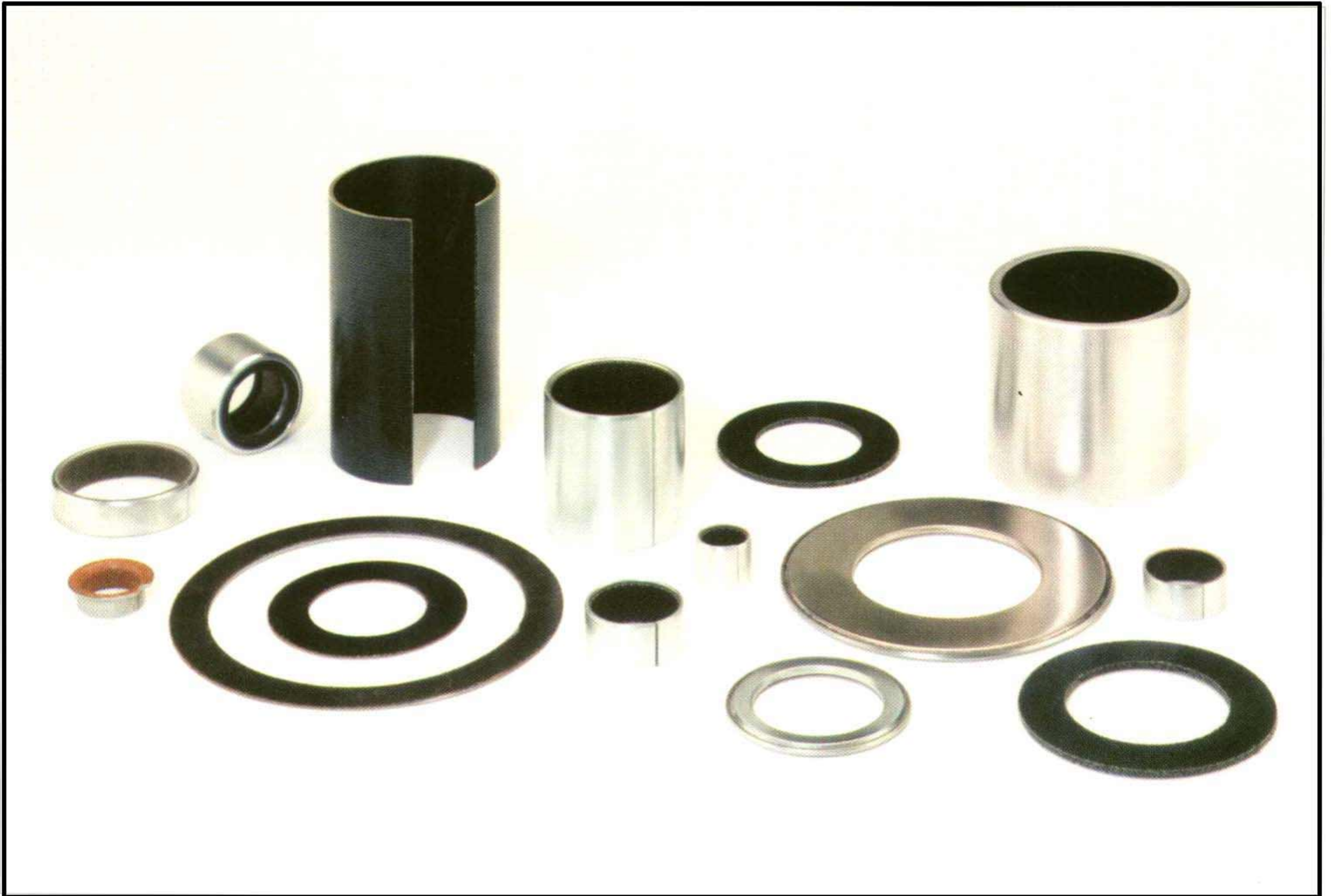


Fiberglide®

Self-Lubricating Bearings



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RBC[®]
BEARINGS

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FIBERGLIDE[®] BEARINGS

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TYPE	DESCRIPTION	DIMENSIONS*	APPLICATIONS
 CJS	Journal bearings, coiled steel backing, zinc plated.	Nom. shaft diameter- .375 to 10.000 Bearing length- .250 to 6.50 Wall thickness- .045 to .09	The CJS bearing works excellent in any pivot or linkage application. For construction and farm equipment, this product is typically used in kingpins, rock shafts, differentials, hinges, pedals and many other pivot points.
 CJT	Journal bearings, thin walled, coiled steel backing, zinc plated	Nom. shaft diameter- .500 to 10.000 Bearing length- .375 to 6.50 Wall thickness - 0.060	This bearing is designed as a direct replacement with conventional 1/16" wall bushings. These bearings are used in self-lubricated chain, variable speed sheaves, boom pivot points on fork lifts and many similar applications.
 CIH	Journal bearings, heavy walled, coiled steel backing, zinc plated	Nom. shaft diameter- .750 to 10.000 Bearing length - .375 to 11.00 Wall thickness - 0.125	This bearing is designed as a direct replacement with the conventional 1/8" wall bronze bushings. Typical applications include suspension points on large trucks and railroad cars. These products are also used in the boom foot pivot of large cranes.
 CJM	Metric Journal bearings, coiled steel backing, zinc plated	Nom. shaft diameter- 8MM to 120MM Bearing length- 8MM to 165MM Wall thickness- 1.0 to 2.5MM	This product is the metric equivalent to the CJS product and used in similar applications.
 LJS	Journal bearings, liner type, non-metallic	Nom. shaft diameter- 1.000 to 12.000 Bearing length- .375 to 6.50 Wall thickness- .022 to .06	These bearings are used in many harsh applications and in food handling machinery. Typical applications include butterfly valves and trunnion support pivots. This product is also used in sheaves and hoists for marine applications.
 FTS	Thrust bearings, metal-backed, single sided	Nom. shaft diameter- .250 to 3.250 I.D. - .280 to 3.312 O.D. - .500 to 4.875 Thickness- .030 to .06	These bearings accommodate thrust in clutches, hospital beds, screw jacks, valve actuators, vehicle suspensions, and many other applications.
 LTD	Thrust bearings, laminated phenolic-backed, double-sided	Nom. shaft diameter- .250 to 3.250 I.D. - .280 to 3.312 O.D. - .500 to 4.875 Thickness- .030 to .09	These bearings are used in cam actuator arms, turntable support bearings, exercise equipment, truck differentials and many other applications.
 FTP	Thrust packs, Two piece assembly	I.D. - 1.000 to 3.000 O.D. - 1.750 to 4.625 Thickness- .130	These bearings are used in articulated frame joints, pivot arm supports, kingpins and many other applications.

Self-Lubricating Bearings

FIBERGLIDE® and FABROID® bearings offer 17 distinct advantages over conventional lubricated bearings:

1. Design freedom—FIBERGLIDE® bearings can be incorporated into internal component assemblies inaccessible to conventional lubrication techniques, eliminating costly maintenance tear down.
2. Maintenance free—The self-lubricating nature of FIBERGLIDE® makes it an ideal selection for equipment providing service to remote environments such as oil and gas transmission lines and pumping stations.
3. Operation without lubrication while tolerating many lubricating and non-lubricating fluids.
4. High dynamic load-carrying (up to 40,000 psi).
5. Inherent dampening qualities.
6. Low coefficient of friction (down to 0.03).
7. Freedom from stick-slip.
8. Absence of cold-flow tendencies of solid and filled PTFE resins.
9. High resistance to fatigue under shock loads.
10. Eliminating fretting corrosion.
11. Resistant to attack by most substances.
12. Operation at temperatures beyond the range of most lubricants (-320°F to 400°F).
13. High wear resistance.
14. Good dimensional stability.
15. Compatible with a wide range of mating materials.
16. Electrically non-conductive.
17. Non-magnetic.

Typical Applications

FIBERGLIDE® bearings are being used by many basic manufacturing industries where they have proven their economy, convenience, and dependability.

