MGS™ Speed Reducers

Performance, Reliability, Quality

3 YEAR WARRANTY

STANDARD 3-DAY DELIVERY

STÖBER

"we don't say we're best...our customers do"

www.stober.com

MGS™ Speed Reducers

Safety Instructions

In order to obtain long life and trouble-free operation from your MGS speed reducer, it is essential that the proper installation and operating procedures be followed. Failure to follow these instructions will void the drive's warranty.

The torque required by the application must not exceed the reducer torque capacity shown on the nameplate. For safety purposes, a safety coupling should be installed between the reducer and the driven load. Otherwise, overload may cause damage to the interior parts of the reducer which may result in breaking the reducer housing. As a result, persons could be injured by flying parts or splashing hot gear oil.

If you have questions about the installation, operation or maintenance of your MGS unit, please contact your local STOBER distributor or STOBER Technical Support for assistance.

WARNING: Safety is the most important consideration when operating any type of drive. Through proper application, safe handling methods, and wearing appropriate clothing, you can prevent accidents and injury to yourself and fellow workers.

The shafts of MGS speed reducers rotate at very high speeds and can cut off or severely injure hands, fingers, and arms. Use appropriate guards for shafts and other rotating parts at all times. Follow all directions in the service instruction manual. Obey all federal, state and local safety regulations when operating the drive.

- Always be sure electrical power is off while making electrical connections and during installation and maintenance of the unit.
- Keep clothing, hands, and tools away from ventilation openings on motors and from all rotating parts during operation.
- Lift the drive with a double rope sling or other proper lifting equipment of adequate strength. Make sure load is secured and balanced to prevent shifting when unit is being moved. Lifting drives by hand may be dangerous and should be avoided.
- The intended use of lifting lugs is to handle the weight of the unit only. Never use a lifting lug to lift attached assemblies.
- Never operate drive at speeds higher than those shown on the nameplate, or personal injury may result. Contact STOBER Drives Inc., if there is any change of operating conditions from those for which the unit was originally sold (as stamped on the nameplate). Failure to comply could result in personal injury and or machinery damage.
- Always follow good safety practices at all times.

Each drive is tested before delivery. Before installation, however, it is advisable to examine the unit for possible damage which might have occurred during transit. If damage is discovered, it should be immediately reported to the transport agent.

If installation is delayed after receipt of the MGS speed reducer, the drive should be stored in a clean, dry place until put into service. Long term storage requires special procedures. If not kept in a heated, dry area, consult STOBER Drives, Inc. for storage instructions.

NOTE: If it is necessary to clean drive shafts, take care to protect the oil seals.

IMPORTANT: Do not use any device to hammer the unit onto the output shaft during installation since the bearing races could be damaged.

Maintenance and lubrication information can be found beginning on Page 180 of this catalog.

Table of Contents

PTDA Member

MGS™ Speed Reducers
The STOBER difference = VALUE for you!

Engineered – Structural Rigidity

Engineered – Precision Gearing Process

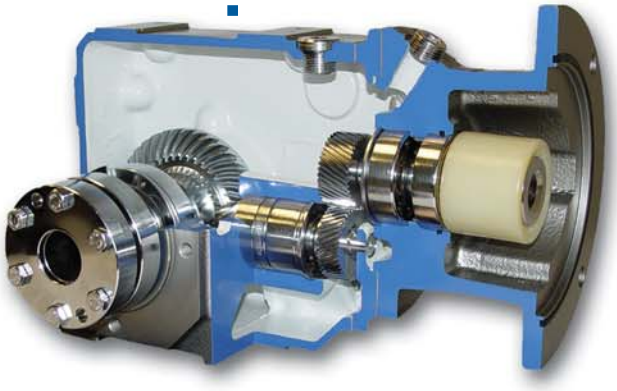
- blanked
- turned
- rough milled
- case hardened (61 RC)
- grinding
  - bearing seat
  - pinion outside diameter

3 YEAR WARRANTY

Engineered – High Quality Bearings

Tight Tolerance – Reduced Clearance
Crowned cage for optimal lubricant flow

- improved ball guidance
- fast lubrication film formation
- reduced friction
- lower running noise
- eliminates cage ejections



Attention to Detail – Robustness

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

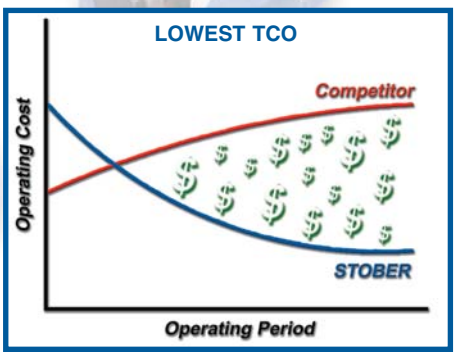
MGS™ Speed Reducers
Reliability, Adaptability, Maintainability

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

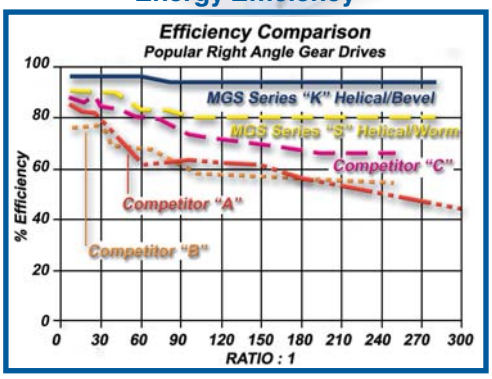
STANDARD 3-DAY DELIVERY

SAME DAY EMERGENCY SHIPPING

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



Energy Efficiency



Notes

Food, Beverage, and Poultry Duty Speed Reducers

3 YEAR WARRANTY

3-DAY DELIVERY

STÖBER

www.stober.com

Supreme Food Duty – "KE" Series
MGS Reducers Right Angle Helical/Bevel with Double Bushing

STOBER Drives Inc. is proud to introduce the newly engineered Supreme Food Duty speed reducer. Drawing on the proven high efficiency gearing of the MGS line, then packaging that efficiency into a specialized housing, this new unit is optimized for the harsh environments of the food industry. The features shown below meet the criteria set forth by the American food industry like no other unit available today.

Performance Specifications:

- Up to 5 HP
- Output Bore Diameters up to 1 1/2 inch
- Ratios up to 70:1
- NEMA C-face for 56C through 182/184TC
- Maintenance free – Lubricated for Life
- Cleanable to a microbiological level
- All units feature Silver Bullet Anti-Microbial™ coating

SILVER BULLET AM™

Made to food industry compatiable materials specifications –
NO harborage points
NO niches
NO product or liquid collections

Integral torque arm bracket for universal mounting

Uses the patented (U.S. Patent Number 5,496,127) Stainless Steel Double Sided Bushing Mounted into Stainless Steel Output Quill – easily installs onto standard cold finished, ground, or stainless shafting

Provided with sealed output covers

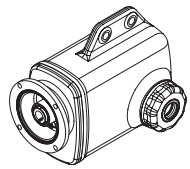
Mounts in any horizontal output position without changing oil level
Shipped filled with Mobile SHC630

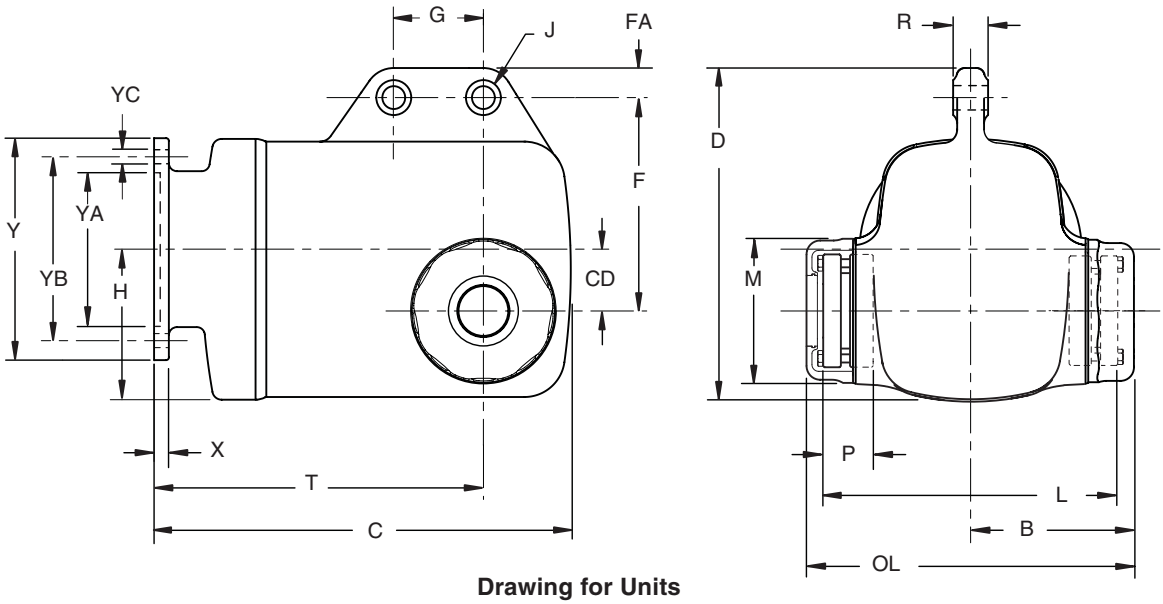
Part No. Explanation

KE 4 0 2 W B 0100 MR160 / 140 F – 108

- **K**E – "**K**" Right Angle Helical/Bevel Suprem**E** Food Duty
- KE**4** – Unit Size No.
- KE4**0** – Design Generation
- KE4**2** – No. of Stages (**2** = 2 Stage)
- KE4**W** – Output Style – "**W**" Wobble Free Bushing
- KE4W**B** – **B**asic Housing Style
- KE4WB**0100** – Nominal Ratio: (**0100** =10:1)
- KE4WB0100 **MR160** / 140 F – 108 – Motor Adapter Size: MR140, **MR160**, MR200
- KE4WB0100 MR160 / **140** F – 108 – 050 (56C), **140** (143/145TC), 180 (182/184TC)
- KE4WB0100 MR160 / 140 **F** – 108 – **F** – **F**ood Duty Coating
- KE4WB0100 MR160 / 140 F – **108** – Bushing Bore (**108** = 1 and 9/16, 1 1/2) Must be specified.

Supreme Food Duty – "KE" Series
Basic Unit – "B" Housing
Double Bushing – Dimensional Data





Drawing for Units
KE202WB — KE402WB

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

Unit Number	B	D	F	G	H	J	L	M	P	R	CD	FA	OL
KE2	4.78	9.72	6.25	2.625	4.41	.67	8.62	4.17	1.46	1.02	1.77	.87	9.57
KE3	5.02	10.75	6.75	3.000	5.06	.67	9.09	4.17	1.46	1.02	2.07	.96	10.04
KE4	5.77	12.17	7.44	3.500	5.89	.83	10.67	4.76	1.69	1.22	2.36	1.18	11.54

Table No. 2 **"KE" Series Dimensions (Inches)**

Unit with Motor Adapter	NEMA C-Flange	C	T	X	Y	YA	YB	YC	Wt. lbs.
KE202WB_MR160/050F	56C	12.20	9.65	.43	6.50	4.500	5.87	.41	53
KE202WB_MR160/140F	143/145TC	12.20	9.65	.43	6.50	4.500	5.87	.41	53
KE302WB_MR160/050F	56C	13.38	10.43	.43	6.50	4.500	5.87	.41	63.5
KE302WB_MR160/140F	143/145TC	13.38	10.43	.43	6.50	4.500	5.87	.41	63.5
KE402WB_MR160/050F	56C	14.76	11.22	.43	6.50	4.500	5.87	.41	94
KE402WB_MR160/140F	143/145TC	14.76	11.22	.43	6.50	4.500	5.87	.41	94
KE402WB_MR200/180F	182/184TC	15.75	12.20	.51	9.00	8.500	7.25	.55	99

Table No. 3 **"WFKE" Double Side Bushings**

	Stock Bores Sizes					
Unit	1	$1\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{7}{16}$	$1\frac{1}{2}$
KE2	**WFKE2-100**	**WFKE2-103**	**WFKE2-104**	**WFKE2-106**	**WFKE2-107**	**WFKE2-108**
KE3	**WFKE3-100**	**WFKE3-103**	**WFKE3-104**	**WFKE3-106**	**WFKE3-107**	**WFKE3-108**
KE4	**WFKE4-100**	**WFKE4-103**	**WFKE4-104**	**WFKE4-106**	**WFKE4-107**	**WFKE4-108**

Bushing Part No. Explanation

WFKE 4 – 107

- **107** = Output Bore in inches – $1\frac{7}{16}$
- **4** = Base Module Size example: KE402
- **WFKE** = **W**obble **F**ree Double Side for **KE** Supreme Food Duty Unit

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

Selection Procedure:

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**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
430 RPM Output (Apprpoximate)							**360 RPM**		**290 RPM**		**215 RPM**	
6.84*	956	KE202WB0040	MR160/050F	56C	4.000	312	5.98*	1,023	5.20	1,097	4.29	1,207
6.84*	956	KE202WB0040	MR160/140F	143/145TC	4.000	312	5.98*	1,023	5.20	1,097	4.29	1,207
12.0*	1,675	KE302WB0040	MR160/050F	56C	4.000	468	10.5*	1,792	9.10*	1,921	7.51*	2,114
12.0*	1,675	KE302WB0040	MR160/140F	143/145TC	4.000	468	10.5*	1,792	9.10*	1,921	7.51*	2,114
16.6*	2,318	KE402WB0040	MR160/050F	56C	4.000	583	13.5*	2,318	11.00	2,318	8.24	2,318
16.6*	2,318	KE402WB0040	MR160/140F	143/145TC	4.000	583	13.5*	2,318	11.00	2,318	8.24	2,318
18.0*	2,513	KE402WB0040	MR200/180F	182/184TC	4.000	583	15.7*	2,689	13.7*	2,883	11.30	3,173
400 RPM Output (Apprpoximate)							**325 RPM**		**265 RPM**		**200 RPM**	
6.45*	984	KE202WB0044	MR160/050F	56C	4.364	318	5.64*	1,053	4.90	1,129	4.05	1,243
6.45*	984	KE202WB0044	MR160/140F	143/145TC	4.364	318	5.64*	1,053	4.90	1,129	4.05	1,243
11.3*	1,724	KE302WB0044	MR160/050F	56C	4.364	478	9.87*	1,844	8.59*	1,978	7.09	2,177
11.3*	1,724	KE302WB0044	MR160/140F	143/145TC	4.364	478	9.87*	1,844	8.59*	1,978	7.09	2,177
16.4*	2,501	KE402WB0044	MR160/050F	56C	4.364	595	13.4*	2,501	10.90	2,501	8.15	2,501
16.4*	2,501	KE402WB0044	MR160/140F	143/145TC	4.364	595	13.4*	2,501	10.90	2,501	8.15	2,501
17.0*	2,587	KE402WB0044	MR200/180F	182/184TC	4.364	595	14.8*	2,768	12.9*	2,968	10.60	3,267
335 RPM Output (Apprpoximate)							**275 RPM**		**225 RPM**		**165 RPM**	
5.76*	1,042	KE202WB0052	MR160/050F	56C	5.177	332	5.03	1,115	4.23	1,155	3.17	1,155
5.76*	1,042	KE202WB0052	MR160/140F	143/145TC	5.177	332	5.03	1,115	4.23	1,155	3.17	1,155
325 RPM Output (Apprpoximate)							**265 RPM**		**215 RPM**		**160 RPM**	
9.79*	1,848	KE302WB0054	MR160/050F	56C	5.375	504	8.56*	1,977	7.44*	2,120	6.14	2,333
9.79*	1,848	KE302WB0054	MR160/140F	143/145TC	5.375	504	8.56*	1,977	7.44*	2,120	6.14	2,333
14.7*	2,782	KE402WB0054	MR160/050F	56C	5.422	627	12.9*	2,976	10.60	3,030	7.98	3,030
14.7*	2,782	KE402WB0054	MR160/140F	143/145TC	5.422	627	12.9*	2,976	10.60	3,030	7.98	3,030
14.7*	2,782	KE402WB0054	MR200/180F	182/184TC	5.422	627	12.9*	2,976	10.60	3,030	7.98	3,030
300 RPM Output (Apprpoximate)							**250 RPM**		**200 RPM**		**150 RPM**	
5.22	1,095	KE202WB0060	MR160/050F	56C	6.000	345	4.56	1,172	3.97	1,256	3.24	1,369
5.22	1,095	KE202WB0060	MR160/140F	143/145TC	6.000	345	4.56	1,172	3.97	1,256	3.28	1,383
9.14*	1,917	KE302WB0060	MR160/050F	56C	6.000	518	7.99*	2,051	6.95	2,199	5.73	2,421
9.14*	1,917	KE302WB0060	MR160/140F	143/145TC	6.000	518	7.99*	2,051	6.95	2,199	5.73	2,421
13.70*	2,878	KE402WB0060	MR160/050F	56C	6.000	644	12.00	3,078	10.40	3,301	8.15	3,440
13.70*	2,878	KE402WB0060	MR160/140F	143/145TC	6.000	644	12.00	3,078	10.40	3,301	8.15	3,440
13.70*	2,878	KE402WB0060	MR200/180F	182/184TC	6.000	644	12.00	3,078	10.40	3,301	8.61	3,633

* For thermal HP capacity, see rating below.

Base Module	KE2	KE3	KE4
Thermal Capacity	5.36	7.38	12.34

NEMA Frame Size
TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5

Part No. Explanation

KE 4 0 2 W B 0100 MR160 / 140 F – 108

- **K**E – "K" Right Angle Helical/Bevel Suprem**E** Food Duty
- 4 – Unit Size No.
- 0 – Design Generation
- 2 – No. of Stages (**2** = 2 Stage)
- W – Output Style – "**W**" Wobble Free Bushing
- B – **B**asic Housing Style
- 0100 – Nominal Ratio: (**0100** =10:1)
- MR160 – Motor Adapter Size: MR140, **MR160**, MR200
- 140 – 050 (56C), **140** (143/145TC), 180 (182/184TC)
- F – **F** – Food Duty Coating
- 108 – Bushing Bore (**108** = 1 and 8/16, 1 1/2)

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

NOTE: [1] All KE units include the bushing. Complete the Part Number by adding the Bushing Bore Size.
KE units will NOT be shipped unless the Bushing Bore is specified.
Bushing Kits may be ordered separately to change the bore size.
[2] Hollow output units are not intended to support overhung loads. Use the load shown only as a reference.

1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
260 RPM Output (Apprpoximate)							**215 RPM**		**175 RPM**		**130 RPM**	
4.84	1,134	KE202WB0067	MR160/050F	56C	6.683	355	4.23	1,214	3.68	1,301	3.04	1,432
4.84	1,134	KE202WB0067	MR160/140F	143/145TC	6.683	355	4.23	1,214	3.68	1,301	3.04	1,432
8.50*	1,993	KE302WB0067	MR160/050F	56C	6.740	532	7.43*	2,132	6.46	2,286	5.33	2,516
8.50*	1,993	KE302WB0067	MR160/140F	143/145TC	6.740	532	7.43*	2,132	6.46	2,286	5.33	2,516
12.7*	2,988	KE402WB0067	MR160/050F	56C	6.719	612	11.10	3,196	9.69	3,427	7.68	3,624
12.7*	2,988	KE402WB0067	MR160/140F	143/145TC	6.719	612	11.10	3,196	9.69	3,427	7.68	3,624
12.7*	2,988	KE402WB0067	MR200/180F	182/184TC	6.719	612	11.10	3,196	9.69	3,427	8.00	3,772
235 RPM Output (Apprpoximate)							**195 RPM**		**160 RPM**		**120 RPM**	
4.66	1,159	KE202WB0071	MR160/050F	56C	7.118	360	4.07	1,240	3.54	1,330	2.92	1,464
4.66	1,159	KE202WB0071	MR160/140F	143/145TC	7.118	360	4.07	1,240	3.54	1,330	2.92	1,464
7.91*	2,055	KE302WB0074	MR160/050F	182/184TC	7.391	546	6.92	2,199	6.02	2,358	4.97	2,595
7.91*	2,055	KE302WB0074	MR160/140F	182/184TC	7.391	546	6.92	2,199	6.02	2,358	4.97	2,595
11.90	3,093	KE402WB0075	MR160/050F	56C	7.456	680	10.40	3,309	9.02	3,548	7.44	3,905
11.90	3,093	KE402WB0075	MR160/140F	143/145TC	7.456	680	10.40	3,309	9.02	3,548	7.44	3,905
11.90	3,093	KE402WB0075	MR200/180F	182/184TC	7.456	680	10.40	3,309	9.02	3,548	7.44	3,905
210 RPM Output (Apprpoximate)							**170 RPM**		**140 RPM**		**105 RPM**	
4.17	1,224	KE202WB0084	MR160/050F	56C	8.397	375	3.65	1,310	3.17	1,404	2.62	1,546
4.17	1,224	KE202WB0084	MR160/140F	143/145TC	8.397	375	3.65	1,310	3.17	1,404	2.62	1,546
7.32	2,148	KE302WB0084	MR160/050F	56C	8.444	563	6.40	2,298	5.56	2,464	4.59	2,712
7.32	2,148	KE302WB0084	MR160/140F	143/145TC	8.444	563	6.40	2,298	5.56	2,464	4.59	2,712
11.00	3,216	KE402WB0084	MR160/050F	56C	8.377	701	9.58	3,440	8.33	3,688	6.88	4,060
11.00	3,216	KE402WB0084	MR160/140F	143/145TC	8.377	701	9.58	3,440	8.33	3,688	6.88	4,060
11.00	3,216	KE402WB0084	MR200/180F	182/184TC	8.377	701	9.58	3,440	8.33	3,688	6.88	4,060
190 RPM Output (Apprpoximate)							**155 RPM**		**125 RPM**		**95 RPM**	
3.92	1,262	KE202WB0092	MR160/050F	56C	9.190	384	3.43	1,350	2.98	1,448	2.46	1,593
3.92	1,262	KE202WB0092	MR160/140F	143/145TC	9.190	384	3.43	1,350	2.98	1,448	2.46	1,593
6.83	2,216	KE302WB0093	MR160/050F	56C	9.267	577	5.97	2,371	5.20	2,543	4.29	2,798
6.83	2,216	KE302WB0093	MR160/140F	143/145TC	9.267	577	5.97	2,371	5.20	2,543	4.29	2,798
10.30	3,322	KE402WB0092	MR160/050F	56C	9.238	717	9.02	3,554	7.84	3,811	6.47	4,195
10.30	3,322	KE402WB0092	MR160/140F	143/145TC	9.238	717	9.02	3,554	7.84	3,811	6.47	4,195
10.30	3,322	KE402WB0092	MR200/180F	182/184TC	9.238	717	9.02	3,554	7.84	3,811	6.47	4,195

EL1 EL2 EL5 EL6

Mounts in ANY Horizontal Output

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

Selection Procedure:

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**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
170 RPM Output (Apprpoximate)							**140 RPM**		**115 RPM**		**85 RPM**	
3.68	1,301	KE202WB0100	MR160/050F	56C	10.07	393	3.22	1,392	2.80	1,493	2.31	1,643
3.68	1,301	KE202WB0100	MR160/140F	143/145TC	10.07	393	3.22	1,392	2.80	1,493	2.31	1,643
6.46	2,283	KE302WB0100	MR160/050F	56C	10.14	590	5.64	2,443	4.91	2,619	4.05	2,883
6.46	2,283	KE302WB0100	MR160/140F	143/145TC	10.14	590	5.64	2,443	4.91	2,619	4.05	2,883
9.68	3,423	KE402WB0100	MR160/050F	56C	10.10	734	8.46	3,662	7.36	3,926	6.07	4,321
9.68	3,423	KE402WB0100	MR160/140F	143/145TC	10.10	734	8.46	3,662	7.36	3,926	6.07	4,321
9.68	3,423	KE402WB0100	MR200/180F	182/184TC	10.10	734	8.46	3,662	7.36	3,926	6.07	4,321
150 RPM Output (Apprpoximate)							**125 RPM**		**100 RPM**		**75 RPM**	
3.37	1,361	KE202WB0115	MR160/050F	56C	11.55	406	2.95	1,457	2.56	1,562	2.12	1,719
3.37	1,361	KE202WB0115	MR160/140F	143/145TC	11.55	406	2.95	1,457	2.56	1,562	2.12	1,719
5.92	2,389	KE302WB0115	MR160/050F	56C	11.61	610	5.04	2,493	4.09	2,493	3.07	2,493
5.92	2,389	KE302WB0115	MR160/140F	143/145TC	11.61	610	5.17	2,556	4.50	2,741	3.71	3,016
8.85	3,576	KE402WB0115	MR160/050F	56C	11.52	759	7.74	3,825	6.73	4,102	5.56	4,514
8.85	3,576	KE402WB0115	MR160/140F	143/145TC	11.52	759	7.74	3,825	6.73	4,102	5.56	4,514
8.85	3,576	KE402WB0115	MR200/180F	182/184TC	11.52	759	7.74	3,825	6.73	4,102	5.56	4,514
140 RPM Output (Apprpoximate)							**115 RPM**		**92 RPM**		**70 RPM**	
3.19	1,406	KE202WB0125	MR160/050F	56C	12.70	415	2.78	1,504	2.42	1,613	2.00	1,772
3.19	1,406	KE202WB0125	MR160/140F	143/145TC	12.70	415	2.78	1,504	2.42	1,613	2.00	1,772
5.56	2,454	KE302WB0125	MR160/050F	56C	12.58	623	4.64	2,508	3.77	2,508	2.82	2,508
5.56	2,454	KE302WB0125	MR160/140F	143/145TC	12.58	623	4.86	2,625	4.23	2,815	3.49	3,098
8.36	3,690	KE402WB0125	MR160/050F	56C	12.66	776	7.31	3,947	6.36	4,233	5.25	4,659
8.36	3,690	KE402WB0125	MR160/140F	143/145TC	12.66	776	7.31	3,947	6.36	4,233	5.25	4,659
8.36	3,690	KE402WB0125	MR200/180F	182/184TC	12.66	776	7.31	3,947	6.36	4,233	5.25	4,659
125 RPM Output (Apprpoximate)							**100 RPM**		**85 RPM**		**62 RPM**	
2.96	1,447	KE202WB0140	MR160/050F	56C	13.85	426	2.59	1,548	2.25	1,660	1.80	1,772
2.96	1,447	KE202WB0140	MR160/140F	143/145TC	13.85	426	2.59	1,548	2.25	1,660	1.80	1,772
5.20	2,540	KE302WB0140	MR160/050F	56C	13.94	639	4.55	2,717	3.92	2,889	2.94	2,889
5.20	2,540	KE302WB0140	MR160/140F	143/145TC	13.94	639	4.55	2,717	3.96	2,913	3.16	3,100
7.80	3,806	KE402WB0140	MR160/050F	56C	13.89	796	6.82	4,071	5.93	4,366	4.89	4,805
7.80	3,806	KE402WB0140	MR160/140F	143/145TC	13.89	796	6.82	4,071	5.93	4,366	4.89	4,805
7.80	3,806	KE402WB0140	MR200/180F	182/184TC	13.89	796	6.82	4,071	5.93	4,366	4.89	4,805

* For thermal HP capacity, see rating below.

Base Module	KE2	KE3	KE4
Thermal Capacity	5.36	7.38	12.34

NEMA Frame Size
TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5

Part No. Explanation

KE 4 0 2 W B 0100 MR160 / 140 F – 108

- KE – "K" Right Angle Helical/Bevel SupremE Food Duty
- 4 – Unit Size No.
- 0 – Design Generation
- 2 – No. of Stages (2 = 2 Stage)
- W – Output Style – "W" Wobble Free Bushing
- B – Basic Housing Style
- 0100 – Nominal Ratio: (0100 =10:1)
- MR160 – Motor Adapter Size: MR140, MR160, MR200
- 140 – 050 (56C), 140 (143/145TC), 180 (182/184TC)
- F – F – Food Duty Coating
- 108 – Bushing Bore (108 = 1 and 8/16, 1 1/2)

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

NOTE: [1] All KE units include the bushing. Complete the Part Number by adding the Bushing Bore Size.
KE units will NOT be shipped unless the Bushing Bore is specified.
Bushing Kits may be ordered separately to change the bore size.
[2] Hollow output units are not intended to support overhung loads. Use the load shown only as a reference.

1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
105 RPM Output (Apprpoximate)							**85 RPM**		**70 RPM**		**53 RPM**	
2.61	1,545	KE202WB0170	MR160/050F	56C	16.86	447	2.28	1,653	1.98	1,772	1.49	1,772
2.61	1,545	KE202WB0170	MR160/140F	143/145TC	16.86	447	2.28	1,653	1.98	1,772	1.49	1,772
4.57	2,710	KE302WB0170	MR160/050F	56C	16.94	671	4.00	2,899	3.47	3,100	2.60	3,100
4.57	2,710	KE302WB0170	MR160/140F	143/145TC	16.94	671	4.00	2,899	3.47	3,100	2.60	3,100
6.86	4,067	KE402WB0170	MR160/050F	56C	16.94	835	6.00	4,350	5.22	4,665	4.09	4,872
6.86	4,067	KE402WB0170	MR160/140F	143/145TC	16.94	835	6.00	4,350	5.22	4,665	4.09	4,872
6.86	4,067	KE402WB0170	MR200/180F	182/184TC	16.94	835	6.00	4,350	5.22	4,665	4.09	4,872
100 RPM Output (Apprpoximate)							**82 RPM**		**65 RPM**		**50 RPM**	
2.56	1,563	KE202WB0175	MR160/050F	56C	17.47	450	2.24	1,672	1.93	1,772	1.44	1,772
2.56	1,563	KE202WB0175	MR160/140F	143/145TC	17.47	450	2.24	1,672	1.93	1,772	1.44	1,772
4.48	2,729	KE302WB0175	MR160/050F	56C	17.29	676	3.91	2,919	3.37	3,100	2.53	3,100
4.48	2,729	KE302WB0175	MR160/140F	143/145TC	17.29	676	3.91	2,919	3.37	3,100	2.53	3,100
6.73	4,104	KE402WB0175	MR160/050F	56C	17.41	841	5.88	4,390	5.12	4,707	3.97	4,872
6.73	4,104	KE402WB0175	MR160/140F	143/145TC	17.41	841	5.88	4,390	5.12	4,707	3.97	4,872
6.73	4,104	KE402WB0175	MR200/180F	182/184TC	17.41	841	5.88	4,390	5.12	4,707	3.97	4,872
90 RPM Output (Apprpoximate)							**70 RPM**		**55 RPM**		**43 RPM**	
2.32	1,644	KE202WB0200	MR160/050F	56C	20.33	468	2.03	1,759	1.66	1,772	1.24	1,772
2.32	1,644	KE202WB0200	MR160/140F	143/145TC	20.33	468	2.03	1,759	1.66	1,772	1.24	1,772
4.07	2,878	KE302WB0200	MR160/050F	56C	20.28	702	3.55	3,078	2.90	3,100	2.18	3,100
4.07	2,878	KE302WB0200	MR160/140F	143/145TC	20.28	702	3.55	3,078	2.90	3,100	2.18	3,100
6.09	4,312	KE402WB0200	MR160/050F	56C	20.20	873	5.33	4,613	4.56	4,872	3.42	4,872
6.09	4,312	KE402WB0200	MR160/140F	143/145TC	20.20	873	5.33	4,613	4.56	4,872	3.42	4,872
6.09	4,312	KE402WB0200	MR200/180F	182/184TC	20.20	873	5.33	4,613	4.56	4,872	3.42	4,872
75 RPM Output (Apprpoximate)							**60 RPM**		**50 RPM**		**38 RPM**	
2.12	1,717	KE202WB0230	MR160/050F	56C	23.18	484	1.79	1,772	1.45	1,772	1.09	1,772
2.12	1,717	KE202WB0230	MR160/140F	143/145TC	23.18	484	1.79	1,772	1.45	1,772	1.09	1,772
3.73	3,013	KE302WB0230	MR160/050F	56C	23.29	726	3.13	3,100	2.54	3,100	1.91	3,100
3.73	3,013	KE302WB0230	MR160/140F	143/145TC	23.29	726	3.13	3,100	2.54	3,100	1.91	3,100
5.59	4,522	KE402WB0230	MR160/050F	56C	23.29	903	4.58	4,536	3.72	4,536	2.79	4,536
5.59	4,522	KE402WB0230	MR160/140F	143/145TC	23.29	903	4.89	4,838	3.99	4,872	2.99	4,872
5.59	4,522	KE402WB0230	MR200/180F	182/184TC	23.29	903	4.89	4,838	3.99	4,872	2.99	4,872

EL1 EL2 EL5 EL6

Mounts in ANY Horizontal Output

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

Selection Procedure:

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**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
70 RPM Output (Apprpoximate)							**55 RPM**		**45 RPM**		**35 RPM**	
2.00	1,764	KE202WB0250	MR160/050F	56C	25.13	494	1.64	1,772	1.33	1,772	1.00	1,772
2.00	1,764	KE202WB0250	MR160/140F	143/145TC	25.13	494	1.64	1,772	1.33	1,772	1.00	1,772
3.48	3,069	KE302WB0250	MR160/050F	56C	25.26	741	2.84	3,069	2.31	3,069	1.73	3,069
3.48	3,069	KE302WB0250	MR160/140F	143/145TC	25.26	741	2.84	3,069	2.31	3,069	1.73	3,069
5.03	4,434	KE402WB0250	MR160/050F	56C	25.28	923	4.11	4,434	3.33	4,434	2.50	4,434
5.03	4,434	KE402WB0250	MR160/140F	143/145TC	25.28	923	4.11	4,434	3.33	4,434	2.50	4,434
5.03	4,434	KE402WB0250	MR200/180F	182/184TC	25.28	923	4.11	4,434	3.33	4,434	2.50	4,434
60 RPM Output (Apprpoximate)							**50 RPM**		**40 RPM**		**30 RPM**	
1.81	1,771	KE202WB0280	MR160/050F	56C	27.95	507	1.48	1,772	1.20	1,772	0.90	1,772
1.81	1,771	KE202WB0280	MR160/140F	143/145TC	27.95	507	1.48	1,772	1.20	1,772	0.90	1,772
3.18	3,100	KE302WB0280	MR160/050F	56C	27.88	760	2.60	3,100	2.11	3,100	1.58	3,100
3.18	3,100	KE302WB0280	MR160/140F	143/145TC	27.88	760	2.60	3,100	2.11	3,100	1.58	3,100
4.91	4,795	KE402WB0280	MR160/050F	56C	27.77	946	4.08	4,872	3.31	4,872	2.48	4,872
4.91	4,795	KE402WB0280	MR160/140F	143/145TC	27.77	946	4.08	4,872	3.31	4,872	2.48	4,872
4.91	4,795	KE402WB0280	MR200/180F	182/184TC	27.77	946	4.08	4,872	3.31	4,872	2.48	4,872
55 RPM Output (Apprpoximate)							**45 RPM**		**35 RPM**		**25 RPM**	
1.16	1,364	KE202WB0340	MR160/050F	56C	33.62	531	0.95	1,364	0.77	1,364	0.58	1,364
1.16	1,364	KE202WB0340	MR160/140F	143/145TC	33.62	531	0.95	1,364	0.77	1,364	0.58	1,364
1.88	2,217	KE302WB0340	MR160/050F	56C	33.62	797	1.54	2,217	1.25	2,217	0.94	2,217
1.88	2,217	KE302WB0340	MR160/140F	143/145TC	33.62	797	1.54	2,217	1.25	2,217	0.94	2,217
2.93	3,444	KE402WB0340	MR160/050F	56C	33.68	992	2.39	3,445	1.94	3,445	1.46	3,445
2.93	3,444	KE402WB0340	MR160/140F	143/145TC	33.68	992	2.39	3,445	1.94	3,445	1.46	3,445
50 RPM Output (Apprpoximate)							**40 RPM**		**33 RPM**		**25 RPM**	
1.45	1,771	KE202WB0350	MR160/050F	56C	34.55	536	1.19	1,772	0.96	1,772	0.72	1,772
1.45	1,771	KE202WB0350	MR160/140F	143/145TC	34.55	536	1.19	1,772	0.96	1,772	0.72	1,772
2.54	3,100	KE302WB0350	MR160/050F	56C	34.73	804	2.08	3,100	1.68	3,100	1.26	3,100
2.54	3,100	KE302WB0350	MR160/140F	143/145TC	34.73	804	2.08	3,100	1.68	3,100	1.26	3,100
3.99	4,871	KE402WB0350	MR160/050F	56C	34.76	1,001	2.23	3,325	1.81	3,325	1.35	3,325
3.99	4,871	KE402WB0350	MR160/140F	143/145TC	34.76	1,001	3.26	4,872	2.65	4,872	1.98	4,872
3.99	4,871	KE402WB0350	MR200/180F	182/184TC	34.76	1,001	3.26	4,872	2.65	4,872	1.98	4,872

* For thermal HP capacity, see rating below.

Base Module	KE2	KE3	KE4
Thermal Capacity	5.36	7.38	12.34

NEMA Frame Size
TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5

Part No. Explanation

KE 4 0 2 W B 0100 MR160 / 140 F – 108

- Bushing Bore (**108** = 1 and 8/16, 1 1/2)
- **F** – Food Duty Coating
- 050 (56C), **140** (143/145TC), 180 (182/184TC)
- Motor Adapter Size: MR140, **MR160**, MR200
- Nominal Ratio: (**0100** =10:1)
- **B**asic Housing Style
- Output Style – "**W**" Wobble Free Bushing
- No. of Stages (**2** = 2 Stage)
- Design Generation
- Unit Size No.
- "**K**" Right Angle Helical/Bevel Suprem**E** Food Duty

Supreme Food Duty – "KE" Series
MGS Reducer – Selection Data

NOTE: [1] All KE units include the bushing. Complete the Part Number by adding the Bushing Bore Size.
KE units will NOT be shipped unless the Bushing Bore is specified.
Bushing Kits may be ordered separately to change the bore size.
[2] Hollow output units are not intended to support overhung loads. Use the load shown only as a reference.

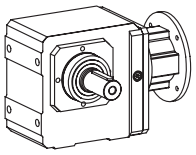
1750 RPM Input		Part Number [1]				Approximate	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.	Base Module	Motor Adapter	NEMA C-Frame	Exact Ratio	Overhung Load [2] lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
45 RPM	**Output (Apprpoximate)**						**35 RPM**		**30 RPM**		**20 RPM**	
1.20	1,705	KE302WB0410	MR160/050F	56C	40.51	835	0.98	1,705	0.80	1,705	0.60	1,705
1.20	1,705	KE302WB0410	MR160/140F	143/145TC	40.51	835	0.98	1,705	0.80	1,705	0.60	1,705
1.93	2,728	KE402WB0410	MR160/050F	56C	40.51	1,039	1.57	2,728	1.28	2,728	0.96	2,728
1.93	2,728	KE402WB0410	MR160/140F	143/145TC	40.51	1,039	1.57	2,728	1.28	2,728	0.96	2,728
40 RPM	**Output (Apprpoximate)**						**30 RPM**		**25 RPM**		**19 RPM**	
1.10	1,771	KE202WB0460	MR160/050F	56C	46.22	575	0.90	1,772	0.73	1,772	0.54	1,772
1.10	1,771	KE202WB0460	MR160/140F	143/145TC	46.22	575	0.90	1,772	0.73	1,772	0.54	1,772
1.88	3,048	KE302WB0460	MR160/050F	56C	46.22	863	1.54	3,048	1.25	3,048	0.94	3,048
1.88	3,048	KE302WB0460	MR160/140F	143/145TC	46.22	863	1.54	3,048	1.25	3,048	0.94	3,048
2.93	4,736	KE402WB0460	MR160/050F	56C	46.31	1,074	2.39	4,736	1.94	4,736	1.46	4,736
2.93	4,736	KE402WB0460	MR160/140F	143/145TC	46.31	1,074	2.39	4,736	1.94	4,736	1.46	4,736
35 RPM	**Output (Apprpoximate)**						**30 RPM**		**23 RPM**		**18 RPM**	
1.36	2,387	KE402WB0500	MR160/050F	56C	50.43	1,095	1.12	2,387	0.90	2,387	0.68	2,387
1.36	2,387	KE402WB0500	MR160/140F	143/145TC	50.43	1,095	1.12	2,387	0.90	2,387	0.68	2,387
30 RPM	**Output (Apprpoximate)**						**25 RPM**		**20 RPM**		**15 RPM**	
1.20	2,344	KE302WB0560	MR160/050F	56C	55.71	904	0.98	2,345	0.80	2,345	0.60	2,345
1.20	2,344	KE302WB0560	MR160/140F	143/145TC	55.71	904	0.98	2,345	0.80	2,345	0.60	2,345
1.93	3,752	KE402WB0560	MR160/050F	56C	55.71	1,125	1.57	3,752	1.28	3,752	0.96	3,752
1.93	3,752	KE402WB0560	MR160/140F	143/145TC	55.71	1,125	1.57	3,752	1.28	3,752	0.96	3,752
25 RPM	**Output (Apprpoximate)**						**20 RPM**		**18 RPM**		**13 RPM**	
1.36	3,282	KE402WB0690	MR160/050F	56C	69.34	1,188	1.11	3,283	0.90	3,283	0.67	3,283
1.36	3,282	KE402WB0690	MR160/140F	143/145TC	69.34	1,188	1.11	3,283	0.90	3,283	0.67	3,283

EL1 EL2 EL5 EL6

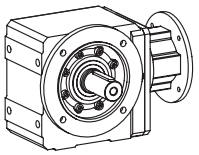
Mounts in ANY Horizontal Output

Food Duty – "K" Series – MGS Reducers
Right Angle Helical/Bevel

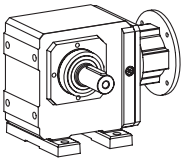
Reducer Configurations



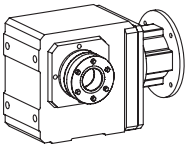
Style VG
Output Shaft



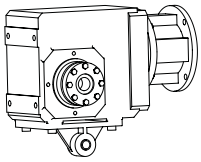
Style VF
Output Shaft
with Output Flange



Style VN
Output Shaft
with Mounting Feet



Style WG
Double Bushing



Style WGD
Double Bushing
with Torque Arm Bracket

Mounting Positions

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

EL1

EL2

EL5

EL6
Possible – but not recommended

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS and REQUIREMENTS

K 4 0 2 V N 0350 MR200 / 180 F

- **F** – Food Duty
- 050 (56C), **140** (143/145TC), **180** (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)
- Motor Adapter Size: MR140, MR160, **MR200**, MR300
- Nominal Ratio: (**0350** = 35:1 approximate, 34.76:1 actual)
- HOUSING STYLE: "**F**" Housing Style – Flange Mounting ..... **SPECIFY IN A NOTE**: ... Flange on Side 3 or Side 4
  "**G**" Housing Style – Tapped Holes
  "**N**" Housing Style – Foot Mount ..... **SPECIFY IN A NOTE**: ... Feet Side 1 or 5 (Also Side 2 on K1)
- OUTPUT STYLE: "**V**" Single Side Solid Output ..... **SPECIFY IN A NOTE**: ..... Shaft on Side 3 or Side 4
- No. of Stages (**2** = 2 Stage, determined by ratio)
- Design Generation
- Unit Size No.
- Right Angle Helical/Bevel

THE FOLLOWING INFORMATION IS REQUIRED WHEN ORDERING:

Feet Side	–	Side 1 ..... Side 5
Flange Side	–	Side 3 ..... Side 4
Shaft Side	–	Side 3 ..... Side 4

THE FOLLOWING OPTIONS ARE AVAILABLE:

Paint	–	White
Oil	–	Food Grade ..... Synthetic

Food Duty – "K" Series – MGS Reducers
Right Angle Helical/Bevel

The standard "K" Series Helical/Bevel MGS Food Duty unit is supplied with a stainless steel output shaft. This unit has several features that make it virtually maintenance free in a **wet** or **dry** environment.

- Lubricated for Life
- Maintenance Free
- Totally Enclosed – no breather to allow comtaminates in
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

SILVER BULLET AM™

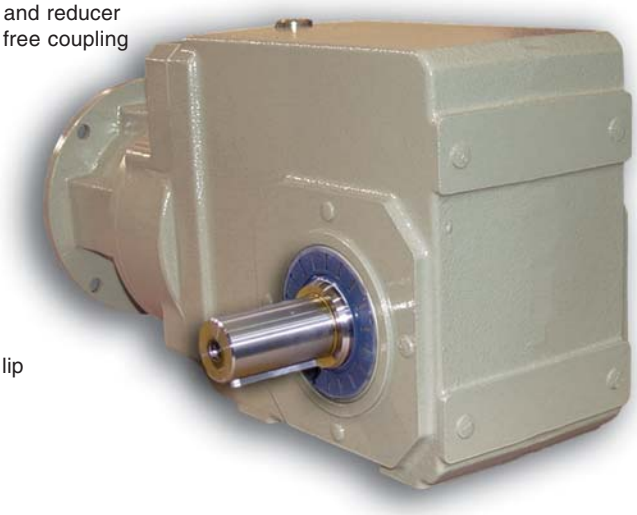
Standard Coating – 1, Primer
– 2, Industrial 316 Stainless Steel Epoxy
– 1, Silver Bullet Anti-Microbial™ Epoxy

STANDARD 3-DAY DELIVERY

Stainless Steel Nameplate

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

NEMA C-face Input
- O-ring between the motor and reducer
- Easy mount maintenance free coupling

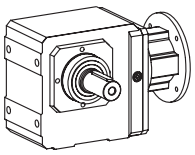


High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life. Standard backlash is ≤12 arc minutes

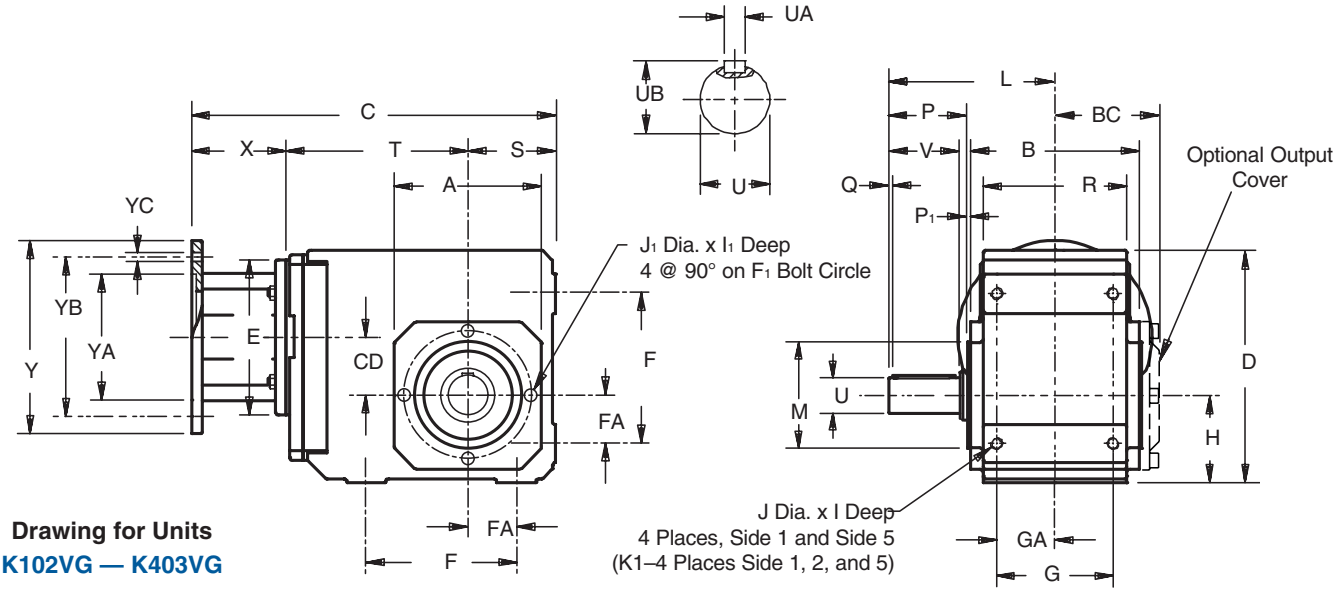
Output Double Sealed – with a dual lip outer seal and a single lip inner seal

ALL Stainless Steel Hardware

See Pages 116-139 for Selection Data.



Food Duty – "K" Series – MGS Reducer
Tapped Holes – "G" Housing
Shaft Output – Dimensional Data



Drawing for Units
K102VG — 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
K102	4.13	4.17	2.64	6.30	3.54	3.54	1.18	2.76	1.38	2.36	.51	.51	M8	M8	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	M8	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	M8	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	M10	6.54
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	M10	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	M10	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	M12	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	M12	12.83

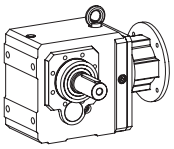
Table No. 2

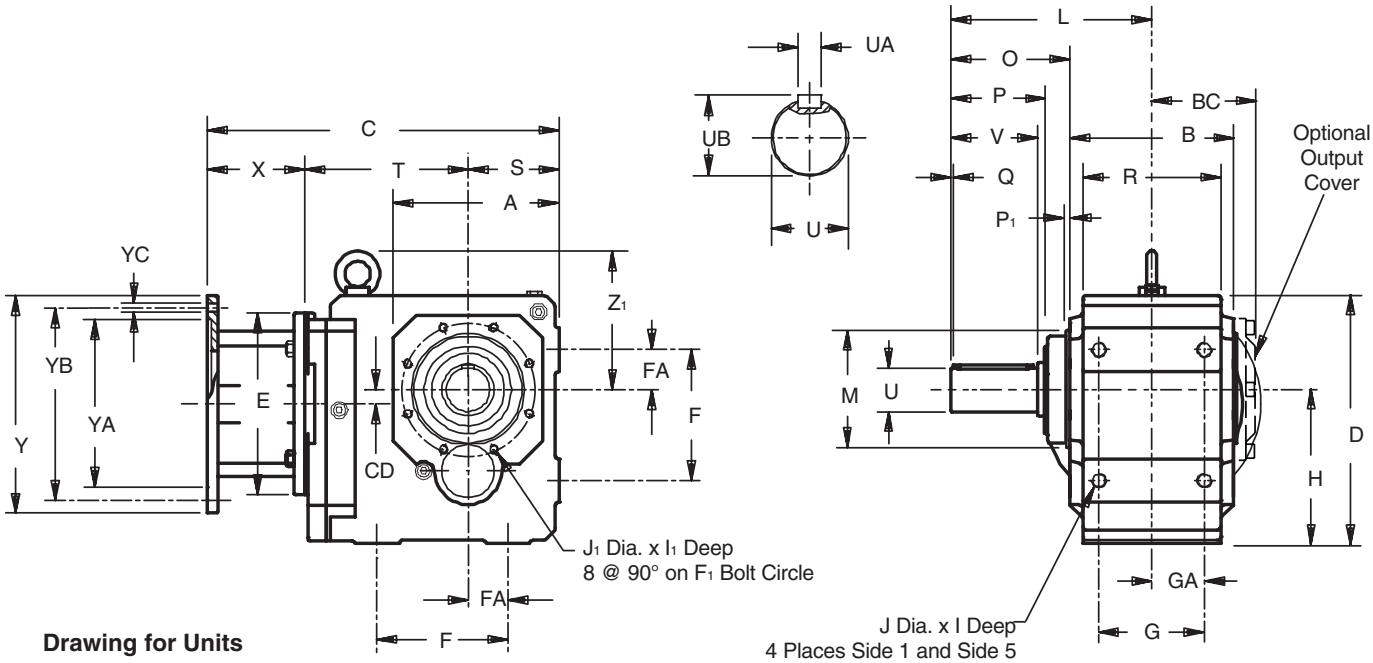
Base Module	M	O	P	P_1	R	Q	S	U	UA – Key	UB	V	Z_1
K102	2.953	—	2.32	.12	3.54	.16	2.36	1.000	$^1/_4 \times {}^1/_4 \times 1^9/_{16}$	1.11	1.97	—
K202/203	3.228	—	2.56	.12	4.53	.16	2.56	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36	2.36	—
K302/303	3.740	—	2.60	.12	5.12	.16	2.95	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36	2.36	—
K402/403	4.331	—	3.39	.14	5.83	.16	3.54	1.375	$^5/_{16} \times {}^5/_{16} \times 2^5/_{16}$	1.51	2.76	—
K513/514	4.331	5.10	3.90	.14	6.30	.16	3.94	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92	3.54	5.98
K613/614	5.512	5.35	4.31	.14	6.61	.16	4.72	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92	3.94	6.77
K713/714	6.102	6.46	5.14	.14	7.48	.16	4.92	2.375	$^5/_8 \times {}^5/_8 \times 3^{15}/_{16}$	2.65	4.72	7.52
K813/814	7.283	7.28	5.94	.16	9.25	.20	5.71	2.875	$^3/_4 \times {}^3/_4 \times 4^5/_{16}$	3.21	5.51	8.11

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

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

Food Duty – "K" Series – MGS Reducer
Tapped Holes – "G" Housing
Shaft Output – Dimensional Data





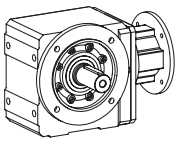
Drawing for Units
K513VG — K814VG

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

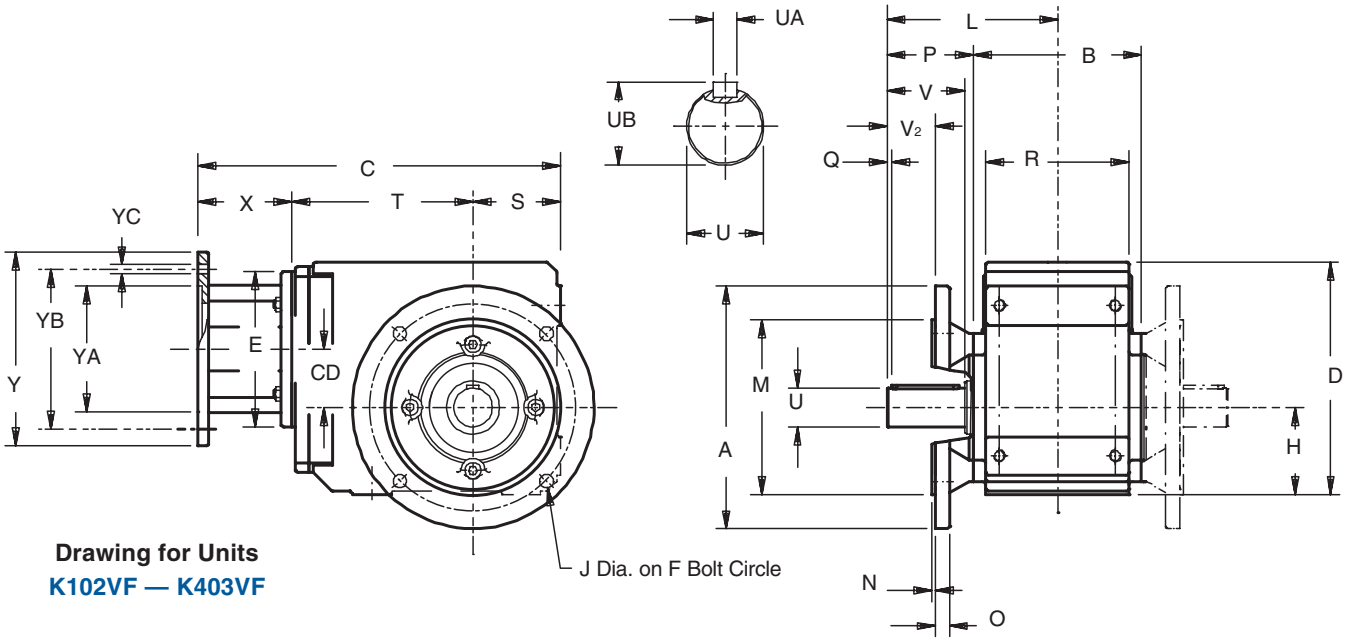
Base	MR140/050F			MR160/140F [1]			MR200/180F			MR250/210F [2]			MR300/250F [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	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 **MR160/050F** for a NEMA 56C frame motor.
[2] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180F** for a NEMA 182/184TC, **MR300/210F** for a NEMA 213/215TC, and **MR300/280F** 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



Food Duty – "K" Series – MGS Reducer
Round Flange – "F" Housing
Shaft Output – Dimensional Data



Drawing for Units
K102VF — K403VF

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

Base Module	A	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 +.001/-.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 +.001/-.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 +.001/-.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	6.54	7.087 +.001/-.0004	.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 +.001/-.0004	.16	.59	5.10	.16	6.30	3.94	3.54	—	5.98
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.001/-.001	.16	.67	5.35	.16	6.61	4.72	3.94	—	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

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

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

Table No. 3

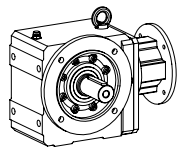
Base Module	Standard Shaft – inches		
	U	UA – Key	UB
K102	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11
K202/203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
K302/303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
K402/403	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51
K513/514	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92
K613/614	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92
K713/714	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65
K813/814	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21

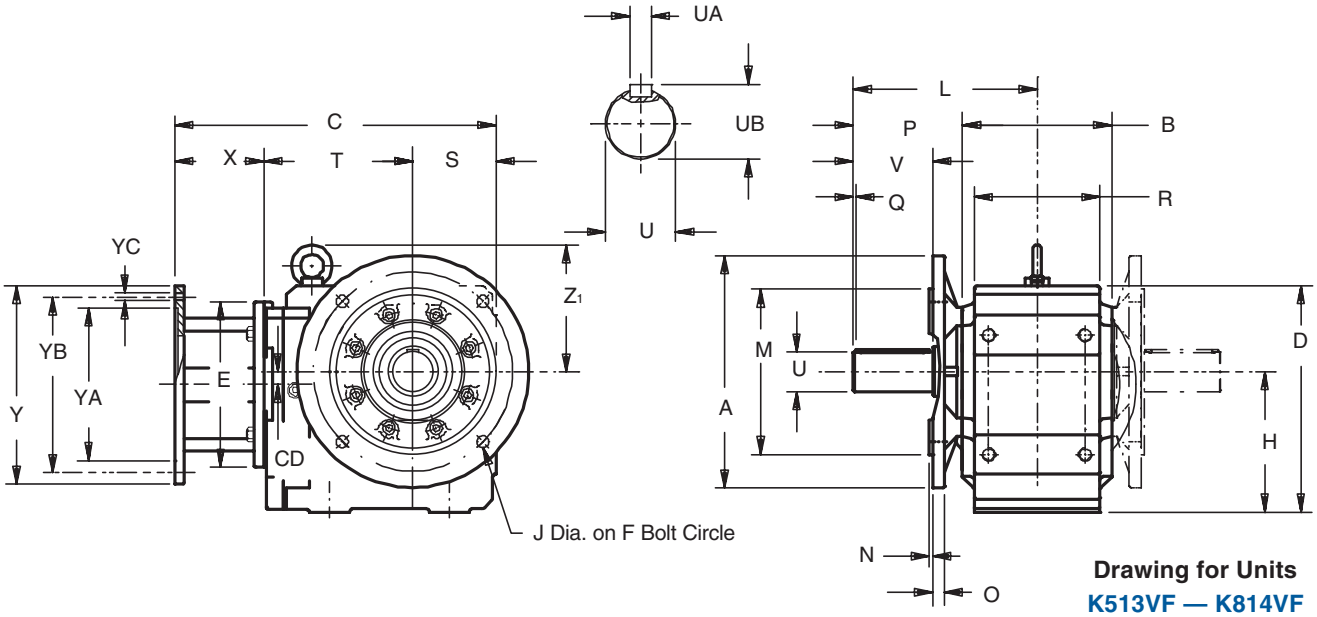
Table No. 4 "K" Series – Optional Flanges (Inches)

Base Module	Flange Size	A	F	J	L	M	N	O
K1	140	5.512	4.53	.35	3.35	3.740	.12	.39
K2	160	6.300	5.12	.35	3.90	4.331	.14	.47
K3	160	6.300	5.12	.35	4.37	4.331	.14	.55
K7	300	11.811	10.43	.55	6.18	9.055	.20	.71
K8	350	13.780	11.81	.71	7.32	9.843	.20	.79
	450	17.717	15.75	.71	7.32	13.781	.20	.79

* Optional flanges are not available in all sizes.

Food Duty – "K" Series – MGS Reducer
Round Flange – "F" Housing
Shaft Output – Dimensional Data





Drawing for Units
K513VF — K814VF

Table No. 5 Food Duty – "K" Series – Flange Mounting Unit Dimensions (Inches) – "F" Housing Style

Base	MR140/050F			MR160/140F [1]			MR200/180F			MR250/210F [2]			MR300/250F [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

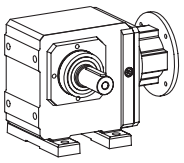
[1] Also available as **MR160/050F** for a NEMA 56C frame motor.
[2] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180F** for a NEMA 182/184TC, **MR300/210F** for a NEMA 213/215TC, and **MR300/280F** for a NEMA 284/286TC frame motor.

All weights are approximate.

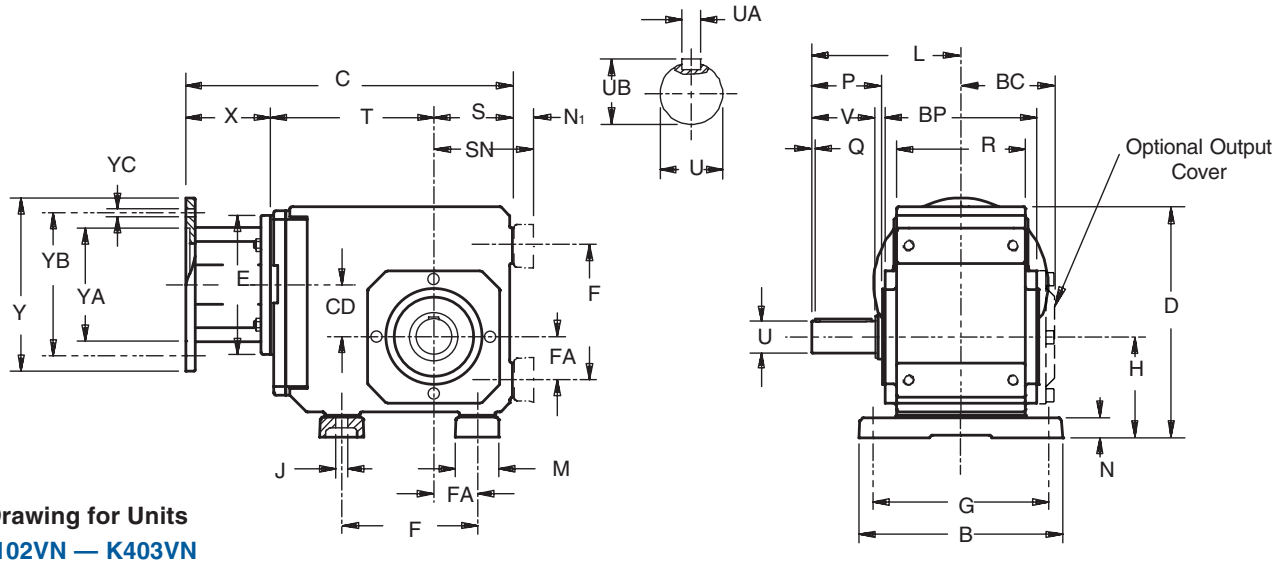
Part No. Example

Food Duty
Round Flange with Motor Adapter

K303VF0650 MR160/140F
Specify: Shaft and Flange Side



Food Duty – "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 [1]	L	M	N	O	P	Q	R	S	V	Z_1	BC	BP	FA	N_1	SN
K102	5.51	6.81	3.54[1]	4.53	2.95	.35	4.53	1.18	.51	—	2.32	.16	3.54	2.36	1.97	—	2.64	4.17	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	—	3.23	5.28	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	—	3.46	5.75	1.57	.91	3.86
K402/403	9.06	10.43	6.10	7.87	4.53	.55	6.54	1.97	.87	—	3.39	.16	5.83	3.54	2.76	—	4.08	6.81	1.97	.98	4.53
K513/514	9.45	11.42	5.51	7.87	7.48	.71	8.74	2.36	1.06	5.10	3.90	.16	6.30	3.94	3.54	5.98	4.31	7.28	1.57	1.18	5.12
K613/614	9.84	13.39	6.30	8.27	8.66	.71	9.29	2.56	1.06	5.35	4.31	.16	6.61	4.72	3.94	6.77	4.61	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	5.08	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	6.26	11.10	2.95	1.77	7.48

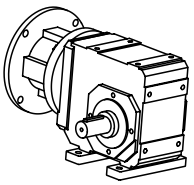
[1] Mounting holes are also located also on Side 1 of the K1 unit ONLY.

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

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

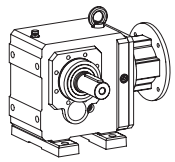
Table No. 3

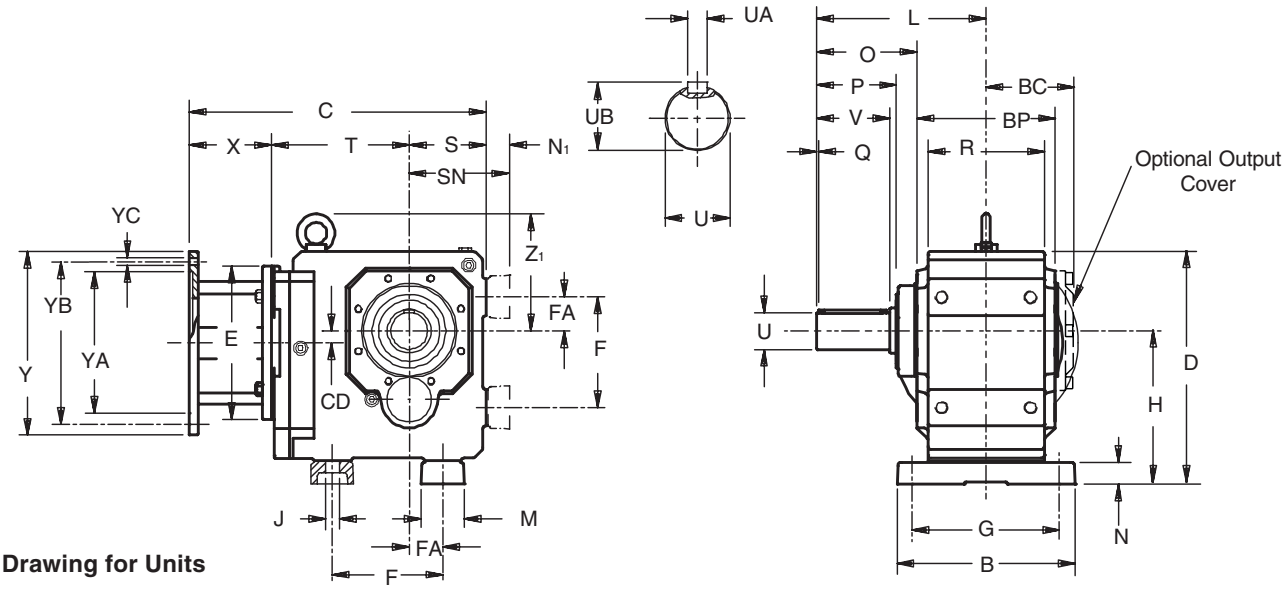
Base Module	Standard Shaft – inches		
	U	UA – Key	UB
K102	1.000	$^1/_4 \times {}^1/_4 \times 1^9/_{16}$	1.11
K202/203	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K302/303	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K402/403	1.375	$^5/_{16} \times {}^5/_{16} \times 2^5/_{16}$	1.51
K513/514	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K613/614	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K713/714	2.375	$^5/_8 \times {}^5/_8 \times 3^{15}/_{16}$	2.65
K813/814	2.875	$^3/_4 \times {}^3/_4 \times 4^5/_{16}$	3.21



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

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





Drawing for Units
K513VN — K814VN

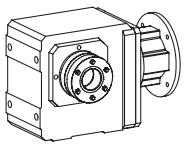
Table No. 4 Food Duty – "K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style

Base	MR140/050F			MR160/140F [2]			MR200/180F			MR250/210F [3]			MR300/250F [4]			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

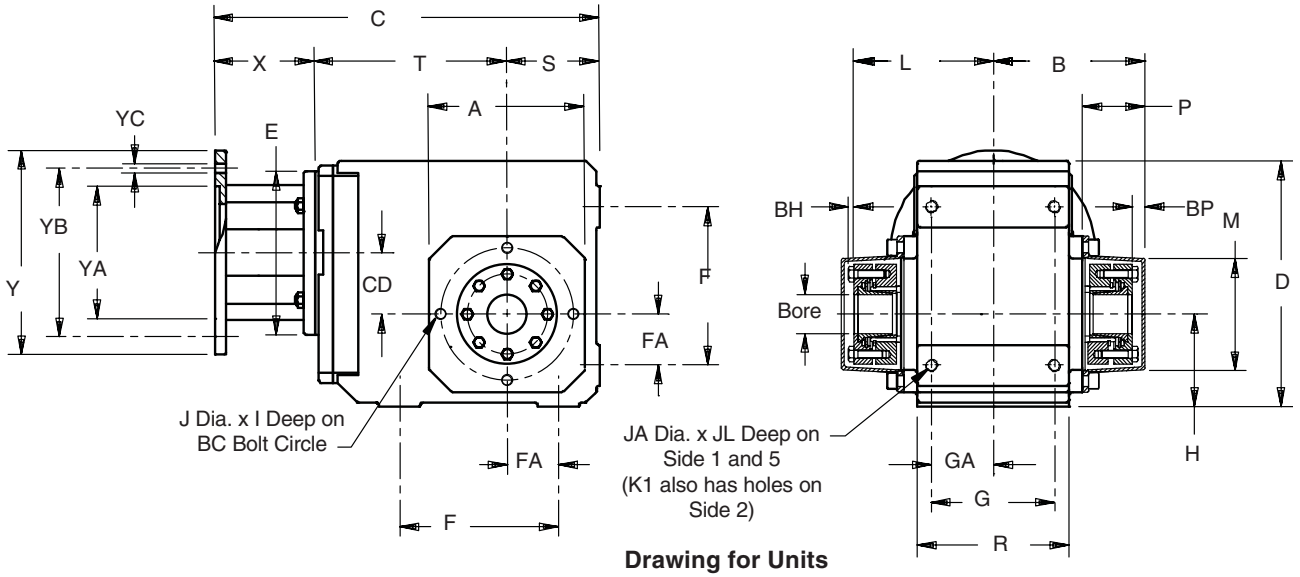
[2] Also available as **MR160/050F** for a NEMA 56C frame motor.
[3] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[4] Also available as **MR300/180F** for a NEMA 182/184TC, **MR300/210F** for a NEMA 213/215TC, and **MR300/280F** for a NEMA 284/286TC frame motor.

All weights are approximate.

Part No. Example
Food Duty
Foot Mounting with Motor Adapter
K303VN0650 MR160/140F
Specify: Shaft and Feet Side



Food Duty – "K" Series – MGS Reducer
Tapped Hole – "G" Housing
Double Bushing – Dimensional Data



Drawing for Units
K102WG — K403WG

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

Base Module	Max. Bore	A	B	D	F	G	H	I	J	L	M	P	R	S	Z_1	BC	BP	BH	FA	GA	JA	JL
K102	1.000	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8	.51
K202/203	1.187	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10	.63
K302/303	1.500	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10	.63
K402/403	1.500	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12	.75
K513/514	2.000	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16	1.02
K613/614	2.187	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16	1.02
K713/714	2.375	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20	1.22
K813/814	2.750	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24	1.50

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

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

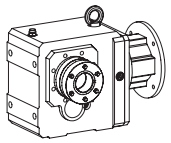
Table No. 3 **"WFB" Double Side Bushings**

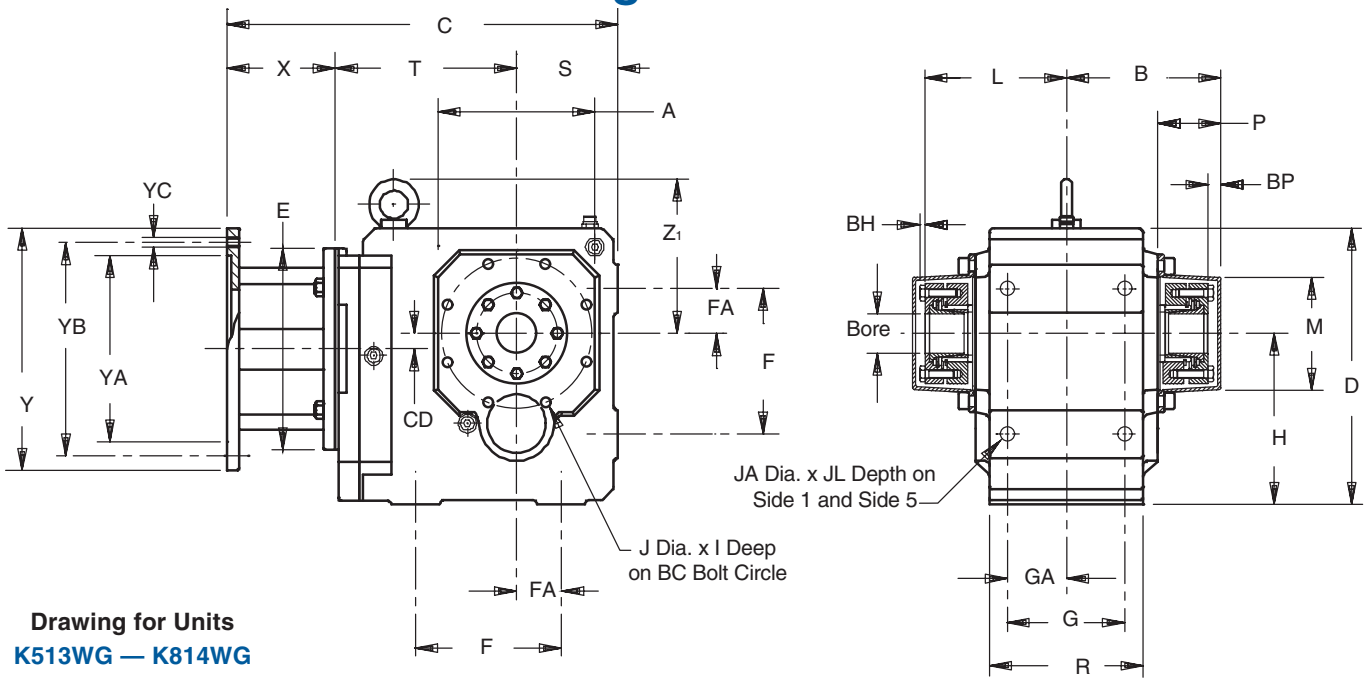
Unit	Stock Bores Sizes						
	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$	40mm
K1	**WFB1-100**	—	—	—	—	—	—
K2	**WFB2-100**	**WFB2-103**	—	—	—	—	—
K3	**WFB3-100**	**WFB3-103**	**WFB3-104**	**WFB3-106**	**WFB3-107**	**WFB3-108**	—
K4	**WFB4-100**	**WFB4-103**	**WFB4-104**	**WFB4-106**	**WFB4-107**	**WFB4-108**	**WFB4-40**

Part No. Example

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

Food Duty – "K" Series – MGS Reducer
Tapped Hole – "G" Housing
Double Bushing – Dimensional Data





Drawing for Units
K513WG — K814WG

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

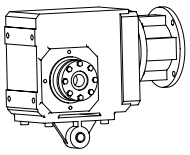
Base	MR140/050F			MR160/140F [1]			MR200/180F			MR250/210F [2]			MR300/250F [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	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 **MR160/050F** for a NEMA 56C frame motor.
[2] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180F** for NEMA 182/184TC, **MR300/210F** for NEMA 213/215TC, and **MR300/280F** for NEMA 284/286TC frame motor.
All weights are approximate.

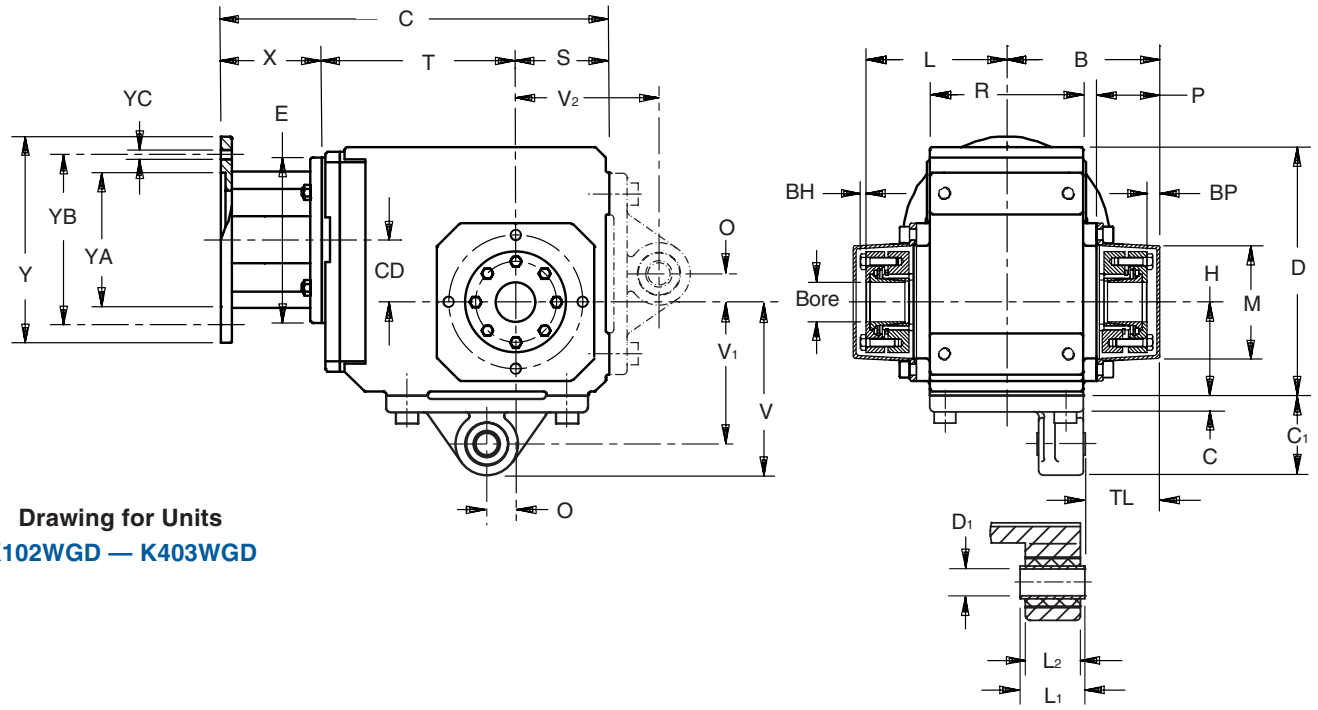
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 5 **"WFB" Double Side Bushings**

Unit	Stock Bores Sizes												
	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	40mm
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-107	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—	WFB5-40
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	WFB6-206	—	—	WFB6-40
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	WFB8-212	—



Food Duty – "K" Series – MGS Reducer
Torque Arm Bracket – "GD" Housing
Double Bushing – Dimensional Data



Drawing for Units
K102WGD — K403WGD

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

Base Module	B	C	C_1	D	D_1 H9	H	L	L_1	L_2	M	O	P	R	S	V	V_1	V_2	Z_1	BP	BH	TL
K102	3.90	.39	2.03	6.30	.47 +.017/-.000	2.36	3.66	1.10	.94	3.07	.59	1.97	3.54	2.36	4.39	3.54	3.54	—	.24	.16	2.05
K202/203	4.68	.47	2.26	7.48	.63 +.017/-.000	2.56	4.26	1.50	1.26	3.46	.89	2.05	4.53	2.56	4.82	3.93	3.93	—	.39	.16	2.29
K302/303	4.98	.47	2.66	8.39	.63 +.017/-.000	2.95	4.54	1.50	1.26	3.78	.98	2.09	5.12	2.95	5.61	4.72	4.72	—	.43	.16	2.30
K402/403	5.80	.55	3.46	9.45	.79 +.020/-.000	3.54	5.33	1.81	1.57	4.33	1.08	2.40	5.83	3.54	7.00	5.91	5.91	—	.47	.20	2.77
K513/514	6.05	.59	4.68	10.24	.79 +.020/-.000	6.30	5.61	1.81	1.57	4.54	1.18	2.40	6.30	3.94	10.98	9.84	7.48	5.98	.43	.20	2.78
K613/614	6.61	.59	3.50	12.20	.79 +.020/-.000	7.48	6.10	1.81	1.57	5.00	1.18	2.68	6.61	4.72	10.98	9.84	7.09	6.77	.51	.24	3.16
K713/714	7.68	.67	4.80	13.46	.79 +.020/-.000	8.35	7.29	2.76	2.52	5.75	1.38	2.91	7.48	4.92	13.15	11.81	8.39	7.52	.39	.24	3.82
K813/814	9.34	.67	4.77	16.14	.94 +.020/-.000	10.43	8.70	4.53	4.02	6.95	1.77	3.43	9.25	5.71	15.20	13.78	9.06	8.11	.64	.31	4.45

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

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

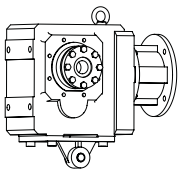
Table No. 3 **"WFB" Double Side Bushings**

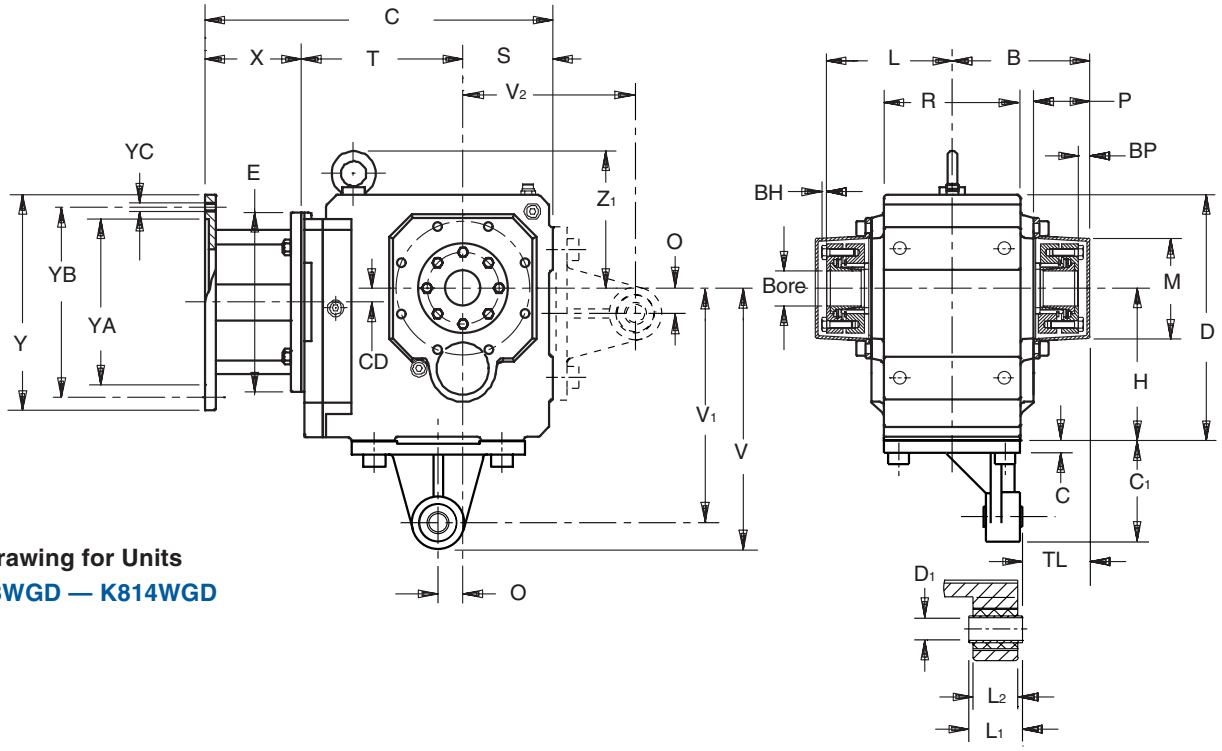
	Stock Bores Sizes						
Unit	1	$1^3/_{16}$	$1^1/_4$	$1^3/_8$	$1^7/_{16}$	$1^1/_2$	40mm
K1	**WFB1-100**	—	—	—	—	—	—
K2	**WFB2-100**	**WFB2-103**	—	—	—	—	—
K3	**WFB3-100**	**WFB3-103**	**WFB3-104**	**WFB3-106**	**WFB3-107**	**WFB3-108**	—
K4	**WFB4-100**	**WFB4-103**	**WFB4-104**	**WFB4-106**	**WFB4-107**	**WFB4-108**	**WFB4-40**

Part No. Example

Food Duty Unit with Torque Arm Bracket
143TC Frame Motor Adapter and $1^7/_{16}$ Bushing Bore
K303WGD0650 MR160/140F WFB3-107

Food Duty – "K" Series – MGS Reducer
Torque Arm Bracket – "GD" Housing
Double Bushing – Dimensional Data





Drawing for Units
K513WGD — K814WGD

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

Base	MR140/050F			MR160/140F [1]			MR200/180F			MR250/210F [2]			MR300/250F [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 **MR160/050F** for a NEMA 56C frame motor.
[2] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180F** for NEMA 182/184TC, **MR300/210F** for NEMA 213/215TC, and **MR300/280F** for NEMA 284/286TC frame motor.
All weights are approximate.

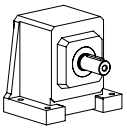
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 5 **"WFB" Double Side Bushings**

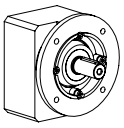
Unit	Stock Bores Sizes												
	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4	40mm
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-107	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—	WFB5-40
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	WFB6-206	—	—	WFB6-40
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	WFB8-212	—

Food Duty – "C" Series – MGS Reducers
Concentric Helical

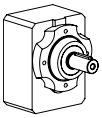
Reducer Configurations



Style N
Foot Mount



Style F
Round Flange



Style G
Tapped Holes

Mounting Positions

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

EL1

EL2

EL3

EL4

EL5 and EL6 can be supplied on request. Be sure to specify when ordering.

EL5

EL6

Possible but not recommended.

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS

C 4 0 2 N 0135 MR160 / 140 F

- **C** – Concentric Helical
- **4** – Unit Size No.
- **0** – Design Generation
- **2** – No. of Stages (**02** = 2 Stage, determined by ratio)
- **N** – HOUSING STYLE
  "**N**" Housing Style – Foot Mounting
  "**F**" Housing Style – Flange Mounting
  "**G**" Housing Style – Tapped Holes
- **0135** – Nominal Ratio: **0135** = 13.5:1
- **MR160** – Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350
- **140** – 050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)
- **F** – Food Duty

THE FOLLOWING ARE OPTIONS FOR ALL UNITS:

Paint – White
Oil – Food Grade ..... Synthetic

Food Duty – "C" Series – MGS Reducers
Concentric Helical

- Lubricated for Life
- Maintenance Free
- Totally Enclosed (Watertight)
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

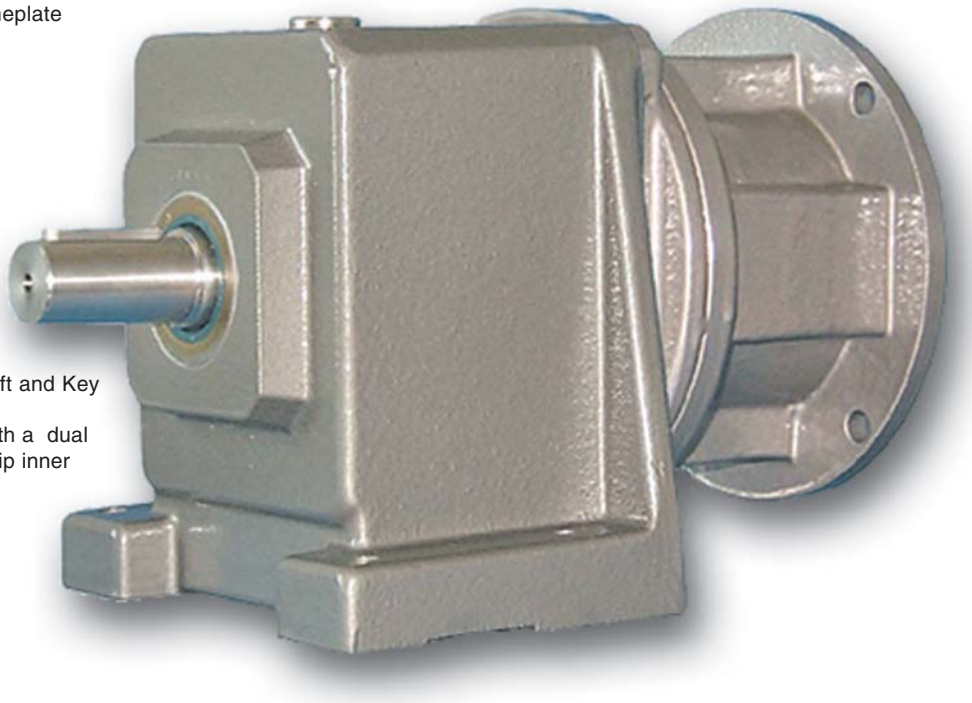
STANDARD 3-DAY DELIVERY

SILVER BULLET AM™

Standard Coating – 1, Primer
– 2, Industrial 316 Stainless Steel Epoxy
– 1, Silver Bullet Anti-Microbial™ Epoxy

NEMA C-face Input
- O-ring between motor and reducer
- Easy mount maintenance free coupling

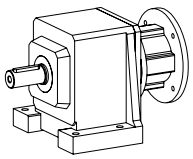
Stainless Steel Nameplate



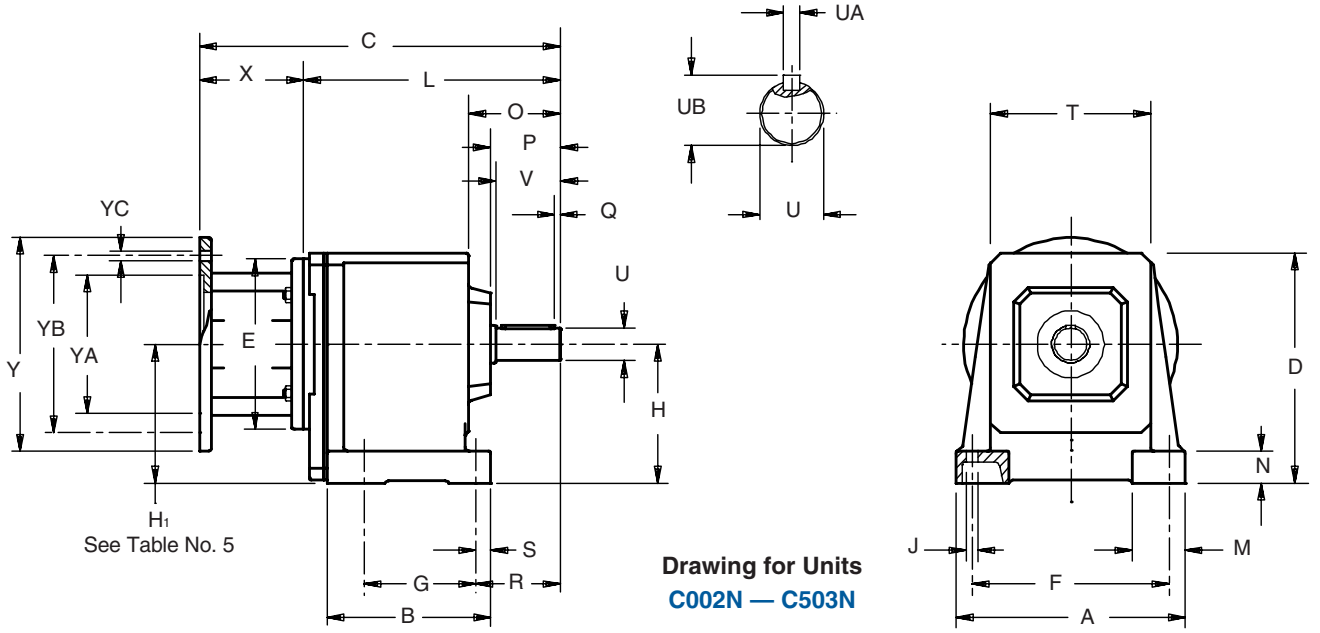
Stainless Steel Output Shaft and Key

Double Sealed Output – with a dual lip outer seal and a single lip inner seal

See Pages 64-91 for Selection Data.



Food Duty – "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
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.

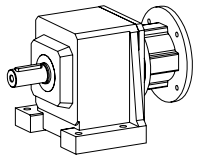
Table No. 2

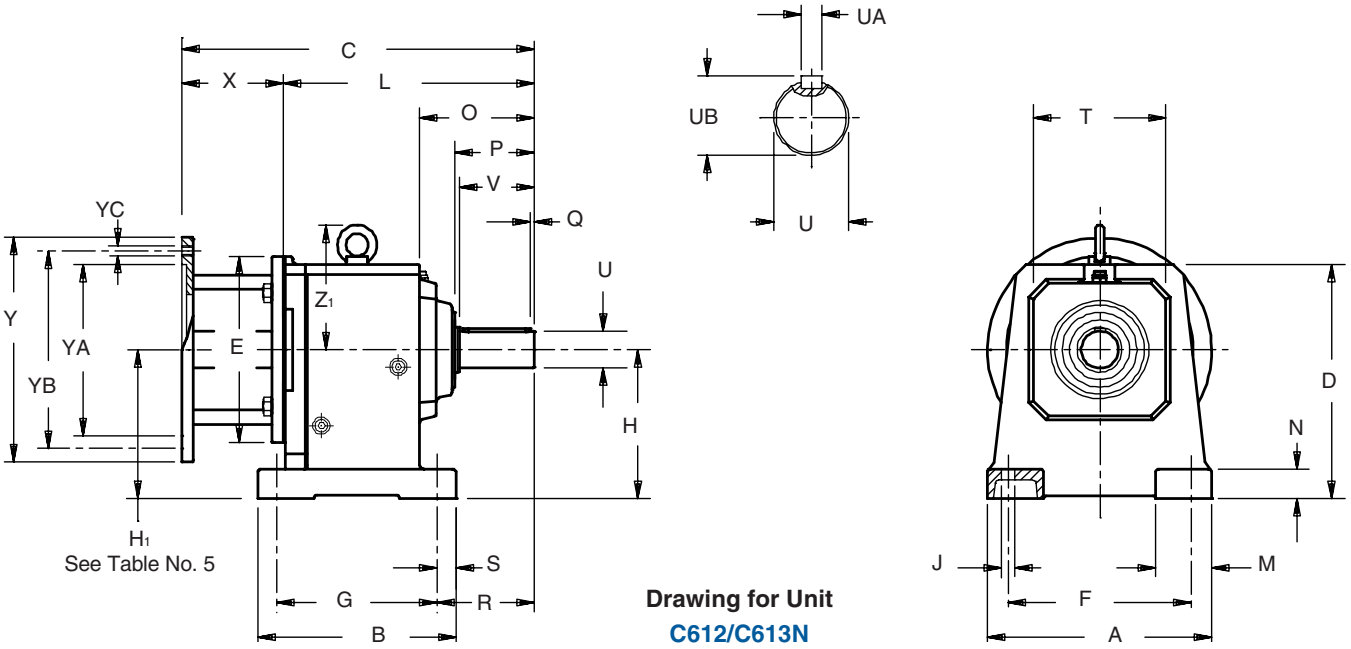
Base Module	S	T	U	V	Z_1	UA – Key	UB
C002	.43	3.62	.7500	1.57	—	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83
C102/C103	.51	4.88	1.0000	1.97	—	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11
C202/C203	.55	5.43	1.2500	2.36	—	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
C302/C303	.55	5.91	1.2500	2.36	—	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	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.
MR140/050F	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050F	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140F	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180F	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180F	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210F	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180F	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210F	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250F	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280F	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

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





Drawing for Unit
C612/C613N

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

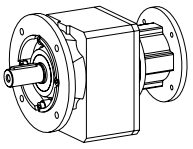
Base	MR140/050F		MR160/140F [2]		MR200/180F		MR250/210F [3]		MR300/250F [4]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	—	—	38
C203	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 **MR160/050F** 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 **MR250/180F** for a NEMA 182/184TC frame motor.
[4] Also available as **MR300/180F** for a NEMA 182/184TC, **MR300/210F** for a NEMA 213/215TC , and **MR300/280F** for a NEMA 284/286TC frame motor.
All weights are approximate.

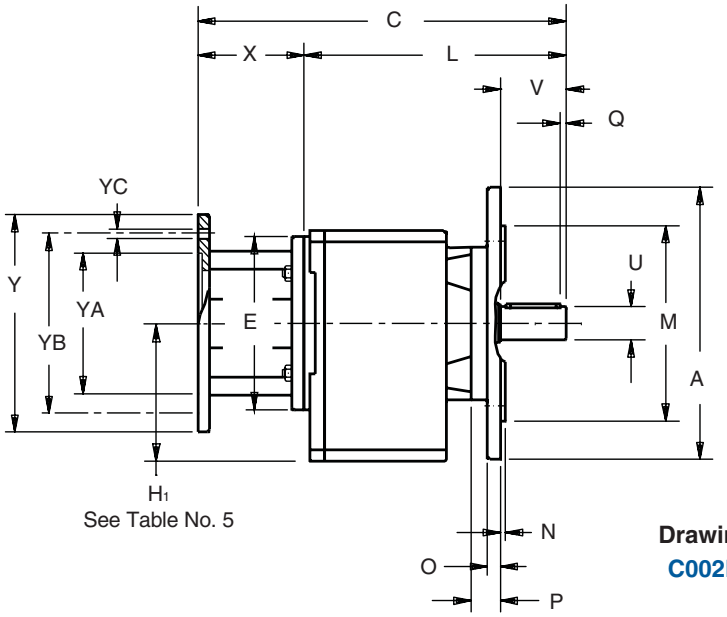
Table No. 5 "C" Series – Input Dimension (Inches)

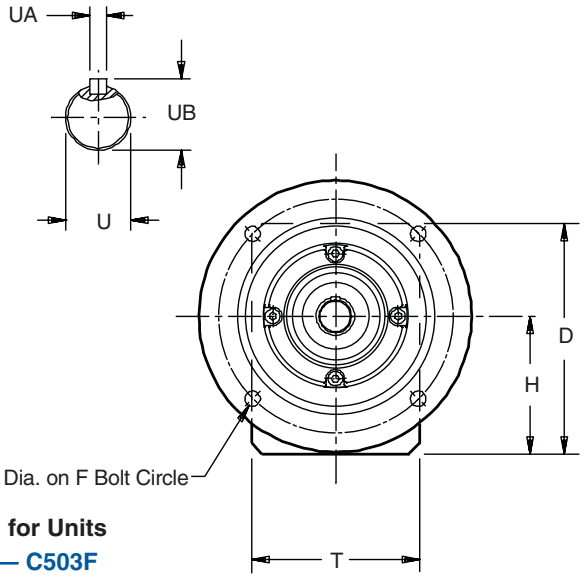
Base	MR160/050F [2]	MR200/180F	MR250/210F	MR300/250F
Module	H_1	H_1	H_1	H_1
C303	3.66	–	–	–
C612	–	7.63	7.63	7.63
C613	–	–	7.63	–

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



Food Duty – "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	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 [1]	.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 [1]	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57

[1] See Table No. 5

Table No. 2

Base Module	Standard Shaft - inches		
	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35

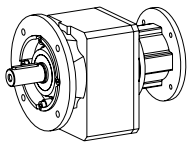
Table No. 3 **Motor Adapter Dimensions (Inches)**

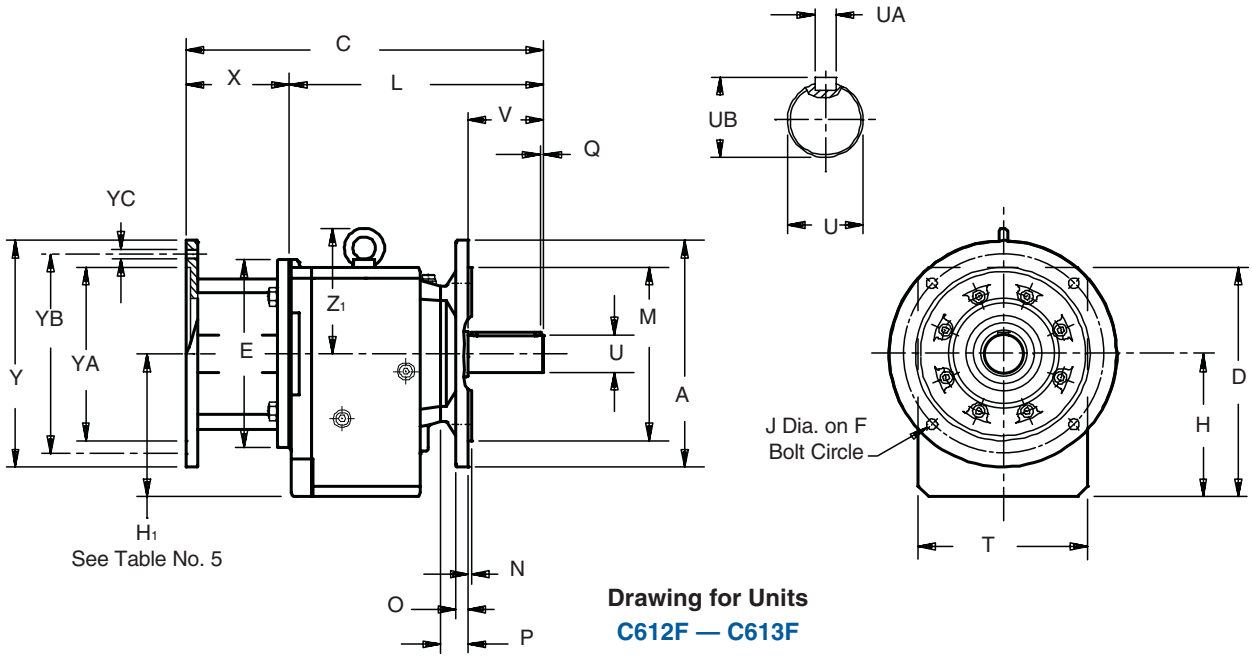
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050F	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050F	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140F	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180F	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180F	182/184TC	9.84	5.31	9.00	8.500	7.25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

Part No. Example

Food Duty Unit
Round Flange with Motor Adapter
C302F0620 MR160/140F

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





Drawing for Units
C612F — C613F

Table No. 4 Beverage Duty "C" Series – Dimensions (Inches) – "F" Housing Style

Base	MR140/050F		MR160/140F [2]		MR200/180F		MR250/210F [3]		MR300/250F [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 [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

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

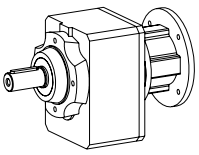
Table No. 5 "C" Series – Input Dimension (Inches)

Base	MR160/140F[2]	MR200/180F	MR250/210F	MR300/250F
Module	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–

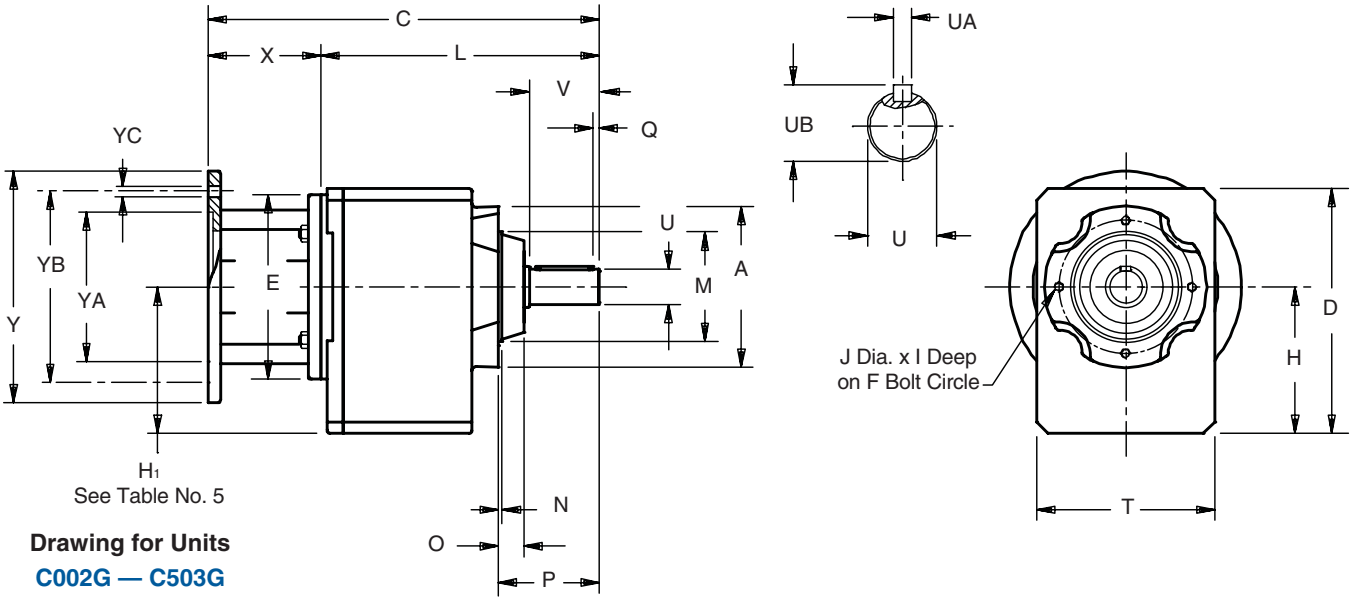
Table No. 6 Optional Flange–Dimensions (Inches)

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
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
C2	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	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
C4	200	7.874	6.50	.43	5.118 +.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

Optional flange are not available for all sizes.



