



RADIAL POLY-ROUND® BEARINGS

Radial Bearings & Cam Followers



Radial Bearings



Cam Followers



Roll End Bearing



Filler Wheels

- Retrofit**
- Unmounted Radial Bearings
 - Cam Followers
 - Roller End Bearings
 - Filler Wheels

with greaseless plane bearings for severe service

- Greaseless bearing eliminates issues of lubrication
- USDA/NSF Accepted
- Non-contaminating
- Will not catastrophically fail
- Well-suited to:
 - Frequent start/stop / intermittent / reversing
 - Extremes of temperature
 - Submerged
 - Washdown
 - High corrosion



EDT Radial Poly-Round® bearings and cam-followers ...



... physically interchange with industry standard units
 but by virtue of being a Class 3 plane bearing, they utilize **NO GREASE**.
NO GREASE eliminates ALL of the maintenance issues that involve lubrication:

- Maintenance time
- Expense of lubricant
- Potential for contamination
- Lube-systems
- Effects of environment on lubricant
- Scheduling



Radial Poly-Round®-style of bearings are ideal in locations where:

- Both ID and OD move around a fixed shaft (such as a roller)
- A metal OD damages the mating part → polymer OD of RPR will not cause damage
- There is high or low temperature, process moisture, wash-down or submersion that causes rolling element bearings to fail
- There is incomplete, oscillating or intermittent shaft rotation
- Grease that is required to keep ball- or needle- bearings rolling is a problem
- 400-series stainless or standard metal bearings corrode due to environment
- Sanitary requirements (food, beverage, textiles, glass, pharmaceuticals) easier to achieve with grease-less bearings

Material Section Chart

	Poly-Round® Bearing Materials	PV Limit*	Maximum Speed V (SFM)	Maximum Loading P (PSI)	Continuous Operating Temp.	Performance in Moisture		Δ T Dimensional Stability with Temp Change	Chemical Resistance	Abrasion Resistance	Impact Resistance	USDA/FDA Contact Approval
						Washdown	Submerged					
Bearings	PA UHMW [^] white	1,000	50	800	150°F	Excellent	Excellent	Poor	Excellent	Abrasion applications are very non-predictable. Each application must be tested for abrasion resistance.	Excellent	Direct
	OE brown	6,000	250	1,500	160°F	Excellent	Excellent	Good	Good		Excellent	Incidental
	NA gray	6,000	350	2,000	200°F	Excellent	Good	Good	Good		Excellent	Incidental
	FA white	6,000	350	1,000	500°F	Excellent	Excellent	Poor	Excellent		Excellent	Direct
	QF black	60,000	400	6,000	450°F	Excellent	Excellent	Excellent	Excellent		Fair	Incidental

[^] PA is not typically used for Radial Poly-Round® bearings due to some of its engineering properties. It is included on this chart as a point of reference of polymer bearing-capability.

* PV limits are included as a point of reference of polymer bearing-capability. The limits listed are realistic for mounted bearings and sleeve bearings; these limits will not typically be achieved in Radial Poly-Round® configuration.

Applications where Radial Poly-Round® plane bearings are **not** recommended

- Tension applications (v-belts, rubber belts, urethane belts, film transfer, etc.)
- High speed devices
- Overhung loads
- Extremely light loads (bearing will not turn without sufficient load)

Applications where plane bearings are not suitable require ball bearings (see catalog section F).

EDT can develop Radial Poly-Round® interchanges for many sizes and styles of machine parts that are used as bearings (unmounted radial bearings, roll-end bearings), or rollers, or filler wheels or cam followers

Interchange bearings that utilize the Radial Poly-Round® design of bearing grade polymer + stainless hub are generally identified with “-RPR” in the EDT part number, such as:

Some common industry-standard radial ball bearings with their dimensions that EDT has available as Radial Poly-Round® (RPR's) are listed here:

O E	6200		-		-	RPR
Material identifier Ref: Material Selection Chart (page 2)	Industry part #	Any modifier (EDT assign)	-	Other description (EDT assign)	-	Radial Poly-Round®

4 mm ID			
p/n	OD	LTB	With Flange OD
694	11	4	12.5
604	12	4	13.5
624	13	5	15.0
634	16	5	18.0

5 mm ID				
p/n	OD	LTB	With Flange OD	
638	11	5	12.5	F685
619	13	4	15	F695
605	14	5	16	F605
625	16	5	18	F625
635	19	6	22	F635