- Steering systems for trucks, farm tractors, off-highway equipment
- Heavy-duty suspension systems of trucks, tractors, and related equipment
- Brakes for trucks, automobiles, off-road vehicles
- Transmission shift linkages and pivots
- Butterfly, ball plug valves
- Clutches and variable speed sheaves
- Marine equipment
- Pneumatic and hydraulic tools and actuators
- Conveying and material handling equipment
- Bridge and other structure support bearings
- Pumps
- Package machinery
- Textile machinery
- Food processing equipment
- Wherever heavy loading and low speed oscillations are encountered

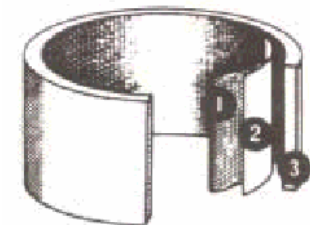
FIBERGLIDE® and FABROID® are registered trademarks of Transport Dynamics Division, Roller Bearing Company of America.

FIBERGLIDE® is a proprietary self-lubricating bearing material of woven polytetrafluoroethylene or PTFE fibers applied to a rigid backing. To assure the best possible bond between PTFE fibers and backing material, a secondary, more readily bondable fiber (which may vary with application requirements) is interwoven with the PTFE fibers presented on the bearing side of the fabric.

FIBERGLIDE® bearings are unique in their ability to resist cold flow under extremely high loads because the monofilament fibers have a tensile strength approximately 25 times greater than straight PTFE resins. Cold flow is also minimized by the effective entrapment of the fiber bundles by the high-strength bonding resins.

FIBERGLIDE® bearings are completely self-lubricating and normally run dry. However, they can also be used where lubricating or other fluids are present. Operating dry, FIBERGLIDE® bearing are recommended where low surface speeds are combined with high loads.

FIBERGLIDE® bearings are available with many backing materials in a wide variety of standard configurations. In addition, Transport Dynamics offers special bearings with an almost unlimited range of configurations and metal backings.



Construction of Typical FIBERGLIDE® Bearing:

1. PTFE fabric
2. Adhesive bonding agent
3. Metal

Many factors affect the overall performance of FIBERGLIDE® bearings. Those of primary concern include applied load, surface velocity, operating mode, surface temperature, mating surface finish and running clearance.

All performance values referred to in this section are based on dry operation. When running in a fluid atmosphere, FIBERGLIDE® bearings may have limitations. Where application requirements exceed those shown, consult Transport Dynamics engineering department for specific recommendations.

FIBERGLIDE® lined bearings are designed to be used under oscillating motion, interrupted start-stop, or axial motion. They are recommended where high loads are combined with low surface speeds.

Design Calculations (Journal Bearings-Oscillating Motion)

Projected Area (sq. in.) = Shaft Dia. Max (or Nom. I.D.) x Length

$$\text{Pressure, P (psi)} = \frac{\text{Load (lbf)}}{\text{Projected Area (sq. in.)}}$$

$$\text{Velocity, V (ft/min)} = \frac{\text{Shaft Dia. Max (in.)} \times \pi}{12} \times \frac{4 \times \text{Osc. Angle}^\circ \times \text{CPM}}{360^\circ}$$

CPM = Cycles per minute

Bearing Wear

Bearing wear is affected by many factors. For the most part, tests conducted by Transport Dynamics subject journal bearings to 20,000 psi loads with the bearing fixed and the shaft oscillating. The values shown in the charts on page 6 are representative of the normal wear rate range that can be expected when the amplitude is $\pm 45^\circ$, frequency is 10 CPM, and shaft finish is 16 RMS under room temperature conditions.

It will be noted that a break-in period takes place during the first few thousand cycles. During this period, some PTFE is transferred to the mating surface. In addition, the fibers are generally reoriented, the high points of the weave are flattened and adjacent fibers tend to blend together. After the break-in period, the bearing surface will become smooth and shiny.

Wear life calculations are typically based on rubbing distance of travel. Because of the many variables which influence wear, it is extremely difficult to project bearing life for all types of applications. For this reason, Transport Dynamics engineering department should be consulted when questions of this nature arise.

Bearing Load Limits

FIBERGLIDE®

	<u>Max.</u>	<u>Typical</u>
Static Pressure Limits with phenolic backing*	10,000 psi	10,000 psi
Static Pressure Limits with steel backing*	34,000 psi	30,000 psi
Dynamic Pressure Limits with phenolic backing	10,000 psi	2,000 to 5,000 psi
Dynamic Pressure Limits with steel backing	20,000 psi	2,000 to 10,000 psi

FABROID®

	<u>Max.</u>	<u>Typical</u>
Static Pressure Limits with steel backing*	34,000 psi	30,000 psi
Dynamic Pressure Limits with steel backing	20,000 psi	2,000 to 15,000 psi

* Where repeated impact loading is applied, these values should be reduced to meet fatigue life requirements.

Velocity Limit

Under dry running conditions, the maximum allowable surface velocity will depend on the applied load and other operating parameters. In general, surface speed should be kept below 35 FPM (Feet Per Minute) at a 10,000 psi or 600 FPM at a 100 psi load.

PV Factor

For plain, dry-running bearings, it is often helpful to reference a pressure-velocity (PV) factor as a guide in determining bearing capability. It should be understood that this factor is actually a variable that reflects the point where the surface temperatures are at a maximum, but are still stable. The maximum PV values established for FIBERGLIDE® in terms of psi-FPM are:

PV continuous-60,000
PV intermittent-350,000

Temperature Limit

Normal operating temperatures should be kept below 300°F for standard FIBERGLIDE® bearings. An increase in wear rates may be experienced at temperatures above 350°F. Note that at elevated operating temperatures, the PV limit will be decreased in order to prevent the surface temperature from exceeding 300°F, (environmental temperature plus friction heat generated). When temperatures exceed 300°F or fall below -200°F, consult Transport Dynamics engineering department for specific recommendations.

Coefficient of Thermal Expansion

When bonded to a metal backing, FIBERGLIDE® can be regarded as having a coefficient of thermal expansion identical to that of the backing. For example, with the standard steel backing the coefficient of thermal expansion is 8.4×10^{-6} in/in/°F.

Mating Surfaces

FIBERGLIDE®, being non-metallic, will operate against most metals, but better performance is obtained with the hardest available mating surfaces. Hardened steel, hard anodized aluminum, hard chrome or nickel plating are recommended. A surface finish of 45-50 Rc is desirable, but satisfactory performance may also be obtained with softer materials. Generally, a surface finish on the mating component of 16-32 μ inch should be provided. Shaft materials or surface treatments should be selected that will effectively resist corrosion. Transport Dynamics recommends a max surface finish of 32 RMS and a minimum hardness of 40 Rc.

To determine the approximate reduction in life for different values of shaft finish and hardness, see below.

SURFACE FINISH	LIFE FACTOR
8-16	1.00
32	0.55
63	0.20

HARDNESS Rockwell Reading	LIFE FACTOR
Rc 50	1.00
Rc 40	0.60
Rc 30	0.40

Coefficient of Friction

Coefficient of friction depends upon the type of movement, finish of mating surface, ambient temperature, bearing pressure, velocity, and other variables. Figures 1, 2 and 3 may be used as a guide in determining coefficient of friction for a particular application. Note in Figure 1 that the coefficient drops off as bearing load increases. This offers the advantage of using the smallest bearing sizes to obtain the least amount of friction. Figure 3 shows the coefficient of friction increasing as surface velocity increases from 2-20 FPM.

Contamination

FIBERGLIDE® can tolerate small amounts of dirt, but reduced bearing life will result. Optimum life is achieved if dirt or abrasive particles are excluded. If a dirty environment is likely, we recommend installation of a simple seal.

Running Clearance

As a general rule, close running fits, and often slight interference fits (.0005 in.) are selected for oscillating motion when minimum starting torque is less important than the elimination of free play. For constant rotation, a free-running fit is normally recommended, the exact amount depending on the bearing bore size. A rule of thumb would be 0.0015 inches per inch of bore (bearing installed).

