

***Model: 50 & 52***



**HÉCO GEAR**  
Planetary Speed Reducers for Industry

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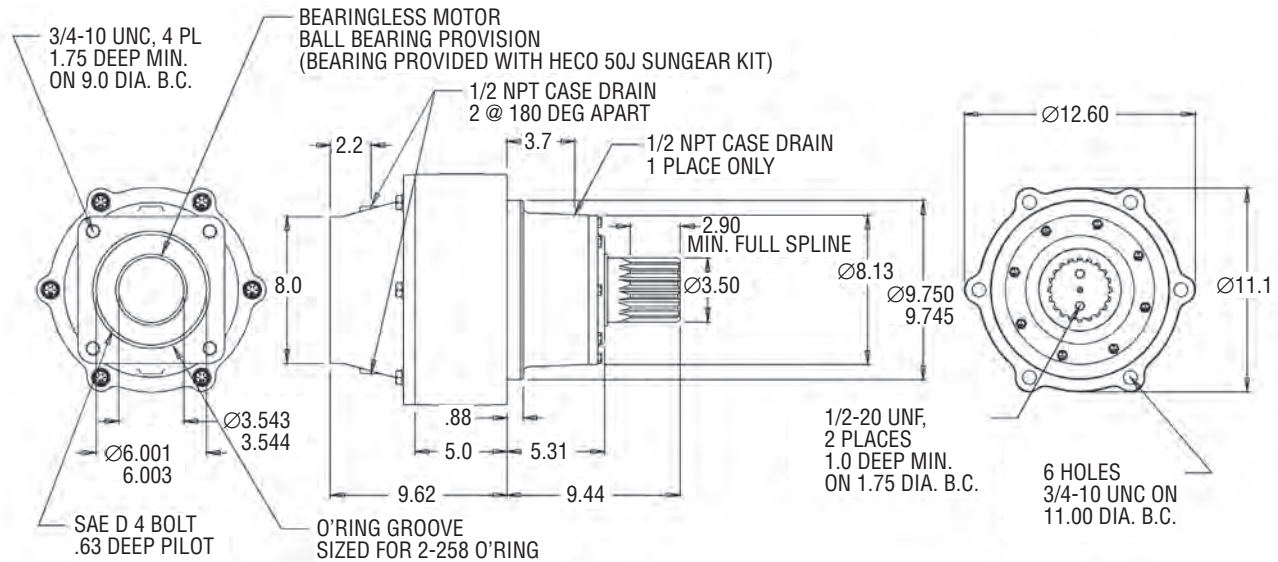


# HĒCO GEAR

# Model 50

**140,000 in-lbs Continuous Torque Output**  
**6.0 to 1 Ratio**

**40,000 lb. Maximum Radial Load**  
**300 RPM Maximum Output Speed**



**Model 50CF-4-7-6** Illustrated with Code 4 Splined Output Shaft and Code 7 SAE D Motor Adaptor (6" pilot/4 bolt)

## Model Codes and Ordering Information

Sample Model Code: 50CF-4-7-6/X

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	INPUT SHAFT/SUNGEAR*
50CF			6	

**Model 50**

**1** – 3 7/8" Keyed

**6** – SAE C; 2 & 4 bolt

**6** – 6.0:1

**50G** – Charlynn 6000 Bearingless

**Center Flange**

**4** – 20T 6/12 Splined

**7** – SAE D; 4 bolt

**50J** – Charlynn 10000 Bearingless

**50K** – 1 3/4" 13T Spline 8/16 DP

**50I** – 1 1/4" 14T Spline 12/24 DP

**50L** – 1 1/2" 17T Spline 12/24 DP

**X** – Gearbox only, without Input Shaft/Sungear\*

\* A sungear is required for **EACH** gearbox.

