
PEER FR010

Pre-Lubricated Plain Bearings

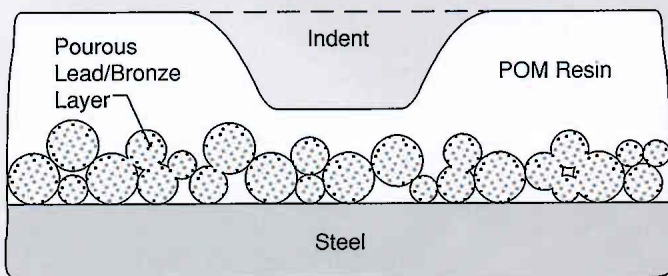
THE DIFFERENCE IS MORE THAN THE DIMPLES



New Choices From A Proven Partner

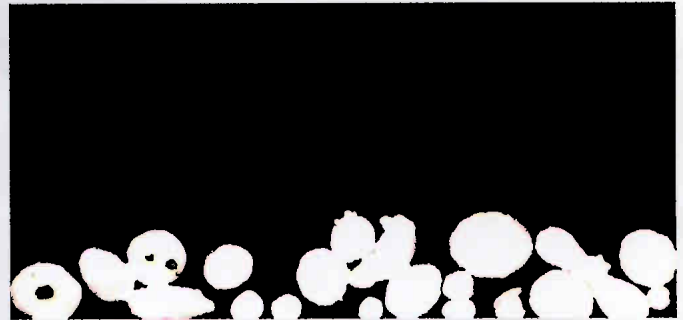
PEER, Inc.'s celebrated family of F-Series bearings has grown once again, giving you new choices in your tribology needs. **FR010**, also known as POM, is a pre-lubricated plain bearing that fills a unique set of application and cost-driven profiles. PEER produces millions of sleeve and flanged bearings, thrust washers, bushings, thrust blocks and wear plates each year with 0 ppm defects.

Bearing Section



Section Sketch

FR010 represents the same standards of excellence. **FR010** starts with steel backing sintered with a porous lead-bronze layer. This layer is impregnated with a polyacetal resin. The bearing's surface has a series of ball indents spaced at specified intervals. These indents retain lubricant and help to distribute it evenly around the bearing surface.



Standard Structure



Features That Deliver Results!

- Ball indents with geometry optimized for a superior lubrication system
- Robust Polyacetal molecular structure, impregnated rather than bonded as is the case with DX™
- Well-suited for high-impact loads and shaft misalignment
- Excellent clearance control
- Designed for very low level of friction and wear when pre-lubricated





