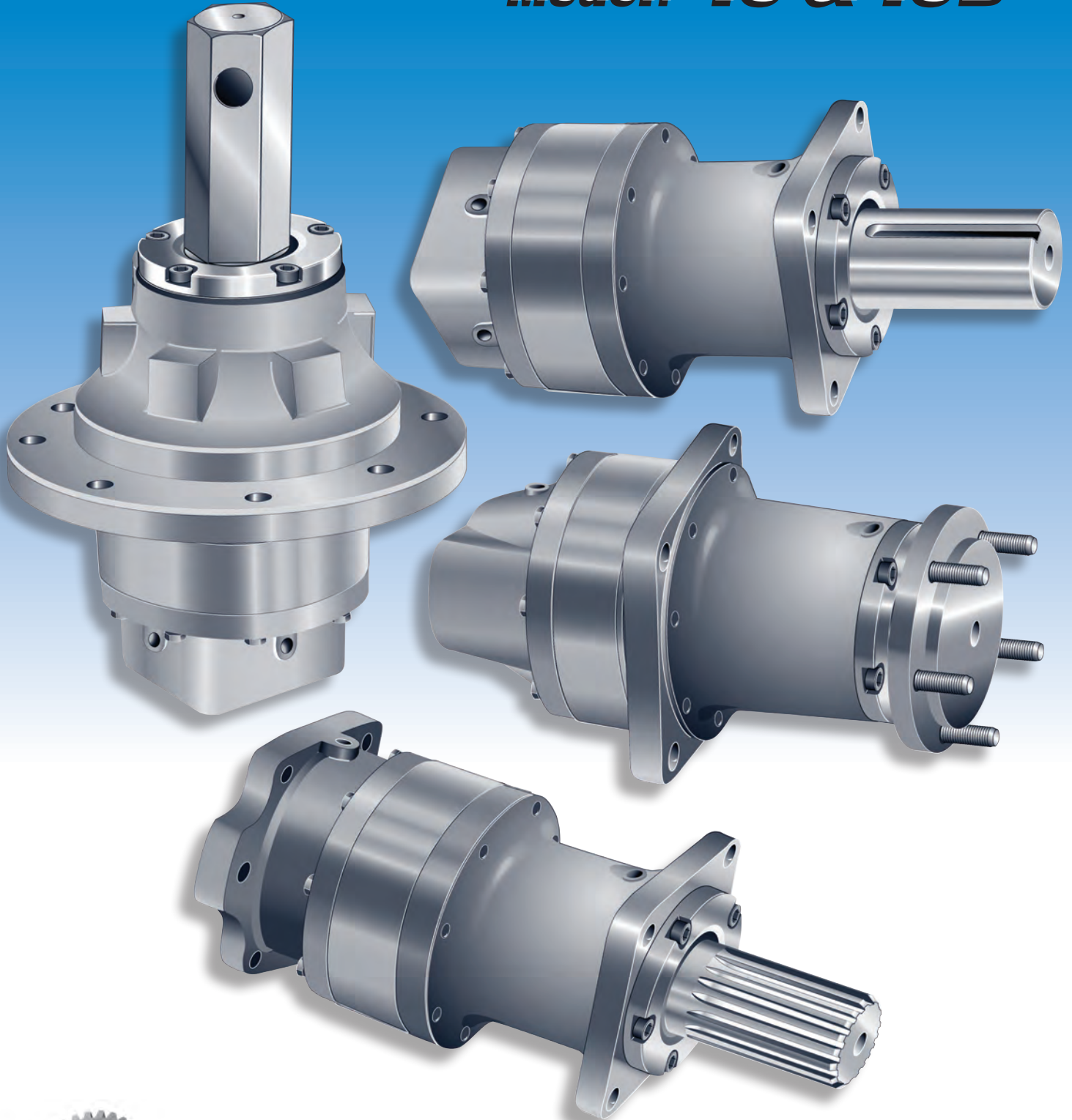


Model: 16 & 16D



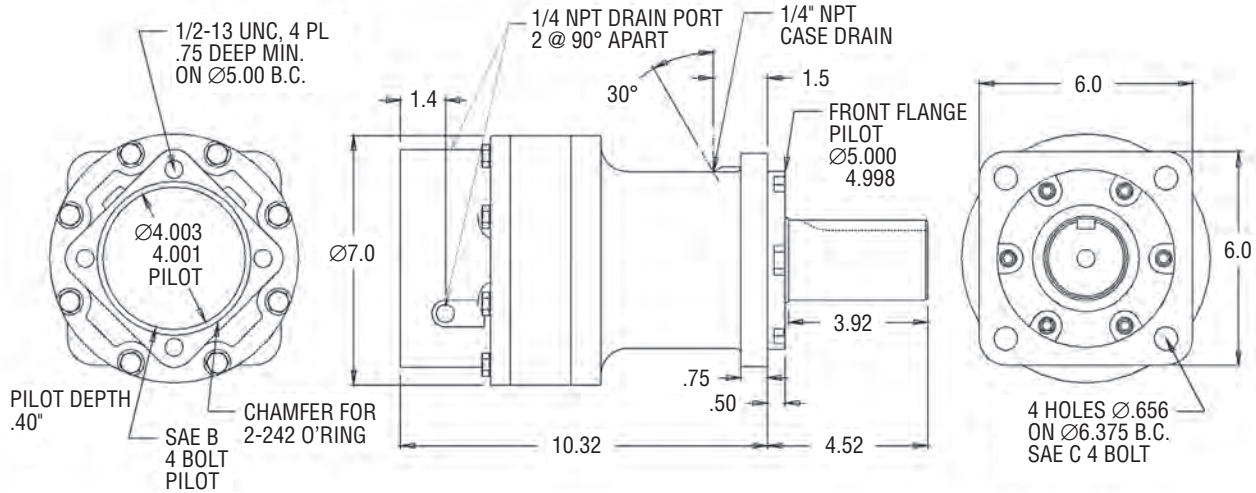
HECO GEAR
Planetary Speed Reducers for Industry

P.O. Box 1388
West Sacramento, CA 95691
(916) 372-5411
Fax: (916) 373-0952
www.hecogear.com

