HPMB®

HIGH PRECISION FIBER REINFORCED COMPOSITE BEARING

compliant RoHS

APPLICATIONS

Industrial – Railroad stabilization system, railroad brake linkages, injection molding machines – guide bushings, hydraulic cylinder pivots, water turbines – wicket gates, servomotors, links, water gates, valves

CHARACTERISTICS

- Machinable inner and outer diameters for superior application precision, circularity and cylindricity tolerances
- Pre-machined high precision HPMB bearings available for immediate installation
- High precision through easy single point machining of the bearing liner, on-site prior to installation
- Superior precision achieved with post-installation (inner diameter tolerance IT7 attainable) single point machining of the bearing liner
- High load capacity
- Excellent shock and edge loading capacity
- Low friction with negligible stick-slip
- Low wear rate for extended bearing life
- Excellent corrosion resistance
- Dimensionally stable - very low water absorption, low swelling
- Environmentally friendly grease-free operation

AVAILABILITY

Bearing forms made to order: finished cylindrical bushings, pre-machined cylindrical bushings, flanged cylindrical bushings (subject to design review)

For questions and assistance, contact a GGB engineer at: **www.ggbearings.com/en/contact**

BEARING PROPERTIES		IMPERIAL UNITS	IMPERIAL VALUE	METRIC UNITS	METRIC VALUE
GENERAL					
Maximum load, p	Static	psi	30 000	N/mm^2	210
	Dynamic	psi	20 000	N/mm^2	140
Operating temperature	Min	°F	-320	°C	- 196
	Max	°F	325	°C	163
Coefficient of linear thermal expansion	Normal to the Surface	10^{-6}/F	7.0	10^{-6}/K	12.6
DRY					
Maximum sliding speed, U		fpm	25	m/s	0.13
Maximum pU factor		psi x fpm	35 000	N/mm^2 x m/s	1.23
Coefficient of friction, f			0.03 - 0.12*		0.03 - 0.12*
RECOMMENDATIONS					
Shaft surface roughness, Ra		µin	8 - 32	µm	0.2 - 0.8
Shaft surface hardness	Normal	HB	> 180	HB	> 180
	For longer service life	HB	> 480	HB	> 480

* Depending on operating conditions

OPERATING PERFORMANCE	
Dry	Very Good
Oil lubricated	Fair
Grease lubricated	Not Recommended
Water lubricated	Very Good
Process fluid lubricated	To be tested by final user

FOR SUPERIOR PERFORMANCE	
Oil lubricated	GAR-FIL / HPF
Grease lubricated	DX / DX10
Process fluid lubricated	GAR- FIL / HPF

MICROSECTION