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



Drawing for Units
C002G — C503G

Table No. 1 **Food Duty "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	2.165	.12	.55	2.28	.16	3.82	1.57	—
C102/C103	4.72	6.89	3.94	3.94	.51	M6	3.150	.12	.67	2.80	.16	5.12	1.97	—
C202/C203	5.51	7.56	4.53	4.41	.51	M8	3.740	.12	.87	3.43	.16	5.59	2.36	—
C302/C303	5.51	8.35	4.53	5.00 [1]	.51	M8	3.740	.12	.87	3.43	.16	6.06	2.36	—
C402/C403	6.30	9.55	5.12	5.61	.63	M10	4.331	.14	.87	4.25	.16	7.01	3.15	—
C502/C503	7.56	11.26	6.50 [2]	6.54	.63	M10	5.118	.14	.91	4.29	.16	7.68	3.15	—
C612/C613	7.09	11.97	6.50	7.44 [1]	.63	M10	5.512	.20	1.18	5.35	.20	8.86	3.94	6.57

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

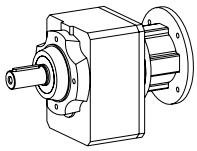
Table No. 2

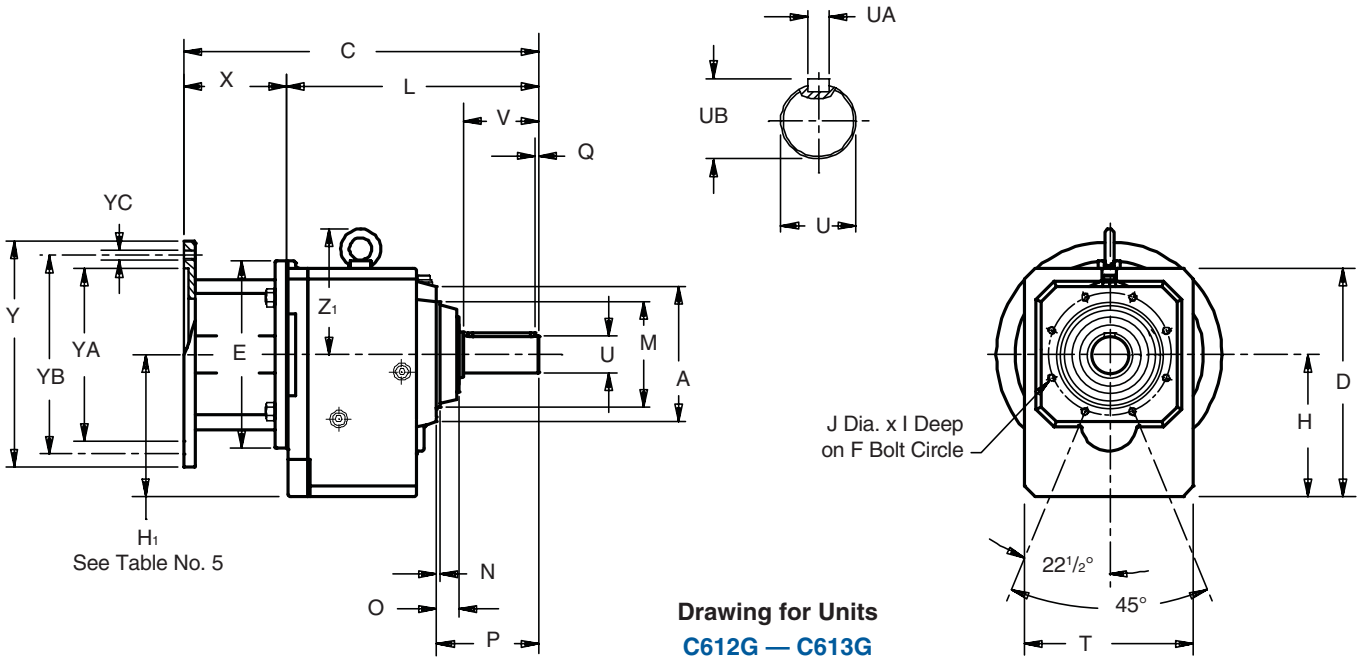
Base Module	Standard Shaft - inches		
	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
C302/C303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36
C402/C403	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79
C502/C503	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79
C612/C613	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35
C712/C713	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65
C812/C813	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21
C912/C913	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01

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

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

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





Drawing for Units
C612G — C613G

Table No. 4 **Food Duty "C" Series – "G" Housing Style – Dimensions (Inches)**

Base	MR140/050F		MR160/140F [3]		MR200/180F		MR250/210F [4]		MR300/250F [5]		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 [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

[1] See Table No. 5
[3] Also available as **MR160/050F** for a NEMA 56C frame motor.
[4] Also available as **MR250/180F** for a NEMA 182/184TC frame motor.
[5] Also available as **MR300/180F** for a NEMA 182/184TC, **MR300/210F** for a NEMA 213/215TC, and **MR300/280F** for a NEMA 284/286TC frame motor.
All weights are approximate.

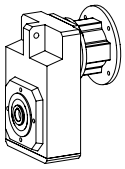
Table No. 5 **"C" Series – Input Dimension (Inches)**

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

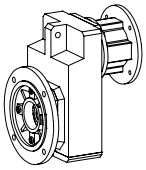
Part No. Example
Food Duty
Tapped Holes Housing with Motor Adapter
C302G0620 MR160/140F

Poultry Duty – "F" Series – MGS Reducer Offset Helical with Hollow Output

Reducer Configurations



Style AG



Style AF

Mounting Positions

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

EL1

EL2

EL3

EL4

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS

F 2 0 2 A F 0135 MR200/ 180 P

- **P** – Poultry Duty
- 050 (56C), 140 (143/145TC), **180** (182/184TC), 210 (213/215TC)
- Motor Adapter Size: MR140, MR160, **MR200**, MR300, MR350
- Nominal Ratio: (**0135** = 13.5:1 approximate – 13.63:1 actual)
- HOUSING STYLE
  "**F**" Housing Style – Flange Mounting
  "**G**" Housing Style – Tapped Holes
- OUTPUT STYLE – "**A**" Hollow Output (Poultry industry standard)
- No. of Stages (**02** = 2 Stage, determined by ratio)
- Design Generation
- Unit Size No.
- **OF**fset Helical

THE FOLLOWING ARE OPTIONS FOR ANY UNIT:

Paint – White
Oil – Food Grade ..... Synthetic

Poultry Duty – "F" Series – MGS Reducer Offset Helical with Hollow Output

- Lubricated for Life
- Maintenance Free
- Totally Enclosed (No Vent Required)
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

SILVER BULLET AM™

Standard Coating – 1, Primer
– 2, Industrial 316 Stainless Steel Epoxy
– 1, Silver Bullet Anti-Microbial™ Epoxy

Stainless Steel Nameplate

NEMA C-face Input – O-ring between motor and reducer with an easy mount, maintenance free coupling

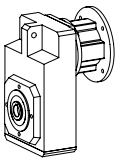
Double Sealed Output – with a dual lip outer seal and a single lip inner seal

Stainless Steel Output Quill

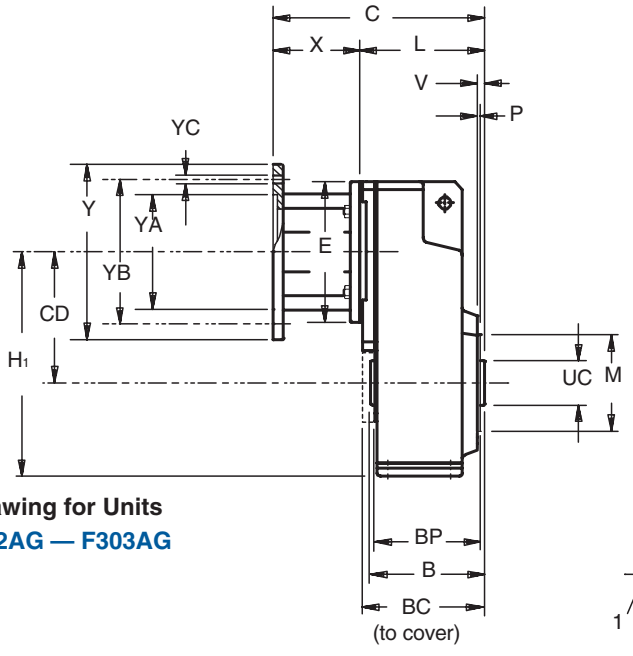
Outside Cover Cap – protects seals from high pressure washing

STANDARD 3-DAY DELIVERY

See Pages 102-109 for Selection Data.



Poultry Duty – "F" Series – MGS Reducer
Tapped Hole – "G" Housing
Hollow Output – Dimensional Data



Drawing for Units
F202AG — F303AG

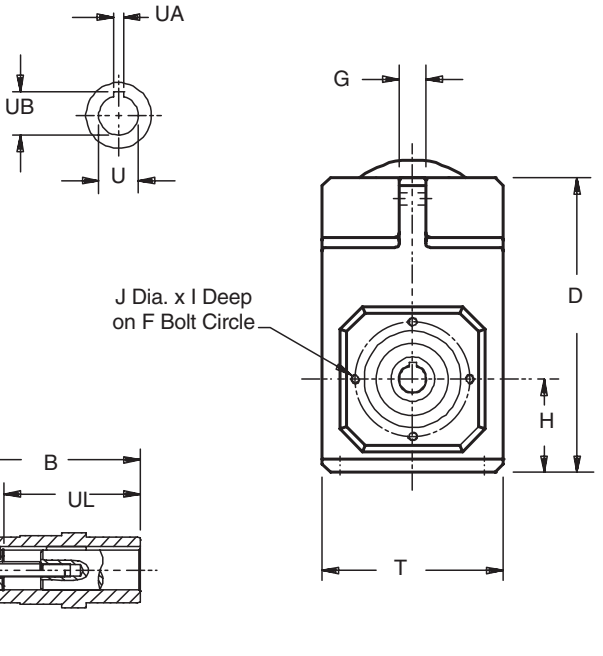


Table No. 1 **Poultry Duty "F" Series – Unit Dimensions (Inches) – "G" Housing Style**

Base Module	CD	B	D	F	G	H	H_1	I	J	M	P	T	U	V	BC	BP	UA	UB	UC	UL	1
F202/F203	5.16	4.53	11.77	4.53	.87	3.66	8.82	.51	M8	3.740	.12	7.09	1.000	.31	4.76	4.13	.250	1.12	1.77	3.62	1/2-13
F302/F303	5.89	5.12	13.23	5.12	1.18	4.17	10.06	.63	M10	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

Poultry Duty "F" Series — Unit Dimensions (Inches)

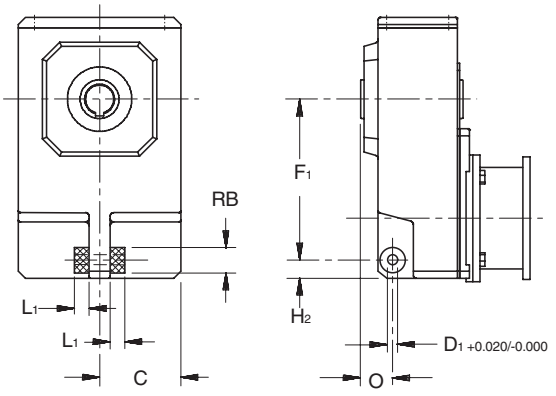
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050P	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050P	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140P	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180P	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23

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

Base Module	MR140/050P C	MR140/050P L	MR160/140P [1] C	MR160/140P [1] L	MR200/180P C	MR200/180P L	Approx. Wt. lbs.
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 **MR160/050P** for a NEMA 56C frame motor.

Rubber Buffer for Torque Arm Mounting



Part No. Example

Poultry Duty Unit
Tapped Hole Housing with Motor Adapter
F302AG0560 MR160/140P

Table No. 4

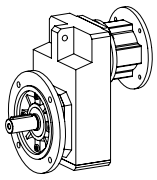
Base Module	Part No.
F1	**25192**
F2	**25192**
F3	**25193**
F4	**25193**
F6	**25194**

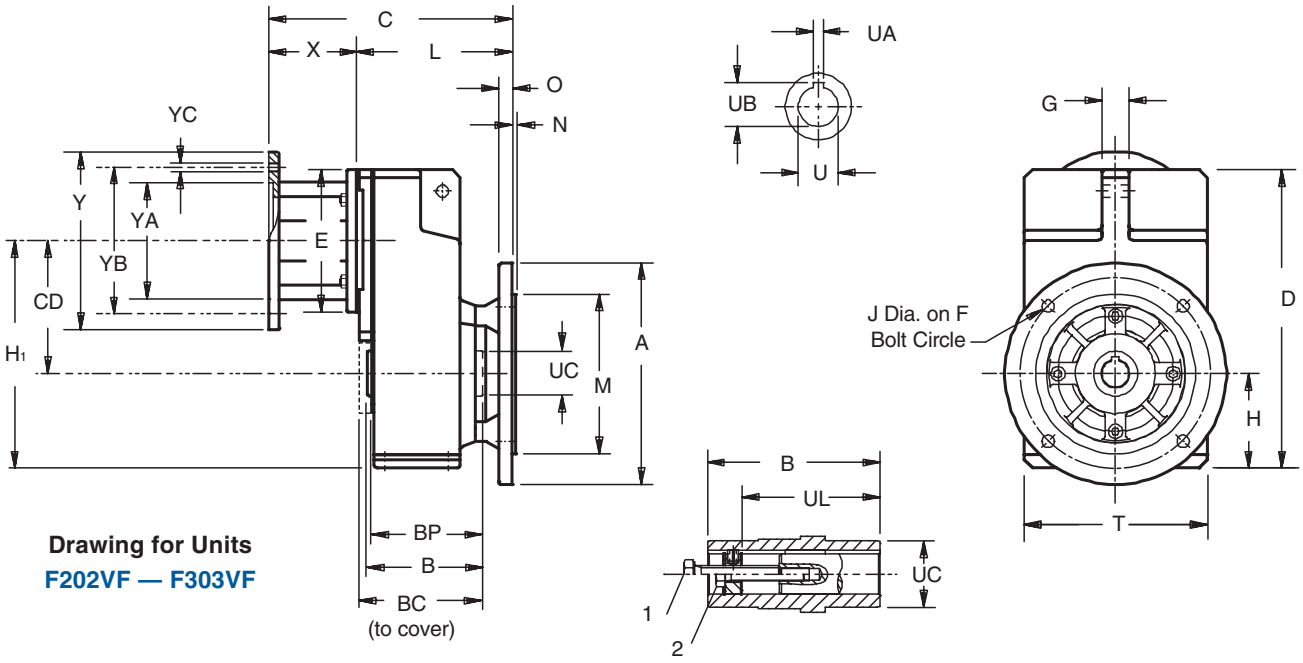
Order two (2) rubber buffers for each unit.
Torque arms are not supplied by STOBER.

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

All weights are approximate.

Poultry Duty – "F" Series – MGS Reducer
Round Flange – "F" Housing
Hollow Output – Dimensional Data





Drawing for Units
F202VF — F303VF

Table No. 1 **Poultry Duty "F" Series – Round Flange Dimensions (Inches)**

Base Module	CD	A	B	D	F	G	H	H_1	J	M	N	O	T	U	BC	BP	UA	UB	UC	UL	1
F202/F203	5.16	7.87	4.53	11.77	6.50	.87	3.66	8.82	.43	5.118	.14	.55	7.09	1.000	4.76	4.13	.250	1.12	1.77	3.62	1/2-13
F302/F303	5.89	9.84	5.12	13.23	8.46	1.18	4.17	10.06	.55	7.087	.16	.59	8.11	1.250	5.5	4.72	.250	1.37	1.97	4.06	1/2-13

Table No. 2

Poultry Duty "F" Series — Unit Dimensions (Inches) – "G" Housing Style

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

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

Base Module	MR140/050P		MR160/140P [1]		MR200/180P		Approx. Wt. lbs.
	C	L	C	L	C	L	
F202	11.54	6.03	12.48	6.18	14.13	6.26	51
F203	12.99	7.48	—	—	—	—	64
F302	12.20	6.69	13.15	6.85	14.80	6.93	67
F303	13.66	8.15	—	—	—	—	73

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

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

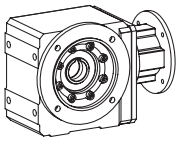
All weights are approximate.

Part No. Example

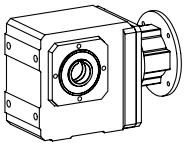
Poultry Duty Unit
Output Flange with Motor Adapter
F302AF0560 MR160/140P

Poultry Duty – "K" Series – MGS Reducers Helical/Bevel with Hollow Output

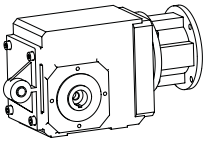
Reducer Configurations



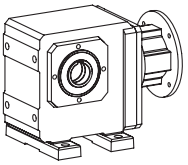
Style AF
Output Flange



Style AG
Tapped Hole



Style AGD
Torque Arm Bracket



Style AN
Foot Mount

Mounting Positions

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

EL1

EL2

EL5

EL6
Possible but not recommended

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS

K 3 0 2 A G 0115 MR160/140 P

- **P** – Poultry Duty
- 050 (56C), **140** (143/145TC), 180 (182/184TC))
- Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350
- Nominal Ratio: (**0115** = 11.5:1 approximate, 11.62:1 actual)
- HOUSING STYLE: "**F**" Housing Style – Flange Mounting ..... **SPECIFY IN A NOTE**: ..... Flange on Side 3 or Side 4
  "**G**" Housing Style – Tapped Holes
  "**GD**" G Housing with Torque Arm Bracket ... **SPECIFY IN A NOTE**: ..... Bracket on Side 1 or Side 5
  "**N**" Housing Style – Foot Mount ..... **SPECIFY IN A NOTE**: ..... Feet on Side 1 or Side 5
- OUTPUT STYLE: "**A**" Hollow Output ..... **SPECIFY IN A NOTE**: ..... Bore Size for K3 ONLY
- No. of Stages (**2** = 2 Stage, determined by ratio)
- Design Generation
- Unit Size No.
- Right Angle Helical/Bevel

THE FOLLOWING OPTIONS ARE AVAILABLE FOR ANY UNIT:

Paint – White
Oil – Food Grade ..... Synthetic

Poultry Duty – "K" Series – MGS Reducers Helical/Bevel with Hollow Output

- Lubricated for Life
- Maintenance Free
- Totally Enclosed (No Vent Required)
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

STANDARD 3-DAY DELIVERY

SILVER BULLET AM™

Standard Coating – 1 Primer Coats
– 2, Industrial 316 Stainless Steel Epoxy
– 1, Silver Bullet Anti-Microbial™ Epoxy

NEMA C-face Input –
O-ring between motor and reducer
Easy mount, maintenance free coupling

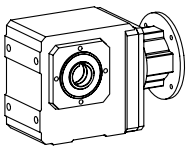
Stainless Steel Nameplate

Double Sealed Output – with a dual lip outer seal and a single lip inner seal

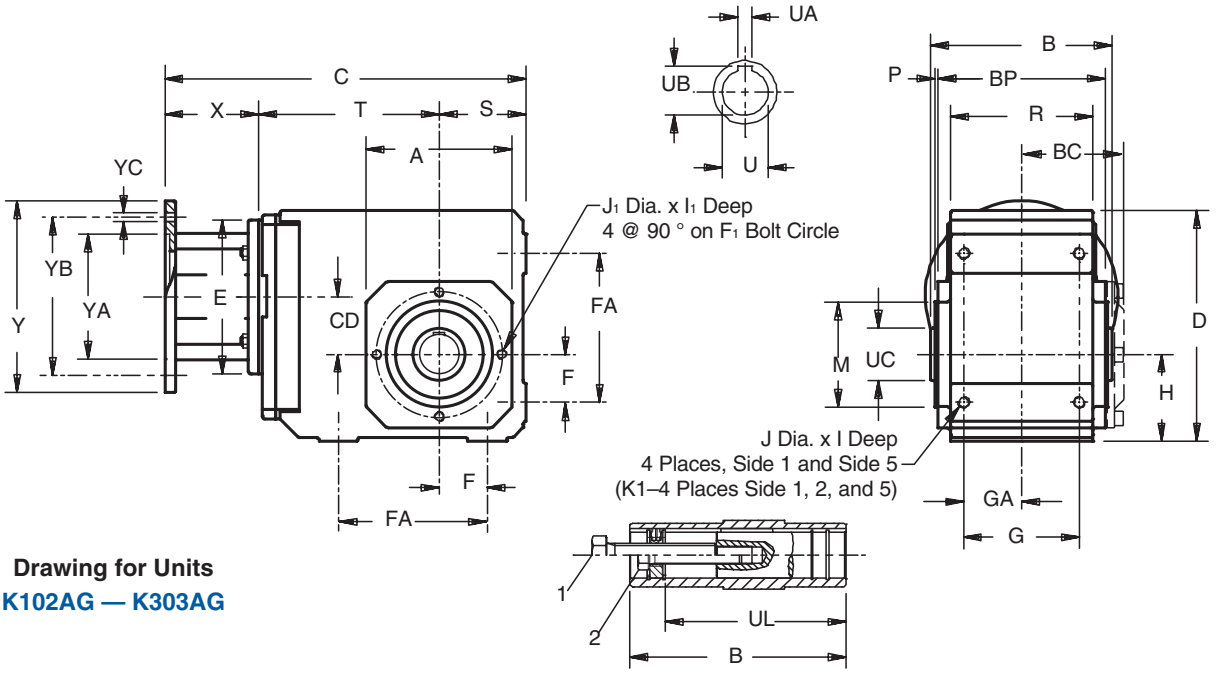
Stainless Steel Output Quill

Outside Cover Cap – protects seals from high pressure washing

See Pages 116-139 for Selection Data.



Poultry Duty – "K" Series – MGS Reducers
Tapped Hole – "G" Housing
Hollow Output – Dimensional Data



Drawing for Units
K102AG — K303AG

Table No. 1 **Poultry Duty "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
K102	4.13	4.41	6.30	3.54	3.54	2.76	2.36	.51	.51	M8	M8	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	M8	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	M8	3.740	.12	5.12	2.95	3.47	5.75	1.57	2.07

Table No. 2 Standard Bore – ins.

Base Module	U	UA	UB	UC	UL	1
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.
MR140/050P	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050P	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140P	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180P	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23

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

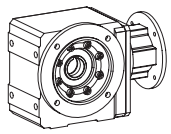
Base	MR140/050P			MR160/140P [1]			MR200/180P			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	53
K302	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	67
K303	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	73

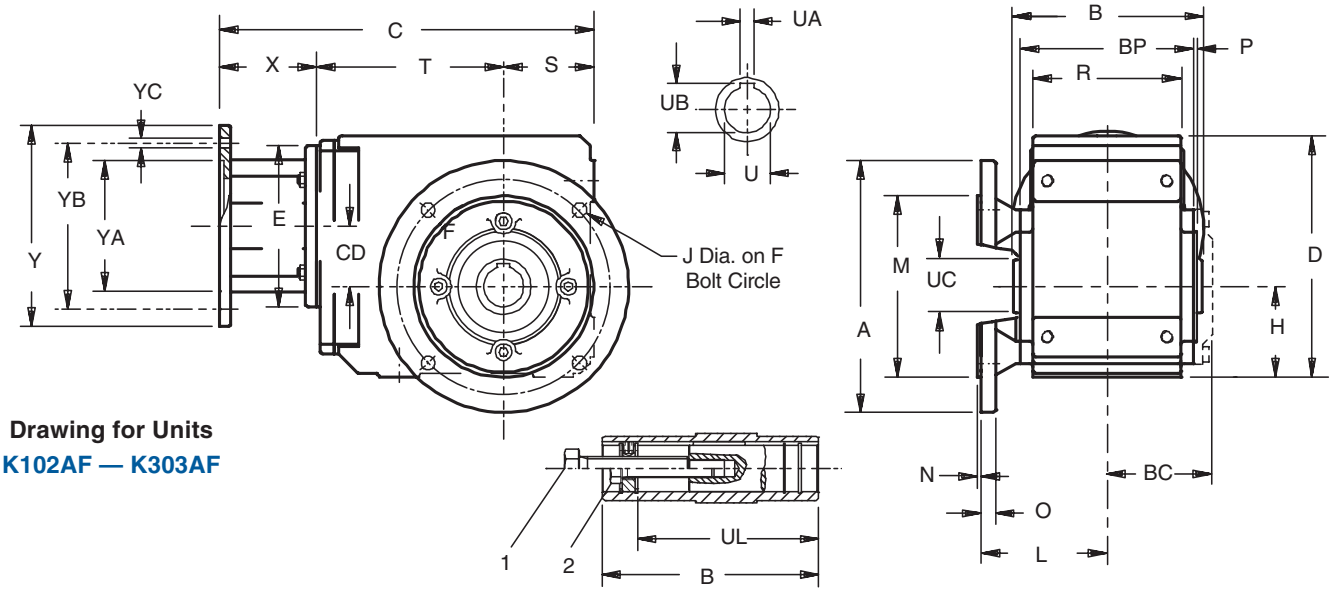
[1] Also available as **MR160/050P** for a NEMA 56C frame motor.

Part No. Example

Poultry Duty
Tapped Holes Housing and Hollow Output
K303AG0650 MR160/140P
Specify Bore Size (K3 ONLY)

Poultry Duty – "K" Series – MGS Reducers
Round Flange – "F" Housing
Hollow Output – Dimensional Data





Drawing for Units
K102AF — K303AF

Table No. 1 Poultry Duty "K" Series – Unit Dimensions (Inches) – "F" Housing Style

Base Module	A	B	D	F	H	J	L	M	N	O	P	R	S	BP	BC	UC	UL	1
K102	6.30	4.17	6.30	5.12	2.36	.35	4.53	4.331 +.001/-.0004	.14	.39	2.44	3.54	2.36	4.17	2.49	1.57	3.86	1/2-13
K202/203	7.87	5.28	7.48	6.50	2.56	.43	5.31	5.118 +.001/-.0004	.14	.47	2.68	4.53	2.56	5.28	3.25	1.77	4.78	1/2-13
K302/303	7.87	5.75	8.39	6.50	2.95	.43	5.59	5.118 +.001/-.0004	.14	.55	2.72	5.12	2.95	5.75	3.47	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. 2 Motor Adapter Dimensions (Inches)

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

Table No. 3 Standard Bore – ins.

Base Module	U	UA	UB
K102	1.000	.250	1.12
K202/203	1.250	250	1.37
K302/303	1.250	250	1.37
	1.375	.312	1.52

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

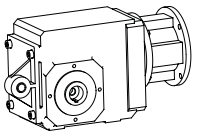
Base	MR140/050P			MR160/140P [1]			MR200/180P			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	53
K302	2.07	12.68	6.42	2.07	13.38	6.57	2.07	14.40	6.65	67
K303	2.07	14.13	7.87	.63	15.08	8.27	—	—	—	73

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

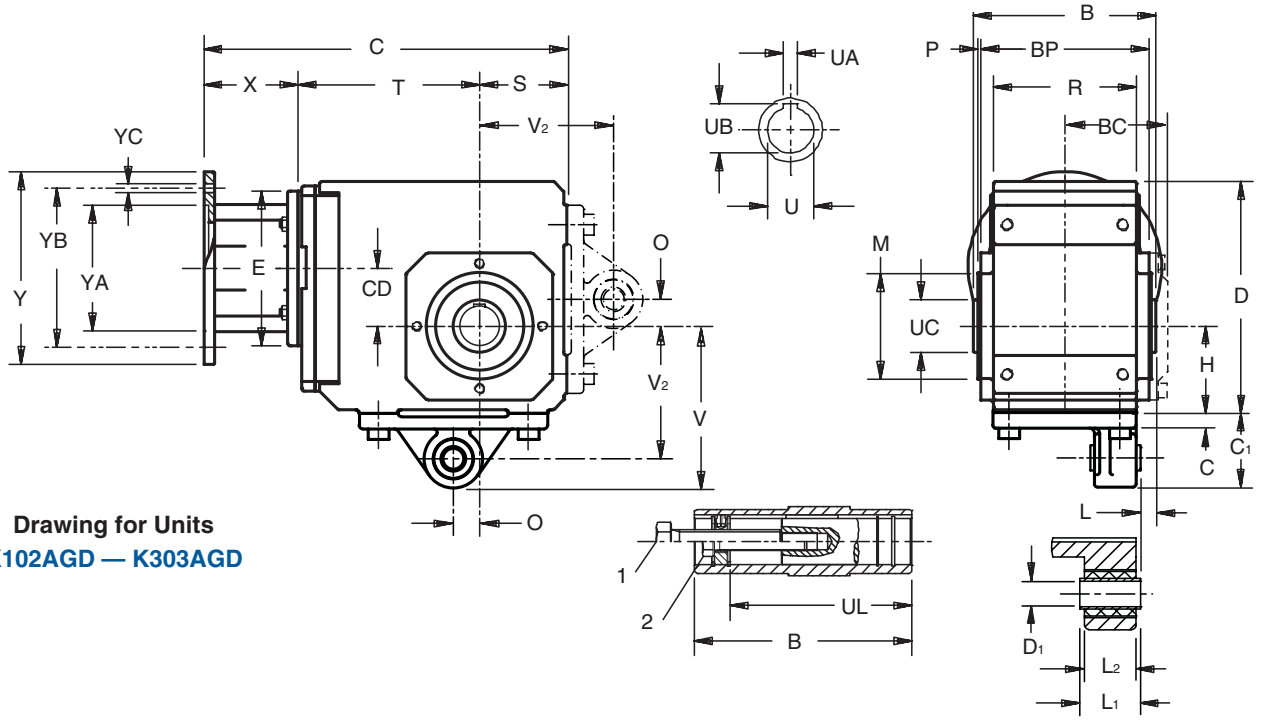
Table No. 5 "K" Series – Optional Flanges (Inches)

Base Module	Flange Size	A	F	J	L	M	N	O
K102	140	5.512	4.53	.35	3.35	3.740	.12	.39
K202/K203	160	6.300	5.12	.35	3.90	4.331	.14	.47
K302/K303	160	6.300	5.12	.35	4.37	4.331	.14	.55

Part No. Example
Poultry Duty
Output Flange and Hollow Output
K303AF0650 MR160/140P
Specify Bore Size (K3 ONLY)



Poultry Duty – "K" Series – MGS Reducers
Torque Arm Bracket – "GD" Housing
Hollow Output – Dimensional Data



Drawing for Units
K102AGD — K303AGD

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

Base Module	B	C	C_1	D	D_1 H9	H	L	L_1	L_2	M	O	P	R	S	V	V_2	BC	BP
K102 [1]	4.72	.39	2.03	6.30	.47 +.017/-.000	2.36	5.51	1.10	.94	1.18	.59	.16	3.54	2.36	4.39	3.54	2.49	4.41
K202/203	5.83	.47	2.26	7.48	.63 +.017/-.000	2.56	7.28	1.50	1.26	1.57	.89	.16	4.53	2.56	4.82	3.93	3.25	5.51
K302/303	6.30	.47	2.66	8.39	.63 +.017/-.000	2.95	7.87	1.50	1.26	1.77	.98	.16	5.12	2.95	5.61	4.72	3.47	5.98

[1] K102 can bolt torque arm bracket on Side 1 (bottom), Side 2 (top), and Side 5.

Table No. 2 **Standard Bore – Inches.**

Base Module	U	UA	UB	UC	UL	1
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

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

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

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

Base	MR140/050P			MR160/140P [2]			MR200/180P			Wt.
Module	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

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

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

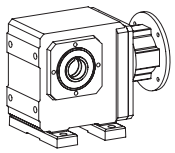
All weights are approximate.

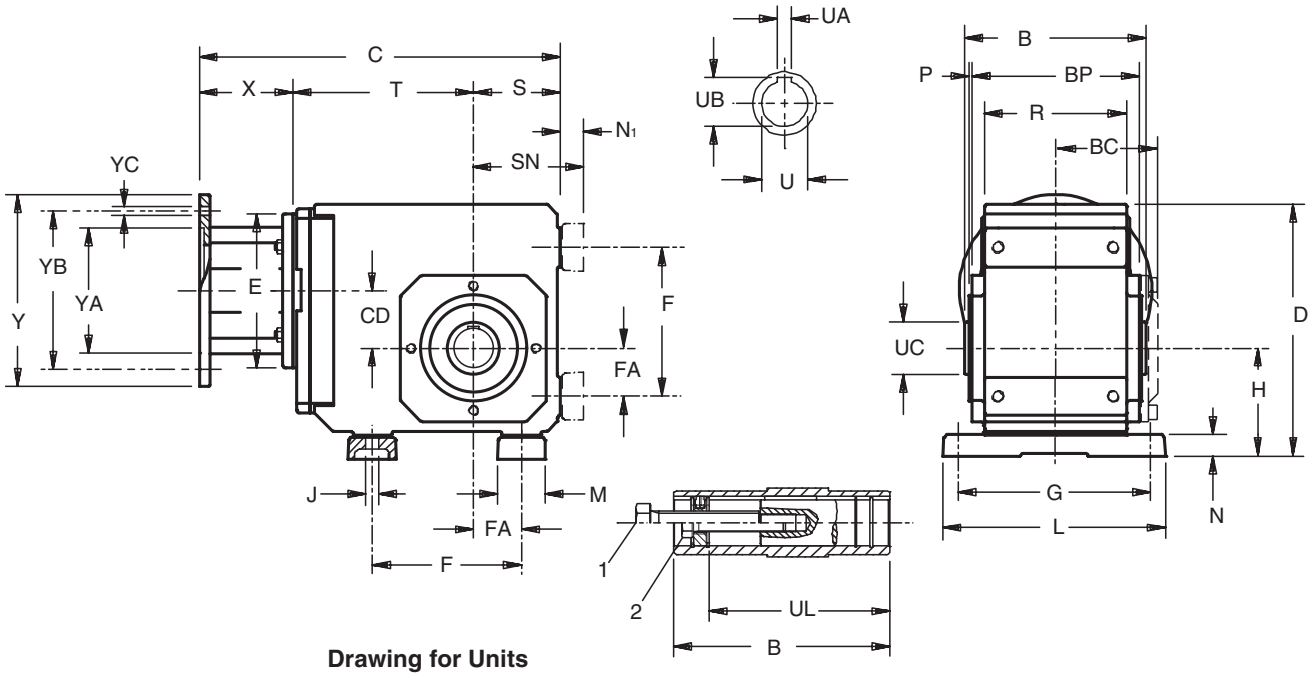
Part No. Example

Poultry Duty with Torque Arm Bracket
Tapped Holes Housing and Hollow Output

K303AGD0650 MR160/140P
Specify Bore Size (K3 ONLY)

Poultry Duty – "K" Series – MGS Reducers
Foot Mount – "H" Housing
Hollow Output – Dimensional Data





Drawing for Units
K102AN — K303AN

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

Base Module	B	D	F	G	H	J	L	M	N	N_1	P	R	S	BC	BP	FA	GA	SN	UC	UL	1
K102	4.72	6.30	3.54	4.53 [1]	2.36	.35 [1]	5.51	1.18	.51	.59	.16	3.54	2.36	2.49	4.41	1.18	1.38 [1]	2.95	1.57	3.86	1/2-13
K202/203	5.83	7.48	4.53	6.10	2.56	.43	7.28	1.57	.79	.91	.16	4.53	2.56	3.25	5.51	1.38	1.77	3.46	1.77	4.78	1/2-13
K302/303	6.30	8.39	5.12	6.69	2.95	.43	7.87	1.77	.79	.91	.16	5.12	2.95	3.47	5.98	1.57	2.07	3.86	1.97	4.92	5/8-11

[1] K102 can bolt mounting feet on Side 1 (bottom), Side 2 (top), and Side 5.

Table No. 2 Standard Bore – ins.

Base Module	U	UA	UB
K102	1.000	.250	1.12
K202/203	1.250	250	1.37
K302/303	1.250	250	1.37
	1.375	.312	1.52

Table No. 3 Motor Adapter Dimensions (Inches)

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

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

Base	MR140/050P			MR160/140P [2]			MR200/180P			Wt.
Module	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

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

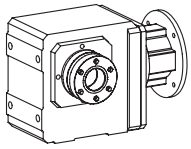
1. Removal Bolt — not supplied.
2. Mounting Bolt — must be smaller than removal bolt.

All weights are approximate.

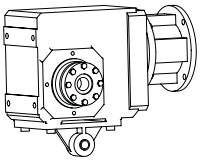
Part No. Example
Poultry Duty
Foot Mounting and Hollow Output
K303AN0650 MR160/140P
Specify Bore Size (K3 ONLY)

Beverage Duty – "K" Series – MGS Reducers
Helical/Bevel with Double Bushing

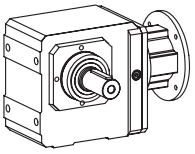
Reducer Configurations



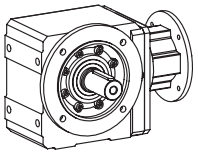
Style WG
Double Bushing



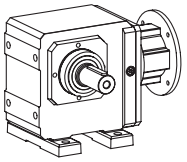
Style WGD
Double Bushing
with Torque Arm Bracket



Style VG
Output Shaft



Style VF
Output Shaft
with Output Flange



Style VN
Output Shaft
with Mounting Feet

Mounting Positions

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

EL1 **EL2** **EL5** **EL6**
Possible – but not recommended

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS

K 6 1 3 W G 0580 MR160 / 140 B

- **B** – Beverage Duty Coating
- 050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)
- Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350
- Nominal Ratio: (**0580** = 57.5:1)
- HOUSING STYLE: "**F**" Housing Style – Flange Mounting ..... **SPECIFY IN A NOTE**: ..... Flange on Side 3 or Side 4
  "**G**" Housing Style – Tapped Holes
  "**GD**" G Housing with Torque Arm Bracket ..... **SPECIFY IN A NOTE**: ..... Bracket on Side 1 or Side 5
  "**N**" Housing Style – Foot Mount ..... **SPECIFY IN A NOTE**: ..... Feet on Side 1 or Side 5
- OUTPUT STYLE: "**V**" Single Side Solid Output ..... **SPECIFY IN A NOTE**: ..... Shaft on Side 3 or Side 4
  "**W**" Wobble Free Bushing
- No. of Stages (**3** = 3 Stage, determined by ratio)
- Design Generation
- Unit Size No.
- Right Angle Helical/Bevel

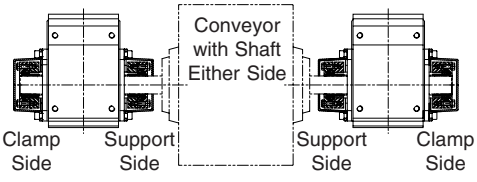
WFB 6 – 107

- Output Bore in inches – **107** = $1^{7}/_{16}$
- Base Module Size example: K**6**13/K**6**14)
- **W**obble **F**ree Dou**B**le Side

THE FOLLOWING OPTIONS ARE AVAILABLE FOR ANY UNIT:

Paint – White ..... Clear Coat
Oil – Food Grade ..... Synthetic

Interchangeable Support Side and Clamp Side



Beverage Duty – "K" Series – MGS Reducers Helical/Bevel with Double Bushing

The standard "K" Series Helical/Bevel MGS Beverage Duty unit is supplied with a patented double sided 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. 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 unit is selected based on horsepower or torque rating, output speed or ratio, and the shaft size of the driven equipment. 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.

This unit has several features that make it virtually maintenance free in a **wet** or **dry** environment.

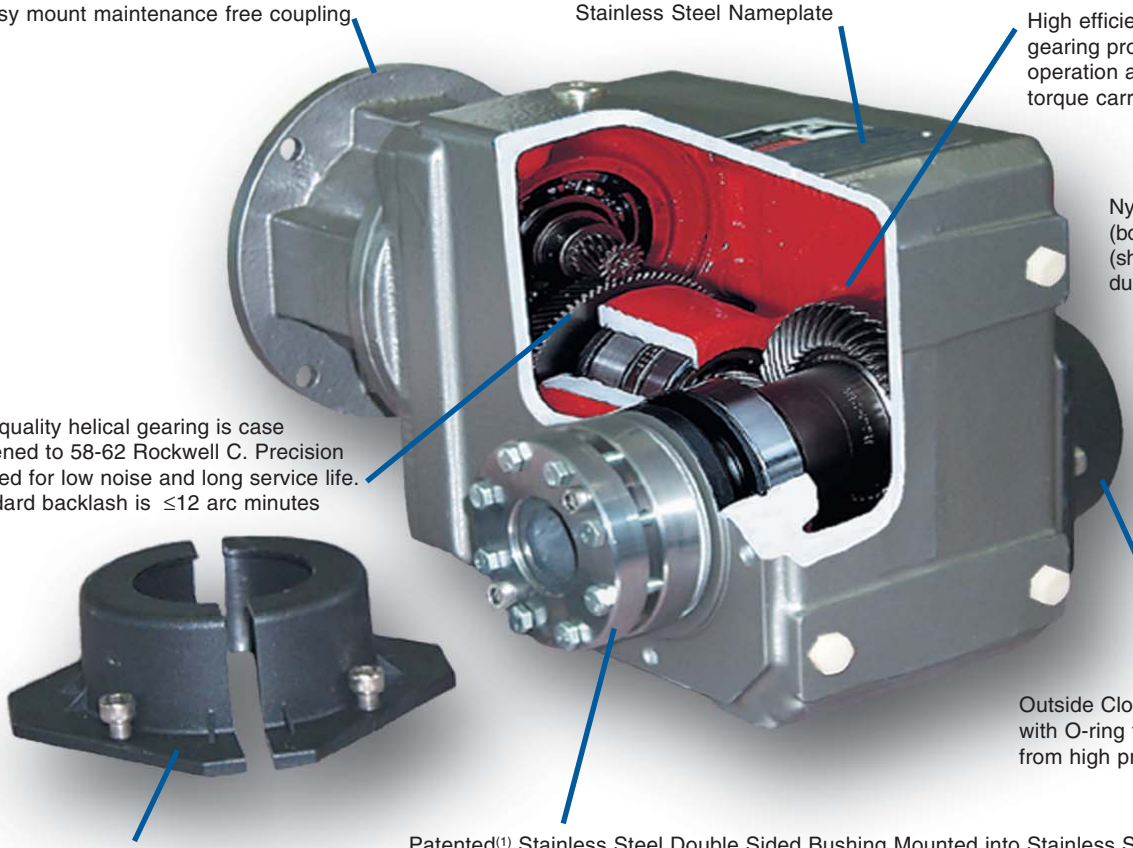
- Lubricated for Life
- Maintenance Free
- Totally Enclosed – no breather to allow comtaminates in
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

STANDARD 3-DAY DELIVERY

Standard Coating – 1, Primer
2, Industrial 316 Stainless Steel Epoxy

Optional Coating – Ultra Clear Industrial Epoxy
– White Epoxy

NEMA C-face Input
- O-ring between the motor and reducer
- Easy mount maintenance free coupling



Stainless Steel Nameplate

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

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

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

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

Inside Split Cover Cap – enables easy assembly onto the shaft

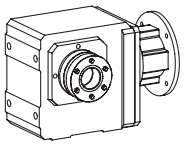
Patented(1) Stainless Steel Double Sided Bushing Mounted into Stainless Steel Output Quill – easily mounts onto standard cold finished, ground, or stainless shafting.

Both Sides of Output Double Sealed – with a dual lip outer seal and a single lip inner seal

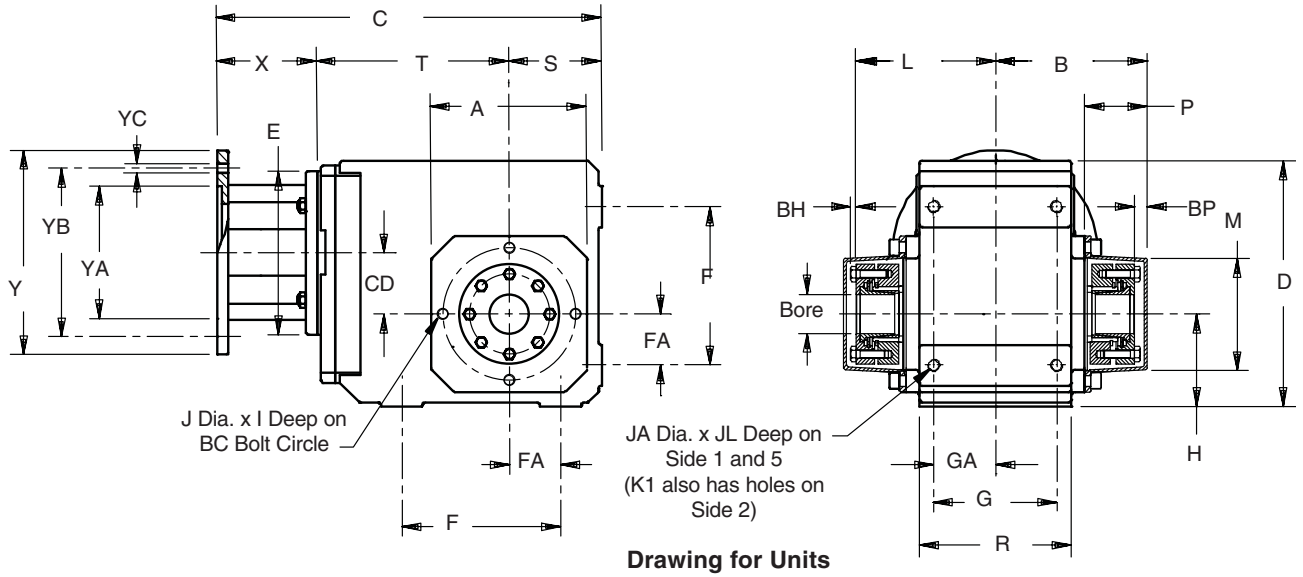
ALL Stainless Steel Hardware

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

See Pages 116-139 for Selection Data.



Beverage Duty – "K" Series – MGS Reducer
Tapped Hole – "G" Housing
Double Bushing – Dimensional Data



Drawing for Units
K102WG — K403WG

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

Base Module	Max. Bore	A	B	D	F	G	H	I	J	L	M	P	R	S	Z_1	BC	BP	BH	FA	GA	JA	JL
K102	1.000	4.13	3.90	6.30	3.54	2.76	2.36	.51	M8	3.66	3.07	1.97	3.54	2.36	—	3.54	.24	.16	1.18	1.38	M8	.51
K202/203	1.187	4.57	4.68	7.48	4.53	3.54	2.56	.51	M8	4.26	3.46	2.05	4.53	2.56	—	3.94	.39	.16	1.38	1.77	M10	.63
K302/303	1.500	5.20	4.98	8.39	5.12	4.13	2.95	.51	M8	4.54	3.78	2.09	5.12	2.95	—	4.53	.43	.16	1.57	2.07	M10	.63
K402/403	1.500	5.98	5.80	9.45	6.10	4.72	3.54	.63	M10	5.33	4.33	2.40	5.83	3.54	—	5.12	.47	.20	1.97	2.36	M12	.75
K513/514	2.000	5.71	6.05	10.24	5.51	4.92	6.30	.63	M10	5.61	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	M16	1.02
K613/614	2.187	7.09	6.61	12.20	6.30	5.12	7.48	.63	M10	6.10	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	M16	1.02
K713/714	2.375	7.68	7.68	13.46	7.09	5.71	8.35	.75	M12	7.29	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	M20	1.22
K813/814	2.750	8.90	9.34	16.14	9.45	7.28	10.43	.75	M12	8.70	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	M24	1.50

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

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

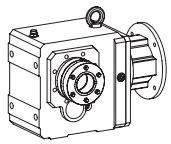
Table No. 3 **"WFB" Double Side Bushings**

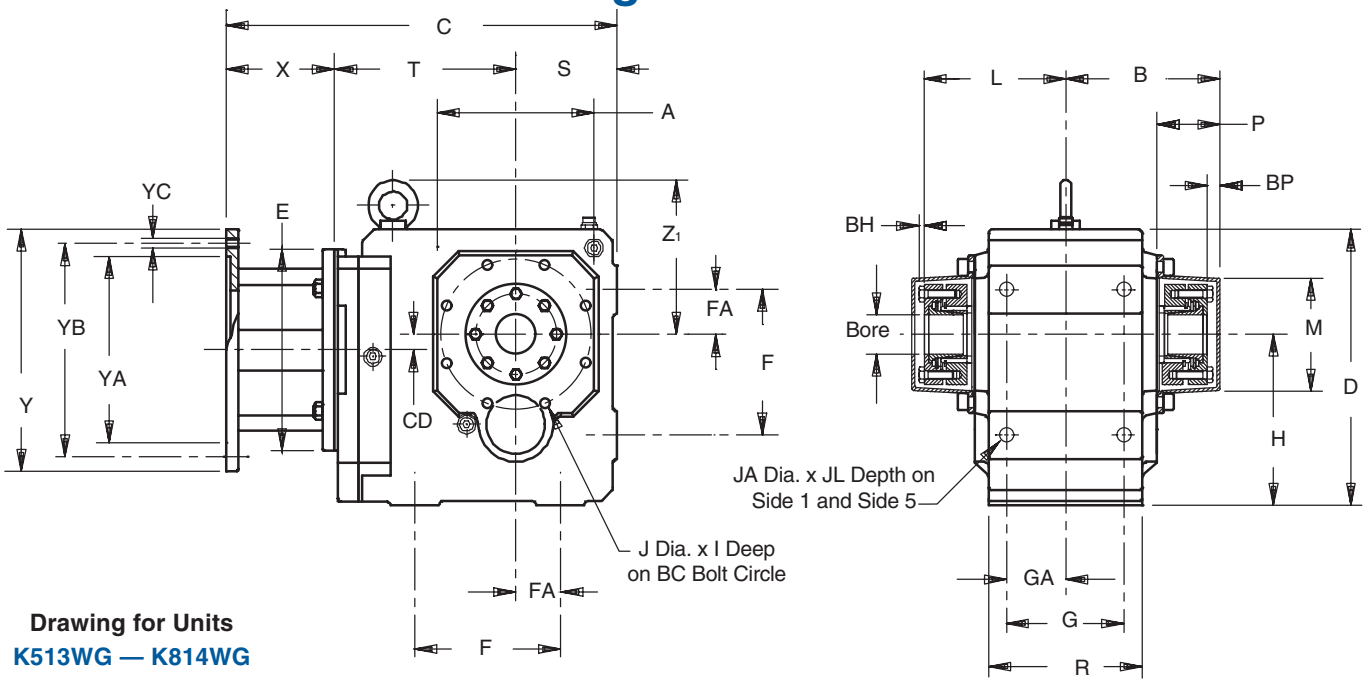
Unit	Stock Bores Sizes						
	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$	40mm
K1	**WFB1-100**	—	—	—	—	—	—
K2	**WFB2-100**	**WFB2-103**	—	—	—	—	—
K3	**WFB3-100**	**WFB3-103**	**WFB3-104**	**WFB3-106**	**WFB3-107**	**WFB3-108**	—
K4	**WFB4-100**	**WFB4-103**	**WFB4-104**	**WFB4-106**	**WFB4-107**	**WFB4-108**	**WFB4-40**

Part No. Example

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

Beverage Duty – "K" Series – MGS Reducer
Tapped Hole – "G" Housing
Double Bushing – Dimensional Data





Drawing for Units
K513WG — K814WG

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

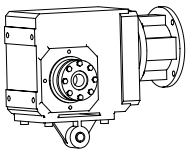
Base	MR140/050B			MR160/140B[1]			MR200/180B			MR250/210B[2]			MR300/250B[3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	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 **MR160/050B** for a NEMA 56C frame motor.
[2] Also available as **MR250/180B** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180B** for NEMA 182/184TC, **MR300/210B** for NEMA 213/215TC, and **MR300/280B** for NEMA 284/286TC frame motor.
All weights are approximate.

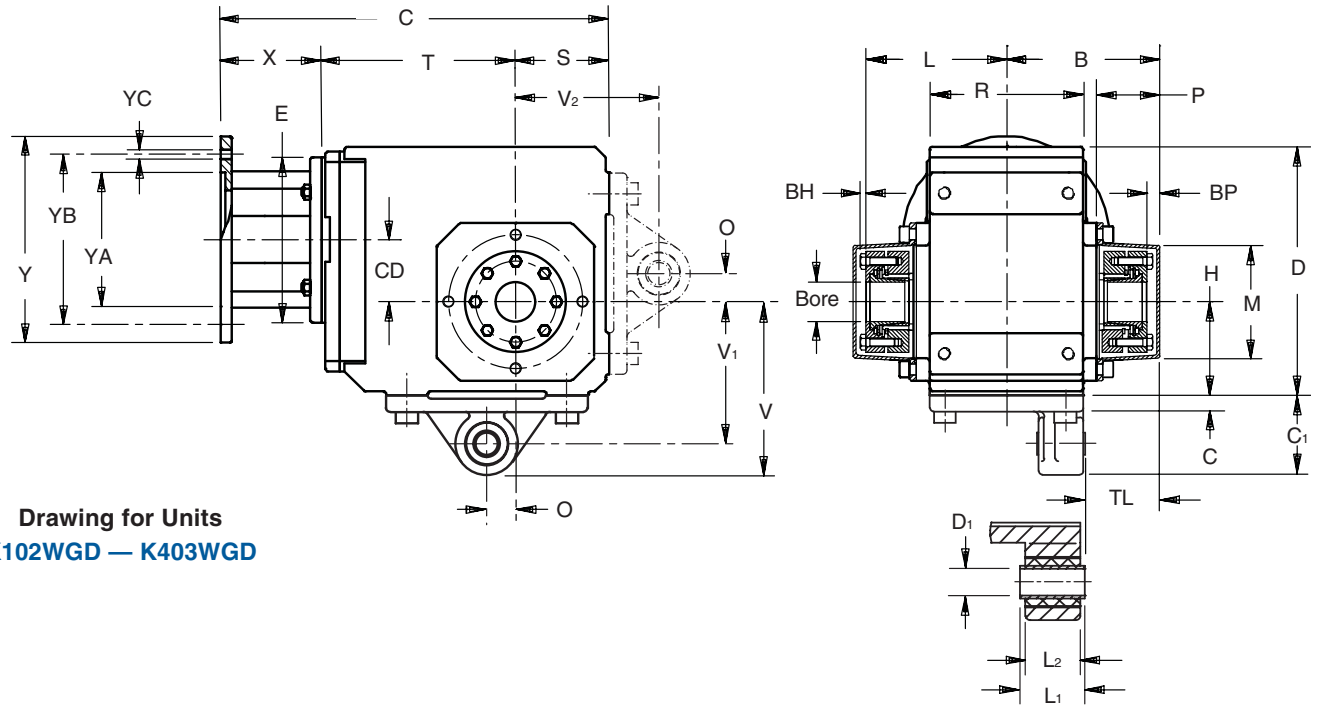
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 5 "WFB" Double Side Bushings

Unit	Stock Bores Sizes												
	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	40mm
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-107	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—	WFB5-40
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	WFB6-206	—	—	WFB6-40
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	WFB8-212	—



Beverage Duty – "K" Series – MGS Reducer
Torque Arm Bracket – "GD" Housing
Double Bushing – Dimensional Data



Drawing for Units
K102WGD — K403WGD

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

Base Module	B	C	C_1	D	D_1 H9	H	L	L_1	L_2	M	O	P	R	S	V	V_1	V_2	Z_1	BP	BH	TL
K102	3.90	.39	2.03	6.30	.47 +.017/-.000	2.36	3.66	1.10	.94	3.07	.59	1.97	3.54	2.36	4.39	3.54	3.54	—	.24	.16	2.05
K202/203	4.68	.47	2.26	7.48	.63 +.017/-.000	2.56	4.26	1.50	1.26	3.46	.89	2.05	4.53	2.56	4.82	3.93	3.93	—	.39	.16	2.29
K302/303	4.98	.47	2.66	8.39	.63 +.017/-.000	2.95	4.54	1.50	1.26	3.78	.98	2.09	5.12	2.95	5.61	4.72	4.72	—	.43	.16	2.30
K402/403	5.80	.55	3.46	9.45	.79 +.020/-.000	3.54	5.33	1.81	1.57	4.33	1.08	2.40	5.83	3.54	7.00	5.91	5.91	—	.47	.20	2.77
K513/514	6.05	.59	4.68	10.24	.79 +.020/-.000	6.30	5.61	1.81	1.57	4.54	1.18	2.40	6.30	3.94	10.98	9.84	7.48	5.98	.43	.20	2.78
K613/614	6.61	.59	3.50	12.20	.79 +.020/-.000	7.48	6.10	1.81	1.57	5.00	1.18	2.68	6.61	4.72	10.98	9.84	7.09	6.77	.51	.24	3.16
K713/714	7.68	.67	4.80	13.46	.79 +.020/-.000	8.35	7.29	2.76	2.52	5.75	1.38	2.91	7.48	4.92	13.15	11.81	8.39	7.52	.39	.24	3.82
K813/814	9.34	.67	4.77	16.14	.94 +.020/-.000	10.43	8.70	4.53	4.02	6.95	1.77	3.43	9.25	5.71	15.20	13.78	9.06	8.11	.64	.31	4.45

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

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

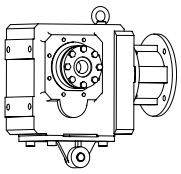
Table No. 3 **"WFB" Double Side Bushings**

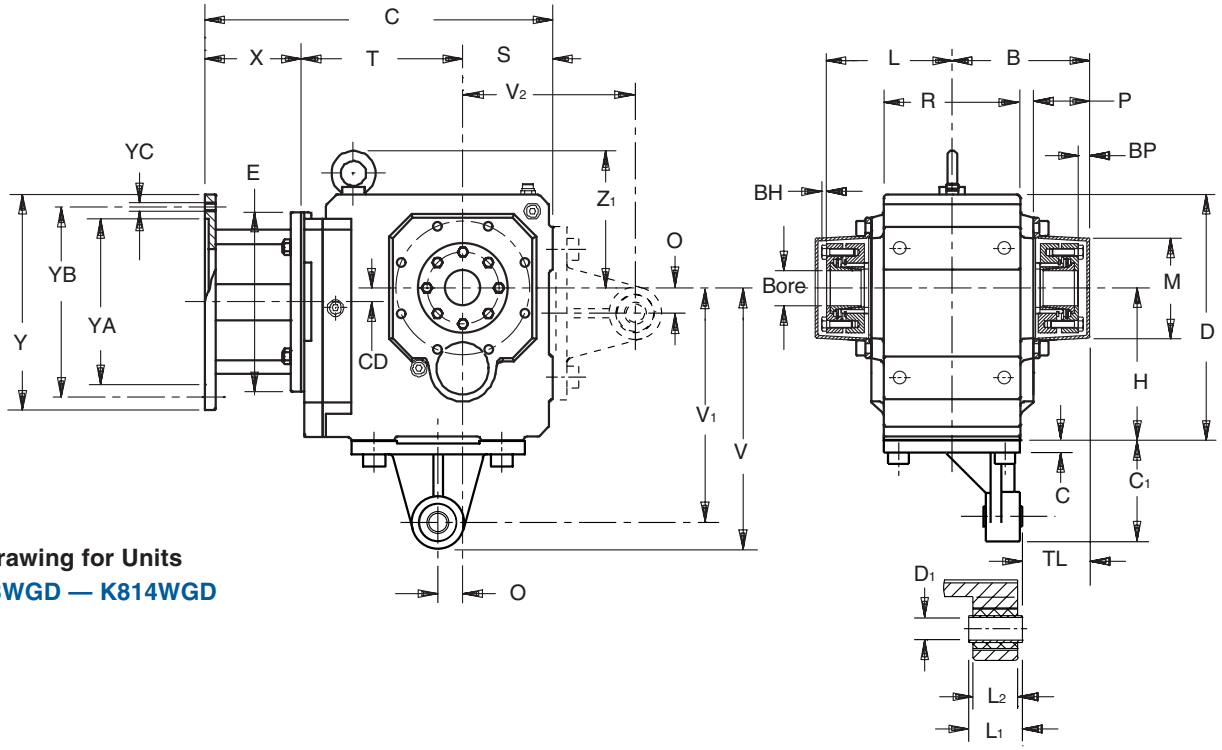
	Stock Bores Sizes						
Unit	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2	40mm
K1	**WFB1-100**	—	—	—	—	—	—
K2	**WFB2-100**	**WFB2-103**	—	—	—	—	—
K3	**WFB3-100**	**WFB3-103**	**WFB3-104**	**WFB3-106**	**WFB3-107**	**WFB3-108**	—
K4	**WFB4-100**	**WFB4-103**	**WFB4-104**	**WFB4-106**	**WFB4-107**	**WFB4-108**	**WFB4-40**

Part No. Example

Beverage Duty Unit with Torque Arm Bracket
143TC Frame Motor Adapter and 1 7/16 Bushing Bore
K303WGD0650 MR160/140B WFB3-107

Beverage Duty – "K" Series – MGS Reducer
Torque Arm Bracket – "GD" Housing
Double Bushing – Dimensional Data





Drawing for Units
K513WGD — K814WGD

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

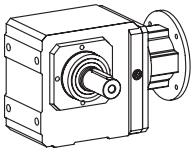
Base	MR140/050B			MR160/140B[1]			MR200/180B			MR250/210B[2]			MR300/250B[3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	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 **MR160/050B** for a NEMA 56C frame motor.
[2] Also available as **MR250/180B** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180B** for NEMA 182/184TC, **MR300/210B** for NEMA 213/215TC, and **MR300/280B** for NEMA 284/286TC frame motor.
All weights are approximate.

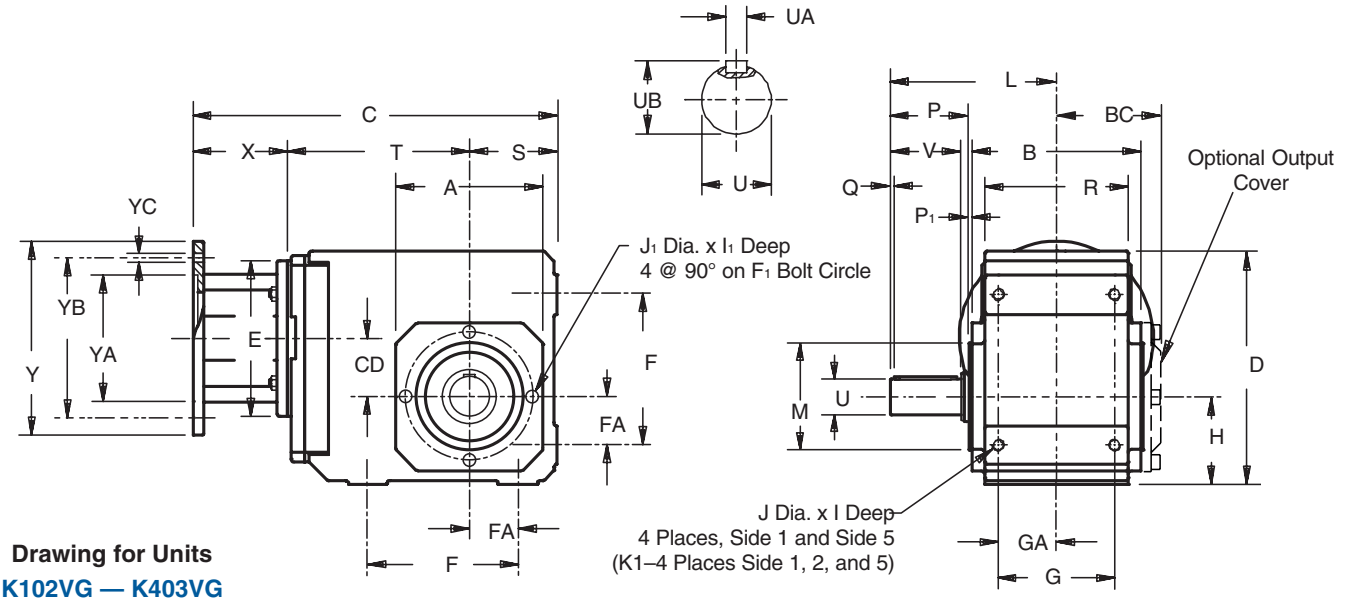
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 5 **"WFB" Double Side Bushings**

Unit	Stock Bores Sizes												
	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	40mm
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-107	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—	WFB5-40
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	WFB6-206	—	—	WFB6-40
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	WFB8-212	—



Beverage Duty – "K" Series – MGS Reducer
Tapped Holes – "G" Housing
Shaft Output – Dimensional Data



Drawing for Units
K102VG — 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
K102	4.13	4.17	2.64	6.30	3.54	3.54	1.18	2.76	1.38	2.36	.51	.51	M8	M8	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	M8	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	M8	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	M10	6.54
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	M10	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	M10	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	M12	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	M12	12.83

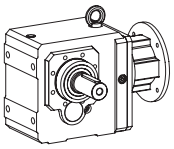
Table No. 2

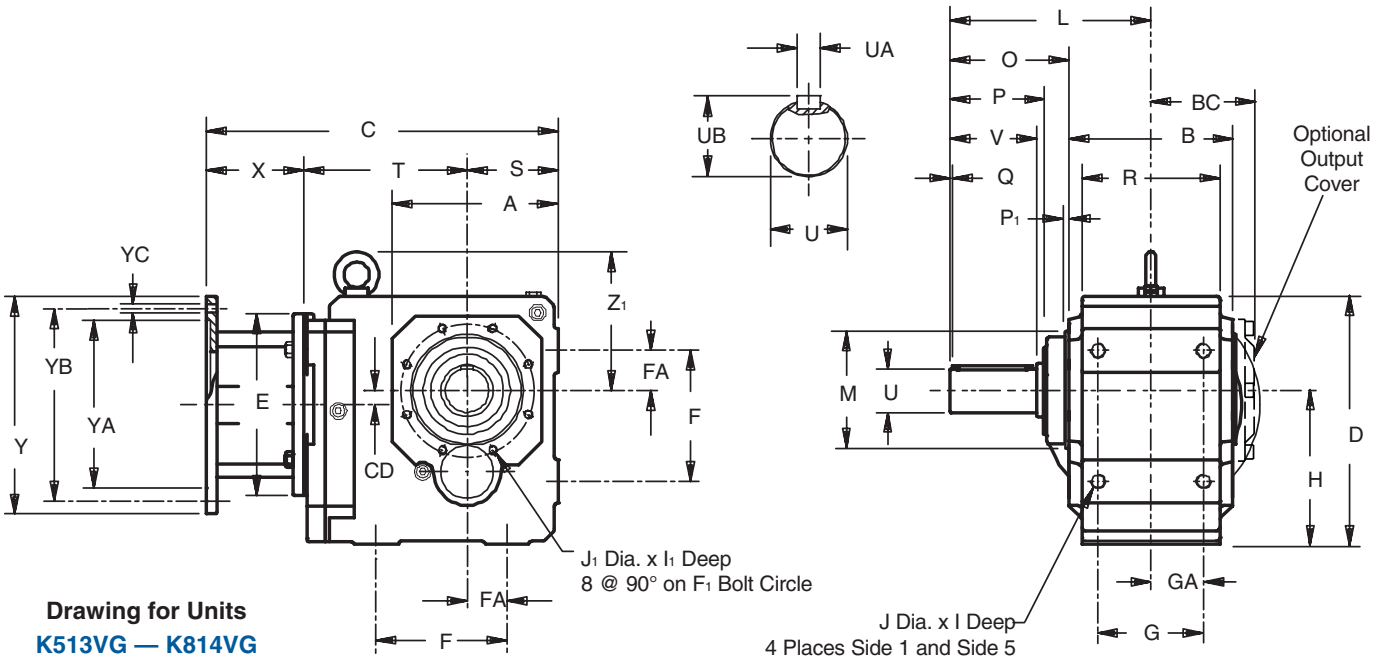
Base Module	M	O	P	P_1	R	Q	S	U	UA – Key	UB	V	Z_1
K102	2.953	—	2.32	.12	3.54	.16	2.36	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	1.97	—
K202/203	3.228	—	2.56	.12	4.53	.16	2.56	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	2.36	—
K302/303	3.740	—	2.60	.12	5.12	.16	2.95	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	2.36	—
K402/403	4.331	—	3.39	.14	5.83	.16	3.54	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	2.76	—
K513/514	4.331	5.10	3.90	.14	6.30	.16	3.94	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	3.54	5.98
K613/614	5.512	5.35	4.31	.14	6.61	.16	4.72	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	3.94	6.77
K713/714	6.102	6.46	5.14	.14	7.48	.16	4.92	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	4.72	7.52
K813/814	7.283	7.28	5.94	.16	9.25	.20	5.71	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	5.51	8.11

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

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

Beverage Duty – "K" Series – MGS Reducer
Tapped Holes – "G" Housing
Shaft Output – Dimensional Data





Drawing for Units
K513VG — K814VG

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

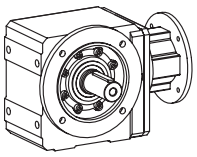
Base	MR140/050B			MR160/140B [1]			MR200/180B			MR250/210B [2]			MR300/250B [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	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 **MR160/050B** for a NEMA 56C frame motor.
[2] Also available as **MR250/180B** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180B** for a NEMA 182/184TC, **MR300/210B** for a NEMA 213/215TC, and **MR300/280B** for a NEMA 284/286TC frame motor.
All weights are approximate.

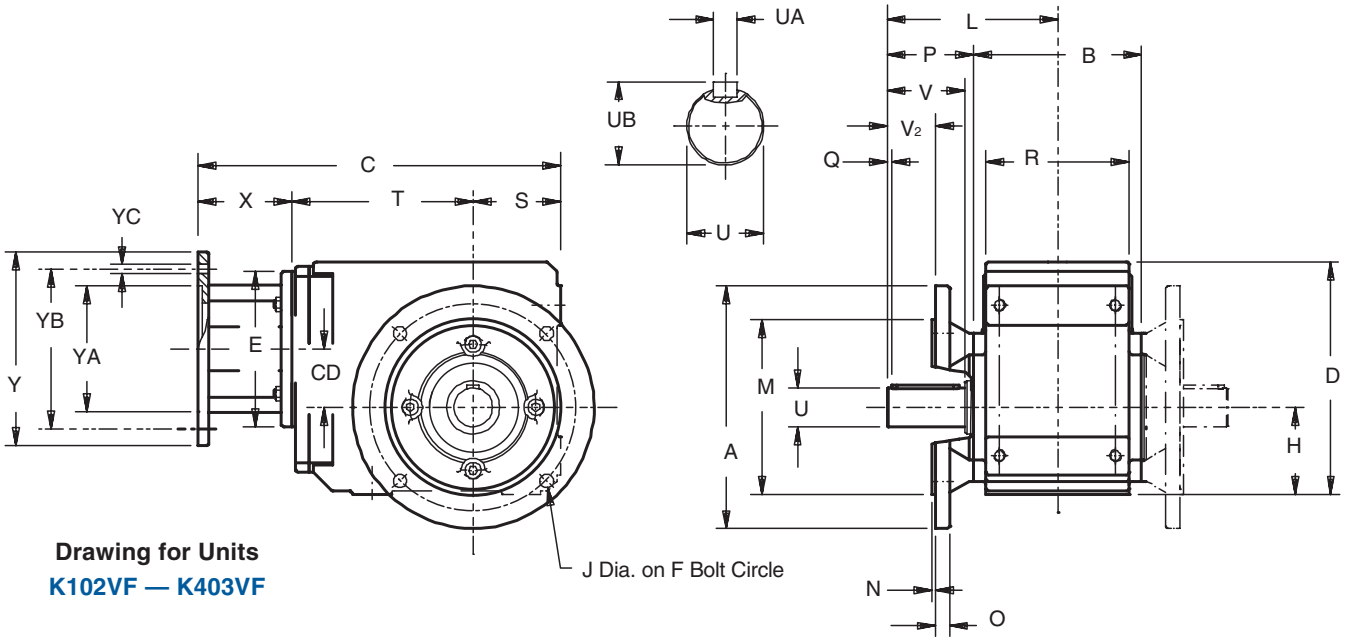
Part No. Example

Beverage Duty
Tapped Hole Housing with Motor Adapter

K303VG0650 MR160/140B
Specify: Shaft Side 3 or Side 4



Beverage Duty – "K" Series – MGS Reducer
Round Flange – "F" Housing
Shaft Output – Dimensional Data



Drawing for Units
K102VF — K403VF

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

Base Module	A	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 +.001/-.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 +.001/-.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 +.001/-.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	6.54	7.087 +.001/-.0004	.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 +.001/-.0004	.16	.59	5.10	.16	6.30	3.94	3.54	—	5.98
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.001/-.001	.16	.67	5.35	.16	6.61	4.72	3.94	—	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

Table No. 2 Motor Adapter Dimensions (Inches)

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

Table No. 3

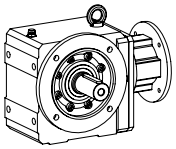
Base Module	Standard Shaft – inches		
	U	UA – Key	UB
K102	1.000	$^1/_4 \times {}^1/_4 \times 1^9/_{16}$	1.11
K202/203	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K302/303	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K402/403	1.375	$^5/_{16} \times {}^5/_{16} \times 2^5/_{16}$	1.51
K513/514	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K613/614	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K713/714	2.375	$^5/_8 \times {}^5/_8 \times 3^{15}/_{16}$	2.65
K813/814	2.875	$^3/_4 \times {}^3/_4 \times 4^5/_{16}$	3.21

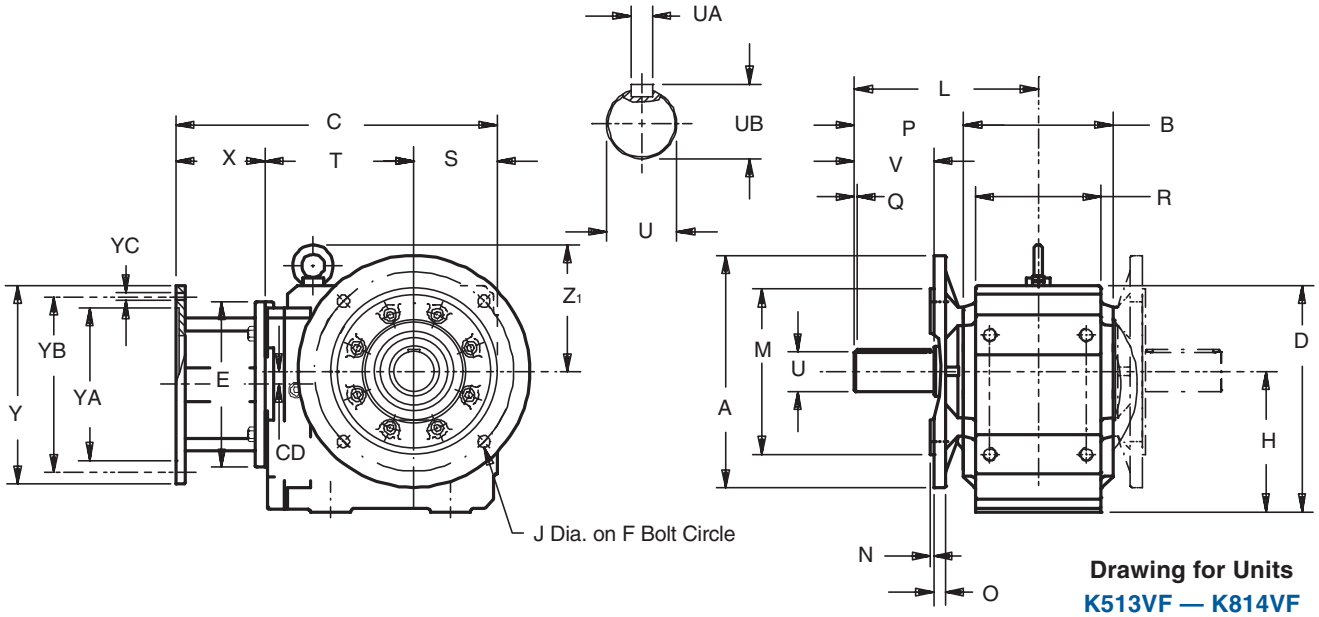
Table No. 4 "K" Series – Optional Flanges (Inches)

Base Module	Flange Size	A	F	J	L	M	N	O
K1	140	5.512	4.53	.35	3.35	3.740	.12	.39
K2	160	6.300	5.12	.35	3.90	4.331	.14	.47
K3	160	6.300	5.12	.35	4.37	4.331	.14	.55
K7	300	11.811	10.43	.55	6.18	9.055	.20	.71
K8	350	13.780	11.81	.71	7.32	9.843	.20	.79
	450	17.717	15.75	.71	7.32	13.781	.20	.79

* Optional flanges are not available in all sizes.

Beverage Duty – "K" Series – MGS Reducer
Round Flange – "F" Housing
Shaft Output – Dimensional Data





Drawing for Units
K513VF — K814VF

Table No. 5 **Beverage Duty – "K" Series – Dimensions (Inches) – "F" Housing Style**

Base	MR140/050B			MR160/140B [1]			MR200/180B			MR250/210B [2]			MR300/250B [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

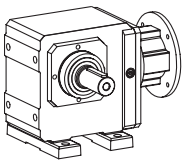
[1] Also available as **MR160/050B** for a NEMA 56C frame motor.
[2] Also available as **MR250/180B** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180B** for a NEMA 182/184TC, **MR300/210B** for a NEMA 213/215TC, and **MR300/280B** for a NEMA 284/286TC frame motor.

All weights are approximate.

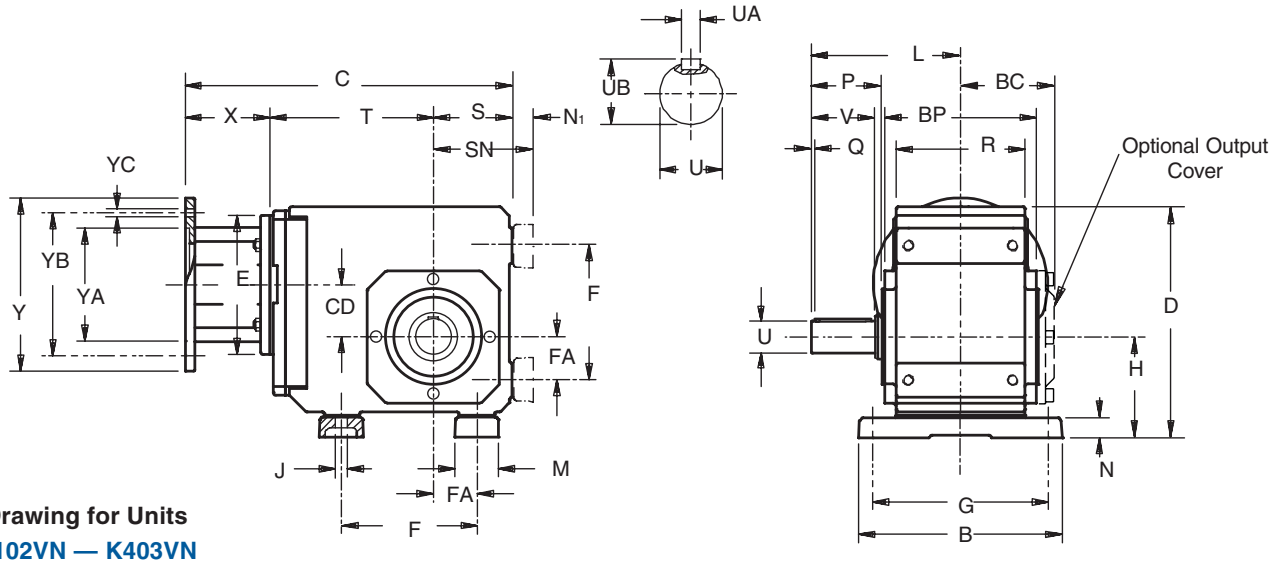
Part No. Example

Beverage Duty
Round Flange with Motor Adapter

K303VF0650 MR160/140B
Specify: Shaft and Flange Side



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



Drawing for Units
K102VN — K403VN

Table No. 1 **Beverage Duty – "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	BC	BP	FA	N_1	SN
K102	5.51	6.81	3.54[1)]	4.53	2.95	.35	4.53	1.18	.51	—	2.32	.16	3.54	2.36	1.97	—	2.64	4.17	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	—	3.23	5.28	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	—	3.46	5.75	1.57	.91	3.86
K402/403	9.06	10.43	6.10	7.87	4.53	.55	6.54	1.97	.87	—	3.39	.16	5.83	3.54	2.76	—	4.08	6.81	1.97	.98	4.53
K513/514	9.45	11.42	5.51	7.87	7.48	.71	8.74	2.36	1.06	5.10	3.90	.16	6.30	3.94	3.54	5.98	4.31	7.28	1.57	1.18	5.12
K613/614	9.84	13.39	6.30	8.27	8.66	.71	9.29	2.56	1.06	5.35	4.31	.16	6.61	4.72	3.94	6.77	4.61	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	5.08	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	6.26	11.10	2.95	1.77	7.48

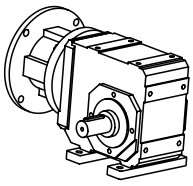
[1)] Mounting holes are also located on Side 1 of the K1 unit ONLY.

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

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

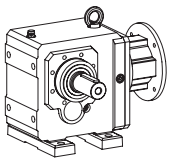
Table No. 3

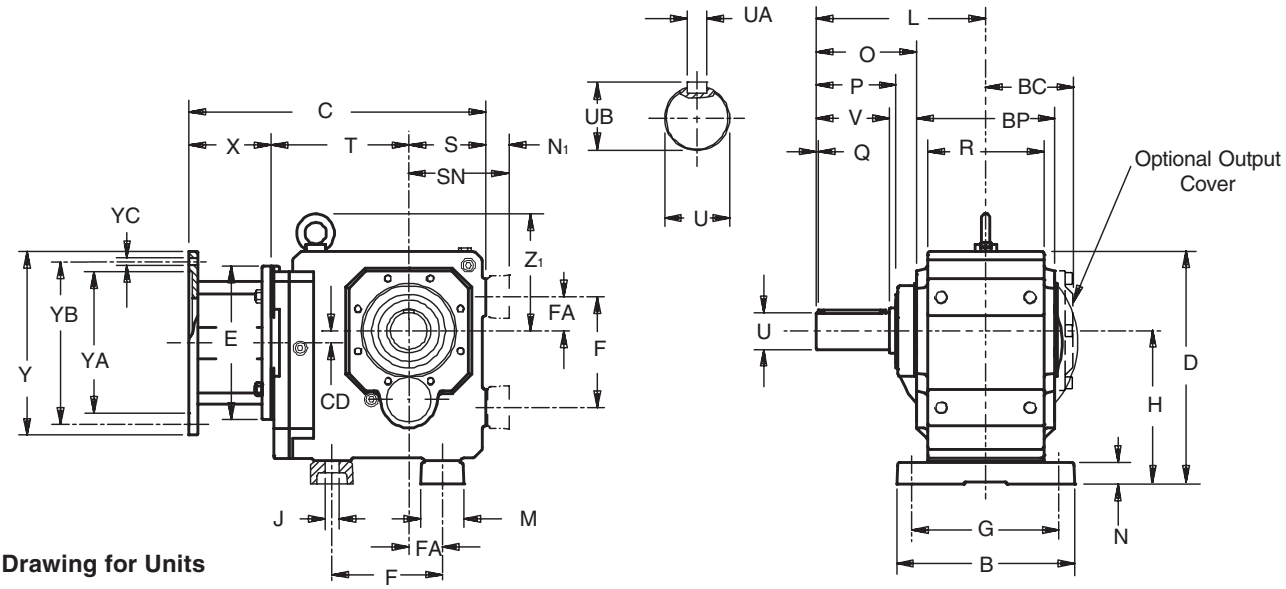
Base Module	Standard Shaft – inches		
	U	UA – Key	UB
K102	1.000	$^1/_4 \times {}^1/_4 \times 1^9/_{16}$	1.11
K202/203	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K302/303	1.250	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
K402/403	1.375	$^5/_{16} \times {}^5/_{16} \times 2^5/_{16}$	1.51
K513/514	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K613/614	1.750	$^3/_8 \times {}^3/_8 \times 3^5/_{32}$	1.92
K713/714	2.375	$^5/_8 \times {}^5/_8 \times 3^{15}/_{16}$	2.65
K813/814	2.875	$^3/_4 \times {}^3/_4 \times 4^5/_{16}$	3.21



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

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





Drawing for Units
K513VN — K814VN

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

Base	MR140/050B			MR160/140B [1]			MR200/180B			MR250/210B [2]			MR300/250B [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 **MR160/050B** for a NEMA 56C frame motor.
[2] Also available as **MR250/180B** for a NEMA 182/184TC frame motor.
[3] Also available as **MR300/180B** for a NEMA 182/184TC, **MR300/210B** for a NEMA 213/215TC, and **MR300/280B** for a NEMA 284/286TC frame motor.

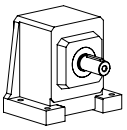
All weights are approximate.

Part No. Example

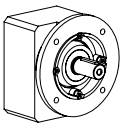
Beverage Duty
Foot Mounting with Motor Adapter
K303VN0650 MR160/140B
Specify: Shaft and Feet Side

Beverage Duty – "C" Series – MGS Reducers
Concentric Helical

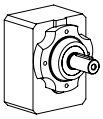
Reducer Configurations



Style N
Foot Mount



Style F
Round Flange



Style G
Tapped Holes

Mounting Positions

One Standard Unit for ALL Horizontal Mounting Positions <u>Without</u> Changing the Oil Level

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

EL5 and EL6 can be supplied on request. Be sure to specify when ordering.

EL5 **EL6**

Possible but not recommended.

Standard Oil: Mobile 630
Optional Oil: Food Grade Oil (Exxon Univis Special Mist 220)
Synthetic Oil (Mobil SHC630)

Part No. Explanation with OPTIONS

C 4 0 2 N 0135 MR160 / 140 B

B – Beverage Duty

050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)

Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350

Nominal Ratio: **0135** = 13.5:1

HOUSING STYLE
"**N**" Housing Style – Foot Mounting
"**F**" Housing Style – Flange Mounting
"**G**" Housing Style – Tapped Holes

No. of Stages (**02** = 2 Stage, determined by ratio)

Design Generation

Unit Size No.

Concentric Helical

THE FOLLOWING ARE OPTIONAL FOR SOME UNITS:

Paint – White ..... Clear Coat
Oil – Food Grade ..... Synthetic

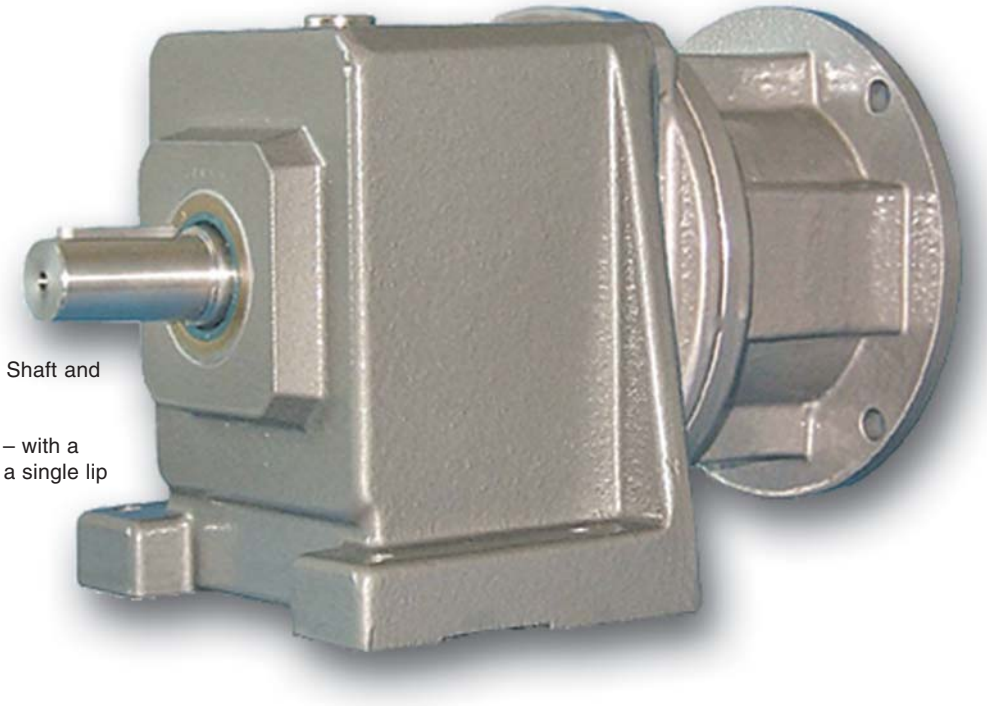
Beverage Duty – "C" Series – MGS Reducers
Concentric Helical

- Lubricated for Life
- Maintenance Free
- Totally Enclosed (Watertight)
- 3 Year Warranty – your guarantee of our confidence in the MGS (Modular Gear System) line of reducers
- 97% Efficiency – for high quality and reliability plus cost savings in energy and maintenance

Standard Coating – Industrial 316 Stainless Steel Epoxy
Coating Options – Additional Layer Ultra Clear Industrial Epoxy
– White Epoxy

Stainless Steel Nameplate

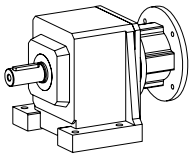
NEMA C-face Input
- O-ring between motor and reducer
- Easy mount maintenance free coupling



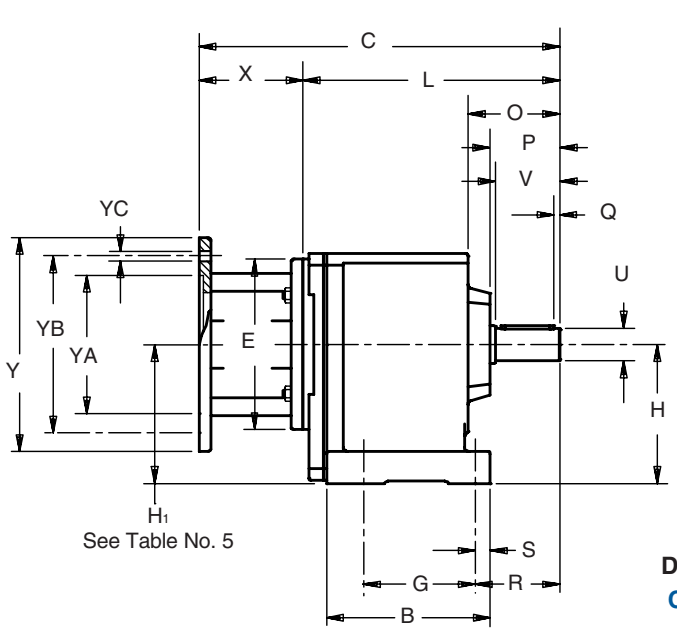
Stainless Steel Output Shaft and Key

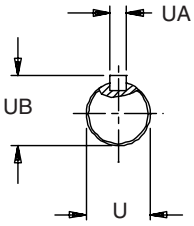
Double Sealed Output – with a dual lip outer seal and a single lip inner seal

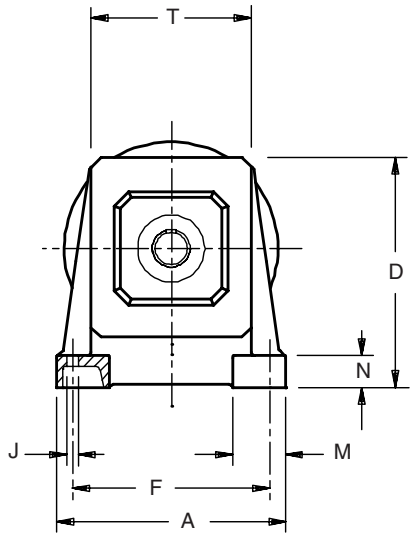
See Pages 64-91 for Selection Data.



