

DP31

METAL-POLYMER HYDRODYNAMIC COMPOSITE BEARINGS



APPLICATIONS

Automotive – Air conditioning compressors, gearbox and transmissions, heavy duty struts and shock absorbers, high performance pumps: axial piston, radial piston, gear, vane, etc.

Industrial – Compressors: scroll and reciprocating; pneumatic and hydraulic cylinders, high performance pumps axial piston, radial piston, gear, vane, etc.

CHARACTERISTICS

- Excellent low friction and wear resistance performance in lubricated applications
- Excellent flow erosion and cavitation resistance
- Very good fatigue strength
- Lead-free material compliant to ELV, WEEE, and RoHS specifications

AVAILABILITY

Bearing forms made to order: Cylindrical bushes, flanged bushes, thrust washers, flanged thrust washers, sliding plates, half-bearings, bearings with locating notches, lubricant holes and machined/stamped grooves, customized bearing designs



BEARING PROPERTIES		UNITS	VALUE
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GENERAL

Maximum load, p	Static	N/mm ²	250
	Dynamic	N/mm ²	140
Operating temperature	Min	°C	- 200
	Max	°C	280
Coefficient of linear thermal expansion	Parallel to the surface	10 ⁻⁶ /K	11
	Normal to the surface	10 ⁻⁶ /K	30

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			0.01 - 0.05

RECOMMENDATIONS

Shaft surface roughness, Ra	Lubricated	µm	≤ 0.05 - 0.40*
Shaft surface hardness	Unhardened acceptable, improved bearing life	HB	> 200

* Depending on operating conditions

OPERATING PERFORMANCE

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

FOR SUPERIOR / LEAD-FREE PERFORMANCE

Dry	DP4 / DP11
Grease lubricated	DP4 / DX
Water lubricated	DP4-B

MICROSECTION

