



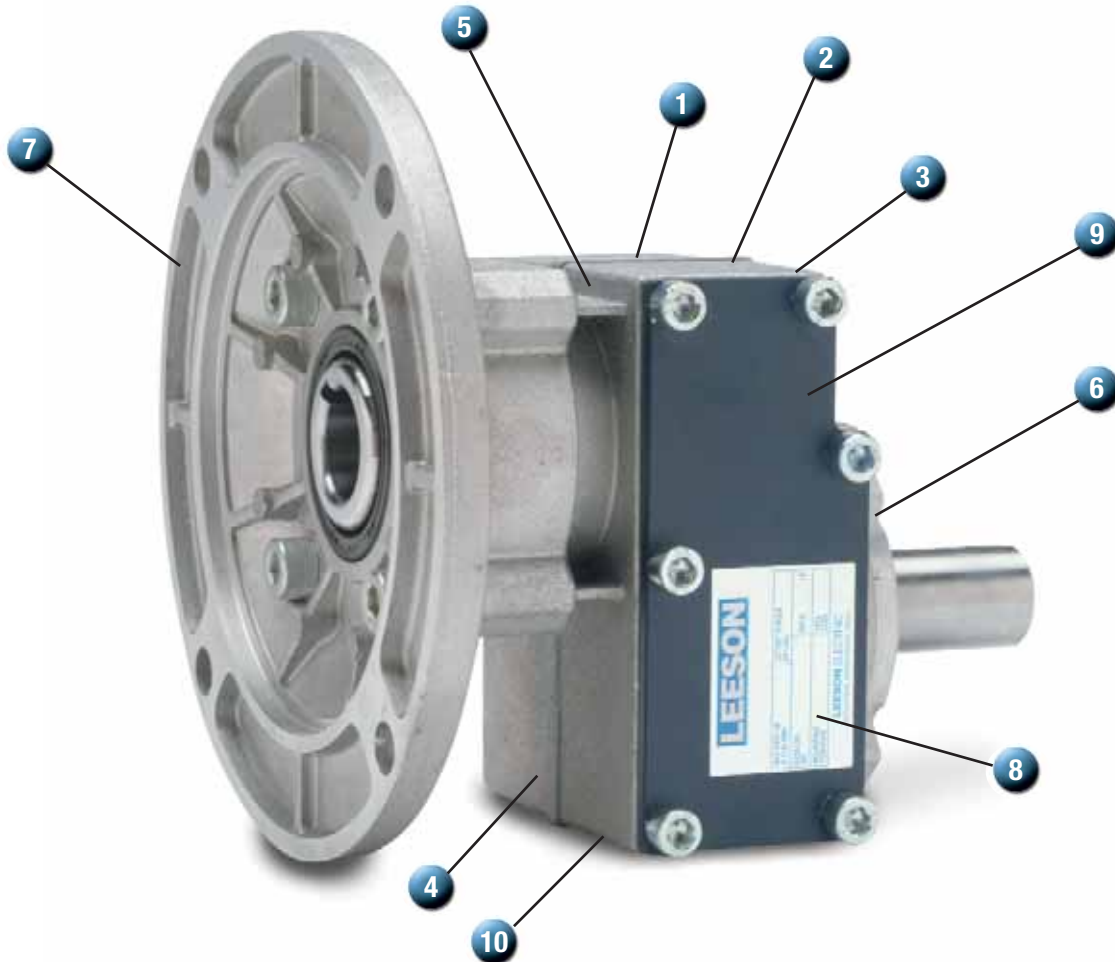
More Than Just a Motor Company



Le **CENTRIC**

**ALUMINUM
RATIO MULTIPLIERS**

Bulletin 7052



- 1 Lightweight Aluminum Construction is up to 75% lighter and 35% smaller than cast iron reducers of similar mechanical capacity.
- 2 All sizes are filled with Mobilgear SHC320 synthetic oil as standard. All sizes are considered “lubed for life”. Specify mounting position at time of order. Refer to page 7 for available positions.
- 3 All gearing is hardened and ground (AGMA Class 10 or better), for enhanced efficiency and noise reduction. Single reduction units are 97-98% efficient with ratios up to 10.8:1.
- 4 Single-piece aluminum alloy housing is vacuum impregnated with Loctite® Resinol® RTC (MIL-STD 276) for protection and sealing. No secondary finish is required, but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.
- 5 Modular construction allows for addition of output flanges for use as ratio multipliers or mounting bases for use as stand-alone single stage gear reducers – interchangeable with many brands, including SEW and David Brown.
- 6 Premium Viton® Seals provide extra protection against entry of contaminants or loss of lubricant.
- 7 Aluminum NEMA C-Face input flange (motorized quill input styles) with machined fits for precision alignment of motor and bearings.
- 8 Permanently marked nameplate with output torque, ratio and input power.
- 9 Removable inspection cover allows periodic inspection of gearing during routine maintenance.
- 10 No fill/drain plugs eliminates potential leak paths.

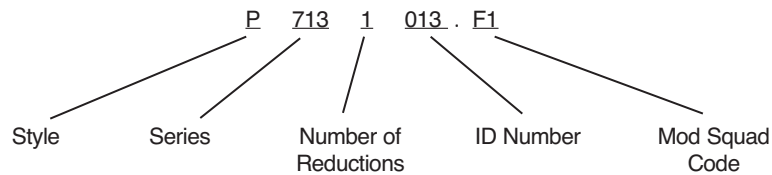