### 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.

**Speed Pickup:** Inductive sensor protected in housing for speed feedback.

**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.

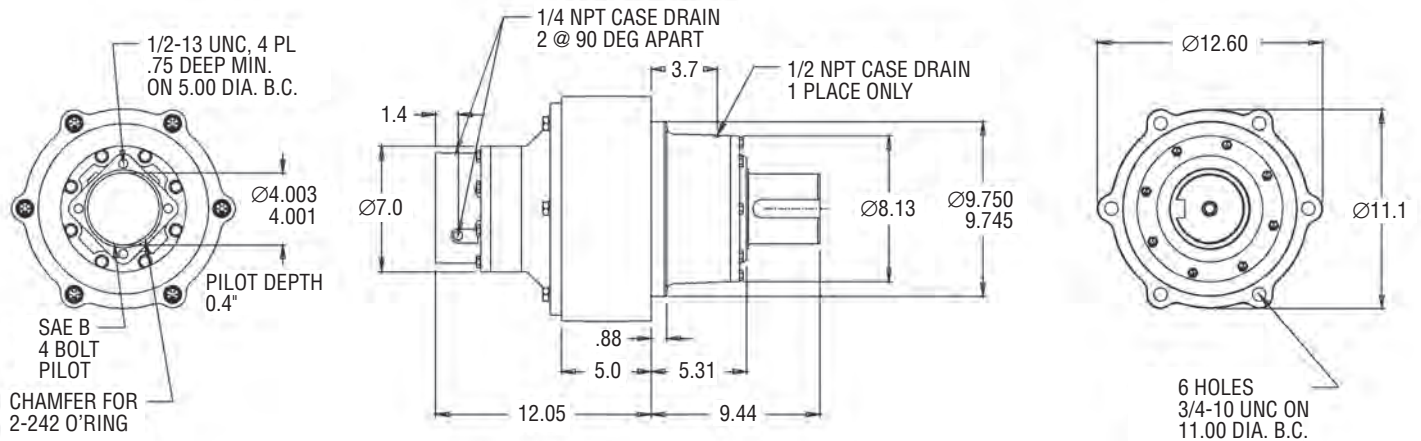


# HĒCO GEAR

## Model 50D

**125,000 in-lbs Continuous Torque Output**  
**31.2 to 1 Ratio**

**40,000 lb. Maximum Radial Load**  
**125 RPM Maximum Output Speed**



**Model 50DCF-1-0-31** Illustrated with Code **1** Keyed Output Shaft and Code **0** SAE B Motor Adapter (4" pilot/4 bolt)

### Model Codes and Ordering Information

Sample Model Code: 50DCF-1-0-31/X

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	INPUT SHAFT/SUNGEAR*
50DCF			31	
<b>Model 50D</b>	<b>1</b> – 3 7/8" Keyed	<b>0</b> – SAE B; 4 bolt	<b>31</b> – 31.2:1	<b>16E</b> – Charlynn 2000 Bearingless
<b>Center Flange</b>	<b>4</b> – 20T 6/12 Splined	<b>4</b> – SAE A; 2 & 4 bolt		<b>16F</b> – Charlynn 4000 Bearingless
		<b>5</b> – SAE B; 2 bolt		<b>16S</b> – Danfoss OMSS
		<b>6</b> – SAE C; 2 & 4 bolt		<b>16O</b> – 7/8" Straight Keyed
				<b>16B</b> – 7/8" 13T Spline 16/32 DP
				<b>16D</b> – 1" Straight Keyed
				<b>16M</b> – 1" SAE 6B Spline
				<b>16C</b> – 1" 15T Spline 16/32 DP
				<b>16P</b> – 1 1/8" Straight Keyed
				<b>16H</b> – 1 1/4" Straight Keyed
				<b>16I</b> – 1 1/4" 14T Spline 12/24 DP
				<b>X</b> – Gearbox only, without Input Shaft/Sungear*

#### 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.

**Speed Pickup:** Inductive sensor protected in housing for speed feedback.

**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.

\* A sungear is required for **EACH** gearbox.

