


Von Ruden Manufacturing, Inc.



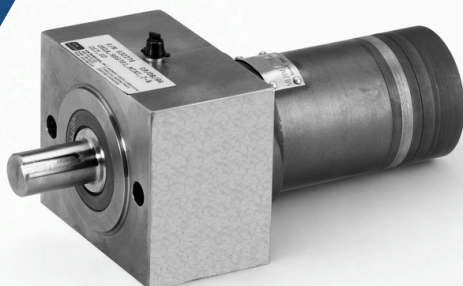
2026-01

FLUID POWER OVERHUNG LOAD ADAPTORS

 (763) 682-3122

 VRM.Sales@vonruden.com

 www.vonruden.com



**All Von Ruden products are 100%
manufactured and repaired in
Buffalo, Minnesota**

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Von Ruden Manufacturing, Inc.



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FLUID POWER
HYDRAULIC MOTORS

MECHANICAL
BEVEL GEARBOXES

TOOL PRODUCTS
DRIVEN TOOL HOLDERS

A family-owned, 100% American-made company with 80 years of experience designing, manufacturing, repairing, and distributing high-performance components. Our products include live and static tooling for machine tools, as well as hydraulic motors, brakes, load adaptors, and bevel gearboxes for mobile and industrial markets.

QUALITY THAT DRIVES – SINCE 1946

Founded in southern Minnesota, Von Ruden began as a tractor saw manufacturer and quickly grew into a leader in motion and power transmission. Today, we manufacture premium hydraulic motors, gearboxes, brakes, tooling, and precision accessories, all designed to meet diverse performance, pricing, and delivery needs. For 80 years, our name has stood for quality, reliability, and innovation.



Von Ruden was founded in 1946 in a small shed in Claremount, Minnesota.



Pictured Left to Right: Marketing Bennett Anderson, CEO Al Anderson, Administration Linda Anderson, and President Brandon Anderson.

RETURN TO FAMILY DRIVEN – SINCE 1989

In 1989, Von Ruden returned to family ownership when Al Anderson acquired the Power Components division from WSI. Relocating to Buffalo, MN, we focused on innovation, investing in cutting-edge technology. When market options didn't meet our standards, we engineered our own, launching into the driven tooling market in 1999. What began as an internal solution is now trusted by shops worldwide.

ENGINEERING THE FUTURE

The future of Von Ruden is built on the same core values that shaped our legacy: quality, innovation, and customer-focused solutions.

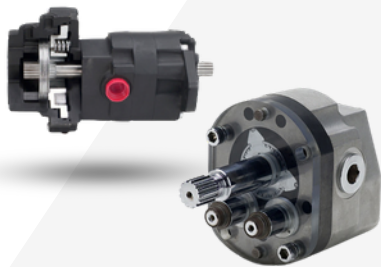
From factory floors to field applications, you'll find Von Ruden products making a difference.



All Von Ruden products are 100% manufactured and repaired in Buffalo, Minnesota

FLUID POWER HYDRAULIC MOTORS

ROL-SEAL® HYDRAULIC MOTORS



Unique rolling abutment design offers smooth low speed, high torque with a proven measurable difference. Compare with all others – gerotor, piston, and gear.

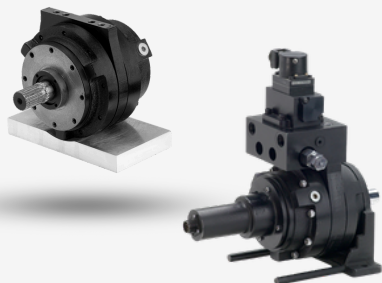
Specifications: (32 to 163cc)

- Seven displacements, 2 to 10 in³ /rev.
- SAE A, B and C flanges and shafts.

Benefits:

- Higher starting torque (92%)
- 10 - 3500 RPM
- Up to 61 gpm, 3750 psi, 4777 lb-in
- Increased vehicle gradeability.
- Less torque “ripple” and “droop.”
- More useable speed and long service life
- Double-ended shaft capability.

AXIAL VANE HYDRAULIC MOTORS



Ultimate hydraulic design for smooth, precise, repeatable positioning applications such as robotics.

Specifications: (16 to 115cc)

- Five displacements, 1 to 7 in³ /rev.
- Options include tach generator, dual relief valves and rear shaft extension.

Benefits:

- High Starting Torque (97%)
- 10 - 3000 RPM
- Up to 46 gpm, 3000 psi, 2229 lb-in
- Accurate, repeatable positioning.
- Rigid for accuracy
- Smooth, balanced speed control
- Fewer wearing parts, exceptional life.

OVERHUNG LOAD ADAPTORS



“Bearing Blocks” Increase hydraulic motor shaft load capacity and motor life.

Specifications:

- 5/8"- 1-3/4" Shaft Diameters
- Ball or tapered bearings
- Grease, oil, or feed lubrication
- 7 Model Series (MINI, SAE A - C)
- 2-Bolt / 4-Bolt mounted frames
- Keyed and splines shaft options

Benefits:

- Increase hydraulic motor life and radial/thrust loads.
- Easily remove or install hydraulic motors.
- Can be used to protect from motor shaft seal leak contamination.

INTEGRAL ACCESSORIES



- Planetary Gearboxes
- Rear Mounted Integral Brake
- Radial Load Adaptor
- Manifold Mounting
- Rear Mounted Tach Packages
- Rear Mounted Shaft Extensions
- Duel Relief Valve Options

All Von Ruden products are 100% manufactured and repaired in Buffalo, Minnesota

WHY CHOOSE VON RUDEN?



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Overhung Load Adaptors

- Bodies are made of quality 35,000 tensile strength cast iron material for dependability.
- All models are drilled with correct holes for mounting (SAE or Industry Standard) using 2 or 4 bolt flanges. Bases are machined, drilled and threaded for foot mounting on every standard model. Features to make installation and designing easier for you.
- Quality high speed ball bearings are used on all smaller units. Heavy duty tapered roller bearings will give performance, durability for smooth operation and long life on larger units giving the assurance of solid performance for you or your customers.
- Instructions for mounting included.
- Painted.
- All standard shafts use 4140 steel for trouble free operation. Input shafts are in sizes from the miniseries .626 inches [15,90 mm] to the SAE C-C 1.750 inches [44,45 mm].
- Output shafts are in sizes from the Mini-Series .750 inches [19,05 mm] to the SAE C-C 1.750 inches [44,45 mm].
- Spline shafts for input and output are available in several configurations depending on model size.
- Hollow bore shafts are available on several models.
- Gaskets/mounting seals provided for input.
- Specials available upon request.



See following catalog pages for complete dimensional, technical, operational and model numbers for making your selection.

Note: Users must shield all moving parts and fill each with a proper lubricant.

Selecting the Correct OLA



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Overhung Load Adaptors

Select the correct flange size, from SAE or other industry standard styles shown in this catalog.
(For styles not shown in this catalog, reach out to Von Ruden for special units).

HP = Transmitted Horsepower

N = RPM of Shaft on Adaptor

R = Radius of Sprocket, Pulley, or Gear in Inches

F = Load Connection Factor

- 1.0 Single Chains
- 1.10 Timing Belts
- 1.25 All Gears or Double Chains
- 2.5 Flat Belts



$$\text{OHL (LBS)} = \frac{63,025 \times \text{HP} \times \text{F}}{\text{N} \times \text{R}}$$

Bearing Life Ratings (L_{10})

Rating Life, L_{10} , is the life that 90 percent of a group of apparently identical bearings will complete or exceed before reaching a defined failure criteria. The average bearing life can reach 4 to 5 times the L_{10} life. The unit of life is expressed in hours.

Calculation and Application Design Considerations

When you double the SPEED, life is reduced by one-half, reducing SPEED one-half doubles the life. Double the LOAD, life is reduced to about 1/10th, reduce LOAD 1/2 and life increases ten times.

Recommended Lubricants and/or Lubricating Systems

Grease:

Lubrication may be used for continuous bearing speeds up to 2,500 FPM [762 MPM] rib speed. Grease lubrication has very limited capacity to dissipate heat. It is also difficult to provide a continuous supply of lubricant to the roller-rib contact at high speed operation.

