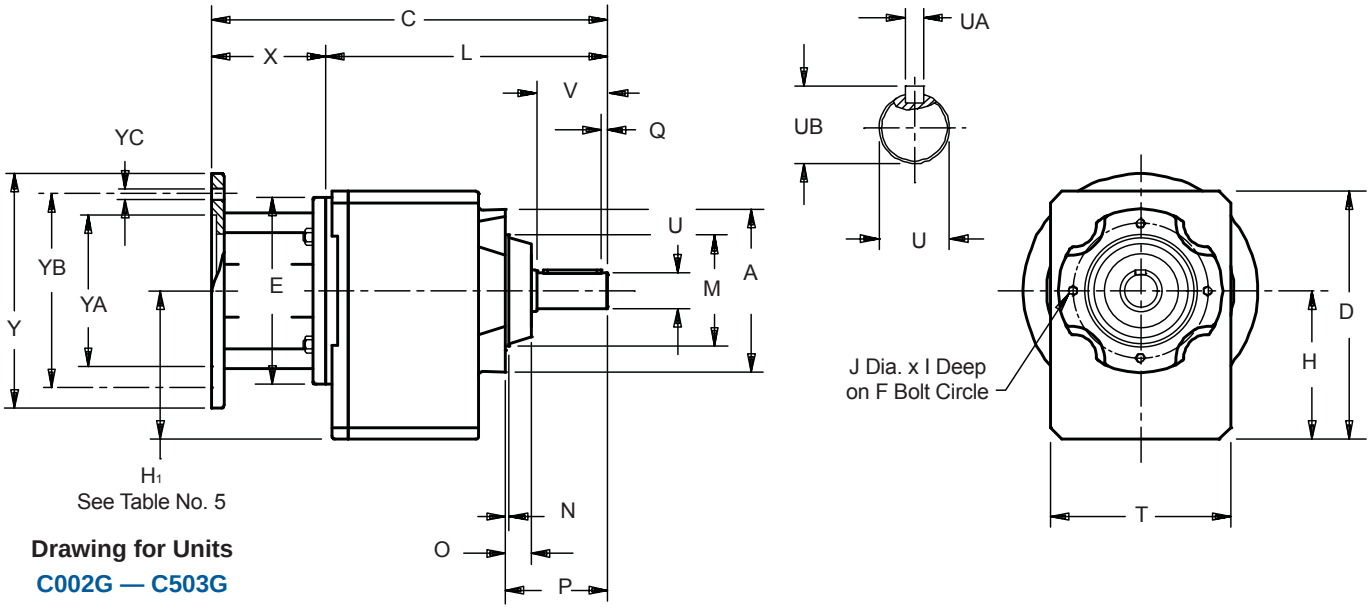
[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.

All weights are approximate.

Part No. Example
Square Flange with Motor Adapter



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



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_1
C002	3.43	5.55	2.95	3.11	.39	M6×1	2.165	.12	.55	2.28	.16	3.82	1.57	—
C102/C103	4.72	6.89	3.94	3.94	.51	M6×1	3.150	.12	.67	2.80	.16	5.12	1.97	—
C202/C203	5.51	7.56	4.53	4.41	.51	M8×1.25	3.740	.12	.87	3.43	.16	5.59	2.36	—
C302/C303	5.51	8.35	4.53	5.00 [1]	.51	M8×1.25	3.740	.12	.87	3.43	.16	6.06	2.36	—
C402/C403	6.30	9.55	5.12	5.61	.63	M10×1.5	4.331	.14	.87	4.25	.16	7.01	3.15	—
C502/C503	7.56	11.26	6.50 [2]	6.54	.63	M10×1.5	5.118	.14	.91	4.29	.16	7.68	3.15	—
C612/C613	7.09	11.97	6.50	7.44 [1]	.63	M10×1.5	5.512	.20	1.18	5.35	.20	8.86	3.94	6.57
C712/C713	7.68	14.61	7.28	9.09 [1]	.75	M12×1.75	6.102	.31	1.46	6.46	.20	10.43	4.72	7.91
C812/C813	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
C912/C913	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

[1] See Table No. 5
[2] C502/C503 has 8 holes instead of 4 as shown in the drawing.

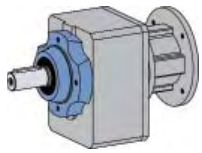
Table No. 2 **Metric output available on request**

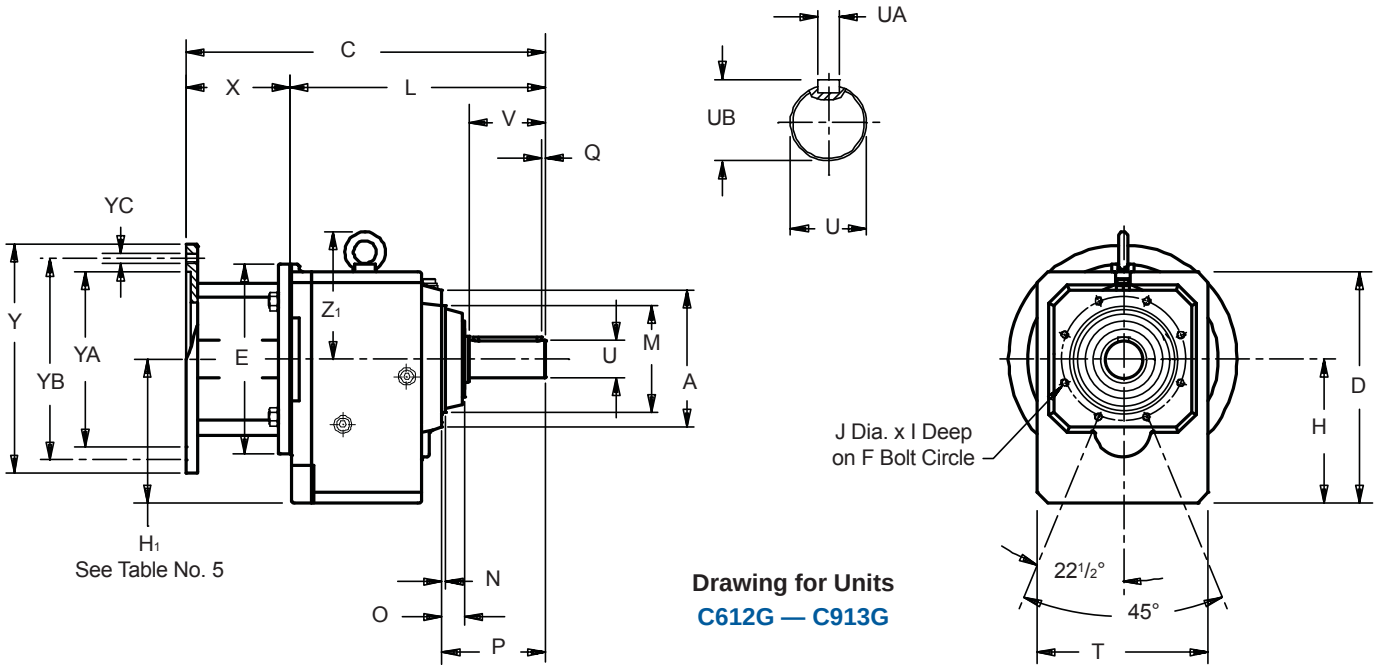
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9x90	53.5
C712/C713	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{m6}	A18x11x100	64
C812/C813	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	A20x12x125	74.5
C912/C913	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	A25x14x140	95

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

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
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						

“C” Series – MGS Reducer Tapped Holes – “G” Housing Dimensional Data





Drawing for Units
C612G — C913G

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

Base	MR140/050		MR160/140 [3]		MR200/180		MR250/210 [4]		MR300/250 [5]		MR350/320 [6]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	C	L	Wt.(lbs)
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 [1]	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 [1]	—	—	—	—	17.91	13.11	18.54	13.23	20.24	13.74	—	—	115
C613 [1]	—	—	18.62	14.76	20.35	15.55	—	—	—	—	—	—	159
C712	—	—	—	—	20.00	15.20	20.59	15.28	22.29	15.79	—	—	199
C713 [1]	—	—	—	—	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	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–
C713	–	–	9.84	–

[1] See Table No. 5
[3] Also available as **MR160/050** for a NEMA 56C frame motor.
[4] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[5] 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.
[6] 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

“C” Series – MGS Reducer
Optional Output Flanges

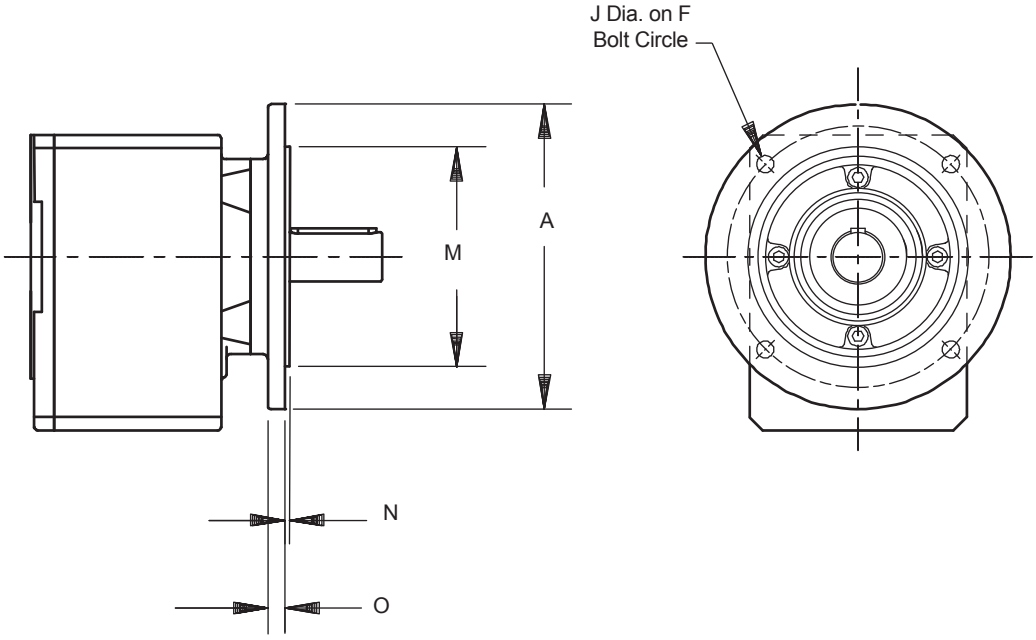


Table No. 1 Flange Dimensions (Inches)

Base Module	Flange Size	A	F	J	M	N	O
C0	120	4.724	3.93	.28	3.150 +.001/-.0004	.12	.39
	140	5.512	4.53	.35	3.740 +.001/-.0004	.12	.39
	160 *	6.300	5.12	.35	4.331 +.001/-.0004	.12	.39
C1	140	5.512	4.53	.35	3.740 +.001/-.0004	.14	.32
	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	200 *	7.874	6.50	.43	5.118 +.001/-.0004	.14	.47
C2	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	200 *	7.874	6.50	.43	5.118 +.001/-.0004	.14	.47
	250	9.843	8.46	.55	7.087 +.001/-.0004	.16	.47
C3	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	200	7.874	6.50	.43	5.118 +.001/-.0004	.14	.47
	250 *	9.843	8.46	.55	7.087 +.001/-.0004	.16	.47
C4	200	7.874	6.50	.43	5.118 +.001/-.0004	.16	.55
	250 *	9.843	8.46	.55	7.087 +.001/-.0004	.16	.55
	300	11.811	10.43	.55	9.055 +.001/-.001	.16	.55
C5	250	9.843	8.46	.55	7.087 +.001/-.0004	.16	.55
	300 *	11.811	10.43	.55	9.055 +.001/-.001	.16	.63
C6	300 *	11.811	10.43	.55	9.055 +.001/-.001	.16	.67
C7	350 *	13.780	11.81	.71	9.842 +.000/-.001	.20	.71
C8	350	13.780	11.81	.71	9.842 +.000/-.001	.20	.71
	400 *	15.748	13.78	.71	11.811 +.000/-.001	.20	.79
	450	17.717	15.75	.71	13.780 +.000/-.001	.20	.79
C9	450 *	17.717	15.75	.71	13.780 +.000/-.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 installlation costs today– and maintenance costs tomorrow.

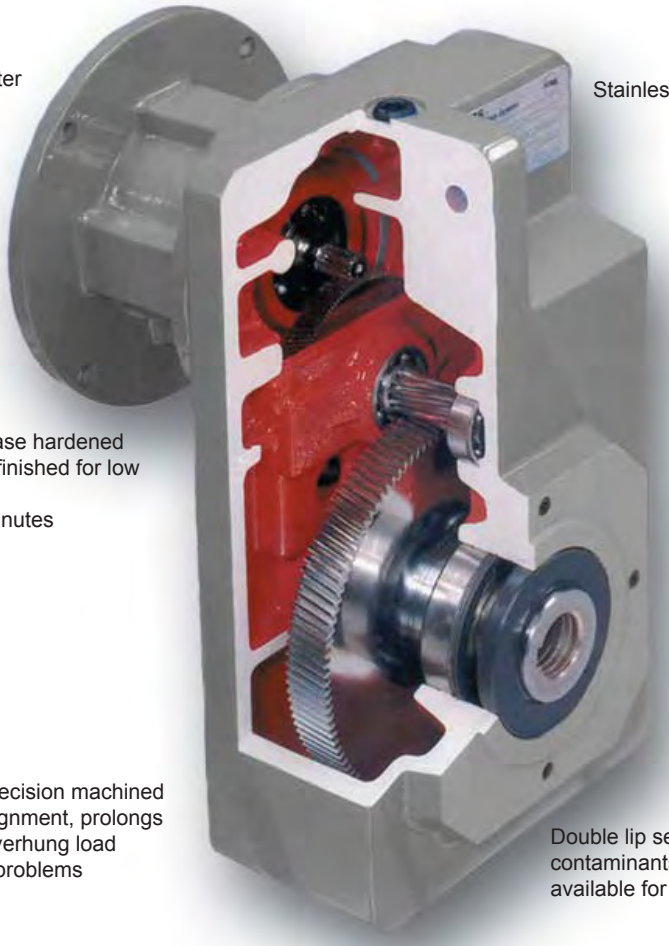
Performance Specifications:

- Horsepower ratings up to 33
- Output torques up 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

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)



Stainless steel nameplate and hardware

“F” Series

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life.
Standard backlash is ≤11 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 two-piece housings.

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

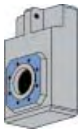
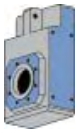
Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

SHIPS in 1 DAY

Part No. Configurator
"F" Series – MGS Speed Reducers

Part No. Explanation

F	4	0	2	V	F	0135	MR200/	180	LL	E34
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	F	Offset Helical (output is offset from the input and the gears are all helical)
Size	4	Sizes available: F1, F2, F3, **F4**, F6
Generation	0	Design generation: first generation **0**, second generation 1, etc.
No. of Gear Stages	2	Number of gear stages: **2**, 3, (determined by the ratio)
Output Style	V	Shaft output  Solid shaft output is ONLY possible with an output flange.
	A	– Hollow output  Hollow output available: imperial, metric, and stainless steel.
	W	– Single or double wobble free bushing output  SPECIFY: Single or Double Bushing **IF** Single Bushing – SPECIFY: 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	F	Output flange 
	G	– Tapped holes around the output 
	GN	– Foot mounting  (tapped holes for side mounting)
Ratio	0135	Approximate ratio: 0135 = 13.5:1 (2:1 up to 276:1)
Motor Adapter	MR200/	Motor adapter size from Selection Data: MR140, MR160, **MR200**, MR250
NEMA Frame Size	180	Motor frame size determined by motor adapter: 050 (56C), 140 (143/145TC), **180** (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.

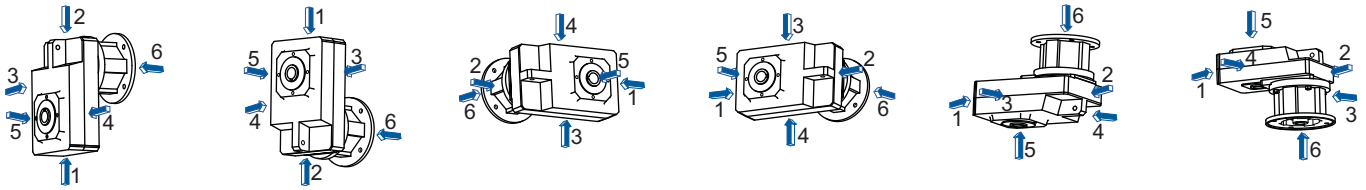
Long Life Option	LL	Added ONLY with long life warranty option.
Mounting Position	E34	The long life mounting position will be stamped on the nameplate.

"F" Series

Part No. Configurator
"F" Series – MGS Speed Reducers

Mounting Positions – Standard 3 Year Warranty

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

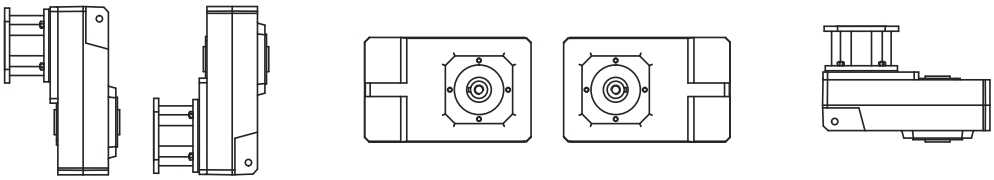


EL1 **EL2** **EL3** **EL4** **EL5** **EL6**

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: ***us.stober.com/lubrication-quantity/index.html***.

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
Flang

Style AG
Hollow Output

Style WG
Bushing

"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 Size [3]	Motor Adapter NEMA C-Frame	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
405 RPM Output (Approximate)								**335 RPM**		**270 RPM**	
2.61	392	F102_0043	MR140/	050	AW140/010	4.308	275	2.16	392	1.73	392
3.83*	577	F102_0043	MR160/	050, 140	AW160/012	4.308	275	3.34	607	2.67	607
385 RPM Output (Approximate)								**319 RPM**		**255 RPM**	
21.97*	3,492	F602_0045	MR200/	180	AW200/014	4.546	833	19.38	3,718	16.29	3,906
33.79*	5,371	F602_0045	MR250/	180, 210	AW250/102	4.546	833	29.47	5,654	23.58	5,654
375 RPM Output (Approximate)								**319 RPM**		**255 RPM**	
2.61	426	F202_0047	MR140/	050	AW140/010	4.680	363	2.16	426	1.73	426
7.22*	1,180	F202_0047	MR160/	050, 140	AW160/012	4.680	363	6.29	1,243	5.03	1,243
7.22*	1,180	F202_0047	MR200/	180	AW200/014	4.680	363	6.29	1,243	5.03	1,243
9.22*	1,496	F302_0046	MR160/	050, 140	AW160/012	4.644	503	7.64	1,496	6.11	1,496
9.22*	1,507	F402_0047	MR160/	050, 140	AW160/012	4.678	622	7.64	1,507	6.11	1,507
12.07*	1,960	F302_0046	MR200/	180	AW200/014	4.644	503	10.53	2,063	8.42	2,063
19.84*	3,244	F402_0047	MR200/	180	AW200/014	4.678	622	17.30	3,415	13.84	3,415
19.84*	3,244	F402_0047	MR250/	180, 210	AW250/102	4.678	622	17.30	3,415	13.84	3,415
315 RPM Output (Approximate)								**260 RPM**		**210 RPM**	
6.44*	1,250	F202_0056	MR160/	050, 140	AW160/012	5.552	385	5.62	1,316	4.49	1,316
6.44*	1,250	F202_0056	MR200/	180	AW200/014	5.552	385	5.62	1,316	4.49	1,316
305 RPM Output (Approximate)								**250 RPM**		**200 RPM**	
8.73*	1,746	F302_0057	MR160/	050, 140	AW160/012	5.720	540	7.64	1,843	6.11	1,843
9.22	1,873	F402_0058	MR160/	050, 140	AW160/012	5.813	669	7.64	1,873	6.11	1,873
10.50*	2,101	F302_0057	MR200/	180	AW200/014	5.720	540	9.16	2,211	7.33	2,211
17.16*	3,488	F402_0058	MR200/	180	AW200/014	5.813	669	14.97	3,672	11.98	3,672
17.16*	3,488	F402_0058	MR250/	180, 210	AW250/102	5.813	669	14.97	3,672	11.98	3,672
19.60*	3,887	F602_0057	MR200/	180	AW200/014	5.673	897	17.29	4,138	14.90	4,457
29.15*	5,782	F602_0057	MR250/	180, 210	AW250/102	5.673	897	25.43	6,087	20.34	6,087
270 RPM Output (Approximate)								**224 RPM**		**180 RPM**	
2.61	589	F102_0065	MR140/	050	AW140/010	6.462	315	2.16	589	1.73	589
2.92	661	F102_0065	MR160/	050, 140	AW160/012	6.462	315	2.55	695	2.04	695
244 RPM Output (Approximate)								**200 RPM**		**160 RPM**	
2.61	652	F102_0072	MR140/	050	AW140/010	7.156	326	2.16	652	1.73	652
2.61	653	F202_0072	MR140/	050	AW140/010	7.167	419	2.16	653	1.73	653
2.73	683	F102_0072	MR160/	050, 140	AW160/012	7.156	326	2.38	719	1.91	719
5.43*	1,361	F202_0072	MR160/	050, 140	AW160/012	7.167	419	4.74	1,432	3.79	1,432
5.43*	1,361	F202_0072	MR200/	180	AW200/014	7.167	419	4.74	1,432	3.79	1,432
7.92*	1,985	F302_0072	MR160/	050, 140	AW160/012	7.172	582	6.98	2,113	6.02	2,276
8.73	2,198	F402_0072	MR160/	050, 140	AW160/012	7.202	719	7.64	2,321	6.11	2,321
9.03*	2,265	F302_0072	MR200/	180	AW200/014	7.172	582	7.88	2,385	6.30	2,385
14.88*	3,746	F402_0072	MR200/	180	AW200/014	7.202	719	12.98	3,944	10.38	3,944
14.88*	3,746	F402_0072	MR250/	180, 210	AW250/102	7.202	719	12.98	3,944	10.38	3,944
17.04*	4,264	F602_0072	MR200/	180	AW200/014	7.159	969	15.03	4,540	12.95	4,890
24.96*	6,248	F602_0072	MR250/	180, 210	AW250/102	7.159	969	21.77	6,578	17.42	6,578

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210
C-Frame	56C	143/145TC	182/184TC	213/215TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10

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

NOTE: [1] Complete Base Module Part Number by adding the Output and Housing Style. Example: F302**AG**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
195 RPM Output (Approximate)								**160 RPM**		**130 RPM**	
2.35	736	F102_0089	MR140/	050	AW140/010	8.948	351	2.05	775	1.64	775
2.35	736	F102_0089	MR160/	050, 140	AW160/012	8.948	351	2.05	775	1.64	775
2.61	820	F202_0090	MR140/	050	AW140/010	9.006	452	2.16	820	1.73	820
4.66	1,468	F202_0090	MR160/	050, 140	AW160/012	9.006	452	4.07	1,546	3.25	1,546
4.66	1,468	F202_0090	MR200/	180	AW200/014	9.006	452	4.07	1,546	3.25	1,546
6.87	2,159	F302_0090	MR160/	050, 140	AW160/012	8.986	627	6.06	2,299	5.23	2,477
7.70	2,418	F402_0090	MR160/	050, 140	AW160/012	8.980	773	6.80	2,575	5.86	2,774
7.77*	2,442	F302_0090	MR200/	180	AW200/014	8.986	627	6.78	2,571	5.42	2,571
8.46	2,659	F602_0090	MR160/	050, 140	AW160/012	8.995	1,046	7.46	2,831	6.11	2,898
12.84*	4,032	F402_0090	MR200/	180	AW200/014	8.980	773	11.20	4,245	8.96	4,245
12.84*	4,032	F402_0090	MR250/	180, 210	AW250/102	8.980	773	11.20	4,245	8.96	4,245
14.86*	4,674	F602_0090	MR200/	180	AW200/014	8.995	1,046	13.11	4,977	11.30	5,361
21.44*	6,742	F602_0090	MR250/	180, 210	AW250/102	8.995	1,046	18.70	7,098	14.96	7,098
160 RPM Output (Approximate)								**130 RPM**		**105 RPM**	
2.06	787	F102_0110	MR140/	050	AW140/010	10.920	375	1.80	828	1.44	828
2.06	787	F102_0110	MR160/	050, 140	AW160/012	10.920	375	1.80	828	1.44	828
2.61	984	F202_0110	MR140/	050	AW140/010	10.803	480	2.16	984	1.73	984
4.13	1,560	F202_0110	MR160/	050, 140	AW160/012	10.803	480	3.60	1,642	2.88	1,642
4.13	1,560	F202_0110	MR200/	180	AW200/014	10.803	480	3.60	1,642	2.88	1,642
5.98	2,253	F302_0110	MR160/	050, 140	AW160/012	10.785	667	5.27	2,399	4.54	2,584
6.66	2,520	F402_0110	MR160/	050, 140	AW160/012	10.825	823	5.87	2,683	5.06	2,890
6.88	2,595	F302_0110	MR200/	180	AW200/014	10.785	667	6.00	2,732	4.80	2,732
7.57	2,861	F602_0110	MR160/	050, 140	AW160/012	10.818	1,112	6.67	3,046	5.75	3,281
11.34	4,291	F402_0110	MR200/	180	AW200/014	10.825	823	9.89	4,518	7.91	4,518
11.34	4,291	F402_0110	MR250/	180, 210	AW250/102	10.825	823	9.89	4,518	7.91	4,518
13.28	5,024	F602_0110	MR200/	180	AW200/014	10.818	1,112	11.72	5,349	10.10	5,762
18.96*	7,170	F602_0110	MR250/	180, 210	AW250/102	10.818	1,112	16.54	7,548	13.23	7,548
130 RPM Output (Approximate)								**105 RPM**		**85 RPM**	
1.78	846	F102_0135	MR140/	050	AW140/010	13.588	403	1.55	891	1.24	891
1.78	846	F102_0135	MR160/	050, 140	AW160/012	13.588	403	1.55	891	1.24	891
2.61	1,219	F302_0135	MR140/	050	AW140/010	13.384	716	2.16	1,219	1.73	1,219
2.61	1,241	F202_0135	MR140/	050	AW140/010	13.625	519	2.16	1,241	1.73	1,241
3.54	1,686	F202_0135	MR160/	050, 140	AW160/012	13.625	519	3.09	1,774	2.47	1,774
3.54	1,686	F202_0135	MR200/	180	AW200/014	13.625	519	3.09	1,774	2.47	1,774
5.12	2,395	F302_0135	MR160/	050, 140	AW160/012	13.384	716	4.52	2,550	3.89	2,747
5.86	2,781	F402_0135	MR160/	050, 140	AW160/012	13.569	887	5.17	2,961	4.46	3,190
5.96	2,789	F302_0135	MR200/	180	AW200/014	13.384	716	5.20	2,936	4.16	2,936
6.36	3,025	F602_0135	MR160/	050, 140	AW160/012	13.609	1,200	5.61	3,220	4.83	3,469
9.75	4,627	F402_0135	MR200/	180	AW200/014	13.569	887	8.51	4,871	6.81	4,871
9.75	4,627	F402_0135	MR250/	180, 210	AW250/102	13.569	887	8.51	4,871	6.81	4,871
11.15	5,304	F602_0135	MR200/	180	AW200/014	13.609	1,200	9.83	5,647	8.47	6,083
16.27*	7,740	F602_0135	MR250/	180, 210	AW250/102	13.609	1,200	14.19	8,148	11.35	8,148

* 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

See Page 70 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
95 RPM Output (Approximate)								**75 RPM**		**60 RPM**	
1.45	937	F102_0185	MR140/	050	AW140/010	18.457	446	1.27	987	1.01	987
1.45	937	F102_0185	MR160/	050, 140	AW160/012	18.457	446	1.27	987	1.01	987
2.61	1,699	F202_0185	MR140/	050	AW140/010	18.651	576	2.16	1,699	1.73	1,699
2.87	1,872	F202_0185	MR160/	050, 140	AW160/012	18.651	576	2.50	1,970	2.00	1,970
2.87	1,872	F202_0185	MR200/	180	AW200/014	18.651	576	2.50	1,970	2.00	1,970
4.76	3,122	F302_0190	MR160/	050, 140	AW160/012	18.774	802	4.15	3,286	3.32	3,286
4.76	3,122	F302_0190	MR200/	180	AW200/014	18.774	802	4.15	3,286	3.32	3,286
7.90	5,142	F402_0185	MR160/	050, 140	AW160/012	18.620	986	6.89	5,413	5.51	5,413
7.90	5,142	F402_0185	MR200/	180	AW200/014	18.620	986	6.89	5,413	5.51	5,413
7.90	5,142	F402_0185	MR250/	180, 210	AW250/102	18.620	986	6.89	5,413	5.51	5,413
13.25	8,578	F602_0185	MR200/	180	AW200/014	18.522	1,330	11.55	9,030	9.24	9,030
13.25	8,578	F602_0185	MR250/	180, 210	AW250/102	18.522	1,330	11.55	9,030	9.24	9,030
75 RPM Output (Approximate)								**60 RPM**		**50 RPM**	
1.25	1,010	F102_0230	MR140/	050	AW140/010	23.080	481	1.09	1,063	0.87	1,063
1.25	1,010	F102_0230	MR160/	050, 140	AW160/012	23.080	481	1.09	1,063	0.87	1,063
2.47	2,020	F202_0230	MR140/	050	AW140/010	23.434	622	2.15	2,126	1.72	2,126
2.47	2,020	F202_0230	MR160/	050, 140	AW160/012	23.434	622	2.15	2,126	1.72	2,126
2.47	2,020	F202_0230	MR200/	180	AW200/014	23.434	622	2.15	2,126	1.72	2,126
4.09	3,365	F302_0240	MR160/	050, 140	AW160/012	23.520	864	3.57	3,543	2.86	3,543
4.09	3,365	F302_0240	MR200/	180	AW200/014	23.520	864	3.57	3,543	2.86	3,543
6.82	5,534	F402_0230	MR160/	050, 140	AW160/012	23.214	1,061	5.95	5,826	4.76	5,826
6.82	5,534	F402_0230	MR200/	180	AW200/014	23.214	1,061	5.95	5,826	4.76	5,826
6.82	5,534	F402_0230	MR250/	180, 210	AW250/102	23.214	1,061	5.95	5,826	4.76	5,826
8.46	6,880	F602_0230	MR160/	050, 140	AW160/012	23.272	1,436	7.46	7,325	6.11	7,498
11.38	9,256	F602_0230	MR200/	180	AW200/014	23.272	1,436	9.92	9,744	7.94	9,744
11.38	9,256	F602_0230	MR250/	180, 210	AW250/102	23.272	1,436	9.92	9,744	7.94	9,744
60 RPM Output (Approximate)								**50 RPM**		**40 RPM**	
1.08	1,063	F102_0280	MR140/	050	AW140/010	28.167	514	0.89	1,063	0.72	1,063
1.08	1,063	F102_0280	MR160/	050, 140	AW160/012	28.167	514	0.89	1,063	0.72	1,063
2.16	2,126	F202_0280	MR140/	050	AW140/010	28.112	660	1.79	2,126	1.43	2,126
2.16	2,126	F202_0280	MR160/	050, 140	AW160/012	28.112	660	1.79	2,126	1.43	2,126
2.16	2,126	F202_0280	MR200/	180	AW200/014	28.112	660	1.79	2,126	1.43	2,126
3.59	3,543	F302_0280	MR160/	050, 140	AW160/012	28.230	919	2.97	3,543	2.38	3,543
3.59	3,543	F302_0280	MR200/	180	AW200/014	28.230	919	2.97	3,543	2.38	3,543
6.02	5,890	F402_0280	MR160/	050, 140	AW160/012	27.986	1,130	5.25	6,200	4.20	6,200
6.02	5,890	F402_0280	MR200/	180	AW200/014	27.986	1,130	5.25	6,200	4.20	6,200
6.02	5,890	F402_0280	MR250/	180, 210	AW250/102	27.986	1,130	5.25	6,200	4.20	6,200
7.57	7,401	F602_0280	MR160/	050, 140	AW160/012	27.986	1,527	6.67	7,880	5.75	8,489
9.96	9,744	F602_0280	MR200/	180	AW200/014	27.986	1,527	8.25	9,744	6.60	9,744
9.96	9,744	F602_0280	MR250/	180, 210	AW250/102	27.986	1,527	8.25	9,744	6.60	9,744

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210
C-Frame	56C	143/145TC	182/184TC	213/215TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10

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

NOTE: [1] Complete Base Module Part Number by adding the Output and Housing Style. Example: F302**AG**0560.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
50 RPM Output (Approximate)								**40 RPM**		**30 RPM**	
0.87	1,063	F102_0350	MR140/	050	AW140/010	35.049	553	0.72	1,063	0.58	1,063
0.87	1,063	F102_0350	MR160/	050, 140	AW160/012	35.049	553	0.72	1,063	0.58	1,063
1.72	2,126	F202_0350	MR140/	050	AW140/010	35.455	714	1.42	2,126	1.14	2,126
1.72	2,126	F202_0350	MR160/	050, 140	AW160/012	35.455	714	1.42	2,126	1.14	2,126
1.72	2,126	F202_0350	MR200/	180	AW200/014	35.455	714	1.42	2,126	1.14	2,126
2.61	3,191	F302_0350	MR140/	050	AW140/010	35.034	987	2.16	3,191	1.73	3,191
2.89	3,543	F302_0350	MR160/	050, 140	AW160/012	35.034	987	2.40	3,543	1.92	3,543
2.89	3,543	F302_0350	MR200/	180	AW200/014	35.034	987	2.40	3,543	1.92	3,543
5.06	6,201	F402_0350	MR160/	050, 140	AW160/012	35.079	1,218	4.19	6,201	3.35	6,201
5.06	6,201	F402_0350	MR200/	180	AW200/014	35.079	1,218	4.19	6,201	3.35	6,201
5.06	6,201	F402_0350	MR250/	180, 210	AW250/102	35.079	1,218	4.19	6,201	3.35	6,201
6.36	7,825	F602_0350	MR160/	050, 140	AW160/012	35.208	1,648	5.61	8,332	4.83	8,975
7.92	9,744	F602_0350	MR200/	180	AW200/014	35.208	1,648	6.56	9,744	5.25	9,744
7.92	9,744	F602_0350	MR250/	180, 210	AW250/102	35.208	1,648	6.56	9,744	5.25	9,744
35 RPM Output (Approximate)								**30 RPM**		**25 RPM**	
0.65	1,063	F102_0460	MR140/	050	AW140/010	46.429	607	0.54	1,063	0.43	1,063
0.65	1,063	F102_0460	MR160/	050, 140	AW160/012	46.429	607	0.54	1,063	0.43	1,063
1.29	2,126	F202_0470	MR140/	050	AW140/010	47.045	784	1.07	2,126	0.86	2,126
1.29	2,126	F202_0470	MR160/	050, 140	AW160/012	47.045	784	1.07	2,126	0.86	2,126
1.29	2,126	F202_0470	MR200/	180	AW200/014	47.045	784	1.07	2,126	0.86	2,126
2.15	3,543	F302_0470	MR140/	050	AW140/010	47.185	1,090	1.78	3,543	1.42	3,543
2.15	3,543	F302_0470	MR160/	050, 140	AW160/012	47.185	1,090	1.78	3,543	1.42	3,543
3.78	6,201	F402_0470	MR160/	050, 140	AW160/012	46.944	1,342	3.13	6,201	2.50	6,201
3.78	6,201	F402_0470	MR200/	180	AW200/014	46.944	1,342	3.13	6,201	2.50	6,201
3.78	6,201	F402_0470	MR250/	180, 210	AW250/102	46.944	1,342	3.13	6,201	2.50	6,201
5.11	8,344	F602_0470	MR160/	050, 140	AW160/012	46.719	1,811	4.51	8,883	3.88	9,569
5.97	9,744	F602_0470	MR200/	180	AW200/014	46.719	1,811	4.94	9,744	3.96	9,744
5.97	9,744	F602_0470	MR250/	180, 210	AW250/102	46.719	1,811	4.94	9,744	3.96	9,744
30 RPM Output (Approximate)								**25 RPM**		**20 RPM**	
0.54	1,063	F102_0560	MR140/	050	AW140/010	55.972	646	0.45	1,063	0.36	1,063
0.54	1,063	F102_0560	MR160/	050, 140	AW160/012	55.972	646	0.45	1,063	0.36	1,063
1.07	2,126	F202_0570	MR140/	050	AW140/010	56.727	835	0.89	2,126	0.71	2,126
1.07	2,126	F202_0570	MR160/	050, 140	AW160/012	56.727	835	0.89	2,126	0.71	2,126
1.07	2,126	F202_0570	MR200/	180	AW200/014	56.727	835	0.89	2,126	0.71	2,126
1.79	3,543	F302_0560	MR140/	050	AW140/010	56.486	1,158	1.49	3,543	1.19	3,543
1.79	3,543	F302_0560	MR160/	050, 140	AW160/012	56.486	1,158	1.49	3,543	1.19	3,543
1.79	3,543	F302_0560	MR200/	180	AW200/014	56.486	1,158	1.49	3,543	1.19	3,543
2.15	3,543	F302_0470	MR200/	180	AW200/014	47.185	1,090	1.78	3,543	1.42	3,543
3.17	6,201	F402_0560	MR160/	050, 140	AW160/012	55.972	1,423	2.63	6,201	2.10	6,201
3.17	6,201	F402_0560	MR200/	180	AW200/014	55.972	1,423	2.63	6,201	2.10	6,201
3.17	6,201	F402_0560	MR250/	180, 210	AW250/102	55.972	1,423	2.63	6,201	2.10	6,201
4.50	8,775	F602_0560	MR160/	050, 140	AW160/012	55.714	1,920	3.97	9,342	3.32	9,744
5.00	9,744	F602_0560	MR200/	180	AW200/014	55.714	1,920	4.15	9,744	3.32	9,744
5.00	9,744	F602_0560	MR250/	180, 210	AW250/102	55.714	1,920	4.15	9,744	3.32	9,744