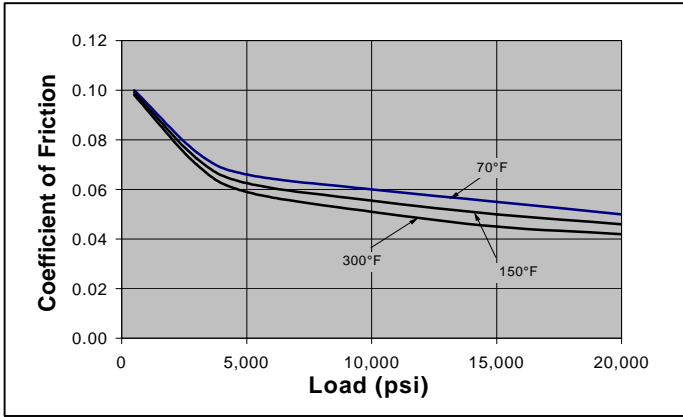


Figure 1: Effect of Load and Temperature on FIBERGLIDE® Bearing

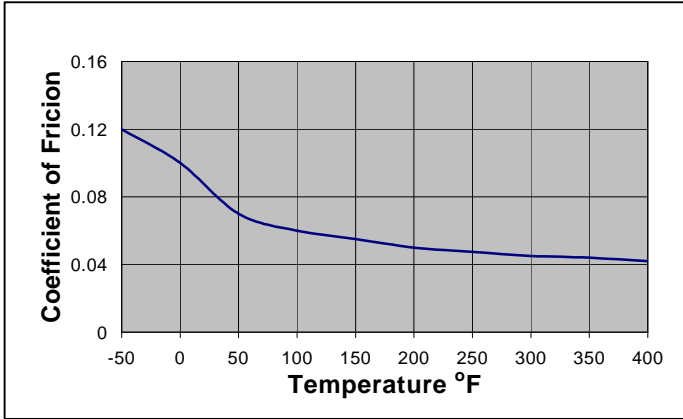


Figure 2: Effect of Temperature on Coefficient of Friction

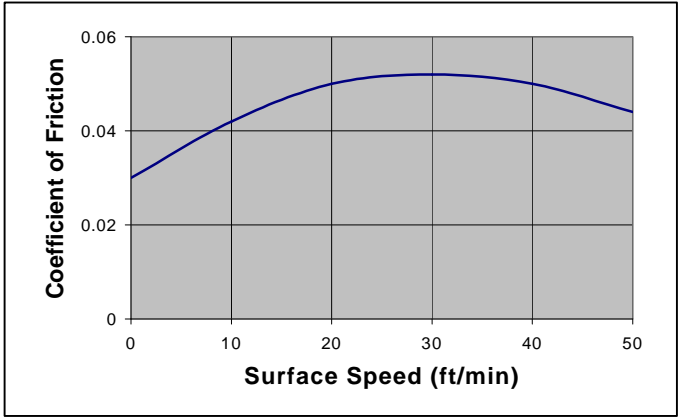


Figure 3: Coefficient of Friction at 70°F and 10,000 psi

Bearing Housing & Shaft Sizing

Standard FIBERGLIDE® journal bearings ([CJS/CJT/CJM/CJH](#) Types) are installed into the housing bore using a press fit. Recommended housing bores should be held to the tolerance shown to ensure the proper fit and size.

The [LJS Type](#) bearing is hand slip fit into its recommended housing bore to provide optimum fit-up. [CJS/CJT/CJM/CJH](#) Types can also be provided for slip fits on special order.

Transport Dynamics offers a special service to properly size housing and shafting for each new application. Contact Transport Dynamics engineering department for details.

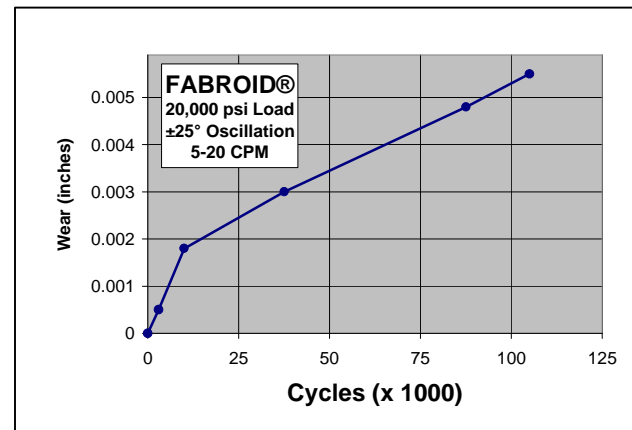
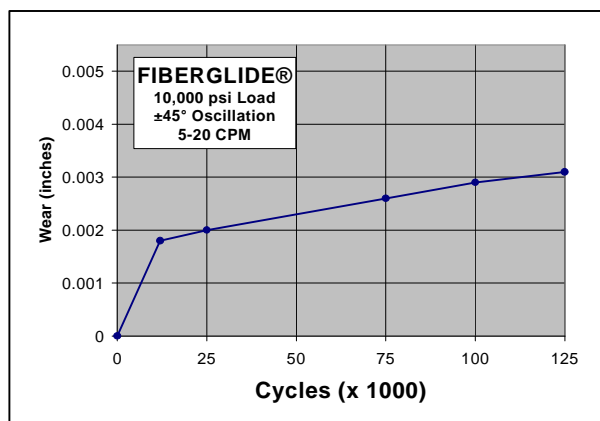
Fluid Compatibility

FIBERGLIDE® can tolerate most fluids or contaminants found in bearing applications, although some reduction of dry bearing life will result. Fluids tend to flush PTFE solid particle lubricants out of the bearing. Grease tends to act as a magnet to attract and retain dirt. Following are some of the environments in which FIBERGLIDE® bearings have operated successfully:

Ammonium Hydroxide	Detergent Solutions	Gasoline
Greases	Hydraulic Oils	Kerosene
Liquid Nitrogen	Lubricating Oils	Mild Acids
Seawater	Toluene	

FIBERGLIDE®-FABROID®

The following graphs are typical wear curves for two types of self-lubricating liner materials; Standard FIBERGLIDE® A and FABROID® G. The standard FIBERGLIDE® A material is suitable for most applications and significantly outperforms other bearing types. But, should your application include extraordinarily high static and/or dynamic loads, extremes of temperature, or chemical resistance requirements, Transport Dynamics manufactures a variety of liner materials and backing for critical service applications.



Comparison of FIBERGLIDE® and FABROID® with Other Self-Lubricating Types

	METAL-BACKED FIBERGLIDE®	METAL-BACKED FABROID®	FILLED PTFE	PTFE IMPREGNATED BRONZE	OIL IMPREGNATED BRONZE
TYP. DYNAMIC LOAD (psi)	2,000 TO 10,000	5,000 TO 20,000	0 TO 500	500 TO 3,000	100 TO 2,000
MAX. STATIC LOAD (psi)	30,000	① 60,000	2,500	20,000	11,000
MAX. CONTINUOUS PV VALUE	60,000	60,000	10,000	50,000	50,000
TEMPERATURE RANGE (°F)	-320 +300	-320 +400	-400 +500	-320 +500	-65 +250
CHEMICAL RESISTANCE	GOOD	EXCELLENT	EXCELLENT	FAIR	POOR
MIN. COEFFICIENT OF FRICTION	0.03	0.03	0.02	0.03	0.05

① FOR LOW SPEED OSCILLAING CONDITIONS-static loads over 30,000 psi or dynamic loads over 20,000 psi require metal backing of high strength stainless steel or equivalent materials.

Transport Dynamics is the originator, innovator and leader in self-lubricating bearing technology with over forty years of material development and application experience. The original FABROID® liner system was patented in 1958. Evolution in the development of materials has created three generations of self-lubricating liner technology.