LECENTRIC RATIO MULTIPLIER CATALOG NUMBER SYSTEM

All stock and custom 700 Series reducers are identified by a catalog number – for example P7131001.B1. The catalog number appears on the nameplate and describes pertinent features of the reducer. If a base or output flange is installed to a reducer at LEESON, the assigned Mod-Squad suffix code (ie:B1) will be added to the catalog number. Accessories that are field installed will not be noted on the reducer nameplate. Reducers furnished without a base or output flange will have a suffix code of "00".

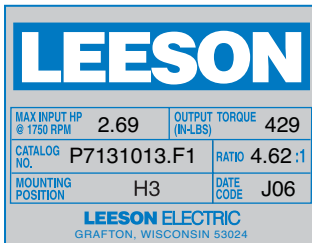
Style	Series	No. of Reductions	ID Number	Mounting Accessory												
P - Basic	713 714 715	1 - Single Reduction	Refer to Selection Tables for Preassigned Numbers	<table border="1"> <thead> <tr> <th>Mod-Squad Suffix Codes</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>F1</td> <td>56C Output Flange</td> </tr> <tr> <td>F2</td> <td>143-5TC Output Flange</td> </tr> <tr> <td>F3</td> <td>182-4TC Output Flange</td> </tr> <tr> <td>B1</td> <td>Foot Mount Base</td> </tr> <tr> <td>00</td> <td>No Accessory Mounted</td> </tr> </tbody> </table>	Mod-Squad Suffix Codes	Description	F1	56C Output Flange	F2	143-5TC Output Flange	F3	182-4TC Output Flange	B1	Foot Mount Base	00	No Accessory Mounted
Mod-Squad Suffix Codes	Description															
F1	56C Output Flange															
F2	143-5TC Output Flange															
F3	182-4TC Output Flange															
B1	Foot Mount Base															
00	No Accessory Mounted															

Sample Catalog Number

Standard aluminum ratio multiplier, single reduction, size 713, 4.62:1, NEMA 56C input and 56C output.