* 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

See Page 70 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
25 RPM Output (Approximate)								**20 RPM**		**16.5 RPM**	
0.43	1,063	F102_0700	MR140/	050	AW140/010	70.056	696	0.36	1,063	0.29	1,063
0.43	1,063	F102_0700	MR160/	050, 140	AW160/012	70.056	696	0.36	1,063	0.29	1,063
0.87	2,126	F202_0700	MR140/	050	AW140/010	70.130	896	0.72	2,126	0.58	2,126
0.87	2,126	F202_0700	MR160/	050, 140	AW160/012	70.130	896	0.72	2,126	0.58	2,126
0.87	2,126	F202_0700	MR200/	180	AW200/014	70.130	896	0.72	2,126	0.58	2,126
1.44	3,543	F302_0700	MR140/	050	AW140/010	70.359	1,245	1.19	3,543	0.96	3,543
1.44	3,543	F302_0700	MR160/	050, 140	AW160/012	70.359	1,245	1.19	3,543	0.96	3,543
1.44	3,543	F302_0700	MR200/	180	AW200/014	70.359	1,245	1.19	3,543	0.96	3,543
2.53	6,201	F402_0700	MR160/	050, 140	AW160/012	70.056	1,534	2.10	6,201	1.68	6,201
2.53	6,201	F402_0700	MR200/	180	AW200/014	70.056	1,534	2.10	6,201	1.68	6,201
2.53	6,201	F402_0700	MR250/	180, 210	AW250/102	70.056	1,534	2.10	6,201	1.68	6,201
3.74	9,102	F602_0700	MR160/	050, 140	AW160/012	69.643	2,069	3.30	9,690	2.65	9,744
4.00	9,744	F602_0700	MR200/	180	AW200/014	69.643	2,069	3.32	9,744	2.65	9,744
4.00	9,744	F602_0700	MR250/	180, 210	AW250/102	69.643	2,069	3.32	9,744	2.65	9,744
19 RPM Output (Approximate)								**16 RPM**		**12 RPM**	
0.33	1,063	F102_0940	MR140/	050	AW140/010	93.631	767	0.27	1,063	0.22	1,063
0.65	2,126	F202_0940	MR140/	050	AW140/010	93.818	987	0.54	2,126	0.43	2,126
0.65	2,126	F202_0940	MR160/	050, 140	AW160/012	93.818	987	0.54	2,126	0.43	2,126
1.08	3,543	F302_0940	MR140/	050	AW140/010	93.644	1,370	0.90	3,543	0.72	3,543
1.08	3,543	F302_0940	MR160/	050, 140	AW160/012	93.644	1,370	0.90	3,543	0.72	3,543
1.08	3,543	F302_0940	MR200/	180	AW200/014	93.644	1,370	0.90	3,543	0.72	3,543
1.90	6,201	F402_0930	MR160/	050, 140	AW160/012	93.333	1,688	1.57	6,201	1.26	6,201
1.90	6,201	F402_0930	MR200/	180	AW200/014	93.333	1,688	1.57	6,201	1.26	6,201
2.84	9,258	F602_0930	MR160/	050, 140	AW160/012	93.333	2,281	2.47	9,744	1.98	9,744
2.99	9,744	F602_0930	MR200/	180	AW200/014	93.333	2,281	2.47	9,744	1.98	9,744
2.99	9,744	F602_0930	MR250/	180, 210	AW250/102	93.333	2,281	2.47	9,744	1.98	9,744
15 RPM Output (Approximate)								**12 RPM**		**9 RPM**	
0.27	1,063	F102_1120	MR140/	050	AW140/010	111.944	814	0.23	1,063	0.18	1,063
0.54	2,126	F202_1130	MR140/	050	AW140/010	112.727	1,049	0.45	2,126	0.36	2,126
0.90	3,543	F302_1130	MR140/	050	AW140/010	112.848	1,458	0.74	3,543	0.60	3,543
0.90	3,543	F302_1130	MR160/	050, 140	AW160/012	112.848	1,458	0.74	3,543	0.60	3,543
1.58	6,201	F402_1120	MR160/	050, 140	AW160/012	112.273	1,795	1.31	6,201	1.05	6,201
1.58	6,201	F402_1120	MR200/	180	AW200/014	112.273	1,795	1.31	6,201	1.05	6,201
2.43	9,546	F602_1120	MR160/	050, 140	AW160/012	112.202	2,425	2.06	9,744	1.65	9,744
2.48	9,744	F602_1120	MR200/	180	AW200/014	112.202	2,425	2.06	9,744	1.65	9,744
13 RPM Output (Approximate)								**10 RPM**		**8 RPM**	
0.22	1,063	F102_1400	MR140/	050	AW140/010	139.750	877	0.18	1,063	0.15	1,063
0.43	2,126	F202_1410	MR140/	050	AW140/010	140.909	1,130	0.36	2,126	0.29	2,126
0.72	3,543	F302_1410	MR140/	050	AW140/010	140.648	1,569	0.60	3,543	0.48	3,543
1.27	6,201	F402_1400	MR160/	050, 140	AW160/012	139.750	1,931	1.05	6,201	0.84	6,201
1.98	9,690	F602_1400	MR160/	050, 140	AW160/012	139.750	2,609	1.65	9,744	1.32	9,744
1.99	9,744	F602_1400	MR200/	180	AW200/014	139.750	2,609	1.65	9,744	1.32	9,744

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210
C-Frame	56C	143/145TC	182/184TC	213/215TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10

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

NOTE: 1) Complete Base Module Part Number by adding the Output and Housing Style. Example: F302**AG**0560.
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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size 3)	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
10 RPM Output (Approximate)								**8 RPM**		**6 RPM**	
0.34	2,126	F203_1840	MR140/	050	AW140/010	184.261	1,215	0.28	2,126	0.22	2,126
0.56	3,543	F303_1850	MR140/	050	AW140/010	184.809	1,688	0.46	3,543	0.37	3,543
0.56	3,543	F303_1820	MR160/	050, 140	AW160/012	182.449	1,688	0.47	3,543	0.37	3,543
0.98	6,201	F403_1840	MR140/	050	AW140/010	183.866	2,081	0.81	6,201	0.65	6,201
0.99	6,201	F403_1820	MR160/	050, 140	AW160/012	181.519	2,081	0.82	6,201	0.66	6,201
1.57	9,744	F603_1810	MR160/	050, 140	AW160/012	180.646	2,813	1.30	9,744	1.04	9,744
8 RPM Output (Approximate)								**7 RPM**		**5 RPM**	
0.28	2,126	F203_2220	MR140/	050	AW140/010	222.182	1,215	0.23	2,126	0.18	2,126
0.47	3,543	F303_2210	MR140/	050	AW140/010	221.237	1,688	0.39	3,543	0.31	3,543
0.47	3,543	F303_2180	MR160/	050, 140	AW160/012	218.413	1,688	0.39	3,543	0.31	3,543
0.82	6,201	F403_2190	MR140/	050	AW140/010	219.225	2,081	0.68	6,201	0.54	6,201
0.83	6,201	F403_2160	MR160/	050, 140	AW160/012	216.426	2,081	0.69	6,201	0.55	6,201
1.31	9,744	F603_2150	MR160/	050, 140	AW160/012	215.429	2,813	1.09	9,744	0.87	9,744
6 RPM Output (Approximate)								**5 RPM**		**4 RPM**	
0.22	2,126	F203_2750	MR140/	050	AW140/010	274.675	1,215	0.19	2,126	0.15	2,126
0.37	3,543	F303_2760	MR140/	050	AW140/010	275.573	1,688	0.31	3,543	0.25	3,543
0.38	3,543	F303_2720	MR160/	050, 140	AW160/012	272.055	1,688	0.31	3,543	0.25	3,543
0.66	6,201	F403_2740	MR140/	050	AW140/010	274.384	2,081	0.54	6,201	0.43	6,201
0.66	6,201	F403_2710	MR160/	050, 140	AW160/012	270.881	2,081	0.55	6,201	0.44	6,201
1.05	9,744	F603_2690	MR160/	050, 140	AW160/012	269.286	2,813	0.87	9,744	0.70	9,744
5 RPM Output (Approximate)								**4 RPM**		**3 RPM**	
0.17	2,126	F203_3670	MR140/	050	AW140/010	367.455	1,215	0.14	2,126	0.11	2,126
0.28	3,543	F303_3670	MR140/	050	AW140/010	366.774	1,688	0.23	3,543	0.19	3,543
0.28	3,543	F303_3620	MR160/	050, 140	AW160/012	362.092	1,688	0.24	3,543	0.19	3,543
0.49	6,201	F403_3660	MR140/	050	AW140/010	365.556	2,081	0.41	6,201	0.33	6,201
0.50	6,201	F403_3610	MR160/	050, 140	AW160/012	360.889	2,081	0.41	6,201	0.33	6,201
0.78	9,744	F603_3610	MR160/	050, 140	AW160/012	360.889	2,813	0.65	9,744	0.52	9,744
4 RPM Output (Approximate)								**3 RPM**		**2.5 RPM**	
0.14	2,126	F203_4420	MR140/	050	AW140/010	441.515	1,215	0.12	2,126	0.09	2,126
0.23	3,543	F303_4420	MR140/	050	AW140/010	441.990	1,688	0.19	3,543	0.15	3,543
0.41	6,201	F403_4400	MR140/	050	AW140/010	439.735	2,081	0.34	6,201	0.27	6,201
0.41	6,201	F403_4340	MR160/	050, 140	AW160/012	434.121	2,081	0.34	6,201	0.28	6,201
0.65	9,744	F603_4340	MR160/	050, 140	AW160/012	433.849	2,813	0.54	9,744	0.43	9,744
3 RPM Output (Approximate)								**2.5 RPM**		**2 RPM**	
0.11	2,126	F203_5520	MR140/	050	AW140/010	551.894	1,215	0.09	2,126	0.07	2,126
0.19	3,543	F303_5510	MR140/	050	AW140/010	550.872	1,688	0.15	3,543	0.12	3,543
0.33	6,201	F403_5470	MR140/	050	AW140/010	547.354	2,081	0.27	6,201	0.22	6,201
0.52	9,744	F603_5400	MR160/	050, 140	AW160/012	540.367	2,813	0.43	9,744	0.35	9,744

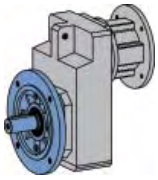
NOTE: For slower speeds than those listed, units can be combined. Contact STOBER Drives Inc.

"F" Series

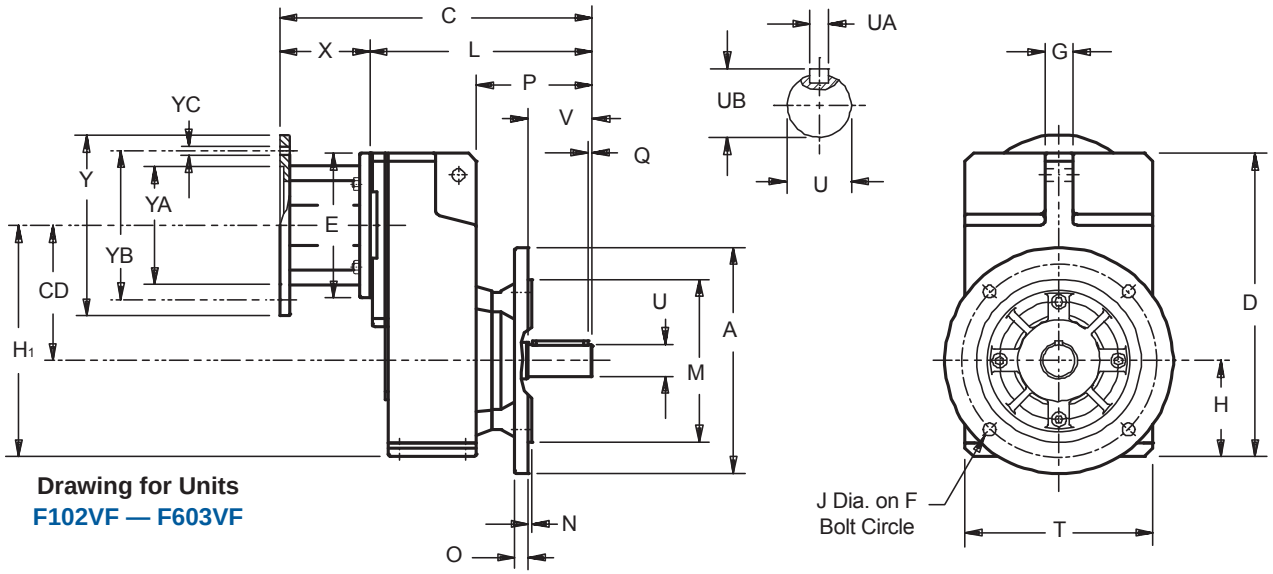
* For thermal HP capacity, see rating below.

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

See Page 70 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_1	J	M	N	O	P	Q	T	V
F102	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
F202/F203	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
F302/F303	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
F402/F403	6.65 [1]	9.84	14.57	8.46	1.18	4.57	11.22	.55	7.087	.16	.59	5.49	.16	9.06	3.15
F602/F603	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

[1] 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.
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. 3 Metric output available on request

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
F102	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
F202/F203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7x50	33
F302/F303	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	35_{k6}	A10x8X60	38
F402/F403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43
F602/F603	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9X90	53.5

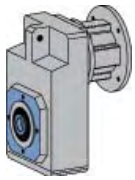
Table No. 4 Motor Adapter Dimensions (Inches)

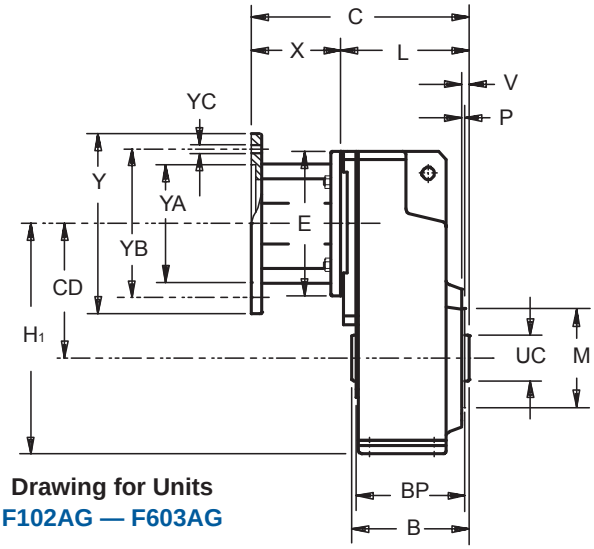
Base	MR140/050		MR160/140[2]		MR200/180		MR250/210[3]		Approx.
Module	C	L	C	L	C	L	C	L	Wt. lbs.
F102	10.40	7.09	11.10	7.24	—	—	—	—	38
F202	11.70	8.39	12.40	8.54	13.42	8.62	—	—	51
F203	13.15	9.84	—	—	—	—	—	—	64
F302	12.76	9.45	13.47	9.61	14.49	9.69	—	—	67
F303	14.22	10.91	15.13	11.28	—	—	—	—	73
F402	—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

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

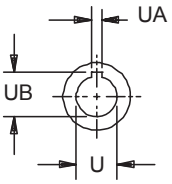
Part No. Example
Round Flange with Motor Adapter
F302VF0620 MR160/140

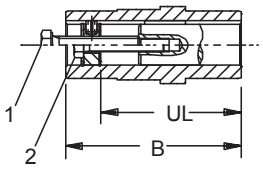
"F" Series – MGS Reducer
Tapped Holes – "G" Housing
Hollow Output – Dimensional Data





Drawing for Units
F102AG — F603AG





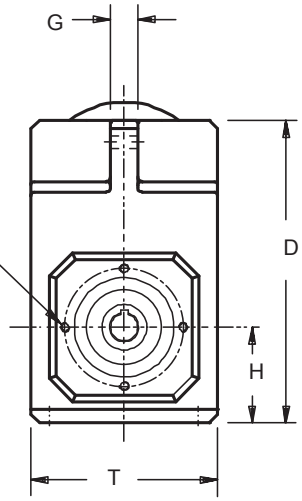
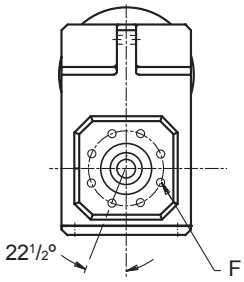


Table No. 1
"F" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base Module	CD	B	D	F	G	H	H_1	I	J *	M	P	T	V	BP
F102	4.02	3.74	9.37	3.35	.79	2.91	6.93	.51	M8×1.25	2.756	.10	5.71	.26	3.43
F202/203	5.16	4.53	11.77	4.53	.87	3.66	8.82	.51	M8×1.25	3.740	.12	7.09	.31	4.13
F302/303	5.89	5.12	13.23	5.12	1.18	4.17	10.06	.63	M10×1.5	4.331	.14	8.11	.33	4.72
F402/403	6.65[1]	5.71	14.57	5.12	1.18	4.57	11.22	.63	M10×1.5	4.331	.14	9.06	.33	5.31
F602/603	7.72	7.09	17.64	6.50	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.
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



*F602 and F603 has 8 tapped holes located as shown.
[1] 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			
F102	.750	.187	.84	20_{H7}	6_{JS9}	22.8	1.38	2.87	3/8-16
F202/F203	1.000	.250	1.12	25_{H7}	8_{JS9}	28.3	1.77	3.62	1/2-13
F302/F303	1.250	.250	1.37	30_{H7}	8_{JS9}	33.3	1.97	4.06	1/2-13
F402/F403	1.500	.375	1.67	40_{H7}	12_{JS9}	43.3	2.17	4.49	3/4-10
F602/F603	2.000	.500	2.23	50_{H7}	14_{JS9}	53.8	2.76	5.63	3/4-10

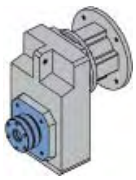
Part No. Example
Tapped Holes Housing with Motor Adapter
F302AG0620 MR160/140

Table No. 4 **Motor Adapter Dimensions (Inches)**

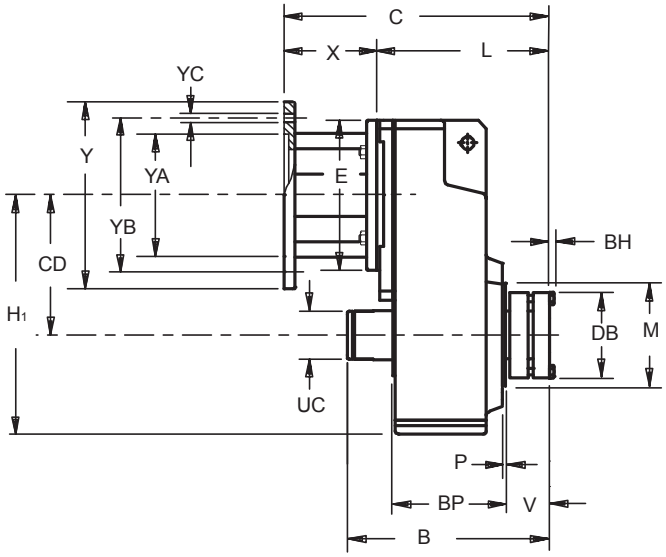
Base Module	MR140/050		MR160/140[2]		MR200/180		MR250/210[3]		Approx. Wt. lbs.
	C	L	C	L	C	L	C	L	
F102	7.40	4.09	8.11	4.25	—	—	—	—	38
F202	8.15	4.84	8.86	5.00	9.88	5.08	—	—	51
F203	9.61	6.30	—	—	—	—	—	—	64
F302	8.74	5.43	9.45	5.59	10.47	5.67	—	—	67
F303	10.20	6.89	11.14	7.28	—	—	—	—	73
F402	—	—	10.04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

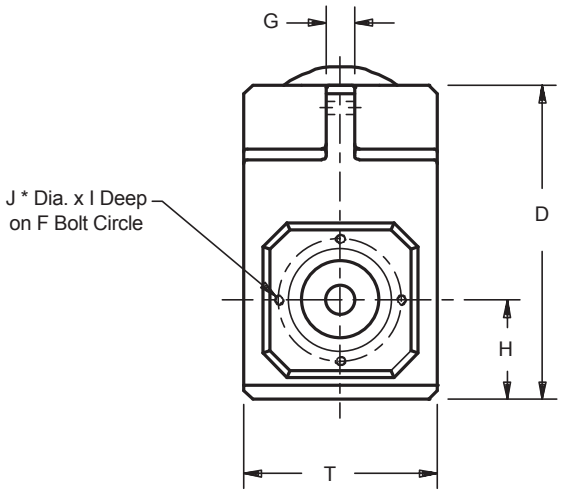
[2] Also available as MR160/050 for a NEMA 56C frame motor.
[3] Also available as MR250/180 for a NEMA 182/184TC frame motor.
All weights are appro

"F" Series



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





Important: For ease of installation, a 1/32 x 45° chamfer (minimum) is recommended for the output shaft end.

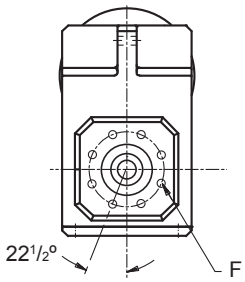
Table No. 1 **"F" Series – Single Side Wobble Free Bushing Unit Dimensions (Inches)**

Base Module	CD	B	D	F	G	H	H_1	I	J *	M	P	T	V	BH	BP	DB	UC	Bushing Capscrews: Metric No.- Size × Length	Tightening Torque: in.lbs	Nm
F1	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
F2	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
F3	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
F4	6.65[1]	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
F6	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

[1] 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.
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



*F602 and F603 has 8 tapped holes located as shown.

[1] C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.

Part No. Example

Unit with Motor Adapter and 1 3/8" Bore Single Bushing

F402WG0560 MR160/140 WF4–106

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

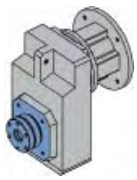


Table No. 3 Motor Adapter Dimensions (Inches)

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

Table No. 4 "WF" Single Side Bushings

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

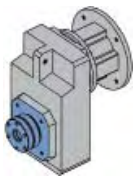
[2] Also available as **MR160/050** for a NEMA 56C frame motor.

[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.

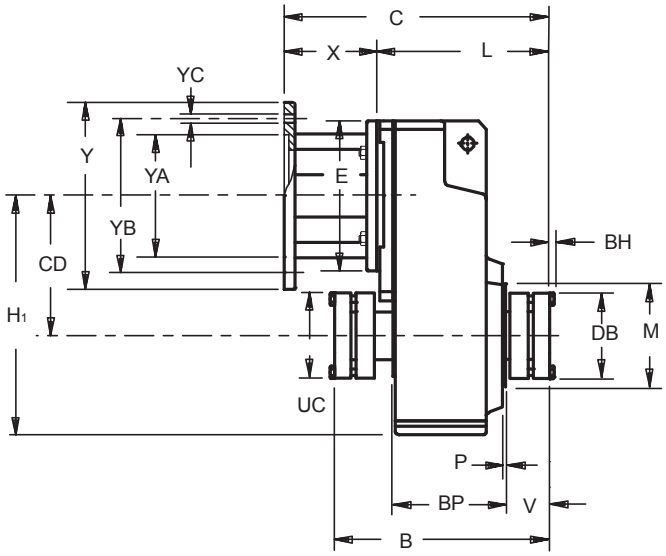
A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the MGS reducer. The bushing will accept a shaft with a tolerance of +.000/-.005.

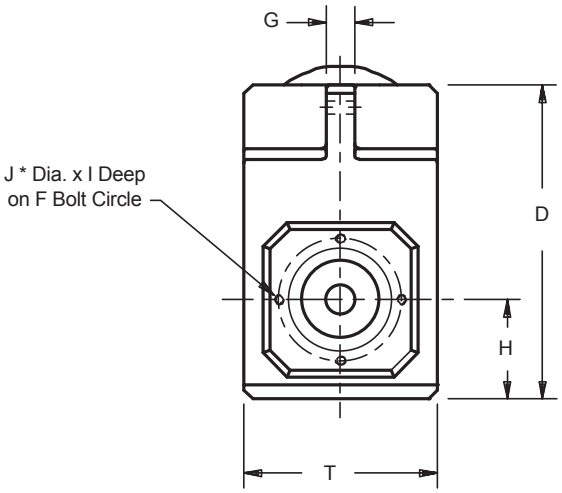
NOTE: F6 units use a WF5 Bushing Kit.

All weights are approximate.



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





Important: For ease of installation, a 1/32 x 45° chamfer (minimum) is recommended for the output shaft end.

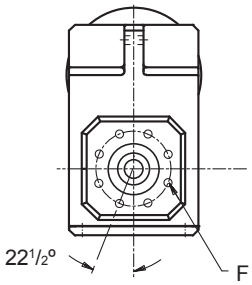
Table No. 1 "F" Series – Double Side Wobble Free Bushing Unit Dimensions (Inches)

Base Module	CD	B	D	F	G	H	H_1	I	J *	M	P	T	V	BH	BP	DB	Bushing Capscrews Metric No.- Size × Length	Tightening Torque in.lbs	Tightening Torque Nm
F102	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
F202	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
F302	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
F402	6.65 [1]	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
F602	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

[1] 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.
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



*F602 and F603 has 8 tapped holes located as shown.
[1] C.D. is 5.19 for F403 with MR160/050 or MR160/140 input.

Part No. Example
Unit with Motor Adapter and 1 3/8" 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

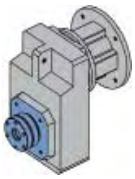


Table No. 3 Motor Adapter Dimensions (Inches)

Base Module	MR140/050		MR160/140[2]		MR200/180		MR250/210[3]		Wt. lbs.
	C	L	C	L	C	L	C	L	
F102	8.42	5.11	—	—	—	—	—	—	38
F202	9.50	6.19	10.21	6.35	—	—	—	—	51
F302	10.09	6.78	10.80	6.94	11.82	7.02	—	—	67
F402	—	—	11.63	7.77	12.65	7.85	—	—	84
F602	—	—	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 3/16	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2
F102	WFN1-075	—	—	—	—	—	—	—	—	—	—	—	—
F202	—	WFN2-100	WFN2-103	—	—	—	—	—	—	—	—	—	—
F302	—	WFN3-100	WFN3-103	WFN3-104	WFN3-106	WFN3-107	WFN3-108	—	—	—	—	—	—
F402	—	WFN4-100	WFN4-103	WFN4-104	WFN4-106	WFN4-107	WFN4-108	—	—	—	—	—	—
F602	—	—	—	—	—	WFN5-107	WFN5-108	WFN5-110	WFN5-111	WFN5-112	WFN5-114	WFN5-115	WFN5-200

[2] Also available as **MR160/050** for a NEMA 56C frame motor.

[3] 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/-.005.

NOTE: F6 units use a WFN5 Bushing Kit.

All weights are approximate.

“F” Series – MGS Reducer
Tapped Holes – “GN” Housing

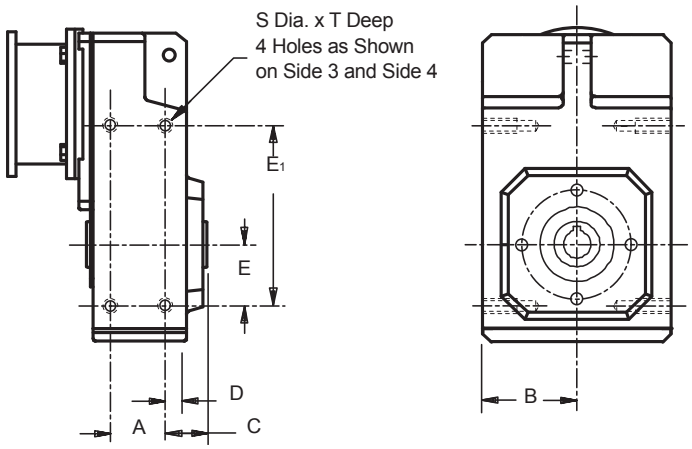


Table No. 1

“F” Series – Foot Mount “GN” Housing Dimensions (Inches)

Base Module	A	B	C	D	E	E1	S	T
F102/F103	1.97	2.79	1.14	.39	1.57	5.51	M6	.43
F202/F203	2.52	3.46	1.32	.41	2.17	6.89	M8	.51
F302/F303	2.83	4.02	1.48	.49	2.36	7.87	M10	.63
F402/F403	3.43	4.49	1.48	49	2.76	8.66	M10	.63
F602/F603	4.25	5.16	1.83	.61	3.35	10.63	M12	.75

Rubber Buffer for Torque Arm Mounting

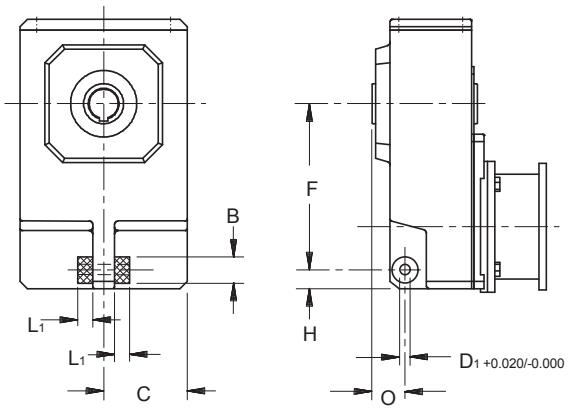


Table No. 2

“F” Series – Rubber Buffer Dimensions (Inches)

Base Module	A	B	C	F	H	D1	L1	O
F102/F103	25192	1.18	2.86	5.91	.55	.43	.59	1.38
F202/F203	25192	1.18	3.55	7.12	.98	.43	.59	1.57
F302/F303	25193	1.57	4.06	8.07	.96	.55	.79	1.77
F402/F403	25193	1.57	4.53	8.98	1.02	.55	.79	1.77
F602/F603	25194	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:

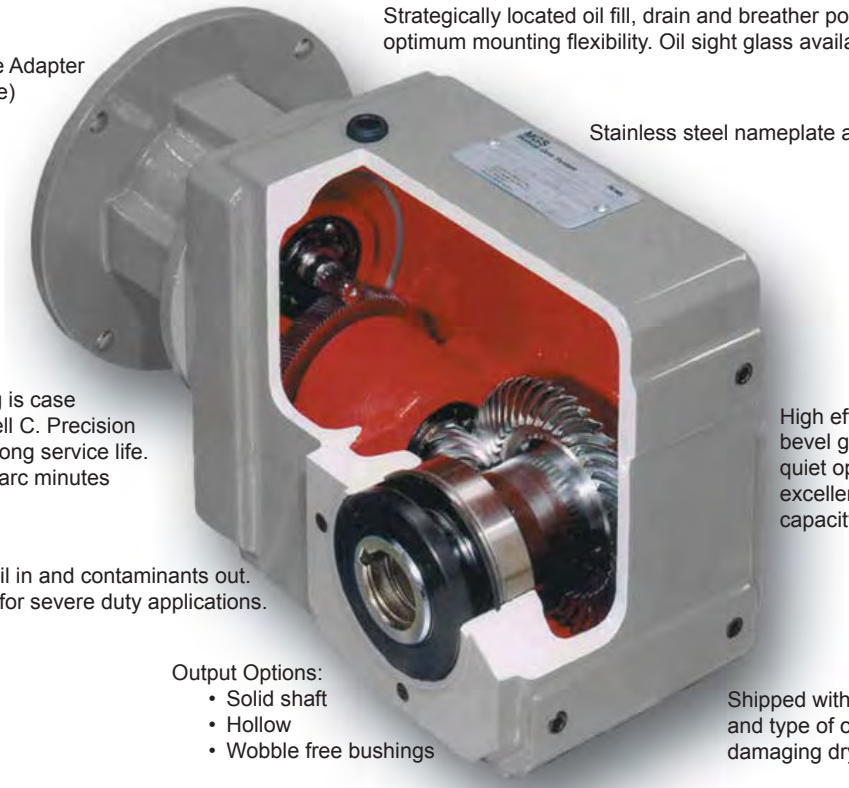
- Horsepower ratings up to 105
- Output torques to 92,250 in. lbs.
- Output speeds available from 437 to 4.5 RPM
- Speed reducer ratios from 4:1 to 381:1
- 3 year warranty standard with option for 5 years

SHIPS in 1 DAY

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

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

Stainless steel nameplate and hardware



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

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.

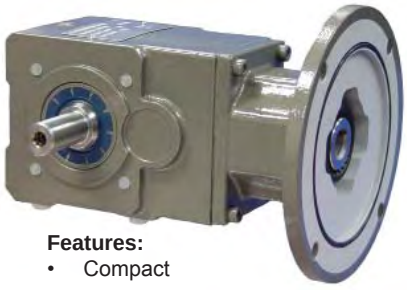
Output Options:
- Solid shaft
- Hollow
- Wobble free bushings

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

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.

“K” Series

“KL” Series



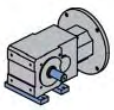
Features:
- Compact
- Symmetrical
- Nominal output torque – 130 to 443 in. lbs.
- Reducer ratios from 4:1 to 32:1
- Maintenance free

Style **AG**
Hollow Output
Tapped Holes

Style **AF**
Hollow Output
Flange Mount

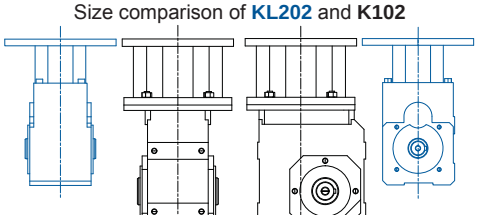
Style **VF**
Solid Output
Flange Mount

Style **VN**
Solid Output
Foot Mount



Style **WG**
Bushing
Tapped Holes

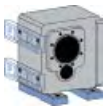
Size comparison of **KL202** and **K102**



Part No. Configurator
"K" Series – MGS Speed Reducers

Part No. Explanation

K	5	1	3	A	GD	0580	MR160/	140	LL	E12
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	K	Right Angle Helical/Bevel (output is at a right angle to input; gears are helical and spiral bevel)
Size	5	Sizes available: K1, K2, K3, K4, **K5**, K6, K7, K8, K9, K10
Generation	1	Design generation: first generation 0, second generation **1**, etc.
No. of Gear Stages	3	Number of gear stages: 2, **3**, 4 (determined by the ratio)
Output Style	A	Hollow output  Hollow output available: imperial, metric, and stainless steel.
		V – Shaft output  SPECIFY: Shaft Side 3 or Side 4 (shown).
		W – Single or double wobble free bushing output  SPECIFY: Single or Double Bushing IF Single Bushing – SPECIFY: Side 3 or Side 4 (shown).
Housing Style	GD	Torque arm backet mounting  SPECIFY: Side 1 or Side 5 (also Side 2 on K1).
		F – Output flange  SPECIFY: Side 3 or Side 4.
		G – Tapped holes around the output 
		N – Foot mounting  SPECIFY: Side 1 or Side 5 (also Side 2 on K1).
Ratio	0580	Approximate ratio: **0580** = 58.297:1 (4:1 up to 381:1)
Motor Adapter	MR160/	Motor adapter size from Selection Data: MR140, **MR160**, MR200, MR250
NEMA Frame Size	140	Motor frame size determined by motor adapter: 050 (56C), **140** (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.