6 mm ID				
p/n	OD	LTB	With Flange OD	
628/6	13	5	15	F686
619/6	15	5	17	F696
625	16	5	19	F606
626	19	6	22	F626



7 mm ID			
p/n	OD	LTB	With Flange OD
F687	14	5	16
F697	17	5	19
F607	19	6	22
F627	22	7	25

8 mm ID			
p/n	OD	LTB	With Flange OD
F688	16	5	18
F698	19	6	22
F608	22	7	25

9 mm ID			
p/n	OD	LTB	With Flange OD
F689	17	5	19
F699	20	6	23



10 mm ID			
p/n	OD	LTB	
6800 / 61800	19	5	
6900 / 61900	22	6	
6000	26	8	
16100	28	8	
6200	30	9	
6300	35	11	
5200	30	14.3	9/16"
5300	35	19.05	3/4"

12 mm ID			
p/n	OD	LTB	
6801 / 61801	21	5	
6901 / 61901	24	6	
6001	26	8	
16001	28	8	
6201	32	9	
6301	37	11	
5201	32	18	5/8"
5301	37	19.05	3/4"

15 mm ID		
p/n	OD	LTB
6802 / 61802	24	5
6902 / 61902	28	7
6002	32	9
16002	32	8
6202	35	11
6302	42	13
5202	35	5/8"
5302	42	3/4"

17 mm ID		
p/n	OD	LTB
6803 / 61803	26	5
6903 / 61903	30	7
6003	35	10
16003	35	8
6203	40	12
6303	47	14
5203	40	11/16"
5303	47	7/8"

20 mm ID		
p/n	OD	LTB
6804 / 61804	32	7
6904 / 61904	37	9
6004	42	12
16004	42	8
6204	48	14
6304	52	15
5204	47	15/16"
5304	52	7/8"

25 mm ID		
p/n	OD	LTB
6805	37	7
6905 / 61905	42	9
6005	47	12
16005	47	8
6205	52	14
6305	62	17
5205	52	15/16"
5305	62	1"

30 mm ID		
	OD	LTB
6806	42	7
6906 / 61906	47	9
6006	55	13
16006	55	9
6206	62	16
6306	72	19
5206	62	15/16"
5306	72	1-3/16"

35 mm ID		
	OD	LTB
6807 / 61807	47	7
6907 / 61907	55	10
6007	62	14
16007	62	9
6207	72	17
6307	80	21
5207	72	1-1/16"
5307	80	1-3/8"

These are examples of the interchange sizes available; other sizes can be made.

(Inch size on next page)

Inch series (single row width)

ID	p/n	OD	LTB
1/8"			
3/16"			
1/4"	1602	11/16"	1/4"
5/16"	1603	7/8"	9/32"
3/8"	1604	7/8"	9/32"
5/16"	1605	29/32"	5/16"
3/8"	1606	29/32"	5/16"
7/16"	1607	29/32"	3/4"
3/8"	1614	1-1/8"	3/4"
7/16"	1615	1-1/8"	3/4"
1/2"	1616	1-1/8"	7/16"
7/16"	1620	1-3/8"	3/4"
1/2"	1621	1-3/8"	7/16"
5/8"	1623	1-3/8"	7/16"
5/8"	1628	1-5/8"	7/16"
3/4"	1630	1-5/8"	1/2"
5/8"	1633	1-3/4"	1/2"
3/4"	1635	1-3/4"	1/2"
3/4"	1638	2"	9/16"
7/8"	1640	2"	9/16"
1"	1641	2"	9/16"
1-1/8"	1652	2-1/2"	5/8"
1-1/4"	1654	2-1/2"	5/8"
1-1/4"	1657	2-9/16"	11/16"
1-1/2"			

ID	p/n	OD	LTB	
			open -1	shield -2
1/8"	R2	3/8"	0.156	0.156
3/16"	R3	1/2"	0.156	0.196
1/4"	R4	5/8"	0.196	0.196
1/4"	R4A	3/4"	0.218	0.2812
3/8"	R6	7/8"	0.218	0.2812
1/2"	R8	1-1/8"	0.25	0.3125
5/8"	R10	1-3/8"	0.281	0.3438
3/4"	R12	1-5/8"	0.312	0.4375
7/8"	R14	1-7/8"	0.375	0.500
1"	R16	2"	0.375	0.500
1-1/8"	R18	2-1/8"	0.375	0.500
1-1/4"	R20	2-1/4"	0.375	0.500
1-1/2"	R24	2-5/8"	0.563	

These are examples of the interchange sizes available; other sizes can be made.

