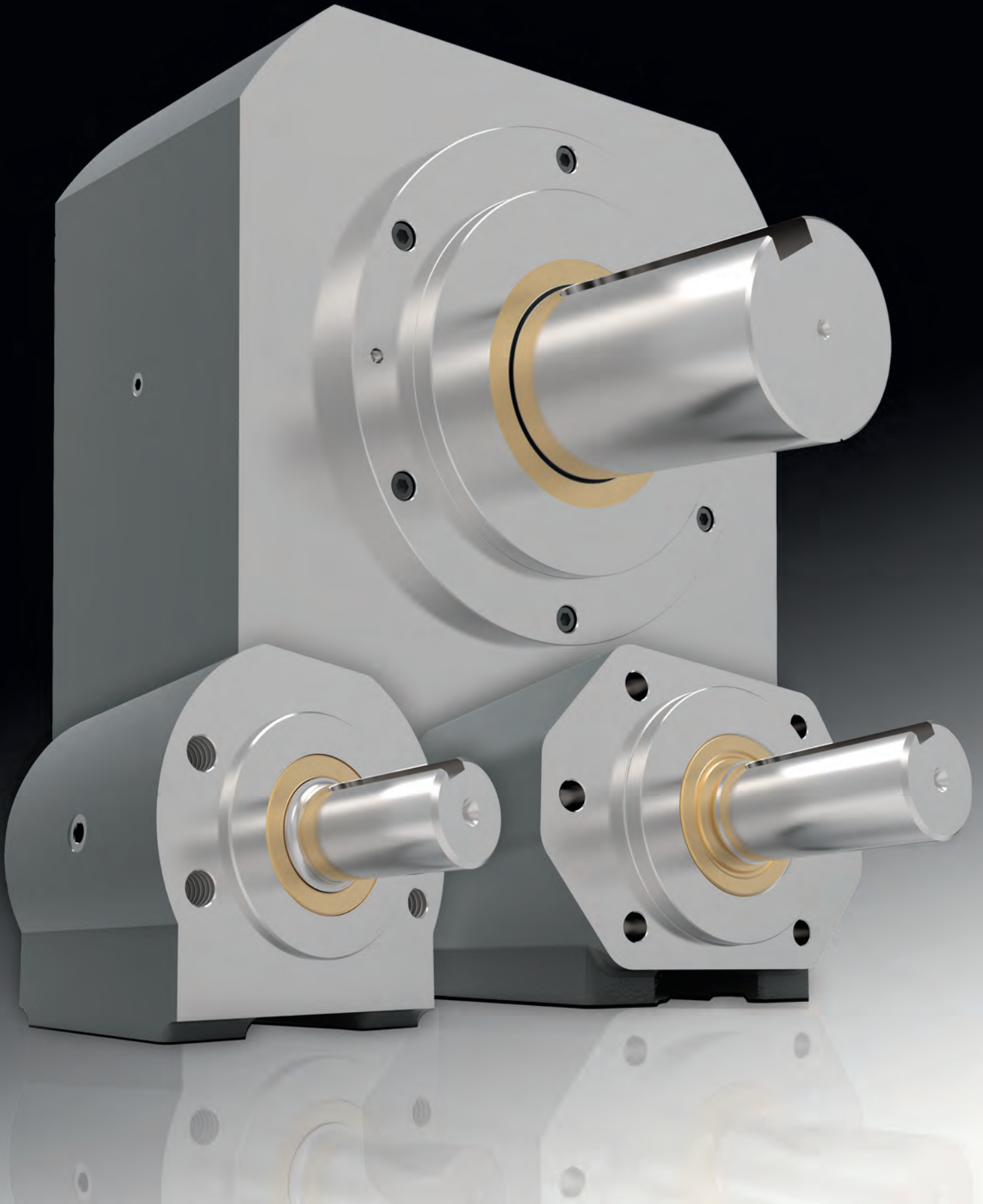


**ZERO-MAX<sup>®</sup>**

**OHLA<sup>®</sup>**  
**Overhung Load Adaptors**



# OHLA<sup>®</sup>

## Overhung Load Adaptors

### Zero-Max is a world-leading expert in Overhung Load Technology

The first complete line of SAE "A" through SAE "F" mount OHLA Overhung Load Adaptors was designed by ZERO-MAX. We set the industry standard with the OHLA design. Today, we provide immediate shipment of standard models from stock.

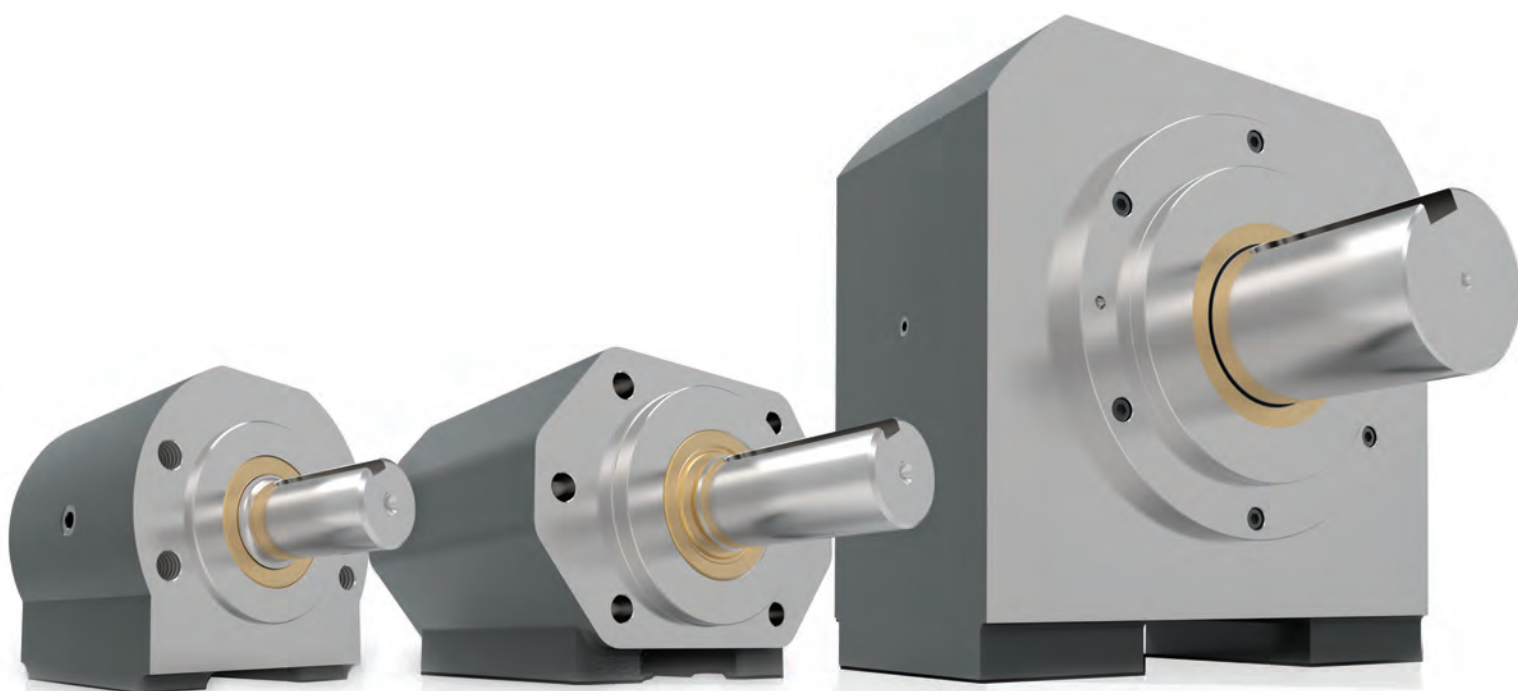
From the smallest Model 200 SAE "A" mount to the largest Model 1500 SAE "F" mount, OHLAs feature rugged housings of cast iron, shafts of 130,000 PSI stress proof steel, ball, tapered, or spherical roller bearings, many different shaft options and attractively painted housings. All models may be either face-or foot-mounted.

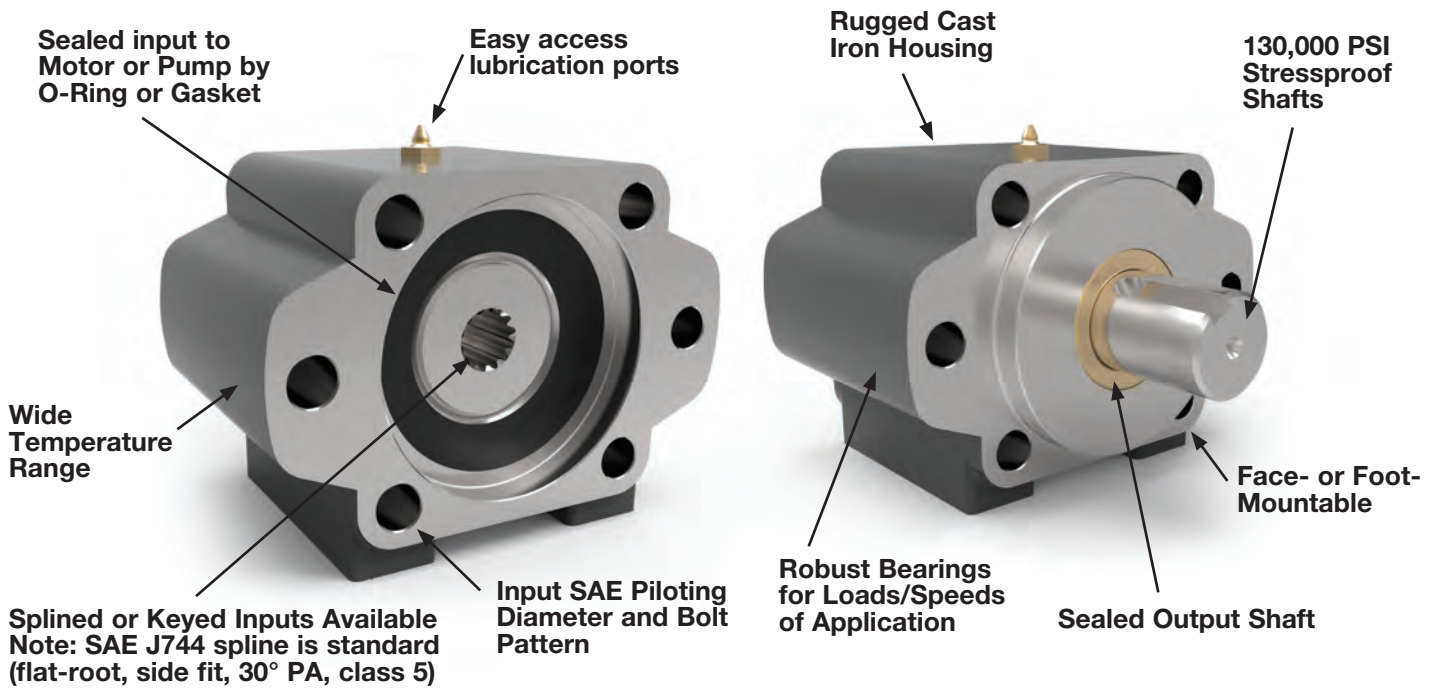
We offer many custom options or we'll create a special design for your application when needed. See pages 49-51 for more details.

### Count on OHLAs for these important benefits:

- Eliminates premature motor or pump failure due to overhung loads (axial and radial) on your motor or pump shaft
- Prevents contamination of hydraulic fluid in harsh environments
- Provides a solid, permanent mounting surface
- Permits the removal of hydraulic motors for servicing without disturbing driven gears, pulleys or sprockets
- Seals out dirt, grime, and other contaminants

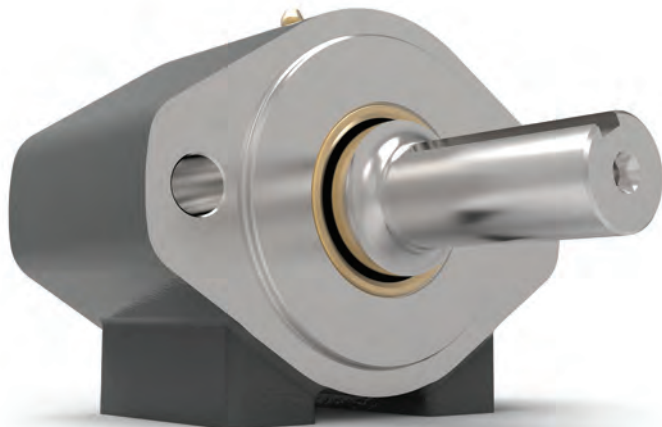
*Call a ZERO-MAX technical sales representative now. There's a model and size OHLA to handle every design need – or we'll engineer a special one just for you. **1-800-533-1731***





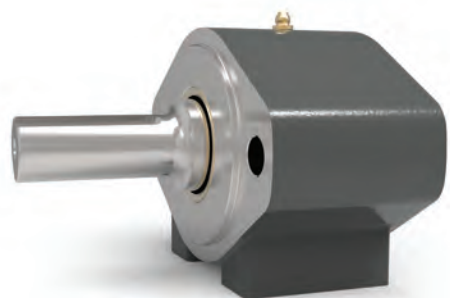
**OHLA Adaptors SAE "A" to "F"**

	<b>SAE A 2-bolt mounting</b> Input Pilot Diameter 3.250" Pages 4-19		<b>SAE D 2-bolt or 4-bolt mounting</b> Input Pilot Diameter 6.000" Pages 46-47
	<b>Non-SAE 4-bolt mounting</b> Input Pilot Diameter 1.750" Pages 20-27		<b>SAE E 4-bolt mounting</b> Input Pilot Diameter 6.500" Pages 48-49
	<b>SAE A 2-bolt or 4-bolt mounting</b> Input Pilot Diameter 3.250" Pages 28-31		<b>SAE F 4-bolt mounting</b> Input Pilot Diameter 7.000" Pages 50-51
	<b>SAE B 2-bolt or 4-bolt mounting</b> Input Pilot Diameter 4.000" Pages 32-37		<b>Double-Male configuration</b> SAE Face or Foot Mounting Pages 52-55
	<b>SAE C 2-bolt or 4-bolt mounting</b> Input Pilot Diameter 5.000" Pages 38-45		<b>OHLA Sizing and Selection</b> Pages 56
			<b>OHLA Specials</b> Pages 57-59

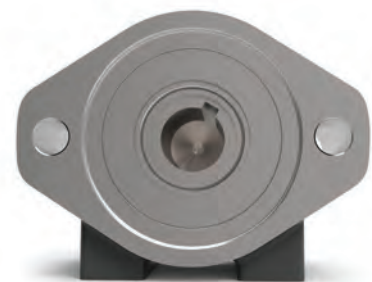


### Features

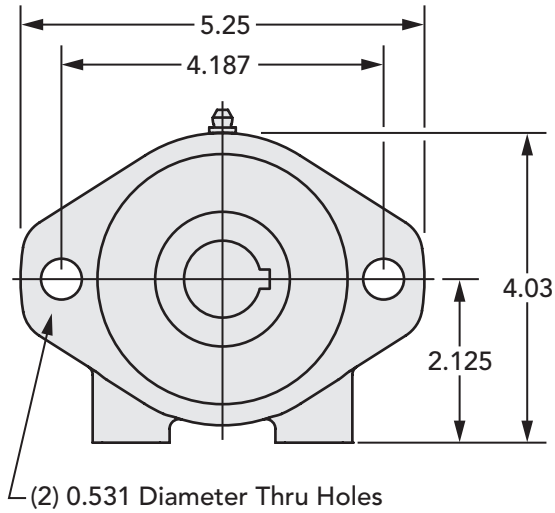
- SAE A 2-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants



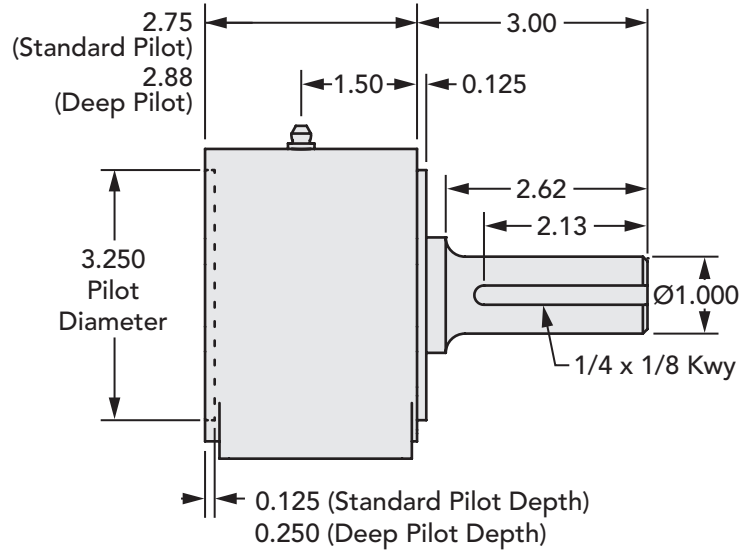
210 Series Data	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.31" 5/8" keyed - bore depth is 2.31" 3/4" keyed - bore depth is 2.81" 9 tooth 16/32 spline - bore depth is 1.68"
Output Shaft Diameter	1"
Output Shaft Keyway	1/4" x 1/8" keyway
Output Shaft Keyway Length	2.13"
Output Shaft Length	2.87"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.120"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.5 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



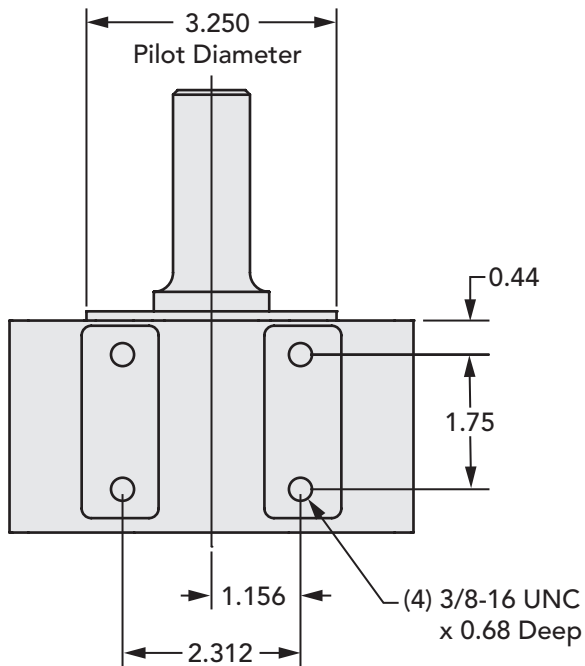
**Input End View**



**Side View**



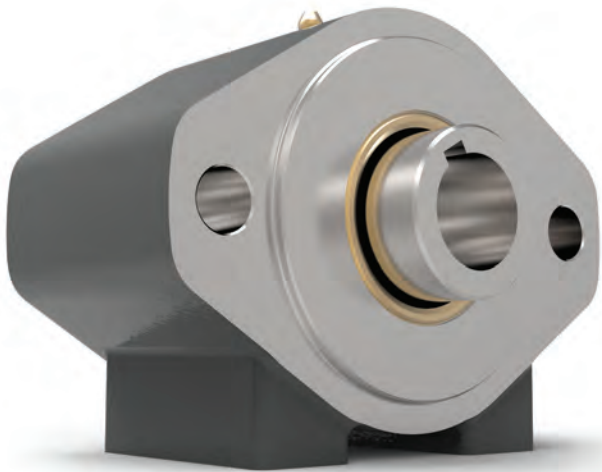
**Bottom View**



**How to Order**

Standard 210 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
210	1" - 1/4 x 1/8	1" - 1/4 x 1/8
210-DP	1" - 1/4 x 1/8	1" - 1/4 x 1/8
210-9S	1" - 1/4 x 1/8	9 Tooth 16/32 Spline
210-9S-DP	1" - 1/4 x 1/8	9 Tooth 16/32 Spline
210-10	1" - 1/4 x 1/8	5/8" - 5/32 x 5/64
210-10-DP	1" - 1/4 x 1/8	5/8" - 5/32 x 5/64
210-12	1" - 1/4 x 1/8	3/4" - 3/16 x 3/32
210-12-DP	1" - 1/4 x 1/8	3/4" - 3/16 x 3/32

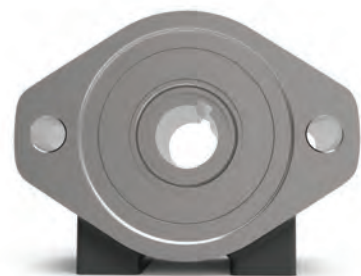
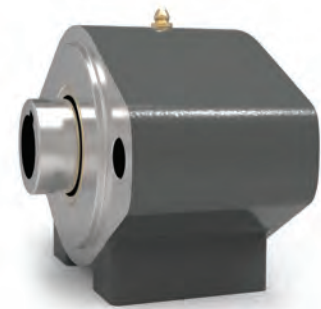
Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot depth is 0.250"



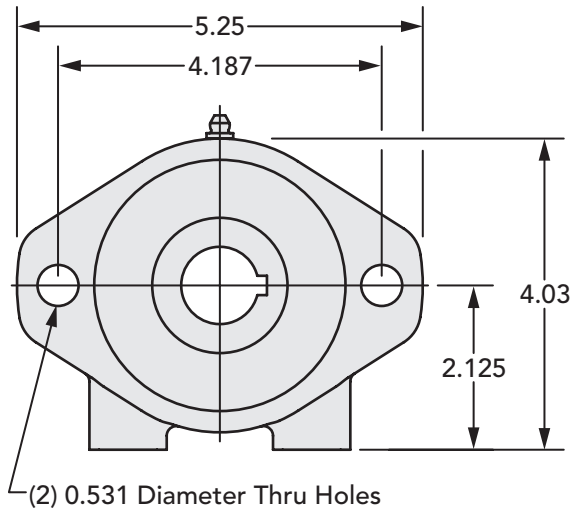
**Features**

- SAE A 2-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

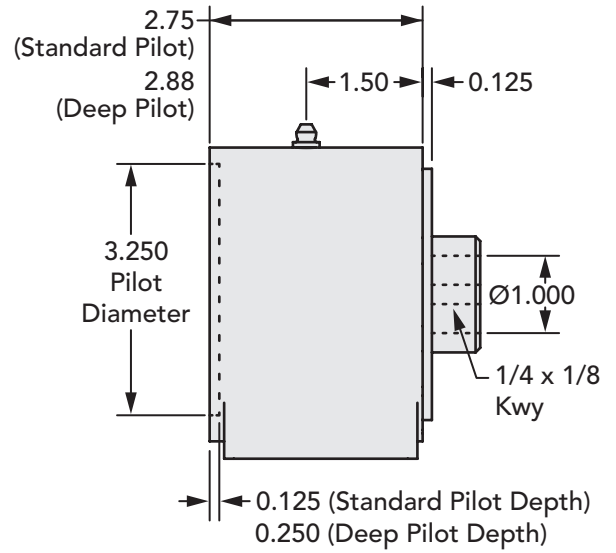
<b>210F Series Data</b>	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1" through-bore
Output Shaft Diameter	1" through-bore
Output Shaft Keyway	1/4" x 1/8" keyway entire length of bore
Output Shaft Length	0.62" extension
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.120"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.5 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