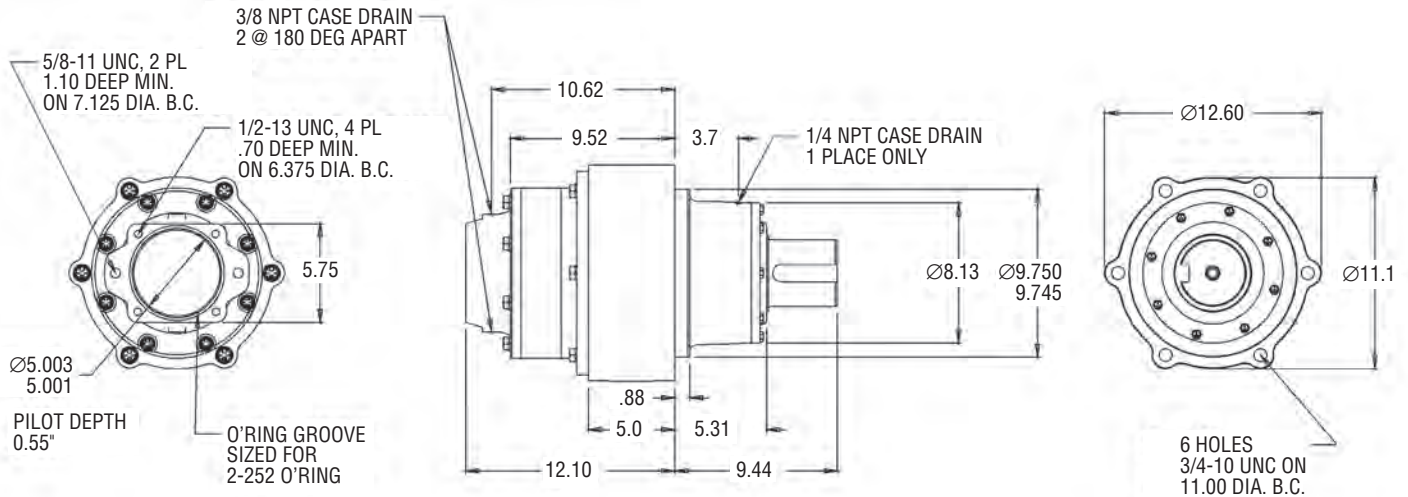


# HĒCO GEAR

# Model 52D

**140,000 in-lbs Continuous Torque Output**  
**28.8 to 1 or 36 to 1 Ratio**

**40,000 lb. Maximum Radial Load**  
**100 RPM Maximum Output Speed**



**Model 52DCF-1-6-36** Illustrated with Code **1** Keyed Output Shaft and Code **6** SAE C Motor Adapter (5" pilot/2&4 bolt)

## Model Codes and Ordering Information

Sample Model Code: 52DCF-1-6-36/X

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	INPUT SHAFT/SUNGEAR*
52DCF				
<b>Model 52D</b>	<b>1</b> – 3 7/8" Keyed	<b>3</b> – SAE B; 2 & 4 bolt	<b>29</b> – 28.8:1	<b>20F4</b> – C/L 4000 Bearingless 4.8:1
<b>Center Flange</b>	<b>4</b> – 20T 6/12 Splined	<b>4</b> – SAE A; 2 & 4 bolt	<b>36</b> – 36:1	<b>20F6</b> – C/L 4000 Bearingless 6:1
		<b>6</b> – SAE C; 2 & 4 bolt		<b>20G4</b> – C/L 6000 Bearingless 4.8:1
		<b>7</b> – SAE D; 4 bolt		<b>20G6</b> – C/L 6000 Bearingless 6:1
				<b>20I4</b> – 1 1/4"-14T Spline 4.8:1
				<b>20I6</b> – 1 1/4"-14T Spline 6:1
				<b>25L4</b> – 1 1/2"-17T Spline 4.8:1
				<b>25L6</b> – 1 1/2"-17T Spline 6:1
				<b>25K6</b> – 1 3/4"-13T Spline 6:1

### 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.

**Speed Pickup:** Inductive sensor protected in housing for speed feedback.

**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.

**X** – Gearbox only, without Input Shaft/Sungear\*

\* A sungear is required for **EACH** gearbox.

