DP10

METAL-POLYMER ANTI-FRICTION PLAIN BEARINGS

APPLICATIONS

Automotive – Braking systems, clutches, hinges – door, bonnet, boot, cabriolet roof tops, pedals, pumps – axial, piston, gear, vane, seat mechanisms, steering systems, struts and shock absorbers, wiper systems, etc.

Industrial – Agricultural equipment, compressors – scroll and reciprocating, construction equipment, food and beverage, material handling equipment, forming machines – metal, plastic and rubber, office equipment, medical and scientific equipment, packaging equipment, pneumatic and hydraulic cylinders, pumps and motors, railroad and tramways, textile machinery, valves, etc.

CHARACTERISTICS

- Good wear and low friction performance over a wide range of loads, speeds and temperatures in dry running conditions
- Very good performance in lubricated applications particularly in marginally lubricated applications
- Suitable for linear, oscillating and rotating movements
- Lead-free material compliant to ELV, WEEE, and RoHS specifications

AVAILABILITY

Bearing forms made to order: Standard forms in special dimensions, half-bearings, special shapes obtained by stamping or deep drawing, bearings with locating notches, lubricant holes and machined/ stamped grooves, customized bearing designs

BEARING PROPERTIES		UNITS	VALUE
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
DRY			
Maximum sliding speed, U		m/s	2.5
Maximum pU factor		N/mm^2 x m/s	1.0
Coefficient of friction, f			0.03 - 0.25*
OIL LUBRICATED			
Maximum sliding speed, U		m/s	5.0
Maximum pU factor		N/mm^2 x m/s	10.0
Coefficient of friction, f			0.02 - 0.08
RECOMMENDATIONS			
Shaft surface roughness, Ra	Dry	µm	0.3 - 0.5
	Lubricated	µm	≤ 0.05 - 0.40*
Shaft surface hardness	Unhardened acceptable, improved bearing life	HB	> 200

* Depending on operating conditions

OPERATING PERFORMANCE	
Dry	Good
Oil lubricated	Good
Grease lubricated	Fair
Water lubricated	Not recommended
Process fluid lubricated	Fair

FOR SUPERIOR / LEAD-FREE PERFORMANCE	
Grease lubricated	DP4 / DX
Water lubricated	DP4-B
Process fluid lubricated	DP4 / DP31

MICROSECTION