Beverage Duty – "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
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 No. 5

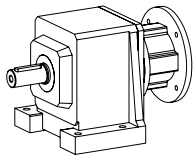
Table No. 2

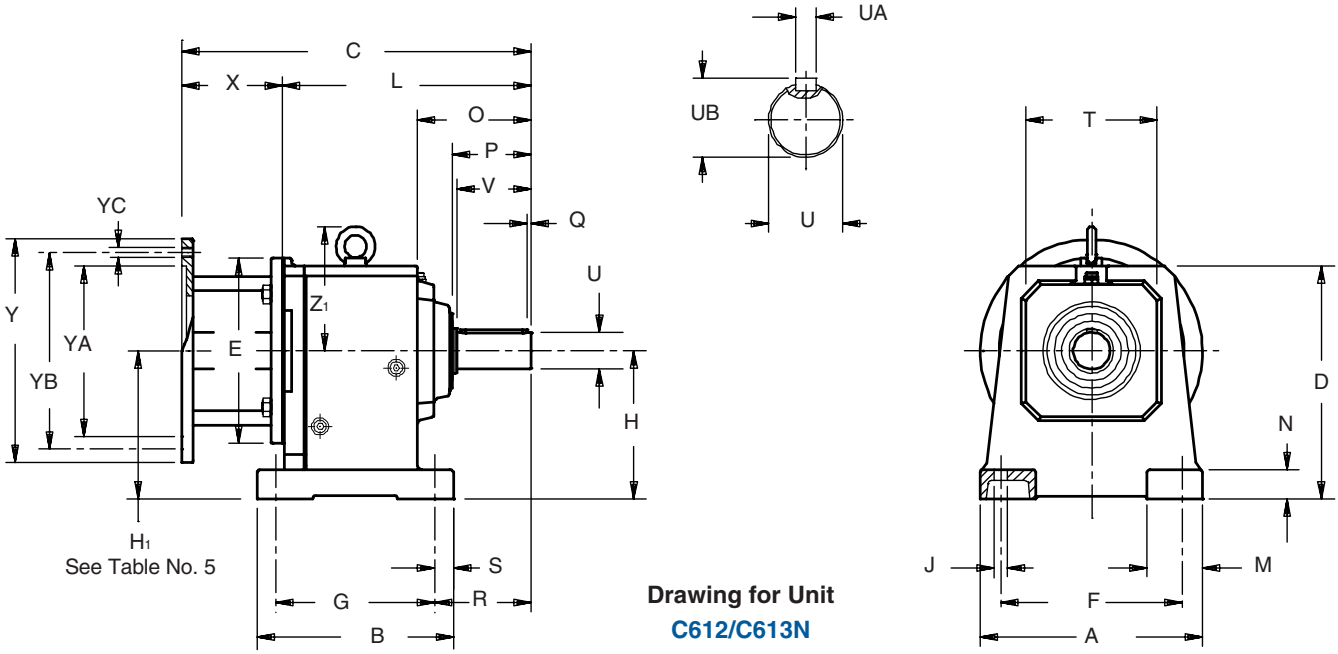
Base Module	S	T	U	V	Z_1	UA – Key	UB
C002	.43	3.62	.7500	1.57	—	$^3/_{16} \times {}^3/_{16} \times 1^7/_{32}$	.83
C102/C103	.51	4.88	1.0000	1.97	—	$^1/_4 \times {}^1/_4 \times 1^9/_{16}$	1.11
C202/C203	.55	5.43	1.2500	2.36	—	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	1.36
C302/C303	.55	5.91	1.2500	2.36	—	$^1/_4 \times {}^1/_4 \times 1^{15}/_{16}$	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.
MR140/050B	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050B	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140B	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180B	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180B	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210B	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180B	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210B	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250B	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280B	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

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





Drawing for Unit
C612/C613N

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

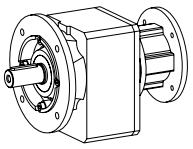
Base Module	MR140/050B C	MR140/050B L	MR160/140B [2] C	MR160/140B [2] L	MR200/180B C	MR200/180B L	MR250/210B [3] C	MR250/210B [3] L	MR300/250B [4] C	MR300/250B [4] L	Approx. Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	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

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

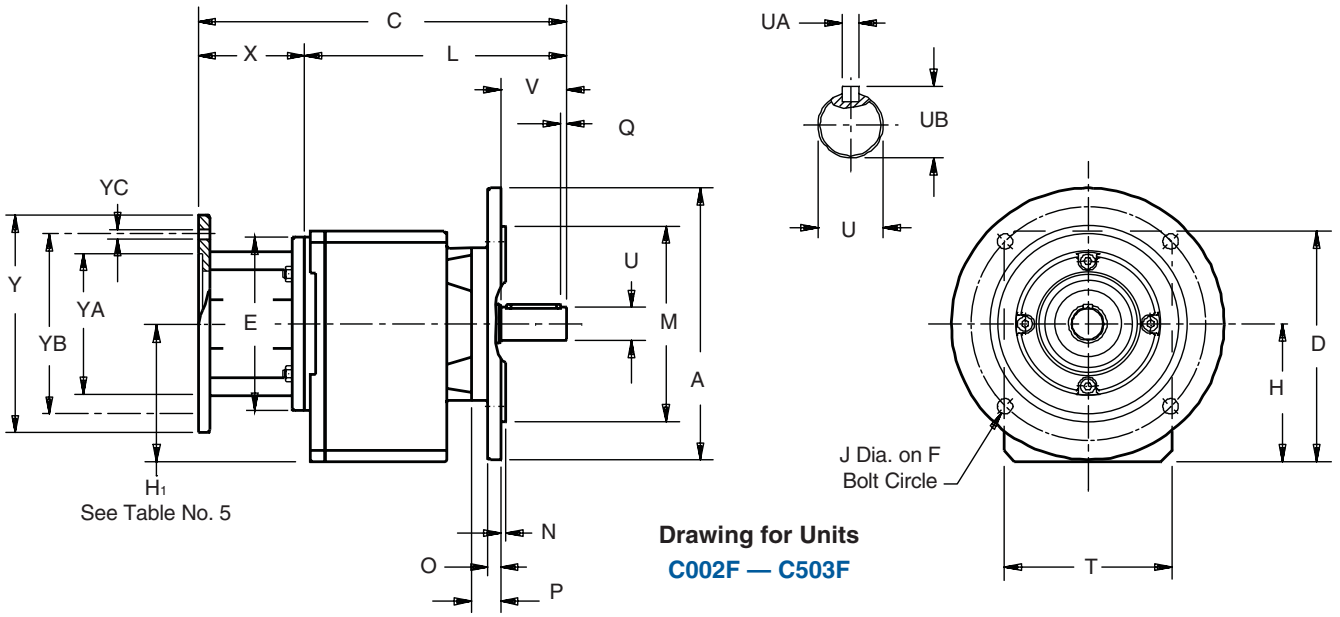
Table No. 5 "C" Series – Input Dimension (Inches)

Base Module	MR160/050B [2] H_1	MR200/180B H_1	MR250/210B H_1	MR300/250B H_1
C303	3.66	–	–	–
C612	–	7.63	7.63	7.63
C613	–	–	7.63	–

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



Beverage Duty – "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	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 [1)]	.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 [1)]	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57

[1)] See Table No. 5

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

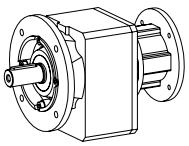
Table No. 3 **Motor Adapter Dimensions (Inches)**

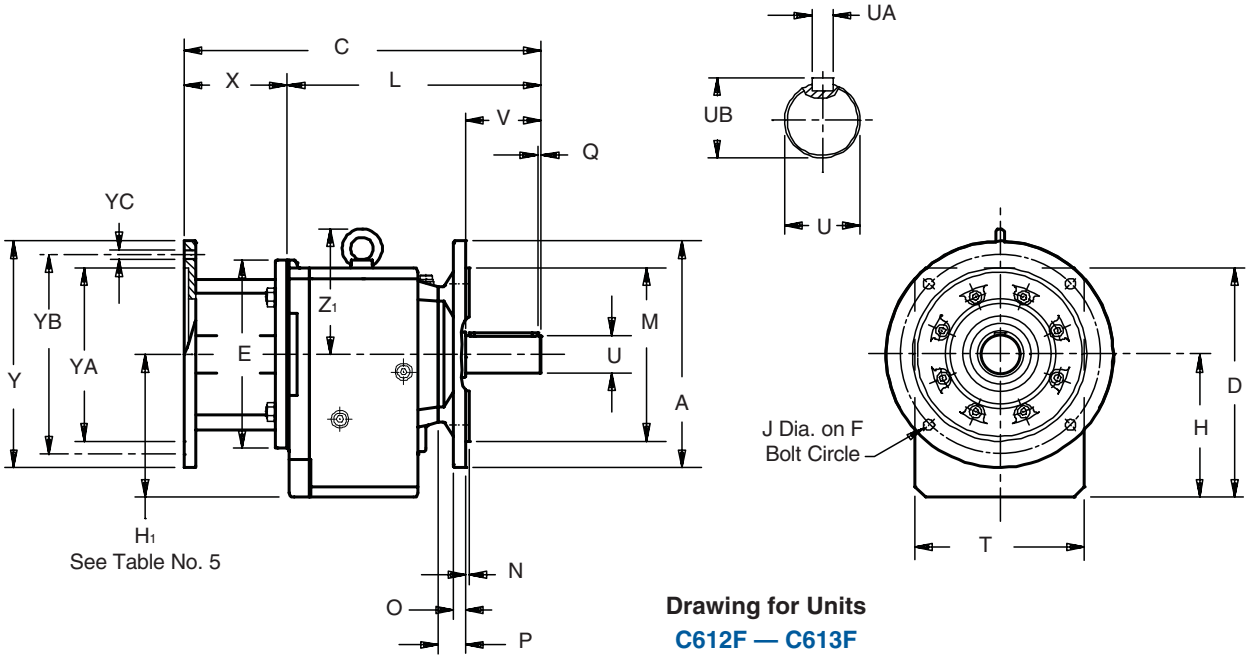
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050B	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050B	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140B	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180B	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180B	182/184TC	9.84	5.31	9.00	8.500	7.25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

Part No. Example

Beverage Duty Unit
Round Flange with Motor Adapter
C302F0620 MR160/140B

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





Drawing for Units
C612F — C613F

Table No. 4 Beverage Duty "C" Series – Dimensions (Inches) – "F" Housing Style

Base	MR140/050B		MR160/140B [2]		MR200/180B		MR250/210B [3]		MR300/250B [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 [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

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

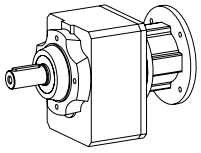
Table No. 5 "C" Series – Input Dimension (Inches)

Base	MR160/140B[2]	MR200/180B	MR250/210B	MR300/250B
Module	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–

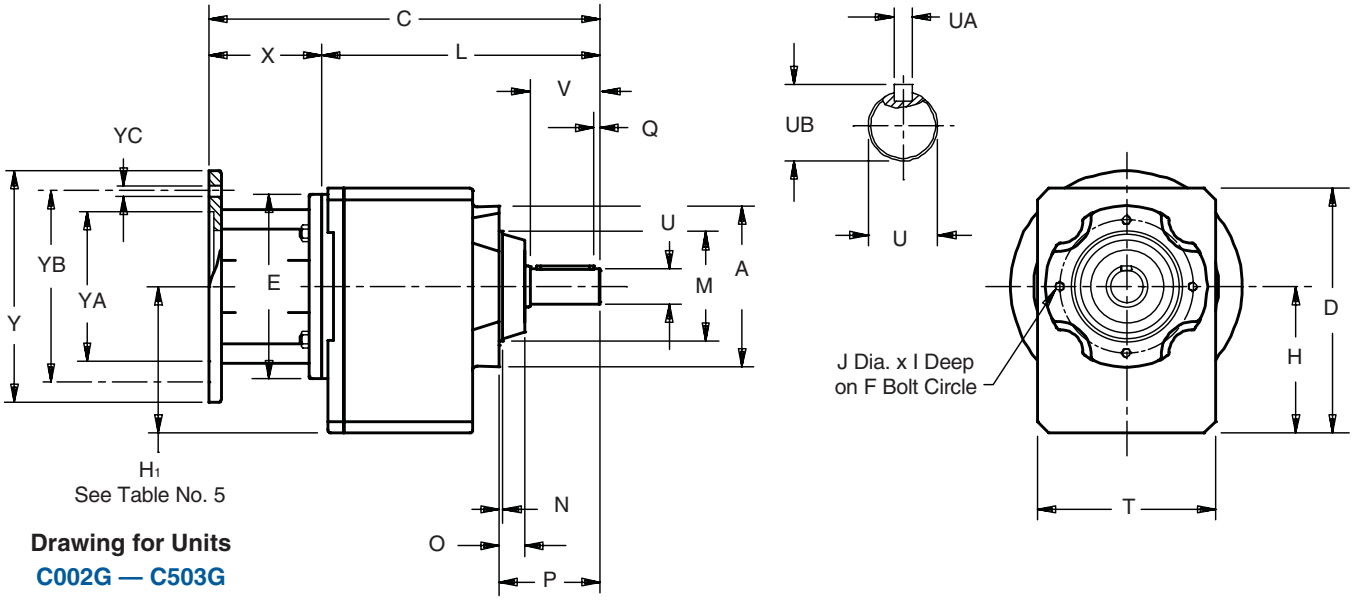
Table No. 6 Optional Flange–Dimensions (Inches)

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
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
C2	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	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
C4	200	7.874	6.50	.43	5.118 +.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

Optional flanges are not available in all sizes.



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



Drawing for Units
C002G — C503G

Table No. 1 **Beverage Duty "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	2.165	.12	.55	2.28	.16	3.82	1.57	—
C102/C103	4.72	6.89	3.94	3.94	.51	M6	3.150	.12	.67	2.80	.16	5.12	1.97	—
C202/C203	5.51	7.56	4.53	4.41	.51	M8	3.740	.12	.87	3.43	.16	5.59	2.36	—
C302/C303	5.51	8.35	4.53	5.00 [1]	.51	M8	3.740	.12	.87	3.43	.16	6.06	2.36	—
C402/C403	6.30	9.55	5.12	5.61	.63	M10	4.331	.14	.87	4.25	.16	7.01	3.15	—
C502/C503	7.56	11.26	6.50 [2]	6.54	.63	M10	5.118	.14	.91	4.29	.16	7.68	3.15	—
C612/C613	7.09	11.97	6.50	7.44 [1]	.63	M10	5.512	.20	1.18	5.35	.20	8.86	3.94	6.57

[1] See Table No. 5

[2] C502/C503 has 8 holes instead of 4 as shown in the drawing.

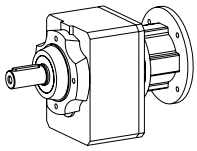
Table No. 2 **Metric output available on request**

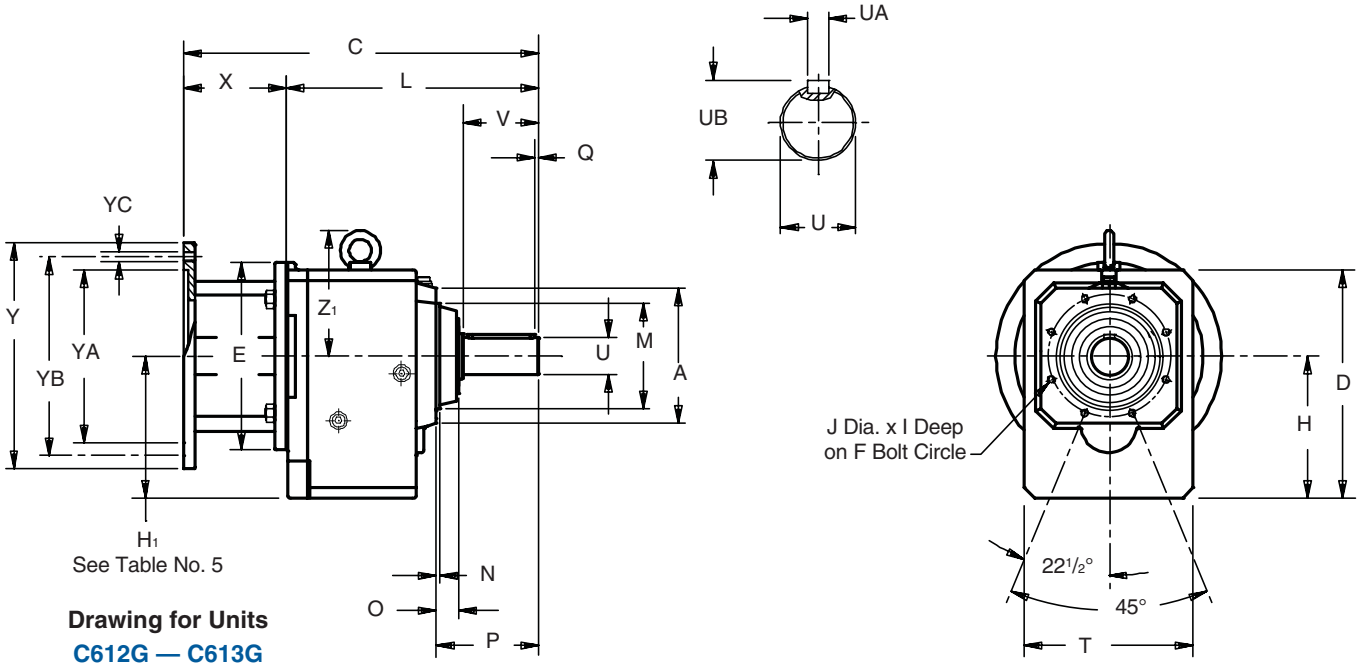
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$3/16 \times 3/16 \times 1\,7/32$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$1/4 \times 1/4 \times 1\,9/16$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$1/4 \times 1/4 \times 1\,15/16$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$1/4 \times 1/4 \times 1\,15/16$	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.
MR140/050B	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050B	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140B	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180B	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180B	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR250/210B	213/215TC	9.84	5.31	9.00	8.500	7.25	.55	36
MR300/180B	182/184TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/210B	213/215TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/250B	254/256TC	11.81	6.50	9.00	8.500	7.25	.57	75
MR300/280B	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

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





Drawing for Units
C612G — C613G

Table No. 4 Beverage Duty "C" Series – "G" Housing Style – Dimensions (Inches)

Base	MR140/050B		MR160/140B [3]		MR200/180B		MR250/210B [4]		MR300/250B [5]		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 [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

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

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

Base	MR160/140B[3]	MR200/180B	MR250/210B	MR300/250B
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
Beverage Duty
Tapped Holes Housing with Motor Adapter
C302G0620 MR160/140B

See pages 8-35 for MGS Reducer Selection Data and available ratios.
All weights are approximate.

Notes

“C” Series Concentric Helical Speed Reducers

3 YEAR WARRANTY

3-DAY DELIVERY

STÖBER

www.stober.com

"C" Series—Concentric Helical MGS Reducers

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

Performance Specifications:

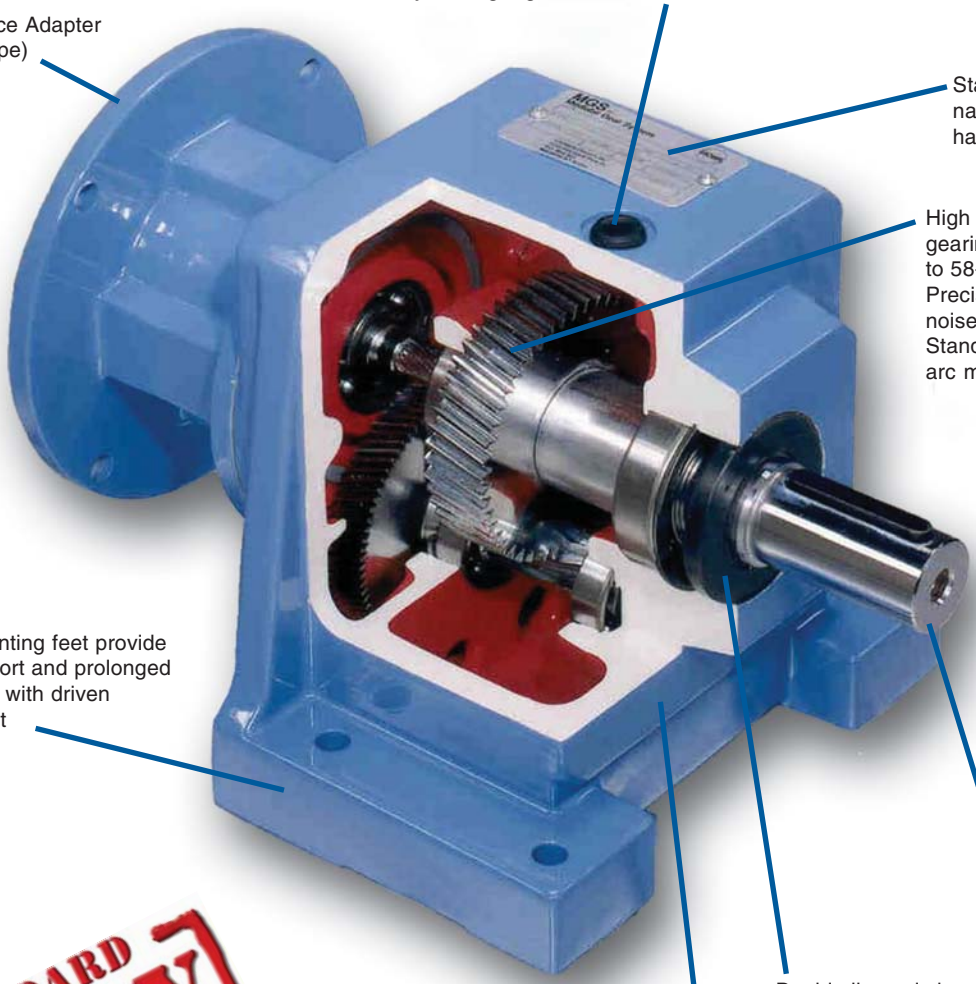
- Horsepower ratings from 1/6 to 165
- Output torques to 62,000 in. lbs.
- Output speeds available from 875 to 6.3 RPM
- Speed reducer ratios from 2.0:1 to 276:1
- 3 year warranty – your assurance of satisfactory product performance

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

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

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

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 ≤20 arc minutes

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

High tensile strength shafts with captured keys

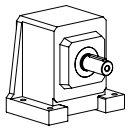
Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

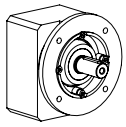
Available with a one-piece cast iron housing. Precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities to eliminate leakage problems common to drives with bolt-on output covers.

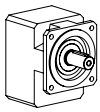
STANDARD 3-DAY DELIVERY

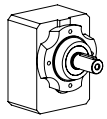
"C" Series—Concentric Helical MGS Speed Reducers Overview

Housing Style + Input Style = Reducer Configurations


Style N
Foot Mount


Style F
Round Flange


Style Q,
Square Flange


Style G
Tapped Holes

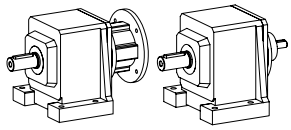
+

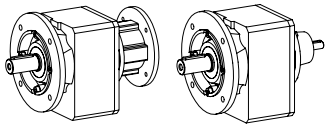

MR
Motor Adapter

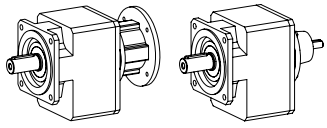

AW
Input Shaft

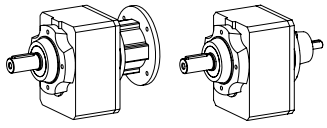
=

Reducer Configurations


Style N, Foot Mount

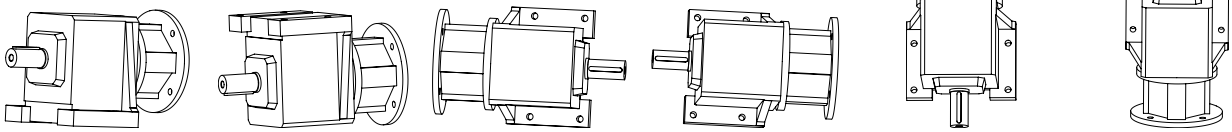

Style F, Round Flange


Style Q, Square Flange


Style G, Tapped Holes

Mounting Positions

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


Side 1 Side 2 Side 3 Side 4 Side 5 Side 6

Part No. Explanation with OPTIONS and REQUIRED INFORMATION

C 4 0 2 N 0135 MR160 / 140

- **C** — Concentric Helical
- **4** — Unit Size No.
- **0** — Design Generation
- **2** — No. of Stages (**02** = 2 Stage, determined by ratio)
- **N** — HOUSING STYLE
  - "**N**" Housing Style – Foot Mounting
  - "**F**" Housing Style – Flange Mounting
  - "**Q**" Housing Style – Square Output Flange
  - "**G**" Housing Style – Tapped Holes
- **0135** — Nominal Ratio: **0135** = 13.5:1
- **MR160** — Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350
- **140** — 050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:

Mounting Position – EL1 EL2 EL3 EL4 EL5 EL6

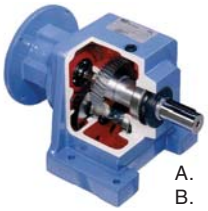
Paint – Standard Gray ..... White ..... Stainless

Option – Imperial or Metric Shaft
(Metric not available in all sizes.)

Part No. Explanation for Input Shaft

AW160 / 012

- **AW160** — Input Size: AW140, **AW160**, AW200, AW250, AW300, AW350
- **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 ($2^{2}/_{16} = 2^{1}/_{8}$)



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
875 RPM Output (Approximate)								**715 RPM**		**580 RPM**		**435 RPM**	
2.64	184	C002_0020	MR140/050	56C	AW140/010	1.997	166	2.19	184	1.75	184	1.31	184
2.78	196	C102_0020	MR140/050	56C	AW140/010	2.018	237	2.30	196	1.84	196	1.38	196
4.08*	285	C002_0020	MR160/050	56C	AW160/012	1.997	166	3.60	303	3.10	327	2.47	347
4.08*	285	C002_0020	MR160/140	143/145TC	AW160/012	1.997	166	3.60	303	3.10	327	2.47	347
8.11*	572	C102_0020	MR160/050	56C	AW160/012	2.018	237	7.15	609	6.16	655	4.89	694
8.11*	572	C102_0020	MR160/140	143/145TC	AW160/012	2.018	237	7.15	609	6.16	655	4.89	694
8.11*	572	C102_0020	MR200/180	182/184/TC	AW200/014	2.018	237	7.15	609	6.16	655	5.09	721
9.84*	690	C202_0020	MR160/050	56C	AW160/012	2.009	333	8.15	690	6.52	690	4.89	690
9.84*	690	C202_0020	MR160/140	143/145TC	AW160/012	2.009	333	8.15	690	6.52	690	4.89	690
9.84	694	C302_0020	MR160/050	56C	AW160/012	2.020	496	8.15	694	6.52	694	4.89	694
9.84	694	C302_0020	MR160/140	143/145TC	AW160/012	2.020	496	8.15	694	6.52	694	4.89	694
12.42*	872	C202_0020	MR200/180	182/184/TC	AW200/014	2.009	333	10.95	928	9.44	1,000	7.79	1,100
20.25*	1,429	C302_0020	MR200/180	182/184/TC	AW200/014	2.020	496	17.86	1,522	15.39	1,639	11.61	1,649
20.25*	1,429	C302_0020	MR250/180	182/184/TC	AW250/102	2.020	496	17.86	1,522	15.39	1,639	12.71	1,804
23.36*	1,613	C502_0020	MR200/180	182/184/TC	AW200/014	1.976	1,038	19.36	1,613	15.48	1,613	11.61	1,613
23.36*	1,606	C402_0020	MR200/180	182/184/TC	AW200/014	1.968	845	19.36	1,606	15.48	1,606	11.61	1,606
29.97*	2,061	C402_0020	MR250/180	182/184/TC	AW250/102	1.968	845	26.44	2,194	22.78	2,364	17.48	2,418
36.44*	2,516	C502_0020	MR250/210	213/215/TC	AW250/102	1.976	1,038	30.19	2,516	24.15	2,516	18.11	2,516
46.33*	3,199	C502_0020	MR300/180	182/184/TC	AW300/110	1.976	1,038	40.87	3,406	35.22	3,669	29.07	4,038
800 RPM Output (Approximate)								**650 RPM**		**525 RPM**		**400 RPM**	
2.78	211	C102_0022	MR140/050	56C	AW140/010	2.177	241	2.30	211	1.84	211	1.38	211
7.71*	586	C102_0022	MR160/050	56C	AW160/012	2.177	241	6.80	624	5.86	672	4.84	740
7.71*	586	C102_0022	MR160/140	143/145TC	AW160/012	2.177	241	6.80	624	5.86	672	4.84	740
7.71*	586	C102_0022	MR200/180	182/184/TC	AW200/014	2.177	241	6.80	624	5.86	672	4.84	740
9.84*	751	C202_0022	MR160/050	56C	AW160/012	2.184	340	8.15	751	6.52	751	4.89	751
9.84*	751	C202_0022	MR160/140	143/145TC	AW160/012	2.184	340	8.15	751	6.52	751	4.89	751
9.84	748	C302_0022	MR160/050	56C	AW160/012	2.177	505	8.15	748	6.52	748	4.89	748
9.84	748	C302_0022	MR160/140	143/145TC	AW160/012	2.177	505	8.15	748	6.52	748	4.89	748
11.74*	896	C202_0022	MR200/180	182/184/TC	AW200/014	2.184	340	10.36	954	8.93	1,028	7.37	1,131
19.26*	1,465	C302_0022	MR200/180	182/184/TC	AW200/014	2.177	505	16.99	1,560	14.65	1,681	11.61	1,777
19.26*	1,465	C302_0022	MR250/180	182/184/TC	AW250/102	2.177	505	16.99	1,560	14.65	1,681	12.09	1,850
23.36*	1,813	C402_0022	MR200/180	182/184/TC	AW200/014	2.221	871	19.36	1,813	15.48	1,813	11.61	1,813
23.36*	1,834	C502_0022	MR200/180	182/184/TC	AW200/014	2.247	1,072	19.36	1,834	15.48	1,834	11.61	1,834
27.65*	2,146	C402_0022	MR250/180	182/184/TC	AW250/102	2.221	871	24.39	2,285	21.02	2,461	17.35	2,709
36.44*	2,861	C502_0022	MR250/180	182/184/TC	AW250/102	2.247	1,072	30.19	2,861	24.15	2,861	18.11	2,861
42.53*	3,339	C502_0022	MR300/210	213/215/TC	AW300/110	2.247	1,072	37.51	3,555	32.33	3,829	26.69	4,215

* For thermal HP capacity, see rating below.

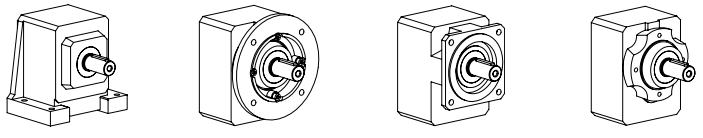
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

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

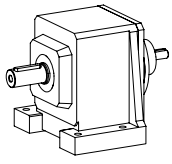
NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
730 RPM Output (Approximate)								**600 RPM**		**485 RPM**		**360 RPM**	
7.23*	605	C102_0024	MR160/050	56C	AW160/012	2.394	247	6.38	644	5.50	694	4.54	764
7.23*	605	C102_0024	MR160/140	143/145TC	AW160/012	2.394	247	6.38	644	5.50	694	4.54	764
7.23*	605	C102_0024	MR200/180	182/184/TC	AW200/014	2.394	247	6.38	644	5.50	694	4.54	764
710 RPM Output (Approximate)								**580 RPM**		**470 RPM**		**350 RPM**	
9.84*	851	C202_0025	MR160/050	56C	AW160/012	2.475	351	8.15	851	6.52	851	4.89	851
9.84*	851	C202_0025	MR160/140	143/145TC	AW160/012	2.475	351	8.15	851	6.52	851	4.89	851
9.84	863	C302_0025	MR160/050	56C	AW160/012	2.510	523	8.15	863	6.52	863	4.89	863
9.84	863	C302_0025	MR160/140	143/145TC	AW160/012	2.510	523	8.15	863	6.52	863	4.89	863
10.80*	934	C202_0025	MR200/180	182/184/TC	AW200/014	2.475	351	9.53	995	8.18	1,068	6.14	1,068
17.52*	1,537	C302_0025	MR200/180	182/184/TC	AW200/014	2.510	523	15.46	1,636	13.32	1,762	10.99	1,940
17.52*	1,537	C302_0025	MR250/180	182/184/TC	AW250/102	2.510	523	15.46	1,636	13.32	1,762	10.99	1,940
23.36*	2,005	C402_0025	MR200/180	182/184/TC	AW200/014	2.456	893	19.36	2,005	15.48	2,005	11.61	2,005
23.36*	2,000	C502_0025	MR200/180	182/184/TC	AW200/014	2.450	1,095	19.36	2,000	15.48	2,000	11.61	2,000
25.86*	2,219	C402_0025	MR250/180	182/184/TC	AW250/102	2.456	893	22.81	2,362	19.66	2,545	16.23	2,801
35.39*	3,030	C502_0025	MR250/180	182/184/TC	AW250/102	2.450	1,095	29.32	3,030	23.46	3,030	17.59	3,030
40.14*	3,436	C502_0025	MR300/250	254/256TC	AW300/110	2.450	1,095	35.41	3,659	30.52	3,941	25.19	4,338
680 RPM Output (Approximate)								**550 RPM**		**450 RPM**		**335 RPM**	
6.88*	620	C102_0026	MR160/050	56C	AW160/012	2.582	252	6.07	661	5.23	712	4.32	783
6.88*	620	C102_0026	MR160/140	143/145TC	AW160/012	2.582	252	6.07	661	5.23	712	4.32	783
6.88*	620	C102_0026	MR200/180	182/184/TC	AW200/014	2.582	252	6.07	661	5.23	712	4.32	783
650 RPM Output (Approximate)								**530 RPM**		**430 RPM**		**320 RPM**	
9.84*	925	C202_0027	MR160/050	56C	AW160/012	2.690	358	8.15	925	6.52	925	4.89	925
9.84*	925	C202_0027	MR160/140	143/145TC	AW160/012	2.690	358	8.15	925	6.52	925	4.89	925
9.84	930	C302_0027	MR160/050	56C	AW160/012	2.705	533	8.15	930	6.52	930	4.89	930
9.84	930	C302_0027	MR160/140	143/145TC	AW160/012	2.705	533	8.15	930	6.52	930	4.89	930
10.22*	961	C202_0027	MR200/180	182/184/TC	AW200/014	2.690	358	9.02	1,023	7.77	1,102	6.14	1,160
16.67*	1,575	C302_0027	MR200/180	182/184/TC	AW200/014	2.705	533	14.70	1,677	12.67	1,807	10.46	1,989
16.67*	1,575	C302_0027	MR250/180	182/184/TC	AW250/102	2.705	533	14.70	1,677	12.67	1,807	10.46	1,989
630 RPM Output (Approximate)								**515 RPM**		**415 RPM**		**315 RPM**	
2.50	242	C002_0028	MR140/050	56C	AW140/010	2.769	180	2.07	242	1.66	242	1.24	242
3.28*	318	C002_0028	MR160/050	56C	AW160/012	2.769	180	2.90	338	2.50	364	2.06	401
3.28*	318	C002_0028	MR160/140	143/145TC	AW160/012	2.769	180	2.90	338	2.50	364	2.06	401
23.36*	2,275	C502_0028	MR200/180	182/184/TC	AW200/014	2.787	1,131	19.36	2,275	15.48	2,275	11.61	2,275
23.36*	2,262	C402_0028	MR200/180	182/184/TC	AW200/014	2.771	921	19.36	2,262	15.48	2,262	11.61	2,262
23.86*	2,310	C402_0028	MR250/180	182/184/TC	AW250/102	2.771	921	21.05	2,459	18.14	2,649	14.97	2,916
35.39*	3,447	C502_0028	MR250/180	182/184/TC	AW250/102	2.787	1,131	29.32	3,447	23.46	3,447	17.59	3,447
36.84*	3,587	C502_0028	MR300/250	254/256TC	AW300/110	2.787	1,131	32.50	3,819	28.00	4,114	23.12	4,528

Part No. Explanation

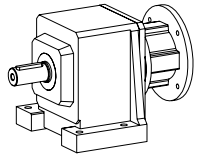
C 3 0 2 N 0620 AW 140 / 012

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Gear Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- AW — Input Shaft
- 140 — Flange No.
- 012 — Shaft Dia. ($^{1}/_{16}$ in.; example–012=$^{12}/_{16}$ or $^{3}/_{4}$)

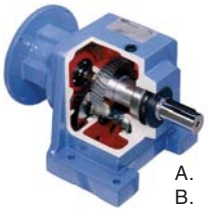


C 3 0 2 N 0620 MR 160 / 140

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- MR — Motor Adapter
- 160 — Flange No.
- 140 — Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
565 RPM	**Output (Approximate)**							**465 RPM**		**375 RPM**		**280 RPM**	
2.46	264	C002_0031	MR140/050	56C	AW140/010	3.067	185	2.04	264	1.63	264	1.22	264
2.61	282	C102_0031	MR140/050	56C	AW140/010	3.091	263	2.16	282	1.73	282	1.30	282
3.07*	329	C002_0031	MR160/050	56C	AW160/012	3.067	185	2.70	350	2.33	377	1.92	415
3.07*	329	C002_0031	MR160/140	143/145TC	AW160/012	3.067	185	2.70	350	2.33	377	1.92	415
6.10*	659	C102_0031	MR160/050	56C	AW160/012	3.091	263	5.38	701	4.64	756	3.83	832
6.10*	659	C102_0031	MR160/140	143/145TC	AW160/012	3.091	263	5.38	701	4.64	756	3.83	832
6.10*	659	C102_0031	MR200/180	182/184/TC	AW200/014	3.091	263	5.38	701	4.64	756	3.83	832
9.29*	1,007	C202_0031	MR160/050	56C	AW160/012	3.103	371	8.15	1,066	6.52	1,066	4.89	1,066
9.29*	1,007	C202_0031	MR160/140	143/145TC	AW160/012	3.103	371	8.15	1,066	6.52	1,066	4.89	1,066
9.29*	1,007	C202_0031	MR200/180	182/184/TC	AW200/014	3.103	371	8.20	1,073	7.06	1,155	5.83	1,272
9.84	1,069	C302_0031	MR160/050	56C	AW160/012	3.110	552	8.15	1,069	6.52	1,069	4.89	1,069
9.84	1,069	C302_0031	MR160/140	143/145TC	AW160/012	3.110	552	8.15	1,069	6.52	1,069	4.89	1,069
15.19*	1,650	C302_0031	MR200/180	182/184/TC	AW200/014	3.110	552	13.40	1,757	11.55	1,893	9.53	2,083
15.19*	1,650	C302_0031	MR250/180	182/184/TC	AW250/102	3.110	552	13.40	1,757	11.55	1,893	9.53	2,083
22.14*	2,398	C402_0031	MR200/180	182/184/TC	AW200/014	3.099	947	19.36	2,530	15.48	2,530	11.61	2,530
22.14*	2,398	C402_0031	MR250/210	213/215/TC	AW250/102	3.099	947	19.53	2,553	16.83	2,750	13.90	3,027
23.36*	2,512	C502_0031	MR200/180	182/184/TC	AW200/014	3.077	1,159	19.36	2,512	15.48	2,512	11.61	2,512
34.24*	3,682	C502_0031	MR250/180	182/184/TC	AW250/102	3.077	1,159	28.37	3,682	22.70	3,682	17.02	3,682
34.24*	3,682	C502_0031	MR300/250	254/256TC	AW300/110	3.077	1,159	28.37	3,682	22.70	3,682	17.02	3,682
525 RPM	**Output (Approximate)**							**430 RPM**		**350 RPM**		**265 RPM**	
2.46	285	C002_0033	MR140/050	56C	AW140/010	3.318	189	2.04	285	1.63	285	1.22	285
2.61	304	C102_0033	MR140/050	56C	AW140/010	3.334	268	2.16	304	1.73	304	1.30	304
2.91	337	C002_0033	MR160/050	56C	AW160/012	3.318	189	2.57	359	2.21	387	1.83	426
2.91	337	C002_0033	MR160/140	143/145TC	AW160/012	3.318	189	2.57	359	2.21	387	1.83	426
5.80*	676	C102_0033	MR160/050	56C	AW160/012	3.334	268	5.12	719	4.41	775	3.64	853
5.80*	676	C102_0033	MR160/140	143/145TC	AW160/012	3.334	268	5.12	719	4.41	775	3.64	853
5.80*	676	C102_0033	MR200/180	182/184/TC	AW200/014	3.334	268	5.12	719	4.41	775	3.64	853
520 RPM	**Output (Approximate)**							**425 RPM**		**345 RPM**		**260 RPM**	
8.79*	1,036	C202_0034	MR160/050	56C	AW160/012	3.373	379	7.75	1,103	6.52	1,159	4.89	1,159
8.79*	1,036	C202_0034	MR160/140	143/145TC	AW160/012	3.373	379	7.75	1,103	6.52	1,159	4.89	1,159
8.79*	1,036	C202_0034	MR200/180	182/184/TC	AW200/014	3.373	379	7.75	1,103	6.68	1,188	5.52	1,308
9.84	1,152	C302_0034	MR160/050	56C	AW160/012	3.352	562	8.15	1,152	6.52	1,152	4.89	1,152
9.84	1,152	C302_0034	MR160/140	143/145TC	AW160/012	3.352	562	8.15	1,152	6.52	1,152	4.89	1,152
14.45*	1,692	C302_0034	MR200/180	182/184/TC	AW200/014	3.352	562	12.74	1,802	10.98	1,941	9.07	2,136
14.45*	1,692	C302_0034	MR250/180	182/184/TC	AW250/102	3.352	562	12.74	1,802	10.98	1,941	9.07	2,136

* For thermal HP capacity, see rating below.

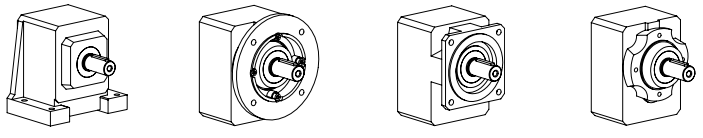
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size
TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

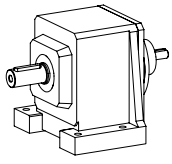
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

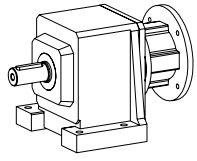
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
500 RPM Output (Approximate)								**410 RPM**		**330 RPM**		**250 RPM**	
20.43*	2,496	C402_0035	MR200/180	182/184/TC	AW200/014	3.497	976	18.02	2,658	15.48	2,854	11.61	2,854
20.43*	2,496	C402_0035	MR250/180	182/184/TC	AW250/102	3.497	976	18.02	2,658	15.53	2,863	12.82	3,151
23.36*	2,858	C502_0035	MR200/180	182/184/TC	AW200/014	3.501	1,198	19.36	2,858	15.48	2,858	11.61	2,858
31.64*	3,871	C502_0035	MR250/210	213/215/TC	AW250/102	3.501	1,198	27.91	4,121	22.70	4,189	17.02	4,189
31.64*	3,871	C502_0035	MR300/250	254/256TC	AW300/110	3.501	1,198	27.91	4,121	22.70	4,189	17.02	4,189
450 RPM Output (Approximate)								**370 RPM**		**300 RPM**		**225 RPM**	
2.37	318	C002_0038	MR140/050	56C	AW140/010	3.835	196	1.97	318	1.57	318	1.18	318
2.52	342	C102_0039	MR140/050	56C	AW140/010	3.883	279	2.09	342	1.67	342	1.25	342
2.64	354	C002_0038	MR160/050	56C	AW160/012	3.835	196	2.33	377	2.01	406	1.66	447
2.64	354	C002_0038	MR160/140	143/145TC	AW160/012	3.835	196	2.33	377	2.01	406	1.66	447
5.24	711	C102_0039	MR160/050	56C	AW160/012	3.883	279	4.62	757	3.98	815	3.29	897
5.24	711	C102_0039	MR160/140	143/145TC	AW160/012	3.883	279	4.62	757	3.98	815	3.29	897
5.24	711	C102_0039	MR200/180	182/184/TC	AW200/014	3.883	279	4.62	757	3.98	815	3.29	897
7.99*	1,086	C202_0039	MR160/050	56C	AW160/012	3.888	393	7.05	1,156	6.08	1,246	4.89	1,336
7.99*	1,086	C202_0039	MR160/140	143/145TC	AW160/012	3.888	393	7.05	1,156	6.08	1,246	4.89	1,336
7.99*	1,086	C202_0039	MR200/180	182/184/TC	AW200/014	3.888	393	7.05	1,156	6.08	1,246	5.02	1,371
9.84	1,333	C302_0039	MR160/050	56C	AW160/012	3.878	583	8.15	1,333	6.52	1,333	4.89	1,333
9.84	1,333	C302_0039	MR160/140	143/145TC	AW160/012	3.878	583	8.15	1,333	6.52	1,333	4.89	1,333
9.84	1,338	C402_0039	MR160/050	56C	AW160/012	3.894	1,002	8.15	1,338	6.52	1,338	4.89	1,338
9.84	1,338	C402_0039	MR160/140	143/145TC	AW160/012	3.894	1,002	8.15	1,338	6.52	1,338	4.89	1,338
13.11*	1,776	C302_0039	MR200/180	182/184/TC	AW200/014	3.878	583	11.56	1,891	9.97	2,037	8.23	2,242
13.11*	1,776	C302_0039	MR250/180	182/184/TC	AW250/102	3.878	583	11.56	1,891	9.97	2,037	8.23	2,242
19.02*	2,587	C402_0039	MR200/180	182/184/TC	AW200/014	3.894	1,002	16.78	2,755	14.46	2,967	11.61	3,179
19.02*	2,587	C402_0039	MR250/180	182/184/TC	AW250/102	3.894	1,002	16.78	2,755	14.46	2,967	11.93	3,266
23.36*	3,156	C502_0039	MR200/180	182/184/TC	AW200/014	3.867	1,228	19.36	3,156	15.48	3,156	11.61	3,156
29.61*	4,001	C502_0039	MR250/180	182/184/TC	AW250/102	3.867	1,228	26.12	4,260	21.90	4,464	16.43	4,464
29.61*	4,001	C502_0039	MR300/250	254/256TC	AW300/110	3.867	1,228	26.12	4,260	21.90	4,464	16.43	4,464
420 RPM Output (Approximate) Continued Next Page								**345 RPM**		**280 RPM**		**210 RPM**	
2.37	344	C002_0041	MR140/050	56C	AW140/010	4.149	199	1.97	344	1.57	344	1.18	344
2.51	363	C002_0041	MR160/050	56C	AW160/012	4.149	199	2.21	387	1.91	417	1.57	459
2.51	363	C002_0041	MR160/140	143/145TC	AW160/012	4.149	199	2.21	387	1.91	417	1.57	459
2.52	369	C102_0042	MR140/050	56C	AW140/010	4.189	284	2.09	369	1.67	369	1.25	369
4.98	729	C102_0042	MR160/050	56C	AW160/012	4.189	284	4.39	776	3.79	836	3.13	920
4.98	729	C102_0042	MR160/140	143/145TC	AW160/012	4.189	284	4.39	776	3.79	836	3.13	920
4.98	729	C102_0042	MR200/180	182/184/TC	AW200/014	4.189	284	4.39	776	3.79	836	3.13	920
7.56	1,117	C202_0042	MR160/050	56C	AW160/012	4.226	401	6.67	1,189	5.75	1,281	4.75	1,410
7.56	1,117	C202_0042	MR160/140	143/145TC	AW160/012	4.226	401	6.67	1,189	5.75	1,281	4.75	1,410
7.56	1,117	C202_0042	MR200/180	182/184/TC	AW200/014	4.226	401	6.67	1,189	5.75	1,281	4.75	1,410

Part No. Explanation

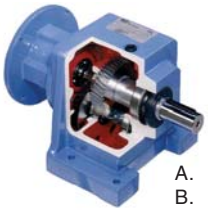
C 3 0 2 N 0620 AW 140 / 012
- 012: Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- AW: Input Shaft
- 140: Flange No.
- 0620: Ratio (0620 = 62.0:1)
- N: Housing Style
- 2: No. of Gear Reductions
- 0: Generation No.
- 3: Unit No.
- C: Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- 140: Motor Frame Size (140=143/145TC)
- 160: Flange No.
- MR: Motor Adapter
- 0620: Ratio (0620 = 62.0:1)
- N: Housing Style
- 2: No. of Reductions
- 0: Generation No.
- 3: Unit No.
- C: Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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 [3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
420 RPM		**Output (Approximate)**	**Continued**					**345 RPM**		**280 RPM**		**210 RPM**	
9.84	1,436	C302_0042	MR160/050	56C	AW160/012	4.179	594	8.15	1,436	6.52	1,436	4.89	1,436
9.84	1,436	C302_0042	MR160/140	143/145TC	AW160/012	4.179	594	8.15	1,436	6.52	1,436	4.89	1,436
12.47*	1,821	C302_0042	MR200/180	182/184/TC	AW200/014	4.179	594	11.00	1,939	9.48	2,089	7.83	2,299
12.47*	1,821	C302_0042	MR250/210	213/215/TC	AW250/102	4.179	594	11.00	1,939	9.48	2,089	7.83	2,299
23.36	3,415	C612_0042	MR200/180	182/184/TC	AW200/014	4.184	1,683	19.36	3,415	15.48	3,415	11.61	3,415
37.73*	5,517	C612_0042	MR250/180	182/184/TC	AW250/102	4.184	1,683	31.27	5,517	25.01	5,517	18.76	5,517
52.15*	7,625	C612_0042	MR300/250	254/256TC	AW300/110	4.184	1,683	46.01	8,118	39.65	8,745	32.73	9,625
79.57*	11,747	C812_0042	MR300/250	254/256TC	AW300/110	4.225	3,164	65.93	11,747	52.74	11,747	39.56	11,747
122.95*	18,151	C812_0042	MR350/320	324/326TC	AW350/202	4.225	3,164	101.87	18,151	81.50	18,151	61.12	18,151
122.95*	17,816	C912_0041	MR350/320	324/326TC	AW350/202	4.147	3,884	101.87	17,816	81.50	17,816	61.12	17,816
410 RPM		**Output (Approximate)**						**335 RPM**		**270 RPM**		**200 RPM**	
23.36	3,476	C712_0043	MR200/180	182/184/TC	AW200/014	4.259	2,325	19.36	3,476	15.48	3,476	11.61	3,476
39.62	5,895	C712_0043	MR250/210	213/215/TC	AW250/102	4.259	2,325	32.82	5,895	26.26	5,895	19.69	5,895
75.70*	11,266	C712_0043	MR300/280	284/286TC	AW300/110	4.259	2,325	62.72	11,266	50.18	11,266	37.63	11,266
400 RPM		**Output (Approximate)**						**325 RPM**		**260 RPM**		**200 RPM**	
9.84	1,510	C402_0044	MR160/050	56C	AW160/012	4.394	1,033	8.15	1,510	6.52	1,510	4.89	1,510
9.84	1,510	C402_0044	MR160/140	143/145TC	AW160/012	4.394	1,033	8.15	1,510	6.52	1,510	4.89	1,510
17.54*	2,694	C402_0044	MR200/180	182/184/TC	AW200/014	4.394	1,033	15.48	2,868	13.34	3,089	11.01	3,400
17.54*	2,694	C402_0044	MR250/210	213/215/TC	AW250/102	4.394	1,033	15.48	2,868	13.34	3,089	11.01	3,400
23.36*	3,591	C502_0044	MR200/180	182/184/TC	AW200/014	4.399	1,268	19.36	3,591	15.48	3,591	11.61	3,591
27.17*	4,177	C502_0044	MR250/210	213/215/TC	AW250/102	4.399	1,268	23.97	4,447	20.66	4,790	16.43	5,079
27.17*	4,177	C502_0044	MR300/280	284/286TC	AW300/110	4.399	1,268	23.97	4,447	20.66	4,790	16.43	5,079
375 RPM		**Output (Approximate)**	**Continued Next Page**					**305 RPM**		**250 RPM**		**185 RPM**	
2.30	376	C002_0047	MR140/050	56C	AW140/010	4.680	206	1.90	376	1.52	376	1.14	376
2.31	378	C002_0047	MR160/050	56C	AW160/012	4.680	206	2.04	403	1.76	434	1.45	477
2.31	378	C002_0047	MR160/140	143/145TC	AW160/012	4.680	206	2.04	403	1.76	434	1.45	477
2.44	397	C102_0047	MR140/050	56C	AW140/010	4.658	292	2.02	397	1.62	397	1.21	397
4.64	755	C102_0047	MR160/050	56C	AW160/012	4.658	292	4.09	804	3.53	866	2.91	953
4.64	755	C102_0047	MR160/140	143/145TC	AW160/012	4.658	292	4.09	804	3.53	866	2.91	953
4.64	755	C102_0047	MR200/180	182/184/TC	AW200/014	4.658	292	4.09	804	3.53	866	2.91	953
7.08	1,154	C202_0047	MR160/050	56C	AW160/012	4.667	411	6.24	1,229	5.38	1,324	4.44	1,457
7.08	1,154	C202_0047	MR160/140	143/145TC	AW160/012	4.667	411	6.24	1,229	5.38	1,324	4.44	1,457
7.08	1,154	C202_0047	MR200/180	182/184/TC	AW200/014	4.667	411	6.24	1,229	5.38	1,324	4.44	1,457
9.84	1,591	C502_0046	MR160/050	56C	AW160/012	4.629	1,284	8.15	1,591	6.52	1,591	4.89	1,591
9.84	1,591	C502_0046	MR160/140	143/145TC	AW160/012	4.629	1,284	8.15	1,591	6.52	1,591	4.89	1,591
9.84	1,607	C302_0047	MR160/050	56C	AW160/012	4.675	611	8.15	1,607	6.52	1,607	4.89	1,607
9.84	1,607	C302_0047	MR160/140	143/145TC	AW160/012	4.675	611	8.15	1,607	6.52	1,607	4.89	1,607

* For thermal HP capacity, see rating below.

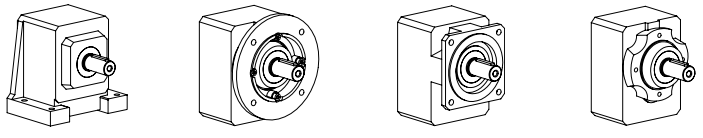
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

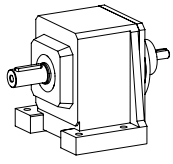
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

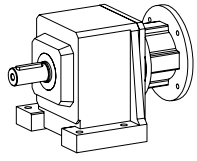
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
375 RPM Output (Approximate) Continued								**305 RPM**		**250 RPM**		**185 RPM**	
9.84	1,609	C402_0047	MR160/050	56C	AW160/012	4.682	1,050	8.15	1,609	6.52	1,609	4.89	1,609
9.84	1,609	C402_0047	MR160/140	143/145TC	AW160/012	4.682	1,050	8.15	1,609	6.52	1,609	4.89	1,609
11.57	1,891	C302_0047	MR200/180	182/184/TC	AW200/014	4.675	611	10.21	2,013	8.80	2,168	7.26	2,387
11.57	1,891	C302_0047	MR250/180	182/184/TC	AW250/102	4.675	611	10.21	2,013	8.80	2,168	7.26	2,387
16.82*	2,751	C402_0047	MR200/180	182/184/TC	AW200/014	4.682	1,050	14.84	2,929	12.79	3,155	10.55	3,473
16.82*	2,751	C402_0047	MR250/180	182/184/TC	AW250/102	4.682	1,050	14.84	2,929	12.79	3,155	10.55	3,473
22.97*	3,715	C502_0046	MR200/180	182/184/TC	AW200/014	4.629	1,284	19.36	3,778	15.48	3,778	11.61	3,778
26.27*	4,248	C502_0046	MR250/180	182/184/TC	AW250/102	4.629	1,284	23.17	4,523	19.97	4,872	15.88	5,166
26.27*	4,248	C502_0046	MR300/280	284/286TC	AW300/110	4.629	1,284	23.17	4,523	19.97	4,872	15.88	5,166
345 RPM Output (Approximate)								**280 RPM**		**230 RPM**		**170 RPM**	
2.19	388	C002_0051	MR140/050	56C	AW140/010	5.063	210	1.90	406	1.52	406	1.14	406
2.19	388	C002_0051	MR160/050	56C	AW160/012	5.063	210	1.94	413	1.67	445	1.38	490
2.19	388	C002_0051	MR160/140	143/145TC	AW160/012	5.063	210	1.94	413	1.67	445	1.38	490
2.44	428	C102_0050	MR160/050	56TC	AW140/010	5.025	297	2.02	428	1.62	428	1.21	428
2.44	428	C102_0050	MR160/140	143/145TC	AW140/010	5.025	297	2.02	428	1.62	428	1.21	428
4.41	775	C102_0050	MR160/050	56C	AW160/012	5.025	297	3.89	825	3.35	888	2.77	978
4.41	775	C102_0050	MR160/140	143/145TC	AW160/012	5.025	297	3.89	825	3.35	888	2.77	978
4.41	775	C102_0050	MR200/180	182/184/TC	AW200/014	5.025	297	3.89	825	3.35	888	2.77	978
6.70	1,187	C202_0051	MR160/050	56C	AW160/012	5.072	420	5.91	1,264	5.09	1,361	4.20	1,498
6.70	1,187	C202_0051	MR160/140	143/145TC	AW160/012	5.072	420	5.91	1,264	5.09	1,361	4.20	1,498
6.70	1,187	C202_0051	MR200/180	182/184/TC	AW200/014	5.072	420	5.91	1,264	5.09	1,361	4.20	1,498
9.84	1,731	C302_0050	MR160/050	56C	AW160/012	5.037	623	8.15	1,731	6.52	1,731	4.89	1,731
9.84	1,731	C302_0050	MR160/140	143/145TC	AW160/012	5.037	623	8.15	1,731	6.52	1,731	4.89	1,731
11.01	1,938	C302_0050	MR200/180	182/184/TC	AW200/014	5.037	623	9.71	2,064	8.37	2,223	6.91	2,447
11.01	1,938	C302_0050	MR250/180	182/184/TC	AW250/102	5.037	623	9.71	2,064	8.37	2,223	6.91	2,447
23.36	4,149	C612_0051	MR200/180	182/184/TC	AW200/014	5.083	1,767	19.36	4,149	15.48	4,149	11.61	4,149
36.77*	6,531	C612_0051	MR250/180	182/184/TC	AW250/102	5.083	1,767	30.47	6,531	24.37	6,531	18.28	6,531
45.81*	8,136	C612_0051	MR300/180	182/184/TC	AW300/110	5.083	1,767	40.41	8,662	34.82	9,331	28.75	10,270
330 RPM Output (Approximate) Continued Next Page								**270 RPM**		**220 RPM**		**165 RPM**	
9.84	1,810	C502_0053	MR160/050	56C	AW160/012	5.265	1,326	8.15	1,810	6.52	1,810	4.89	1,810
9.84	1,810	C502_0053	MR160/140	143/145TC	AW160/012	5.265	1,326	8.15	1,810	6.52	1,810	4.89	1,810
9.84	1,816	C402_0053	MR160/050	56C	AW160/012	5.284	1,082	8.15	1,816	6.52	1,816	4.89	1,816
9.84	1,816	C402_0053	MR160/140	143/145TC	AW160/012	5.284	1,082	8.15	1,816	6.52	1,816	4.89	1,816
15.51*	2,865	C402_0053	MR200/180	182/184/TC	AW200/014	5.284	1,082	13.69	3,050	11.79	3,285	9.74	3,616
15.51*	2,865	C402_0053	MR250/210	213/215/TC	AW250/102	5.284	1,082	13.69	3,050	11.79	3,285	9.74	3,616
22.97*	4,226	C502_0053	MR200/180	182/184/TC	AW200/014	5.265	1,326	19.36	4,298	15.48	4,298	11.61	4,298
23.36	4,335	C712_0053	MR200/180	182/184/TC	AW200/014	5.311	2,457	19.36	4,335	15.48	4,335	11.61	4,335
24.11*	4,435	C502_0053	MR250/180	182/184/TC	AW250/102	5.265	1,326	21.27	4,722	18.33	5,086	15.13	5,598

Part No. Explanation

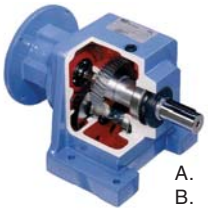
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
330 RPM Output (Approximate) Continued								**270 RPM**		**220 RPM**		**165 RPM**	
24.11*	4,435	C502_0053	MR300/210	213/215/TC	AW300/110	5.265	1,326	21.27	4,722	18.33	5,086	15.13	5,598
38.46	7,137	C712_0053	MR250/180	182/184/TC	AW250/102	5.311	2,457	31.87	7,137	25.49	7,137	19.12	7,137
73.49*	13,638	C712_0053	MR300/250	254/256TC	AW300/110	5.311	2,457	60.89	13,638	48.71	13,638	36.53	13,638
122.95*	22,396	C912_0052	MR350/320	324/326TC	AW350/202	5.213	4,113	101.87	22,396	81.50	22,396	61.12	22,396
325 RPM Output (Approximate)								**265 RPM**		**215 RPM**		**160 RPM**	
77.01*	14,495	C812_0054	MR300/250	254/256TC	AW300/110	5.387	3,362	63.81	14,495	51.05	14,495	38.28	14,495
118.49*	22,304	C812_0054	MR350/360	364/365TC	AW350/202	5.387	3,362	101.87	23,143	81.50	23,143	61.12	23,143
300 RPM Output (Approximate)								**245 RPM**		**200 RPM**		**150 RPM**	
2.00	407	C002_0058	MR140/050	56C	AW140/010	5.824	217	1.76	433	1.46	450	1.10	450
2.00	407	C002_0058	MR160/050	56C	AW160/012	5.824	217	1.76	433	1.52	467	1.25	514
2.00	407	C002_0058	MR160/140	143/145TC	AW160/012	5.824	217	1.76	433	1.52	467	1.25	514
2.35	482	C102_0059	MR140/050	56C	AW140/010	5.875	309	1.94	482	1.56	482	1.17	482
2.42	490	C202_0058	MR140/050	56C	AW140/010	5.791	434	2.01	490	1.61	490	1.20	490
3.98	816	C102_0059	MR160/050	56C	AW160/012	5.875	309	3.51	869	3.02	936	2.49	1,030
3.98	816	C102_0059	MR160/140	143/145TC	AW160/012	5.875	309	3.51	869	3.02	936	2.49	1,030
3.98	816	C102_0059	MR200/180	182/184/TC	AW200/014	5.875	309	3.51	869	3.02	936	2.49	1,030
6.13	1,240	C202_0058	MR160/050	56C	AW160/012	5.791	434	5.41	1,321	4.66	1,423	3.85	1,566
6.13	1,240	C202_0058	MR160/140	143/145TC	AW160/012	5.791	434	5.41	1,321	4.66	1,423	3.85	1,566
6.13	1,240	C202_0058	MR200/180	182/184/TC	AW200/014	5.791	434	5.41	1,321	4.66	1,423	3.85	1,566
8.89	1,820	C302_0059	MR160/050	56C	AW160/012	5.859	647	7.84	1,938	6.52	2,014	4.89	2,014
8.89	1,820	C302_0059	MR160/140	143/145TC	AW160/012	5.859	647	7.84	1,938	6.52	2,014	4.89	2,014
9.84	2,011	C502_0059	MR160/050	56C	AW160/012	5.850	1,361	8.15	2,011	6.52	2,011	4.89	2,011
9.84	2,011	C502_0059	MR160/140	143/145TC	AW160/012	5.850	1,361	8.15	2,011	6.52	2,011	4.89	2,011
9.84	2,025	C402_0059	MR160/050	56C	AW160/012	5.891	1,112	8.15	2,025	6.52	2,025	4.89	2,025
9.84	2,025	C402_0059	MR160/140	143/145TC	AW160/012	5.891	1,112	8.15	2,025	6.52	2,025	4.89	2,025
9.96	2,038	C302_0059	MR200/180	182/184/TC	AW200/014	5.859	647	8.78	2,170	7.57	2,338	6.25	2,573
9.96	2,038	C302_0059	MR250/180	182/184/TC	AW250/102	5.859	647	8.78	2,170	7.57	2,338	6.25	2,573
14.43	2,970	C402_0059	MR200/180	182/184/TC	AW200/014	5.891	1,112	12.73	3,162	10.97	3,407	9.06	3,749
14.43	2,970	C402_0059	MR250/180	182/184/TC	AW250/102	5.891	1,112	12.73	3,162	10.97	3,407	9.06	3,749
19.88	4,064	C502_0059	MR200/180	182/184/TC	AW200/014	5.850	1,361	17.54	4,327	15.12	4,661	11.61	4,775
22.47*	4,593	C502_0059	MR250/180	182/184/TC	AW250/102	5.850	1,361	19.82	4,890	17.08	5,268	14.10	5,798
22.47*	4,593	C502_0059	MR300/250	254/256TC	AW300/110	5.850	1,361	19.82	4,890	17.08	5,268	14.10	5,798
275 RPM Output (Approximate) Continued Next Page								**225 RPM**		**185 RPM**		**135 RPM**	
1.90	418	C002_0063	MR140/050	56C	AW140/010	6.300	221	1.67	445	1.44	479	1.10	486
1.90	418	C002_0063	MR160/050	56C	AW160/012	6.300	221	1.67	445	1.44	479	1.19	527
1.90	418	C002_0063	MR160/140	143/145TC	AW160/012	6.300	221	1.67	445	1.44	479	1.19	527
2.35	520	C102_0063	MR140/050	56C	AW140/010	6.338	315	1.94	520	1.56	520	1.17	520

* For thermal HP capacity, see rating below.

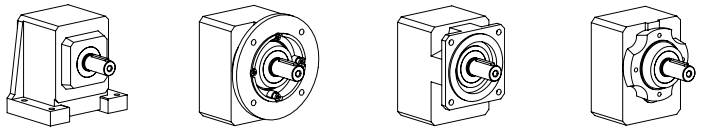
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

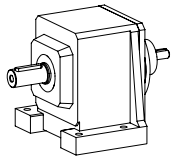
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

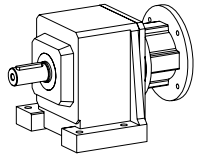
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
275 RPM Output (Approximate) Continued								**225 RPM**		**185 RPM**		**135 RPM**	
2.42	533	C202_0063	MR140/050	56C	AW140/010	6.295	443	2.01	533	1.61	533	1.20	533
3.78	837	C102_0063	MR160/050	56C	AW160/012	6.338	315	3.33	891	2.87	960	2.37	1,057
3.78	837	C102_0063	MR160/140	143/145TC	AW160/012	6.338	315	3.33	891	2.87	960	2.37	1,057
3.78	837	C102_0063	MR200/180	182/184/TC	AW200/014	6.338	315	3.33	891	2.87	960	2.37	1,057
5.80	1,275	C202_0063	MR160/050	56C	AW160/012	6.295	443	5.12	1,358	4.41	1,463	3.64	1,610
5.80	1,275	C202_0063	MR160/140	143/145TC	AW160/012	6.295	443	5.12	1,358	4.41	1,463	3.64	1,610
5.80	1,275	C202_0063	MR200/180	182/184/TC	AW200/014	6.295	443	5.12	1,358	4.41	1,463	3.64	1,610
8.89	1,962	C302_0063	MR160/050	56C	AW160/012	6.314	659	7.84	2,089	6.52	2,170	4.89	2,170
8.89	1,962	C302_0063	MR160/140	143/145TC	AW160/012	6.314	659	7.84	2,089	6.52	2,170	4.89	2,170
9.47	2,090	C302_0063	MR200/180	182/184/TC	AW200/014	6.314	659	8.36	2,225	7.20	2,397	5.94	2,638
9.47	2,090	C302_0063	MR250/180	182/184/TC	AW250/102	6.314	659	8.36	2,225	7.20	2,397	5.94	2,638
260 RPM Output (Approximate)								**215 RPM**		**175 RPM**		**130 RPM**	
9.84	2,285	C402_0066	MR160/050	56C	AW160/012	6.648	1,146	8.15	2,285	6.52	2,285	4.89	2,285
9.84	2,285	C402_0066	MR160/140	143/145TC	AW160/012	6.648	1,146	8.15	2,285	6.52	2,285	4.89	2,285
9.84	2,287	C502_0067	MR160/050	56C	AW160/012	6.655	1,406	8.15	2,287	6.52	2,287	4.89	2,287
9.84	2,287	C502_0067	MR160/140	143/145TC	AW160/012	6.655	1,406	8.15	2,287	6.52	2,287	4.89	2,287
13.31	3,092	C402_0066	MR200/180	182/184/TC	AW200/014	6.648	1,146	11.74	3,292	10.12	3,547	8.35	3,904
13.31	3,092	C402_0066	MR250/210	213/215/TC	AW250/102	6.648	1,146	11.74	3,292	10.12	3,547	8.35	3,904
19.88	4,624	C502_0067	MR200/180	182/184/TC	AW200/014	6.655	1,406	17.54	4,923	15.12	5,303	11.61	5,432
20.62*	4,795	C502_0067	MR250/180	182/184/TC	AW250/102	6.655	1,406	18.19	5,105	15.68	5,499	12.94	6,053
20.62*	4,795	C502_0067	MR300/250	254/256TC	AW300/110	6.655	1,406	18.19	5,105	15.68	5,499	12.94	6,053
23.36	5,320	C612_0065	MR200/180	182/184/TC	AW200/014	6.518	1,881	19.36	5,320	15.48	5,320	11.61	5,320
35.40*	8,062	C612_0065	MR250/210	213/215/TC	AW250/102	6.518	1,881	29.33	8,062	23.47	8,062	17.60	8,062
38.81*	8,839	C612_0065	MR300/180	182/184/TC	AW300/110	6.518	1,881	34.24	9,411	29.50	10,137	24.36	11,158
74.64*	17,397	C812_0067	MR300/250	254/256TC	AW300/110	6.670	3,547	61.85	17,397	49.48	17,397	37.11	17,397
102.76*	23,950	C812_0067	MR350/360	364/365TC	AW350/202	6.670	3,547	90.66	25,500	78.12	27,469	61.12	28,655
122.95*	27,994	C912_0065	MR350/320	324/326TC	AW350/202	6.516	4,349	101.87	27,994	81.50	27,994	61.12	27,994
255 RPM Output (Approximate)								**210 RPM**		**170 RPM**		**125 RPM**	
23.36	5,560	C712_0068	MR200/180	182/184/TC	AW200/014	6.811	2,615	19.36	5,560	15.48	5,560	11.61	5,560
37.06	8,821	C712_0068	MR250/180	182/184/TC	AW250/102	6.811	2,615	30.71	8,821	24.57	8,821	18.43	8,821
62.38*	14,846	C712_0068	MR300/250	254/256TC	AW300/110	6.811	2,615	55.03	15,806	46.95	16,855	35.21	16,855
245 RPM Output (Approximate) Continued Next Page								**200 RPM**		**160 RPM**		**120 RPM**	
23.36	6,005	C712_0074	MR200/180	182/184/TC	AW200/014	7.357	2,665	19.36	6,005	15.48	6,005	11.61	6,005
23.36	5,804	C612_0071	MR200/180	182/184/TC	AW200/014	7.111	1,922	19.36	5,804	15.48	5,804	11.61	5,804
36.62*	9,099	C612_0071	MR250/180	182/184/TC	AW250/102	7.111	1,922	30.47	9,136	24.37	9,136	18.28	9,136
36.62*	9,099	C612_0071	MR300/180	182/184/TC	AW300/110	7.111	1,922	32.31	9,688	27.84	10,436	22.98	11,486
38.46	9,886	C712_0074	MR250/180	182/184/TC	AW250/102	7.357	2,665	31.87	9,886	25.49	9,886	19.12	9,886

Part No. Explanation

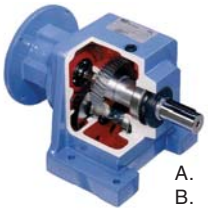
C 3 0 2 N 0620 AW 140 / 012
- 012 – Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- AW – Flange No.
- 140 – Input Shaft
- 0620 – Ratio (0620 = 62.0:1)
- N – Housing Style
- 2 – No. of Gear Reductions
- 0 – Generation No.
- 3 – Unit No.
- C – Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- 140 – Motor Frame Size (140=143/145TC)
- 160 – Flange No.
- MR – Motor Adapter
- 0620 – Ratio (0620 = 62.0:1)
- N – Housing Style
- 2 – No. of Reductions
- 0 – Generation No.
- 3 – Unit No.
- C – Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
245 RPM Output (Approximate) Continued								**200 RPM**		**160 RPM**		**120 RPM**	
59.25*	15,232	C712_0074	MR300/250	254/256TC	AW300/110	7.357	2,665	52.27	16,218	45.05	17,470	34.26	17,716
77.01*	19,654	C812_0073	MR300/250	254/256TC	AW300/110	7.304	3,628	63.81	19,654	51.05	19,654	38.28	19,654
96.73*	24,686	C812_0073	MR350/320	324/326TC	AW350/202	7.304	3,628	85.33	26,283	73.54	28,313	60.70	31,162
122.95*	31,817	C912_0074	MR350/360	364/365TC	AW350/202	7.406	4,490	101.87	31,817	81.50	31,817	61.12	31,817
225 RPM Output (Approximate)								**185 RPM**		**150 RPM**		**110 RPM**	
1.66	447	C002_0077	MR140/050	56C	AW140/010	7.714	233	1.46	476	1.26	512	1.04	564
1.66	447	C002_0077	MR160/050	56C	AW160/012	7.714	233	1.46	476	1.26	512	1.04	564
1.66	447	C002_0077	MR160/140	143/145TC	AW160/012	7.714	233	1.46	476	1.26	512	1.04	564
2.23	607	C102_0078	MR140/050	56C	AW140/010	7.796	332	1.85	607	1.48	607	1.11	607
2.29	625	C202_0078	MR140/050	56C	AW140/010	7.800	467	1.90	625	1.52	625	1.14	625
3.29	897	C102_0078	MR160/050	56C	AW160/012	7.796	332	2.90	955	2.50	1,029	2.07	1,132
3.29	897	C102_0078	MR160/140	143/145TC	AW160/012	7.796	332	2.90	955	2.50	1,029	2.07	1,132
3.29	897	C102_0078	MR200/180	182/184/TC	AW200/014	7.796	332	2.90	955	2.50	1,029	2.07	1,132
5.03	1,370	C202_0078	MR160/050	56C	AW160/012	7.800	467	4.43	1,458	3.82	1,571	3.15	1,729
5.03	1,370	C202_0078	MR160/140	143/145TC	AW160/012	7.800	467	4.43	1,458	3.82	1,571	3.15	1,729
5.03	1,370	C202_0078	MR200/180	182/184/TC	AW200/014	7.800	467	4.43	1,458	3.82	1,571	3.15	1,729
6.98	1,912	C302_0078	MR160/050	56C	AW160/012	7.841	696	6.16	2,035	5.30	2,193	4.38	2,413
6.98	1,912	C302_0078	MR160/140	143/145TC	AW160/012	7.841	696	6.16	2,035	5.30	2,193	4.38	2,413
8.15	2,225	C402_0078	MR160/050	56C	AW160/012	7.816	1,193	7.19	2,369	6.19	2,552	4.89	2,686
8.15	2,225	C402_0078	MR160/140	143/145TC	AW160/012	7.816	1,193	7.19	2,369	6.19	2,552	4.89	2,686
8.20	2,246	C302_0078	MR200/180	182/184/TC	AW200/014	7.841	696	7.23	2,392	6.23	2,576	4.87	2,685
8.20	2,246	C302_0078	MR250/180	182/184/TC	AW250/102	7.841	696	7.23	2,392	6.23	2,576	4.87	2,685
9.69	2,630	C502_0078	MR160/050	56C	AW160/012	7.763	1,461	8.15	2,668	6.52	2,668	4.89	2,668
9.69	2,630	C502_0078	MR160/140	143/145TC	AW160/012	7.763	1,461	8.15	2,668	6.52	2,668	4.89	2,668
11.95	3,264	C402_0078	MR200/180	182/184/TC	AW200/014	7.816	1,193	10.54	3,475	9.09	3,743	7.50	4,120
11.95	3,264	C402_0078	MR250/180	182/184/TC	AW250/102	7.816	1,193	10.54	3,475	9.09	3,743	7.50	4,120
16.28	4,416	C502_0078	MR200/180	182/184/TC	AW200/014	7.763	1,461	14.36	4,702	12.38	5,065	10.22	5,574
18.61	5,047	C502_0078	MR250/210	213/215/TC	AW250/102	7.763	1,461	16.42	5,374	14.15	5,789	11.68	6,372
18.61	5,047	C502_0078	MR300/250	254/256TC	AW300/110	7.763	1,461	16.42	5,374	14.15	5,789	11.68	6,372
210 RPM Output (Approximate) Continued Next Page								**175 RPM**		**140 RPM**		**105 RPM**	
1.85	531	C002_0082	MR140/050	56C	AW140/010	8.235	237	1.53	531	1.22	531	0.92	531
1.85	531	C002_0082	MR160/050	56C	AW160/012	8.235	237	1.53	531	1.22	531	0.92	531
1.85	531	C002_0082	MR160/140	143/145TC	AW160/012	8.235	237	1.53	531	1.22	531	0.92	531
2.61	754	C102_0083	MR140/050	56C	AW140/010	8.263	337	2.16	754	1.73	754	1.30	754
3.68	1,063	C102_0083	MR160/050	56C	AW160/012	8.263	337	3.05	1,063	2.44	1,063	1.83	1,063
3.68	1,063	C102_0083	MR160/140	143/145TC	AW160/012	8.263	337	3.05	1,063	2.44	1,063	1.83	1,063
3.68	1,063	C102_0083	MR200/180	182/184/TC	AW200/014	8.263	337	3.05	1,063	2.44	1,063	1.83	1,063
6.18	1,770	C202_0082	MR160/050	56C	AW160/012	8.190	473	5.13	1,772	4.10	1,772	3.08	1,772

* For thermal HP capacity, see rating below.

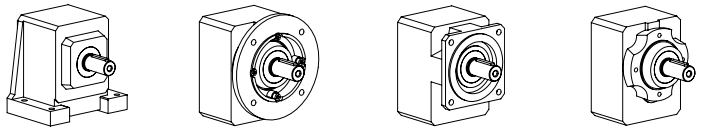
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

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

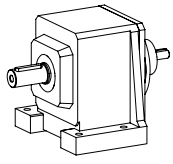
NOTE: 1) Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
210 RPM	**Output (Approximate)**	**Continued**						**175 RPM**		**140 RPM**		**105 RPM**	
6.18	1,770	C202_0082	MR160/140	143/145TC	AW160/012	8.190	473	5.13	1,772	4.10	1,772	3.08	1,772
6.18	1,770	C202_0082	MR200/180	182/184/TC	AW200/014	8.190	473	5.13	1,772	4.10	1,772	3.08	1,772
9.57	2,758	C302_0083	MR160/050	56C	AW160/012	8.250	704	8.15	2,835	6.52	2,835	4.89	2,835
9.57	2,758	C302_0083	MR160/140	143/145TC	AW160/012	8.250	704	8.15	2,835	6.52	2,835	4.89	2,835
9.57	2,758	C302_0083	MR200/180	182/184/TC	AW200/014	8.250	704	8.44	2,936	7.13	3,100	5.35	3,100
9.57	2,758	C302_0083	MR250/180	182/184/TC	AW250/102	8.250	704	8.44	2,936	7.13	3,100	5.35	3,100
16.01*	4,634	C402_0083	MR200/180	182/184/TC	AW200/014	8.285	1,211	13.94	4,872	11.16	4,872	8.37	4,872
16.01*	4,634	C402_0083	MR250/180	182/184/TC	AW250/102	8.285	1,211	13.94	4,872	11.16	4,872	8.37	4,872
23.36*	6,745	C502_0083	MR200/180	182/184/TC	AW200/014	8.263	1,484	19.36	6,745	15.48	6,745	11.61	6,745
23.36	6,685	C612_0082	MR200/180	182/184/TC	AW200/014	8.190	1,991	19.36	6,685	15.48	6,685	11.61	6,685
24.05*	6,945	C502_0083	MR250/180	182/184/TC	AW250/102	8.263	1,484	20.34	7,086	16.27	7,086	12.20	7,086
24.05*	6,945	C502_0083	MR300/250	254/256TC	AW300/110	8.263	1,484	20.34	7,086	16.27	7,086	12.20	7,086
33.33*	9,538	C612_0082	MR250/180	182/184/TC	AW250/102	8.190	1,991	28.34	9,790	22.68	9,790	17.01	9,790
33.33*	9,538	C612_0082	MR300/180	182/184/TC	AW300/110	8.190	1,991	29.40	10,155	25.34	10,939	20.92	12,040
122.95*	35,606	C912_0083	MR350/360	364/365TC	AW350/202	8.288	4,618	101.87	35,606	81.50	35,606	61.12	35,606
205 RPM	**Output (Approximate)**							**170 RPM**		**135 RPM**		**100 RPM**	
23.36	6,930	C712_0085	MR200/180	182/184/TC	AW200/014	8.490	2,763	19.36	6,930	15.48	6,930	11.61	6,930
35.72	10,597	C712_0085	MR250/210	213/215/TC	AW250/102	8.490	2,763	29.60	10,597	23.68	10,597	17.76	10,597
53.86*	15,977	C712_0085	MR300/250	254/256TC	AW300/110	8.490	2,763	47.51	17,011	40.94	18,325	33.80	20,169
71.75*	21,240	C812_0085	MR300/250	254/256TC	AW300/110	8.472	3,765	59.45	21,240	47.56	21,240	35.67	21,240
87.62*	25,938	C812_0085	MR350/320	324/326TC	AW350/202	8.472	3,765	77.30	27,616	66.61	29,748	54.99	32,742
200 RPM	**Output (Approximate)**							**160 RPM**		**130 RPM**		**95 RPM**	
23.36	7,443	C612_0091	MR200/180	182/184/TC	AW200/014	9.118	2,045	19.36	7,443	15.48	7,443	11.61	7,443
31.03*	9,885	C612_0091	MR250/180	182/184/TC	AW250/102	9.118	2,045	27.37	10,525	23.46	11,278	17.60	11,278
31.03*	9,885	C612_0091	MR300/180	182/184/TC	AW300/110	9.118	2,045	27.37	10,525	23.59	11,338	17.97	11,515
74.64*	23,586	C812_0090	MR300/250	254/256TC	AW300/110	9.043	3,827	61.85	23,586	49.48	23,586	37.11	23,586
83.89*	26,508	C812_0090	MR350/320	324/326TC	AW350/202	9.043	3,827	74.01	28,223	63.78	30,402	50.17	31,889
190 RPM	**Output (Approximate)**	**Continued Next Page**						**155 RPM**		**125 RPM**		**90 RPM**	
1.65	531	C002_0092	MR140/050	56C	AW140/010	9.228	244	1.37	531	1.09	531	0.82	531
1.65	531	C002_0092	MR160/050	56C	AW160/012	9.228	244	1.37	531	1.09	531	0.82	531
1.65	531	C002_0092	MR160/140	143/145TC	AW160/012	9.228	244	1.37	531	1.09	531	0.82	531
2.61	851	C102_0093	MR140/050	56C	AW140/010	9.326	347	2.16	851	1.73	851	1.30	851
3.26	1,063	C102_0093	MR160/050	56C	AW160/012	9.326	347	2.70	1,063	2.16	1,063	1.62	1,063
3.26	1,063	C102_0093	MR160/140	143/145TC	AW160/012	9.326	347	2.70	1,063	2.16	1,063	1.62	1,063
3.26	1,063	C102_0093	MR200/180	182/184/TC	AW200/014	9.326	347	2.70	1,063	2.16	1,063	1.62	1,063
5.40	1,772	C202_0094	MR160/050	56C	AW160/012	9.387	489	4.48	1,772	3.58	1,772	2.69	1,772
5.40	1,772	C202_0094	MR160/140	143/145TC	AW160/012	9.387	489	4.48	1,772	3.58	1,772	2.69	1,772
5.40	1,772	C202_0094	MR200/180	182/184/TC	AW200/014	9.387	489	4.48	1,772	3.58	1,772	2.69	1,772

Part No. Explanation

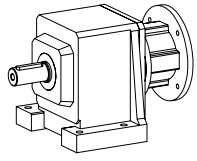
C 3 0 2 N 0620 AW 140 / 012

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Gear Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- AW — Input Shaft
- 140 — Flange No.
- 012 — Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)

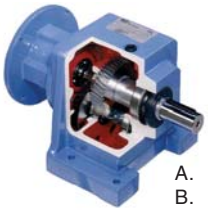


C 3 0 2 N 0620 MR 160 / 140

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- MR — Motor Adapter
- 160 — Flange No.
- 140 — Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
190 RPM Output (Approximate) Continued								**155 RPM**		**125 RPM**		**90 RPM**	
8.83	2,871	C302_0093	MR160/050	56C	AW160/012	9.310	726	7.79	3,057	6.32	3,100	4.74	3,100
8.83	2,871	C302_0093	MR160/140	143/145TC	AW160/012	9.310	726	7.79	3,057	6.32	3,100	4.74	3,100
8.83	2,871	C302_0093	MR200/180	182/184/TC	AW200/014	9.310	726	7.79	3,057	6.32	3,100	4.74	3,100
8.83	2,871	C302_0093	MR250/180	182/184/TC	AW250/102	9.310	726	7.79	3,057	6.32	3,100	4.74	3,100
14.86*	4,809	C402_0093	MR200/180	182/184/TC	AW200/014	9.261	1,245	12.47	4,872	9.98	4,872	7.48	4,872
14.86*	4,809	C402_0093	MR250/180	182/184/TC	AW250/102	9.261	1,245	12.47	4,872	9.98	4,872	7.48	4,872
21.90*	7,086	C502_0093	MR200/180	182/184/TC	AW200/014	9.261	1,527	18.14	7,086	14.52	7,086	10.89	7,086
21.90*	7,086	C502_0093	MR250/210	213/215/TC	AW250/102	9.261	1,527	18.14	7,086	14.52	7,086	10.89	7,086
21.90*	7,086	C502_0093	MR300/180	182/184/TC	AW300/110	9.261	1,527	18.14	7,086	14.52	7,086	10.89	7,086
23.36*	7,701	C712_0094	MR200/180	182/184/TC	AW200/014	9.435	2,837	19.36	7,701	15.48	7,701	11.61	7,701
37.06*	12,219	C712_0094	MR250/180	182/184/TC	AW250/102	9.435	2,837	30.71	12,219	24.57	12,219	18.43	12,219
50.20*	16,549	C712_0094	MR300/250	254/256TC	AW300/110	9.435	2,837	44.28	17,620	35.62	17,716	26.72	17,716
122.95*	39,774	C912_0093	MR350/320	324/326TC	AW350/202	9.258	4,748	101.87	39,774	81.50	39,774	61.12	39,774
175 RPM Output (Approximate)								**145 RPM**		**115 RPM**		**85 RPM**	
23.36	8,253	C612_0100	MR200/180	182/184/TC	AW200/014	10.111	2,099	19.36	8,253	15.48	8,253	11.61	8,253
23.36	8,091	C712_0099	MR200/180	182/184/TC	AW200/014	9.912	2,872	19.36	8,091	15.48	8,091	11.61	8,091
28.96	10,232	C612_0100	MR250/210	213/215/TC	AW250/102	10.111	2,099	25.55	10,894	21.87	11,657	16.40	11,657
28.96	10,232	C612_0100	MR300/210	213/215/TC	AW300/110	10.111	2,099	25.55	10,894	22.02	11,735	18.07	12,844
34.84	12,068	C712_0099	MR250/180	182/184/TC	AW250/102	9.912	2,872	28.87	12,068	23.10	12,068	17.32	12,068
48.58*	16,824	C712_0099	MR300/250	254/256TC	AW300/110	9.912	2,872	42.85	17,912	36.93	19,295	30.48	21,237
69.49*	24,648	C812_0100	MR300/250	254/256TC	AW300/110	10.151	3,939	57.58	24,648	46.06	24,648	34.55	24,648
77.67*	27,549	C812_0100	MR350/320	324/326TC	AW350/202	10.151	3,939	68.52	29,331	59.05	31,596	48.74	34,776
122.95*	42,055	C912_0098	MR350/320	324/326TC	AW350/202	9.789	4,815	101.87	42,055	81.50	42,055	61.12	42,055
170 RPM Output (Approximate) Continued Next Page								**135 RPM**		**110 RPM**		**80 RPM**	
1.48	531	C002_0105	MR140/050	56C	AW140/010	10.297	250	1.22	531	0.98	531	0.73	531
1.48	531	C002_0105	MR160/050	56C	AW160/012	10.297	250	1.22	531	0.98	531	0.73	531
1.48	531	C002_0105	MR160/140	143/145TC	AW160/012	10.297	250	1.22	531	0.98	531	0.73	531
2.52	914	C102_0105	MR140/050	56C	AW140/010	10.383	357	2.09	914	1.67	914	1.25	914
2.93	1,063	C102_0105	MR160/050	56C	AW160/012	10.383	357	2.43	1,063	1.94	1,063	1.46	1,063
2.93	1,063	C102_0105	MR160/140	143/145TC	AW160/012	10.383	357	2.43	1,063	1.94	1,063	1.46	1,063
2.93	1,063	C102_0105	MR200/180	182/184/TC	AW200/014	10.383	357	2.43	1,063	1.94	1,063	1.46	1,063
4.94	1,772	C202_0105	MR160/050	56C	AW160/012	10.260	500	4.09	1,772	3.28	1,772	2.46	1,772
4.94	1,772	C202_0105	MR160/140	143/145TC	AW160/012	10.260	500	4.09	1,772	3.28	1,772	2.46	1,772
4.94	1,772	C202_0105	MR200/180	182/184/TC	AW200/014	10.260	500	4.09	1,772	3.28	1,772	2.46	1,772
8.26	2,968	C302_0105	MR160/050	56C	AW160/012	10.286	744	7.15	3,100	5.72	3,100	4.29	3,100
8.26	2,968	C302_0105	MR160/140	143/145TC	AW160/012	10.286	744	7.15	3,100	5.72	3,100	4.29	3,100
8.26	2,968	C302_0105	MR200/180	182/184/TC	AW200/014	10.286	744	7.15	3,100	5.72	3,100	4.29	3,100
8.26	2,968	C302_0105	MR250/180	182/184/TC	AW250/102	10.286	744	7.15	3,100	5.72	3,100	4.29	3,100

* For thermal HP capacity, see rating below.

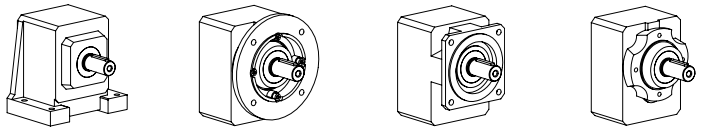
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

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

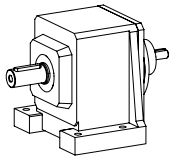
NOTE: 1) Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
170 RPM		**Output (Approximate)** Continued						**135 RPM**		**110 RPM**		**80 RPM**	
9.84	3,578	C402_0105	MR160/050	56C	AW160/012	10.410	1,282	8.15	3,578	6.52	3,578	4.89	3,578
9.84	3,578	C402_0105	MR160/140	143/145TC	AW160/012	10.410	1,282	8.15	3,578	6.52	3,578	4.89	3,578
13.39	4,872	C402_0105	MR200/180	182/184/TC	AW200/014	10.410	1,282	11.10	4,872	8.88	4,872	6.66	4,872
13.39	4,872	C402_0105	MR250/180	182/184/TC	AW250/102	10.410	1,282	11.10	4,872	8.88	4,872	6.66	4,872
19.53	7,086	C502_0105	MR200/180	182/184/TC	AW200/014	10.383	1,571	16.18	7,086	12.95	7,086	9.71	7,086
19.53	7,086	C502_0105	MR250/180	182/184/TC	AW250/102	10.383	1,571	16.18	7,086	12.95	7,086	9.71	7,086
19.53	7,086	C502_0105	MR300/280	284/286TC	AW300/110	10.383	1,571	16.18	7,086	12.95	7,086	9.71	7,086
150 RPM		**Output (Approximate)**						**120 RPM**		**100 RPM**		**75 RPM**	
1.32	531	C002_0115	MR140/050	56C	AW140/010	11.540	258	1.09	531	0.87	531	0.66	531
1.32	531	C002_0115	MR160/050	56C	AW160/012	11.540	258	1.09	531	0.87	531	0.66	531
1.32	531	C002_0115	MR160/140	143/145TC	AW160/012	11.540	258	1.09	531	0.87	531	0.66	531
2.52	1,032	C102_0115	MR140/050	56C	AW140/010	11.717	367	2.09	1,032	1.67	1,032	1.25	1,032
2.60	1,063	C102_0115	MR160/050	56C	AW160/012	11.717	367	2.15	1,063	1.72	1,063	1.29	1,063
2.60	1,063	C102_0115	MR160/140	143/145TC	AW160/012	11.717	367	2.15	1,063	1.72	1,063	1.29	1,063
2.60	1,063	C102_0115	MR200/180	182/184/TC	AW200/014	11.717	367	2.15	1,063	1.72	1,063	1.29	1,063
7.62	3,090	C302_0115	MR160/050	56C	AW160/012	11.607	767	6.33	3,100	5.07	3,100	3.80	3,100
7.62	3,090	C302_0115	MR160/140	143/145TC	AW160/012	11.607	767	6.33	3,100	5.07	3,100	3.80	3,100
7.62	3,090	C302_0115	MR200/180	182/184/TC	AW200/014	11.607	767	6.33	3,100	5.07	3,100	3.80	3,100
7.62	3,090	C302_0115	MR250/180	182/184/TC	AW250/102	11.607	767	6.33	3,100	5.07	3,100	3.80	3,100
9.84	3,999	C402_0115	MR160/050	56C	AW160/012	11.636	1,318	8.15	3,999	6.52	3,999	4.89	3,999
9.84	3,999	C402_0115	MR160/140	143/145TC	AW160/012	11.636	1,318	8.15	3,999	6.52	3,999	4.89	3,999
11.98	4,872	C402_0115	MR200/180	182/184/TC	AW200/014	11.636	1,318	9.93	4,872	7.94	4,872	5.96	4,872
11.98	4,872	C402_0115	MR250/180	182/184/TC	AW250/102	11.636	1,318	9.93	4,872	7.94	4,872	5.96	4,872
17.43	7,086	C502_0115	MR200/180	182/184/TC	AW200/014	11.636	1,617	14.44	7,086	11.55	7,086	8.66	7,086
17.43	7,086	C502_0115	MR250/180	182/184/TC	AW250/102	11.636	1,617	14.44	7,086	11.55	7,086	8.66	7,086
17.43	7,086	C502_0115	MR300/180	182/184/TC	AW300/110	11.636	1,617	14.44	7,086	11.55	7,086	8.66	7,086
23.36	9,352	C612_0115	MR200/180	182/184/TC	AW200/014	11.457	2,166	19.36	9,352	15.48	9,352	11.61	9,352
26.65	10,667	C612_0115	MR250/180	182/184/TC	AW250/102	11.457	2,166	23.51	11,357	19.07	11,515	14.30	11,515
26.65	10,667	C612_0115	MR300/250	254/256TC	AW300/110	11.457	2,166	23.51	11,357	19.07	11,515	14.30	11,515
71.52*	28,708	C812_0115	MR300/250	254/256TC	AW300/110	11.487	4,063	59.45	28,798	47.56	28,798	35.67	28,798
71.52*	28,708	C812_0115	MR350/320	324/326TC	AW350/202	11.487	4,063	63.10	30,565	52.66	31,889	39.50	31,889
145 RPM		**Output (Approximate)**						**120 RPM**		**96 RPM**		**73 RPM**	
4.31	1,772	C202_0120	MR160/050	56C	AW160/012	11.760	518	3.57	1,772	2.86	1,772	2.14	1,772
4.31	1,772	C202_0120	MR160/140	143/145TC	AW160/012	11.760	518	3.57	1,772	2.86	1,772	2.14	1,772
4.31	1,772	C202_0120	MR200/180	182/184/TC	AW200/014	11.760	518	3.57	1,772	2.86	1,772	2.14	1,772
23.36	9,600	C712_0120	MR200/180	182/184/TC	AW200/014	11.761	2,997	19.36	9,600	15.48	9,600	11.61	9,600
35.72	14,680	C712_0120	MR250/180	182/184/TC	AW250/102	11.761	2,997	29.60	14,680	23.68	14,680	17.76	14,680
43.11*	17,716	C712_0120	MR300/180	182/184/TC	AW300/110	11.761	2,997	35.72	17,716	28.58	17,716	21.43	17,716
122.95*	50,587	C912_0120	MR350/320	324/326TC	AW350/202	11.775	5,042	101.87	50,587	81.50	50,587	61.12	50,587

Part No. Explanation

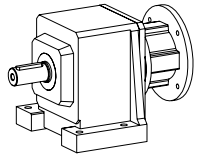
C 3 0 2 N 0620 AW 140 / 012

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Gear Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- AW — Input Shaft
- 140 — Flange No.
- 012 — Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)

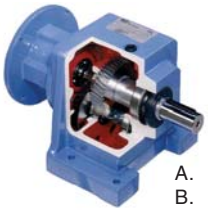


C 3 0 2 N 0620 MR 160 / 140

- C — Concentric Helical
- 3 — Unit No.
- 0 — Generation No.
- 2 — No. of Reductions
- N — Housing Style
- 0620 — Ratio (0620 = 62.0:1)
- MR — Motor Adapter
- 160 — Flange No.
- 140 — Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
140 RPM Output (Approximate)								**115 RPM**		**90 RPM**		**70 RPM**	
1.21	531	C002_0125	MR140/050	56C	AW140/010	12.567	263	1.00	531	0.80	531	0.60	531
1.21	531	C002_0125	MR160/050	56C	AW160/012	12.567	263	1.00	531	0.80	531	0.60	531
1.21	531	C002_0125	MR160/140	143/145TC	AW160/012	12.567	263	1.00	531	0.80	531	0.60	531
2.44	1,062	C102_0125	MR140/050	56C	AW140/010	12.455	373	2.02	1,062	1.62	1,062	1.21	1,062
2.44	1,063	C102_0125	MR160/050	56C	AW160/012	12.455	373	2.02	1,063	1.62	1,063	1.21	1,063
2.44	1,063	C102_0125	MR160/140	143/145TC	AW160/012	12.455	373	2.02	1,063	1.62	1,063	1.21	1,063
2.44	1,063	C102_0125	MR200/180	182/184/TC	AW200/014	12.455	373	2.02	1,063	1.62	1,063	1.21	1,063
4.12	1,772	C202_0125	MR160/050	56C	AW160/012	12.315	524	3.41	1,772	2.73	1,772	2.05	1,772
4.12	1,772	C202_0125	MR160/140	143/145TC	AW160/012	12.315	524	3.41	1,772	2.73	1,772	2.05	1,772
4.12	1,772	C202_0125	MR200/180	182/184/TC	AW200/014	12.315	524	3.41	1,772	2.73	1,772	2.05	1,772
7.16	3,100	C302_0125	MR160/050	56C	AW160/012	12.400	780	5.93	3,100	4.74	3,100	3.56	3,100
7.16	3,100	C302_0125	MR160/140	143/145TC	AW160/012	12.400	780	5.93	3,100	4.74	3,100	3.56	3,100
7.16	3,100	C302_0125	MR200/180	182/184/TC	AW200/014	12.400	780	5.93	3,100	4.74	3,100	3.56	3,100
7.16	3,100	C302_0125	MR250/180	182/184/TC	AW250/102	12.400	780	5.93	3,100	4.74	3,100	3.56	3,100
9.84	4,272	C502_0125	MR160/050	56C	AW160/012	12.429	1,644	8.15	4,272	6.52	4,272	4.89	4,272
9.84	4,272	C502_0125	MR160/140	143/145TC	AW160/012	12.429	1,644	8.15	4,272	6.52	4,272	4.89	4,272
9.84	4,303	C402_0125	MR160/050	56C	AW160/012	12.519	1,342	8.15	4,303	6.52	4,303	4.89	4,303
9.84	4,303	C402_0125	MR160/140	143/145TC	AW160/012	12.519	1,342	8.15	4,303	6.52	4,303	4.89	4,303
11.14	4,872	C402_0125	MR200/180	182/184/TC	AW200/014	12.519	1,342	9.23	4,872	7.38	4,872	5.54	4,872
11.14	4,872	C402_0125	MR250/180	182/184/TC	AW250/102	12.519	1,342	9.23	4,872	7.38	4,872	5.54	4,872
16.32	7,086	C502_0125	MR200/180	182/184/TC	AW200/014	12.429	1,644	13.52	7,086	10.82	7,086	8.11	7,086
16.32	7,086	C502_0125	MR250/180	182/184/TC	AW250/102	12.429	1,644	13.52	7,086	10.82	7,086	8.11	7,086
16.32	7,086	C502_0125	MR300/280	284/286TC	AW300/110	12.429	1,644	13.52	7,086	10.82	7,086	8.11	7,086
22.20	9,759	C612_0125	MR200/180	182/184/TC	AW200/014	12.581	2,217	19.36	10,269	15.48	10,269	11.61	10,269
25.03	11,005	C612_0125	MR250/180	182/184/TC	AW250/102	12.581	2,217	22.08	11,717	19.03	12,622	14.53	12,844
25.03	11,005	C612_0125	MR300/180	182/184/TC	AW300/110	12.581	2,217	22.08	11,717	19.03	12,622	14.53	12,844
34.84	15,522	C812_0125	MR250/210	213/215/TC	AW250/102	12.749	4,170	28.87	15,522	23.10	15,522	17.32	15,522
66.58*	29,660	C812_0125	MR300/180	182/184/TC	AW300/110	12.749	4,170	55.17	29,660	44.13	29,660	33.10	29,660
66.72*	29,723	C812_0125	MR350/360	364/365TC	AW350/202	12.749	4,170	58.86	31,646	50.73	34,090	41.52	37,204
122.95*	53,362	C912_0125	MR350/320	324/326TC	AW350/202	12.421	5,110	101.87	53,362	81.50	53,362	61.12	53,362
130 RPM Output (Approximate)								**105 RPM**		**85 RPM**		**65 RPM**	
23.36	11,207	C712_0135	MR200/180	182/184/TC	AW200/014	13.730	3,115	19.36	11,207	15.48	11,207	11.61	11,207
23.36	10,760	C712_0130	MR200/180	182/184/TC	AW200/014	13.182	3,084	19.36	10,760	15.48	10,760	11.61	10,760
32.99	15,197	C712_0130	MR250/210	213/215/TC	AW250/102	13.182	3,084	27.34	15,197	21.87	15,197	16.40	15,197
34.84	16,716	C712_0135	MR250/180	182/184/TC	AW250/102	13.730	3,115	28.87	16,716	23.10	16,716	17.32	16,716
36.93	17,716	C712_0135	MR300/210	213/215/TC	AW300/110	13.730	3,115	30.60	17,716	24.48	17,716	18.36	17,716
40.17	18,501	C712_0130	MR300/180	182/184/TC	AW300/110	13.182	3,084	35.43	19,698	30.54	21,219	22.95	21,259

* For thermal HP capacity, see rating below.

