

Installing Poly-Round® bearing into EDT housing

NOTE: Fig 7-1: Remove two (2) setscrews from an EDT housing in order to replace the Poly-Round® bearing.

Step 1: Put new bearing into a freezer or into ice water for an hour. Poly-Round® bearings are made for a snug fit into the housing. Chilling the polymer will shrink it and make it easier to install, but it is still possible without chilling.



Step 2: Fig 7-2: Establish orientation of the insert into the housing (the slot on the bearing O.D. should be directly under the tapped hole in the housing). Roll the chilled bearing into the housing. If necessary, use a bar in the bearing bore to assist; the diameter of the bar should be as close to the bearing bore as possible (a wood or plastic bar is preferable because it will cause less damage).



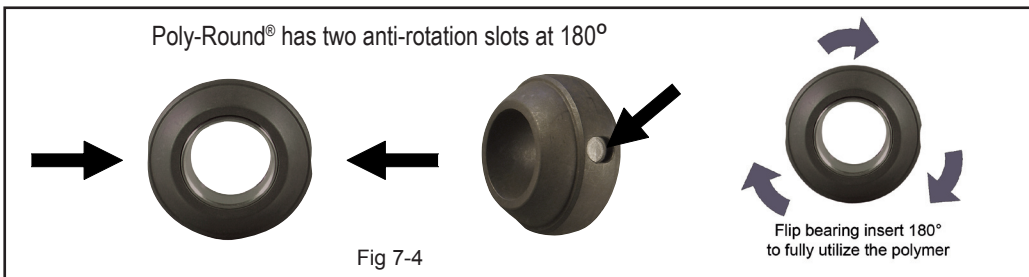
Step 3: Fig 7-3: Install two setscrews through the housing. The 1st setscrew (the longest one) will make contact with the bottom of the slot in the bearing and then will be reversed 1 full turn. The 2nd setscrew will go on top of the 1st to lock it in place and to fill up the hole.

Fig 7-4: Current Poly-Round® bearings include two anti-rotation slots on the spherical outer diameter. One of these should be used in every installation. The second slot is used when the insert is flipped 180°, which doubles the life of the bearing.

The anti-rotation slot:

- Allows insert to be retained within a range of motion so it can align with the shaft.
- Keeps insert in place (so it doesn't spin) while the operating temperature increases to lock the bearing in the housing. (The bearing expands more than the housing.)

Additional directions for mounting the assembly onto equipment can be found in the EDT catalog on page U-8, or online at <http://edtcorp.com/e.userhandbook/userhandbook.html>, and go to page 8.



For Special Application Conditions..... See pages U-20 thru U-23

See: EDT Poly-Round® Installation video:
<http://www.youtube.com/watch?v=N8mXjrZbwYA>



Installing mounted bearings onto equipment

Note: There are TWO setscrews through the outside of the EDT housing. Both are preset at the factory and do not require field adjustment.

Step 1: Mount bearing and housing assembly onto machine. Bolt pressure should not exceed 25-30 foot/pounds of torque no matter what kind of housing (polymer, stainless steel, standard cast metal) you are mounting.

All housings (steel and polymer) should be installed with a flat washer under the hex head of the bolt. Use of a lock washer is at the discretion of the installer, and should be mounted **above** the flat washer (see Fig 8-1).

Step 2: Slide locking sleeve into the bearing and place it against the side of the bearing. On Poly-Round® units, locking sleeve may thrust against either side of the insert where it will not run against metal; on All-Round® units, locking sleeve must thrust against flange of polymer bearing.

Leave a .005 gap (paper thickness) between the SS flange of the locking sleeve and the side of the bearing (see Fig 8-2).

Step 3: After the bearings are mounted, and before drives and belts (or other devices) are installed, make sure the shaft freewheels inside the bearings. If not, the bearing must be adjusted inside the housing to better align with shaft. Attach drive mechanisms and belts only after shaft freewheeling is confirmed.

Step 4: Run equipment. EDT Poly-Round® bearings will run warmer than ball bearings, but should never run so warm that you cannot hold your hand on the bearing. If it runs warmer than your hand can tolerate, and Step 3 above has been accomplished, refer to the Troubleshooting Guide on page U-27. EDT welcomes your call to the factory for troubleshooting or other assistance.