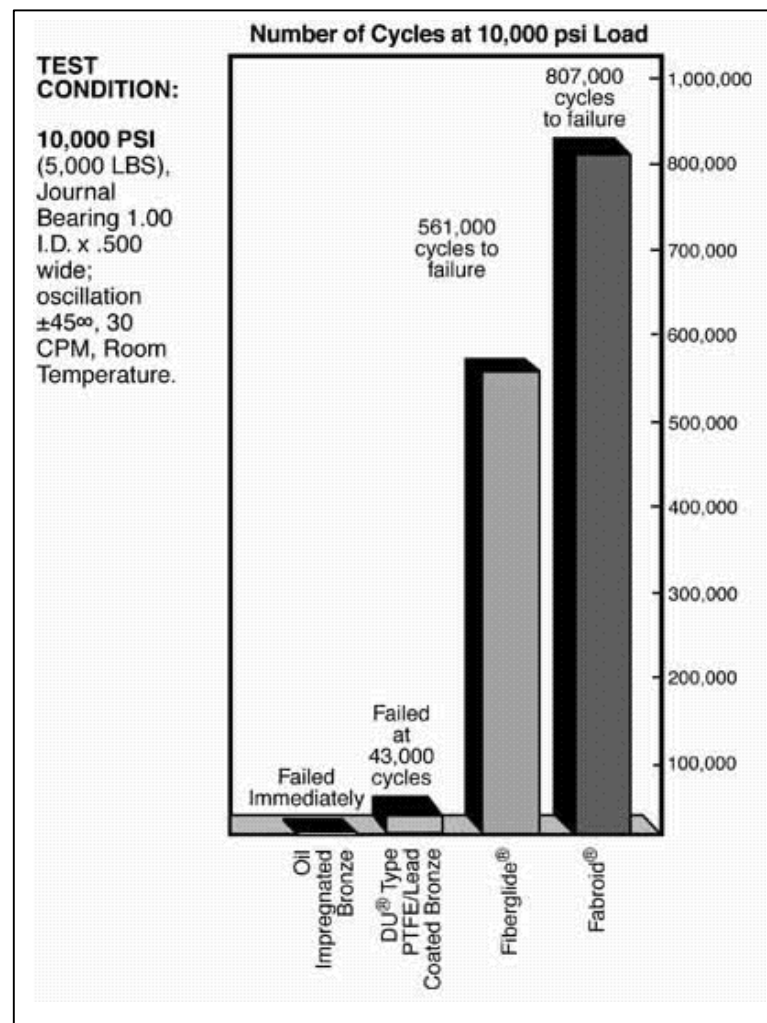
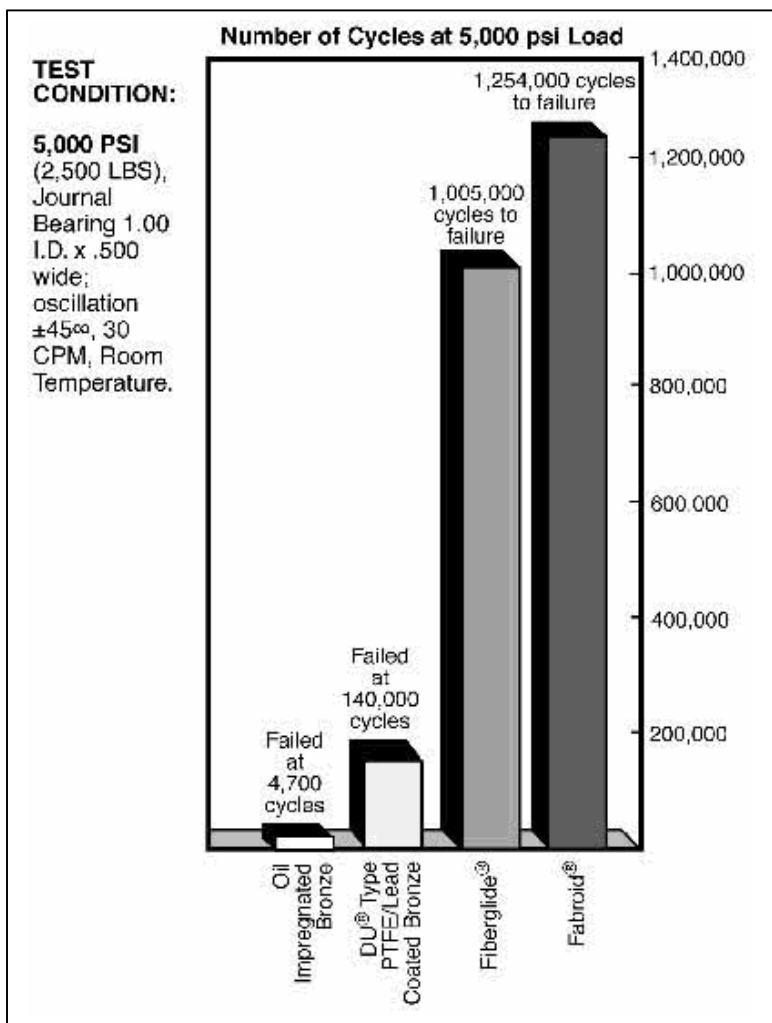
Today's materials represent a significant advance in technology and their increased capabilities offer solutions in applications previously judged to be borderline or beyond material capability. **Contact Transport Dynamics engineering department for a detailed publication of all our liner systems. Request Engineering Bulletin #106, Bearing Design Guide.**

COMPARATIVE TESTING

Tests were conducted to compare the load carrying capability and wear life of four standard self-lubricating bearing products. Transport Dynamics performed all testing on the same test machine and fixturing. Standard FIBERGLIDE® and FABROID® products are presented herein. Transport Dynamics offers other self-lubricating bearing products capable of dynamic loading to 40,000 psi and ultimate static loading to 120,000 psi.

Test Conditions

The bearings were placed under a fixed load with an oscillating shaft. The test bearing size was 1.00 inch I.D. by .500 inch long. The test conditions were 5,000 psi (2,500 lbs) and 10,000 psi (5,000 lbs) with an oscillation of $\pm 45^\circ$ and 30 cycles per minute at room temperature. Approximately every 10,000 cycles, the bearings were removed and inspected for wear.



Journal Bearings

Installation of solid journal bearings or closed seam coiled bearings ([CJS](#), [CJT](#), [CJM](#) and [CJH](#) series) should be accomplished with a stepped mandrel tool as illustrated. Housing bore should be provided with a lead-in chamfer. See Figure 1.

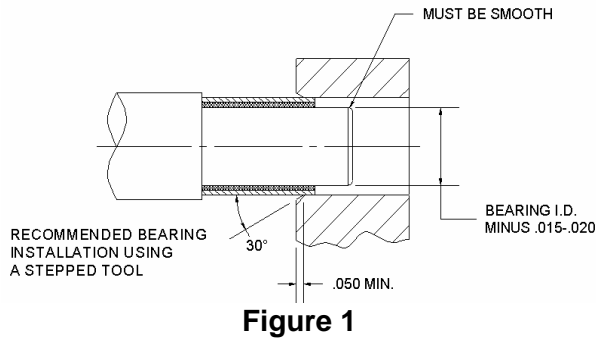


Figure 1

Entering corner of shaft must have a lead-in chamfer or radius as shown in Figure 2 to avoid damaging the bearing liner during assembly.

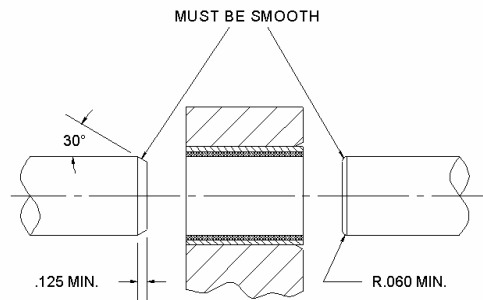


Figure 2

When installation assembly design does not provide means for entrapment, liner type bearings ([LJS](#) series) should be positioned in the housing bore by undercutting the I.D. to form retaining steps as shown in Figure 3 (upper). A separate sleeve type retainer, pressed into the housing, may be preferred in some cases as demonstrated in Figure 3 (lower).