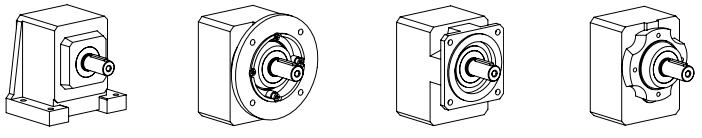
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

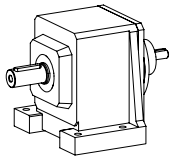
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

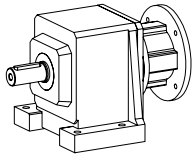
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
125 RPM Output (Approximate)								**100 RPM**		**80 RPM**		**60 RPM**	
1.08	531	C002_0140	MR140/050	56C	AW140/010	14.083	271	0.89	531	0.72	531	0.54	531
1.08	531	C002_0140	MR160/050	56C	AW160/012	14.083	271	0.89	531	0.72	531	0.54	531
2.16	1,063	C102_0140	MR140/050	56C	AW140/010	14.056	385	1.79	1,063	1.43	1,063	1.08	1,063
2.16	1,063	C102_0140	MR160/050	56C	AW160/012	14.056	385	1.79	1,063	1.43	1,063	1.08	1,063
2.16	1,063	C102_0140	MR160/140	143/145TC	AW160/012	14.056	385	1.79	1,063	1.43	1,063	1.08	1,063
2.16	1,063	C102_0140	MR200/180	182/184/TC	AW200/014	14.056	385	1.79	1,063	1.43	1,063	1.08	1,063
3.59	1,772	C202_0140	MR160/050	56C	AW160/012	14.115	542	2.98	1,772	2.38	1,772	1.79	1,772
3.59	1,772	C202_0140	MR160/140	143/145TC	AW160/012	14.115	542	2.98	1,772	2.38	1,772	1.79	1,772
3.59	1,772	C202_0140	MR200/180	182/184/TC	AW200/014	14.115	542	2.98	1,772	2.38	1,772	1.79	1,772
6.34	3,100	C302_0140	MR160/050	56C	AW160/012	13.993	804	5.25	3,100	4.20	3,100	3.15	3,100
6.34	3,100	C302_0140	MR160/140	143/145TC	AW160/012	13.993	804	5.25	3,100	4.20	3,100	3.15	3,100
6.34	3,100	C302_0140	MR200/180	182/184/TC	AW200/014	13.993	804	5.25	3,100	4.20	3,100	3.15	3,100
6.34	3,100	C302_0140	MR250/180	182/184/TC	AW250/102	13.993	804	5.25	3,100	4.20	3,100	3.15	3,100
9.84	4,787	C502_0140	MR160/050	56C	AW160/012	13.929	1,691	8.15	4,787	6.52	4,787	4.89	4,787
9.84	4,787	C502_0140	MR160/140	143/145TC	AW160/012	13.929	1,691	8.15	4,787	6.52	4,787	4.89	4,787
9.84	4,809	C402_0140	MR160/050	56C	AW160/012	13.993	1,380	8.15	4,809	6.52	4,809	4.89	4,809
9.84	4,809	C402_0140	MR160/140	143/145TC	AW160/012	13.993	1,380	8.15	4,809	6.52	4,809	4.89	4,809
9.96	4,872	C402_0140	MR200/180	182/184/TC	AW200/014	13.993	1,380	8.26	4,872	6.60	4,872	4.95	4,872
9.96	4,872	C402_0140	MR250/180	182/184/TC	AW250/102	13.993	1,380	8.26	4,872	6.60	4,872	4.95	4,872
14.56	7,086	C502_0140	MR200/180	182/184/TC	AW200/014	13.929	1,691	12.06	7,086	9.65	7,086	7.24	7,086
14.56	7,086	C502_0140	MR250/180	182/184/TC	AW250/102	13.929	1,691	12.06	7,086	9.65	7,086	7.24	7,086
14.56	7,086	C502_0140	MR300/180	182/184/TC	AW300/110	13.929	1,691	12.06	7,086	9.65	7,086	7.24	7,086
23.15	11,444	C612_0140	MR200/180	182/184/TC	AW200/014	14.145	2,283	19.30	11,515	15.44	11,515	11.58	11,515
23.15	11,444	C612_0140	MR250/180	182/184/TC	AW250/102	14.145	2,283	19.30	11,515	15.44	11,515	11.58	11,515
23.15	11,444	C612_0140	MR300/250	254/256TC	AW300/110	14.145	2,283	19.30	11,515	15.44	11,515	11.58	11,515
63.40*	30,491	C812_0140	MR300/250	254/256TC	AW300/110	13.763	4,251	54.94	31,889	43.95	31,889	32.97	31,889
63.40*	30,491	C812_0140	MR350/320	324/326TC	AW350/202	13.763	4,251	54.94	31,889	43.95	31,889	32.97	31,889
109.36*	53,148	C912_0140	MR350/320	324/326TC	AW350/202	13.908	5,257	90.62	53,148	72.49	53,148	54.37	53,148
110 RPM Output (Approximate) Continued Next Page								**90 RPM**		**75 RPM**		**55 RPM**	
0.97	531	C002_0155	MR140/050	56C	AW140/010	15.637	278	0.81	531	0.64	531	0.48	531
0.97	531	C002_0155	MR160/050	56C	AW160/012	15.637	278	0.81	531	0.64	531	0.48	531
1.94	1,063	C102_0155	MR140/050	56C	AW140/010	15.708	395	1.60	1,063	1.28	1,063	0.96	1,063
1.94	1,063	C102_0155	MR160/050	56C	AW160/012	15.708	395	1.60	1,063	1.28	1,063	0.96	1,063
1.94	1,063	C102_0155	MR160/140	143/145TC	AW160/012	15.708	395	1.60	1,063	1.28	1,063	0.96	1,063
1.94	1,063	C102_0155	MR200/180	182/184/TC	AW200/014	15.708	395	1.60	1,063	1.28	1,063	0.96	1,063
2.42	1,294	C202_0155	MR140/050	56C	AW140/010	15.283	553	2.01	1,294	1.61	1,294	1.20	1,294
3.32	1,772	C202_0155	MR160/050	56C	AW160/012	15.283	553	2.75	1,772	2.20	1,772	1.65	1,772
3.32	1,772	C202_0155	MR160/140	143/145TC	AW160/012	15.283	553	2.75	1,772	2.20	1,772	1.65	1,772
3.32	1,772	C202_0155	MR200/180	182/184/TC	AW200/014	15.283	553	2.75	1,772	2.20	1,772	1.65	1,772

Part No. Explanation

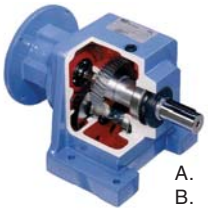
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
110 RPM		**Output (Approximate)** Continued						**90 RPM**		**75 RPM**		**55 RPM**	
5.71	3,100	C302_0155	MR160/050	56C	AW160/012	15.543	825	4.73	3,100	3.78	3,100	2.84	3,100
5.71	3,100	C302_0155	MR160/140	143/145TC	AW160/012	15.543	825	4.73	3,100	3.78	3,100	2.84	3,100
5.71	3,100	C302_0155	MR200/180	182/184/TC	AW200/014	15.543	825	4.73	3,100	3.78	3,100	2.84	3,100
5.71	3,100	C302_0155	MR250/180	182/184/TC	AW250/102	15.543	825	4.73	3,100	3.78	3,100	2.84	3,100
9.84	5,399	C502_0155	MR160/050	56C	AW160/012	15.708	1,743	8.15	5,399	6.52	5,399	4.89	5,399
9.84	5,399	C502_0155	MR160/140	143/145TC	AW160/012	15.708	1,743	8.15	5,399	6.52	5,399	4.89	5,399
12.91	7,086	C502_0155	MR200/180	182/184/TC	AW200/014	15.708	1,743	10.70	7,086	8.56	7,086	6.42	7,086
12.91	7,086	C502_0155	MR250/180	182/184/TC	AW250/102	15.708	1,743	10.70	7,086	8.56	7,086	6.42	7,086
12.91	7,086	C502_0155	MR300/250	254/256TC	AW300/110	15.708	1,743	10.70	7,086	8.56	7,086	6.42	7,086
105 RPM		**Output (Approximate)**						**85 RPM**		**70 RPM**		**53 RPM**	
8.85	4,872	C402_0160	MR160/050	56C	AW160/012	15.750	1,422	7.33	4,872	5.87	4,872	4.40	4,872
8.85	4,872	C402_0160	MR160/140	143/145TC	AW160/012	15.750	1,422	7.33	4,872	5.87	4,872	4.40	4,872
8.85	4,872	C402_0160	MR200/180	182/184/TC	AW200/014	15.750	1,422	7.33	4,872	5.87	4,872	4.40	4,872
8.85	4,872	C402_0160	MR250/180	182/184/TC	AW250/102	15.750	1,422	7.33	4,872	5.87	4,872	4.40	4,872
18.57	10,514	C612_0160	MR200/180	182/184/TC	AW200/014	16.203	2,362	16.38	11,194	14.12	12,058	11.28	12,844
21.15	11,974	C612_0160	MR250/210	213/215/TC	AW250/102	16.203	2,362	18.66	12,748	15.04	12,844	11.28	12,844
21.15	11,974	C612_0160	MR300/280	284/286TC	AW300/110	16.203	2,362	18.66	12,748	15.04	12,844	11.28	12,844
22.20	12,980	C712_0165	MR200/180	182/184/TC	AW200/014	16.734	3,273	19.36	13,659	15.48	13,659	11.61	13,659
31.67	18,517	C712_0165	MR250/180	182/184/TC	AW250/102	16.734	3,273	26.24	18,517	20.99	18,517	15.74	18,517
32.99	19,716	C812_0170	MR250/180	182/184/TC	AW250/102	17.101	4,488	27.34	19,716	21.87	19,716	16.40	19,716
34.26	20,033	C712_0165	MR300/210	213/215/TC	AW300/110	16.734	3,273	30.13	21,259	24.10	21,259	18.08	21,259
54.86*	32,780	C812_0170	MR300/250	254/256TC	AW300/110	17.101	4,488	48.39	34,901	41.27	37,204	30.95	37,204
54.86*	32,780	C812_0170	MR350/320	324/326TC	AW350/202	17.101	4,488	48.39	34,901	41.27	37,204	30.95	37,204
66.03	37,985	C912_0165	MR300/210	213/215/TC	AW300/110	16.463	5,483	54.71	37,985	43.77	37,985	32.83	37,985
107.79*	62,006	C912_0165	MR350/320	324/326TC	AW350/202	16.463	5,483	89.31	62,006	71.45	62,006	53.59	62,006
100 RPM		**Output (Approximate)** Continued Next Page						**80 RPM**		**65 RPM**		**50 RPM**	
0.87	531	C002_0175	MR140/050	56C	AW140/010	17.525	286	0.72	531	0.58	531	0.43	531
0.87	531	C002_0175	MR160/050	56C	AW160/012	17.525	286	0.72	531	0.58	531	0.43	531
1.72	1,063	C102_0175	MR140/050	56C	AW140/010	17.727	408	1.42	1,063	1.14	1,063	0.85	1,063
1.72	1,063	C102_0175	MR160/050	56C	AW160/012	17.727	408	1.42	1,063	1.14	1,063	0.85	1,063
1.72	1,063	C102_0175	MR160/140	143/145TC	AW160/012	17.727	408	1.42	1,063	1.14	1,063	0.85	1,063
1.72	1,063	C102_0175	MR200/180	182/184/TC	AW200/014	17.727	408	1.42	1,063	1.14	1,063	0.85	1,063
2.42	1,483	C202_0175	MR140/050	56C	AW140/010	17.517	572	2.01	1,483	1.61	1,483	1.20	1,483
2.89	1,772	C202_0175	MR160/050	56C	AW160/012	17.517	572	2.40	1,772	1.92	1,772	1.44	1,772
2.89	1,772	C202_0175	MR160/140	143/145TC	AW160/012	17.517	572	2.40	1,772	1.92	1,772	1.44	1,772
2.89	1,772	C202_0175	MR200/180	182/184/TC	AW200/014	17.517	572	2.40	1,772	1.92	1,772	1.44	1,772
5.06	3,100	C302_0175	MR160/050	56C	AW160/012	17.540	851	4.19	3,100	3.35	3,100	2.51	3,100
5.06	3,100	C302_0175	MR160/140	143/145TC	AW160/012	17.540	851	4.19	3,100	3.35	3,100	2.51	3,100

* For thermal HP capacity, see rating below.

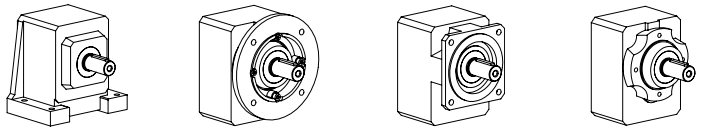
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

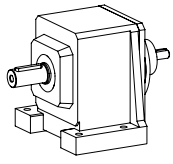
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

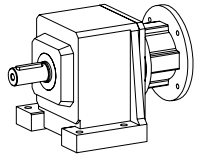
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
100 RPM Output (Approximate) Continued								**80 RPM**		**65 RPM**		**50 RPM**	
5.06	3,100	C302_0175	MR200/180	182/184/TC	AW200/014	17.540	851	4.19	3,100	3.35	3,100	2.51	3,100
5.06	3,100	C302_0175	MR250/210	213/215/TC	AW250/102	17.540	851	4.19	3,100	3.35	3,100	2.51	3,100
7.92	4,872	C402_0175	MR160/050	56C	AW160/012	17.604	1,462	6.56	4,872	5.25	4,872	3.94	4,872
7.92	4,872	C402_0175	MR160/140	143/145TC	AW160/012	17.604	1,462	6.56	4,872	5.25	4,872	3.94	4,872
7.92	4,872	C402_0175	MR200/180	182/184/TC	AW200/014	17.604	1,462	6.56	4,872	5.25	4,872	3.94	4,872
7.92	4,872	C402_0175	MR250/180	182/184/TC	AW250/102	17.604	1,462	6.56	4,872	5.25	4,872	3.94	4,872
9.84	6,050	C502_0175	MR160/050	56C	AW160/012	17.604	1,793	8.15	6,050	6.52	6,050	4.89	6,050
9.84	6,050	C502_0175	MR160/140	143/145TC	AW160/012	17.604	1,793	8.15	6,050	6.52	6,050	4.89	6,050
11.52	7,086	C502_0175	MR200/180	182/184/TC	AW200/014	17.604	1,793	9.55	7,086	7.64	7,086	5.73	7,086
11.52	7,086	C502_0175	MR250/210	213/215/TC	AW250/102	17.604	1,793	9.55	7,086	7.64	7,086	5.73	7,086
11.52	7,086	C502_0175	MR300/210	213/215/TC	AW300/110	17.604	1,793	9.55	7,086	7.64	7,086	5.73	7,086
18.72	11,515	C612_0175	MR200/180	182/184/TC	AW200/014	17.600	2,411	15.51	11,515	12.41	11,515	9.31	11,515
18.72	11,515	C612_0175	MR250/180	182/184/TC	AW250/102	17.600	2,411	15.51	11,515	12.41	11,515	9.31	11,515
18.72	11,515	C612_0175	MR300/280	284/286TC	AW300/110	17.600	2,411	15.51	11,515	12.41	11,515	9.31	11,515
34.84	21,046	C812_0175	MR250/180	182/184/TC	AW250/102	17.287	4,500	28.87	21,046	23.10	21,046	17.32	21,046
52.79	31,889	C812_0175	MR300/280	284/286TC	AW300/110	17.287	4,500	43.74	31,889	34.99	31,889	26.25	31,889
52.79	31,889	C812_0175	MR350/320	324/326TC	AW350/202	17.287	4,500	43.74	31,889	34.99	31,889	26.25	31,889
86.19*	53,148	C912_0175	MR350/320	324/326TC	AW350/202	17.648	5,579	71.41	53,148	57.13	53,148	42.85	53,148
95 RPM Output (Approximate)								**78 RPM**		**62 RPM**		**47 RPM**	
23.36	14,906	C712_0185	MR200/180	182/184/TC	AW200/014	18.261	3,346	19.36	14,906	15.48	14,906	11.61	14,906
27.76	17,716	C712_0185	MR300/280	284/286TC	AW300/110	18.261	3,346	23.01	17,716	18.40	17,716	13.80	17,716
27.76	17,716	C712_0185	MR250/180	182/184/TC	AW250/102	18.261	3,346	23.01	17,716	18.40	17,716	13.80	17,716
90 RPM Output (Approximate)								**75 RPM**		**60 RPM**		**45 RPM**	
15.96	10,934	C612_0195	MR200/180	182/184/TC	AW200/014	19.607	2,477	14.08	11,641	12.13	12,540	9.32	12,844
18.62	12,759	C612_0195	MR250/180	182/184/TC	AW250/102	19.607	2,477	15.53	12,844	12.43	12,844	9.32	12,844
18.62	12,759	C612_0195	MR300/250	254/256TC	AW300/110	19.607	2,477	15.53	12,844	12.43	12,844	9.32	12,844
31.90	22,576	C812_0200	MR250/210	213/215/TC	AW250/102	20.257	4,682	26.43	22,576	21.14	22,576	15.86	22,576
49.00	34,684	C812_0200	MR300/250	254/256TC	AW300/110	20.257	4,682	43.23	36,928	34.84	37,204	26.13	37,204
49.00	34,684	C812_0200	MR350/320	324/326TC	AW350/202	20.257	4,682	43.23	36,928	34.84	37,204	26.13	37,204
63.19	44,494	C912_0200	MR300/250	254/256TC	AW300/110	20.152	5,767	52.36	44,494	41.89	44,494	31.41	44,494
88.06*	62,006	C912_0200	MR350/360	364/365TC	AW350/202	20.152	5,767	72.96	62,006	58.37	62,006	43.78	62,006
85 RPM Output (Approximate) Continued Next Page								**70 RPM**		**55 RPM**		**40 RPM**	
0.73	531	C002_0210	MR140/050	56C	AW140/010	20.714	298	0.61	531	0.49	531	0.37	531
0.73	531	C002_0210	MR160/050	56C	AW160/012	20.714	298	0.61	531	0.49	531	0.37	531
1.46	1,063	C102_0210	MR140/050	56C	AW140/010	20.844	424	1.21	1,063	0.97	1,063	0.73	1,063
1.46	1,063	C102_0210	MR160/050	56C	AW160/012	20.844	424	1.21	1,063	0.97	1,063	0.73	1,063
1.46	1,063	C102_0210	MR160/140	143/145TC	AW160/012	20.844	424	1.21	1,063	0.97	1,063	0.73	1,063

Part No. Explanation

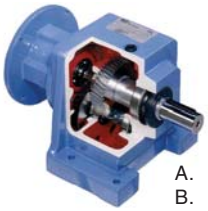
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
85 RPM		**Output (Approximate) Continued**						**70 RPM**		**55 RPM**		**40 RPM**	
1.46	1,063	C102_0210	MR200/180	182/184/TC	AW200/014	20.844	424	1.21	1,063	0.97	1,063	0.73	1,063
2.29	1,650	C202_0210	MR140/050	56C	AW140/010	20.583	595	1.90	1,650	1.52	1,650	1.14	1,650
2.46	1,772	C202_0210	MR160/050	56C	AW160/012	20.583	595	2.04	1,772	1.63	1,772	1.22	1,772
2.46	1,772	C202_0210	MR160/140	143/145TC	AW160/012	20.583	595	2.04	1,772	1.63	1,772	1.22	1,772
2.46	1,772	C202_0210	MR200/180	182/184/TC	AW200/014	20.583	595	2.04	1,772	1.63	1,772	1.22	1,772
4.27	3,100	C302_0210	MR160/050	56C	AW160/012	20.800	888	3.53	3,100	2.83	3,100	2.12	3,100
4.27	3,100	C302_0210	MR160/140	143/145TC	AW160/012	20.800	888	3.53	3,100	2.83	3,100	2.12	3,100
4.27	3,100	C302_0210	MR200/180	182/184/TC	AW200/014	20.800	888	3.53	3,100	2.83	3,100	2.12	3,100
4.27	3,100	C302_0210	MR250/180	182/184/TC	AW250/102	20.800	888	3.53	3,100	2.83	3,100	2.12	3,100
6.67	4,872	C402_0210	MR160/050	56C	AW160/012	20.899	1,526	5.53	4,872	4.42	4,872	3.32	4,872
6.67	4,872	C402_0210	MR160/140	143/145TC	AW160/012	20.899	1,526	5.53	4,872	4.42	4,872	3.32	4,872
6.67	4,872	C402_0210	MR200/180	182/184/TC	AW200/014	20.899	1,526	5.53	4,872	4.42	4,872	3.32	4,872
6.67	4,872	C402_0210	MR250/180	182/184/TC	AW250/102	20.899	1,526	5.53	4,872	4.42	4,872	3.32	4,872
9.69	7,061	C502_0210	MR160/050	56C	AW160/012	20.844	1,871	8.06	7,086	6.45	7,086	4.84	7,086
9.69	7,061	C502_0210	MR160/140	143/145TC	AW160/012	20.844	1,871	8.06	7,086	6.45	7,086	4.84	7,086
9.73	7,086	C502_0210	MR200/180	182/184/TC	AW200/014	20.844	1,871	8.06	7,086	6.45	7,086	4.84	7,086
9.73	7,086	C502_0210	MR250/180	182/184/TC	AW250/102	20.844	1,871	8.06	7,086	6.45	7,086	4.84	7,086
9.73	7,086	C502_0210	MR300/280	284/286TC	AW300/110	20.844	1,871	8.06	7,086	6.45	7,086	4.84	7,086
18.57	13,413	C712_0210	MR200/180	182/184/TC	AW200/014	20.672	3,451	16.38	14,281	14.12	15,384	11.61	16,874
29.43	21,259	C712_0210	MR250/180	182/184/TC	AW250/102	20.672	3,451	24.39	21,259	19.51	21,259	14.63	21,259
29.43	21,259	C712_0210	MR300/280	284/286TC	AW300/110	20.672	3,451	24.39	21,259	19.51	21,259	14.63	21,259
75 RPM		**Output (Approximate) Continued Next Page**						**60 RPM**		**50 RPM**		**37 0RPM**	
0.66	531	C002_0230	MR140/050	56C	AW140/010	23.214	307	0.54	531	0.43	531	0.33	531
0.66	531	C002_0230	MR160/050	56C	AW160/012	23.214	307	0.54	531	0.43	531	0.33	531
1.29	1,063	C102_0240	MR140/050	56C	AW140/010	23.523	437	1.07	1,063	0.86	1,063	0.64	1,063
1.29	1,063	C102_0240	MR160/050	56C	AW160/012	23.523	437	1.07	1,063	0.86	1,063	0.64	1,063
1.29	1,063	C102_0240	MR160/140	143/145TC	AW160/012	23.523	437	1.07	1,063	0.86	1,063	0.64	1,063
1.29	1,063	C102_0240	MR200/180	182/184/TC	AW200/014	23.523	437	1.07	1,063	0.86	1,063	0.64	1,063
2.15	1,772	C202_0240	MR140/050	56C	AW140/010	23.593	616	1.78	1,772	1.42	1,772	1.07	1,772
2.15	1,772	C202_0240	MR160/050	56C	AW160/012	23.593	616	1.78	1,772	1.42	1,772	1.07	1,772
2.15	1,772	C202_0240	MR160/140	143/145TC	AW160/012	23.593	616	1.78	1,772	1.42	1,772	1.07	1,772
2.15	1,772	C202_0240	MR200/180	182/184/TC	AW200/014	23.593	616	1.78	1,772	1.42	1,772	1.07	1,772
3.78	3,100	C302_0230	MR160/050	56C	AW160/012	23.472	915	3.13	3,100	2.51	3,100	1.88	3,100
3.78	3,100	C302_0230	MR160/140	143/145TC	AW160/012	23.472	915	3.13	3,100	2.51	3,100	1.88	3,100
3.78	3,100	C302_0230	MR200/180	182/184/TC	AW200/014	23.472	915	3.13	3,100	2.51	3,100	1.88	3,100
3.78	3,100	C302_0230	MR250/210	213/215/TC	AW250/102	23.472	915	3.13	3,100	2.51	3,100	1.88	3,100
5.97	4,872	C402_0230	MR160/050	56C	AW160/012	23.359	1,569	4.95	4,872	3.96	4,872	2.97	4,872
5.97	4,872	C402_0230	MR160/140	143/145TC	AW160/012	23.359	1,569	4.95	4,872	3.96	4,872	2.97	4,872
5.97	4,872	C402_0230	MR200/180	182/184/TC	AW200/014	23.359	1,569	4.95	4,872	3.96	4,872	2.97	4,872

* For thermal HP capacity, see rating below.

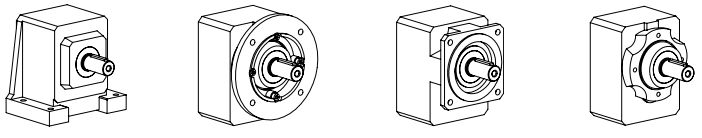
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

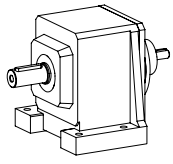
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

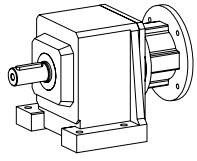
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
75 RPM		**Output (Approximate) Continued**						**60 RPM**		**50 RPM**		**37 0RPM**	
5.97	4,872	C402_0230	MR250/180	182/184/TC	AW250/102	23.359	1,569	4.95	4,872	3.96	4,872	2.97	4,872
8.68	7,086	C502_0230	MR160/050	56C	AW160/012	23.359	1,925	7.19	7,086	5.76	7,086	4.32	7,086
8.68	7,086	C502_0230	MR160/140	143/145TC	AW160/012	23.359	1,925	7.19	7,086	5.76	7,086	4.32	7,086
8.68	7,086	C502_0230	MR200/180	182/184/TC	AW200/014	23.359	1,925	7.19	7,086	5.76	7,086	4.32	7,086
8.68	7,086	C502_0230	MR250/210	213/215/TC	AW250/102	23.359	1,925	7.19	7,086	5.76	7,086	4.32	7,086
8.68	7,086	C502_0230	MR300/280	284/286TC	AW300/110	23.359	1,925	7.19	7,086	5.76	7,086	4.32	7,086
14.54	11,515	C612_0230	MR200/180	182/184/TC	AW200/014	22.667	2,568	12.05	11,515	9.64	11,515	7.23	11,515
14.54	11,515	C612_0230	MR250/180	182/184/TC	AW250/102	22.667	2,568	12.05	11,515	9.64	11,515	7.23	11,515
14.54	11,515	C612_0230	MR300/210	213/215/TC	AW300/110	22.667	2,568	12.05	11,515	9.64	11,515	7.23	11,515
21.87	17,716	C712_0230	MR200/180	182/184/TC	AW200/014	23.182	3,551	18.12	17,716	14.50	17,716	10.87	17,716
21.87	17,716	C712_0230	MR250/180	182/184/TC	AW250/102	23.182	3,551	18.12	17,716	14.50	17,716	10.87	17,716
21.87	17,716	C712_0230	MR300/280	284/286TC	AW300/110	23.182	3,551	18.12	17,716	14.50	17,716	10.87	17,716
32.99	26,733	C812_0230	MR250/180	182/184/TC	AW250/102	23.188	4,843	27.34	26,733	21.87	26,733	16.40	26,733
39.36	31,889	C812_0230	MR300/250	254/256TC	AW300/110	23.188	4,843	32.61	31,889	26.09	31,889	19.57	31,889
39.36	31,889	C812_0230	MR350/320	324/326TC	AW350/202	23.188	4,843	32.61	31,889	26.09	31,889	19.57	31,889
65.03	53,148	C912_0230	MR300/180	182/184/TC	AW300/110	23.390	5,986	53.88	53,148	43.11	53,148	32.33	53,148
65.03	53,148	C912_0230	MR350/320	324/326TC	AW350/202	23.390	5,986	53.88	53,148	43.11	53,148	32.33	53,148
70 RPM		**Output (Approximate) Continued Next Page**						**55 RPM**		**45 RPM**		**35 RPM**	
0.61	531	C002_0250	MR140/050	56C	AW140/010	24.972	312	0.50	531	0.40	531	0.30	531
0.61	531	C002_0250	MR160/050	56C	AW160/012	24.972	312	0.50	531	0.40	531	0.30	531
1.21	1,063	C102_0250	MR140/050	56C	AW140/010	25.133	445	1.00	1,063	0.80	1,063	0.60	1,063
1.21	1,063	C102_0250	MR160/050	56C	AW160/012	25.133	445	1.00	1,063	0.80	1,063	0.60	1,063
1.21	1,063	C102_0250	MR160/140	143/145TC	AW160/012	25.133	445	1.00	1,063	0.80	1,063	0.60	1,063
2.06	1,772	C202_0250	MR140/050	56C	AW140/010	24.641	623	1.70	1,772	1.36	1,772	1.02	1,772
2.06	1,772	C202_0250	MR160/050	56C	AW160/012	24.641	623	1.70	1,772	1.36	1,772	1.02	1,772
2.06	1,772	C202_0250	MR160/140	143/145TC	AW160/012	24.641	623	1.70	1,772	1.36	1,772	1.02	1,772
2.06	1,772	C202_0250	MR200/180	182/184/TC	AW200/014	24.641	623	1.70	1,772	1.36	1,772	1.02	1,772
3.58	3,100	C302_0250	MR160/050	56C	AW160/012	24.800	928	2.96	3,100	2.37	3,100	1.78	3,100
3.58	3,100	C302_0250	MR160/140	143/145TC	AW160/012	24.800	928	2.96	3,100	2.37	3,100	1.78	3,100
3.58	3,100	C302_0250	MR200/180	182/184/TC	AW200/014	24.800	928	2.96	3,100	2.37	3,100	1.78	3,100
3.58	3,100	C302_0250	MR250/210	213/215/TC	AW250/102	24.800	928	2.96	3,100	2.37	3,100	1.78	3,100
5.59	4,872	C402_0250	MR160/050	56C	AW160/012	24.923	1,594	4.64	4,872	3.71	4,872	2.78	4,872
5.59	4,872	C402_0250	MR160/140	143/145TC	AW160/012	24.923	1,594	4.64	4,872	3.71	4,872	2.78	4,872
5.59	4,872	C402_0250	MR200/180	182/184/TC	AW200/014	24.923	1,594	4.64	4,872	3.71	4,872	2.78	4,872
5.59	4,872	C402_0250	MR250/180	182/184/TC	AW250/102	24.923	1,594	4.64	4,872	3.71	4,872	2.78	4,872
8.09	7,086	C502_0250	MR160/050	56C	AW160/012	25.073	1,959	6.70	7,086	5.36	7,086	4.02	7,086
8.09	7,086	C502_0250	MR160/140	143/145TC	AW160/012	25.073	1,959	6.70	7,086	5.36	7,086	4.02	7,086
8.09	7,086	C502_0250	MR200/180	182/184/TC	AW200/014	25.073	1,959	6.70	7,086	5.36	7,086	4.02	7,086

Part No. Explanation

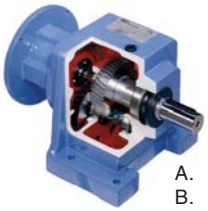
C 3 0 2 N 0620 AW 140 / 012
- C: Concentric Helical
- 3: Unit No.
- 0: Generation No.
- 2: No. of Gear Reductions
- N: Housing Style
- 0620: Ratio (0620 = 62.0:1)
- AW: Input Shaft
- 140: Flange No.
- 012: Shaft Dia. ($^1/_{16}$ in.; example–012=$^{12}/_{16}$ or $^3/_4$)



C 3 0 2 N 0620 MR 160 / 140
- C: Concentric Helical
- 3: Unit No.
- 0: Generation No.
- 2: No. of Reductions
- N: Housing Style
- 0620: Ratio (0620 = 62.0:1)
- MR: Motor Adapter
- 160: Flange No.
- 140: Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
70 RPM		**Output (Approximate) Continued**						**55 RPM**		**45 RPM**		**35 RPM**	
8.09	7,086	C502_0250	MR250/210	213/215/TC	AW250/102	25.073	1,959	6.70	7,086	5.36	7,086	4.02	7,086
8.09	7,086	C502_0250	MR300/250	254/256TC	AW300/110	25.073	1,959	6.70	7,086	5.36	7,086	4.02	7,086
13.15	11,454	C612_0250	MR200/180	182/184/TC	AW200/014	24.928	2,630	11.60	12,195	9.77	12,844	7.33	12,844
14.75	12,844	C612_0250	MR250/210	213/215/TC	AW250/102	24.928	2,630	12.22	12,844	9.77	12,844	7.33	12,844
14.75	12,844	C612_0250	MR300/280	284/286TC	AW300/110	24.928	2,630	12.22	12,844	9.77	12,844	7.33	12,844
15.96	14,116	C712_0250	MR200/180	182/184/TC	AW200/014	25.313	3,630	14.08	15,029	12.13	16,190	10.02	17,819
24.04	21,259	C712_0250	MR250/180	182/184/TC	AW250/102	25.313	3,630	19.92	21,259	15.93	21,259	11.95	21,259
24.04	21,259	C712_0250	MR300/280	284/286TC	AW300/110	25.313	3,630	19.92	21,259	15.93	21,259	11.95	21,259
60.27	53,368	C912_0250	MR300/250	254/256TC	AW300/110	25.342	6,107	49.94	53,368	39.95	53,368	29.96	53,368
70.02*	62,006	C912_0250	MR350/360	364/365TC	AW350/202	25.342	6,107	58.02	62,006	46.42	62,006	34.81	62,006
65 RPM		**Output (Approximate)**						**52 RPM**		**42 RPM**		**32 RPM**	
12.01	11,515	C612_0270	MR200/180	182/184/TC	AW200/014	27.429	2,694	9.96	11,515	7.96	11,515	5.97	11,515
12.01	11,515	C612_0270	MR250/180	182/184/TC	AW250/102	27.429	2,694	9.96	11,515	7.96	11,515	5.97	11,515
12.01	11,515	C612_0270	MR300/280	284/286TC	AW300/110	27.429	2,694	9.96	11,515	7.96	11,515	5.97	11,515
30.29	27,576	C812_0260	MR250/210	213/215/TC	AW250/102	26.058	4,986	25.09	27,576	20.08	27,576	15.06	27,576
31.90	30,612	C812_0270	MR250/210	213/215/TC	AW250/102	27.467	5,052	26.43	30,612	21.14	30,612	15.86	30,612
33.23	31,889	C812_0270	MR300/250	254/256TC	AW300/110	27.467	5,052	27.53	31,889	22.02	31,889	16.52	31,889
33.23	31,889	C812_0270	MR350/320	324/326TC	AW350/202	27.467	5,052	27.53	31,889	22.02	31,889	16.52	31,889
40.86	37,204	C812_0260	MR300/180	182/184/TC	AW300/110	26.058	4,986	33.86	37,204	27.08	37,204	20.31	37,204
60 RPM		**Output (Approximate) Continued Next Page**						**50 RPM**		**40 RPM**		**30 RPM**	
0.54	531	C002_0280	MR140/050	56C	AW140/010	27.986	321	0.45	531	0.36	531	0.27	531
0.54	531	C002_0280	MR160/050	56C	AW160/012	27.986	321	0.45	531	0.36	531	0.27	531
1.07	1,063	C102_0280	MR140/050	56C	AW140/010	28.364	458	0.89	1,063	0.71	1,063	0.53	1,063
1.07	1,063	C102_0280	MR160/050	56C	AW160/012	28.364	458	0.89	1,063	0.71	1,063	0.53	1,063
1.07	1,063	C102_0280	MR160/140	143/145TC	AW160/012	28.364	458	0.89	1,063	0.71	1,063	0.53	1,063
1.80	1,772	C202_0280	MR140/050	56C	AW140/010	28.243	644	1.49	1,772	1.19	1,772	0.89	1,772
1.80	1,772	C202_0280	MR160/050	56C	AW160/012	28.243	644	1.49	1,772	1.19	1,772	0.89	1,772
1.80	1,772	C202_0280	MR160/140	143/145TC	AW160/012	28.243	644	1.49	1,772	1.19	1,772	0.89	1,772
1.80	1,772	C202_0280	MR200/180	182/184/TC	AW200/014	28.243	644	1.49	1,772	1.19	1,772	0.89	1,772
3.17	3,100	C302_0280	MR160/050	56C	AW160/012	27.986	956	2.63	3,100	2.10	3,100	1.58	3,100
3.17	3,100	C302_0280	MR160/140	143/145TC	AW160/012	27.986	956	2.63	3,100	2.10	3,100	1.58	3,100
3.17	3,100	C302_0280	MR200/180	182/184/TC	AW200/014	27.986	956	2.63	3,100	2.10	3,100	1.58	3,100
3.17	3,100	C302_0280	MR250/180	182/184/TC	AW250/102	27.986	956	2.63	3,100	2.10	3,100	1.58	3,100
5.01	4,872	C402_0280	MR160/050	56C	AW160/012	27.857	1,639	4.15	4,872	3.32	4,872	2.49	4,872
5.01	4,872	C402_0280	MR160/140	143/145TC	AW160/012	27.857	1,639	4.15	4,872	3.32	4,872	2.49	4,872
5.01	4,872	C402_0280	MR200/180	182/184/TC	AW200/014	27.857	1,639	4.15	4,872	3.32	4,872	2.49	4,872
5.01	4,872	C402_0280	MR250/210	213/215/TC	AW250/102	27.857	1,639	4.15	4,872	3.32	4,872	2.49	4,872

* For thermal HP capacity, see rating below.

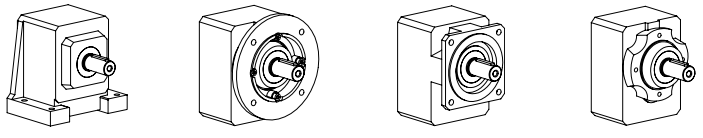
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

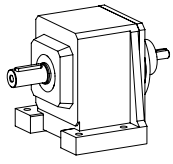
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

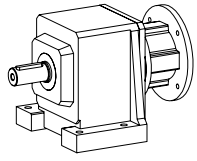
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
60 RPM		**Output (Approximate) Continued**						**50 RPM**		**40 RPM**		**30 RPM**	
7.22	7,086	C502_0280	MR160/050	56C	AW160/012	28.099	2,016	5.98	7,086	4.78	7,086	3.59	7,086
7.22	7,086	C502_0280	MR160/140	143/145TC	AW160/012	28.099	2,016	5.98	7,086	4.78	7,086	3.59	7,086
7.22	7,086	C502_0280	MR200/180	182/184/TC	AW200/014	28.099	2,016	5.98	7,086	4.78	7,086	3.59	7,086
7.22	7,086	C502_0280	MR250/180	182/184/TC	AW250/102	28.099	2,016	5.98	7,086	4.78	7,086	3.59	7,086
7.22	7,086	C502_0280	MR300/250	254/256TC	AW300/110	28.099	2,016	5.98	7,086	4.78	7,086	3.59	7,086
17.71	17,716	C712_0290	MR200/180	182/184/TC	AW200/014	28.636	3,744	14.67	17,716	11.74	17,716	8.80	17,716
17.71	17,716	C712_0290	MR250/210	213/215/TC	AW250/102	28.636	3,744	14.67	17,716	11.74	17,716	8.80	17,716
17.71	17,716	C712_0290	MR300/250	254/256TC	AW300/110	28.636	3,744	14.67	17,716	11.74	17,716	8.80	17,716
53.13	53,148	C912_0290	MR300/280	284/286TC	AW300/110	28.631	6,296	44.02	53,148	35.22	53,148	26.41	53,148
53.13	53,148	C912_0290	MR350/360	364/365TC	AW350/202	28.631	6,296	44.02	53,148	35.22	53,148	26.41	53,148
55 RPM		**Output (Approximate)**						**45 RPM**		**37 RPM**		**28 0RPM**	
0.49	531	C002_0310	MR140/050	56C	AW140/010	31.256	330	0.40	531	0.32	531	0.24	531
0.49	531	C002_0310	MR160/050	143/145TC	AW160/012	31.256	330	0.40	531	0.32	531	0.24	531
0.98	1,063	C102_0310	MR140/050	56C	AW140/010	31.071	469	0.81	1,063	0.65	1,063	0.49	1,063
0.98	1,063	C102_0310	MR160/050	56C	AW160/012	31.071	469	0.81	1,063	0.65	1,063	0.49	1,063
1.65	1,772	C202_0310	MR140/050	56C	AW140/010	30.692	658	1.37	1,772	1.10	1,772	0.82	1,772
1.65	1,772	C202_0310	MR160/050	56C	AW160/012	30.692	658	1.37	1,772	1.10	1,772	0.82	1,772
1.65	1,772	C202_0310	MR160/140	143/145TC	AW160/012	30.692	658	1.37	1,772	1.10	1,772	0.82	1,772
2.86	3,100	C302_0310	MR160/050	56C	AW160/012	31.040	981	2.37	3,100	1.89	3,100	1.42	3,100
2.86	3,100	C302_0310	MR160/140	143/145TC	AW160/012	31.040	981	2.37	3,100	1.89	3,100	1.42	3,100
2.86	3,100	C302_0310	MR200/180	182/184/TC	AW200/014	31.040	981	2.37	3,100	1.89	3,100	1.42	3,100
2.86	3,100	C302_0310	MR250/180	182/184/TC	AW250/102	31.040	981	2.37	3,100	1.89	3,100	1.42	3,100
4.48	4,872	C402_0310	MR160/050	56C	AW160/012	31.154	1,686	3.71	4,872	2.97	4,872	2.22	4,872
4.48	4,872	C402_0310	MR160/140	143/145TC	AW160/012	31.154	1,686	3.71	4,872	2.97	4,872	2.22	4,872
4.48	4,872	C402_0310	MR200/180	182/184/TC	AW200/014	31.154	1,686	3.71	4,872	2.97	4,872	2.22	4,872
4.48	4,872	C402_0310	MR250/210	213/215/TC	AW250/102	31.154	1,686	3.71	4,872	2.97	4,872	2.22	4,872
6.49	7,086	C502_0310	MR160/050	56C	AW160/012	31.231	2,070	5.38	7,086	4.30	7,086	3.23	7,086
6.49	7,086	C502_0310	MR160/140	143/145TC	AW160/012	31.231	2,070	5.38	7,086	4.30	7,086	3.23	7,086
6.49	7,086	C502_0310	MR200/180	182/184/TC	AW200/014	31.231	2,070	5.38	7,086	4.30	7,086	3.23	7,086
6.49	7,086	C502_0310	MR250/210	213/215/TC	AW250/102	31.231	2,070	5.38	7,086	4.30	7,086	3.23	7,086
10.61	12,011	C612_0320	MR200/180	182/184/TC	AW200/014	32.406	2,808	9.36	12,788	7.52	12,844	5.64	12,844
11.34	12,844	C612_0320	MR250/210	213/215/TC	AW250/102	32.406	2,808	9.40	12,844	7.52	12,844	5.64	12,844
11.34	12,844	C612_0320	MR300/210	213/215/TC	AW300/110	32.406	2,808	9.40	12,844	7.52	12,844	5.64	12,844
54.75	61,477	C912_0320	MR300/210	213/215/TC	AW300/110	32.134	6,481	45.76	62,006	36.61	62,006	27.45	62,006
55.22	62,006	C912_0320	MR350/360	364/365TC	AW350/202	32.134	6,481	45.76	62,006	36.61	62,006	27.45	62,006

Part No. Explanation

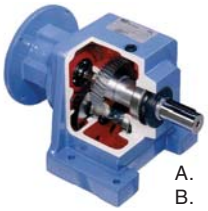
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

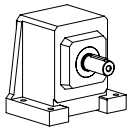
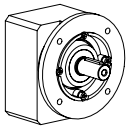
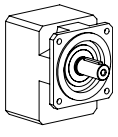
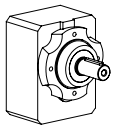
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
50 RPM		**Output (Approximate)**						**40 RPM**		**33 RPM**		**25 RPM**	
0.43	531	C002_0350	MR140/050	56C	AW140/010	35.028	340	0.36	531	0.29	531	0.22	531
0.43	531	C002_0350	MR160/050	143/145TC	AW160/012	35.028	340	0.36	531	0.29	531	0.22	531
0.87	1,063	C102_0350	MR140/050	56C	AW140/010	35.065	483	0.72	1,063	0.58	1,063	0.43	1,063
0.87	1,063	C102_0350	MR160/050	56C	AW160/012	35.065	483	0.72	1,063	0.58	1,063	0.43	1,063
1.44	1,772	C202_0350	MR140/050	56C	AW140/010	35.179	681	1.19	1,772	0.96	1,772	0.72	1,772
1.44	1,772	C202_0350	MR160/050	56C	AW160/012	35.179	681	1.19	1,772	0.96	1,772	0.72	1,772
1.44	1,772	C202_0350	MR160/140	143/145TC	AW160/012	35.179	681	1.19	1,772	0.96	1,772	0.72	1,772
2.53	3,100	C302_0350	MR160/050	56C	AW160/012	35.028	1,011	2.10	3,100	1.68	3,100	1.26	3,100
2.53	3,100	C302_0350	MR160/140	143/145TC	AW160/012	35.028	1,011	2.10	3,100	1.68	3,100	1.26	3,100
4.00	4,872	C402_0350	MR160/050	56C	AW160/012	34.821	1,733	3.32	4,872	2.65	4,872	1.99	4,872
4.00	4,872	C402_0350	MR160/140	143/145TC	AW160/012	34.821	1,733	3.32	4,872	2.65	4,872	1.99	4,872
4.00	4,872	C402_0350	MR200/180	182/184/TC	AW200/014	34.821	1,733	3.32	4,872	2.65	4,872	1.99	4,872
4.00	4,872	C402_0350	MR250/210	213/215/TC	AW250/102	34.821	1,733	3.32	4,872	2.65	4,872	1.99	4,872
5.79	7,086	C502_0350	MR160/050	56C	AW160/012	35.000	2,129	4.80	7,086	3.84	7,086	2.88	7,086
5.79	7,086	C502_0350	MR160/140	143/145TC	AW160/012	35.000	2,129	4.80	7,086	3.84	7,086	2.88	7,086
5.79	7,086	C502_0350	MR200/180	182/184/TC	AW200/014	35.000	2,129	4.80	7,086	3.84	7,086	2.88	7,086
5.79	7,086	C502_0350	MR250/210	213/215/TC	AW250/102	35.000	2,129	4.80	7,086	3.84	7,086	2.88	7,086
9.45	11,515	C612_0350	MR200/180	182/184/TC	AW200/014	34.872	2,860	7.83	11,515	6.26	11,515	4.70	11,515
9.45	11,515	C612_0350	MR250/210	213/215/TC	AW250/102	34.872	2,860	7.83	11,515	6.26	11,515	4.70	11,515
9.45	11,515	C612_0350	MR300/250	254/256TC	AW300/110	34.872	2,860	7.83	11,515	6.26	11,515	4.70	11,515
12.55	14,816	C712_0340	MR200/180	182/184/TC	AW200/014	33.797	3,902	11.07	15,775	9.54	16,993	7.87	18,703
14.46	17,716	C712_0350	MR200/180	182/184/TC	AW200/014	35.065	3,938	11.98	17,716	9.58	17,716	7.19	17,716
14.46	17,716	C712_0350	MR250/180	182/184/TC	AW250/102	35.065	3,938	11.98	17,716	9.58	17,716	7.19	17,716
14.46	17,716	C712_0350	MR300/210	213/215/TC	AW300/110	35.065	3,938	11.98	17,716	9.58	17,716	7.19	17,716
18.00	21,259	C712_0340	MR250/180	182/184/TC	AW250/102	33.797	3,902	14.92	21,259	11.93	21,259	8.95	21,259
18.00	21,259	C712_0340	MR300/250	254/256TC	AW300/110	33.797	3,902	14.92	21,259	11.93	21,259	8.95	21,259
25.83	31,889	C812_0350	MR250/210	213/215/TC	AW250/102	35.333	5,381	21.40	31,889	17.12	31,889	12.84	31,889
25.83	31,889	C812_0350	MR300/280	284/286TC	AW300/110	35.333	5,381	21.40	31,889	17.12	31,889	12.84	31,889
26.75	31,386	C812_0340	MR250/210	213/215/TC	AW250/102	33.585	5,313	23.59	33,417	19.11	33,839	14.34	33,839
31.70	37,204	C812_0340	MR300/280	284/286TC	AW300/110	33.585	5,313	26.27	37,204	21.01	37,204	15.76	37,204
42.24	53,148	C912_0360	MR300/250	254/256TC	AW300/110	36.005	6,668	35.00	53,148	28.00	53,148	21.00	53,148
42.24	53,148	C912_0360	MR350/360	364/365TC	AW350/202	36.005	6,668	35.00	53,148	28.00	53,148	21.00	53,148
45 RPM		**Output (Approximate)** **Continued Next Page**						**35 RPM**		**30 RPM**		**20 RPM**	
0.36	531	C002_0420	MR140/050	56C	AW140/010	41.774	355	0.30	531	0.24	531	0.18	531
0.73	1,063	C102_0420	MR140/050	56C	AW140/010	41.567	504	0.61	1,063	0.49	1,063	0.36	1,063
0.73	1,063	C102_0420	MR160/050	56C	AW160/012	41.567	504	0.61	1,063	0.49	1,063	0.36	1,063
1.24	1,772	C202_0410	MR140/050	56C	AW140/010	40.850	707	1.03	1,772	0.82	1,772	0.62	1,772
1.24	1,772	C202_0410	MR160/050	56C	AW160/012	40.850	707	1.03	1,772	0.82	1,772	0.62	1,772
1.24	1,772	C202_0410	MR160/140	143/145TC	AW160/012	40.850	707	1.03	1,772	0.82	1,772	0.62	1,772

* 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

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes

Housing Style Q is available on special order.

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

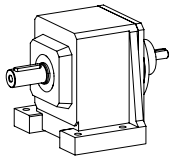
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

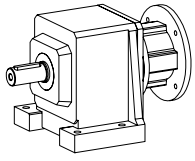
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
45 RPM		**Output (Approximate) Continued**						**35 RPM**		**30 RPM**		**20 RPM**	
2.15	3,100	C302_0410	MR160/050	56C	AW160/012	41.354	1,054	1.78	3,100	1.42	3,100	1.07	3,100
2.15	3,100	C302_0410	MR160/140	143/145TC	AW160/012	41.354	1,054	1.78	3,100	1.42	3,100	1.07	3,100
3.34	4,872	C402_0420	MR160/050	56C	AW160/012	41.751	1,814	2.77	4,872	2.21	4,872	1.66	4,872
3.34	4,872	C402_0420	MR160/140	143/145TC	AW160/012	41.751	1,814	2.77	4,872	2.21	4,872	1.66	4,872
3.34	4,872	C402_0420	MR200/180	182/184/TC	AW200/014	41.751	1,814	2.77	4,872	2.21	4,872	1.66	4,872
3.34	4,872	C402_0420	MR250/210	213/215/TC	AW250/102	41.751	1,814	2.77	4,872	2.21	4,872	1.66	4,872
4.86	7,086	C502_0420	MR160/050	56C	AW160/012	41.688	2,224	4.03	7,086	3.22	7,086	2.42	7,086
4.86	7,086	C502_0420	MR160/140	143/145TC	AW160/012	41.688	2,224	4.03	7,086	3.22	7,086	2.42	7,086
4.86	7,086	C502_0420	MR200/180	182/184/TC	AW200/014	41.688	2,224	4.03	7,086	3.22	7,086	2.42	7,086
4.86	7,086	C502_0420	MR250/210	213/215/TC	AW250/102	41.688	2,224	4.03	7,086	3.22	7,086	2.42	7,086
7.85	10,812	C612_0390	MR200/180	182/184/TC	AW200/014	39.396	2,949	6.51	10,812	5.21	10,812	3.90	10,812
7.85	10,812	C612_0390	MR250/210	213/215/TC	AW250/102	39.396	2,949	6.51	10,812	5.21	10,812	3.90	10,812
10.61	15,202	C712_0410	MR200/180	182/184/TC	AW200/014	41.016	4,096	9.36	16,186	8.06	17,435	6.44	18,554
12.95	18,554	C712_0410	MR250/210	213/215/TC	AW250/102	41.016	4,096	10.73	18,554	8.58	18,554	6.44	18,554
12.95	18,554	C712_0410	MR300/210	213/215/TC	AW300/110	41.016	4,096	10.73	18,554	8.58	18,554	6.44	18,554
23.05	32,165	C812_0400	MR250/210	213/215/TC	AW250/102	39.938	5,548	19.91	33,527	15.92	33,527	11.94	33,527
24.02	33,527	C812_0400	MR300/210	213/215/TC	AW300/110	39.938	5,548	19.91	33,527	15.92	33,527	11.94	33,527
38.77	53,230	C912_0390	MR300/250	254/256TC	AW300/110	39.298	6,815	32.12	53,230	25.70	53,230	19.27	53,230
40 RPM		**Output (Approximate) Continued Next Page**						**30 RPM**		**25 RPM**		**19 RPM**	
0.32	531	C002_0470	MR140/050	56C	AW140/010	46.815	366	0.27	531	0.22	531	0.16	531
0.65	1,063	C102_0470	MR140/050	56C	AW140/010	46.909	520	0.54	1,063	0.43	1,063	0.32	1,063
0.65	1,063	C102_0470	MR160/050	56C	AW160/012	46.909	520	0.54	1,063	0.43	1,063	0.32	1,063
1.08	1,772	C202_0470	MR140/050	56C	AW140/010	46.822	731	0.90	1,772	0.72	1,772	0.54	1,772
1.08	1,772	C202_0470	MR160/050	56C	AW160/012	46.822	731	0.90	1,772	0.72	1,772	0.54	1,772
1.08	1,772	C202_0470	MR160/140	143/145TC	AW160/012	46.822	731	0.90	1,772	0.72	1,772	0.54	1,772
1.90	3,100	C302_0470	MR160/050	56C	AW160/012	46.667	1,086	1.58	3,100	1.26	3,100	0.95	3,100
1.90	3,100	C302_0470	MR160/140	143/145TC	AW160/012	46.667	1,086	1.58	3,100	1.26	3,100	0.95	3,100
2.99	4,872	C402_0470	MR160/050	56C	AW160/012	46.667	1,865	2.48	4,872	1.98	4,872	1.49	4,872
2.99	4,872	C402_0470	MR160/140	143/145TC	AW160/012	46.667	1,865	2.48	4,872	1.98	4,872	1.49	4,872
4.34	7,086	C502_0470	MR160/050	56C	AW160/012	46.719	2,289	3.60	7,086	2.88	7,086	2.16	7,086
4.34	7,086	C502_0470	MR160/140	143/145TC	AW160/012	46.719	2,289	3.60	7,086	2.88	7,086	2.16	7,086
4.34	7,086	C502_0470	MR200/180	182/184/TC	AW200/014	46.719	2,289	3.60	7,086	2.88	7,086	2.16	7,086
4.34	7,086	C502_0470	MR250/210	213/215/TC	AW250/102	46.719	2,289	3.60	7,086	2.88	7,086	2.16	7,086
7.27	11,515	C612_0450	MR200/180	182/184/TC	AW200/014	45.333	3,054	6.02	11,515	4.82	11,515	3.61	11,515
7.27	11,515	C612_0450	MR250/180	182/184/TC	AW250/102	45.333	3,054	6.02	11,515	4.82	11,515	3.61	11,515
7.27	11,515	C612_0450	MR300/210	213/215/TC	AW300/110	45.333	3,054	6.02	11,515	4.82	11,515	3.61	11,515
10.83	17,716	C712_0470	MR200/180	182/184/TC	AW200/014	46.818	4,234	8.97	17,716	7.18	17,716	5.38	17,716
10.83	17,716	C712_0470	MR250/180	182/184/TC	AW250/102	46.818	4,234	8.97	17,716	7.18	17,716	5.38	17,716
10.83	17,716	C712_0470	MR300/210	213/215/TC	AW300/110	46.818	4,234	8.97	17,716	7.18	17,716	5.38	17,716

Part No. Explanation

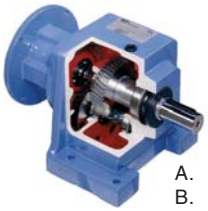
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
40 RPM		**Output (Approximate) Continued**						**30 RPM**		**25 RPM**		**19 RPM**	
20.04	31,889	C812_0460	MR250/210	213/215/TC	AW250/102	45.538	5,733	16.61	31,889	13.28	31,889	9.96	31,889
20.04	31,889	C812_0460	MR300/210	213/215/TC	AW300/110	45.538	5,733	16.61	31,889	13.28	31,889	9.96	31,889
33.32	53,148	C912_0460	MR300/250	254/256TC	AW300/110	45.655	7,075	27.60	53,148	22.08	53,148	16.56	53,148
33.32	53,148	C912_0460	MR350/320	324/326TC	AW350/202	45.655	7,075	27.60	53,148	22.08	53,148	16.56	53,148
35 RPM		**Output (Approximate)**						**28 RPM**		**23 RPM**		**17 RPM**	
0.30	531	C002_0500	MR140/050	56C	AW140/010	49.944	372	0.25	531	0.20	531	0.15	531
0.61	1,063	C102_0500	MR140/050	56C	AW140/010	49.944	528	0.50	1,063	0.40	1,063	0.30	1,063
1.03	1,772	C202_0490	MR140/050	56C	AW140/010	49.227	740	0.85	1,772	0.68	1,772	0.51	1,772
1.03	1,772	C202_0490	MR160/050	143/145TC	AW160/012	49.227	740	0.85	1,772	0.68	1,772	0.51	1,772
1.78	3,100	C302_0500	MR160/050	56C	AW160/012	49.745	1,104	1.48	3,100	1.18	3,100	0.89	3,100
1.78	3,100	C302_0500	MR160/140	143/145TC	AW160/012	49.745	1,104	1.48	3,100	1.18	3,100	0.89	3,100
2.78	4,872	C402_0500	MR160/050	56C	AW160/012	50.192	1,899	2.30	4,872	1.84	4,872	1.38	4,872
2.78	4,872	C402_0500	MR160/140	143/145TC	AW160/012	50.192	1,899	2.30	4,872	1.84	4,872	1.38	4,872
4.07	7,086	C502_0500	MR160/050	56C	AW160/012	49.821	2,326	3.37	7,086	2.70	7,086	2.02	7,086
4.07	7,086	C502_0500	MR160/140	143/145TC	AW160/012	49.821	2,326	3.37	7,086	2.70	7,086	2.02	7,086
4.07	7,086	C502_0500	MR200/180	182/184/TC	AW200/014	49.821	2,326	3.37	7,086	2.70	7,086	2.02	7,086
4.07	7,086	C502_0500	MR250/180	182/184/TC	AW250/102	49.821	2,326	3.37	7,086	2.70	7,086	2.02	7,086
7.57	12,844	C613_0490	MR200/180	182/184/TC	AW200/014	49.277	3,119	6.27	12,844		12,844	3.76	12,844
12.15	21,259	C713_0510	MR250/180	182/184/TC	AW250/102	50.845	4,322	10.07	21,259	8.05	21,259	6.04	21,259
17.52	29,662	C813_0490	MR250/180	182/184/TC	AW250/102	49.176	5,844	14.52	29,662		29,662	8.71	29,662
30 RPM		**Output (Approximate) Continued Next Page**						**25 RPM**		**21 RPM**		**15 RPM**	
0.27	531	C002_0560	MR140/050	56C	AW140/010	55.972	382	0.23	531	0.18	531	0.14	531
0.54	1,063	C102_0560	MR140/050	56C	AW140/010	56.364	544	0.45	1,063	0.36	1,063	0.27	1,063
0.90	1,772	C202_0560	MR140/050	56C	AW140/010	56.424	766	0.74	1,772	0.60	1,772	0.45	1,772
0.90	1,772	C202_0560	MR160/050	56C	AW160/012	56.424	766	0.74	1,772	0.60	1,772	0.45	1,772
1.58	3,100	C302_0560	MR160/050	56C	AW160/012	56.136	1,138	1.31	3,100	1.05	3,100	0.79	3,100
1.58	3,100	C302_0560	MR160/140	143/145TC	AW160/012	56.136	1,138	1.31	3,100	1.05	3,100	0.79	3,100
2.49	4,872	C402_0560	MR160/050	56C	AW160/012	56.101	1,953	2.06	4,872	1.65	4,872	1.24	4,872
2.49	4,872	C402_0560	MR160/140	143/145TC	AW160/012	56.101	1,953	2.06	4,872	1.65	4,872	1.24	4,872
3.63	7,086	C502_0560	MR160/050	56C	AW160/012	55.833	2,393	3.01	7,086	2.41	7,086	1.81	7,086
3.63	7,086	C502_0560	MR160/140	143/145TC	AW160/012	55.833	2,393	3.01	7,086	2.41	7,086	1.81	7,086
3.63	7,086	C502_0560	MR200/180	182/184/TC	AW200/014	55.833	2,393	3.01	7,086	2.41	7,086	1.81	7,086
3.63	7,086	C502_0560	MR250/180	182/184/TC	AW250/102	55.833	2,393	3.01	7,086	2.41	7,086	1.81	7,086
5.98	11,515	C612_0550	MR200/180	182/184/TC	AW200/014	55.111	3,207	4.95	11,515	3.96	11,515	2.97	11,515
5.98	11,515	C612_0550	MR250/210	213/215/TC	AW250/102	55.111	3,207	4.95	11,515	3.96	11,515	2.97	11,515
8.92	17,716	C712_0570	MR200/180	182/184/TC	AW200/014	56.818	4,443	7.39	17,716	5.91	17,716	4.44	17,716
8.92	17,716	C712_0570	MR250/180	182/184/TC	AW250/102	56.818	4,443	7.39	17,716	5.91	17,716	4.44	17,716
8.92	17,716	C712_0570	MR300/280	284/286TC	AW300/110	56.818	4,443	7.39	17,716	5.91	17,716	4.44	17,716

* For thermal HP capacity, see rating below.

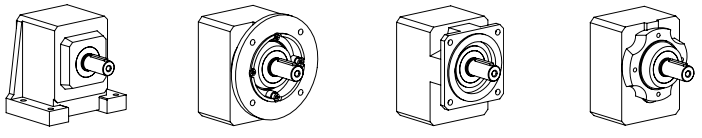
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes



Housing Style Q is available on special order.

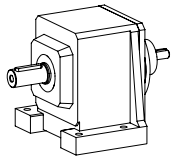
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: 1) Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
2) Select Input Option and add to completed Part Number. See example below.
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.
4) Other frame sizes may also be available. See dimension pages.

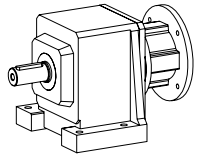
1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
30 RPM		**Output (Approximate) Continued**						**25 RPM**		**21 RPM**		**15 RPM**	
16.85	31,889	C812_0540	MR250/180	182/184/TC	AW250/102	54.154	5,987	13.96	31,889	11.17	31,889	8.38	31,889
16.85	31,889	C812_0540	MR300/180	182/184/TC	AW300/110	54.154	5,987	13.96	31,889	11.17	31,889	8.38	31,889
27.24	53,148	C912_0560	MR300/210	213/215/TC	AW300/110	55.833	7,441	22.57	53,148	18.06	53,148	13.54	53,148
28 RPM		**Output (Approximate)**						**23 RPM**		**19 RPM**		**14 0RPM**	
0.24	531	C002_0620	MR140/050	56C	AW140/010	62.350	393	0.20	531	0.16	531	0.12	531
0.48	1,054	C102_0620	MR140/050	56C	AW140/010	62.431	558	0.40	1,054	0.32	1,054	0.24	1,054
0.77	1,658	C202_0610	MR140/050	56C	AW140/010	61.354	782	0.64	1,658	0.51	1,658	0.38	1,658
1.35	2,932	C302_0620	MR160/050	56C	AW160/012	61.920	1,166	1.12	2,932	0.90	2,932	0.67	2,932
1.35	2,932	C302_0620	MR160/140	143/145TC	AW160/012	61.920	1,166	1.12	2,932	0.90	2,932	0.67	2,932
2.03	4,440	C402_0630	MR160/050	56C	AW160/012	62.515	2,007	1.68	4,440	1.35	4,440	1.01	4,440
2.03	4,440	C402_0630	MR160/140	143/145TC	AW160/012	62.515	2,007	1.68	4,440	1.35	4,440	1.01	4,440
2.90	6,325	C502_0620	MR160/050	56C	AW160/012	62.431	2,461	2.40	6,325	1.92	6,325	1.44	6,325
2.90	6,325	C502_0620	MR160/140	143/145TC	AW160/012	62.431	2,461	2.40	6,325	1.92	6,325	1.44	6,325
5.88	12,844	C613_0630	MR200/180	182/184/TC	AW200/014	63.462	3,322	4.87	12,844	3.90	12,844	2.92	12,844
9.57	21,259	C713_0650	MR250/180	182/184/TC	AW250/102	64.547	4,587	7.93	21,259	6.34	21,259	4.76	21,259
15.48	35,139	C813_0660	MR250/180	182/184/TC	AW250/102	65.963	6,290	13.58	37,204	10.86	37,204	8.15	37,204
25 RPM		**Output (Approximate)**						**20 RPM**		**18 RPM**		**13 0RPM**	
0.22	531	C002_0700	MR140/050	56C	AW140/010	69.875	404	0.18	531	0.14	531	0.11	531
0.43	1,063	C102_0700	MR140/050	56C	AW140/010	70.455	575	0.36	1,063	0.29	1,063	0.21	1,063
0.72	1,772	C202_0700	MR140/050	56C	AW140/010	70.324	810	0.60	1,772	0.48	1,772	0.36	1,772
1.27	3,100	C302_0700	MR160/050	56C	AW160/012	69.875	1,202	1.05	3,100	0.84	3,100	0.63	3,100
1.27	3,100	C302_0700	MR160/140	143/145TC	AW160/012	69.875	1,202	1.05	3,100	0.84	3,100	0.63	3,100
2.00	4,872	C402_0700	MR160/050	56C	AW160/012	69.875	2,063	1.65	4,872	1.32	4,872	0.99	4,872
2.00	4,872	C402_0700	MR160/140	143/145TC	AW160/012	69.875	2,063	1.65	4,872	1.32	4,872	0.99	4,872
2.90	7,086	C502_0700	MR160/050	56C	AW160/012	69.965	2,532	2.40	7,086	1.92	7,086	1.44	7,086
2.90	7,086	C502_0700	MR160/140	143/145TC	AW160/012	69.965	2,532	2.40	7,086	1.92	7,086	1.44	7,086
4.78	11,515	C612_0690	MR200/180	182/184/TC	AW200/014	68.889	3,391	3.96	11,515	3.17	11,515	2.38	11,515
4.78	11,515	C612_0690	MR250/210	213/215/TC	AW250/102	68.889	3,391	3.96	11,515	3.17	11,515	2.38	11,515
7.29	17,716	C712_0700	MR200/180	182/184/TC	AW200/014	69.545	4,674	6.04	17,716	4.83	17,716	3.62	17,716
7.29	17,716	C712_0700	MR250/180	182/184/TC	AW250/102	69.545	4,674	6.04	17,716	4.83	17,716	3.62	17,716
13.25	31,889	C812_0690	MR250/180	182/184/TC	AW250/102	68.889	6,358	10.98	31,889	8.78	31,889	6.59	31,889
13.25	31,889	C812_0690	MR300/210	213/215/TC	AW300/110	68.889	6,358	10.98	31,889	8.78	31,889	6.59	31,889
21.74	53,148	C912_0700	MR300/280	284/286TC	AW300/110	69.965	7,872	18.01	53,148	14.41	53,148	10.81	53,148

Part No. Explanation

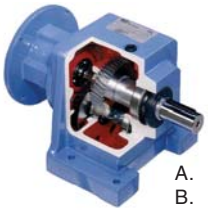
C 3 0 2 N 0620 AW 140 / 012
- 012: Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- AW: Input Shaft
- 140: Flange No.
- 0620: Ratio (0620 = 62.0:1)
- N: Housing Style
- 2: No. of Gear Reductions
- 0: Generation No.
- 3: Unit No.
- C: Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- 140: Motor Frame Size (140=143/145TC)
- 160: Flange No.
- MR: Motor Adapter
- 0620: Ratio (0620 = 62.0:1)
- N: Housing Style
- 2: No. of Reductions
- 0: Generation No.
- 3: Unit No.
- C: Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
20 RPM		**Output (Approximate)**						**18 RPM**		**15 RPM**		**10 RPM**	
0.38	1,063	C103_0820	MR140/050	56C	AW140/010	81.638	597	0.31	1,063	0.25	1,063	0.19	1,063
0.64	1,772	C203_0810	MR140/050	56C	AW140/010	80.618	838	0.53	1,772	0.42	1,772	0.32	1,772
0.65	1,772	C203_0800	MR160/050	56C	AW160/012	79.589	835	0.54	1,772	0.43	1,772	0.32	1,772
1.07	3,003	C303_0810	MR140/050	56C	AW140/010	81.467	1,249	0.89	3,003	0.71	3,003	0.53	3,003
1.12	3,100	C303_0800	MR160/050	56C	AW160/012	80.427	1,245	0.93	3,100	0.74	3,100	0.56	3,100
1.12	3,100	C303_0800	MR160/140	143/145TC	AW160/012	80.427	1,245	0.93	3,100	0.74	3,100	0.56	3,100
1.75	4,872	C403_0810	MR160/050	56C	AW160/012	80.810	2,140	1.45	4,872	1.16	4,872	0.87	4,872
1.75	4,872	C403_0810	MR160/140	143/145TC	AW160/012	80.810	2,140	1.45	4,872	1.16	4,872	0.87	4,872
2.55	7,086	C503_0810	MR160/050	56C	AW160/012	80.596	2,623	2.12	7,086	1.69	7,086	1.27	7,086
2.55	7,086	C503_0810	MR160/140	143/145TC	AW160/012	80.596	2,623	2.12	7,086	1.69	7,086	1.27	7,086
2.97	7,745	C613_0760	MR160/050	56C	AW160/012	75.814	3,473	2.46	7,745	1.97	7,745	1.48	7,745
2.97	7,745	C613_0760	MR160/140	143/145TC	AW160/012	75.814	3,473	2.46	7,745	1.97	7,745	1.48	7,745
4.86	12,844	C613_0770	MR200/180	182/184/TC	AW200/014	76.795	3,484	4.03	12,844	3.22	12,844	2.42	12,844
6.82	19,007	C713_0810	MR200/180	182/184/TC	AW200/014	80.965	4,855	6.02	20,237	5.06	21,259	3.79	21,259
7.75	21,259	C713_0800	MR250/180	182/184/TC	AW250/102	79.734	4,836	6.42	21,259	5.13	21,259	3.85	21,259
7.97	21,754	C813_0790	MR200/180	182/184/TC	AW200/014	79.339	6,587	6.60	21,754	5.28	21,754	3.96	21,754
13.70	36,844	C813_0780	MR250/210	213/215/TC	AW250/102	78.133	6,562	11.46	37,204	9.17	37,204	6.88	37,204
15.60	41,738	C913_0780	MR250/210	213/215/TC	AW250/102	77.728	8,082	13.76	44,438	11.02	44,495	8.27	44,495
19 RPM		**Output (Approximate)**						**16 RPM**		**13 RPM**		**10 RPM**	
0.34	1,063	C103_0920	MR140/050	56C	AW140/010	92.131	608	0.28	1,063	0.22	1,063	0.17	1,063
0.56	1,772	C203_0920	MR140/050	56C	AW140/010	92.404	855	0.46	1,772	0.37	1,772	0.28	1,772
0.56	1,772	C203_0910	MR160/050	56C	AW160/012	91.225	855	0.47	1,772	0.37	1,772	0.28	1,772
0.98	3,100	C303_0920	MR140/050	56C	AW140/010	91.933	1,271	0.81	3,100	0.65	3,100	0.49	3,100
0.99	3,100	C303_0910	MR160/050	56C	AW160/012	90.759	1,271	0.82	3,100	0.66	3,100	0.49	3,100
1.57	4,872	C403_0900	MR160/050	56C	AW160/012	90.323	2,183	1.30	4,872	1.04	4,872	0.78	4,872
1.57	4,872	C403_0900	MR160/140	143/145TC	AW160/012	90.323	2,183	1.30	4,872	1.04	4,872	0.78	4,872
2.28	7,086	C503_0900	MR160/050	56C	AW160/012	90.323	2,678	1.89	7,086	1.51	7,086	1.13	7,086
2.28	7,086	C503_0900	MR160/140	143/145TC	AW160/012	90.323	2,678	1.89	7,086	1.51	7,086	1.13	7,086
3.08	9,299	C613_0880	MR160/050	56C	AW160/012	87.644	3,600	2.55	9,299	2.04	9,299	1.53	9,299
3.08	9,299	C613_0880	MR160/140	143/145TC	AW160/012	87.644	3,600	2.55	9,299	2.04	9,299	1.53	9,299
3.77	11,515	C613_0890	MR200/180	182/184/TC	AW200/014	88.778	3,600	3.12	11,515	2.50	11,515	1.87	11,515
5.76	17,716	C713_0890	MR250/180	182/184/TC	AW250/102	89.416	4,950	4.77	17,716	3.82	17,716	2.86	17,716
7.97	24,905	C813_0910	MR200/180	182/184/TC	AW200/014	90.821	6,750	6.60	24,905	5.28	24,905	3.96	24,905
10.36	31,889	C813_0890	MR250/210	213/215/TC	AW250/102	89.441	6,750	8.58	31,889	6.87	31,889	5.15	31,889
17.12	53,148	C913_0900	MR250/180	182/184/TC	AW250/102	90.219	8,325	14.18	53,148	11.35	53,148	8.51	53,148

* For thermal HP capacity, see rating below.

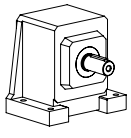
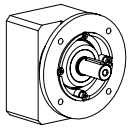
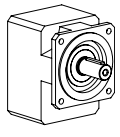
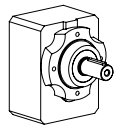
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes

Housing Style Q is available on special order.

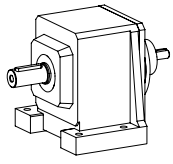
"C" Series – Concentric Helical MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

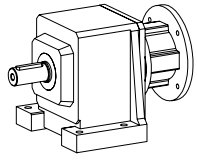
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
18 RPM	**Output (Approximate)**							**15 RPM**		**12 RPM**		**9 RPM**	
3.82	12,844	C613_0980	MR200/180	182/184/TC	AW200/014	97.634	3,600	3.17	12,844	2.53	12,844	1.90	12,844
5.95	20,308	C713_0990	MR200/180	182/184/TC	AW200/014	99.141	4,950	5.16	21,259	4.13	21,259	3.10	21,259
6.33	21,259	C713_0980	MR250/210	213/215/TC	AW250/102	97.634	4,950	5.24	21,259	4.19	21,259	3.15	21,259
10.75	37,204	C813_1010	MR250/180	182/184/TC	AW250/102	100.511	6,750	8.91	37,204	7.13	37,204	5.35	37,204
16 RPM	**Output (Approximate)**							**13 RPM**		**11 RPM**		**8 RPM**	
0.28	1,063	C103_1110	MR140/050	56C	AW140/010	111.091	608	0.23	1,063	0.18	1,063	0.14	1,063
0.47	1,772	C203_1110	MR140/050	56C	AW140/010	110.619	855	0.39	1,772	0.31	1,772	0.23	1,772
0.47	1,772	C203_1090	MR160/050	56C	AW160/012	109.206	855	0.39	1,772	0.31	1,772	0.23	1,772
0.82	3,100	C303_1100	MR140/050	56C	AW140/010	109.612	1,271	0.68	3,100	0.54	3,100	0.41	3,100
0.83	3,100	C303_1080	MR160/050	56C	AW160/012	108.213	1,271	0.69	3,100	0.55	3,100	0.41	3,100
1.31	4,872	C403_1080	MR160/050	56C	AW160/012	107.714	2,183	1.09	4,872	0.87	4,872	0.65	4,872
1.31	4,872	C403_1080	MR160/140	143/145TC	AW160/012	107.714	2,183	1.09	4,872	0.87	4,872	0.65	4,872
1.90	7,086	C503_1090	MR160/050	56TC	AW160/012	108.649	2,678	1.57	7,086	1.26	7,086	0.94	7,086
1.90	7,086	C503_1090	MR160/140	143/145TC	AW160/012	108.649	2,678	1.57	7,086	1.26	7,086	0.94	7,086
2.97	10,835	C613_1060	MR160/050	56C	AW160/012	106.057	3,600	2.46	10,835	1.97	10,835	1.48	10,835
2.97	10,835	C613_1060	MR160/140	143/145TC	AW160/012	106.057	3,600	2.46	10,835	1.97	10,835	1.48	10,835
3.11	11,515	C613_1070	MR200/180	182/184/TC	AW200/014	107.429	3,600	2.58	11,515	2.06	11,515	1.55	11,515
4.66	17,716	C713_1100	MR250/180	182/184/TC	AW250/102	110.455	4,950	3.86	17,716	3.09	17,716	2.32	17,716
7.97	29,498	C813_1080	MR200/180	182/184/TC	AW200/014	107.578	6,750	6.60	29,498	5.28	29,498	3.96	29,498
8.75	31,889	C813_1060	MR250/180	182/184/TC	AW250/102	105.943	6,750	7.25	31,889	5.80	31,889	4.35	31,889
13.98	53,148	C913_1100	MR250/180	182/184/TC	AW250/102	110.434	8,325	11.59	53,148	9.27	53,148	6.95	53,148
14 RPM	**Output (Approximate)**							**12 RPM**		**9 RPM**		**7 RPM**	
4.67	21,259	C713_1320	MR200/180	182/184/TC	AW200/014	132.371	4,950	3.87	21,259	3.09	21,259	2.32	21,259
4.74	21,259	C713_1300	MR250/180	182/184/TC	AW250/102	130.359	4,950	3.93	21,259	3.14	21,259	2.36	21,259
8.34	37,204	C813_1300	MR250/180	182/184/TC	AW250/102	129.541	6,750	6.91	37,204	5.53	37,204	4.15	37,204
13 RPM	**Output (Approximate)** **Continued Next Page**							**10 RPM**		**9 RPM**		**6 RPM**	
0.22	1,063	C103_1370	MR140/050	56C	AW140/010	137.338	608	0.19	1,063	0.15	1,063	0.11	1,063
0.37	1,772	C203_1380	MR140/050	56C	AW140/010	137.786	855	0.31	1,772	0.25	1,772	0.19	1,772
0.38	1,772	C203_1360	MR160/050	56C	AW160/012	136.027	855	0.31	1,772	0.25	1,772	0.19	1,772
0.66	3,100	C303_1370	MR140/050	56C	AW140/010	137.192	1,271	0.54	3,100	0.44	3,100	0.33	3,100
0.67	3,100	C303_1350	MR160/050	56C	AW160/012	135.441	1,271	0.55	3,100	0.44	3,100	0.33	3,100
1.05	4,872	C403_1350	MR160/050	56C	AW160/012	134.643	2,183	0.87	4,872	0.70	4,872	0.52	4,872
1.05	4,872	C403_1350	MR160/140	143/145TC	AW160/012	134.643	2,183	0.87	4,872	0.70	4,872	0.52	4,872
1.52	7,086	C503_1350	MR160/050	56C	AW160/012	135.333	2,678	1.26	7,086	1.01	7,086	0.76	7,086
1.52	7,086	C503_1350	MR160/140	143/145TC	AW160/012	135.333	2,678	1.26	7,086	1.01	7,086	0.76	7,086
2.48	11,515	C613_1350	MR160/050	56C	AW160/012	134.838	3,600	2.06	11,515	1.64	11,515	1.23	11,515
2.48	11,515	C613_1350	MR160/140	143/145TC	AW160/012	134.838	3,600	2.06	11,515	1.64	11,515	1.23	11,515
3.75	17,716	C713_1370	MR200/180	182/184/TC	AW200/014	137.338	4,950	3.11	17,716	2.48	17,716	1.86	17,716

Part No. Explanation

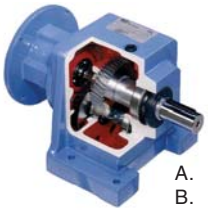
C 3 0 2 N 0620 AW 140 / 012
- Shaft Dia. (1/16 in.; example–012=12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Gear Reductions
- Generation No.
- Unit No.
- Concentric Helical



C 3 0 2 N 0620 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0620 = 62.0:1)
- Housing Style
- No. of Reductions
- Generation No.
- Unit No.
- Concentric Helical



Mounting position must be specified when ordering.



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
13 RPM		**Output (Approximate) Continued**						**10 RPM**		**9 RPM**		**6 RPM**	
3.81	17,716	C713_1350	MR250/180	182/184/TC	AW250/102	135.250	4,950	3.15	17,716	2.52	17,716	1.89	17,716
6.70	31,889	C813_1380	MR200/180	182/184/TC	AW200/014	138.389	6,750	5.55	31,889	4.44	31,889	3.33	31,889
6.80	31,889	C813_1360	MR250/180	182/184/TC	AW250/102	136.286	6,750	5.63	31,889	4.51	31,889	3.38	31,889
11.12	53,148	C913_1390	MR250/180	182/184/TC	AW250/102	138.876	8,325	9.21	53,148	7.37	53,148	5.53	53,148
10 RPM		**Output (Approximate)**						**8 RPM**		**7 RPM**		**5 RPM**	
1.91	11,515	C613_1750	MR160/050	56C	AW160/012	175.289	3,600	1.58	11,515	1.27	11,515	0.95	11,515
1.91	11,515	C613_1750	MR160/140	143/145TC	AW160/012	175.289	3,600	1.58	11,515	1.27	11,515	0.95	11,515
5.19	31,889	C813_1780	MR200/180	182/184/TC	AW200/014	178.359	6,750	4.30	31,889	3.44	31,889	2.58	31,889
5.27	31,889	C813_1760	MR250/180	182/184/TC	AW250/102	175.648	6,750	4.37	31,889	3.50	31,889	2.62	31,889
8.77	53,148	C913_1760	MR250/210	213/215/TC	AW250/102	176.097	8,325	7.27	53,148	5.81	53,148	4.36	53,148
9.5 RPM		**Output (Approximate)**						**7.5 RPM**		**6 RPM**		**4.5 RPM**	
0.17	1,063	C103_1840	MR140/050	56C	AW140/010	183.727	608	0.14	1,063	0.11	1,063	0.08	1,063
0.28	1,772	C203_1830	MR140/050	56C	AW140/010	183.387	855	0.23	1,772	0.19	1,772	0.14	1,772
0.28	1,772	C203_1810	MR160/050	56C	AW160/012	181.046	855	0.24	1,772	0.19	1,772	0.14	1,772
0.49	3,100	C303_1830	MR140/050	56C	AW140/010	182.778	1,271	0.41	3,100	0.33	3,100	0.25	3,100
0.50	3,100	C303_1800	MR160/050	56C	AW160/012	180.444	1,271	0.41	3,100	0.33	3,100	0.25	3,100
0.78	4,872	C403_1800	MR160/050	56C	AW160/012	180.444	2,183	0.65	4,872	0.52	4,872	0.39	4,872
1.14	7,086	C503_1810	MR160/050	56C	AW160/012	180.646	2,678	0.94	7,086	0.76	7,086	0.57	7,086
1.14	7,086	C503_1810	MR160/140	143/145TC	AW160/012	180.646	2,678	0.94	7,086	0.76	7,086	0.57	7,086
2.81	17,716	C713_1830	MR160/050	56C	AW160/012	183.371	4,950	2.33	17,716	1.86	17,716	1.40	17,716
2.81	17,716	C713_1830	MR160/140	143/145TC	AW160/012	183.371	4,950	2.33	17,716	1.86	17,716	1.40	17,716
8 RPM		**Output (Approximate)**						**7 RPM**		**5 RPM**		**4 RPM**	
0.14	1,063	C103_2210	MR140/050	56C	AW140/010	220.758	608	0.12	1,063	0.09	1,063	0.07	1,063
0.23	1,772	C203_2210	MR140/050	56C	AW140/010	220.995	855	0.19	1,772	0.15	1,772	0.12	1,772
0.41	3,100	C303_2200	MR140/050	56C	AW140/010	219.867	1,271	0.34	3,100	0.27	3,100	0.20	3,100
0.41	3,100	C303_2170	MR160/050	56C	AW160/012	217.061	1,271	0.34	3,100	0.28	3,100	0.21	3,100
0.65	4,872	C403_2170	MR160/050	56C	AW160/012	216.925	2,183	0.54	4,872	0.43	4,872	0.32	4,872
0.95	7,086	C503_2160	MR160/050	56C	AW160/012	215.889	2,678	0.79	7,086	0.63	7,086	0.47	7,086
1.57	11,515	C613_2130	MR160/050	56C	AW160/012	213.096	3,600	1.30	11,515	1.04	11,515	0.78	11,515
1.57	11,515	C613_2130	MR160/140	143/145TC	AW160/012	213.096	3,600	1.30	11,515	1.04	11,515	0.78	11,515
4.37	31,889	C813_2120	MR200/180	182/184/TC	AW200/014	212.103	6,750	3.62	31,889	2.90	31,889	2.17	31,889
4.44	31,889	C813_2090	MR250/180	182/184/TC	AW250/102	208.879	6,750	3.68	31,889	2.94	31,889	2.21	31,889
7.17	53,148	C913_2150	MR250/180	182/184/TC	AW250/102	215.357	8,325	5.94	53,148	4.75	53,148	3.56	53,148

* For thermal HP capacity, see rating below.

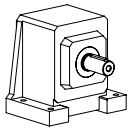
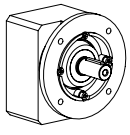
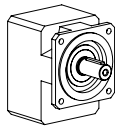
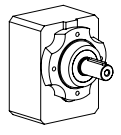
Base Module	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size
TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **Q** – Square Flange **G** – Tapped Holes

Housing Style Q is available on special order.

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

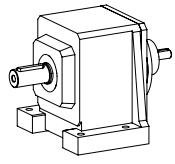
NOTE: [1] Complete Base Module Part Number by adding Housing Style. Example: C302**N**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
6.5 RPM	**Output (Approximate)**							**5 RPM**		**4 RPM**		**3 RPM**	
0.11	1,063	C103_2760	MR140/050	56C	AW140/010	275.947	608	0.09	1,063	0.07	1,063	0.06	1,063
0.19	1,772	C203_2750	MR140/050	56C	AW140/010	275.436	855	0.15	1,772	0.12	1,772	0.09	1,772
0.33	3,100	C303_2740	MR140/050	56C	AW140/010	273.677	1,271	0.27	3,100	0.22	3,100	0.16	3,100
0.52	4,872	C403_2700	MR160/050	56C	AW160/012	270.183	2,183	0.43	4,872	0.35	4,872	0.26	4,872
0.76	7,086	C503_2710	MR160/050	56C	AW160/012	270.532	2,678	0.63	7,086	0.50	7,086	0.38	7,086
1.26	11,515	C613_2660	MR160/050	56C	AW160/012	266.370	3,600	1.04	11,515	0.83	11,515	0.62	11,515
1.26	11,515	C613_2660	MR160/140	143/145TC	AW160/012	266.370	3,600	1.04	11,515	0.83	11,515	0.62	11,515
3.43	31,889	C813_2700	MR200/180	182/184/TC	AW200/014	269.815	6,750	2.85	31,889	2.28	31,889	1.71	31,889
3.49	31,889	C813_2660	MR250/180	182/184/TC	AW250/102	265.714	6,750	2.89	31,889	2.31	31,889	1.73	31,889

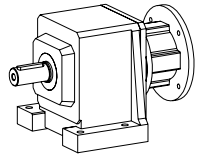
NOTE: For slower speeds than those listed above, units can be combined. Contact STOBER Drives Inc.

Part No. Explanation

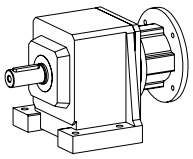
C 3 0 2 N 0620 AW 140 / 012
- Unit No. Concentric Helical
- Generation No.
- No. of Gear Reductions
- Housing Style
- Ratio (0620 = 62.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example–012=$^{12}/_{16}$ or $^{3}/_{4}$)



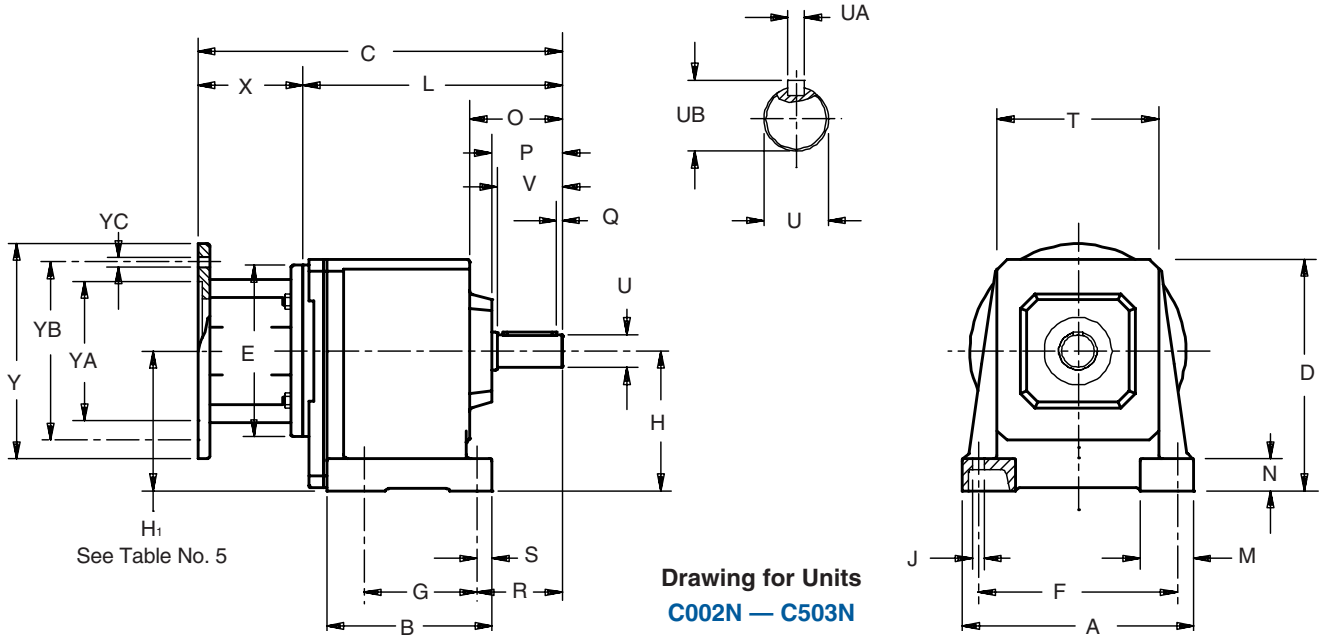
C 3 0 2 N 0620 MR 160 / 140
- Unit No. Concentric Helical
- Generation No.
- No. of Reductions
- Housing Style
- Ratio (0620 = 62.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.



"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

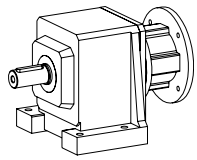
Table No. 2 **Metric output available on request**

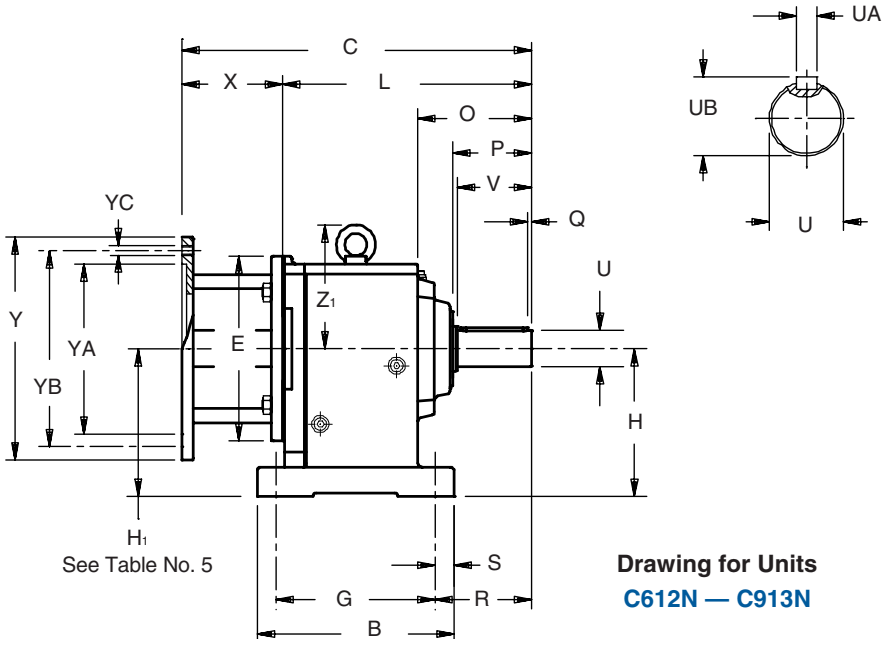
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	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	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

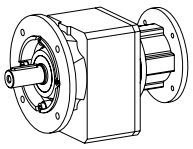
Base	MR140/050		MR160/140 [2]		MR200/180		MR250/210 [3]		MR300/250 [4]		MR350/320 [5]		Approx.
Module	C	L	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	—	—	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	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)

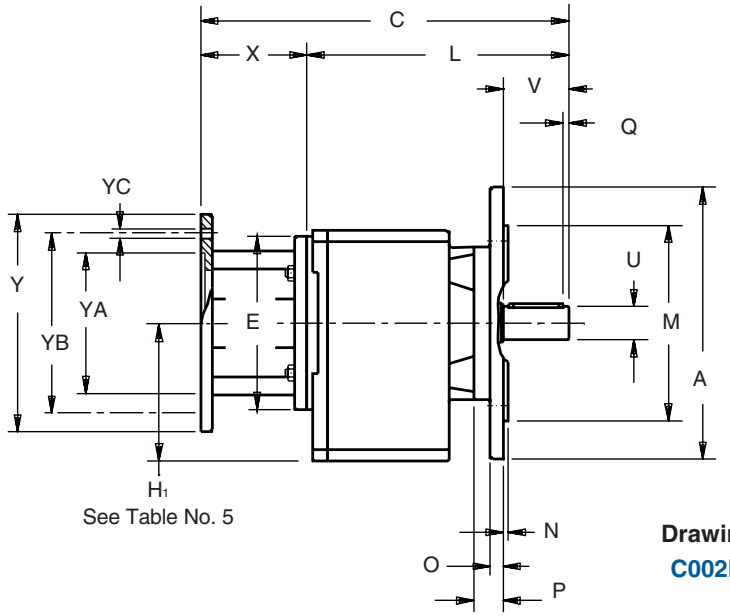
Base	MR160/140[2]	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
C303	3.66	–	–	–
C612	–	7.63	7.63	7.63
C613	–	–	7.63	–
C713	–	–	10.00	–

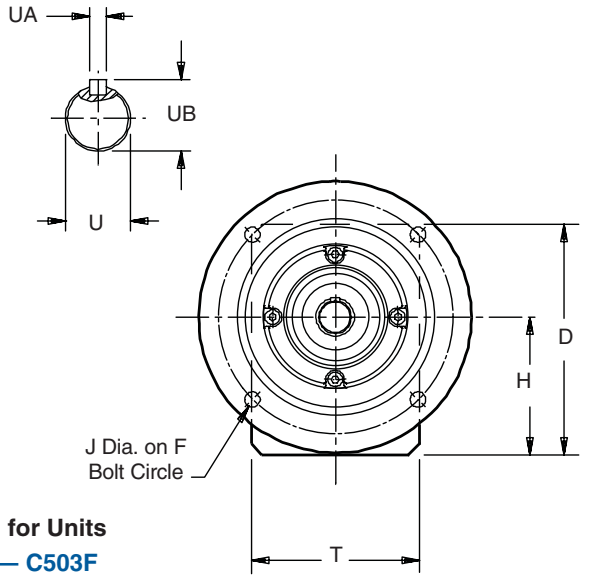
[1] See Table No. 5
[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.
[5]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

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



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





Drawing for Units
C002F — C503F

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

Base Module	A	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 [1]	.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 [1]	.55	9.055	.16	.67	1.42	.20	8.86	3.94	6.57
C712/C713	13.78	14.61	11.81	9.09 [1]	.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 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**

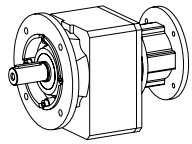
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	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

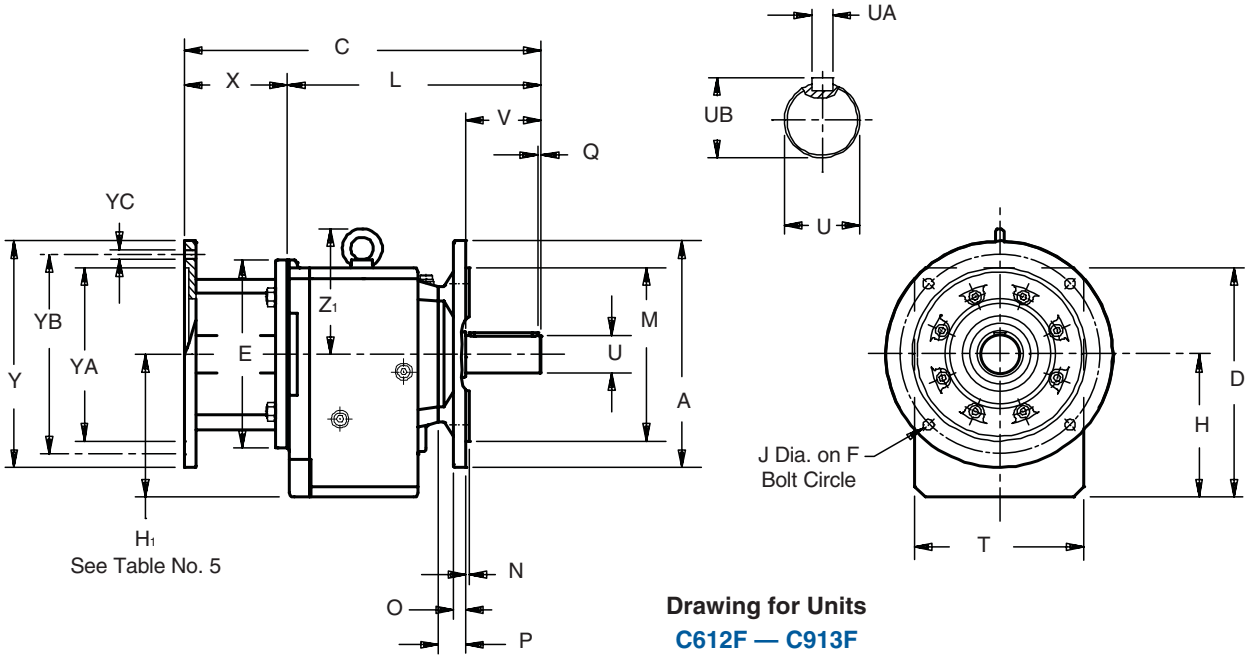
Table No. 3 **Motor Adapter Dimensions (Inches)**

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	7.09	13.37	12.500	11.00	.70	133

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

"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	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
C71 [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	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–
C713	–	–	9.84	–

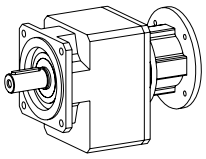
[1] See Table No. 5
[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.
[4] Also available as **MR300/180** for a NEMA 182/184TC, **MR300/210** for a NEMA 213/215TC, and **MR300/280** for a NEMA 284/286TC frame motor.
[5]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

All weights are approximate.

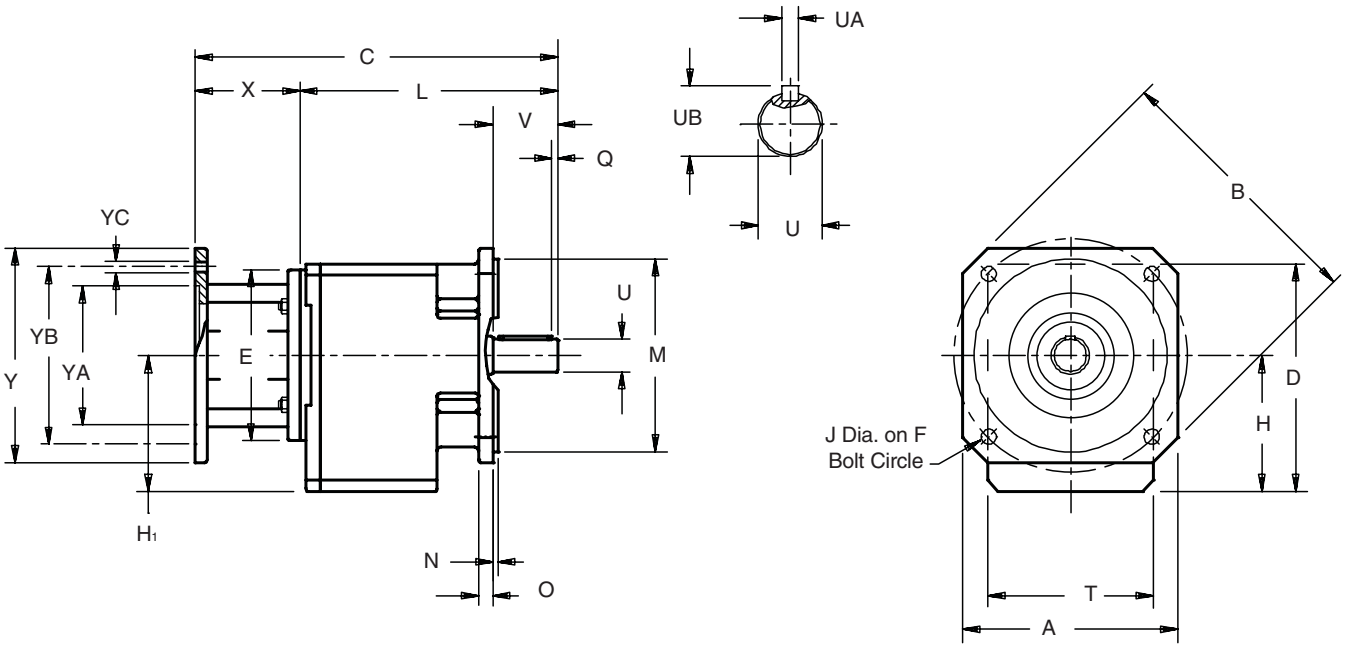
Table No. 6 Optional Flange Dimensions (Inches)

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
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
C2	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	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
C4	200	7.874	6.50	.43	5.118 +.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
C8	350	13.780	11.81	.71	9.842 +.000/-.001	.20	.71
	450	17.717	15.75	.71	13.780 +.000/-.001	.20	.79

Optional flange are not available for all sizes.



"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

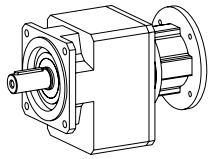


Table No. 3 Motor Adapter Dimensions (Inches)

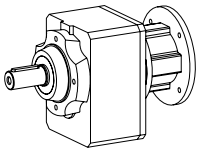
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs.
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55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

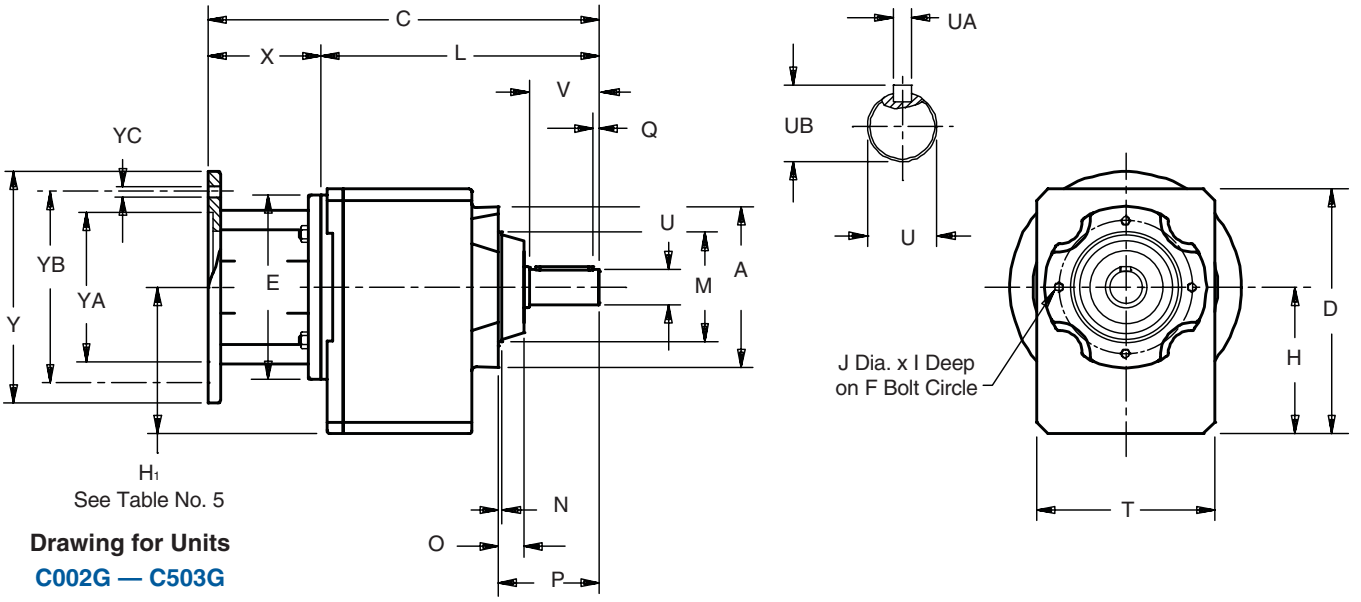
Base	MR140/050		MR160/140 [2]		MR200/180		MR250/210 [3]		Approx.
Module	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	9.37	6.06	10.08	6.22	—	—	—	—	18
C102	10.67	7.36	11.38	7.52	12.40	7.60	—	—	29
C103	12.13	8.82	—	—	—	—	—	—	34
C202	11.77	8.46	12.48	8.62	13.50	8.70	—	—	38
C203	13.23	9.92	14.17	10.31	—	—	—	—	45
C302	—	—	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
C302Q0620 MR160/140



"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	2.165	.12	.55	2.28	.16	3.82	1.57	—
C102/C103	4.72	6.89	3.94	3.94	.51	M6	3.150	.12	.67	2.80	.16	5.12	1.97	—
C202/C203	5.51	7.56	4.53	4.41	.51	M8	3.740	.12	.87	3.43	.16	5.59	2.36	—
C302/C303	5.51	8.35	4.53	5.00 [1]	.51	M8	3.740	.12	.87	3.43	.16	6.06	2.36	—
C402/C403	6.30	9.55	5.12	5.61	.63	M10	4.331	.14	.87	4.25	.16	7.01	3.15	—
C502/C503	7.56	11.26	6.50 [2]	6.54	.63	M10	5.118	.14	.91	4.29	.16	7.68	3.15	—
C612/C613	7.09	11.97	6.50	7.44 [1]	.63	M10	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	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	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	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.