Static Oil:

This method of lubrication is used successfully for speeds up to 3,500 FPM [1,067 MPM] rib speed. Increased contact of lubricant with the housing results in an improved means of dissipating heat over grease lubrication.

Forced Feed Oil Systems:

Bearing speeds above 5,000 FPM [1,524 MPM] rib speed generally require a circulating oil system. Because centrifugal forces tend to starve the roller-rib contact area of lubricant. The main problem with running faster is getting lubricant to where it is needed.

Overhung Load Adaptors

Lubrication requirements for speeds and temperatures.

All Von Ruden Overhung Load Adaptors Are Shipped Without Lubrication.

- Speeds under 1800 RPM, use 80/90 wt. oil or circulating lube oil system.
- Speeds 19800 or 2400 RPM, use low viscosity oil or circulating lube oil system.
- Speeds over 2400 RPM require circulating lube oil systems and possible coolers.

Ambient Temperature	Lubricant
(-20° F to 0° F)	Mobil super 10W-30
(0° F to 40° F)	Mobilube HP 80W-90
(40° F to 100° F)	Mobilube HD 80W-90
(100° F to 150° F)	Mobilube HD 85W-140

Model Series	Description	*Recommended Model Amount in Horizontal Position	Maximum Displacement/Volume
Mini Series	2 Bolt with Standard Duty Ball Bearings	1.50 oz. (.044 Liters)	5.42 Cubic Inches/3.00 oz. [88.83 Cubic Centimeters]
SAE 'A'	2 Bolt with Standard Duty Ball Bearings	1.70 oz. (.050 Liters)	6.00 Cubic Inches/3.40 oz. [98.34 Cubic Centimeters]
SAE 'A'	2 Bolt with Heavy Duty Ball Bearings	1.25 oz. (.037 Liters)	4.50 Cubic Inches/2.5 oz. [73.75 Cubic Centimeters]
Special Industry Standard	4 Bolt with 2.5 Inch Pilot with Standard Duty Ball Bearings	1.70 oz. (.050 Liters)	6.00 Cubic Inches/3.40 oz. [98.34 Cubic Centimeters]
SAE 'A'	4 Bolt with Heavy Duty Tapered Bearings	2.35 oz. (.069 Liters)	8.63 Cubic Inches/4.70 oz. [141.45 Cubic Centimeters]
SAE 'B'	2/4 Bolt with Heavy Duty Tapered Bearings	2.35 oz. (.069 Liters)	8.63 Cubic Inches/4.70 oz. [141.45 Cubic Centimeters]
SAE 'C'	2/4 Bolt with Heavy Duty Tapered Bearings	3.44 oz. (.102 Liters)	12.40 Cubic Inches/6.88 oz. [203.24 Cubic Centimeters]
SAE 'C-C'	2/4 Bolt with Heavy Duty Tapered Bearings	4.25 oz. (.125 Liters)	15.30 Cubic Inches/8.50 oz. [250.77 Cubic Centimeters]

*Special Mounting Note

When mounting the overhung load adapter in the vertical position or any other position that the shaft is at a 30° or greater tilt, a forced feed oil system is recommended. If that is not an option, an outside vented reservoir with sufficient lubrication capacity connected to one of the fill ports that has an oil level above the highest bearing may offer proper lubrication if speeds are within parameters listed above in recommended lube specifications.

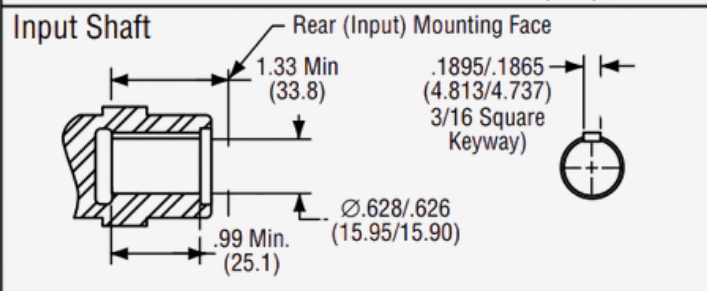
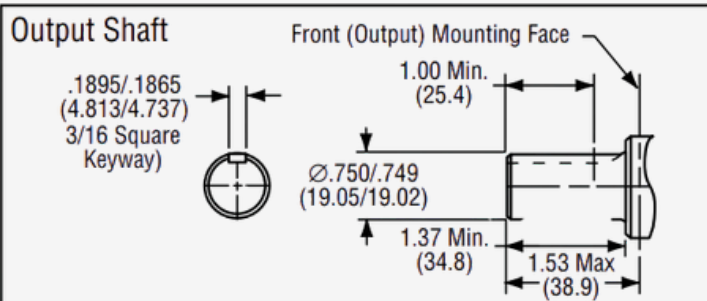
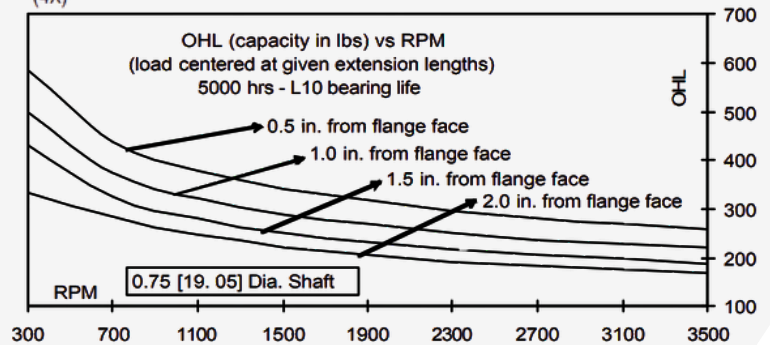
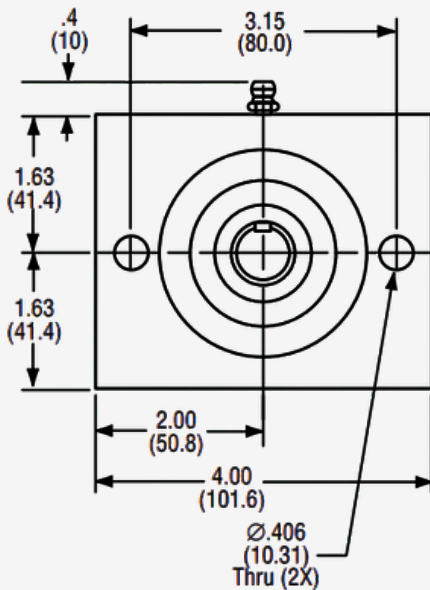
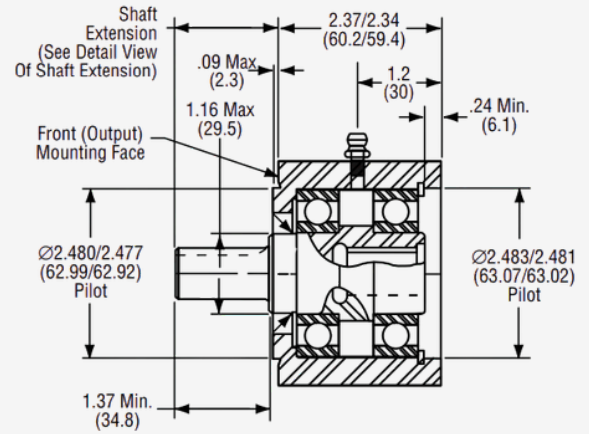
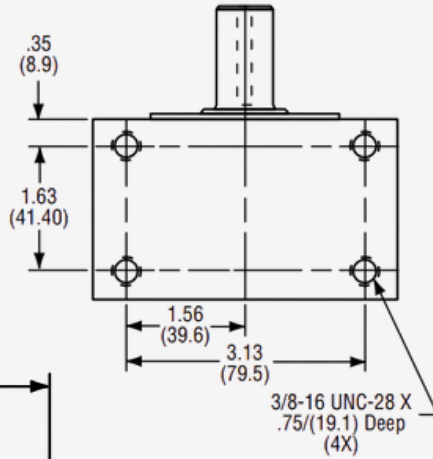
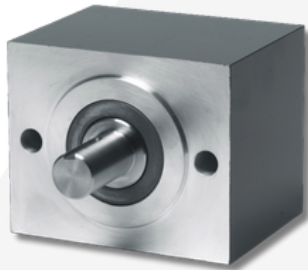
MINI SERIES 2 BOLT