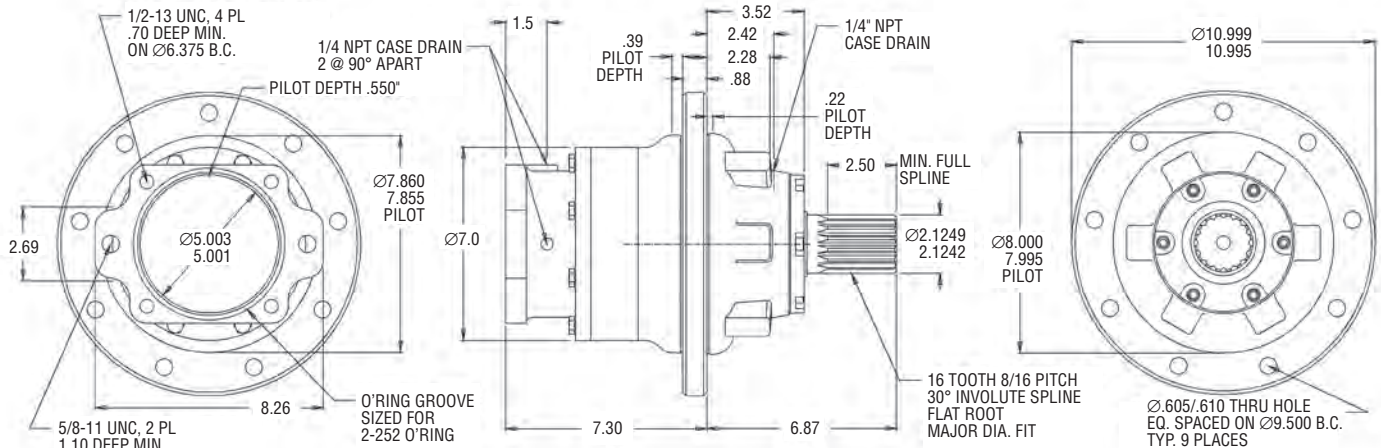
Model 16 Installation Dimensions

30,000 in-lbs Continuous Torque Output
5.2 to 1 Ratio

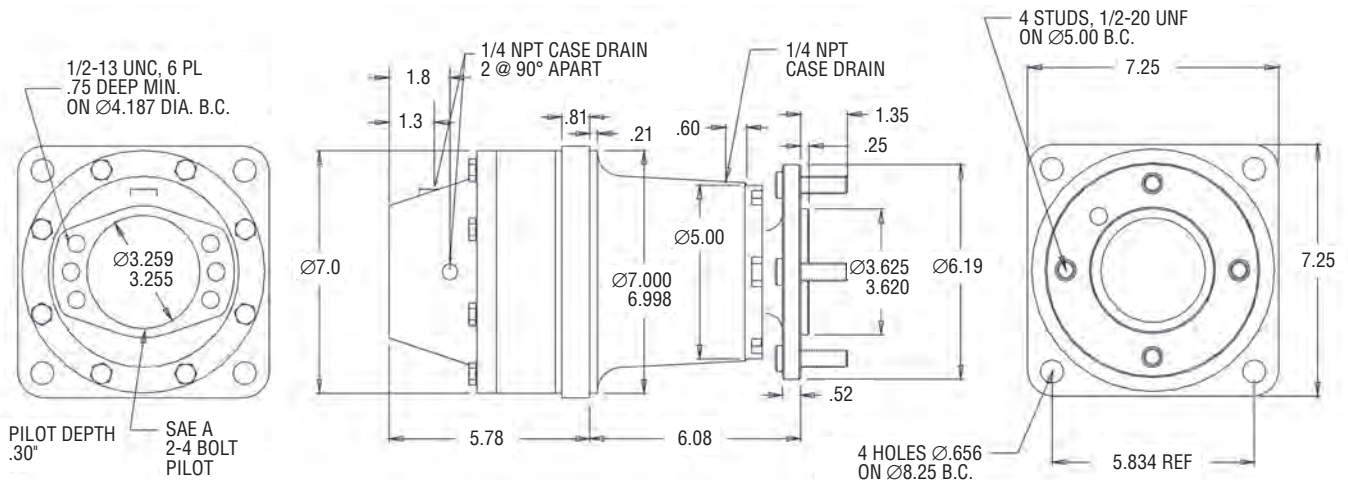
20,000 lb. Maximum Radial Load
450 RPM Maximum Output Speed



Model 16FF-1-0-5 Illustrated with Code 1 2.250" Keyed Output Shaft and Code 0 SAE B, 4 Bolt Motor Adapter



