




WAKEFIELD THERMAL

ALVES UNIVERSAL JOINTS

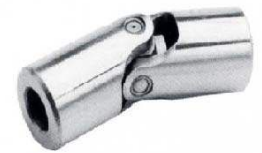
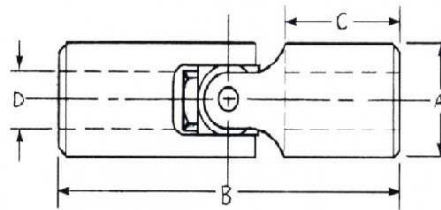


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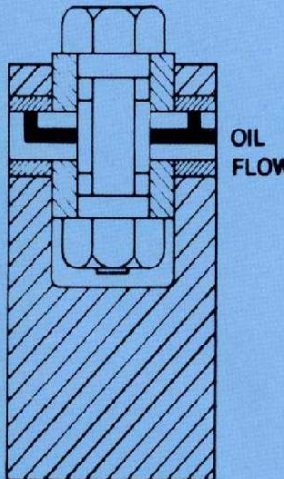
www.Wakefield-Vette.com

Alves Blue Block Universal Joints... *split block design makes the difference...*

Built Better and cost less... the ultimate products in motion linkage. All wear parts are heat treated for increased life. The *split block* design provides a positive lubrication reservoir for long life and low wear. The pins move resistance free within the bushings, while the bushings remained fixed with the yokes. Standard joints produced from high-grade alloy steel for extra durability and each part of the same joint is completely interchangeable. All parts are produced to extremely close tolerances, and fitted exactly to meet the most rigid backlash requirements. The Blue Block design is available in stainless steel, with keyways and with many custom configurations. Protective coverings are also available for use in contaminated atmospheres.



OIL FLOW SYSTEM



Note how the unique construction of the split block forms a lubrication chamber.

The oil enters through the oil hole in one pin and into the reservoir. As the speed is increased, oil is thrown centrifugally to thoroughly lubricate each pin and bushing.

| Single Joints | | SPECIFICATIONS OF STANDARD JOINTS | | | | | | | |
|-----------------------------------|------------|-----------------------------------|----------|--------|------------|--------------|-------------------|---------------------------------|--|
| CAT NO | CAT NO | A O.D. | B LENGTH | D BORE | D MAX BORE | C HOLE DEPTH | APPROX WEIGHT LBS | STATIC BREAKING TORQUE INCH/LBS | |
| SOLID HUBS | BORED HUBS | 0 | + - 1/32 | 0.002 | 0.002 | x | | | |
| | | -0.015 | | -0.001 | -0.001 | | | | |
| BS-375 | BB-375 | 3/8 | 1-3/4 | 3/16 | 1/4 | 19/32 | .09 | 150 | |
| BS-500 | BB-500 | 1/2 | 2 | 1/4 | 3/8 | 19/32 | .12 | 410 | |
| BS-625 | BB-625 | 5/8 | 2-1/4 | 5/16 | 1/2 | 23/32 | .25 | 890 | |
| ABOVE JOINTS DO NOT HAVE BEARINGS | | | | | | | | | |
| BS-750 | BB-750 | 3/4 | 2-11/16 | 3/8 | 5/8 | 7/8 | 0.31 | 1,500 | |
| BS-875 | BB-875 | 7/8 | 3 | 7/16 | 11/16 | 1 | 0.5 | 1,650 | |
| BS-1000 | BB-1000 | 1 | 3-3/3 | 1/2 | 3/4 | 1-1/8 | 0.62 | 3,000 | |
| BS-1125 | BB-1125 | 1-1/8 | 3-1/2 | 9/16 | 7/8 | 1-1/8 | 0.87 | 3,500 | |
| BS-1250 | BB-1250 | 1-1/4 | 3-3/4 | 5/8 | 1 | 1-1/8 | 1.13 | 5,400 | |
| BS-1500 | BB-1500 | 1-1/2 | 4-1/4 | 3/4 | 1-1/8 | 1-1/8 | 1.75 | 8,800 | |
| BS-1750 | BB-1750 | 1-3/4 | 5 | 7/8 | 1-1/4 | 1-7/16 | 2.93 | 14,500 | |
| BS-2000 | BB-2000 | 2 | 6 | 1 | 1-1/2 | 1-13/16 | 4.5 | 22,000 | |
| BS-2500 | BB-2500 | 2-1/2 | 7 | 1-1/4 | 1 3/4 | 1-7/8 | 7.25 | 31,500 | |
| BS-3000 | BB-3000 | 3 | 9 | 1-1/2 | 2 | 2-15/16 | 15.5 | 55,000 | |
| BS-4000 | BB-4000 | 4 | 10-5/8 | 2 | 2-1/2 | 3-1/2 | 35.5 | 127,000 | |