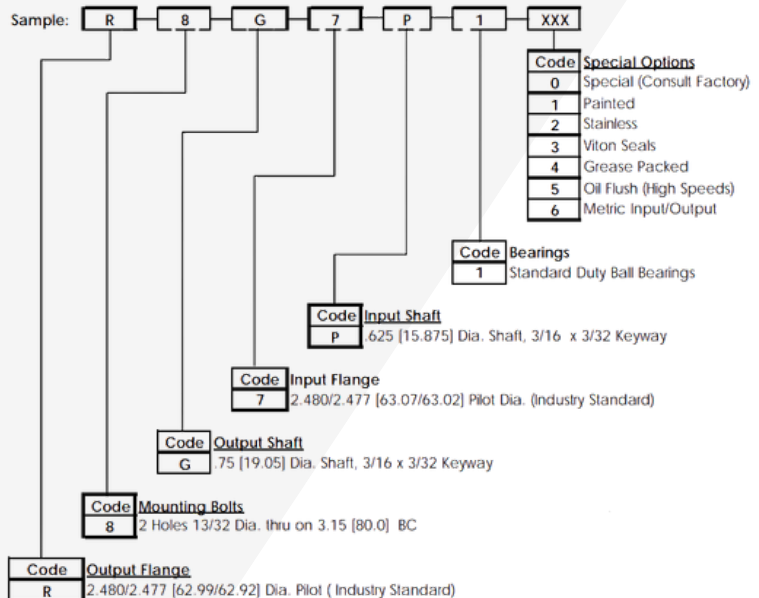
Overhung Load Adaptors

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MINI SERIES 2 - BOLT - STANDARD DUTY BALL BEARINGS



Ordering Information



Approx. Weight: 6 lbs. (2.2 kg.)

Dimensions: Inch (MM)

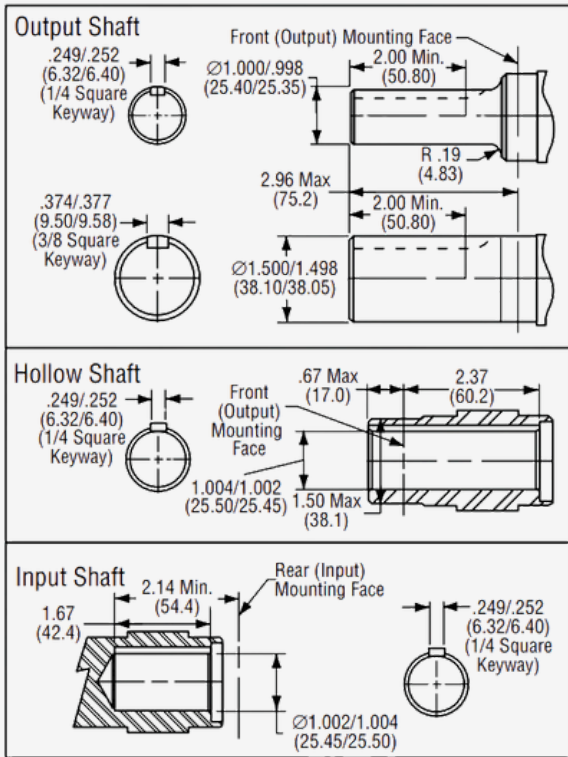
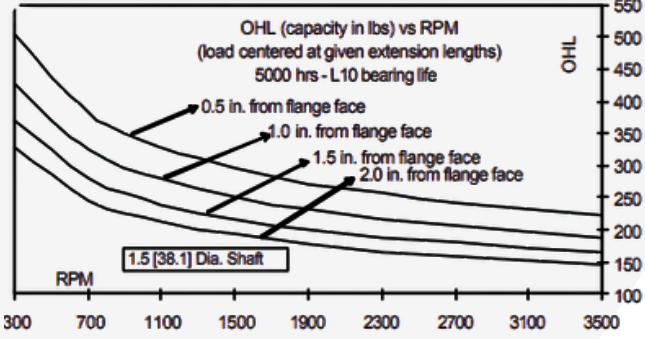
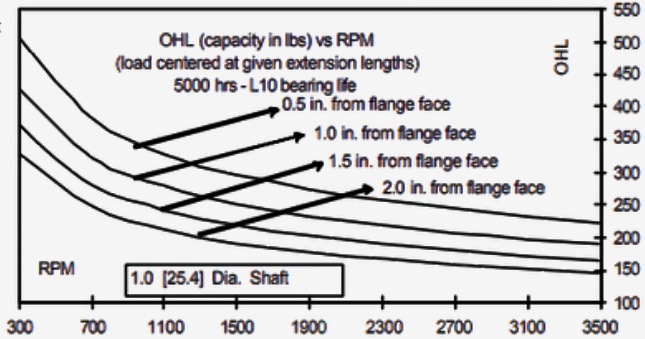
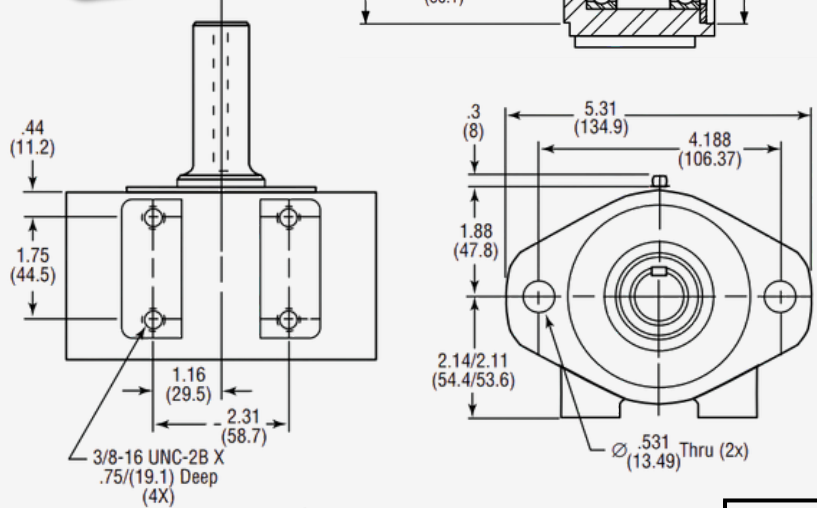
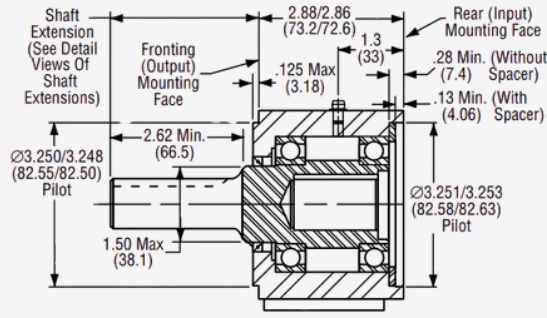
SAE A 2 BOLT

Overhung Load Adaptors



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SAE A 2 BOLT FLANGE - STANDARD DUTY BALL BEARINGS



Ordering Information

Sample: **A** **2** **A** **1** **C** **1** **XXX**

- Code Special Options**
 - 0 Special (consult factory)
 - 1 Painted
 - 2 Stainless
 - 3 Viton Seals
 - 4 Grease Packed
 - 6 Metric Input/Output
- Code Bearings**
 - 1 Standard Duty Ball Bearings
- Code Input Shaft**
 - C 1.00 [25.4] Dia. Shaft, 1/4 x 1/8 Keyway
 - G 0.75 [19.05] Dia. Shaft, 3/16 x 3/32 Keyway
 - X Hollow thru Shaft, see output shaft code
- Code Input Flange**
 - 1 SAE "A" Flange (Order spacer #11351 when 1/8" deep pilot is require)
- Code Output Shaft**
 - A 1.00 [25.4] Dia. Shaft, 1/4 x 1/8 Keyway
 - C 1.50 [38.1] Dia. Shaft, 3/8 x 3/16 Keyway
 - D 1.00 ID (Hollow) thru Shaft, 1/4 x 1/8 Keyway
 - G 0.75 [19.05] Dia. Shaft, 3/16 x 3/32 Keyway
- Code Mounting Bolts**
 - 2 2 Holes 17/32 Dia. thru on 4-3/16 [106.363] BC
- Code Output Flange**
 - A SAE "A" FLANGE