Model 16AF-4-6-5 Illustrated with Code 4 Splined Output Shaft and Code 6 SAE C, 2 & 4 Bolt Motor Adapter

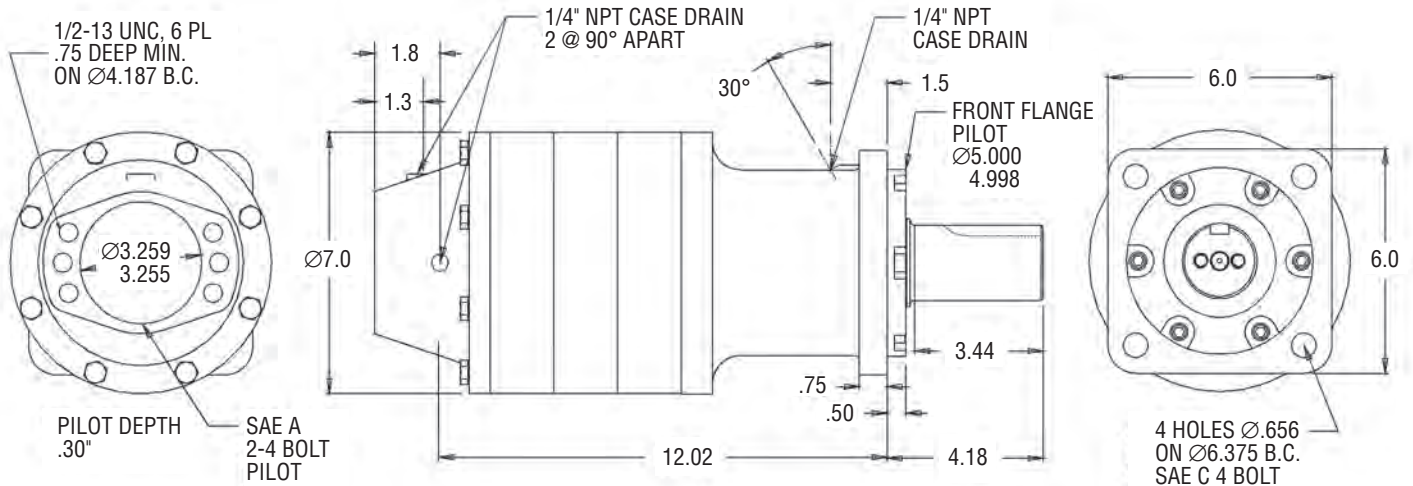


Model 16CF-2-4-5 Illustrated with Code 2 Flanged Output Shaft and Code 4 SAE A, 2 & 4 Bolt Motor Adapter