Rigorous Testing Proven In The Field

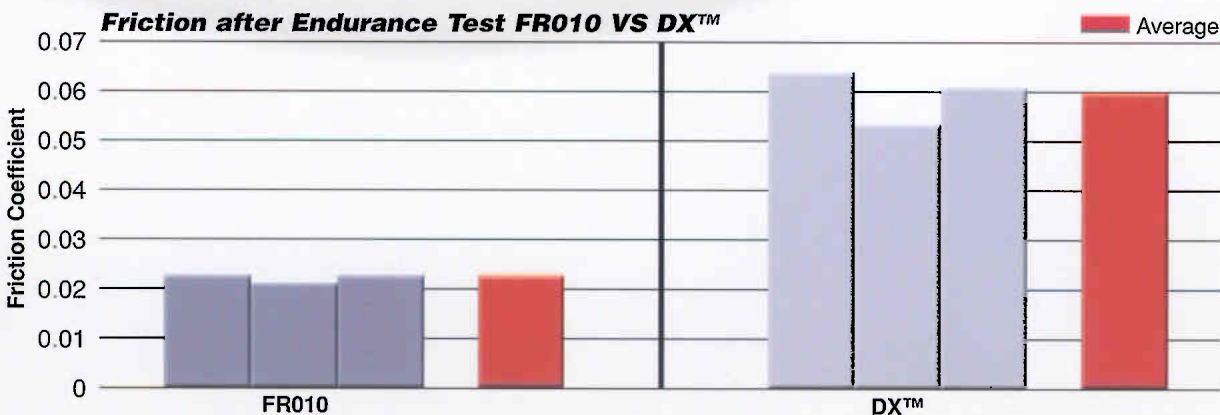
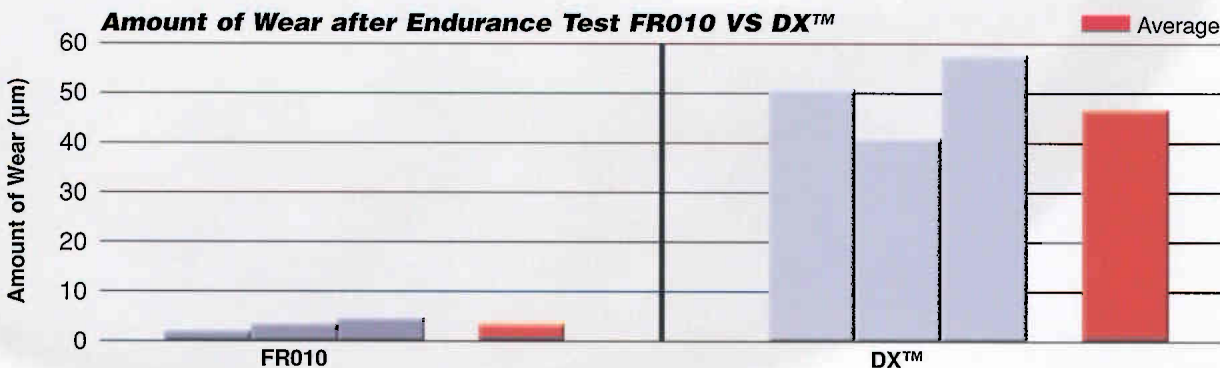
FR010 has been authoritatively tested against a popular competitive brand. The data which follows make a strong case for PEER's superiority:

FR010 POM Bearing — For Pre-Lubricated Applications

Material Structure	FR010 (polyacetal resin impregnated into a porous bronze inner structure sintered onto a steel backing)
PV	Static load conditions: 80,000 psi•fpm
Temperature Range	-40°F – 230°F intermittent to 265°F
Friction Coefficient	Static load condition: 0.015 – 0.15 Dynamic load condition: 0.01 – 0.10
Maximum Load and Speed	Load: 20,000 psi Speed: 500 fpm
Uses	Ideal for linkage, pivoting and rotating applications requiring grease or oil lubrication. <i>Example: Heavy and medium duty Steering Axles.</i>

The **FR010** bearing surface contains ball indentations for superb grease and oil retention. **FR010** bearings can be supplied with grooves or holes to enhance lubrication flow. The surface of the **FR010** is ideally suited for sizing operations such as boring, reaming, turning and broaching.

Please contact a Peer representative for more information.



Test Condition

Load
1848 psi (12.74 Mpa)

Speed
43.3 fpm (0.22 m/sec)

PV
80,000 psi•fpm
(2.8 Mpa m/sec)

RPM
205

Test Period
100 hrs.

Shaft
SAE1045, HRc55
8 µi Ra (0.2 µm)

Bushing Size
20mm(D) x 15mm(L)

Lubrication
Grease Dafrex 152
(Li+MoS₂ 2.5%)



Technical Notes

Clearance

Bearing Clearance: Diametrical clearance for **FR010** pre-lubricated bearings are typically greater than conventional plain type bearings to allow for possible thermal expansion of the lining during operation.

Shaft speeds that exceed 50 fpm require additional clearance. For slower rotating speeds and oscillating motions the clearance can be minimal with bearing to shaft conformity.

Shaft Surfaces and Finish

FR010 bearings can be used with most conventional shaft materials with a hardness of HB200 or higher. Peer, Inc. recommends a shaft surface finish of 16 Ra microinches (0.4 μm) or better.