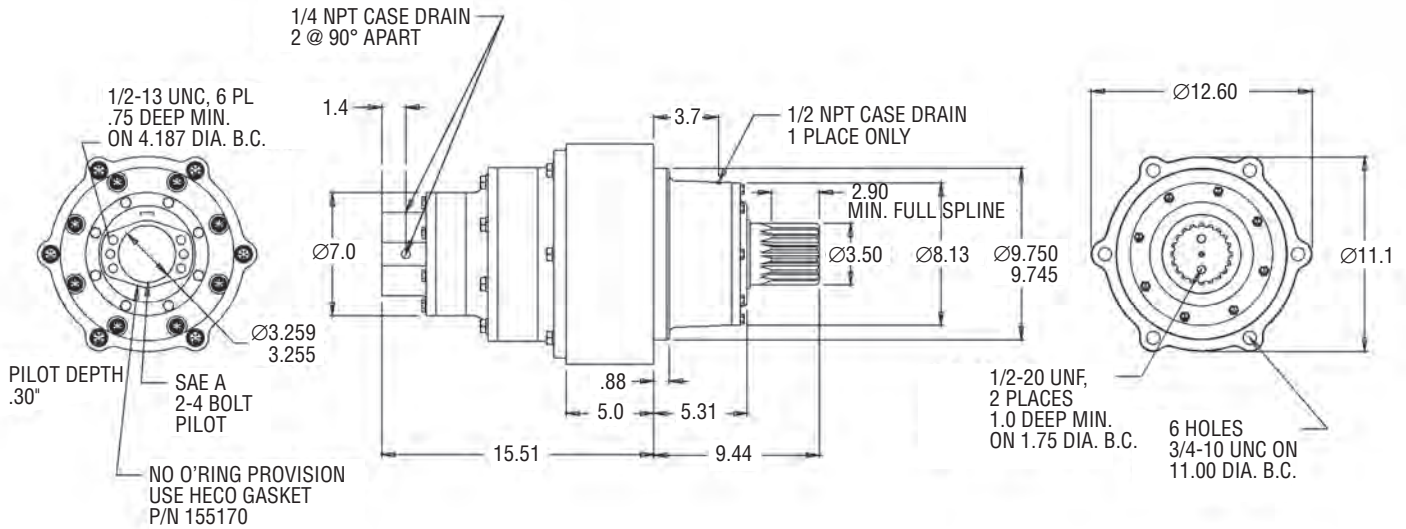


# HECO GEAR

# Model 52T

**140,000 in-lbs Continuous Torque Output**  
**149 to 1 or 187 to 1 Ratio**

**40,000 lb. Maximum Radial Load**  
**30 RPM Maximum Output Speed**



**Model 52TCF-4-4-149** Illustrated with Code 4 Splined Shaft and Code 4 SAE A Motor Adapter (3.25" pilot/2&4 bolt)

## Model Codes and Ordering Information

Sample Model Code: 52TCF-4-4-149/X

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	INPUT SHAFT/SUNGEAR*
52TCF				
<b>Model 52T</b>	<b>1</b> – 3 7/8" Keyed	<b>0</b> – SAE B; 4 bolt	<b>149</b> – 149:1	<b>16E</b> – Charlynn 2000 Bearingless
<b>Center Flange</b>	<b>4</b> – 20T 6/12 Splined	<b>4</b> – SAE A; 2 & 4 bolt	<b>187</b> – 187:1	<b>16F</b> – Charlynn 4000 Bearingless
		<b>5</b> – SAE B; 2 bolt		<b>16S</b> – Danfoss OMSS
		<b>6</b> – SAE C; 2 & 4 bolt		<b>16O</b> – 7/8" Straight Keyed
				<b>16B</b> – 7/8" 13T Spline 16/32 DP
				<b>16D</b> – 1" Straight Keyed
				<b>16M</b> – 1" SAE 6B Spline
				<b>16C</b> – 1" 15T Spline 16/32 DP
				<b>16P</b> – 1 1/8" Straight Keyed
				<b>16H</b> – 1 1/4" Straight Keyed
				<b>16I</b> – 1 1/4" 14T Spline 12/24 DP
				<b>X</b> – Gearbox only, without Input Shaft/Sungear*

### 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.

**Speed Pickup:** Inductive sensor protected in housing for speed feedback.

**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.

\* A sungear is required for **EACH** gearbox.