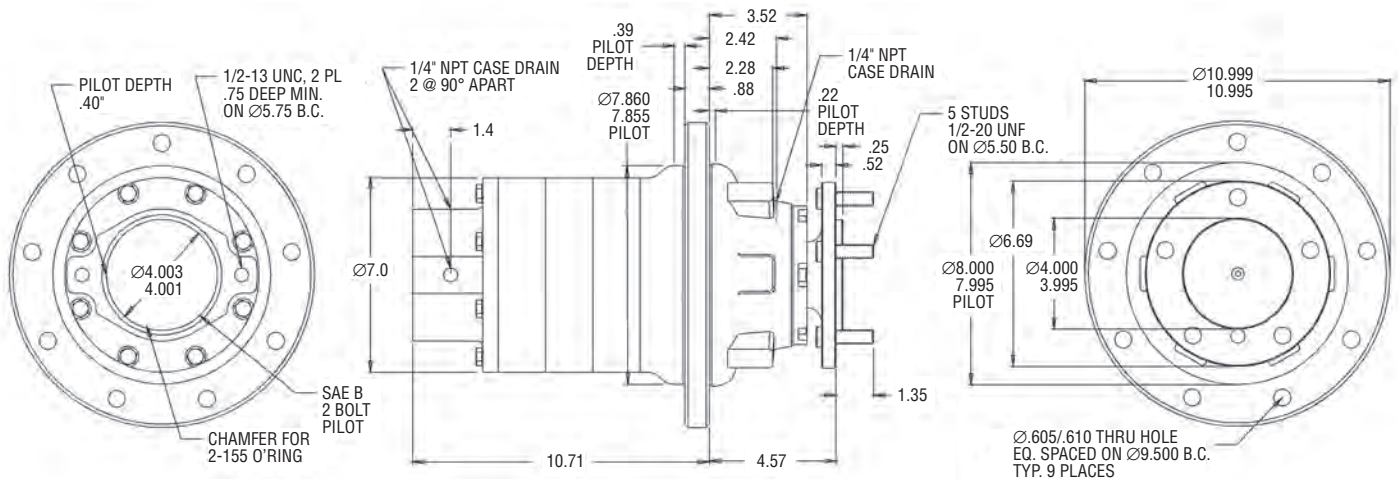
Model 16D Installation Dimensions

30,000 in-lbs Continuous Torque Output
27 to 1 Ratio

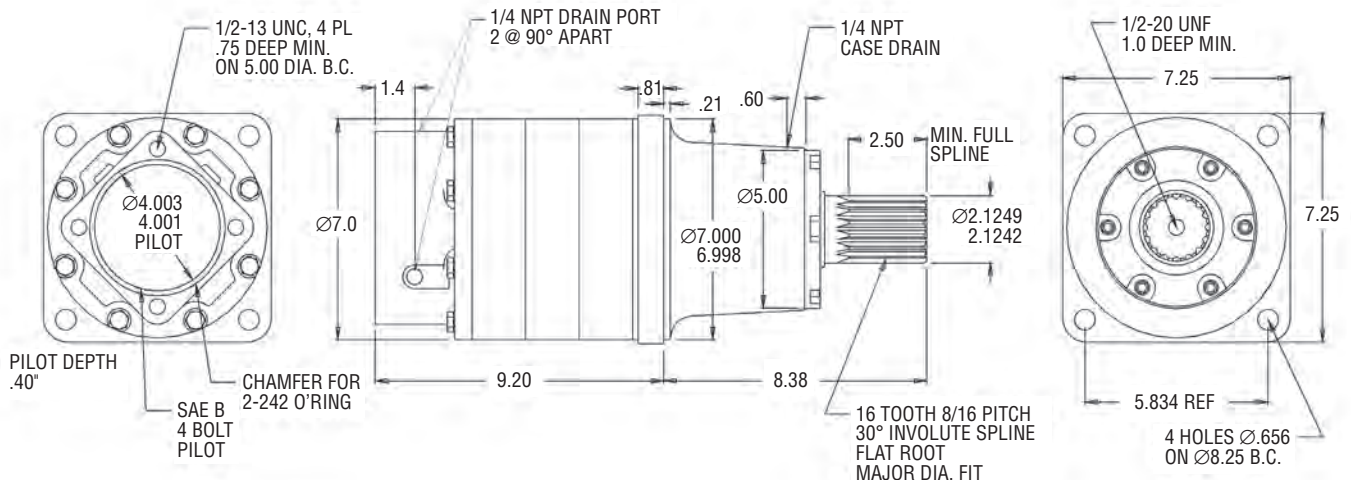
20,000 lb. Maximum Radial Load
85 RPM Maximum Output Speed



Model 16DFF-6-4-27 Illustrated with Code 6 Keyed Output Shaft and Code 4 SAE A, 2 & 4 Bolt Motor Adapter



Model 16DAF-5-5-27 Illustrated with Code 5 Flanged Output Shaft and Code 5 SAE B, 2 Bolt Motor Adapter



