

DTS10®

Metal-Polymer Hydrodynamic Composite Bearings



CHARACTERISTICS

- The first polymer-lined bearing for lubricated conditions offering low friction and high wear resistance that is designed to be machined on-site for tight tolerances
- Excellent wear resistance and low friction in lubricated hydraulic applications
- Excellent chemical resistance, fatigue strength, cavitation and flow erosion resistance, and good behavior in dry start-up conditions
- A minimum overlay thickness of 0.1 mm permits, under carefully controlled conditions, machining of the assembled bore for improved dimensional tolerance and reduced geometric defects, while retaining a thin layer of PTFE sliding surface
- Compatible with most standard machining processes including turning, broaching, reaming and milling
- Lead-free material compliant to EVL, WEEE, and RoHS specifications



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

APPLICATIONS

Industrial: Compressors: scroll and reciprocating, pumps and motors: external and internal gear, pumps, vane pumps, axial and radial piston pumps, gerotor pumps, etc., hydraulic cylinders



DTS10® Technical Data

Bearing Properties		Imperial Units	Imperial Value	Metric Units	Metric Value
General					
Maximum load, p	Static	psi	20 000	N/mm ²	140
Operating temperature	Min	°F	- 328	°C	- 200
	Max	°F	536	°C	280
Fluid Lubricated					
Maximum sliding speed, U		fpm	2 000	m/s	10
Maximum pU factor		psi x fpm	2 860 000*	N/mm ² x m/s	100*
Coefficient of friction			0.01 - 0.08		0.01 - 0.08
Recommendations					
Shaft surface roughness, Ra		µin	≤ 2 - 8*	µm	≤ 0.05 - 0.2*
Shaft surface hardness		HB	> 200	HB	> 200

* Depending on operating conditions

Operating Performance	
Dry	Fair
Oil lubricated	Excellent
Grease lubricated	Fair
Water lubricated	Fair
Process fluid lubricated	Good

For Superior Performance	
Dry	GAR-MAX / HSG / GAR-FIL / MLG
Grease lubricated	DX / DX10
Water lubricated	HPM / HPF / DP4-B