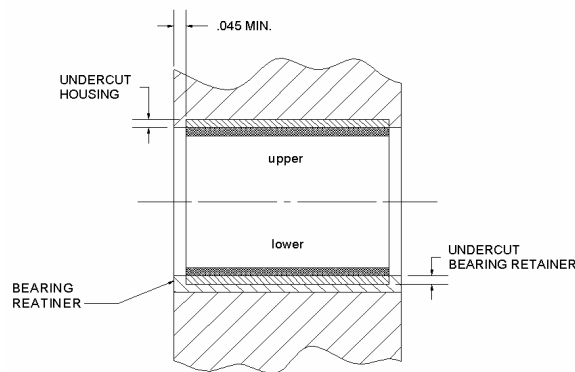


Figure 3

Thrust Bearings

[FTS/LTD](#) series thrust bearings should run against a hard, smooth mating surface, which should be resistant to corrosion, if moisture or high humidity to form surface rust.

Note that the standard I.D. dimensions are oversized in order to allow for corner radius of stepped shafts. See Figure 4.

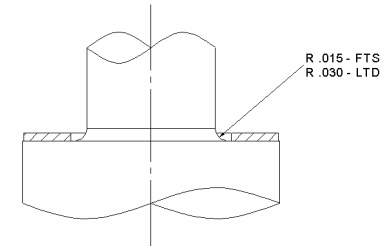


Figure 4

Thrust Packs

Slim pack thrust bearings ([FTP](#) series) should be installed with the heavy wear washer on the bottom as indicated in Figure 5.

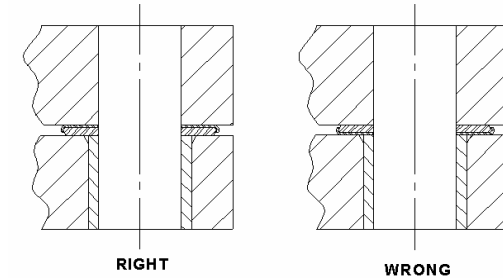


Figure 5

When it is necessary to install this assembly below a heavy-walled journal bearing, where repeated impact loads are involved, a special thrust pack having an enlarged liner plate I.D. may be preferred. See Figure 6.

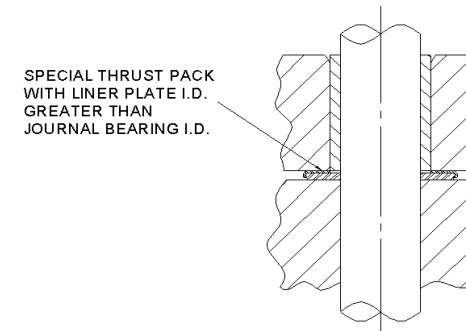
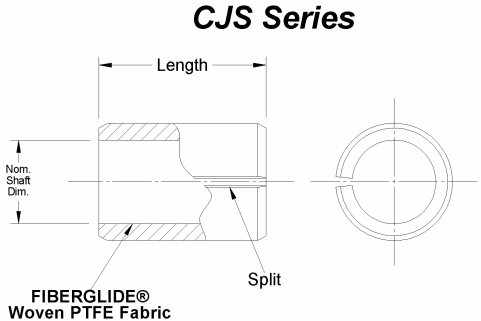


Figure 6

Fiberglide[®] Journal Bearings

Coiled Steel Backing

FIBERGLIDE[®] coiled steel journal bearings are designed to meet industry standards for self-lubricating bushings. They provide all of the advantages of FIBERGLIDE[®] at minimum cost. Carbon steel is normally used as a backing material, with the external surfaces plated to resist corrosion. Other metals can be supplied upon special order. Typical applications include automotive vehicles, farm equipment, construction and material handling equipment. FABROID[®] can also be supplied for special applications-consult Transport Dynamics Engineering Department. For bearing installation [click here](#).

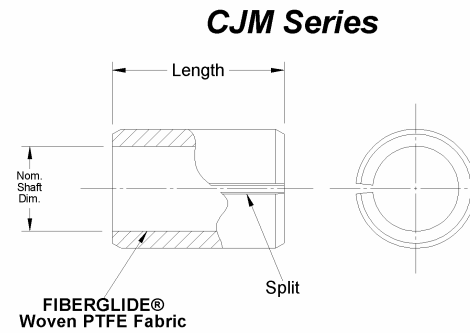


PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (IN.)		PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (in.)	
			+ .000	- .020				+ .000	- .020
CJS-0606	.375	.4680/.4690	.375		CJS-1816	1.125	1.2805/1.2815	1.000	
CJS-0608	.375	.4680/.4690	.500		CJS-1824	1.125	1.2805/1.2815	1.500	
CJS-0610	.375	.4680/.4690	.625						
CJS-0612	.375	.4680/.4690	.750		CJS-2012	1.250	1.4055/1.4065	.750	
					CJS-2016	1.250	1.4055/1.4065	1.000	
CJS-0808	.500	.5930/.5940	.500		CJS-2020	1.250	1.4055/1.4065	1.250	
CJS-0810	.500	.5930/.5940	.625		CJS-2024	1.250	1.4055/1.4065	1.500	
CJS-0812	.500	.5930/.5940	.750						
CJS-0816	.500	.5930/.5940	1.000		CJS-2216	1.375	1.5305/1.5315	1.000	
					CJS-2222	1.375	1.5305/1.5315	1.375	
CJS-1008	.625	.7180/.7190	.500		CJS-2224	1.375	1.5305/1.5315	1.500	
CJS-1010	.625	.7180/.7190	.625						
CJS-1012	.625	.7180/.7190	.750		CJS-2416	1.500	1.6555/1.6565	1.000	
CJS-1016	.625	.7180/.7190	1.000		CJS-2424	1.500	1.6555/1.6565	1.500	
					CJS-2428	1.500	1.6555/1.6565	1.750	
CJS-1208	.750	.8745/.8755	.500						
CJS-1212	.750	.8745/.8755	.750		CJS-2824	1.750	1.9375/1.9385	1.500	
CJS-1216	.750	.8745/.8755	1.000		CJS-2828	1.750	1.9375/1.9385	1.750	
CJS-1220	.750	.8745/.8755	1.250		CJS-2832	1.750	1.9375/1.9385	2.000	
CJS-1408	.875	.9995/1.0005	.500		CJS-3224	2.000	2.1875/2.1885	1.500	
CJS-1414	.875	.9995/1.0005	.875		CJS-3232	2.000	2.1875/2.1885	2.000	
CJS-1416	.875	.9995/1.0005	1.000						
CJS-1420	.875	.9995/1.0005	1.250		CJS-3636	2.250	2.4375/2.4385	2.250	
CJS-1608	1.000	1.1245/1.1255	.500		CJS-4848	3.000	3.1875/3.1885	3.000	
CJS-1612	1.000	1.1245/1.1255	.750						
CJS-1616	1.000	1.1245/1.1255	1.000		CJS-5656	3.500	3.6875/3.6885	3.500	
CJS-1620	1.000	1.1245/1.1255	1.250						
CJS-1624	1.000	1.1245/1.1255	1.500		CJS-6464	4.000	4.1875/4.1885	4.000	

Metric Fiberglide[®] Journal Bearings Coiled Steel Backing

[MAIN MENU](#)

FIBERGLIDE[®] coiled steel journal bearings are designed to meet industry standards for self-lubricating bushings. They provide all of the advantages of FIBERGLIDE[®] at minimum cost. Carbon steel is normally used as a backing material, with the external surfaces plated to resist corrosion. Other metals can be supplied upon special order. Typical applications include automotive vehicles, farm equipment, construction and material handling equipment. FABROID[®] can also be supplied for special applications-consult Transport Dynamics Engineering Department. For bearing installation, [click here](#).