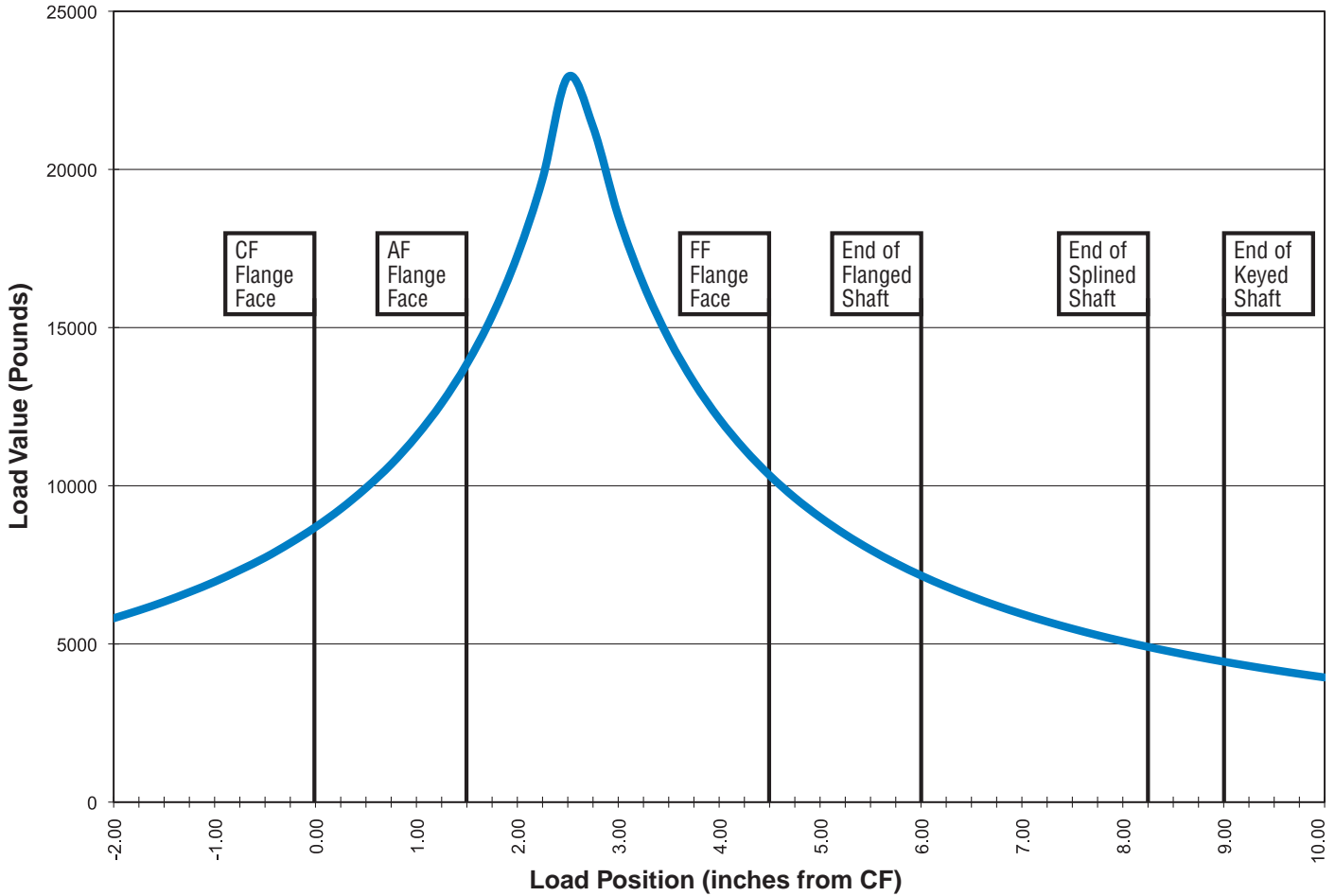
Model 16DCF-4-0-27 Illustrated with Code 4 Splined Output Shaft and Code 0 SAE B, 4 Bolt Motor Adapter

Output Shaft Options

<p>Code 1: 2.250" Keyed Shaft</p>	<p>Code 6: 2.000" Keyed Shaft</p>
<p>Code 2/22: 4 Bolt Flange</p>	<p>Code 7: 2.545" Round Shaft with Cross Drilled Hole</p>
<p>Code 3: J501 Tapered</p>	<p>Code 8: 2.000" Hex with Cross Drilled Hole</p>
<p>Code 4: Splined</p>	<p>Code 81: 1.625" Square</p>
<p>Code 5/52: 5 Bolt Flange</p>	<p>Code 9: 9 Bolt Flange</p>

Output Shaft Bearing Radial Load Curve

Based on 18,000,000 revolution life (filled with 85W-140 oil)



A simultaneous maximum torque and maximum speed NOT recommended. Consult Heco if your application falls outside of recommended maximum RPM, torque, or radial load.