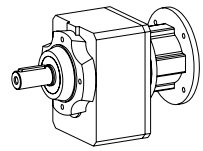
Table No. 2 **Metric output available on request**

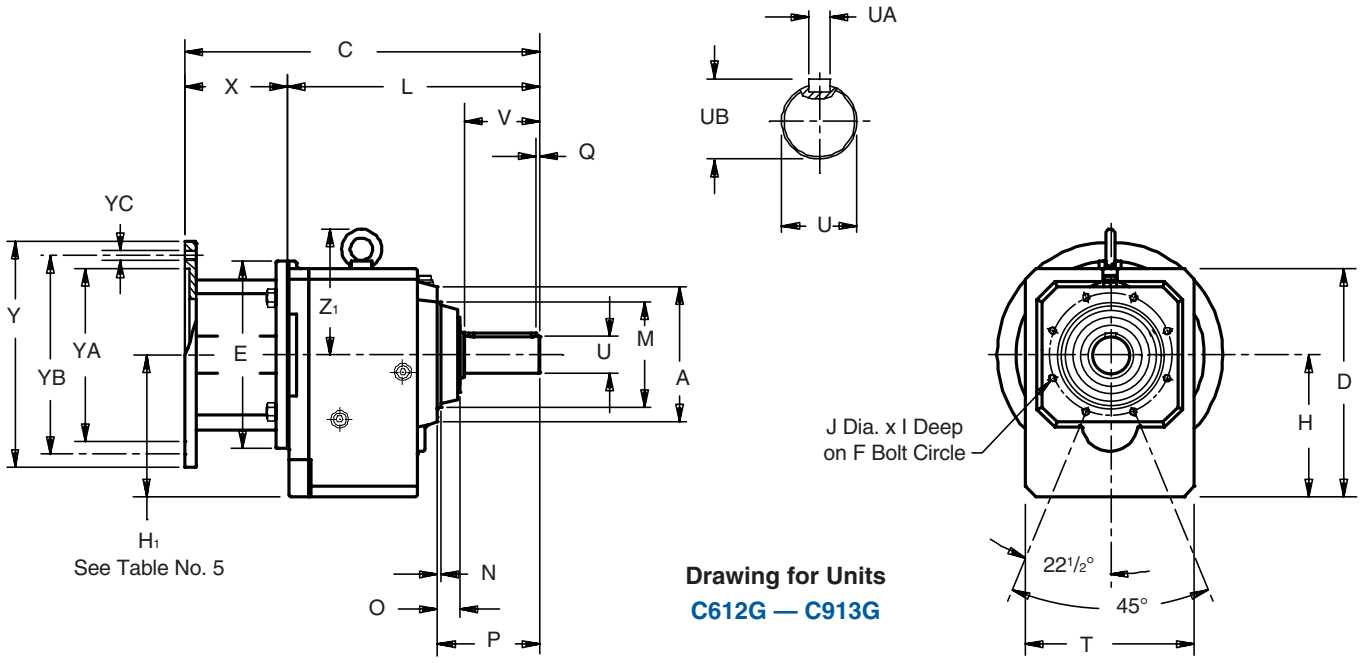
	Standard Shaft - inches			Optional Shaft - mm		
Base Module	U	UA	UB	U	UA	UB
C002	.750	$3/16 \times 3/16 \times 1\,7/32$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$1/4 \times 1/4 \times 1\,9/16$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$1/4 \times 1/4 \times 1\,15/16$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$1/4 \times 1/4 \times 1\,15/16$	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	7.09	13.37	12.500	11.00	.70	133

"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)

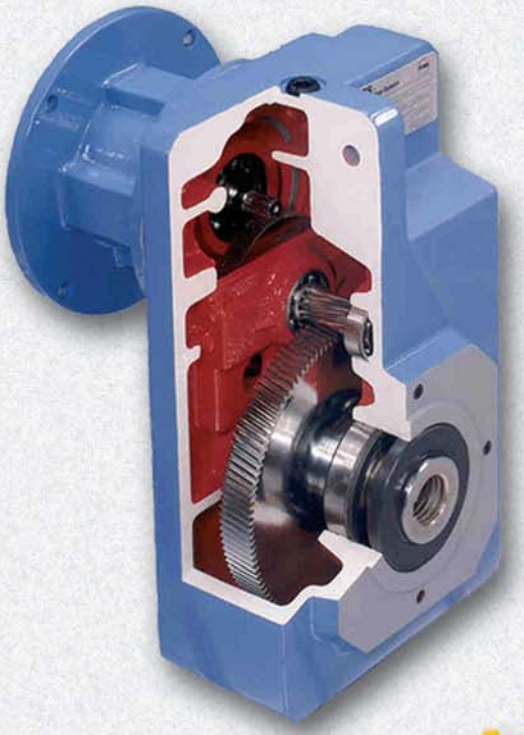
Base	MR160/140	MR200/180	MR250/210	MR300/250
Module	H_1	H_1	H_1	H_1
C303	3.54	–	–	–
C612	–	7.44	7.44	7.44
C613	–	–	7.44	–
C713	–	–	9.84	–

[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
C302G0620 MR160/140

Notes

“F” Series Offset Helical Speed Reducers



3 YEAR WARRANTY

3-DAY DELIVERY

STÖBER

www.stober.com

"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.

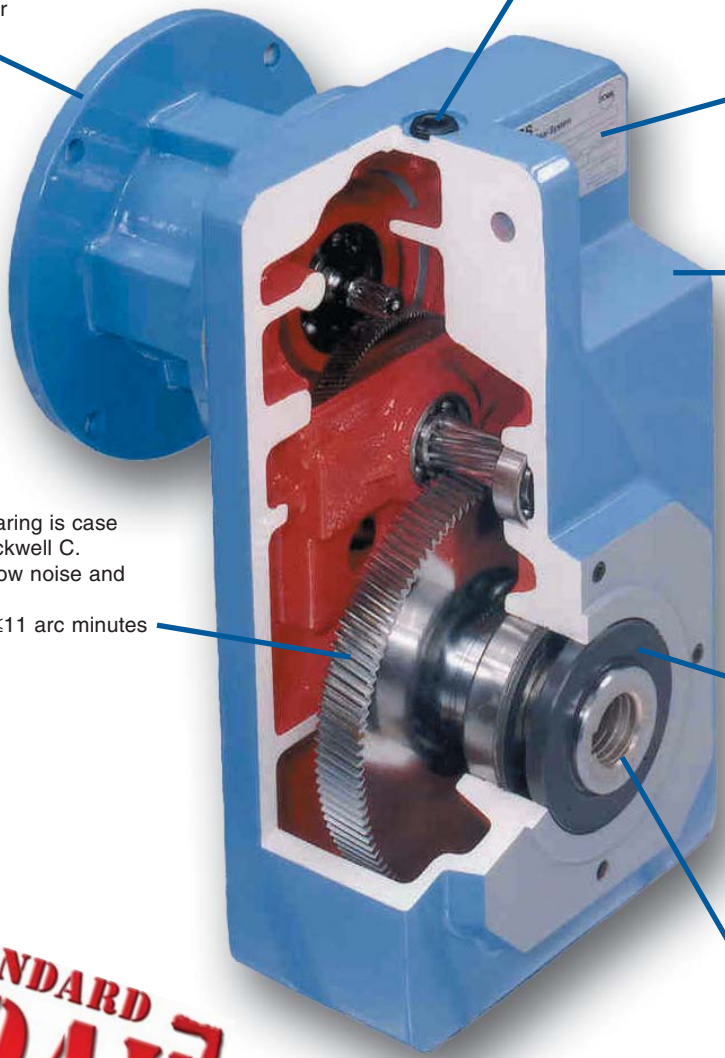
Performance Specifications:

- Horsepower ratings from 1/6 to 33
- Output torques to 9,743 in. lbs.
- Output speeds available from 406 to 3 RPM
- Speed reducer ratios from 4.3:1 to 552:1
- 3 year warranty – your assurance of satisfactory product performance

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



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.

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

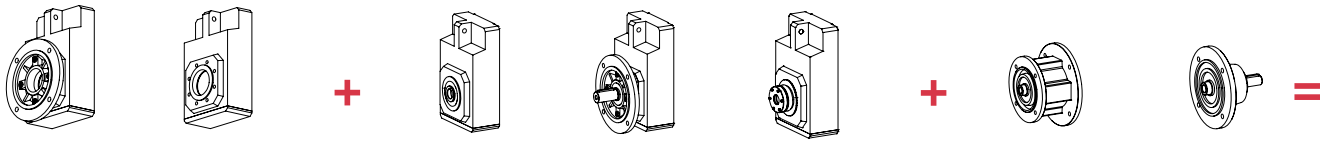
Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

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

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

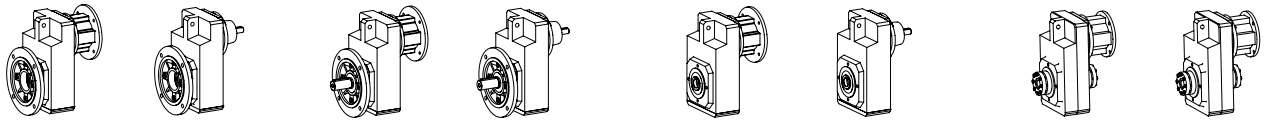
"F" Series – Offset Helical MGS Speed Reducers Overview

Housing Style + Output Style + Input Style = Reducer Configurations



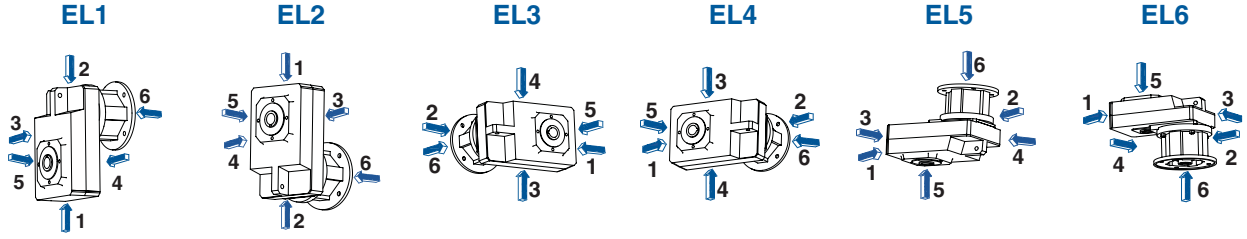
Style F	Style G		Style A	Style V	Style W		MR	AW	
Round Flange	Tapped Holes	+	Hollow Output	Solid Output	Bushing Output	+	Motor Adapter	Input Shaft	=

Reducer Configurations



Style AF | Style VF | Style AG | Style WG

Mounting Positions



Part No. Explanation with OPTIONS and REQUIRED INFORMATION

F 4 0 2 V F 0135 MR200 / 180

- 050 (56C), 140 (143/145TC), **180** (182/184TC), 210 (213/215TC),
- Motor Adapter Size: MR140, MR160, **MR200**, MR300, MR350
- Nominal Ratio: (**0135** = 13.5:1)
- HOUSING STYLE
  - "**F**" Housing Style – Flange Mounting
  - "**G**" Housing Style – Tapped Holes
- OUTPUT STYLE
  - "**V**" Solid Output – ONLY AVAILABLE with "F" Housing Style
    - **SPECIFY IN A NOTE**: Imperial or Metric [1)]
  - "**A**" Hollow Output
    - **SPECIFY IN A NOTE**: Standard or Stainless Steel [1)]; Imperial or Metric [1)]
  - "**W**" Wobble Free Bushing
    - **SPECIFY IN A NOTE**: Bushing Part Number; Single or Double Bushing (Double not possible on F203, F303, F403, F603); IF Single Side 5 or Side 6 (Side 6 not possible on F203, F303, F403, F603)
- No. of Stages (**02** = 2 Stage, determined by ratio)
- Design Generation
- Unit Size No.
- OFfset Helical

[1)] Not available in all sizes.

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:

Mounting Position – EL1 EL2 EL3 EL4 EL5 EL6

Paint – Standard Gray ..... White ..... Stainless

Part No. Explanation for Input Shaft

AW200 / 014

- 010 ($^{10}/_{16} = {}^{5}/_{8}$), 012 ($^{12}/_{16} = {}^{3}/_{4}$), **014** ($^{14}/_{16} = {}^{7}/_{8}$), 102 ($1^{2}/_{16} = 1^{1}/_{8}$)
- Input Size: AW140, AW160, **AW200**, AW250

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

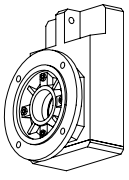
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
405 RPM Output (Approximate)								**330 RPM**		**270 RPM**		**200 RPM**	
2.64	398	F102_0043	MR140/050	56C	AW140/010	4.308	374	2.19	398	1.75	398	1.31	398
3.75*	564	F102_0043	MR160/050	56C	AW160/012	4.308	374	3.30	600	2.85	647	2.35	712
3.75*	564	F102_0043	MR160/140	143/145TC	AW160/012	4.308	374	3.30	600	2.85	647	2.35	712
385 RPM Output (Approximate)								**315 RPM**		**255 RPM**		**190 RPM**	
23.36*	3,711	F602_0045	MR200/180	182/184/TC	AW200/014	4.546	1,129	19.36	3,711	15.48	3,711	11.61	3,711
33.04*	5,249	F602_0045	MR250/180	182/184/TC	AW250/102	4.546	1,129	29.14	5,586	23.31	5,586	17.48	5,586
375 RPM Output (Approximate)								**305 RPM**		**250 RPM**		**185 RPM**	
2.78	454	F202_0047	MR140/050	56C	AW140/010	4.680	491	2.30	454	1.84	454	1.38	454
7.05*	1,154	F202_0047	MR160/050	56C	AW160/012	4.680	491	6.22	1,228	5.36	1,323	4.43	1,456
7.05*	1,154	F202_0047	MR160/140	143/145TC	AW160/012	4.680	491	6.22	1,228	5.36	1,323	4.43	1,456
7.05*	1,154	F202_0047	MR200/180	182/184/TC	AW200/014	4.680	491	6.22	1,228	5.36	1,323	4.43	1,456
9.84*	1,596	F302_0046	MR160/050	56C	AW160/012	4.644	681	8.15	1,596	6.52	1,596	4.89	1,596
9.84*	1,596	F302_0046	MR160/140	143/145TC	AW160/012	4.644	681	8.15	1,596	6.52	1,596	4.89	1,596
9.84	1,608	F402_0047	MR160/050	56C	AW160/012	4.678	842	8.15	1,608	6.52	1,608	4.89	1,608
9.84	1,608	F402_0047	MR160/140	143/145TC	AW160/012	4.678	842	8.15	1,608	6.52	1,608	4.89	1,608
11.80*	1,915	F302_0046	MR200/180	182/184/TC	AW200/014	4.644	681	10.41	2,039	8.97	2,196	7.41	2,417
19.40*	3,171	F402_0047	MR200/180	182/184/TC	AW200/014	4.678	842	17.11	3,376	14.75	3,636	11.61	3,818
19.40*	3,171	F402_0047	MR250/180	182/184/TC	AW250/102	4.678	842	17.11	3,376	14.75	3,636	12.17	4,002
315 RPM Output (Approximate)								**255 RPM**		**210 RPM**		**155 RPM**	
6.30*	1,221	F202_0056	MR160/050	56C	AW160/012	5.552	513	5.55	1,300	4.79	1,401	3.95	1,542
6.30*	1,221	F202_0056	MR160/140	143/145TC	AW160/012	5.552	513	5.55	1,300	4.79	1,401	3.95	1,542
6.30*	1,221	F202_0056	MR200/180	182/184/TC	AW200/014	5.552	513	5.55	1,300	4.79	1,401	3.95	1,542
305 RPM Output (Approximate)								**250 RPM**		**200 RPM**		**150 RPM**	
9.84*	1,966	F302_0057	MR160/050	56C	AW160/012	5.720	718	8.15	1,966	6.52	1,966	4.89	1,966
9.84*	1,966	F302_0057	MR160/140	143/145TC	AW160/012	5.720	718	8.15	1,966	6.52	1,966	4.89	1,966
9.84	1,998	F402_0058	MR160/050	56C	AW160/012	5.813	889	8.15	1,998	6.52	1,998	4.89	1,998
9.84	1,998	F402_0058	MR160/140	143/145TC	AW160/012	5.813	889	8.15	1,998	6.52	1,998	4.89	1,998
10.27*	2,053	F302_0057	MR200/180	182/184/TC	AW200/014	5.720	718	9.06	2,186	7.81	2,354	6.14	2,467
16.78*	3,409	F402_0058	MR200/180	182/184/TC	AW200/014	5.813	889	14.80	3,629	12.76	3,910	10.53	4,303
16.78*	3,409	F402_0058	MR250/180	182/184/TC	AW250/102	5.813	889	14.80	3,629	12.76	3,910	10.53	4,303
23.36*	4,631	F602_0057	MR200/180	182/184/TC	AW200/014	5.673	1,193	19.36	4,631	15.48	4,631	11.61	4,631
28.51*	5,651	F602_0057	MR250/210	213/215/TC	AW250/102	5.673	1,193	25.15	6,016	21.67	6,481	17.02	6,788
270 RPM Output (Approximate)								**220 RPM**		**180 RPM**		**135 RPM**	
2.50	564	F102_0065	MR140/050	56C	AW140/010	6.462	414	2.07	564	1.66	564	1.24	564
2.86	646	F102_0065	MR160/050	56C	AW160/012	6.462	414	2.52	687	2.17	740	1.79	815
2.86	646	F102_0065	MR160/140	143/145TC	AW160/012	6.462	414	2.52	687	2.17	740	1.79	815

* For thermal HP capacity, see rating below.

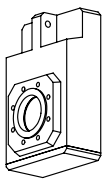
Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75

Housing Styles

F – Round Flange



G – Tapped Holes



Some Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size
TEFC 1750 RPM

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

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

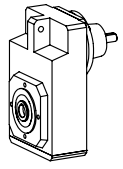
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: F302**AG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
245 RPM Output (Approximate)								**200 RPM**		**160 RPM**		**120 RPM**	
2.46	615	F102_0072	MR140/050	56C	AW140/010	7.156	425	2.04	615	1.63	615	1.22	615
2.61	654	F202_0072	MR140/050	56C	AW140/010	7.167	547	2.16	654	1.73	654	1.30	654
2.67	668	F102_0072	MR160/050	56C	AW160/012	7.156	425	2.36	711	2.03	766	1.68	843
2.67	668	F102_0072	MR160/140	143/145TC	AW160/012	7.156	425	2.36	711	2.03	766	1.68	843
5.31	1,330	F202_0072	MR160/050	56C	AW160/012	7.167	547	4.68	1,416	4.04	1,525	3.33	1,679
5.31	1,330	F202_0072	MR160/140	143/145TC	AW160/012	7.167	547	4.68	1,416	4.04	1,525	3.33	1,679
5.31	1,330	F202_0072	MR200/180	182/184/TC	AW200/014	7.167	547	4.68	1,416	4.04	1,525	3.33	1,679
8.83*	2,214	F302_0072	MR160/050	56C	AW160/012	7.172	759	7.79	2,357	6.52	2,465	4.89	2,465
8.83*	2,214	F302_0072	MR160/140	143/145TC	AW160/012	7.172	759	7.79	2,357	6.52	2,465	4.89	2,465
8.83*	2,214	F302_0072	MR200/180	182/184/TC	AW200/014	7.172	759	7.79	2,357	6.72	2,539	5.54	2,794
9.84	2,475	F402_0072	MR160/050	56C	AW160/012	7.202	937	8.15	2,475	6.52	2,475	4.89	2,475
9.84	2,475	F402_0072	MR160/140	143/145TC	AW160/012	7.202	937	8.15	2,475	6.52	2,475	4.89	2,475
14.55*	3,661	F402_0072	MR200/180	182/184/TC	AW200/014	7.202	937	12.83	3,898	11.06	4,199	9.13	4,622
14.55*	3,661	F402_0072	MR250/180	182/184/TC	AW250/102	7.202	937	12.83	3,898	11.06	4,199	9.13	4,622
23.36*	5,844	F602_0072	MR200/180	182/184/TC	AW200/014	7.159	1,265	19.36	5,844	15.48	5,844	11.61	5,844
24.41*	6,106	F602_0072	MR250/180	182/184/TC	AW250/102	7.159	1,265	21.53	6,501	18.56	7,003	15.32	7,708
195 RPM Output (Approximate)								**160 RPM**		**130 RPM**		**95 RPM**	
2.30	720	F102_0089	MR140/050	56C	AW140/010	8.948	449	1.97	742	1.57	742	1.18	742
2.30	720	F102_0089	MR160/050	56C	AW160/012	8.948	449	2.03	766	1.75	825	1.44	908
2.30	720	F102_0089	MR160/140	143/145TC	AW160/012	8.948	449	2.03	766	1.75	825	1.44	908
2.52	793	F202_0090	MR140/050	56C	AW140/010	9.006	579	2.09	793	1.67	793	1.25	793
4.56	1,435	F202_0090	MR160/050	56C	AW160/012	9.006	579	4.02	1,528	3.47	1,646	2.86	1,811
4.56	1,435	F202_0090	MR160/140	143/145TC	AW160/012	9.006	579	4.02	1,528	3.47	1,646	2.86	1,811
4.56	1,435	F202_0090	MR200/180	182/184/TC	AW200/014	9.006	579	4.02	1,528	3.47	1,646	2.86	1,811
7.60*	2,386	F302_0090	MR160/050	56C	AW160/012	8.986	803	6.70	2,541	5.78	2,737	4.77	3,012
7.60*	2,386	F302_0090	MR160/140	143/145TC	AW160/012	8.986	803	6.70	2,541	5.78	2,737	4.77	3,012
7.60*	2,386	F302_0090	MR200/180	182/184/TC	AW200/014	8.986	803	6.70	2,541	5.78	2,737	4.77	3,012
9.84	3,086	F402_0090	MR160/050	56C	AW160/012	8.980	991	8.15	3,086	6.52	3,086	4.89	3,086
9.84	3,086	F402_0090	MR160/140	143/145TC	AW160/012	8.980	991	8.15	3,086	6.52	3,086	4.89	3,086
9.84	3,091	F602_0090	MR160/050	56C	AW160/012	8.995	1,339	8.15	3,091	6.52	3,091	4.89	3,091
9.84	3,091	F602_0090	MR160/140	143/145TC	AW160/012	8.995	1,339	8.15	3,091	6.52	3,091	4.89	3,091
12.56*	3,941	F402_0090	MR200/180	182/184/TC	AW200/014	8.980	991	11.08	4,195	9.55	4,519	7.88	4,974
12.56*	3,941	F402_0090	MR250/210	213/215/TC	AW250/102	8.980	991	11.08	4,195	9.55	4,519	7.88	4,974
20.96*	6,589	F602_0090	MR200/180	182/184/TC	AW200/014	8.995	1,339	18.49	7,015	15.48	7,342	11.61	7,342
20.96*	6,589	F602_0090	MR250/180	182/184/TC	AW250/102	8.995	1,339	18.49	7,015	15.94	7,557	13.16	8,318
160 RPM Output (Approximate) Continued Next Page								**130 RPM**		**105 RPM**		**80 RPM**	
2.02	769	F102_0110	MR140/050	56C	AW140/010	10.920	472	1.78	819	1.52	876	1.14	876
2.02	769	F102_0110	MR160/050	56C	AW160/012	10.920	472	1.78	819	1.53	882	1.26	971

Part No. Explanation

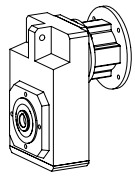
F 6 0 2 A G 0560 AW 160 / 012

- F — Offset Helical
- 6 — Unit No.
- 0 — Generation No.
- 2 — No. of Gear Reductions
- A — Output Style (A-Hollow; V-Solid)
- G — Housing Style
- 0560 — Ratio (0560 = 56.0:1)
- AW 160 — Input Shaft
- / — Flange No.
- 012 — Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



F 6 0 2 A G 0560 MR 160 / 140

- F — Offset Helical
- 6 — Unit No.
- 0 — Generation No.
- 2 — No. of Reductions
- A — Output Style (A-Hollow; V-Solid)
- G — Housing Style
- 0560 — Ratio (0560 = 56.0:1)
- MR — Motor Adapter
- 160 — Flange No.
- / — Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

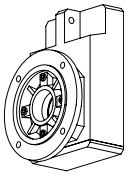
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft [3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
160 RPM Output (Approximate) Continued								**130 RPM**		**105 RPM**		**80 RPM**	
2.02	769	F102_0110	MR160/140	143/145TC	AW160/012	10.920	472	1.78	819	1.53	882	1.26	971
2.44	921	F202_0110	MR140/050	56C	AW140/010	10.803	606	2.02	921	1.62	921	1.21	921
4.04	1,525	F202_0110	MR160/050	56C	AW160/012	10.803	606	3.56	1,623	3.07	1,749	2.53	1,925
4.04	1,525	F202_0110	MR160/140	143/145TC	AW160/012	10.803	606	3.56	1,623	3.07	1,749	2.53	1,925
4.04	1,525	F202_0110	MR200/180	182/184/TC	AW200/014	10.803	606	3.56	1,623	3.07	1,749	2.53	1,925
6.73	2,536	F302_0110	MR160/050	56C	AW160/012	10.785	841	5.94	2,700	5.12	2,909	4.22	3,201
6.73	2,536	F302_0110	MR160/140	143/145TC	AW160/012	10.785	841	5.94	2,700	5.12	2,909	4.22	3,201
6.73	2,536	F302_0110	MR200/180	182/184/TC	AW200/014	10.785	841	5.94	2,700	5.12	2,909	4.22	3,201
9.84	3,718	F602_0110	MR160/050	56C	AW160/012	10.818	1,402	8.15	3,718	6.52	3,718	4.89	3,718
9.84	3,718	F602_0110	MR160/140	143/145TC	AW160/012	10.818	1,402	8.15	3,718	6.52	3,718	4.89	3,718
9.84	3,720	F402_0110	MR160/050	56C	AW160/012	10.825	1,038	8.15	3,720	6.52	3,720	4.89	3,720
9.84	3,720	F402_0110	MR160/140	143/145TC	AW160/012	10.825	1,038	8.15	3,720	6.52	3,720	4.89	3,720
11.09	4,194	F402_0110	MR200/180	182/184/TC	AW200/014	10.825	1,038	9.78	4,465	8.43	4,810	6.96	5,294
11.09	4,194	F402_0110	MR250/210	213/215/TC	AW250/102	10.825	1,038	9.78	4,465	8.43	4,810	6.96	5,294
18.54*	7,007	F602_0110	MR200/180	182/184/TC	AW200/014	10.818	1,402	16.35	7,460	14.09	8,037	11.61	8,830
18.54*	7,007	F602_0110	MR250/180	182/184/TC	AW250/102	10.818	1,402	16.35	7,460	14.09	8,037	11.63	8,845
130 RPM Output (Approximate)								**105 RPM**		**85 RPM**		**65 RPM**	
1.74	827	F102_0135	MR140/050	56C	AW140/010	13.588	499	1.54	881	1.32	949	1.09	1,044
1.74	827	F102_0135	MR160/050	56C	AW160/012	13.588	499	1.54	881	1.32	949	1.09	1,044
1.74	827	F102_0135	MR160/140	143/145TC	AW160/012	13.588	499	1.54	881	1.32	949	1.09	1,044
2.35	1,117	F202_0135	MR140/050	56C	AW140/010	13.625	642	1.94	1,117	1.56	1,117	1.17	1,117
2.42	1,133	F302_0135	MR140/050	56C	AW140/010	13.384	887	2.01	1,133	1.61	1,133	1.20	1,133
3.46	1,647	F202_0135	MR160/050	56C	AW160/012	13.625	642	3.05	1,754	2.63	1,889	2.17	2,079
3.46	1,647	F202_0135	MR160/140	143/145TC	AW160/012	13.625	642	3.05	1,754	2.63	1,889	2.17	2,079
3.46	1,647	F202_0135	MR200/180	182/184/TC	AW200/014	13.625	642	3.05	1,754	2.63	1,889	2.17	2,079
5.83	2,725	F302_0135	MR160/050	56C	AW160/012	13.384	887	5.14	2,902	4.43	3,126	3.66	3,440
5.83	2,725	F302_0135	MR160/140	143/145TC	AW160/012	13.384	887	5.14	2,902	4.43	3,126	3.66	3,440
5.83	2,725	F302_0135	MR200/180	182/184/TC	AW200/014	13.384	887	5.14	2,902	4.43	3,126	3.66	3,440
8.89	4,216	F402_0135	MR160/050	56C	AW160/012	13.569	1,098	7.84	4,489	6.52	4,664	4.89	4,664
8.89	4,216	F402_0135	MR160/140	143/145TC	AW160/012	13.569	1,098	7.84	4,489	6.52	4,664	4.89	4,664
9.54	4,522	F402_0135	MR200/180	182/184/TC	AW200/014	13.569	1,098	8.41	4,814	7.25	5,186	5.99	5,708
9.54	4,522	F402_0135	MR250/180	182/184/TC	AW250/102	13.569	1,098	8.41	4,814	7.25	5,186	5.99	5,708
9.84	4,677	F602_0135	MR160/050	56C	AW160/012	13.609	1,485	8.15	4,677	6.52	4,677	4.89	4,677
9.84	4,677	F602_0135	MR160/140	143/145TC	AW160/012	13.609	1,485	8.15	4,677	6.52	4,677	4.89	4,677
15.91*	7,564	F602_0135	MR200/180	182/184/TC	AW200/014	13.609	1,485	14.03	8,054	12.09	8,676	9.98	9,549
15.91*	7,564	F602_0135	MR250/180	182/184/TC	AW250/102	13.609	1,485	14.03	8,054	12.09	8,676	9.98	9,549

* For thermal HP capacity, see rating below.

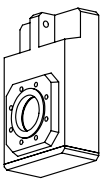
Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75

Housing Styles

F – Round Flange



G – Tapped Holes



Some Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size
TEFC 1750 RPM

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

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

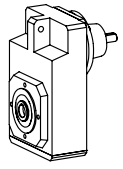
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: F302**AG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
95 RPM	**Output (Approximate)**							**75 RPM**		**60 RPM**		**45 RPM**	
1.42	916	F102_0185	MR140/050	56C	AW140/010	18.457	539	1.25	975	1.08	1,050	0.82	1,063
1.42	916	F102_0185	MR160/050	56C	AW160/012	18.457	539	1.25	975	1.08	1,050	0.82	1,063
1.42	916	F102_0185	MR160/140	143/145TC	AW160/012	18.457	539	1.25	975	1.08	1,050	0.82	1,063
2.61	1,702	F202_0185	MR140/050	56C	AW140/010	18.651	694	2.16	1,702	1.73	1,702	1.30	1,702
2.81	1,829	F202_0185	MR160/050	56C	AW160/012	18.651	694	2.48	1,947	2.13	2,098	1.62	2,126
2.81	1,829	F202_0185	MR160/140	143/145TC	AW160/012	18.651	694	2.48	1,947	2.13	2,098	1.62	2,126
4.65	3,051	F302_0190	MR160/050	56C	AW160/012	18.774	966	4.10	3,248	3.54	3,499	2.69	3,543
4.65	3,051	F302_0190	MR160/140	143/145TC	AW160/012	18.774	966	4.10	3,248	3.54	3,499	2.69	3,543
4.65	3,051	F302_0190	MR200/180	182/184/TC	AW200/014	18.774	966	4.10	3,248	3.54	3,499	2.69	3,543
7.72	5,025	F402_0185	MR160/050	56C	AW160/012	18.620	1,189	6.81	5,350	5.87	5,763	4.74	6,201
7.72	5,025	F402_0185	MR160/140	143/145TC	AW160/012	18.620	1,189	6.81	5,350	5.87	5,763	4.74	6,201
7.72	5,025	F402_0185	MR200/180	182/184/TC	AW200/014	18.620	1,189	6.81	5,350	5.87	5,763	4.74	6,201
7.72	5,025	F402_0185	MR250/180	182/184/TC	AW250/102	18.620	1,189	6.81	5,350	5.87	5,763	4.74	6,201
12.95	8,383	F602_0185	MR200/180	182/184/TC	AW200/014	18.522	1,604	11.43	8,925	9.85	9,614	7.48	9,744
12.95	8,383	F602_0185	MR250/210	213/215/TC	AW250/102	18.522	1,604	11.43	8,925	9.85	9,614	7.48	9,744
75 RPM	**Output (Approximate)**							**60 RPM**		**50 RPM**		**35 RPM**	
1.22	987	F102_0230	MR140/050	56C	AW140/010	23.080	569	1.08	1,051	0.87	1,063	0.66	1,063
1.22	987	F102_0230	MR160/050	56C	AW160/012	23.080	569	1.08	1,051	0.87	1,063	0.66	1,063
1.22	987	F102_0230	MR160/140	143/145TC	AW160/012	23.080	569	1.08	1,051	0.87	1,063	0.66	1,063
2.41	1,974	F202_0230	MR140/050	56C	AW140/010	23.434	735	2.09	2,064	1.67	2,064	1.25	2,064
2.41	1,974	F202_0230	MR160/050	56C	AW160/012	23.434	735	2.13	2,101	1.72	2,126	1.29	2,126
2.41	1,974	F202_0230	MR160/140	143/145TC	AW160/012	23.434	735	2.13	2,101	1.72	2,126	1.29	2,126
4.00	3,289	F302_0240	MR160/050	56C	AW160/012	23.520	1,022	3.53	3,501	2.86	3,543	2.14	3,543
4.00	3,289	F302_0240	MR160/140	143/145TC	AW160/012	23.520	1,022	3.53	3,501	2.86	3,543	2.14	3,543
4.00	3,289	F302_0240	MR200/180	182/184/TC	AW200/014	23.520	1,022	3.53	3,501	2.86	3,543	2.14	3,543
6.67	5,408	F402_0230	MR160/050	56C	AW160/012	23.214	1,256	5.88	5,758	5.07	6,201	3.80	6,201
6.67	5,408	F402_0230	MR160/140	143/145TC	AW160/012	23.214	1,256	5.88	5,758	5.07	6,201	3.80	6,201
6.67	5,408	F402_0230	MR200/180	182/184/TC	AW200/014	23.214	1,256	5.88	5,758	5.07	6,201	3.80	6,201
6.67	5,408	F402_0230	MR250/180	182/184/TC	AW250/102	23.214	1,256	5.88	5,758	5.07	6,201	3.80	6,201
9.84	7,998	F602_0230	MR160/050	56C	AW160/012	23.272	1,698	8.15	7,998	6.52	7,998	4.89	7,998
9.84	7,998	F602_0230	MR160/140	143/145TC	AW160/012	23.272	1,698	8.15	7,998	6.52	7,998	4.89	7,998
11.12	9,046	F602_0230	MR200/180	182/184/TC	AW200/014	23.272	1,698	9.81	9,631	7.94	9,744	5.96	9,744
11.12	9,046	F602_0230	MR250/180	182/184/TC	AW250/102	23.272	1,698	9.81	9,631	7.94	9,744	5.96	9,744
60 RPM	**Output (Approximate)** **Continued Next Page**							**50 RPM**		**40 RPM**		**30 RPM**	
1.07	1,055	F102_0280	MR140/050	56C	AW140/010	28.167	599	0.89	1,063	0.72	1,063	0.54	1,063
1.07	1,055	F102_0280	MR160/050	56C	AW160/012	28.167	599	0.89	1,063	0.72	1,063	0.54	1,063
1.07	1,055	F102_0280	MR160/140	143/145TC	AW160/012	28.167	599	0.89	1,063	0.72	1,063	0.54	1,063
2.13	2,097	F202_0280	MR140/050	56C	AW140/010	28.112	769	1.79	2,126	1.43	2,126	1.08	2,126

Part No. Explanation

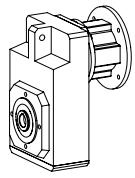
F 6 0 2 A G 0560 AW 160 / 012

- F — Offset Helical
- 6 — Unit No.
- 0 — Generation No.
- 2 — No. of Gear Reductions
- A — Output Style (A-Hollow; V-Solid)
- G — Housing Style
- 0560 — Ratio (0560 = 56.0:1)
- AW 160 — Input Shaft
- / 012 — Flange No. / Shaft Dia. (1/16 in.; example – 012 = 12/16 or 3/4)



F 6 0 2 A G 0560 MR 160 /140

- F — Offset Helical
- 6 — Unit No.
- 0 — Generation No.
- 2 — No. of Reductions
- A — Output Style (A-Hollow; V-Solid)
- G — Housing Style
- 0560 — Ratio (0560 = 56.0:1)
- MR 160 — Motor Adapter
- /140 — Flange No. / Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

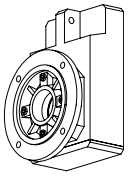
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
60 RPM Output (Approximate) Continued								**50 RPM**		**40 RPM**		**30 RPM**	
2.13	2,097	F202_0280	MR160/050	56C	AW160/012	28.112	769	1.79	2,126	1.43	2,126	1.08	2,126
2.13	2,097	F202_0280	MR160/140	143/145TC	AW160/012	28.112	769	1.79	2,126	1.43	2,126	1.08	2,126
3.54	3,495	F302_0280	MR160/050	56C	AW160/012	28.230	1,069	2.98	3,543	2.38	3,543	1.79	3,543
3.54	3,495	F302_0280	MR160/140	143/145TC	AW160/012	28.230	1,069	2.98	3,543	2.38	3,543	1.79	3,543
3.54	3,495	F302_0280	MR200/180	182/184/TC	AW200/014	28.230	1,069	2.98	3,543	2.38	3,543	1.79	3,543
5.89	5,756	F402_0280	MR160/050	56C	AW160/012	27.986	1,316	5.19	6,128	4.20	6,201	3.15	6,201
5.89	5,756	F402_0280	MR160/140	143/145TC	AW160/012	27.986	1,316	5.19	6,128	4.20	6,201	3.15	6,201
5.89	5,756	F402_0280	MR200/180	182/184/TC	AW200/014	27.986	1,316	5.19	6,128	4.20	6,201	3.15	6,201
5.89	5,756	F402_0280	MR250/180	182/184/TC	AW250/102	27.986	1,316	5.19	6,128	4.20	6,201	3.15	6,201
9.84	9,619	F602_0280	MR160/050	56C	AW160/012	27.986	1,779	8.15	9,619	6.52	9,619	4.89	9,619
9.84	9,619	F602_0280	MR160/140	143/145TC	AW160/012	27.986	1,779	8.15	9,619	6.52	9,619	4.89	9,619
9.84	9,619	F602_0280	MR200/180	182/184/TC	AW200/014	27.986	1,779	8.26	9,744	6.60	9,744	4.95	9,744
9.84	9,619	F602_0280	MR250/180	182/184/TC	AW250/102	27.986	1,779	8.26	9,744	6.60	9,744	4.95	9,744
50 RPM Output (Approximate)								**40 RPM**		**30 RPM**		**25 RPM**	
0.87	1,063	F102_0350	MR140/050	56C	AW140/010	35.049	632	0.72	1,063	0.58	1,063	0.43	1,063
0.87	1,063	F102_0350	MR160/050	56C	AW160/012	35.049	632	0.72	1,063	0.58	1,063	0.43	1,063
1.72	2,126	F202_0350	MR140/050	56C	AW140/010	35.455	815	1.42	2,126	1.14	2,126	0.85	2,126
1.72	2,126	F202_0350	MR160/140	143/145TC	AW160/012	35.455	815	1.42	2,126	1.14	2,126	0.85	2,126
2.42	2,967	F302_0350	MR140/050	56C	AW140/010	35.034	1,129	2.01	2,967	1.61	2,967	1.20	2,967
2.89	3,543	F302_0350	MR160/050	56C	AW160/012	35.034	1,129	2.40	3,543	1.92	3,543	1.44	3,543
2.89	3,543	F302_0350	MR160/140	143/145TC	AW160/012	35.034	1,129	2.40	3,543	1.92	3,543	1.44	3,543
5.06	6,201	F402_0350	MR160/050	56C	AW160/012	35.079	1,393	4.19	6,201	3.35	6,201	2.51	6,201
5.06	6,201	F402_0350	MR160/140	143/145TC	AW160/012	35.079	1,393	4.19	6,201	3.35	6,201	2.51	6,201
5.06	6,201	F402_0350	MR200/180	182/184/TC	AW200/014	35.079	1,393	4.19	6,201	3.35	6,201	2.51	6,201
5.06	6,201	F402_0350	MR250/180	182/184/TC	AW250/102	35.079	1,393	4.19	6,201	3.35	6,201	2.51	6,201
7.92	9,744	F602_0350	MR160/050	56C	AW160/012	35.208	1,884	6.56	9,744	5.25	9,744	3.94	9,744
7.92	9,744	F602_0350	MR160/140	143/145TC	AW160/012	35.208	1,884	6.56	9,744	5.25	9,744	3.94	9,744
7.92	9,744	F602_0350	MR200/180	182/184/TC	AW200/014	35.208	1,884	6.56	9,744	5.25	9,744	3.94	9,744
7.92	9,744	F602_0350	MR250/180	182/184/TC	AW250/102	35.208	1,884	6.56	9,744	5.25	9,744	3.94	9,744
35 RPM Output (Approximate) Continued Next Page								**30 RPM**		**25 RPM**		**18.5 RPM**	
0.66	1,063	F102_0460	MR140/050	56C	AW140/010	46.429	678	0.54	1,063	0.43	1,063	0.33	1,063
0.66	1,063	F102_0460	MR160/050	56C	AW160/012	46.429	678	0.54	1,063	0.43	1,063	0.33	1,063
1.29	2,126	F202_0470	MR140/050	56C	AW140/010	47.045	875	1.07	2,126	0.86	2,126	0.64	2,126
1.29	2,126	F202_0470	MR160/050	56C	AW160/012	47.045	875	1.07	2,126	0.86	2,126	0.64	2,126
1.29	2,126	F202_0470	MR160/140	143/145TC	AW160/012	47.045	875	1.07	2,126	0.86	2,126	0.64	2,126
2.15	3,543	F302_0470	MR140/050	56C	AW140/010	47.185	1,216	1.78	3,543	1.42	3,543	1.07	3,543
2.15	3,543	F302_0470	MR160/050	56C	AW160/012	47.185	1,216	1.78	3,543	1.42	3,543	1.07	3,543
2.15	3,543	F302_0470	MR160/140	143/145TC	AW160/012	47.185	1,216	1.78	3,543	1.42	3,543	1.07	3,543

* For thermal HP capacity, see rating below.

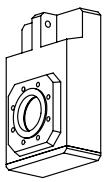
Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75

Housing Styles

F – Round Flange



G – Tapped Holes



Some Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size
TEFC 1750 RPM

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

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

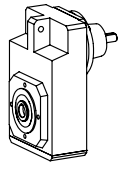
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: F302**AG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
35 RPM Output (Approximate) Continued								**30 RPM**		**25 RPM**		**18.5 RPM**	
3.78	6,201	F402_0470	MR160/050	56C	AW160/012	46.944	1,498	3.13	6,201	2.51	6,201	1.88	6,201
3.78	6,201	F402_0470	MR160/140	143/145TC	AW160/012	46.944	1,498	3.13	6,201	2.51	6,201	1.88	6,201
3.78	6,201	F402_0470	MR200/180	182/184/TC	AW200/014	46.944	1,498	3.13	6,201	2.51	6,201	1.88	6,201
3.78	6,201	F402_0470	MR250/180	182/184/TC	AW250/102	46.944	1,498	3.13	6,201	2.51	6,201	1.88	6,201
5.97	9,744	F602_0470	MR160/050	56C	AW160/012	46.719	2,022	4.95	9,744	3.96	9,744	2.97	9,744
5.97	9,744	F602_0470	MR160/140	143/145TC	AW160/012	46.719	2,022	4.95	9,744	3.96	9,744	2.97	9,744
5.97	9,744	F602_0470	MR200/180	182/184/TC	AW200/014	46.719	2,022	4.95	9,744	3.96	9,744	2.97	9,744
5.97	9,744	F602_0470	MR250/180	182/184/TC	AW250/102	46.719	2,022	4.95	9,744	3.96	9,744	2.97	9,744
30 RPM Output (Approximate)								**25 RPM**		**20 RPM**		**15.5 RPM**	
0.54	1,063	F102_0560	MR140/050	56C	AW140/010	55.972	711	0.45	1,063	0.36	1,063	0.27	1,063
0.54	1,063	F102_0560	MR160/050	56C	AW160/012	55.972	711	0.45	1,063	0.36	1,063	0.27	1,063
1.07	2,126	F202_0570	MR140/050	56C	AW140/010	56.727	917	0.89	2,126	0.71	2,126	0.53	2,126
1.07	2,126	F202_0570	MR160/050	56C	AW160/012	56.727	917	0.89	2,126	0.71	2,126	0.53	2,126
1.07	2,126	F202_0570	MR160/140	143/145TC	AW160/012	56.727	917	0.89	2,126	0.71	2,126	0.53	2,126
1.80	3,543	F302_0560	MR140/050	56C	AW140/010	56.486	1,272	1.49	3,543	1.19	3,543	0.89	3,543
1.80	3,543	F302_0560	MR160/050	56C	AW160/012	56.486	1,272	1.49	3,543	1.19	3,543	0.89	3,543
1.80	3,543	F302_0560	MR160/140	143/145TC	AW160/012	56.486	1,272	1.49	3,543	1.19	3,543	0.89	3,543
3.17	6,201	F402_0560	MR160/050	56C	AW160/012	55.972	1,565	2.63	6,201	2.10	6,201	1.58	6,201
3.17	6,201	F402_0560	MR160/140	143/145TC	AW160/012	55.972	1,565	2.63	6,201	2.10	6,201	1.58	6,201
3.17	6,201	F402_0560	MR200/180	182/184/TC	AW200/014	55.972	1,565	2.63	6,201	2.10	6,201	1.58	6,201
3.17	6,201	F402_0560	MR250/210	213/215/TC	AW250/102	55.972	1,565	2.63	6,201	2.10	6,201	1.58	6,201
5.01	9,744	F602_0560	MR160/050	56C	AW160/012	55.714	2,113	4.15	9,744	3.32	9,744	2.49	9,744
5.01	9,744	F602_0560	MR160/140	143/145TC	AW160/012	55.714	2,113	4.15	9,744	3.32	9,744	2.49	9,744
5.01	9,744	F602_0560	MR200/180	182/184/TC	AW200/014	55.714	2,113	4.15	9,744	3.32	9,744	2.49	9,744
5.01	9,744	F602_0560	MR250/180	182/184/TC	AW250/102	55.714	2,113	4.15	9,744	3.32	9,744	2.49	9,744
25 RPM Output (Approximate)								**20 RPM**		**16.5 RPM**		**12.5 RPM**	
0.43	1,063	F102_0700	MR140/050	56C	AW140/010	70.056	752	0.36	1,063	0.29	1,063	0.22	1,063
0.43	1,063	F102_0700	MR160/050	56C	AW160/012	70.056	752	0.36	1,063	0.29	1,063	0.22	1,063
0.87	2,126	F202_0700	MR140/050	56C	AW140/010	70.130	967	0.72	2,126	0.58	2,126	0.43	2,126
0.87	2,126	F202_0700	MR160/050	56C	AW160/012	70.130	967	0.72	2,126	0.58	2,126	0.43	2,126
1.44	3,543	F302_0700	MR140/050	56C	AW140/010	70.359	1,344	1.19	3,543	0.96	3,543	0.72	3,543
1.44	3,543	F302_0700	MR160/050	56C	AW160/012	70.359	1,344	1.19	3,543	0.96	3,543	0.72	3,543
1.44	3,543	F302_0700	MR160/140	143/145TC	AW160/012	70.359	1,344	1.19	3,543	0.96	3,543	0.72	3,543
2.53	6,201	F402_0700	MR160/050	56C	AW160/012	70.056	1,655	2.10	6,201	1.68	6,201	1.26	6,201
2.53	6,201	F402_0700	MR160/140	143/145TC	AW160/012	70.056	1,655	2.10	6,201	1.68	6,201	1.26	6,201
4.00	9,744	F602_0700	MR160/050	56C	AW160/012	69.643	2,234	3.32	9,744	2.65	9,744	1.99	9,744
4.00	9,744	F602_0700	MR160/140	143/145TC	AW160/012	69.643	2,234	3.32	9,744	2.65	9,744	1.99	9,744
4.00	9,744	F602_0700	MR200/180	182/184/TC	AW200/014	69.643	2,234	3.32	9,744	2.65	9,744	1.99	9,744
4.00	9,744	F602_0700	MR250/210	213/215/TC	AW250/102	69.643	2,234	3.32	9,744	2.65	9,744	1.99	9,744

Part No. Explanation

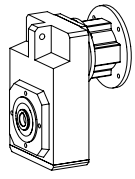
F 6 0 2 A G 0560 AW 160 / 012

- F – Offset Helical
- 6 – Unit No.
- 0 – Generation No.
- 2 – No. of Gear Reductions
- A – Output Style (A-Hollow; V-Solid)
- G – Housing Style
- 0560 – Ratio (0560 = 56.0:1)
- AW – Input Shaft
- 160 – Flange No.
- 012 – Shaft Dia. (1/16 in.; example – 012 = 12/16 or 3/4)



F 6 0 2 A G 0560 MR 160 /140

- F – Offset Helical
- 6 – Unit No.
- 0 – Generation No.
- 2 – No. of Reductions
- A – Output Style (A-Hollow; V-Solid)
- G – Housing Style
- 0560 – Ratio (0560 = 56.0:1)
- MR – Motor Adapter
- 160 – Flange No.
- /140 – Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
18.5 RPM Output (Approximate)								**15.5 RPM**		**12.5 RPM**		**9 RPM**	
0.32	1,063	F102_0940	MR140/050	56C	AW140/010	93.631	808	0.27	1,063	0.22	1,063	0.16	1,063
0.65	2,126	F202_0940	MR140/050	56C	AW140/010	93.818	1,040	0.54	2,126	0.43	2,126	0.32	2,126
0.65	2,126	F202_0940	MR160/050	56C	AW160/012	93.818	1,040	0.54	2,126	0.43	2,126	0.32	2,126
1.08	3,543	F302_0940	MR140/050	56C	AW140/010	93.644	1,443	0.90	3,543	0.72	3,543	0.54	3,543
1.08	3,543	F302_0940	MR160/050	56C	AW160/012	93.644	1,443	0.90	3,543	0.72	3,543	0.54	3,543
1.08	3,543	F302_0940	MR160/140	143/145TC	AW160/012	93.644	1,443	0.90	3,543	0.72	3,543	0.54	3,543
1.90	6,201	F402_0930	MR160/050	56C	AW160/012	93.333	1,779	1.58	6,201	1.26	6,201	0.95	6,201
1.90	6,201	F402_0930	MR160/140	143/145TC	AW160/012	93.333	1,779	1.58	6,201	1.26	6,201	0.95	6,201
2.99	9,744	F602_0930	MR160/050	56C	AW160/012	93.333	2,403	2.48	9,744	1.98	9,744	1.49	9,744
2.99	9,744	F602_0930	MR160/140	143/145TC	AW160/012	93.333	2,403	2.48	9,744	1.98	9,744	1.49	9,744
15.5 RPM Output (Approximate)								**12.5 RPM**		**10.5 RPM**		**8 RPM**	
0.27	1,063	F102_1120	MR140/050	56C	AW140/010	111.944	845	0.23	1,063	0.18	1,063	0.14	1,063
0.54	2,126	F202_1130	MR140/050	56C	AW140/010	112.727	1,088	0.45	2,126	0.36	2,126	0.27	2,126
0.90	3,543	F302_1130	MR140/050	56C	AW140/010	112.848	1,512	0.74	3,543	0.60	3,543	0.45	3,543
0.90	3,543	F302_1130	MR160/050	56C	AW160/012	112.848	1,512	0.74	3,543	0.60	3,543	0.45	3,543
1.58	6,201	F402_1120	MR160/050	56C	AW160/012	112.273	1,863	1.31	6,201	1.05	6,201	0.79	6,201
1.58	6,201	F402_1120	MR160/140	143/145TC	AW160/012	112.273	1,863	1.31	6,201	1.05	6,201	0.79	6,201
2.49	9,744	F602_1120	MR160/050	56C	AW160/012	112.202	2,517	2.06	9,744	1.65	9,744	1.24	9,744
2.49	9,744	F602_1120	MR160/140	143/145TC	AW160/012	112.202	2,517	2.06	9,744	1.65	9,744	1.24	9,744
12.5 RPM Output (Approximate)								**10 RPM**		**8 RPM**		**6 RPM**	
0.22	1,063	F102_1400	MR140/050	56C	AW140/010	139.750	893	0.18	1,063	0.14	1,063	0.11	1,063
0.43	2,126	F202_1410	MR140/050	56C	AW140/010	140.909	1,151	0.36	2,126	0.29	2,126	0.21	2,126
0.72	3,543	F302_1410	MR140/050	56C	AW140/010	140.648	1,598	0.60	3,543	0.48	3,543	0.36	3,543
1.27	6,201	F402_1400	MR160/050	56C	AW160/012	139.750	1,967	1.05	6,201	0.84	6,201	0.63	6,201
1.27	6,201	F402_1400	MR160/140	143/145TC	AW160/012	139.750	1,967	1.05	6,201	0.84	6,201	0.63	6,201
2.00	9,744	F602_1400	MR160/050	56C	AW160/012	139.750	2,659	1.65	9,744	1.32	9,744	0.99	9,744
2.00	9,744	F602_1400	MR160/140	143/145TC	AW160/012	139.750	2,659	1.65	9,744	1.32	9,744	0.99	9,744
9.5 RPM Output (Approximate)								**8 RPM**		**6 RPM**		**5 RPM**	
0.34	2,126	F203_1840	MR140/050	56C	AW140/010	184.261	1,215	0.28	2,126	0.22	2,126	0.16	2,126
0.56	3,543	F303_1850	MR140/050	56C	AW140/010	184.809	1,688	0.46	3,543	0.36	3,543	0.27	3,543
0.56	3,543	F303_1820	MR160/050	56C	AW160/012	182.449	1,688	0.47	3,543	0.37	3,543	0.28	3,543
0.98	6,201	F403_1840	MR140/050	56C	AW140/010	183.866	2,081	0.81	6,201	0.64	6,201	0.48	6,201
0.99	6,201	F403_1820	MR160/050	56C	AW160/012	181.519	2,081	0.82	6,201	0.65	6,201	0.49	6,201
1.57	9,744	F603_1810	MR160/050	56C	AW160/012	180.646	2,813	1.30	9,744	1.02	9,744	0.77	9,744
1.57	9,744	F603_1810	MR160/140	143/145TC	AW160/012	180.646	2,813	1.30	9,744	1.02	9,744	0.77	9,744

* For thermal HP capacity, see rating below.

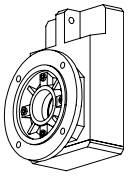
Base Module	F1	F2	F3	F4	F6
Thermal Capacity	2.95	5.36	7.38	12.34	14.75

NEMA Frame Size
TEFC 1750 RPM

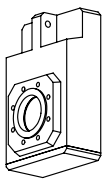
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10

Housing Styles

F – Round Flange



G – Tapped Holes



Some Housing Styles are available as Hollow (A) or Solid (V) Output.

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

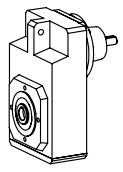
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: F302**AG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
8 RPM	**Output (Approximate)**							**6.5 RPM**		**5 RPM**		**4 RPM**	
0.28	2,126	F203_2220	MR140/050	56C	AW140/010	222.182	1,215	0.23	2,126	0.18	2,126	0.14	2,126
0.47	3,543	F303_2210	MR140/050	56C	AW140/010	221.237	1,688	0.39	3,543	0.30	3,543	0.23	3,543
0.47	3,543	F303_2180	MR160/050	56C	AW160/012	218.413	1,688	0.39	3,543	0.31	3,543	0.23	3,543
0.82	6,201	F403_2190	MR140/050	56C	AW140/010	219.225	2,081	0.68	6,201	0.54	6,201	0.40	6,201
0.83	6,201	F403_2160	MR160/050	56C	AW160/012	216.426	2,081	0.69	6,201	0.54	6,201	0.41	6,201
1.31	9,744	F603_2150	MR160/050	56C	AW160/012	215.429	2,813	1.09	9,744	0.86	9,744	0.64	9,744
1.31	9,744	F603_2150	MR160/140	143/145TC	AW160/012	215.429	2,813	1.09	9,744	0.86	9,744	0.64	9,744
6.5 RPM	**Output (Approximate)**							**5 RPM**		**4 RPM**		**3 RPM**	
0.22	2,126	F203_2750	MR140/050	56C	AW140/010	274.675	1,215	0.19	2,126	0.15	2,126	0.11	2,126
0.37	3,543	F303_2760	MR140/050	56C	AW140/010	275.573	1,688	0.31	3,543	0.24	3,543	0.18	3,543
0.38	3,543	F303_2720	MR160/050	56C	AW160/012	272.055	1,688	0.31	3,543	0.25	3,543	0.19	3,543
0.66	6,201	F403_2740	MR140/050	56C	AW140/010	274.384	2,081	0.54	6,201	0.43	6,201	0.32	6,201
0.67	6,201	F403_2710	MR160/050	56C	AW160/012	270.881	2,081	0.55	6,201	0.43	6,201	0.33	6,201
1.05	9,744	F603_2690	MR160/050	56C	AW160/012	269.286	2,813	0.87	9,744	0.69	9,744	0.51	9,744
1.05	9,744	F603_2690	MR160/140	143/145TC	AW160/012	269.286	2,813	0.87	9,744	0.69	9,744	0.51	9,744
5 RPM	**Output (Approximate)**							**4 RPM**		**3 RPM**		**2.5 RPM**	
0.17	2,126	F203_3670	MR140/050	56C	AW140/010	367.455	1,215	0.14	2,126	0.11	2,126	0.08	2,126
0.28	3,543	F303_3670	MR140/050	56C	AW140/010	366.774	1,688	0.23	3,543	0.18	3,543	0.14	3,543
0.28	3,543	F303_3620	MR160/050	56C	AW160/012	362.092	1,688	0.24	3,543	0.19	3,543	0.14	3,543
0.49	6,201	F403_3660	MR140/050	56C	AW140/010	365.556	2,081	0.41	6,201	0.32	6,201	0.24	6,201
0.50	6,201	F403_3610	MR160/050	56C	AW160/012	360.889	2,081	0.41	6,201	0.33	6,201	0.24	6,201
0.78	9,744	F603_3610	MR160/050	56C	AW160/012	360.889	2,813	0.65	9,744	0.51	9,744	0.38	9,744
4 RPM	**Output (Approximate)**							**3 RPM**		**2.5 RPM**		**2 RPM**	
0.14	2,126	F203_4420	MR140/050	56C	AW140/010	441.515	1,215	0.12	2,126	0.09	2,126	0.07	2,126
0.23	3,543	F303_4420	MR140/050	56C	AW140/010	441.990	1,688	0.19	3,543	0.15	3,543	0.11	3,543
0.41	6,201	F403_4400	MR140/050	56C	AW140/010	439.735	2,081	0.34	6,201	0.27	6,201	0.20	6,201
0.41	6,201	F403_4340	MR160/050	56C	AW160/012	434.121	2,081	0.34	6,201	0.27	6,201	0.20	6,201
0.65	9,744	F603_4340	MR160/050	56C	AW160/012	433.849	2,813	0.54	9,744	0.43	9,744	0.32	9,744
3 RPM	**Output (Approximate)**							**2.5 RPM**		**2 RPM**		**1.5 RPM**	
0.11	2,126	F203_5520	MR140/050	56C	AW140/010	551.894	1,215	0.09	2,126	0.07	2,126	0.05	2,126
0.19	3,543	F303_5510	MR140/050	56C	AW140/010	550.872	1,688	0.15	3,543	0.12	3,543	0.09	3,543
0.33	6,201	F403_5470	MR140/050	56C	AW140/010	547.354	2,081	0.27	6,201	0.21	6,201	0.16	6,201
0.52	9,744	F603_5400	MR160/050	56C	AW160/012	540.367	2,813	0.43	9,744	0.34	9,744	0.26	9,744

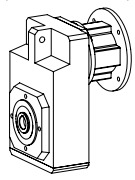
NOTE: For slower speeds than those listed, units can be combined. Contact STOBER Drives Inc.

Part No. Explanation

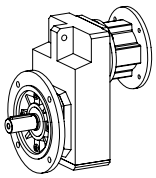
F 6 0 2 A G 0560 AW 160 / 012
- Shaft Dia. (1/16 in.; example – 012 = 12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0560 = 56.0:1)
- Housing Style
- Output Style (A-Hollow; V-Solid)
- No. of Gear Reductions
- Generation No.
- Unit No.
- Offset Helical



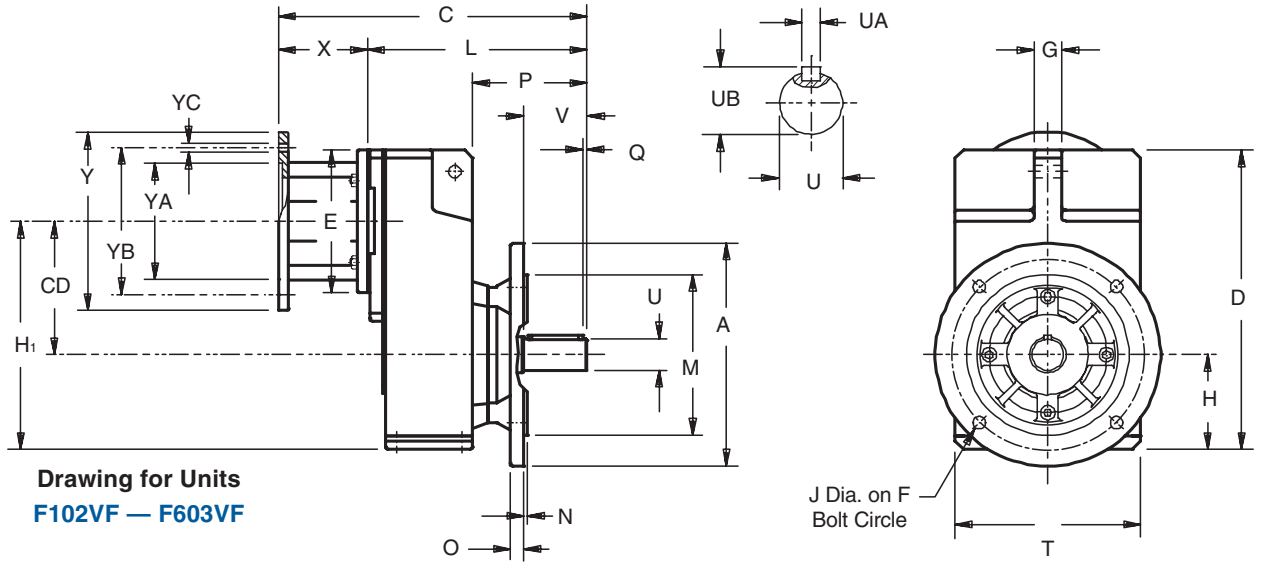
F 6 0 2 A G 0560 MR 160 /140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0560 = 56.0:1)
- Housing Style
- Output Style (A-Hollow; V-Solid)
- No. of Reductions
- Generation No.
- Unit No.
- Offset Helical



Mounting position must be specified when ordering.



"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 +.000/-.001	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

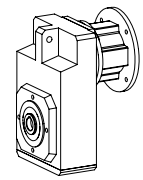
Table No. 4 Motor Adapter Dimensions (Inches)

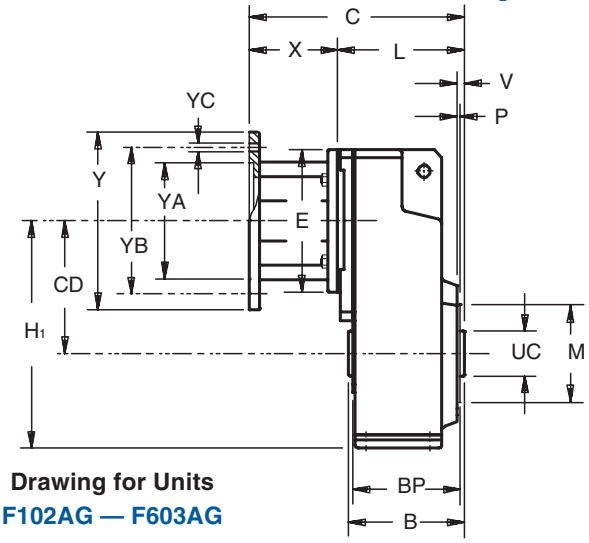
Base	MR140/050		MR160/140[2]		MR200/180		MR250/210[3]		Approx.
Module	C	L	C	L	C	L	C	L	Wt. lbs.
F102	10.40	7.09	11.10	7.24	—	—	—	—	38
F202	11.70	8.39	12.40	8.54	13.42	8.62	—	—	51
F203	13.15	9.84	—	—	—	—	—	—	64
F302	12.76	9.45	13.47	9.61	14.49	9.69	—	—	67
F303	14.22	10.91	15.13	11.28	—	—	—	—	73
F402	—	—	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.

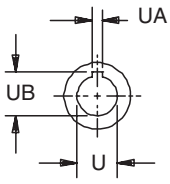
Part No. Example
Round Flange with Motor Adapter
F302VF0620 MR160/140

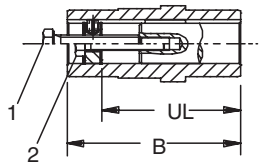
"F" Series – MGS Reducer
Tapped Holes – "G" Housing
Hollow Output – Dimensional Data





Drawing for Units
F102AG — F603AG





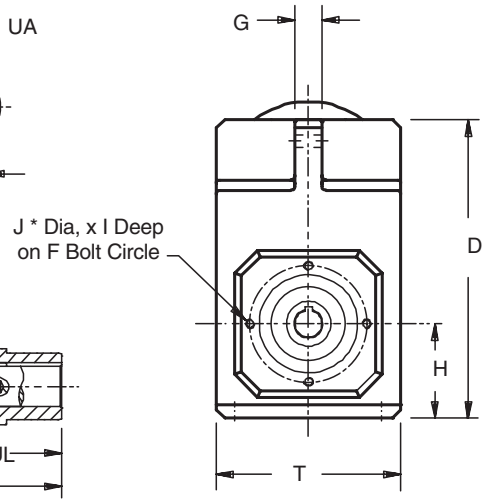


Table No. 1 **"F" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style**

Base Module	CD	B	C	D	D_1	F	F_1	G	H	H_1	H_2	I	J *	M	L_1	O	P	T	V	BP	RB
F102	4.02	3.74	2.86	9.37	.43	3.35	5.91	.79	2.91	6.93	.55	.51	M8	2.756	.59	1.38	.10	5.71	.26	3.43	1.18
F202/203	5.16	4.53	3.55	11.77	.43	4.53	7.13	.87	3.66	8.82	.98	.51	M8	3.740	.59	1.57	.12	7.09	.31	4.13	1.18
F302/303	5.89	5.12	4.06	13.23	.55	5.12	8.07	1.18	4.17	10.06	.96	.63	M10	4.331	.79	1.77	.14	8.11	.33	4.72	1.57
F402/403	6.65[1)]	5.71	4.53	14.57	.55	5.12	8.98	1.18	4.57	11.22	1.02	.63	M10	4.331	.79	1.77	.14	9.06	.33	5.31	1.57
F602/603	7.72	7.09	5.22	17.64	.57	6.50	10.63	1.38	5.39	13.11	1.02	.63	M10	5.118	1.18	2.77	.14	10.43	.41	6.54	2.36

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

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

Base Module	Standard Bore - inches			Optional Bore - mm			UC	UL	1
	U +.000/-.001	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	40_{H7}	14_{JS9}	53.8	2.76	5.63	3/4-10

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	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 approximate.

Part No. Example

Tapped Holes Housing with Motor Adapter
F302AG0620 MR160/140

Rubber Buffer for Torque Arm Mounting

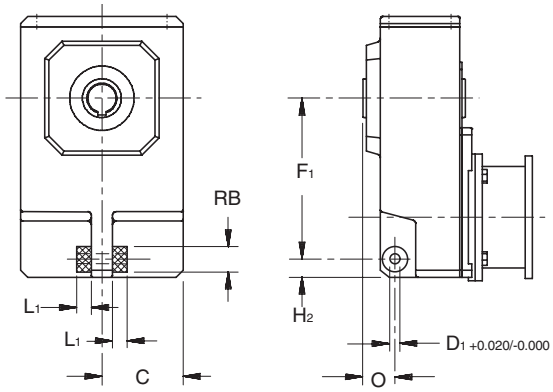
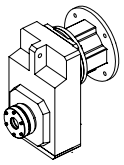


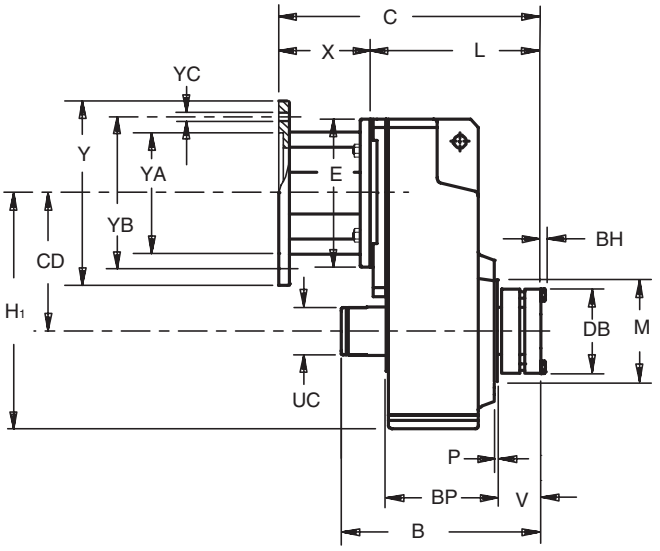
Table No. 5

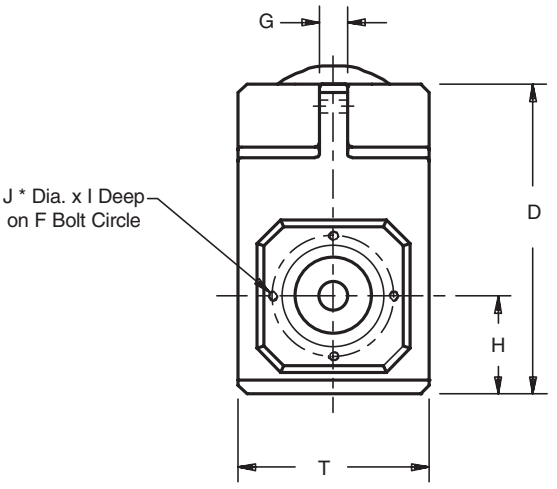
Base Module	Part No.
F1	25192
F2	25192
F3	25193
F4	25193
F6	25194

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



"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 No.– Size Metric	Tight Torque in.lbs	Tight Torque Nm
F102	4.02	6.40	9.37	3.35	.79	2.91	6.93	.51	M8	2.756	.10	5.71	1.18	.16	3.43	2.68	1.35	6 – M6x25	89	10
F202/F203	5.16	7.26	11.77	4.53	.87	3.66	8.82	.51	M8	3.740	.12	7.09	1.54	.16	4.13	3.07	1.74	8 – M6x30	89	10
F302/F303	5.89	7.95	13.23	5.12	1.18	4.17	10.06	.63	M10	4.331	.14	8.11	1.54	.16	4.72	3.31	1.90	8 – M6x30	89	10
F402/F403	6.65 [1]	8.93	14.57	5.12	1.18	4.57	11.22	.63	M10	4.331	.14	9.06	1.78	.20	5.31	3.82	2.14	8 – M8x30	221	25
F602/F603	7.72	10.24	17.64	6.50	1.38	5.39	13.11	.63	M10	5.118	.14	10.43	1.77	.24	6.54	4.13	2.53	8 – M10x35	434	49

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

Table No. 3 Motor Adapter Dimensions (Inches)

Base Module	MR140/050 C	MR140/050 L	MR160/140[2] C	MR160/140[2] L	MR200/180 C	MR200/180 L	MR250/210[3] C	MR250/210[3] L	Wt. 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

Part No. Example
Unit with Motor Adapter and 1 3/8" Bore Single Bushing
F402WG0560 MR160/140 WF4–106

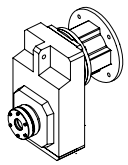
Table No. 4 "WF" Single Side Bushings

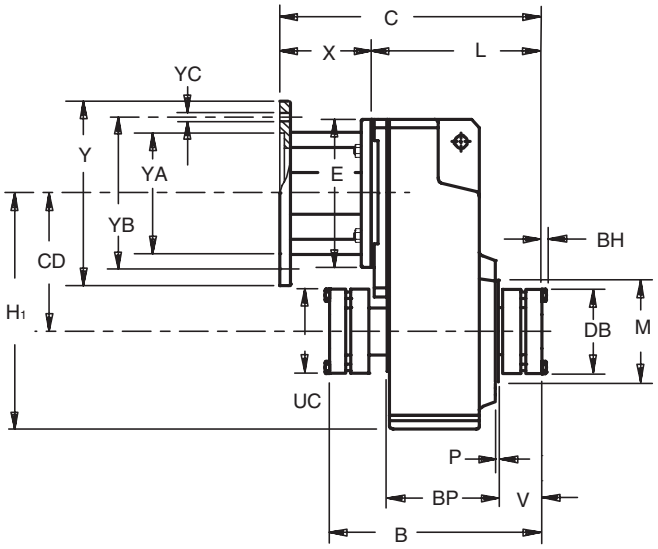
Base Module	Stock Bores Sizes 3/4	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2
F102	WF1-075	—	—	—	—	—	—	—	—	—	—	—	—
F202/F203	—	WF2-100	WF2-103	—	—	—	—	—	—	—	—	—	—
F302/F303	—	WF3-100	WF3-103	WF3-104	WF3-106	WF3-107	WF3-108	—	—	—	—	—	—
F402/F403	—	WF4-100	WF4-103	WF4-104	WF4-106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

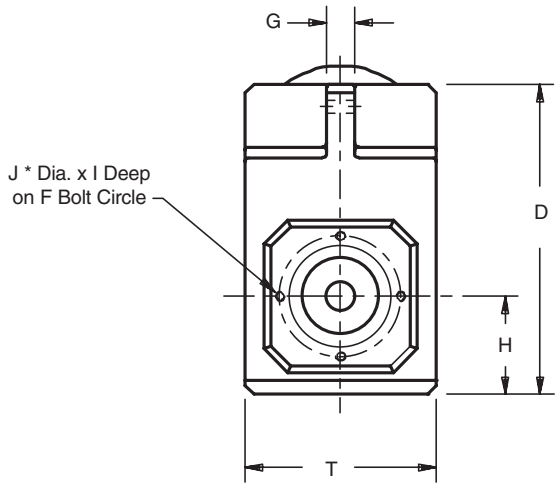
[2] Also available as **MR160/050** for a NEMA 56C frame motor.
[3] Also available as **MR250/180** for a NEMA 182/184TC frame motor.

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 No.– Size Metric	Tight Torque in.lbs	Tight Torque Nm
F102	4.02	6.73	9.37	3.35	.79	2.91	6.93	.51	M8	2.756	.10	5.71	1.18	.16	3.43	2.68	6 – M6x25	89	10
F202	5.16	7.77	11.77	4.53	.87	3.66	8.82	.51	M8	3.740	.12	7.09	1.54	.16	4.13	3.07	8 – M6x30	89	10
F302	5.89	8.46	13.23	5.12	1.18	4.17	10.06	.63	M10	4.331	.14	8.11	1.54	.16	4.72	3.31	8 – M6x30	89	10
F402	6.65 [1]	9.57	14.57	5.12	1.18	4.57	11.22	.63	M10	4.331	.14	9.06	1.78	.20	5.31	3.82	8 – M8x30	221	25
F602	7.72	10.84	17.64	6.50	1.38	5.39	13.11	.63	M10	5.118	.14	10.43	1.77	.24	6.54	4.13	8 – M10x35	434	49

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

[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

Table No. 3 Motor Adapter Dimensions (Inches)

Base Module	MR140/050 C	MR140/050 L	MR160/140 [2] C	MR160/140 [2] L	MR200/180 C	MR200/180 L	MR250/210 [3] C	MR250/210 [3] L	Wt. 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
F302	10.09	6.78	10.80	6.94	11.82	7.02	—	—	67
F402	—	—	11.63	7.77	12.65	7.85	13.28	7.97	84
F602	—	—	12.84	8.98	13.86	9.06	14.49	9.18	165

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.)

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.

Notes

“K” Series Right Angle Helical/Bevel Speed Reducers

3 YEAR WARRANTY

3-DAY DELIVERY

STÖBER

www.stober.com

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

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

Performance Specifications:

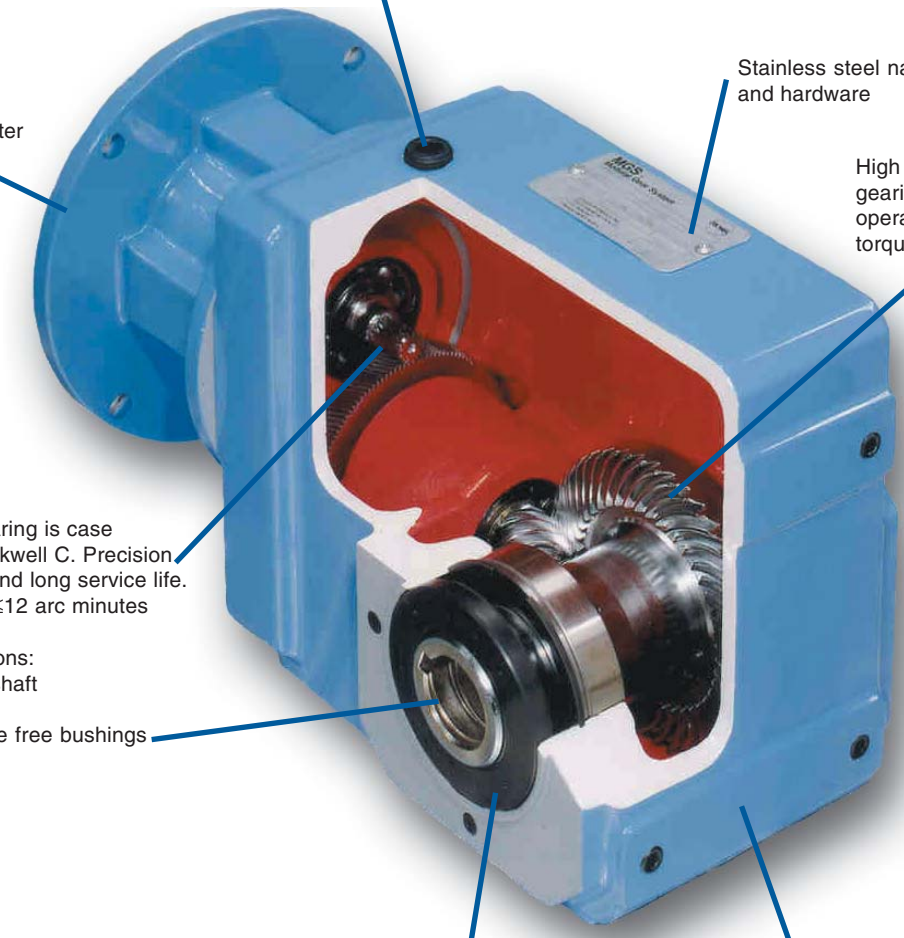
- Horsepower ratings from 1/6 to 165
- Output torques to 106,296 in. lbs.
- Output speeds available from 437 to 4.5 RPM
- Speed reducer ratios from 4:1 to 381:1
- 3 year warranty – your assurance of satisfactory product performance

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

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



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

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

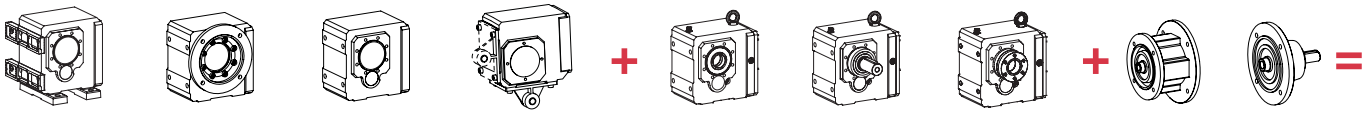
Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

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.

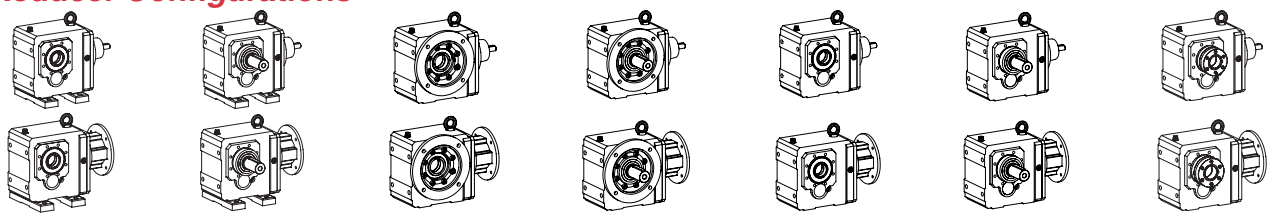
"K" Series – Right Angle Helical/Bevel MGS Speed Reducers Overview

Housing Style + Output Style + Input Style = Reducer Configurations



Style N Foot Mount | Style F Round Flange | Style G Tapped Holes | Style GD Torque Arm Bracket | + | Style A Hollow Output | Style V Solid Output | Style W Bushing Output | + | MT Motor Adapter | AW Input Shaft | =

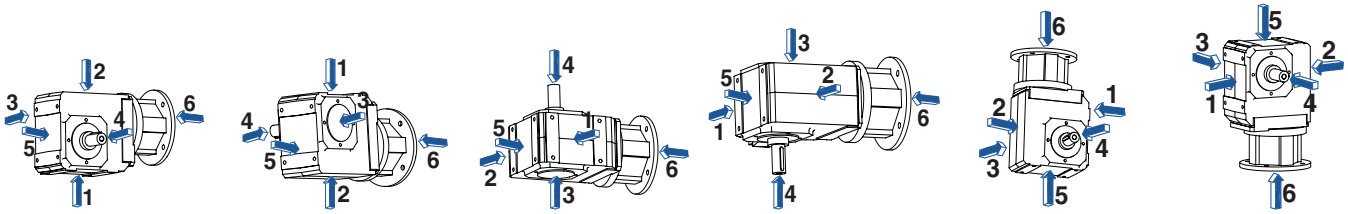
Reducer Configurations



Style AN Hollow Output | Style VN Solid Output | Style AF Hollow Output | Style VF Solid Output | Style AG Hollow Output | Style VG Solid Output | Style WG Bushing Output

Mounting Positions *(Units shown with shaft on Side 4.)*

EL1 EL2 EL3 EL4 EL5 EL6



Part No. Explanation with OPTIONS and REQUIRED INFORMATION

K 6 1 3 A GD 0580 MR160 / 140

- **K** – Right Angle Helical/Bevel
- **6** – Unit Size No.
- **1** – Design Generation
- **3** – No. of Stages (**3** = 3 Stage, determined by ratio)
- **A** – OUTPUT STYLE:
  - "**V**" Solid Output ..... **SPECIFY IN A NOTE**: .. Imperial or Metric[1)] Single or Double. IF Single: Shaft on Side 3 or Side 4
  - "**A**" Hollow Output ..... **SPECIFY IN A NOTE**: .. Imperial or Metric[1)]
  - "**W**" Wobble Free Bushing ... **SPECIFY IN A NOTE**: .. Single or Double Bushing. IF Single: Side 5 or Side 6
- **GD** – HOUSING STYLE:
  - "**F**" Housing Style – Flange Mounting ..... **SPECIFY IN A NOTE**: ..... Flange on Side 3 or Side 4
  - "**G**" Housing Style – Tapped Holes
  - "**GD**" G Housing with Torque Arm Bracket .... **SPECIFY IN A NOTE**: ..... Bracket on Side 1 or Side 5
  - "**N**" Housing Style – Foot Mount ..... **SPECIFY IN A NOTE**: ..... Feet on Side 1 or Side 5
- **0580** – Nominal Ratio: (**0580** = 57.5:1)
- **MR160** – Motor Adapter Size: MR140, **MR160**, MR200, MR300, MR350
- **140** – 050 (56C), **140** (143/145TC), 180 (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:

Mounting Position	–	EL1 EL2 EL3 EL4 EL5 EL6
Paint	–	Standard Gray ..... White ..... Stainless
Shaft Side	–	Side 3 or Side 4
Flange Side	–	Side 3 or Side 4
Feet Side	–	Side 1 or Side 5 (Also Side 2 on K1)

Part No. Explanation for Input Shaft

AW160 / 012

- **AW160** – Input Size: AW140, **AW160**, AW200, AW250, AW300, AW350
- **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 ($2^{2}/_{16}$=$2^{1}/_{8}$)

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
435 RPM Output (Approximate)								**360 RPM**		**290 RPM**		**215 RPM**	
2.64	369	K102_0040	MR140/050	56C	AW140/010	4.000	520	2.19	369	1.75	369	1.31	369
2.81	392	K202_0040	MR140/050	56C	AW140/010	4.000	624	2.32	392	1.86	392	1.39	392
3.83*	536	K102_0040	MR160/050	56C	AW160/012	4.000	520	3.38	570	2.91	614	2.41	676
3.83*	536	K102_0040	MR160/140	143/145TC	AW160/012	4.000	520	3.38	570	2.91	614	2.41	676
6.84*	957	K202_0040	MR160/050	56C	AW160/012	4.000	624	6.04	1,018	5.20	1,097	4.29	1,207
6.84*	957	K202_0040	MR160/140	143/145TC	AW160/012	4.000	624	6.04	1,018	5.20	1,097	4.29	1,207
6.84*	957	K202_0040	MR200/180	182/184/TC	AW200/014	4.000	624	6.04	1,018	5.20	1,097	4.29	1,207
9.84*	1,375	K302_0040	MR160/050	56C	AW160/012	4.000	728	8.15	1,375	6.52	1,375	4.89	1,375
9.84*	1,375	K302_0040	MR160/140	143/145TC	AW160/012	4.000	728	8.15	1,375	6.52	1,375	4.89	1,375
9.84	1,375	K402_0040	MR160/050	56C	AW160/012	4.000	1,165	8.15	1,375	6.52	1,375	4.89	1,375
9.84	1,375	K402_0040	MR160/140	143/145TC	AW160/012	4.000	1,165	8.15	1,375	6.52	1,375	4.89	1,375
11.99*	1,675	K302_0040	MR200/180	182/184/TC	AW200/014	4.000	728	10.57	1,784	9.11	1,921	7.52	2,115
17.99*	2,514	K402_0040	MR200/180	182/184/TC	AW200/014	4.000	1,165	15.87	2,677	13.67	2,883	11.29	3,173
17.99*	2,514	K402_0040	MR250/180	182/184/TC	AW250/102	4.000	1,165	15.87	2,677	13.67	2,883	11.29	3,173
400 RPM Output (Approximate)								**325 RPM**		**265 RPM**		**200 RPM**	
2.78	423	K202_0044	MR140/050	56C	AW140/010	4.364	638	2.30	423	1.84	423	1.38	423
6.46*	985	K202_0044	MR160/050	56C	AW160/012	4.364	638	5.70	1,048	4.91	1,129	4.05	1,243
6.46*	985	K202_0044	MR160/140	143/145TC	AW160/012	4.364	638	5.70	1,048	4.91	1,129	4.05	1,243
6.46*	985	K202_0044	MR200/180	182/184/TC	AW200/014	4.364	638	5.70	1,048	4.91	1,129	4.05	1,243
9.84*	1,500	K302_0044	MR160/050	56C	AW160/012	4.364	744	8.15	1,500	6.52	1,500	4.89	1,500
9.84*	1,500	K302_0044	MR160/140	143/145TC	AW160/012	4.364	744	8.15	1,500	6.52	1,500	4.89	1,500
9.84	1,500	K402_0044	MR160/050	56C	AW160/012	4.364	1,191	8.15	1,500	6.52	1,500	4.89	1,500
9.84	1,500	K402_0044	MR160/140	143/145TC	AW160/012	4.364	1,191	8.15	1,500	6.52	1,500	4.89	1,500
11.31*	1,725	K302_0044	MR200/180	182/184/TC	AW200/014	4.364	744	9.98	1,836	8.60	1,978	7.10	2,177
16.97*	2,588	K402_0044	MR200/180	182/184/TC	AW200/014	4.364	1,191	14.97	2,755	12.90	2,968	10.65	3,267
16.97*	2,588	K402_0044	MR250/180	182/184/TC	AW250/102	4.364	1,191	14.97	2,755	12.90	2,968	10.65	3,267
335 RPM Output (Approximate)								**275 RPM**		**225 RPM**		**165 RPM**	
5.76*	1,042	K202_0052	MR160/050	56C	AW160/012	5.177	666	5.08	1,110	4.38	1,196	3.62	1,316
5.76*	1,042	K202_0052	MR160/140	143/145TC	AW160/012	5.177	666	5.08	1,110	4.38	1,196	3.62	1,316
5.76*	1,042	K202_0052	MR200/180	182/184/TC	AW200/014	5.177	666	5.08	1,110	4.38	1,196	3.62	1,316
325 RPM Output (Approximate)								**265 RPM**		**215 RPM**		**160 RPM**	
9.84*	1,847	K302_0054	MR160/050	56C	AW160/012	5.375	784	8.15	1,847	6.52	1,847	4.89	1,847
9.84*	1,847	K302_0054	MR160/140	143/145TC	AW160/012	5.375	784	8.15	1,847	6.52	1,847	4.89	1,847
9.84	1,863	K402_0054	MR160/050	56C	AW160/012	5.422	1,257	8.15	1,863	6.52	1,863	4.89	1,863
9.84	1,863	K402_0054	MR160/140	143/145TC	AW160/012	5.422	1,257	8.15	1,863	6.52	1,863	4.89	1,863
9.84*	1,849	K302_0054	MR200/180	182/184/TC	AW200/014	5.375	784	8.68	1,968	7.48	2,120	6.14	2,319
14.69*	2,782	K402_0054	MR200/180	182/184/TC	AW200/014	5.422	1,257	12.96	2,962	11.16	3,191	9.22	3,512
14.69*	2,782	K402_0054	MR250/180	182/184/TC	AW250/102	5.422	1,257	12.96	2,962	11.16	3,191	9.22	3,512

* For thermal HP capacity, see rating below.

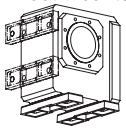
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

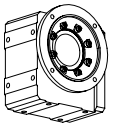
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

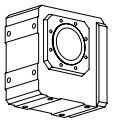
N – Foot Mounted



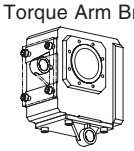
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

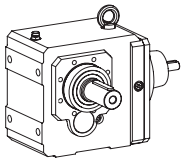
"K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data

NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
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.
4) Other frame sizes may also be available. See dimension pages.

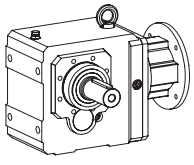
1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
315 RPM Output (Approximate)								**255 RPM**		**210 RPM**		**155 RPM**	
2.64	514	K102_0056	MR140/050	56C	AW140/010	5.568	565	2.19	514	1.75	514	1.31	514
3.07*	598	K102_0056	MR160/050	56C	AW160/012	5.568	565	2.71	637	2.34	686	1.93	755
3.07*	598	K102_0056	MR160/140	143/145TC	AW160/012	5.568	565	2.71	637	2.34	686	1.93	755
290 RPM Output (Approximate)								**240 RPM**		**190 RPM**		**145 RPM**	
2.50	524	K102_0060	MR140/050	56C	AW140/010	6.000	576	2.07	524	1.66	524	1.24	524
2.78	582	K202_0060	MR140/050	56C	AW140/010	6.000	691	2.30	582	1.84	582	1.38	582
2.92	613	K102_0060	MR160/050	56C	AW160/012	6.000	576	2.58	653	2.22	703	1.84	774
2.92	613	K102_0060	MR160/140	143/145TC	AW160/012	6.000	576	2.58	653	2.22	703	1.84	774
5.22	1,095	K202_0060	MR160/050	56C	AW160/012	6.000	691	4.61	1,166	3.97	1,256	3.28	1,382
5.22	1,095	K202_0060	MR160/140	143/145TC	AW160/012	6.000	691	4.61	1,166	3.97	1,256	3.28	1,382
5.22	1,095	K202_0060	MR200/180	182/184/TC	AW200/014	6.000	691	4.61	1,166	3.97	1,256	3.28	1,382
9.15*	1,918	K302_0060	MR160/050	56C	AW160/012	6.000	806	8.07	2,042	6.52	2,062	4.89	2,062
9.15*	1,918	K302_0060	MR160/140	143/145TC	AW160/012	6.000	806	8.07	2,042	6.52	2,062	4.89	2,062
9.15*	1,918	K302_0060	MR200/180	182/184/TC	AW200/014	6.000	806	8.07	2,042	6.95	2,199	5.74	2,421
9.84	2,062	K402_0060	MR160/050	56C	AW160/012	6.000	1,290	8.15	2,062	6.52	2,062	4.89	2,062
9.84	2,062	K402_0060	MR160/140	143/145TC	AW160/012	6.000	1,290	8.15	2,062	6.52	2,062	4.89	2,062
13.73*	2,878	K402_0060	MR200/180	182/184/TC	AW200/014	6.000	1,290	12.11	3,064	10.44	3,301	8.61	3,633
13.73*	2,878	K402_0060	MR250/180	182/184/TC	AW250/102	6.000	1,290	12.11	3,064	10.44	3,301	8.61	3,633
260 RPM Output (Approximate)								**215 RPM**		**175 RPM**		**130 RPM**	
2.46	571	K102_0066	MR140/050	56C	AW140/010	6.644	591	2.04	571	1.63	571	1.22	571
2.61	610	K202_0067	MR140/050	56C	AW140/010	6.683	710	2.16	610	1.73	610	1.30	610
2.73	634	K102_0066	MR160/050	56C	AW160/012	6.644	591	2.41	675	2.08	728	1.71	801
2.73	634	K102_0066	MR160/140	143/145TC	AW160/012	6.644	591	2.41	675	2.08	728	1.71	801
4.86	1,135	K202_0067	MR160/050	56C	AW160/012	6.683	710	4.29	1,208	3.70	1,302	3.05	1,433
4.86	1,135	K202_0067	MR160/140	143/145TC	AW160/012	6.683	710	4.29	1,208	3.70	1,302	3.05	1,433
4.86	1,135	K202_0067	MR200/180	182/184/TC	AW200/014	6.683	710	4.29	1,208	3.70	1,302	3.05	1,433
8.46*	1,994	K302_0067	MR160/050	56C	AW160/012	6.740	830	7.47	2,123	6.44	2,286	4.89	2,316
8.46*	1,994	K302_0067	MR160/140	143/145TC	AW160/012	6.740	830	7.47	2,123	6.44	2,286	4.89	2,316
8.46*	1,994	K302_0067	MR200/180	182/184/TC	AW200/014	6.740	830	7.47	2,123	6.44	2,286	5.31	2,517
9.84	2,309	K402_0067	MR160/050	56C	AW160/012	6.719	1,327	8.15	2,309	6.52	2,309	4.89	2,309
9.84	2,309	K402_0067	MR160/140	143/145TC	AW160/012	6.719	1,327	8.15	2,309	6.52	2,309	4.89	2,309
12.73*	2,988	K402_0067	MR200/180	182/184/TC	AW200/014	6.719	1,327	11.23	3,182	9.68	3,427	7.99	3,772
12.73*	2,988	K402_0067	MR250/180	182/184/TC	AW250/102	6.719	1,327	11.23	3,182	9.68	3,427	7.99	3,772
245 RPM Output (Approximate)								**200 RPM**		**160 RPM**		**120 RPM**	
4.66	1,159	K202_0071	MR160/050	56C	AW160/012	7.118	721	4.11	1,234	3.54	1,329	2.92	1,463
4.66	1,159	K202_0071	MR160/140	143/145TC	AW160/012	7.118	721	4.11	1,234	3.54	1,329	2.92	1,463
4.66	1,159	K202_0071	MR200/180	182/184/TC	AW200/014	7.118	721	4.11	1,234	3.54	1,329	2.92	1,463

Part No. Explanation

K 4 0 2 V G 0690 AW 160 / 012
- Shaft Dia. (1/16 in.; example – 012 = 12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.



K 4 0 2 V G 0690 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
235 RPM Output (Approximate)								**190 RPM**		**155 RPM**		**115 RPM**	
7.96*	2,056	K302_0074	MR160/050	56C	AW160/012	7.391	849	7.02	2,189	6.05	2,358	4.89	2,540
7.96*	2,056	K302_0074	MR160/140	143/145TC	AW160/012	7.391	849	7.02	2,189	6.05	2,358	4.89	2,540
7.96*	2,056	K302_0074	MR200/180	182/184/TC	AW200/014	7.391	849	7.02	2,189	6.05	2,358	5.00	2,595
9.84	2,563	K402_0075	MR160/050	56C	AW160/012	7.456	1,362	8.15	2,563	6.52	2,563	4.89	2,563
9.84	2,563	K402_0075	MR160/140	143/145TC	AW160/012	7.456	1,362	8.15	2,563	6.52	2,563	4.89	2,563
11.88	3,094	K402_0075	MR200/180	182/184/TC	AW200/014	7.456	1,362	10.48	3,294	9.03	3,548	7.45	3,906
11.88	3,094	K402_0075	MR250/180	182/184/TC	AW250/102	7.456	1,362	10.48	3,294	9.03	3,548	7.45	3,906
22.58*	5,710	K513_0073	MR200/180	182/184/TC	AW200/014	7.347	1,629	19.37	5,911	15.49	5,911	11.62	5,911
22.58*	5,710	K513_0073	MR250/180	182/184/TC	AW250/102	7.347	1,629	19.92	6,079	17.17	6,548	14.17	7,207
23.37*	5,891	K613_0073	MR200/180	182/184/TC	AW200/014	7.323	1,936	19.37	5,891	15.49	5,891	11.62	5,891
23.37	5,989	K813_0074	MR200/180	182/184/TC	AW200/014	7.445	3,524	19.37	5,989	15.49	5,989	11.62	5,989
23.37	6,084	K713_0076	MR200/180	182/184/TC	AW200/014	7.563	2,684	19.37	6,084	15.49	6,084	11.62	6,084
29.90	7,536	K613_0073	MR250/210	213/215/TC	AW250/102	7.323	1,936	26.38	8,024	22.73	8,644	18.12	9,189
29.90	7,536	K613_0073	MR300/210	213/215/TC	AW300/110	7.323	1,936	26.38	8,024	22.73	8,644	18.76	9,513
37.76	9,828	K713_0076	MR250/210	213/215/TC	AW250/102	7.563	2,684	31.28	9,828	25.03	9,828	18.77	9,828
39.64	10,157	K813_0074	MR250/210	213/215/TC	AW250/102	7.445	3,524	32.84	10,157	26.27	10,157	19.71	10,157
47.90*	12,467	K713_0076	MR300/280	284/286TC	AW300/110	7.563	2,684	42.25	13,274	36.41	14,299	30.06	15,738
75.74*	19,409	K813_0074	MR300/250	254/256TC	AW300/110	7.445	3,524	62.76	19,409	50.21	19,409	37.66	19,409
79.62*	21,741	K913_0079	MR300/250	254/256TC	AW300/110	7.934	8,025	65.97	21,741	52.77	21,741	39.58	21,741
220 RPM Output (Approximate)								**185 RPM**		**148 RPM**		**110 RPM**	
123.02*	33,594	K913_0079	MR350/320	324/326TC	AW350/202	7.934	8,025	101.93	33,594	81.55	33,594	61.16	33,594
123.02*	33,632	K1013_0079	MR350/320	324/326TC	AW350/202	7.943	9,880	101.93	33,632	81.55	33,632	61.16	33,632
215 RPM Output (Approximate)								**180 RPM**		**145 RPM**		**105 RPM**	
2.35	684	K102_0083	MR140/050	56C	AW140/010	8.309	625	1.97	689	1.57	689	1.18	689
2.35	684	K102_0083	MR160/050	56C	AW160/012	8.309	625	2.08	728	1.79	784	1.48	863
2.35	684	K102_0083	MR160/140	143/145TC	AW160/012	8.309	625	2.08	728	1.79	784	1.48	863
21.10*	5,907	K513_0081	MR200/180	182/184/TC	AW200/014	8.134	1,671	18.61	6,289	15.49	6,544	11.62	6,544
21.10*	5,907	K513_0081	MR250/180	182/184/TC	AW250/102	8.134	1,671	18.61	6,289	16.04	6,774	13.24	7,456
23.37	6,631	K813_0082	MR200/180	182/184/TC	AW200/014	8.243	3,615	19.37	6,631	15.49	6,631	11.62	6,631
23.37*	6,522	K613_0081	MR200/180	182/184/TC	AW200/014	8.107	1,986	19.37	6,522	15.49	6,522	11.62	6,522
27.94*	7,796	K613_0081	MR250/180	182/184/TC	AW250/102	8.107	1,986	24.65	8,301	21.24	8,942	17.53	9,841
27.94*	7,796	K613_0081	MR300/280	284/286TC	AW300/110	8.107	1,986	24.65	8,301	21.24	8,942	17.53	9,841
39.64	11,246	K813_0082	MR250/180	182/184/TC	AW250/102	8.243	3,615	32.84	11,246	26.27	11,246	19.71	11,246
75.74*	21,489	K813_0082	MR300/210	213/215/TC	AW300/110	8.243	3,615	62.76	21,489	50.21	21,489	37.66	21,489

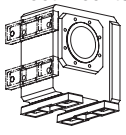
* For thermal HP capacity, see rating below.

