

ZetaMax[®] 1000



HIGH-STRENGTH, MACHINABLE FIBER REINFORCED COMPOSITE BEARING



APPLICATIONS

Suitable for use in highly loaded aerospace, space, defense and industrial applications; ultimate compressive strength exceeds 930 MPa.

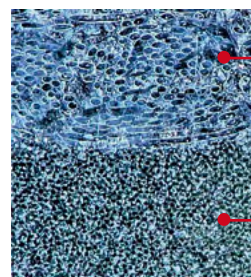
FEATURES

- Exceeds AS85560 aerospace requirements
- Load capacity up to 620 MPa
- Young's modulus 13.8 GPa
- Compliant with ASTM E595-15 outgassing standards
- Up to 4x longer service life under 100 MPa load when compared to Gar-Max[®]
- Precision-machined liner for tight dimensional control and optimal clearance
- Weight savings: up to 75% lighter versus comparable bronze bearings
- Self-lubricating for maintenance-free operation
- Low friction and minimal stick-slip behavior
- Excellent corrosion resistance

AVAILABILITY

Bearing forms made to order: finished or pre-machined cylindrical bushings, flanged cylindrical bushings (subject to design review)

MICROSECTION



Sliding layer

Backing



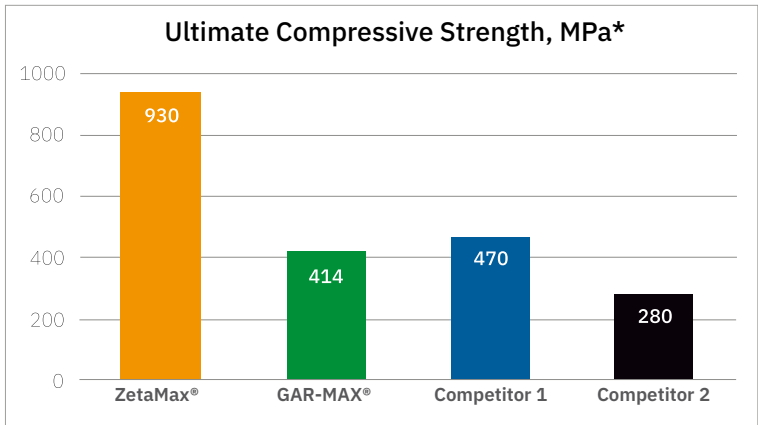
BEARING PROPERTIES IMPERIAL UNITS IMPERIAL VALUE METRIC UNITS METRIC VALUE

GENERAL					
Maximum load P	static	psi	90 000	N/mm²	620
	dynamic		23 200		160
Ultimate compression strength	@ 77 °F / 25°C	psi	135 000	N/mm²	930
	@ 320 °F / 160 °C		100 000		690
Operating temperature	min	°F	-320	°C	-196
	max	°F	444	°C	229
Coefficient of linear thermal expansion	normal to the surface	10 ⁻⁶ /F	7,0	10 ⁻⁶ /K	12,6

DRY					
Maximum sliding speed V		fpm	25	m/s	0,13
Maximum PV factor		psi x fpm	35 000	N/mm² x m/s	1,23
Coefficient of friction f			0.03 - 0.12*		

RECOMMENDATIONS					
Shaft surface roughness R _a		µin	8 - 32	µm	0,2 - 0,8
Shaft surface hardness	normal for longer service life		> 180 HB		
			> 480 HB		

* Depending on operating conditions



* At room temperatures

OPERATING PERFORMANCE	
Dry	Very good
Oil lubricated	Good
Process fluid lubricated	Fair