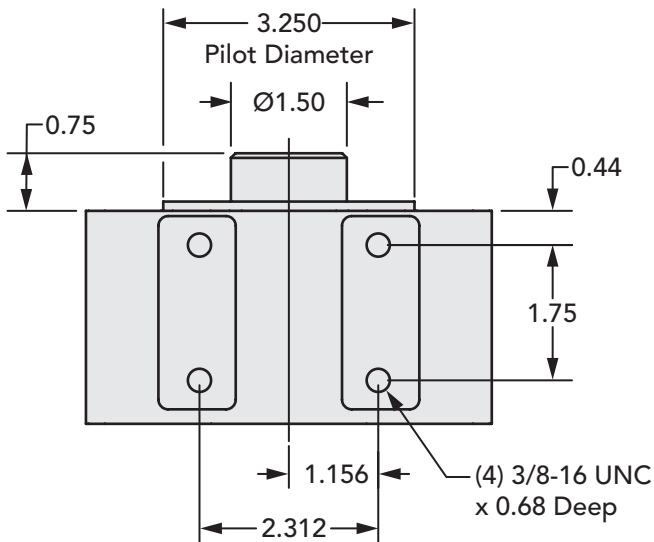
**Input End View**



**Side View**



**Bottom View**

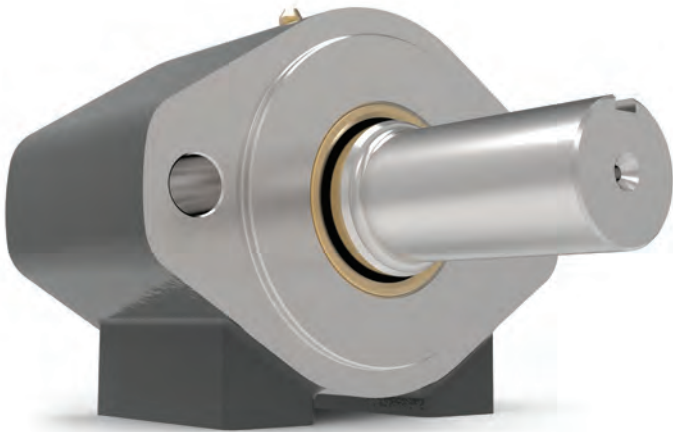


**How to Order**

**Standard 210F Series Models**

Part Number	Output Shaft - Keyway	Input Bore - Keyway
210F	1" bore - 1/4 x 1/8	1" - 1/4 x 1/8
210F-DP	1" bore - 1/4 x 1/8	1" - 1/4 x 1/8

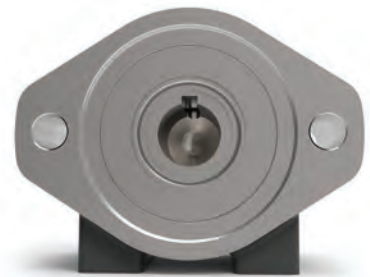
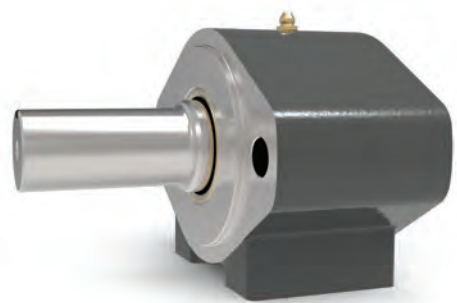
Note: Part numbers with -DP on the end call out a Deep pilot option. Standard pilot depth is 0.125" and the Deep pilot option is 0.250"



### Features

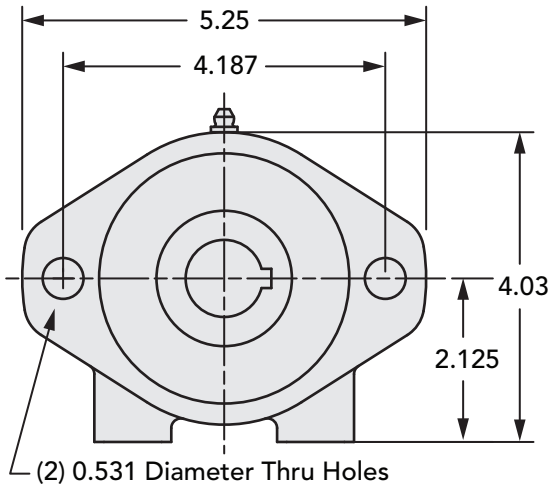
- SAE A 2-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

212k Series Data	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.31"
Output Shaft Diameter	1-1/4"
Output Shaft Keyway	1/4" x 1/8" keyway
Output Shaft Keyway Length	2.13"
Output Shaft Length	2.87"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.120"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.5 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs

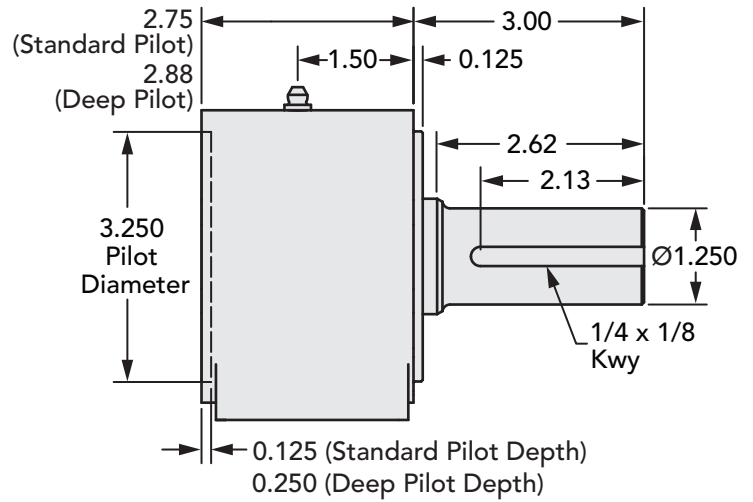




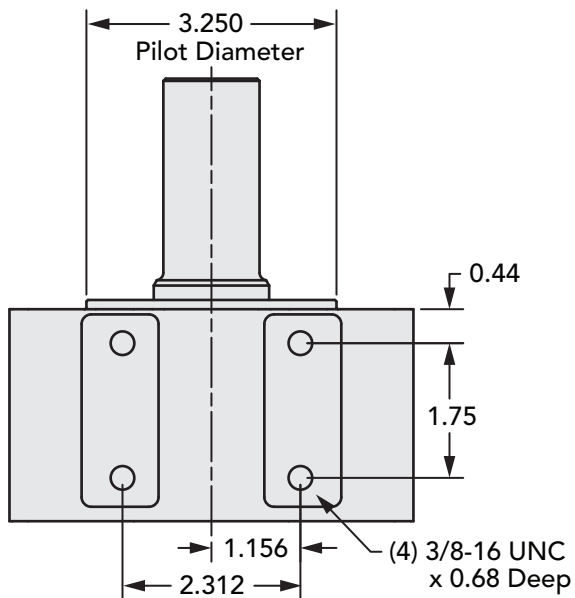
**Input End View**



**Side View**



**Bottom View**

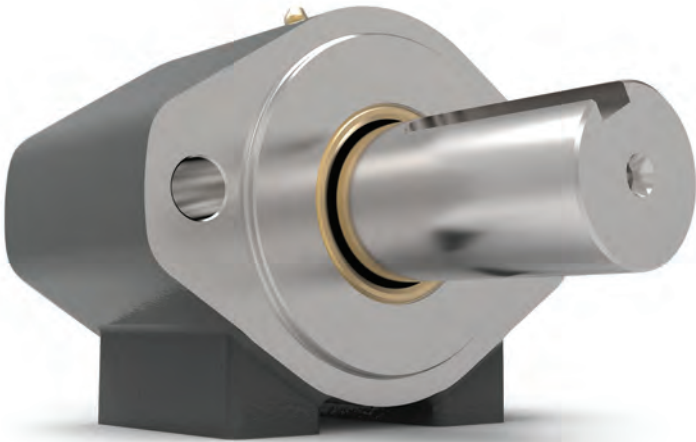


**How to Order**

**Standard 212k Series Models**

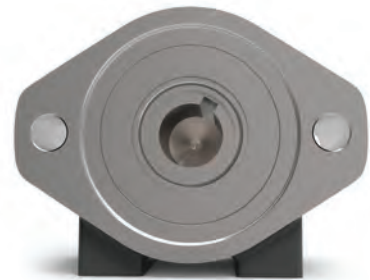
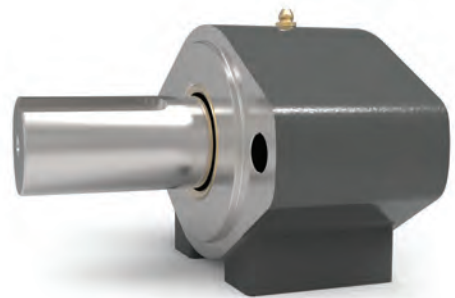
Part Number	Output Shaft - Keyway	Input Bore - Keyway
212k	1-1/4" - 1/4 x 1/8	1" - 1/4 x 1/8
212k-DP	1-1/4" - 1/4 x 1/8	1" - 1/4 x 1/8

Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot depth is 0.250"



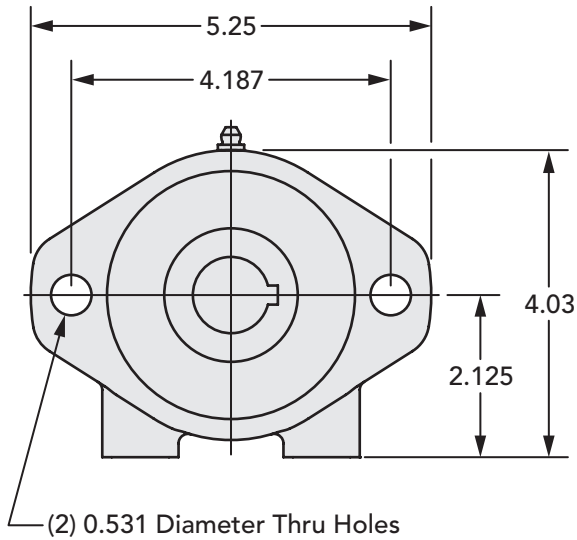
**Features**

- SAE A 2-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

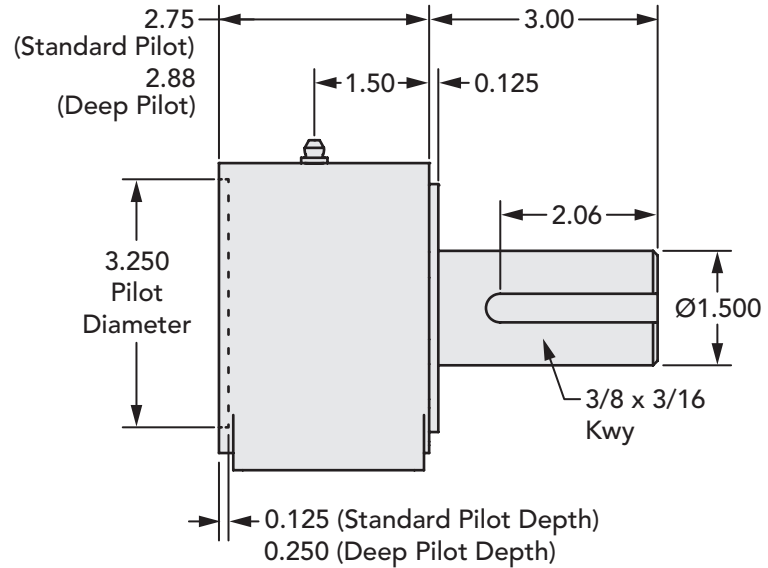


215 Series Data	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.31" 3/4" keyed - bore depth is 2.81"
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.06"
Output Shaft Length	2.87"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.120"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.5 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs

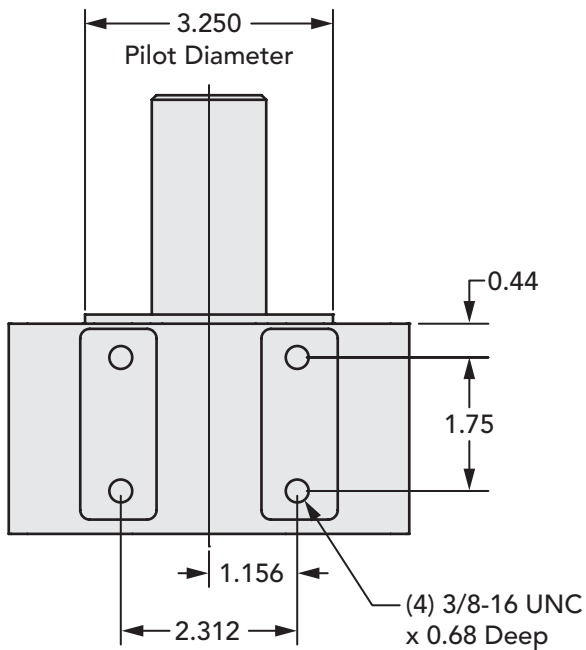
**Input End View**



**Side View**



**Bottom View**

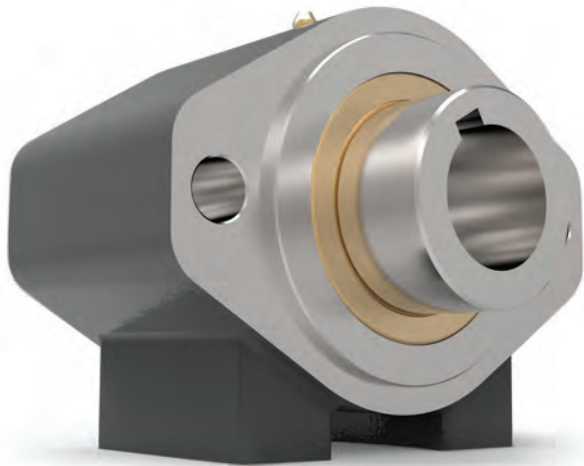


**How to Order**

**Standard 215 Series Models**

Part Number	Output Shaft - Keyway	Input Bore - Keyway
215	1-1/2" - 3/8 x 3/16	1" - 1/4 x 1/8
215-DP	1-1/2" - 3/8 x 3/16	1" - 1/4 x 1/8
215-12	1-1/2" - 3/8 x 3/16	3/4" - 3/16 x 3/32
215-12-DP	1-1/2" - 3/8 x 3/16	3/4" - 3/16 x 3/32

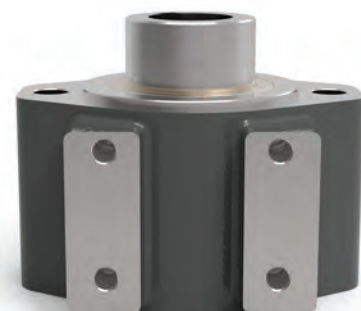
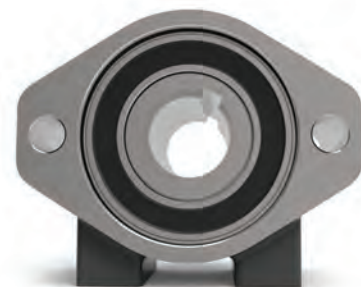
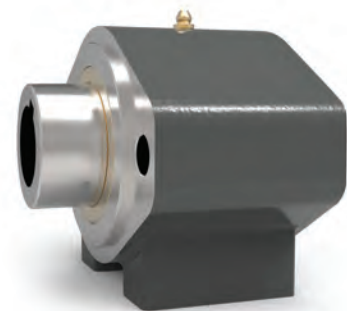
Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot option is 0.250"



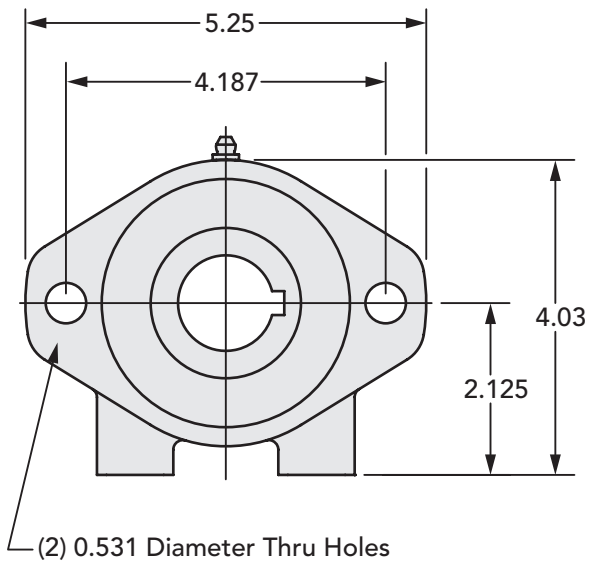
**Features**

- SAE A 2-bolt mounting
- Heavy Duty Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

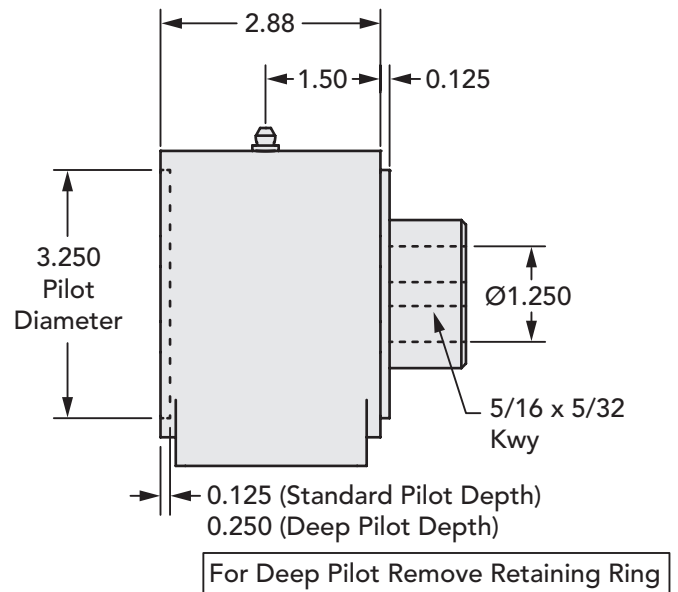
<b>300F Series Data</b>	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1-1/4" through-bore
Output Shaft Diameter	1-1/4" through-bore
Output Shaft Keyway	5/16" x 5/32" keyway the entire length of the bore
Output Shaft Length	1.00" extension
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.7 oz. Maximum 1.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3100 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



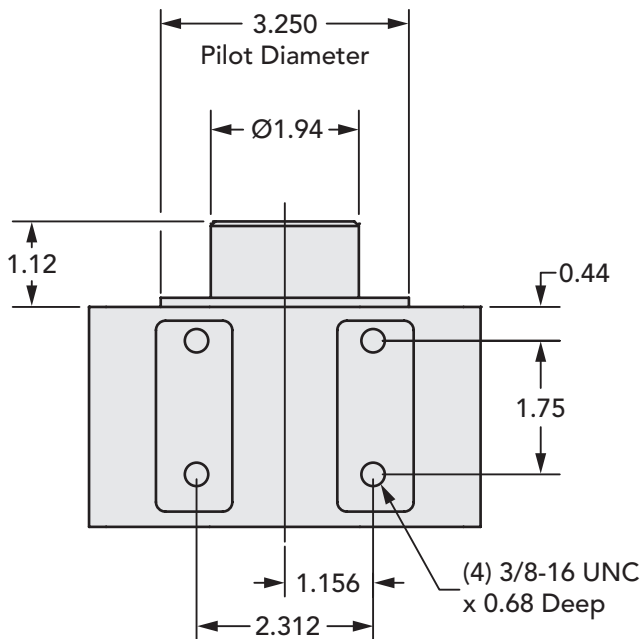
**Input End View**



**Side View**



**Bottom View**

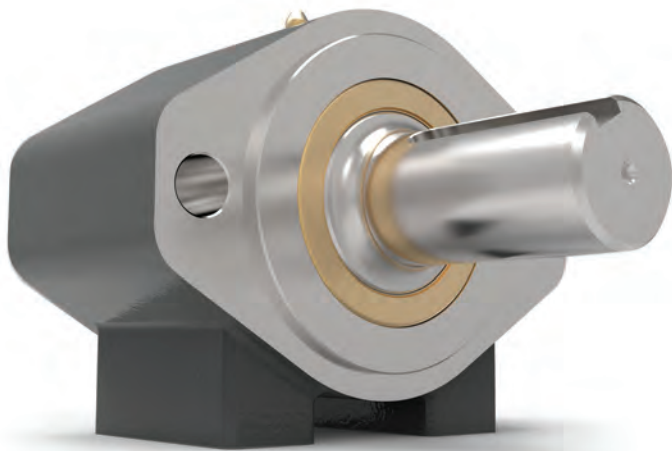


**How to Order**

**Standard 300F Series Models**

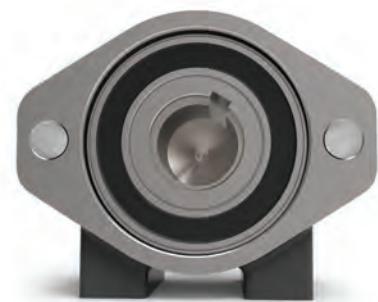
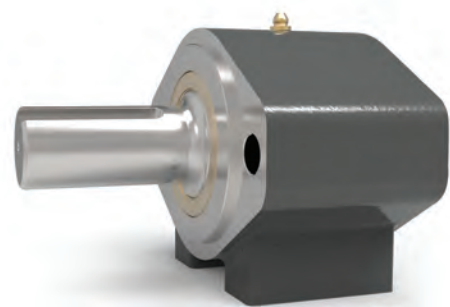
Part Number	Output Shaft - Keyway	Input Bore - Keyway
300F	1-1/4" bore - 5/16 x 5/32	1-1/4" - 5/16 x 5/32
300F-DP	1-1/4" bore - 5/16 x 5/32	1-1/4" - 5/16 x 5/32

Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot option is 0.250"



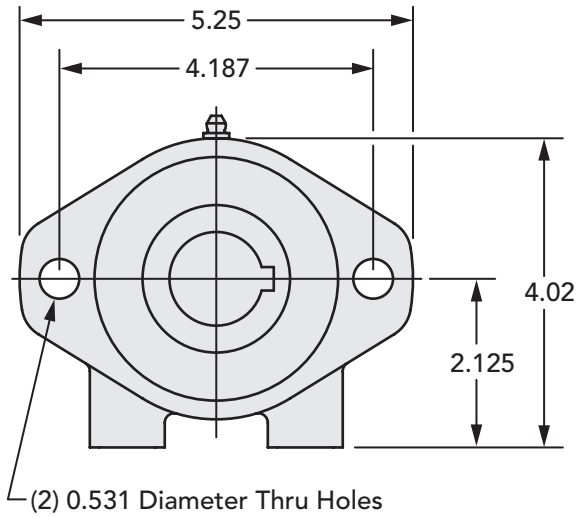
### Features

- SAE A 2-bolt mounting
- Heavy Duty Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