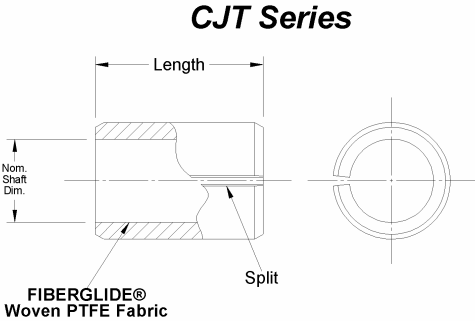


PART NUMBER	SHAFT DIA. (mm) MIN/MAX	RECOMMENDED HOUSING BORE MIN/MAX (mm)	BEARING LENGTH (mm) +0.25 -0.25	PART NUMBER	SHAFT DIA. (mm) MIN/MAX	RECOMMENDED HOUSING BORE MIN/MAX (mm)	BEARING LENGTH (mm) +.25 -.25
CJM-0808	7.972/7.987	10.000/10.015	8.00	CJM-1815	17.966/17.984	20.000/20.021	15.00
CJM-0810	7.972/7.987	10.000/10.015	10.00	CJM-1820	17.966/17.984	20.000/20.021	20.00
CJM-0812	7.972/7.987	10.000/10.015	12.00	CJM-1825	17.966/17.984	20.000/20.021	25.00
CJM-1008	9.972/9.987	12.000/12.018	8.00	CJM-2015	19.959/19.980	23.000/23.021	15.00
CJM-1010	9.972/9.987	12.000/12.018	10.00	CJM-2020	19.959/19.980	23.000/23.021	20.00
CJM-1012	9.972/9.987	12.000/12.018	12.00	CJM-2025	19.959/19.980	23.000/23.021	25.00
CJM-1015	9.972/9.987	12.000/12.018	15.00	CJM-2030	19.959/19.980	23.000/23.021	30.00
CJM-1020	9.972/9.987	12.000/12.018	20.00				
CJM-1210	11.966/11.984	14.000/14.018	10.00	CJM-2215	21.959/21.980	25.000/25.021	15.00
CJM-1212	11.966/11.984	14.000/14.018	12.00	CJM-2220	21.959/21.980	25.000/25.021	20.00
CJM-1215	11.966/11.984	14.000/14.018	15.00	CJM-2225	21.959/21.980	25.000/25.021	25.00
CJM-1220	11.966/11.984	14.000/14.018	20.00	CJM-2230	21.959/21.980	25.000/25.021	30.00
CJM-1225	11.966/11.984	14.000/14.018	25.00				
CJM-1310	12.966/12.984	15.000/15.018	10.00	CJM-2415	23.959/23.980	27.000/27.021	15.00
CJM-1415	13.966/13.984	16.000/16.018	15.00	CJM-2420	23.959/23.980	27.000/27.021	20.00
CJM-1420	13.966/13.984	16.000/16.018	20.00	CJM-2425	23.959/23.980	27.000/27.021	25.00
CJM-1512	14.966/14.984	17.000/17.018	12.00	CJM-2430	23.959/23.980	27.000/27.021	30.00
CJM-1515	14.966/14.984	17.000/17.018	15.00	CJM-2515	24.959/24.980	28.000/28.021	15.00
CJM-1525	14.966/14.984	17.000/17.018	25.00	CJM-2520	24.959/24.980	28.000/28.021	20.00
CJM-1612	15.966/15.984	18.000/18.018	12.00	CJM-2525	24.959/24.980	28.000/28.021	25.00
CJM-1615	15.966/15.984	18.000/18.018	15.00	CJM-2530	24.959/24.980	28.000/28.021	30.00
CJM-1620	15.966/15.984	18.000/18.018	20.00	CJM-3020	29.959/29.980	34.000/34.025	20.00
CJM-1625	15.966/15.984	18.000/18.018	25.00	CJM-3030	29.959/29.980	34.000/34.025	30.00
				CJM-3035	29.959/29.980	34.000/34.025	35.00
				CJM-4040	39.950/39.975	44.000/44.025	40.00

Fiberglide[®] Journal Bearings

Thin-Walled Coiled Steel Backing

The constant wall thickness of .062 inch of the CJT series makes them dimensionally interchangeable with other types of coiled bearings commonly used. They provide all of the advantages of FIBERGLIDE[®] at minimum cost. Carbon steel is normally used as a backing material, with the external surfaces plated to resist corrosion. Other metals can be supplied upon special order. Typical applications include automotive vehicles, farm equipment, construction and material handling equipment. FABROID[®] can also be supplied for special applications-consult Transport Dynamics Engineering Department. For bearing installation, [click here](#).

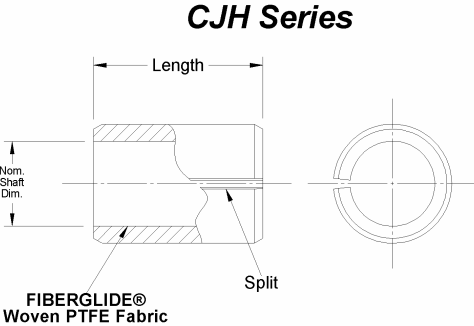


PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (IN.) +.000 -.020	PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (in.) +.000 -.020
CJT-0808	.500	.6240/.6250	.500	CJT-2816	1.750	1.8745/1.8755	1.000
CJT-0810	.500	.6240/.6250	.625	CJT-2824	1.750	1.8745/1.8755	1.500
CJT-0812	.500	.6240/.6250	.750	CJT-2828	1.750	1.8745/1.8755	1.750
CJT-0816	.500	.6240/.6250	1.000	CJT-2832	1.750	1.8745/1.8755	2.000
CJT-1008	.625	.7490/.7500	.500	CJT-3216	2.000	2.1245/2.1255	1.000
CJT-1010	.625	.7490/.7500	.625	CJT-3224	2.000	2.1245/2.1255	1.500
CJT-1012	.625	.7490/.7500	.750	CJT-3232	2.000	2.1245/2.1255	2.000
CJT-1016	.625	.7490/.7500	1.000	CJT-3618	2.250	2.3745/2.3755	1.125
FOR SIZES 12XX THROUGH 16XX USE CJS SERIES				CJT-3636	2.250	2.3745/2.3755	2.250
CJT-1812	1.125	1.2495/1.2505	.750	CJT-4020	2.500	2.6245/2.6255	1.250
CJT-1816	1.125	1.2495/1.2505	1.000	CJT-4040	2.500	2.6245/2.6255	2.500
CJT-1818	1.125	1.2495/1.2505	1.125	CJT-4422	2.750	2.8745/2.8755	1.375
CJT-1824	1.125	1.2495/1.2505	1.500	CJT-4444	2.750	2.8745/2.8755	2.750
CJT-2012	1.250	1.3745/1.3755	.750	CJT-4824	3.000	3.1245/3.1255	1.500
CJT-2016	1.250	1.3745/1.3755	1.000	CJT-4848	3.000	3.1245/3.1255	3.000
CJT-2020	1.250	1.3745/1.3755	1.250	CJT-5226	3.250	3.3745/3.3755	1.625
CJT-2024	1.250	1.3745/1.3755	1.500	CJT-5252	3.250	3.3745/3.3755	3.250
CJT-2212	1.375	1.4995/1.5005	.750	CJT-5628	3.500	3.6245/3.6255	1.750
CJT-2216	1.375	1.4995/1.5005	1.000	CJT-5656	3.500	3.6245/3.6255	3.500
CJT-2222	1.375	1.4995/1.5005	1.375	CJT-6432	4.000	4.1245/4.1255	2.000
CJT-2224	1.375	1.4995/1.5005	1.500	CJT-6464	4.000	4.1245/4.1255	4.000
CJT-2416	1.500	1.6245/1.6255	1.000				
CJT-2424	1.500	1.6245/1.6255	1.500				
CJT-2428	1.500	1.6245/1.6255	1.750				

Fiberglide[®] Journal Bearings

Heavy-Walled Coiled Steel Backing

The constant wall thickness of 1/8 inch (.125) for the CJH series makes them dimensionally interchangeable with many bronze and filament bearings commonly used. They provide all of the advantages of FIBERGLIDE[®] at minimum cost. Carbon steel is normally used as a backing material, with the external surfaces plated to resist corrosion. Other metals can be supplied upon special order. Typical applications include farm, construction and material handling equipment. FABROID[®] can also be supplied for special applications- consult Transport Dynamics Engineering Department. For bearing installation, [click here](#).



