

DP11

METAL-POLYMER ANTI-FRICTION PLAIN BEARINGS



APPLICATIONS

Automotive – Belt tensioners, clutches, dual mass fly-wheels, pulley dampers, etc.

Industrial – Applications with high frequency and low amplitude oscillating movements

CHARACTERISTICS

- Very good wear and anti friction performance over a wide range of loads, speeds and temperatures in dry running conditions
- Particularly suited to dry applications with high frequency and low amplitude oscillating movements
- Suitable for linear, oscillating and rotating movements
- Lead-free material compliant to ELV, WEEE, and RoHS specifications
- Approved to standard DIN 75 200 / FMVSS 302 - Federal Motor Vehicle Safety Standard concerning the flammability of materials used in the occupant compartments of motor vehicles

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		0.04 - 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	Very 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