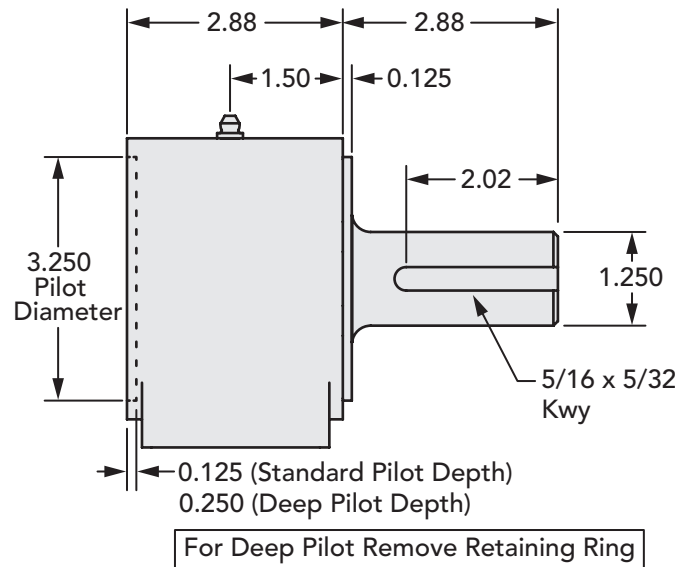


312 Series Data	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1-1/4" keyed - bore depth is 2.37 inches
Output Shaft Diameter	1-1/4"
Output Shaft Keyway	5/16" x 5/32" keyway
Output Shaft Keyway Length	2.02"
Output Shaft Length	2.75"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.7 oz. Maximum 1.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3100 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs

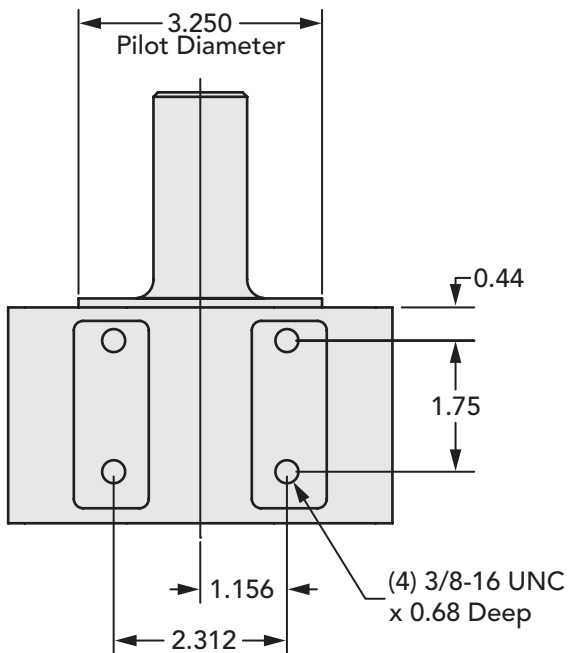
## Input End View



## Side View



## Bottom View

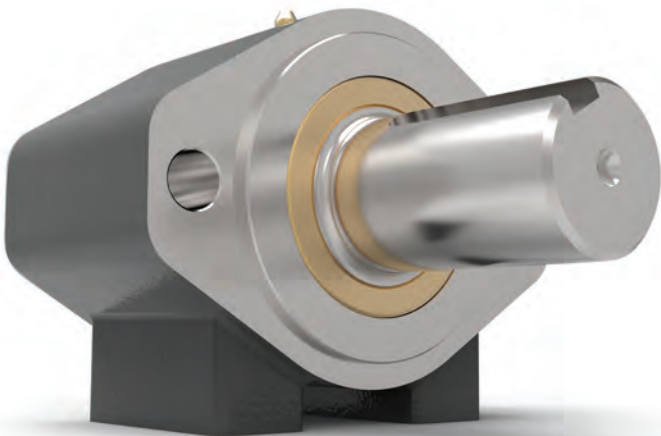


## How to Order

### Standard 312 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
312	1-1/4" - 5/16 x 5/32	1-1/4" - 5/16 x 5/32
312-DP	1-1/4" - 5/16 x 5/32	1-1/4" - 5/16 x 5/32

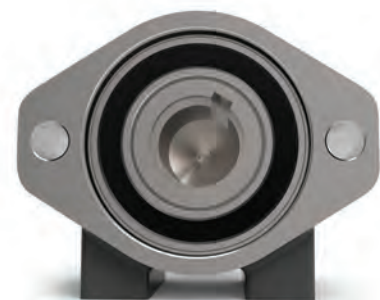
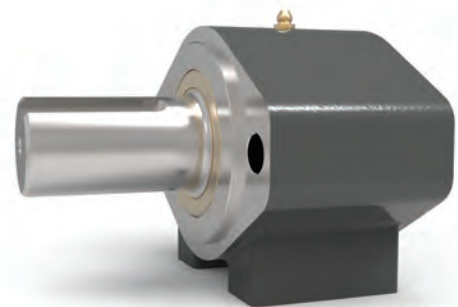
Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot option is 0.250"



### Features

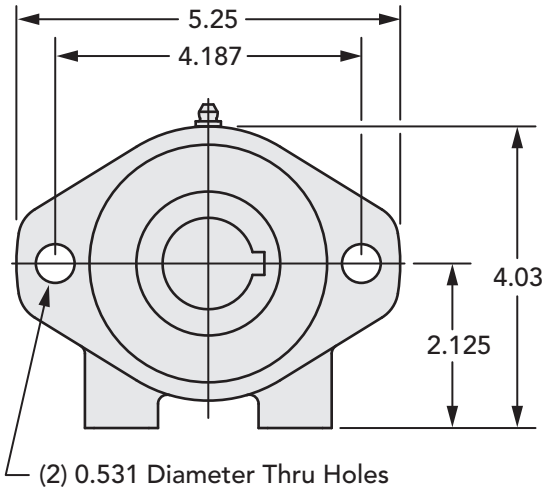
- SAE A 2-bolt mounting
- Heavy Duty Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

315 Series Data	
Input Standard	SAE A 2-bolt
Input Pilot Diameter	3.250"
Input Pilot Depth	(standard housing) 0.125" (deep pilot option) 0.250"
Input Pilot Sealing Method	Buna-N Gasket
Input Bore Diameter and Depth	1-1/4" keyed - bore depth is 2.37 inches
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.00"
Output Shaft Length	2.75"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.7 oz. Maximum 1.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3100 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs

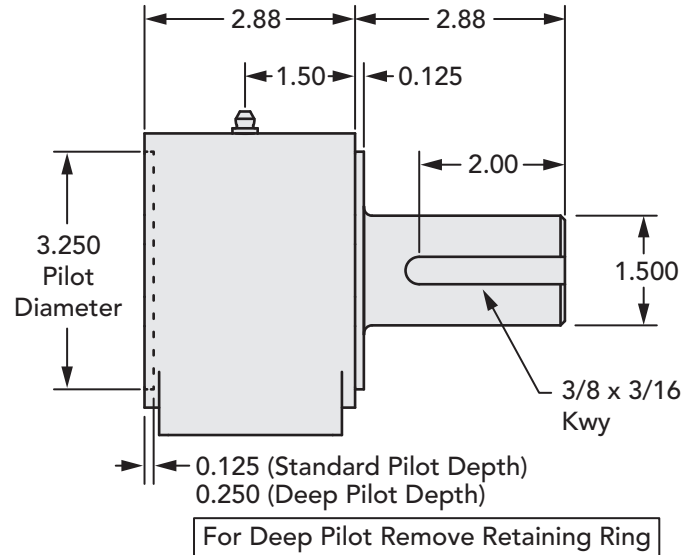




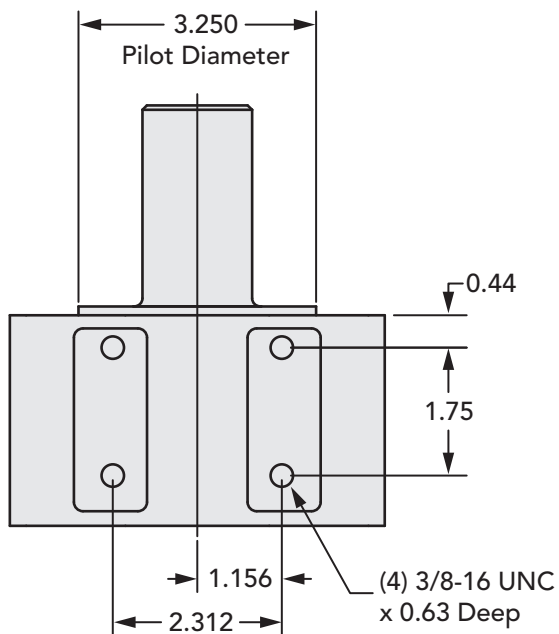
## Input End View



## Side View



## Bottom View



## How to Order

### Standard 315 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
315	1-1/2" - 3/8 x 3/16	1-1/4" - 5/16 x 5/32
315-DP	1-1/2" - 3/8 x 3/16	1-1/4" - 5/16 x 5/32

Note: Part numbers with -DP on the end call out a Deep pilot option.  
Standard pilot depth is 0.125" and the Deep pilot option is 0.250"

**Extra-Duty Series**



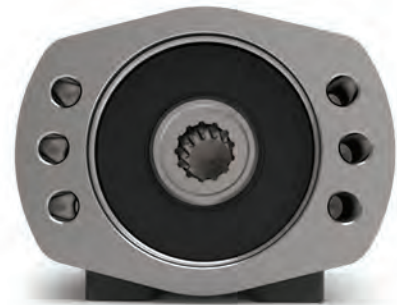
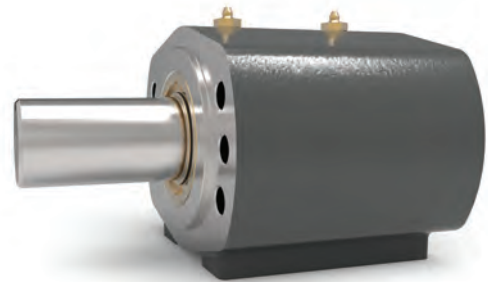
**Features**

- SAE A 2-bolt or 4-bolt magneto mounting
- Heavy Duty Spherical Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

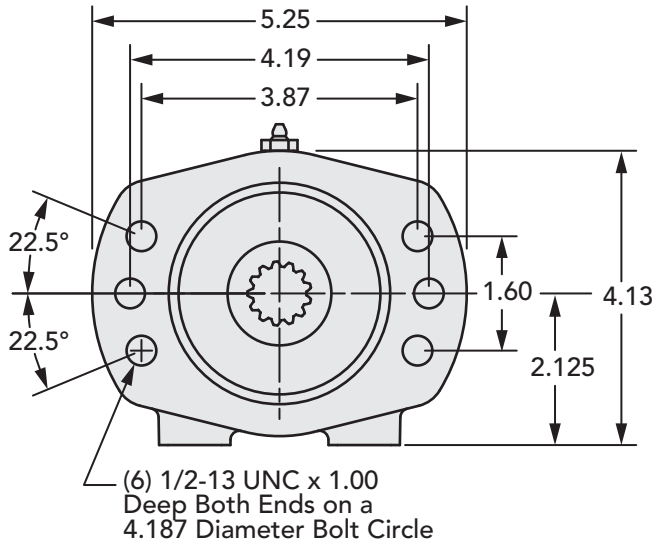
**Extra-Duty Series Enhancements:**

- Extended Housing
- Heat-Treated Shaft
- O-Ring Input Seal
- Spherical Roller Bearings
- Dual NPT Grease Zerks
- Double-Primary Lip Output Seal

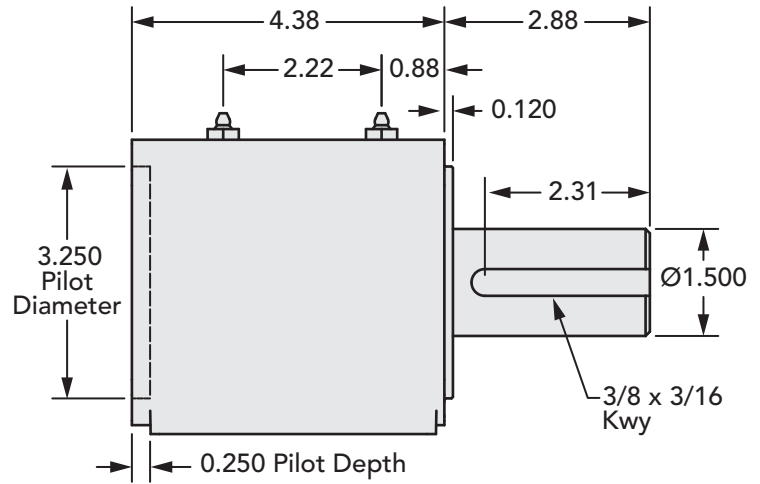
350 Series Data	
Input Standard	SAE A 2-bolt or 4-bolt Magneto mount
Input Pilot Diameter	3.250"
Input Pilot Depth	0.250"
Input Pilot Sealing Method	O-ring
Input Bore Diameter and Depth	13 tooth 16/32 Spline - bore depth is 2.28 inches 14 tooth 12/24 Spline - bore depth is 2.28 inches
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.50"
Output Shaft Length	2.75"
Output Shaft Seal Type	Double Primary Lip Seal With Garter Springs
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	8620 steel - Heat-treated
Bearing Type	Spherical Roller Bearing
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fittings	(2) Standard Zerk Fitting
Grease Capacity	Minimum 1.2 oz. (0.6 oz. per grease fitting) Maximum 2.2 oz. (1.1 oz. per grease fitting)
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	(2) 1/4-18 NPT
Unit Weight	18 lbs



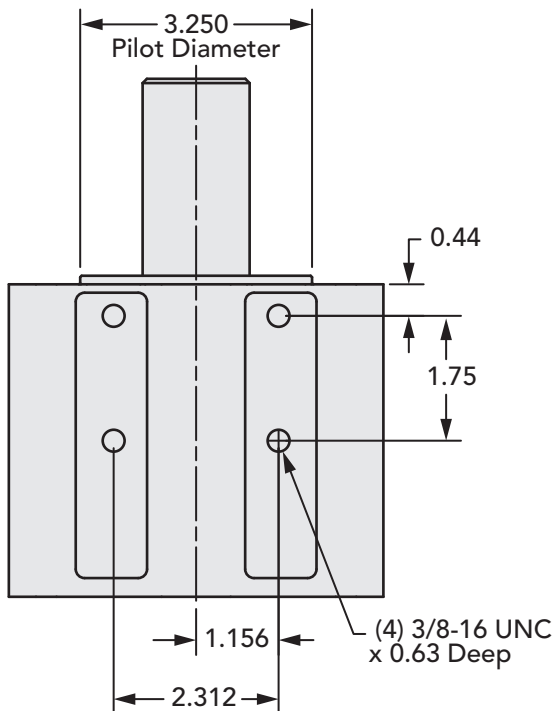
## Input End View



## Side View



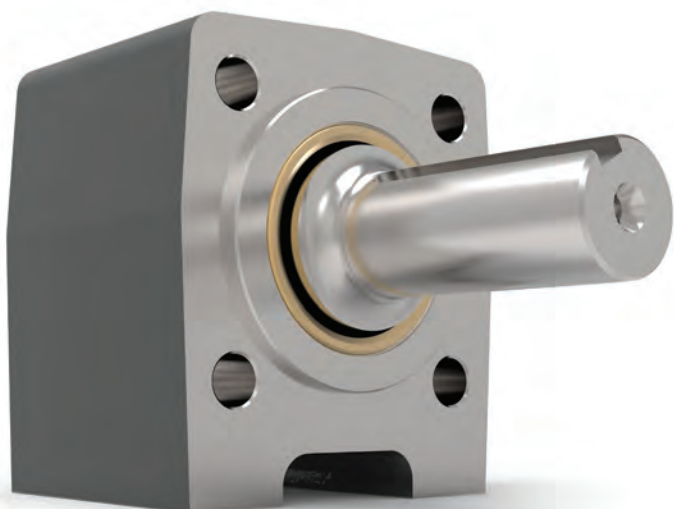
## Bottom View



## How to Order

### Standard 350 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
350-13S	1-1/2" - 3/8 x 3/16	13 Tooth 16/32 Spline
350-14S	1-1/2" - 3/8 x 3/16	14 Tooth 12/24 Spline

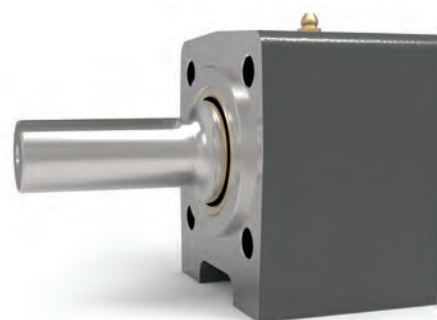


### Features

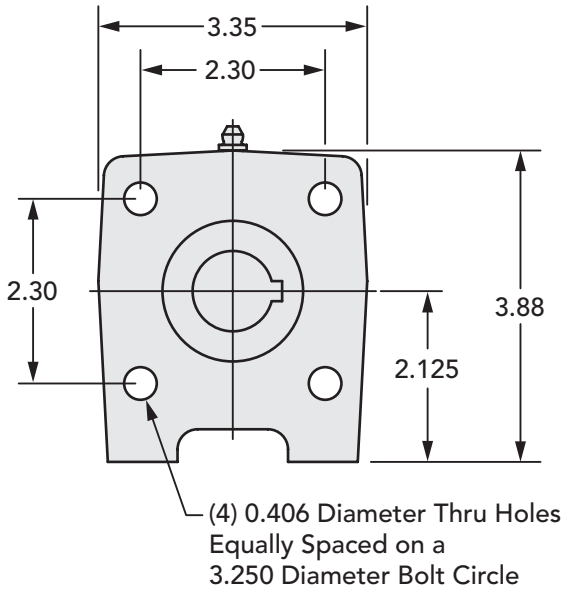
- Non- SAE 4-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

#### 410 Series Data

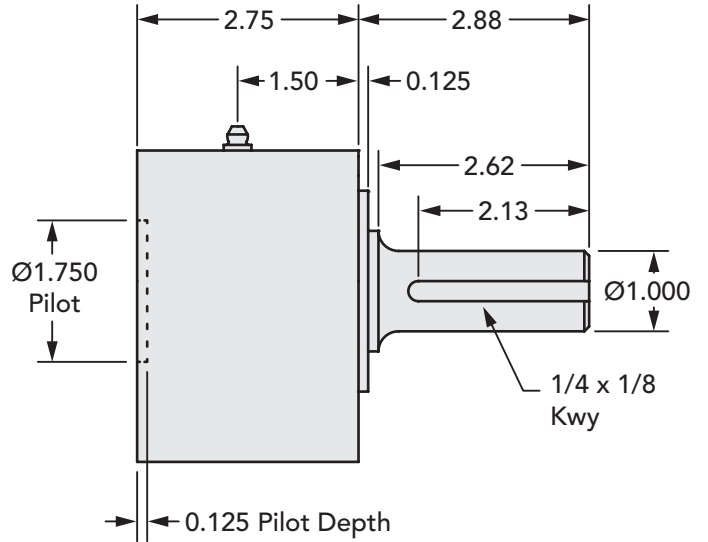
Input Standard	Non- SAE 4-bolt mount (designed to fit a popular LSHT Geroler motor)
Input Pilot Diameter	1.750"
Input Pilot Depth	0.125"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.18"
Output Shaft Diameter	1"
Output Shaft Keyway	1/4" x 1/8" keyway
Output Shaft Keyway Length	2.13"
Output Shaft Length	2.87"
Output Pilot Diameter	2.500"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.4 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



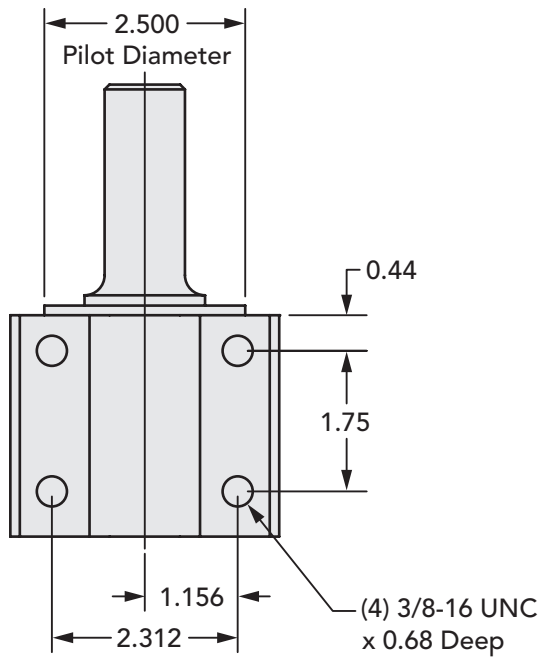
**Input End View**



**Side View**

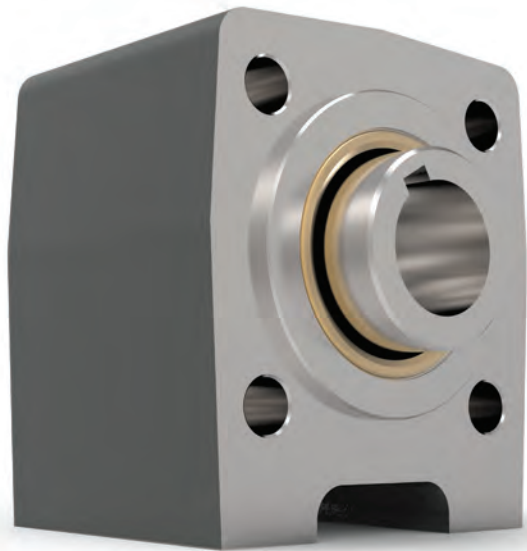


**Bottom View**



**How to Order**

Standard 410 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
410	1" - 1/4 x 1/8	1" - 1/4 x 1/8