Long Life Option	LL	Added ONLY with long life warranty option.
Mounting Position	E12	The long life mou

"K" Series

Part No. Configurator
"K" Series – MGS Speed Reducers

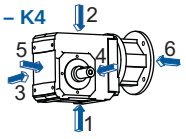
Mounting Positions – Standard 3 Year Warranty

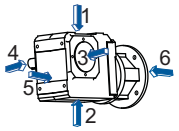
Mounting Position MUST BE SPECIFIED.

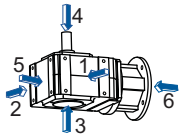
Standard Oil: Mobilgear 600XP220

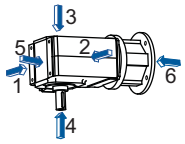
Optional Oil: Food Grade (Mobil SHC CIBUS 220) or Synthetic Oil (Mobil SHC630)

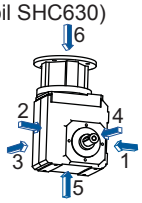
K1 – K4

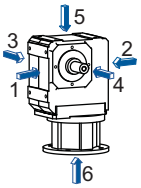




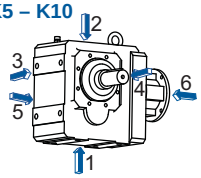


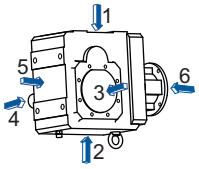


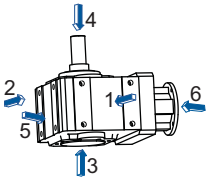


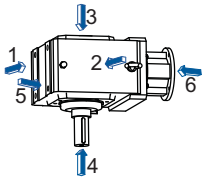


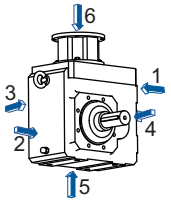
K5 – K10

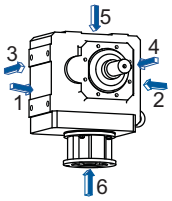












EL1 **EL2** **EL3** **EL4** **EL5** **EL6**

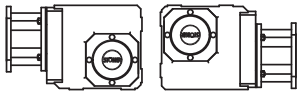
"K" units have the shaft on Side 3 and/or Side 4 (shown). **Shaft side must be specified.**

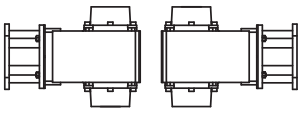
EL1 Side 1 is the bottom side when the unit is set in a normal position. Side 1 is the down side for EL1.
EL2 Side 2 is the top of the unit. Side 2 is the down side for EL2 . (The unit is up-side-down.)
EL3 Side 3 is the right side when facing the input with the unit in a normal position (EL1). Side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

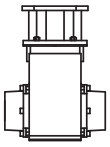
Mounting Positions – Long Life 5 Year Warranty

Mounting Position MUST BE SPECIFIED.

Standard Oil: Synthetic Oil (Mobil SHC630)







E12 **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: ***us.stober.com/lubrication-quantity/index.html***.

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 5000 Hours
Wet Operating Conditions – after 2000 Hours.

K1 – K4

K5 – K10

Style AN Hollow Output Foot Mount | Style VN Solid Output Foot Mount | Style AF Hollow Output Flange Mou | Style VF Solid Output | Style AG Hollow Output | Style VG Solid Output | Style WG Bushing

"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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
435 RPM Output (Approximate)								**360 RPM**		**290 RPM**	
2.08	291	KL202_0040	ML2R	050	–	4.000	225	1.84	310	1.49	313
2.61	364	K102_0040	MR140/	050	AW140/010	4.000	402	2.16	364	1.73	364
2.61	364	K202_0040	MR140/	050	AW140/010	4.000	483	2.16	364	1.73	364
3.92*	548	K102_0040	MR160/	050, 140	AW160/012	4.000	402	3.42	577	2.74	577
7.00*	979	K202_0040	MR160/	050, 140	AW160/012	4.000	483	6.10	1,030	4.88	1,030
7.00*	979	K202_0040	MR200/	180	AW200/014	4.000	483	6.10	1,030	4.88	1,030
9.22*	1,289	K302_0040	MR160/	050, 140	AW160/012	4.000	563	7.64	1,289	6.11	1,289
9.22	1,289	K402_0040	MR160/	050, 140	AW160/012	4.000	901	7.64	1,289	6.11	1,289
12.26*	1,714	K302_0040	MR200/	180	AW200/014	4.000	563	10.69	1,805	8.55	1,805
18.39*	2,572	K402_0040	MR200/	180	AW200/014	4.000	901	16.04	2,708	12.84	2,708
18.39*	2,572	K402_0040	MR250/	180, 210	AW250/102	4.000	901	16.04	2,708	12.84	2,708
400 RPM Output (Approximate)								**330 RPM**		**265 RPM**	
2.61	397	K202_0044	MR140/	050	AW140/010	4.364	497	2.16	397	1.73	397
6.60*	1,008	K202_0044	MR160/	050, 140	AW160/012	4.364	497	5.76	1,061	4.61	1,061
6.60*	1,008	K202_0044	MR200/	180	AW200/014	4.364	497	5.76	1,061	4.61	1,061
9.22*	1,406	K302_0044	MR160/	050, 140	AW160/012	4.364	580	7.64	1,406	6.11	1,406
9.22	1,406	K402_0044	MR160/	050, 140	AW160/012	4.364	928	7.64	1,406	6.11	1,406
11.57*	1,765	K302_0044	MR200/	180	AW200/014	4.364	580	10.09	1,858	8.07	1,858
17.36*	2,648	K402_0044	MR200/	180	AW200/014	4.364	928	15.14	2,788	12.11	2,788
17.36*	2,648	K402_0044	MR250/	180, 210	AW250/102	4.364	928	15.14	2,788	12.11	2,788
340 RPM Output (Approximate)								**280 RPM**		**225 RPM**	
5.89*	1,067	K202_0052	MR160/	050, 140	AW160/012	5.177	526	5.14	1,123	4.11	1,123
5.89*	1,067	K202_0052	MR200/	180	AW200/014	5.177	526	5.14	1,123	4.11	1,123
325 RPM Output (Approximate)								**270 RPM**		**215 RPM**	
8.73*	1,640	K302_0054	MR160/	050, 140	AW160/012	5.375	621	7.64	1,732	6.11	1,732
9.22	1,747	K402_0054	MR160/	050, 140	AW160/012	5.422	997	7.64	1,747	6.11	1,747
10.07*	1,892	K302_0054	MR200/	180	AW200/014	5.375	621	8.78	1,991	7.02	1,991
15.02*	2,847	K402_0054	MR200/	180	AW200/014	5.422	997	13.10	2,997	10.48	2,997
15.02*	2,847	K402_0054	MR250/	180, 210	AW250/102	5.422	997	13.10	2,997	10.48	2,997
315 RPM Output (Approximate)								**260 RPM**		**210 RPM**	
2.61	507	K102_0056	MR140/	050	AW140/010	5.568	449	2.16	507	1.73	507
3.14*	612	K102_0056	MR160/	050, 140	AW160/012	5.568	449	2.74	644	2.19	644
290 RPM Output (Approximate)								**240 RPM**		**195 RPM**	
2.61	546	K102_0060	MR140/	050	AW140/010	6.000	460	2.16	546	1.73	546
2.61	546	K202_0060	MR140/	050	AW140/010	6.000	553	2.16	546	1.73	546
2.99*	627	K102_0060	MR160/	050, 140	AW160/012	6.000	460	2.61	661	2.09	661
5.34	1,120	K202_0060	MR160/	050, 140	AW160/012	6.000	553	4.66	1,180	3.73	1,180
5.34	1,120	K202_0060	MR200/	180	AW200/014	6.000	553	4.66	1,180	3.73	1,180
9.22*	1,933	K302_0060	MR160/	050, 140	AW160/012	6.000	645	7.64	1,933	6.11	1,933
9.22	1,933	K402_0060	MR160/	050, 140	AW160/012	6.000	1,031	7.64	1,933	6.11	1,933
9.36*	1,962	K302_0060	MR200/	180	AW200/014	6.000	645	8.16	2,066	6.53	2,066
14.04*	2,945	K402_0060	MR200/	180	AW200/014	6.000	1,031	12.24	3,100	9.80	3,100
14.04*	2,945	K402_0060	MR250/	180, 210	AW250/102	6.000	1,031	12.24	3,100	9.80	3,100
260 RPM Output (Approximate) Continued Next Page								**215 RPM**		**175 RPM**	
2.61	605	K102_0066	MR140/	050	AW140/010	6.644	476	2.16	605	1.73	605
2.61	609	K202_0067	MR140/	050	AW140/010	6.683	573	2.16	609	1.73	609

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
260 RPM Output (Approximate) Continued								**215 RPM**		**175 RPM**	
2.80	649	K102_0066	MR160/	050, 140	AW160/012	6.644	476	2.44	683	1.95	683
4.97	1,161	K202_0067	MR160/	050, 140	AW160/012	6.683	573	4.34	1,223	3.47	1,223
4.97	1,161	K202_0067	MR200/	180	AW200/014	6.683	573	4.34	1,223	3.47	1,223
7.92*	1,865	K302_0067	MR160/	050, 140	AW160/012	6.740	670	6.98	1,986	6.02	2,139
8.66*	2,040	K302_0067	MR200/	180	AW200/014	6.740	670	7.55	2,148	6.04	2,148
8.73	2,050	K402_0067	MR160/	050, 140	AW160/012	6.719	1,071	7.64	2,165	6.11	2,165
13.02*	3,058	K402_0067	MR200/	180	AW200/014	6.719	1,071	11.35	3,219	9.08	3,219
13.02*	3,058	K402_0067	MR250/	180, 210	AW250/102	6.719	1,071	11.35	3,219	9.08	3,219
245 RPM Output (Approximate)								**200 RPM**		**160 RPM**	
4.77	1,186	K202_0071	MR160/	050, 140	AW160/012	7.118	585	4.16	1,249	3.33	1,249
4.77	1,186	K202_0071	MR200/	180	AW200/014	7.118	585	4.16	1,249	3.33	1,249
235 RPM Output (Approximate)								**195 RPM**		**155 RPM**	
8.14*	2,104	K302_0074	MR160/	050, 140	AW160/012	7.391	691	7.10	2,215	5.68	2,215
8.14*	2,104	K302_0074	MR200/	180	AW200/014	7.391	691	7.10	2,215	5.68	2,215
9.22	2,402	K402_0075	MR160/	050, 140	AW160/012	7.456	1,109	7.64	2,402	6.11	2,402
12.14	3,166	K402_0075	MR200/	180	AW200/014	7.456	1,109	10.59	3,333	8.47	3,333
12.14	3,166	K402_0075	MR250/	180, 210	AW250/102	7.456	1,109	10.59	3,333	8.47	3,333
21.97*	5,562	K513_0073	MR200/	180	AW200/014	7.347	1,325	19.38	5,921	16.10	6,150
23.08*	5,842	K513_0073	MR250/	180, 210	AW250/102	7.347	1,325	20.13	6,150	16.10	6,150
24.58*	6,201	K613_0073	MR200/	180	AW200/014	7.323	1,575	20.36	6,201	16.29	6,201
24.58	6,305	K813_0074	MR200/	180	AW200/014	7.445	2,870	20.36	6,305	16.29	6,305
24.58	6,405	K713_0076	MR200/	180	AW200/014	7.563	2,189	20.36	6,405	16.29	6,405
30.56*	7,712	K613_0073	MR250/	180, 210	AW250/102	7.323	1,575	26.66	8,118	21.33	8,118
30.56*	7,712	K613_0073	MR300/	180, 210, 250, 280	AW300/110	7.323	1,575	26.66	8,118	21.33	8,118
39.32	10,087	K813_0074	MR250/	180, 210	AW250/102	7.445	2,870	32.58	10,087	26.06	10,087
39.32*	10,247	K713_0076	MR250/	180, 210	AW250/102	7.563	2,189	32.58	10,247	26.06	10,247
48.95*	12,757	K713_0076	MR300/	180, 210, 250, 280	AW300/110	7.563	2,189	42.70	13,430	34.16	13,430
73.72*	18,914	K813_0074	MR300/	180, 210, 250, 280	AW300/110	7.445	2,870	61.09	18,914	48.87	18,914
220 RPM Output (Approximate)								**185 RPM**		**146 RPM**	
1.47	411	KL202_0080	ML2R	050	–	8.000	284	1.30	438	1.05	443
73.72*	20,156	K913_0079	MR300/	180, 210, 250, 280	AW300/110	7.934	6,570	61.09	20,156	48.87	20,156
105.20*	28,763	K913_0079	MR350/	320, 360	AW350/202	7.934	6,570	87.17	28,763	69.74	28,763
105.20*	28,795	K1013_0079	MR350/	320, 360	AW350/202	7.943	8,090	87.17	28,795	69.74	28,795
215 RPM Output (Approximate)								**180 RPM**		**143 RPM**	
21.56*	6,044	K513_0081	MR200/	180	AW200/014	8.134	1,371	18.81	6,363	15.05	6,363
21.56*	6,044	K513_0081	MR250/	180, 210	AW250/102	8.134	1,371	18.81	6,363	15.05	6,363
24.58*	6,865	K613_0081	MR200/	180	AW200/014	8.107	1,629	20.36	6,865	16.29	6,865
28.56*	7,978	K613_0081	MR250/	180, 210	AW250/102	8.107	1,629	24.91	8,398	19.93	8,398
28.56*	7,978	K613_0081	MR300/	180, 210, 250, 280	AW300/110	8.107	1,629	24.91	8,398	19.93	8,398
210 RPM Output (Approximate) Continued Next Page								**170 RPM**		**140 RPM**	
2.41	699	K102_0083	MR140/	050	AW140/010	8.309	513	2.10	736	1.68	736
2.41	699	K102_0083	MR160/	050, 140	AW160/012	8.309	513	2.10	736	1.68	736
2.61	765	K202_0084	MR140/	050	AW140/010	8.397	618	2.16	765	1.73	765
4.27	1,253	K202_0084	MR160/	050, 140	AW160/012	8.397	618	3.72	1,319	2.98	1,319
4.27	1,253	K202_0084	MR200/	180	AW200/014	8.397	618	3.72	1,319	2.98	1,319
6.87	2,029	K302_0084	MR160/	050, 140	AW160/012	8.444	722	6.06	2,160	5.20	2,315
7.45*	2,199	K302_0084	MR200/	180	AW200/014	8.444	722	6.50	2,315	5.20	2,315

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
210 RPM Output (Approximate) Continued								**170 RPM**		**140 RPM**	
7.70	2,256	K402_0084	MR160/	050, 140	AW160/012	8.377	1,153	6.80	2,402	5.86	2,588
11.24	3,291	K402_0084	MR200/	180	AW200/014	8.377	1,153	9.80	3,465	7.84	3,465
11.24	3,291	K402_0084	MR250/	180, 210	AW250/102	8.377	1,153	9.80	3,465	7.84	3,465
24.58	6,980	K813_0082	MR200/	180	AW200/014	8.243	2,969	20.36	6,980	16.29	6,980
39.32	11,169	K813_0082	MR250/	180, 210	AW250/102	8.243	2,969	32.58	11,169	26.06	11,169
39.32*	11,345	K713_0084	MR250/	180, 210	AW250/102	8.373	2,264	32.58	11,345	26.06	11,345
45.74*	13,197	K713_0084	MR300/	180, 210, 250, 280	AW300/110	8.373	2,264	39.90	13,893	31.92	13,893
73.72*	20,941	K813_0082	MR300/	180, 210, 250, 280	AW300/110	8.243	2,969	61.09	20,941	48.87	20,941
190 RPM Output (Approximate)								**155 RPM**		**125 RPM**	
2.24	725	K102_0092	MR140/	050	AW140/010	9.249	532	1.96	763	1.56	763
2.24	725	K102_0092	MR160/	050, 140	AW160/012	9.249	532	1.96	763	1.56	763
2.61	837	K202_0092	MR140/	050	AW140/010	9.190	637	2.16	837	1.73	837
4.02	1,292	K202_0092	MR160/	050, 140	AW160/012	9.190	637	3.51	1,360	2.81	1,360
4.02	1,292	K202_0092	MR200/	180	AW200/014	9.190	637	3.51	1,360	2.81	1,360
7.00	2,268	K302_0093	MR160/	050, 140	AW160/012	9.267	745	6.11	2,388	4.89	2,388
7.00	2,268	K302_0093	MR200/	180	AW200/014	9.267	745	6.11	2,388	4.89	2,388
8.73	2,819	K402_0092	MR160/	050, 140	AW160/012	9.238	1,191	7.64	2,977	6.11	2,977
10.53	3,400	K402_0092	MR200/	180	AW200/014	9.238	1,191	9.18	3,580	7.35	3,580
10.53	3,400	K402_0092	MR250/	180, 210	AW250/102	9.238	1,191	9.18	3,580	7.35	3,580
19.60*	6,190	K513_0092	MR200/	180	AW200/014	9.168	1,427	17.29	6,591	13.89	6,622
19.91*	6,290	K513_0092	MR250/	180, 210	AW250/102	9.168	1,427	17.37	6,622	13.89	6,622
22.41*	7,013	K613_0091	MR200/	180	AW200/014	9.081	1,692	19.77	7,466	16.29	7,690
24.58	7,781	K713_0092	MR200/	180	AW200/014	9.188	2,335	20.36	7,781	16.29	7,781
24.58	7,862	K813_0093	MR200/	180	AW200/014	9.284	3,089	20.36	7,862	16.29	7,862
26.48*	8,285	K613_0091	MR250/	180, 210	AW250/102	9.081	1,692	23.10	8,722	18.48	8,722
26.48*	8,285	K613_0091	MR300/	180, 210, 250, 280	AW300/110	9.081	1,692	23.10	8,722	18.48	8,722
39.32*	12,449	K713_0092	MR250/	180, 210	AW250/102	9.188	2,335	32.58	12,449	26.06	12,449
39.32	12,579	K813_0093	MR250/	180, 210	AW250/102	9.284	3,089	32.58	12,579	26.06	12,579
42.99*	13,612	K713_0092	MR300/	180, 210, 250, 280	AW300/110	9.188	2,335	37.50	14,330	30.00	14,330
73.72*	23,586	K813_0093	MR300/	180, 210, 250, 280	AW300/110	9.284	3,089	61.09	23,586	48.87	23,586
170 RPM Output (Approximate) Continued Next Page								**140 RPM**		**115 RPM**	
2.11	747	K102_0100	MR140/	050	AW140/010	10.140	548	1.84	787	1.47	787
2.11	747	K102_0100	MR160/	050, 140	AW160/012	10.140	548	1.84	787	1.47	787
2.61	917	K202_0100	MR140/	050	AW140/010	10.073	657	2.16	917	1.73	917
3.78	1,332	K202_0100	MR160/	050, 140	AW160/012	10.073	657	3.30	1,402	2.64	1,402
3.78	1,332	K202_0100	MR200/	180	AW200/014	10.073	657	3.30	1,402	2.64	1,402
5.98	2,117	K302_0100	MR160/	050, 140	AW160/012	10.135	768	5.27	2,254	4.54	2,428
6.60	2,337	K302_0100	MR200/	180	AW200/014	10.135	768	5.75	2,460	4.60	2,460
6.66	2,351	K402_0100	MR160/	050, 140	AW160/012	10.098	1,227	5.87	2,503	5.06	2,696
9.92	3,503	K402_0100	MR200/	180	AW200/014	10.098	1,227	8.65	3,687	6.92	3,687
9.92	3,503	K402_0100	MR250/	180, 210	AW250/102	10.098	1,227	8.65	3,687	6.92	3,687
18.60*	6,507	K513_0100	MR200/	180	AW200/014	10.150	1,476	16.23	6,850	12.98	6,850
18.60*	6,507	K513_0100	MR250/	180, 210	AW250/102	10.150	1,476	16.23	6,850	12.98	6,850
22.41*	7,764	K613_0100	MR200/	180	AW200/014	10.054	1,750	19.77	8,266	16.29	8,514
24.58	8,614	K713_0100	MR200/	180	AW200/014	10.172	2,416	20.36	8,614	16.29	8,614
24.58	8,705	K813_0105	MR200/	180	AW200/014	10.279	3,196	20.36	8,705	16.29	8,705
24.74*	8,571	K613_0100	MR250/	180, 210	AW250/102	10.054	1,750	21.58	9,023	17.26	9,023
24.74*	8,571	K613_0100	MR300/	180, 210, 250, 280	AW300/110	10.054	1,750	21.58	9,023	17.26	9,023
39.32*	13,782	K713_0100	MR250/	180, 210	AW250/102	10.172	2,416	32.58	13,782	26.06	13,782

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

"K" Series

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
170 RPM Output (Approximate) Continued								**140 RPM**		**115 RPM**	
39.32	13,927	K813_0105	MR250/	180, 210	AW250/102	10.279	3,196	32.58	13,927	26.06	13,927
40.17*	14,082	K713_0100	MR300/	180, 210, 250, 280	AW300/110	10.172	2,416	35.04	14,824	28.03	14,824
69.06*	24,461	K813_0105	MR300/	180, 210, 250, 280	AW300/110	10.279	3,196	60.24	25,750	48.19	25,750
73.72*	25,702	K913_0100	MR300/	180, 210, 250, 280	AW300/110	10.117	7,125	61.09	25,702	48.87	25,702
105.20*	36,202	K1013_0100	MR350/	320, 360	AW350/202	9.986	8,731	87.17	36,202	69.74	36,202
105.20*	36,677	K913_0100	MR350/	320, 360	AW350/202	10.117	7,125	87.17	36,677	69.74	36,677
150 RPM Output (Approximate)								**125 RPM**		**100 RPM**	
1.93	781	K102_0115	MR140/	050	AW140/010	11.565	573	1.68	822	1.35	822
1.93	781	K102_0115	MR160/	050, 140	AW160/012	11.565	573	1.68	822	1.35	822
2.61	1,052	K202_0115	MR140/	050	AW140/010	11.546	687	2.16	1,052	1.73	1,052
3.45	1,394	K202_0115	MR160/	050, 140	AW160/012	11.546	687	3.01	1,467	2.41	1,467
3.45	1,394	K202_0115	MR200/	180	AW200/014	11.546	687	3.01	1,467	2.41	1,467
6.02	2,445	K302_0115	MR160/	050, 140	AW160/012	11.610	803	5.25	2,574	4.20	2,574
6.02	2,445	K302_0115	MR200/	180	AW200/014	11.610	803	5.25	2,574	4.20	2,574
7.70	3,102	K402_0115	MR160/	050, 140	AW160/012	11.518	1,282	6.80	3,303	5.86	3,558
9.09	3,660	K402_0115	MR200/	180	AW200/014	11.518	1,282	7.93	3,853	6.34	3,853
9.09	3,660	K402_0115	MR250/	180, 210	AW250/102	11.518	1,282	7.93	3,853	6.34	3,853
17.04*	6,791	K513_0115	MR200/	180	AW200/014	11.569	1,542	14.87	7,155	11.90	7,155
17.05*	6,797	K513_0115	MR250/	180, 210	AW250/102	11.569	1,542	14.87	7,155	11.90	7,155
19.60	7,702	K613_0115	MR200/	180	AW200/014	11.407	1,825	17.29	8,200	14.90	8,834
21.48	8,721	K713_0120	MR200/	180	AW200/014	11.781	2,537	18.95	9,285	16.29	9,976
22.74*	8,939	K613_0115	MR250/	180, 210	AW250/102	11.407	1,825	19.84	9,411	15.87	9,411
22.74*	8,939	K613_0115	MR300/	180, 210, 250, 280	AW300/110	11.407	1,825	19.84	9,411	15.87	9,411
24.58	10,082	K813_0120	MR200/	180	AW200/014	11.906	3,356	20.36	10,082	16.29	10,082
36.43*	14,788	K713_0120	MR250/	180, 210	AW250/102	11.781	2,537	31.77	15,568	25.42	15,568
36.43*	14,788	K713_0120	MR300/	180, 210, 250, 280	AW300/110	11.781	2,537	31.77	15,568	25.42	15,568
39.32	16,132	K813_0120	MR250/	180, 210	AW250/102	11.906	3,356	32.58	16,132	26.06	16,132
62.61*	25,688	K813_0120	MR300/	180, 210, 250, 280	AW300/110	11.906	3,356	54.62	27,043	43.69	27,043
140 RPM Output (Approximate)								**115 RPM**		**90 RPM**	
1.82	804	K102_0125	MR140/	050	AW140/010	12.618	590	1.59	846	1.27	846
1.82	804	K102_0125	MR160/	050, 140	AW160/012	12.618	590	1.59	846	1.27	846
2.61	1,145	K302_0125	MR140/	050	AW140/010	12.577	825	2.16	1,145	1.73	1,145
2.61	1,157	K202_0125	MR140/	050	AW140/010	12.705	710	2.16	1,157	1.73	1,157
3.24	1,439	K202_0125	MR160/	050, 140	AW160/012	12.705	710	2.83	1,515	2.26	1,515
3.24	1,439	K202_0125	MR200/	180	AW200/014	12.705	710	2.83	1,515	2.26	1,515
5.12	2,251	K302_0125	MR160/	050, 140	AW160/012	12.577	825	4.52	2,397	3.89	2,582
5.71	2,511	K302_0125	MR200/	180	AW200/014	12.577	825	4.98	2,644	3.99	2,644
5.86	2,594	K402_0125	MR160/	050, 140	AW160/012	12.658	1,323	5.17	2,762	4.46	2,975
8.53	3,777	K402_0125	MR200/	180	AW200/014	12.658	1,323	7.44	3,976	5.96	3,976
8.53	3,777	K402_0125	MR250/	180, 210	AW250/102	12.658	1,323	7.44	3,976	5.96	3,976
15.93*	7,032	K513_0130	MR200/	180	AW200/014	12.808	1,595	13.90	7,402	11.12	7,402
15.93*	7,032	K513_0130	MR250/	180, 210	AW250/102	12.808	1,595	13.90	7,402	11.12	7,402
19.60	8,527	K613_0125	MR200/	180	AW200/014	12.629	1,888	17.29	9,079	14.83	9,736
21.25*	9,248	K613_0125	MR250/	180, 210	AW250/102	12.629	1,888	18.54	9,736	14.83	9,736
21.25*	9,248	K613_0125	MR300/	180, 210, 250, 280	AW300/110	12.629	1,888	18.54	9,736	14.83	9,736
73.72*	31,819	K913_0125	MR300/	180, 210, 250, 280	AW300/110	12.525	7,650	61.09	31,819	48.87	31,819
105.20*	45,247	K1013_0125	MR350/	320, 360	AW350/202	12.481	9,405	87.17	45,247	69.74	45,247
105.20*	45,406	K913_0125	MR350/	320, 360	AW350/202	12.525	7,650	87.17	45,406	69.74	45,406

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
125 RPM Output (Approximate)								**105 RPM**		**85 RPM**	
1.69	835	K102_0140	MR140/	050	AW140/010	14.114	612	1.48	879	1.18	879
1.69	835	K102_0140	MR160/	050, 140	AW160/012	14.114	612	1.48	879	1.18	879
2.61	1,262	K202_0140	MR140/	050	AW140/010	13.851	730	2.16	1,262	1.73	1,262
3.06	1,481	K202_0140	MR160/	050, 140	AW160/012	13.851	730	2.67	1,559	2.13	1,559
3.06	1,481	K202_0140	MR200/	180	AW200/014	13.851	730	2.67	1,559	2.13	1,559
5.33	2,599	K302_0140	MR160/	050, 140	AW160/012	13.935	854	4.65	2,736	3.72	2,736
5.33	2,599	K302_0140	MR200/	180	AW200/014	13.935	854	4.65	2,736	3.72	2,736
6.66	3,232	K402_0140	MR160/	050, 140	AW160/012	13.885	1,364	5.87	3,441	5.06	3,707
8.02	3,895	K402_0140	MR200/	180	AW200/014	13.885	1,364	7.00	4,100	5.60	4,100
8.02	3,895	K402_0140	MR250/	180, 210	AW250/102	13.885	1,364	7.00	4,100	5.60	4,100
21.48	9,655	K713_0130	MR200/	180	AW200/014	13.043	2,625	18.95	10,279	16.29	11,045
24.58	11,163	K813_0130	MR200/	180	AW200/014	13.182	3,472	20.36	11,163	16.29	11,163
34.04*	15,299	K713_0130	MR250/	180, 210	AW250/102	13.043	2,625	29.69	16,105	23.75	16,105
34.04*	15,299	K713_0130	MR300/	180, 210, 250, 280	AW300/110	13.043	2,625	29.69	16,105	23.75	16,105
39.32	17,861	K813_0130	MR250/	180, 210	AW250/102	13.182	3,472	32.58	17,861	26.06	17,861
58.50*	26,575	K813_0130	MR300/	180, 210, 250, 280	AW300/110	13.182	3,472	51.03	27,976	40.82	27,976
120 RPM Output (Approximate)								**100 RPM**		**80 RPM**	
8.46	4,235	K513_0145	MR160/	050, 140	AW160/012	14.536	1,664	7.46	4,509	6.11	4,616
14.64	7,335	K513_0145	MR200/	180	AW200/014	14.536	1,664	12.77	7,721	10.22	7,721
14.64	7,335	K513_0145	MR250/	180, 210	AW250/102	14.536	1,664	12.77	7,721	10.22	7,721
17.24	8,512	K613_0145	MR200/	180	AW200/014	14.332	1,970	15.21	9,063	13.10	9,763
18.92	9,650	K713_0150	MR200/	180	AW200/014	14.802	2,738	16.69	10,274	14.38	11,068
19.53	9,646	K613_0145	MR250/	180, 210	AW250/102	14.332	1,970	17.04	10,155	13.63	10,155
19.53	9,646	K613_0145	MR300/	180, 210, 250, 280	AW300/110	14.332	1,970	17.04	10,155	13.63	10,155
22.11	11,309	K813_0150	MR200/	180	AW200/014	14.842	3,612	19.51	12,041	16.29	12,569
31.29*	15,957	K713_0150	MR250/	180, 210	AW250/102	14.802	2,738	27.29	16,799	21.83	16,799
31.29*	15,957	K713_0150	MR300/	180, 210, 250, 280	AW300/110	14.802	2,738	27.29	16,799	21.83	16,799
39.12	20,007	K813_0150	MR250/	180, 210	AW250/102	14.842	3,612	32.58	20,110	26.06	20,110
54.06*	27,647	K813_0150	MR300/	180, 210, 250, 280	AW300/110	14.842	3,612	47.15	29,105	37.72	29,105
110 RPM Output (Approximate)								**90 RPM**		**75 RPM**	
.79	443	KL202_0160	ML2R	050	–	16.000	358	.66	443	.52	443
8.46	4,689	K513_0160	MR160/	050, 140	AW160/012	16.093	1,721	7.46	4,992	6.11	5,11
13.68	7,588	K513_0160	MR200/	180	AW200/014	16.093	1,721	11.91	7,972	9.53	7,972
13.68	7,588	K513_0160	MR250/	180, 210	AW250/102	16.093	1,721	11.91	7,972	9.53	7,972
17.24	9,425	K613_0160	MR200/	180	AW200/014	15.868	2,038	15.21	10,034	12.74	10,505
18.25	9,979	K613_0160	MR250/	180, 210	AW250/102	15.868	2,038	15.92	10,505	12.74	10,505
18.25	9,979	K613_0160	MR300/	180, 210, 250, 280	AW300/110	15.868	2,038	15.92	10,505	12.74	10,505
73.72*	40,419	K913_0160	MR300/	180, 210, 250, 280	AW300/110	15.910	8,285	61.09	40,419	48.87	40,419
93.68*	51,358	K913_0160	MR350/	320, 360	AW350/202	15.910	8,285	81.71	54,065	65.37	54,065
105.20*	57,555	K1013_0160	MR350/	320, 360	AW350/202	15.876	10,190	87.17	57,555	69.74	57,555
105 RPM Output (Approximate) Continued Next Page								**85 RPM**		**70 RPM**	
1.51	883	K102_0165	MR140/	050	AW140/010	16.714	648	1.32	929	1.05	929
1.51	883	K102_0165	MR160/	050, 140	AW160/012	16.714	648	1.32	929	1.05	929
2.44	1,439	K202_0170	MR140/	050	AW140/010	16.858	780	2.15	1,532	1.73	1,535
2.61	1,543	K302_0170	MR140/	050	AW140/010	16.939	911	2.16	1,543	1.73	1,543
2.68	1,581	K202_0170	MR160/	050, 140	AW160/012	16.858	780	2.34	1,664	1.87	1,664
2.68	1,581	K202_0170	MR200/	180	AW200/014	16.858	780	2.34	1,664	1.87	1,664

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
105 RPM Output (Approximate) Continued								**85 RPM**		**70 RPM**	
4.03	2,389	K302_0170	MR160/	050, 140	AW160/012	16.939	911	3.56	2,544	3.07	2,740
4.65	2,753	K402_0170	MR160/	050, 140	AW160/012	16.939	1,458	4.10	2,931	3.53	3,158
4.68	2,774	K302_0170	MR200/	180	AW200/014	16.939	911	4.09	2,920	3.27	2,920
7.03	4,162	K402_0170	MR200/	180	AW200/014	16.939	1,458	6.13	4,381	4.90	4,381
7.03	4,162	K402_0170	MR250/	180, 210	AW250/102	16.939	1,458	6.13	4,381	4.90	4,381
8.68	5,129	K613_0170	MR160/	050, 140	AW160/012	17.156	2,091	7.64	5,448	6.11	5,448
15.25	9,014	K613_0170	MR200/	180	AW200/014	17.156	2,091	13.45	9,597	11.59	10,339
17.32	10,242	K613_0170	MR250/	180, 210	AW250/102	17.156	2,091	15.11	10,782	12.09	10,782
17.32	10,242	K613_0170	MR300/	180, 210, 250, 280	AW300/110	17.156	2,091	15.11	10,782	12.09	10,782
18.92	10,684	K713_0165	MR200/	180	AW200/014	16.388	2,832	16.69	11,375	14.38	12,253
22.11	12,521	K813_0165	MR200/	180	AW200/014	16.432	3,737	19.51	13,331	16.29	13,915
29.23	16,508	K713_0165	MR250/	180, 210	AW250/102	16.388	2,832	25.50	17,379	20.40	17,379
29.23	16,508	K713_0165	MR300/	180, 210, 250, 280	AW300/110	16.388	2,832	25.50	17,379	20.40	17,379
39.12	22,151	K813_0165	MR250/	180, 210	AW250/102	16.432	3,737	32.58	22,264	26.06	22,264
50.51*	28,601	K813_0165	MR300/	180, 210, 250, 280	AW300/110	16.432	3,737	44.06	30,109	35.25	30,109
100 RPM Output (Approximate)								**82 RPM**		**65 RPM**	
1.46	898	K102_0175	MR140/	050	AW140/010	17.563	659	1.28	945	1.02	945
1.46	898	K102_0175	MR160/	050, 140	AW160/012	17.563	659	1.28	945	1.02	945
2.61	1,575	K302_0175	MR140/	050	AW140/010	17.293	917	2.16	1,575	1.73	1,575
2.61	1,591	K202_0175	MR140/	050	AW140/010	17.469	789	2.16	1,591	1.73	1,591
2.62	1,600	K202_0175	MR160/	050, 140	AW160/012	17.469	789	2.29	1,684	1.83	1,684
2.62	1,600	K202_0175	MR200/	180	AW200/014	17.469	789	2.29	1,684	1.83	1,684
4.62	2,793	K302_0175	MR160/	050, 140	AW160/012	17.293	917	4.03	2,940	3.22	2,940
4.62	2,793	K302_0175	MR200/	180	AW200/014	17.293	917	4.03	2,940	3.22	2,940
5.86	3,567	K402_0175	MR160/	050, 140	AW160/012	17.405	1,471	5.17	3,798	4.46	4,091
6.90	4,200	K402_0175	MR200/	180	AW200/014	17.405	1,471	6.02	4,421	4.82	4,421
6.90	4,200	K402_0175	MR250/	180, 210	AW250/102	17.405	1,471	6.02	4,421	4.82	4,421
7.57	4,556	K513_0175	MR160/	050, 140	AW160/012	17.481	1,769	6.67	4,851	5.75	5,226
12.95	7,800	K513_0175	MR200/	180	AW200/014	17.481	1,769	10.97	7,972	8.77	7,972
12.95	7,800	K513_0175	MR250/	180, 210	AW250/102	17.481	1,769	10.97	7,972	8.77	7,972
19.85	11,851	K813_0175	MR200/	180	AW200/014	17.327	3,803	17.51	12,618	15.09	13,593
35.15	20,990	K813_0175	MR250/	180, 210	AW250/102	17.327	3,803	31.01	22,347	26.06	23,477
48.76*	29,111	K813_0175	MR300/	180, 210, 250, 280	AW300/110	17.327	3,803	42.53	30,646	34.02	30,646
95 RPM Output (Approximate)								**79 RPM**		**63 RPM**	
15.67	9,865	K713_0185	MR200/	180	AW200/014	18.275	2,937	13.82	10,504	11.91	11,315
27.18	17,119	K713_0185	MR250/	180, 210	AW250/102	18.275	2,937	23.71	18,022	18.97	18,022
27.18	17,119	K713_0185	MR300/	180, 210, 250, 280	AW300/110	18.275	2,937	23.71	18,022	18.97	18,022
90 RPM Output (Approximate) Continued Next Page								**75 RPM**		**60 RPM**	
7.57	5,044	K513_0195	MR160/	050, 140	AW160/012	19.353	1,830	6.67	5,371	5.75	5,786
8.68	5,679	K613_0190	MR160/	050, 140	AW160/012	18.994	2,164	7.64	6,032	6.11	6,032
11.95	7,972	K513_0195	MR200/	180	AW200/014	19.353	1,830	9.91	7,972	7.92	7,972
11.95	7,972	K513_0195	MR250/	180, 210	AW250/102	19.353	1,830	9.91	7,972	7.92	7,972
15.25	9,980	K613_0190	MR200/	180	AW200/014	18.994	2,164	13.45	10,626	11.30	11,154
16.19	10,596	K613_0190	MR250/	180, 210	AW250/102	18.994	2,164	14.12	11,154	11.30	11,154
16.19	10,596	K613_0190	MR300/	180, 210, 250, 280	AW300/110	18.994	2,164	14.12	11,154	11.30	11,154
19.85	13,121	K813_0190	MR200/	180	AW200/014	19.183	3,934	17.51	13,970	15.09	15,049
35.15	23,238	K813_0190	MR250/	180, 210	AW250/102	19.183	3,934	31.01	24,741	26.06	25,991