Some common industry-standard **cam followers** with their dimensions that EDT has available as Radial Poly-Round® (RPR's) are listed here:

OE	C			-		-		RPR
Material identifier Ref: Material Selection Chart (page 2)	Cam follower M = Metric	Y = Yoke F = Stud R = Roller	O = [placeholder] R = Flush H = Hex S = Slotted	-	ID size NTE 3 digits (or in 16 ^{ths})	-	Other modifier C = Crowned E = Eccentric M = Smaller OD N = Narrow S = (placeholder)	Radial Poly-Round®



EDT part numbers			Roller OD	Roller LTB	Roller ID OR Stud thread	
Yoke type	Stud type	Roller (with boss)			ID	Stud Thread
CYR-x or CYR-x-S	CF-x or CF-x-B	CR-x or CR-x-				
__CYR-10-SRPR	__CFO-10-SRPR	__CR-xx-RPR	5/8"	7/16"		1/4-28
__CYR-3/4-SRPR	__CFO-3/4-SRPR	__CR-xx-RPR	3/4"	1/2"	1/4"	3/8-24
__CYR-14-SRPR	__CFO-14-SRPR	__CR-xx-RPR	7/8"	1/2"	1/4"	3/8-24
__CYR-16-SRPR	__CFS-16-SRPR	__CR-xx-RPR	1"	5/8"	5/16"	7/16-20
__CYR-18-SRPR	__CFO-18-SRPR	__CR-xx-RPR	1-1/8"	5/8"	5/16"	7/16-20
__CYR-20-SRPR	__CFO-20-SRPR	__CR-xx-RPR	1-1/4"	3/4"	3/8"	1/2-20
__CYR-22-SRPR	__CFS-22-SRPR	__CR-xx-RPR	1-3/8"	3/4"	3/8"	5/8-18
__CYR-24-SRPR	__CFO-24-SRPR	__CR-xx-RPR	1-1/2"	7/8"	7/16"	5/8-18
__CYR-26-SRPR	__CFO-26-SRPR	__CR-xx-RPR	1-5/8"	7/8"	7/16"	5/8-18
__CYR-28-SRPR	__CFO-28-SRPR	__CR-xx-RPR	1-3/4"	1"	1/2"	3/4-16

These are examples of the interchange sizes available; other sizes can be made.

Common industry-standard **needle bearing assemblies** with dimensions that EDT has available as Radial Poly-Round® (RPR's) are listed here:

EDT part number	Industry part numbers	ID	OD	LTB
	Outer ring /inner ring N indicates Narrow ltb			N indicates Narrow LTB
_MR-10-NRPR	MR-14-N / MI-10-N	5/8"	1-1/8"	3/4"
_MR-12-NRPR	MR-16-N / MI-12-N	3/4"	1-1/2"	3/4"
_MR-14-NRPR	MR-18-N / MI-14-N	7/8"	1-5/8"	1"
_MR-16-NRPR	MR-20-N / MI-16-N	1"	1-3/4"	1"
_MR-18-NRPR	MR-22-N / MI-18-N	1-1/8"	1-7/8"	1"
_MR-20-NRPR	MR-24-N / MI-20-N	1-1/4"	2-1/8"	1"
_MR-22-MRPR	MR-26 / MI-22-4S	1-3/8"	2-3/16"	1-1/4"
_MR-22-ORPR	MR-28 / MI-22	1-3/8"	2-5/16"	1-1/4"
_MR-24-NRPR	MR-28-N/ MI-24-N	1-1/2"	2-5/16"	1"
_MR-24-ORPR	MR-28 / MI-24	1-1/2"	2-5/16"	1-1/4"

These are examples of the interchange sizes available; other sizes can be made.



Guide wheels and other assemblies that incorporate radial ball bearings or other multi-piece units can be made as Radial Poly-Round® bearings.