Approx. Weight: 11 lbs. (4.99 kg.)
Dimensions: Inch (MM)

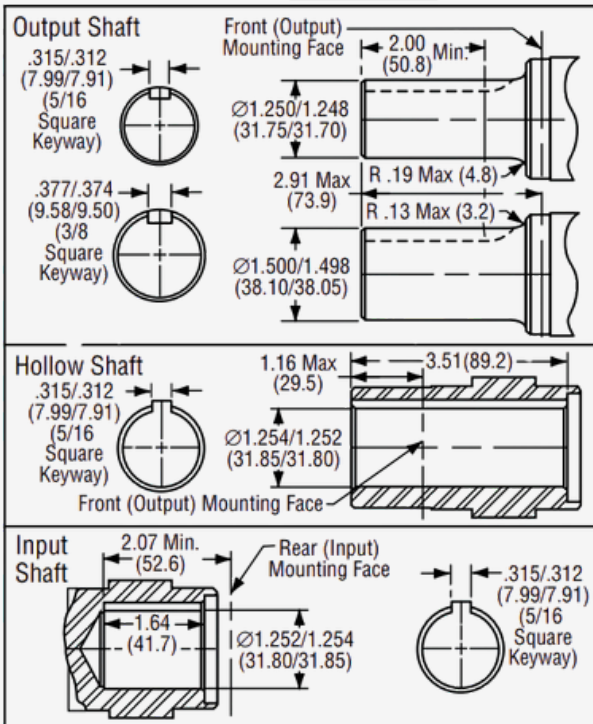
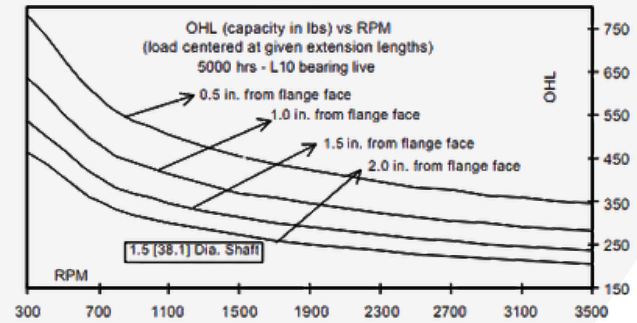
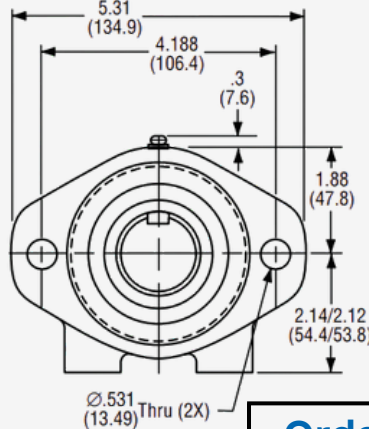
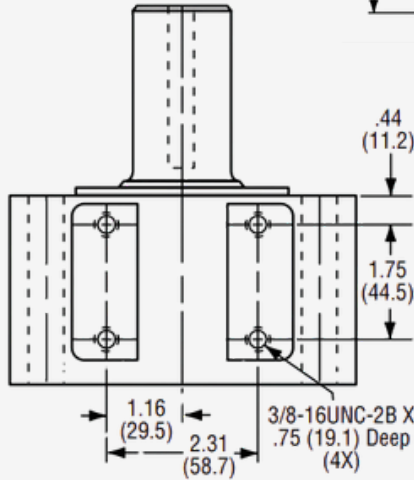
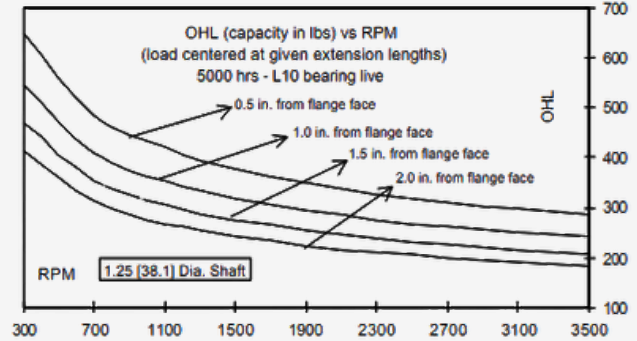
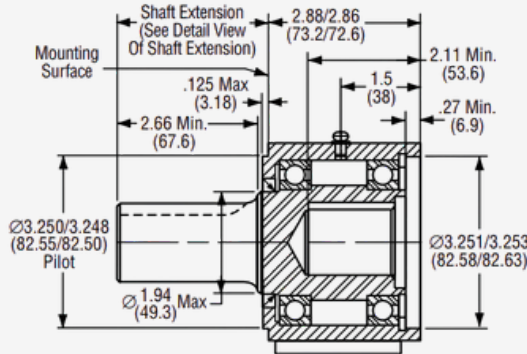
SAE A 2 BOLT

Overhung Load Adaptors

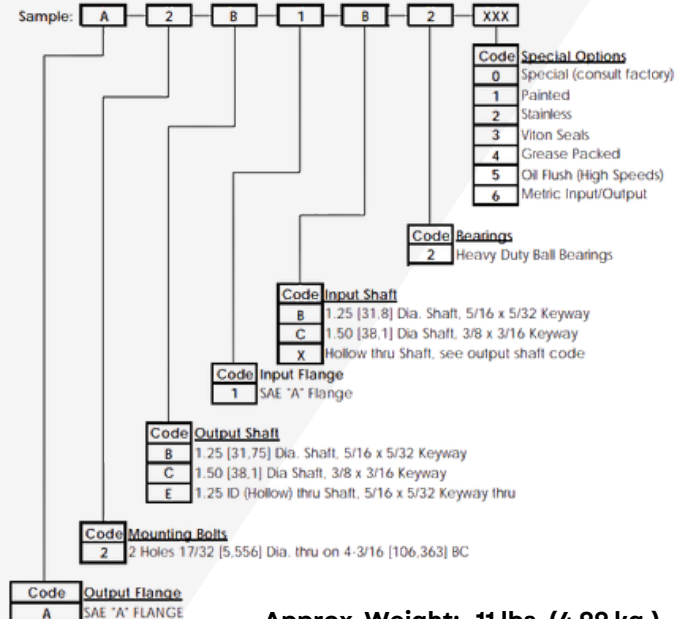


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SAE A 2 BOLT FLANGE - HEAVY DUTY BALL BEARINGS



Ordering Information



Approx. Weight: 11 lbs. (4.99 kg.)

Dimensions: Inch (MM)