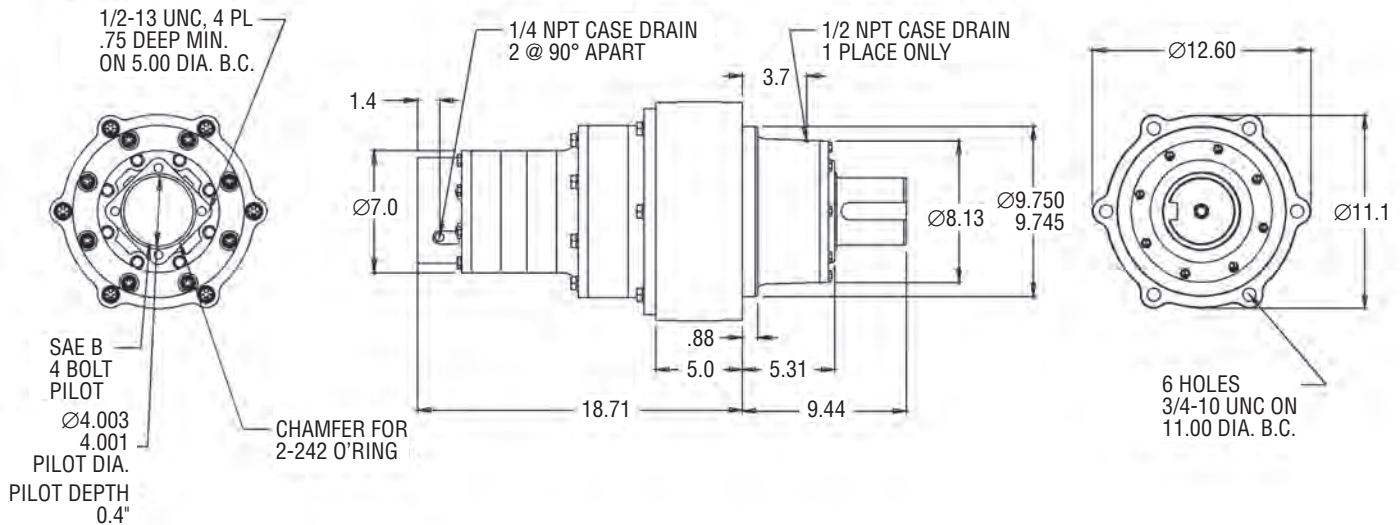


# HĒCO GEAR

## Model 52Q

**140,000 in-lbs Continuous Torque Output**  
**778 to 1 or 973 to 1 Ratio**

**40,000 lb. Maximum Radial Load**  
**5 RPM Maximum Output Speed**



**Model 52QCF-1-0-778** Illustrated with Code **1** Keyed Output Shaft and Code **0** SAE B Motor Adapter (4" pilot/4 bolt)

### Model Codes and Ordering Information

Sample Model Code: 52QCF-1-0-778/X

MODEL	OUTPUT SHAFT	MOTOR ADAPTER	RATIO	INPUT SHAFT/SUNGEAR*
<b>52QCF</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Model 52Q</b>	<b>1</b> – 3 7/8" Keyed	<b>0</b> – SAE B; 4 bolt	<b>778</b> – 778:1	<b>16E</b> – Charlynn 2000 Bearingless
<b>Center Flange</b>	<b>4</b> – 20T 6/12 Splined	<b>4</b> – SAE A; 2 & 4 bolt	<b>973</b> – 973:1	<b>16F</b> – Charlynn 4000 Bearingless
		<b>5</b> – SAE B; 2 bolt		<b>16S</b> – Danfoss OMSS
		<b>6</b> – SAE C; 2 & 4 bolt		<b>16O</b> – 7/8" Straight Keyed
				<b>16B</b> – 7/8" 13T Spline 16/32 DP
				<b>16D</b> – 1" Straight Keyed
				<b>16M</b> – 1" SAE 6B Spline
				<b>16C</b> – 1" 15T Spline 16/32 DP
				<b>16P</b> – 1 1/8" Straight Keyed
				<b>16H</b> – 1 1/4" Straight Keyed
				<b>16I</b> – 1 1/4" 14T Spline 12/24 DP
				<b>X</b> – Gearbox only, without Input Shaft/Sungear*