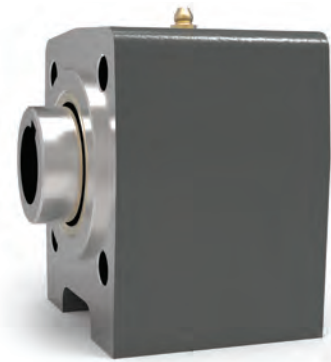


### Features

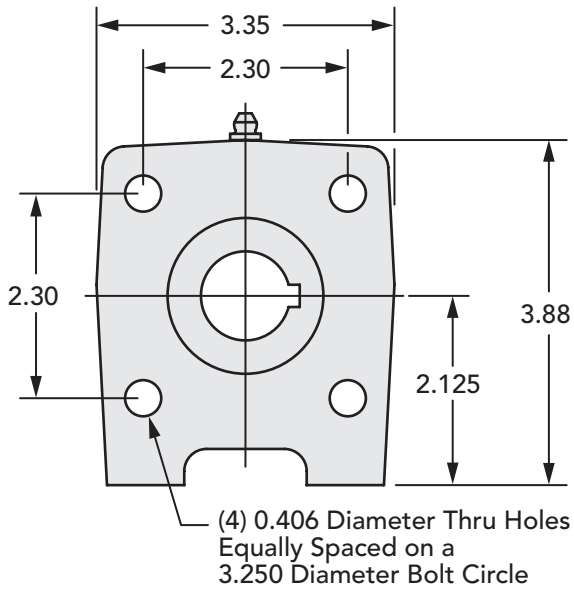
- Non-SAE 4-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

#### 410F Series Data

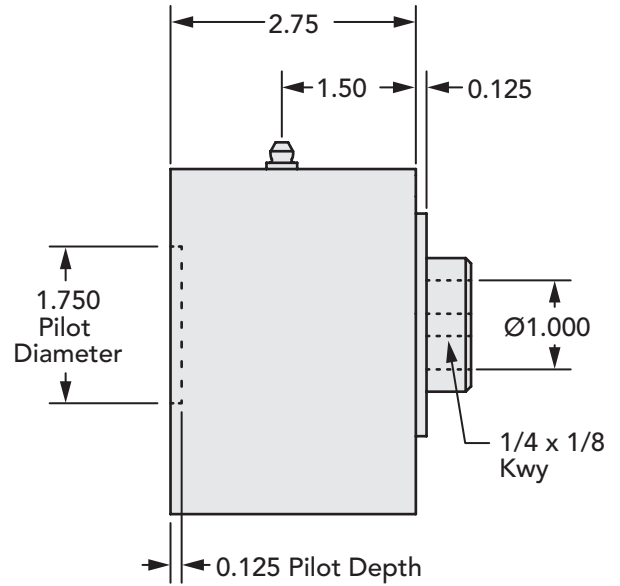
Input Standard	Non-SAE 4-bolt mount (designed to fit a popular LSHT Geroler motor)
Input Pilot Diameter	1.750"
Input Pilot Depth	0.125"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1" through-bore
Output Shaft Diameter	1" through-bore
Output Shaft Keyway	1/4" x 1/8" keyway the entire length of the bore
Output Shaft Length	0.50" extension
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	2.500"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.4 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



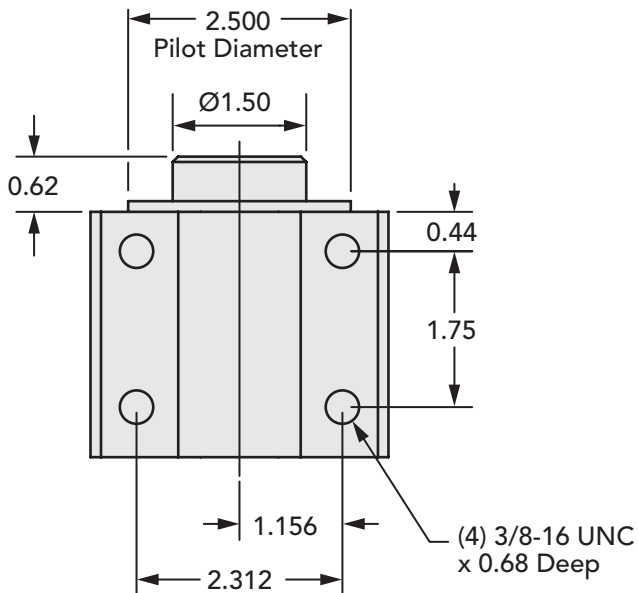
**Input End View**



**Side View**

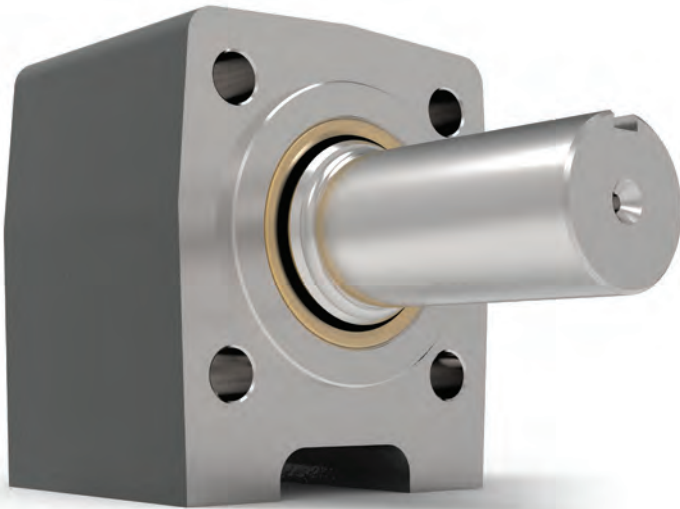


**Bottom View**



**How to Order**

Standard 410F Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
410F	1" bore - 1/4 x 1/8	1" - 1/4 x 1/8

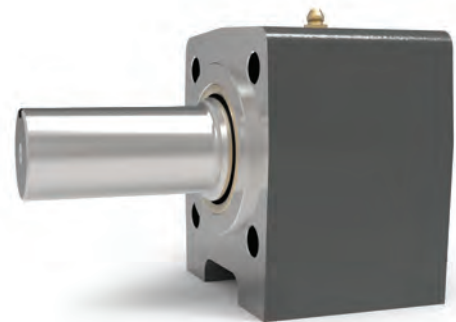


### Features

- Non-SAE 4-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

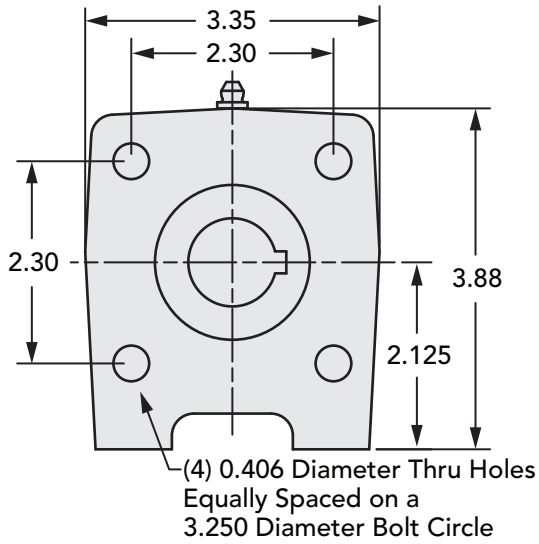
#### 412k Series Data

Input Standard	Non- SAE 4-bolt mount (designed to fit a popular LSHT Geroler motor)
Input Pilot Diameter	1.750"
Input Pilot Depth	0.125"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.31"
Output Shaft Diameter	1-1/4"
Output Shaft Keyway	1/4" x 1/8" keyway
Output Shaft Keyway Length	2.13"
Output Shaft Length	2.87"
Output Pilot Diameter	2.500"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.4 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs

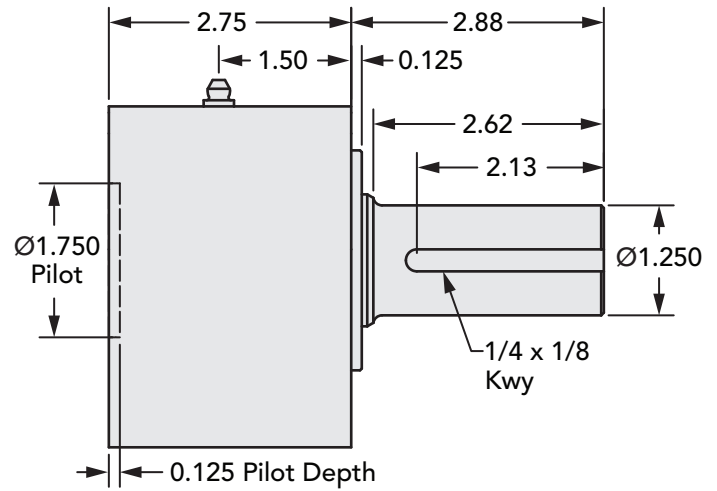




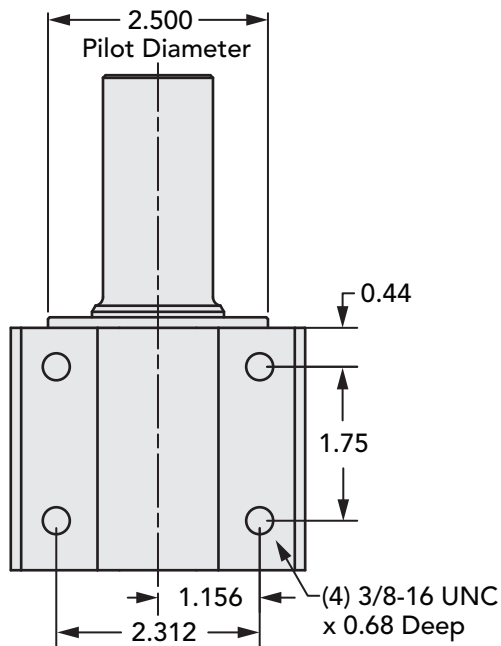
**Input End View**



**Side View**



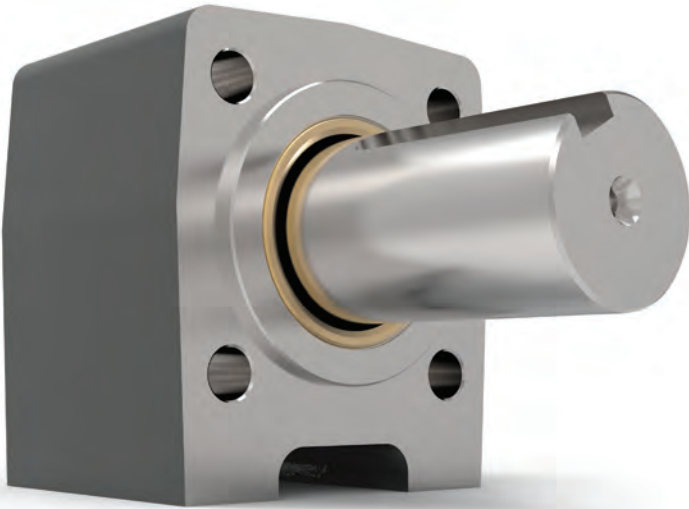
**Bottom View**



**How to Order**

**Standard 412k Series Models**

Part Number	Output Shaft - Keyway	Input Bore - Keyway
412k	1-1/4" - 1/4 x 1/8	1" - 1/4 x 1/8

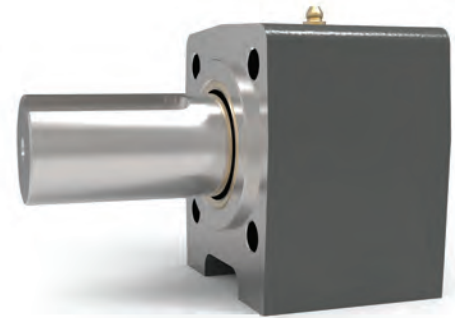


**Features**

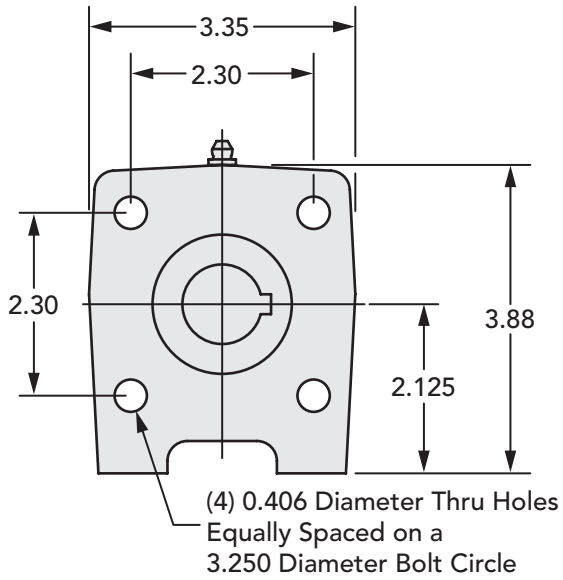
- Non-SAE 4-bolt mounting
- Deep Groove Ball Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

**415 Series Data**

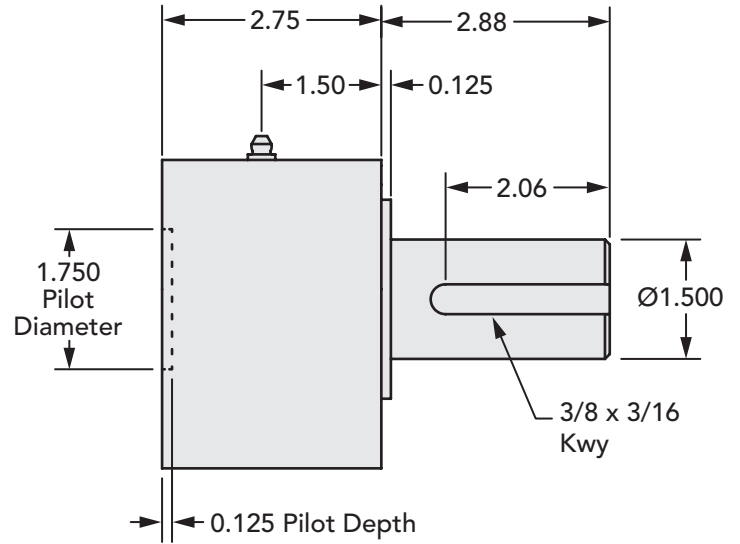
Input Standard	Non-SAE 4-bolt mount (designed to fit a popular LSHT Geroler motor)
Input Pilot Diameter	1.750"
Input Pilot Depth	0.125"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1" keyed - bore depth is 2.18"
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.06"
Output Shaft Length	2.87"
Output Pilot Diameter	2.500"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Deep Groove Ball Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 0.4 oz. Maximum 1.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3800 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 0.68" deep
Housing Grease Ports	Press-fit Zerk Fitting
Unit Weight	10 lbs



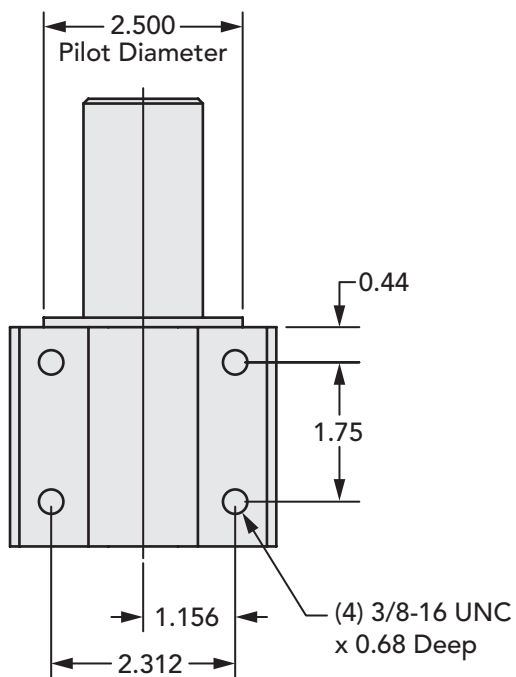
**Input End View**



**Side View**



**Bottom View**



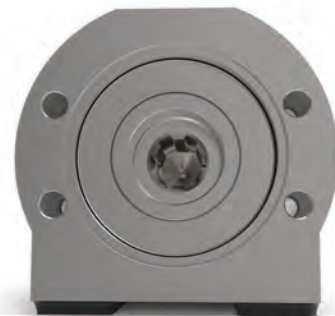
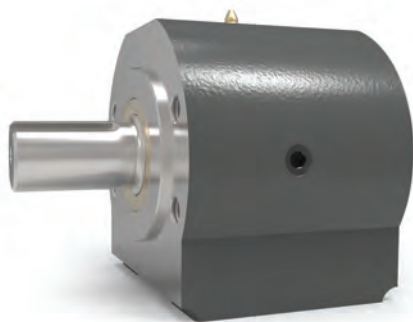
**How to Order**

Standard 415 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
415	1-1/2" - 3/8 x 3/16	1" - 1/4 x 1/8



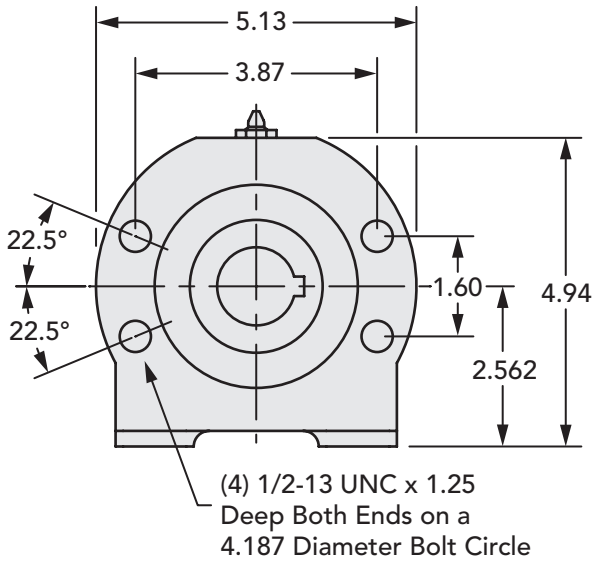
**Features**

- SAE A 2-bolt or 4-bolt mounting
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

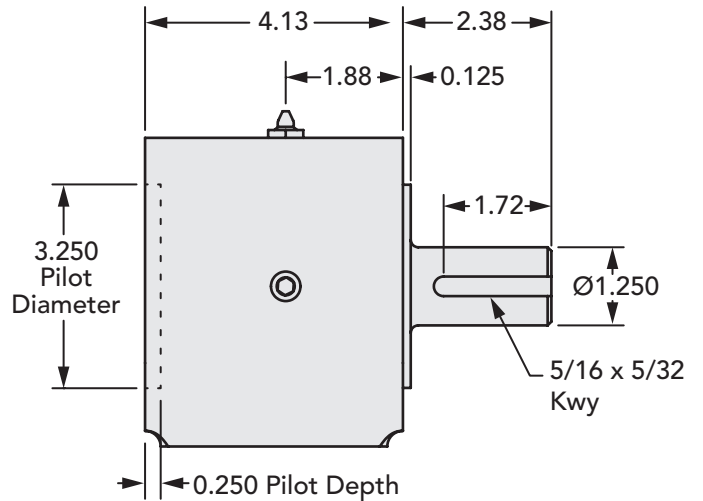


512 Series Data	
Input Standard	SAE A 2 bolt - 2 different mounts: 4-bolt Magneto Mount 2-bolt (rotated 22-1/2° from horizontal)
Input Pilot Diameter	3.250"
Input Pilot Depth	0.250"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1-1/4" keyed - bore depth is 2.5" 1"- 6B Spline - bore depth is 2.68" 14 tooth 12/24 spline - bore depth is 2.75"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-1/4"
Output Shaft Keyway	5/16" x 5/32" keyway
Output Shaft Keyway Length	1.72"
Output Shaft Length	2.25"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk fitting
Grease Capacity	Minimum 2.0 oz. Maximum 4.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 1.00" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	22 lbs

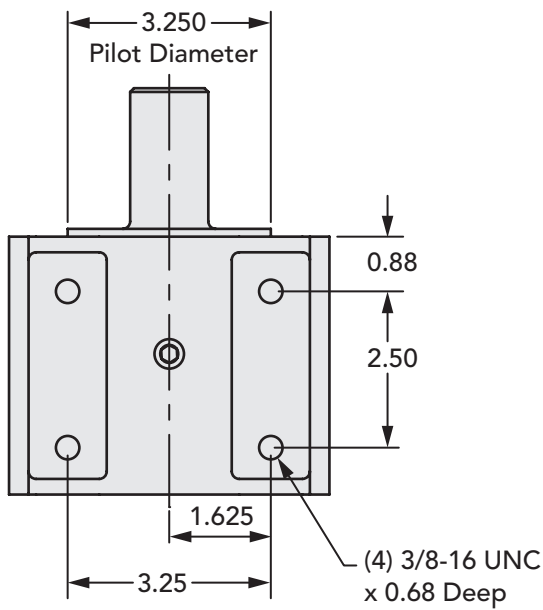
**Input End View**



**Side View**

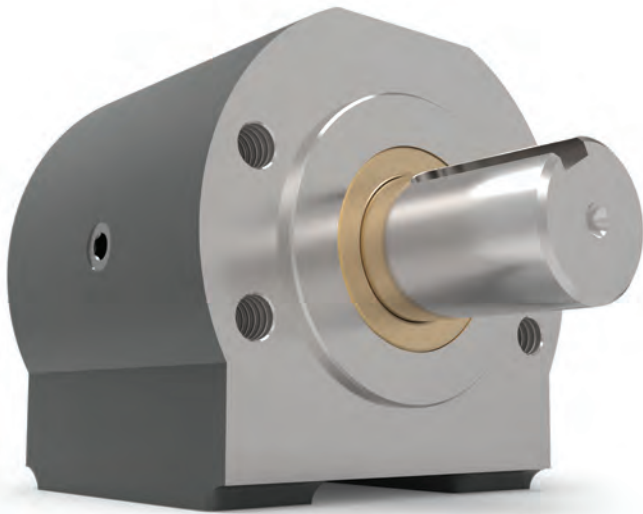


**Bottom View**



**How to Order**

Standard 512 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
512-14S	1-1/4" - 5/16 x 5/32	14 Tooth 12/24 Spline
512-20	1-1/4" - 5/16 x 5/32	1-1/4" - 5/16 x 5/32
512-6BS	1-1/4" - 5/16 x 5/32	1" - 6B Spline