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
90 RPM Output (Approximate) Continued								**75 RPM**		**60 RPM**	
45.56*	30,115	K813_0190	MR300/	180, 210, 250, 280	AW300/110	19.183	3,934	39.74	31,703	31.79	31,703
73.72*	48,429	K913_0190	MR300/	180, 210, 250, 280	AW300/110	19.063	8,800	61.09	48,429	48.87	48,429
83.04*	54,548	K913_0190	MR350/	320, 360	AW350/202	19.063	8,800	72.43	57,424	57.95	57,424
105.20*	67,977	K1013_0190	MR350/	320, 360	AW350/202	18.751	10,772	87.17	67,977	69.74	67,977
85 RPM Output (Approximate)								**70 RPM**		**55 RPM**	
1.33	940	K102_0200	MR140/	050	AW140/010	20.150	690	1.15	974	0.92	974
1.33	940	K102_0200	MR160/	050, 140	AW160/012	20.150	690	1.15	974	0.92	974
2.07	1,471	K202_0200	MR140/	050	AW140/010	20.327	830	1.83	1,566	1.57	1,687
2.32	1,643	K302_0200	MR140/	050	AW140/010	20.278	967	2.05	1,750	1.73	1,847
2.37	1,683	K202_0200	MR160/	050, 140	AW160/012	20.327	830	2.07	1,772	1.65	1,772
2.37	1,683	K202_0200	MR200/	180	AW200/014	20.327	830	2.07	1,772	1.65	1,772
3.56	2,526	K302_0200	MR160/	050, 140	AW160/012	20.278	967	3.14	2,690	2.71	2,898
4.03	2,849	K402_0200	MR160/	050, 140	AW160/012	20.197	1,546	3.56	3,033	3.07	3,267
4.15	2,945	K302_0200	MR200/	180	AW200/014	20.278	967	3.62	3,100	2.90	3,100
6.25	4,413	K402_0200	MR200/	180	AW200/014	20.197	1,546	5.45	4,646	4.36	4,646
6.25	4,413	K402_0200	MR250/	180, 210	AW250/102	20.197	1,546	5.45	4,646	4.36	4,646
15.67	10,922	K713_0200	MR200/	180	AW200/014	20.233	3,038	13.82	11,629	11.91	12,527
25.40	17,710	K713_0200	MR250/	180, 210	AW250/102	20.233	3,038	22.16	18,643	17.73	18,643
25.40	17,710	K713_0200	MR300/	180, 210, 250, 280	AW300/110	20.233	3,038	22.16	18,643	17.73	18,643
80 RPM Output (Approximate)								**65 RPM**		**53 RPM**	
6.36	4,817	K513_0220	MR160/	050, 140	AW160/012	21.992	1,910	5.61	5,129	4.83	5,525
7.39	5,518	K613_0220	MR160/	050, 140	AW160/012	21.684	2,261	6.52	5,875	5.61	6,328
10.52	7,972	K513_0220	MR200/	180	AW200/014	21.992	1,910	8.72	7,972	6.97	7,972
10.52	7,972	K513_0220	MR250/	180, 210	AW250/102	21.992	1,910	8.72	7,972	6.97	7,972
12.98	9,702	K613_0220	MR200/	180	AW200/014	21.684	2,261	11.45	10,329	9.87	11,127
14.82	11,074	K613_0220	MR250/	180, 210	AW250/102	21.684	2,261	12.93	11,658	10.34	11,658
14.82	11,074	K613_0220	MR300/	180, 210, 250, 280	AW300/110	21.684	2,261	12.93	11,658	10.34	11,658
75 RPM Output (Approximate)								**60 RPM**		**50 RPM**	
1.21	986	K102_0230	MR140/	050	AW140/010	23.265	723	1.06	1,038	0.85	1,038
1.21	986	K102_0230	MR160/	050, 140	AW160/012	23.265	723	1.06	1,038	0.85	1,038
2.17	1,758	K202_0230	MR140/	050	AW140/010	23.180	867	1.81	1,772	1.45	1,772
2.17	1,758	K202_0230	MR160/	050, 140	AW160/012	23.180	867	1.81	1,772	1.45	1,772
2.17	1,758	K202_0230	MR200/	180	AW200/014	23.180	867	1.81	1,772	1.45	1,772
2.61	2,121	K302_0230	MR140/	050	AW140/010	23.292	1,013	2.16	2,121	1.73	2,121
3.79	3,084	K302_0230	MR160/	050, 140	AW160/012	23.292	1,013	3.15	3,100	2.52	3,100
3.79	3,084	K302_0230	MR200/	180	AW200/014	23.292	1,013	3.15	3,100	2.52	3,100
4.65	3,786	K402_0230	MR160/	050, 140	AW160/012	23.292	1,621	4.10	4,031	3.53	4,342
5.68	4,628	K402_0230	MR200/	180	AW200/014	23.292	1,621	4.96	4,872	3.97	4,872
5.68	4,628	K402_0230	MR250/	180, 210	AW250/102	23.292	1,621	4.96	4,872	3.97	4,872
13.54	10,610	K713_0230	MR200/	180	AW200/014	22.739	3,159	11.94	11,296	10.29	12,168
15.67	12,440	K813_0230	MR200/	180	AW200/014	23.044	4,182	13.82	13,245	11.91	14,267
23.50	18,413	K713_0230	MR250/	180, 210	AW250/102	22.739	3,159	20.50	19,383	16.40	19,383
23.50	18,413	K713_0230	MR300/	180, 210, 250, 280	AW300/110	22.739	3,159	20.50	19,383	16.40	19,383
27.75	22,036	K813_0230	MR250/	180, 210	AW250/102	23.044	4,182	24.48	23,462	21.10	25,273
40.32*	32,014	K813_0230	MR300/	180, 210, 250, 280	AW300/110	23.044	4,182	35.17	33,702	28.13	33,702

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

"K" Series

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
73 RPM Output (Approximate)								**57 RPM**		**48 RPM**	
6.36	5,334	K513_0240	MR160/	050, 140	AW160/012	24.348	1,976	5.61	5,679	4.83	6,117
7.39	6,109	K613_0240	MR160/	050, 140	AW160/012	24.007	2,339	6.52	6,504	5.61	7,006
9.50	7,972	K513_0240	MR200/	180	AW200/014	24.348	1,976	7.87	7,972	6.30	7,972
9.50	7,972	K513_0240	MR250/	180, 210	AW250/102	24.348	1,976	7.87	7,972	6.30	7,972
12.98	10,741	K613_0240	MR200/	180	AW200/014	24.007	2,339	11.45	11,436	9.66	12,060
13.85	11,456	K613_0240	MR250/	180, 210	AW250/102	24.007	2,339	12.08	12,060	9.66	12,060
13.85	11,456	K613_0240	MR300/	180, 210, 250, 280	AW300/110	24.007	2,339	12.08	12,060	9.66	12,060
35.15	29,004	K913_0240	MR250/	180, 210	AW250/102	23.943	9,495	31.01	30,880	25.57	31,828
62.77*	51,785	K913_0240	MR300/	180, 210, 250, 280	AW300/110	23.943	9,495	55.37	55,135	47.72	59,393
71.33*	58,854	K913_0240	MR350/	320, 360	AW350/202	23.943	9,495	62.22	61,957	49.78	61,957
97.49*	79,931	K1013_0240	MR350/	320, 360	AW350/202	23.793	11,661	86.00	85,101	69.74	86,256
70 RPM Output (Approximate)								**55 RPM**		**45 RPM**	
0.96	851	K102_0250	MR140/	050	AW140/010	25.220	743	0.80	851	0.64	851
0.96	851	K102_0250	MR160/	050, 140	AW160/012	25.220	743	0.80	851	0.64	851
1.73	1,515	K202_0250	MR140/	050	AW140/010	25.130	891	1.52	1,613	1.31	1,738
1.89	1,670	K302_0250	MR140/	050	AW140/010	25.259	1,041	1.67	1,778	1.44	1,916
2.02	1,772	K202_0250	MR160/	050, 140	AW160/012	25.130	891	1.67	1,772	1.34	1,772
2.02	1,772	K202_0250	MR200/	180	AW200/014	25.130	891	1.67	1,772	1.34	1,772
2.91	2,566	K302_0250	MR160/	050, 140	AW160/012	25.259	1,041	2.56	2,732	2.21	2,943
3.34	2,956	K402_0250	MR160/	050, 140	AW160/012	25.279	1,666	2.95	3,147	2.54	3,390
3.48	3,070	K302_0250	MR200/	180	–	25.259	1,041	2.88	3,070	2.30	3,070
5.02	4,434	K402_0250	MR200/	180	AW200/014	25.279	1,666	4.16	4,434	3.33	4,434
5.02	4,434	K402_0250	MR250/	180, 210	AW250/102	25.279	1,666	4.16	4,434	3.33	4,434
13.54	11,746	K713_0250	MR200/	180	AW200/014	25.175	3,268	11.94	12,506	10.29	13,472
15.67	13,773	K813_0260	MR200/	180	AW200/014	25.513	4,327	13.82	14,664	11.91	15,796
21.96	19,048	K713_0250	MR250/	180, 210	AW250/102	25.175	3,268	19.15	20,052	15.32	20,052
21.96	19,048	K713_0250	MR300/	180, 210, 250, 280	AW300/110	25.175	3,268	19.15	20,052	15.32	20,052
27.75	24,397	K813_0260	MR250/	180, 210	AW250/102	25.513	4,327	24.48	25,976	21.10	27,981
37.67	33,118	K813_0260	MR300/	180, 210, 250, 280	AW300/110	25.513	4,327	32.86	34,865	26.29	34,865
60 RPM Output (Approximate) Continued Next Page								**50 RPM**		**40 RPM**	
1.07	1,049	K102_0280	MR140/	050	AW140/010	28.048	770	0.90	1,063	0.72	1,063
1.07	1,049	K102_0280	MR160/	050, 140	AW160/012	28.048	770	0.90	1,063	0.72	1,063
1.81	1,772	K202_0280	MR140/	050	AW140/010	27.950	923	1.50	1,772	1.20	1,772
1.81	1,772	K202_0280	MR160/	050, 140	AW160/012	27.950	923	1.50	1,772	1.20	1,772
1.81	1,772	K202_0280	MR200/	180	AW200/014	27.950	923	1.50	1,772	1.20	1,772
2.32	2,260	K302_0280	MR140/	050	AW140/010	27.883	1,076	2.05	2,406	1.73	2,540
3.18	3,100	K302_0280	MR160/	050, 140	AW160/012	27.883	1,076	2.64	3,100	2.11	3,100
3.18	3,100	K302_0280	MR200/	180	AW200/014	27.883	1,076	2.64	3,100	2.11	3,100
4.03	3,917	K402_0280	MR160/	050, 140	AW160/012	27.771	1,719	3.56	4,171	3.07	4,493
5.02	4,872	K402_0280	MR200/	180	AW200/014	27.771	1,719	4.16	4,872	3.33	4,872
5.02	4,872	K402_0280	MR250/	180, 210	AW250/102	27.771	1,719	4.16	4,872	3.33	4,872
5.11	5,136	K513_0290	MR160/	050, 140	AW160/012	29.181	2,099	4.51	5,468	3.88	5,891
5.97	5,923	K613_0290	MR160/	050, 140	AW160/012	28.772	2,485	5.27	6,306	4.54	6,793
7.93	7,972	K513_0290	MR200/	180	AW200/014	29.181	2,099	6.57	7,972	5.26	7,972
7.93	7,972	K513_0290	MR250/	180, 210	AW250/102	29.181	2,099	6.57	7,972	5.26	7,972
10.48	10,395	K613_0290	MR200/	180	AW200/014	28.772	2,485	9.25	11,067	7.97	11,921
11.33	11,434	K713_0290	MR200/	180	AW200/014	29.285	3,437	10.00	12,173	8.61	13,113
12.27	12,169	K613_0290	MR250/	180, 210	AW250/102	28.772	2,485	10.71	12,810	8.57	12,810

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
60 RPM Output (Approximate) Continued								**50 RPM**		**40 RPM**	
12.27	12,169	K613_0290	MR300/	180, 210, 250, 280	AW300/110	28.772	2,485	10.71	12,810	8.57	12,810
13.54	13,649	K813_0290	MR200/	180	AW200/014	29.254	4,529	11.94	14,532	10.29	15,655
19.85	20,033	K713_0290	MR250/	180, 210	AW250/102	29.285	3,437	17.32	21,089	13.85	21,089
19.85	20,033	K713_0290	MR300/	180, 210, 250, 280	AW300/110	29.285	3,437	17.32	21,089	13.85	21,089
23.91	24,103	K813_0290	MR250/	180, 210	AW250/102	29.254	4,529	21.09	25,662	18.18	27,644
34.39	34,664	K813_0290	MR300/	180, 210, 250, 280	AW300/110	29.254	4,529	29.99	36,492	24.00	36,492
55 RPM Output (Approximate)								**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	1,134	2.28	3,100	1.83	3,100
3.34	3,733	K403_0320	MR160/	050, 140	AW160/012	32.390	1,809	2.95	3,974	2.41	4,062
5.11	5,687	K513_0320	MR160/	050, 140	AW160/012	32.308	2,171	4.51	6,054	3.88	6,522
5.97	6,557	K613_0320	MR160/	050, 140	AW160/012	31.855	2,571	5.27	6,982	4.54	7,521
7.16	7,972	K513_0320	MR200/	180	AW200/014	32.308	2,171	5.93	7,972	4.75	7,972
7.16	7,972	K513_0320	MR250/	180, 210	AW250/102	32.308	2,171	5.93	7,972	4.75	7,972
10.48	11,508	K613_0320	MR200/	180	AW200/014	31.855	2,571	9.25	12,253	7.76	12,844
11.33	12,659	K713_0320	MR200/	180	AW200/014	32.423	3,555	10.00	13,478	8.61	14,519
11.47	12,589	K613_0320	MR250/	180, 210	AW250/102	31.855	2,571	9.70	12,844	7.76	12,844
11.47	12,589	K613_0320	MR300/	180, 210, 250, 280	AW300/110	31.855	2,571	9.70	12,844	7.76	12,844
13.54	15,112	K813_0320	MR200/	180	AW200/014	32.389	4,685	11.94	16,090	10.29	17,332
18.55	20,724	K713_0320	MR250/	180, 210	AW250/102	32.423	3,555	15.77	21,259	12.61	21,259
18.55	20,724	K713_0320	MR300/	180, 210, 250, 280	AW300/110	32.423	3,555	15.77	21,259	12.61	21,259
23.91	26,686	K813_0320	MR250/	180, 210	AW250/102	32.389	4,685	21.09	28,412	18.18	30,606
27.75	30,711	K913_0320	MR250/	180, 210	AW250/102	32.116	10,471	24.48	32,698	21.10	35,223
32.13	35,860	K813_0320	MR300/	180, 210, 250, 280	AW300/110	32.389	4,685	27.62	37,204	22.10	37,204
49.56	54,851	K913_0320	MR300/	180, 210, 250, 280	AW300/110	32.116	10,471	43.72	58,400	37.14	62,006
56.03*	62,006	K913_0320	MR350/	320, 360	AW350/202	32.116	10,471	46.42	62,006	37.14	62,006
58.79	63,887	K1013_0320	MR300/	180, 210, 250, 280	AW300/110	31.535	12,810	51.87	68,020	44.70	73,272
78.29*	85,073	K1013_0320	MR350/	320, 360	AW350/202	31.535	12,810	69.06	90,576	59.52	97,571
52 RPM Output (Approximate)								**43 RPM**		**35 RPM**	
0.55	647	K102_0340	MR140/	050	AW140/010	33.707	819	0.46	647	0.36	647
1.16	1,364	K202_0340	MR140/	050	AW140/010	33.618	981	0.96	1,364	0.77	1,364
1.16	1,364	K202_0340	MR160/	050, 140	AW160/012	33.618	981	0.96	1,364	0.77	1,364
1.48	1,734	K302_0340	MR140/	050	AW140/010	33.618	1,145	1.30	1,846	1.12	1,989
1.89	2,217	K302_0340	MR160/	050, 140	AW160/012	33.618	1,145	1.56	2,217	1.25	2,217
1.89	2,217	K302_0340	MR200/	180	AW200/014	33.618	1,145	1.56	2,217	1.25	2,217
2.62	3,084	K402_0340	MR160/	050, 140	AW160/012	33.678	1,833	2.31	3,283	1.94	3,445
2.93	3,445	K402_0340	MR200/	180	AW200/014	33.678	1,833	2.43	3,445	1.94	3,445
50 RPM Output (Approximate) Continued Next Page								**40 RPM**		**33 RPM**	
0.87	1,063	K102_0350	MR140/	050	AW140/010	35.105	830	0.72	1,063	0.57	1,063
0.87	1,063	K102_0350	MR160/	050, 140	AW160/012	35.105	830	0.72	1,063	0.57	1,063
1.47	1,772	K202_0350	MR140/	050	AW140/010	34.554	990	1.22	1,772	0.97	1,772
1.47	1,772	K202_0350	MR160/	050, 140	AW160/012	34.554	990	1.22	1,772	0.97	1,772
1.47	1,772	K202_0350	MR200/	180	AW200/014	34.554	990	1.22	1,772	0.97	1,772
1.89	2,297	K302_0350	MR140/	050	AW140/010	34.731	1,157	1.67	2,445	1.44	2,634
2.51	3,100	K303_0360	MR160/	050, 140	AW160/012	35.833	1,170	2.08	3,100	1.66	3,100
2.55	3,100	K302_0350	MR160/	050, 140	AW160/012	34.731	1,157	2.12	3,100	1.69	3,100
2.55	3,100	K302_0350	MR200/	180	AW200/014	34.731	1,157	2.12	3,100	1.69	3,100

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

"K" Series

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
50 RPM Output (Approximate) Continued								**40 RPM**		**33 RPM**	
3.34	4,065	K402_0350	MR160/	050, 140	AW160/012	34.758	1,852	2.95	4,327	2.54	4,662
3.34	4,117	K403_0360	MR160/	050, 140	AW160/012	35.721	1,869	2.95	4,383	2.41	4,480
4.01	4,872	K402_0350	MR200/	180	AW200/014	34.758	1,852	3.32	4,872	2.66	4,872
4.01	4,872	K402_0350	MR250/	180, 210	AW250/102	34.758	1,852	3.32	4,872	2.66	4,872
4.50	5,402	K513_0350	MR160/	050, 140	AW160/012	34.800	2,226	3.97	5,751	3.43	6,195
5.11	6,092	K613_0350	MR160/	050, 140	AW160/012	34.610	2,643	4.51	6,486	3.88	6,987
6.65	7,972	K513_0350	MR200/	180	AW200/014	34.800	2,226	5.51	7,972	4.41	7,972
6.65	7,972	K513_0350	MR250/	180, 210	AW250/102	34.800	2,226	5.51	7,972	4.41	7,972
8.95	10,673	K613_0350	MR200/	180	AW200/014	34.610	2,643	7.89	11,364	6.80	12,241
9.98	12,191	K713_0350	MR200/	180	AW200/014	35.438	3,662	8.81	12,980	7.59	13,982
10.77	12,844	K613_0350	MR250/	180, 210	AW250/102	34.610	2,643	8.92	12,844	7.14	12,844
10.77	12,844	K613_0350	MR300/	180, 210, 250, 280	AW300/110	34.610	2,643	8.92	12,844	7.14	12,844
11.33	14,109	K813_0360	MR200/	180	AW200/014	36.138	4,859	10.00	15,022	8.61	16,182
17.41	21,259	K713_0350	MR250/	180, 210	AW250/102	35.438	3,662	14.43	21,259	11.54	21,259
17.41	21,259	K713_0350	MR300/	180, 210, 250, 280	AW300/110	35.438	3,662	14.43	21,259	11.54	21,259
19.95	24,839	K813_0360	MR250/	180, 210	AW250/102	36.138	4,859	17.60	26,445	15.16	28,487
29.87	37,194	K813_0360	MR300/	180, 210, 250, 280	AW300/110	36.138	4,859	24.75	37,204	19.80	37,204
45 RPM Output (Approximate)								**38 RPM**		**30 RPM**	
1.30	1,772	K203_0390	MR140/	050	AW140/010	39.454	1,035	1.08	1,772	0.86	1,772
2.30	3,100	K303_0390	MR160/	050, 140	AW160/012	39.187	1,205	1.90	3,100	1.52	3,100
3.34	4,500	K403_0390	MR160/	050, 140	AW160/012	39.047	1,926	2.95	4,791	2.40	4,872
4.50	5,981	K513_0390	MR160/	050, 140	AW160/012	38.529	2,302	3.97	6,368	3.43	6,859
5.11	6,745	K613_0380	MR160/	050, 140	AW160/012	38.319	2,734	4.51	7,181	3.88	7,735
6.01	7,972	K513_0390	MR200/	180	AW200/014	38.529	2,302	4.98	7,972	3.98	7,972
6.01	7,972	K513_0390	MR250/	180, 210	AW250/102	38.529	2,302	4.98	7,972	3.98	7,972
8.95	11,817	K613_0380	MR200/	180	AW200/014	38.319	2,734	7.89	12,581	6.45	12,844
9.73	12,844	K613_0380	MR250/	180, 210	AW250/102	38.319	2,734	8.06	12,844	6.45	12,844
9.73	12,844	K613_0380	MR300/	180, 210, 250, 280	AW300/110	38.319	2,734	8.06	12,844	6.45	12,844
9.98	13,497	K713_0390	MR200/	180	AW200/014	39.234	3,789	8.81	14,370	7.59	15,480
15.73	21,259	K713_0390	MR250/	180, 210	AW250/102	39.234	3,789	13.03	21,259	10.42	21,259
15.73	21,259	K713_0390	MR300/	180, 210, 250, 280	AW300/110	39.234	3,789	13.03	21,259	10.42	21,259
24.72	32,411	K913_0380	MR250/	180, 210	AW250/102	38.042	11,079	21.81	34,508	18.80	37,172
43.99	57,666	K913_0380	MR300/	180, 210, 250, 280	AW300/110	38.042	11,079	38.81	61,396	31.35	62,006
47.30	62,006	K913_0380	MR350/	320, 360	AW350/202	38.042	11,079	39.19	62,006	31.35	62,006
50.44	67,096	K1013_0390	MR300/	180, 210, 250, 280	AW300/110	38.601	13,703	44.50	71,436	38.35	76,952
67.07*	89,219	K1013_0390	MR350/	320, 360	AW350/202	38.601	13,703	59.17	94,991	50.99	102,325
43 RPM Output (Approximate)								**36 RPM**		**29 RPM**	
0.38	541	K102_0400	MR140/	050	AW140/010	40.300	869	0.32	541	0.26	541
0.72	1,023	K202_0400	MR140/	050	AW140/010	40.394	1,043	0.60	1,023	0.48	1,023
1.20	1,705	K302_0410	MR140/	050	AW140/010	40.512	1,218	1.00	1,705	0.80	1,705
1.20	1,705	K302_0410	MR160/	050, 140	AW160/012	40.512	1,218	1.00	1,705	0.80	1,705
1.93	2,729	K402_0410	MR160/	050, 140	AW160/012	40.512	1,950	1.60	2,729	1.28	2,729
1.93	2,729	K402_0410	MR200/	180	AW200/014	40.512	1,950	1.60	2,729	1.28	2,729
11.33	15,621	K813_0400	MR200/	180	AW200/014	40.009	5,027	10.00	16,631	8.61	17,915
19.95	27,499	K813_0400	MR250/	180, 210	AW250/102	40.009	5,027	17.60	29,278	15.16	31,539
26.99	37,204	K813_0400	MR300/	180, 210, 250, 280	AW300/110	40.009	5,027	22.36	37,204	17.89	37,204

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
40 RPM Output (Approximate)								**32 RPM**		**26 RPM**	
0.55	900	K102_0470	MR140/	050	AW140/010	46.918	914	0.46	900	0.36	900
1.10	1,772	K202_0460	MR140/	050	AW140/010	46.225	1,091	0.91	1,772	0.73	1,772
1.10	1,772	K202_0460	MR160/	050, 140	AW160/012	46.225	1,091	0.91	1,772	0.73	1,772
1.14	1,772	K203_0450	MR140/	050	AW140/010	45.223	1,083	0.94	1,772	0.75	1,772
1.48	2,384	K302_0460	MR140/	050	AW140/010	46.225	1,273	1.30	2,538	1.12	2,735
1.89	3,048	K302_0460	MR160/	050, 140	AW160/012	46.225	1,273	1.56	3,048	1.25	3,048
1.89	3,048	K302_0460	MR200/	180	AW200/014	46.225	1,273	1.56	3,048	1.25	3,048
2.01	3,100	K303_0450	MR160/	050, 140	AW160/012	44.892	1,261	1.66	3,100	1.33	3,100
2.62	4,240	K402_0460	MR160/	050, 140	AW160/012	46.308	2,038	2.31	4,514	1.94	4,737
2.93	4,737	K402_0460	MR200/	180	AW200/014	46.308	2,038	2.43	4,737	1.94	4,737
3.17	4,872	K403_0450	MR160/	050, 140	AW160/012	44.536	2,012	2.63	4,872	2.10	4,872
3.74	5,603	K513_0440	MR160/	050, 140	AW160/012	43.500	2,397	3.30	5,965	2.84	6,426
4.22	6,261	K613_0430	MR160/	050, 140	AW160/012	43.111	2,843	3.72	6,666	3.20	7,181
5.32	7,972	K513_0440	MR200/	180	AW200/014	43.500	2,397	4.41	7,972	3.53	7,972
5.32	7,972	K513_0440	MR250/	180, 210	AW250/102	43.500	2,397	4.41	7,972	3.53	7,972
7.38	10,965	K613_0430	MR200/	180	AW200/014	43.111	2,843	6.51	11,675	5.61	12,576
8.00	12,417	K713_0450	MR200/	180	AW200/014	45.054	3,967	7.06	13,220	6.08	14,241
8.65	12,844	K613_0430	MR250/	180, 210	AW250/102	43.111	2,843	7.16	12,844	5.73	12,844
9.98	15,222	K813_0440	MR200/	180	AW200/014	44.250	5,199	8.81	16,207	7.59	17,459
13.69	21,259	K713_0450	MR250/	180, 210	AW250/102	45.054	3,967	11.35	21,259	9.08	21,259
13.69	21,259	K713_0450	MR300/	180, 210, 250, 280	AW300/110	45.054	3,967	11.35	21,259	9.08	21,259
17.49	26,663	K813_0440	MR250/	180, 210	AW250/102	44.250	5,199	15.43	28,388	13.29	30,580
24.40	37,204	K813_0440	MR300/	180, 210, 250, 280	AW300/110	44.250	5,199	20.22	37,204	16.17	37,204
35 RPM Output (Approximate)								**28 RPM**		**23 RPM**	
0.25	442	K102_0500	MR140/	050	AW140/010	50.310	935	0.21	442	0.17	442
0.48	853	K202_0500	MR140/	050	AW140/010	50.492	1,124	0.40	853	0.32	853
0.77	1,364	K302_0500	MR140/	050	AW140/010	50.492	1,311	0.64	1,364	0.51	1,364
1.03	1,772	K203_0500	MR140/	050	AW140/010	49.759	1,118	0.86	1,772	0.69	1,772
1.32	2,240	K303_0490	MR140/	050	AW140/010	49.260	1,300	1.09	2,240	0.87	2,240
1.35	2,387	K402_0500	MR160/	050, 140	AW160/012	50.427	2,097	1.12	2,387	0.90	2,387
1.85	3,100	K303_0491	MR160/	050, 140	AW160/012	48.631	1,295	1.53	3,100	1.23	3,100
2.89	4,872	K403_0490	MR160/	050, 140	AW160/012	48.944	2,076	2.39	4,872	1.92	4,872
3.74	6,203	K513_0480	MR160/	050, 140	AW160/012	48.161	2,480	3.30	6,605	2.84	7,114
4.22	6,932	K613_0480	MR160/	050, 140	AW160/012	47.730	2,941	3.72	7,381	3.20	7,951
4.80	7,972	K513_0480	MR200/	180	AW200/014	48.161	2,480	3.98	7,972	3.18	7,972
4.80	7,972	K513_0480	MR250/	180, 210	AW250/102	48.161	2,480	3.98	7,972	3.18	7,972
7.38	12,140	K613_0480	MR200/	180	AW200/014	47.730	2,941	6.47	12,844	5.18	12,844
7.81	12,844	K613_0480	MR250/	180, 210	AW250/102	47.730	2,941	6.47	12,844	5.18	12,844
8.00	13,747	K713_0500	MR200/	180	AW200/014	49.881	4,104	7.06	14,637	6.08	15,767
9.98	16,853	K813_0490	MR200/	180	AW200/014	48.991	5,378	8.81	17,943	7.59	19,329
12.37	21,259	K713_0500	MR250/	180, 210	AW250/102	49.881	4,104	10.25	21,259	8.20	21,259
12.37	21,259	K713_0500	MR300/	180, 210, 250, 280	AW300/110	49.881	4,104	10.25	21,259	8.20	21,259
17.49	29,520	K813_0490	MR250/	180, 210	AW250/102	48.991	5,378	15.43	31,429	13.29	33,856
19.95	33,636	K913_0490	MR250/	180, 210	AW250/102	48.937	12,050	17.60	35,811	15.16	38,577
22.04	37,204	K813_0490	MR300/	180, 210, 250, 280	AW300/110	48.991	5,378	18.26	37,204	14.61	37,204
35.44	59,756	K913_0490	MR300/	180, 210, 250, 280	AW300/110	48.937	12,050	30.47	62,006	24.37	62,006
41.49	69,403	K1013_0490	MR300/	180, 210, 250, 280	AW300/110	48.543	14,790	36.60	73,893	31.54	79,598
55.15	92,250	K1013_0490	MR350/	320, 360	AW350/202	48.543	14,790	48.65	98,218	41.93	105,802

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

"K" Series

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
30 RPM Output (Approximate)								**25 RPM**		**20 RPM**	
0.38	753	K102_0560	MR140/	050	AW140/010	56.095	970	0.32	753	0.26	753
0.72	1,407	K202_0560	MR140/	050	AW140/010	55.542	1,160	0.60	1,407	0.48	1,407
0.95	1,772	K203_0540	MR140/	050	AW140/010	54.250	1,151	0.79	1,772	0.63	1,772
1.20	2,345	K302_0560	MR140/	050	AW140/010	55.705	1,355	1.00	2,345	0.80	2,345
1.20	2,345	K302_0560	MR160/	050, 140	AW160/012	55.705	1,355	1.00	2,345	0.80	2,345
1.32	2,481	K303_0550	MR140/	050	AW140/010	54.579	1,346	1.09	2,481	0.87	2,481
1.67	3,100	K303_0540	MR160/	050, 140	AW160/012	53.883	1,340	1.38	3,100	1.11	3,100
1.93	3,752	K402_0560	MR160/	050, 140	AW160/012	55.705	2,168	1.60	3,752	1.28	3,752
2.63	4,872	K403_0540	MR160/	050, 140	AW160/012	53.690	2,141	2.18	4,872	1.75	4,872
2.84	5,699	K513_0580	MR160/	050, 140	AW160/012	58.297	2,643	2.50	6,068	2.16	6,536
3.36	6,658	K613_0580	MR160/	050, 140	AW160/012	57.545	3,131	2.96	7,089	2.55	7,636
3.97	7,972	K513_0580	MR200/	180	AW200/014	58.297	2,643	3.29	7,972	2.63	7,972
3.97	7,972	K513_0580	MR250/	180, 210	AW250/102	58.297	2,643	3.29	7,972	2.63	7,972
5.87	11,633	K613_0580	MR200/	180	AW200/014	57.545	3,131	5.18	12,386	4.29	12,844
6.42	12,949	K713_0590	MR200/	180	AW200/014	58.570	4,330	5.66	13,787	4.88	14,851
6.48	12,844	K613_0580	MR250/	180, 210	AW250/102	57.545	3,131	5.37	12,844	4.29	12,844
7.37	15,014	K813_0590	MR200/	180	AW200/014	59.082	5,724	6.51	15,985	5.61	17,219
10.53	21,259	K713_0590	MR250/	180, 210	AW250/102	58.570	4,330	8.73	21,259	6.98	21,259
10.53	21,259	K713_0590	MR300/	180, 210, 250, 280	AW300/110	58.570	4,330	8.73	21,259	6.98	21,259
13.00	26,457	K813_0590	MR250/	180, 210	AW250/102	59.082	5,724	11.46	28,168	9.88	30,343
18.27	37,204	K813_0590	MR300/	180, 210, 250, 280	AW300/110	59.082	5,724	15.14	37,204	12.11	37,204
27 RPM Output (Approximate)								**22 RPM**		**18 RPM**	
0.75	1,772	K203_0680	MR140/	050	AW140/010	68.419	1,244	0.62	1,772	0.50	1,772
0.78	1,772	K203_0660	MR140/	050	AW140/010	66.027	1,229	0.65	1,772	0.52	1,772
1.25	2,848	K303_0660	MR140/	050	AW140/010	66.346	1,436	1.09	2,999	0.87	2,999
1.32	3,016	K403_0660	MR140/	050	AW140/010	66.346	2,298	1.09	3,016	0.87	3,016
1.32	3,079	K303_0680	MR140/	050	AW140/010	67.733	1,446	1.09	3,079	0.87	3,079
1.32	3,099	K403_0680	MR140/	050	AW140/010	68.169	2,319	1.09	3,099	0.87	3,099
1.35	3,100	K303_0670	MR160/	050, 140	AW160/012	66.868	1,440	1.11	3,100	0.89	3,100
1.37	3,100	K303_0650	MR160/	050, 140	AW160/012	65.499	1,430	1.14	3,100	0.91	3,100
2.10	4,872	K403_0670	MR160/	050, 140	AW160/012	67.298	2,309	1.74	4,872	1.39	4,872
2.16	4,872	K403_0650	MR160/	050, 140	AW160/012	65.499	2,288	1.79	4,872	1.43	4,872
2.84	6,310	K513_0650	MR160/	050, 140	AW160/012	64.544	2,734	2.50	6,718	2.16	7,237
3.36	7,371	K613_0640	MR160/	050, 140	AW160/012	63.710	3,239	2.96	7,848	2.55	8,454
3.58	7,972	K513_0650	MR200/	180	AW200/014	64.544	2,734	2.97	7,972	2.38	7,972
3.58	7,972	K513_0650	MR250/	180, 210	AW250/102	64.544	2,734	2.97	7,972	2.38	7,972
5.85	12,844	K613_0640	MR200/	180	AW200/014	63.710	3,239	4.85	12,844	3.88	12,844
5.85	12,844	K613_0640	MR250/	180, 210	AW250/102	63.710	3,239	4.85	12,844	3.88	12,844
6.42	14,337	K713_0650	MR200/	180	AW200/014	64.846	4,480	5.66	15,264	4.88	16,443
7.37	16,622	K813_0650	MR200/	180	AW200/014	65.412	5,922	6.51	17,697	5.61	19,064
9.51	21,259	K713_0650	MR250/	180, 210	AW250/102	64.846	4,480	7.88	21,259	6.31	21,259
9.51	21,259	K713_0650	MR300/	180, 210, 250, 280	AW300/110	64.846	4,480	7.88	21,259	6.31	21,259
13.00	29,292	K813_0650	MR250/	180, 210	AW250/102	65.412	5,922	11.46	31,186	9.88	33,594
15.22	34,499	K814_0670	MR250/	180, 210	AW250/102	66.833	5,965	13.43	36,731	10.88	37,204
15.85	34,454	K913_0630	MR250/	180, 210	AW250/102	63.071	13,113	13.99	36,683	12.05	39,516
16.51	37,204	K813_0650	MR300/	180, 210, 250, 280	AW300/110	65.412	5,922	13.68	37,204	10.94	37,204
28.20	61,289	K913_0630	MR300/	180, 210, 250, 280	AW300/110	63.071	13,113	23.64	62,006	18.91	62,006
34.03	72,176	K1013_0620	MR300/	180, 210, 250, 280	AW300/110	61.553	16,009	30.02	76,846	25.87	82,780