DOUBLE U-JOINTS FOR MORE ANGULAR FLEXIBILITY AVAILABLE IN ABOVE SIZES

Repair Kits

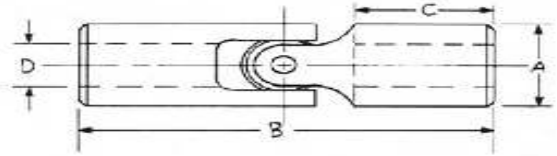
Alves on site repair kits can be used to repair any size Blue Block U-Joint. Each kit contains (4) bushings, (3) solid bushing pins, (1) oilier bushing pin, (2) centering blocks, (1) nut and (1) bolt



Alves Solid Block Universal Joints

Qualified to MIL-U-20625A, Other MIL Specs On Request

Standard pin and block type manufactured from high-grade alloy steel for extra durability, strength and long life. Ideal for angles up to 25 degrees and speeds to 1750 rpm. Available for greater angles and higher speeds; with heat-treated yokes and matched components for heavy-duty applications; and with round, hex, splined, or keyway bores. Also available in stainless steel alloys, bronze and other materials for corrosive, sanitation or similar applications.



| Single Joints | | Specifications Of Standard Joints | | | | | | |
|---------------|------------|-----------------------------------|----------|--------------|--------------|--------------|-------------------|---------------------------------|
| CAT NO | CAT NO | A O.D. | B LENGTH | D BORE | D MAX BORE | C HOLE DEPTH | APPROX WEIGHT LBS | STATIC BREAKING TORQUE INCH/LBS |
| SOLID HUBS | BORED HUBS | 0 -0.015 | | 0.002 -0.001 | 0.002 -0.001 | 0.03125 | | |
| SS-375 | SB-375 | 3/8 | 1-3/1 | 3/16 | 1/1 | 19/32 | 0.09 | 150 |
| SS-500 | SB-500 | 1/2 | 2 | 1/4 | 3/8 | 19/32 | 0.12 | 410 |
| SS-625 | SB-625 | 5/8 | 2-1/4 | 5/16 | 1/2 | 23/32 | 0.25 | 890 |
| SS-750 | SB-750 | 3/4 | 2-11/16 | 3/8 | 5/8 | 7/8 | 0.31 | 1,500 |
| SS-875 | SB-875 | 7/8 | 3 | 7/16 | 11/16 | 1 | 0.5 | 1,650 |
| SS-1000 | SB-1000 | 1 | 3-3/8 | 1/2 | 3/4 | 1-1/8 | 0.62 | 3,000 |
| SS-1125 | SB-1 25 | 1-1/8 | 3-1/2 | 9/16 | 7/8 | 1-1/8 | 0.87 | 3,500 |
| SS-1250 | SB-1250 | 1-1/4 | 3-3/4 | 5/8 | 1 | 1-1/8 | 1.13 | 5,400 |
| SS-1500 | SB-1500 | 1-1/2 | 4-1/4 | 3/4 | 1-1/8 | 1-1/8 | 1.75 | 8,800 |
| SS-1750 | SB-1750 | 1-3/4 | 5 | 7/8 | 1-1/4 | 1-7/16 | 2.93 | 14,500 |
| SS-2000 | SB-2000 | 2 | 6 | 1 | 1-1/2 | 1-13/16 | 4.5 | 22,000 |
| SS-2500 | SB-2500 | 2-1/2 | 7 | 1-1/4 | 1-3/4 | 1-7/8 | 7.25 | 31,500 |
| SS-3000 | SB-3000 | 3 | 9 | 1-1/2 | 2 | 2-15/16 | 15.5 | 55,000 |
| SS-4000 | SB-4000 | 4 | 10-5/8 | 2 | 2-1/2 | 3-1/2 | 35.5 | 127,000 |