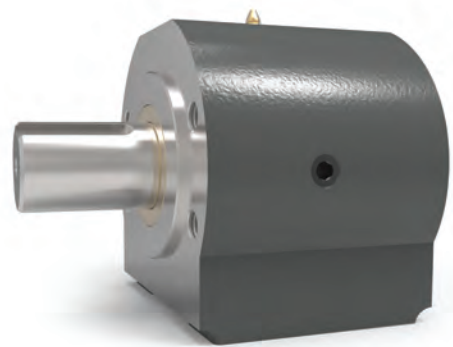


**Features**

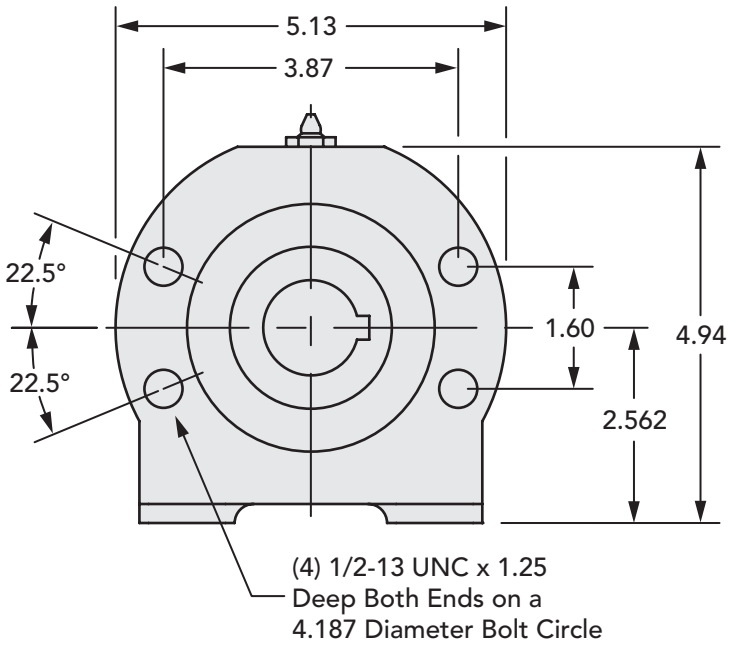
- SAE A 2-bolt or 4-bolt mounting
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-Mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

**515 Series Data**

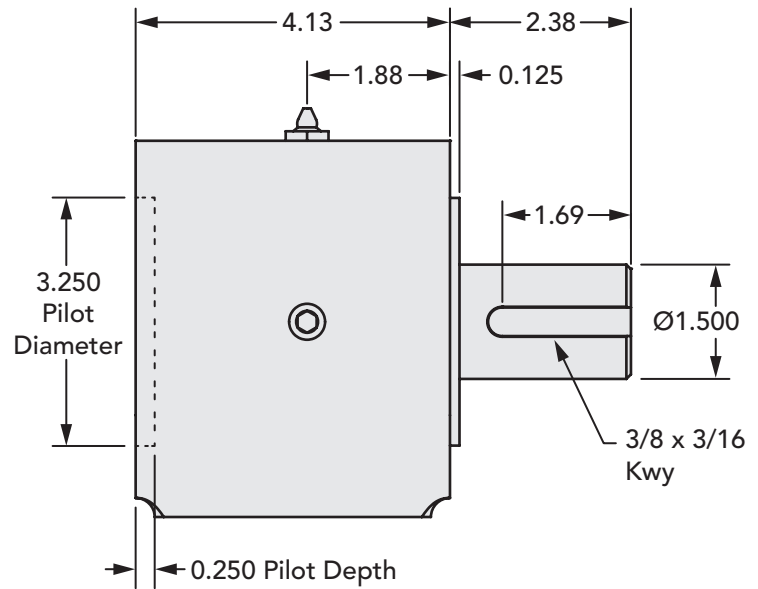
Input Standard	SAE A 2 bolt - 2 different mounts: 4-bolt Magneto Mount 2-bolt (rotated 22-1/2° from horizontal)
Input Pilot Diameter	3.250"
Input Pilot Depth	0.250"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1-1/4" keyed - bore depth is 2.5" 1"- 6B Spline - bore depth is 2.68" 14 tooth 12/24 spline - bore depth is 2.75"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	1.69"
Output Shaft Length	2.25"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	3.250"
Output Pilot Height	0.125"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 2.0 oz. Maximum 4.0 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/8"-16 UNC x 1.00" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	22 lbs



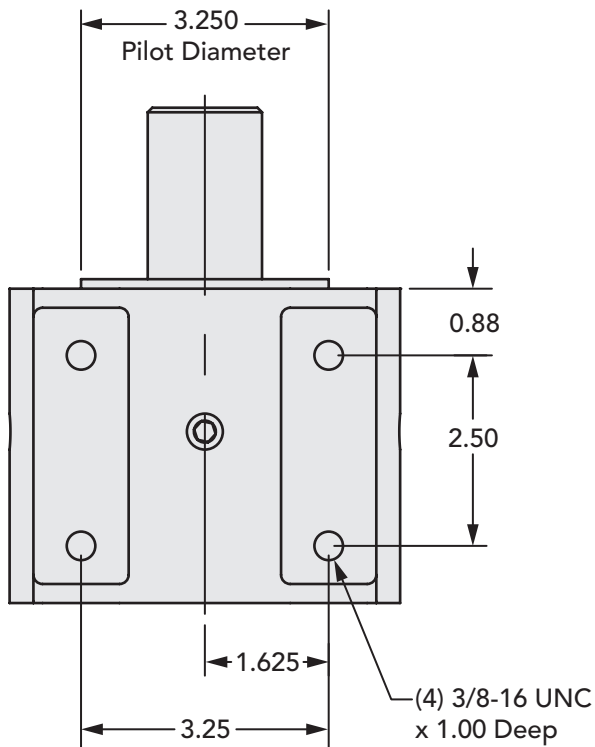
## Input End View



## Side View



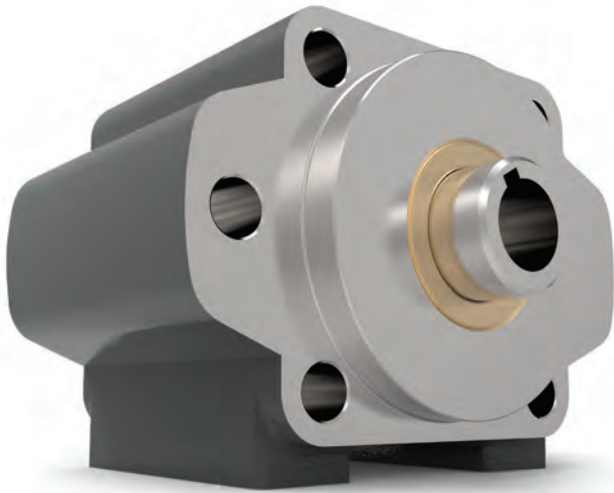
## Bottom View



## How to Order

### Standard 515 Series Models

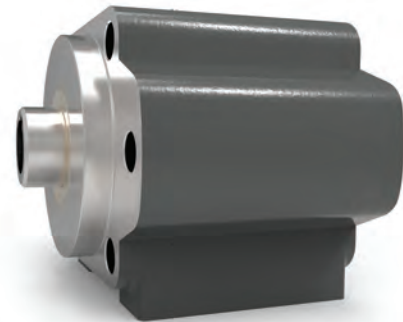
Part Number	Output Shaft - Keyway	Input Bore - Keyway
515-14S	1-1/2" - 3/8 x 3/16	14 Tooth 12/24 Spline
515-20	1-1/2" - 3/8 x 3/16	1-1/4" - 5/16 x 5/32
515-6BS	1-1/2" - 3/8 x 3/16	1" - 6B Spline



**Features**

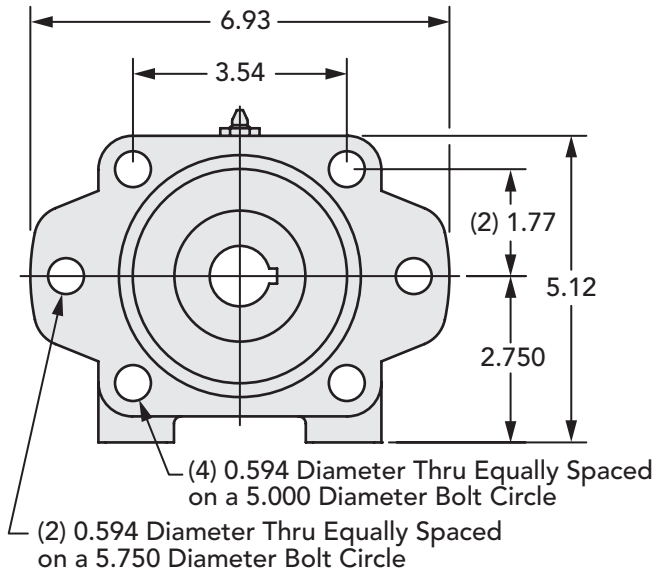
- SAE B - 2-bolt or 4-bolt mounting
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

<b>600F Series Data</b>	
Input Standard	SAE B 2- bolt or SAE B 4-bolt mount
Input Pilot Diameter	4.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	1" through-bore
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1" through-bore
Output Shaft Keyway	1/4" x 1/8" keyway the entire length of the bore
Output Shaft Length	0.73" extension
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	4.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 2.2 oz. Maximum 4.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 7/16"-14 UNC x 0.75" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	30 lbs

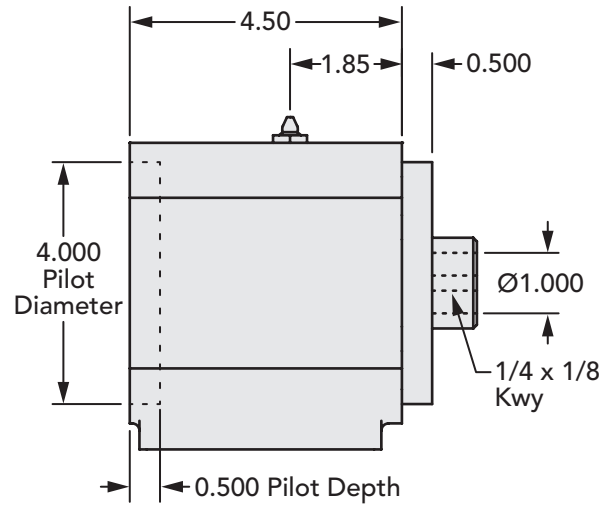




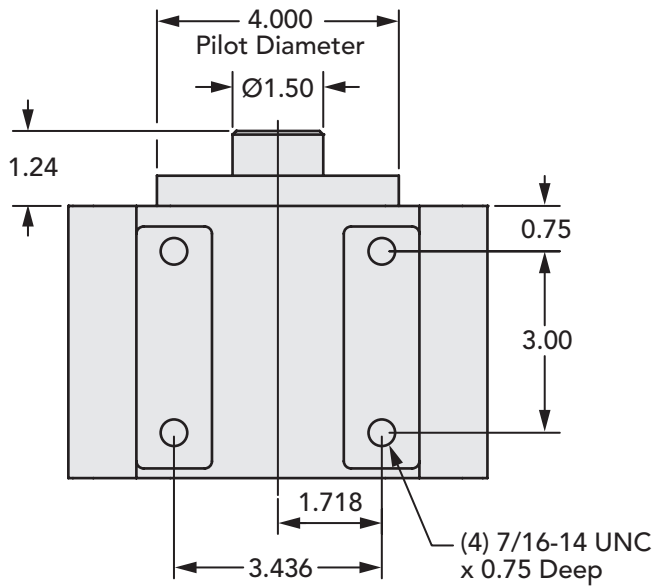
**Input End View**



**Side View**

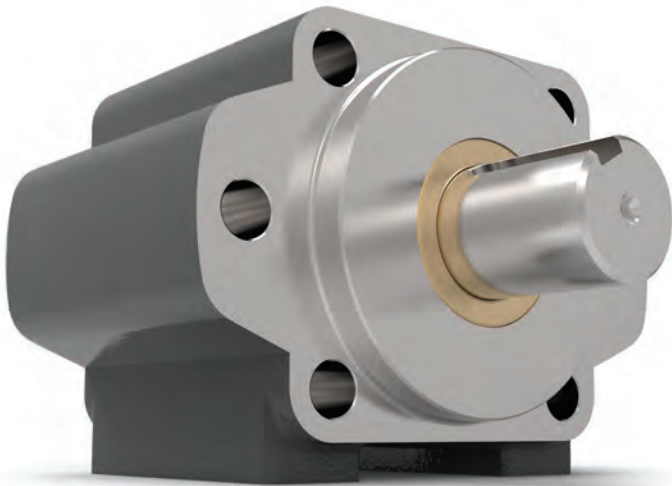


**Bottom View**



**How to Order**

Standard 600F Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
600F	1" bore - 1/4 x 1/8	1" - 1/4 x 1/8

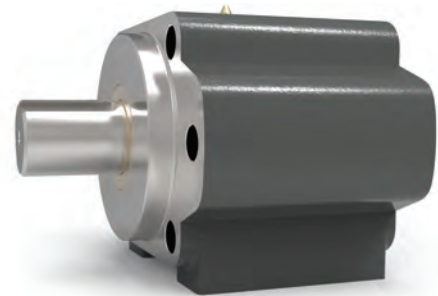


**Features**

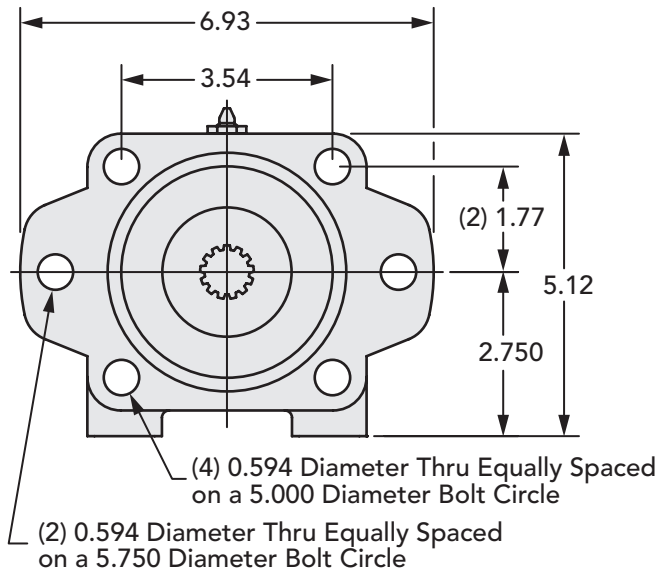
- SAE B - 2-bolt or 4-bolt mounting
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

**615 Series Data**

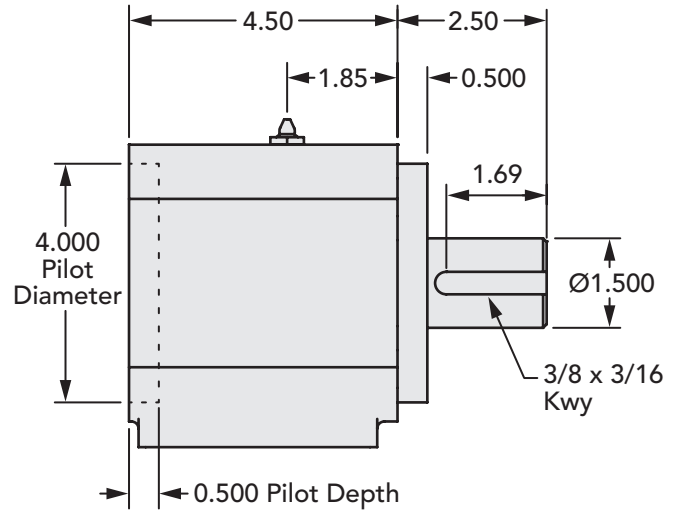
Input Standard	SAE B 2-bolt or SAE B 4-bolt mount
Input Pilot Diameter	4.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	13 tooth 16/32 spline - bore depth is 2.67"
	15 tooth 16/32 spine - bore depth is 2.67"
	7/8" keyed shaft - bore depth is 2.85"
	1" keyed shaft - bore depth is 2.85"
	1-1/4" keyed shaft - bore depth is 2.86"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	1.69"
Output Shaft Length	2.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	4.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 2.2 oz.
	Maximum 4.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease base	Lithium
Standard mounting orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 7/16"-14 UNC x 0.75" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	30 lbs



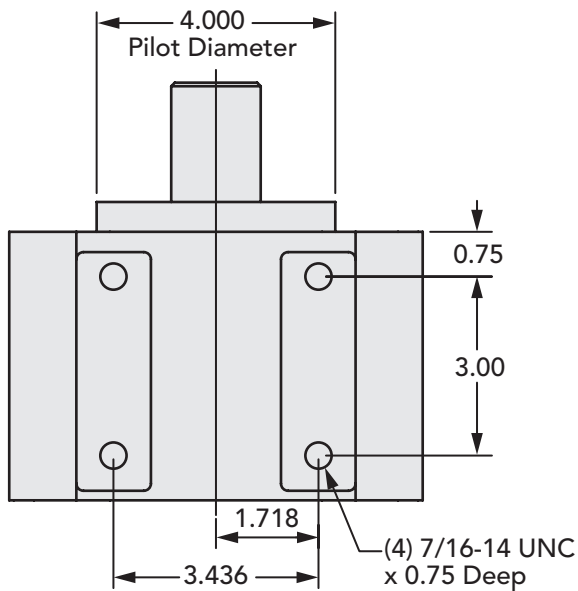
## Input End View



## Side View



## Bottom View

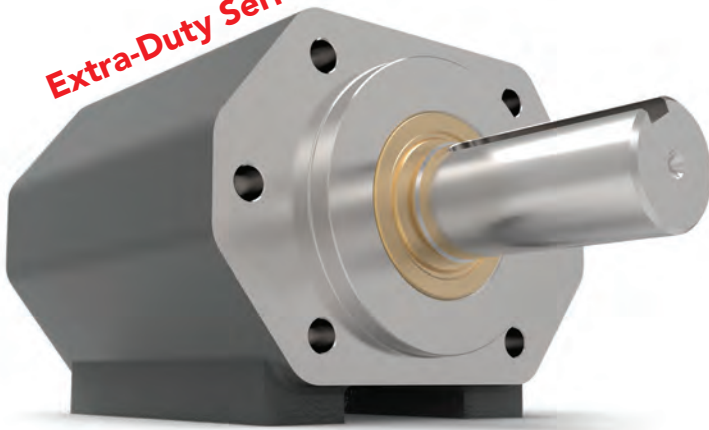


## How to Order

### Standard 615 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
615-13S	1-1/2" - 3/8 x 3/16	13 Tooth 16/32 Spline
615-15S	1-1/2" - 3/8 x 3/16	15 Tooth 16/32 Spline
615-14K	1-1/2" - 3/8 x 3/16	7/8" - 3/16 x 3/32
615-14	1-1/2" - 3/8 x 3/16	7/8" - 1/4 x 1/8
615-16K	1-1/2" - 3/8 x 3/16	1" - 5/16 x 5/32
615-16	1-1/2" - 3/8 x 3/16	1" - 1/4 x 1/8
615-20	1-1/2" - 3/8 x 3/16	1-1/4" - 5/16 x 5/32

**Extra-Duty Series**



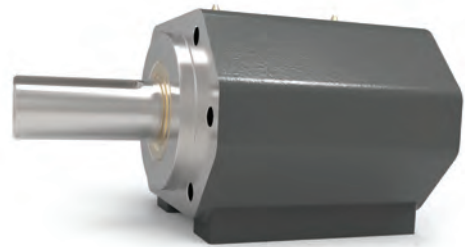
**Features**

- SAE B - 2-bolt or 4-bolt mounting
- Heavy Duty Spherical Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

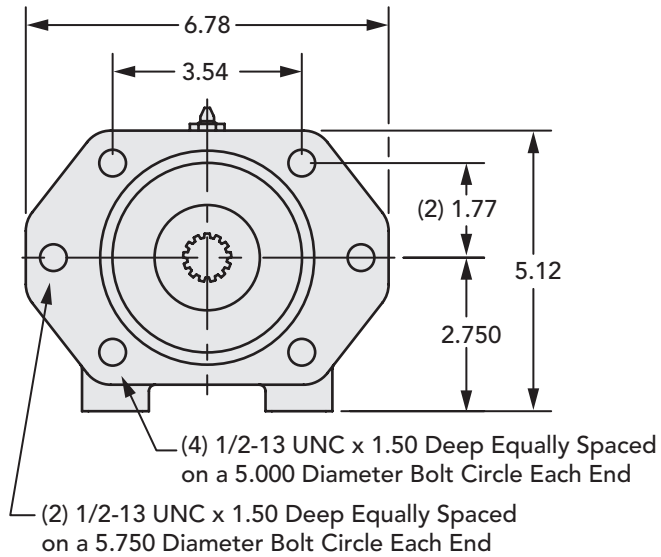
**Extra-Duty Series Enhancements:**

- Extended Housing
- Heat-Treated Shaft
- O-Ring Input Seal
- Spherical Roller Bearings
- Dual NPT Grease Zerks
- Double-Primary Lip Output Seal

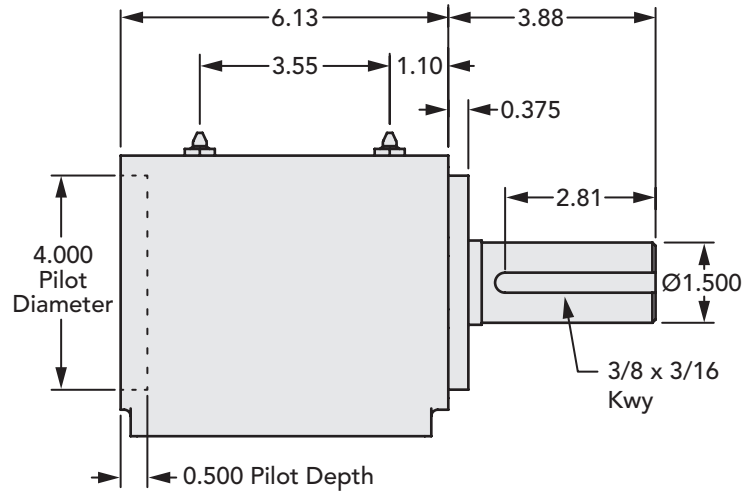
650 Series Data	
Input Standard	SAE B 2-bolt or SAE B 4-bolt mount
Input Pilot Diameter	4.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	O-ring
Input Bore Diameter and Depth	13 tooth 16/32 Spline - bore depth is 2.43 inches 15 tooth 16/32 Spline - bore depth is 2.43 inches
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.81"
Output Shaft Length	3.50"
Output Shaft Seal Type	Double Primary Lip Seal With Garter Springs
Output Pilot Diameter	4.000"
Output Pilot Height	0.375"
Shaft Material	8620 steel - Heat-treated
Bearing Type	Spherical Roller Bearing
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fittings	(2) Standard Zerk Fitting
Grease Capacity	Minimum 3.5 oz. (1.75 oz. per grease fitting) Maximum 7.0 oz. (3.5 oz. per grease fitting)
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	3500 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 7/16"-14 UNC x 0.75" deep
Housing Grease Ports	(2) 1/4-18 NPT
Unit Weight	40 lbs