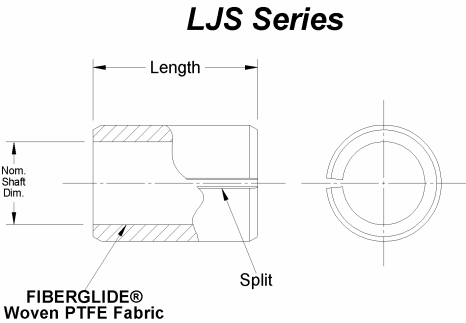
PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (IN.)		PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	BEARING LENGTH (in.)	
			+.000	-.020				+.000	-.020
CJH-1204	.750	.9995/1.0005	.250		CJH-3224	2.000	2.2495/2.2505	1.500	
CJH-1208	.750	.9995/1.0005	.500		CJH-3232	2.000	2.2495/2.2505	2.000	
CJH-1212	.750	.9995/1.0005	.750		CJH-3248	2.000	2.2495/2.2505	3.000	
CJH-1608	1.000	1.2495/1.2505	.500		CJH-3624	2.250	2.4995/2.5005	1.500	
CJH-1612	1.000	1.2495/1.2505	.750		CJH-3636	2.250	2.4995/2.5005	2.250	
CJH-1616	1.000	1.2495/1.2505	1.000		CJH-3648	2.250	2.4995/2.5005	3.000	
CJH-1812	1.125	1.3745/1.3755	.750		CJH-4032	2.500	2.7495/2.7505	2.000	
CJH-1816	1.125	1.3745/1.3755	1.000		CJH-4040	2.500	2.7495/2.7505	2.500	
					CJH-4048	2.500	2.7495/2.7505	3.000	
CJH-2016	1.250	1.4995/1.5005	1.000		CJH-4432	2.750	2.9995/3.0005	2.000	
CJH-2020	1.250	1.4995/1.5005	1.250		CJH-4440	2.750	2.9995/3.0005	2.500	
CJH-2024	1.250	1.4995/1.5005	1.500		CJH-4448	2.750	2.9995/3.0005	3.000	
CJH-2216	1.375	1.6245/1.6255	1.000		CJH-4832	3.000	3.2495/3.2505	2.000	
CJH-2220	1.375	1.6245/1.6255	1.250		CJH-4840	3.000	3.2495/3.2505	2.500	
CJH-2224	1.375	1.6245/1.6255	1.500		CJH-4848	3.000	3.2495/3.2505	3.000	
CJH-2420	1.500	1.7495/1.7505	1.250		CJH-5232	3.250	3.4995/3.5005	2.000	
CJH-2424	1.500	1.7495/1.7505	1.500		CJH-5240	3.250	3.4995/3.5005	2.500	
CJH-2432	1.500	1.7495/1.7505	2.000		CJH-5248	3.250	3.4995/3.5005	3.000	
CJH-2820	1.750	1.9995/2.0005	1.250		CJH-5632	3.500	3.7495/3.7505	2.000	
CJH-2824	1.750	1.9995/2.0005	1.500		CJH-5664	3.500	3.7495/3.7505	4.000	
CJH-2832	1.750	1.9995/2.0005	2.000						
					CJH-6432	4.000	4.2495/4.2505	2.000	
					CJH-6464	4.000	4.2495/4.2505	4.000	

Fiberglide[®] Journal Bearings

Liner Type Non-Metallic

The Fiberglide Liner Type bearing provides high load capacity and low friction in the form of a thin-walled sleeve for use in butterfly valves, trunnion bearings, ball and plug valve stem bushings, cylinder guide bushings, food handling machinery, and door hinge bushings, among others.

Because these bearings are completely non-metallic-fabricated of woven PTFE fibers on the bore supported by a laminated backing, there is no possibility of corrosion. Maximum compressive strength is 10,000 psi, with operating temperature range of -250°F to 200°F. Maximum speeds are typically 20 surface FPM. For bearing installation, [click here](#).



PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	WALL THICKNESS (IN.)	BEARING LENGTH (IN.) +.000 -.025
LJS-1616	1.000	1.061/1.062	.027/.030	1.000
LJS-1624	1.000	1.061/1.062	.027/.030	1.500
LJS-1632	1.000	1.061/1.062	.027/.030	2.000
LJS-1818	1.125	1.186/1.187	.027/.030	1.125
LJS-1828	1.125	1.186/1.187	.027/.030	1.500
LJS-1836	1.125	1.186/1.187	.027/.030	2.250
LJS-2020	1.250	1.311/1.312	.027/.030	1.250
LJS-2030	1.250	1.311/1.312	.027/.030	1.875
LJS-2040	1.250	1.311/1.312	.027/.030	2.500
LJS-2222	1.375	1.436/1.437	.027/.030	1.375
LJS-2232	1.375	1.436/1.437	.027/.030	2.000
LJS-2244	1.375	1.436/1.437	.027/.030	2.750
LJS-2424	1.500	1.561/1.562	.027/.030	1.500
LJS-2436	1.500	1.561/1.562	.027/.030	2.250
LJS-2448	1.500	1.561/1.562	.027/.030	3.000
LJS-2828	1.750	1.811/1.812	.027/.030	1.750
LJS-2842	1.750	1.811/1.812	.027/.030	2.625
LJS-2856	1.750	1.811/1.812	.027/.030	3.500

PART NUMBER	MAX. SHAFT DIA. (in.)	RECOMMENDED HOUSING BORE MIN/MAX (in.)	WALL THICKNESS (IN.)	BEARING LENGTH (IN.) +.000 -.025
LJS-3232	2.000	2.126/2.127	.059/.062	2.000
LJS-3232	2.000	2.126/2.127	.059/.062	3.000
LJS-3636	2.250	2.376/2.377	.059/.062	2.250
LJS-3654	2.250	2.376/2.377	.059/.062	3.375
LJS-4040	2.500	2.626/2.627	.059/.062	2.500
LJS-4060	2.500	2.626/2.627	.059/.062	3.750
LJS-4444	2.750	2.876/2.877	.059/.062	2.750
LJS-4466	2.750	2.876/2.877	.059/.062	4.125
LJS-4848	3.000	3.126/3.127	.059/.062	3.000
LJS-4872	3.000	3.126/3.127	.059/.062	4.500
LJS-5656	3.500	3.626/3.627	.059/.062	3.500
LJS-6464	4.000	4.126/4.127	.059/.062	4.000
LJS-6496	4.000	4.126/4.127	.059/.062	6.000
LJS-7272	4.500	4.626/4.627	.059/.062	4.500
LJS-8080	5.000	5.126/5.127	.059/.062	5.000
LJS-9696	6.000	6.126/6.127	.059/.062	6.000

Fiberglide[®] Thrust Bearings

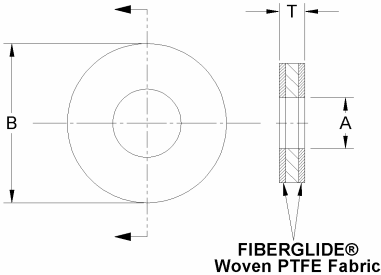
Laminated Phenolic-Backed

Phenolic-backed Fiberglide thrust bearings provide high load capacity and low friction for use where the elimination of lubrication is desirable. Typical applications include industrial valves and valve actuators, vehicle kingpin assemblies and marine drives.

Non-metallic and hence non-corrosive, these Fiberglide thrust bearings are lightweight and are fabricated of woven PTFE fibers backed by a laminated phenolic resin system. Double sided construction extends bearing life. It is important that mating surfaces be smooth and free from sharp edges.

Maximum compressive strength is 10,000 psi, with operating temperature range of -250°F to 200°F. Friction coefficients as low as 0.03 with no added lubricants are obtainable. For bearing installation, [click here](#).