Lubricants

FR010 pre-lubricated bearings are ideally suited and designed for use with grease lubrication. The selection for grease depends on several important application factors such as temperature, lubrication stability within the environment and the degree of possible foreign contamination. In most applications a premium quality, multi-purpose grease such as: Antioxidant Lithium Base or Calcium Based with EP Additives, Sodium Based or Calcium Based grease is recommended.

Sizing

FR010 bearings have a nominal 0.012 inch (0.3mm) anti-friction layer that allows for ID sizing if desired. Several ID sizing methods are recommended for use such as broaching, reaming or boring. It is recommended that not more than 0.005 inch (0.127mm) be removed from the liner; this will ensure sufficient indent depth to retain grease lubrication.

Alignment

FR010 bearings operate at their highest with proper shaft alignment across the entire bearing surface. However, **FR010** bearings are well suited for demanding applications where shaft misalignments do occur. It is recommended that misalignments should not exceed 0.002 inch (0.05mm).

Applications

FR010 bearings are pre-lubricated type bearings designed for smooth, low friction motion in oscillating or fretting conditions. They are ideal for use with misalignment and high impact conditions.

Typical applications in which these conditions apply include:

- Suspensions
- King Pins
- Gear Boxes
- Linkages
- Hydraulic Cylinders

If your needs are related to these applications, why not contact PEER, Inc. today?

FR010 Pre-Lubricated Bearings — Available Sizes (Inches)

* Metric Sizes Available at www.peerinc.com
Custom Sizes Also Available

Nominal Bearing Bore	Recommended Shaft Dia.	Recommended Housing Bore	Nominal Wall Thickness	Installed Bearing I.D.	Common Part Numbers
1/2	.5000	.6345	.0669	.5007	08FE06, 08FE08
	.4990	.6352	.0657	.5038	
5/8	.6250	.7596	.0669	.6258	10FE10, 10FE12
	.6240	.7604	.0657	.6290	
3/4	.7500	.8846	.0669	.7508	12FE12, 12FE16
	.7488	.8854	.0657	.7540	
7/8	.8750	1.0097	.0669	.8759	14FE12, 14FE16
	.8738	1.0105	.0657	.8791	
1	1.0000	1.1348	.0699	1.0010	16FE12, 16FE16
	0.9988	1.1356	.0657	1.0042	
1-1/8	1.1250	1.2598	.0669	1.1260	18FE12, 18FE16
	1.1238	1.2606	.0657	1.1292	
1-1/4	1.2500	1.4160	.0824	1.2512	20FE12, 20FE16
	1.2484	1.4170	.0810	1.2550	
1-3/8	1.3750	1.5410	.0824	1.3762	22FE16, 22FE24
	1.3734	1.5420	.0810	1.3800	
1-1/2	1.5000	1.6660	.0824	1.5012	24FE16, 24FE24, 24FE32
	1.4984	1.6670	.0810	1.5050	
1-5/8	1.6250	1.7910	.0824	1.6262	26FE16, 26FE24, 26FE32
	1.6234	1.7920	.0810	1.6300	
1-3/4	1.7500	1.9371	.0928	1.7515	28FE16, 28FE24, 28FE32
	1.7484	1.9381	.0902	1.7577	
1-7/8	1.8750	2.0621	.0928	1.8765	30FE16, 30FE24, 30FE32, 30FE36
	1.8734	2.0633	.0902	1.8829	
2	2.0000	2.1871	.0928	2.0015	32FE16, 32FE24, 32FE28, 32FE32
	1.9982	2.1883	.0902	2.0079	
2-1/2	2.5000	2.6871	.0928	2.5015	40FE24, 40FE32, 40FE40
	2.4982	2.6883	.0902	2.5079	
3	3.0000	3.1875	.0928	3.0019	48FE24, 48FE32, 48FE40, 48FE48
	2.9982	3.1889	.0902	3.0085	

Part Numbers

Are expressed in increments of 1/16 inch.
The first two numbers represent the ID and the second two numbers represent the length.

Length Tolerances

+/-0.010 inch for all FR010 Bearings.