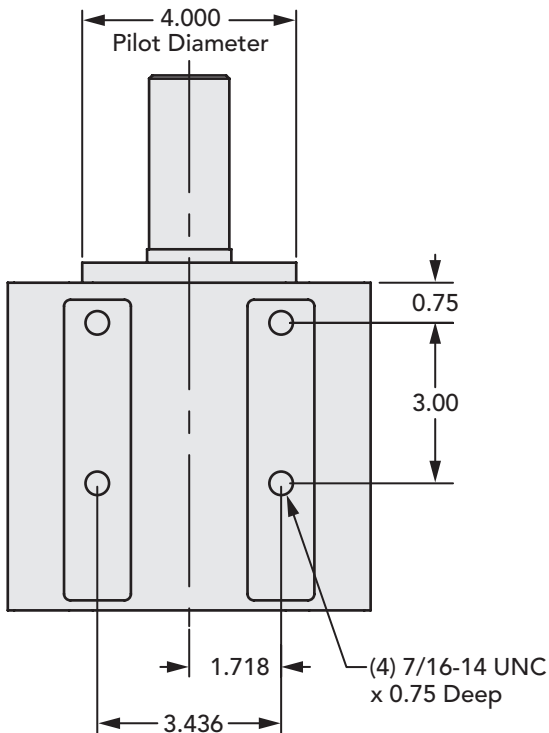
## Input End View



## Side View



## Bottom View



## How to Order

### Standard 650 Series Models

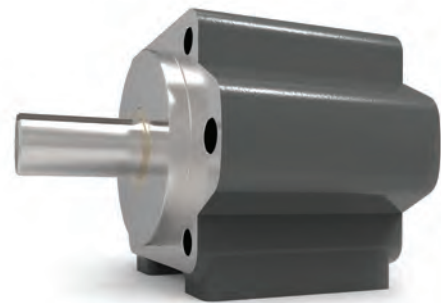
Part Number	Output Shaft - Keyway	Input Bore - Keyway
650-13S	1-1/2" - 3/8 x 3/16	13 Tooth 16/32 Spline
650-15S	1-1/2" - 3/8 x 3/16	15 Tooth 16/32 Spline



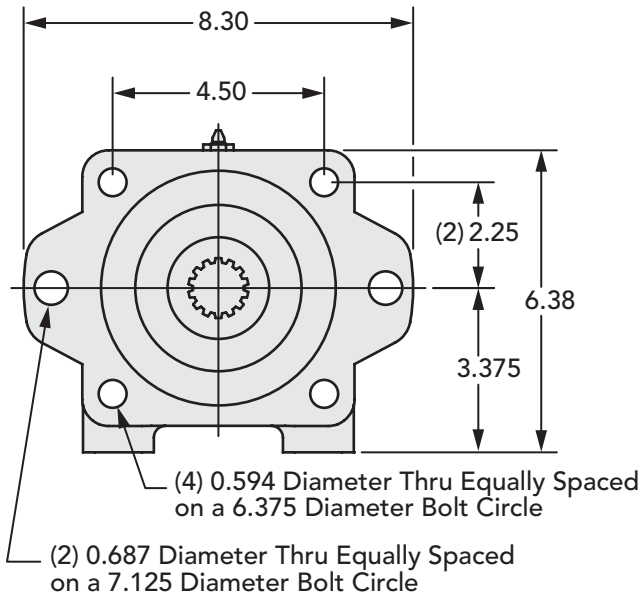
**Features**

- SAE C - 2-bolt or 4-bolt mounting
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

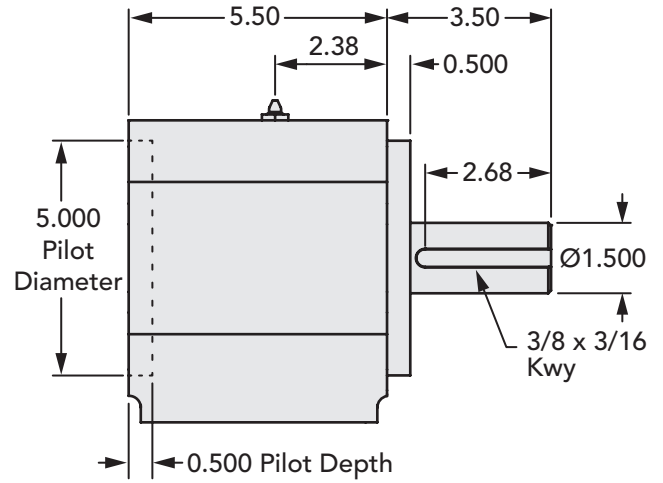
815 Series Data	
Input Standard	SAE C 2-bolt or SAE C 4-bolt mount
Input Pilot Diameter	5.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	14 tooth 12/24 spline - bore depth is 2.89" 7/8" keyed shaft - bore depth is 3.33" 1" keyed shaft - bore depth is 3.33" 1-1/4 keyed shaft - bore depth is 3.33"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.68"
Output Shaft Length	3.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	5.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 2.8 oz. Maximum 5.6 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1/2"-13 UNC x 1.00" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	55 lbs



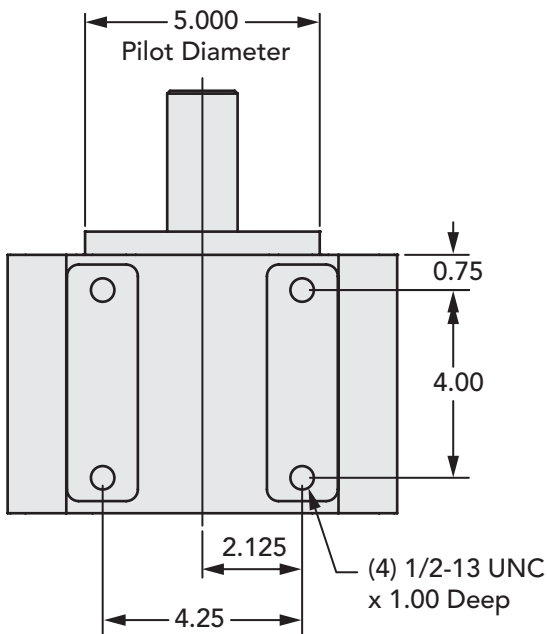
## Input End View



## Side View



## Bottom View



## How to Order

### Standard 815 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
815-14S	1-1/2" - 3/8 x 3/16	14 Tooth 12/24 Spline
815-14K	1-1/2" - 3/8 x 3/16	7/8" - 3/16 x 3/32
815-14	1-1/2" - 3/8 x 3/16	7/8" - 1/4 x 1/8
815-16K	1-1/2" - 3/8 x 3/16	1" - 5/16 x 5/32
815-16	1-1/2" - 3/8 x 3/16	1" - 1/4 x 1/8
815-20	1-1/2" - 3/8 x 3/16	1-1/4" - 5/16 x 5/32

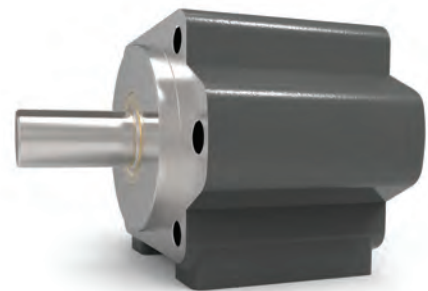


**Features**

- SAE C - 2-bolt or 4 bolt mounting
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

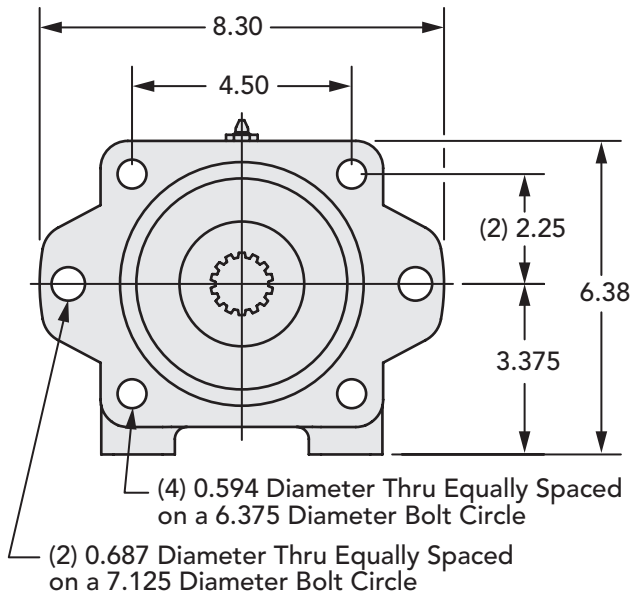
**915 Series Data**

Input Standard	SAE C 2-bolt or SAE C 4-bolt mount
Input Pilot Diameter	5.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	14 tooth 12/24 spline - bore depth is 3.09" 17 tooth 12/24 spline - bore depth is 3.50" 1-1/2 - 3/8 x 3/16 keyed shaft - bore depth is 3.59" 1-3/4 - 7/16 x 7/32 keyed shaft - bore depth is 3.59"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	2.56"
Output Shaft Length	3.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	5.000"/4.997"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 4.3 oz. Maximum 8.6 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	1900 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1/2"-13 UNC x 1.00" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	55 lbs

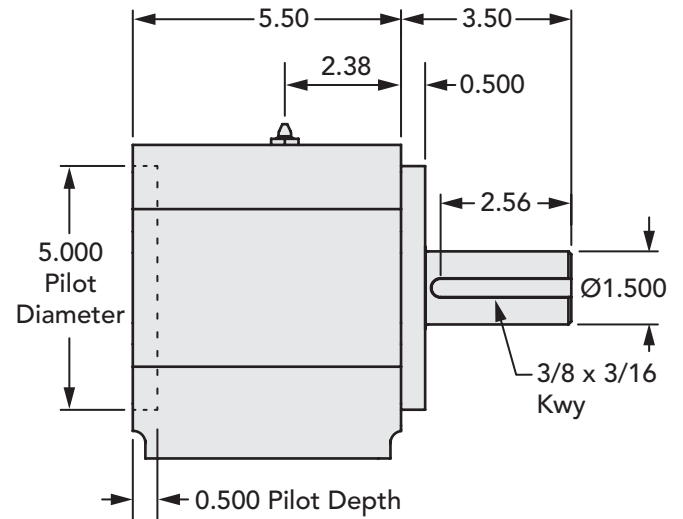




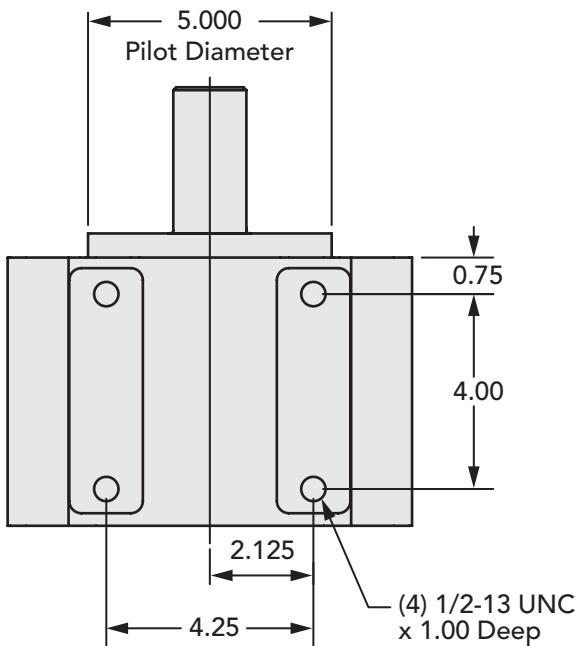
## Input End View



## Side View



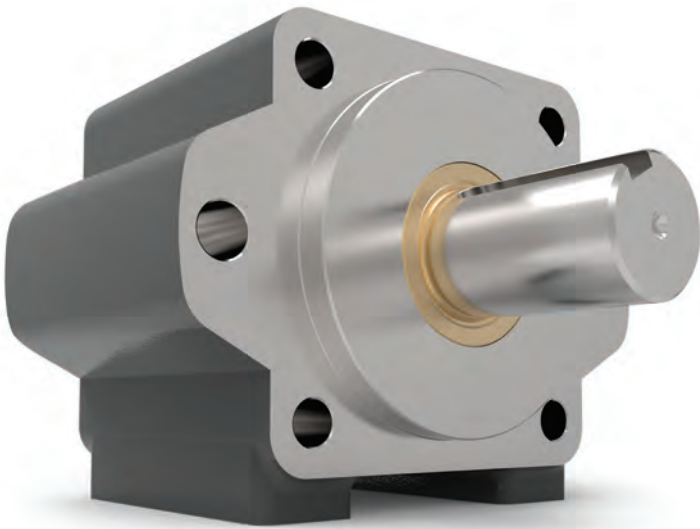
## Bottom View



## How to Order

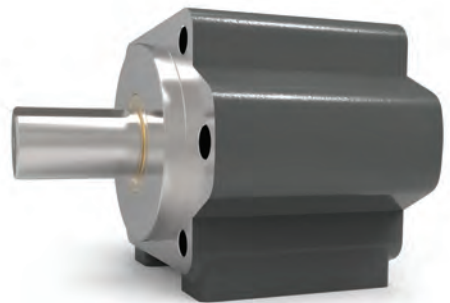
### Standard 915 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
915-14S	1-1/2" - 3/8 x 3/16	14 Tooth 12/24 Spline
915-17S	1-1/2" - 3/8 x 3/16	17 Tooth 12/24 Spline
915-24	1-1/2" - 3/8 x 3/16	1-1/2" - 3/8 x 3/16
915-28	1-1/2" - 3/8 x 3/16	1-3/4" - 7/16 x 7/32



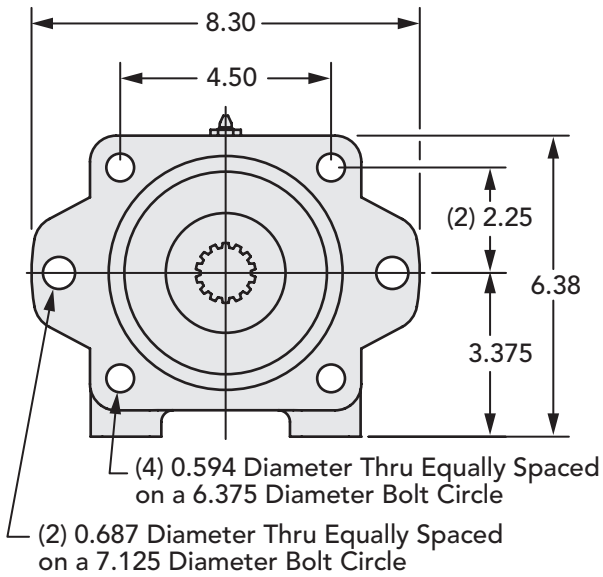
**Features**

- SAE C - 2-bolt or 4-bolt mounting
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

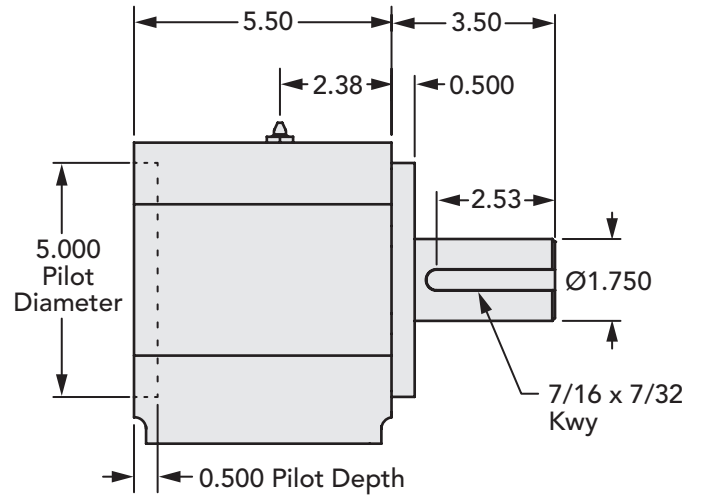


928 Series Data	
Input Standard	SAE C 2-bolt or SAE C 4-bolt mount
Input Pilot Diameter	5.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	14 tooth 12/24 spline - bore depth is 3.09" 17 tooth 12/24 spline - bore depth is 3.50" 1-1/2 - 3/8 x 3/16 keyed shaft - bore depth is 3.59" 1-3/4 - 7/16 x 7/32 keyed shaft - bore depth is 3.59"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	1-3/4"
Output Shaft Keyway	7/16" x 7/32" keyway
Output Shaft Keyway Length	2.53"
Output Shaft Length	3.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	5.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 4.3 oz. Maximum 8.6 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	1900 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1/2"-13 UNC x 1.00" deep
Housing Grease Ports	1/4"-18 NPT
Unit Weight	55 lbs

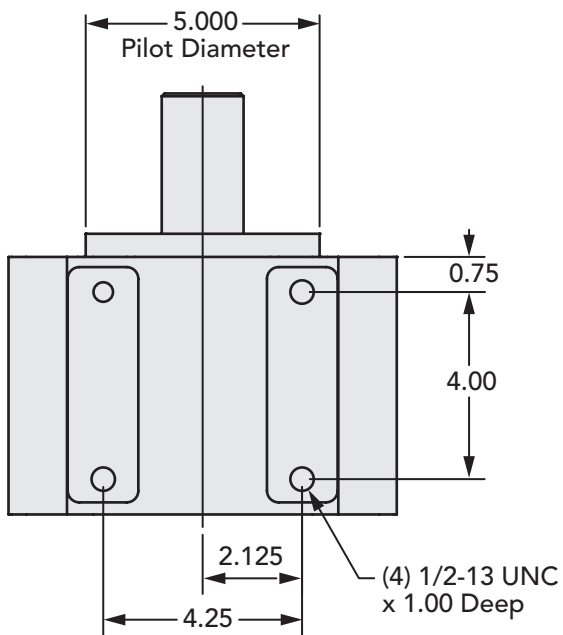
**Input End View**



**Side View**



**Bottom View**



**How to Order**

Standard 928 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
928-14S	1-3/4" - 7/16 x 7/32	14 Tooth 12/24 Spline
928-17S	1-3/4" - 7/16 x 7/32	17 Tooth 12/24 Spline
928-24	1-3/4" - 7/16 x 7/32	1-1/2" - 3/8 x 3/16
928-28	1-3/4" - 7/16 x 7/32	1-3/4" - 7/16 x 7/32

**Extra-Duty Series**



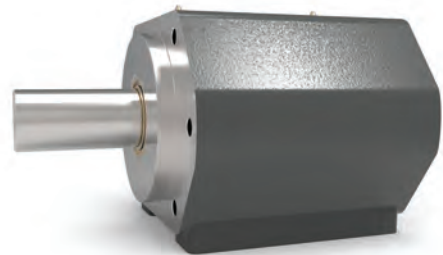
**Features**

- SAE C - 2-bolt or 4-bolt mounting
- Heavy Duty Spherical Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

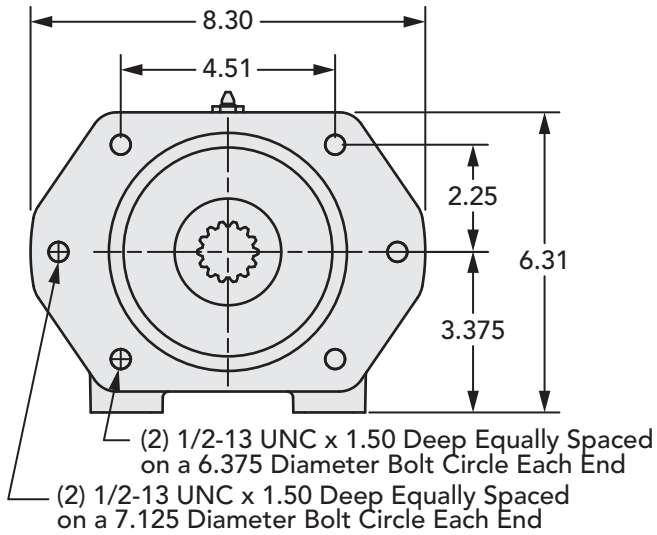
**Extra-Duty Series Enhancements:**

- Extended Housing
- Heat-Treated Shaft
- O-Ring Input Seal
- Spherical Roller Bearings
- Dual NPT Grease Zerks
- Double-Primary Lip Output Seal

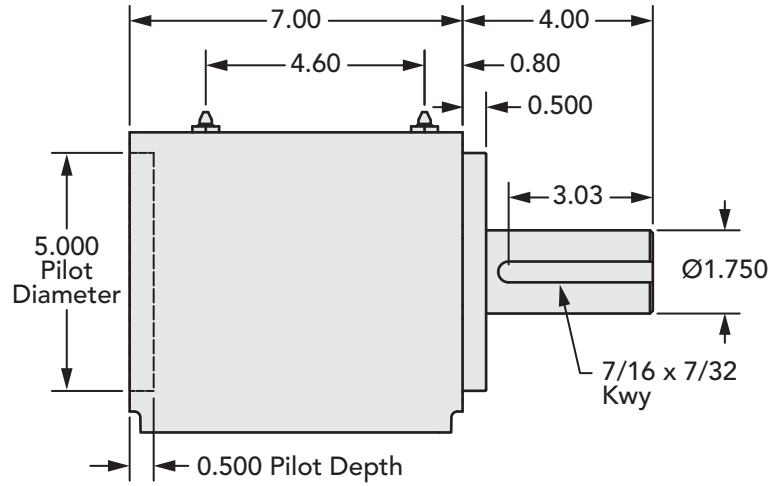
950 Series Data	
Input Standard	SAE C 2-bolt or SAE C 4-bolt mount
Input Pilot Diameter	5.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	O-ring
Input Bore Diameter and Depth	14 tooth 12/24 Spline - bore depth is 3.50 inches 17 tooth 12/24 Spline - bore depth is 3.50 inches
Output Shaft Diameter	1-3/4"
Output Shaft Keyway	7/16" x 7/32" keyway
Output Shaft Keyway Length	3.25"
Output Shaft Length	3.50"
Output Shaft Seal Type	Double Primary Lip Seal With Garter Springs
Output Pilot Diameter	5.000"
Output Pilot Height	0.500"
Shaft Material	8620 steel - Heat-treated
Bearing Type	Spherical Roller Bearing
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fittings	(2) Standard Zerk Fitting
Grease Capacity	Minimum 6.8 oz. (3.4 oz. per grease fitting) Maximum 13.6 oz. (6.8 oz. per grease fitting)
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2500 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1/2"-13 UNC x 1.00" deep
Housing Grease Ports	(2) 1/4-18 NPT
Unit Weight	70 lbs