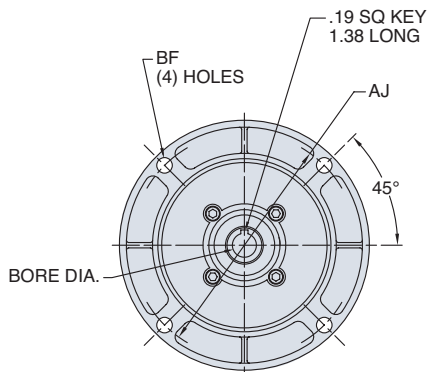
Typical Nameplate



SPECIFY REDUCER MOUNTING POSITION AT TIME OF ORDER. REFER TO PAGE 7 FOR POSSIBLE MOUNTING POSITIONS. LeCENTRIC REDUCERS WILL BE FACTORY FILLED WITH OIL FOR POSITION H3 UNLESS OTHERWISE SPECIFIED.

MOTOR MOUNTING DIMENSIONS

Dimensions below pertain to all LeCentric reducers found on pages 3 through 5.



NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

1.0 SF • 1750 RPM INPUT

Output RPM	Input HP	Output Torque (lb-in)	Ratio	Output OHL (lbs.)	Weight (lbs.)	Non-Motorized		Motorized
						Basic Reducer Catalog Number▼	Input Motor Flange Size	Basic Reducer Catalog Number▼
1115	6.66	362	1.57	60	4.5	P7131001.00	56C	P7131009.00
616	3.84	377	2.84	107	4.5	P7131002.00	56C	P7131010.00
532	3.84	437	3.29	120	4.5	P7131003.00	56C	P7131011.00
452	2.68	359	3.87	132	4.5	P7131004.00	56C	P7131012.00
379	2.69	429	4.62	143	4.5	P7131005.00	56C	P7131013.00
278	1.92	419	6.30	159	4.5	P7131006.00	56C	P7131014.00
213	1.20	342	8.22	169	4.5	P7131007.00	56C	P7131015.00
161	0.66	250	10.86	177	4.5	P7131008.00	56C	P7131016.00

▼ Catalog number is for basic reducer and does not include output flange or horizontal base kit. These optional accessories are listed in table below.

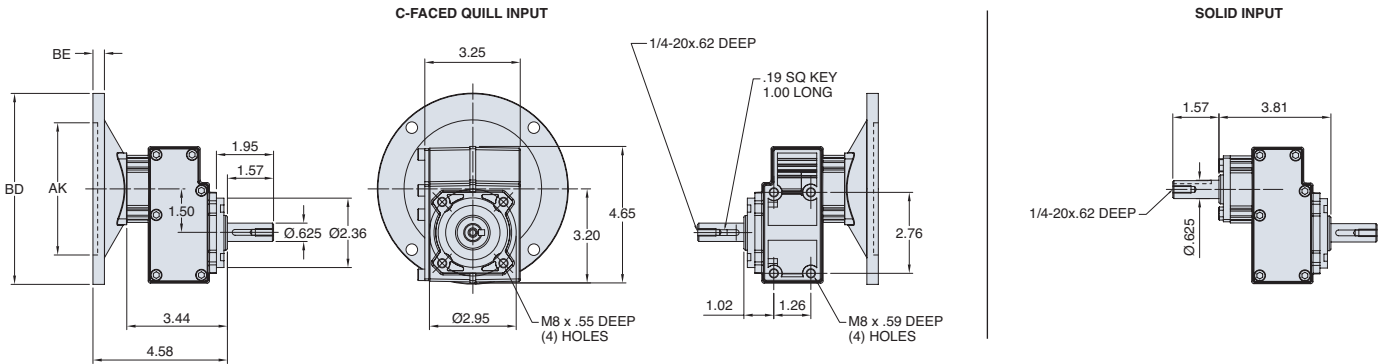


OPTIONAL ACCESSORY KITS

Mounting Option	Accessory Kit Catalog Number	ModSquad Service		Weight
		Service Number	Suffix Code	
Output Flange Kit – NEMA 56C (6.50" dia.)	G175741	F713	F1	1
Horizontal Base Mount Kit	G175143	T713	B1	2

