

Ways to Increase Bearing Performance

Action	Result
Submersion in any liquid cooler than the normal operating temperature of the bearing	Helps to dissipate heat away from the polymer bearing
Lubrication (look under Special Application Conditions, pages U-18 thru U-21)	Lowers coefficient of friction and abrasion; reduces heat generation
Seal out solid contaminants (dirt, dust, chemicals, food processing powders, etc.)	Lowers coefficient of friction and abrasion; reduces heat generation
Improve shaft surface finish or install EDT locking sleeve (optimize at 10–12 RMS)	Lowers coefficient of friction and abrasion; reduces heat generation
Eliminate plastic locking collar; replace with stainless steel locking collar	Helps to dissipate heat from the polymer bearing
Upgrade polymer bearing material	Increases PV operating range; increases material's high temperature capacity; reduces chemical attack
Isolate from heat source by relocating or insulating bearing	Increases margin of PV available for application
Design power transmission drive so bearings evenly carry the load rather than the load being cantilevered	Better load distribution lowers PV and reduces heat generation
Check that locking sleeve is fully installed in bearing	Better load distribution lowers PV and reduces heat generation

Installation difficulties

If you have difficulty assembling spherical bearings into housings, or flange polymer bearings into ALL-ROUND® inserts, call the factory or your EDT representative for assistance. Polymer parts should be well chilled prior to installation for easiest assembly. Do not force units together if the installation does not go smoothly. In this respect EDT bearing installations are no different than radial ball bearing installations.

Test the mating parts prior to full installation by performing the following procedure:

1. Install the spherical insert into the installation slots in the spherical housing.
2. Using both hands, hold the bearing between your fingers like a key and turn the bearing in the housing like a key in a lock. (Do not use a separate tool to assist.) A bearing that fits properly will turn around in the housing until it reaches the original starting point (Fig 25-1). If it does not, check the following conditions:

- Out-of-round housing
- Out-of-round bearing
- Tolerance mismatched of housing and bearing
- Burr on I.D. of housing
- Burr on O.D. of bearing
- Loading slots not extended to centerline of spherical I.D. of housing.

Note: EDT self-aligning bearings should fit snugly but do not need to fit tight into the housing when they are swiveled into the final working position. They must be tight enough to prevent rotation of the bearing in the housing. A setscrew into the anti-rotation slot on the bearing O.D. insures that no rotation can occur.