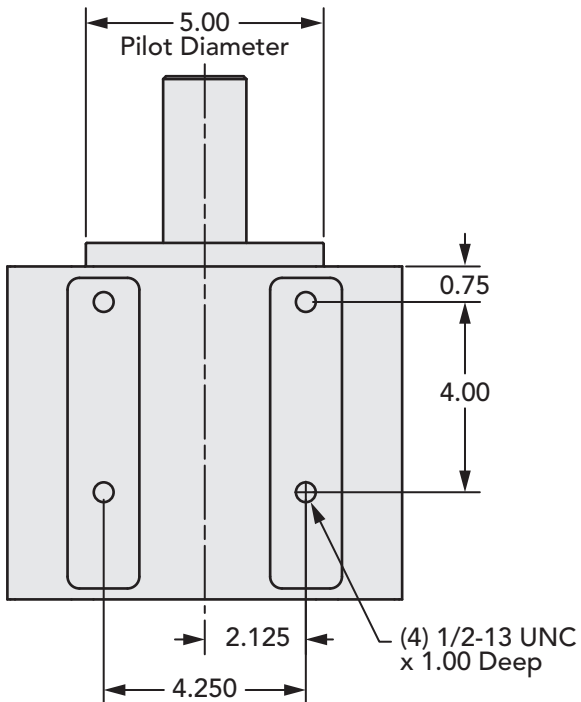
## Input End View



## Side View



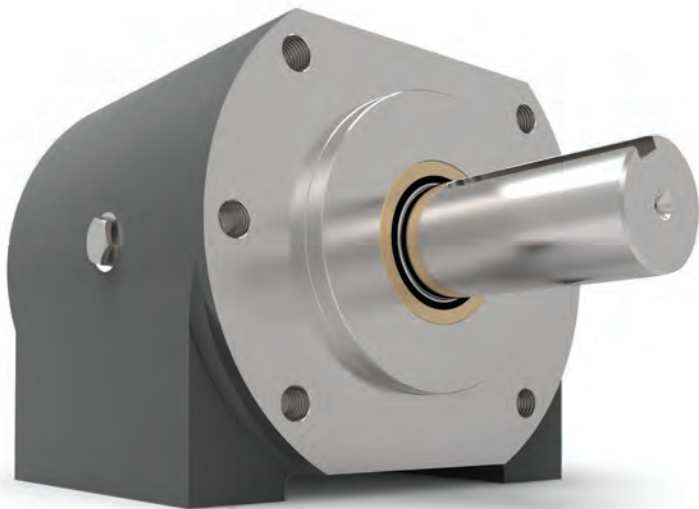
## Bottom View



## How to Order

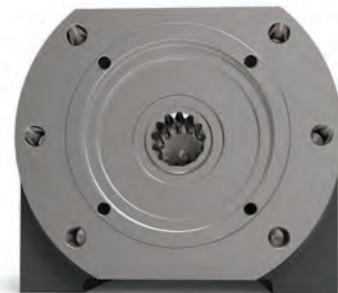
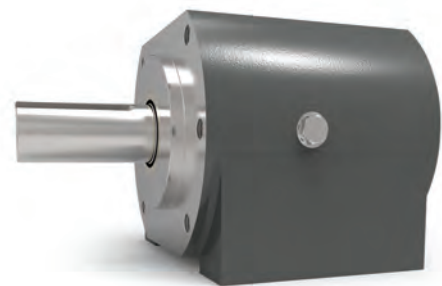
### Standard 950 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
950-14S	1-3/4" - 7/16 x 7/32	14 Tooth 12/24 Spline
950-17S	1-3/4" - 7/16 x 7/32	17 Tooth 12/24 Spline



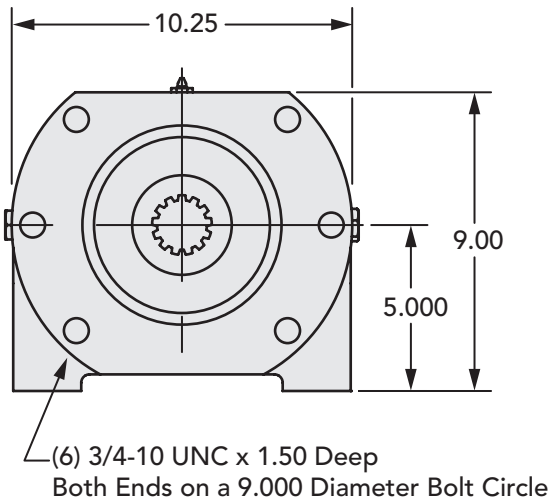
**Features**

- SAE D - 2-bolt or 4-bolt mounting
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

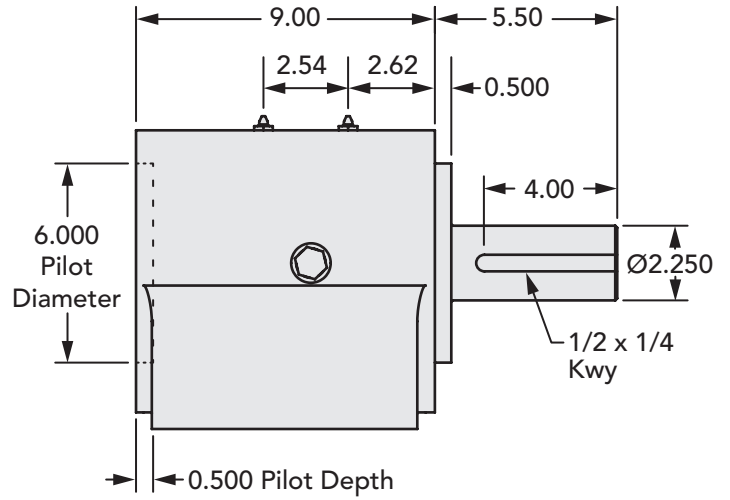


<b>1136 Series Data</b>	
Input Standard	SAE D 2-bolt or SAE D 4-bolt mount
Input Pilot Diameter	6.000"
Input Pilot Depth	0.500"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	13 tooth 8/16 spline - bore depth is 3.92" 1-3/4 - 7/16 x 7/32 keyed shaft - bore depth is 3.80"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	2-1/4"
Output Shaft Keyway	1/2" x 1/4" keyway
Output Shaft Keyway Length	4.00"
Output Shaft Length	5.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	6.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(2) Standard Zerk Fitting
Grease Capacity	Minimum 20 oz. (10 oz. per grease fitting) Maximum 30 oz. (15 oz. per grease fitting)
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2500 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 3/4"-10 UNC x 1.50" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	195 lbs

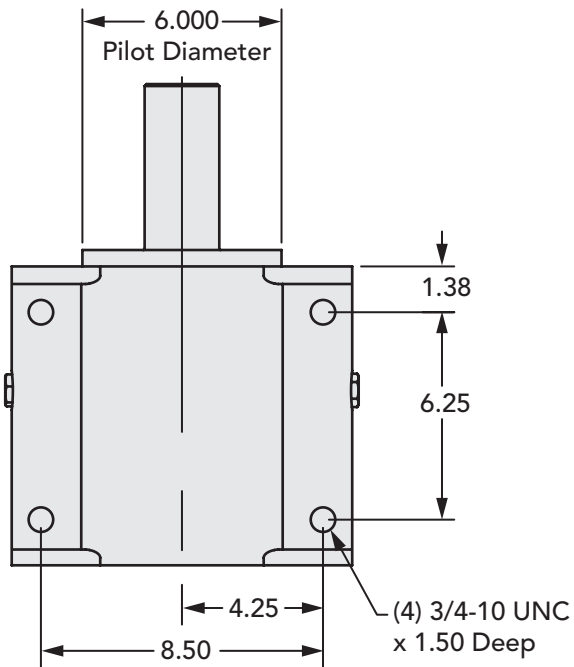
**Input End View**



**Side View**



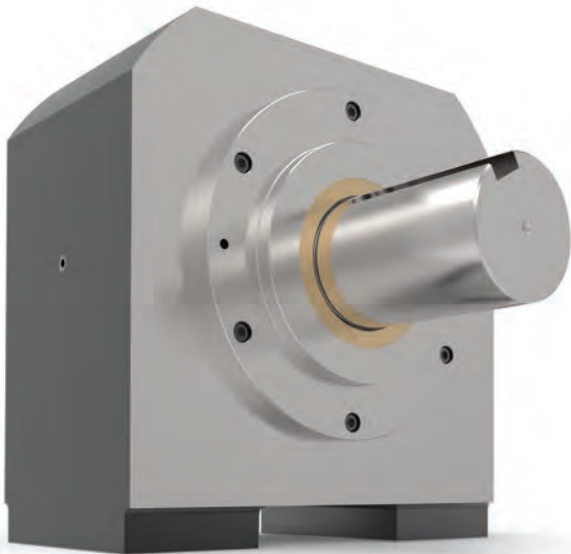
**Bottom View**



**How to Order**

**Standard 1136 Series Models**

Part Number	Output Shaft - Keyway	Input Bore - Keyway
1136-13S	2-1/4" - 1/2 x 1/4	13 Tooth 8/16 Spline
1136-28	2-1/4" - 1/2 x 1/4	1-3/4" - 7/16 x 7/32

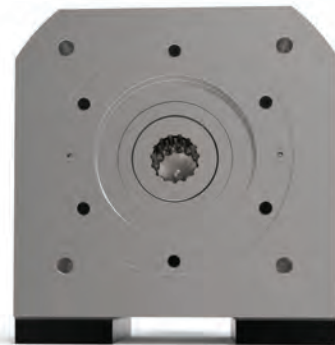
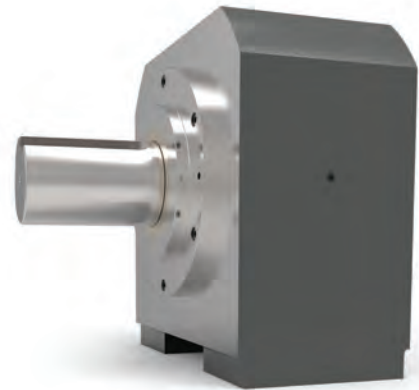


**Features**

- SAE E - 4-bolt mounting
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

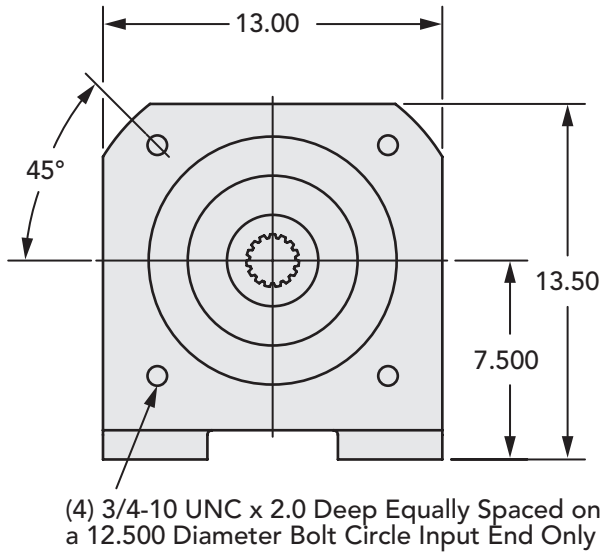
**1250 Series Data**

Input Standard	SAE E 4-bolt mount
Input Pilot Diameter	6.500"
Input Pilot Depth	0.625"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	13 tooth 8/16 spline - bore depth is 3.73"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	3-1/2"
Output Shaft Keyway	7/8" x 7/16" keyway
Output Shaft Keyway Length	4.13"
Output Shaft Length	5.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	6.500"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Spherical Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	Optional
Grease Capacity	Minimum 11 oz. Maximum 22 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	1500 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1"-8 UNC x 2.00" deep
Housing Grease Ports	(3) 1/2-13 UNC X 1.25 deep
Unit Weight	250 lbs

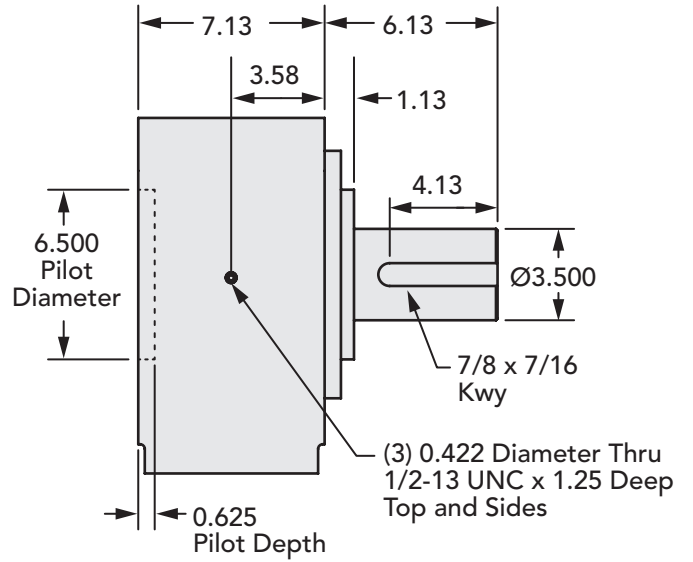




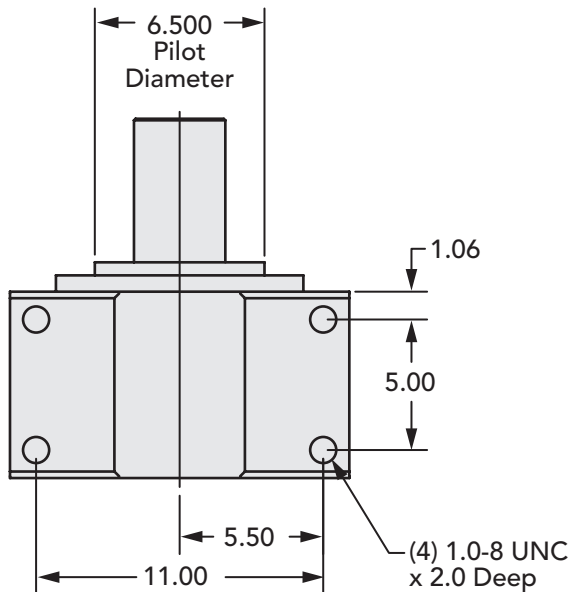
**Input End View**



**Side View**

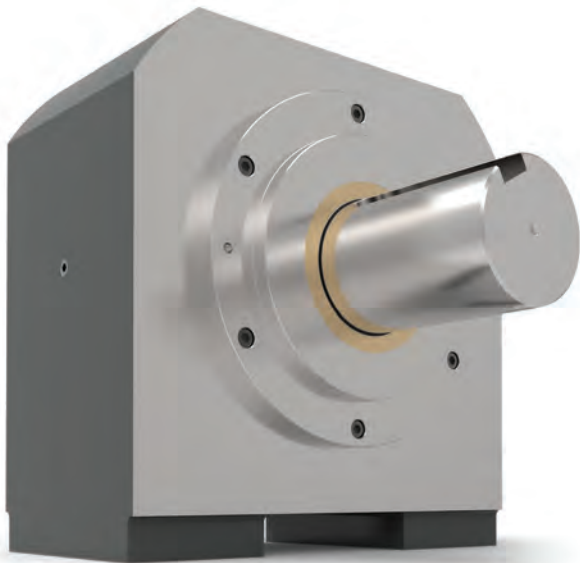


**Bottom View**



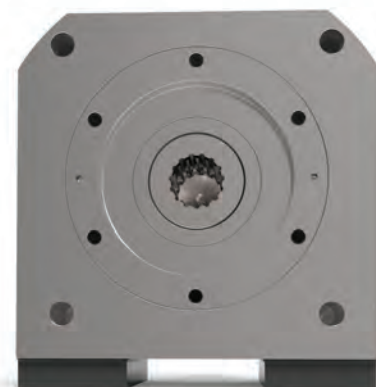
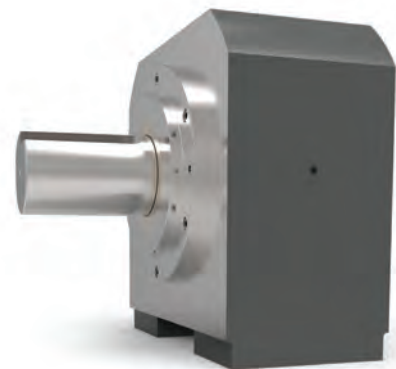
**How to Order**

Standard 1250 Series Models		
Part Number	Output Shaft - Keyway	Input Bore - Keyway
1250-13S	3-1/2" - 7/8 x 7/16	13 Tooth 8/16 Spline



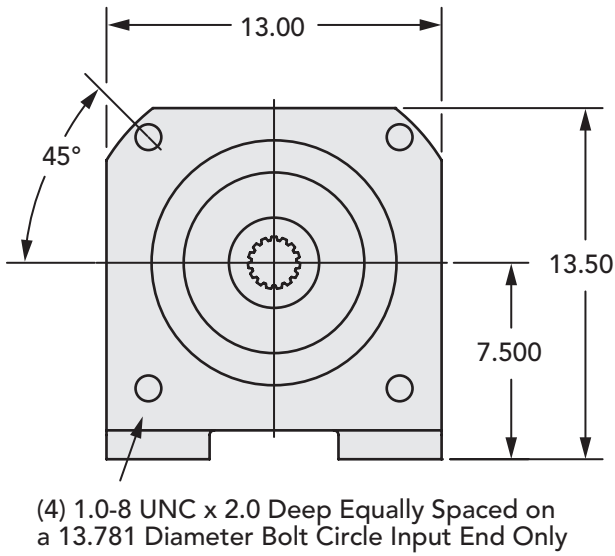
### Features

- SAE F - 4-bolt mounting
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides a sturdy mounting base for the motor or pump
- Supports heavy radial and axial loads - protecting the hydraulic motor or pump
- Reduces downtime and maintenance costs
- Protects pump or motor shaft seal from harmful contaminants

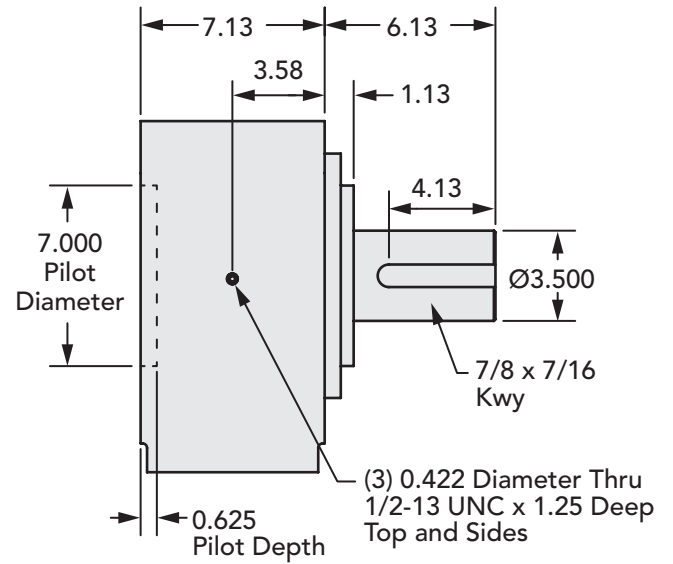


1500 Series Data	
Input Standard	SAE F 4-bolt mount
Input Pilot Diameter	7.000"
Input Pilot Depth	0.625"
Input Pilot Sealing Method	Fiber Gasket
Input Bore Diameter and Depth	15 tooth 8/16 spline - bore depth is 3.37"
Input Shaft Seal Type	Double-lip with Garter Spring
Output Shaft Diameter	3-1/2"
Output Shaft Keyway	7/8" x 7/16" keyway
Output Shaft Keyway Length	4.13"
Output Shaft Length	5.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	7.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Spherical Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	Optional
Grease Capacity	Minimum 11 oz. Maximum 22 oz.
Grease type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	1500 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1"-8 UNC x 2.00" deep
Housing Grease Ports	(3) 1/2-13 UNC X 1.25 deepDP
Unit Weight	250 lbs.

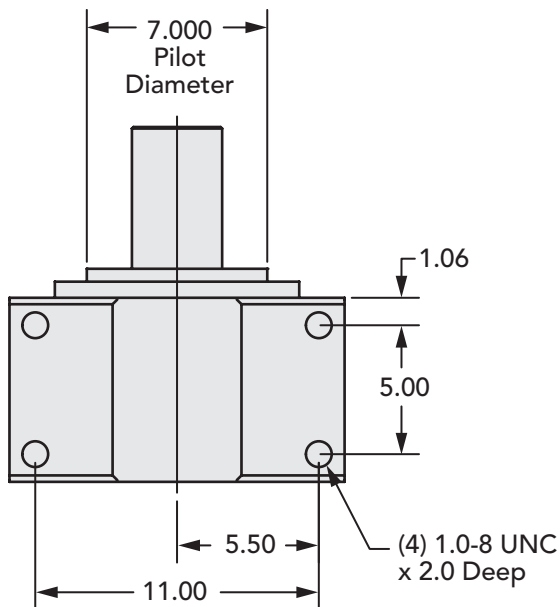
## Input End View



## Side View



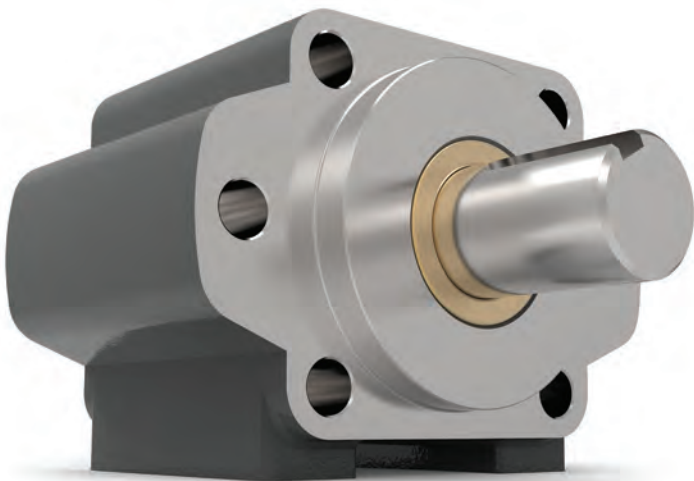
## Bottom View



## How to Order

### Standard 1500 Series Models

Part Number	Output Shaft - Keyway	Input Bore - Keyway
1500-15S	3-1/2" - 7/8 x 7/16	15 Tooth 8/16 Spline



### Features

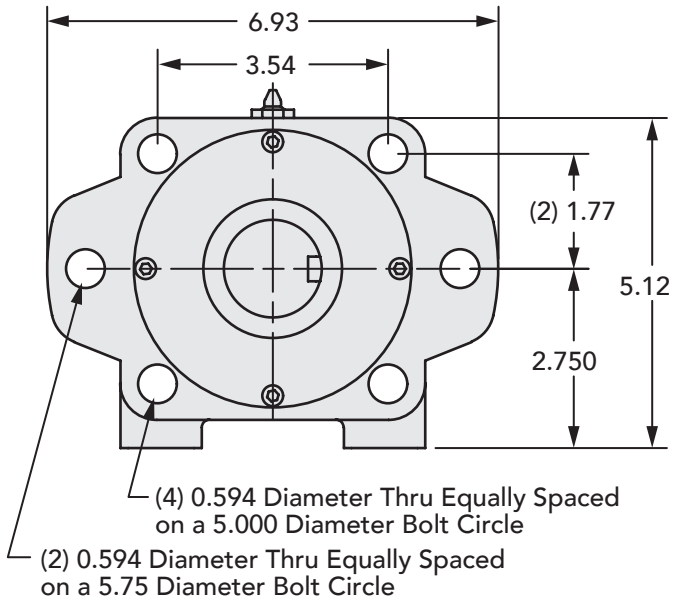
- Double-male shaft configuration with dual seals
- SAE B – 2-bolt or 4-bolt mounting pattern
- Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides sturdy mounting base
- Supports heavy radial and axial loads
- Reduces downtime and maintenance costs