#### 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.

**Speed Pickup:** Inductive sensor protected in housing for speed feedback.

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

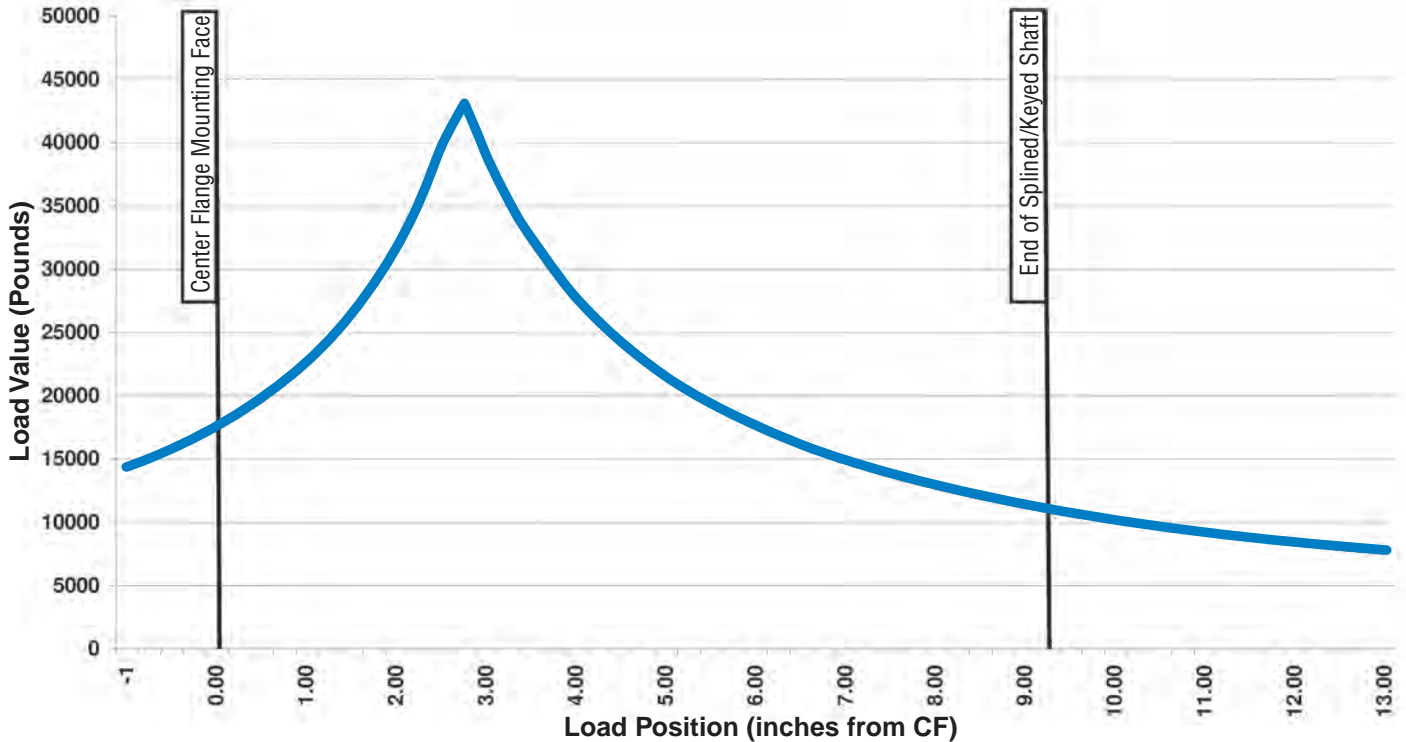
**Delivery:** Standard delivery on all Heco gearboxes is 4-6 weeks ARO.

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

\* A sungear is required for **EACH** gearbox.

# 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
50, 52D, 52T, 52Q	140,000 in-lbs	160,000 in-lbs	180,000 in-lbs
50D	125,000 in-lbs	140,000 in-lbs	165,000 in-lbs

## Hydraulic Motor Adapter Options

**Code 0: SAE B, 4 Bolt**

CHAMFER FOR 2-242 O-RING  
1/2-13 UNC, 4 PL .75" DEEP MIN. ON  $\varnothing$ 5.00 B.C.  
 $\varnothing$ 4.003  
4.001  
PILOT DEPTH .40"

**Model: 50D, 52T, 52Q**

**Code 3: SAE B, 2 & 4 Bolt**

$\varnothing$ 4.003  
4.001  
TAP DRILL 1.25 DEEP MAX. TAP 1/2-13 UNC X 1.00 DEEP MIN 4 HOLES EQ. SPACED AS SHOWN ON  $\varnothing$ 5.00 B.C.  
O-RING GROOVE  
TAP DRILL 1.25 DEEP MAX. TAP 1/2-13 UNC X 1.00 DEEP MIN 2 HOLES EQ. SPACED AS SHOWN ON  $\varnothing$ 5.750 B.C.  
45°  
90°  
PILOT DEPTH .550"

**Model: 52D**

**Code 4: SAE A, 2 & 4 Bolt**

1/2-13 UNC, 6 PL .75" DEEP MIN. ON  $\varnothing$ 4.187 B.C.  
NO O-RING USE GASKET P/N 155170  
PILOT DEPTH .30"  
22.5°  
22.5°  
 $\varnothing$ 3.259  
3.255

