

SEVERE SERVICE UNMOUNTED RADIAL BEARINGS





Variety of products for different environments

Polymer grease-less bearing

Radial bearings for sanitary, corrosive, and extreme temperature environments

When environmental conditions prematurely fail conventional unmounted ball bearings, consider EDT radial bearings

- Physically interchange with industry standard radial bearings
- Available in inch and metric sizes
- Wide range of products to address many conditions
 - Radial Poly-Round®



- Stainless ball, greased or solid lubricated
- Non-corrosive treated steel (NCS) with solid lubrication
- Steel with high temperature solid lubrication



For information on Radial Poly-Round® bearings, turn to page K-7

FOR DESIGN ASSISTANCE

Complete a Bearing Design Checklist (BDC). See page K-5 or go to www.edtcorp.com



RADIAL BEARING ALTERNATIVES

For Severe Service Environments





Radial Poly-Round® (RPR) applications

- Low or moderate speed and load applications
- Incomplete rotation
- Light duty plastic belt or roller conveyors
- Highly corrosive applications (choose bearing material based on environment)
- Submerged locations
- Sanitary requirements where lubrication is problematic or where wash-down is frequent
- High impact locations (choose bearing material based on environment)

Advantages of Radial Poly-Round® bearings

- Eliminate product contamination from grease or rust
- Extend maintenance cycles for lower cost of ownership
- Reduce production shutdown from bearing failure
- USDA Accepted



APPLICATIONS where PLANE BEARINGS should be AVOIDED

Plane bearings are not recommended for:

- High speed devices (fans, pumps, curved table top conveyors)
- High tension applications (V-belt drives, flat belt conveyors, urethane belts)
- Overhung loads (shaft mounted gear reducers)
- Trunnion applications
- Applications where centerline positioning is critical

In any of these kinds of applications, select a ball bearing



Ball Bearing applications

- High tension applications (V-belt drives, flat belt conveyors, urethane belts)
- High speed devices (fans, pumps, curved table top conveyors)
- Overhung loads (shaft mounted gear reducers)
- Trunnion applications
- High-precision installations requiring precise centerline location

Advantages of ball bearings over plane bearings

- Low friction
- High speed
- Precision centerline maintenance
- Trunnions
- High tension

APPLICATIONS where ROLLING ELEMENTS should be AVOIDED

Ball bearings are not recommended for:

- Intermittent or oscillation motion
- High load with low speed
- Frequent start-stop
- Incomplete rotation
- Applications where the lubrication is compromised*
- Locations in the presence of salts or chlorine

*In applications that require ball bearings, and where the integrity of the grease is compromised, consider using solid lubricated ball bearings.

In any of these kinds of applications, select a plane bearing product: a Radial Poly-Round®

Sample part # **EDT Radial Bearing Part Numbering System**

OE F 6000 RPR	MATERIAL	2 Letters: indicator of polymer bearing material (refer to Material Selection Chart, below; additional materials may be applied for unique applications)							
		ZA Stainless steel ball bearing							
		Non-corrosive treatment over steel ball bearing							
		Steel (industry standard 52100 material) ball bearing							
OE F 6000 RPR	VARIATION	RIATION (when indicated)							
		F Flange style unit							
OE F 6000 RPR	RADIAL BE	RADIAL BEARING Industry standard nomenclature for radial bearing being interchanged							
OE F 6 000 RPR	Туре	1, 3, 5, 6, 7, 9							
OE F 6 0 00 RPR	Series	Cross section (18, 19, 0, 1, 2, 3, 4)							
OE F 60 00 RPR	Bore Size	00 indicates 10 mm ID 01 indicates 12 mm ID 02 indicates 15 mm ID 03 indicates 17 mm ID 04 indicates 20 mm ID 05 indicates 25 mm ID 06 indicates 30 mm ID 07 indicates 35 mm ID 08 indicates 40 mm ID 08 indicates 40 mm ID							
OE F 6000 RPR	MODIFIER	-X2 indicates RPR width is equal to that of 2 (two) single radial bearings -1 indicates width is equal to open ball bearing (refers to R-series radials) -2 indicates width is equal to seal/shielded ball bearing (refers to R-series radials) -J indicates white solid lubricated -W indicates black solid lubricated, temperature range -250 to +250°F -WP is same as above with additional moisture resistance -M indicates black solid lubricated to +450°F -MP is same as above with additional moisture resistance -R indicates black solid lubricated to +500°F -T indicates black solid lubricated to +650°F							