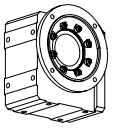
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

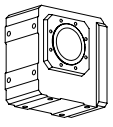
NEMA Frame Size TEFC 1750 RPM

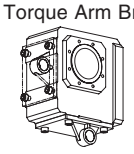
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted 

F – Round Flange 

G – Tapped Holes 

BD – Torque Arm Bracket 

These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

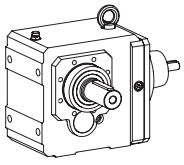
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
210 RPM Output (Approximate)								**170 RPM**		**140 RPM**		**105 RPM**	
2.52	740	K202_0084	MR140/050	56C	AW140/010	8.397	751	2.09	740	1.67	740	1.25	740
4.17	1,225	K202_0084	MR160/050	56C	AW160/012	8.397	751	3.68	1,304	3.17	1,405	2.62	1,546
4.17	1,225	K202_0084	MR160/140	143/145TC	AW160/012	8.397	751	3.68	1,304	3.17	1,405	2.62	1,546
4.17	1,225	K202_0084	MR200/180	182/184/TC	AW200/014	8.397	751	3.68	1,304	3.17	1,405	2.62	1,546
7.28	2,149	K302_0084	MR160/050	56C	AW160/012	8.444	878	6.43	2,288	5.54	2,465	4.57	2,713
7.28	2,149	K302_0084	MR160/140	143/145TC	AW160/012	8.444	878	6.43	2,288	5.54	2,465	4.57	2,713
7.28	2,149	K302_0084	MR200/180	182/184/TC	AW200/014	8.444	878	6.43	2,288	5.54	2,465	4.57	2,713
9.84	2,879	K402_0084	MR160/050	56C	AW160/012	8.377	1,402	8.15	2,879	6.52	2,879	4.89	2,879
9.84	2,879	K402_0084	MR160/140	143/145TC	AW160/012	8.377	1,402	8.15	2,879	6.52	2,879	4.89	2,879
10.99	3,216	K402_0084	MR200/180	182/184/TC	AW200/014	8.377	1,402	9.69	3,424	8.35	3,689	6.90	4,060
10.99	3,216	K402_0084	MR250/180	182/184/TC	AW250/102	8.377	1,402	9.69	3,424	8.35	3,689	6.90	4,060
23.37	6,736	K713_0084	MR200/180	182/184/TC	AW200/014	8.373	2,753	19.37	6,736	15.49	6,736	11.62	6,736
37.76*	10,881	K713_0084	MR250/210	213/215/TC	AW250/102	8.373	2,753	31.28	10,881	25.03	10,881	18.77	10,881
44.75*	12,897	K713_0084	MR300/250	254/256TC	AW300/110	8.373	2,753	39.48	13,732	34.02	14,792	28.09	16,281
190 RPM Output (Approximate)								**155 RPM**		**125 RPM**		**95 RPM**	
2.19	708	K102_0092	MR140/050	56C	AW140/010	9.249	641	1.93	754	1.63	795	1.22	795
2.19	708	K102_0092	MR160/050	56C	AW160/012	9.249	641	1.93	754	1.67	812	1.38	894
2.19	708	K102_0092	MR160/140	143/145TC	AW160/012	9.249	641	1.93	754	1.67	812	1.38	894
2.61	839	K202_0092	MR140/050	56C	AW140/010	9.190	769	2.16	839	1.73	839	1.30	839
3.93	1,262	K202_0092	MR160/050	56C	AW160/012	9.190	769	3.47	1,344	2.99	1,448	2.47	1,593
3.93	1,262	K202_0092	MR160/140	143/145TC	AW160/012	9.190	769	3.47	1,344	2.99	1,448	2.47	1,593
3.93	1,262	K202_0092	MR200/180	182/184/TC	AW200/014	9.190	769	3.47	1,344	2.99	1,448	2.47	1,593
6.85	2,217	K302_0093	MR160/050	56C	AW160/012	9.267	898	6.04	2,360	5.20	2,542	4.30	2,798
6.85	2,217	K302_0093	MR160/140	143/145TC	AW160/012	9.267	898	6.04	2,360	5.20	2,542	4.30	2,798
6.85	2,217	K302_0093	MR200/180	182/184/TC	AW200/014	9.267	898	6.04	2,360	5.20	2,542	4.30	2,798
9.84	3,175	K402_0092	MR160/050	56C	AW160/012	9.238	1,436	8.15	3,175	6.52	3,175	4.89	3,175
9.84	3,175	K402_0092	MR160/140	143/145TC	AW160/012	9.238	1,436	8.15	3,175	6.52	3,175	4.89	3,175
10.29	3,323	K402_0092	MR200/180	182/184/TC	AW200/014	9.238	1,436	9.08	3,538	7.83	3,811	6.46	4,195
10.29	3,323	K402_0092	MR250/180	182/184/TC	AW250/102	9.238	1,436	9.08	3,538	7.83	3,811	6.46	4,195
19.48*	6,147	K513_0092	MR200/180	182/184/TC	AW200/014	9.168	1,722	17.19	6,545	14.81	7,050	11.62	7,376
19.48*	6,147	K513_0092	MR250/210	213/215/TC	AW250/102	9.168	1,722	17.19	6,545	14.81	7,050	12.23	7,759
23.37	7,469	K813_0093	MR200/180	182/184/TC	AW200/014	9.284	3,724	19.37	7,469	15.49	7,469	11.62	7,469
23.37*	7,306	K613_0091	MR200/180	182/184/TC	AW200/014	9.081	2,043	19.37	7,306	15.49	7,306	11.62	7,306
23.37	7,392	K713_0092	MR200/180	182/184/TC	AW200/014	9.188	2,818	19.37	7,392	15.49	7,392	11.62	7,392
25.91*	8,097	K613_0091	MR250/180	182/184/TC	AW250/102	9.081	2,043	22.85	8,621	19.69	9,286	16.26	10,221
25.91*	8,097	K613_0091	MR300/210	213/215/TC	AW300/110	9.081	2,043	22.85	8,621	19.69	9,286	16.26	10,221
36.79*	11,634	K713_0092	MR250/180	182/184/TC	AW250/102	9.188	2,818	30.48	11,634	24.39	11,634	18.29	11,634
38.48	12,296	K813_0093	MR250/180	182/184/TC	AW250/102	9.284	3,724	31.88	12,296	25.51	12,296	19.13	12,296
42.07*	13,303	K713_0092	MR300/250	254/256TC	AW300/110	9.188	2,818	37.11	14,163	31.98	15,257	26.40	16,793
72.31*	23,107	K813_0093	MR300/250	254/256TC	AW300/110	9.284	3,724	60.93	23,496	48.74	23,496	36.56	23,496

Part No. Explanation

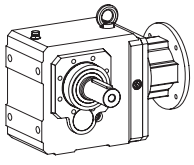
K 4 0 2 V G 0690 AW 160 / 012

- K — Unit No.
- 4 — Generation No.
- 0 — No. of Gear Reductions
- 2 — Output Style (A-hollow; V-solid)
- V — Housing Style
- G — Ratio (0690 = 69.0:1)
- 0690 — Input Shaft
- AW — Flange No.
- 160 — Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- 012



K 4 0 2 V G 0690 MR 160 / 140

- K — Unit No.
- 4 — Generation No.
- 0 — No. of Reductions
- 2 — Output Style (A-hollow; V-solid)
- V — Housing Style
- G — Ratio (0690 = 69.0:1)
- 0690 — Motor Adapter
- MR — Flange No.
- 160 — Motor Frame Size (140=143/145TC)
- 140



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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 [3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
170 RPM Output (Approximate)								**140 RPM**		**115 RPM**		**85 RPM**	
2.06	730	K102_0100	MR140/050	56C	AW140/010	10.140	656	1.82	778	1.52	814	1.14	814
2.06	730	K102_0100	MR160/050	56C	AW160/012	10.140	656	1.82	778	1.57	838	1.29	922
2.06	730	K102_0100	MR160/140	143/145TC	AW160/012	10.140	656	1.82	778	1.57	838	1.29	922
2.44	859	K202_0100	MR140/050	56C	AW140/010	10.073	786	2.02	859	1.62	859	1.21	859
3.70	1,301	K202_0100	MR160/050	56C	AW160/012	10.073	786	3.26	1,386	2.81	1,493	2.32	1,643
3.70	1,301	K202_0100	MR160/140	143/145TC	AW160/012	10.073	786	3.26	1,386	2.81	1,493	2.32	1,643
3.70	1,301	K202_0100	MR200/180	182/184/TC	AW200/014	10.073	786	3.26	1,386	2.81	1,493	2.32	1,643
6.45	2,284	K302_0100	MR160/050	56C	AW160/012	10.135	919	5.69	2,432	4.90	2,619	4.05	2,883
6.45	2,284	K302_0100	MR160/140	143/145TC	AW160/012	10.135	919	5.69	2,432	4.90	2,619	4.05	2,883
6.45	2,284	K302_0100	MR200/180	182/184/TC	AW200/014	10.135	919	5.69	2,432	4.90	2,619	4.05	2,883
9.70	3,423	K402_0100	MR160/050	56C	AW160/012	10.098	1,469	8.15	3,471	6.52	3,471	4.89	3,471
9.70	3,423	K402_0100	MR160/140	143/145TC	AW160/012	10.098	1,469	8.15	3,471	6.52	3,471	4.89	3,471
9.70	3,423	K402_0100	MR200/180	182/184/TC	AW200/014	10.098	1,469	8.56	3,645	7.38	3,926	6.09	4,321
9.70	3,423	K402_0100	MR250/180	182/184/TC	AW250/102	10.098	1,469	8.56	3,645	7.38	3,926	6.09	4,321
18.20*	6,359	K513_0100	MR200/180	182/184/TC	AW200/014	10.150	1,766	16.06	6,770	13.84	7,293	11.35	7,972
18.20*	6,359	K513_0100	MR250/180	182/184/TC	AW250/102	10.150	1,766	16.06	6,770	13.84	7,293	11.35	7,972
23.37*	8,088	K613_0100	MR200/180	182/184/TC	AW200/014	10.054	2,096	19.37	8,088	15.49	8,088	11.62	8,088
23.37*	8,183	K713_0100	MR200/180	182/184/TC	AW200/014	10.172	2,890	19.37	8,183	15.49	8,183	11.62	8,183
23.37	8,269	K813_0105	MR200/180	182/184/TC	AW200/014	10.279	3,820	19.37	8,269	15.49	8,269	11.62	8,269
24.21*	8,376	K613_0100	MR250/210	213/215/TC	AW250/102	10.054	2,096	21.35	8,918	18.40	9,607	15.19	10,574
24.21*	8,376	K613_0100	MR300/210	213/215/TC	AW300/110	10.054	2,096	21.35	8,918	18.40	9,607	15.19	10,574
36.79*	12,880	K713_0100	MR250/180	182/184/TC	AW250/102	10.172	2,890	30.48	12,880	24.39	12,880	18.29	12,880
38.48	13,614	K813_0105	MR250/180	182/184/TC	AW250/102	10.279	3,820	31.88	13,614	25.51	13,614	19.13	13,614
39.31*	13,762	K713_0100	MR300/250	254/256TC	AW300/110	10.172	2,890	34.68	14,652	29.88	15,783	24.67	17,372
67.57*	23,904	K813_0105	MR300/250	254/256TC	AW300/110	10.279	3,820	59.61	25,451	48.74	26,014	36.56	26,014
77.05*	26,830	K913_0100	MR300/280	284/286TC	AW300/110	10.117	8,528	63.84	26,830	51.07	26,830	38.31	26,830
123.02*	42,282	K1013_0100	MR350/320	324/326TC	AW350/202	9.986	10,462	101.93	42,282	81.55	42,282	61.16	42,282
123.02*	42,837	K913_0100	MR350/360	364/365TC	AW350/202	10.117	8,528	101.93	42,837	81.55	42,837	61.16	42,837
150 RPM Output (Approximate) Continued Next Page								**125 RPM**		**100 RPM**		**75 RPM**	
1.89	763	K102_0115	MR140/050	56C	AW140/010	11.565	678	1.67	813	1.44	875	1.18	959
1.89	763	K102_0115	MR160/050	56C	AW160/012	11.565	678	1.67	813	1.44	875	1.19	963
1.89	763	K102_0115	MR160/140	143/145TC	AW160/012	11.565	678	1.67	813	1.44	875	1.19	963
2.52	1,017	K202_0115	MR140/050	56C	AW140/010	11.546	814	2.09	1,017	1.67	1,017	1.25	1,017
3.38	1,362	K202_0115	MR160/050	56C	AW160/012	11.546	814	2.98	1,450	2.57	1,562	2.12	1,719
3.38	1,362	K202_0115	MR160/140	143/145TC	AW160/012	11.546	814	2.98	1,450	2.57	1,562	2.12	1,719
3.38	1,362	K202_0115	MR200/180	182/184/TC	AW200/014	11.546	814	2.98	1,450	2.57	1,562	2.12	1,719
5.89	2,390	K302_0115	MR160/050	56C	AW160/012	11.610	951	5.20	2,544	4.48	2,741	3.70	3,017
5.89	2,390	K302_0115	MR160/140	143/145TC	AW160/012	11.610	951	5.20	2,544	4.48	2,741	3.70	3,017
5.89	2,390	K302_0115	MR200/180	182/184/TC	AW200/014	11.610	951	5.20	2,544	4.48	2,741	3.70	3,017

* For thermal HP capacity, see rating below.

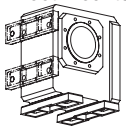
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

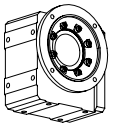
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

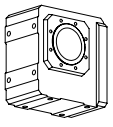
N – Foot Mounted



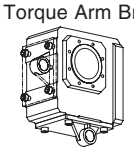
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

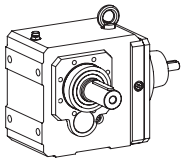
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
150 RPM Output (Approximate) Continued								**125 RPM**		**100 RPM**		**75 RPM**	
8.89	3,577	K402_0115	MR160/050	56C	AW160/012	11.518	1,518	7.84	3,808	6.52	3,959	4.89	3,959
8.89	3,577	K402_0115	MR160/140	143/145TC	AW160/012	11.518	1,518	7.84	3,808	6.52	3,959	4.89	3,959
8.89	3,577	K402_0115	MR200/180	182/184/TC	AW200/014	11.518	1,518	7.84	3,808	6.76	4,102	5.58	4,515
8.89	3,577	K402_0115	MR250/180	182/184/TC	AW250/102	11.518	1,518	7.84	3,808	6.76	4,102	5.58	4,515
16.68*	6,643	K513_0115	MR200/180	182/184/TC	AW200/014	11.569	1,825	14.72	7,072	12.68	7,618	9.95	7,972
16.68*	6,643	K513_0115	MR250/180	182/184/TC	AW250/102	11.569	1,825	14.72	7,072	12.68	7,618	9.95	7,972
22.25*	8,736	K613_0115	MR200/180	182/184/TC	AW200/014	11.407	2,163	19.37	9,177	15.49	9,177	11.62	9,177
22.25*	8,736	K613_0115	MR250/180	182/184/TC	AW250/102	11.407	2,163	19.63	9,301	16.92	10,020	13.96	11,028
22.25*	8,736	K613_0115	MR300/250	254/256TC	AW300/110	11.407	2,163	19.63	9,301	16.92	10,020	13.96	11,028
23.37	9,478	K713_0120	MR200/180	182/184/TC	AW200/014	11.781	2,998	19.37	9,478	15.49	9,478	11.62	9,478
23.37	9,578	K813_0120	MR200/180	182/184/TC	AW200/014	11.906	3,963	19.37	9,578	15.49	9,578	11.62	9,578
35.42*	14,362	K713_0120	MR250/180	182/184/TC	AW250/102	11.781	2,998	29.35	14,362	23.48	14,362	17.61	14,362
35.64*	14,452	K713_0120	MR300/250	254/256TC	AW300/110	11.781	2,998	31.44	15,387	27.10	16,575	22.37	18,243
37.08	15,196	K813_0120	MR250/210	213/215/TC	AW250/102	11.906	3,963	30.73	15,196	24.58	15,196	18.44	15,196
61.26*	25,104	K813_0120	MR300/250	254/256TC	AW300/110	11.906	3,963	54.04	26,728	46.57	28,792	35.23	29,039
140 RPM Output (Approximate)								**115 RPM**		**92 RPM**		**70 RPM**	
1.78	786	K102_0125	MR140/050	56C	AW140/010	12.618	693	1.57	836	1.35	901	1.10	974
1.78	786	K102_0125	MR160/050	56C	AW160/012	12.618	693	1.57	836	1.35	901	1.10	974
1.78	786	K102_0125	MR160/140	143/145TC	AW160/012	12.618	693	1.57	836	1.35	901	1.10	974
2.35	1,042	K202_0125	MR140/050	56C	AW140/010	12.705	833	1.94	1,042	1.56	1,042	1.17	1,042
2.42	1,065	K302_0125	MR140/050	56C	AW140/010	12.577	970	2.01	1,065	1.61	1,065	1.20	1,065
3.17	1,406	K202_0125	MR160/050	56C	AW160/012	12.705	833	2.79	1,497	2.41	1,613	1.98	1,772
3.17	1,406	K202_0125	MR160/140	143/145TC	AW160/012	12.705	833	2.79	1,497	2.41	1,613	1.98	1,772
3.17	1,406	K202_0125	MR200/180	182/184/TC	AW200/014	12.705	833	2.79	1,497	2.41	1,613	1.98	1,772
5.58	2,454	K302_0125	MR160/050	56C	AW160/012	12.577	970	4.93	2,613	4.25	2,815	3.50	3,098
5.58	2,454	K302_0125	MR160/140	143/145TC	AW160/012	12.577	970	4.93	2,613	4.25	2,815	3.50	3,098
5.58	2,454	K302_0125	MR200/180	182/184/TC	AW200/014	12.577	970	4.93	2,613	4.25	2,815	3.50	3,098
8.34	3,691	K402_0125	MR160/050	56C	AW160/012	12.658	1,554	7.36	3,930	6.34	4,233	4.89	4,350
8.34	3,691	K402_0125	MR160/140	143/145TC	AW160/012	12.658	1,554	7.36	3,930	6.34	4,233	4.89	4,350
8.34	3,691	K402_0125	MR200/180	182/184/TC	AW200/014	12.658	1,554	7.36	3,930	6.34	4,233	5.24	4,659
8.34	3,691	K402_0125	MR250/180	182/184/TC	AW250/102	12.658	1,554	7.36	3,930	6.34	4,233	5.24	4,659
15.59*	6,872	K513_0130	MR200/180	182/184/TC	AW200/014	12.808	1,872	13.75	7,316	11.85	7,881	8.99	7,972
15.59*	6,872	K513_0130	MR250/180	182/184/TC	AW250/102	12.808	1,872	13.75	7,316	11.85	7,881	8.99	7,972
20.79*	9,038	K613_0125	MR200/180	182/184/TC	AW200/014	12.629	2,219	18.34	9,622	15.49	10,160	11.62	10,160
20.79*	9,038	K613_0125	MR250/180	182/184/TC	AW250/102	12.629	2,219	18.34	9,622	15.81	10,365	13.05	11,409
20.79*	9,038	K613_0125	MR300/250	254/256TC	AW300/110	12.629	2,219	18.34	9,622	15.81	10,365	13.05	11,409
74.69*	32,196	K913_0125	MR300/250	254/256TC	AW300/110	12.525	8,996	61.88	32,196	49.51	32,196	37.13	32,196
107.50*	46,343	K913_0125	MR350/360	364/365TC	AW350/202	12.525	8,996	94.84	49,341	81.55	53,032	61.16	53,032
123.02*	52,846	K1013_0125	MR350/360	364/365TC	AW350/202	12.481	11,062	101.93	52,846	81.55	52,846	61.16	52,846

Part No. Explanation

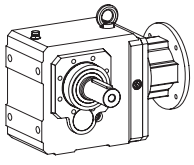
K 4 0 2 V G 0690 AW 160 / 012

- Unit No.
- Generation No.
- No. of Gear Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



K 4 0 2 V G 0690 MR 160 / 140

- Unit No.
- Generation No.
- No. of Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
135 RPM Output (Approximate)								**110 RPM**		**90 RPM**		**65 RPM**	
23.37	10,605	K813_0130	MR200/180	182/184/TC	AW200/014	13.182	4,065	19.37	10,605	15.49	10,605	11.62	10,605
23.37	10,493	K713_0130	MR200/180	182/184/TC	AW200/014	13.043	3,076	19.37	10,493	15.49	10,493	11.62	10,493
33.30*	14,951	K713_0130	MR250/180	182/184/TC	AW250/102	13.043	3,076	29.35	15,901	23.48	15,901	17.61	15,901
33.30*	14,951	K713_0130	MR300/180	182/184/TC	AW300/110	13.043	3,076	29.38	15,918	25.32	17,147	20.90	18,873
37.08	16,825	K813_0130	MR250/180	182/184/TC	AW250/102	13.182	4,065	30.73	16,825	24.58	16,825	18.44	16,825
57.24*	25,971	K813_0130	MR300/250	254/256TC	AW300/110	13.182	4,065	50.50	27,651	43.52	29,786	35.23	32,151
125 RPM Output (Approximate)								**100 RPM**		**85 RPM**		**62 RPM**	
1.65	816	K102_0140	MR140/050	56C	AW140/010	14.114	713	1.46	868	1.26	935	1.04	1,029
1.65	816	K102_0140	MR160/050	56C	AW160/012	14.114	713	1.46	868	1.26	935	1.04	1,029
1.65	816	K102_0140	MR160/140	143/145TC	AW160/012	14.114	713	1.46	868	1.26	935	1.04	1,029
2.44	1,181	K202_0140	MR140/050	56C	AW140/010	13.851	852	2.02	1,181	1.62	1,181	1.21	1,181
2.99	1,447	K202_0140	MR160/050	56C	AW160/012	13.851	852	2.64	1,541	2.27	1,660	1.82	1,772
2.99	1,447	K202_0140	MR160/140	143/145TC	AW160/012	13.851	852	2.64	1,541	2.27	1,660	1.82	1,772
5.22	2,540	K302_0140	MR160/050	56C	AW160/012	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100
5.22	2,540	K302_0140	MR160/140	143/145TC	AW160/012	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100
5.22	2,540	K302_0140	MR200/180	182/184/TC	AW200/014	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100
7.85	3,806	K402_0140	MR160/050	56C	AW160/012	13.885	1,591	6.92	4,053	5.96	4,366	4.89	4,772
7.85	3,806	K402_0140	MR160/140	143/145TC	AW160/012	13.885	1,591	6.92	4,053	5.96	4,366	4.89	4,772
7.85	3,806	K402_0140	MR200/180	182/184/TC	AW200/014	13.885	1,591	6.92	4,053	5.96	4,366	4.92	4,805
7.85	3,806	K402_0140	MR250/180	182/184/TC	AW250/102	13.885	1,591	6.92	4,053	5.96	4,366	4.92	4,805
120 RPM Output (Approximate)								**95 RPM**		**80 RPM**		**60 RPM**	
9.84	4,924	K513_0145	MR160/050	56C	AW160/012	14.536	1,932	8.15	4,924	6.52	4,924	4.89	4,924
9.84	4,924	K513_0145	MR160/140	143/145TC	AW160/012	14.536	1,932	8.15	4,924	6.52	4,924	4.89	4,924
14.33	7,168	K513_0145	MR200/180	182/184/TC	AW200/014	14.536	1,932	12.64	7,631	10.56	7,972	7.92	7,972
14.33	7,168	K513_0145	MR250/210	213/215/TC	AW250/102	14.536	1,932	12.64	7,631	10.56	7,972	7.92	7,972
19.11	9,427	K613_0145	MR200/180	182/184/TC	AW200/014	14.332	2,290	16.86	10,037	14.53	10,812	11.62	11,530
19.11	9,427	K613_0145	MR250/210	213/215/TC	AW250/102	14.332	2,290	16.86	10,037	14.53	10,812	11.99	11,900
19.11	9,427	K613_0145	MR300/250	254/256TC	AW300/110	14.332	2,290	16.86	10,037	14.53	10,812	11.99	11,900
23.37	11,908	K713_0150	MR200/180	182/184/TC	AW200/014	14.802	3,175	19.37	11,908	15.49	11,908	11.62	11,908
23.37	11,940	K813_0150	MR200/180	182/184/TC	AW200/014	14.842	4,187	19.37	11,940	15.49	11,940	11.62	11,940
30.61*	15,595	K713_0150	MR250/180	182/184/TC	AW250/102	14.802	3,175	27.00	16,604	22.69	17,438	17.02	17,438
30.61*	15,595	K713_0150	MR300/180	182/184/TC	AW300/110	14.802	3,175	27.00	16,604	23.27	17,886	19.21	19,686
35.74	18,259	K813_0150	MR250/210	213/215/TC	AW250/102	14.842	4,187	29.62	18,259	23.69	18,259	17.77	18,259
52.89*	27,018	K813_0150	MR300/280	284/286TC	AW300/110	14.842	4,187	46.66	28,766	40.21	30,987	33.19	34,106

* For thermal HP capacity, see rating below.

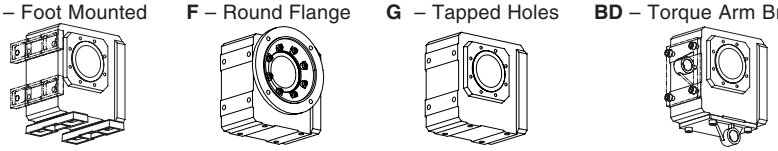
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

N – Foot Mounted **F** – Round Flange **G** – Tapped Holes **BD** – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

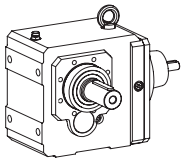
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
110 RPM Output (Approximate)								**90 RPM**		**75 RPM**		**55 RPM**	
9.84	5,451	K513_0160	MR160/140	143/145TC	AW160/012	16.093	1,982	8.15	5,451	6.52	5,451	4.89	5,451
9.84	5,451	K513_0160	MR160/140	143/145TC	AW160/012	16.093	1,982	8.15	5,451	6.52	5,451	4.89	5,451
13.39	7,415	K513_0160	MR200/180	182/184/TC	AW200/014	16.093	1,982	11.81	7,895	9.54	7,972	7.16	7,972
13.39	7,415	K513_0160	MR250/180	182/184/TC	AW250/102	16.093	1,982	11.81	7,895	9.54	7,972	7.16	7,972
17.86	9,752	K613_0160	MR200/180	182/184/TC	AW200/014	15.868	2,349	15.75	10,383	13.58	11,185	11.21	12,311
17.86	9,752	K613_0160	MR250/180	182/184/TC	AW250/102	15.868	2,349	15.75	10,383	13.58	11,185	11.21	12,311
17.86	9,752	K613_0160	MR300/180	182/184/TC	AW300/110	15.868	2,349	15.75	10,383	13.58	11,185	11.21	12,311
71.79*	39,311	K913_0160	MR300/250	254/256TC	AW300/110	15.910	9,550	59.48	39,311	47.59	39,311	35.69	39,311
91.66*	50,190	K913_0160	MR350/320	324/326TC	AW350/202	15.910	9,550	80.86	53,437	69.68	57,563	56.29	62,006
123.02*	67,221	K1013_0160	MR350/360	364/365TC	AW350/202	15.876	11,748	101.93	67,221	81.55	67,221	61.16	67,221
105 RPM Output (Approximate)								**85 RPM**		**70 RPM**		**53 RPM**	
1.48	863	K102_0165	MR140/050	56C	AW140/010	16.714	744	1.30	919	1.11	974	0.83	974
1.48	863	K102_0165	MR160/050	56C	AW160/012	16.714	744	1.30	919	1.11	974	0.83	974
1.48	863	K102_0165	MR160/140	143/145TC	AW160/012	16.714	744	1.30	919	1.11	974	0.83	974
2.23	1,313	K202_0170	MR140/050	56C	AW140/010	16.858	894	1.85	1,313	1.48	1,313	1.11	1,313
2.29	1,358	K302_0170	MR140/050	56C	AW140/010	16.939	1,045	1.90	1,358	1.52	1,358	1.14	1,358
2.62	1,545	K202_0170	MR160/050	56C	AW160/012	16.858	894	2.31	1,645	1.99	1,772	1.50	1,772
2.62	1,545	K202_0170	MR160/140	143/145TC	AW160/012	16.858	894	2.31	1,645	1.99	1,772	1.50	1,772
4.58	2,710	K302_0170	MR160/050	56C	AW160/012	16.939	1,045	4.04	2,886	3.47	3,100	2.60	3,100
4.58	2,710	K302_0170	MR160/140	143/145TC	AW160/012	16.939	1,045	4.04	2,886	3.47	3,100	2.60	3,100
4.58	2,710	K302_0170	MR200/180	182/184/TC	AW200/014	16.939	1,045	4.04	2,886	3.47	3,100	2.60	3,100
6.87	4,067	K402_0170	MR160/050	56C	AW160/012	16.939	1,672	6.06	4,330	5.22	4,665	4.09	4,872
6.87	4,067	K402_0170	MR160/140	143/145TC	AW160/012	16.939	1,672	6.06	4,330	5.22	4,665	4.09	4,872
6.87	4,067	K402_0170	MR200/180	182/184/TC	AW200/014	16.939	1,672	6.06	4,330	5.22	4,665	4.09	4,872
6.87	4,067	K402_0170	MR250/210	213/215/TC	AW250/102	16.939	1,672	6.06	4,330	5.22	4,665	4.09	4,872
9.84	5,811	K613_0170	MR160/050	56C	AW160/012	17.156	2,396	8.15	5,811	6.52	5,811	4.89	5,811
9.84	5,811	K613_0170	MR160/140	143/145TC	AW160/012	17.156	2,396	8.15	5,811	6.52	5,811	4.89	5,811
16.95	10,009	K613_0170	MR200/180	182/184/TC	AW200/014	17.156	2,396	14.95	10,657	12.89	11,480	10.64	12,635
16.95	10,009	K613_0170	MR250/180	182/184/TC	AW250/102	17.156	2,396	14.95	10,657	12.89	11,480	10.64	12,635
16.95	10,009	K613_0170	MR300/280	284/286TC	AW300/110	17.156	2,396	14.95	10,657	12.89	11,480	10.64	12,635
23.37	13,184	K713_0165	MR200/180	182/184/TC	AW200/014	16.388	3,256	19.37	13,184	15.49	13,184	11.62	13,184
23.37	13,219	K813_0165	MR200/180	182/184/TC	AW200/014	16.432	4,295	19.37	13,219	15.49	13,219	11.62	13,219
28.60	16,133	K713_0165	MR250/180	182/184/TC	AW250/102	16.388	3,256	25.23	17,177	21.74	18,503	17.02	19,306
28.60	16,133	K713_0165	MR300/250	254/256TC	AW300/110	16.388	3,256	25.23	17,177	21.74	18,503	17.95	20,365
35.74	20,215	K813_0165	MR250/210	213/215/TC	AW250/102	16.432	4,295	29.62	20,215	23.69	20,215	17.77	20,215
49.42*	27,951	K813_0165	MR300/180	182/184/TC	AW300/110	16.432	4,295	43.60	29,759	37.57	32,057	31.01	35,283

Part No. Explanation

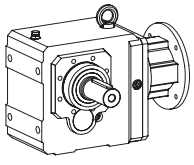
K 4 0 2 V G 0690 AW 160 / 012

- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.



K 4 0 2 V G 0690 MR 160 / 140

- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
100 RPM Output (Approximate)								**82 RPM**		**65 RPM**		**50 RPM**	
1.43	877	K102_0175	MR140/050	56C	AW140/010	17.563	753	1.26	934	1.09	1,006	0.86	1,063
1.43	877	K102_0175	MR160/050	56C	AW160/012	17.563	753	1.26	934	1.09	1,006	0.86	1,063
1.43	877	K102_0175	MR160/140	143/145TC	AW160/012	17.563	753	1.26	934	1.09	1,006	0.86	1,063
2.35	1,433	K202_0175	MR140/050	56C	AW140/010	17.469	902	1.94	1,433	1.56	1,433	1.17	1,433
2.42	1,464	K302_0175	MR140/050	56C	AW140/010	17.293	1,050	2.01	1,464	1.61	1,464	1.20	1,464
2.56	1,564	K202_0175	MR160/050	56C	AW160/012	17.469	902	2.26	1,665	1.92	1,772	1.44	1,772
2.56	1,564	K202_0175	MR160/140	143/145TC	AW160/012	17.469	902	2.26	1,665	1.92	1,772	1.44	1,772
4.52	2,729	K302_0175	MR160/050	56C	AW160/012	17.293	1,050	3.98	2,906	3.40	3,100	2.55	3,100
4.52	2,729	K302_0175	MR160/140	143/145TC	AW160/012	17.293	1,050	3.98	2,906	3.40	3,100	2.55	3,100
4.52	2,729	K302_0175	MR200/180	182/184/TC	AW200/014	17.293	1,050	3.98	2,906	3.40	3,100	2.55	3,100
6.75	4,104	K402_0175	MR160/050	56C	AW160/012	17.405	1,683	5.95	4,370	5.13	4,707	3.98	4,872
6.75	4,104	K402_0175	MR160/140	143/145TC	AW160/012	17.405	1,683	5.95	4,370	5.13	4,707	3.98	4,872
6.75	4,104	K402_0175	MR200/180	182/184/TC	AW200/014	17.405	1,683	5.95	4,370	5.13	4,707	3.98	4,872
6.75	4,104	K402_0175	MR250/180	182/184/TC	AW250/102	17.405	1,683	5.95	4,370	5.13	4,707	3.98	4,872
9.84	5,921	K513_0175	MR160/050	56C	AW160/012	17.481	2,023	8.15	5,921	6.52	5,921	4.89	5,921
9.84	5,921	K513_0175	MR160/140	143/145TC	AW160/012	17.481	2,023	8.15	5,921	6.52	5,921	4.89	5,921
12.67	7,622	K513_0175	MR200/180	182/184/TC	AW200/014	17.481	2,023	10.98	7,972	8.78	7,972	6.59	7,972
12.67	7,622	K513_0175	MR250/180	182/184/TC	AW250/102	17.481	2,023	10.98	7,972	8.78	7,972	6.59	7,972
23.37	13,939	K813_0175	MR200/180	182/184/TC	AW200/014	17.327	4,353	19.37	13,939	15.49	13,939	11.62	13,939
34.86	20,791	K813_0175	MR250/180	182/184/TC	AW250/102	17.327	4,353	28.89	20,791	23.11	20,791	17.33	20,791
47.70*	28,449	K813_0175	MR300/250	254/256TC	AW300/110	17.327	4,353	42.08	30,290	36.27	32,628	29.94	35,912
95 RPM Output (Approximate)								**78 RPM**		**63 RPM**		**48 RPM**	
23.37	14,702	K713_0185	MR200/180	182/184/TC	AW200/014	18.275	3,346	19.37	14,702	15.49	14,702	11.62	14,702
26.60	16,730	K713_0185	MR250/180	182/184/TC	AW250/102	18.275	3,346	23.46	17,812	20.22	19,187	16.41	20,765
26.60	16,730	K713_0185	MR300/180	182/184/TC	AW300/110	18.275	3,346	23.46	17,812	20.22	19,187	16.69	21,118
90 RPM Output (Approximate) Continued Next Page								**75 RPM**		**60 RPM**		**45 RPM**	
9.84	6,434	K613_0190	MR160/050	56C	AW160/012	18.994	2,457	8.15	6,434	6.52	6,434	4.89	6,434
9.84	6,434	K613_0190	MR160/140	143/145TC	AW160/012	18.994	2,457	8.15	6,434	6.52	6,434	4.89	6,434
9.84	6,555	K513_0195	MR160/050	56C	AW160/012	19.353	2,075	8.15	6,555	6.52	6,555	4.89	6,555
9.84	6,555	K513_0195	MR160/140	143/145TC	AW160/012	19.353	2,075	8.15	6,555	6.52	6,555	4.89	6,555
11.84	7,885	K513_0195	MR200/180	182/184/TC	AW200/014	19.353	2,075	9.92	7,972	7.93	7,972	5.95	7,972
11.84	7,885	K513_0195	MR250/180	182/184/TC	AW250/102	19.353	2,075	9.92	7,972	7.93	7,972	5.95	7,972
15.84	10,355	K613_0190	MR200/180	182/184/TC	AW200/014	18.994	2,457	13.97	11,025	12.04	11,876	9.77	12,844
15.84	10,355	K613_0190	MR250/180	182/184/TC	AW250/102	18.994	2,457	13.97	11,025	12.04	11,876	9.77	12,844
15.84	10,355	K613_0190	MR300/250	254/256TC	AW300/110	18.994	2,457	13.97	11,025	12.04	11,876	9.77	12,844
23.37	15,432	K813_0190	MR200/180	182/184/TC	AW200/014	19.183	4,465	19.37	15,432	15.49	15,432	11.62	15,432
34.86	23,018	K813_0190	MR250/180	182/184/TC	AW250/102	19.183	4,465	28.89	23,018	23.11	23,018	17.33	23,018

* For thermal HP capacity, see rating below.

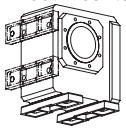
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

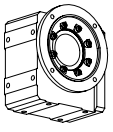
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

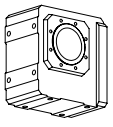
N – Foot Mounted



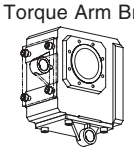
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

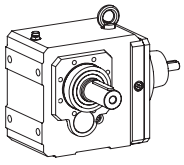
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
90 RPM	**Output (Approximate)** **Continued**							**75 RPM**		**60 RPM**		**45 RPM**	
44.58*	29,431	K813_0190	MR300/210	213/215/TC	AW300/110	19.183	4,465	39.32	31,335	33.89	33,754	27.97	37,151
69.53*	45,620	K913_0190	MR300/180	182/184/TC	AW300/110	19.063	9,992	57.61	45,620	46.09	45,620	34.57	45,620
81.25*	53,308	K913_0190	MR350/320	324/326TC	AW350/202	19.063	9,992	71.68	56,756	61.77	61,139	46.98	62,006
123.02*	79,394	K1013_0190	MR350/320	324/326TC	AW350/202	18.751	12,247	101.93	79,394	81.55	79,394	61.16	79,394
85 RPM	**Output (Approximate)**							**70 RPM**		**55 RPM**		**43 RPM**	
1.30	918	K102_0200	MR140/050	56C	AW140/010	20.150	779	1.15	974	0.92	974	0.69	974
1.30	918	K102_0200	MR160/050	56C	AW160/012	20.150	779	1.15	974	0.92	974	0.69	974
1.30	918	K102_0200	MR160/140	143/145TC	AW160/012	20.150	779	1.15	974	0.92	974	0.69	974
2.14	1,522	K202_0200	MR140/050	56C	AW140/010	20.327	937	1.78	1,522	1.42	1,522	1.07	1,522
2.22	1,570	K302_0200	MR140/050	56C	AW140/010	20.278	1,093	1.84	1,570	1.47	1,570	1.10	1,570
2.32	1,645	K202_0200	MR160/050	56C	AW160/012	20.327	937	2.04	1,751	1.65	1,772	1.24	1,772
2.32	1,645	K202_0200	MR160/140	143/145TC	AW160/012	20.327	937	2.04	1,751	1.65	1,772	1.24	1,772
4.06	2,878	K302_0200	MR160/050	56C	AW160/012	20.278	1,093	3.58	3,064	2.90	3,100	2.18	3,100
4.06	2,878	K302_0200	MR160/140	143/145TC	AW160/012	20.278	1,093	3.58	3,064	2.90	3,100	2.18	3,100
4.06	2,878	K302_0200	MR200/180	182/184/TC	AW200/014	20.278	1,093	3.58	3,064	2.90	3,100	2.18	3,100
6.11	4,313	K402_0200	MR160/050	56C	AW160/012	20.197	1,747	5.39	4,592	4.58	4,872	3.43	4,872
6.11	4,313	K402_0200	MR160/140	143/145TC	AW160/012	20.197	1,747	5.39	4,592	4.58	4,872	3.43	4,872
6.11	4,313	K402_0200	MR200/180	182/184/TC	AW200/014	20.197	1,747	5.39	4,592	4.58	4,872	3.43	4,872
6.11	4,313	K402_0200	MR250/210	213/215/TC	AW250/102	20.197	1,747	5.39	4,592	4.58	4,872	3.43	4,872
23.37	16,277	K713_0200	MR200/180	182/184/TC	AW200/014	20.233	3,433	19.37	16,277	15.49	16,277	11.62	16,277
24.85	17,307	K713_0200	MR250/180	182/184/TC	AW250/102	20.233	3,433	21.92	18,427	18.89	19,850	15.18	21,259
24.85	17,307	K713_0200	MR300/210	213/215/TC	AW300/110	20.233	3,433	21.92	18,427	18.89	19,850	15.18	21,259
80 RPM	**Output (Approximate)**							**65 RPM**		**53 RPM**		**40 RPM**	
9.84	7,345	K613_0220	MR160/050	56C	AW160/012	21.684	2,540	8.15	7,345	6.52	7,345	4.89	7,345
9.84	7,345	K613_0220	MR160/140	143/145TC	AW160/012	21.684	2,540	8.15	7,345	6.52	7,345	4.89	7,345
9.84	7,449	K513_0220	MR160/050	56C	AW160/012	21.992	2,143	8.15	7,449	6.52	7,449	4.89	7,449
9.84	7,449	K513_0220	MR160/140	143/145TC	AW160/012	21.992	2,143	8.15	7,449	6.52	7,449	4.89	7,449
10.53	7,972	K513_0220	MR200/180	182/184/TC	AW200/014	21.992	2,143	8.73	7,972	6.98	7,972	5.24	7,972
10.53	7,972	K513_0220	MR250/210	213/215/TC	AW250/102	21.992	2,143	8.73	7,972	6.98	7,972	5.24	7,972
14.50	10,822	K613_0220	MR200/180	182/184/TC	AW200/014	21.684	2,540	12.79	11,522	11.02	12,412	8.56	12,844
14.50	10,822	K613_0220	MR250/180	182/184/TC	AW250/102	21.684	2,540	12.79	11,522	11.02	12,412	8.56	12,844
14.50	10,822	K613_0220	MR300/280	284/286TC	AW300/110	21.684	2,540	12.79	11,522	11.02	12,412	8.56	12,844
75 RPM	**Output (Approximate)** **Continued Next Page**							**60 RPM**		**50 RPM**		**38 RPM**	
1.19	963	K102_0230	MR140/050	56C	AW140/010	23.265	808	1.05	1,026	0.87	1,063	0.65	1,063
1.19	963	K102_0230	MR160/050	56C	AW160/012	23.265	808	1.05	1,026	0.87	1,063	0.65	1,063
1.19	963	K102_0230	MR160/140	143/145TC	AW160/012	23.265	808	1.05	1,026	0.87	1,063	0.65	1,063
2.12	1,718	K202_0230	MR140/050	56C	AW140/010	23.180	969	1.81	1,772	1.45	1,772	1.09	1,772

Part No. Explanation

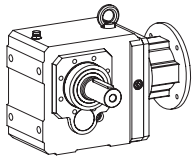
K 4 0 2 V G 0690 AW 160 / 012

- Unit No.
- Generation No.
- No. of Gear Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



K 4 0 2 V G 0690 MR 160 / 140

- Unit No.
- Generation No.
- No. of Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
75 RPM	**Output (Approximate)**	**Continued**						**60 RPM**		**50 RPM**		**38 RPM**	
2.12	1,718	K202_0230	MR160/050	56C	AW160/012	23.180	969	1.81	1,772	1.45	1,772	1.09	1,772
2.12	1,718	K202_0230	MR160/140	143/145TC	AW160/012	23.180	969	1.81	1,772	1.45	1,772	1.09	1,772
2.29	1,867	K302_0230	MR140/050	56C	AW140/010	23.292	1,131	1.90	1,867	1.52	1,867	1.14	1,867
3.70	3,014	K302_0230	MR160/050	56C	AW160/012	23.292	1,131	3.16	3,100	2.53	3,100	1.89	3,100
3.70	3,014	K302_0230	MR160/140	143/145TC	AW160/012	23.292	1,131	3.16	3,100	2.53	3,100	1.89	3,100
3.70	3,014	K302_0230	MR200/180	182/184/TC	AW200/014	23.292	1,131	3.16	3,100	2.53	3,100	1.89	3,100
5.56	4,523	K402_0230	MR160/050	56C	AW160/012	23.292	1,810	4.90	4,815	3.97	4,872	2.98	4,872
5.56	4,523	K402_0230	MR160/140	143/145TC	AW160/012	23.292	1,810	4.90	4,815	3.97	4,872	2.98	4,872
5.56	4,523	K402_0230	MR200/180	182/184/TC	AW200/014	23.292	1,810	4.90	4,815	3.97	4,872	2.98	4,872
5.56	4,523	K402_0230	MR250/180	182/184/TC	AW250/102	23.292	1,810	4.90	4,815	3.97	4,872	2.98	4,872
9.51	7,972	K513_0240	MR160/050	56C	AW160/012	24.348	2,198	7.88	7,972	6.31	7,972	4.73	7,972
9.51	7,972	K513_0240	MR160/140	143/145TC	AW160/012	24.348	2,198	7.88	7,972	6.31	7,972	4.73	7,972
9.51	7,972	K513_0240	MR200/180	182/184/TC	AW200/014	24.348	2,198	7.88	7,972	6.31	7,972	4.73	7,972
9.51	7,972	K513_0240	MR250/180	182/184/TC	AW250/102	24.348	2,198	7.88	7,972	6.31	7,972	4.73	7,972
9.84	8,132	K613_0240	MR160/050	56C	AW160/012	24.007	2,605	8.15	8,132	6.52	8,132	4.89	8,132
9.84	8,132	K613_0240	MR160/140	143/145TC	AW160/012	24.007	2,605	8.15	8,132	6.52	8,132	4.89	8,132
13.55	11,196	K613_0240	MR200/180	182/184/TC	AW200/014	24.007	2,605	11.95	11,920	10.30	12,840	7.73	12,844
13.55	11,196	K613_0240	MR250/180	182/184/TC	AW250/102	24.007	2,605	11.95	11,920	10.30	12,840	7.73	12,844
13.55	11,196	K613_0240	MR300/250	254/256TC	AW300/110	24.007	2,605	11.95	11,920	10.30	12,840	7.73	12,844
22.21	17,383	K713_0230	MR200/180	182/184/TC	AW200/014	22.739	3,534	19.37	18,293	15.49	18,293	11.62	18,293
22.99	17,994	K713_0230	MR250/210	213/215/TC	AW250/102	22.739	3,534	20.28	19,158	17.48	20,637	13.50	21,259
22.99	17,994	K713_0230	MR300/180	182/184/TC	AW300/110	22.739	3,534	20.28	19,158	17.48	20,637	13.50	21,259
23.37	18,539	K813_0230	MR200/180	182/184/TC	AW200/014	23.044	4,674	19.37	18,539	15.49	18,539	11.62	18,539
33.01	26,184	K813_0230	MR250/180	182/184/TC	AW250/102	23.044	4,674	27.35	26,184	21.88	26,184	16.41	26,184
34.86	28,729	K913_0240	MR250/180	182/184/TC	AW250/102	23.943	10,578	28.89	28,729	23.11	28,729	17.33	28,729
39.45	31,286	K813_0230	MR300/180	182/184/TC	AW300/110	23.044	4,674	34.80	33,310	29.99	35,882	23.32	37,204
66.62*	54,898	K913_0240	MR300/180	182/184/TC	AW300/110	23.943	10,578	55.20	54,898	44.16	54,898	33.12	54,898
69.79*	57,516	K913_0240	MR350/320	324/326TC	AW350/202	23.943	10,578	61.57	61,236	49.88	62,006	37.41	62,006
123.02*	100,743	K1013_0240	MR350/320	324/326TC	AW350/202	23.793	12,998	101.93	100,743	81.55	100,743	61.16	100,743
70 RPM	**Output (Approximate)**	**Continued Next Page**						**55 RPM**		**45 RPM**		**35 RPM**	
0.97	851	K102_0250	MR140/050	56C	AW140/010	25.220	824	0.80	851	0.64	851	0.48	851
0.97	851	K102_0250	MR160/050	56C	AW160/012	25.220	824	0.80	851	0.64	851	0.48	851
2.01	1,765	K202_0250	MR140/050	56C	AW140/010	25.130	988	1.67	1,772	1.34	1,772	1.00	1,772
2.01	1,765	K202_0250	MR160/050	56C	AW160/012	25.130	988	1.67	1,772	1.34	1,772	1.00	1,772
2.01	1,765	K202_0250	MR160/140	143/145TC	AW160/012	25.130	988	1.67	1,772	1.34	1,772	1.00	1,772
2.13	1,877	K302_0250	MR140/050	56C	AW140/010	25.259	1,154	1.76	1,877	1.41	1,877	1.06	1,877
3.48	3,070	K302_0250	MR160/050	56C	AW160/012	25.259	1,154	2.88	3,070	2.31	3,070	1.73	3,070
3.48	3,070	K302_0250	MR160/140	143/145TC	AW160/012	25.259	1,154	2.88	3,070	2.31	3,070	1.73	3,070
3.48	3,070	K302_0250	MR200/180	182/184/TC	AW200/014	25.259	1,154	2.88	3,070	2.31	3,070	1.73	3,070

* For thermal HP capacity, see rating below.

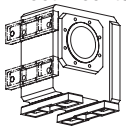
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

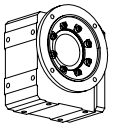
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

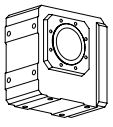
N – Foot Mounted



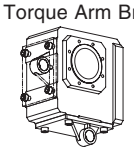
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

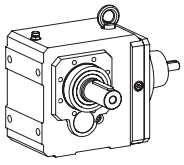
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
70 RPM Output (Approximate) Continued								**55 RPM**		**45 RPM**		**35 RPM**	
5.02	4,434	K402_0250	MR160/050	56C	AW160/012	25.279	1,848	4.16	4,434	3.33	4,434	2.50	4,434
5.02	4,434	K402_0250	MR160/140	143/145TC	AW160/012	25.279	1,848	4.16	4,434	3.33	4,434	2.50	4,434
5.02	4,434	K402_0250	MR200/180	182/184/TC	AW200/014	25.279	1,848	4.16	4,434	3.33	4,434	2.50	4,434
5.02	4,434	K402_0250	MR250/180	182/184/TC	AW250/102	25.279	1,848	4.16	4,434	3.33	4,434	2.50	4,434
21.48	18,615	K713_0250	MR200/180	182/184/TC	AW200/014	25.175	3,625	18.95	19,819	15.49	20,253	11.62	20,253
21.48	18,615	K713_0250	MR250/180	182/184/TC	AW250/102	25.175	3,625	18.95	19,819	16.26	21,259	12.20	21,259
21.48	18,615	K713_0250	MR300/180	182/184/TC	AW300/110	25.175	3,625	18.95	19,819	16.26	21,259	12.20	21,259
23.37	20,525	K813_0260	MR200/180	182/184/TC	AW200/014	25.513	4,795	19.37	20,525	15.49	20,525	11.62	20,525
33.01	28,989	K813_0260	MR250/180	182/184/TC	AW250/102	25.513	4,795	27.35	28,989	21.88	28,989	16.41	28,989
36.86	32,365	K813_0260	MR300/210	213/215/TC	AW300/110	25.513	4,795	32.52	34,459	28.02	37,120	21.06	37,204
60 RPM Output (Approximate)								**50 RPM**		**40 RPM**		**30 RPM**	
1.05	1,025	K102_0280	MR140/050	56C	AW140/010	28.048	846	0.90	1,063	0.72	1,063	0.54	1,063
1.05	1,025	K102_0280	MR160/050	56C	AW160/012	28.048	846	0.90	1,063	0.72	1,063	0.54	1,063
1.05	1,025	K102_0280	MR160/140	143/145TC	AW160/012	28.048	846	0.90	1,063	0.72	1,063	0.54	1,063
1.81	1,772	K202_0280	MR140/050	56C	AW140/010	27.950	1,015	1.50	1,772	1.20	1,772	0.90	1,772
1.81	1,772	K202_0280	MR160/050	56C	AW160/012	27.950	1,015	1.50	1,772	1.20	1,772	0.90	1,772
1.81	1,772	K202_0280	MR160/140	143/145TC	AW160/012	27.950	1,015	1.50	1,772	1.20	1,772	0.90	1,772
2.22	2,159	K302_0280	MR140/050	56C	AW140/010	27.883	1,183	1.84	2,159	1.47	2,159	1.10	2,159
3.18	3,100	K302_0280	MR160/050	56C	AW160/012	27.883	1,183	2.64	3,100	2.11	3,100	1.58	3,100
3.18	3,100	K302_0280	MR160/140	143/145TC	AW160/012	27.883	1,183	2.64	3,100	2.11	3,100	1.58	3,100
3.18	3,100	K302_0280	MR200/180	182/184/TC	AW200/014	27.883	1,183	2.64	3,100	2.11	3,100	1.58	3,100
4.94	4,796	K402_0280	MR160/050	56C	AW160/012	27.771	1,891	4.16	4,872	3.33	4,872	2.50	4,872
4.94	4,796	K402_0280	MR160/140	143/145TC	AW160/012	27.771	1,891	4.16	4,872	3.33	4,872	2.50	4,872
4.94	4,796	K402_0280	MR200/180	182/184/TC	AW200/014	27.771	1,891	4.16	4,872	3.33	4,872	2.50	4,872
4.94	4,796	K402_0280	MR250/180	182/184/TC	AW250/102	27.771	1,891	4.16	4,872	3.33	4,872	2.50	4,872
7.94	7,972	K513_0290	MR160/050	56C	AW160/012	29.181	2,300	6.58	7,972	5.26	7,972	3.95	7,972
7.94	7,972	K513_0290	MR160/140	143/145TC	AW160/012	29.181	2,300	6.58	7,972	5.26	7,972	3.95	7,972
7.94	7,972	K513_0290	MR200/180	182/184/TC	AW200/014	29.181	2,300	6.58	7,972	5.26	7,972	3.95	7,972
7.94	7,972	K513_0290	MR250/180	182/184/TC	AW250/102	29.181	2,300	6.58	7,972	5.26	7,972	3.95	7,972
9.70	9,606	K613_0290	MR160/050	56C	AW160/012	28.772	2,726	8.15	9,746	6.52	9,746	4.89	9,746
9.70	9,606	K613_0290	MR160/140	143/145TC	AW160/012	28.772	2,726	8.15	9,746	6.52	9,746	4.89	9,746
12.01	11,892	K613_0290	MR200/180	182/184/TC	AW200/014	28.772	2,726	10.59	12,661	8.60	12,844	6.45	12,844
12.01	11,892	K613_0290	MR250/180	182/184/TC	AW250/102	28.772	2,726	10.59	12,661	8.60	12,844	6.45	12,844
12.01	11,892	K613_0290	MR300/210	213/215/TC	AW300/110	28.772	2,726	10.59	12,661	8.60	12,844	6.45	12,844
18.58	18,728	K713_0290	MR200/180	182/184/TC	AW200/014	29.285	3,765	16.39	19,939	13.98	21,259	10.49	21,259
19.42	19,577	K713_0290	MR250/180	182/184/TC	AW250/102	29.285	3,765	17.13	20,844	13.98	21,259	10.49	21,259
19.42	19,577	K713_0290	MR300/210	213/215/TC	AW300/110	29.285	3,765	17.13	20,844	13.98	21,259	10.49	21,259
22.21	22,364	K813_0290	MR200/180	182/184/TC	AW200/014	29.254	4,962	19.37	23,534	15.49	23,534	11.62	23,534
31.69	31,904	K813_0290	MR250/210	213/215/TC	AW250/102	29.254	4,962	26.25	31,904	21.00	31,904	15.75	31,904
33.65	33,876	K813_0290	MR300/250	254/256TC	AW300/110	29.254	4,962	29.68	36,067	24.49	37,204	18.37	37,204

Part No. Explanation

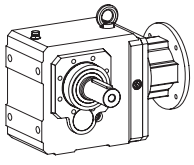
K 4 0 2 V G 0690 AW 160 / 012

- Unit No.
- Generation No.
- No. of Gear Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



K 4 0 2 V G 0690 MR 160 / 140

- Unit No.
- Generation No.
- No. of Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
55 RPM	**Output (Approximate)**							**45 RPM**		**35 RPM**		**27 RPM**	
2.76	3,100	K303_0330	MR160/050	56C	AW160/012	32.649	1,231	2.29	3,100	1.83	3,100	1.37	3,100
2.76	3,100	K303_0330	MR160/140	143/145TC	AW160/012	32.649	1,231	2.29	3,100	1.83	3,100	1.37	3,100
3.13	3,489	K403_0320	MR160/050	56C	AW160/012	32.390	1,966	2.59	3,489	2.07	3,489	1.56	3,489
3.13	3,489	K403_0320	MR160/140	143/145TC	AW160/012	32.390	1,966	2.59	3,489	2.07	3,489	1.56	3,489
7.17	7,972	K513_0320	MR160/050	56C	AW160/012	32.308	2,359	5.94	7,972	4.75	7,972	3.56	7,972
7.17	7,972	K513_0320	MR160/140	143/145TC	AW160/012	32.308	2,359	5.94	7,972	4.75	7,972	3.56	7,972
7.17	7,972	K513_0320	MR200/180	182/184/TC	AW200/014	32.308	2,359	5.94	7,972	4.75	7,972	3.56	7,972
7.17	7,972	K513_0320	MR250/180	182/184/TC	AW250/102	32.308	2,359	5.94	7,972	4.75	7,972	3.56	7,972
9.70	10,635	K613_0320	MR160/050	56C	AW160/012	31.855	2,796	8.15	10,790	6.52	10,790	4.89	10,790
9.70	10,635	K613_0320	MR160/140	143/145TC	AW160/012	31.855	2,796	8.15	10,790	6.52	10,790	4.89	10,790
11.22	12,303	K613_0320	MR200/180	182/184/TC	AW200/014	31.855	2,796	9.71	12,844	7.77	12,844	5.82	12,844
11.22	12,303	K613_0320	MR250/180	182/184/TC	AW250/102	31.855	2,796	9.71	12,844	7.77	12,844	5.82	12,844
11.22	12,303	K613_0320	MR300/250	254/256TC	AW300/110	31.855	2,796	9.71	12,844	7.77	12,844	5.82	12,844
18.15	20,253	K713_0320	MR200/180	182/184/TC	AW200/014	32.423	3,862	15.78	21,259	12.63	21,259	9.47	21,259
18.15	20,253	K713_0320	MR250/210	213/215/TC	AW250/102	32.423	3,862	15.78	21,259	12.63	21,259	9.47	21,259
18.15	20,253	K713_0320	MR300/210	213/215/TC	AW300/110	32.423	3,862	15.78	21,259	12.63	21,259	9.47	21,259
22.21	24,760	K813_0320	MR200/180	182/184/TC	AW200/014	32.389	5,090	19.37	26,056	15.49	26,056	11.62	26,056
31.44	35,045	K813_0320	MR250/180	182/184/TC	AW250/102	32.389	5,090	26.25	35,323	21.00	35,323	15.75	35,323
31.44	35,045	K813_0320	MR300/210	213/215/TC	AW300/110	32.389	5,090	27.65	37,204	22.12	37,204	16.59	37,204
33.01	36,492	K913_0320	MR250/180	182/184/TC	AW250/102	32.116	11,383	27.35	36,492	21.88	36,492	16.41	36,492
56.10*	62,006	K913_0320	MR300/280	284/286TC	AW300/110	32.116	11,383	46.48	62,006	37.18	62,006	27.89	62,006
56.10*	62,006	K913_0320	MR350/360	364/365TC	AW350/202	32.116	11,383	46.48	62,006	37.18	62,006	27.89	62,006
66.07	71,710	K1013_0320	MR300/250	254/256TC	AW300/110	31.535	13,947	54.74	71,710	43.80	71,710	32.85	71,710
97.94*	106,296	K1013_0320	MR350/360	364/365TC	AW350/202	31.535	13,947	81.15	106,296	64.92	106,296	48.69	106,296
50 RPM	**Output (Approximate)** **Continued Next Page**							**40 RPM**		**33 RPM**		**25 RPM**	
0.55	647	K102_0340	MR140/050	56C	AW140/010	33.707	886	0.45	647	0.36	647	0.27	647
0.87	1,063	K102_0350	MR140/050	56C	AW140/010	35.105	895	0.72	1,063	0.57	1,063	0.43	1,063
0.87	1,063	K102_0350	MR160/050	56C	AW160/012	35.105	895	0.72	1,063	0.57	1,063	0.43	1,063
1.16	1,364	K202_0340	MR140/050	56C	AW140/010	33.618	1,063	0.96	1,364	0.77	1,364	0.58	1,364
1.16	1,364	K202_0340	MR160/050	56C	AW160/012	33.618	1,063	0.96	1,364	0.77	1,364	0.58	1,364
1.16	1,364	K202_0340	MR160/140	143/145TC	AW160/012	33.618	1,063	0.96	1,364	0.77	1,364	0.58	1,364
1.47	1,772	K202_0350	MR140/050	56C	AW140/010	34.554	1,070	1.22	1,772	0.97	1,772	0.73	1,772
1.47	1,772	K202_0350	MR160/050	56C	AW160/012	34.554	1,070	1.22	1,772	0.97	1,772	0.73	1,772
1.47	1,772	K202_0350	MR160/140	143/145TC	AW160/012	34.554	1,070	1.22	1,772	0.97	1,772	0.73	1,772
1.89	2,217	K302_0340	MR140/050	56C	AW140/010	33.618	1,240	1.56	2,217	1.25	2,217	0.94	2,217
1.89	2,217	K302_0340	MR160/050	56C	AW160/012	33.618	1,240	1.56	2,217	1.25	2,217	0.94	2,217
1.89	2,217	K302_0340	MR160/140	143/145TC	AW160/012	33.618	1,240	1.56	2,217	1.25	2,217	0.94	2,217
2.13	2,581	K302_0350	MR140/050	56C	AW140/010	34.731	1,250	1.76	2,581	1.41	2,581	1.06	2,581
2.51	3,100	K303_0360	MR160/050	56C	AW160/012	35.833	1,260	2.08	3,100	1.67	3,100	1.25	3,100

* For thermal HP capacity, see rating below.

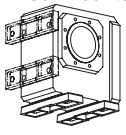
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

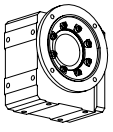
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

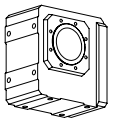
N – Foot Mounted



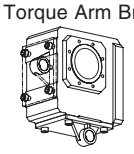
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

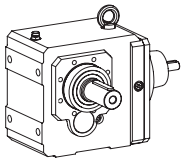
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
50 RPM Output (Approximate) Continued								**40 RPM**		**33 RPM**		**25 RPM**	
2.51	3,100	K303_0360	MR160/140	143/145TC	AW160/012	35.833	1,260	2.08	3,100	1.67	3,100	1.25	3,100
2.55	3,100	K302_0350	MR160/050	56C	AW160/012	34.731	1,250	2.12	3,100	1.69	3,100	1.27	3,100
2.55	3,100	K302_0350	MR160/140	143/145TC	AW160/012	34.731	1,250	2.12	3,100	1.69	3,100	1.27	3,100
2.93	3,445	K402_0340	MR160/050	56C	AW160/012	33.678	1,985	2.43	3,445	1.94	3,445	1.46	3,445
2.93	3,445	K402_0340	MR160/140	143/145TC	AW160/012	33.678	1,985	2.43	3,445	1.94	3,445	1.46	3,445
3.24	3,985	K403_0360	MR160/050	56C	AW160/012	35.721	2,014	2.69	3,985	2.15	3,985	1.61	3,985
3.24	3,985	K403_0360	MR160/140	143/145TC	AW160/012	35.721	2,014	2.69	3,985	2.15	3,985	1.61	3,985
4.01	4,872	K402_0350	MR160/050	56C	AW160/012	34.758	2,001	3.32	4,872	2.66	4,872	1.99	4,872
4.01	4,872	K402_0350	MR160/140	143/145TC	AW160/012	34.758	2,001	3.32	4,872	2.66	4,872	1.99	4,872
4.01	4,872	K402_0350	MR200/180	182/184/TC	AW200/014	34.758	2,001	3.32	4,872	2.66	4,872	1.99	4,872
4.01	4,872	K402_0350	MR250/180	182/184/TC	AW250/102	34.758	2,001	3.32	4,872	2.66	4,872	1.99	4,872
6.66	7,972	K513_0350	MR160/050	56C	AW160/012	34.800	2,403	5.52	7,972	4.41	7,972	3.31	7,972
6.66	7,972	K513_0350	MR160/140	143/145TC	AW160/012	34.800	2,403	5.52	7,972	4.41	7,972	3.31	7,972
6.66	7,972	K513_0350	MR200/180	182/184/TC	AW200/014	34.800	2,403	5.52	7,972	4.41	7,972	3.31	7,972
6.66	7,972	K513_0350	MR250/210	213/215/TC	AW250/102	34.800	2,403	5.52	7,972	4.41	7,972	3.31	7,972
8.15	9,711	K613_0350	MR160/050	56C	AW160/012	34.610	2,855	7.19	10,339	6.20	11,138	4.89	11,723
8.15	9,711	K613_0350	MR160/140	143/145TC	AW160/012	34.610	2,855	7.19	10,339	6.20	11,138	4.89	11,723
10.62	12,647	K613_0350	MR200/180	182/184/TC	AW200/014	34.610	2,855	8.93	12,844	7.15	12,844	5.36	12,844
10.62	12,647	K613_0350	MR250/180	182/184/TC	AW250/102	34.610	2,855	8.93	12,844	7.15	12,844	5.36	12,844
10.62	12,647	K613_0350	MR300/250	254/256TC	AW300/110	34.610	2,855	8.93	12,844	7.15	12,844	5.36	12,844
15.97	19,477	K713_0350	MR200/180	182/184/TC	AW200/014	35.438	3,949	14.09	20,737	11.55	21,259	8.67	21,259
17.10	20,862	K713_0350	MR250/180	182/184/TC	AW250/102	35.438	3,949	14.44	21,259	11.55	21,259	8.67	21,259
17.10	20,862	K713_0350	MR300/250	254/256TC	AW300/110	35.438	3,949	14.44	21,259	11.55	21,259	8.67	21,259
18.58	23,110	K813_0360	MR200/180	182/184/TC	AW200/014	36.138	5,231	16.39	24,605	14.13	26,505	11.62	29,072
29.22	36,348	K813_0360	MR250/180	182/184/TC	AW250/102	36.138	5,231	24.78	37,204	19.83	37,204	14.87	37,204
29.22	36,348	K813_0360	MR300/280	284/286TC	AW300/110	36.138	5,231	24.78	37,204	19.83	37,204	14.87	37,204
45 RPM Output (Approximate) Continued Next Page								**35 RPM**		**30 RPM**		**23 RPM**	
0.39	544	K102_0400	MR140/050	56C	AW140/010	40.300	927	0.32	544	0.26	544	0.19	544
0.72	1,023	K202_0400	MR140/050	56C	AW140/010	40.394	1,113	0.60	1,023	0.48	1,023	0.36	1,023
1.07	1,455	K203_0390	MR140/050	56C	AW140/010	39.454	1,106	0.89	1,455	0.71	1,455	0.53	1,455
1.20	1,705	K302_0410	MR140/050	56C	AW140/010	40.512	1,299	1.00	1,705	0.80	1,705	0.60	1,705
1.20	1,705	K302_0410	MR160/050	56C	AW160/012	40.512	1,299	1.00	1,705	0.80	1,705	0.60	1,705
1.20	1,705	K302_0410	MR160/140	143/145TC	AW160/012	40.512	1,299	1.00	1,705	0.80	1,705	0.60	1,705
1.93	2,729	K402_0410	MR160/050	56C	AW160/012	40.512	2,079	1.60	2,729	1.28	2,729	0.96	2,729
1.93	2,729	K402_0410	MR160/140	143/145TC	AW160/012	40.512	2,079	1.60	2,729	1.28	2,729	0.96	2,729
2.30	3,100	K303_0390	MR160/050	56C	AW160/012	39.187	1,288	1.90	3,100	1.52	3,100	1.14	3,100
2.30	3,100	K303_0390	MR160/140	143/145TC	AW160/012	39.187	1,288	1.90	3,100	1.52	3,100	1.14	3,100
3.03	4,077	K403_0390	MR160/050	56C	AW160/012	39.047	2,060	2.51	4,077	2.01	4,077	1.51	4,077
3.03	4,077	K403_0390	MR160/140	143/145TC	AW160/012	39.047	2,060	2.51	4,077	2.01	4,077	1.51	4,077

Part No. Explanation

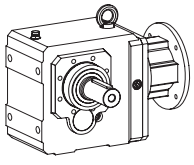
K 4 0 2 V G 0690 AW 160 / 012

- Unit No. = K
- Generation No. = 4
- No. of Gear Reductions = 0
- Output Style (A-hollow; V-solid) = 2
- Housing Style = V
- Ratio (0690 = 69.0:1) = G 0690
- Input Shaft = AW
- Flange No. = 160
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$) = /012



K 4 0 2 V G 0690 MR 160 / 140

- Unit No. = K
- Generation No. = 4
- No. of Reductions = 0
- Output Style (A-hollow; V-solid) = 2
- Housing Style = V
- Ratio (0690 = 69.0:1) = G 0690
- Motor Adapter = MR
- Flange No. = 160
- Motor Frame Size (140=143/145TC) = /140



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
45 RPM	**Output (Approximate)**	**Continued**						**35 RPM**		**30 RPM**		**23 RPM**	
6.01	7,972	K513_0390	MR160/050	56C	AW160/012	38.529	2,465	4.98	7,972	3.98	7,972	2.99	7,972
6.01	7,972	K513_0390	MR160/140	143/145TC	AW160/012	38.529	2,465	4.98	7,972	3.98	7,972	2.99	7,972
6.01	7,972	K513_0390	MR200/180	182/184/TC	AW200/014	38.529	2,465	4.98	7,972	3.98	7,972	2.99	7,972
6.01	7,972	K513_0390	MR250/180	182/184/TC	AW250/102	38.529	2,465	4.98	7,972	3.98	7,972	2.99	7,972
6.81	10,099	K613_0430	MR160/050	56C	AW160/012	43.111	3,016	6.00	10,752	5.17	11,582	4.27	12,748
6.81	10,099	K613_0430	MR160/140	143/145TC	AW160/012	43.111	3,016	6.00	10,752	5.17	11,582	4.27	12,748
8.15	10,752	K613_0380	MR160/050	56C	AW160/012	38.319	2,929	7.19	11,448	6.20	12,331	4.84	12,844
8.15	10,752	K613_0380	MR160/140	143/145TC	AW160/012	38.319	2,929	7.19	11,448	6.20	12,331	4.84	12,844
8.66	12,844	K613_0430	MR200/180	182/184/TC	AW200/014	43.111	3,016	7.17	12,844	5.74	12,844	4.30	12,844
8.66	12,844	K613_0430	MR250/210	213/215/TC	AW250/102	43.111	3,016	7.17	12,844	5.74	12,844	4.30	12,844
9.74	12,844	K613_0380	MR200/180	182/184/TC	AW200/014	38.319	2,929	8.07	12,844	6.46	12,844	4.84	12,844
9.74	12,844	K613_0380	MR250/180	182/184/TC	AW250/102	38.319	2,929	8.07	12,844	6.46	12,844	4.84	12,844
9.74	12,844	K613_0380	MR300/180	182/184/TC	AW300/110	38.319	2,929	8.07	12,844	6.46	12,844	4.84	12,844
15.74	21,259	K713_0390	MR200/180	182/184/TC	AW200/014	39.234	4,051	13.04	21,259	10.44	21,259	7.83	21,259
15.74	21,259	K713_0390	MR250/180	182/184/TC	AW250/102	39.234	4,051	13.04	21,259	10.44	21,259	7.83	21,259
15.74	21,259	K713_0390	MR300/180	182/184/TC	AW300/110	39.234	4,051	13.04	21,259	10.44	21,259	7.83	21,259
18.58	25,586	K813_0400	MR200/180	182/184/TC	AW200/014	40.009	5,366	16.39	27,241	14.13	29,344	11.62	32,187
27.02	37,204	K813_0400	MR250/180	182/184/TC	AW250/102	40.009	5,366	22.39	37,204	17.91	37,204	13.43	37,204
27.02	37,204	K813_0400	MR300/210	213/215/TC	AW300/110	40.009	5,366	22.39	37,204	17.91	37,204	13.43	37,204
31.91	41,786	K913_0380	MR250/210	213/215/TC	AW250/102	38.042	11,876	26.44	41,786	21.15	41,786	15.87	41,786
47.36	62,006	K913_0380	MR300/280	284/286TC	AW300/110	38.042	11,876	39.24	62,006	31.39	62,006	23.54	62,006
47.36	62,006	K913_0380	MR350/320	324/326TC	AW350/202	38.042	11,876	39.24	62,006	31.39	62,006	23.54	62,006
63.23	83,998	K1013_0390	MR300/250	254/256TC	AW300/110	38.601	14,670	52.39	83,998	41.91	83,998	31.43	83,998
80.01*	106,296	K1013_0390	MR350/320	324/326TC	AW350/202	38.601	14,670	66.29	106,296	53.03	106,296	39.78	106,296
40 RPM	**Output (Approximate)**	**Continued Next Page**						**30 RPM**		**25 RPM**		**20 RPM**	
1.07	1,667	K203_0450	MR140/050	56C	AW140/010	45.223	1,145	0.89	1,667	0.71	1,667	0.53	1,667
1.10	1,772	K202_0460	MR140/050	56C	AW140/010	46.225	1,151	0.91	1,772	0.73	1,772	0.55	1,772
1.10	1,772	K202_0460	MR160/050	56C	AW160/012	46.225	1,151	0.91	1,772	0.73	1,772	0.55	1,772
1.10	1,772	K202_0460	MR160/140	143/145TC	AW160/012	46.225	1,151	0.91	1,772	0.73	1,772	0.55	1,772
1.89	3,048	K302_0460	MR140/050	56C	AW140/010	46.225	1,343	1.56	3,048	1.25	3,048	0.94	3,048
1.89	3,048	K302_0460	MR160/050	56C	AW160/012	46.225	1,343	1.56	3,048	1.25	3,048	0.94	3,048
1.89	3,048	K302_0460	MR160/140	143/145TC	AW160/012	46.225	1,343	1.56	3,048	1.25	3,048	0.94	3,048
2.01	3,100	K303_0450	MR160/050	56C	AW160/012	44.892	1,333	1.66	3,100	1.33	3,100	1.00	3,100
2.01	3,100	K303_0450	MR160/140	143/145TC	AW160/012	44.892	1,333	1.66	3,100	1.33	3,100	1.00	3,100
2.93	4,737	K402_0460	MR160/050	56C	AW160/012	46.308	2,149	2.43	4,737	1.94	4,737	1.46	4,737
2.93	4,737	K402_0460	MR160/140	143/145TC	AW160/012	46.308	2,149	2.43	4,737	1.94	4,737	1.46	4,737
3.13	4,798	K403_0450	MR160/050	56C	AW160/012	44.536	2,129	2.59	4,798	2.07	4,798	1.56	4,798
3.13	4,798	K403_0450	MR160/140	143/145TC	AW160/012	44.536	2,129	2.59	4,798	2.07	4,798	1.56	4,798
5.32	7,972	K513_0440	MR160/050	56C	AW160/012	43.500	2,541	4.41	7,972	3.53	7,972	2.65	7,972

* For thermal HP capacity, see rating below.

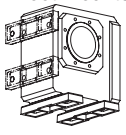
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

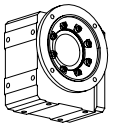
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

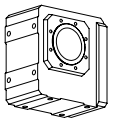
N – Foot Mounted



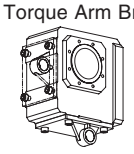
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

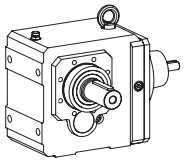
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
40 RPM Output (Approximate) Continued								**30 RPM**		**25 RPM**		**20 RPM**	
5.32	7,972	K513_0440	MR160/140	143/145TC	AW160/012	43.500	2,541	4.41	7,972	3.53	7,972	2.65	7,972
5.32	7,972	K513_0440	MR200/180	182/184/TC	AW200/014	43.500	2,541	4.41	7,972	3.53	7,972	2.65	7,972
5.32	7,972	K513_0440	MR250/180	182/184/TC	AW250/102	43.500	2,541	4.41	7,972	3.53	7,972	2.65	7,972
13.16	20,403	K713_0450	MR200/180	182/184/TC	AW200/014	45.054	4,193	11.36	21,259	9.09	21,259	6.82	21,259
13.71	21,259	K713_0450	MR250/210	213/215/TC	AW250/102	45.054	4,193	11.36	21,259	9.09	21,259	6.82	21,259
13.71	21,259	K713_0450	MR300/280	284/286TC	AW300/110	45.054	4,193	11.36	21,259	9.09	21,259	6.82	21,259
15.97	24,320	K813_0440	MR200/180	182/184/TC	AW200/014	44.250	5,502	14.09	25,894	12.14	27,893	10.02	30,700
24.43	37,204	K813_0440	MR250/180	182/184/TC	AW250/102	44.250	5,502	20.24	37,204	16.19	37,204	12.14	37,204
24.43	37,204	K813_0440	MR300/210	213/215/TC	AW300/110	44.250	5,502	20.24	37,204	16.19	37,204	12.14	37,204
35 RPM Output (Approximate)								**28 RPM**		**23 RPM**		**18 RPM**	
0.25	442	K102_0500	MR140/050	56C	AW140/010	50.310	980	0.21	442	0.17	442	0.13	442
0.48	853	K202_0500	MR140/050	56C	AW140/010	50.492	1,177	0.40	853	0.32	853	0.24	853
0.55	900	K102_0470	MR140/050	56C	AW140/010	46.918	963	0.45	900	0.36	900	0.27	900
0.77	1,364	K302_0500	MR140/050	56C	AW140/010	50.492	1,373	0.64	1,364	0.51	1,364	0.38	1,364
1.02	1,772	K203_0500	MR140/050	56C	AW140/010	49.759	1,172	0.84	1,772	0.68	1,772	0.51	1,772
1.07	1,816	K303_0490	MR140/050	56C	AW140/010	49.260	1,364	0.89	1,816	0.71	1,816	0.53	1,816
1.35	2,387	K402_0500	MR160/050	56C	AW160/012	50.427	2,196	1.12	2,387	0.90	2,387	0.67	2,387
1.35	2,387	K402_0500	MR160/140	143/145TC	AW160/012	50.427	2,196	1.12	2,387	0.90	2,387	0.67	2,387
1.85	3,100	K303_0490	MR160/050	56C	AW160/012	48.631	1,360	1.53	3,100	1.23	3,100	0.92	3,100
1.85	3,100	K303_0490	MR160/140	143/145TC	AW160/012	48.631	1,360	1.53	3,100	1.23	3,100	0.92	3,100
2.89	4,872	K403_0490	MR160/050	56C	AW160/012	48.944	2,179	2.40	4,872	1.92	4,872	1.44	4,872
2.89	4,872	K403_0490	MR160/140	143/145TC	AW160/012	48.944	2,179	2.40	4,872	1.92	4,872	1.44	4,872
4.81	7,972	K513_0480	MR160/050	56C	AW160/012	48.161	2,607	3.98	7,972	3.19	7,972	2.39	7,972
4.81	7,972	K513_0480	MR160/140	143/145TC	AW160/012	48.161	2,607	3.98	7,972	3.19	7,972	2.39	7,972
4.81	7,972	K513_0480	MR200/180	182/184/TC	AW200/014	48.161	2,607	3.98	7,972	3.19	7,972	2.39	7,972
4.81	7,972	K513_0480	MR250/180	182/184/TC	AW250/102	48.161	2,607	3.98	7,972	3.19	7,972	2.39	7,972
6.81	11,181	K613_0480	MR160/050	56C	AW160/012	47.730	3,094	6.00	11,904	5.17	12,823	3.89	12,844
6.81	11,181	K613_0480	MR160/140	143/145TC	AW160/012	47.730	3,094	6.00	11,904	5.17	12,823	3.89	12,844
7.82	12,844	K613_0480	MR200/180	182/184/TC	AW200/014	47.730	3,094	6.48	12,844	5.18	12,844	3.89	12,844
7.82	12,844	K613_0480	MR250/210	213/215/TC	AW250/102	47.730	3,094	6.48	12,844	5.18	12,844	3.89	12,844
12.38	21,259	K713_0500	MR200/180	182/184/TC	AW200/014	49.881	4,301	10.26	21,259	8.21	21,259	6.16	21,259
12.38	21,259	K713_0500	MR250/210	213/215/TC	AW250/102	49.881	4,301	10.26	21,259	8.21	21,259	6.16	21,259
12.38	21,259	K713_0500	MR300/250	254/256TC	AW300/110	49.881	4,301	10.26	21,259	8.21	21,259	6.16	21,259
15.97	26,926	K813_0490	MR200/180	182/184/TC	AW200/014	48.991	5,644	14.09	28,668	12.14	30,882	10.02	33,989
22.06	37,204	K813_0490	MR250/210	213/215/TC	AW250/102	48.991	5,644	18.28	37,204	14.63	37,204	10.97	37,204
22.06	37,204	K813_0490	MR300/280	284/286TC	AW300/110	48.991	5,644	18.28	37,204	14.63	37,204	10.97	37,204
30.30	51,041	K913_0490	MR250/180	182/184/TC	AW250/102	48.937	12,647	25.11	51,041	20.09	51,041	15.07	51,041
36.81	62,006	K913_0490	MR300/280	284/286TC	AW300/110	48.937	12,647	30.50	62,006	24.40	62,006	18.30	62,006
60.30	100,751	K1013_0490	MR300/250	254/256TC	AW300/110	48.543	15,535	49.96	100,751	39.97	100,751	29.98	100,751
63.62	106,296	K1013_0490	MR350/320	324/326TC	AW350/202	48.543	15,535	52.71	106,296	42.17	106,296	31.63	106,296

Part No. Explanation

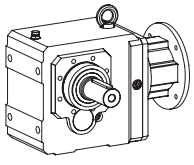
K 4 0 2 V G 0690 AW 160 / 012

- Unit No.
- Generation No.
- No. of Gear Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



K 4 0 2 V G 0690 MR 160 / 140

- Unit No.
- Generation No.
- No. of Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
30 RPM	**Output (Approximate)**							**25 RPM**		**20 RPM**		**15 RPM**	
0.39	758	K102_0560	MR140/050	56C	AW140/010	56.095	1,007	0.32	758	0.26	758	0.19	758
0.72	1,407	K202_0560	MR140/050	56C	AW140/010	55.542	1,205	0.60	1,407	0.48	1,407	0.36	1,407
0.95	1,772	K203_0540	MR140/050	56C	AW140/010	54.250	1,198	0.79	1,772	0.63	1,772	0.47	1,772
1.07	2,012	K303_0550	MR140/050	56C	AW140/010	54.579	1,400	0.89	2,012	0.71	2,012	0.53	2,012
1.20	2,345	K302_0560	MR140/050	56C	AW140/010	55.705	1,407	1.00	2,345	0.80	2,345	0.60	2,345
1.20	2,345	K302_0560	MR160/050	56C	AW160/012	55.705	1,407	1.00	2,345	0.80	2,345	0.60	2,345
1.20	2,345	K302_0560	MR160/140	143/145TC	AW160/012	55.705	1,407	1.00	2,345	0.80	2,345	0.60	2,345
1.67	3,100	K303_0540	MR160/050	56C	AW160/012	53.883	1,395	1.39	3,100	1.11	3,100	0.83	3,100
1.67	3,100	K303_0540	MR160/140	143/145TC	AW160/012	53.883	1,395	1.39	3,100	1.11	3,100	0.83	3,100
1.93	3,752	K402_0560	MR160/050	56C	AW160/012	55.705	2,251	1.60	3,752	1.28	3,752	0.96	3,752
1.93	3,752	K402_0560	MR160/140	143/145TC	AW160/012	55.705	2,251	1.60	3,752	1.28	3,752	0.96	3,752
2.64	4,872	K403_0540	MR160/050	56C	AW160/012	53.690	2,230	2.18	4,872	1.75	4,872	1.31	4,872
2.64	4,872	K403_0540	MR160/140	143/145TC	AW160/012	53.690	2,230	2.18	4,872	1.75	4,872	1.31	4,872
3.97	7,972	K513_0580	MR160/050	56C	AW160/012	58.297	2,734	3.29	7,972	2.63	7,972	1.98	7,972
3.97	7,972	K513_0580	MR160/140	143/145TC	AW160/012	58.297	2,734	3.29	7,972	2.63	7,972	1.98	7,972
3.97	7,972	K513_0580	MR200/180	182/184/TC	AW200/014	58.297	2,734	3.29	7,972	2.63	7,972	1.98	7,972
3.97	7,972	K513_0580	MR250/210	213/215/TC	AW250/102	58.297	2,734	3.29	7,972	2.63	7,972	1.98	7,972
5.27	10,436	K613_0580	MR160/050	56C	AW160/012	57.545	3,242	4.65	11,111	4.01	11,969	3.22	12,844
5.27	10,436	K613_0580	MR160/140	143/145TC	AW160/012	57.545	3,242	4.65	11,111	4.01	11,969	3.22	12,844
6.49	12,844	K613_0580	MR200/180	182/184/TC	AW200/014	57.545	3,242	5.37	12,844	4.30	12,844	3.22	12,844
6.49	12,844	K613_0580	MR250/180	182/184/TC	AW250/102	57.545	3,242	5.37	12,844	4.30	12,844	3.22	12,844
10.55	21,259	K713_0590	MR200/180	182/184/TC	AW200/014	58.570	4,477	8.74	21,259	6.99	21,259	5.24	21,259
10.55	21,259	K713_0590	MR250/210	213/215/TC	AW250/102	58.570	4,477	8.74	21,259	6.99	21,259	5.24	21,259
10.55	21,259	K713_0590	MR300/250	254/256TC	AW300/110	58.570	4,477	8.74	21,259	6.99	21,259	5.24	21,259
12.55	25,527	K813_0590	MR200/180	182/184/TC	AW200/014	59.082	5,915	11.07	27,179	9.54	29,277	7.88	32,224
18.30	37,204	K813_0590	MR250/180	182/184/TC	AW250/102	59.082	5,915	15.16	37,204	12.13	37,204	9.10	37,204
18.30	37,204	K813_0590	MR300/250	254/256TC	AW300/110	59.082	5,915	15.16	37,204	12.13	37,204	9.10	37,204
25 RPM	**Output (Approximate)** **Continued Next Page**							**20 RPM**		**18 RPM**		**13 RPM**	
0.25	616	K102_0700	MR140/050	56C	AW140/010	70.029	1,064	0.21	616	0.17	616	0.13	616
0.48	1,172	K202_0690	MR140/050	56C	AW140/010	69.427	1,274	0.40	1,172	0.32	1,172	0.24	1,172
0.75	1,772	K203_0680	MR140/050	56C	AW140/010	68.419	1,269	0.62	1,772	0.50	1,772	0.37	1,772
0.77	1,876	K302_0690	MR140/050	56C	AW140/010	69.427	1,486	0.64	1,876	0.51	1,876	0.38	1,876
0.78	1,772	K203_0660	MR140/050	56C	AW140/010	66.027	1,258	0.65	1,772	0.52	1,772	0.39	1,772
1.07	2,513	K403_0680	MR140/050	56C	AW140/010	68.169	2,368	0.89	2,513	0.71	2,513	0.53	2,513
1.07	2,446	K303_0660	MR140/050	56C	AW140/010	66.346	1,470	0.89	2,446	0.71	2,446	0.53	2,446
1.07	2,446	K403_0660	MR140/050	56C	AW140/010	66.346	2,352	0.89	2,446	0.71	2,446	0.53	2,446
1.07	2,497	K303_0680	MR140/050	56C	AW140/010	67.733	1,477	0.89	2,497	0.71	2,497	0.53	2,497
1.35	3,100	K303_0670	MR160/050	56C	AW160/012	66.868	1,473	1.12	3,100	0.89	3,100	0.67	3,100
1.35	3,100	K303_0670	MR160/140	143/145TC	AW160/012	66.868	1,473	1.12	3,100	0.89	3,100	0.67	3,100

* For thermal HP capacity, see rating below.

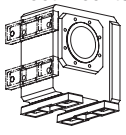
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

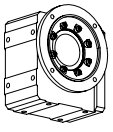
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

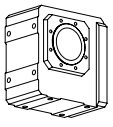
N – Foot Mounted



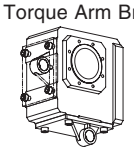
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

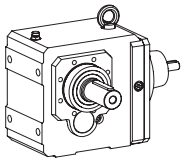
NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
3) Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
4) Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
25 RPM Output (Approximate) Continued								**20 RPM**		**18 RPM**		**13 RPM**	
1.35	3,283	K402_0690	MR160/050	56C	AW160/012	69.338	2,378	1.12	3,283	0.90	3,283	0.67	3,283
1.35	3,283	K402_0690	MR160/140	143/145TC	AW160/012	69.338	2,378	1.12	3,283	0.90	3,283	0.67	3,283
1.38	3,100	K303_0650	MR160/050	56C	AW160/012	65.499	1,465	1.14	3,100	0.91	3,100	0.68	3,100
1.38	3,100	K303_0650	MR160/140	143/145TC	AW160/012	65.499	1,465	1.14	3,100	0.91	3,100	0.68	3,100
2.10	4,872	K403_0670	MR160/050	56C	AW160/012	67.298	2,360	1.74	4,872	1.39	4,872	1.05	4,872
2.10	4,872	K403_0670	MR160/140	143/145TC	AW160/012	67.298	2,360	1.74	4,872	1.39	4,872	1.05	4,872
2.16	4,872	K403_0650	MR160/050	56C	AW160/012	65.499	2,344	1.79	4,872	1.43	4,872	1.07	4,872
2.16	4,872	K403_0650	MR160/140	143/145TC	AW160/012	65.499	2,344	1.79	4,872	1.43	4,872	1.07	4,872
3.01	7,268	K513_0700	MR160/050	56C	AW160/012	70.083	2,863	2.50	7,268	2.00	7,268	1.50	7,268
3.01	7,268	K513_0700	MR160/140	143/145TC	AW160/012	70.083	2,863	2.50	7,268	2.00	7,268	1.50	7,268
3.59	7,972	K513_0650	MR160/050	56C	AW160/012	64.544	2,805	2.97	7,972	2.38	7,972	1.78	7,972
3.59	7,972	K513_0650	MR160/140	143/145TC	AW160/012	64.544	2,805	2.97	7,972	2.38	7,972	1.78	7,972
3.59	7,972	K513_0650	MR200/180	182/184/TC	AW200/014	64.544	2,805	2.97	7,972	2.38	7,972	1.78	7,972
3.59	7,972	K513_0650	MR250/180	182/184/TC	AW250/102	64.544	2,805	2.97	7,972	2.38	7,972	1.78	7,972
4.60	10,894	K613_0690	MR160/050	56C	AW160/012	68.772	3,390	4.06	11,599	3.26	11,639	2.44	11,639
4.60	10,894	K613_0690	MR160/140	143/145TC	AW160/012	68.772	3,390	4.06	11,599	3.26	11,639	2.44	11,639
4.92	11,639	K613_0690	MR200/180	182/184/TC	AW200/014	68.772	3,390	4.07	11,639	3.26	11,639	2.44	11,639
4.92	11,639	K613_0690	MR250/210	213/215/TC	AW250/102	68.772	3,390	4.07	11,639	3.26	11,639	2.44	11,639
5.27	11,554	K613_0640	MR160/050	56C	AW160/012	63.710	3,325	4.65	12,301	3.88	12,844	2.91	12,844
5.27	11,554	K613_0640	MR160/140	143/145TC	AW160/012	63.710	3,325	4.65	12,301	3.88	12,844	2.91	12,844
5.86	12,844	K613_0640	MR200/180	182/184/TC	AW200/014	63.710	3,325	4.85	12,844	3.88	12,844	2.91	12,844
5.86	12,844	K613_0640	MR250/210	213/215/TC	AW250/102	63.710	3,325	4.85	12,844	3.88	12,844	2.91	12,844
7.85	19,244	K713_0710	MR200/180	182/184/TC	AW200/014	71.203	4,701	6.51	19,244	5.21	19,244	3.90	19,244
7.85	19,244	K713_0710	MR250/210	213/215/TC	AW250/102	71.203	4,701	6.51	19,244	5.21	19,244	3.90	19,244
9.53	21,259	K713_0650	MR200/180	182/184/TC	AW200/014	64.846	4,593	7.89	21,259	6.31	21,259	4.74	21,259
9.53	21,259	K713_0650	MR250/210	213/215/TC	AW250/102	64.846	4,593	7.89	21,259	6.31	21,259	4.74	21,259
9.53	21,259	K713_0650	MR300/250	254/256TC	AW300/110	64.846	4,593	7.89	21,259	6.31	21,259	4.74	21,259
12.55	28,262	K813_0650	MR200/180	182/184/TC	AW200/014	65.412	6,067	11.07	30,091	9.54	32,414	7.88	35,677
16.42	37,204	K814_0670	MR250/210	213/215/TC	AW250/102	66.833	6,100	13.61	37,204	10.88	37,204	8.16	37,204
16.53	37,204	K813_0650	MR250/180	182/184/TC	AW250/102	65.412	6,067	13.69	37,204	10.95	37,204	8.22	37,204
16.53	37,204	K813_0650	MR300/210	213/215/TC	AW300/110	65.412	6,067	13.69	37,204	10.95	37,204	8.22	37,204
26.76	58,091	K913_0630	MR250/180	182/184/TC	AW250/102	63.071	13,476	23.61	61,849	18.93	62,006	14.20	62,006
28.56	62,006	K913_0630	MR300/180	182/184/TC	AW300/110	63.071	13,476	23.67	62,006	18.93	62,006	14.20	62,006
50.18	106,296	K1013_0620	MR300/210	213/215/TC	AW300/110	61.553	16,485	41.57	106,296	33.26	106,296	24.94	106,296
50.18	106,296	K1013_0620	MR350/320	324/326TC	AW350/202	61.553	16,485	41.57	106,296	33.26	106,296	24.94	106,296
23 RPM Output (Approximate) Continued Next Page								**18 RPM**		**15 RPM**		**10 RPM**	
0.65	1,772	K203_0800	MR140/050	56C	AW140/010	79.615	1,319	0.54	1,772	0.43	1,772	0.32	1,772
1.07	2,916	K403_0790	MR140/050	56C	AW140/010	79.105	2,457	0.89	2,916	0.71	2,916	0.53	2,916
1.07	2,928	K303_0790	MR140/050	56C	AW140/010	79.424	1,537	0.89	2,928	0.71	2,928	0.53	2,928
1.15	3,100	K303_0780	MR160/050	56C	AW160/012	78.410	1,532	0.95	3,100	0.76	3,100	0.57	3,100

Part No. Explanation

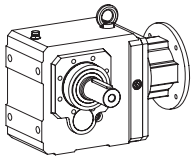
K 4 0 2 V G 0690 AW 160 / 012

- Unit No.
- Generation No.
- No. of Gear Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Input Shaft
- Flange No.
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)



K 4 0 2 V G 0690 MR 160 / 140

- Unit No.
- Generation No.
- No. of Reductions
- Output Style (A-hollow; V-solid)
- Housing Style
- Ratio (0690 = 69.0:1)
- Motor Adapter
- Flange No.
- Motor Frame Size (140=143/145TC)



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
23 RPM Output (Approximate) Continued								**18 RPM**		**15 RPM**		**10 RPM**	
1.81	4,872	K403_0780	MR160/140	143/145TC	AW160/012	78.095	2,449	1.50	4,872	1.20	4,872	0.90	4,872
2.99	7,972	K513_0780	MR160/050	56C	AW160/012	77.592	2,937	2.47	7,972	1.98	7,972	1.48	7,972
2.99	7,972	K513_0780	MR160/140	143/145TC	AW160/012	77.592	2,937	2.47	7,972	1.98	7,972	1.48	7,972
4.60	12,061	K613_0760	MR160/050	56C	AW160/012	76.140	3,477	4.06	12,841	3.25	12,844	2.44	12,844
4.60	12,061	K613_0760	MR160/140	143/145TC	AW160/012	76.140	3,477	4.06	12,841	3.25	12,844	2.44	12,844
4.90	12,844	K613_0760	MR200/180	182/184/TC	AW200/014	76.140	3,477	4.06	12,844	3.25	12,844	2.44	12,844
4.90	12,844	K613_0760	MR250/210	213/215/TC	AW250/102	76.140	3,477	4.06	12,844	3.25	12,844	2.44	12,844
7.84	21,259	K713_0790	MR200/180	182/184/TC	AW200/014	78.832	4,823	6.49	21,259	5.19	21,259	3.90	21,259
7.84	21,259	K713_0790	MR250/210	213/215/TC	AW250/102	78.832	4,823	6.49	21,259	5.19	21,259	3.90	21,259
10.61	26,191	K813_0720	MR200/180	182/184/TC	AW200/014	71.701	6,208	9.36	27,886	8.07	30,039	6.43	31,935
10.61	28,998	K813_0790	MR200/180	182/184/TC	AW200/014	79.384	6,368	9.36	30,874	8.07	33,258	6.43	35,365
12.94	31,935	K813_0720	MR250/180	182/184/TC	AW250/102	71.701	6,208	10.72	31,935	8.58	31,935	6.43	31,935
12.94	31,935	K813_0720	MR300/280	284/286TC	AW300/110	71.701	6,208	10.72	31,935	8.58	31,935	6.43	31,935
12.94	35,365	K813_0790	MR250/180	182/184/TC	AW250/102	79.384	6,368	10.73	35,365	8.58	35,365	6.43	35,365
12.94	35,365	K813_0790	MR300/210	213/215/TC	AW300/110	79.384	6,368	10.73	35,365	8.58	35,365	6.43	35,365
14.83	37,204	K814_0740	MR250/180	182/184/TC	AW250/102	73.993	6,257	12.29	37,204	9.83	37,204	7.37	37,204
23.06	59,535	K913_0750	MR250/180	182/184/TC	AW250/102	75.004	14,072	19.90	62,006	15.92	62,006	11.94	62,006
24.02	62,006	K913_0750	MR300/250	254/256TC	AW300/110	75.004	14,072	19.90	62,006	15.92	62,006	11.94	62,006
38.76	100,417	K1013_0750	MR300/250	254/256TC	AW300/110	75.276	17,335	32.11	100,417	25.69	100,417	19.27	100,417
20 RPM Output (Approximate)								**17 RPM**		**13 RPM**		**9.5 RPM**	
2.03	6,105	K513_0870	MR160/050	56C	AW160/012	87.290	3,024	1.68	6,105	1.35	6,105	1.01	6,105
2.03	6,105	K513_0870	MR160/140	143/145TC	AW160/012	87.290	3,024	1.68	6,105	1.35	6,105	1.01	6,105
2.77	7,972	K514_0850	MR160/050	56C	AW160/012	85.034	3,005	2.29	7,972	1.83	7,972	1.37	7,972
2.77	7,972	K514_0850	MR160/140	143/145TC	AW160/012	85.034	3,005	2.29	7,972	1.83	7,972	1.37	7,972
2.90	8,600	K613_0860	MR160/050	56C	AW160/012	86.178	3,586	2.40	8,600	1.92	8,600	1.44	8,600
2.90	8,600	K613_0860	MR160/140	143/145TC	AW160/012	86.178	3,586	2.40	8,600	1.92	8,600	1.44	8,600
3.14	8,919	K614_0840	MR160/050	56C	AW160/012	83.843	3,562	2.60	8,919	2.08	8,919	1.56	8,919
3.14	8,919	K614_0840	MR160/140	143/145TC	AW160/012	83.843	3,562	2.60	8,919	2.08	8,919	1.56	8,919
4.83	14,803	K713_0890	MR200/180	182/184/TC	AW200/014	89.004	4,950	4.00	14,803	3.20	14,803	2.40	14,803
4.83	14,803	K713_0890	MR250/210	213/215/TC	AW250/102	89.004	4,950	4.00	14,803	3.20	14,803	2.40	14,803
7.04	21,259	K714_0890	MR200/180	182/184/TC	AW200/014	89.061	4,950	5.83	21,259	4.67	21,259	3.50	21,259
8.22	24,838	K813_0880	MR200/180	182/184/TC	AW200/014	87.763	6,525	6.81	24,838	5.45	24,838	4.09	24,838
8.22	24,838	K813_0880	MR250/210	213/215/TC	AW250/102	87.763	6,525	6.81	24,838	5.45	24,838	4.09	24,838
12.35	37,204	K814_0890	MR250/180	182/184/TC	AW250/102	88.885	6,525	10.23	37,204	8.18	37,204	6.14	37,204
19 RPM Output (Approximate) Continued Next Page								**15 RPM**		**12 RPM**		**9 RPM**	
0.57	1,772	K203_0910	MR140/050	56C	AW140/010	90.787	1,350	0.47	1,772	0.38	1,772	0.28	1,772
0.99	3,100	K303_0910	MR140/050	56C	AW140/010	91.226	1,575	0.82	3,100	0.65	3,100	0.49	3,100
1.00	3,100	K303_0900	MR160/050	56C	AW160/012	90.061	1,575	0.83	3,100	0.66	3,100	0.50	3,100
1.07	3,363	K403_0910	MR140/050	56C	AW140/010	91.226	2,520	0.89	3,363	0.71	3,363	0.53	3,363
1.57	4,872	K403_0900	MR160/050	56C	AW160/012	90.061	2,520	1.30	4,872	1.04	4,872	0.78	4,872

* For thermal HP capacity, see rating below.

