



TECHNICAL UPDATE

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EDT Bearing Selection Guidelines

Revised 02/02

These guidelines and generalizations are intended to assist in initially selecting the optimum EDT product to try in any specific application. Accurate applications information, collected on an EDT Bearing Design Checklist (BDC) completed either by someone familiar with the application or direct site information, is vital to choosing the most appropriate bearing. Bearing selection for any application is only as accurate as the information provided to select it.

- 1) Always specify self aligning bearings unless there is a specific reason to recommend a block bearing. Price alone is not a good reason.) Machine frames are fabrications and by that definition are never square; therefore bearings mounted on fabricated frames must have self aligning capability.
- 2) Always recommend a locking sleeve with a bearing. Half of a bearing's performance is based on the bearing material and design; the other half is based on the condition of the journal. This includes both the nature of the material and its' surface finish over the expected life of the bearing. The primary reason not to spec a locking sleeve is that the journal operation is very slow and does not make a full rotation.
- 3) Never spec a plane bearing in a friction drive application. Examples of this would be "V" belt motor drives, flat belt conveyors, and urethane belt conveyors.
- 4) Never spec a plane bearing in a high speed application. Examples of this would be fans and pumps.
- 5) Never spec a plane bearing in an overhung load. Example would be a shaft mounted gear reducer. If the reducer is supported by a separate frame or by a torque arm, call the factory for a review.
- 6) Never spec a plane bearing in a trunnion application.
- 7) Always spec a Poly Round in applications below 40°F (C).
- 8) Never spec FA in an ALL ROUND® bearing.
- 9) Never spec QB for continuous submerged operations or environments where the pH is more than 3 points off of neutral. Neutral pH is 7, QB should not be used lower than 4 nor higher than 10 pH.
- 10) KG housings should not be spec'd in applications that have ambient temperatures above 150°F. However, high temperature wash down and steam cleaning are acceptable (since the higher temperatures are not being sustained during operation, only in cleaning).

- 11) Machine specific (customized) bearings must be spec'd from a BDC or with participation of someone intimately familiar with the machine. Customized bearings often have less room for error.
- 12) Modular plastic belt conveyors will always use NA Poly Rounds with a locking sleeve.
These are covered by the EDT Guaranteed Solutions program to last for a minimum of one year.
- 13) When estimating the length of a conveyor for an application: figure each 90 degree bend in the conveyor as 3 times the length and each 180 degree curve as 6 times the length. Example a ten foot conveyor with one 90 degree bend has an equivalent length of 30 feet. With two 90 degree bends, the bearings on the 10' conveyor are handling the equivalent of 60 feet on a straight conveyor. 10' with one 90 degree and one 180 degree bend is equivalent to a 90 foot straight conveyor when calculating bearing load. Normally you would see these kinds of designs on tabletop chain conveyors and are best left to ball bearings.
- 14) Abrasive contaminants (dust, flour, grains, sand and other solids) must be kept out of the working surface of the bearing. Grease is not recommended in dusty environments as it attracts and hold the contaminants in the bearing. Seals like Forsheda v rings are recommended to reduce solid contamination of the journal. If there is sufficient room, the EDT Glove® should be used. (The Glove® is available blind bored or thru bored.)
- 15) In high solid abrasive contaminated applications it is best to completely isolate and cover the bearing with the EDT Glove®. Since any covering that restricts airflow around a bearing will raise temperature, it is normally recommended to use a ball bearing inside of the EDT Glove®.
- 16) If there is not enough flushing liquid present in an application, a black residue may build up around the ID of a QB or QF bearing. This is normal, but may be unacceptable in a sanitary environment. The only remedy for this is to use an alternative material; call the factory for recommendations.

RED FLAG ALERT!	
<p>Stainless ball bearings can rust since the balls and races are made of 400-series (hardenable) stainless steel. High concentrations of cleaning solutions as well as other strong chemicals may speed up the corrosion process.</p> <p>EDT plane bearings are fully non-corrosive alternatives to ball bearings, for most locations EXCEPT:</p> <ul style="list-style-type: none">• high tension: flat belts, urethane belts, tabletop chain• overhung loads• high speed devices: fans, pumps• trunnions	