**Model: 50D, 52D, 52T, 52Q**

**Code 5: SAE B, 2 Bolt**

1/2-13 UNC, 2 PL .75" DEEP MIN. ON  $\varnothing$ 5.75 B.C.  
CHAMFER FOR 2-155 O-RING  
 $\varnothing$ 4.003  
4.001  
PILOT DEPTH .40"

**Model: 50D, 52T, 52Q**

**Code 6: SAE C, 2 & 4 Bolt**

PILOT DEPTH .550"  
2.69  
8.26  
5/8-11 UNC, 2 PL 1.10" DEEP MIN. ON  $\varnothing$ 7.125 B.C.  
O-RING GROOVE SIZED FOR 2-252 O-RING  
1/2-13 UNC, 4 PL .70" DEEP MIN. ON  $\varnothing$ 6.375 B.C.  
 $\varnothing$ 5.003  
5.001

**Model: 50, 50D, 52D, 52T, 52Q**

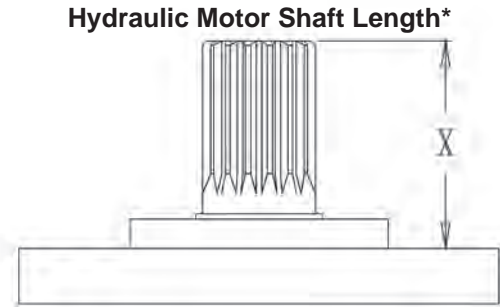
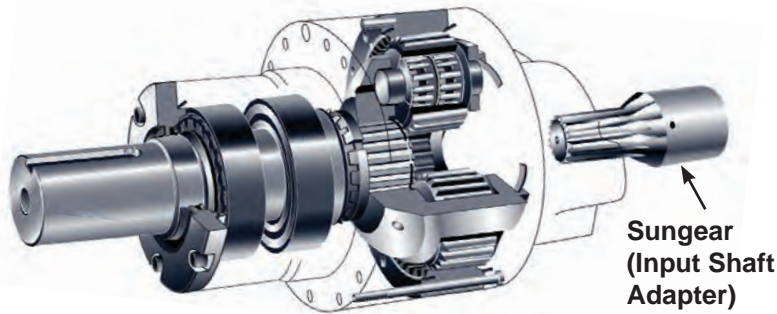
**Code 7: SAE D, 4 Bolt**

3/4-10 UNC, 4 PL 1.75" DEEP MIN. ON  $\varnothing$ 9.00 B.C.  
CHAMFER FOR 2-258 O-RING  
PILOT DEPTH .60"  
 $\varnothing$ 6.003  
6.001

**Model: 50, 52D**

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

# Input Shaft / Sungear Options



## Model 50

Part #	Hydraulic Motor Shaft Type	Minimum Length - in (mm)*	Maximum Length - in (mm)*
50G	Charlynn 6000 Bearingless	N/A	N/A
50J	Charlynn 10000 Bearingless	N/A	N/A
50K	1 3/4" 13T Spline 8/16 DP	2.72" (69.09)	2.97" (75.44)
50I	1 1/4" 14T Spline 12/24 DP	2.02" (51.31)	2.27" (57.66)
50L	1 1/2" 17T Spline 12/24 DP	2.86" (72.64)	3.06" (77.72)

## Model 50D, 52T, 52Q

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		

## Model 52D

Part #	Hydraulic Motor Shaft Type	Minimum Length - in (mm)*	Maximum Length - in (mm)*
20F4	Charlynn 4000 Bearingless (4.8:1)	N/A	N/A
20F6	Charlynn 4000 Bearingless (6:1)	N/A	N/A
20G4	Charlynn 6000 Bearingless (4.8:1)	N/A	N/A
20G6	Charlynn 6000 Bearingless (6:1)	N/A	N/A
20I4	1 1/4" 14T Spline 12/24 DP (4.8:1)	1.97" (50.04)	2.32" (58.93)
20I6	1 1/4" 14T Spline 12/24 DP (6:1)	1.97" (50.04)	2.32" (58.93)
25L4	1 1/2" 17T Spline 12/24 DP (4.8:1)	2.20" (55.88)	2.40" (60.96)
25L6	1 1/2" 17T Spline 12/24 DP (6:1)	2.20" (55.88)	2.40" (60.96)
25K6	1 3/4" 13T Spline 8/16 DP (6:1)	1.92" (48.77)	2.22" (56.39)
251670	Required spacer for Charlynn 6000 and VIS standard motors with 1 1/2" 17T Splined output shaft		

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