DIMENSIONS (INCHES)

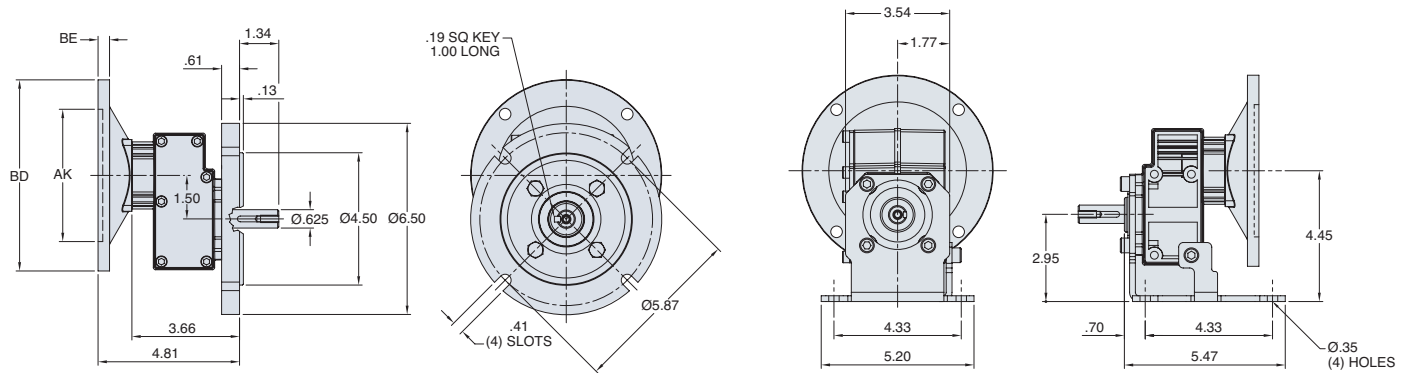
STANDARD MOUNT ("00" SUFFIX)



DIMENSIONS (INCHES) • OPTIONAL ACCESSORIES

OPTIONAL OUTPUT FLANGE MOUNT ("F1" SUFFIX)

OPTIONAL FOOT MOUNT ("B1" SUFFIX)



1.0 SF • 1750 RPM INPUT

Output RPM	Input HP	Output Torque (lb-in)	Ratio	Output OHL (lbs.)	Weight (lbs.)	Non-Motorized		Motorized
						Basic Reducer Catalog Number▼	Input Motor Flange Size	Basic Reducer Catalog Number▼
1115	6.66	362	1.57	130	6.5	P7141001.00	56C 143-5TC	P7141009.00 P7141017.00
616	3.84	377	2.84	227	6.5	P7141002.00	56C 143-5TC	P7141010.00 P7141018.00
532	3.84	437	3.29	251	6.5	P7141003.00	56C 143-5TC	P7141011.00 P7141019.00
452	2.68	359	3.87	273	6.5	P7141004.00	56C 143-5TC	P7141012.00 P7141020.00
379	2.69	429	4.62	293	6.5	P7141005.00	56C 143-5TC	P7141013.00 P7141021.00
278	1.92	419	6.30	321	6.5	P7141006.00	56C 143-5TC	P7141014.00 P7141022.00
213	1.20	342	8.22	339	6.5	P7141007.00	56C 143-5TC	P7141015.00 P7141023.00
161	0.66	250	10.86	353	6.5	P7141008.00	56C 143-5TC	P7141016.00 P7141024.00



