

## HPM

### FIBER REINFORCED COMPOSITE HYDRO BEARING



### APPLICATIONS

**Industrial** – Servo-motor bearings, operating ring sliding segments, linkage bearings, wicket gate bearings, guide vane bearings, intake gate sliding segments, intake gate roller bearings, spillway gate bearings, trash rate bearings, fish screen bearings, trunnion bearings, blade bearings, injector bearings, deflector bearings, ball and butterfly trunnion bearings, etc.

### CHARACTERISTICS

- Designed for hydropower applications
- High load capacity
- Excellent shock and edge loading capacity
- Low friction, superior wear rate and bearing life
- Excellent corrosion resistance
- Dimensionally stable - very low water absorption, low swelling
- Environmentally friendly

### AVAILABILITY

**Bearing forms available in standard dimensions:**

Plain cylindrical bushes

**Bearing forms made to order:** cylindrical bushes with non-standard dimensions, customized bearing designs



BEARING PROPERTIES		IMPERIAL UNITS	IMPERIAL VALUE	METRIC UNITS	METRIC VALUE
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GENERAL					
Maximum load, p	Static	psi	30 000	N/mm <sup>2</sup>	210
	Dynamic	psi	20 000	N/mm <sup>2</sup>	140
Operating temperature	Min	°F	-320	°C	- 196
	Max	°F	320	°C	160

DRY					
Maximum sliding speed, U		fpm	25	m/s	0.13
Maximum pU factor		psi x fpm	35 000	N/mm <sup>2</sup> 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	Poor
Water lubricated	Very Good
Process fluid lubricated	Poor

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

**MICROSECTION**

