



CDI
ENERGY
PRODUCTS®
A Michelin Group Company

PERFORMANCE PRODUCT SPOTLIGHT

**VALVE
SOLUTIONS**

FIBREX® BEARINGS

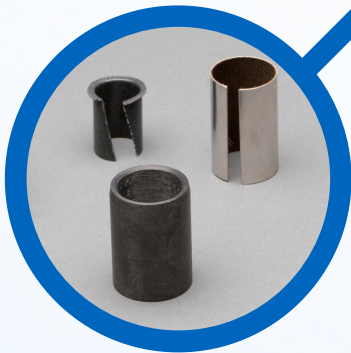
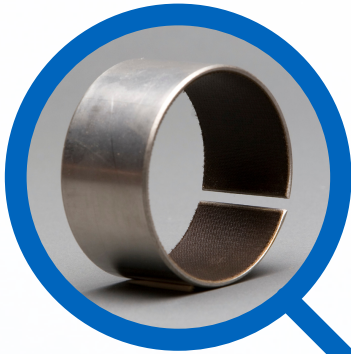
PRODUCT OVERVIEW

Strength, Dimensional Stability, and Low Friction

Fibrex® bearings utilize an innovative blend of PTFE and glass fibers bonded onto a metal sheeting to provide the **strength and dimensional stability** of a metallic body with the **low friction and tribological properties** of a reinforced PTFE matrix.

In addition to these design characteristics, Fibrex® bearings minimize brinelling, fretting, and other forms of wear along the contact area.

With its inherent damping properties, Fibrex® bearings are suitable with a wide range of mating materials and are capable of sustaining extremely high loads well beyond the range of solid TFE or any other solid lubricating bearing. Both radial bearing and thrust washer design options are available.



BENEFITS

- High impact strength
- High resistance to wear
- High load capacity at low speeds
- Dimensionally stable
- Custom sizes for your application
- No lubrication needed

FIBREX OVERVIEW

Fibrex® Bearings offer the strength and stability of a stainless steel body with the low friction and tribological properties of a reinforced PTFE matrix. Applications include radial bearings and thrust washers for valves, commercial fire sprinkler systems, mixers, blenders, swivels, extruders, etc.

Fibrex



Metal Backing



Sleeve Bearing

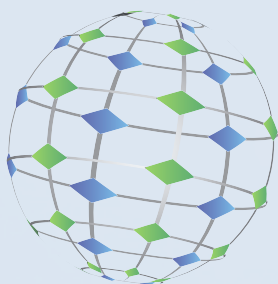
Thrust Washer



Fibrex



Metal Backing



To learn more about this performance product or how CDI Energy Products can improve performance in your operations, please visit our website cdiproducts.com

FIBREX OVERVIEW

Metal Body Material Options

[Maximum Bearing Load for each material included below]

316 SS (standard) 30 Ksi [206 MPa]	Inconel® 625 50 Ksi [344 MPa]	Inconel® 718 60 Ksi [413 MPa]	Monel® 400 34 Ksi [234 MPa]	Hastalloy® C or B 60 Ksi [413 MPa]	Standard Thickness
Suggested Hardware and Bearing Tolerances					0.027 in [0.68 mm]
Housing Bore Diameter	•	+0.002 in, -0.000 in [+0.05, -0 mm]			0.031 in [0.79 mm]
Shaft Diameter	•	+0.000 in, -0.002 in [+0.05, -0 mm]			0.033 in [0.84 mm]
Bearing Thickness	•	+/- .002 in [0.05 mm]			0.039 in [0.99 mm]
Bearing Length	•	-0.000 in, -0.030 in [0, -0.762 mm]			0.045 in [1.14 mm]
Minimum Diametrical Clearance between shaft and bearing ID	•	.005 in [0.127 mm]			0.050 in [1.27 mm]
PV Limit	•	Continuous: 20,000 psi · ft/min [0.7 MPa · m/s]			0.057 in [1.45 mm]
	•	Maximum: 60,000 psi · ft/min [2.1 MPa · m/s]			0.062 in [1.57 mm]
Temperature Limit	•	400°F [204°C] up to 30 ksi [206 MPa]			0.075 in [1.91 mm]
	•	350° [177°C] from 30-60 ksi [206-413 MPa]			0.090 in [2.29 mm]
Maximum Diameter	•	14 in [355 mm]			0.098 in [2.5 mm]
Maximum Length	•	11 in [280 mm]			Standard sizes not available in all materials. Contact CDI engineering to determine if Fibrex® bearings can fit your application.
Velocity Range	•	0 – 50 FPM / 0 – 0.254 m/s			
Coefficient of Friction	•	0.05 – 0.10			

The descriptions, design, and performance information, and recommended uses for the products described herein are based generally on our design and manufacturing experience, product testing in specific conditions, and industry standards. The foregoing information is for general guidance only and does not constitute a guaranty or warranty of design or warranty of performance. Every effort has been made to ensure the information provided is accurate and up to date. However, the information provided herein is provided "as-is" and we make no representations or warranties of any kind, express or implied, with respect to the information provided. We reserve the right to make product changes from time to time, without prior notification, which may change some of the information provided herein. All warranties regarding the products described herein will be given in writing at the time of sale of such products. Each purchaser of such products must decide if the products are suitable for the intended use of such purchaser.

IT'S AMAZING TO THINK WHAT WE ARE CAPABLE OF