LTD Series



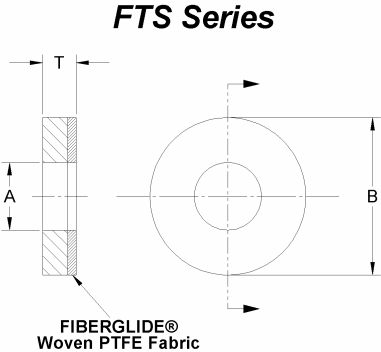
PART NUMBER	MAX. SHAFT DIA. (in.)	A		T	PART NUMBER	MAX. SHAFT DIA. (in.)	A		T
		+0.020 -0.000 (in.)	+0.000 -0.020 (in.)	±.002 (in.)			+0.020 -0.000 (in.)	+0.000 -0.020 (in.)	±.002 (in.)
LTD-0408	.250	.280	.500	.031	LTD-2240	1.375	1.406	2.500	.063
LTD-0510	.312	.344	.625	.031	LTD-2442	1.500	1.531	2.625	.094
LTD-0612	.375	.406	.750	.031	LTD-2644	1.625	1.656	2.750	.094
LTD-0714	.437	.468	.875	.031	LTD-2846	1.750	1.781	2.875	.094
LTD-0816	.500	.531	1.000	.031	LTD-3048	1.875	1.906	3.000	.094
LTD-0918	.562	.593	1.125	.063	LTD-3252	2.000	2.062	3.250	.094
LTD-1020	.625	.656	1.250	.063	LTD-3654	2.250	2.312	3.375	.094
LTD-1122	.687	.718	1.375	.063	LTD-4060	2.500	2.562	3.750	.094
LTD-1224	.750	.781	1.500	.063	LTD-4466	2.750	2.812	4.125	.094
LTD-1326	.812	.843	1.625	.063	LTD-4872	3.000	3.062	4.500	.094
LTD-1428	.875	.906	1.750	.063	LTD-5278	3.250	3.312	4.875	.094
LTD-1530	.937	.968	1.875	.063					
LTD-1632	1.000	1.031	2.000	.063					
LTD-1834	1.125	1.156	2.125	.063					
LTD-2036	1.250	1.281	2.250	.063					

Fiberglide[®] Thrust Bearings Metal-Backed

Fiberglide FTS series thrust bearings offer an economical approach to obtaining self-lubrication where high loads are encountered. They are comprised of zinc plated mild steel with woven PTFE laminated to one face. These bearings are recommended for use as an alternate to LTD washers in applications where metal backing is preferred.

Maximum compressive strength is 30,000 psi, with operating temperature range of -320°F to 300°F. Friction coefficients as low as 0.03 with no added lubricants are obtainable.

Fabroid liners can also be supplied. For special applications, consult Transport Dynamics Engineering Department. These thrust bearings can also be supplied with special metals and with liners on both sides (FTD Series). For installation, [click here](#).



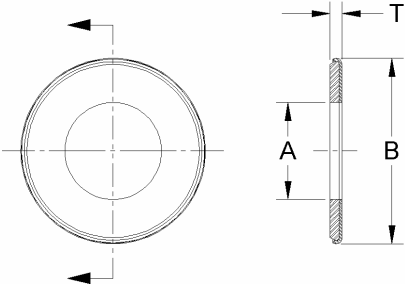
PART NUMBER	MAX. SHAFT DIA. (in.)	A		T	PART NUMBER	MAX. SHAFT DIA. (in.)	A		T
		+0.020 -0.000 (in.)	+0.000 -0.020 (in.)				+0.020 -0.000 (in.)	+0.000 -0.020 (in.)	
FTS-0408	.250	.280	.500	.058	FTS-2240	1.375	1.406	2.500	.058
FTS-0510	.312	.344	.625	.058	FTS-2442	1.500	1.531	2.625	.058
FTS-0612	.375	.406	.750	.058	FTS-2644	1.625	1.656	2.750	.058
FTS-0714	.437	.468	.875	.058	FTS-2846	1.750	1.781	2.875	.058
FTS-0816	.500	.531	1.000	.058	FTS-3048	1.875	1.906	3.000	.058
FTS-0918	.562	.593	1.125	.058	FTS-3252	2.000	2.062	3.250	.058
FTS-1020	.625	.656	1.250	.058	FTS-3654	2.250	2.312	3.375	.058
FTS-1122	.687	.718	1.375	.058	FTS-4060	2.500	2.562	3.750	.058
FTS-1224	.750	.781	1.500	.058	FTS-4466	2.750	2.812	4.125	.058
FTS-1326	.812	.843	1.625	.058	FTS-4872	3.000	3.062	4.500	.058
FTS-1428	.875	.906	1.750	.058	FTS-5278	3.250	3.312	4.875	.058
FTS-1530	.937	.968	1.875	.058					
FTS-1632	1.000	1.031	2.000	.058					
FTS-1834	1.125	1.156	2.125	.058					
FTS-2036	1.250	1.281	2.250	.058					

Fiberglide[®] Thrust Bearings

Slim Pack Thrust Packs

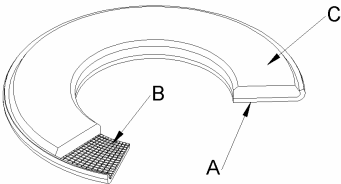
Fiberglide Slim Pack thrust bearings are unique in the industry. They need no lubrication, can tolerate extremely high loads and require very little space. (Nominal thickness is only .125 in.) The advanced, patented design includes a self-contained dust seal and utilizes materials which resist corrosion. It provides its own smooth internal wear surface which is ideal where cast iron or other rough mating surfaces are present. Slim Pack thrust bearings are particularly suited for such applications as vehicle kingpin assemblies, and frame hinges. [Click here](#) for installation.

FTP Series



PART NUMBER	A +.005 -.025 (in.)	B +.010 -.020 (in.)	T ±.010 (in.)	AREA in. ²
FTP-1628	1.000	1.750	.130	1.25
FTP-2032	1.250	2.000	.130	1.48
FTP-2436	1.500	2.250	.130	1.72
FTP-2638	1.625	2.375	.130	1.84
FTP-2840	1.750	2.500	.130	1.96
FTP-3244	2.000	2.750	.130	2.19
FTP-3648	2.250	3.000	.130	2.43
FTP-4052	2.500	3.250	.130	2.66
FTP-4072	2.500	4.500	.130	10.03
FTP-4874	3.000	4.625	.130	8.72

Cutaway view of FIBERGLIDE[®] FTP Series Thrust Pack



- Diagram Shows:**
- A. Outer metal shell (Liner Plate)
 - B. FIBERGLIDE[®] self-lubricating liner
 - C. Hard inner metal washer (Wear Plate), rotates against FIBERGLIDE[®] liner which is bonded to outer shell.

Note: "T" is measured with pack loaded

Innovation. Commitment. Quality.

RBC has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC offers a full line of standard industrial and aerospace bearings, including:



Spherical Plain Bearings

Radial, angular contact, extended inner ring, high misalignment. **QuadLube®**, **ImpactTuff®**, **SpreadLock® Seal**, **CrossLube®** bearings, and self-lubricating bearings. Available in inch and metric sizes.



Rod Ends

Commercial and industrial, precision, Mil-Spec series, self-lubricating, and aircraft. **Heim Unibal®** and **Spherco®** brands. Available in inch and metric sizes.



Thin Section Ball Bearings

Standard cross sections to one inch. Sizes to 40 inches. Stainless steel and other materials are available. Seals are available on all sizes and standard cross sections.



Ball Bearings

Precision ground, semiground, unground. High loads, long life, smooth operation. **Nice** brand is offered in caged and full complement configurations.



Self-Lubricating Bearings

Radial, thrust, rod ends, spherical bearings, high temperature, high loads. Available in inch and metric sizes. **Fiberglide®**.



Cam Followers

Standard stud, heavy stud, yoke type, caged roller followers. Patented **RBC Roller®** cylindrical roller cam followers, **HexLube®** universal cam followers, airframe track rollers.



Airframe Control Bearings

Ball bearing types, self-lubricating types, needle roller track rollers.



Needle Roller Bearings

Pitchlign® caged heavy duty needle roller bearings, inner rings, **TJ TandemRoller®** bearings for long life.



Pins and shafts

Bremen and **Miller** pins, needle rollers, shafts, and rollers.



Tapered Roller Bearings

Tyson® brand case-hardened in many sizes. Used in Class 8 heavy truck and trailer wheel bearings, gearboxes, and final drive transmissions.



Ball Screws

Precision ground, rolled, ball splines. Long life, low wear, high accuracy. **QuickTurn™ Ball Screw Repair Service.**



Specials

RBC manufactures many specialty bearings for the aerospace, oil and energy, semiconductor equipment, packaging, heavy truck, and other industries.