DOUBLE U JOINTS FOR MORE ANGULAR FLEXIBILITY AVAILABLE IN BOTH SIZES

SHAFT TYPE



BUTT TYPE



Alves "Double" Universal Joints

Connects two Blue Block, Hex Block or Solid Block Joints to compensate for shaft separation and parallel misalignment. Available with round hex, splined or keyway bores. Catalog numbers in table are for Blue Block style, Butt type. Consult factory for Hex and Solid Block styles, Shaft and Center Types, and for spring loaded assemblies, such as those used for multi-spindle drills.

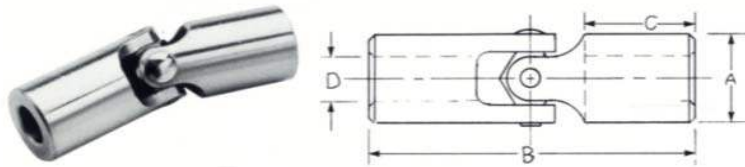
CENTER SECTION TYPE



| SINGLE JOINTS | | SPECIFICATIONS OF STANDARD JOINTS | | | | | |
|--|------------|-----------------------------------|----------|---------------|----------------|--------------|-------------------|
| CAT NO | CAT NO | A O.D. | B LENGTH | D BORE | DEPTH MAX BORE | C HOLE DEPTH | APPROX WEIGHT LBS |
| SOLID HUBS | BORED HUBS | +0.000 -0.015 | + 1/32 | +0.002 -0.001 | +0.002 | + 1/32 | |
| BS-375 -D | BB-375 -D | 3/8 | 3-1/2 | 3/16 | 1/4 | 19/32 | .13 |
| BS-500 -D | BB-500 -D | 1/2 | 4 | 1/4 | 3/8 | 19/32 | .20 |
| BS-625 -D | BB-625 -D | 5/8 | 4-1/2 | 1/2 | 1/2 | 23/32 | .40 |
| ABOVE JOINTS DO NOT HAVE BEARINGS | | | | | | | |
| BS-750 -D | BB-750-D | 3/4 | 5-3/8 | 3/8 | 5/8 | 7/8 | .56 |
| BS-875 -D | BB-875-D | 7/8 | 6 | 7/16 | 11/16 | 1 | .87 |
| BS-1000-D | BB-1000-D | 1 | 6-3/4 | 1/2 | 3/4 | 1-1/8 | 1.17 |
| BS-1125-D | BB-1125-D | 1-1/8 | 7 | 9/16 | 7/8 | 1-1/8 | 1.58 |
| BS-1250-D | BB-1250-D | 1-1/4 | 7-1/2 | 5/8 | 1 | 1-1/8 | 2.07 |
| BS-1500-D | BB-1500-D | 1-1/2 | 8-1/2 | 3/4 | 1-1/8 | 1-1/8 | 3.25 |
| BS-1750-D | BB-1750-D | 1-3/4 | 10 | 7/8 | 1-1/4 | 1-7/16 | 5.43 |
| BS-2000-D | BB-2000-D | 2 | 12 | 1 | 1-1/2 | 1-13/16 | 8.00 |
| BS-2500-D | BB-2500-D | 2-1/2 | 14 | 1-1/4 | 1-0/4 | 1-7/8 | 14.45 |
| BS-3000-D | BB-3000-D | 3 | 18 | 1-1/22 | 2 | 2-15/16 | 28.50 |
| BS-4000-D | BB-4000-D | 4 | 21-1/4 | 2 | 2-1/2 | 3-1/2 | 63.00 |

Note: Both input and output speeds are near constant velocity.

