HI-EX®

METAL-POLYMER HYDRODYNAMIC COMPOSITE BEARINGS

compliant RoHS

APPLICATIONS

Automotive – Diesel fuel pumps, ABS equipment

Industrial – Hydraulic motors and pumps, agricultural equipment, wind energy equipment, yaw and teeter bearings.

CHARACTERISTICS

- Marginally lubricated composite bearing material with good wear resistance under thin film conditions
- Standard bearings supplied with indents for optimum retention and distribution of the lubricant over the sliding layer
- Available with non-indented overlay for hydrodynamic applications
- Rated for high temperature use up to 250°C / 480°F
- Suitable for use with low viscosity fluids
- Good chemical resistance
- Lead-free bearing material compliant to ELV, RoHS and WEEE specifications
- Tested acc. to ASTM E595/ECSS-Q-ST-70-02C - Outgassing properties of materials used in Spacecraft equipment

AVAILABILITY

Bearing forms made to order: Cylindrical bushes, thrust washers, sliding plates, half-bearings, special shapes obtained by stamping, bearings with locating notches, lubricant holes and machined grooves, customized bearing designs

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

BEARING PROPERTIES		UNITS	VALUE
GENERAL			
Maximum load, p	Static	N/mm^2	140
	Dynamic	N/mm^2	140
Operating temperature	Min	°C	- 150
	Max	°C	250
Coefficient of linear thermal expansion	Parallel to the surface	$10^{-6}/K$	11
	Normal to the surface	$10^{-6}/K$	29
GREASE LUBRICATED			
Maximum sliding speed, U		m/s	2.5
Maximum pU factor		N/mm^2 x m/s	2.8
Coefficient of friction, f			0.08 - 0.12
OIL LUBRICATED			
Maximum sliding speed, U		m/s	10.0
Maximum pU factor		N/mm^2 x m/s	10.0
Coefficient of friction, f			0.03 - 0.08
RECOMMENDATIONS			
Shaft surface roughness, Ra		µm	≤ 0.05 - 0.40*
Shaft surface hardness	Normal	HB	> 200
	For longer service life	HB	> 350

* Depending on operating conditions

OPERATING PERFORMANCE	
Dry	Fair
Oil lubricated	Good
Grease lubricated	Very Good
Water lubricated	Good
Process fluid lubricated	Good

FOR SUPERIOR PERFORMANCE	
Dry	GAR-MAX / HSG / GAR-FIL / MLG

MICROSECTION