#### 615M Series Data

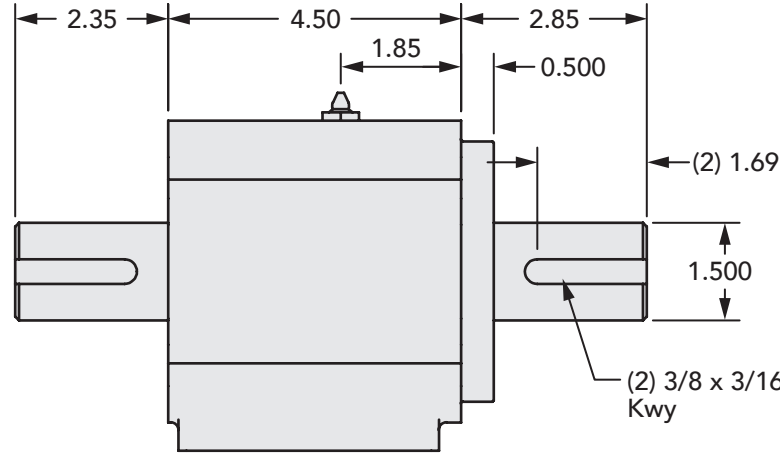
Face Mount Pattern	SAE B 2-bolt or SAE B 4-bolt
Input Shaft Diameter	1-1/2"
Input Shaft Keyway	3/8" x 3/16" keyway
Input Shaft Keyway Length	1.69"
Input Shaft Length	2.35"
Input Shaft Seal Type	Double-lip with Garter Spring
Input Pilot	N/A
Input Plate Seal Type	O-Ring
Output Shaft Diameter	1-1/2"
Output Shaft Keyway	3/8" x 3/16" keyway
Output Shaft Keyway Length	1.69"
Output Shaft Length	2.35"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	4.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 2.2 oz. Maximum 4.4 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease base	Lithium
Standard mounting orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	2300 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 7/16"-14 UNC x 0.75" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	30 lbs



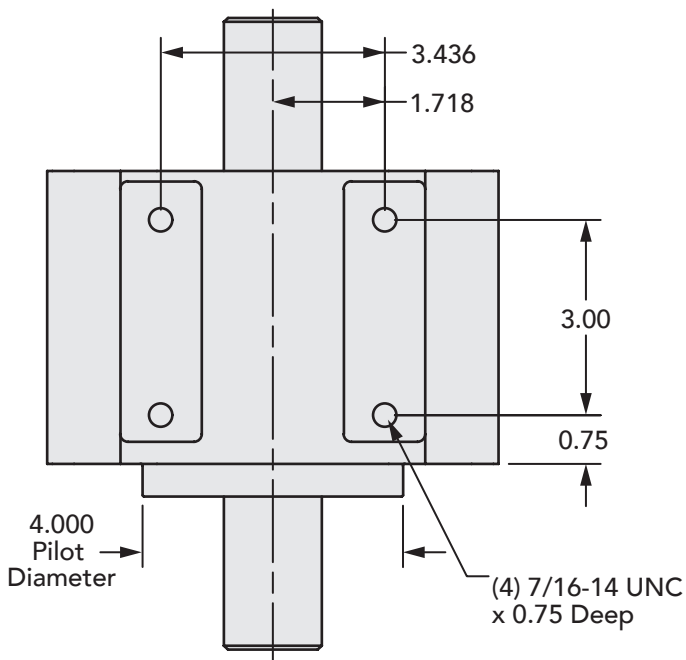
## Input End View



## Side View



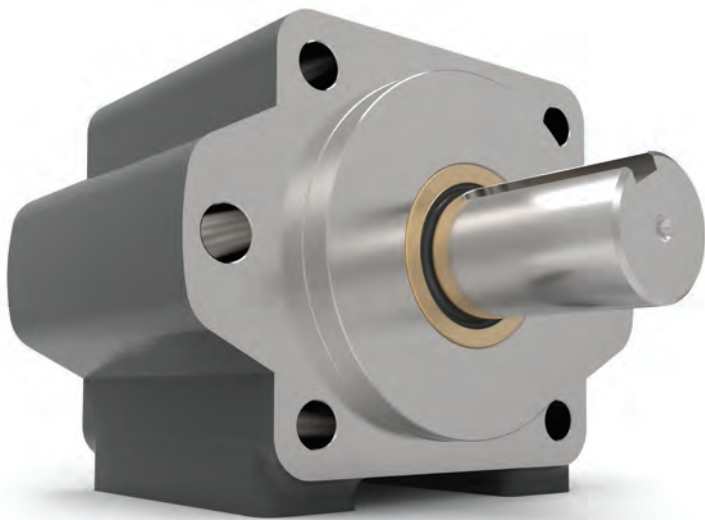
## Bottom View



## How to Order

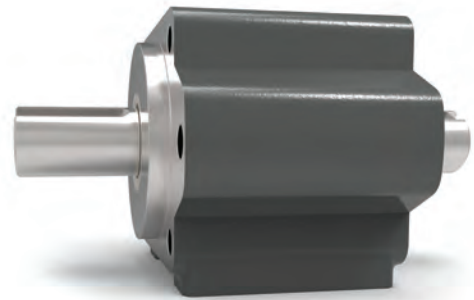
### Standard 615M Series Models

Part Number	Output Shaft - Keyway	Input Shaft - Keyway
615M	1-1/2" - 3/8 x 3/16	1-1/2" - 3/8 x 3/16



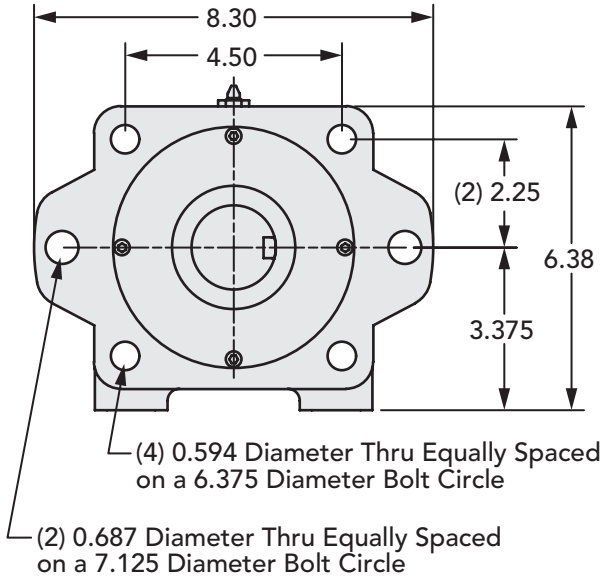
**Features**

- Double-male shaft configuration with dual seals
- SAE C - 2-bolt or 4-bolt mounting pattern
- Extra Heavy Duty Tapered Roller Bearings
- May be either Face-mounted or Foot-mounted
- Provides sturdy mounting base
- Supports heavy radial and axial loads
- Reduces downtime and maintenance costs

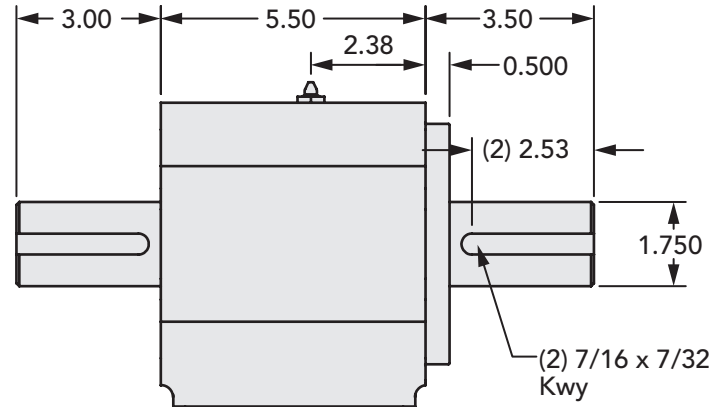


928M Series Data	
Face Mount Pattern	SAE C 2-bolt or SAE C 4-bolt
Input Shaft Diameter	1-3/4"
Input Shaft Keyway	7/16" x 7/32" keyway
Input Shaft Keyway Length	2.53"
Input Shaft Length	3.00"
Input Shaft Seal Type	Double-lip with Garter Spring
Input Pilot	N/A
Input Plate Seal Type	O-Ring
Output Shaft Diameter	1-3/4"
Output Shaft Keyway	7/16" x 7/32" keyway
Output Shaft Keyway Length	2.53"
Output Shaft Length	3.00"
Output Shaft Seal Type	Double-lip with Garter Spring
Output Pilot Diameter	5.000"
Output Pilot Height	0.500"
Shaft Material	1144 Stressproof Steel
Bearing Type	Tapered Roller Bearings
Standard Lubrication Method	Grease
Optional Lubrication Methods	Please Consult Factory
Grease Fitting	(1) Standard Zerk Fitting
Grease Capacity	Minimum 4.3 oz. Maximum 8.6 oz.
Grease Type (recommended for typical applications)	NLGI #2
Recommended Grease Base	Lithium
Standard Mounting Orientation	Shaft Horizontal - Consult Factory for other Mounting Orientations
Maximum Speed Without Modification	1900 RPM
Housing Material	Cast Iron
Housing Feet - Threaded Holes	(4) 1/2"-13 UNC x 1.00" deep
Housing Grease Ports	1/4-18 NPT
Unit Weight	55 lbs

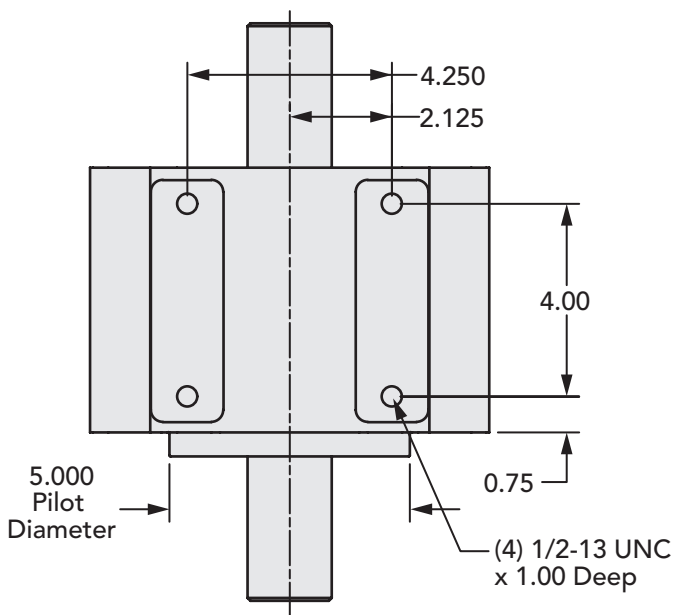
## Input End View



## Side View



## Bottom View



## How to Order

### Standard 928M Series Models

Part Number	Output Shaft - Keyway	Input Shaft - Keyway
928M	1-3/4" - 7/16 x 7/32	1-3/4" - 7/16 x 7/32

## Dimensional Criteria

- Standard unit may be selected for fitting-up to the hydraulic motor or pump dimensions
- CAD files may be downloaded from website to check for fit or detail drawings are available from factory
- Modifications to standard dimensions are available as needed
  - Please see Specials pages in catalog for examples of modifications we have done
  - Modifications not shown are also possible, please contact factory
  - Please contact factory for quote on special modifications

## Performance Criteria

- If desired, Zero-Max Engineering will analyze the application and advise
  - Bearing lifetime,
  - Strength of shaft connections, and
  - Make lubrication recommendations
- Info needed to analyze application includes:
  - **Horsepower (HP)**
    - If unknown, please provide Pressure and Flow Rate through motor /pump
  - **Speed (rpm)**
  - **Overhung Load Information**
    - If pulley, need to know diameter and the distance from load center to the face of OHLA output pilot – see illustration
    - If a fan or blower, need to know the radial load, thrust load (and direction of thrust), and weight of fan
    - If other type of load connection, please provide equivalent radial and thrust loads (and direction of thrust) or provide a sketch for review
  - **Mounting Orientation**
    - Horizontal (shaft parallel to ground)
    - Vertical, shaft-up (shaft pointing at the sky)
    - Vertical, shaft-down (shaft pointing at the ground)
  - **Hydraulic Motor or Pump**
    - Part number, catalog page, or drawing of motor/pump showing shaft and pilot detail
    - Info is needed to confirm fit-up to OHLA, and for shaft strength calculations
  - **If any special operating environment requirements, please advise**
    - Temperature extremes
    - Chemical exposure
    - Washdown
    - Underwater application
    - Other...



Zero-Max Configurable  
3D CAD Downloads.

[www.zero-max.com](http://www.zero-max.com)



**Some of the special features we can add:**

- Double-Male Shafts
- Drilled-and-Tapped Shaft End
- External Threaded Shaft-End
- Stepped Shoulder on Shaft for Retention / Positioning of Mounted Component
- Face Seals
- SAE or NPT Ports
- Pre-Greased Units
- Permanently-Lubed Units
- Breather Plugs
- Add-on Seal Carriers
- QPQ Finish for Corrosion Protection / Seal Life
- Tapered Output Shafts
- Stainless Steel Shafts
- Nickel-Plated Housings
- Custom Output Seals
- Tapped Mounting Holes
- Transition Between 2 SAE Mounting Sizes
- Other Features - as needed - please inquire...



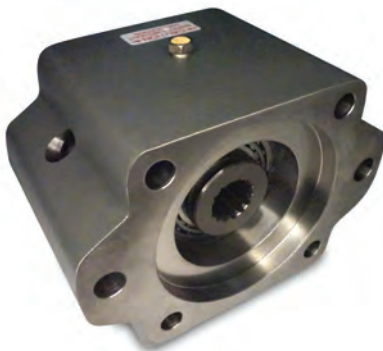
- Drilled-and-Tapped Shaft-End



- Double-Male Shaft



- QPQ Finish on Shaft for Corrosion-Protection and Enhanced Seal Life



- Breather Plug
- Custom Splined Shafts



- Extended Shaft Length



- Pre-greased and Plugged / Lubed-for-Life
- Extended Housing for Increased Bearing Stance and Longer Lifetime
- Face Seal for Added Protection



- Plugged for use in a Wet Environment
- Add-On Seal Carrier



- Adaptor Plate for Non-SAE Motors/Pumps or for Transitioning 2 Different SAE Mounts
- SAE O-ring Ports for Circulating Oil Lubrication



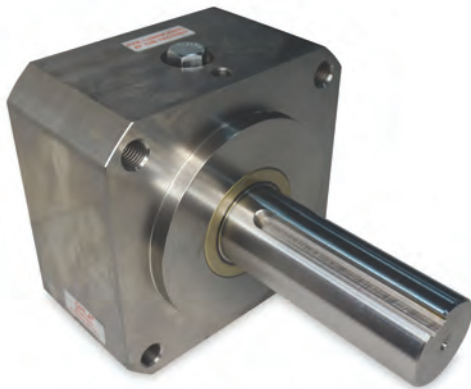
- Add-on Seal Carrier for Mechanical Seal or Special Seals
- External Threaded Shaft-End Including Cross-drilled Hole for Securing a Castellated Nut
- Tapered Output Shaft with Keyway



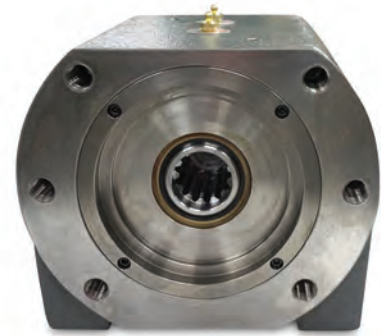
- QPQ Shaft
- Internal Seals for Vertical, Shaft-up Mounting
- O-Ring Ports for Circulating Oil Lubrication



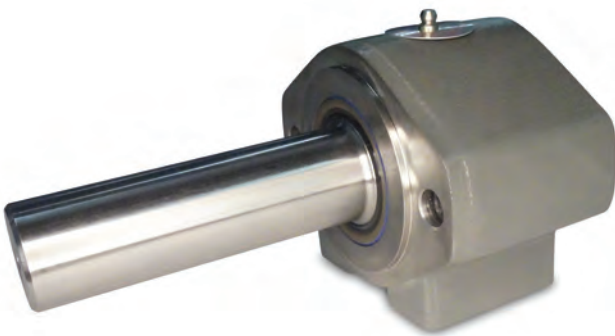
- Double Male OHLA
- QPQ Shaft
- Closed End Keyway
- Nickel Plated Housing
- Special Seals



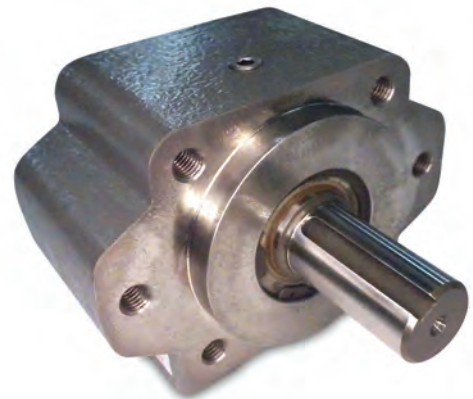
- Shortened Housing for Weight Reduction
- Speed Sensor Port



- DIN Splines
- Custom Splines



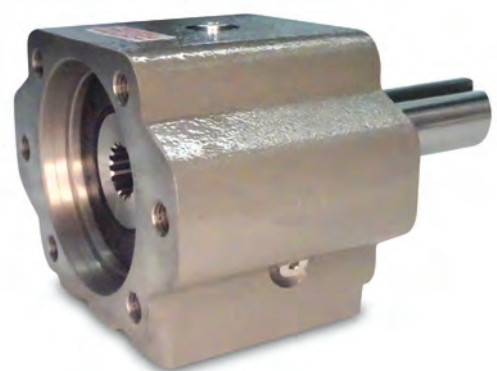
- Keyless Shaft for use with Keyless Locking Devices



- NPT Lube Port
- Retaining Ring for High Pressure Seal Retention

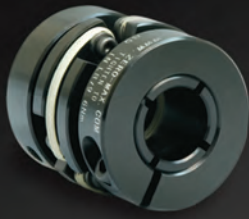


- Input Pilot
- O-Ring Seal



- SAE O-Ring Lube Ports Top and Side

# PRECISE. RELIABLE. ROBUST. AVAILABLE.



## CD® Couplings

High-performance couplings that outperform and outlast bellows and steel disc designs. The unique design of the composite disc enables the CD Couplings to withstand punishing applications and deliver high precision performance. Fully Customizable.



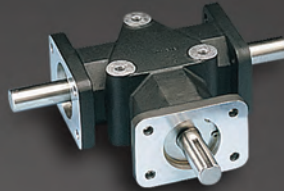
## Keyless Shaft Locking Devices

ETP® keyless connections and Posi-Lok® keyless bushings provide quick, easy and accurate assembly of mounted shaft components. Both inch and metric bore sizes are available from stock.



## ServoClass® Couplings

Designed for demanding servomotor applications. Zero backlash, high torsional stiffness, high speed design. Features flexible metal discs for high misalignment capacity and keyless clamp-type mounting hubs.



## Crown Gear Drives

Available in 5-sizes, 3 configurations, and with 1:1 and 2:1 ratios. High quality AGMA class 10 spiral bevel gears. Stainless steel shafts and either black anodized or IP65-Rated nickel-plated aluminum housing.



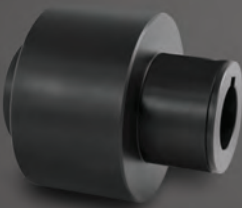
## Schmidt Offset Couplings

Designed to handle high amounts (up to 17") of parallel shaft offset with constant angular velocity. Standard models with torque capacities up to 459,000 in-lbs and extensive custom capabilities.



## Adjustable Speed Drives

Easy to install and maintenance free. Zero-Max® Drives offer infinitely variable speeds from 0 rpm to 1/4 of input rpm. 5 models with torque ranges from 12 in-lbs to 200 in-lbs.



## Overload Safety Couplings

Torque Tender® Couplings provide reliable overload protection in any mechanical power transmission system. Full selection of styles and sizes with set-point torque ranges from 3 to 3,000 in-lbs.



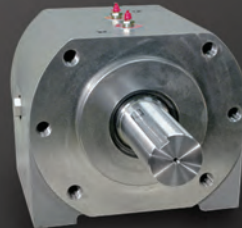
## Roh'Lix® Linear Actuators

Simple conversion of rotary motion into precise linear motion. Available in five models and multiple configurations. Roh'Lix actuators have thrust ratings from 5 to 200 lbs. All models feature built-in overload protection.



## Control-Flex Couplings

Zero backlash couplings designed for encoder and instrumentation type applications. Features high misalignment capacity, constant velocity, and an electrically isolated hub design.



## OHLA® Overhung Load Adaptors

Designed to protect hydraulic motors and pumps from radial/axial loads and to provide additional seal protection. 11 models available for mounts from SAE A to SAE F. Fully customizable.

Warranty. Zero-Max, Inc. the manufacturer, warrants that for a period of 12 months from date of shipment it will repair, or at its option, replace any new apparatus which proves defective in material or workmanship, or which does not conform to applicable drawings and specifications approved by the manufacturer. All repairs and replacements shall be F.O.B. factory. All claims must be made in writing to the manufacturer. ● In no event and under no circumstances shall manufacturer be liable for (a) damages in shipment; (b) failures or damages due to misuse, abuse, improper installation or abnormal conditions of temperature, dirt, water or corrosives; (c) failures due to operation, intentional or otherwise, above rated capacities, and (d) non-authorized expenses for removal, inspection, transportation, repair or rework. Nor shall manufacturer ever be liable for consequential and incidental damages, or in any amount greater than the purchase price of the apparatus. ● Zero Max, Inc. reserves the right to discontinue models or to change specifications at any time without notice. No discontinuance or change shall create any liability on the part of Zero-Max, Inc. in respect to its products in the hands of customers or products on order not incorporating such changes even though delivered after any such change. ● This warranty is in LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE TERMS OF THIS WARRANTY CONSTITUTE ALL BUYER'S OR USER'S SOLE AND EXCLUSIVE REMEDY, AND ARE IN LIEU OF ANY RIGHT TO RECOVER FOR NEGLIGENCE, BREACH OF WARRANTY, STRICT TORT LIABILITY OR UPON ANY OTHER THEORY. Any legal proceedings arising out of the sale or use of this apparatus must be commenced within 18 months of the date of purchase. ● CAUTION: Rotating equipment must be guarded. Also refer to OSHA specifications and recommendations. ● Zero-Max®, CD®, ETP®, ServoClass®, Torq-Tender®, Posi-Lok®, Roh'Lix®, and OHLA® are registered trademarks of Zero-Max, Inc. In U.S.A.

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