Alves Low Cost, Self Lubricating, Hex Block Universal Joint



An inexpensive riveted joint, designed for low torque...manual, intermittent or light duty. Unique center block is produced from our own proprietary powdered metal formulation and sintering process. With its own self-contained oil supply the block not only acts as a carrying member for the cross-pins, but are also as a continuous lubricates bearing block. As a result, the Hex Block Joint lasts longer than other comparable units and is ideal for applications where oiling is required but impractical because of the universal joint location. Maximum operating angle on standard models is 35 degrees. Hex Block Joints can be special ordered for greater angles and other characteristics.

| SINGLE JOINTS | | SPECIFICATIONS OF STANDARD | | | | | | | |
|---------------|---------|----------------------------|----------|--------|------------|----------|---------------|-------|--|
| CAT NO | CAT NO | A O.D | B LENGTH | D BORE | D MAX BORE | C HOLE | APPROX WEIGHT | | |
| SOLID | BORED | 0 | | 0.002 | 0.002 | DEPTH | IN LBS | | |
| HUBS | HUBS | -0.015 | + 1/32 | -0.001 | -0.001 | + 1/32 | SOLID | BORED | |
| HS-625 | HB-625 | 5/8 | 2-1/4 | 5/16 | 1/2 | 51/64 | 19 | 15 | |
| HS-750 | HB-750 | 3/4 | 2-11/16 | 3/8 | 5/8 | 31/32 | 31 | 25 | |
| HS-875 | HB-875 | 7/8 | 3 | 7/16 | 11-16 | 1- 5/64 | 46 | 32 | |
| HS-1000 | HB-1000 | 1 | 3-3/8 | 1/2 | 3/4 | 1- 11/16 | 67 | 61 | |
| HS-1250 | HB-1250 | 1-1/4 | 3-3/4 | 5/8 | 1 | 2- 1/4 | 1.17 | 90 | |

DOUBLE U-JOINTS FOR MORE ANGULAR FLEXIBILITY AVAILABLE IN ABOVE SIZES

Alves Needle Bearing Universal Joints

| SINGLE JOINTS | | SPECIFICATIONS OF STANDARD JOINTS | | | | | | | | |
|---------------|-----------|-----------------------------------|----------|--------|------------|---------|---------------|-----|--|--|
| CAT NO | CAT NO | A O.D | B LENGTH | D BORE | D MAX BORE | C HOLE | APPROX WEIGHT | | | |
| SOLID | BORED | 0 | | 0.002 | 0.002 | DEPTH | SWING | LBS | | |
| HUBS | HUBS | -0.015 | + 1/32 | -0.001 | -0.001 | + 1/32 | DIA | LBS | | |
| BS-750-N | BB-750-N | 3/4 | 2-1/4 | 5/16 | 1/2 | 51/64 | 7/8 | 15 | | |
| BS-1000-N | BB-1000-N | 1 | 2-11/16 | 3/8 | 5/8 | 31/32 | 1-1/8 | 25 | | |
| BS-1250-N | BB-1250-N | 1-1/4 | 3 | 7/16 | 11/16 | 1-5/64 | 1-1/8 | 32 | | |
| BS-1500-N | BB-1500-N | 1-1/2 | 3-3/8 | 1/2 | 3/4 | 1-13/64 | 1-1/8 | 61 | | |
| BS-2000-N | BB-2000-N | 2 | 3/4 | 5/8 | 1 | 1-7/32 | 1-13/16 | 90 | | |

These are the only repairable needle bearing joints on the market. Using the Alves Blue Block design, with modified and special hardened pins, and the highest quality pre-lubricated and sealed needle bearings in the hubs, they are easily repaired on site using the inexpensive special repair kit available from your local distributor, or from Alves direct. They are physically interchangeable with competing units and provide the precision and reliability required for demanding applications requiring speeds to 6,000 rpm and operating angles to 25 degrees. Greater angular operation can be achieved by utilizing a double universal joint.