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
25 RPM Output (Approximate)								**21 RPM**		**17 RPM**	
0.25	616	K102_0700	MR140/	050	AW140/010	70.029	1,045	0.21	616	0.17	616
0.48	1,172	K202_0690	MR140/	050	AW140/010	69.427	1,250	0.40	1,172	0.32	1,172
0.77	1,876	K302_0690	MR140/	050	AW140/010	69.427	1,458	0.64	1,876	0.51	1,876
1.35	3,283	K402_0690	MR160/	050, 140	AW160/012	69.338	2,332	1.12	3,283	0.90	3,283
2.43	5,877	K513_0700	MR160/	050, 140	AW160/012	70.083	2,810	2.15	6,257	1.85	6,740
2.84	6,723	K613_0690	MR160/	050, 140	AW160/012	68.772	3,322	2.50	7,158	2.16	7,711
3.01	7,268	K513_0700	MR200/	180	AW200/014	70.083	2,810	2.49	7,268	2.00	7,268
4.91	11,639	K613_0690	MR200/	180	AW200/014	68.772	3,322	4.07	11,639	3.26	11,639
4.91	11,639	K613_0690	MR250/	180, 210	AW250/102	68.772	3,322	4.07	11,639	3.26	11,639
5.47	13,414	K713_0710	MR200/	180	AW200/014	71.203	4,621	4.82	14,281	4.16	15,384
6.42	15,852	K813_0720	MR200/	180	AW200/014	71.701	6,106	5.66	16,878	4.88	18,181
7.84	19,244	K713_0710	MR250/	180, 210	AW250/102	71.203	4,621	6.50	19,244	5.20	19,244
11.26	27,814	K813_0720	MR250/	180, 210	AW250/102	71.701	6,106	9.93	29,613	8.56	31,900
12.93	31,935	K813_0720	MR300/	180, 210, 250, 280	AW300/110	71.701	6,106	10.71	31,935	8.57	31,935
23 RPM Output (Approximate)								**19 RPM**		**15 RPM**	
2.84	7,443	K613_0760	MR160/	050, 140	AW160/012	76.140	3,437	2.50	7,925	2.16	8,537
4.90	12,844	K613_0760	MR200/	180	AW200/014	76.140	3,437	4.06	12,844	3.25	12,844
4.90	12,844	K613_0760	MR250/	180, 210	AW250/102	76.140	3,437	4.06	12,844	3.25	12,844
14.04	36,283	K913_0750	MR250/	180, 210	AW250/102	75.004	13,893	12.38	38,630	10.67	41,613
14.82	37,204	K814_0740	MR250/	180, 210	AW250/102	73.993	6,170	12.28	37,204	9.83	37,204
23.56	60,903	K913_0750	MR300/	180, 210, 250, 280	AW300/110	75.004	13,893	19.53	60,903	15.62	60,903
28.20	73,149	K1013_0750	MR300/	180, 210, 250, 280	AW300/110	75.276	17,119	24.88	77,881	21.44	83,895
22 RPM Output (Approximate)								**18 RPM**		**15 RPM**	
0.65	1,772	K203_0800	MR140/	050	AW140/010	79.615	1,308	0.54	1,772	0.43	1,772
1.11	3,030	K303_0790	MR140/	050	AW140/010	79.424	1,525	0.94	3,100	0.75	3,100
1.15	3,100	K303_0780	MR160/	050, 140	AW160/012	78.410	1,518	0.95	3,100	0.76	3,100
1.25	3,396	K403_0790	MR140/	050	AW140/010	79.105	2,437	1.09	3,575	0.87	3,575
1.81	4,872	K403_0780	MR160/	050, 140	AW160/012	78.095	2,426	1.50	4,872	1.20	4,872
2.43	6,506	K513_0780	MR160/	050, 140	AW160/012	77.592	2,907	2.15	6,927	1.85	7,462
2.98	7,972	K513_0780	MR200/	180	AW200/014	77.592	2,907	2.47	7,972	1.98	7,972
5.47	14,851	K713_0790	MR200/	180	AW200/014	78.832	4,781	4.82	15,811	4.16	17,032
6.42	17,551	K813_0790	MR200/	180	AW200/014	79.384	6,317	5.66	18,686	4.88	20,129
7.83	21,259	K713_0790	MR250/	180, 210	AW250/102	78.832	4,781	6.48	21,259	5.19	21,259
11.26	30,795	K813_0790	MR250/	180, 210	AW250/102	79.384	6,317	9.93	32,787	8.56	35,318
12.93	35,365	K813_0790	MR300/	180, 210, 250, 280	AW300/110	79.384	6,317	10.71	35,365	8.57	35,365
20 RPM Output (Approximate)								**17 RPM**		**13 RPM**	
1.98	5,965	K513_0870	MR160/	050, 140	AW160/012	87.290	3,024	1.68	6,105	1.35	6,105
2.03	6,105	K513_0870	MR200/	180	AW200/014	87.290	3,024	1.68	6,105	1.35	6,105
2.32	6,875	K613_0860	MR160/	050, 140	AW160/012	86.178	3,582	2.04	7,320	1.76	7,885
2.76	7,972	K514_0850	MR160/	050, 140	AW160/012	85.034	2,998	2.29	7,972	1.83	7,972
2.90	8,600	K613_0860	MR200/	180	AW200/014	86.178	3,582	2.40	8,600	1.92	8,600
3.34	9,512	K614_0840	MR160/	050, 140	AW160/012	83.843	3,549	2.95	10,127	2.41	10,351
4.44	13,607	K713_0890	MR200/	180	AW200/014	89.004	4,950	3.91	14,488	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
5.47	16,533	K813_0880	MR200/	180	AW200/014	87.763	6,525	4.82	17,603	4.16	18,962
6.54	19,755	K714_0890	MR200/	180	AW200/014	89.061	4,950	5.77	21,033	4.67	21,259
7.68	23,220	K813_0880	MR250/	180, 210	AW250/102	87.763	6,525	6.36	23,220	5.09	23,220
12.34	37,204	K814_0890	MR250/	180, 210	AW250/102	88.885	6,525	10.23	37,204	8.18	37,204

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

"K" Series

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
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
1.32	4,148	K403_0910	MR140/	050	AW140/010	91.226	2,520	1.09	4,148	0.87	4,148
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
3.34	10,531	K614_0930	MR160/	050, 140	AW160/012	92.826	3,600	2.95	11,211	2.41	11,460
6.54	20,801	K914_0940	MR200/	180	AW200/014	93.777	14,625	5.77	22,147	4.97	23,857
15.22	47,672	K914_0920	MR250/	180, 210	AW250/102	92.352	14,625	13.43	50,756	11.57	54,676
20.18	65,598	K1013_0940	MR300/	180, 210, 250, 280	AW300/110	94.329	18,000	16.72	65,598	13.38	65,598
18 RPM Output (Approximate)								**15 RPM**		**12 RPM**	
1.98	6,604	K513_0970	MR160/	050, 140	AW160/012	96.643	3,026	1.68	6,761	1.35	6,761
2.03	6,761	K513_0970	MR200/	180	AW200/014	96.643	3,026	1.68	6,761	1.35	6,761
2.32	7,612	K613_0950	MR160/	050, 140	AW160/012	95.412	3,600	2.04	8,104	1.76	8,730
2.90	9,524	K613_0950	MR200/	180	AW200/014	95.412	3,600	2.40	9,524	1.92	9,524
4.44	15,065	K713_0990	MR200/	180	AW200/014	98.540	4,950	3.91	16,040	3.20	16,394
4.83	16,394	K713_0990	MR250/	180, 210	AW250/102	98.540	4,950	4.00	16,394	3.20	16,394
5.47	18,305	K813_0970	MR200/	180	AW200/014	97.166	6,525	4.82	19,489	4.16	20,994
6.36	21,259	K714_0990	MR200/	180	AW200/014	98.604	4,950	5.27	21,259	4.21	21,259
7.68	25,708	K813_0970	MR250/	180, 210	AW250/102	97.166	6,525	6.36	25,708	5.09	25,708
11.15	37,204	K814_0980	MR250/	180, 210	AW250/102	98.408	6,525	9.24	37,204	7.39	37,204
11.26	37,012	K913_0950	MR250/	180, 210	AW250/102	95.412	14,625	9.93	39,406	8.56	42,449
14.48	47,620	K913_0950	MR300/	180, 210, 250, 280	AW300/110	95.412	14,625	12.00	47,620	9.60	47,620
20.18	65,598	K1013_0940	MR300/	180, 210, 250, 280	AW300/110	94.329	18,000	16.72	65,598	13.38	65,598
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
0.57	2,160	K303_1090	MR140/	050	AW140/010	109.208	1,575	0.68	3,100	0.55	3,100
0.83	3,100	K303_1080	MR160/	050, 140	AW160/012	107.814	1,575	0.69	3,100	0.55	3,100
1.25	4,670	K403_1090	MR140/	050	AW140/010	108.769	2,520	1.08	4,872	0.86	4,872
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
3.34	12,621	K614_1110	MR160/	050, 140	AW160/012	111.254	3,600	2.82	12,824	2.25	12,824
3.34	12,846	K714_1130	MR160/	050, 140	AW160/012	113.236	4,950	2.79	12,919	2.23	12,919
5.47	21,259	K714_1150	MR200/	180	AW200/014	114.700	4,950	4.53	21,259	3.62	21,259
6.54	25,415	K814_1150	MR200/	180	AW200/014	114.579	6,525	5.77	27,060	4.97	29,149
9.72	37,204	K814_1130	MR250/	180, 210	AW250/102	112.838	6,525	8.05	37,204	6.44	37,204
14 RPM Output (Approximate)								**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
3.08	12,844	K614_1230	MR160/	050, 140	AW160/012	123.174	3,600	2.55	12,844	2.04	12,844
3.34	14,222	K714_1250	MR160/	050, 140	AW160/012	125.368	4,950	2.79	14,303	2.23	14,303
4.94	21,259	K714_1270	MR200/	180	AW200/014	126.990	4,950	4.09	21,259	3.27	21,259
6.54	27,901	K914_1260	MR200/	180	AW200/014	125.788	14,625	5.77	29,707	4.97	32,001
6.54	28,138	K814_1270	MR200/	180	AW200/014	126.855	6,525	5.77	29,959	4.97	32,272
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	9.78	62,006
15.22	62,789	K1014_1220	MR250/	180, 210	AW250/102	121.636	18,000	13.43	66,850	11.57	72,013

* 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

See Page 86 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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
13 RPM Output (Approximate)								**11 RPM**		**8.5 RPM**	
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	2.34	12,844	1.88	12,844
3.10	14,402	K714_1370	MR160/	050, 140	AW160/012	137.025	4,950	2.57	14,402	2.05	14,402
4.52	21,259	K714_1390	MR200/	180	AW200/014	138.797	4,950	3.74	21,259	2.99	21,259
6.54	31,395	K814_1420	MR200/	180	AW200/014	141.539	6,525	5.77	33,427	4.69	33,943
7.87	37,204	K814_1390	MR250/	180, 210	AW250/102	139.388	6,525	6.52	37,204	5.22	37,204
12 RPM Output (Approximate)								**10 RPM**		**8 RPM**	
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
3.10	15,945	K714_1520	MR160/	050, 140	AW160/012	151.706	4,950	2.57	15,945	2.05	15,945
6.54	33,049	K914_1490	MR200/	180	AW200/014	148.996	14,625	5.77	35,188	4.97	37,905
12.46	62,006	K914_1470	MR250/	180, 210	AW250/102	146.732	14,625	10.32	62,006	8.26	62,006
15.22	76,857	K1014_1490	MR250/	180, 210	AW250/102	148.889	18,000	13.43	81,828	10.95	83,415
11 RPM Output (Approximate)								**9 RPM**		**7.5 RPM**	
4.08	21,259	K714_1540	MR200/	180	AW200/014	153.668	4,950	3.38	21,259	2.70	21,259
6.54	34,759	K814_1570	MR200/	180	AW200/014	156.703	6,525	5.77	37,008	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
10 RPM Output (Approximate)								**8 RPM**		**7 RPM**	
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	0.33	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	0.50	4,737
0.77	4,737	K403_1790	MR160/	050, 140	AW160/012	179.056	2,520	0.64	4,737	0.51	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	1.51	12,844
2.63	15,514	K714_1740	MR160/	050, 140	AW160/012	174.209	4,950	2.18	15,514	1.74	15,514
3.55	21,259	K714_1760	MR200/	180	AW200/014	176.462	4,950	2.94	21,259	2.36	21,259
5.81	34,132	K814_1730	MR200/	180	AW200/014	173.313	6,525	5.07	35,932	4.05	35,932
6.43	37,204	K814_1710	MR250/	180, 210	AW250/102	170.679	6,525	5.33	37,204	4.26	37,204
9 RPM Output (Approximate)								**7.5 RPM**		**6 RPM**	
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
2.63	17,176	K714_1930	MR160/	050, 140	AW160/012	192.874	4,950	2.18	17,176	1.74	17,176
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
5.80	37,204	K814_1890	MR250/	180, 210	AW250/102	188.966	6,525	4.81	37,204	3.85	37,204
6.54	42,515	K914_1920	MR200/	180	AW200/014	191.670	14,625	5.73	44,947	4.58	44,947
9.69	62,006	K914_1890	MR250/	180, 210	AW250/102	188.757	14,625	8.03	62,006	6.42	62,006
13.15	83,494	K1014_1870	MR250/	180, 210	AW250/102	187.236	18,000	11.47	87,896	9.17	87,896

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210	250	280	320	360
C-Frame	56C	143/145TC	182/184TC	213/215TC	254/256TC	284/286TC	324/326TC	364/365TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10	15			

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

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: K402**VG**0690.
[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							
8 RPM Output (Approximate)								**7 RPM**		**5.5 RPM**	
0.19	1,407	K203_2180	MR140/	050	AW140/010	217.538	1,350	0.16	1,407	0.13	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
0.51	3,752	K403_2150	MR160/	050, 140	AW160/012	215.391	2,520	0.42	3,752	0.34	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	222.507	3,600	1.41	12,844	1.13	12,844
2.36	18,092	K714_2260	MR160/	050, 140	AW160/012	226.472	4,950	1.95	18,092	1.56	18,092
2.73	21,259	K714_2290	MR200/	180	AW200/014	229.400	4,950	2.26	21,259	1.81	21,259
4.60	36,082	K814_2310	MR200/	180	AW200/014	231.404	6,525	3.93	37,204	3.14	37,204
4.81	37,204	K814_2280	MR250/	180, 210	AW250/102	227.888	6,525	3.99	37,204	3.19	37,204
7 RPM Output (Approximate)								**6 RPM**		**4.5 RPM**	
0.19	1,407	K203_2180	MR140/	050	AW140/010	217.538	1,350	0.16	1,407	0.13	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
0.51	3,752	K403_2150	MR160/	050, 140	AW160/012	215.391	2,520	0.42	3,752	0.34	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	222.507	3,600	1.41	12,844	1.13	12,844
2.36	18,092	K714_2260	MR160/	050, 140	AW160/012	226.472	4,950	1.95	18,092	1.56	18,092
2.73	21,259	K714_2290	MR200/	180	AW200/014	229.400	4,950	2.26	21,259	1.81	21,259
4.60	36,082	K814_2310	MR200/	180	AW200/014	231.404	6,525	3.93	37,204	3.14	37,204
4.81	37,204	K814_2280	MR250/	180, 210	AW250/102	227.888	6,525	3.99	37,204	3.19	37,204
6 RPM Output (Approximate)								**5 RPM**		**4 RPM**	
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	31,935	K814_2810	MR200/	180	AW200/014	280.830	6,525	2.78	31,935	2.22	31,935
3.35	35,365	K814_3110	MR200/	180	AW200/014	310.919	6,525	2.78	35,365	2.22	35,365
3.41	31,935	K814_2770	MR250/	180, 210	AW250/102	276.563	6,525	2.82	31,935	2.26	31,935
3.41	35,365	K814_3060	MR250/	180, 210	AW250/102	306.194	6,525	2.82	35,365	2.26	35,365
4.82	47,993	K914_2940	MR200/	180	AW200/014	293.764	14,625	4.20	50,523	3.36	50,523
9.17	90,262	K1014_2900	MR250/	180, 210	AW250/102	290.350	18,000	8.00	95,021	6.40	95,021
5 RPM Output (Approximate)								**4.5 RPM**		**3.5 RPM**	
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	0.50	8,600
0.76	9,524	K614_3690	MR160/	050, 140	AW160/012	368.926	3,600	0.63	9,524	0.50	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
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.

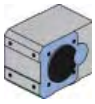
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

See Page 86 for Part No. Configurator. Mounting position MUST be specified

Part No. Configurator
“KL” Series – MGS Speed Reducers

Part No. Explanation

KL	2	0	2	A	F	0040	ML2R/	050
Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size

Series	KL	Right Angle Helical/Bevel (output is at a right angle to input; gears are helical and spiral bevel)
Size	2	Sizes available: **KL2**
Generation	0	Design generation: first generation **0**, second generation 1, etc.
No. of Gear Stages	2	Determined by ratio.
Output Style	A	Hollow output 
		P – Shaft with key output  **SPECIFY**: Shaft Side 3 or Side 4 (shown).
		W – Double wobble free bushing output 
Housing Style	F	Output flange  **SPECIFY**: Side 3 or Side 4.
		G – Tapped holes around the output 
		N – Foot mounting  **SPECIFY**: Side 1 or Side 5.
Ratio	0040	Approximate ratio: **0040** = 4.00:1 (4:1, 8:1, 16:1, and 32:1)
Motor Adapter	ML2R/	Round motor adapter for KL2
NEMA Frame Size	050	Motor frame size: **050** (56C)

Completed part number for standard warranty unit.
Coating options: white, stainless steel, or standard gray

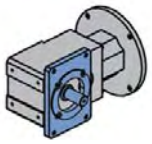
Mounting Position must be specified.

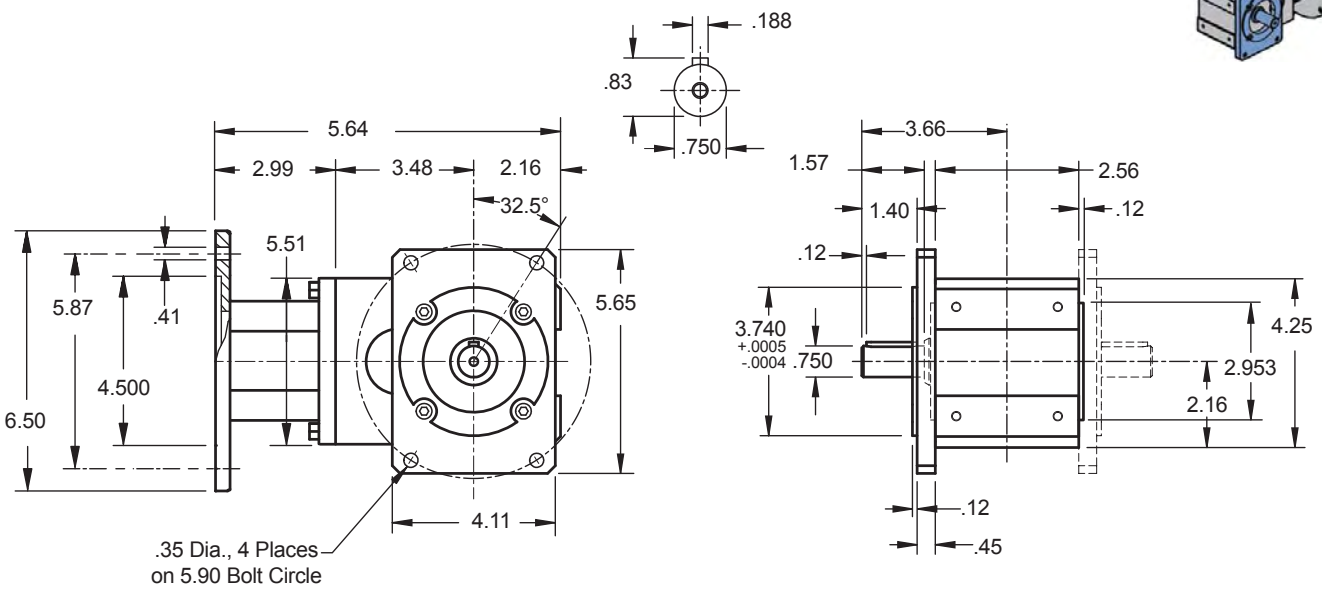
“K” Series

“K” Series – MGS Reducer
“KL” Dimensional Data

Drawing for Units KL202PF

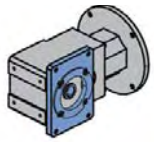
Shaft Output , Flange Housing

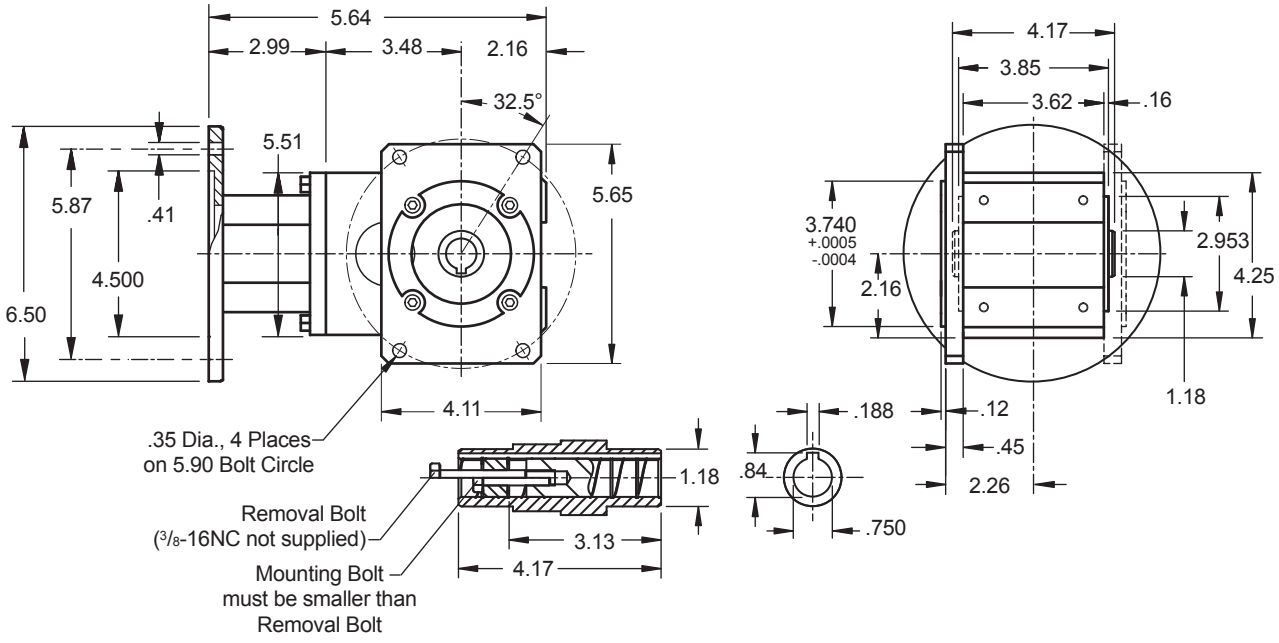




Drawing for Units KL202AF

Hollow Output , Flange Housing

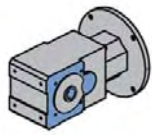


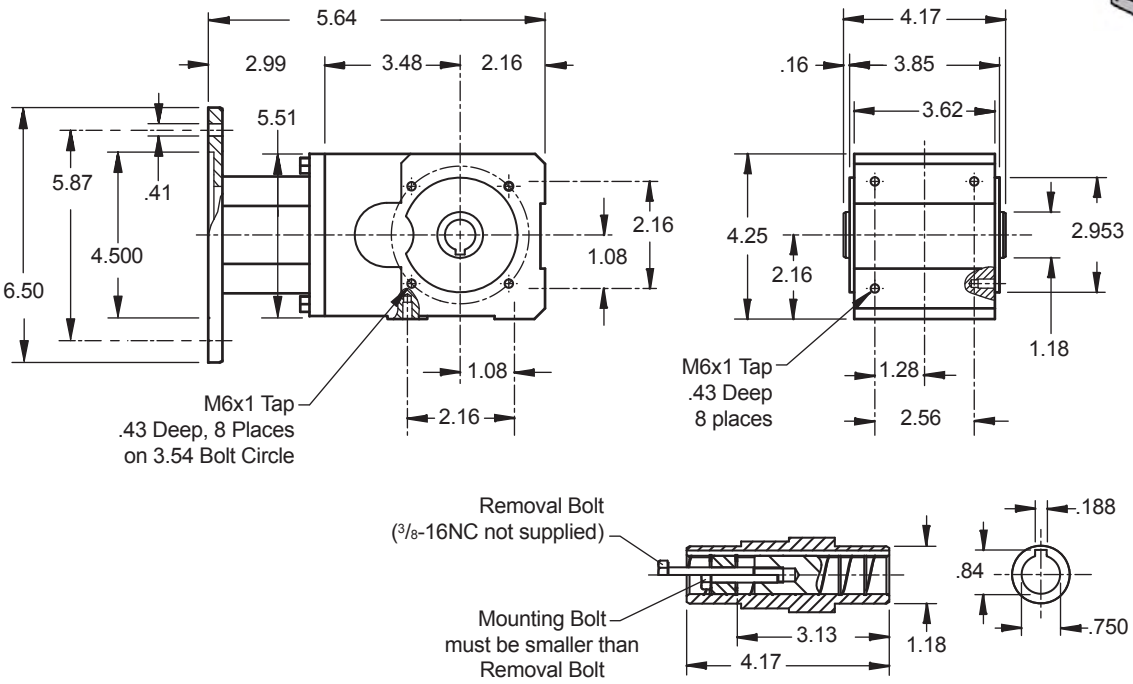


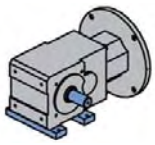
“K” Series

“K” Series – MGS Reducer
“KL” Dimensional Data

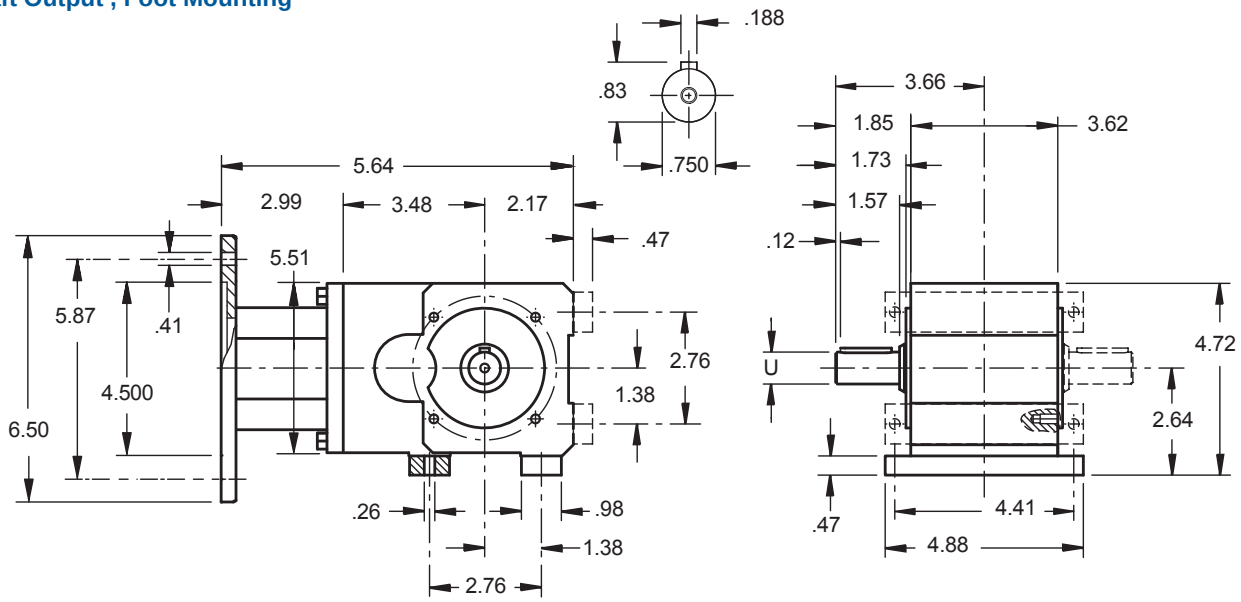
Drawing for Units KL202AG
Hollow Output , Tapped Hole Housing







Drawing for Units KL202PN
Shaft Output , Foot Mounting

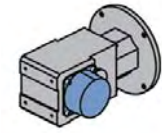


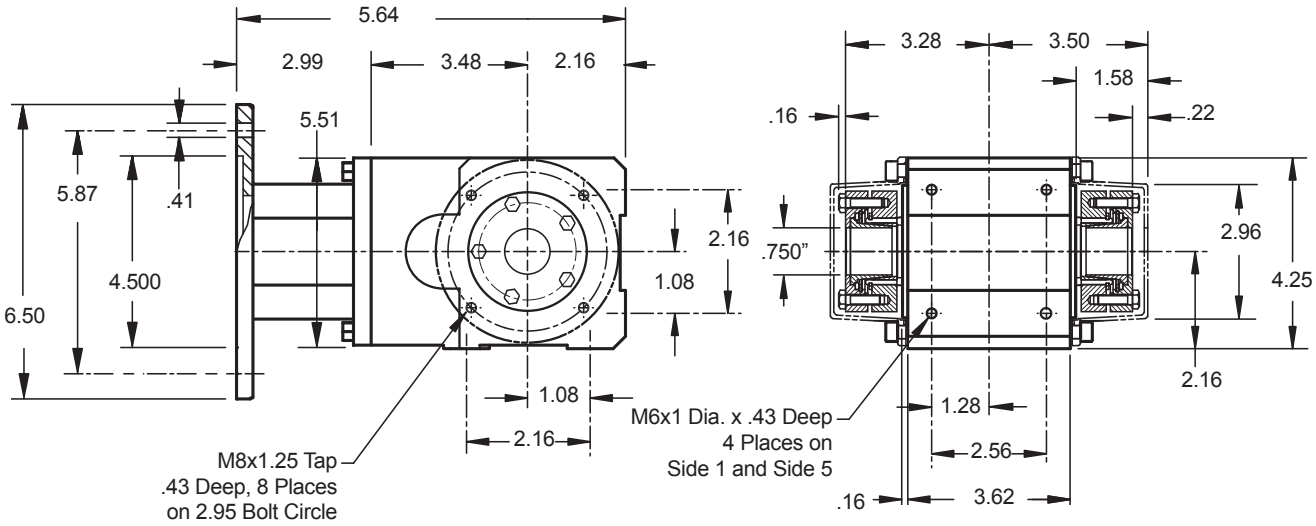
“K” Series

“K” Series – MGS Reducer
“KL” Dimensional Data

Drawing for Unit KL202WG

Double Bushing, Tapped Hole Housing





Important: A 1/32 x 45° chamfer minimum is recommended for the shaft end.

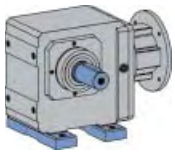
Part No. Example

Double Bushing Unit with Motor Adapter and
3/4” Bushing Bore

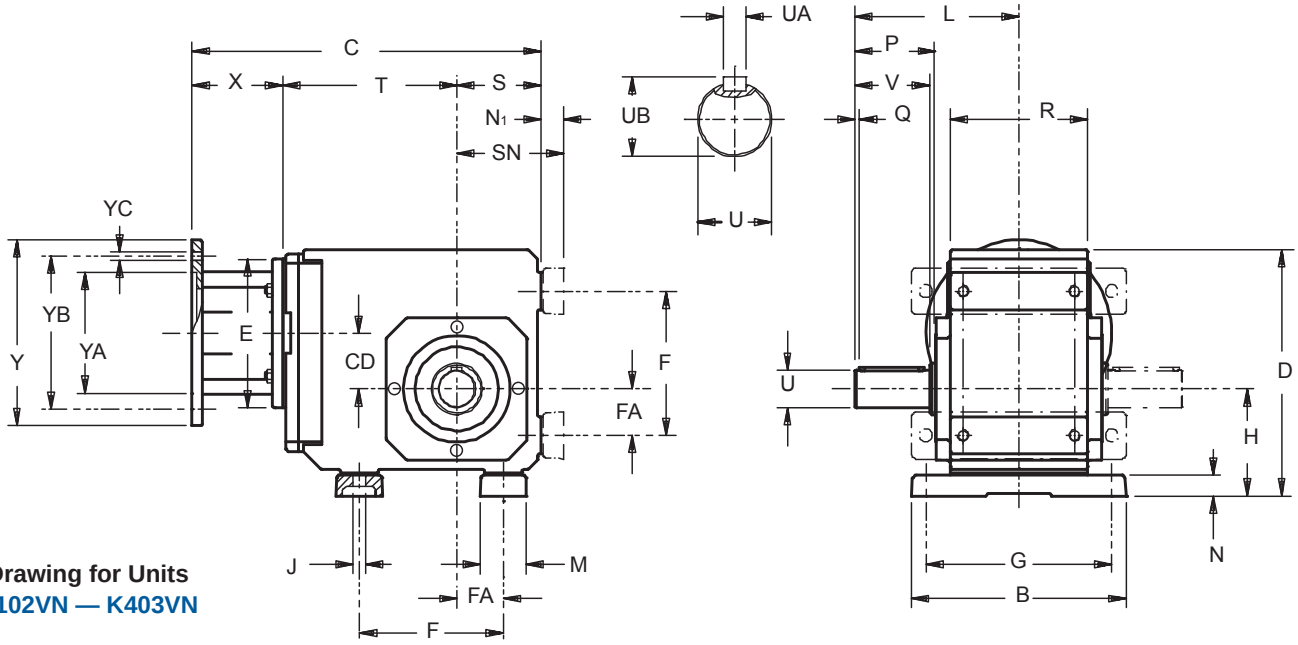
KL202WG0040 ML2R050
WFBKL2-012

This unit is only available with 3/4” Bushing Bore

“K” Series



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



Drawing for Units
K102VN — K403VN

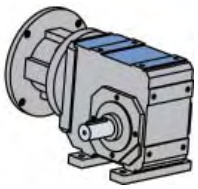
Table No. 1 **"K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	B	D	F	G	H	J	L	M	N	O	P	Q	R	S	V	Z_1	BO	FA	N_1	SN
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	3.54	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	3.54	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[1)]	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)]	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.
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

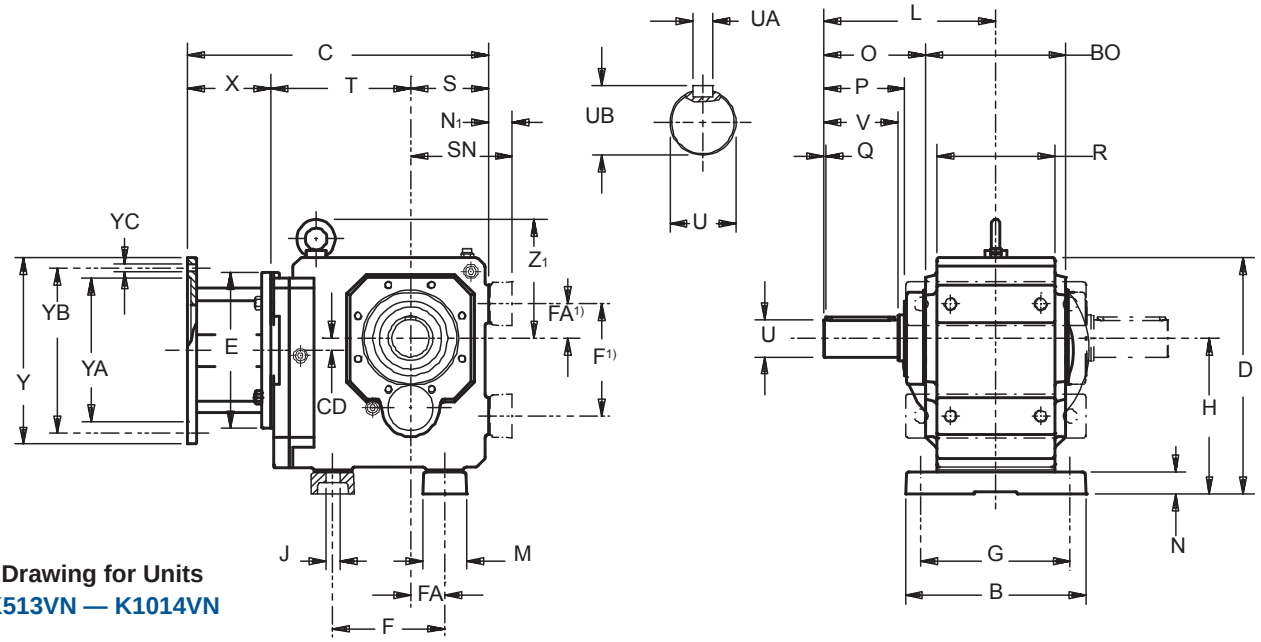


K1 Housing with tapped holes on Side 1, Side 2, and Side 5. Shown with mounting feet on Side 1.