Torque Ratings

Model	Continuous	Intermittent	Peak
16, 16D	30,000 in·lbs 2,500 ft·lb 3,390 Nm	45,000 in·lbs 3,750 ft·lb 5,080 Nm	60,000 in·lbs 5,000 ft·lb 6,780 Nm

Oil Recommendation

For maximum speed reducer life the recommended oil is SAE 85W-140 multi-grade gear oil meeting APIGL5 and API-MT1 service. Alternate oil that will provide adequate speed reducer life is SAE 90W gear oil meeting API-GL5 and API-MT1 service. These oils should be readily available at your local automotive store or lubricant dealer.

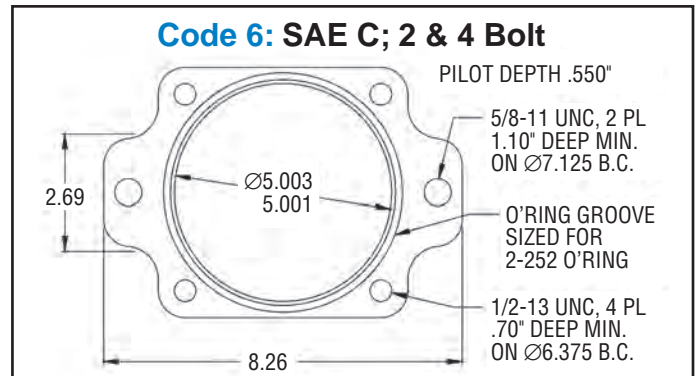
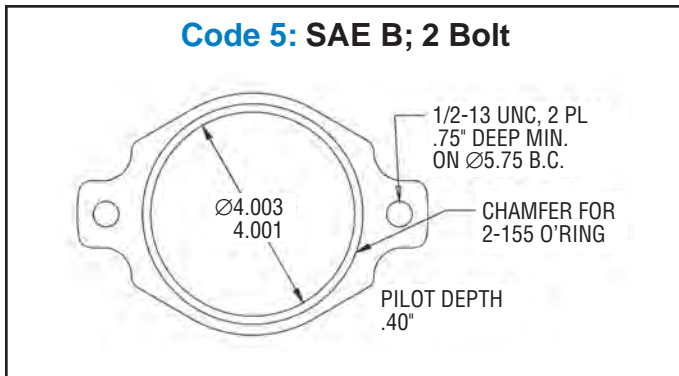
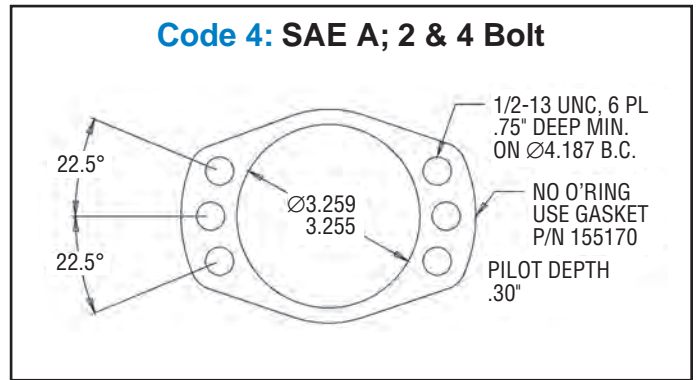
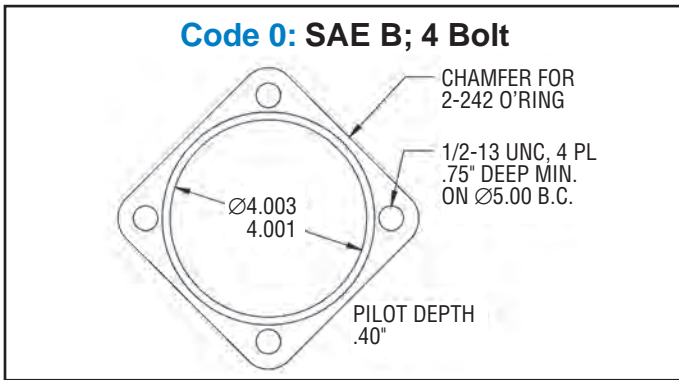
When using a Bearingless hydraulic motor or “Flow Through” lubrication, where hydraulic oil from the hydraulic motor lubricates the speed reducer, an ISO 68 hydraulic oil with EP1 additives and a minimum of 0.125% zinc anti-wear additive will provide adequate speed reducer life.

Maximum oil temperature should not exceed 160° F (71° C) for continuous operation or 180° F (82° C) for intermittent operation.

Consult Heco Gear for applications requiring use of non-petroleum based or fire retardant lubrication.