Boot Kits

LOW PROFILE BOOT



STANDARD BOOT



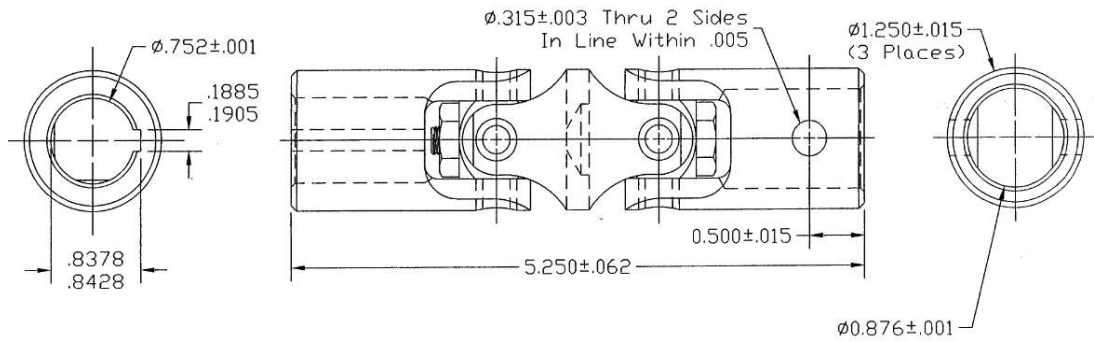
Protects joints from dirt and contaminants. Adds lubrication capacity, quickly and easily replaced in the field. Plastic straps standard. Stainless steel straps available.

| BOOT NO. | U-Joint | Std. Boot |
|------------|---------|-----------|
| 375- Boot | 3/8 | 1-1/32 |
| 500- Boot | 1/2 | 1-1/4 |
| 625- Boot | 5/8 | 1-1/2 |
| 750- Boot | 3/4 | 1-3/4 |
| 875- Boot | 7/8 | 2 |
| 1000- Boot | 1 | 2-9/32 |
| 1125- Boot | 1-1/8 | 2-9/16 |
| 1250- Boot | 1-1/4 | 2-7/8 |
| 1500- Boot | 1-1/2 | 3-1/4 |
| 1750- Boot | 1-3/4 | 3-5/8 |
| 2000- Boot | 2 | 4-17/32 |
| 2500- Boot | 2-1/2 | |
| 3000- Boot | 3 | |
| 4000- Boot | 4 | |