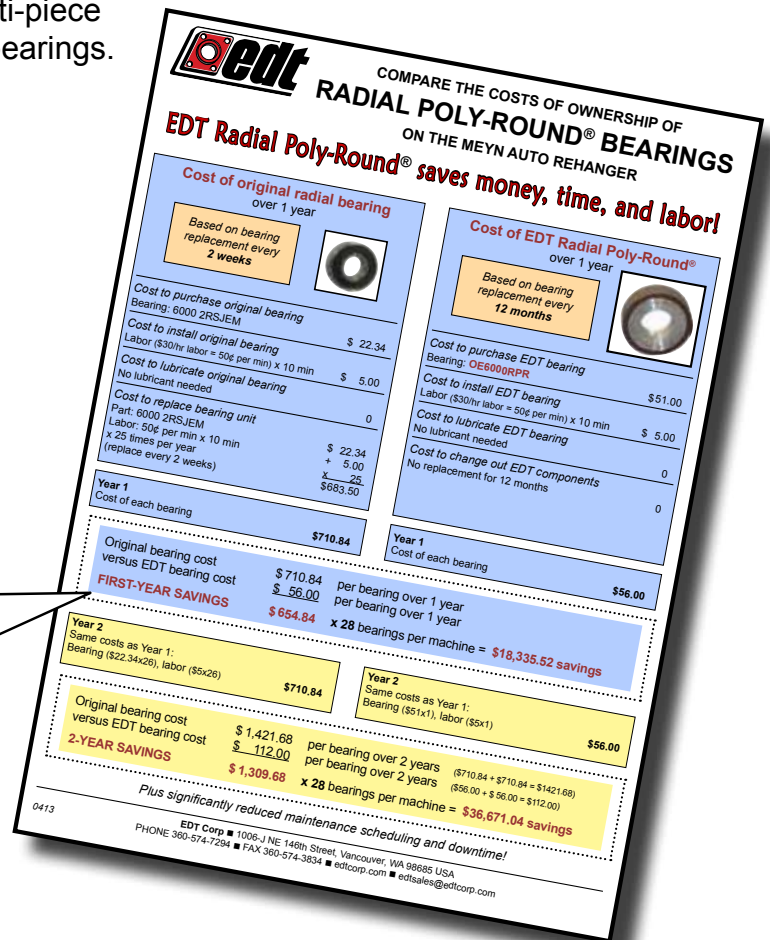


FAU1510.75RPR
Beverage filler wheel retrofit



OEVR8X2RPR-D0420
Can filler wheel retrofit

Look at the savings that can be realized despite higher initial cost: EDT Radial Poly-Round® at \$51 versus radial ball bearing at \$22.



EDT can assist you in:

- Evaluating application as suitable for an RPR bearing
- Help you select best material
- Based on current product longevity, illustrate the cost savings you might expect

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



Radial Poly-Round® (RPR) bearings are available to retrofit:

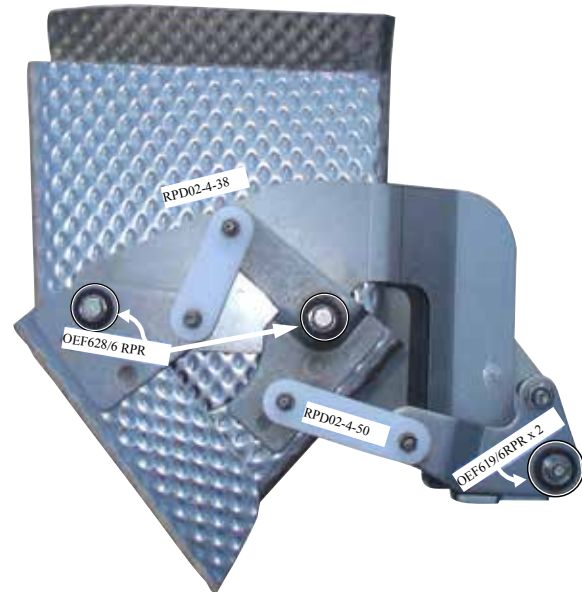
- Unmounted ball bearings of many configurations
- Some sizes of needle bearings
- Many styles of cam followers
- V-groove wheels

RPRs can be made for specific applications, especially those where:

- Both ID and OD move around a fixed shaft
- The shaft surface finish cannot be controlled (bolts, steel bar, corrosive environments)
- Operating environment is not conducive to industry-available products because of:
 - Grease
 - Rolling elements
 - Multiple pieces to assemble
- Infrequent, incomplete, oscillating motion
- Bearing location is difficult to replace or critical for reliable operation

In suitable applications,
Radial Poly-Round® bearings

- Save time
- Eliminate grease
- Eliminate catastrophic failure
- Reduce inventory
- Save Money!



Example of RPR application:
Bulk product scale feeder bucket

FOR DESIGN ASSISTANCE

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