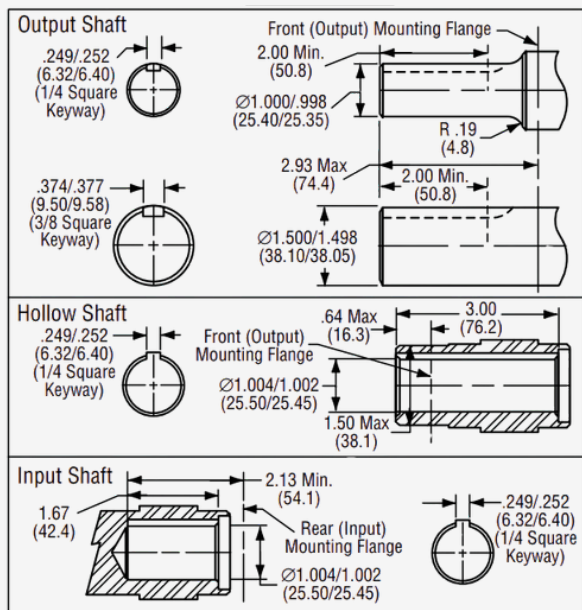
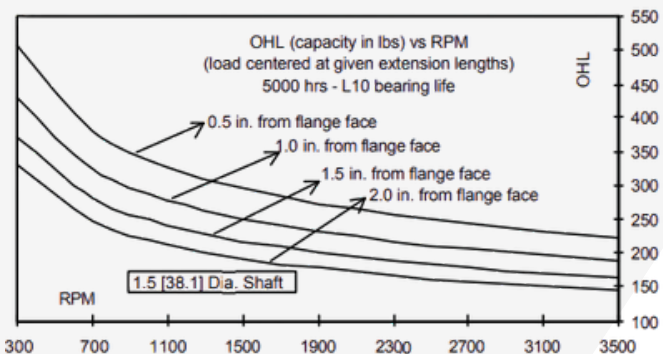
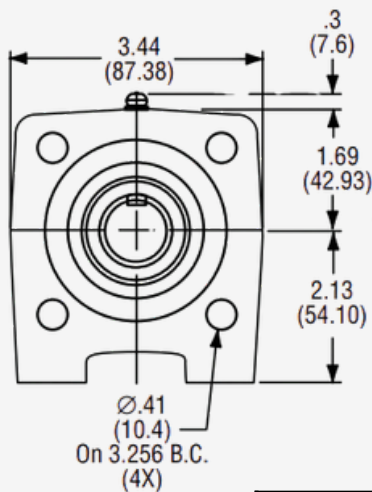
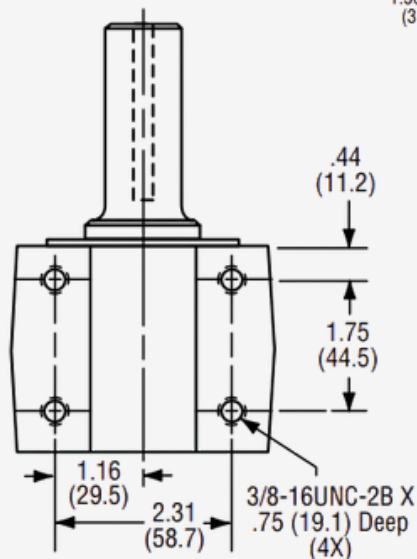
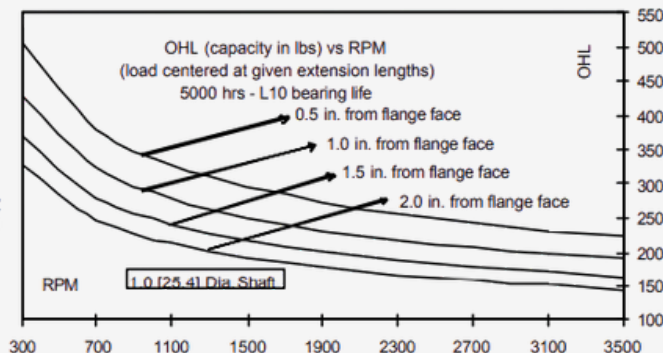
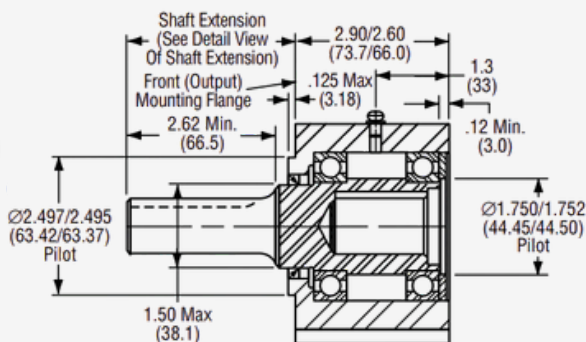
MODEL 4 BOLT

Overhung Load Adaptors

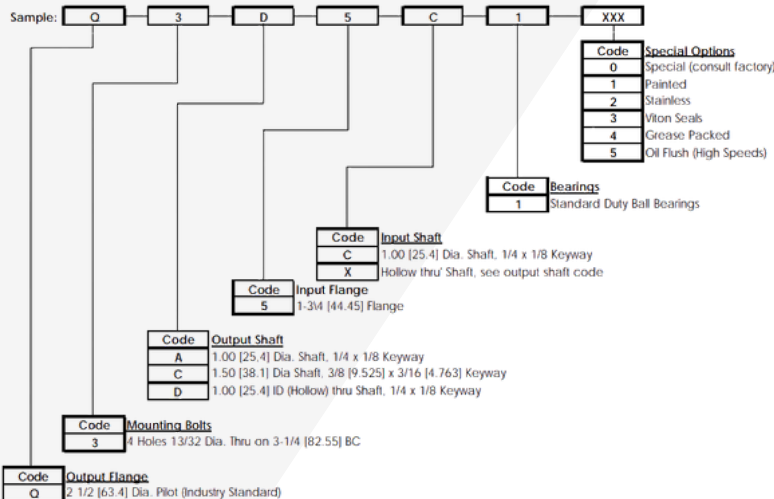


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Model 4 Bolt - 2.5" Pilot - Standard Duty Ball Bearings



Ordering Information



Approx. Weight: 10 lbs. (4.53 kg.)

Dimensions: Inch (MM)

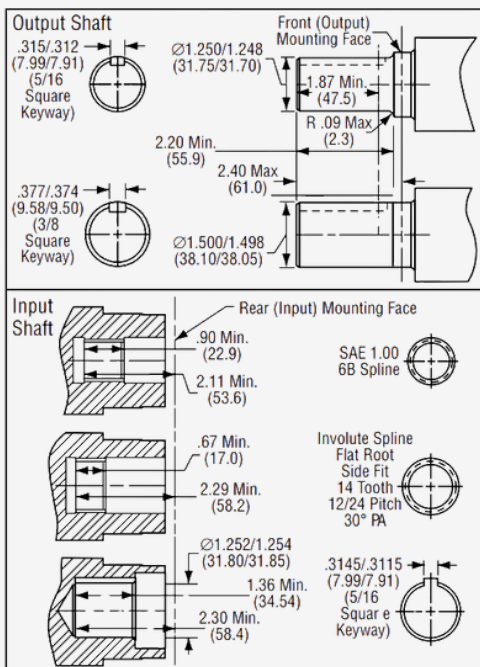
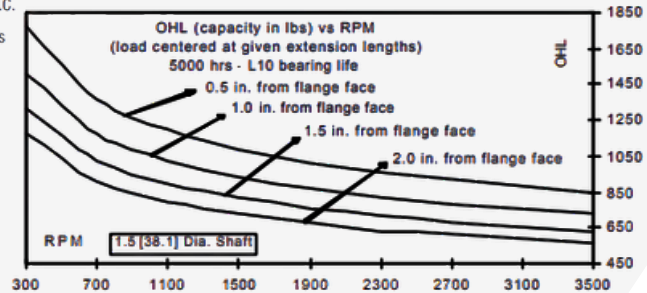
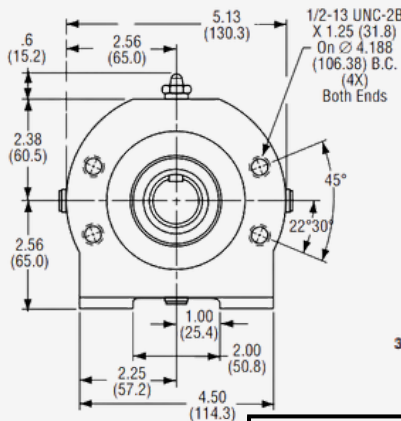
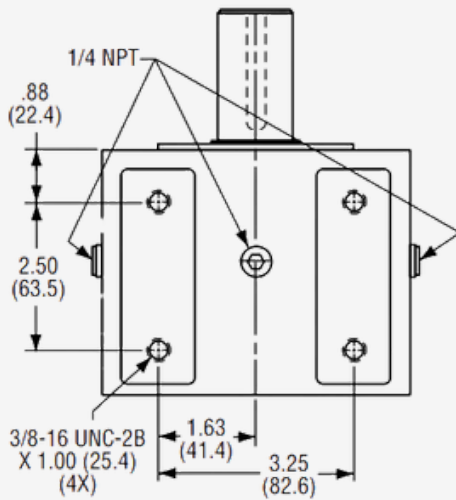
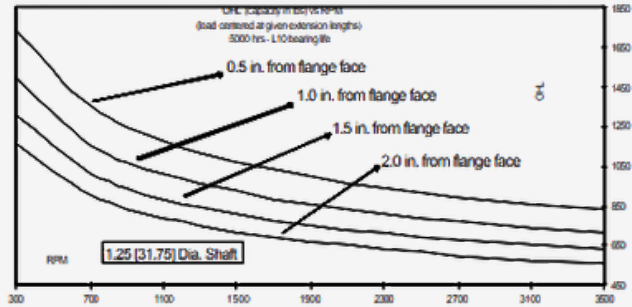
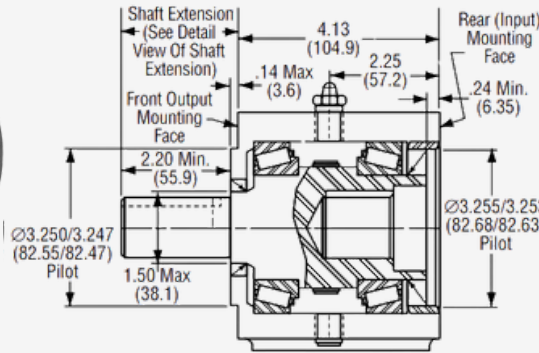
SAE A 4 BOLT