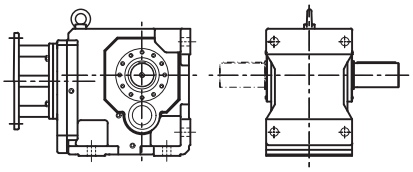
Part No. Example

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.

1) FA = 6.10, F=16.54 on Side 5 of the K10.

Table No. 3 **Metric output available on request.**

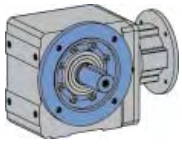
Base Module	Standard Shaft – inches			Optional Shaft – mm		
	U	UA – Key	UB	U	UA – Key	UB
K102	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	A8 ×7×40	28
K202/203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8 ×7×50	33
K302/303	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8 ×7×50	33
K402/403	1.375	5/16 × 5/16 × 2 5/16	1.51	40k6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

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

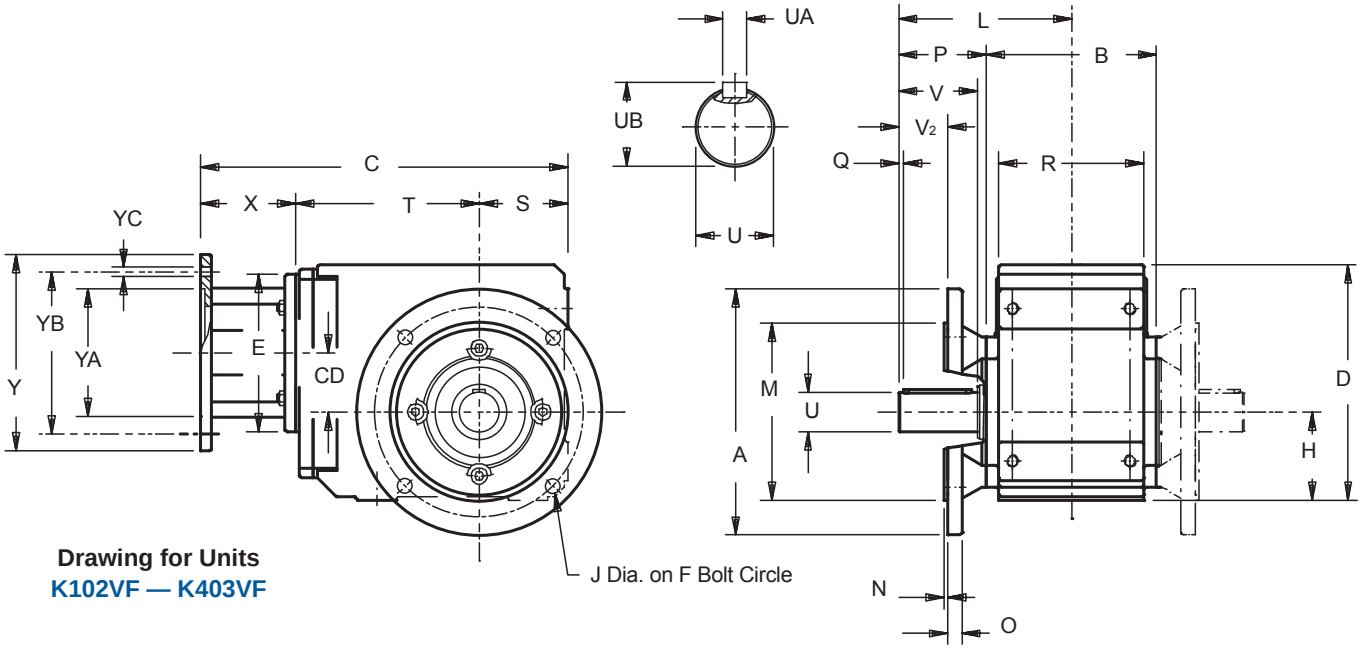
Base	MR140/050			MR160/140 2)			MR200/180			MR250/210 3)			MR300/250 4)			MR350/320 5)			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	40
K203	1.81	12.96	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
K913	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	508
K914	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	530
K1013	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	913
K1014	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	993

2) Also available as **MR160/050** for a NEMA 56C frame motor.
3) Also available as **MR250/180** for a NEMA 182/184TC frame motor.
4) 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.
5) 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



Drawing for Units
K102VF — K403VF

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

Base Module	A [1]	B	D	F	H	J	L	M	N	O	P	Q	R	S	V	V_2	Z_1
K102	6.30	4.17	6.30	5.12	2.36	.35	4.53	4.331 +.0005/-.0004	.14	.39	2.44	.16	3.54	2.36	1.97	1.18	—
K202/203	7.87	5.28	7.48	6.50	2.56	.43	5.31	5.118 +.0006/-.0004	.14	.47	2.68	.16	4.53	2.56	2.36	1.42	—
K302/303	7.87	5.75	8.39	6.50	2.95	.43	5.59	5.118 +.0006/-.0004	.14	.55	2.72	.16	5.12	2.95	2.36	1.22	—
K402/403	9.84	6.81	9.45	8.46	3.54	.55	6.93	7.087 +.0006/-.0005	.16	.59	3.52	.16	5.83	3.54	2.76	1.95	—
K513/514	9.84	7.28	10.24	8.46	6.30	.55	8.74	7.087 +.0006/-.0005	.16	.59	5.10	.16	6.30	3.54	3.54	—	5.98
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.0006/-.0005	.16	.67	5.35	.16	6.61	4.72	3.54	—	6.77
K713/714	13.78	8.90	13.46	11.81	8.35	.71	10.91	9.842 +.000/-.001	.20	.71	6.46	.16	7.48	4.92	4.72	—	7.52
K813/814	15.75	11.10	16.14	13.78	10.43	.71	12.83	11.811 +.000/-.001	.20	.79	7.28	.20	9.25	5.71	5.51	—	8.11
K913/914	17.72	12.99	19.49	15.75	12.40	.71	15.16	13.780 +.000/-.001	.20	.91	8.66	.31	11.22	7.09	6.69	—	9.84
K1013/1014	21.65	14.02	23.27	19.69	14.76	.71	18.35	17.716 +.000/-.002	.20	.98	11.34	.59	15.75	8.86	8.27	—	12.01

[1] See Page 122 for other flange sizes. Optional flanges are not available for all sizes.

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

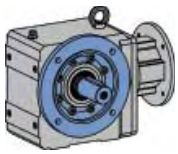
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55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

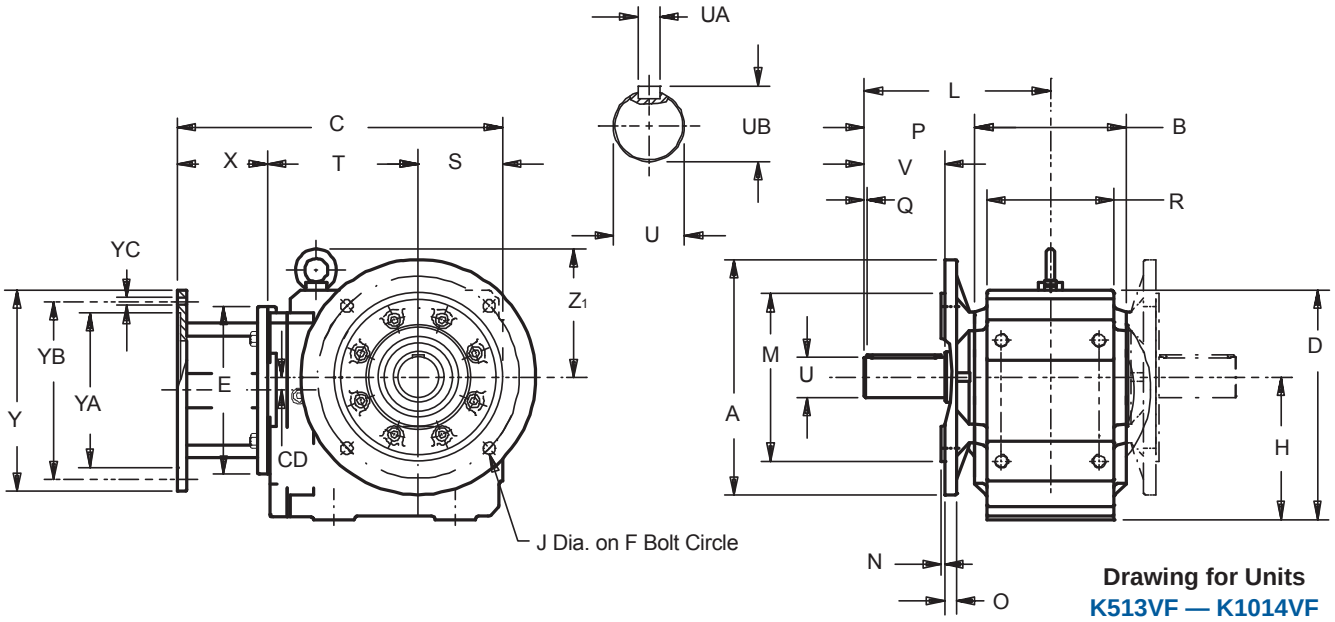
Part No. Example

Round Flange with Motor Adapter

K30

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

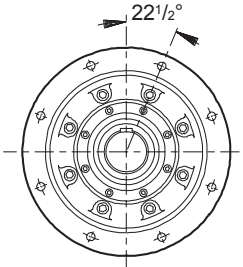




Drawing for Units
K513VF — K1014VF

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

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



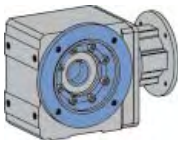
K913 thru K1014 has 8 mounting holes in the output flange located as shown.

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

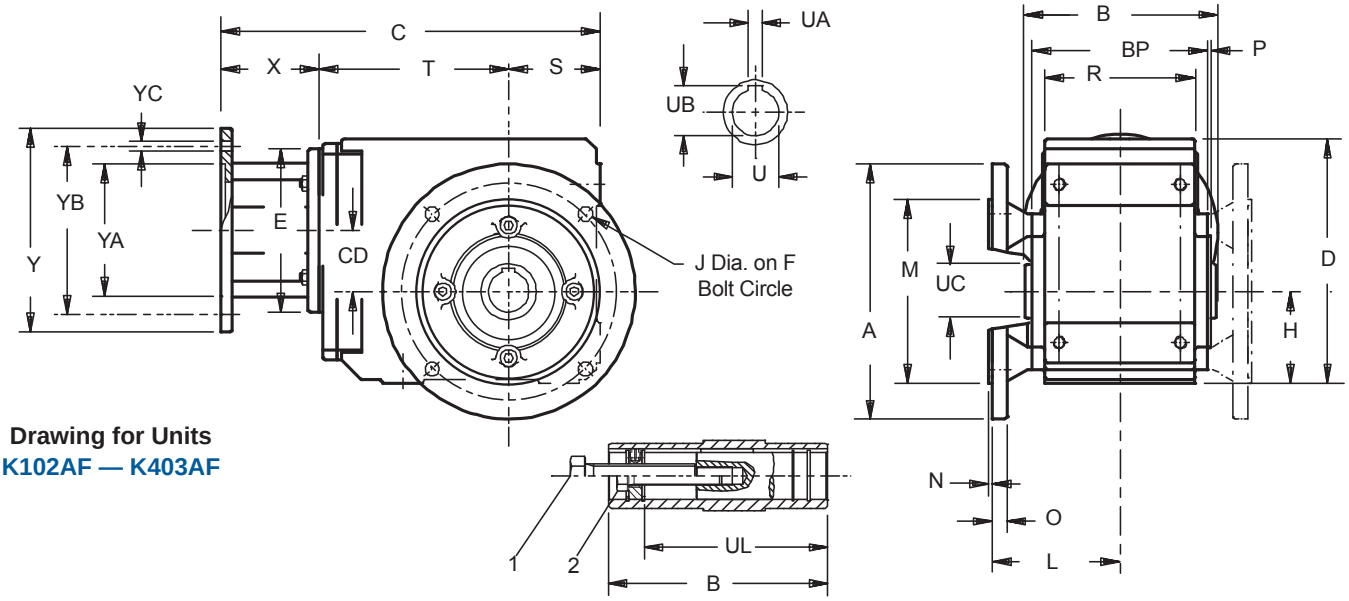
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			MR350/320 [4]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	—	—	—	40
K203	1.81	12.96	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
K913	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	508
K914	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	530
K1013	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	913
K1014	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	993

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[3] 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.
[4] 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
K102AF — K403AF

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

Base Module	A [1)]	B	D	F	H	J	L	M	N	O	P	R	S	Z_1	BP	UC	UL	1
K102	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
K202/203	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
K302/303	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
K402/403	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
K513/514	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
K613/614	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
K713/714	13.78	9.53	13.46	11.81	8.35	.71	6.18	9.842 +.000/-.001	.20	.71	.14	7.48	4.92	7.52	8.90	3.35	8.43	1-8
K813/814	15.75	11.81	16.14	13.78	10.43	.71	7.32	11.811 +.000/-.001	.20	.79	.16	9.25	5.71	8.11	11.10	3.94	10.35	1-8
K913/914	17.72	13.78	19.49	15.75	12.40	.71	8.46	13.780 +.000/-.001	.20	.91	.20	11.22	7.09	9.84	12.99	4.33	11.89	1-8
K1013/1014	21.65	16.14	23.27	19.69	14.76	.71	10.08	17.716 +.000/-.002	.20	.98	.28	15.75	8.86	12.01	15.60	5.12	14.25	1 1/4-7

[1)] See Page 122 for other flange sizes. Optional flanges are not available for all sizes.

Table No. 2 Motor Adapter Dimensions (Inches)

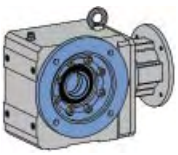
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55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

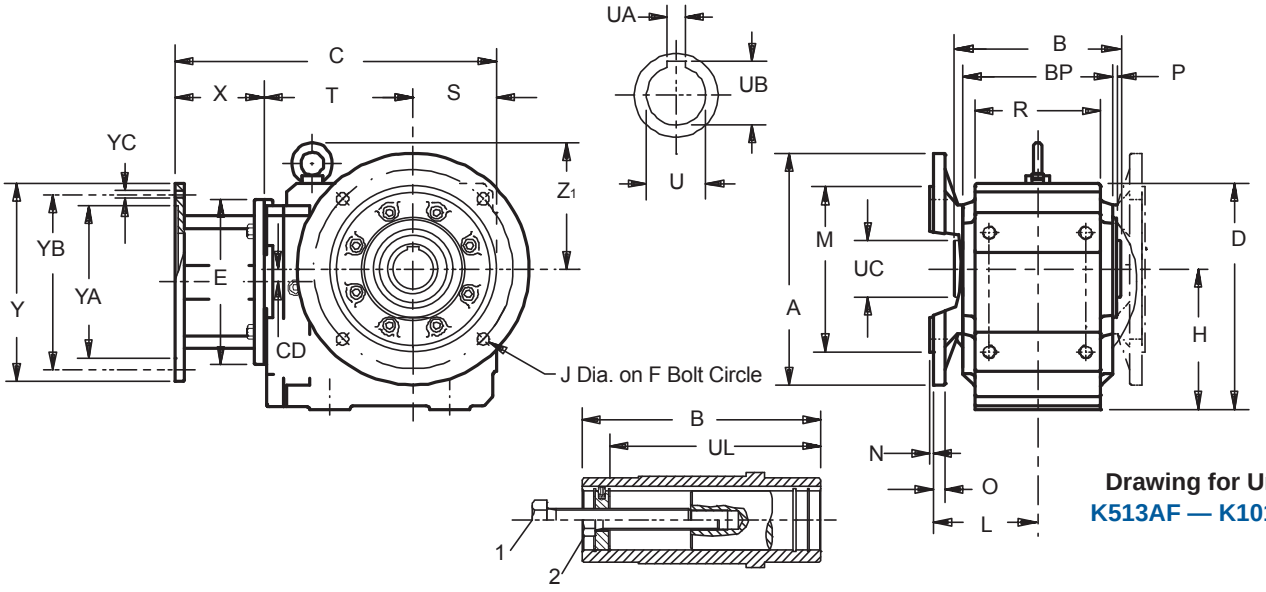
Part No. Example

Hollow Output, Flanged Housing with Motor Adapter

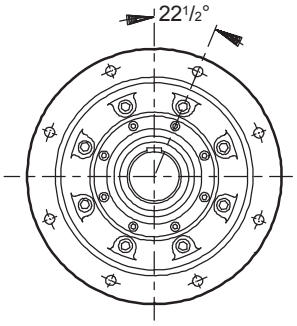
1. Removal Bolt — not supplied.
2. Mounting Bolt — must be smaller than removal bolt.

“K” Series – MGS Reducer
Flange Mount – “F” Housing
Hollow Output – Dimensional Data





Drawing for Units
K513AF — K1014AF



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

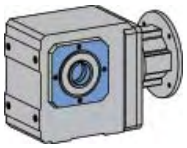
Table No. 4 **Metric output available on request.**

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

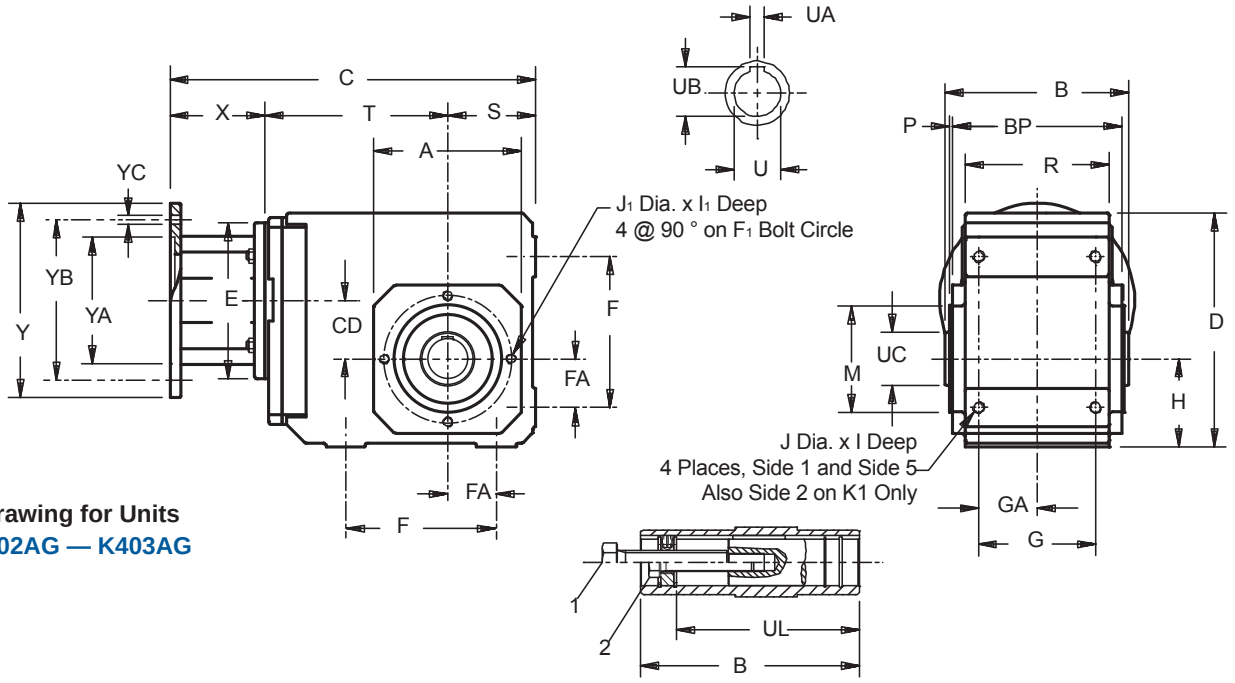
Table No. 5 **“K” Series – Round Flange Unit Dimensions (Inches) – “F” Housing Style**

Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			MR350/320 [4]			Wt.
Module	CD	C	T	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
K913	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	508
K914	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	530
K1013	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	913
K1014	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	993

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[3] 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.
[4] 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
K102AG — K403AG

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

Base Module	A	B	D	F	F_1	G	H	I	I_1	J	J_1	M $_{j6}$	P	R	S	Z_1
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 $^{+.0005/-.0003}$	.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 $^{+.0005/-.0004}$	.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 $^{+.0005/-.0004}$	.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 $^{+.0005/-.0004}$	.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 $^{+.0005/-.0004}$	.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 $^{+.0006/-.0004}$	.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 $^{+.0006/-.0004}$	.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 $^{+.0006/-.0005}$	.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 $^{+.0006/-.0005}$	.20	11.22	7.09	9.84
K1013/1014	13.38	16.14	23.27	13.78[1)]	11.81	12.99	14.76	1.77	1.30	1.54	M20×2.5	9.843 $^{+.0006/-.0005}$	.28	15.59	8.86	12.01

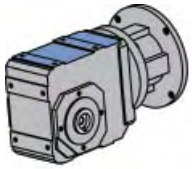
Table No. 2

Base Module	BP	FA	GA	UC	UL	1
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[1)]	6.50	5.12	14.25	1 1/4-7

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

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

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
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

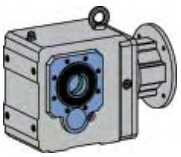


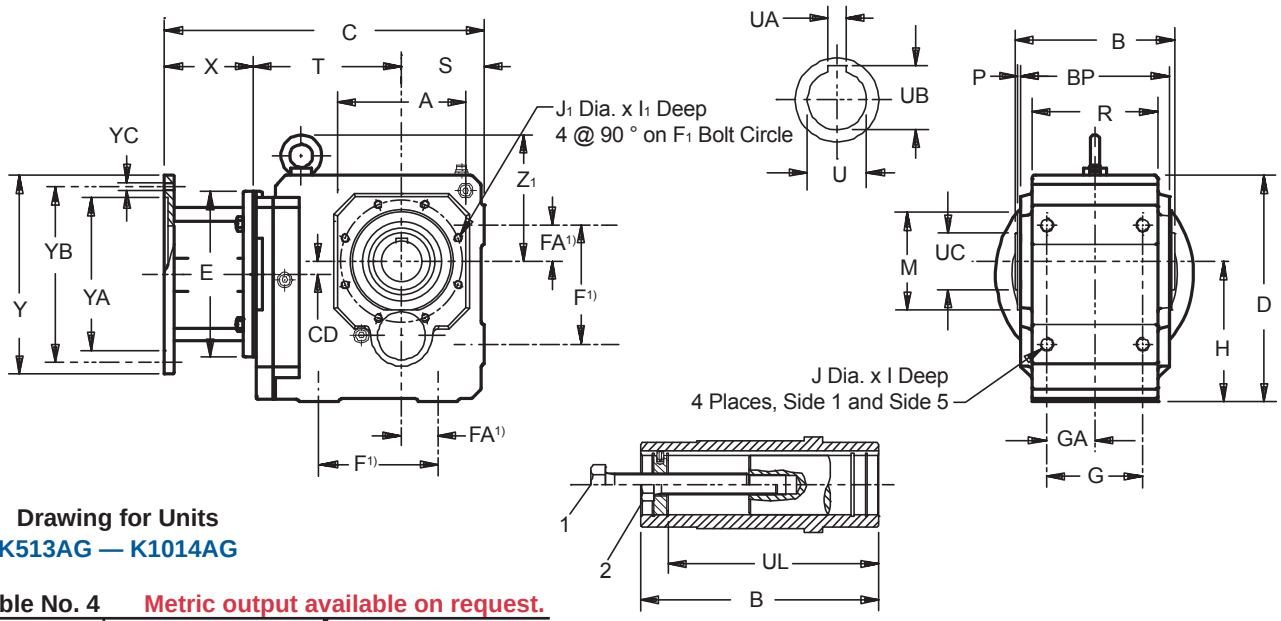
K1 Housing with tapped holes on Side 1, Side 2, and Side

Part No. Example

Tapped Holes Housing with Motor Adapter

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

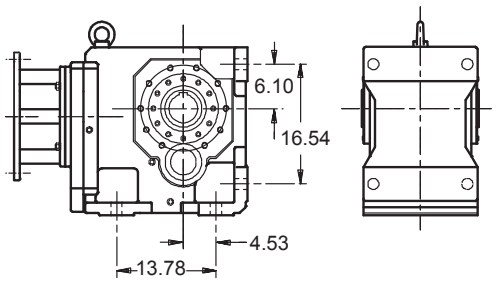




Drawing for Units
K513AG — K1014AG

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

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

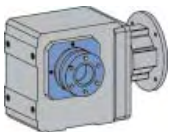


[1] Typical K10 housing with mounting hole locations.

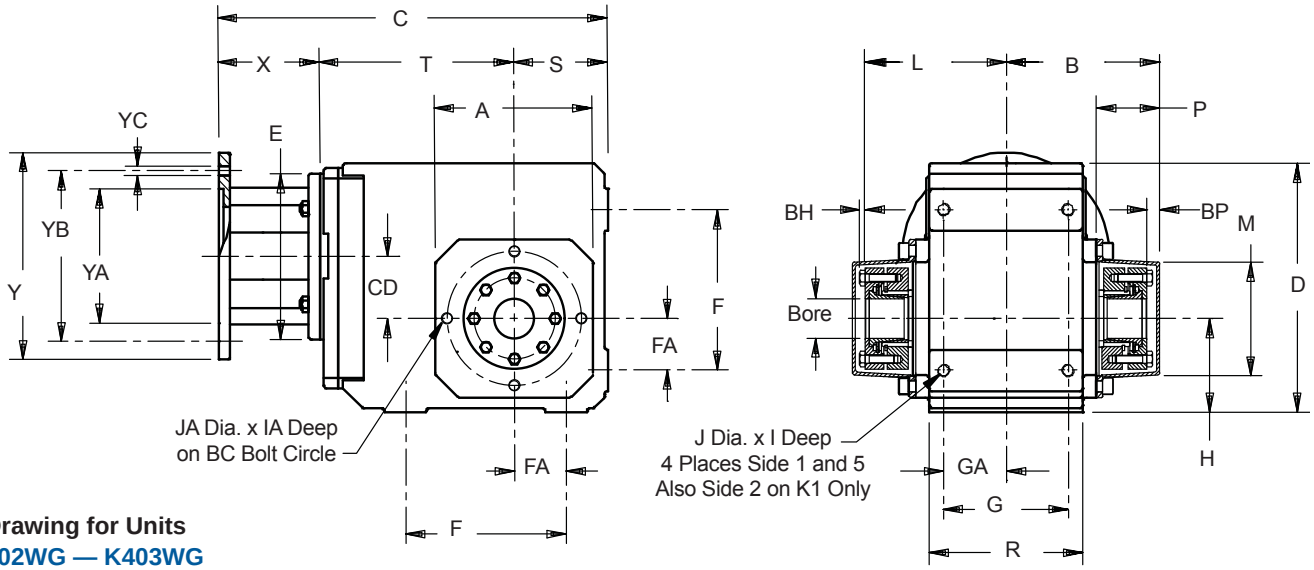
Table No. 5 **"K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style**

Base	MR140/050			MR160/140 [2]			MR200/180			MR250/210 [3]			MR300/250 [4]			MR350/320 [5]			Wt.
Module	CD	C	T	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
K913	—	—	—	—	—	—	—	—	—	.98	23.97	11.57	.98	25.68	12.09	.98	27.17	12.99	508
K914	—	—	—	—	—	—	.98	25.79	13.90	.98	26.77	14.37	—	—	—	—	—	—	530
K1013	—	—	—	—	—	—	—	—	—	—	—	—	1.10	15.43	30.79	1.10	32.29	16.34	913
K1014	—	—	—	—	—	—	—	—	—	1.10	31.89	17.72	—	—	—	—	—	—	993

[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] 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.
[5] 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
K102WG — 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_1	BC	BP	BH	FA	GA	JA	IA
K102	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8×1.25	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8×1.25	.51
K202/203	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8×1.25	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10×1.5	.63
K302/303	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8×1.25	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10×1.5	.63
K402/403	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10×1.5	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12×1.75	.75
K513/514	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10×1.5	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16×2.0	1.02
K613/614	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10×1.5	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16×2.0	1.02
K713/714	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12×1.75	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20×2.5	1.22
K813/814	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12×1.75	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24×3	1.50

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

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
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 $1^{7}/_{16}$ Bushing Bore

K303WG0650 MR160/140
WFB3-107

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

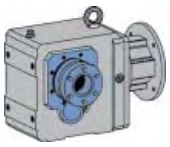
Unit	Stock Bores Sizes – mm			
	25	30	35	40
K1	WFB1-25	—	—	—
K2	WFB2-25	WFB2-30	—	—
K3	—	WFB3-30	WFB3-35	—
K4	—	—	—	WFB4-40
K5	—	—	—	WFB5-40
K6	—	—	—	WFB6-40

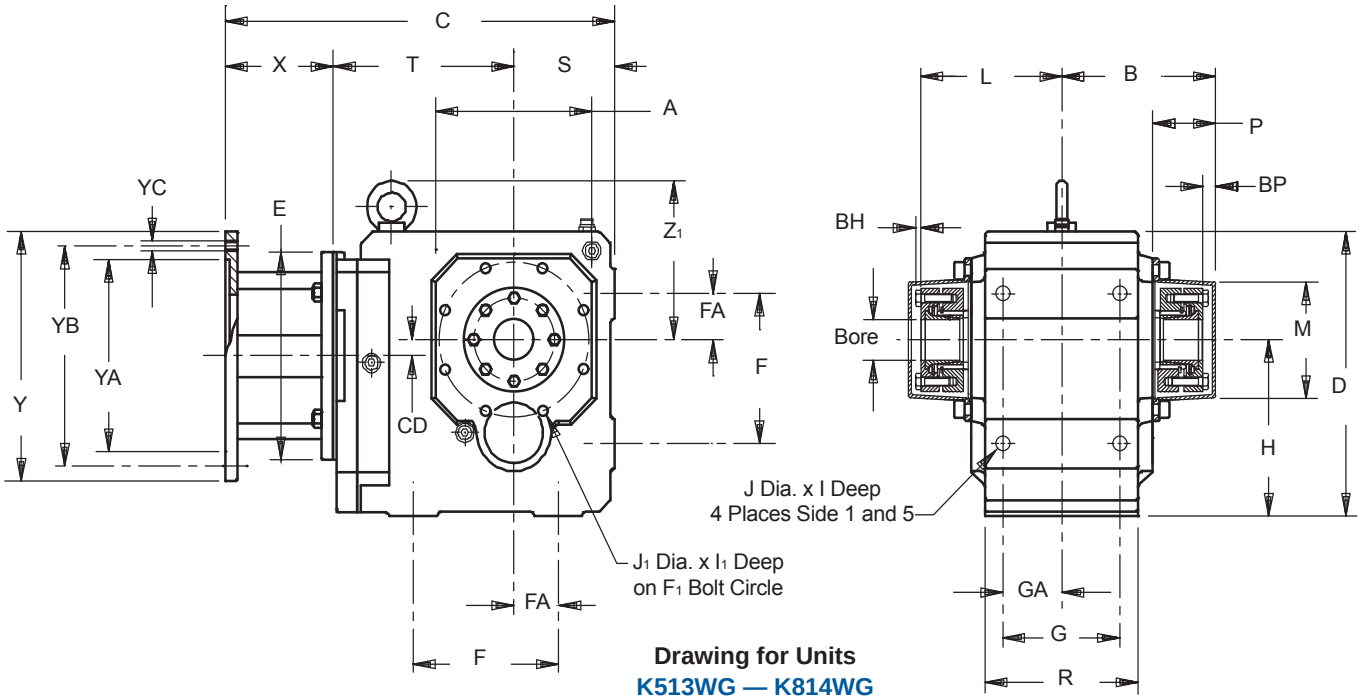
Table No. 4 **"WFB" Double Side Bushings – Inches**

Unit	Stock Bores Sizes					
	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$
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

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





Drawing for Units
K513WG — K814WG

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

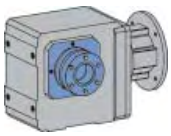
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[3] 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.