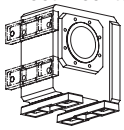
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

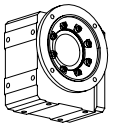
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

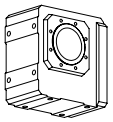
N – Foot Mounted



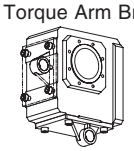
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

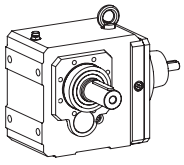
"K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data

NOTE: 1) Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
2) Select Input Option and add to completed Part Number. See example below.
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.
4) Other frame sizes may also be available. See dimension pages.

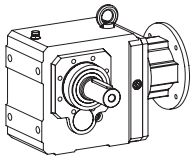
1750 RPM Input		Base Module 1)	Input Options 2)			Exact Ratio	Over-hung Load Output Shaft 3) lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size 4)	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
19 RPM Output (Approximate) Continued								**15 RPM**		**12 RPM**		**9 RPM**	
1.57	4,872	K403_0900	MR160/140	143/145TC	AW160/012	90.061	2,520	1.30	4,872	1.04	4,872	0.78	4,872
2.50	7,972	K514_0940	MR160/050	56C	AW160/012	94.145	3,026	2.07	7,972	1.66	7,972	1.24	7,972
2.50	7,972	K514_0940	MR160/140	143/145TC	AW160/012	94.145	3,026	2.07	7,972	1.66	7,972	1.24	7,972
3.14	9,874	K614_0930	MR160/050	56C	AW160/012	92.826	3,600	2.60	9,874	2.08	9,874	1.56	9,874
3.14	9,874	K614_0930	MR160/140	143/145TC	AW160/012	92.826	3,600	2.60	9,874	2.08	9,874	1.56	9,874
7.97	25,351	K914_0940	MR200/180	182/184/TC	AW200/014	93.777	14,625	6.61	25,351	5.29	25,351	3.96	25,351
17.54	54,901	K914_0920	MR250/180	182/184/TC	AW250/102	92.352	14,625	14.53	54,901	11.62	54,901	8.72	54,901
25.52	82,844	K1013_0940	MR300/250	254/256TC	AW300/110	94.329	18,000	21.14	82,844	16.91	82,844	12.69	82,844
30.25	95,723	K1014_0930	MR300/280	284/286TC	AW300/110	93.343	18,000	25.06	95,723	20.05	95,723	15.04	95,723
18 RPM Output (Approximate)								**14 RPM**		**11 RPM**		**8 RPM**	
2.03	6,761	K513_0970	MR160/050	56C	AW160/012	96.642	3,026	1.68	6,761	1.35	6,761	1.01	6,761
2.03	6,761	K513_0970	MR160/140	143/145TC	AW160/012	96.642	3,026	1.68	6,761	1.35	6,761	1.01	6,761
2.90	9,524	K613_0950	MR160/050	56C	AW160/012	95.412	3,600	2.40	9,524	1.92	9,524	1.44	9,524
2.90	9,524	K613_0950	MR160/140	143/145TC	AW160/012	95.412	3,600	2.40	9,524	1.92	9,524	1.44	9,524
4.83	16,394	K713_0990	MR200/180	182/184/TC	AW200/014	98.540	4,950	4.01	16,394	3.20	16,394	2.40	16,394
4.83	16,394	K713_0990	MR250/210	213/215/TC	AW250/102	98.540	4,950	4.01	16,394	3.20	16,394	2.40	16,394
6.36	21,259	K714_0990	MR200/180	182/184/TC	AW200/014	98.604	4,950	5.27	21,259	4.22	21,259	3.16	21,259
8.22	27,506	K813_0970	MR200/180	182/184/TC	AW200/014	97.166	6,525	6.82	27,506	5.45	27,506	4.09	27,506
8.22	27,506	K813_0970	MR250/210	213/215/TC	AW250/102	97.166	6,525	6.82	27,506	5.45	27,506	4.09	27,506
11.15	37,204	K814_0980	MR250/180	182/184/TC	AW250/102	98.408	6,525	9.24	37,204	7.39	37,204	5.54	37,204
14.50	47,620	K913_0950	MR250/180	182/184/TC	AW250/102	95.412	14,625	12.02	47,620	9.61	47,620	7.21	47,620
14.50	47,620	K913_0950	MR300/250	254/256TC	AW300/110	95.412	14,625	12.02	47,620	9.61	47,620	7.21	47,620
16 RPM Output (Approximate)								**13 RPM**		**10 RPM**		**7 RPM**	
0.47	1,772	K203_1090	MR140/050	56C	AW140/010	109.471	1,350	0.39	1,772	0.31	1,772	0.23	1,772
0.82	3,100	K303_1090	MR140/050	56C	AW140/010	109.208	1,575	0.68	3,100	0.55	3,100	0.41	3,100
0.84	3,100	K303_1080	MR160/050	56C	AW160/012	107.814	1,575	0.69	3,100	0.55	3,100	0.42	3,100
1.07	4,010	K403_1090	MR140/050	56C	AW140/010	108.769	2,520	0.89	4,010	0.71	4,010	0.53	4,010
1.32	4,872	K403_1070	MR160/050	56C	AW160/012	107.381	2,520	1.09	4,872	0.87	4,872	0.66	4,872
1.32	4,872	K403_1070	MR160/140	143/145TC	AW160/012	107.381	2,520	1.09	4,872	0.87	4,872	0.66	4,872
2.08	7,972	K514_1130	MR160/050	56C	AW160/012	112.834	3,026	1.73	7,972	1.38	7,972	1.04	7,972
2.08	7,972	K514_1130	MR160/140	143/145TC	AW160/012	112.834	3,026	1.73	7,972	1.38	7,972	1.04	7,972
2.98	11,257	K614_1110	MR160/050	56C	AW160/012	111.254	3,600	2.47	11,257	1.98	11,257	1.48	11,257
2.98	11,257	K614_1110	MR160/140	143/145TC	AW160/012	111.254	3,600	2.47	11,257	1.98	11,257	1.48	11,257
3.08	11,841	K714_1130	MR160/050	56C	AW160/012	113.236	4,950	2.56	11,841	2.04	11,841	1.53	11,841
3.08	11,841	K714_1130	MR160/140	143/145TC	AW160/012	113.236	4,950	2.56	11,841	2.04	11,841	1.53	11,841
5.47	21,259	K714_1150	MR200/180	182/184/TC	AW200/014	114.700	4,950	4.53	21,259	3.62	21,259	2.72	21,259
7.97	30,964	K814_1150	MR200/180	182/184/TC	AW200/014	114.579	6,525	6.60	30,964	5.28	30,964	3.96	30,964
9.73	37,204	K814_1130	MR250/210	213/215/TC	AW250/102	112.838	6,525	8.06	37,204	6.45	37,204	4.83	37,204

Part No. Explanation

K 4 0 2 V G 0690 AW 160 / 012
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.



K 4 0 2 V G 0690 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
14 RPM	**Output (Approximate)**							**12 RPM**		**9 RPM**		**6.5 RPM**	
1.88	7,972	K514_1250	MR160/050	56C	AW160/012	124.924	3,026	1.56	7,972	1.25	7,972	0.94	7,972
1.88	7,972	K514_1250	MR160/140	143/145TC	AW160/012	124.924	3,026	1.56	7,972	1.25	7,972	0.94	7,972
2.98	12,464	K614_1230	MR160/050	56C	AW160/012	123.174	3,600	2.47	12,464	1.98	12,464	1.48	12,464
2.98	12,464	K614_1230	MR160/140	143/145TC	AW160/012	123.174	3,600	2.47	12,464	1.98	12,464	1.48	12,464
3.08	13,110	K714_1250	MR160/050	56C	AW160/012	125.368	4,950	2.56	13,110	2.04	13,110	1.53	13,110
3.08	13,110	K714_1250	MR160/140	143/145TC	AW160/012	125.368	4,950	2.56	13,110	2.04	13,110	1.53	13,110
4.94	21,259	K714_1270	MR200/180	182/184/TC	AW200/014	126.990	4,950	4.09	21,259	3.27	21,259	2.45	21,259
7.97	34,290	K814_1270	MR200/180	182/184/TC	AW200/014	126.855	6,525	6.61	34,290	5.29	34,290	3.96	34,290
7.98	34,011	K914_1260	MR200/180	182/184/TC	AW200/014	125.788	14,625	6.61	34,011	5.29	34,011	3.96	34,011
8.78	37,204	K814_1250	MR250/210	213/215/TC	AW250/102	124.927	6,525	7.28	37,204	5.82	37,204	4.37	37,204
14.76	62,006	K914_1240	MR250/180	182/184/TC	AW250/102	123.877	14,625	12.23	62,006	9.79	62,006	7.34	62,006
17.39	71,713	K1014_1220	MR250/180	182/184/TC	AW250/102	121.636	18,000	14.41	71,713	11.53	71,713	8.65	71,713
25.34	106,296	K1014_1240	MR300/210	213/215/TC	AW300/110	123.715	18,000	21.00	106,296	16.80	106,296	12.60	106,296
13 RPM	**Output (Approximate)**							**10 RPM**		**8 RPM**		**6 RPM**	
0.38	1,772	K203_1350	MR140/050	56C	AW140/010	135.335	1,350	0.32	1,772	0.25	1,772	0.19	1,772
0.66	3,100	K303_1360	MR140/050	56C	AW140/010	136.029	1,575	0.55	3,100	0.44	3,100	0.33	3,100
0.67	3,100	K303_1340	MR160/050	56C	AW160/012	134.292	1,575	0.56	3,100	0.44	3,100	0.33	3,100
1.04	4,872	K403_1360	MR140/050	56C	AW140/010	136.137	2,520	0.86	4,872	0.69	4,872	0.52	4,872
1.05	4,872	K403_1340	MR160/050	56C	AW160/012	134.399	2,520	0.87	4,872	0.70	4,872	0.52	4,872
1.05	4,872	K403_1340	MR160/140	143/145TC	AW160/012	134.399	2,520	0.87	4,872	0.70	4,872	0.52	4,872
1.75	7,972	K514_1350	MR160/050	56C	AW160/012	134.560	3,026	1.45	7,972	1.16	7,972	0.87	7,972
1.75	7,972	K514_1350	MR160/140	143/145TC	AW160/012	134.560	3,026	1.45	7,972	1.16	7,972	0.87	7,972
2.83	12,844	K614_1340	MR160/050	56C	AW160/012	133.827	3,600	2.35	12,844	1.88	12,844	1.41	12,844
2.83	12,844	K614_1340	MR160/140	143/145TC	AW160/012	133.827	3,600	2.35	12,844	1.88	12,844	1.41	12,844
2.97	13,797	K714_1370	MR160/050	56C	AW160/012	137.025	4,950	2.46	13,797	1.97	13,797	1.48	13,797
2.97	13,797	K714_1370	MR160/140	143/145TC	AW160/012	137.025	4,950	2.46	13,797	1.97	13,797	1.48	13,797
4.52	21,259	K714_1390	MR200/180	182/184/TC	AW200/014	138.797	4,950	3.74	21,259	2.99	21,259	2.25	21,259
7.87	37,204	K814_1390	MR250/180	182/184/TC	AW250/102	139.387	6,525	6.52	37,204	5.22	37,204	3.91	37,204
12 RPM	**Output (Approximate)**							**9.5 RPM**		**8 RPM**		**6 RPM**	
1.58	7,972	K514_1490	MR160/050	56C	AW160/012	148.977	3,026	1.31	7,972	1.05	7,972	0.78	7,972
1.58	7,972	K514_1490	MR160/140	143/145TC	AW160/012	148.977	3,026	1.31	7,972	1.05	7,972	0.78	7,972
2.56	12,844	K614_1480	MR160/050	56C	AW160/012	148.165	3,600	2.12	12,844	1.69	12,844	1.27	12,844
2.56	12,844	K614_1480	MR160/140	143/145TC	AW160/012	148.165	3,600	2.12	12,844	1.69	12,844	1.27	12,844
2.97	15,275	K714_1520	MR160/050	56C	AW160/012	151.706	4,950	2.46	15,275	1.97	15,275	1.48	15,275
2.97	15,275	K714_1520	MR160/140	143/145TC	AW160/012	151.706	4,950	2.46	15,275	1.97	15,275	1.48	15,275
6.82	32,748	K814_1420	MR200/180	182/184/TC	AW200/014	141.539	6,525	6.02	34,867	5.14	37,204	3.85	37,204
7.97	40,284	K914_1490	MR200/180	182/184/TC	AW200/014	148.996	14,625	6.61	40,284	5.29	40,284	3.96	40,284
12.47	62,006	K914_1470	MR250/180	182/184/TC	AW250/102	146.732	14,625	10.33	62,006	8.26	62,006	6.20	62,006
15.61	78,797	K1014_1490	MR250/180	182/184/TC	AW250/102	148.889	18,000	13.77	83,894	11.03	84,001	8.27	84,001
20.70	106,296	K1014_1510	MR300/210	213/215/TC	AW300/110	151.435	18,000	17.16	106,296	13.72	106,296	10.29	106,296

* For thermal HP capacity, see rating below.

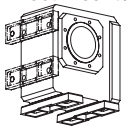
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

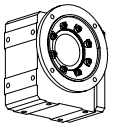
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

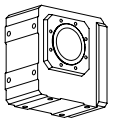
N – Foot Mounted



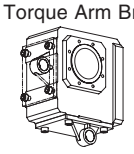
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

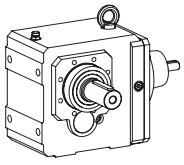
"K" Series – Right Angle Helical/Bevel MGS Reducer – Selection Data

NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

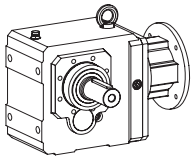
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
11 RPM	**Output (Approximate)**							**9 RPM**		**7.5 RPM**		**5.5 RPM**	
4.08	21,259	K714_1540	MR200/180	182/184/TC	AW200/014	153.668	4,950	3.38	21,259	2.71	21,259	2.03	21,259
6.83	36,257	K814_1570	MR200/180	182/184/TC	AW200/014	156.703	6,525	5.80	37,204	4.64	37,204	3.48	37,204
7.11	37,204	K814_1540	MR250/180	182/184/TC	AW250/102	154.322	6,525	5.89	37,204	4.71	37,204	3.54	37,204
10 RPM	**Output (Approximate)**							**8.5 RPM**		**7 RPM**		**5 RPM**	
0.28	1,772	K203_1810	MR140/050	56C	AW140/010	181.048	1,350	0.24	1,772	0.19	1,772	0.14	1,772
0.49	3,048	K303_1810	MR140/050	56C	AW140/010	181.048	1,575	0.41	3,048	0.32	3,048	0.24	3,048
0.50	3,048	K303_1790	MR160/050	56C	AW160/012	178.737	1,575	0.41	3,048	0.33	3,048	0.25	3,048
0.76	4,737	K403_1810	MR140/050	56C	AW140/010	181.372	2,520	0.63	4,737	0.50	4,737	0.38	4,737
0.77	4,737	K403_1790	MR160/050	56C	AW160/012	179.056	2,520	0.64	4,737	0.51	4,737	0.38	4,737
1.40	7,972	K514_1680	MR160/050	56C	AW160/012	168.200	3,026	1.16	7,972	0.93	7,972	0.69	7,972
1.40	7,972	K514_1680	MR160/140	143/145TC	AW160/012	168.200	3,026	1.16	7,972	0.93	7,972	0.69	7,972
2.27	12,844	K614_1670	MR160/050	56C	AW160/012	166.694	3,600	1.88	12,844	1.51	12,844	1.13	12,844
2.27	12,844	K614_1670	MR160/140	143/145TC	AW160/012	166.694	3,600	1.88	12,844	1.51	12,844	1.13	12,844
2.84	16,753	K714_1740	MR160/050	56C	AW160/012	174.209	4,950	2.35	16,753	1.88	16,753	1.41	16,753
2.84	16,753	K714_1740	MR160/140	143/145TC	AW160/012	174.209	4,950	2.35	16,753	1.88	16,753	1.41	16,753
3.55	21,259	K714_1760	MR200/180	182/184/TC	AW200/014	176.462	4,950	2.94	21,259	2.36	21,259	1.77	21,259
5.95	34,989	K814_1730	MR200/180	182/184/TC	AW200/014	173.313	6,525	5.25	37,204	4.20	37,204	3.15	37,204
6.43	37,204	K814_1710	MR250/210	213/215/TC	AW250/102	170.679	6,525	5.33	37,204	4.26	37,204	3.20	37,204
9 RPM	**Output (Approximate)**							**7.5 RPM**		**5.5 RPM**		**4.5 RPM**	
1.26	7,972	K514_1860	MR160/050	56C	AW160/012	186.221	3,026	1.05	7,972	0.84	7,972	0.63	7,972
1.26	7,972	K514_1860	MR160/140	143/145TC	AW160/012	186.221	3,026	1.05	7,972	0.84	7,972	0.63	7,972
2.05	12,844	K614_1850	MR160/050	56C	AW160/012	184.554	3,600	1.70	12,844	1.36	12,844	1.02	12,844
2.05	12,844	K614_1850	MR160/140	143/145TC	AW160/012	184.554	3,600	1.70	12,844	1.36	12,844	1.02	12,844
2.84	18,548	K714_1930	MR160/050	56C	AW160/012	192.874	4,950	2.35	18,548	1.88	18,548	1.41	18,548
2.84	18,548	K714_1930	MR160/140	143/145TC	AW160/012	192.874	4,950	2.35	18,548	1.88	18,548	1.41	18,548
3.21	21,259	K714_1950	MR200/180	182/184/TC	AW200/014	195.368	4,950	2.66	21,259	2.13	21,259	1.60	21,259
5.72	37,204	K814_1920	MR200/180	182/184/TC	AW200/014	191.882	6,525	4.74	37,204	3.79	37,204	2.84	37,204
5.81	37,204	K814_1890	MR250/180	182/184/TC	AW250/102	188.966	6,525	4.81	37,204	3.85	37,204	2.89	37,204
6.82	44,347	K914_1920	MR200/180	182/184/TC	AW200/014	191.670	14,625	6.02	47,216	5.19	50,862	3.90	51,037
9.69	62,006	K914_1890	MR250/180	182/184/TC	AW250/102	188.757	14,625	8.03	62,006	6.42	62,006	4.82	62,006
13.17	83,571	K1014_1870	MR250/180	182/184/TC	AW250/102	187.236	18,000	11.61	88,978	10.01	95,848	7.89	100,754
16.46	106,296	K1014_1900	MR300/210	213/215/TC	AW300/110	190.437	18,000	13.64	106,296	10.91	106,296	8.18	106,296
8 RPM	**Output (Approximate)**	Continued Next Page						**6.5 RPM**		**5.5 RPM**		**4 RPM**	
0.19	1,407	K203_2180	MR140/050	56C	AW140/010	217.538	1,350	0.16	1,407	0.12	1,407	0.09	1,407
0.31	2,345	K303_2180	MR140/050	56C	AW140/010	218.176	1,575	0.26	2,345	0.21	2,345	0.16	2,345
0.50	3,752	K403_2180	MR140/050	56C	AW140/010	218.176	2,520	0.41	3,752	0.33	3,752	0.25	3,752
0.51	3,752	K403_2150	MR160/050	56C	AW160/012	215.391	2,520	0.42	3,752	0.34	3,752	0.25	3,752
1.04	7,972	K514_2250	MR160/050	56C	AW160/012	225.417	3,026	0.86	7,972	0.69	7,972	0.52	7,972

Part No. Explanation

K 4 0 2 V G 0690 AW 160 / 012
- Shaft Dia. (1/16 in.; example – 012 = 12/16 or 3/4)
- Flange No.
- Input Shaft
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.



K 4 0 2 V G 0690 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
8 RPM		**Output (Approximate) Continued**						**6.5 RPM**		**5.5 RPM**		**4 RPM**	
1.04	7,972	K514_2250	MR160/140	143/145TC	AW160/012	225.417	3,026	0.86	7,972	0.69	7,972	0.52	7,972
1.70	12,844	K614_2230	MR160/050	56C	AW160/012	222.507	3,600	1.41	12,844	1.13	12,844	0.85	12,844
1.70	12,844	K614_2230	MR160/140	143/145TC	AW160/012	222.507	3,600	1.41	12,844	1.13	12,844	0.85	12,844
2.59	19,872	K714_2260	MR160/050	56C	AW160/012	226.472	4,950	2.22	20,589	1.78	20,589	1.33	20,589
2.59	19,872	K714_2260	MR160/140	143/145TC	AW160/012	226.472	4,950	2.22	20,589	1.78	20,589	1.33	20,589
4.74	37,204	K814_2310	MR200/180	182/184/TC	AW200/014	231.404	6,525	3.93	37,204	3.14	37,204	2.36	37,204
4.82	37,204	K814_2280	MR250/180	182/184/TC	AW250/102	227.887	6,525	3.99	37,204	3.19	37,204	2.39	37,204
7 RPM		**Output (Approximate)**						**5.5 RPM**		**4.5 RPM**		**3.5 RPM**	
0.94	7,972	K514_2500	MR160/050	56C	AW160/012	249.569	3,026	0.78	7,972	0.62	7,972	0.47	7,972
1.29	11,639	K614_2660	MR160/050	56C	AW160/012	265.917	3,600	1.07	11,639	0.86	11,639	0.64	11,639
1.29	11,639	K614_2660	MR160/140	143/145TC	AW160/012	265.917	3,600	1.07	11,639	0.86	11,639	0.64	11,639
1.54	12,844	K614_2460	MR160/050	56C	AW160/012	246.347	3,600	1.27	12,844	1.02	12,844	0.76	12,844
1.54	12,844	K614_2460	MR160/140	143/145TC	AW160/012	246.347	3,600	1.27	12,844	1.02	12,844	0.76	12,844
2.50	21,259	K714_2510	MR160/050	56C	AW160/012	250.737	4,950	2.07	21,259	1.66	21,259	1.24	21,259
2.50	21,259	K714_2510	MR160/140	143/145TC	AW160/012	250.737	4,950	2.07	21,259	1.66	21,259	1.24	21,259
4.28	37,204	K814_2560	MR200/180	182/184/TC	AW200/014	256.198	6,525	3.55	37,204	2.84	37,204	2.13	37,204
4.35	37,204	K814_2520	MR250/210	213/215/TC	AW250/102	252.304	6,525	3.60	37,204	2.88	37,204	2.16	37,204
5.72	47,896	K914_2470	MR200/180	182/184/TC	AW200/014	247.029	14,625	5.05	50,994	4.35	54,932	3.59	60,460
7.52	62,006	K914_2430	MR250/180	182/184/TC	AW250/102	243.275	14,625	6.23	62,006	4.98	62,006	3.74	62,006
11.16	89,859	K1014_2370	MR250/180	182/184/TC	AW250/102	237.418	18,000	9.85	95,672	8.49	103,060	6.56	106,296
6 RPM		**Output (Approximate)**						**5 RPM**		**4 RPM**		**3 RPM**	
0.13	1,172	K203_2720	MR140/050	56C	AW140/010	271.923	1,350	0.10	1,172	0.08	1,172	0.06	1,172
0.20	1,876	K303_2720	MR140/050	56C	AW140/010	271.923	1,575	0.17	1,876	0.13	1,876	0.10	1,876
0.35	3,283	K403_2720	MR140/050	56C	AW140/010	271.572	2,520	0.29	3,283	0.23	3,283	0.17	3,283
0.78	7,972	K514_3000	MR160/050	56C	AW160/012	300.023	3,026	0.65	7,972	0.52	7,972	0.39	7,972
0.79	7,268	K514_2710	MR160/050	56C	AW160/012	270.989	3,026	0.66	7,268	0.52	7,268	0.39	7,268
1.29	12,844	K614_2940	MR160/050	56C	AW160/012	294.408	3,600	1.07	12,844	0.85	12,844	0.64	12,844
2.06	21,259	K714_3050	MR160/050	56C	AW160/012	304.817	4,950	1.70	21,259	1.36	21,259	1.02	21,259
2.06	21,259	K714_3050	MR160/140	143/145TC	AW160/012	304.817	4,950	1.70	21,259	1.36	21,259	1.02	21,259
2.06	19,244	K714_2750	MR160/050	56C	AW160/012	275.319	4,950	1.71	19,244	1.37	19,244	1.03	19,244
2.06	19,244	K714_2750	MR160/140	143/145TC	AW160/012	275.319	4,950	1.71	19,244	1.37	19,244	1.03	19,244
3.35	31,935	K814_2810	MR200/180	182/184/TC	AW200/014	280.830	6,525	2.78	31,935	2.22	31,935	1.67	31,935
3.35	35,365	K814_3110	MR200/180	182/184/TC	AW200/014	310.919	6,525	2.78	35,365	2.22	35,365	1.67	35,365
3.41	31,935	K814_2770	MR250/210	213/215/TC	AW250/102	276.563	6,525	2.82	31,935	2.26	31,935	1.69	31,935
3.41	35,365	K814_3060	MR250/180	182/184/TC	AW250/102	306.194	6,525	2.82	35,365	2.26	35,365	1.69	35,365
5.00	49,821	K914_2940	MR200/180	182/184/TC	AW200/014	293.764	14,625	4.41	53,044	3.80	57,140	3.10	62,006
9.53	93,852	K1014_2900	MR250/210	213/215/TC	AW250/102	290.350	18,000	8.41	99,923	6.76	100,417	5.07	100,417

* For thermal HP capacity, see rating below.

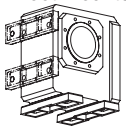
Base Module	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
Thermal Capacity	2.95	5.36	7.38	12.34	14.75	20.12	29.50	40.23	53.64	67.05

NEMA Frame Size TEFC 1750 RPM

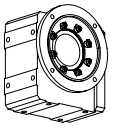
C-Frame	Motor HP
56C	1/3 - 1 1/2
143/145TC	1, 1 1/2, 2
182/184TC	3, 5
213/215TC	7 1/2, 10
254/256TC	15, 20
284/286TC	25, 30
324/326TC	40, 50
364/365TC	60, 75

Housing Styles

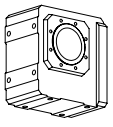
N – Foot Mounted



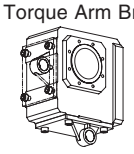
F – Round Flange



G – Tapped Holes



BD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

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

NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: K302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[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.
[4] Other frame sizes may also be available. See dimension pages.

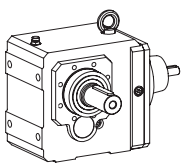
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
5 RPM	**Output (Approximate)**							**4.5 RPM**		**3.5 RPM**		**2.5 RPM**	
0.53	6,105	K514_3380	MR160/050	56C	AW160/012	337.521	3,026	0.44	6,105	0.35	6,105	0.27	6,105
0.53	6,761	K514_3740	MR160/050	56C	AW160/012	373.684	3,026	0.44	6,761	0.35	6,761	0.27	6,761
0.76	8,600	K614_3330	MR160/050	56C	AW160/012	333.223	3,600	0.63	8,600	0.50	8,600	0.38	8,600
0.76	9,524	K614_3690	MR160/050	56C	AW160/012	368.926	3,600	0.63	9,524	0.50	9,524	0.38	9,524
1.27	14,803	K714_3440	MR160/050	56C	AW160/012	344.148	4,950	1.05	14,803	0.84	14,803	0.63	14,803
1.27	14,803	K714_3440	MR160/140	143/145TC	AW160/012	344.148	4,950	1.05	14,803	0.84	14,803	0.63	14,803
1.27	16,394	K714_3810	MR160/050	56C	AW160/012	381.021	4,950	1.05	16,394	0.84	16,394	0.63	16,394
1.27	16,394	K714_3810	MR160/140	143/145TC	AW160/012	381.021	4,950	1.05	16,394	0.84	16,394	0.63	16,394
3.76	47,620	K914_3740	MR200/180	182/184/TC	AW200/014	373.696	14,625	3.11	47,620	2.49	47,620	1.87	47,620

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

Part No. Explanation

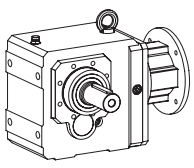
K 4 0 2 V G 0690 AW 160 / 012

- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.

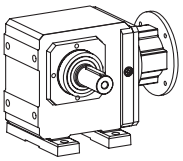


K 4 0 2 V G 0690 MR 160 / 140

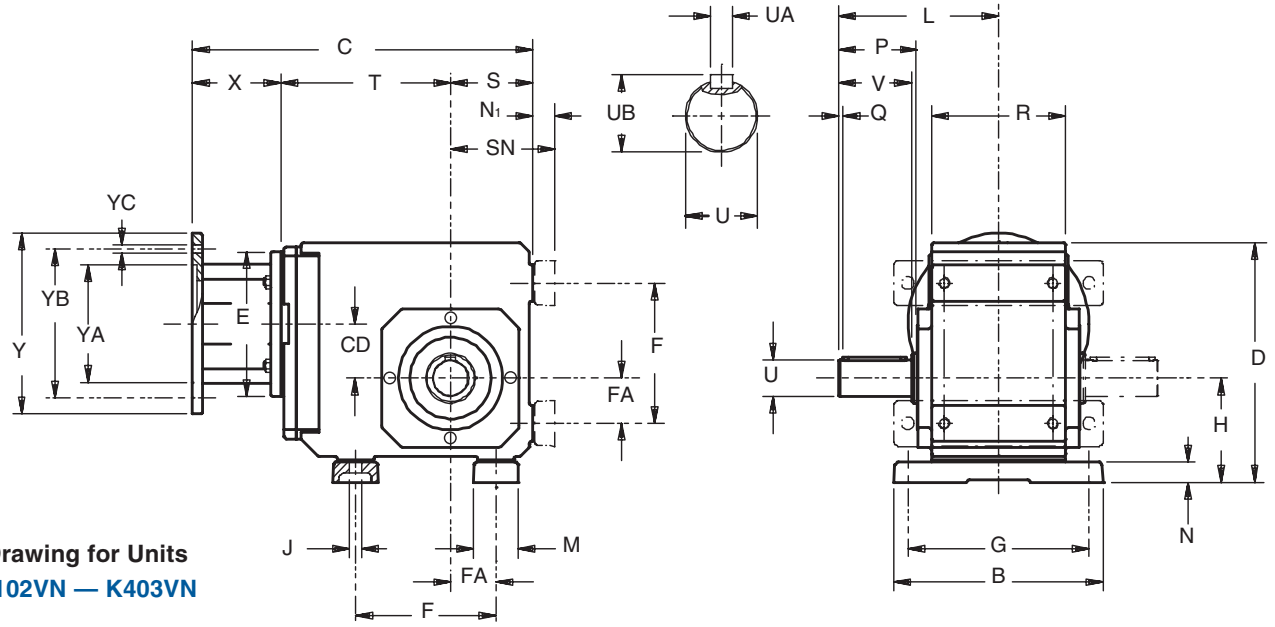
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0690 = 69.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.



Mounting position must be specified when ordering.



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



Drawing for Units
K102VN — K403VN

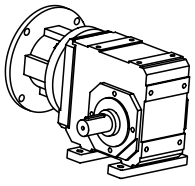
Table No. 1 **"K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

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	6.54	1.97	.87	—	3.39	.16	5.83	3.54	2.76	—	—	1.97	.98	4.53
K513/514	9.45	11.42	5.51	7.87	7.48	.71	8.74	2.36	1.06	5.10	3.90	.16	6.30	3.94	3.54	5.98	7.28	1.57	1.18	5.12
K613/614	9.84	13.39	6.30	8.27	8.66	.71	9.29	2.56	1.06	5.35	4.31	.16	6.61	4.72	3.94	6.77	7.87	1.97	1.18	5.91
K713/714	11.42	14.96	7.09	9.45	9.84	.87	10.91	2.76	1.38	6.46	5.14	.16	7.48	4.92	4.72	7.52	8.90	2.17	1.50	6.42
K813/814	14.17	17.91	9.45	11.81	12.20	1.02	12.83	3.35	1.61	7.28	5.94	.20	9.25	5.71	5.51	8.11	11.10	2.95	1.77	7.48
K913/914	16.93	21.46	11.02	14.17	14.37	1.30	15.16	3.74	1.81	8.66	7.13	.31	11.22	7.09	6.69	9.84	12.99	3.74	1.97	9.06
K1013/1014	15.75	23.27	13.78	12.99	14.76	1.54	16.46	4.72	1.77	9.45	8.66	.59	15.75	—	8.27	12.01	14.02	4.53	1.77	8.86

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

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

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



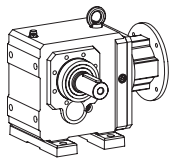
K1 Housing with tapped holes on Side 1, Side 2, and Side 5. Shown with mounting feet on Side 1.

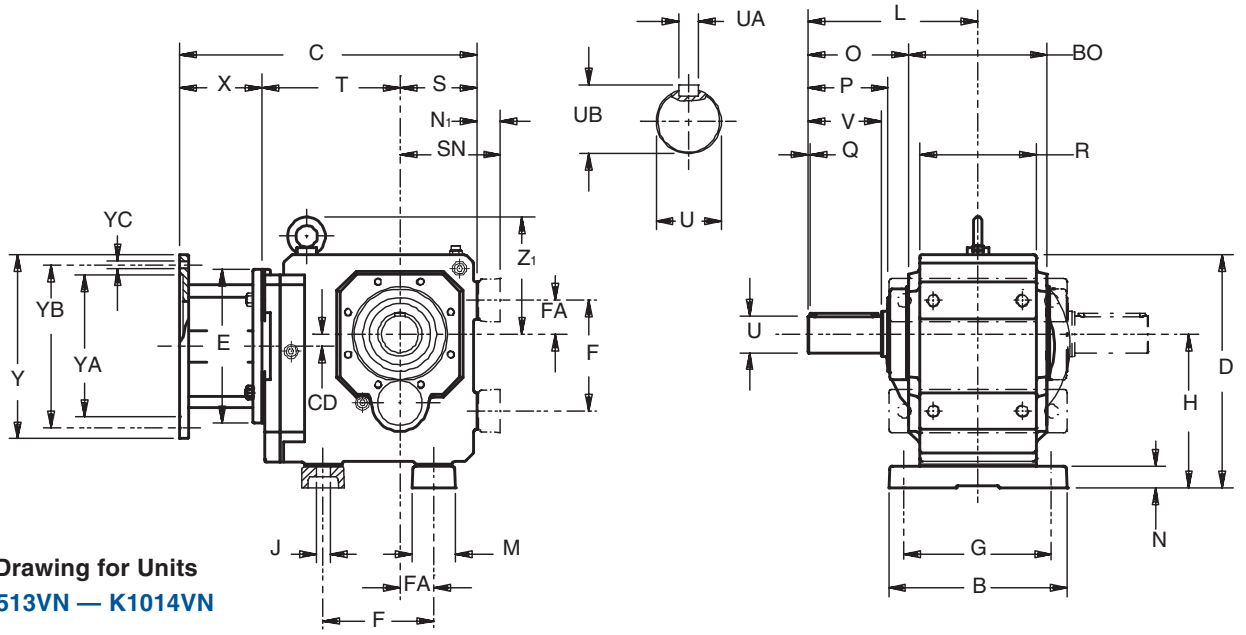
Part No. Example

Foot Mounting with Motor Adapter

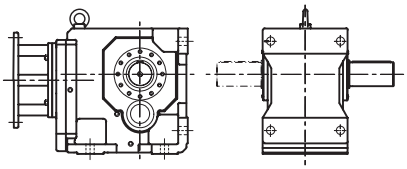
K303VN0650 MR160/140

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





Drawing for Units
K513VN — K1014VN



Mounting feet are integral in the K10 housing.

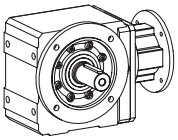
Table No. 3 **Metric output available on request.**

Base Module	Standard Shaft – inches			Optional Shaft – mm		
	U	UA – Key	UB	U	UA – Key	UB
K102	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	M8 ×7×40	28
K202/K203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	M8 ×7×50	33
K302/K303	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	M8 ×7×50	33
K402/K403	1.375	5/16 × 5/16 × 2 5/16	1.51	40k6	M12 ×8×70	43
K513/K514	1.750	3/8 × 3/8 × 3 5/32	1.92	45k6	M14 ×9×80	48.5
K613/K614	1.750	3/8 × 3/8 × 3 5/32	1.92	50k6	M14 ×9×90	53.5
K713/K714	2.375	5/8 × 5/8 × 3 15/16	2.65	60k6	M18 ×11×110	64
K813/K814	2.875	3/4 × 3/4 × 4 5/16	3.21	70m6	M20 ×12×125	74.5
K913/K914	3.625	7/8 × 7/8 × 5 1/2	4.01	90m6	M25 ×14×140	95
K1013/K1014	4.375	1 × 1 × 7 1/8	4.82	110m6	M28 ×16×180	116

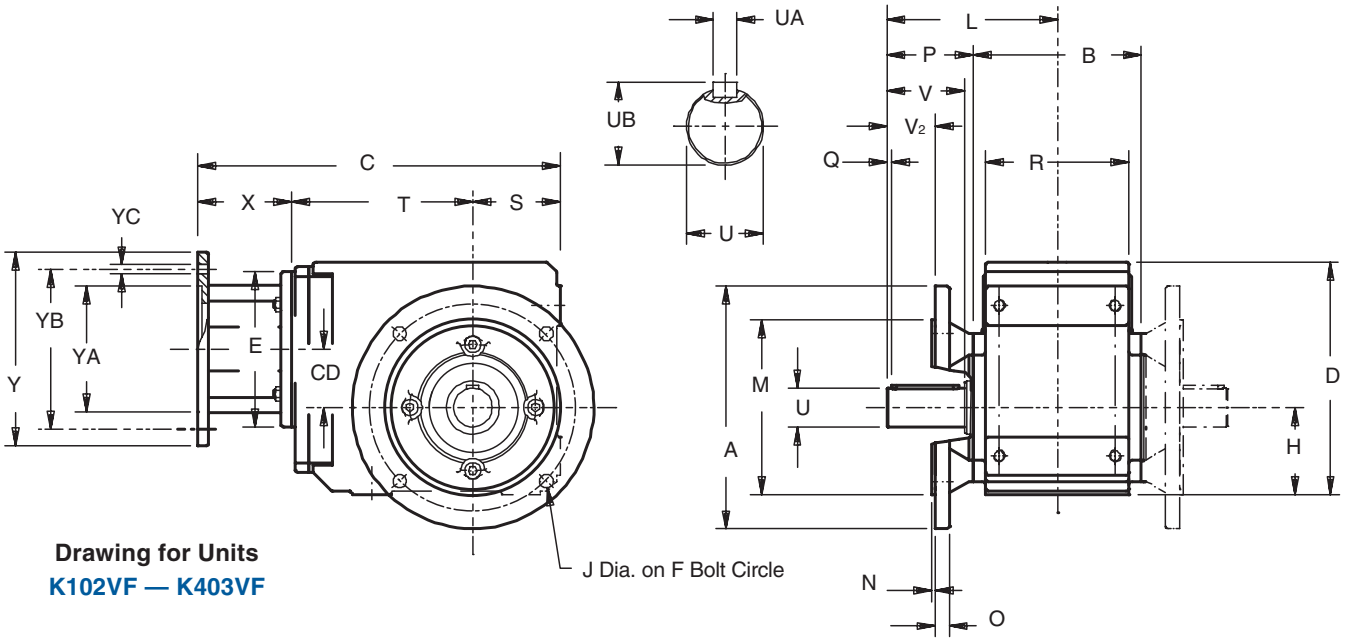
Table No. 4 **"K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

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
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	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 +.001/-.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 +.001/-.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 +.001/-.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	6.54	7.087 +.001/-.0004	.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 +.001/-.0004	.16	.59	5.10	.16	6.30	3.94	3.54	—	5.98
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.001/-.001	.16	.67	5.35	.16	6.61	4.72	3.94	—	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

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

Table No. 3 "K" Series — Optional Flanges (Inches)

Base Module	Flange Size	A	F	J	L	M	N	O
K102	140	5.512	4.53	.35	3.35	3.740	.12	.39
K202/K203	160	6.300	5.12	.35	3.90	4.331	.14	.47
K302/K303	160	6.300	5.12	.35	4.37	4.331	.14	.55
K713/K714	300	11.811	10.43	.55	6.18	9.055	.20	.71
K813/K814	350	13.780	11.81	.71	7.32	9.843	.20	.79
	450	17.717	15.75	.71	7.32	13.781	.20	.79

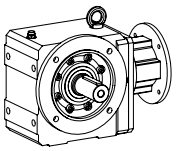
* Optional flanges are not available in all sizes.

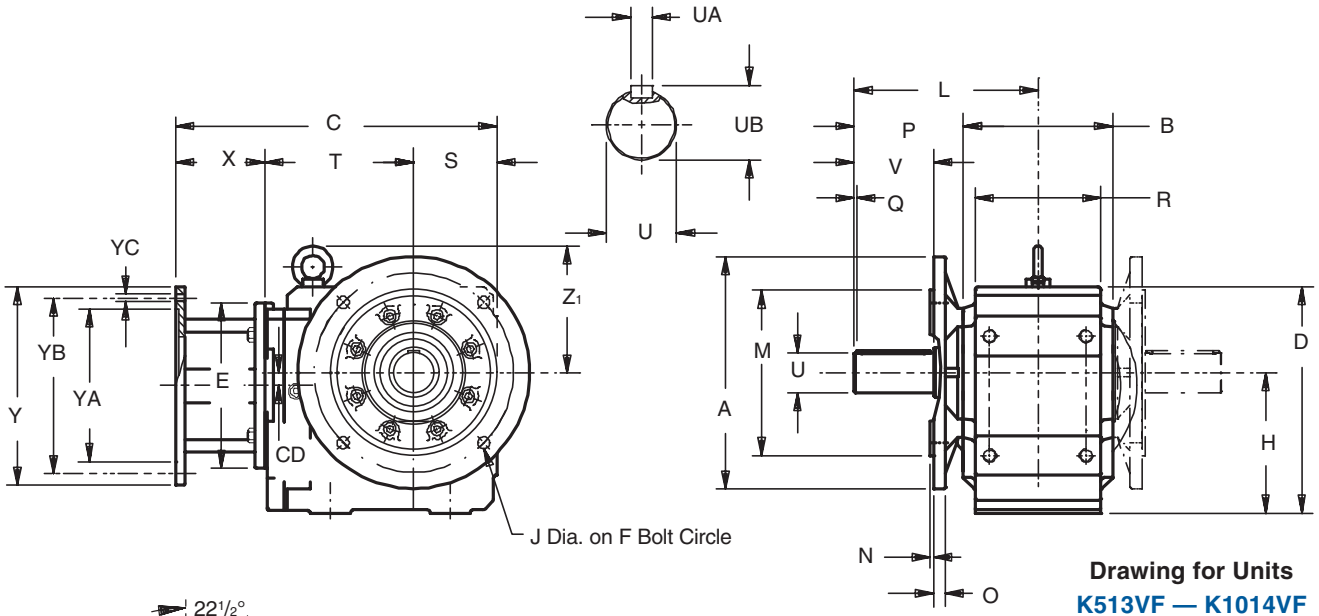
Part No. Example

Round Flange with Motor Adapter

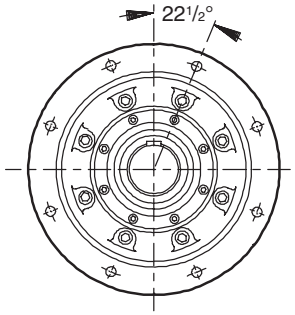
K303VF0650 MR160/140

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





Drawing for Units
K513VF — K1014VF



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

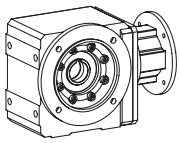
Table No. 4 **Metric output available on request.**

Base Module	Standard Shaft – inches			Optional Shaft – mm		
	U	UA – Key	UB	U	UA – Key	UB
K102	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	M8 ×7×40	28
K202/203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	M8 ×7×50	33
K302/303	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	M8 ×7×50	33
K402/403	1.375	5/16 × 5/16 × 2 5/16	1.51	40k6	M12 ×8×70	43
K513/514	1.750	3/8 × 3/8 × 3 5/32	1.92	45k6	M14 ×9×80	48.5
K613/614	1.750	3/8 × 3/8 × 3 5/32	1.92	50k6	M14 ×9×90	53.5
K713/714	2.375	5/8 × 5/8 × 3 15/16	2.65	60k6	M18 ×11×110	64
K813/814	2.875	3/4 × 3/4 × 4 5/16	3.21	70m6	M20 ×12×125	74.5
K913/914	3.625	7/8 × 7/8 × 5 1/2	4.01	90m6	M25 ×14×140	95
K1013/1014	4.375	1 × 1 × 7 1/8	4.82	110m6	M28 ×16×180	116

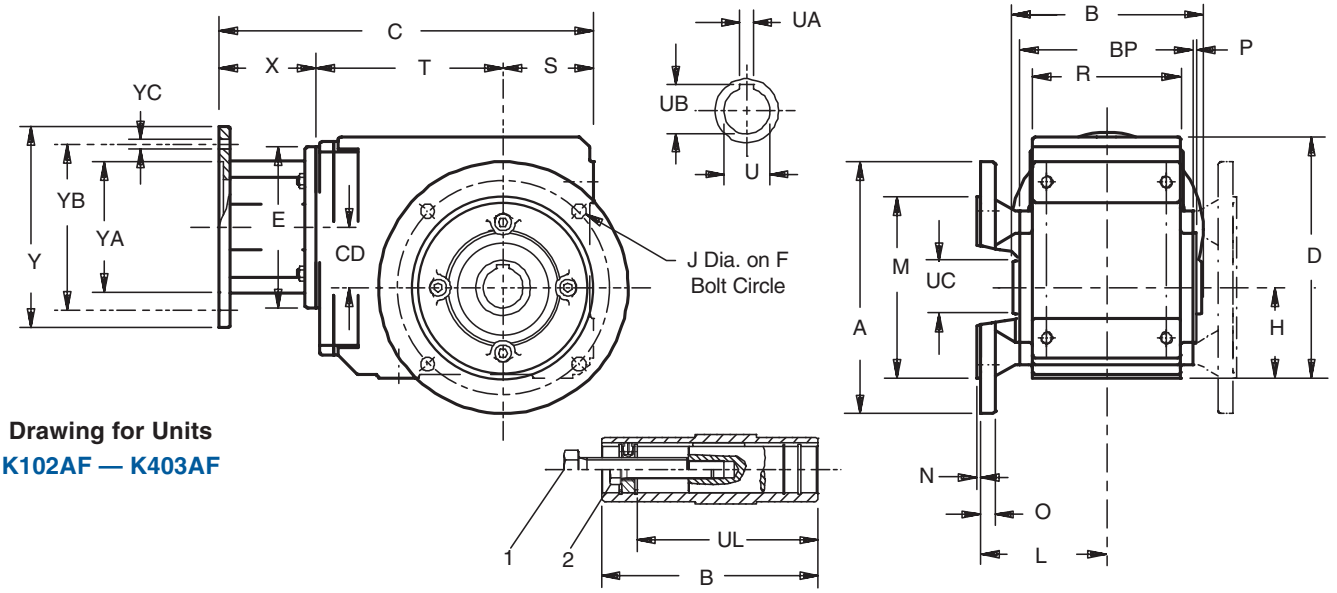
Table No. 5 **"K" Series – Flange Mounting Unit Dimensions (Inches) – "F" Housing Style**

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	B	D	F	H	J	L	M	N	O	P	R	S	Z_1	BP	UC	UL	1
K102	6.30	4.17	6.30	5.12	2.36	.35	4.53	4.331 +.001/-.0004	.14	.39	2.44	3.54	2.36	—	4.17	1.57	3.86	1/2-13
K202/203	7.87	5.28	7.48	6.50	2.56	.43	5.31	5.118 +.001/-.0004	.14	.47	2.68	4.53	2.56	—	5.28	1.77	4.78	1/2-13
K302/303	7.87	5.75	8.39	6.50	2.95	.43	5.59	5.118 +.001/-.0004	.14	.55	2.72	5.12	2.95	—	5.75	1.97	4.92	5/8-11
K402/403	9.84	6.81	9.45	8.46	3.54	.55	6.54	7.087 +.001/-.0004	.16	.59	3.52	5.83	3.54	—	6.81	2.17	6.18	3/4-10
K513/514	9.84	7.28	10.24	8.46	6.30	.55	8.74	7.087 +.001/-.0004	.16	.59	5.10	6.30	3.94	5.98	7.28	2.56	6.46	3/4-10
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055 +.001/-.001	.16	.67	5.35	6.61	4.72	6.77	7.87	2.76	7.05	3/4-10
K713/714	13.78	8.90	13.46	11.81	8.35	.71	10.91	9.842 +.000/-.001	.20	.71	6.46	7.48	4.92	7.52	8.90	3.35	8.43	1-8
K813/814	15.75	11.10	16.14	13.78	10.43	.71	12.83	11.811 +.000/-.001	.20	.79	7.28	9.25	5.71	8.11	11.10	3.94	10.35	1-8
K913/914	17.72	12.99	19.49	15.75	12.40	.71	15.16	13.780 +.000/-.001	.20	.91	8.66	11.22	7.09	9.84	12.99	4.33	12.32	1-8
K1013/1014	21.65	14.02	23.27	19.69	14.76	.71	18.35	17.716 +.000/-.002	.20	.98	11.34	15.75	8.86	12.01	15.60	5.12	14.25	1 1/4-7

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

Table No. 3 "K" Series — Optional Flanges (Inches)

Base Module	Flange Size	A	F	J	L	M	N	O
K102	140	5.512	4.53	.35	3.35	3.740	.12	.39
K202/K203	160	6.300	5.12	.35	3.90	4.331	.14	.47
K302/K303	160	6.300	5.12	.35	4.37	4.331	.14	.55
K713/K714	200	7.874	6.50	.43	6.18	5.118	.20	.71
K813/K814	350	13.780	11.81	.71	7.32	9.843	.20	.79
	450	17.717	15.75	.71	7.32	13.781	.20	.79

Optional flanges are not available in all sizes.

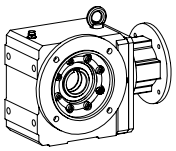
1. Removal Bolt — not supplied.
2. Mounting Bolt — must be smaller than removal bolt.

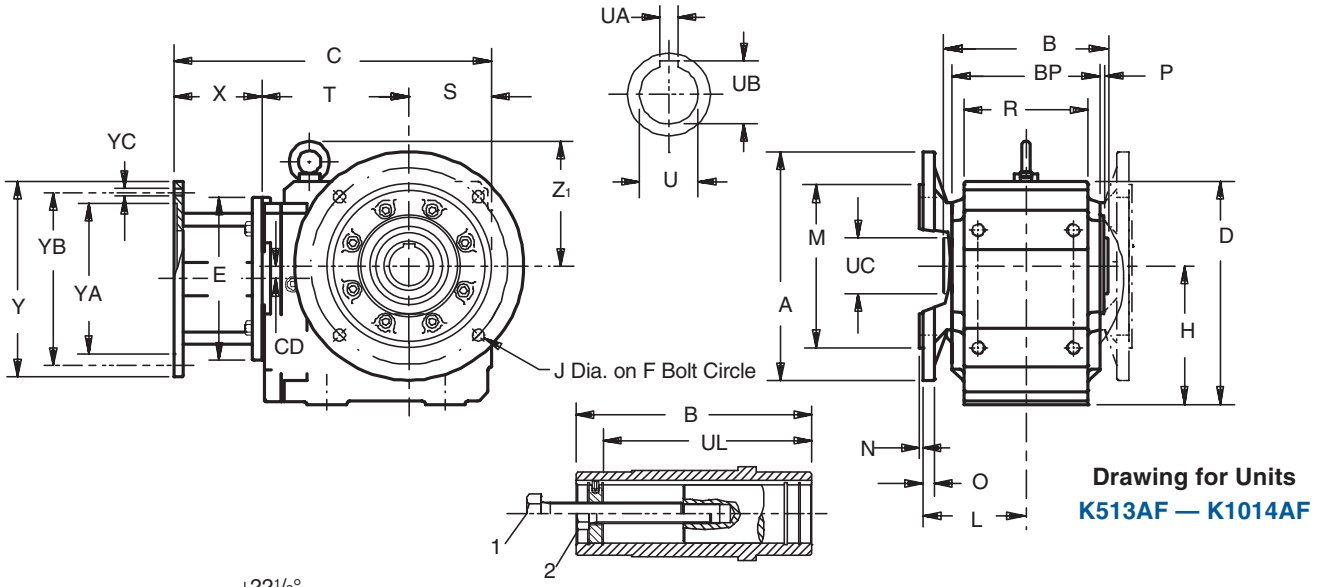
Part No. Example

Hollow Output, Flanged Housing with Motor Adapter

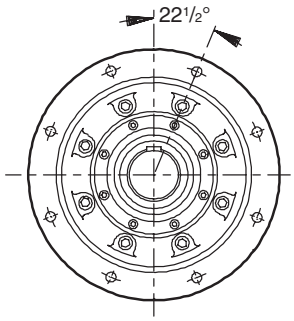
K303AF0650 MR160/140

"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.

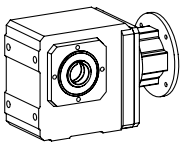
Table No. 4 **Metric output available on request.**

Base Module	Standard Bore - inches			Optional Bore - mm		
	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

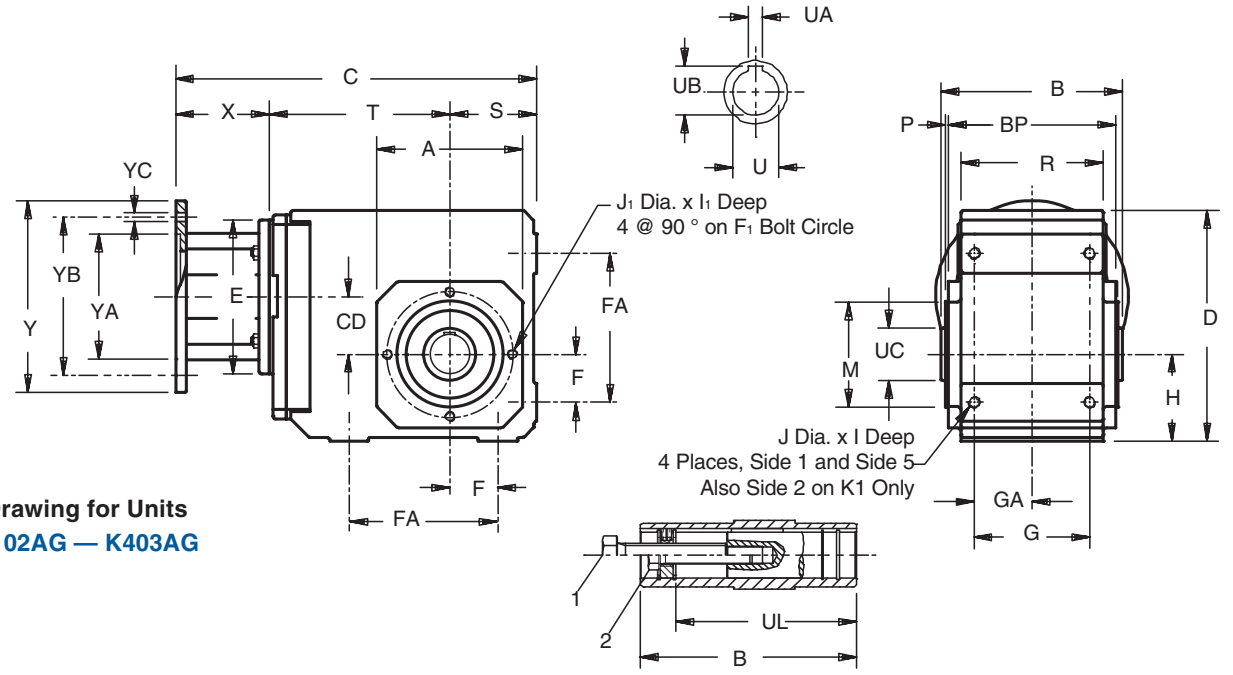
Table No. 5 **"K" Series – Hollow Output, Round Flange Unit Dimensions (Inches) – "F" Housing Style**

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	P	R	S	Z_1	BP	FA	GA
K102	4.13	4.72	6.30	3.54	3.54	2.76	2.36	.51	.51	M8	M8	2.953 +.001/-.0003	.12	3.54	2.36	—	3.54	1.18	1.38
K202/203	4.57	5.83	7.48	4.53	3.94	3.54	2.56	.63	.51	M10	M8	3.228 +.001/-.0004	.12	4.53	2.56	—	3.94	1.38	1.77
K302/303	5.20	6.30	8.39	5.12	4.53	4.13	2.95	.63	.51	M10	M8	3.740 +.001/-.0004	.12	5.12	2.95	—	4.53	1.57	2.07
K402/403	5.98	7.40	9.45	6.10	5.12	4.72	3.54	.75	.63	M12	M10	4.331 +.001/-.0004	.14	5.83	3.54	—	5.12	1.97	2.36
K513/514	5.71	7.87	10.24	5.51	5.12	4.92	6.30	1.02	.63	M16	M10	4.331 +.001/-.0004	.14	6.30	3.94	5.98	5.12	1.57	2.46
K613/614	7.09	8.46	12.20	6.30	6.50	5.12	7.48	1.02	.63	M16	M10	5.512 +.001/-.0004	.14	6.61	4.72	6.77	6.50	1.97	2.56
K713/714	7.68	9.53	13.46	7.09	7.28	5.71	8.35	1.22	.75	M20	M12	6.102 +.001/-.0004	.14	7.48	4.92	7.52	7.28	2.17	2.85
K813/814	8.90	11.81	16.14	9.45	8.46	7.28	10.43	1.50	.75	M24	M12	7.283 +.001/-.001	.16	9.25	5.71	8.11	8.46	2.95	3.64
K913/914	11.02	13.78	19.49	11.02	10.43	8.86	12.40	1.89	1.02	M30	M16	9.055 +.001/-.001	.20	11.22	7.09	9.84	10.43	3.74	4.43
K1013/1014	13.38	16.14	23.27	11.81	11.81	12.99	14.76	1.77	1.30	1.54	M20	9.843 +.001/-.001	.28	15.59	8.86	12.01	11.81	4.53	6.50

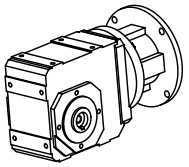
Table No. 2

Base Module	UC	UL	1
K102	1.57	3.86	1/2-13
K202/203	1.77	4.78	1/2-13
K302/303	1.97	4.92	5/8-11
K402/403	2.17	6.18	3/4-10
K513/514	2.56	6.46	3/4-10
K613/614	2.76	7.05	3/4-10
K713/714	3.35	8.43	1-8
K813/814	3.94	10.35	1-8
K913/914	4.33	12.32	1-8
K1013/1014	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



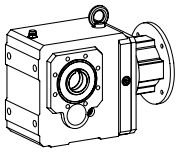
K1 Housing with tapped holes on Side 1, Side 2, and Side 5.

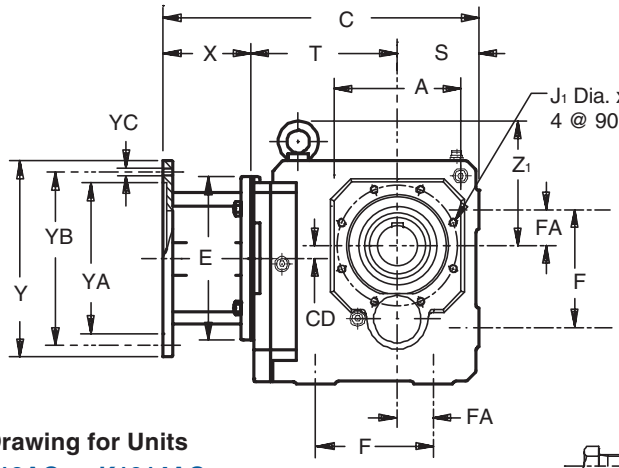
Part No. Example

Tapped Holes Housing with Motor Adapter

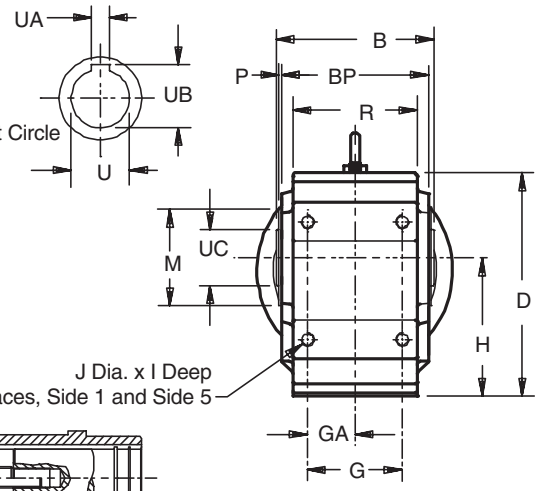
K303AG0650 MR160/140

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





Drawing for Units
K513AG — K1014AG



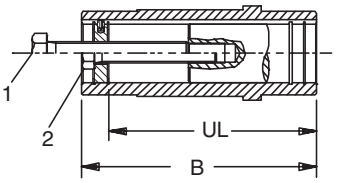
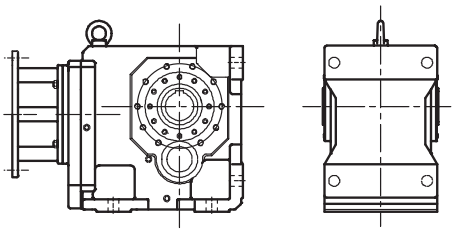


Table No. 4 **Metric output available on request.**

Base Module	Standard Bore - inches			Optional Bore - mm		
	U	UA	UB	U	UA	UB
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

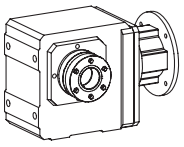


Typical K10 housing.

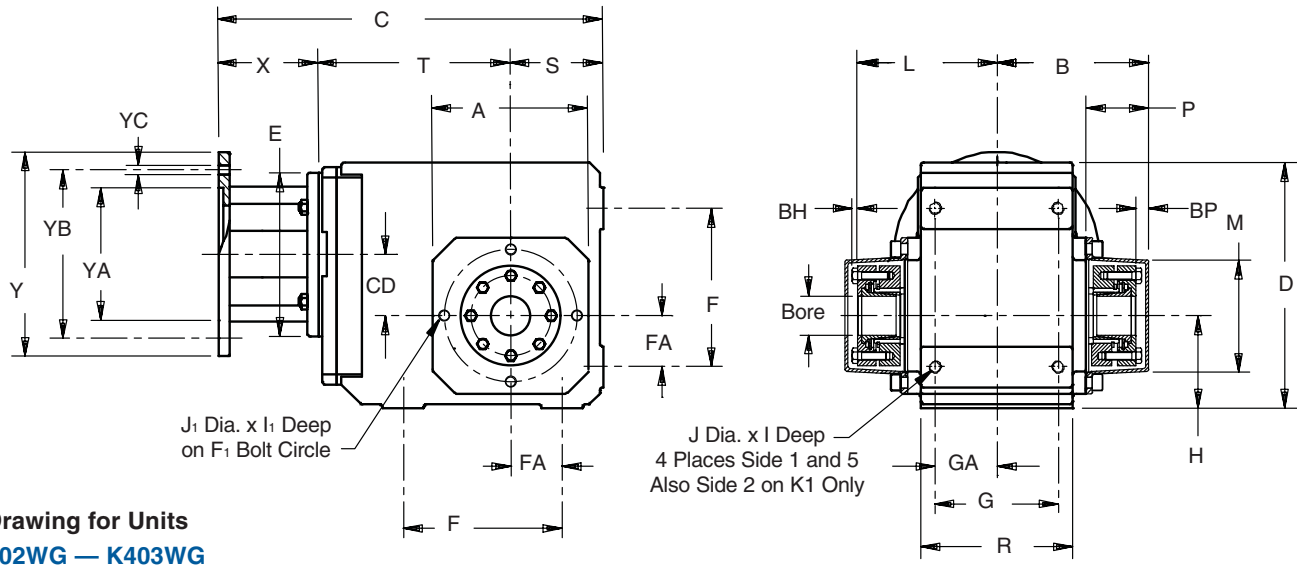
Table No. 5 **"K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style**

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
Double Bushing – Dimensional Data



Drawing for Units
K102WG — K403WG

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

Base Module	Max. Bore	A	B	D	F	F_1	G	H	I	I_1	J	J_1	L	M	P	R	S	Z_1	BP	BH	FA	GA
K102	1.000	4.13	3.90	6.30	3.54	3.54	2.76	2.36	.51	.51	M8	M8	3.66	3.07	1.97	3.54	2.36	—	.24	.16	1.18	1.38
K202/203	1.187	4.57	4.68	7.48	4.53	3.94	3.54	2.56	.63	.51	M10	M8	4.26	3.46	2.05	4.53	2.56	—	.39	.16	1.38	1.77
K302/303	1.500	5.20	4.98	8.39	5.12	4.53	4.13	2.95	.63	.51	M10	M8	4.54	3.78	2.09	5.12	2.95	—	.43	.16	1.57	2.07
K402/403	1.500	5.98	5.80	9.45	6.10	5.12	4.72	3.54	.75	.63	M12	M10	5.33	4.33	2.40	5.83	3.54	—	.47	.20	1.97	2.36
K513/514	2.000	5.71	6.05	10.24	5.51	5.12	4.92	6.30	1.02	.63	M16	M10	5.61	4.54	2.40	6.30	3.94	5.98	.43	.20	1.57	2.46
K613/614	2.187	7.09	6.61	12.20	6.30	6.50	5.12	7.48	1.02	.63	M16	M10	6.10	5.00	2.68	6.61	4.72	6.77	.51	.24	1.97	2.56
K713/714	2.375	7.68	7.68	13.46	7.09	7.28	5.71	8.35	1.22	.75	M20	M12	7.29	5.75	2.91	7.48	4.92	7.52	.39	.24	2.17	2.85
K813/814	2.750	8.90	9.34	16.14	9.45	8.46	7.28	10.43	1.50	.75	M24	M12	8.70	6.95	3.43	9.25	5.71	8.11	.64	.31	2.95	3.64

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
MR30_/280	284/286TC	11.81	6.50	11.13	10.500	9.00	.57	75

Part No. Example

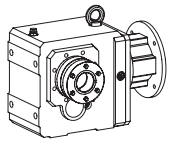
143TC Frame Motor Adapter and $1^{7}/_{16}$ Bushing Bore

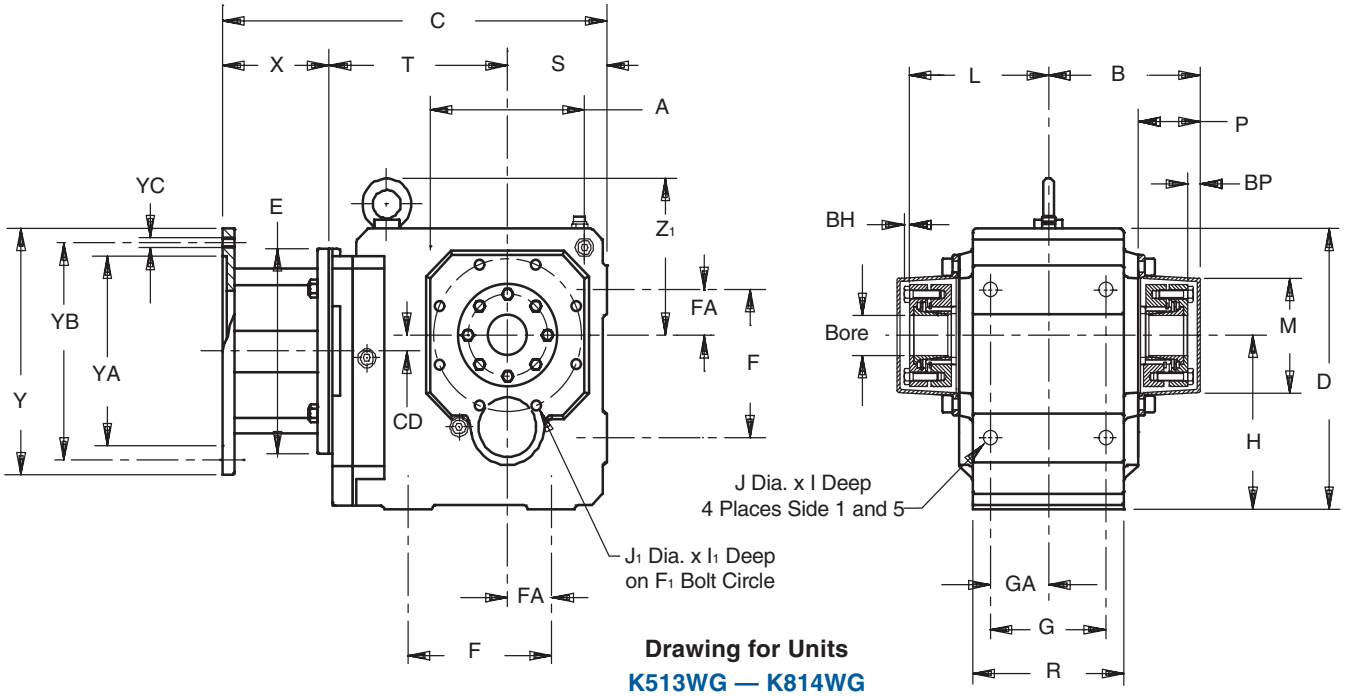
K303WG0650 MR160/140 WFB3-107

Table No. 3 **"WFB" Double Side Bushings**

	Stock Bores Sizes						
Unit	1	$1^{3}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{8}$	$1^{7}/_{16}$	$1^{1}/_{2}$	40mm
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**	**WFB4-40**

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





Drawing for Units
K513WG — K814WG

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

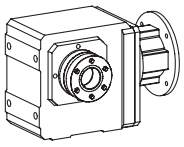
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53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

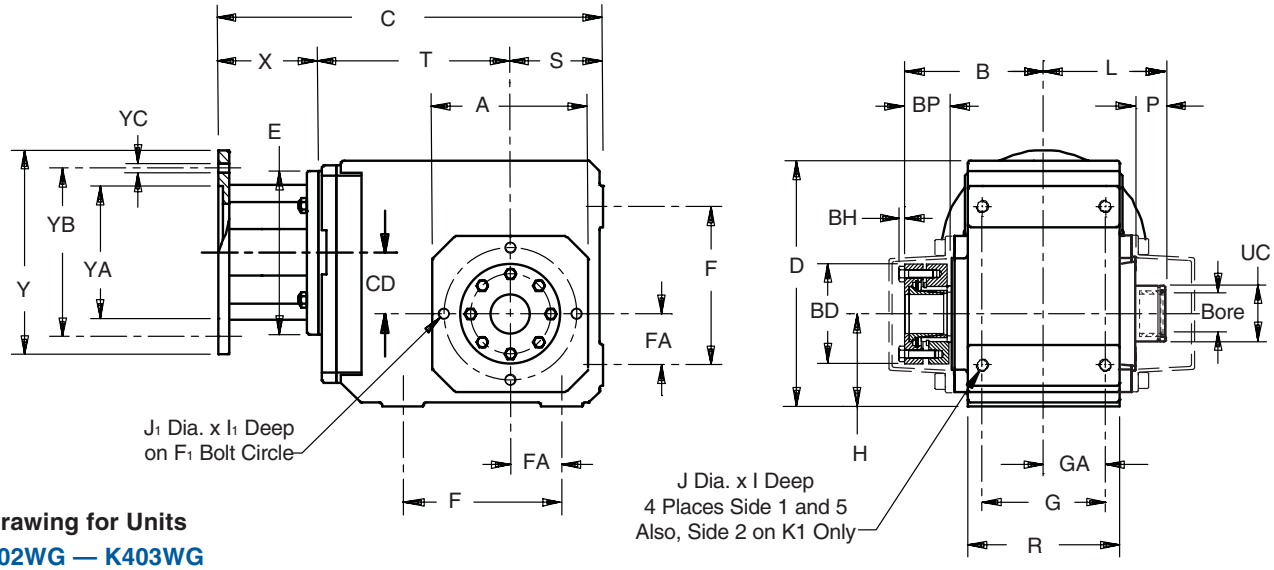
NOTE: A double side bushing kit includes 2 each of a pressure ring and clamp ring, flanged and tapered cone, and all hardware to mount the kit into the reducer. The WFB1 does not use a tapered cone. All double bushing kits include covers.
The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 5 **"WFB" Double 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	40mm
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-107	WFB5-112	WFB5-114	WFB5-115	WFB5-200	—	—	—	—	WFB5-40
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	—	WFB6-115	WFB6-200	WFB6-203	WFB6-206	—	—	WFB6-40
K7	—	—	—	—	—	—	WFB7-115	WFB7-200	WFB7-203	WFB7-206	—	—	—
K8	—	—	—	—	—	—	—	—	WFB8-203	WFB8-206	WFB7-207	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	BD	BP	BH	FA	GA	UC
K102	4.13	3.66	6.30	3.54	3.54	2.76	2.36	.51	.51	M8	M8	3.15	1.97	3.54	2.36	—	2.76	1.62	.16	1.18	1.38	1.54
K202/203	4.57	4.29	7.48	4.53	3.94	3.54	2.567	.63	.51	M10	M8	3.78	2.05	4.53	2.56	—	3.07	1.54	.16	1.38	1.7	1.73
K302/303	5.20	4.54	8.39	5.12	4.53	4.13	2.95	.63	.51	M10	M8	4.02	2.09	5.12	2.95	—	3.31	1.55	.16	1.57	2.07	1.93
K402/403	5.98	5.33	9.45	6.10	5.12	4.72	3.54	.75	.63	M12	M10	4.69	2.40	5.83	3.54	—	3.82	1.83	.20	1.97	2.36	2.13
K513/514	5.71	5.61	10.24	5.51	5.12	4.92	6.30	1.02	.63	M16	M10	4.96	2.40	6.30	3.94	5.98	4.13	1.87	.20	1.57	2.46	2.56
K613/614	7.09	6.10	12.20	6.30	6.50	5.12	7.48	1.02	.63	M16	M10	5.12	2.68	6.61	4.72	6.77	4.65	2.11	.24	1.97	2.56	2.91
K713/714	7.68	7.29	13.46	7.09	7.28	5.71	8.35	1.22	.75	M20	M12	6.20	2.91	7.48	4.92	7.52	5.43	2.70	.24	2.17	2.85	3.35
K813/814	8.90	8.70	16.14	9.45	8.46	7.28	10.43	1.50	.75	M24	M12	7.58	3.43	9.25	5.71	8.11	6.22	2.99	.31	2.95	3.64	3.94

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

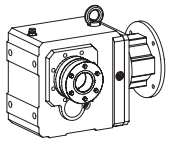
143TC Frame Motor Adapter and $1^{7}/_{16}$ Bushing Bore

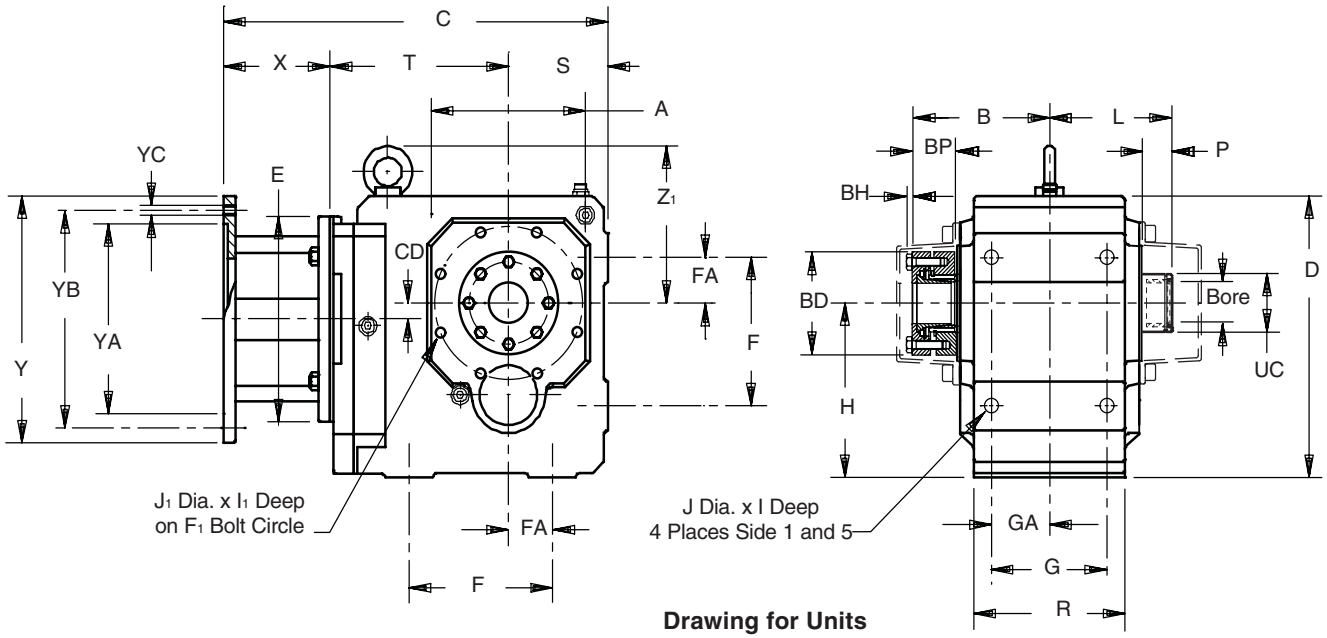
K303WG0650 MR160/140 WF3-107

Table No. 3 "WF" Single Side Bushings

	Stock Bores Sizes					
Unit	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**
K4	**WF4-100**	**WF4-103**	**WF4-104**	**WF4-106**	**WF4-107**	**WF4-108**

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





Drawing for Units
K513WG — K814WG

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

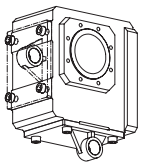
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			MR300/250 [3]			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	10.55	4.88	1.42	11.26	5.04	—	—	—	—	—	—	—	—	—	31
K202	1.81	11.50	5.63	1.81	12.21	5.79	1.81	13.23	5.87	—	—	—	—	—	—	40
K203	1.81	12.96	7.09	—	—	—	—	—	—	—	—	—	—	—	—	53
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. 5 **"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	WF5-107	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	WF6-206	—	—
K7	—	—	—	—	—	—	WF7-115	WF7-200	WF7-203	WF7-206	—	—
K8	—	—	—	—	—	—	—	—	WF8-203	WF8-206	WF8-207	WF8-212



"K" Series – MGS Reducer Torque Arm Bracket

(torque arm supplied by others)

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

Drawing for Units
K102AGD — K403AGD

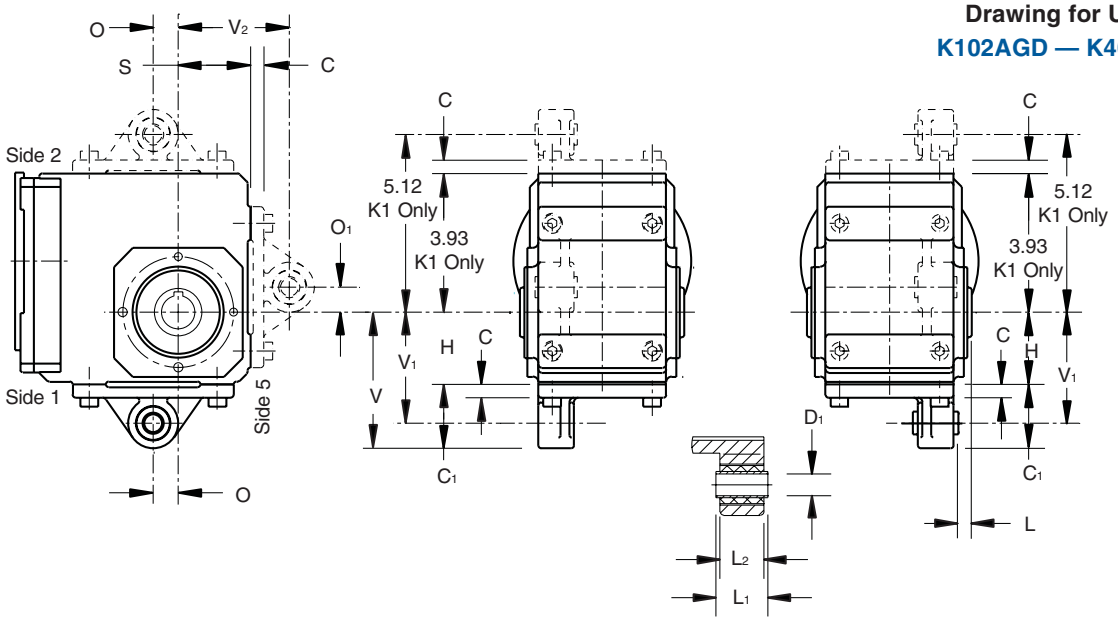
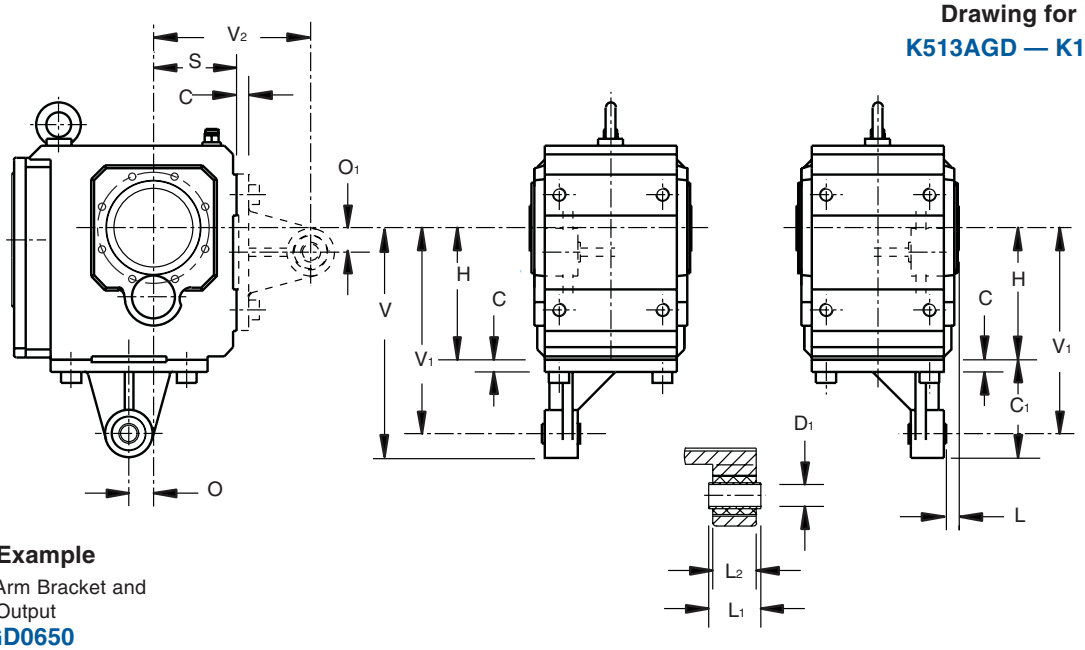


Table No. 1 **"K" Series — Torque Arm Bracket Dimensions (Inches)**

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

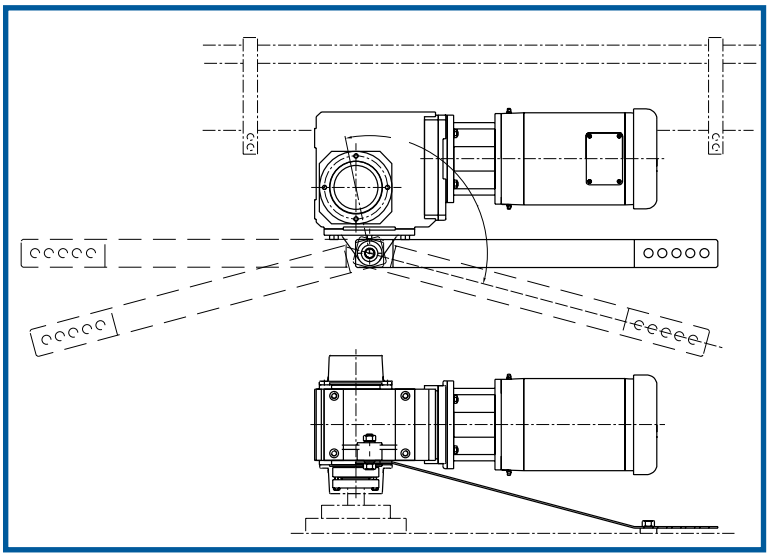
Drawing for Units
K513AGD — K1014AGD

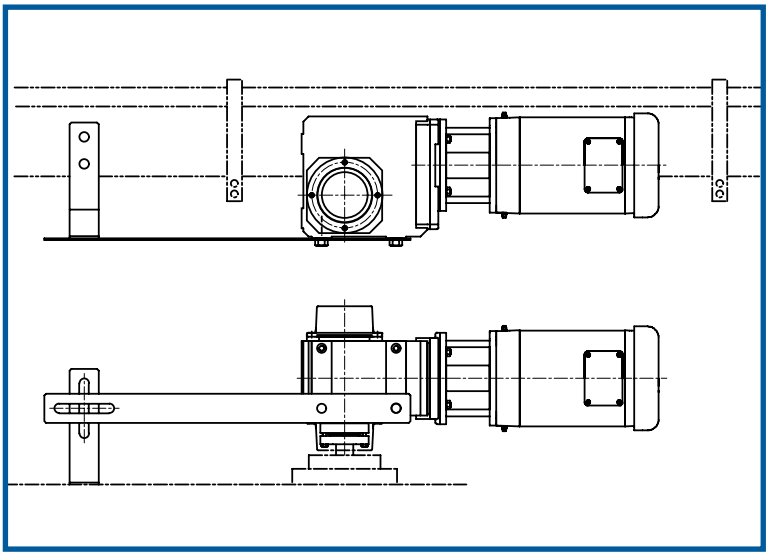


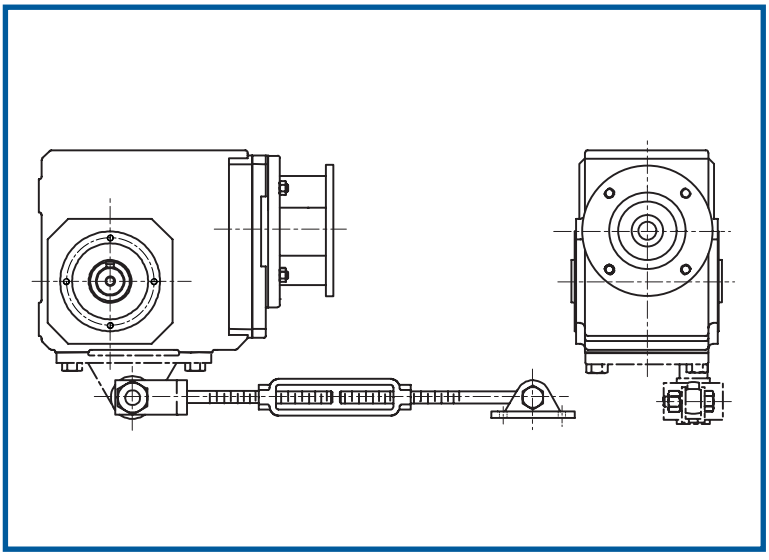
Part No. Example

Unit with Torque Arm Bracket and Hollow Output
K513AGD0650

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

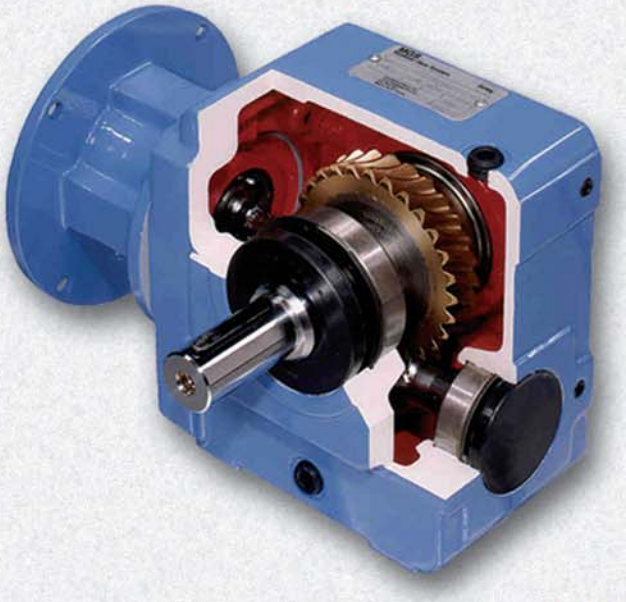






Notes

“S” Series Right Angle Helical/Worm Speed Reducers



3 YEAR WARRANTY

3-DAY DELIVERY

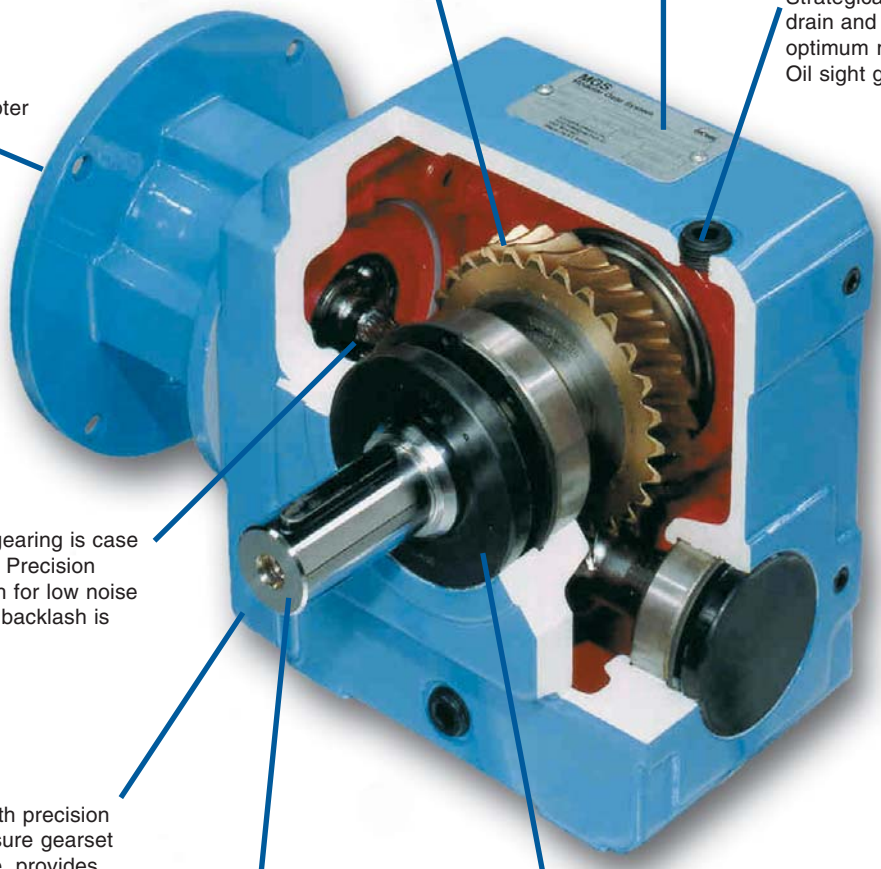
www.stober.com

"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 1/6 to 8.19
- Output torques to 7,086 in. lbs.
- Output speeds available from 318 to 2.5 RPM
- Speed reducer ratios from 9.2:1 to 683:1
- 3 year warranty–your assurance of satisfactory product performance



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)

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

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.

Output Options:
- Solid shaft
- Hollow

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

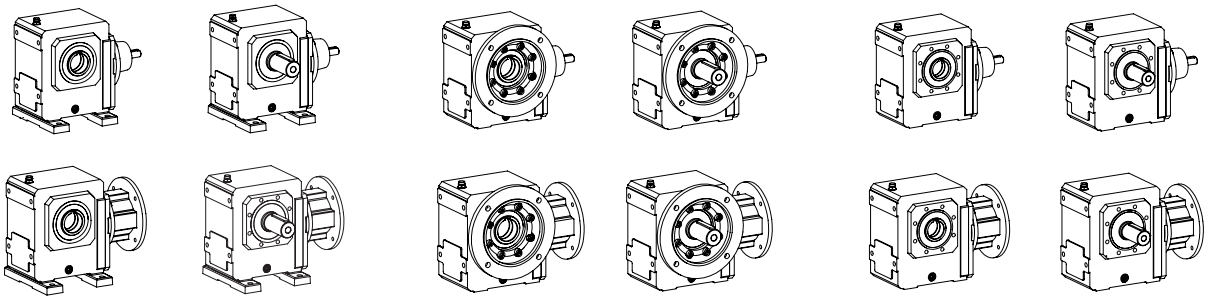
Shipped with the proper amount and type of oil to prevent gear damaging dry start-ups

"S" Series – Right Angle Helical/Worm MGS Speed Reducers Overview

Housing Style + Output Style + Input Style = Reducer Configurations

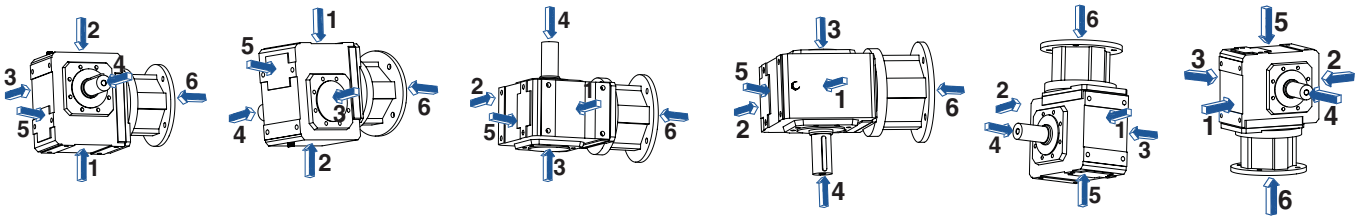
Style N	Style F	Style G		Style A	Style V		MR	AW	
Foot Mount	Round Flange	Tapped Holes	+	Hollow Output	Solid Output	+	Motor Adapter	Input Shaft	=

Reducer Configurations



Style AN	Style VN	Style AF	Style VF	Style AG	Style VG
Hollow Output	Solid Output	Hollow Output	Solid Output	Hollow Output	Solid Output

Mounting Positions *(Units shown with shaft on Side 4.)*



Part No. Explanation with OPTIONS and REQUIRED INFORMATION

S 4 0 2 A N 0280 MR200 / 180

180: 050 (56C), 140 (143/145TC), **180** (182/184TC), 210 (213/215TC), 250 (254/256TC), 280 (284/286TC), 320 (324/326TC), 360 (364/365TC)

MR200: Motor Adapter Size: MR140, MR160, **MR200**, MR300, MR350

0280: Nominal Ratio: (**0280** = 27.9:1)

N: HOUSING STYLE: "**F**" Housing Style – Flange Mounting ..... **SPECIFY IN A NOTE**: ..... Flange on Side 3 or Side 4
"**G**" Housing Style – Tapped Holes
"**GD**" Housing Style – Torque Arm Bracket .... **SPECIFY IN A NOTE**: ..... Bracket on Side 1 or Side 5
"**N**" Housing Style – Foot Mount ..... **SPECIFY IN A NOTE**: ..... Feet on Side 1 or Side 5

A: OUTPUT STYLE: "**V**" Solid Output ..... **SPECIFY IN A NOTE**: ..... Imperial or Metric[1)]
Single or Double
IF Single: Shaft on Side 3 or Side 4

"**A**" Hollow Output ..... **SPECIFY IN A NOTE**: ..... Imperial or Metric[1)]

[1)]Not available in all sizes.

2: No. of Stages (**2** = 2 Stage, determined by ratio)

0: Design Generation

4: Unit Size No.

S: Right Angle Helical/Worm

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:
Mounting Position – EL1 EL2 EL3 EL4 EL5 EL6
Paint – Standard Gray ..... White ..... Stainless

Part No. Explanation for Input Shaft

AW160 / 012

012: 010 ($^{10}/_{16} = {}^{5}/_{8}$), **012** ($^{12}/_{16} = {}^{3}/_{4}$), 014 ($^{14}/_{16} = {}^{7}/_{8}$), 102 ($1^{2}/_{16} = 1^{1}/_{8}$)

AW160: Input Size: AW140, **AW160**, AW200, AW250

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

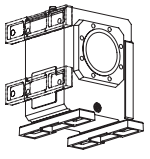
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
190 RPM Output (Approximate)								**155 RPM**		**125 RPM**		**95 RPM**	
1.78	511	S102_0092	MR140/050	56C	AW140/010	9.200	593	1.69	589	1.60	684	1.37	777
1.78	511	S102_0092	MR160/050	56C	AW160/012	9.200	593	1.69	589	1.60	684	1.37	777
1.78	511	S102_0092	MR160/140	143/145TC	AW160/012	9.200	593	1.69	589	1.60	684	1.37	777
3.26	939	S202_0092	MR140/050	56C	AW140/010	9.232	862	2.67	933	2.16	928	1.62	921
3.47	998	S202_0092	MR160/050	56C	AW160/012	9.232	862	3.27	1,145	3.08	1,320	2.79	1,585
3.47	998	S202_0092	MR160/140	143/145TC	AW160/012	9.232	862	3.27	1,145	3.08	1,320	2.79	1,585
3.47	998	S202_0092	MR200/180	182/184TC	AW200/014	9.232	862	3.27	1,145	3.08	1,320	2.79	1,585
5.17	1,499	S302_0093	MR160/050	56C	AW160/012	9.310	1,078	5.20	1,834	4.25	1,836	3.18	1,822
5.17	1,499	S302_0093	MR160/140	143/145TC	AW160/012	9.310	1,078	5.20	1,834	4.25	1,836	3.18	1,822
5.17	1,499	S302_0093	MR200/180	182/184TC	AW200/014	9.310	1,078	5.20	1,834	5.23	2,261	4.68	2,680
8.19	2,382	S402_0093	MR160/050	56C	AW160/012	9.281	1,402	8.12	2,874	8.05	3,491	7.38	4,234
8.19	2,382	S402_0093	MR160/140	143/145TC	AW160/012	9.281	1,402	8.12	2,874	8.05	3,491	7.38	4,234
8.19	2,382	S402_0093	MR200/180	182/184TC	AW200/014	9.281	1,402	8.12	2,874	8.05	3,491	7.38	4,234
8.19	2,382	S402_0093	MR250/210	213/215TC	AW250/102	9.281	1,402	8.12	2,874	8.05	3,491	7.38	4,234
150 RPM Output (Approximate)								**125 RPM**		**100 RPM**		**75 RPM**	
1.68	598	S102_0115	MR140/050	56C	AW140/010	11.500	627	1.59	691	1.43	760	1.19	837
1.68	598	S102_0115	MR160/050	56C	AW160/012	11.500	627	1.59	691	1.43	760	1.19	837
1.68	598	S102_0115	MR160/140	143/145TC	AW160/012	11.500	627	1.59	691	1.43	760	1.19	837
3.16	1,131	S202_0115	MR140/050	56C	AW140/010	11.600	912	2.58	1,125	2.10	1,118	1.57	1,110
3.26	1,165	S202_0115	MR160/050	56C	AW160/012	11.600	912	3.07	1,337	2.89	1,541	2.42	1,710
3.26	1,165	S202_0115	MR160/140	143/145TC	AW160/012	11.600	912	3.07	1,337	2.89	1,541	2.42	1,710
3.26	1,165	S202_0115	MR200/180	182/184TC	AW200/014	11.600	912	3.07	1,337	2.89	1,541	2.42	1,710
5.20	1,877	S302_0115	MR160/050	56C	AW160/012	11.660	1,141	5.06	2,219	4.10	2,207	3.08	2,191
5.20	1,877	S302_0115	MR160/140	143/145TC	AW160/012	11.660	1,141	5.23	2,298	4.88	2,625	4.06	2,889
8.08	2,924	S402_0115	MR160/050	56C	AW160/012	11.570	1,483	8.01	3,528	7.67	4,141	6.38	4,557
8.08	2,924	S402_0115	MR160/140	143/145TC	AW160/012	11.570	1,483	8.01	3,528	7.67	4,141	6.38	4,557
8.08	2,924	S402_0115	MR200/180	182/184TC	AW200/014	11.570	1,483	8.01	3,528	7.67	4,141	6.38	4,557
8.08	2,924	S402_0115	MR250/210	213/215TC	AW250/102	11.570	1,483	8.01	3,528	7.67	4,141	6.38	4,557
125 RPM Output (Approximate) **Continued Next Page**								**100 RPM**		**80 RPM**		**60 RPM**	
1.61	689	S102_0140	MR140/050	56C	AW140/010	14.040	657	1.45	758	1.27	812	1.06	894
1.61	689	S102_0140	MR160/050	56C	AW160/012	14.040	657	1.45	758	1.27	812	1.06	894
1.61	689	S102_0140	MR160/140	143/145TC	AW160/012	14.040	657	1.45	758	1.27	812	1.06	894
3.04	1,307	S202_0140	MR140/050	56C	AW140/010	13.910	956	2.48	1,299	2.01	1,292	1.51	1,283
3.07	1,319	S202_0140	MR160/050	56C	AW160/012	13.910	956	2.89	1,513	2.57	1,651	2.14	1,817
3.07	1,319	S202_0140	MR160/140	143/145TC	AW160/012	13.910	956	2.89	1,513	2.57	1,651	2.14	1,817
3.07	1,319	S202_0140	MR200/180	182/184TC	AW200/014	13.910	956	2.89	1,513	2.57	1,651	2.14	1,817
5.20	2,253	S302_0140	MR160/050	56C	AW160/012	14.000	1,196	4.86	2,563	3.94	2,549	2.96	2,532
5.20	2,253	S302_0140	MR160/140	143/145TC	AW160/012	14.000	1,196	4.86	2,563	3.94	2,549	2.96	2,532

For thermal HP capacity, see rating below.