Overhung Load Adaptors



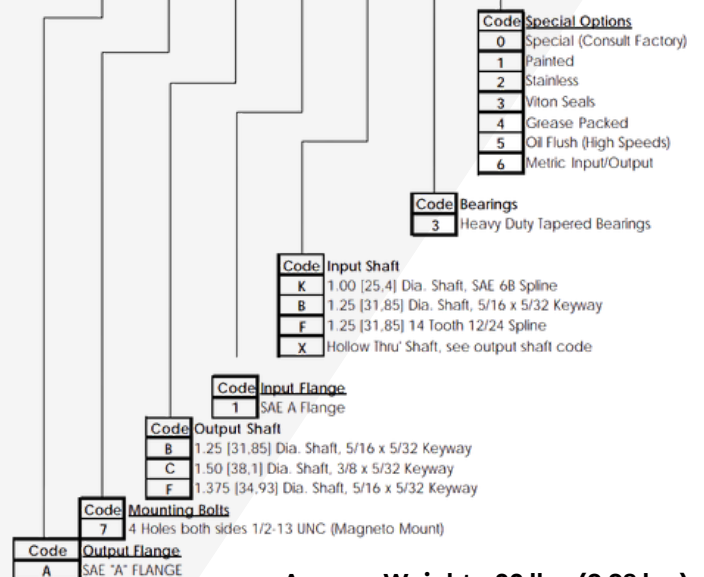
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SAE A 4 Bolt Flange - Heavy Duty Tapered Bearings



Ordering Information

Sample: A 7 B 1 F 3 XXX



Approx. Weight: 22 lbs. (9.98 kg.)

Dimensions: Inch (MM)

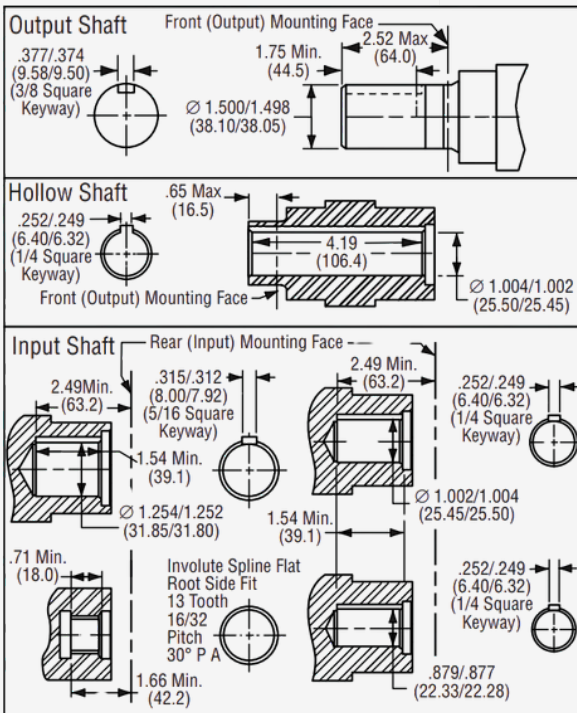
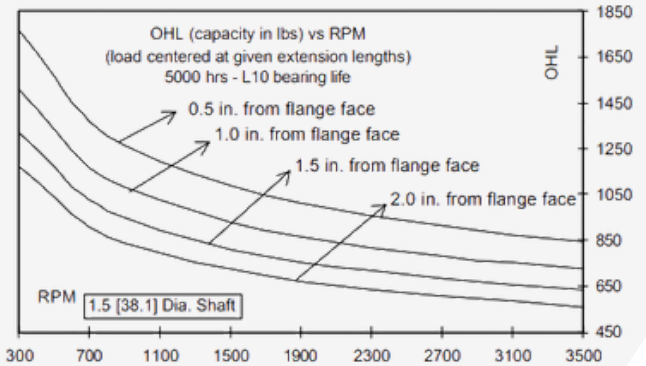
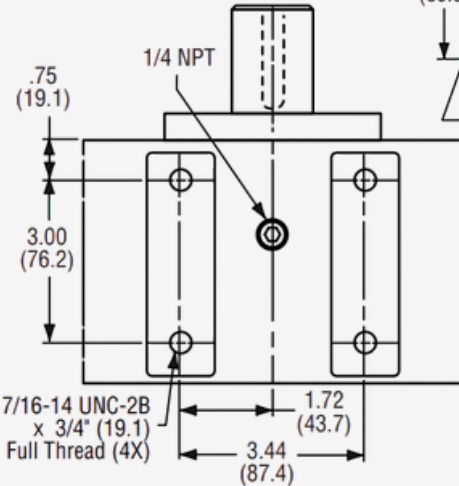
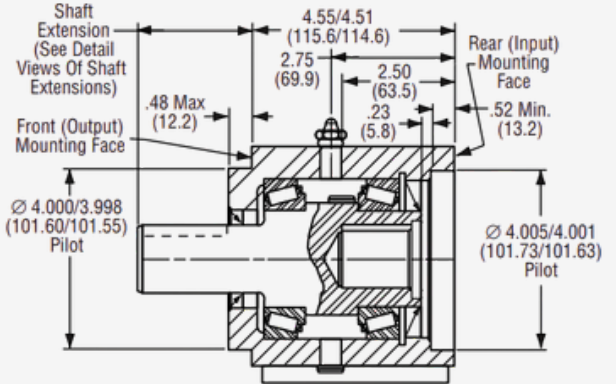
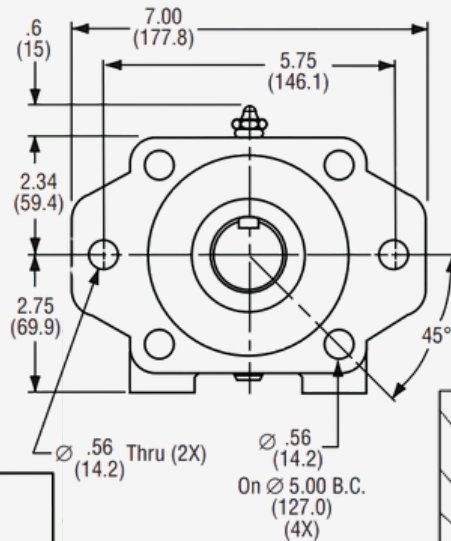
SAE B 2/4 BOLT

Overhung Load Adaptors

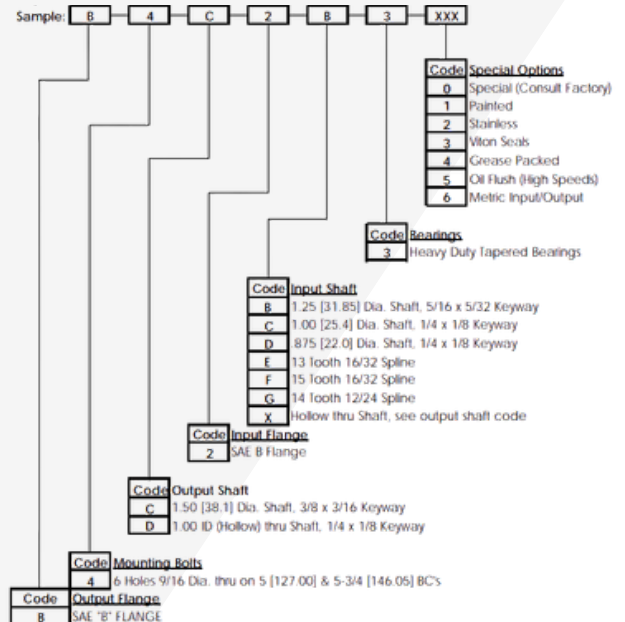


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SAE B 2/4 Bolt - Heavy Duty Tapered Bearings