For Special Application Conditions..... See pages U-20 thru U-23

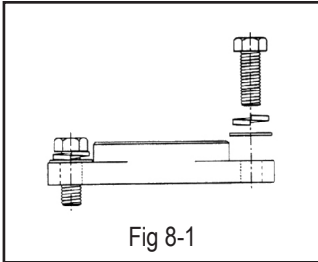


Fig 8-1

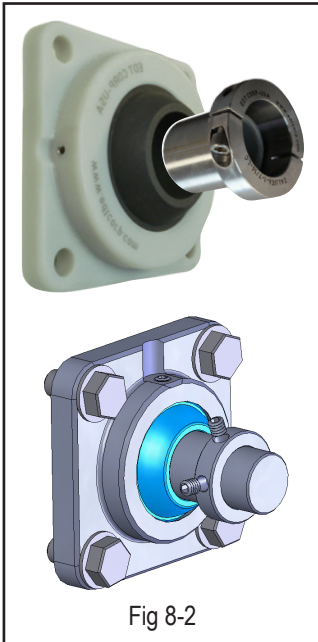
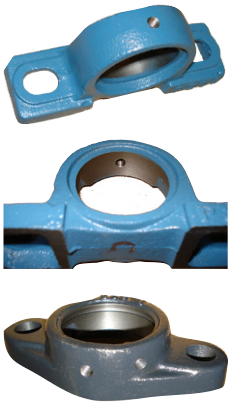


Fig 8-2

AXIAL HOLDING POWER* Alloy socket head cap screws		
Socket Head Cap Screw	Maximum Screw Torque (in-lbs)	Axial Holding Power (lbs)
4-40	14	235
6-32	26	355
8-32	46	546
10-32	67	785
1/4-28	196	1510
5/16-24	416	2412
3/8-24	718	3653
1/2-20	1755	6657

TORSIONAL HOLDING POWER* Steel Couplings without Keyways			
Alloy Socket Screw	Maximum Screw Torque (in-lbs)	Coupling ID (inches)	Torsional Holding Power (in-lbs)
4-40	14	1/4	50
6-32	26	3/8	120
8-32	46	1/2	288
10-32	67	5/8	480
1/4-28	196	1	1500
1/4-28	196	1-1/2	2256
5/16-24	416	2	4824

* www.staffordmfg.com/Home.aspx



Installing Poly-Round® bearing into NON-EDT housing

A bearing housing must be properly prepared to accept an EDT Poly-Round® bearing in order to maximize performance from all components. It is vital to optimum bearing life that a Poly-Round® insert be installed correctly into a bearing housing.

Polymers have higher coefficients of thermal expansion than metals, so it is a “best practice” to retain the Poly-Round® insert into the housing in order to assure that the insert does not spin and yet is able to align with the shaft as required.

The original tapped hole in standard bearing housings is in the wrong position (it hits the grease ring that is off the center line). It is also not thru-tapped, so the hole will not securely accommodate a set screw, which is what EDT uses as an anti-rotation pin. (If the existing hole is chased through, rather than make a new threaded hole on the centerline, the Poly-Round® will not fully align perpendicular to the housing and the shaft.)

On the major OD, on the centerline of the bearing, EDT taps a new hole, 1/4-28 or M6 x 1, thread completely thru the wall to the ID of the housing.

Step 1: Put new bearing into a freezer or into ice water for an hour. Poly-Round® bearings are made for a snug fit into the housing. Chilling the polymer will shrink it and make it easier to install, but it is still possible without chilling.

Step 2: Align one of the anti-rotation slots with the tapped hole.

Step 3: Thread setscrew through the housing and towards the Poly-Round® (anti-rotation pin). (See Fig 9-1.) Set-screw should be screwed down until it just touches the bottom of the slot. Reverse the setscrew (back-it-out) one FULL turn (360°).

Notes: EDT plugs any other holes in the housing with a very short set screw so the hole is not a contamination-trap, or gives an impression that “something is missing.” The setscrews in the housing should NOT be adjusted after this time. Do not adjust the housing setscrew when housing is mounted on the equipment.

Current Poly-Round® bearings include two anti-rotation slots on the spherical outer diameter. One of these should be used in every installation. The second slot is used when the insert is flipped 180°, which doubles the life of the bearing (see Fig 9-2).

The anti-rotation slot:

- Allows insert to be retained within a range of motion so it can align with the shaft.
- Keeps insert in place (so it doesn't spin) while the operating temperature increases to lock the bearing in the housing. (The bearing expands more than the housing.)

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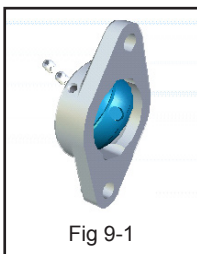


Fig 9-1

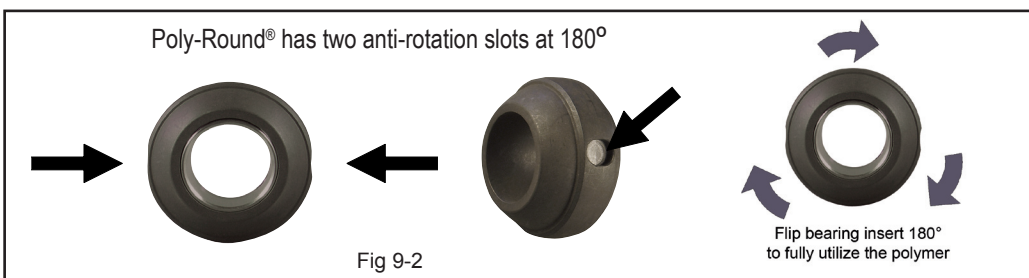


Fig 9-2