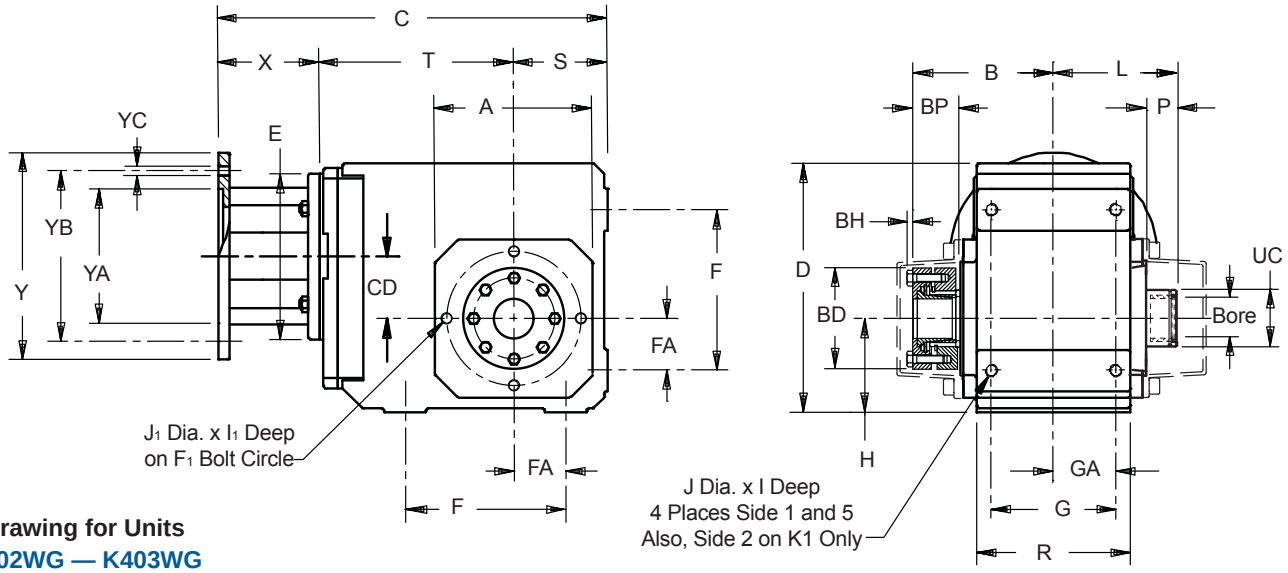
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

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

Unit	Stock Bores Sizes – Inches											
	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
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_1	G	H	I	I_1	J	J_1	L	P	R	S	Z_1
K102	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	—
K202/203	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	—
K302/303	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	—
K402/403	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	—
K513/514	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
K613/614	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
K713/714	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
K813/814	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
K102	2.76	1.62	.16	1.18	1.38	1.54
K202/203	3.07	1.54	.16	1.38	1.7	1.73
K302/303	3.31	1.55	.16	1.57	2.07	1.93
K402/403	3.82	1.83	.20	1.97	2.36	2.13
K513/514	4.13	1.87	.20	1.57	2.46	2.56
K613/614	4.65	2.11	.24	1.97	2.56	2.91
K713/714	5.43	2.70	.24	2.17	2.85	3.35
K813/814	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.
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 $1^{7}/_{16}$ Bushing Bore
K303WG0650 MR160/140 WF3-107

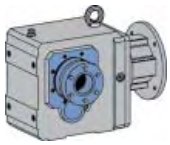
Table No. 4
"WF" Single Side Bushing – Metric

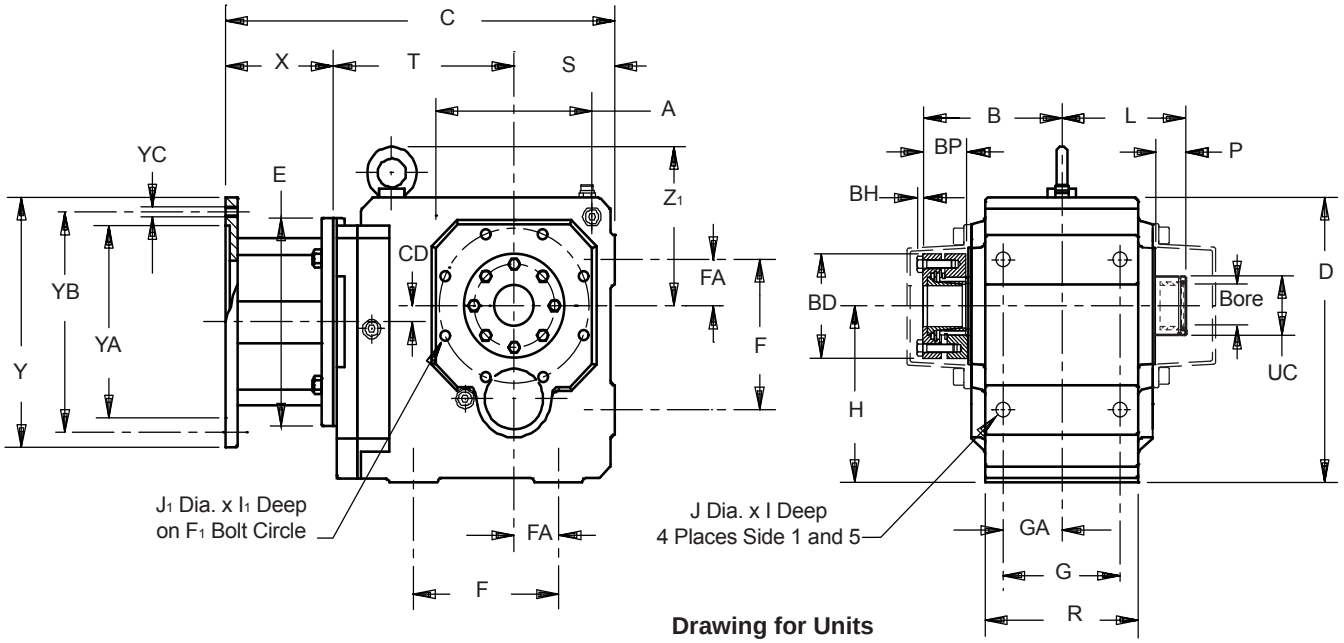
Unit	Stock Bores Sizes – mm		
	25	30	35
K1	WF1-25	—	—
K2	—	WF2-30	—
K3	—	WF3-30	WF3-35

Table No. 5 "WF" Single Side Bushings

Unit	Stock Bores Sizes					
	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$
K1	WF1-100	—	—	—	—	—
K2	WF2-100	WF2-103	—	—	—	—
K3	WF3-100	WF3-103	WF3-104	WF3-106	WF3-107	WF3-108

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





Drawing for Units
K513WG — K814WG

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

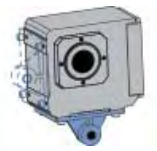
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[3] 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/-.005.

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

	Stock Bores Sizes											
Unit	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
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	—	—	—	—								



“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.

Drawing for Units
K102AGD — K403AGD

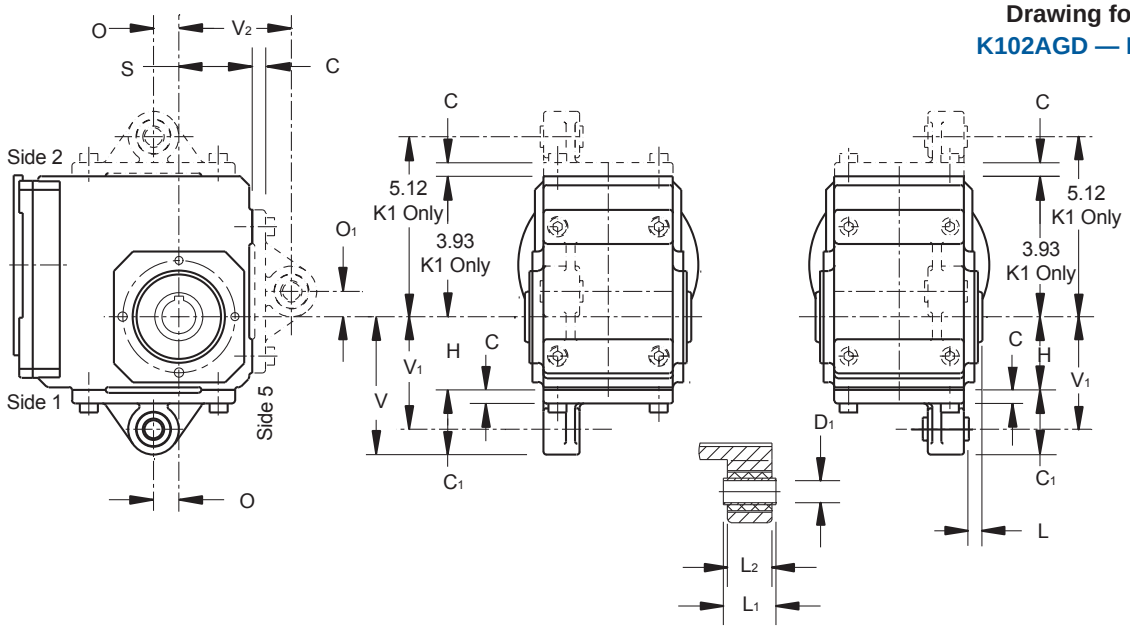
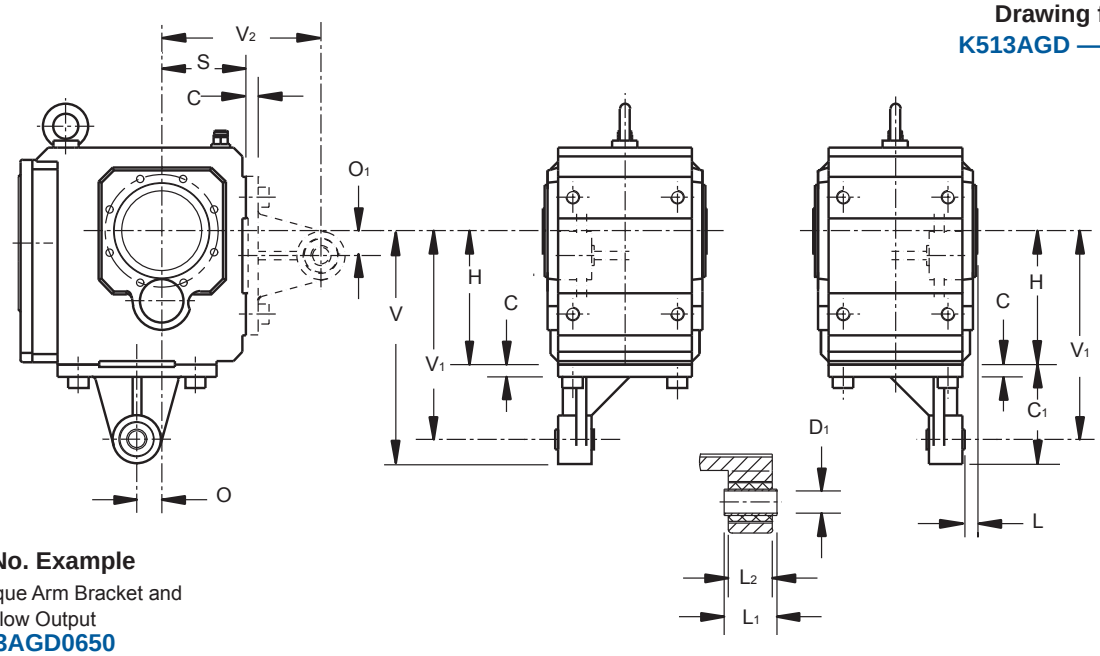


Table No. 1 **“K” Series — Torque Arm Bracket Dimensions (Inches)**

Base Module	C	C1	D1 H9		H	L	L1	L2	O	O1	S	V	V1	V2
K102	.39	2.03	.47	+0.017/-0.000	2.36	.51	1.10	.94	.59	.59	2.36	4.39	3.54	3.54
K202/K203	.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
K302/K303	.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
K402/K403	.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
K513/K514	.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
K613/K614	.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
K713/K714	.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
K813/K814	.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
K913/K914	.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
K1013/K1014	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

Drawing for Units
K513AGD — K1014AGD

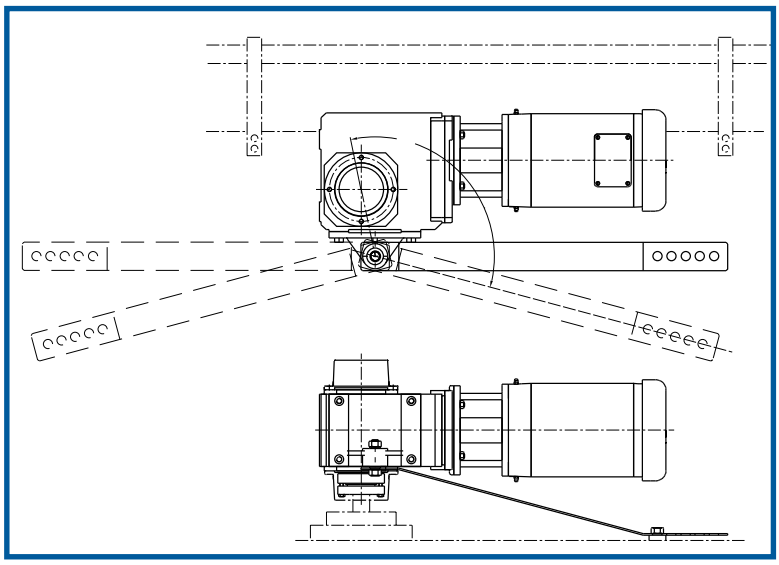


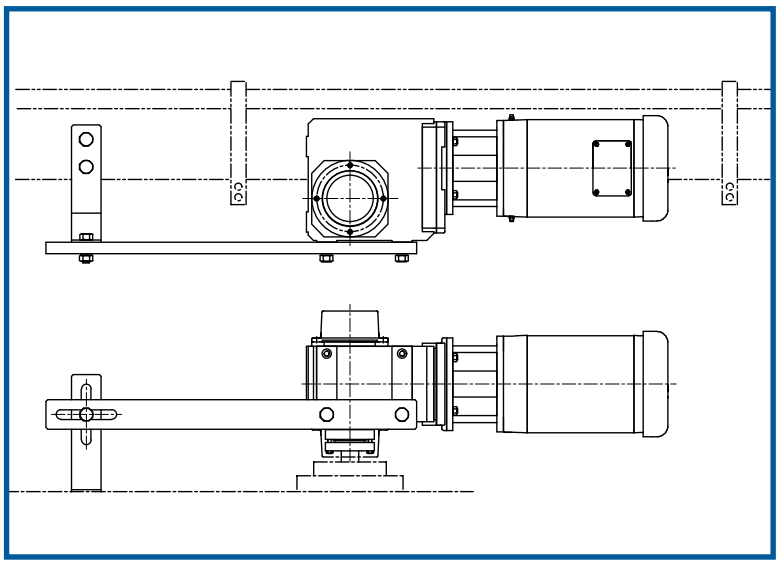
Part No. Example

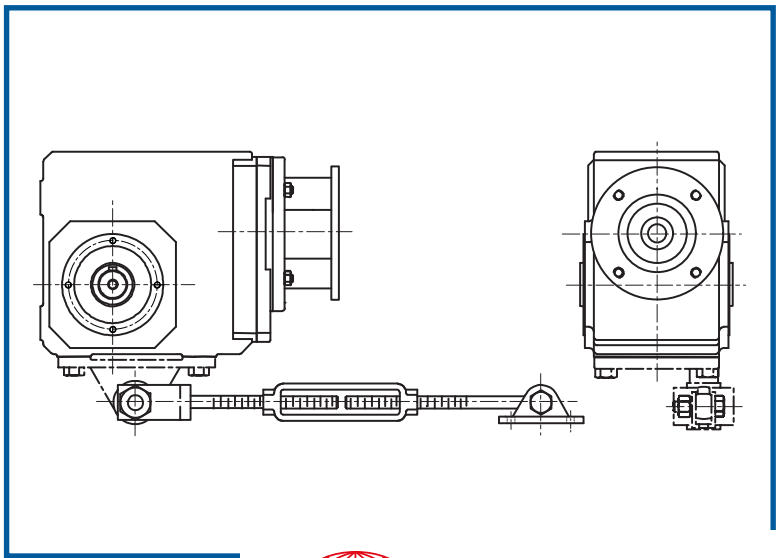
Unit with Torque Arm Bracket and Hollow Output

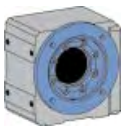
K513AGD0650

“K” Series – MGS Reducer
Torque Arm Mounting Method
(torque arm supplied by others)

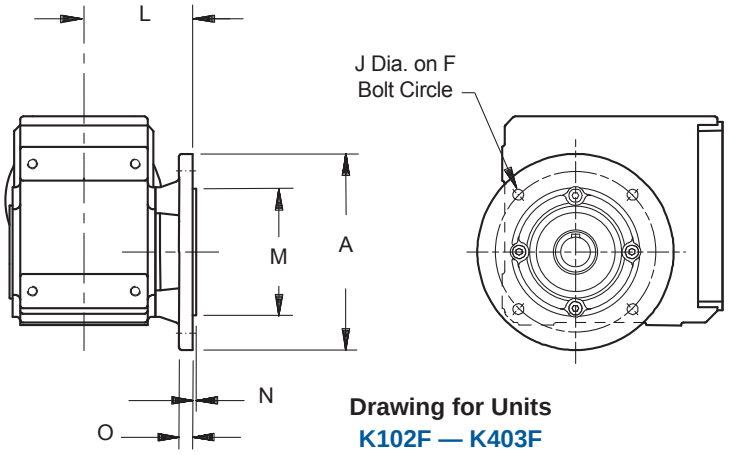




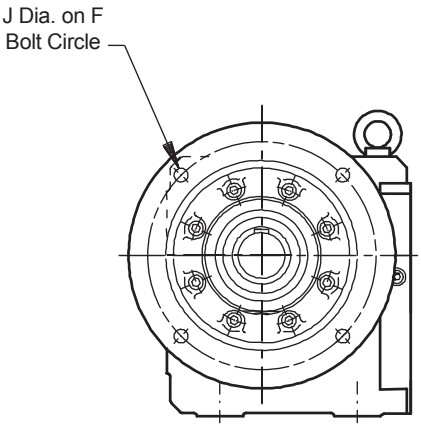




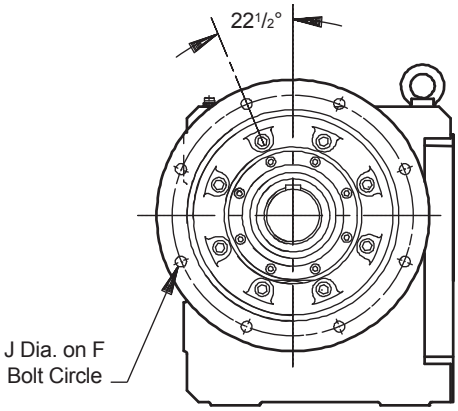
“K” Series – MGS Reducer
Optional Round Flanges



Drawing for Units
K102F — K403F



Drawing for Units
K513F — K814F



Drawing for Units
K913F — K1014F

Table No. 1 Flange Dimensions (Inches) – Standard and Optional

Base Module	Flange Size	A	F	J	L	M	N	O
K102	140	5.512	4.53	.35	3.35	3.740 +.001/-.0004	.12	.39
	160 *	6.300	5.12	.35	4.53	4.331 +.001/-.0004	.14	.39
K202/K203	160	6.300	5.12	.35	3.90	4.331 +.001/-.0004	.14	.47
	200 *	7.874	6.50	.43	5.31	5.118 +.001/-.0004	.14	.47
K302/K303	160	6.300	5.12	.35	4.37	4.331 +.001/-.0004	.14	.55
	200 *	7.874	6.50	.43	5.59	5.118 +.001/-.0004	.14	.55
K402/K403	250 *	9.843	8.46	.55	6.93	7.087 +.001/-.0004	.16	.59
K513/K514	250 *	9.843	8.46	.55	8.74	7.087 +.001/-.0004	.16	.59
K613/K614	300 *	11.811	10.43	.55	9.29	9.055 +.001/-.001	.16	.67
K713/K714	300	11.811	10.43	.55	6.18	9.055 +.001/-.001	.20	.71
	350 *	13.780	11.81	.71	10.91	9.842 +.000/-.001	.20	.71
K813/K814	350	13.780	11.81	.71	7.32	9.842 +.000/-.001	.20	.79
	400 *	15.748	13.78	.71	7.32	11.811 +.000/-.001	.20	.79
	450	17.717	15.75	.71	7.32	13.781 +.000/-.001	.20	.79
K913/K914	450 *	17.717	15.75	.71	8.46	13.780 +.000/-.001	.20	.91
K1013/K1014	550 *	21.654	19.69	.71	10.08	17.717 +.000/-.002	.20	.98

* This is the standard flange and will be shipped unless otherwise specified.
Optional flanges are not availabl

“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:

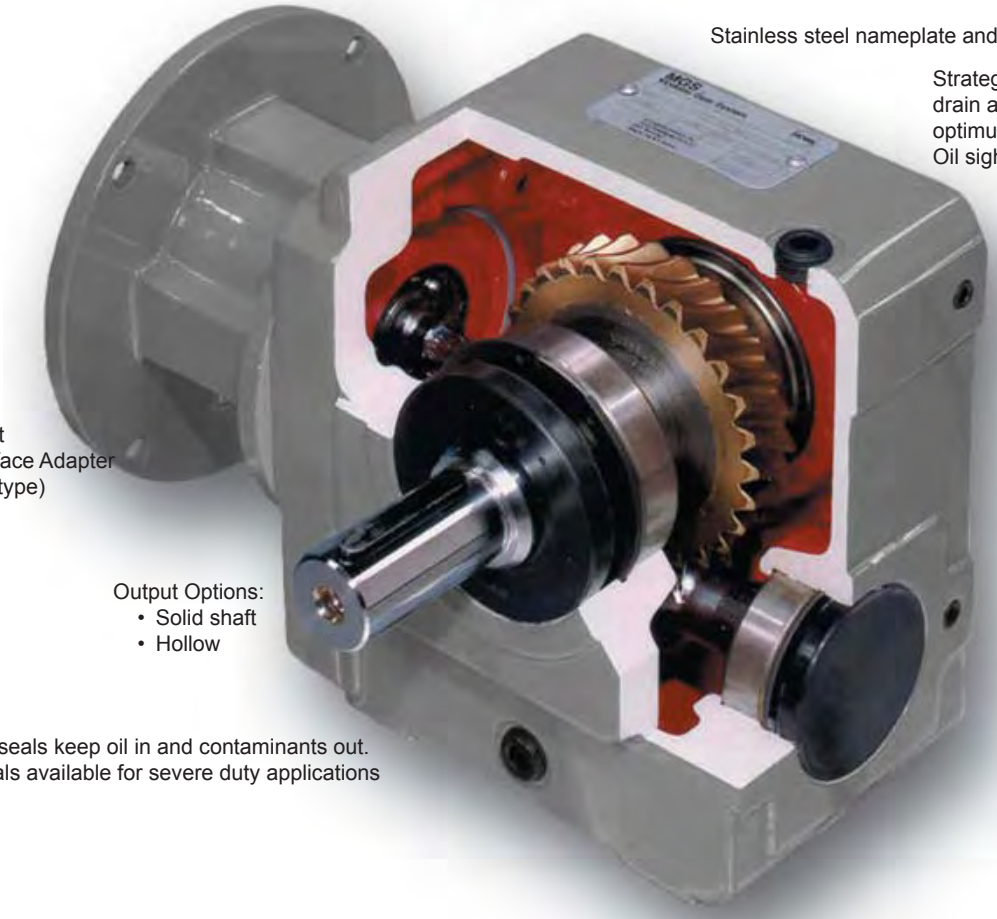
- Horsepower ratings from .12 to 8.19
- Output torques to 7,086 in. lbs.
- Output speeds available from 190 to 2.5 RPM
- Speed reducer ratios from 9.2:1 to 683:1
- 3 year warranty–your assurance of satisfactory product performance

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 ≤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

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

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

SHIPS in 1 DAY

“S” Series

Part No. Configurator
“S” Series – MGS Speed Reducers

Part No. Explanation

S	4	0	2	A	N	0280	MR200/	180
Series	Size	Generation	No. of Gear Stages	Output Style	Housing Style	Ratio:1	Motor Adapter	NEMA Frame Size

Series	S	Right Angle Helical/Worm (output is at a right angle to input; gears are helical and a worm gear set)
Size	4	Sizes available: S1, S2, S3, **S4**
Generation	0	Design generation: first generation 0, second generation **1**, etc.
No. of Gear Stages	2	Number of gear stages: **2**, 3, (determined by the ratio)
Output Style	A	Hollow output  Hollow output available: imperial and metric in some sizes.
	V	– Shaft output  **SPECIFY**: Shaft Side 3 or Side 4 (shown) or double.
Housing Style	N	Foot mounting  **SPECIFY**: Side 1 or Side 5
	F	– Output flange  **SPECIFY**: Side 3 or Side 4 (shown).
	G	– Tapped holes around the output 
	GD	– Torque arm mounting  **SPECIFY**: Side 1 or Side 5
Ratio	0280	Approximate ratio: **0280** = 27.9:1 (9.2:1 up to 683:1)
Motor Adapter	MR200/	Motor adapter size from Selection Data: MR140, MR160, **MR200**, MR250
NEMA Frame Size	180	Motor frame size determined by motor adapter: 050 (56C), 140 (143/145TC), **180** (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

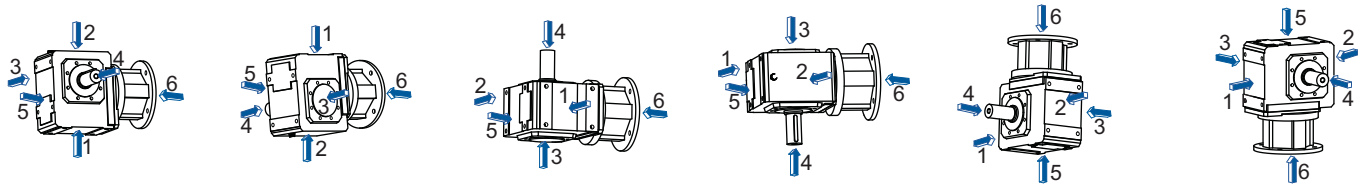
Mounting Position must be specified.

Part No. Configurator
“S” Series – MGS Speed Reducers

Mounting Positions – Standard 3 Year Warranty

Mounting Position MUST BE SPECIFIED.

Standard Oil: Mobilgear 600XP220



EL1 **EL2** **EL3** **EL4** **EL5** **EL6**

“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.

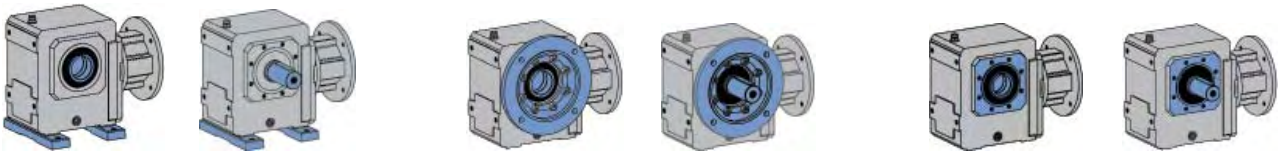
All STOBER units are filled with the correct amount of lubrication before shipping. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

For oil quantity in each size and mounting position, see our web site: ***us.stober.com/lubrication-quantity/index.html***.

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 [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							
190 RPM Output (Approximate)								**155 RPM**		**125 RPM**	
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
150 RPM Output (Approximate)								**125 RPM**		**100 RPM**	
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
125 RPM Output (Approximate)								**100 RPM**		**80 RPM**	
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
100 RPM Output (Approximate								**80 RPM**		**65 RPM**	
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

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210
C-Frame	56C	143/145TC	182/184TC	213/215TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10

"S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: S302**VG**0590.
[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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
75 RPM Output (Approximate)								**60 RPM**		**50 RPM**	
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
60 RPM Output (Approximate)								**50 RPM**		**40 RPM**	
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
50 RPM Output (Approximate)								**40 RPM**		**30 RPM**	
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
40 RPM Output (Approximate)								**30 RPM**		**25 RPM**	
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

For thermal HP capacity, see rating below.

Base Module	S1	S2	S3	S4
Thermal Capacity	2.95	5.36	7.38	12.34

See Page 124 for Part No. Co

“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	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
30 RPM Output (Approximate)								**25 RPM**		**20 RPM**	
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
25 RPM Output (Approximate)								**20 RPM**		**15 RPM**	
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
20 RPM Output (Approximate)								**15 RPM**		**13 RPM**	
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
15 RPM Output (Approximate)								**12 RPM**		**10 RPM**	
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
12 RPM Output (Approximate)								**10 RPM**		**8 RPM**	
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

NEMA Frame Size, TEFC, 1750 RPM

	050	140	180	210
C-Frame	56C	143/145TC	182/184TC	213/215TC
Motor HP	1/3 – 1 1/2	1, 1 1/2, 2	3, 5	7 1/2, 10

"S" Series – Right Angle Helical/Worm MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing and Output Style. Example: S302**VG**0590.
[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.

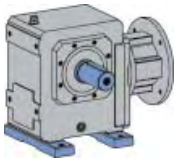
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [4] lbs.	1450 RPM Input		1160 RPM Input	
			Motor Adapter		Input Shaft						
Input HP	Output Torque in. lbs.		Size [3]	NEMA C-Frame				Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
10 RPM Output (Approximate)								**8 RPM**		**6 RPM**	
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
7 RPM Output (Approximate)								**6 RPM**		**5 RPM**	
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	7,085
1.12	7,086	S403_2260	MR160/	050, 140	AW160/012	226.200	2,925	0.92	7,086	0.75	7,086
6 RPM Output (Approximate)								**5 RPM**		**4 RPM**	
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
5 RPM Output (Approximate)								**4 RPM**		**3 RPM**	
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
4 RPM Output (Approximate)								**3 RPM**		**2.5 RPM**	
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
0.57	7,086	S403_4560	MR140/	050	AW140/010	455.500	2,925	0.47	7,086	0.38	7,086
3 RPM Output (Approximate)								**2.5 RPM**		**2 RPM**	
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
2.5 RPM Output (Approximate)								**2 RPM**		**1.5 RPM**	
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.

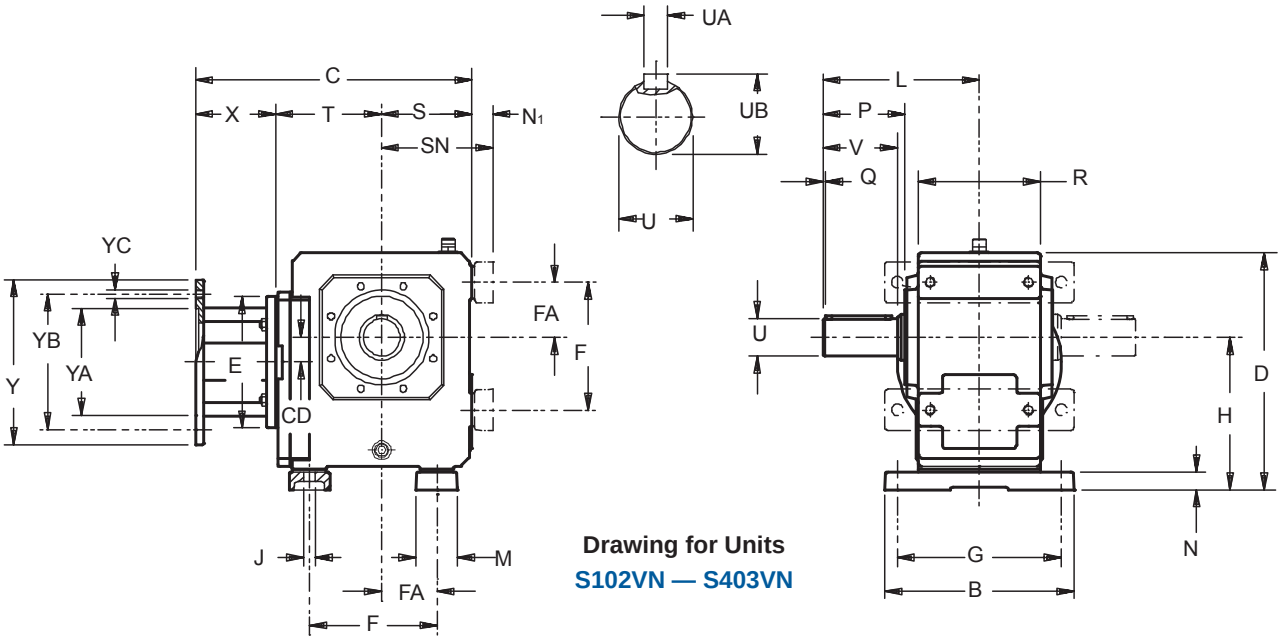
For thermal HP capacity, see rating below.

Base Module	S1	S2	S3	S4
Thermal Capacity	2.95	5.36	7.38	12.34

See Page 124 for Part No. Co



“S” Series – MGS Reducer
Foot Mount – “N” Housing
Shaft Output – Dimensional Data



Drawing for Units
S102VN — S403VN

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_1	P	Q	R	S	V	FA	SN
S102	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
S202/203	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
S302/303	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
S402/403	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.**

	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
S102	1.000	$^1/_4 \times ^1/_4 \times 1^1/_2$	1.11	25_{k6}	A8x7x40	28.0
S202/203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7x50	33.0
S302/303	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	40_{k6}	A12x8X70	43.0
S402/403	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	45_{k6}	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

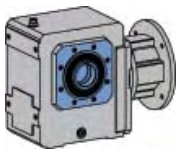
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36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

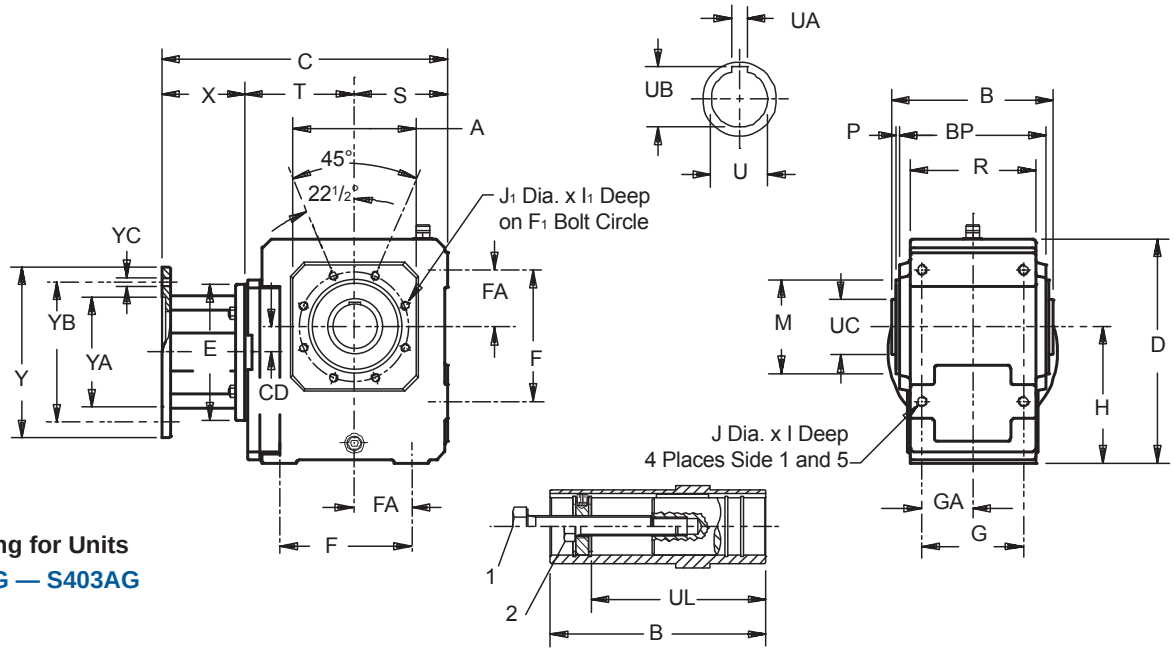
Table No. 4 **“S” Series – Foot Mounting Dimensions (Inches) – “N” Housing Style**

Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			Approx.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	Wt. lbs.
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] 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_1	G	H	I	I_1	J	J_1 [1]	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

[1] 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 U	UA	UB	Optional Bore - mm U	UA	UB	UC	UL	1
S102	1.000	.250	1.11	25_{H7}	8_{JS9}	28.3	1.57	3.86	1/2-13
S202/203	1.375	.312	1.52	35_{H7}	10_{JS9}	38.3	1.97	4.69	5/8-11
S302/303	1.500	.375	1.67	40_{H7}	12_{JS9}	43.3	2.17	5.39	3/4-10
S402/403	1.750	.375	1.92	50_{H7}	14_{JS9}	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

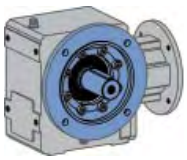
“S” Series – Tapped Holes Unit Dimensions (Inches) – “G” Housing Style

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

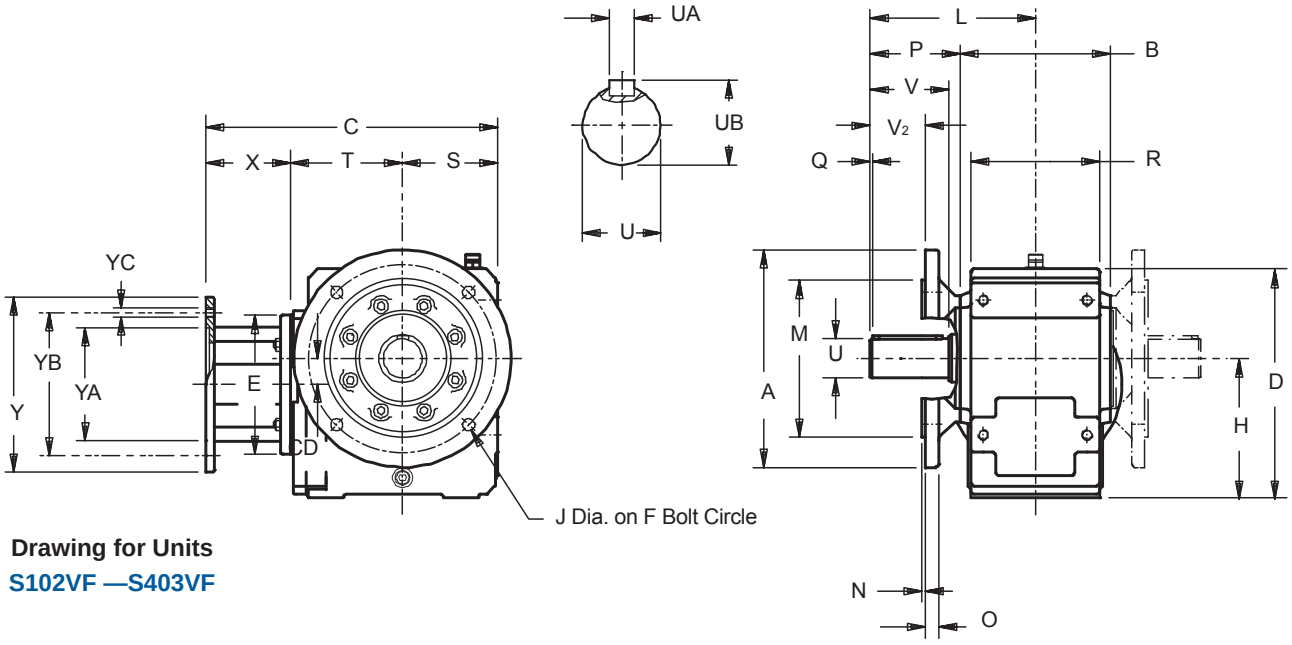
Table No. 4 **“S” Series –Tapped Holes Unit Dimensions (Inches) –”G” Housing Style**

Base Module	MR140/050 CD	C	T	MR160/140 [2] CD	C	T	MR200/180 CD	C	T	MR250/210 [3] CD	C	T	Approx. Wt. lbs.
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

[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] 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 [1]	B	D	F	H	J	L	M	N	O	P	Q	R	S	V	V_2
S102	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
S202/203	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
S302/303	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
S402/403	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

[1] See Page 135 for other flange sizes. Optional flanges are not available for all sizes.