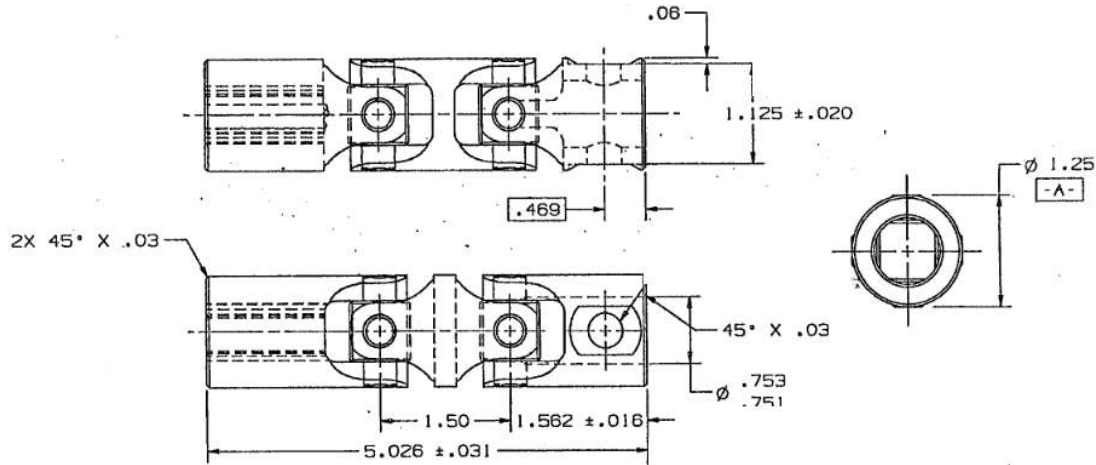
Universal Joint Cross Reference Guide

| O.D | Lovejoy® | Curtis® | Boston® | Browning® | Alves® | Apex® |
|------------|-----------------|----------------|----------------|------------------|---------------|--------------|
| 3/8" | D-1 | C-641 | J-37 | UJ-3S | S-375 | 300-6 |
| 1/2" | D-2 | C-642 | J-50 | UJ-4S | S-500 | 300-8 |
| 5/8" | D-3 | C-643 | J-62 | UJ-5S | S-625 | 300-10 |
| 3/4" | D-4 | C-644 | J-75 | UJ-6S | S-750 | 300-12 |
| 7/8" | D-5 | C-645 | J-87 | UJ-7S | S-875 | 300-14 |
| 1" | D-6 | C-646 | J-100 | UJ-8S | S-1000 | 300-16 |
| 1-1/8" | D-7 | C-647 | -- | UJ-9S | S-1125 | -- |
| 1-1/4" | D-8 | C-648 | J-125 | UJ-10S | S-1250 | 300-20 |
| 1-1/2" | D-10 | C-650 | J-150 | UJ-12S | S-1500 | 300-24 |
| 1-3/4" | D-11 | C-651 | J-175 | UJ-14S | S-1750 | 300-28 |
| 2" | D-12 | C-652 | J-200 | UJ-16S | S-2000 | 300-32 |
| 2-1/2" | D-13 | C-653 | J-250 | UJ-20S | S-2500 | 400-40 |
| 3" | D-14 | C-654 | J-300 | UJ-24S | S-3000 | 400-48 |
| 4" | D-15 | C-655 | J-400 | -- | S-4000 | 400-64 |