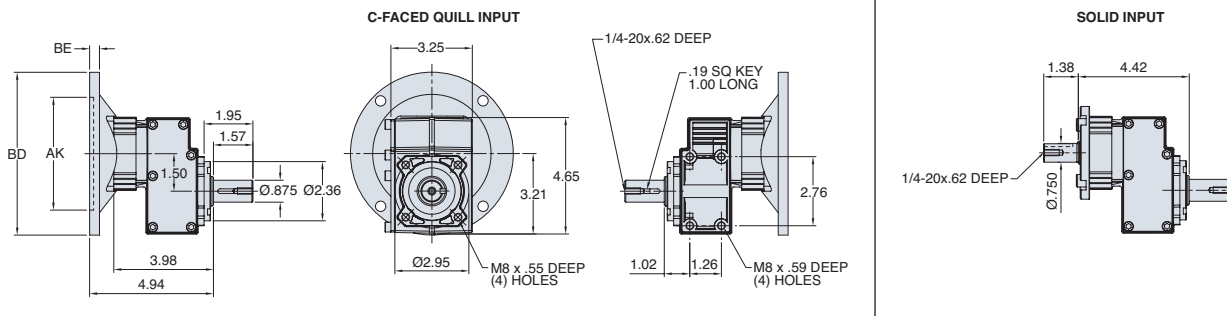
▼ Catalog number is for basic reducer and does not include output flange or horizontal base kit. These optional accessories are listed in table below.

OPTIONAL ACCESSORY KITS

Mounting Option	Accessory Kit Catalog Number	ModSquad Service		Weight
		Service Number	Suffix Code	
Output Flange Kit – NEMA 43-5TC (6.50" dia.)	G175741	F714	F2	1
Horizontal Base Mount Kit	G175143	T714	B1	2

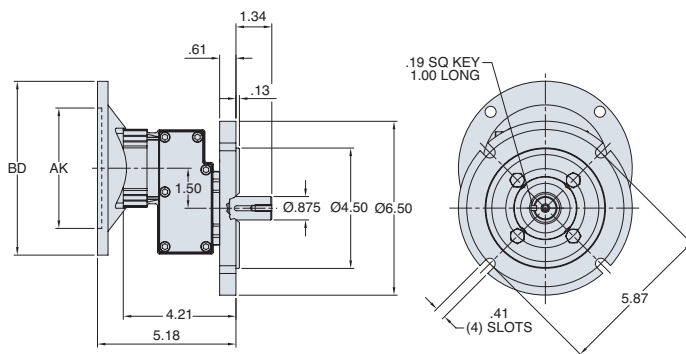
DIMENSIONS (INCHES)

STANDARD MOUNT ("00" SUFFIX)

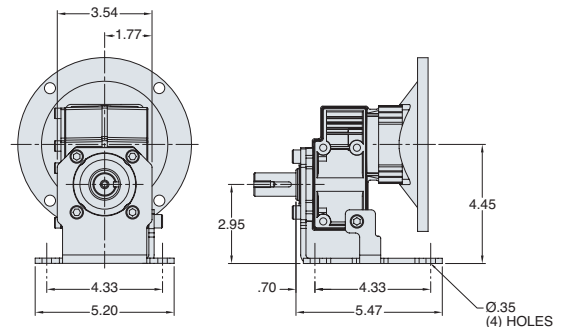


DIMENSIONS (INCHES) • OPTIONAL ACCESSORIES

OPTIONAL OUTPUT FLANGE MOUNT ("F2" SUFFIX)



OPTIONAL FOOT MOUNT ("B1" SUFFIX)



1.0 SF • 1750 RPM INPUT

Output RPM	Input HP	Output Torque (lb-in)	Ratio	Output OHL (lbs.)	Weight (lbs.)	Non-Motorized		Motorized
						Basic Reducer Catalog Number▼	Input Motor Flange Size	Basic Reducer Catalog Number▼
1346	13.18	593	1.30	170	11.00	P7151001.00	182-4TC	P7151022.00
714	12.74	1080	2.45	320	11.00	P7151002.00	182-4TC	P7151023.00
529	9.43	1080	3.31	404	11.00	P7151003.00	182-4TC	P7151024.00
406	7.89	1177	4.31	458	11.00	P7151004.00	182-4TC	P7151025.00
332	6.46	1177	5.27	490	11.00	P7151005.00	182-4TC	P7151026.00
229	3.82	1009	7.63	534	11.00	P7151006.00	143-5TC 182-4TC	P7151020.00 P7151027.00
167	1.92	699	10.50	561	11.00	P7151007.00	143-5TC 182-4TC	P7151021.00 P7151028.00



NEMA 56C and 143-5TC inputs are available with all Series 715 ratios. Contact LEESON for price and availability.