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

	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
S102	1.000	$^1/_4 \times ^1/_4 \times 1^1/_2$	1.11	25_{k6}	A8x7x40	28.0
S202/203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7x50	33.0
S302/303	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	40_{k6}	A12x8X70	43.0
S402/403	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	45_{k6}	A14x9x80	48.5

“S” Series – MGS Reducer
Flange Mount – “F” Housing
Shaft Output – Dimensional Data

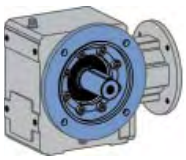


Table No. 3

“S” Series – Round Flange Unit Dimensions (Inches) – “F” Housing Style

Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
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– Round Flange Unit Dimensions (Inches) –”F” Housing Style

Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			Approx
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	Wt. lbs.
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

[1] Also available as **MR160/050** for a NEMA 56C frame motor.
[2] 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)

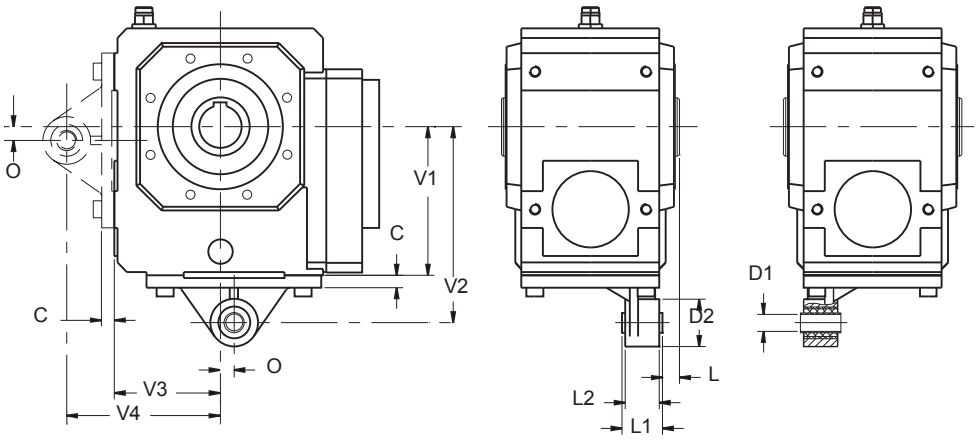


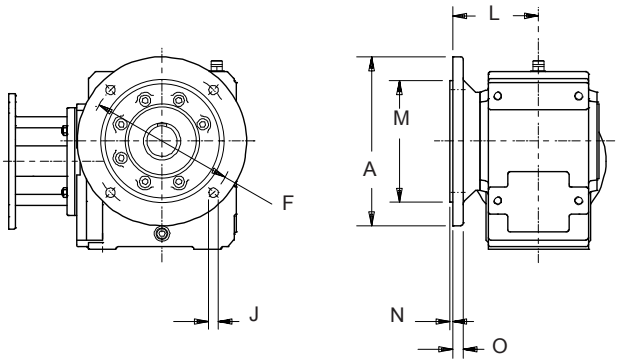
Table No. 1 **“S” Series – Torque Arm Bracket Dimensions (Inches)**

Base Module	C	D1 H9	D2	L	L1	L2	O	V1	V2	V3	V4
S102	.39	.47 +0.017/-.000	1.69	.51	1.10	.94	.20	3.93	5.12	2.76	3.93
S202/S203	.47	.63 +0.017/-.000	1.77	.57	1.50	1.26	.22	4.72	6.10	3.35	4.72
S302/S303	.47	.63 +0.017/-.000	1.77	.63	1.50	1.26	.51	5.51	7.28	3.93	5.71
S402/S403	.55	.79 +0.020/-.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



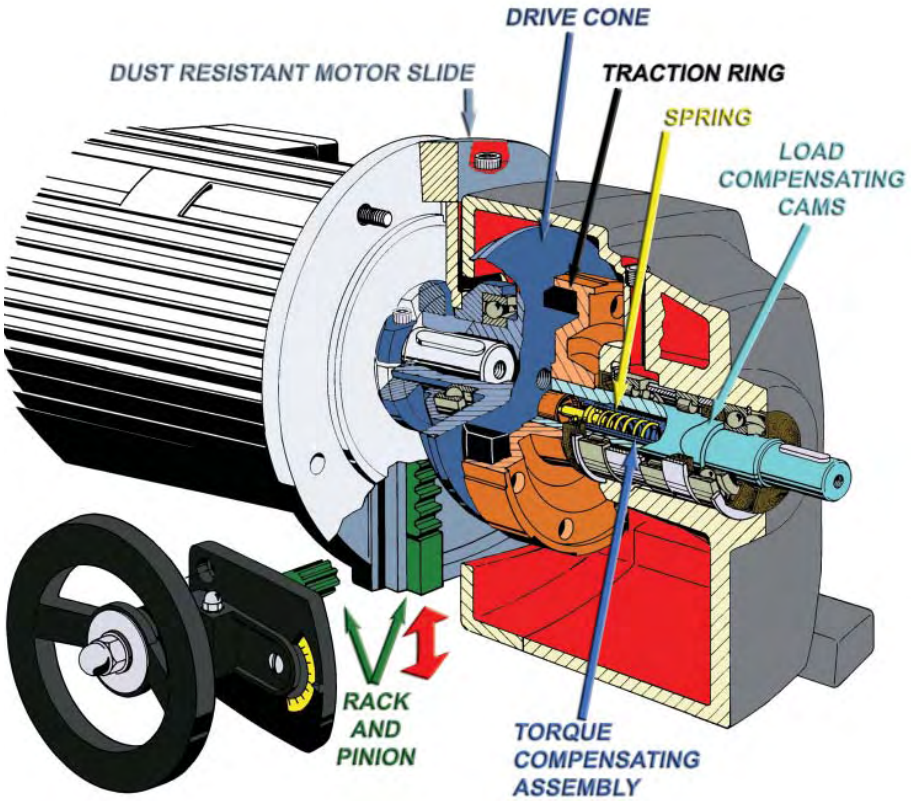
Drawing for Units
S102F — S403F

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 +.001/-.0004	.12	.39
	160 *	6.300	5.12	.35	4.53	4.331 +.001/-.0004	.14	.39
S2	160	6.300	5.12	.35	4.13	4.331 +.001/-.0004	.14	.55
	200 *	7.874	6.50	.43	4.13	5.118 +.001/-.0004	.14	.55
S3	**250***	9.843	8.46	.55	4.58	7.087 +.001/-.0004	.16	.59
S4	**250 ***	9.843	8.46	.55	4.96	7.087 +.001/-.0004	.16	.59

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

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.

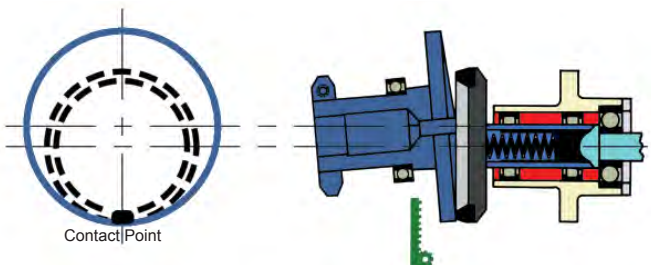
As the drive is started, the l**oad compensating cams** move against each other to increase pressure between the **drive cone** and **traction ring**. During operation, the **load compensating cams** maintain the proper amount of pressure between the **drive cone** and **traction ring** in proportion 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.

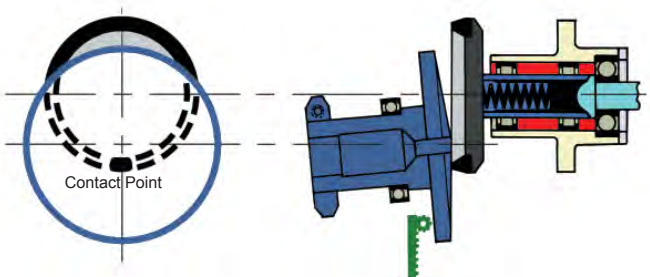
Movement of the motor and **drive cone** are accomplished through the use of a **handwheel** attached to a **rack and pinion**. By turning the **handwheel**, the motor is easily raised or lowered on the **dust resistant motor slide**. Speed changes can also be made through the use of an optional electric 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:

STOBER 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

STOBER'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 resistent 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.

Miscellaneous

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 [1]	**C**	Concentic Helical (output and input are 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 ($^{10}/_{16}$ = $^{5}/_{8}$), **012** ($^{12}/_{16}$ = $^{3}/_{4}$), 014 ($^{14}/_{16}$=$^{7}/_{8}$), 102 ($1^{2}/_{16}$=$1^{1}/_{8}$),110 ($1^{10}/_{16}$=$1^{5}/_{8}$), 202 ($2^{2}/_{16}$=$2^{1}/_{8}$)

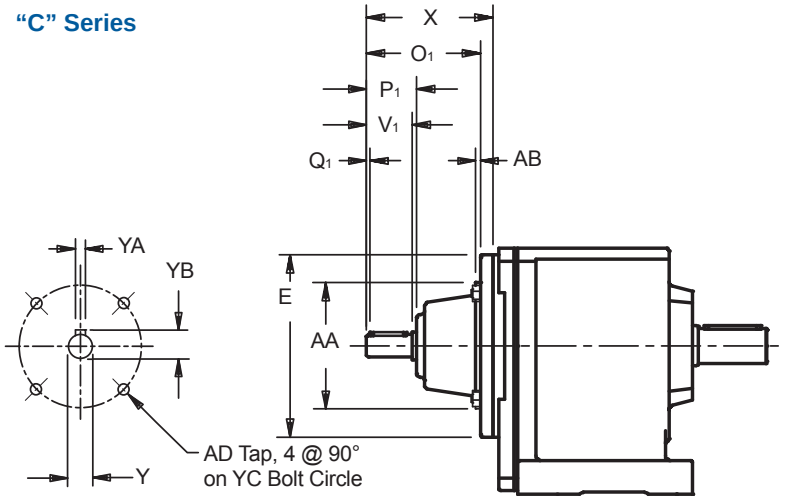
[1] The AW input is available with the standard housing and output styles in MGS Series, “C”, “F”, “K”, and “S”. See the Selection Tables for the size that is available in each ratio.

Mounting distance information is required the same as when using a motor adapter.

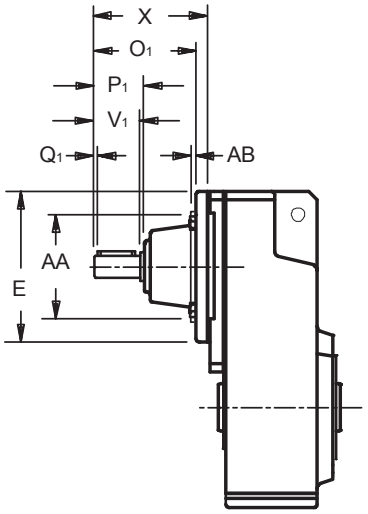
An AW input is not available with the Long Life warranty or food and beverage.

MGS Reducer
AW Input Shaft
Dimensional Data

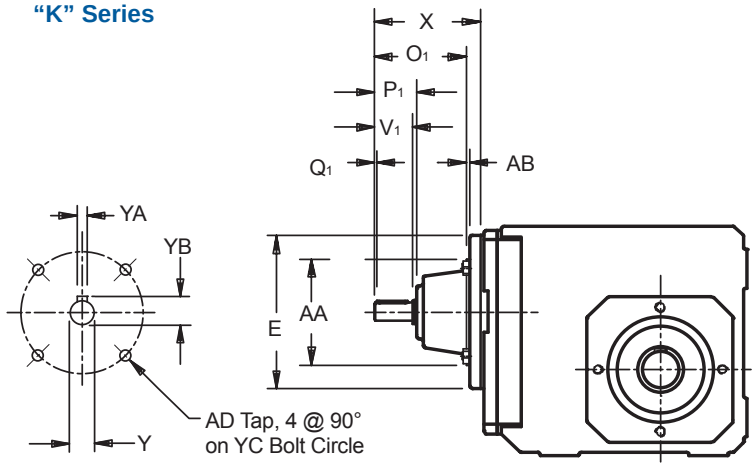
"C" Series



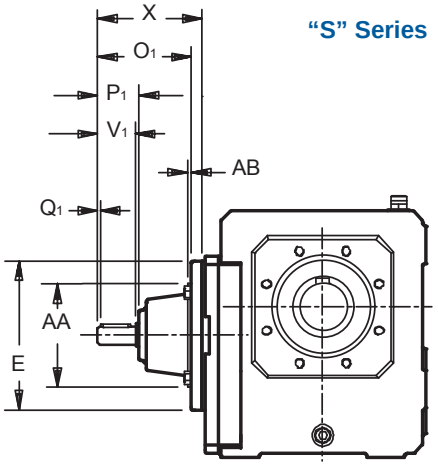
"F" Series



"K" Series



"S" Series



Part No. Example

Tapped Holes, Hollow Output with Input Shaft

S302AG0620 AW160/012

Table No. 1 **"AW" Input (Inches)**

Input Shaft Part No.	E	O_1	P_1	Q_1	V_1	X	Y	AA	AB	AD	YA – Key	YB	YC	Wt. lbs.	Overhung Load lbs.
AW140/010	5.51	3.58	1.38	.12	1.25	4.02	.6250	3.740	.16	M8×1.25	$^3/_{16} \times ^3/_{16} \times ^{31}/_{32}$	.71	4.53	8	98
AW160/012	6.30	4.21	1.69	.12	1.50	4.69	.7500	4.331	.18	M8×1.25	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	5.12	12	196
AW200/014	7.87	5.00	1.97	.16	1.75	5.51	.8750	5.118	.16	M10×1.5	$^3/_{16} \times ^3/_{16} \times 1^7/_{16}$	.96	6.50	18	333
AW250/102	9.84	7.20	2.48	.20	2.25	7.80	1.1250	7.087	.16	M12×1.75	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.24	8.46	31	680
AW300/110	11.81	8.39	3.54	.24	3.25	9.02	1.6250	9.055	.20	M12×1.75	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	10.43	51	1,072
AW350/202	13.78	10.83	4.88	.28	4.50	11									

Miscellaneous

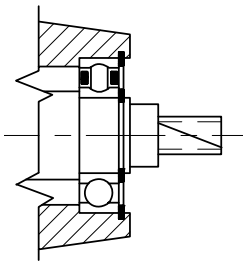
MGS Speed Reducer Backstops

DO NOT USE BACKSTOPS ON MAN LIFTS!

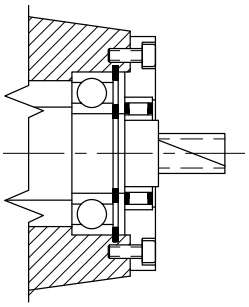
The direction of rotation of the OUTPUT *must* be specified when ordering a unit with a backstop.

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
AWB140/010	.625	2.1
AWB160/012	.750	10.4
AWB200/014	.875	18.2
AWB250/102	1.125	29.1
AWB300/110	1.625	40.5
AWB350/202	2.125	54.0

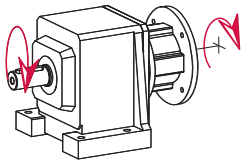
Table No. 2 MR with Backstop

Adapter Part No.	NEMA Frame	Max. HP * @ 1750 RPM
MRB140/050	56C	2.1
MRB160/050	56C	10.4
MRB160/140	143/145TC	10.4
MRB200/050	56C	18.2
MRB200/140	143/145TC	18.2
MRB200/180	182/184TC	18.2
MRB250/180	182/184TC	29.1
MRB250/210	213/215TC	29.1
MRB300/180	182/184TC	40.5
MRB300/210	213/215TC	40.5
MRB300/250	254/256TC	40.5
MRB300/280	284/286TC	40.5
MRB350/320	324/326TC	54.0
MRB350/360	364/365TC	54.0

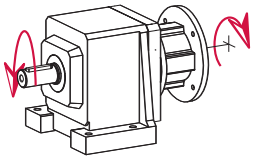
* HP ratings shown are based on 2.0 Service Factor. Maximum HP must not be exceeded.

MGS Reducers
Standard Direction of Rotation

"C" Series – Concentric Helical

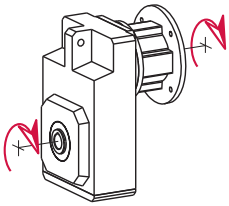


C002 – C912
Input and Output Rotate the Same Direction

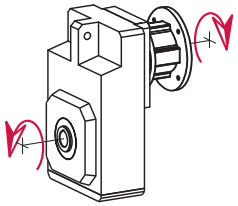


C103 – C913
Input and Output Rotate Opposite Direction

"F" Series – Offset Helical

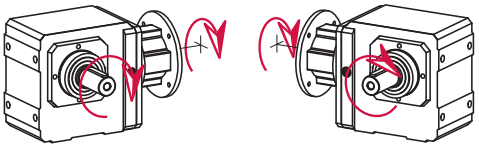


F102 – F602
Input and Output Rotate the Same Direction



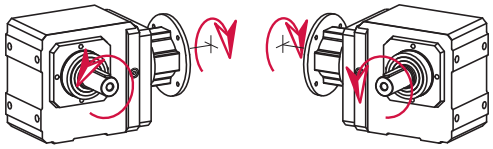
F203 – F603
Input and Output Rotate Opposite Direction

"K" Series – Right Angle Helical/Bevel



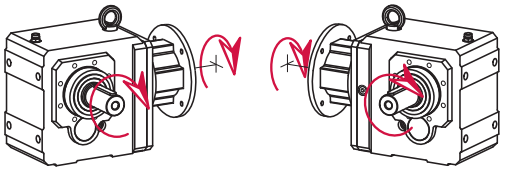
Shaft Side 4 Shaft Side 3

K102 – K402
CCW Input and CW Single Output



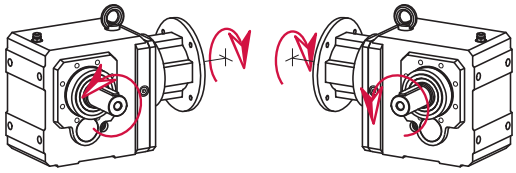
Shaft Side 4 Shaft Side 3

K203 – K403
CCW Input and CCW Single Output



Shaft Side 4 Shaft Side 3

K513 – K1013
CCW Input and CW Single Output



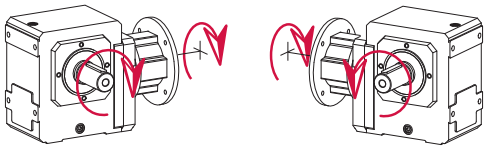
Shaft Side 4 Shaft Side 3

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

STOBER

Table No. 1 Conversions

Imperial to Metric

1 inch	x	25.4	=	mm
1 in²	x	645.16	=	mm²
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 in²	x	.00029	=	kgm²
1 PSI	x	.0689	=	bar
1 PSI	x	.00689	=	N/mm²
		°F	=	32 + 9/5 x °C

Metric to Imperial

mm	x	.03937	=	inch
1 mm²	x	.0015	=	in²
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 kgm² (J)	x	3418.0	=	lb in² (WR²)
1 bar	x	14.5	=	PSI
1 N/mm²	x	145.04	=	PSI
		°C	=	5/9 (°F-32)

Table No. 2 Formulas

1 HP = 54 in.lbs @ 1160 RPM

1 HP = 36 in.lbs @ 1750 RPM

$$HP = \frac{\text{Force x FPM}}{33{,}000}$$

$$HP = \frac{\text{T in.lbs. x RPM}}{63{,}025}$$

$$HP = \frac{\text{T ft.lbs. x RPM}}{5{,}252}$$

$$\text{T in.lbs.} = \frac{63{,}025 \times HP}{RPM}$$

$$\text{T ft.lbs.} = \frac{5{,}252 \times HP}{RPM}$$

FPM = .2618 x Dia. x RPM

$$RPM = \frac{FPM}{.2618 \times \text{Dia.}}$$

$$RPM = \frac{63{,}025 \times HP}{\text{Torque}}$$

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	+.0000 / -.0005	1.97 – 3.15	+.0000 / -.0008
.71 – 1.18	+.0000 / -.0006	3.15 Up	+.0000 / -.0009
1.18 – 1.97	+.0000 / -.0007		

"F", "K", and "S" Series Reducers

Table No. 4 Hollow Output — "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		

All Series Reducers with Input Shaft

Table No. 5 Pilot Diameter — "AA" Dimension

Dia. Range	Tolerance	Dia. Range	Tolerance
3.15 – 4.72	+.0007 / -.0005	9.06 – 12.40	+.0012 / -.0008
4.72 – 7.09	+.0008 / -.0006	12.40 Up	+.0014 / -.0009
7.09 – 9.06	+.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	+.0005 / -.0003	>7.09 to 9.84	+.0006 / -.0005
>3.15 to 4.72	+.0005 / -.0004	>9.84 to 12.40	+.0006 / -.0006
>4.72 to 7.09	+.0006 / -.0004	>12.40 to 15.74	+.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	+.0007 / -.0005	7.09 – 9.84	+.0012 / -.0008
3.15 – 4.72	+.0008 / -.0006	9.84 – 12.40	+.0014 / -.0009
4.72 – 7.09	+.0010 / -.0007		

All Series Reducers

Table No. 8 Keyway Width — "UA" Dimension

Bore Range	Tolerance
All Sizes	+.0019 / -.0000

Table No. 9 Thermal Ratings

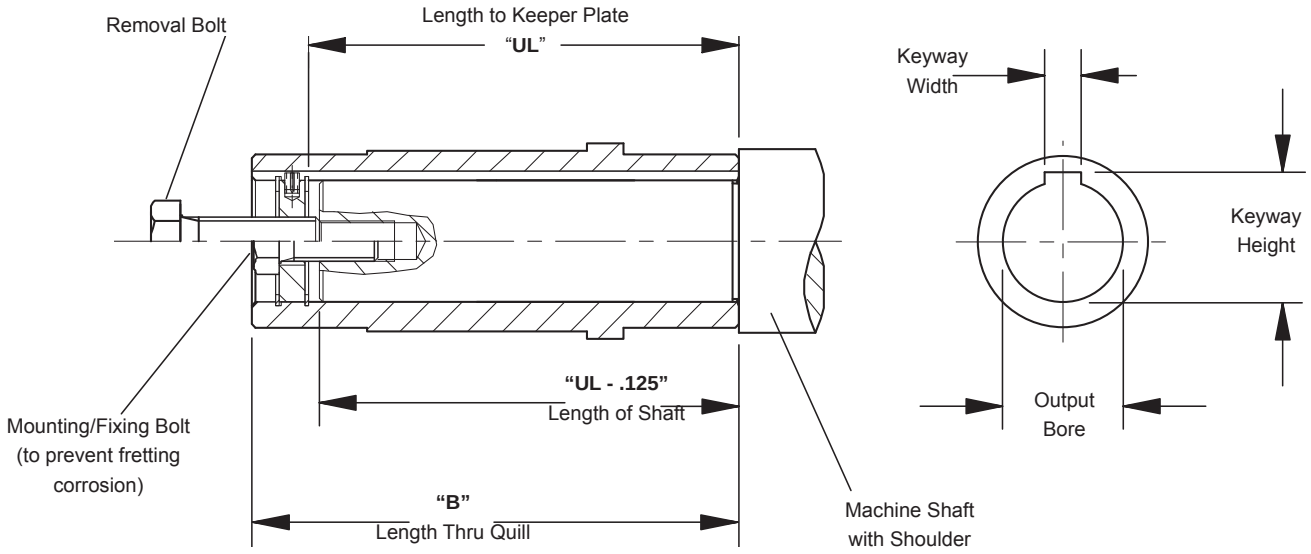
HP	kW	Base Modules			
2.95	2.2	C0	F1	K1	S1
5.36	4.0	C1	F2	K2	S2
7.38	5.5	C2	F3	K3	S3
12.34	9.2	C3	F4	K4	S4
14.75	11.0	C4	F6	K5	—
20.12	15.0	C5	—	K6	—
29.50	22.0	C6	—	K7	—
40.23	30.0	C7	—	K8	—
53.64	40.0	C8	—	K9	—
67.05	50.0	C9	—	K10	—

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
F1	.750	2.67	3/8-16 NC	KL2	.750	3.13	3/8-16 NC	S1	1.000	3.86	1/2-13 NC
F2	1.000	3.62	1/2-13 NC	K1	1.000	3.86	1/2-13 NC	S2	1.375	4.69	5/8-11 NC
F3	1.250	4.06	1/2-13 NC	K2	1.187	4.78	1/2-13 NC	S3	1.500	5.39	3/4-10 NC
F4	1.500	4.49	3/4-10 NC	K3	1.375	4.92	5/8-11 NC	S4	1.750	6.24	3/4-10 NC
F6	2.000	5.63	3/4-10 NC	K4	1.500	6.18	3/4-10 NC				
				K5	2.000	6.46	3/4-10 NC				
				K6	2.000	7.05	3/4-10 NC				
				K7	2.375	8.43	1-8 NC				
				K8	2.750	10.35	1-8 NC				
				K9	3.250	11.89	1-8 NC				
				K10	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			

Miscellaneous

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 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" mm	"XL" inches	Adapter Part No.	"XL" mm	"XL" inches
MR140/050	24.5	.96	MR250/210	34	1.3
MR160/050	28	1.1	MR300/180	56	2.2
MR160/140	26	1.0	MR300/210	54	2.1
MR200/050	39	1.5	MR300/250	52	2.0
MR200/140	41	1.6	MR300/280	52	2.0
MR200/180	31	1.2	MR350/320	64	2.5
MR250/180	36	1.4	MR350/360	64	2.5
Location of "MS–R" Motor Coupling					
MS_1R050	24.5	.96	MS_3R050	28	1.1
MS_2R050	28	1.1	MS_3R140	26	1.0
MS_2R140	26	1.0			
Location of "ML" Motor Coupling					
ML2R050	24.5	.96			

"XL" Tolerance = +1mm / -0mm (+0.040 / -0.000 inches)

Step 2. Tighten the Setscrew[1)]

With the coupling hub located at the correct distance, tighten the setscrew in the coupling.

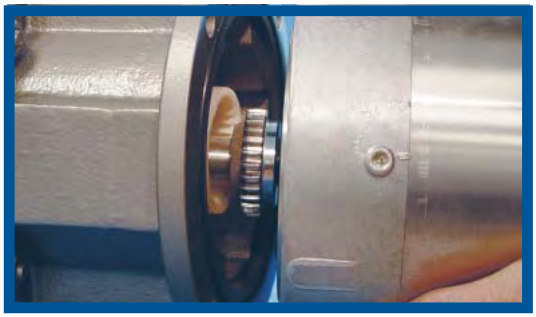
Step 3. Secure the Motor Key

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.

[1)] Setscrews are NOT located over the key in som

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 ±.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.

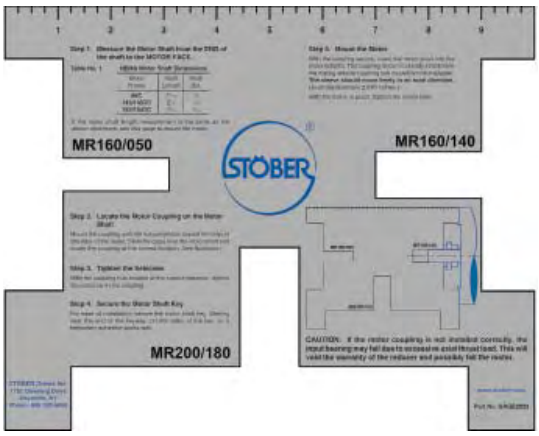
WHEN INSTALLING A FOOD DUTY REDUCER:

Miscellaneous

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 adaper (MR160/050, MR160/140 and MR200/180).



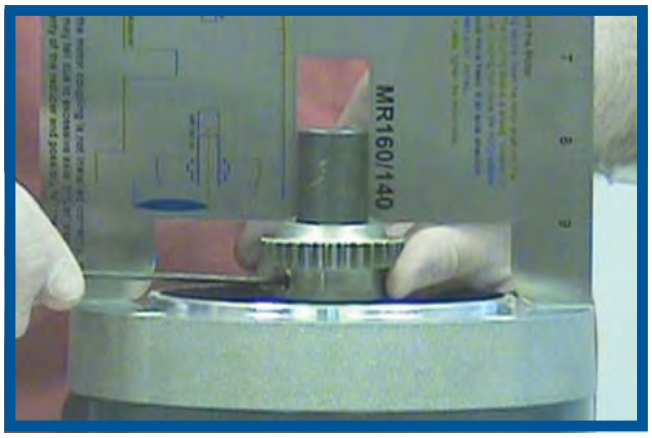
This simple-to-use gage rapidly positions the motor coupling hub on the shaft.

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*.

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.

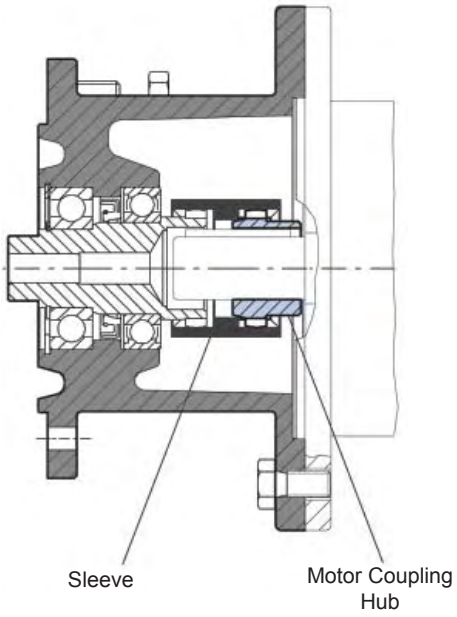
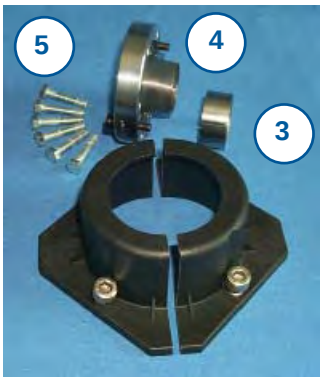


Table No. 2
Couplings Used with MR Motor Adapters

Adapter	NEMA Frame	Motor Hub	Sleeve
MR140/050	56C	M-19 x 5/8	M-19
MR160/050	56C	M-24 x 5/8	M-24
MR160/140	143/145TC	M-24 x 7/8	M-24
MR200/050	56C	M-32 x 5/8	M-32
MR200/140	143/145TC	M-32 x 7/8	M-32
MR200/180	182/184TC	M-32 x 1 1/8	M-32
MR250/180	182/184TC	M-38 x 1 1/8	M-38
MR250/210	213/215TC	M-38 x 1 3/8	M-38
MR300/180	182/184TC	M-48 x 1 1/8	M-48
MR300/210	213/215TC	M-48 x 1 3/8	M-48
MR300/250	254/256TC	M-48 x 1 5/8	M-48
MR300/280	284/286TC	M-48 x 1 7/8	M-48
MR350/320	324/326TC	M-65 x 2 1/8	M-65
MR350/360	364/365TC	M-65 x 2 3/8	M-65
Couplings Used with MS_R Motor Adapters			
MS1R050	56C	M-19 x 5/8	M-19
MS2R050	56C	M-24 x 5/8	M-24
MS2R140	143/145TC	M-24 x 7/8	M-24
MS3R050	56C	M-24 x 5/8	M-24
MS3R140	143/145TC	M-24 x 7/8	M-24
Couplings Used with ML Motor Adapters			
ML2R050	56C	M-19 x 5/8	M-19

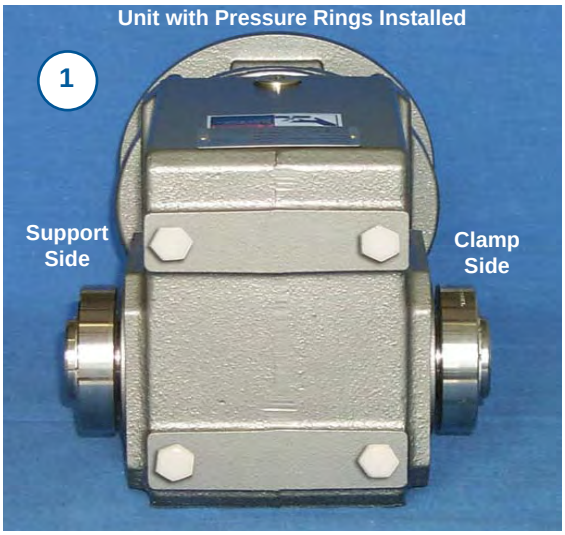
Miscellaneous

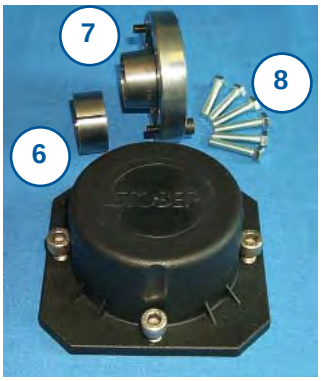
“K” Series – MGS Helical/Bevel Reducer
“WFB” – Wobble Free Bushing
Installation Instructions



Support Side
Bushing Components

The Support Side is the bushing with the coating on the cone. Do NOT use cleaner on the coated cone.

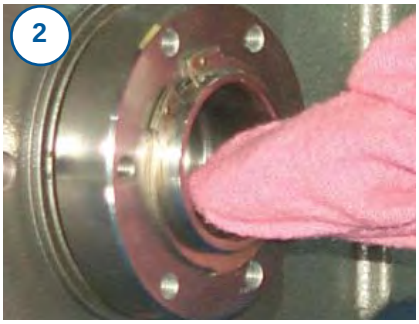




Clamp Side
Bushing Components

Support Side Installation

K1 units do not have a tapered cone.



Be sure the inside of the quill is free of grease and oil before installing the tapered cones.

Install the Flanged Cone Assembly (4) with it’s slot opposite the slot in the tapered cone (3).

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.

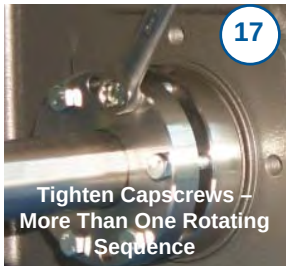
Clamp Side Installation

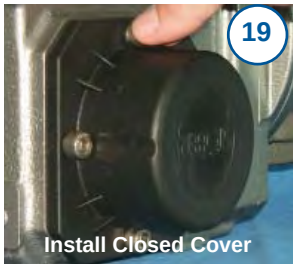
K1 units do not have a tapered cone.

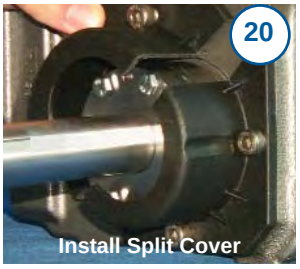
Install the Flanged Cone Assembly (7) with it’s slot opposite the slot in the tapered cone (6).

Miscellaneous

"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.

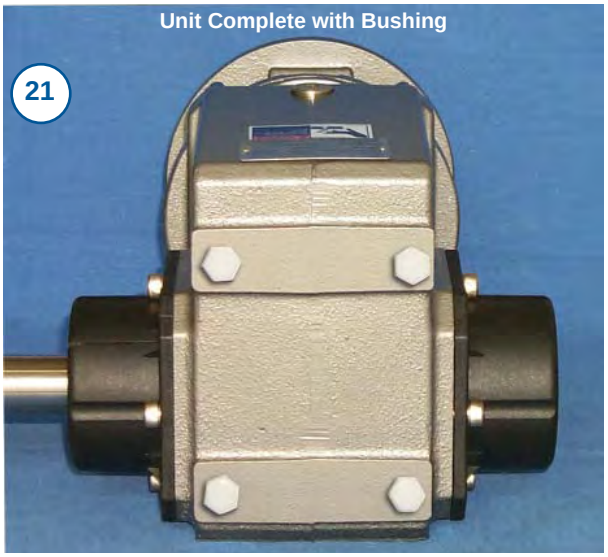


Table No. 1

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			

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).

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.

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STOBER MGS Speed Reducers 2011