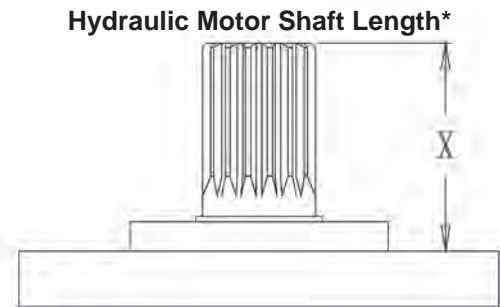
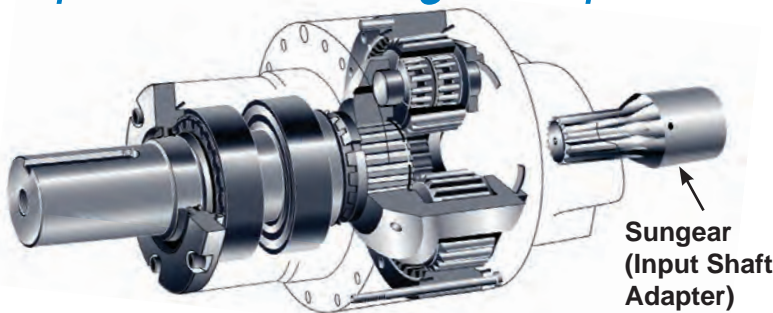
Warranty information and Parts & Service manuals (PDF format) are available at www.hecogear.com.

Hydraulic Motor Adapter Options



Heco gearboxes ship with all bolts, split washers, gasket/O-ring, necessary to connect your motor.

Input Shaft / Sungear Options



Part #	Hydraulic Motor Shaft Type	Minimum Length - in (mm)*	Maximum Length - in (mm)*
16E	Charlynn 2000 Bearingless	N/A	N/A
16F	Charlynn 4000 Bearingless	N/A	N/A
16S	Danfoss OMSS Bearingless	N/A	N/A
16O	7/8" Straight Keyed	1.80" (45.72)	2.09" (53.09)
16B	7/8" 13T Spline 16/32 DP	1.40" (35.56)	1.75" (44.45)
16D	1" Straight Keyed	1.80" (45.72)	2.10" (53.34)
16M	1" SAE 6B Spline	1.95" (49.53)	2.30" (58.42)
16C	1" 15T Spline 16/32 DP	1.70" (43.18)	1.95" (49.53)
16P	1 1/8" Straight Keyed	1.85" (46.99)	2.15" (54.61)
16H	1 1/4" Straight Keyed	2.05" (52.07)	2.40" (60.96)
16I	1 1/4" 14T Spline 12/24 DP	2.00" (50.80)	2.32" (58.93)
151010	Required spacer for Charlynn 4000 standard motor shaft		

* Motor Shaft Length: Distance from hydraulic motor mounting flange to tip of motor output shaft (see above).

Model Codes and Ordering Information

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	DESIGN NUMBER
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
16FF – Front Flange (5.2:1)	1 – 2.250" Keyed Shaft	0 – SAE B; 4 bolt	5 – 5.2:1	7 – Current design
16CF – Center Flange (5.2:1)	2 – 4 Bolt Flange (1/2" studs)	4 – SAE A; 2 & 4 bolt	27 – 27.04:1	
16AF – "A" Flange (5.2:1) See drawings on page 2	22 – 4 Bolt Flange (5/8" studs)	5 – SAE B; 2 bolt		
16DFF – Front Flange (27:1)	3 – 2.250" J501 Tapered	6 – SAE C; 2 & 4 bolt		
16DCF – Center Flange (27:1)	4 – 16 Tooth 8/16 Splined	See page 6 for more detail		
16DAF – "A" Flange (27:1) See drawings on page 3	5 – 5 Bolt Flange (1/2" studs)			
	52 – 5 Bolt Flange (5/8" studs)			
	6 – 2.000" Keyed Shaft			
	7 – 2.545" Round Shaft			
	8 – 2.000" Hex Shaft			
	81 – 1.625" Square Shaft			
	9 – 9 Bolt Flange (5/8" studs)			
	See page 4 for more detail			

Sample Model Code: 16DAF-1-0-27-7

Sample Sungear Code: 16E

See page 6 for more detail

Common Options:

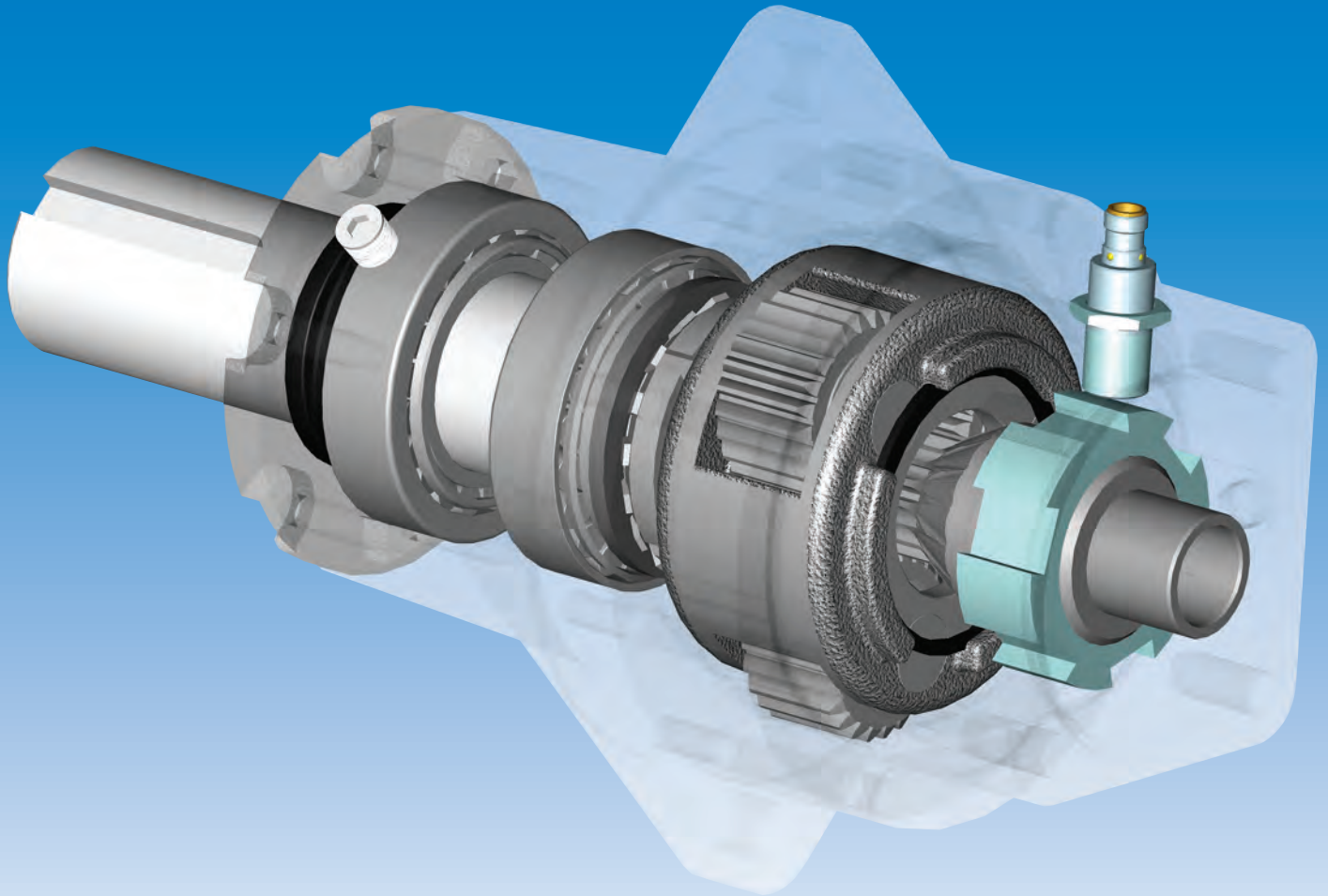
Nickel Plating (MIL-C-26074E; Class 2, Grade 0005): Nickel plated shaft, seal carrier, and stainless steel seal carrier bolts for corrosion prone environments (add A22 suffix to gearbox part number)

Speed Pickup: Inductive sensor protected in housing for speed feedback (add A37 suffix for PNP or A38 for NPN).

Output Shafts: Quick turnaround on customized shafts for your application.

Delivery: Standard delivery on all Heco gearboxes is 4-6 weeks ARO.

24 Hour Quick Ship: Available for all gearboxes and components.



Speed Pickup for Planetary Speed Reducers

The Heco Speed Pickup package provides a low cost alternative for speed feedback

- Confirm actuation
- Control acceleration/deceleration ramps
- Product output metering and counting
- Control mixing speeds

The Heco Speed Package is enclosed and protected within the gearbox and includes:

- Non-contact, inductive sensor that is available in PNP (A37 option) or NPN (A38 option) configuration
- Model 16: 6 pulses per revolution; Model 25: 8 pulses per revolution
- Pickup ring mounted to input shaft provides greater accuracy
- 5 meter (16') molded cable that easily detaches for sensor replacement
- No maintenance. Set it and forget it!
- All components inside the gearbox housing
- Impervious to outside debris

Please visit www.hecogear.com for more information