▼ Catalog number is for basic reducer and does not include output flange or horizontal base kit.

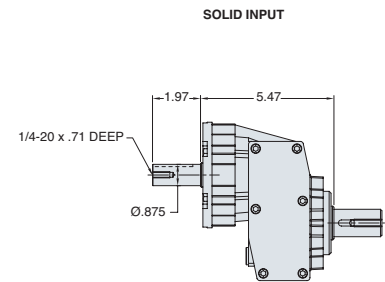
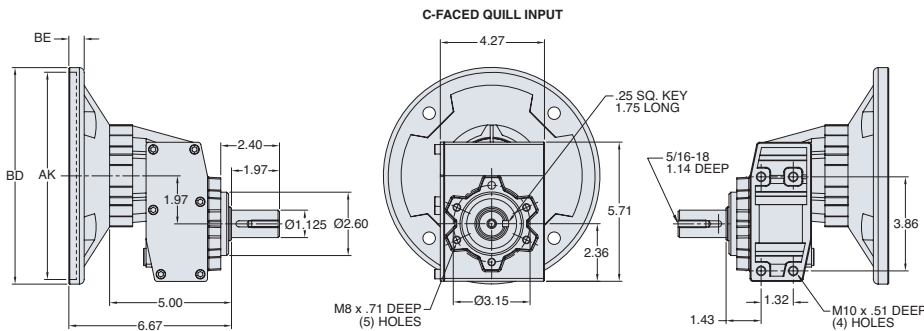
These optional accessories are listed in table below.

OPTIONAL ACCESSORY KITS

Mounting Option	Accessory Kit Catalog Number	ModSquad Service		Weight
		Service Number	Suffix Code	
Output Flange Kit – NEMA 180TC (9.00" dia.)	G175142	F715	F3	2
Horizontal Base Mount Kit	G175144	T715	B1	2

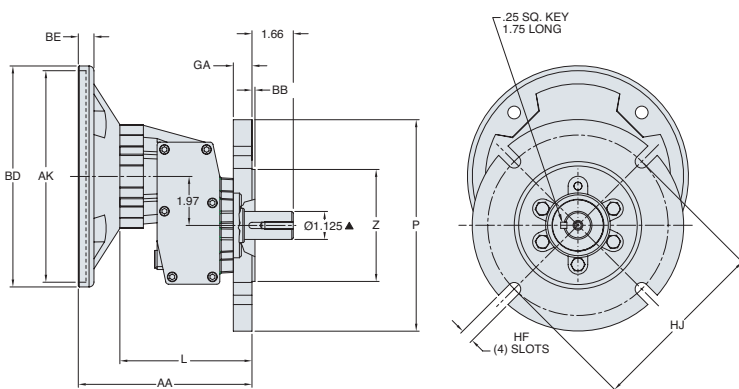
DIMENSIONS (INCHES)

STANDARD MOUNT ("00" SUFFIX)

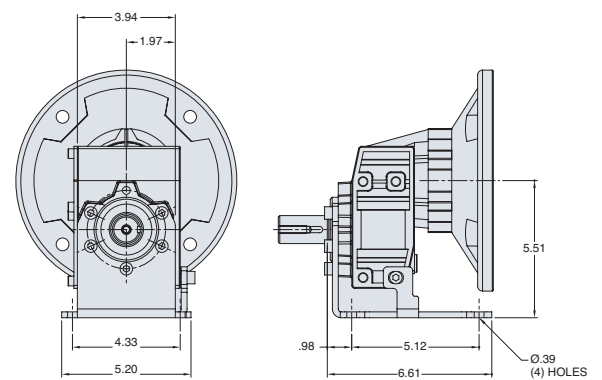


DIMENSIONS (INCHES) • OPTIONAL ACCESSORIES

OPTIONAL OUTPUT FLANGE MOUNT ("F3" SUFFIX)