Ordering Information



Approx. Weight: 30 lbs. (13.61 kg.)
Dimensions: Inch (MM)

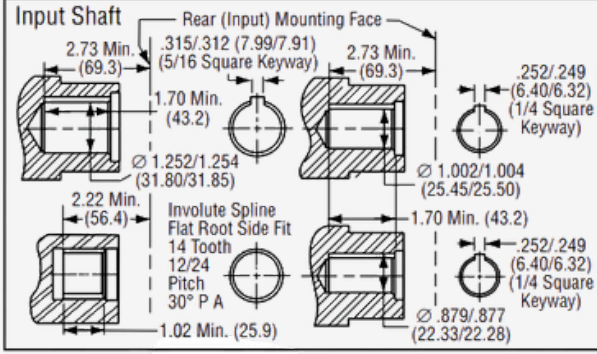
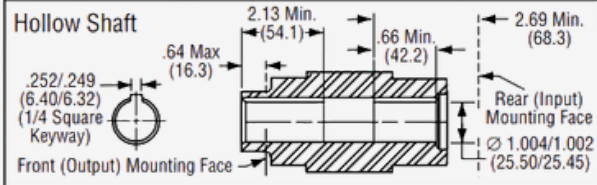
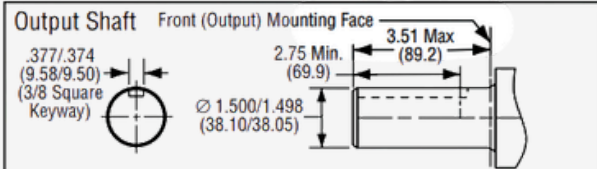
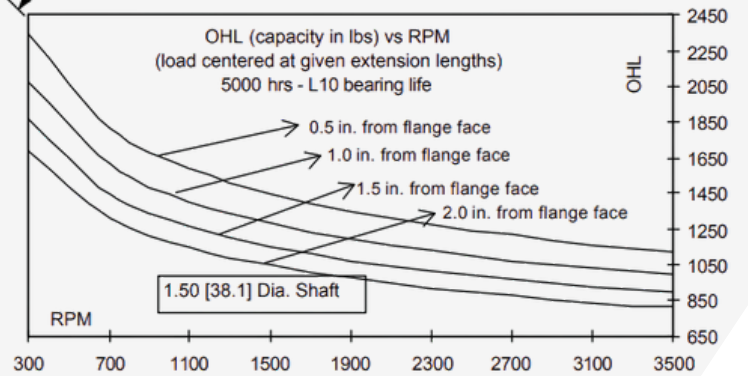
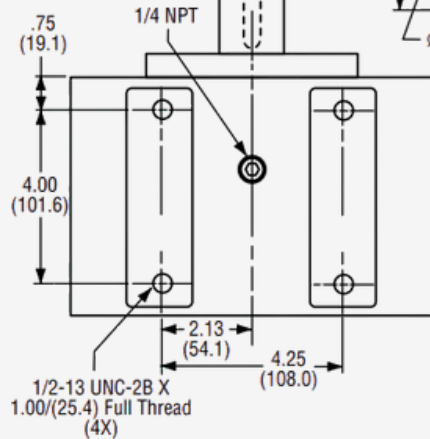
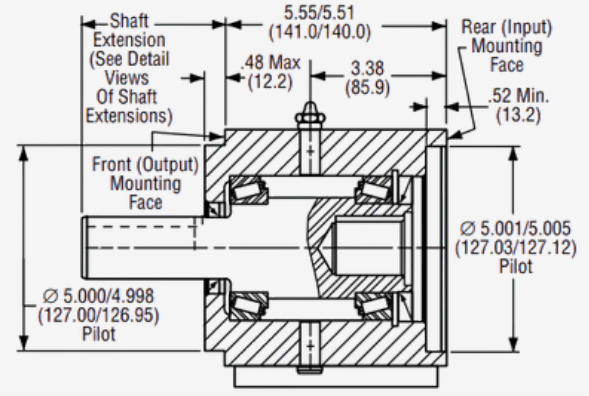
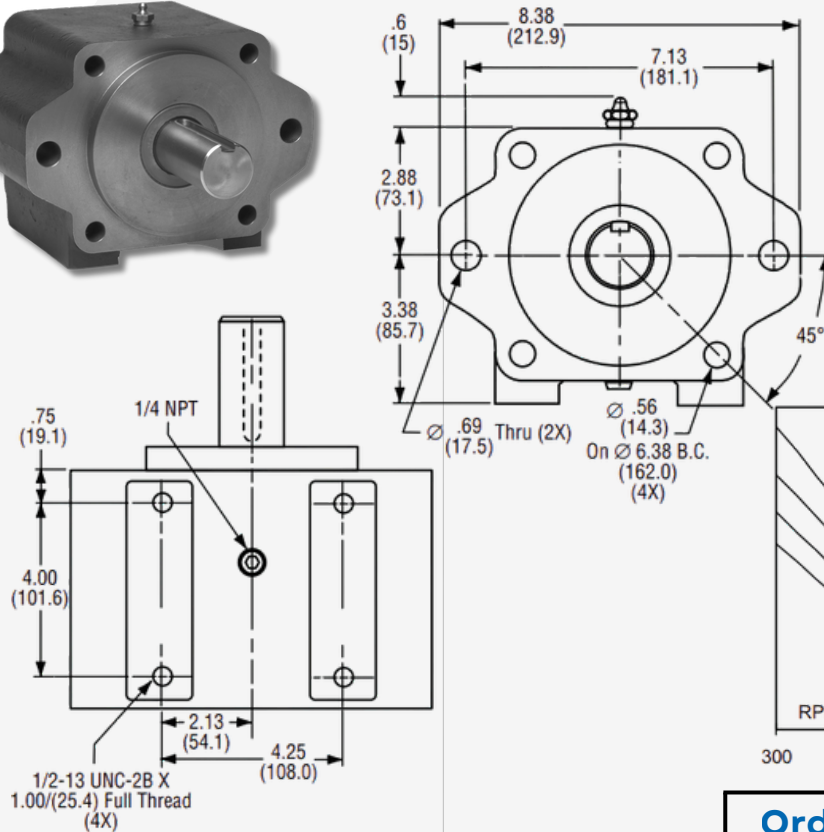
SAE C 2/4 BOLT

