

Special Application Conditions

Many bearing applications fall out of “the norm” and often there is no choice except to change the product or break the generally accepted rules of design to accommodate these difficult conditions. Here are some difficult conditions in which EDT bearings have been called upon, and suggestions to extend bearing life as long as possible. These recommendations are based on the premise that “ambient temperature” is 70 deg F.

Abrasion

All moving parts (bearings, by their nature, allow parts to move) are affected by solid abrasives. It is impossible to predict the longevity of any specific product, including an EDT bearing, in a solid abrasive environment because there are so many unknown factors involved. Take, for example, salt. It is both hard and soft, smooth and rough-edged, and different colors. Typically, bearing seals are called upon to combat abrasives, but even the best bearing seals are a compromise because bearings need to allow parts to move against each other and in so doing, the seal is not tight. The best option for extending bearing life in abrasives is to cover up the bearing.

For this, EDT developed the Bearing Glove® that completely encapsulates the bearing and housing with a sealed plate on the bottom and a sealed cover on the top. This device is very effective and is even more effective if it is filled with grease. The stationary grease captured by the Glove® cover is nearly 100% effective. Any bearing mounted inside of a Glove® does not require lubrication for the life of the product. Like all of EDT’s products, the Glove® is designed to accommodate all other industry standard designs.



Fig 18-1

Gloves® are designed to mate with 2-bolt flanged housings. Since the diagonal distance across the bolt holes of a 4-bolt flange are the same as a 2-bolt flange, 2-bolt Gloves® can be used to retrofit 4-bolt locations. An optional stainless angle allows 2-bolt flange housings to be mounted upright, like pillow blocks, so the 2-bolt Glove® can also retrofit for pillow blocks. With the Glove®, three styles of bearings can accommodate complete exclusion of solid contaminants.

Fig 18-2



Cold

Cold operations generally fall into the two categories of below -40 deg C (F) or above -40 deg C (F). If ammonia refrigerant is used, the application will never be below -40 deg. *Note that -40 deg F and -40 deg C are the same temperature.*

All of EDT’s standard catalog bearings can be used in freezers down to -40 deg. There are no material restrictions or bore changes required at this low temperature, but the Poly-Round® style of bearing is generally better unless there are other environmental considerations.

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