OPTIONAL FOOT MOUNT ("B1" SUFFIX)

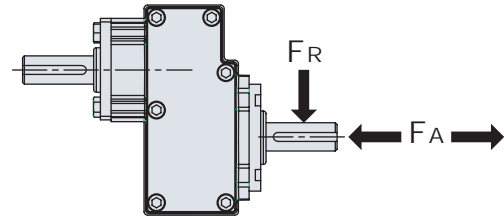


▲ CONTACT LEESON FOR ALTERNATE SHAFT DIAMETERS

Frame Combinations		AA	BB	GA	HF	HJ	L	P	Z
Input Flange	Output Flange								
56/140TC	56/140TC	6.14	.13	.39	.41	5.87	5.17	6.50	4.50
56/140TC	180TC	6.28	N/A	.75	.53	7.75	5.31	8.50	8.50
180TC	56/140TC	6.84	.13	.39	.41	5.87	5.17	6.50	4.50
180TC	180TC	6.98	N/A	.75	.53	7.75	5.31	8.50	8.50

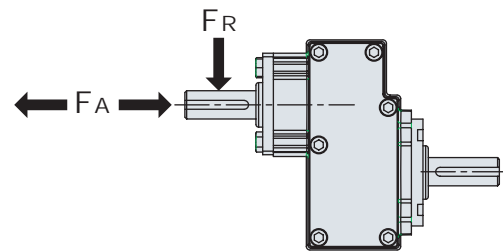
SINGLE REDUCTION OUTPUT SHAFT RATINGS ▼

Output RPM	Series					
	713		714		715	
	F _A	F _R	F _A	F _R	F _A	F _R
1000	13	65	29	144	46	230
700	19	94	41	204	66	330
600	23	112	45	225	72	359
400	26	130	52	258	83	416
300	28	142	56	281	90	449
200	33	164	65	326	103	517
140	36	180	72	359	115	573



SINGLE REDUCTION INPUT SHAFT RATINGS ▼

Input RPM	Series					
	713		714		715	
	F _A	F _R	F _A	F _R	F _A	F _R
1750	25	125	43	216	72	359

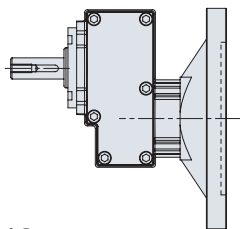


FA = Axial Load Rating = Thrust Rating (lbs)

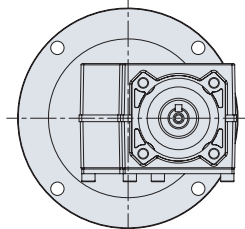
FR = Radial Load Rating = Overhung Load (lbs)

▼ Overhung load is located at centerline of shaft extension for solid input/output shaft style.

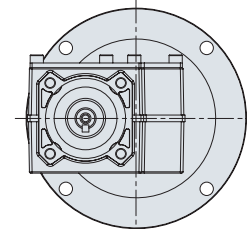
Carefully follow lubrication instructions and installation manuals furnished with the gear reducer. All standard LeCentric inline reducers are factory filled with Mobilgear SHC320 synthetic oil. The mounting position is stamped on all LeCentric nameplates. The standard position is H3, as shown below. Specify mounting position of reducer for correct oil fill at time of shipment. Positions H3-H8 are horizontal mount. Positions V5 and V6 are vertical mount. Sizes 713-715 ONLY: Lube quantity is same for all mounting positions.