Overhung Load Adaptors

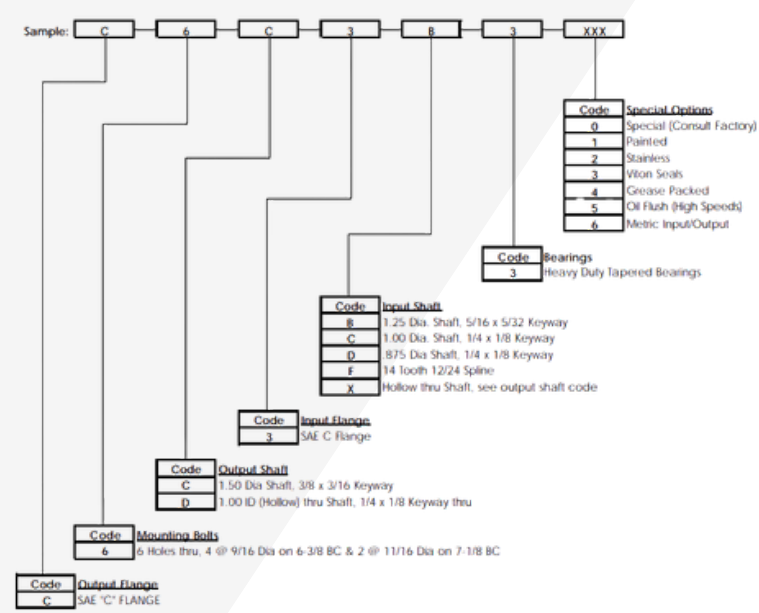


2026-01

SAE C 2/4 Bolt Flange - Heavy Duty Tapered Bearings

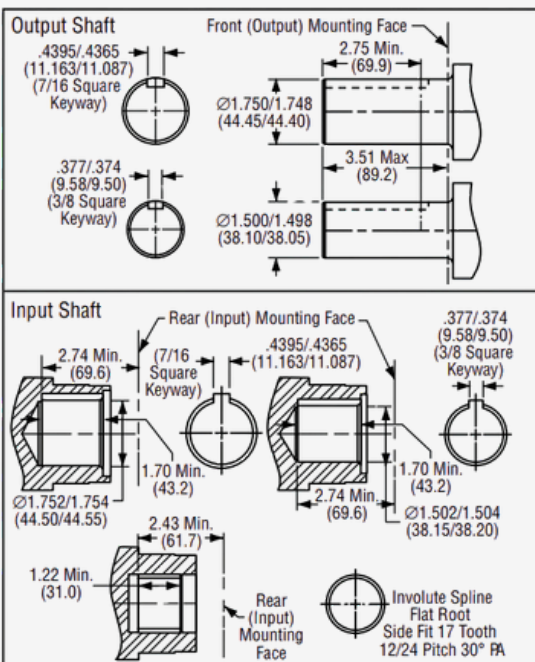
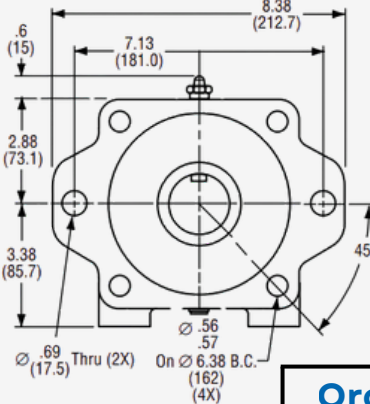
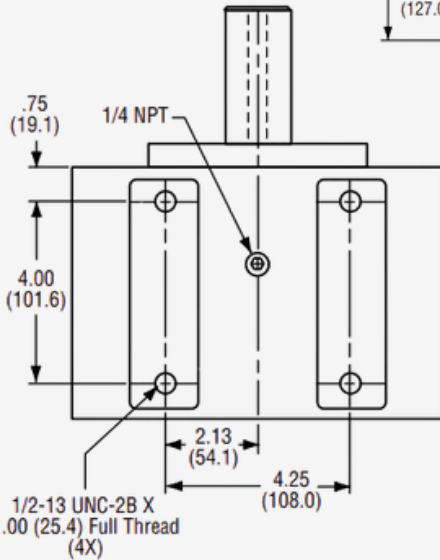
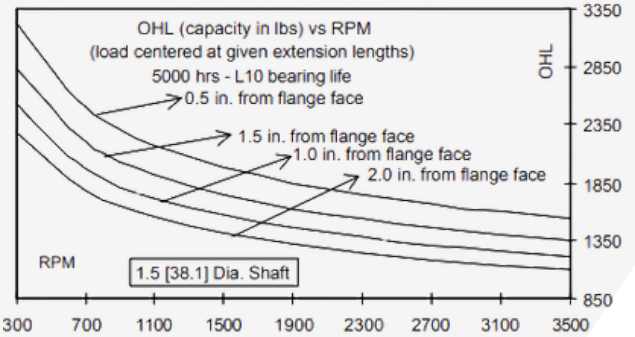
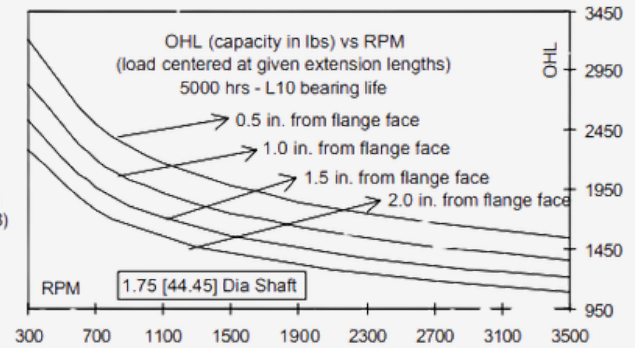
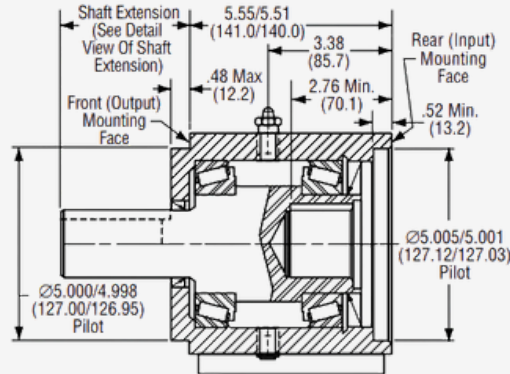


Ordering Information



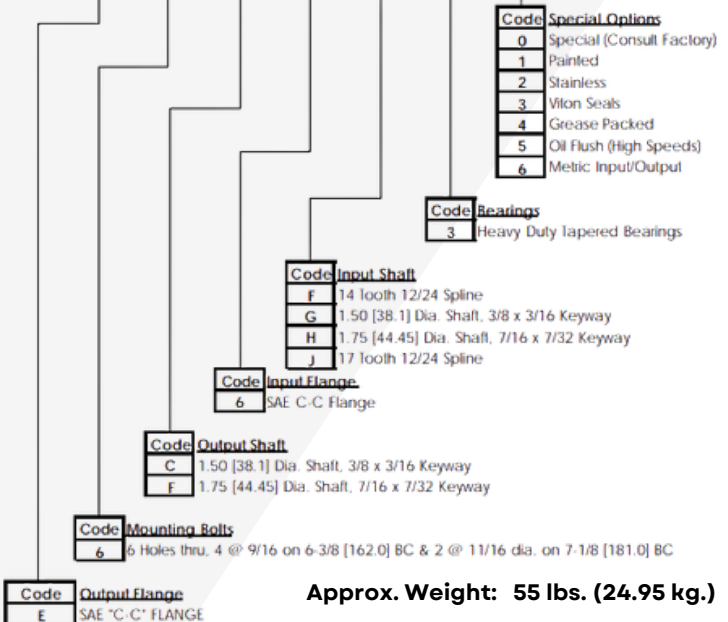
Approx. Weight: 55 lbs. (24.95 kg.)
Dimensions: Inch (MM)

SAE C-C - Heavy Duty Tapered Bearings



Ordering Information

Sample: E 6 F 6 H 3 XXX



Approx. Weight: 55 lbs. (24.95 kg.)

Dimensions: Inch (MM)

FLUID POWER HYDRAULIC MOTORS

ROL-SEAL®



- Displacements: 2-10 in³
- Motor Series: SAE "A" "B" "C"
- Rotary Abutment Advantage
- Integral Brake/Planetary Gearbox

AXIAL VANE



- Displacements: 1-7 in³
- 97% Efficiency
- Mechanically Stiff Rotor/Shaft
- Integral Brake/Planetary Gearbox

OVERHUNG LOAD ADAPTOR



- 7 Model Series
- SAE "A" "B" "C"
- 2 or 4 Bolt Mounting
- Standard/Heavy Duty Bearings

MECHANICAL RIGHT ANGLE BEVEL GEARBOXES

MODELS



- 9 Model Series
- 2-4 Shaft Configurations
- SAE Motor Mount Flange

OPTIONS



- Up to 200 Horsepower
- Ratio Options: 1:1-3/3-1:1
- Spiral or Straight Cut Gears

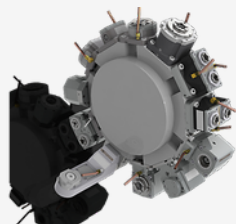
DESIGN



- All Components Machined
- Press Fit Internal Components
- Shimmed for Backlash

TOOL PRODUCTS DRIVEN TOOL HOLDERS

BRANDS



- DMG MORI
- DN SOLUTIONS
- HAAS
- MAZAK
- OKUMA

OPTIONS



- BMT & VDI Mounting
- Face/OD Machining
- Ratio Options: 1:1 / 1:2 / 2:1
- 500/1500 PSI Through Coolant
- Multiple Spindle Options

DESIGN



- Machine Specific Designs
- ER Recessed Spindles
- Industry leading Bearing Capacity
- ABEC 7/9 Spindle Bearings
- ICL Mechanical Sealing Systems

All Von Ruden products are 100% manufactured and repaired in Buffalo, Minnesota