Suffix indicates EDT's exclusive Poly-Round® bearing



RPR

RPR

OE F 6000

Plane bearings Radial Poly-Round® and cylindrical Poly-Round®



NCS treated with Stainless with Stainless with standard white solid lubricant

black solid lubricant

Stainless with black solid lubricant

DARK GRAY 0112

Radial Poly-Round® Material Selection Chart

grease

Radial Poly-Round® bearings may be made of various high performance polymers to best fit the application. Due to the small length-to-diameter ratios of unmounted bearings, useful PVs are lower in RPRs than in mounted bearings.

Radial	RPR					mance	ΔΤ					
Poly-Round® bearing	PV	Max Speed	Max Loading	Continuous Operating	iting		Dimensional Stability with	Chemical	Abrasion	Impact	USDA/FDA Contact	
materials	Limit	V (SFM)	P (PSI)	Temp.	Washdown	Submerged	Temp Change	Resistance	Resistance	Resistance	Acceptance	
QF black	15,000	400	1,500	500°F	Excellent	Excellent	Excellent	Excellent	Abrasion	Fair	Incidental	
OE brown or black	1,500	350	250	160°F	Excellent	Good	Good	Fair	applications are unpredictable. Each application	Fair	Incidental	
NA grey	1,500	350	500	200°F	Excellent	Good	Good	Fair	must be tested for abrasion	Excellent	Incidental	
FA white	1,500	350	250	500°F	Excellent	Excellent	Poor	Excellent	resistance.	Excellent	Direct	

EDT has the widest choice of radial bearing alternatives; something for almost all hostile environments



FOR DESIGN ASSISTANCE

Complete a Bearing Design Checklist (BDC). See page K-5 or go to www.edtcorp.com



Successful EDT Radial Poly-Round® (RPR) applications include:

- Guides and wheels
- Oven and freezer idler rolls
- Wash-down duty machinery
- Poultry rehanger
- Ice rakes
- Rollers (low- and medium-speed)
- Dancer bars on packaging machines
- Parts washers
- Robotic linkages



Successful EDT radial ball bearing applications include:

- Exhaust fans
- High speed idler rolls in ovens and freezers
- Refrigeration fans
- High-temperature, high-torque chain tensioners
- Urethane belt food processing equipment





BEARING DESIGN CHECKLIST (BDC)

	Reference Project:	Date:										
Distributor / Branch	Contact											
Customer	Contact											
City	State											
Phone	Fax											
Email												
Application D)ata											
Do any of these conditions exist?	What type of drive is being used?											
O Modular Belt	O Roller Chain											
O Tensioned Flat Belt	Direct Couple											
O Screw Auger	Timing Belt/HTD Belt											
O Overhung Load	O Line Shaft											
O Trunnion	Hydraulic Motor											
O USDA/FDA Inspection	O V-Belt											
Indirect Food Contact	O Slave Drive											
O Direct Food Contact	Variable Frequency Drive											
Wash Down	O Supported Shaft											
	Mount Reducer											
SubmersionChemical	O Unsupported Shaft Mount Reducer											
O Abrasive Material											l	
O Vibration/Impact			Bearing Data									
Bearing for: O New machin	ne O Retrofit	O Mo	ounted	О Ту	pe "E"	/Rolle	r O	Thrus	st			
How long is current bearing lasting? (Estimated life)			○ ER ○ Unmounted/Radial ○ Roll End									
Weeks: Months	s: Years:	Shaft Diameter:										
Is a drawing of current sys	stem available? O Yes O No	Shaft	RPM:									
Existing problem is with: O Bearing O Housing O Both			Estimated Load per Bearing:									
Suspected cause of failure:			Temp. around bearing:									
		Shaft	t direct	ion: O	Horiz	ontal	O Ve	rtical	O In	clined		
Will existing housing be re-used? O Yes O No			Type of motion: O Radial motion O Linear motion O Expansion O Intermittent O Reversing O Frequent stop/sta									
Has a plane bearing been	tried previously? O Yes O No		pansior alignm e							quents	stop/sta	
Material or brand:			_		-							
Describe the application:			Split housing required? ○ Yes ○ No Part # of existing bearing:									
		Part	# UT EX	isung	bearir	ıg: _						

Style of housing: _

DARK GRAY 0112

ENGINEERING NOTES

K-6