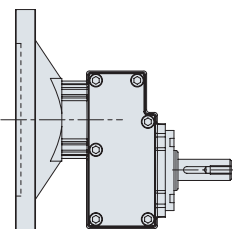
H3



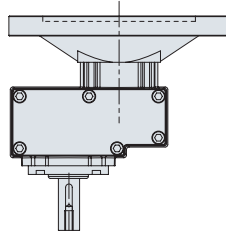
H6



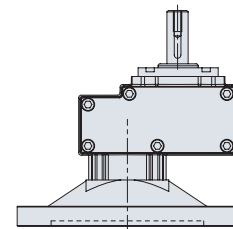
H7



H8



V5



V6

LUBRICATION





All standard LeCentric reducers ordered from LEESON are filled with Mobilgear® SHC320 synthetic oil to operate within a -25°F to +113°F ambient temperature range. Lubrication quantities are specified below. Prior to start-up, verify that the mounting position on nameplate matches required position (see below). LeCentric reducers are filled to proper level, based on mounting position printed on nameplate. **ALL LeCentric reducers will be filled with oil for position "H3" unless otherwise specified. LeCentric sizes 713-715: mounting position does not affect oil level.** If the ambient temperature will be outside the range for the lubricant installed at LEESON, drain and refill the reducer with the proper viscosity lubricant prior to use. Consult LEESON for alternate lubricants.

Change Intervals: LeCentric reducers utilize extreme pressure lubricants which protect the teeth in the event of the oil thinning out due to local temperature rise or high pressure due to accidental overloads. LeCentric reducers are "lubed-for-life" and do not require regular oil changes under normal industrial operating conditions and environments. If the reducers are operated in severe environments (i.e. high or low temperatures, high altitudes, dusty, caustic, etc.) oil changes may be required. Contact LEESON if severe conditions exist or to review the application to determine impact environment will have on reducer. High ambient temperatures cause the oil to thin out and reduce its protective qualities. In such cases, it will be necessary to utilize heavier grades than shown. Conversely, low temperatures will necessitate a thinner grade, otherwise trouble may be experienced with burning out of motors at starting. In this condition, the pour point of the oil must be less than the lowest ambient temperature to be encountered. Refer to installation manual provided with reducer for approved lubricants and suppliers.

LUBE QUANTITIES (OUNCES)

Reducer Size	713	714	715
All Positions	3.53	3.53	8.82

NOTE: Multiply the above quantities by 0.06 to obtain the equivalent weight of oil in pounds
 16 oz. = 1 pint
 2 pints = 1 quart

-  In the Food and Drug Industry (including animal food), consult the lubrication supplier for recommendation of lubricants which are acceptable to the Food and Drug Administration and/or other authoritative bodies having jurisdiction.
-  Do not mix different oils in the reducer. Oils should be compatible with Viton® seal material.
-  Oil should be changed/checked if reducer is used in severe environment as defined above.
-  **SYNTHETIC LUBRICANTS IN FOOD AND DRUG INDUSTRY** Synthetic lubricants may contain toxic substances and should not be used in the food processing industry without the lubricant manufacturer's approval. Lubricants which meet USDA "H1" classification are suitable for food and drug processing applications where incidental contact is acceptable.

LEESON CARRIES A WHOLE FAMILY OF GEAR REDUCERS



LeCentric aluminum inline reducers feature modular construction and are a smart choice for bolt-in replacements for dozens of popular brands. Complete information is available in LEESON's 7050 Catalog.



IronMan® by Ohio Gear cast iron worm reducers are designed to be the premium worm reducer in the industry. Complete information is available in LEESON's 8050 Catalog.



Bravo® aluminum worm reducers are a compact and lightweight alternative to cast iron reducers.

BRAVO®, LeCentric, and Ironman® by Ohio Gear reducers match easily with LEESON motors and combine to make LEESON your preferred Gear + Motor supplier.



LEESON ELECTRIC

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