

EDT CASE STUDY

Solution[®] split plane bearings

Food Processor

Split Type E pillow blocks on cooling tunnel



Problems Powering long tunnel equipment, such as a cooling tunnel, involves large shafts (4" diameter is not uncommon), large motors and heavy gearboxes. When the tapered roller pillow block bearings need to be changed out, all of these components must be removed. The wet environment demands the bearings be replaced at least once a year. This is difficult and time consuming, often requiring an outside contractor with a crane for a couple of days.

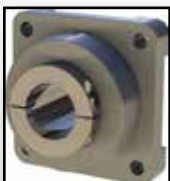
For this processor, the cost of using standard roller bearings over the course of a year was very expensive, including:

- Cost of original bearings
- Costs of grease and labor of routine lubrication (this plant: up to four lube cycles per week = 208 times per year)
- Time and costs to schedule maintenance with an outside contractor to work with maintenance staff (and the disruption to collateral equipment)
- Threat of difficulty of accessing bearings, keeping them lubricated for reliable operation, possibility of process contamination
- Downtime due to bearing failure

The Bottom Line

EDT bearings reduce the time and expenses involved in installing and operating these critical bearings.

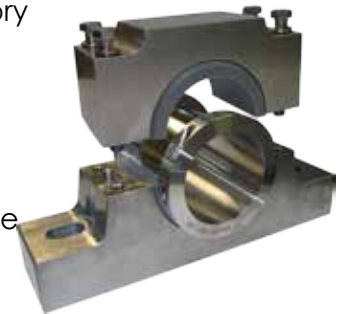
Big savings in the first year, and even more in subsequent years.



Type E Solution[®] units are available 1-piece or split; pillow block, pilot and 4-bolt

Solutions EDT plane bearings address all of these issues. Type E Solution[®] bearings directly interchange industry-standard tapered roller bearings. Advantages for this processor include:

- Split components allow bearing service without removing motor and gearbox, therefore eliminating the need for outside contractor
- Eliminate grease (re-lube and as source of contamination)
- Fully non-corrosive units, no concern about rust
- Reduce labor: ZERO maintenance while bearing is in operation; after 1 year, open the split bearing, measure the wear. In this case, it was determined that there was at least 6 more months life on the first side. When the bearing does wear, reverse the top and bottom halves of the Poly-Sphere[®] and rebolt the top to get another 18 months of usable life
- Lower inventory costs: housing is a one-time purchase, sleeves reuse over multiple inserts; only the Poly-Sphere[®] is eventually replaced
- Length of service can be predicted and scheduled

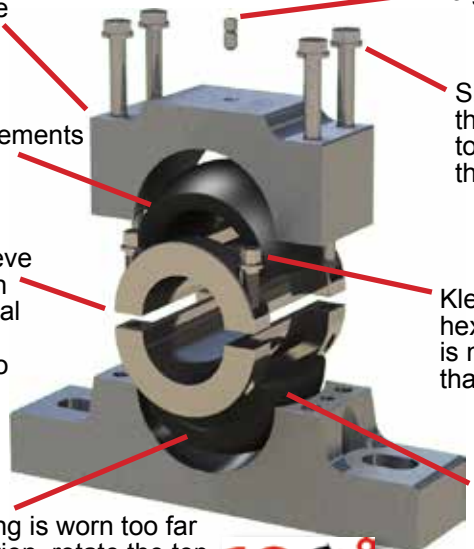


Bearings For Severe Service Environments



COMPARE THE COSTS OF OWNERSHIP OF Type E Solution® Bearings ON COOLING TUNNEL INFEED AND DISCHARGE

	Cost of original RPB Bearing (lasts 1 year and then replace complete unit)		Cost of EDT Type E Solution® Bearing (lasts multiple years with insert rotated year 2)	 
Cost to purchase bearings	2 pcs RPB200-C2CR 2 pcs RPB400-C2CR	\$4,969.74	2 pcs QFT14E9T-64T 2 pcs QF1E4-32-LKV	\$16,936.60
Cost to install original bearing	Outside contractor labor to install over 2 days	\$21,241.08	In house labor (4 mechanics x 8 hrs ea - 1 day)	\$882.88
Cost of bearing and installation per cooler		\$26,210.82		\$17,819.48
Cost to lubricate bearings 1 shot at .40/ounce x 2 oz Labor at (.58 per min x 2 min) per day Frequency: 4 days/week x 52 weeks Cost to lubricate bearings over 1 year		0.80 1.16 x 208 \$407.68		\$0.00
1-year cost of bearings:		\$26,618.50	1-year savings per cooler = \$8,799.02	
Year-2 Costs	Original RPB bearings: repeat costs of year 1	\$26,618.50	EDT: Rotate bearings in 1 day with 4 in-house mechanics (as above)	\$882.88
2nd year cost of bearings				
2-year cost of bearings:		\$53,237.00	2-year savings per cooler = \$34,534.64	
Year-3 Costs	Original RPB bearings: repeat costs of year 1	\$26,618.50	EDT: Replace bearings ONLY in 1 day with 4 in-house mechanics Cost of bearings (QFOU040-RPB / QFOU09T-RPB)	\$882.88 \$4,540.00
3rd year cost of bearings				
3-year cost of bearings:		\$79,855.50	3-year savings per cooler = \$55,730.26	
➔ x 3 Coolers per plant = \$167,190.78 TOTAL SAVINGS ➔				



304 stainless housing is a one-time investment

No grease ever

No rolling elements

Simply unbolt the housing top to access the shaft

Locking sleeve assures high quality journal and radial placement to the shaft

KleanCap® hex hardware is more sanitary than sockets

When bearing is worn too far in one direction, rotate the top and bottom halves to double the bearing life

Poly-Sphere® is the single replaceable component

180°



Let EDT Help!
To check which bearing is best for your application, complete a **Bearing Design Checklist (BDC)** today and you'll hear from us promptly!
edtcorp.com/docs/bearing-design-checklist.pdf
OR...<http://tinyurl.com/edtbdc>



Bearings For Severe Service Environments



For a Cost Of Ownership analysis of your own application, contact an EDT sales representative today