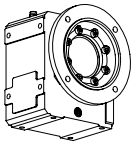
Base Module Thermal Capacity	S1	S2	S3	S4
	2.95	5.36	7.38	12.34

Housing Styles

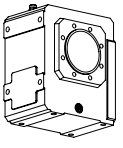
N – Foot Mounted



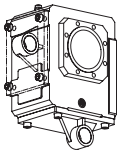
F – Round Flange



G – Tapped Holes



GD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143T/145T	1, 1 1/2, 2
182T/184T	3, 5
213T/215T	7 1/2, 10

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

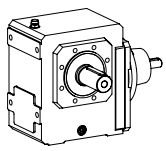
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: S302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
125 RPM Output (Approximate) Continued								**100 RPM**		**80 RPM**		**60 RPM**	
5.20	2,253	S302_0140	MR200/180	182/184TC	AW160/012	14.000	1,196	4.93	2,602	4.31	2,790	3.59	3,070
8.00	3,479	S402_0140	MR160/050	56C	AW160/012	13.950	1,554	7.77	4,110	6.79	4,407	5.65	4,851
8.00	3,479	S402_0140	MR160/140	143/145TC	AW160/012	13.950	1,554	7.77	4,110	6.79	4,407	5.65	4,851
8.00	3,479	S402_0140	MR200/180	182/184TC	AW200/014	13.950	1,554	7.77	4,110	6.79	4,407	5.65	4,851
8.00	3,479	S402_0140	MR250/210	213/215TC	AW250/102	13.950	1,554	7.77	4,110	6.79	4,407	5.65	4,851
100 RPM Output (Approximate								**80 RPM**		**65 RPM**		**50 RPM**	
1.43	762	S102_0175	MR140/050	56C	AW140/010	17.470	695	1.26	815	1.10	874	0.91	962
1.43	762	S102_0175	MR160/050	56C	AW160/012	17.470	695	1.26	815	1.10	874	0.91	962
1.43	762	S102_0175	MR160/140	143/145TC	AW160/012	17.470	695	1.26	815	1.10	874	0.91	962
2.89	1,544	S202_0175	MR140/050	56C	AW140/010	17.550	1,011	2.41	1,567	1.96	1,559	1.47	1,549
2.89	1,544	S202_0175	MR160/050	56C	AW160/012	17.550	1,011	2.56	1,664	2.24	1,784	1.86	1,964
2.89	1,544	S202_0175	MR160/140	143/145TC	AW160/012	17.550	1,011	2.56	1,664	2.24	1,784	1.86	1,964
3.02	1,625	S302_0175	MR140/050	56C	AW140/010	17.370	1,264	2.46	1,617	2.00	1,608	1.50	1,598
4.85	2,614	S302_0175	MR160/050	56C	AW160/012	17.370	1,264	4.26	2,796	3.73	2,998	2.82	3,008
4.85	2,614	S302_0175	MR160/140	143/145TC	AW160/012	17.370	1,264	4.26	2,796	3.73	2,998	2.82	3,008
4.85	2,614	S302_0175	MR200/180	182/184TC	AW200/014	17.370	1,264	4.26	2,796	3.73	2,998	3.10	3,300
7.67	4,143	S402_0175	MR160/050	56C	AW160/012	17.490	1,644	6.74	4,432	5.89	4,752	4.90	5,230
7.67	4,143	S402_0175	MR160/140	143/145TC	AW160/012	17.490	1,644	6.74	4,432	5.89	4,752	4.90	5,230
7.67	4,143	S402_0175	MR200/180	182/184TC	AW200/014	17.490	1,644	6.74	4,432	5.89	4,752	4.90	5,230
7.67	4,143	S402_0175	MR250/210	213/215TC	AW250/102	17.490	1,644	6.74	4,432	5.89	4,752	4.90	5,230
75 RPM Output (Approximate)								**60 RPM**		**50 RPM**		**35 RPM**	
1.19	837	S102_0230	MR140/050	56C	AW140/010	23.140	747	1.04	895	0.91	960	0.75	1,056
1.19	837	S102_0230	MR160/050	56C	AW160/012	23.140	747	1.04	895	0.91	960	0.75	1,056
1.19	837	S102_0230	MR160/140	143/145TC	AW160/012	23.140	747	1.04	895	0.91	960	0.75	1,056
2.42	1,709	S202_0230	MR140/050	56C	AW140/010	23.290	1,087	2.12	1,828	1.85	1,954	1.39	1,943
2.42	1,709	S202_0230	MR160/050	56C	AW160/012	23.290	1,087	2.12	1,828	1.85	1,960	1.54	2,152
2.42	1,709	S202_0230	MR160/140	143/145TC	AW160/012	23.290	1,087	2.12	1,828	1.85	1,960	1.54	2,152
2.88	2,056	S302_0230	MR140/050	56C	AW140/010	23.400	1,359	2.36	2,046	1.91	2,037	1.43	2,025
4.05	2,887	S302_0230	MR160/050	56C	AW160/012	23.400	1,359	3.55	3,088	3.11	3,311	2.58	3,644
4.05	2,887	S302_0230	MR160/140	143/145TC	AW160/012	23.400	1,359	3.55	3,088	3.11	3,311	2.58	3,644
4.05	2,887	S302_0230	MR200/180	182/184TC	AW200/014	23.400	1,359	3.55	3,088	3.11	3,311	2.58	3,644
6.38	4,566	S402_0230	MR160/050	56C	AW160/012	23.400	1,767	5.61	4,883	4.90	5,236	4.07	5,763
6.38	4,566	S402_0230	MR160/140	143/145TC	AW160/012	23.400	1,767	5.61	4,883	4.90	5,236	4.07	5,763
6.38	4,566	S402_0230	MR200/180	182/184TC	AW200/014	23.400	1,767	5.61	4,883	4.90	5,236	4.07	5,763
6.38	4,566	S402_0230	MR250/180	182/184TC	AW250/102	23.400	1,767	5.61	4,883	4.90	5,236	4.07	5,763

Part No. Explanation

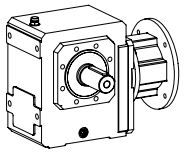
S 3 0 2 V G 0590 AW 160 / 012

- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



S 3 0 2 V G 0590 MR 160 / 140

- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

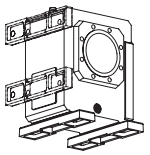
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
60 RPM	**Output (Approximate)**							**50 RPM**		**40 RPM**		**30 RPM**	
1.06	890	S102_0280	MR140/050	56C	AW140/010	27.900	782	0.93	952	0.81	1,021	0.64	1,066
1.06	890	S102_0280	MR160/050	56C	AW160/012	27.900	782	0.93	952	0.81	1,021	0.64	1,066
1.06	890	S102_0280	MR160/140	143/145TC	AW160/012	27.900	782	0.93	952	0.81	1,021	0.64	1,066
2.15	1,819	S202_0280	MR140/050	56C	AW140/010	28.080	1,138	1.89	1,946	1.65	2,087	1.32	2,214
2.15	1,819	S202_0280	MR160/050	56C	AW160/012	28.080	1,138	1.89	1,946	1.65	2,087	1.32	2,214
2.15	1,819	S202_0280	MR160/140	143/145TC	AW160/012	28.080	1,138	1.89	1,946	1.65	2,087	1.32	2,214
2.78	2,369	S302_0280	MR140/050	56C	AW140/010	28.010	1,422	2.27	2,359	1.84	2,348	1.38	2,335
3.60	3,065	S302_0280	MR160/050	56C	AW160/012	28.010	1,422	3.16	3,278	2.76	3,515	2.29	3,869
3.60	3,065	S302_0280	MR160/140	143/145TC	AW160/012	28.010	1,422	3.16	3,278	2.76	3,515	2.29	3,869
3.60	3,065	S302_0280	MR200/180	182/184TC	AW200/014	28.010	1,422	3.16	3,278	2.76	3,515	2.29	3,869
5.39	4,610	S402_0280	MR160/050	56C	AW160/012	27.900	1,849	4.41	4,588	3.57	4,566	2.68	4,540
5.39	4,610	S402_0280	MR160/140	143/145TC	AW160/012	27.900	1,849	4.41	4,588	3.57	4,566	2.68	4,540
5.66	4,841	S402_0280	MR200/180	182/184TC	AW200/014	27.900	1,849	4.97	5,178	4.35	5,552	3.61	6,111
50 RPM	**Output (Approximate)**							**40 RPM**		**30 RPM**		**25 RPM**	
0.92	960	S102_0350	MR140/050	56C	AW140/010	34.920	826	0.78	992	0.63	988	0.47	984
0.92	960	S102_0350	MR160/050	56C	AW160/012	34.920	826	0.78	992	0.63	988	0.47	984
1.86	1,953	S202_0350	MR140/050	56C	AW140/010	34.710	1,202	1.64	2,089	1.39	2,176	1.04	2,166
1.86	1,953	S202_0350	MR160/050	56C	AW160/012	34.710	1,202	1.64	2,089	1.39	2,176	1.04	2,166
1.86	1,953	S202_0350	MR160/140	143/145TC	AW160/012	34.710	1,202	1.64	2,089	1.39	2,176	1.04	2,166
2.67	2,820	S302_0350	MR140/050	56C	AW140/010	34.890	1,503	2.18	2,808	1.77	2,796	1.33	2,783
3.12	3,298	S302_0350	MR160/050	56C	AW160/012	34.890	1,503	2.74	3,527	2.27	3,591	1.70	3,573
3.12	3,298	S302_0350	MR160/140	143/145TC	AW160/012	34.890	1,503	2.74	3,527	2.27	3,591	1.70	3,573
4.92	5,217	S402_0350	MR160/050	56C	AW160/012	34.920	1,954	4.04	5,219	3.28	5,197	2.46	5,170
4.92	5,217	S402_0350	MR160/140	143/145TC	AW160/012	34.920	1,954	4.04	5,219	3.28	5,197	2.46	5,170
4.92	5,217	S402_0350	MR200/180	182/184TC	AW200/014	34.920	1,954	4.04	5,219	3.28	5,197	2.46	5,170
40 RPM	**Output (Approximate)**							**30 RPM**		**25 RPM**		**20 RPM**	
0.82	995	S102_0440	MR140/050	56C	AW140/010	43.680	874	0.73	1,065	0.65	1,161	0.53	1,264
0.82	995	S102_0440	MR160/050	56C	AW160/012	43.680	874	0.73	1,065	0.65	1,161	0.53	1,264
1.42	1,751	S202_0440	MR140/050	56C	AW140/010	43.880	1,272	1.25	1,876	1.13	2,075	0.95	2,309
1.42	1,751	S202_0440	MR160/050	56C	AW160/012	43.880	1,272	1.25	1,876	1.13	2,075	0.95	2,309
1.42	1,751	S202_0440	MR160/140	143/145TC	AW160/012	43.880	1,272	1.25	1,876	1.13	2,075	0.95	2,309
2.63	3,301	S302_0430	MR160/050	56C	AW140/010	43.440	1,590	2.33	3,557	2.00	3,725	1.50	3,690
2.63	3,301	S302_0430	MR160/140	143/145TC	AW160/012	43.440	1,590	2.33	3,557	2.10	3,910	1.74	4,294
3.86	4,893	S402_0440	MR160/050	56C	AW160/012	43.710	2,067	3.43	5,267	3.08	5,799	2.57	6,386
3.86	4,893	S402_0440	MR160/140	143/145TC	AW160/012	43.710	2,067	3.43	5,267	3.08	5,799	2.57	6,386
3.86	4,893	S402_0440	MR200/180	182/184TC	AW200/014	43.710	2,067	3.43	5,267	3.08	5,799	2.57	6,386
3.86	4,893	S402_0440	MR250/180	182/184TC	AW250/102	43.710	2,067	3.43	5,267	3.08	5,799	2.57	6,386

For thermal HP capacity, see rating below.

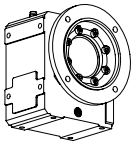
Base Module Thermal Capacity	S1	S2	S3	S4
	2.95	5.36	7.38	12.34

Housing Styles

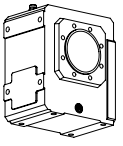
N – Foot Mounted



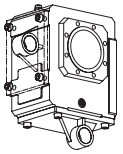
F – Round Flange



G – Tapped Holes



GD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143T/145T	1, 1 1/2, 2
182T/184T	3, 5
213T/215T	7 1/2, 10

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

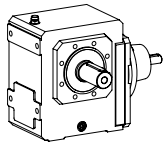
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: S302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
30 RPM Output (Approximate)								**25 RPM**		**20 RPM**		**15 RPM**	
0.69	1,100	S102_0580	MR140/050	56C	AW140/010	57.860	940	0.61	1,189	0.53	1,261	0.43	1,339
0.69	1,100	S102_0580	MR160/140	56C	AW160/012	57.860	940	0.61	1,189	0.53	1,261	0.43	1,339
1.19	1,945	S202_0580	MR140/050	56C	AW140/010	58.220	1,367	1.08	2,141	0.95	2,306	0.77	2,482
1.19	1,945	S202_0580	MR160/050	56C	AW160/012	58.220	1,367	1.08	2,141	0.95	2,306	0.77	2,482
1.19	1,945	S202_0580	MR160/140	143/145TC	AW160/012	58.220	1,367	1.08	2,141	0.95	2,306	0.77	2,482
2.25	3,725	S302_0590	MR140/050	56C	AW140/010	58.500	1,709	2.01	4,040	1.75	4,306	1.41	4,591
2.25	3,725	S302_0590	MR160/050	56C	AW160/012	58.500	1,709	2.01	4,040	1.75	4,306	1.41	4,591
2.25	3,725	S302_0590	MR160/140	143/145TC	AW160/012	58.500	1,709	2.01	4,040	1.75	4,306	1.41	4,591
3.29	5,500	S402_0590	MR160/050	56C	AW160/012	58.500	2,222	2.95	5,984	2.57	6,393	2.08	6,832
3.29	5,500	S402_0590	MR160/140	143/145TC	AW160/012	58.500	2,222	2.95	5,984	2.57	6,393	2.08	6,832
3.29	5,500	S402_0590	MR200/180	182/184TC	AW200/014	58.500	2,222	2.95	5,984	2.57	6,393	2.08	6,832
3.29	5,500	S402_0590	MR250/180	182/184TC	AW250/102	58.500	2,222	2.95	5,984	2.57	6,393	2.08	6,832
25 RPM Output (Approximate)								**20 RPM**		**15 RPM**		**12 RPM**	
0.62	1,183	S102_0700	MR140/050	56C	AW140/010	69.750	983	0.54	1,254	0.46	1,314	0.37	1,379
0.62	1,183	S102_0700	MR160/050	56C	AW160/012	69.750	983	0.54	1,254	0.46	1,314	0.37	1,379
1.09	2,128	S202_0700	MR140/050	56C	AW140/010	70.200	1,431	0.97	2,290	0.84	2,426	0.67	2,573
1.09	2,128	S202_0700	MR160/050	56C	AW160/012	70.200	1,431	0.97	2,290	0.84	2,426	0.67	2,573
1.09	2,128	S202_0700	MR160/140	143/145TC	AW160/012	70.200	1,431	0.97	2,290	0.84	2,426	0.67	2,573
2.03	4,009	S302_0700	MR140/050	56C	AW140/010	70.030	1,789	1.78	4,272	1.53	4,494	1.22	4,732
2.03	4,009	S302_0700	MR160/050	56C	AW160/012	70.030	1,789	1.78	4,272	1.53	4,494	1.22	4,732
2.03	4,009	S302_0700	MR160/140	143/145TC	AW160/012	70.030	1,789	1.78	4,272	1.53	4,494	1.22	4,732
2.97	5,927	S402_0700	MR160/050	56C	AW160/012	69.750	2,325	2.61	6,333	2.25	6,676	1.79	7,044
2.97	5,927	S402_0700	MR160/140	143/145TC	AW160/012	69.750	2,325	2.61	6,333	2.25	6,676	1.79	7,044
20 RPM Output (Approximate)								**15 RPM**		**13 RPM**		**10 RPM**	
0.54	1,262	S102_0870	MR140/050	56C	AW140/010	87.300	1,039	0.46	1,318	0.39	1,366	0.31	1,417
0.54	1,262	S102_0870	MR160/050	56C	AW160/012	87.300	1,039	0.46	1,318	0.39	1,366	0.31	1,417
0.95	2,297	S202_0870	MR140/050	56C	AW140/010	86.790	1,512	0.83	2,428	0.71	2,538	0.56	2,657
0.95	2,297	S202_0870	MR160/050	56C	AW160/012	86.790	1,512	0.83	2,428	0.71	2,538	0.56	2,657
1.76	4,293	S302_0870	MR140/050	56C	AW140/010	87.230	1,890	1.52	4,504	1.29	4,682	1.01	4,872
1.76	4,293	S302_0870	MR160/050	56C	AW160/012	87.230	1,890	1.52	4,504	1.29	4,682	1.01	4,872
1.76	4,293	S302_0870	MR160/140	143/145TC	AW160/012	87.230	1,890	1.52	4,504	1.29	4,682	1.01	4,872
2.59	6,374	S402_0870	MR160/050	56C	AW160/012	87.300	2,457	2.23	6,698	1.90	6,972	1.46	7,086
2.59	6,374	S402_0870	MR160/140	143/145TC	AW160/012	87.300	2,457	2.23	6,698	1.90	6,972	1.46	7,086

Part No. Explanation

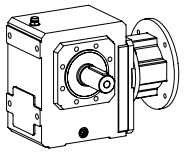
S 3 0 2 V G 0590 AW 160 / 012

- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



S 3 0 2 V G 0590 MR 160 / 140

- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



Mounting position must be specified when ordering.

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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
D. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

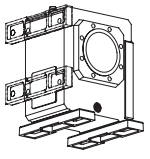
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
15 RPM	**Output (Approximate)**							**12 RPM**		**10 RPM**		**7 RPM**	
0.43	1,340	S102_1170	MR140/050	56C	AW140/010	116.700	1,117	0.37	1,382	0.31	1,417	0.23	1,417
0.78	2,478	S202_1160	MR140/050	56C	AW140/010	116.100	1,625	0.66	2,575	0.56	2,657	0.42	2,657
0.78	2,478	S202_1160	MR160/140	56C	AW160/012	116.100	1,625	0.66	2,575	0.56	2,657	0.42	2,657
1.42	4,580	S302_1160	MR140/050	56C	AW140/010	116.100	2,031	1.21	4,738	1.01	4,872	0.76	4,872
1.42	4,580	S302_1160	MR160/050	56C	AW160/012	116.100	2,031	1.21	4,738	1.01	4,872	0.76	4,872
1.42	4,580	S302_1160	MR160/140	143/145TC	AW160/012	116.100	2,031	1.21	4,738	1.01	4,872	0.76	4,872
2.09	6,817	S402_1160	MR160/050	56C	AW160/012	116.300	2,640	1.78	7,060	1.46	7,086	1.10	7,086
2.09	6,817	S402_1160	MR160/140	143/145TC	AW160/012	116.300	2,640	1.78	7,060	1.46	7,086	1.10	7,086
12 RPM	**Output (Approximate)**							**10 RPM**		**8 RPM**		**6 RPM**	
0.38	1,378	S102_1400	MR140/050	56C	AW140/010	139.500	1,164	0.32	1,407	0.26	1,401	0.19	1,394
0.68	2,557	S203_1360	MR140/050	56C	AW140/010	136.300	1,693	0.58	2,640	0.47	2,657	0.36	2,657
0.69	2,567	S202_1400	MR140/050	56C	AW140/010	139.500	1,693	0.58	2,649	0.47	2,657	0.36	2,657
1.13	4,281	S303_1370	MR140/050	56C	AW140/010	137.100	2,117	0.92	4,260	0.75	4,241	0.56	4,218
1.21	4,584	S302_1400	MR140/050	56C	AW140/010	139.900	2,117	0.99	4,562	0.80	4,542	0.60	4,517
1.21	4,584	S302_1400	MR160/050	56C	AW160/012	139.900	2,117	0.99	4,562	0.80	4,542	0.60	4,517
1.21	4,584	S302_1400	MR160/140	143/145TC	AW160/012	139.900	2,117	0.99	4,562	0.80	4,542	0.60	4,517
1.24	4,703	S303_1350	MR160/050	56C	AW160/012	135.300	2,117	1.05	4,839	0.86	4,872	0.65	4,872
1.24	4,703	S303_1350	MR160/140	143/145TC	AW160/012	135.300	2,117	1.05	4,839	0.86	4,872	0.65	4,872
1.83	7,000	S403_1350	MR160/050	56C	AW160/012	134.900	2,752	1.52	7,086	1.24	7,086	0.93	7,086
1.83	7,000	S403_1350	MR160/140	143/145TC	AW160/012	134.900	2,752	1.52	7,086	1.24	7,086	0.93	7,086
1.84	7,041	S402_1400	MR160/050	56C	AW160/012	139.900	2,752	1.52	7,086	1.24	7,086	0.93	7,086
1.84	7,041	S402_1400	MR160/140	143/145TC	AW160/012	139.900	2,752	1.52	7,086	1.24	7,086	0.93	7,086
10 RPM	**Output (Approximate)**							**8 RPM**		**6 RPM**		**5 RPM**	
0.25	1,143	S102_1740	MR140/050	56C	AW140/010	174.100	1,230	0.21	1,138	0.17	1,134	0.13	1,129
0.49	2,251	S202_1740	MR140/050	56C	AW140/010	174.400	1,789	0.40	2,242	0.32	2,234	0.24	2,224
0.57	2,651	S203_1720	MR140/050	56C	AW140/010	171.800	1,789	0.47	2,657	0.38	2,657	0.29	2,657
0.78	3,648	S302_1740	MR140/050	56C	AW140/010	174.400	2,236	0.63	3,633	0.51	3,618	0.39	3,601
1.03	4,848	S303_1680	MR160/050	56C	AW160/012	167.900	2,236	0.85	4,872	0.69	4,872	0.52	4,872
1.03	4,848	S303_1680	MR160/140	143/145TC	AW160/012	167.900	2,236	0.85	4,872	0.69	4,872	0.52	4,872
1.03	4,855	S303_1700	MR140/050	56C	AW140/010	170.100	2,236	0.85	4,872	0.69	4,872	0.52	4,872
1.13	5,367	S403_1710	MR140/050	56C	AW140/010	171.200	2,907	0.92	5,343	0.75	5,321	0.56	5,295
1.36	6,443	S402_1740	MR160/050	56C	AW160/012	174.100	2,907	1.11	6,415	0.90	6,388	0.68	6,357
1.36	6,443	S402_1740	MR160/140	143/145TC	AW160/012	174.100	2,907	1.11	6,415	0.90	6,388	0.68	6,357
1.49	7,086	S403_1690	MR160/050	56C	AW160/012	169.000	2,907	1.23	7,086	1.00	7,086	0.75	7,086
1.49	7,086	S403_1690	MR160/140	143/145TC	AW160/012	169.000	2,907	1.23	7,086	1.00	7,086	0.75	7,086
7 RPM	**Output (Approximate)**	Continued Next Page						**6 RPM**		**5 RPM**		**4 RPM**	
0.26	1,253	S102_2420	MR140/050	56C	AW140/010	242.000	1,237	0.22	1,306	0.19	1,350	0.15	1,398
0.43	2,657	S203_2280	MR140/050	56C	AW140/010	228.000	1,800	0.35	2,657	0.29	2,657	0.22	2,657
0.78	4,872	S303_2290	MR140/050	56C	AW140/010	229.100	2,250	0.64	4,872	0.52	4,872	0.39	4,872

For thermal HP capacity, see rating below.

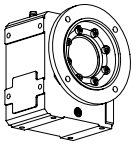
Base Module Thermal Capacity	S1	S2	S3	S4
	2.95	5.36	7.38	12.34

Housing Styles

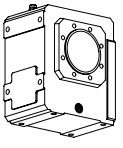
N – Foot Mounted



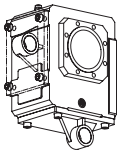
F – Round Flange



G – Tapped Holes



GD – Torque Arm Bracket



These Housing Styles are available as Hollow (A) or Solid (V) Output.

NEMA Frame Size TEFC 1750 RPM

C-Frame	Motor HP
56C	1/3 - 1 1/2
143T/145T	1, 1 1/2, 2
182T/184T	3, 5
213T/215T	7 1/2, 10

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

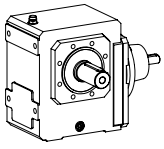
NOTE: [1] Complete Base Module Part Number by adding Output and Housing Style. Example: S302**VG**0560.
[2] Select Input Option and add to completed Part Number. See example below.
[3] Overhung Load is measured at the center of the shaft extension. Hollow output units are not intended to support overhung loads. If a load rating is required, use 50% of the published overhung load.
[4] Other frame sizes may also be available. See dimension pages.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Over-hung Load Output Shaft[3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
7 RPM		**Output (Approximate) Continued**						**6 RPM**		**5 RPM**		**4 RPM**	
0.78	4,872	S303_2260	MR160/050	56C	AW160/012	226.200	2,250	0.64	4,872	0.52	4,872	0.39	4,872
1.12	7,086	S403_2290	MR140/050	56C	AW140/010	229.100	2,925	0.92	7,086	0.75	7,085	0.56	7,056
1.12	7,086	S403_2260	MR160/050	56C	AW160/012	226.200	2,925	0.92	7,086	0.75	7,086	0.56	7,086
1.12	7,086	S403_2260	MR160/140	143/145TC	AW160/012	226.200	2,925	0.92	7,086	0.75	7,086	0.56	7,086
6 RPM		**Output (Approximate)**						**5 RPM**		**4 RPM**		**3 RPM**	
0.22	1,300	S102_2890	MR140/050	56C	AW140/010	289.300	1,237	0.19	1,344	0.16	1,381	0.12	1,417
0.36	2,657	S203_2750	MR140/050	56C	AW140/010	275.000	1,800	0.30	2,657	0.24	2,657	0.18	2,657
0.65	4,872	S303_2740	MR140/050	56C	AW140/010	274.300	2,250	0.54	4,872	0.44	4,872	0.33	4,872
0.65	4,872	S303_2710	MR160/050	56C	AW160/012	270.800	2,250	0.54	4,872	0.44	4,872	0.33	4,872
0.94	7,086	S403_2730	MR140/050	56C	AW140/010	273.200	2,925	0.77	7,086	0.63	7,086	0.47	7,086
0.94	7,086	S403_2700	MR160/050	56C	AW160/012	269.700	2,925	0.77	7,086	0.63	7,086	0.47	7,086
5 RPM		**Output (Approximate)**						**4 RPM**		**3 RPM**		**2.5 RPM**	
0.19	1,348	S102_3610	MR140/050	56C	AW140/010	361.200	1,237	0.16	1,383	0.13	1,413	0.10	1,417
0.29	2,657	S203_3400	MR140/050	56C	AW140/010	339.900	1,800	0.24	2,657	0.19	2,657	0.15	2,657
0.53	4,872	S303_3370	MR160/050	56C	AW160/012	337.300	2,250	0.43	4,872	0.35	4,872	0.26	4,872
0.53	4,872	S303_3420	MR140/050	56C	AW140/010	341.700	2,250	0.43	4,872	0.35	4,872	0.26	4,872
0.76	7,086	S403_3380	MR160/050	56C	AW160/012	337.600	2,925	0.62	7,086	0.51	7,086	0.38	7,086
0.76	7,086	S403_3420	MR140/050	56C	AW140/010	341.900	2,925	0.62	7,086	0.51	7,086	0.38	7,086
4 RPM		**Output (Approximate)**						**3 RPM**		**2.5 RPM**		**2 RPM**	
0.22	2,657	S203_4550	MR140/050	56C	AW140/010	454.700	1,800	0.18	2,657	0.15	2,657	0.11	2,657
0.40	4,872	S303_4550	MR140/050	56C	AW140/010	454.700	2,250	0.33	4,872	0.26	4,872	0.20	4,872
0.40	4,872	S303_4490	MR160/050	56C	AW160/012	448.900	2,250	0.33	4,872	0.26	4,872	0.20	4,872
0.57	7,086	S403_4560	MR140/050	56C	AW140/010	455.500	2,925	0.47	7,086	0.38	7,086	0.29	7,086
0.57	7,086	S403_4500	MR160/050	56C	AW160/012	449.700	2,925	0.47	7,086	0.38	7,086	0.29	7,086
3 RPM		**Output (Approximate)**						**2.5 RPM**		**2 RPM**		**1.5 RPM**	
0.18	2,655	S203_5460	MR140/050	56C	AW140/010	546.400	1,800	0.15	2,650	0.12	2,645	0.09	2,640
0.30	4,475	S303_5480	MR140/050	56C	AW140/010	548.000	2,250	0.25	4,465	0.20	4,457	0.15	4,447
0.48	7,086	S403_5410	MR160/050	56C	AW160/012	541.000	2,925	0.39	7,086	0.32	7,086	0.24	7,086
0.48	7,086	S403_5480	MR140/050	56C	AW140/010	548.000	2,925	0.39	7,086	0.32	7,086	0.24	7,086
2.5 RPM		**Output (Approximate)**						**2 RPM**		**1.5 RPM**		**1 RPM**	
0.12	2,208	S203_6830	MR140/050	56C	AW140/010	683.000	1,800	0.10	2,204	0.08	2,201	0.06	2,197
0.19	3,572	S303_6830	MR140/050	56C	AW140/010	683.000	2,250	0.16	3,565	0.13	3,559	0.10	3,552
0.34	6,303	S403_6820	MR140/050	56C	AW140/010	682.100	2,925	0.28	6,291	0.23	6,280	0.17	6,268

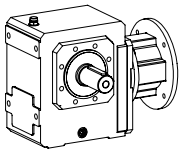
NOTE: For slower speeds than those listed above, units can be combined. Contact STOBER Drives Inc.

Part No. Explanation

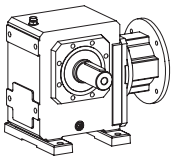
S 3 0 2 V G 0590 AW 160 / 012
- Shaft Dia. ($^{1}/_{16}$ in.; example – 012 = $^{12}/_{16}$ or $^{3}/_{4}$)
- Flange No.
- Input Shaft
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Gear Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



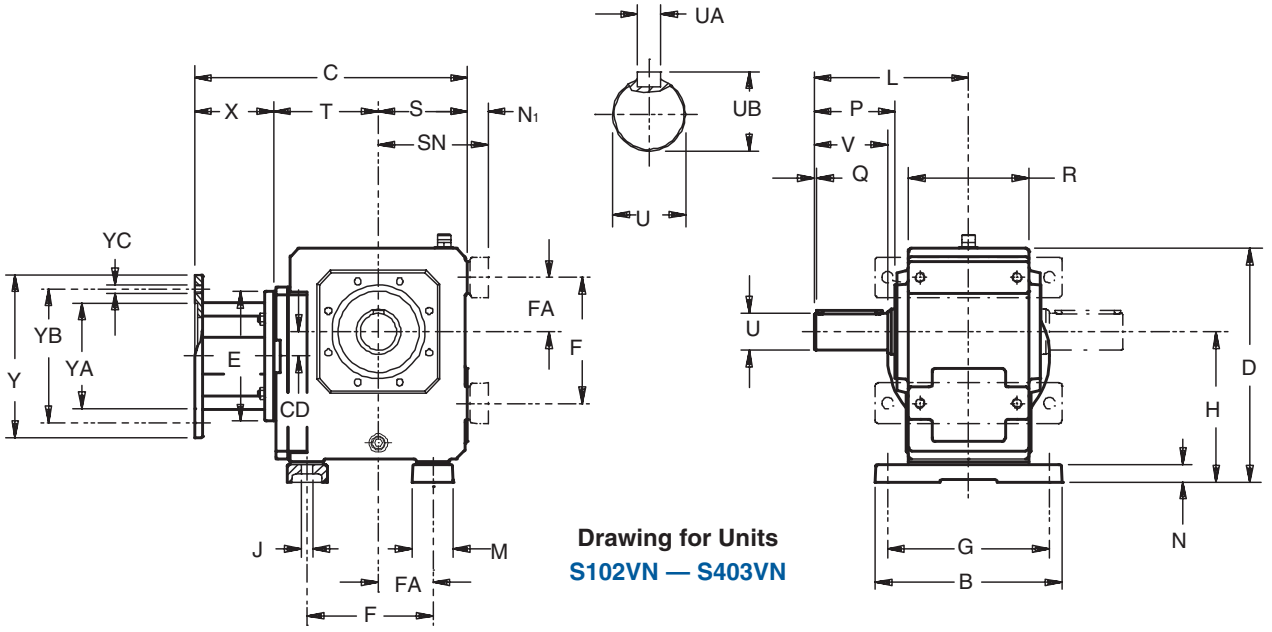
S 3 0 2 V G 0590 MR 160 / 140
- Motor Frame Size (140=143/145TC)
- Flange No.
- Motor Adapter
- Ratio (0590 = 59.0:1)
- Housing Style
- Output Style (A-hollow; V-solid)
- No. of Reductions
- Generation No.
- Unit No.
- Right Angle Helical/Worm



Mounting position must be specified when ordering.



"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.**

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	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

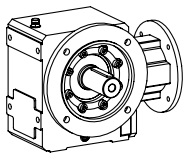
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36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

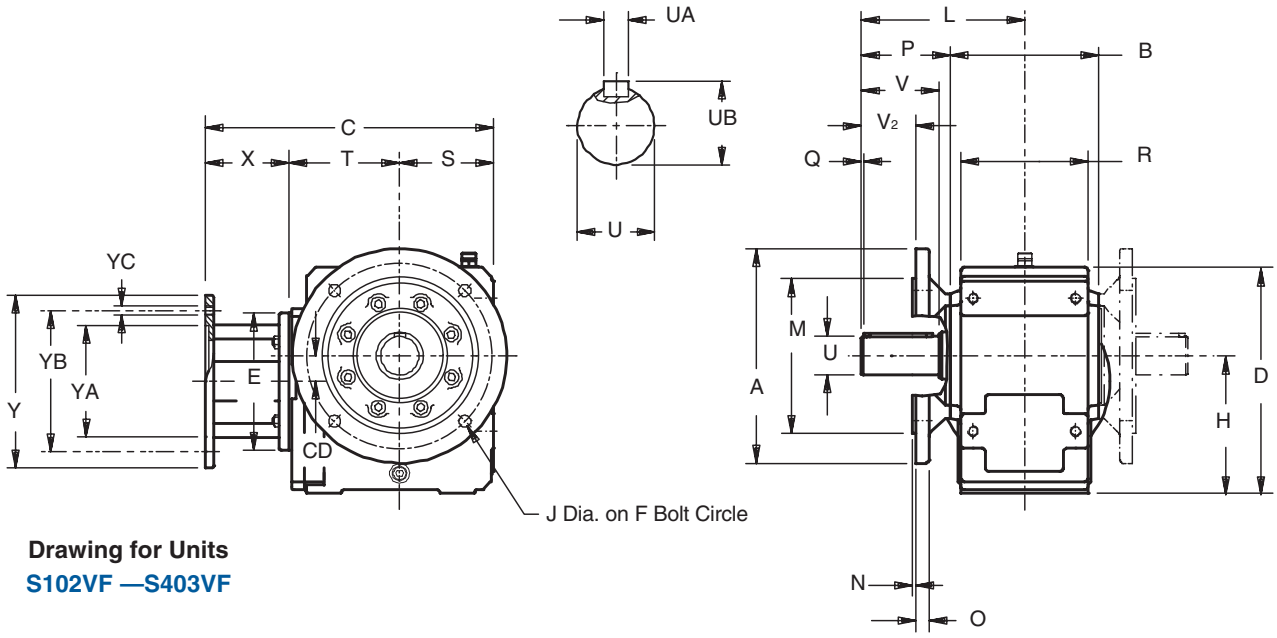
Table No. 4 **"S" Series – Foot Mounting Dimensions (Inches) – "N" Housing Style**

Base Module	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			Approx. Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
S102	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
S202	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
S203	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
S302	1.00	11.70	4.45	1.00	12.41	4.61	1.00	13.43	4.69	—	—	—	60
S303	1.00	13.16	5.91	2.44	14.10	6.30	—	—	—	—	—	—	67
S402	—	—	—	1.18	13.27	5.08	1.18	14.29	5.16	1.18	14.88	5.24	80
S403	1.18	14.02	6.38	2.64	14.96	6.77	—	—	—	—	—	—	95

[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
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	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

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

Table No. 3 Optional Flange Dimensions (Inches)

Base Module	Flange Size *	A	F	J	L	M	N	O
S1	140	5.512	4.53	.35	3.35	3.740	.12	.39
S2	160	6.300	5.12	.35	4.13	4.331	.14	.55

* Optional flanges are not available in all sizes.

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

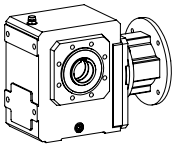
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36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

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

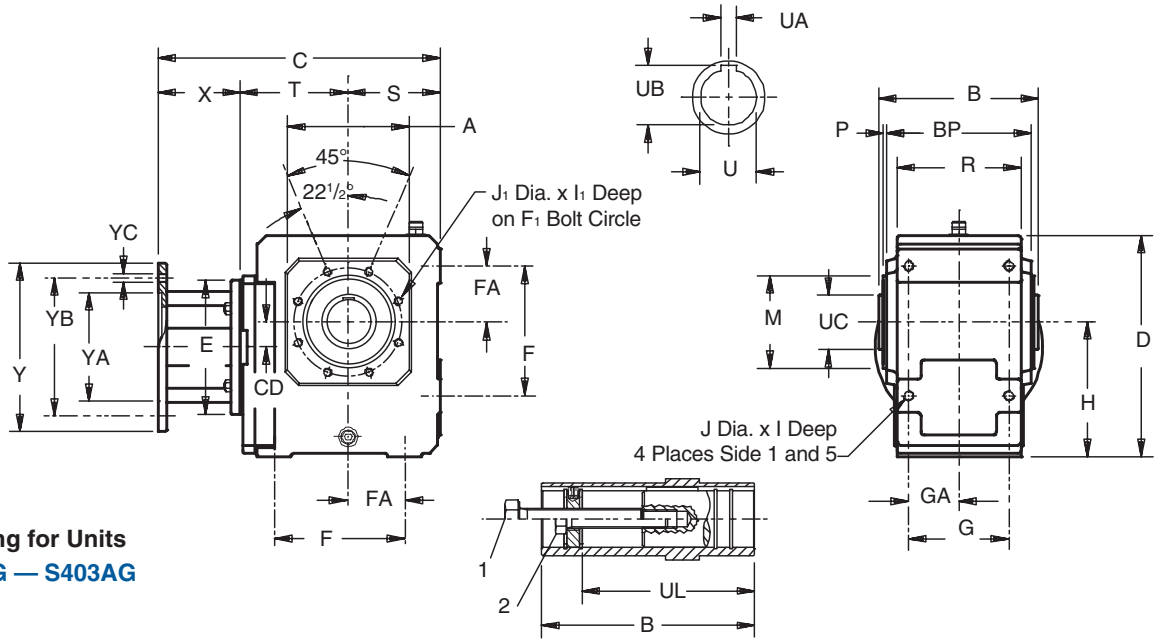
Base	MR140/050			MR160/140 [1]			MR200/180			MR250/210 [2]			Approx
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	Wt. lbs.
S102	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
S202	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
S203	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
S302	1.00	11.70	4.45	1.00	12.41	4.61	1.00	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
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	M8	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	M8	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	M10	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	M10	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			Optional Bore - mm			UC	UL	1
	U	UA	UB	U	UA	UB			
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

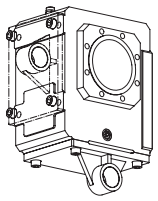
Motor Adapter	NEMA C-Flange	E	X	Y	YA	YB	YC	Wt. lbs
MR140/050	56C	5.51	3.31	6.50	4.500	5.87	.41	9
MR160/050	56C	6.30	3.86	6.50	4.500	5.87	.41	16
MR160/140	143/145TC	6.30	3.86	6.50	4.500	5.87	.41	16
MR200/180	182/184TC	7.87	4.80	9.00	8.500	7.25	.55	23
MR250/180	182/184TC	9.84	5.31	9.00	8.500	7.25	.55	36
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			MR160/140 [2]			MR200/180			MR250/210 [3]			Approx. Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
S102	.55	9.34	3.27	.55	10.05	3.43	—	—	—	—	—	—	31
S202	.67	10.52	3.86	.67	11.23	4.02	.67	12.24	4.09	—	—	—	49
S203	.67	11.97	5.31	—	—	—	—	—	—	—	—	—	53
S302	1.00	11.70	4.45	1.00	12.41	4.61	1.00	13.43	4.69	—	—	—	60
S303	1.00	13.16	5.91	2.44	14.10	6.30	—	—	—	—	—	—	67
S402	—	—	—	1.18	13.27	5.08	1.18	14.29	5.16	1.18	14.88	5.24	80
S403	1.18	14.02	6.38	2.64	14.96	6.77	—	—	—	—	—	—	95

[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
Torque Arm Bracket – "GD" Housing
(torque arm supplied by others)



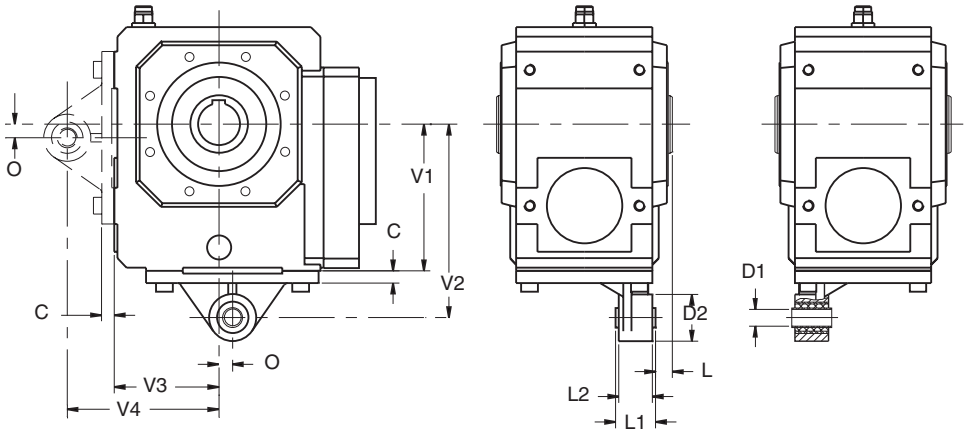


Table No. 1 "S" Series — Torque Arm Bracket Dimensions (Inches)

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

Notes

Miscellaneous

VISION:

To be recognized as the Gold Standard in our industry.

MISSION:

To provide the most reliable and effective drive solutions for demanding applications in the shortest lead-time.

CORE VALUES:

Customer driven
Value People
Seek the Best
Operate with Integrity
Care and give back

STÖBER

www.stober.com

ComTrac® Adjustable Speed Drives
Washdown/Outdoor Service/ Severe Duty

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.

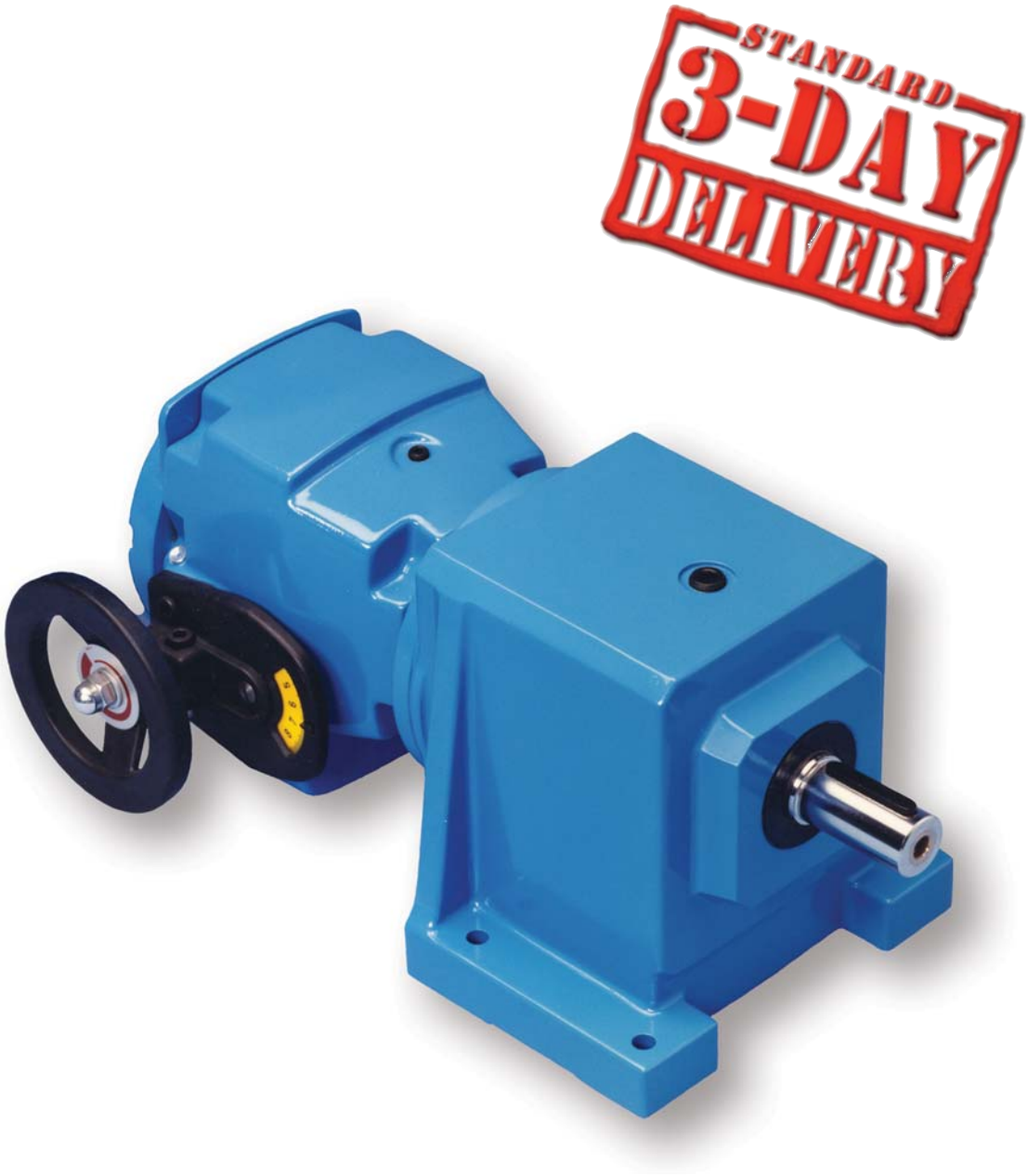
Delivery – ComTrac units are shipped in 3 days or less.

"C" Series – Concentric Helical MGS® Adjustable Speed Drives

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.

Performance Specifications:

- Horsepower ratings – from ½ to 10
- Output speeds – available from 1139 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



"F" Series – Offset Helical
MGS® Adjustable Speed Drives

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.

Performance Specifications:

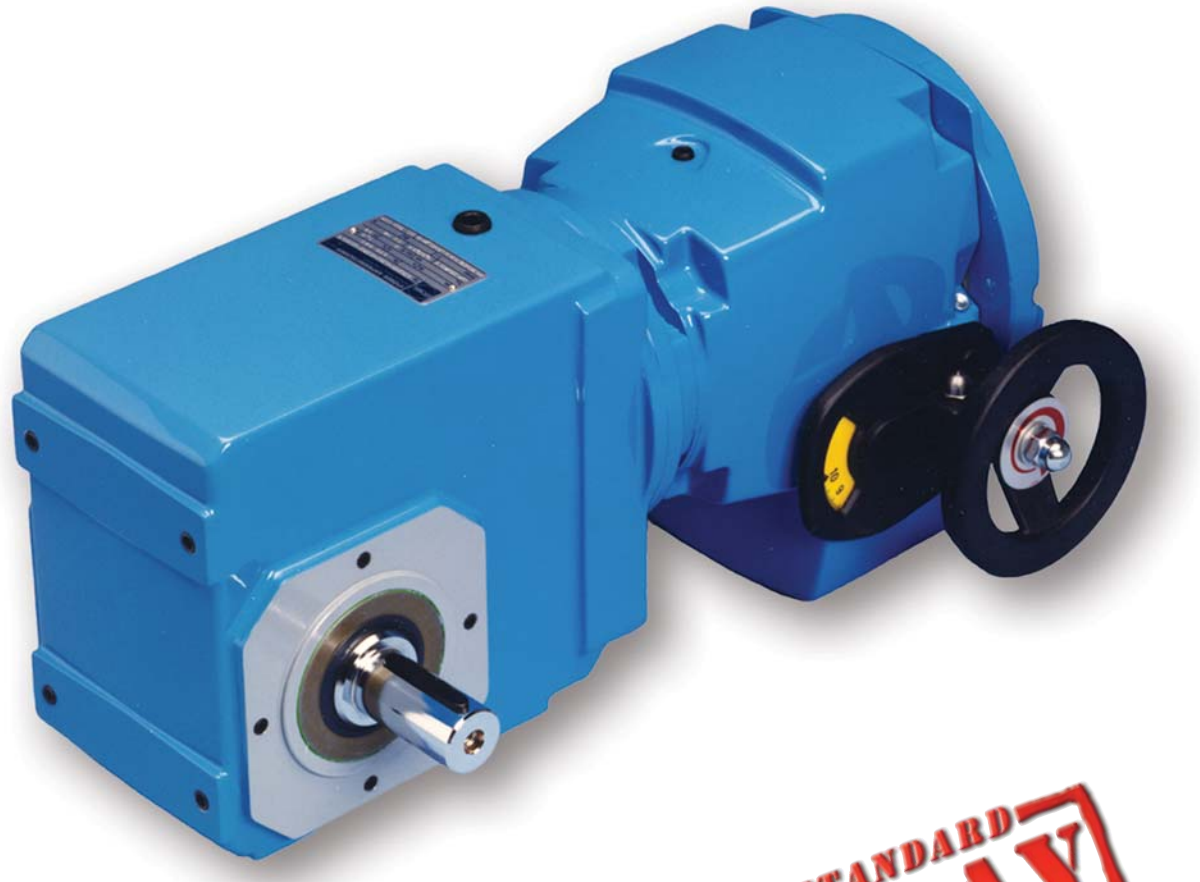
- Horsepower ratings – from ½ to 7½
- Output speeds – available from 528 to .6 RPM
- Speed range – 5:1 to 7:1
- Output torques – up to 9,744 in.lbs.
- NEMA frames – from 56C to 215TC

"K" Series – Right Angle Helical/Bevel MGS® Adjustable Speed Drives

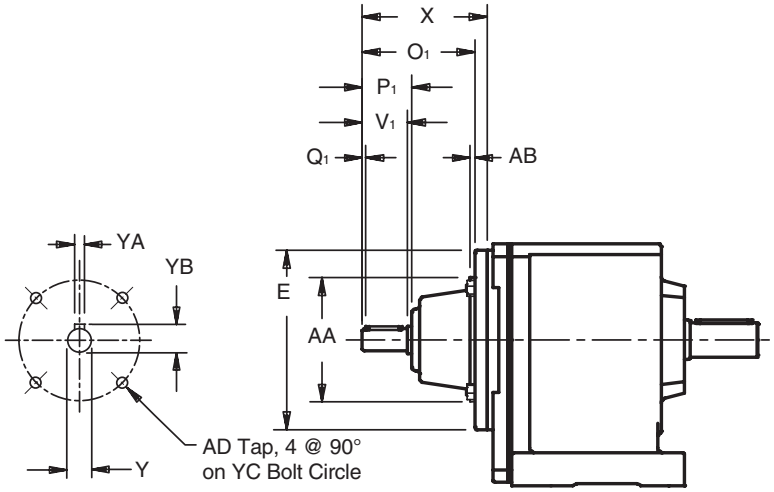
With the many mounting options available, ComTrac Adjustable Speed Drives and MGS Helical/Bevel Speed Reducers offer consistent, higher input-to-output efficiencies and a configurations for almost any application situation. This added efficiency reduces your costs today through smaller gear drive and motor sizing. Tomorrow, you'll benefit through optimum energy savings.

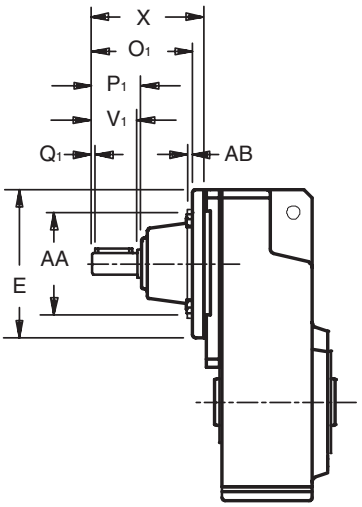
Performance Specifications:

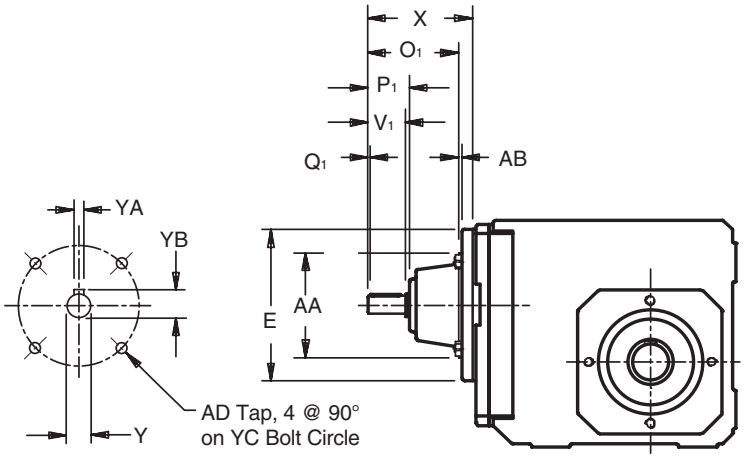
- Horsepower ratings – from 1/2 to 10
- Output speeds – available from 569 to .9 RPM
- Speed range – 5:1 to 7:1
- Output torques – up to 99,227 in.lbs.
- NEMA frames – from 56C to 215TC



MGS Reducer
AW Input Shaft
Dimensional Data







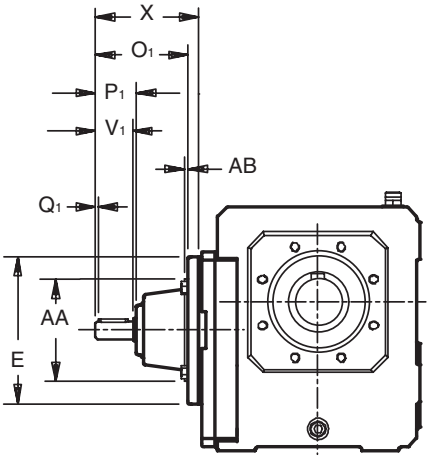
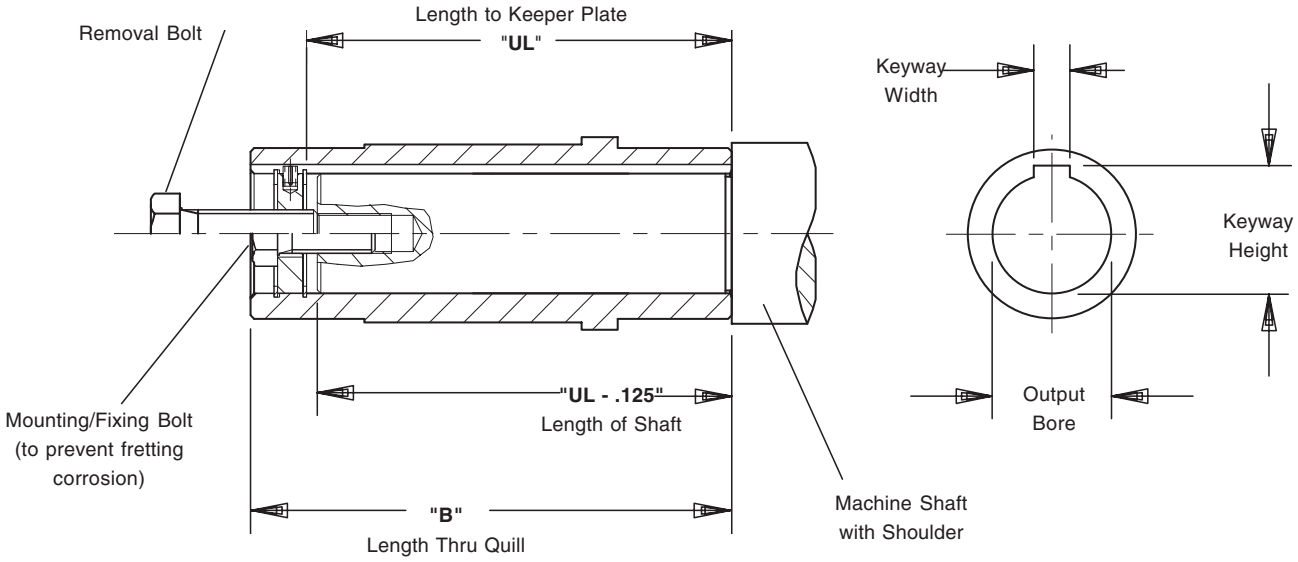


Table No. 3 **"C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Input Shaft	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	$3/16 \times 3/16 \times 31/32$	.71	4.53	8	98
AW160/012	6.30	4.21	1.69	.12	1.50	4.69	.7500	4.331	.18	M8	$3/16 \times 3/16 \times 1\,7/32$	.83	5.12	12	196
AW200/014	7.87	5.00	1.97	.16	1.75	5.51	.8750	5.118	.16	M10	$3/16 \times 3/16 \times 1\,7/16$	.96	6.50	18	333
AW250/102	9.84	7.20	2.48	.20	2.25	7.80	1.1250	7.087	.16	M12	$1/4 \times 1/4 \times 1\,15/16$	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	$3/8 \times 3/8 \times 2\,7/8$	1.79	10.43	51	1,072
AW350/202	13.78	10.83	4.88	.28	4.50	11.61	2.1250	9.842	.24	M16	$1/2 \times 1/2 \times 3\,15/16$	2.35	11.81	100	1,569

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	K1	1.000	3.86	1/2-13 NC	S1	1.000	3.86	1/2-13 NC
F2	1.000	3.62	1/2-13 NC	K2	1.187	4.78	1/2-13 NC	S2	1.375	4.69	5/8-11 NC
F3	1.250	4.06	1/2-13 NC	K3	1.375	4.92	5/8-11 NC	S3	1.500	5.39	3/4-10 NC
F4	1.500	4.49	3/4-10 NC	K4	1.500	6.18	3/4-10 NC	S4	1.750	6.24	3/4-10 NC
F6	2.000	5.63	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	12.32	1-8 NC				
				K10	4.000	14.25	1 1/4-7 NC				

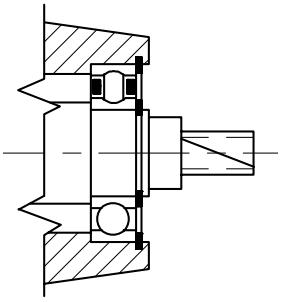
Table No. 2 Hollow Shaft — "U" Dimension

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	+.0010 / -.0000		

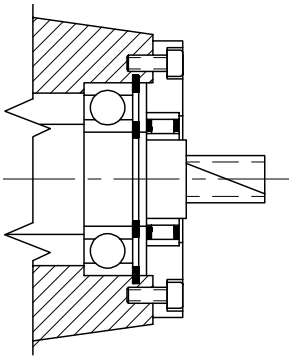
MGS Reducers
Any Unit Style with Backstops

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

DO NOT USE BACKSTOPS ON MAN LIFTS!



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, and 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

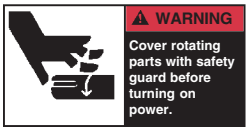
Table No. 2 MR with Backstop

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

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

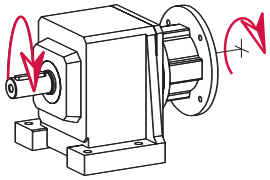
See the following page for illustration of standard direction of rotation.
(Examples shown are EL1 mounting – input rotating counterclockwise (CCW).)

If the backstop is assembled for the standard rotation shown, but rotates in the opposite direction at startup, damage to the backstop is certain.

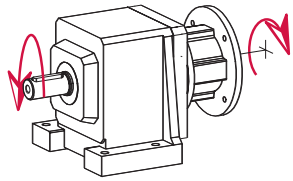


MGS Reducers
Standard Direction of Rotation

"C" Series – Concentric Helical

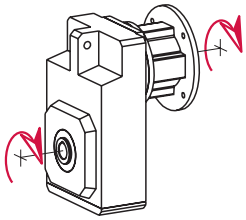


C002 – C912
Input and Output Rotate the Same Direction

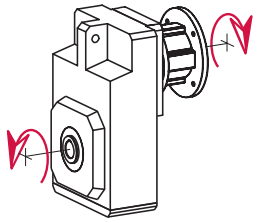


C103 – C913
Input and Output Rotate Opposite Direction

"F" Series – Offset Helical

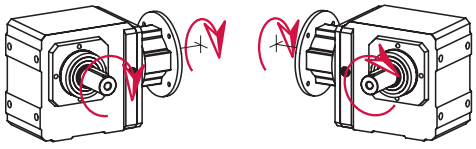


F102 – F602
Input and Output Rotate the Same Direction



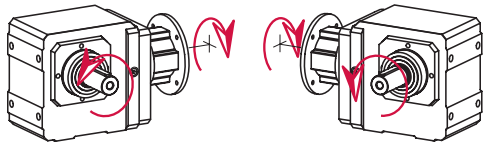
F203 – F603
Input and Output Rotate Opposite Direction

"K" Series – Right Angle Helical/Bevel



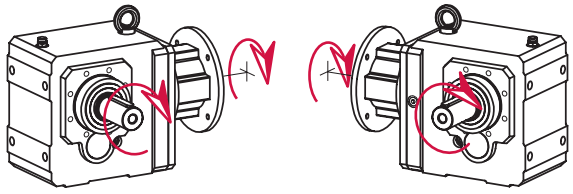
Shaft Side 4 Shaft Side 3

K102 – K402
CCW Input and CW Single Output



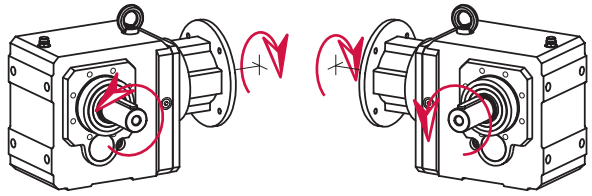
Shaft Side 4 Shaft Side 3

K203 – K403
CCW Input and CCW Single Output



Shaft Side 4 Shaft Side 3

K513 – K1013
CCW Input and CW Single Output



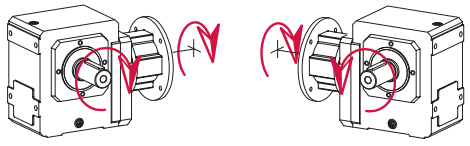
Shaft Side 4 Shaft Side 3

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



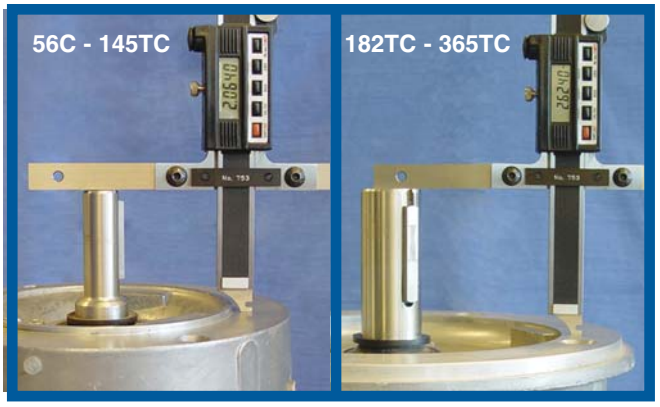
Shaft Side 4 –CW Shaft Side 3 – CCW

S203 – S403
CCW Input and Single Output

REMINDER:
With a "K" or "S" unit double output, the shaft rotation on Side 3 will be opposite the rotation of Side 4.

MGS Reducers
NEMA C-Face Motor Installation Instructions

Step 1. Measure the Motor Shaft

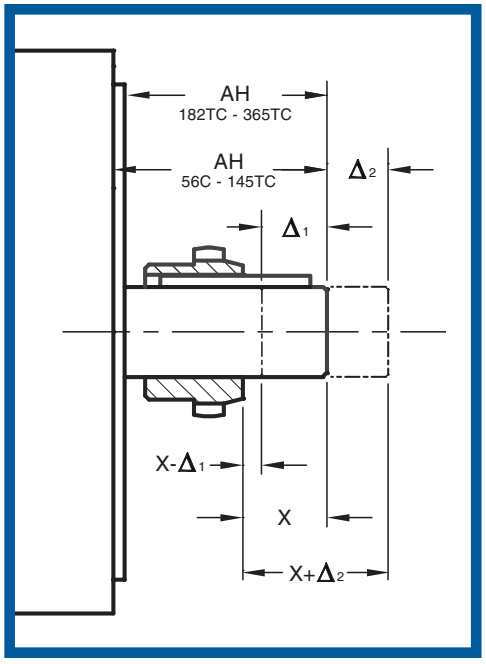


Accurate measurement of the motor shaft is vital to mounting the motor coupling correctly. The measurement must be taken from the face of the motor or pilot surface (see above) to the end of the motor shaft. If this dimension is the same as the NEMA standard "AH" dimension shown in Table No. 1, proceed with the motor mounting in Step 2.

Table No. 1 NEMA Motor Shaft Dimensions

Motor Frame	"AH"	Shaft Dia.	Motor Frame	"AH"	Shaft Dia.
56C	$2^{1}/_{16}$	$^{5}/_{8}$	**254/256TC**	$3^{3}/_{4}$	$1^{5}/_{8}$
143/145TC	$2^{1}/_{8}$	$^{7}/_{8}$	**284/286TC**	$4^{3}/_{8}$	$1^{7}/_{8}$
182/184TC	$2^{5}/_{8}$	$1^{1}/_{8}$	**324/326TC**	5	$2^{1}/_{8}$
213/215TC	$3^{1}/_{8}$	$1^{3}/_{8}$	**364/365TC**	$5^{5}/_{8}$	$2^{3}/_{8}$

If the motor shaft length measurement is less than "AH", **subtract** the difference (Δ_1) from the "X" dimension shown in Table No. 2. If the motor shaft length measurement is greater than "AH", **add** the difference (Δ_2) to the "X" dimension shown in Table No. 2.



Step 2. Locate the Motor Coupling on the Motor Shaft

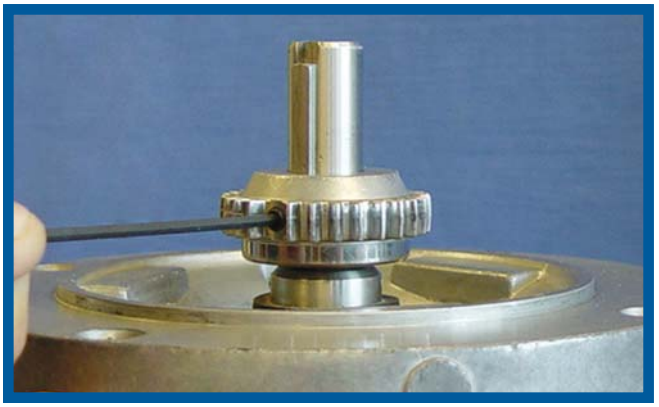
Mount the coupling with the hub projection toward the step or shoulder of the motor. The motor shaft should project through the coupling by the "X" dimension (or the value determined using the previous measurement).

Table No. 2 Location of Motor Coupling

Adapter Part No.	"X" mm	"X" inches	Adapter Part No.	"X" mm	"X" inches
MR140/050	28	1.1	**MR250/210**	46	1.8
MR160/050	22	.9	**MR300/180**	10	.4
MR160/140	25	1.0	**MR300/210**	26	1.0
MR200/050	12	.5	**MR300/250**	42	1.7
MR200/140	12	.5	**MR300/280**	58	2.3
MR200/180	30	1.2	**MR350/320**	64	2.5
MR250/180	30	1.2	**MR350/360**	80	3.1

"X" Tolerance – +1mm / -0mm (+0.040 / -0.000 inches)

Step 3. Tighten the Setscrew

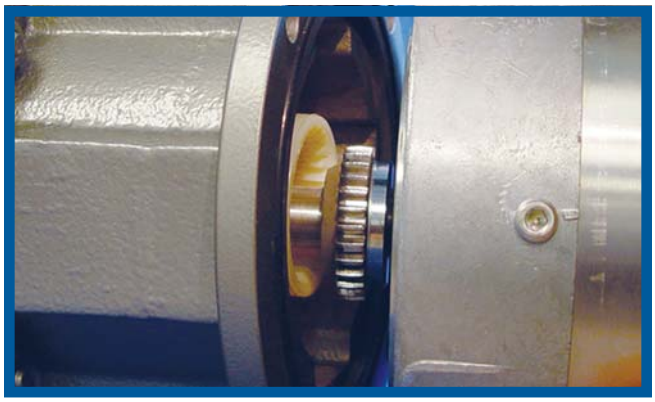


With the coupling hub located at the correct distance, tighten the setscrew in the coupling.

Step 4. Secure the Motor Shaft Key

For ease of installation, secure the motor shaft key. Staking near the end of the keyway, on the sides of the key, or a temporary adhesive works well.

Step 5. 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, tighten the motor bolts.

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.

Some motor manufacturers provide a drain hole in the mounting face of washdown motors. In some mounting positions, water or other material can enter the motor adapter and fail the bearing. **Be sure this hole is covered during washing or when the unit is in a wet environment.** The illustration below shows the method that STOBER assembly personnel use to plug the hole.

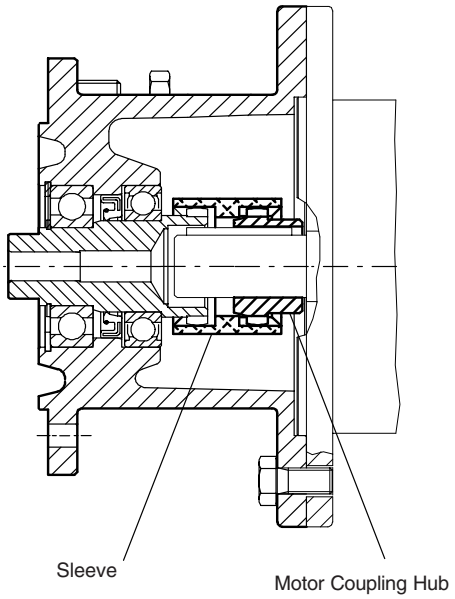
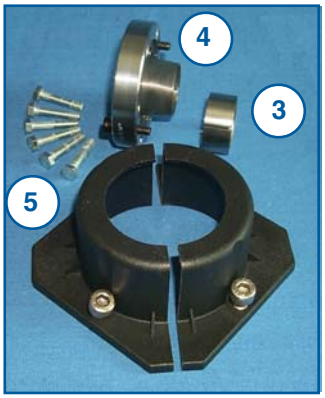


Table No. 3
Couplings Used with MR Motor Adapters

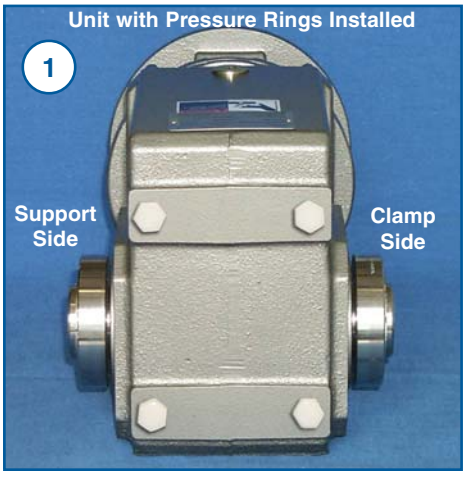
Adapter	NEMA Frame	Motor Hub	Sleeve
MR140/050	56C	M-19 x 5/8	M-19
MR160/050	56C	M-24 x 5/8	M-24
MR160/140	143/145TC	M-24 x 7/8	M-24
MR200/050	56C	M-32 x 5/8	M-32
MR200/140	143/145TC	M-32 x 7/8	M-32
MR200/180	182/184TC	M-32 x 1 1/8	M-32
MR250/180	182/184TC	M-38 x 1 1/8	M-38
MR250/210	213/215TC	M-38 x 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

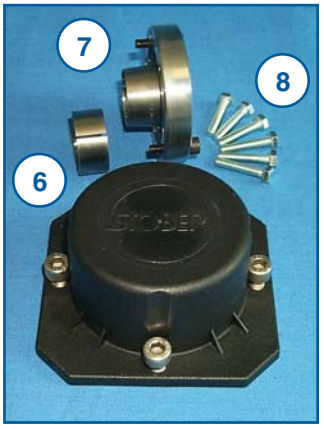
"K" Series – MGS Helical/Bevel Reducer
"WFB" – Wobble Free Bushing
Installation Instructions



Support Side
Bushing Components

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

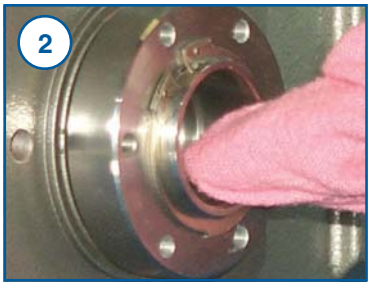




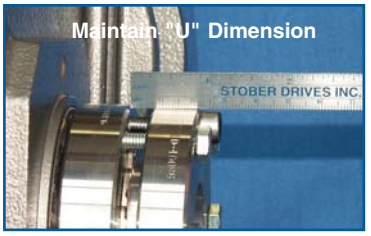
Clamp Side
Bushing Components

Support Side Installation

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



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

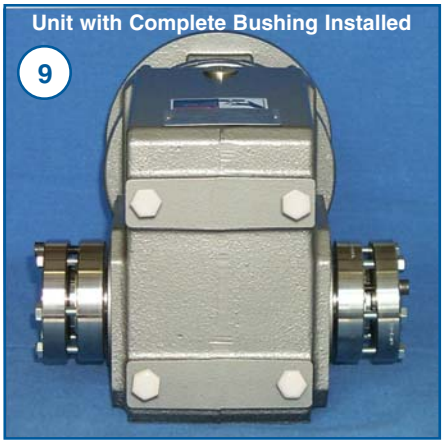


The "U" distance (between the rings) determined by the spacer bolts (see Table 1) must be maintained throughout assembly of the bushing and mounting onto the shaft. Therefore, **DO NOT** tighten the capscrews or remove the spacer bolts until the unit is mounted on the shaft.

Clamp Side Installation

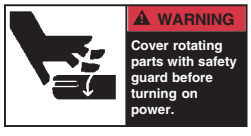
Install the Flanged Cone Assembly (7) with it's slot opposite the slot in the tapered cone (6).

"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.



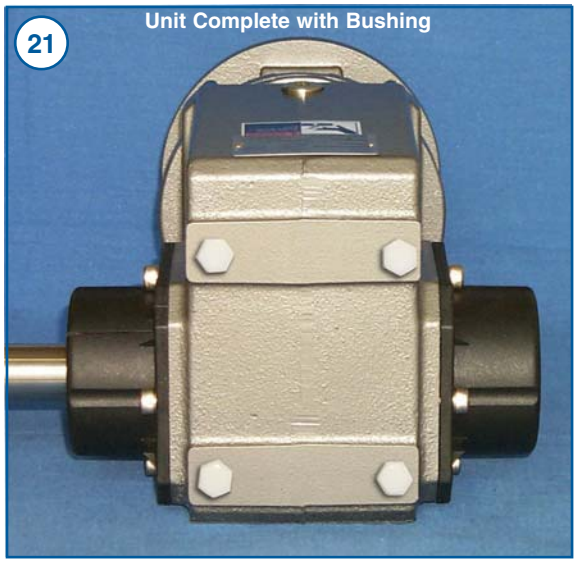


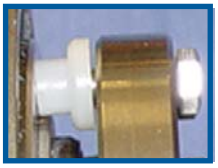
Table No. 1

Base Module	Capscrews		Tightening Torque		U		Spacer Bolts
	Qty.	Size x Length	Nm.	in. lbs.	mm	ins.	
K102	6	M6x25 mm	10	89	5	.20	M6x20mm
K202/K203	6	M6x30 mm	10	89	5	.20	M6x20mm
K302/K303	8	M6x30 mm	10	89	5	.20	M6x20mm
K402/K403	8	M8x30 mm	25	221	6	.24	M8x20mm
K513/K514	8	M8x30 mm	25	221	7	.28	M8x25mm
K613/K614	8	M10x35 mm	49	434	8.5	.33	M10x25mm
K713/K714	8	M10x40mm	49	434	5.5	.22	M10x25mm
K813/K814	8	M12x40mm	85	752	7	.28	M12x45mm

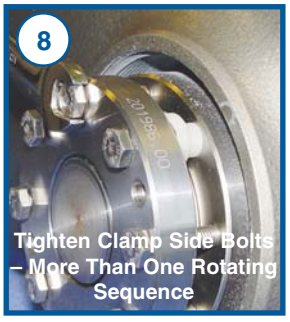
"KE" Series – MGS Helical/Bevel Reducer
Reducer and Motor Installation Instructions

The KE Supreme Food Duty unit is shipped with the bushing and covers installed. The bushing bore size is required when ordering and no unit will be shipped without the bushings. Specify Support Side and Clamp Side when ordering. The Support Side is the inboard side or closest to the equipment.

The stainless steel covers are threaded hand tight onto the unit. Remove the covers and protect the threads while handling the unit during installation.



The spacer installed between the Support Side Bushing locking rings will not be removed but will compress as the capscrews are tightened.



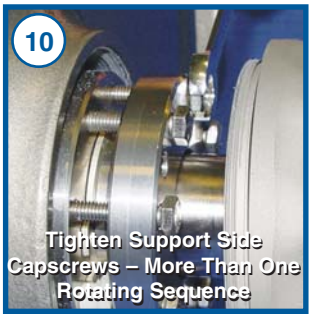
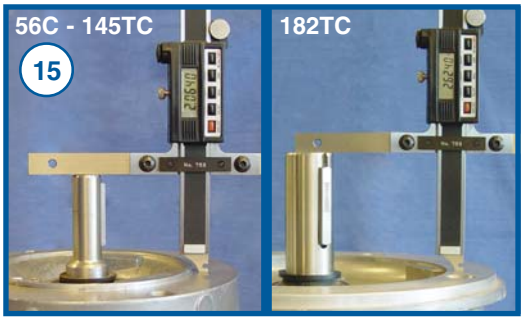
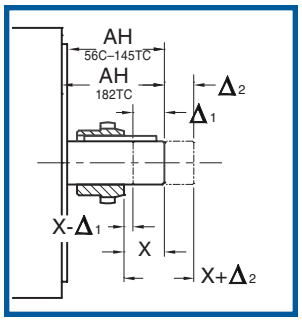


Table No. 1

Base Module	Capscrews		Tightening Torque	
	Qty.	Size x Length	Nm.	in. lbs.
KE2	6	M6x30 mm	10	89
KE3	8	M6x30 mm	10	89
KE4	8	M8x30 mm	25	221

"KE" Series – MGS Helical/Bevel Reducer Reducer and Motor Installation Instructions





Accurate measurement of the motor shaft is vital to mounting the motor coupling correctly. The measurement must be taken from the face of the motor or pilot surface (see above) to the end of the motor shaft. If this dimension is the same as the NEMA standard "AH" dimension shown in Table No. 2, proceed with the motor mounting.

If the motor shaft length measurement is less than "AH", **subtract** the difference (Δ_1) from the "X" dimension shown in Table No. 3.

If the motor shaft length measurement is greater than "AH", **add** the difference (Δ_2) to the "X" dimension shown in Table No. 3.

Table No. 2

NEMA Motor Shaft Dimensions

Motor Frame	"AH"	Shaft Dia.
56C	$2^{1}/_{16}$	$^{5}/_{8}$
143/145TC	$2^{1}/_{8}$	$^{7}/_{8}$
182/184TC	$2^{5}/_{8}$	$1^{1}/_{8}$

Table No. 3

Location of Motor Coupling

Adapter Part No.	"X" mm	"X" inches
MR160/050F	22	.9
MR160/140F	25	1.0
MR200/180F	30	1.2

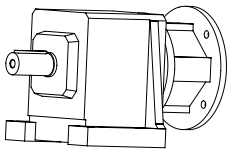
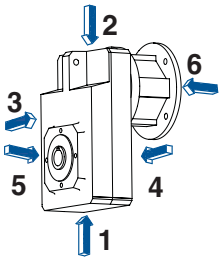
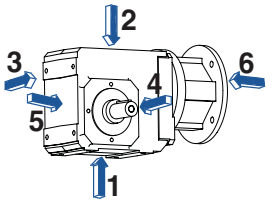
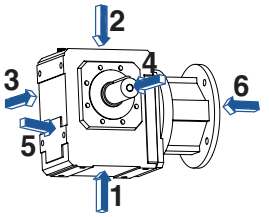
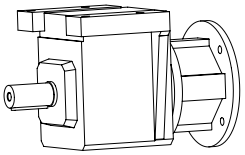
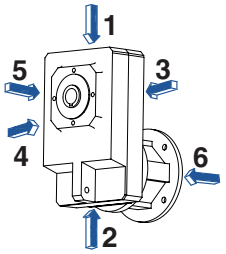
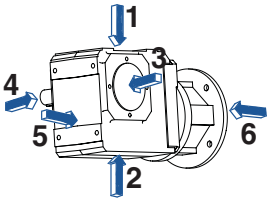
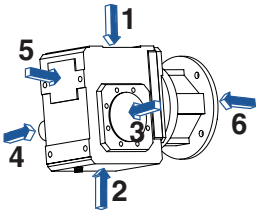
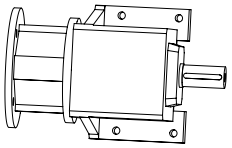
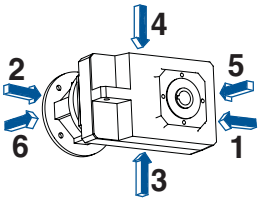
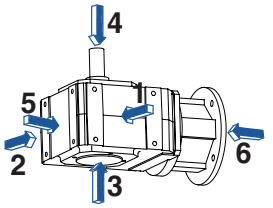
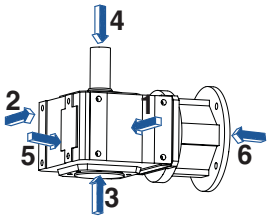
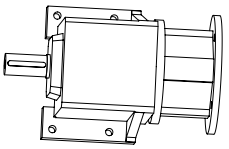
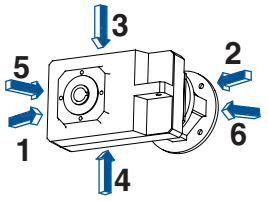
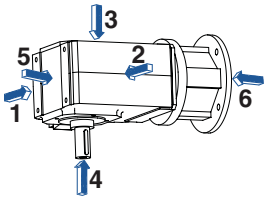
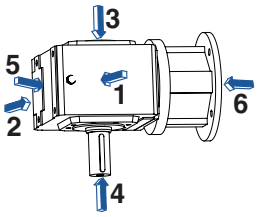
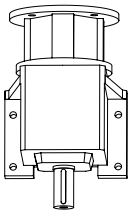
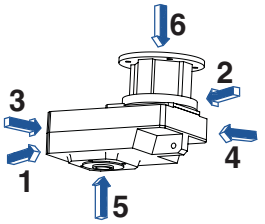
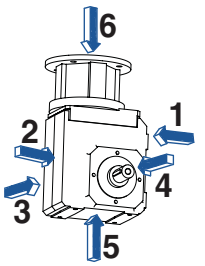
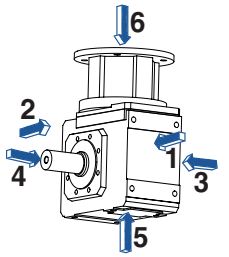
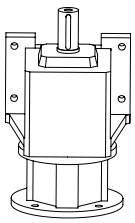
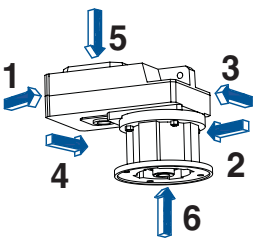
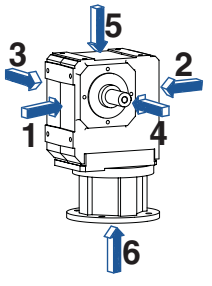
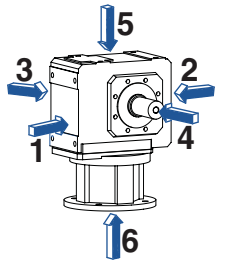
"X" Tolerance – +1mm / -0mm (+0.040 / -0.000 inches)

Mount the coupling with the hub projection toward the step or shoulder of the motor. The motor shaft should project through the coupling by the "X" dimension (or the value determined using the previous measurement).

MGS Speed Reducer
Lubrication and Mounting Data

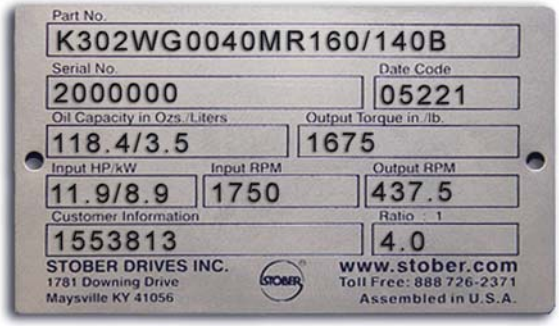
Lubrication and Mounting Position

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**.

Mounting Position	"C" Series	"F" Series	"K" Series	"S" Series
EL1				
EL2				
EL3				
EL4				
EL5				
EL6				

MGS Speed Reducer
Maintenance and Tolerance Data

The lubricant quantity for the mounting position ordered is stamped on the nameplate of each unit.



Maintenance

With STOBER reducers very little maintenance is required under normal operating conditions.

Units supplied without breathers are lubricated for life, maintenance free.

Breathers are provided on these standard units:

C612 through C913
F602 through F603
K513 through K1014
S102 through S403

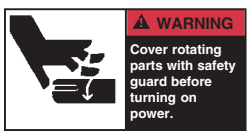
STOBER recommends that the lubrication be changed in units supplied with breathers according to the following schedule:

Normal Operating Conditions – after 5000 Hours
Wet Operating Conditions – after 2000 Hours.

If food grade or synthetic oil is requested, it will be Mobilgear Special Mist EP220 food grade or Mobilgear SHC630 synthetic.

Characterictic of STOBER Standard Lubricants

	MobilGear 630	Exxon Special Mist EP220 Food Grade	Mobilgear SHC630
Anti-Foaming Additives	4	4	Excellent
Corrosion Protection	4	4	Optimum
Extreme Pressure Additives	4	4	4
Friction and Wear Reducing Characteristics	4	4	Superior
Oxidation Protection	4	4	Enhanced
Wide Temperature Range			4



All Series Reducers

Table No. 1 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. 2 Hollow Shaft — "U" Dimension

Bore Range	Tolerance	Bore Range	Tolerance
.39 – .71	+.0007 / -.0000	1.97 – 3.15	+.0012 / -.0000
.71 – 1.18	+.0008 / -.0000	3.15 Up	+.0014 / -.0000
1.18 – 1.97	+.0010 / -.0000		

All Series Reducers with Input Shaft

Table No. 3 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. 4 Pilot Diameter — "M" 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 Reducers with Motor Adapter

Table No. 5 Pilot Bore Diameter — "YA" Dimension

Bore Range	Tolerance	Bore Range	Tolerance
1.97 – 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. 6 Keyway Width — "UA" Dimension

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

Table No. 7 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. 8 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 Speed Reducer
Service Factor and Selection Procedure

Selection Requirements

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

- Input Speed – Revolutions per Minute (RPM)
- Output Speed – Revolutions per Minute (RPM)
- Input Horsepower (HP) 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 the 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.

Service Factor

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), use the information in Tables 1 to 4.

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

Choose an MGS reducer that will meet or exceed,

HP x SF or Torque (in./lbs.) x SF.

Table No. 1 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. 2 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. 3 Ambient Temperature Factor (f_T)

Temperature (°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. 4 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

NOTE: DO NOT SERVICE FACTOR THE MOTOR.

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 Style. See overview pages for housing 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 uniformly loaded belt conveyor. It will be driven by a 2 HP, 1750 RPM, 145TC NEMA frame motor mounted to the reducer. The output shaft size is undetermined but the output speed required is 128 RPM. The drive will operate 12 hours per day, 5 days per week.

Determine the Service Factor (SF).

Uniform load belt conveyor – Load Factor = **1.00** (f_B)

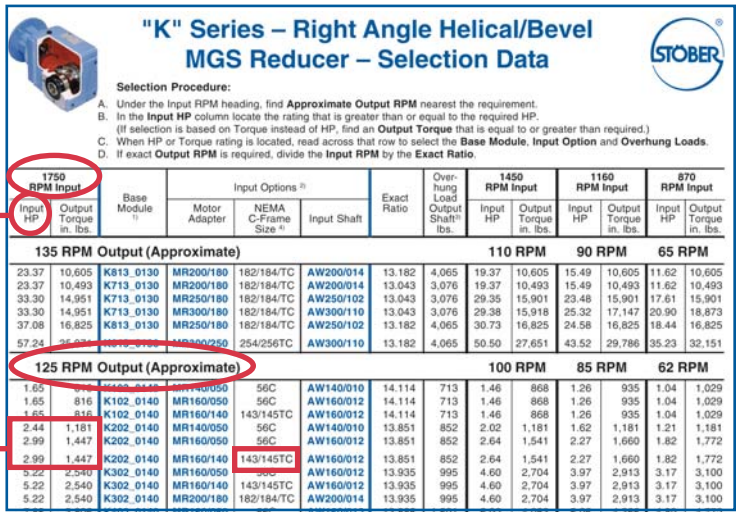
12 hours per day service – Hours of Service = **1.10** (f_L)

1.00 (f_B) x 1.10 (f_L) = **1.10** SF.

The required HP rating for the reducer is:

2 HP Motor x 1.10 SF = **2.2** HP

MGS Speed Reducer Selection Procedures



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

Selection Procedure:

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 **Base Module**, **Input Option** and **Overhung Loads**.
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 [3] lbs.	1450 RPM Input		1160 RPM Input		870 RPM Input	
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft			Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.	Input HP	Output Torque in. lbs.
135 RPM Output (Approximate)								**110 RPM**		**90 RPM**		**65 RPM**	
23.37	10,605	K813_0130	MR200/180	182/184/TC	AW200/014	13.182	4,065	19.37	10,605	15.49	10,605	11.62	10,605
23.37	10,493	K713_0130	MR200/180	182/184/TC	AW200/014	13.043	3,076	19.37	10,493	15.49	10,493	11.62	10,493
33.30	14,951	K713_0130	MR250/180	182/184/TC	AW250/102	13.043	3,076	29.35	15,901	23.48	15,901	17.61	15,901
33.30	14,951	K713_0130	MR300/180	182/184/TC	AW300/110	13.043	3,076	29.38	15,918	25.32	17,147	20.90	18,873
37.08	16,825	K813_0130	MR250/180	182/184/TC	AW250/102	13.182	4,065	30.73	16,825	24.58	16,825	18.44	16,825
57.24	25,971	K813_0130	MR300/250	254/256TC	AW300/110	13.182	4,065	50.50	27,651	43.52	29,786	35.23	32,151
125 RPM Output (Approximate)								**100 RPM**		**85 RPM**		**62 RPM**	
1.65	748	K102_0140	MR140/050	56C	AW140/010	14.114	713	1.46	868	1.26	935	1.04	1,029
1.65	816	K102_0140	MR160/050	56C	AW160/012	14.114	713	1.46	868	1.26	935	1.04	1,029
1.65	816	K102_0140	MR160/140	143/145TC	AW160/012	14.114	713	1.46	868	1.26	935	1.04	1,029
2.44	1,181	K202_0140	MR140/050	56C	AW140/010	13.851	852	2.02	1,181	1.62	1,181	1.21	1,181
2.99	1,447	K202_0140	MR160/050	56C	AW160/012	13.851	852	2.64	1,541	2.27	1,660	1.82	1,772
2.99	1,447	K202_0140	MR160/140	143/145TC	AW160/012	13.851	852	2.64	1,541	2.27	1,660	1.82	1,772
5.22	2,540	K302_0140	MR160/050	56C	AW160/012	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100
5.22	2,540	K302_0140	MR160/140	143/145TC	AW160/012	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100
5.22	2,540	K302_0140	MR200/180	182/184/TC	AW200/014	13.935	995	4.60	2,704	3.97	2,913	3.17	3,100

A. From the Selection Data pages for "K" Series reducers, under the 1750 Input RPM heading, find **125 RPM Output (Approximate)** which is the closest to 128.

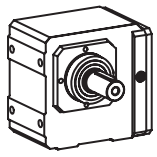
B. In the **Input HP** column, locate the rating that is equal to or greater than 2.2 HP. The first unit available with a 143TC frame is rated at **2.99 HP.**

C. Read across the row to select the **Base Module** and **Input Option**.

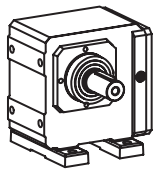
1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [3] lbs.
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft		
1.65	816	K102_0140	MR160/050	56C	AW160/012	14.114	713
1.65	816	K102_0140	MR160/140	143/145TC	AW160/012	14.114	713
2.44	1,181	K202_0140	MR140/050	56C	AW140/010	13.851	852
2.99	1,447	K202_0140	MR160/050	56C	AW160/012	13.851	852
2.99	1,447	K202_0140	MR160/140	143/145TC	AW160/012	13.851	852
5.22	2,540	K302_0140	MR160/050	56C	AW160/012	13.935	995

1. Complete Base Module Part Number by adding **Output Style** and **Housing Style**.

   Example: K202**VN**0140

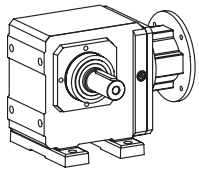


Output Style "V"



Housing Style "N"

2. Add the **Input Option** to complete the Part Number.
   Example: K202VN0140 **MR160/140**



D. Check **Overhung Load**.

1750 RPM Input		Base Module [1]	Input Options [2]			Exact Ratio	Overhung Load Output Shaft [3] lbs.
Input HP	Output Torque in. lbs.		Motor Adapter	NEMA C-Frame Size [4]	Input Shaft		
1.65	816	K102_0140	MR160/140	143/145TC	AW160/012	14.114	713
2.44	1,181	K202_0140	MR140/050	56C	AW140/010	13.851	852
2.99	1,447	K202_0140	MR160/050	56C	AW160/012	13.851	852
2.99	1,447	K202_0140	MR160/140	143/145TC	AW160/012	13.851	852
5.22	2,540	K302_0140	MR160/050	56C	AW160/012	13.935	995
5.22	2,540	K302_0140	MR160/140	143/145TC	AW160/012	13.935	995

852 lbs. – with the load at the center of the output shaft

The input load is not a consideration since a motor adapter is used on this unit. If the input shaft option is chosen to use with an auxillary drive, the input load must be checked.

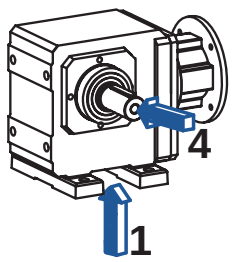
E. If exact **Output RPM** is required, divide the **Input RPM** by the **Exact Ratio**.

$$\frac{1750 \text{ Input RPM}}{13.851 \text{ Exact Ratio}} = 126.34 \text{ Output RPM}$$

Since Output Style is “V” solid shaft, and is available as a single or double output, the shaft side must be designated. In this case, we will specify the shaft on the left, with the mounting feet on the bottom, and the mounting position as standard horizontal.

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

K202VN0140 MR160/140
EL1
Shaft Side 4
Feet Side 1



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; 3-years (single shift operation or 18 months multiple shift operation) for MGS products; 2-years (single shift operation or 12 months multiple shift operation) for TD products, from the date of shipment to the Customer. For ServoFit products, 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 (1 1/2%) per month (eighteen percent (18%) per year). If such rate is deemed to be usurious at any time, it shall be reduced to the maximum rate permitted by applicable law. STOBER may stop or withhold shipment of products if the Customer does not fulfill its payment obligations. If STOBER is insecure about payment for any reason, STOBER may require full or partial payment in advance and as a condition to the continuation of its delivery of products.

11. **SECURITY INTEREST.** Unless and until the products are paid for in full, STOBER reserves a security interest in them to secure the unpaid balance of the purchase price. The Customer hereby grants to STOBER a power of attorney, coupled with an interest, to execute and file on behalf of the Customer all necessary financing statements and other documents required or appropriate to protect the security interest granted herein.

12. **ACCEPTANCE OF PRODUCTS.** The Customer will conduct any incoming inspection tests as soon as possible upon arrival of the products, but in no event later than ten (10) days after the date of receipt. Any products not rejected by written notice to STOBER within such period shall be deemed accepted by the Customer. STOBER shall not be liable for any additional costs, expenses or damages incurred by the Customer, directly or indirectly, as a result of any shortage, damage or discrepancy in a shipment.

13. **LIMITATION OF REMEDIES.**

(a) STOBER SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY DELAY IN FURNISHING THE CUSTOMER WITH PRODUCTS.

(b) IN NO EVENT SHALL STOBER'S LIABILITY INCLUDE ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES, EVEN IF STOBER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE.

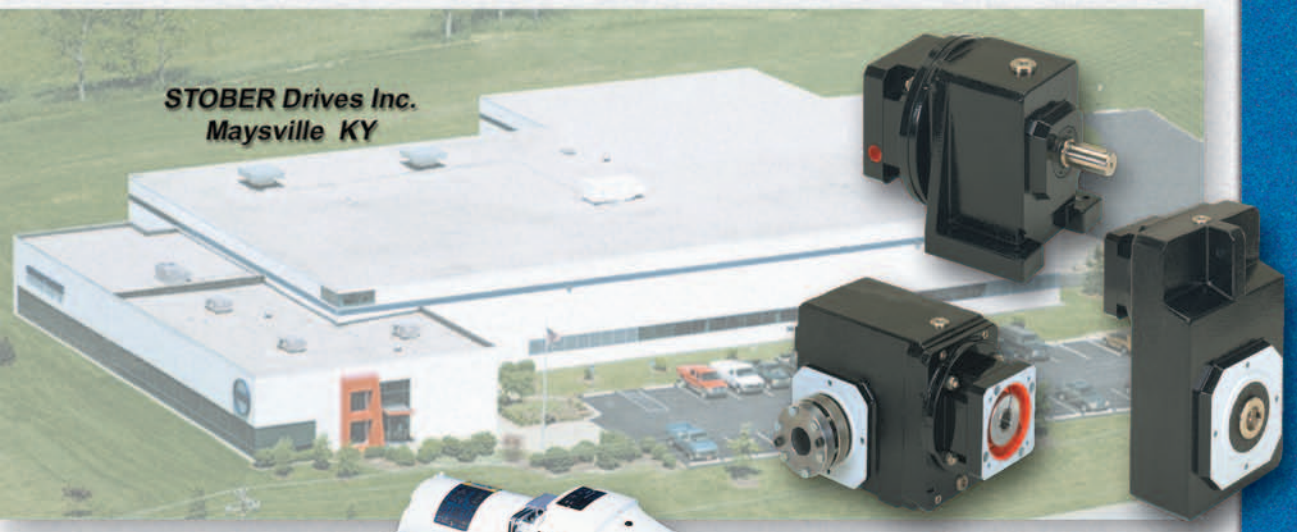
14. **MADE-TO-ORDER PRODUCTS.** STOBER reserves the right to revoke and amend any price quotations offered to the Customer for made-to-order products, provided that such price quotations have not been accepted by the Customer prior to the date of revocation or amendment.

15. **DIES, TOOLS AND EQUIPMENT.** Charges incurred by the Customer for dies, tools and other equipment shall not confer ownership or the right to possession therein by the Customer. All such dies, tools and equipment shall remain the property of STOBER, and STOBER shall have the exclusive right to possession thereof. STOBER shall maintain such tools and equipment in good working order.

16. **REGULATORY LAWS AND STANDARDS.** STOBER makes no representation that its products conform to state or local laws, ordinances, regulations, codes or standards except as may be otherwise agreed to in writing by STOBER.

17. **SIZES AND WEIGHTS.** STOBER's products are made only in the sizes and to the specifications set forth in its catalogs and other literature. If any alteration is requested, such altered product will be treated as a made-to-order item. STOBER assumes no responsibility for typographical errors which may appear in its catalogs or literature, and cannot accept alteration charges caused by such errors. Since weights shown in STOBER's catalogs are approximate, they cannot be used in determining freight allowances set forth in its catalogs and other literature. Freight allowances will be determined at the time of shipment and shall be based on actual shipping weight.

18. **SYSTEM DESIGN.** Responsibility for system design to ensure proper use and application of STOBER's products within their published specifications and ratings rests solely with the Customer. This includes, but is not limited to, an analysis of loads created by torsional vibrations within the entire system, regardless of how induced.



ServoFit™ Modular System

ComTrac™ and MGS
Adjustable Speed Drives

ServoFit™ Precision Planetary Gearheads

STOBER Drives, Inc.
1781 Downing Drive, Maysville KY 41056
Phone: 606 759-5090, FAX: 606 759-5045, Toll Free: 800 711-3588
Web: www.stober.com, E-mail: sales@stober.com

STÖBER