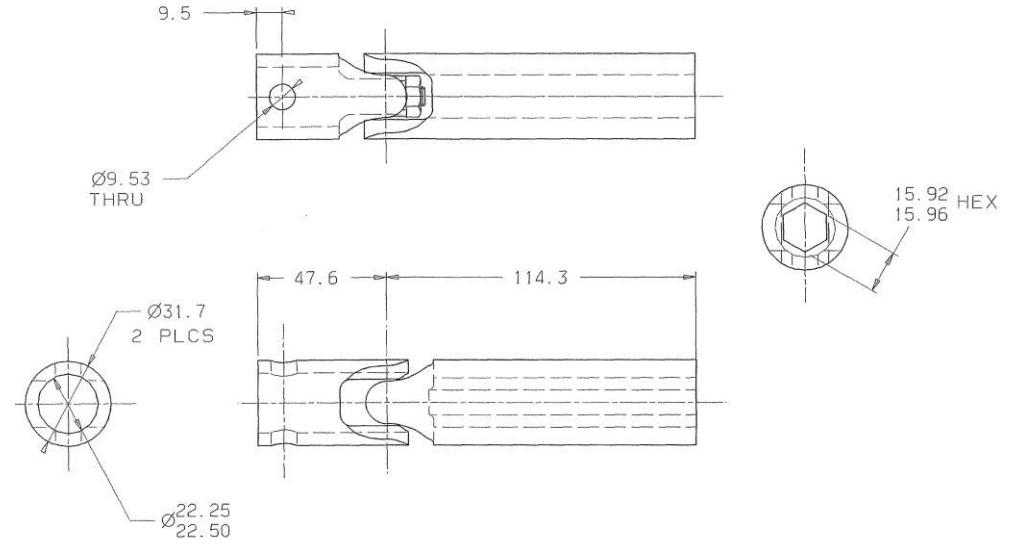
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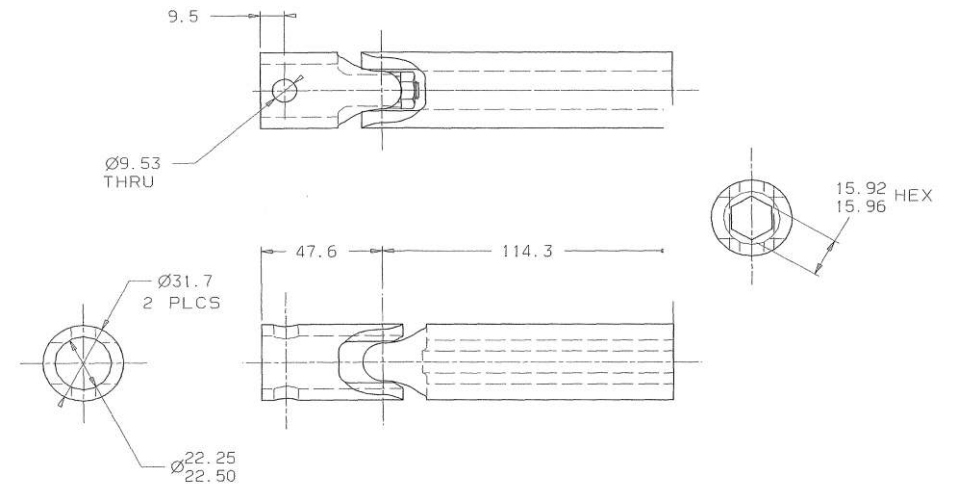
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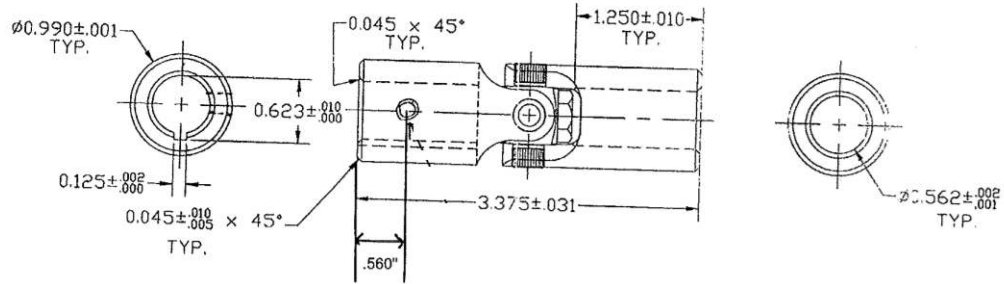
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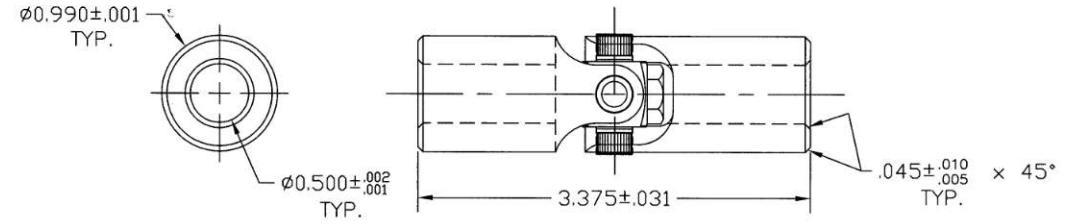
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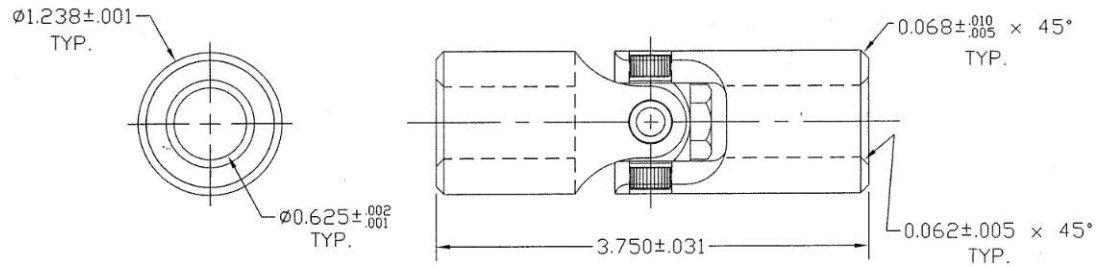
BB-1250-010-02A



BB-1000



BB-1250



BS-1250

