GGB-CSM®

THICK WALLED MONOMETAL BEARINGS

compliant RoHS

APPLICATIONS

Industrial – General mechanical engineering, applications with elevated temperatures and corrosion risk, exhaust or smoke flaps, valves, turbines, iron foundry, steel and aluminum industry, furnaces, blower, steel works and civil engineering, turbines (water, steam and gas), pumps and compressors, sewage purification plants, thermal treatment furnaces, hot rolling mills, food and beverage industry, packaging equipment, agriculture and construction machines, handling equipment, tire molds, etc.

CHARACTERISTICS

- Self-lubricating metal bearings produced by metallurgic powder
- Maintenance-free bearings with homogeneously distributed solid lubricant (graphite, MoS_2) in the metallic matrix
- High load capacity and temperature ranges up to 600°C possible depending on the alloy
- Corrosion resistant alloys are available
- Lead free alloys are available

AVAILABILITY

Bearing forms made to order: Cylindrical bushes, flanged bushes, thrust washers, sliding plates, half-bearings, axial and radial segment rings, self-aligning spherical bearings, spherical plain bearings, special shapes, customized bearing designs

BEARING PROPERTIES		IMPERIAL UNITS	IMPERIAL VALUE	METRIC UNITS	METRIC VALUE
GENERAL					
Maximum load, p	Static	psi	15 000 - 38 000	N/mm^2	100 - 260
	Dynamic	psi	8 000 - 19 000	N/mm^2	55 - 130
Operating temperature	Min	°F	- 330	°C	- 200
	Max	°F	1 100	°C	600
Coefficient of linear thermal expansion		10^{-6}/F	7 - 10	10^{-6}/K	13 - 18
DRY					
Maximum sliding speed, U		fpm	40 - 100	m/s	0.2 - 0.5
Maximum pU factor		psi x fpm	23 000 - 43 000	N/mm^2 x m/s	0.8 - 1.5
Coefficient of friction, f			0.11 - 0.50		0.11 - 0.50
WATER LUBRICATED					
Coefficient of friction, f			0.08 - 0.18		0.08 - 0.18
RECOMMENDATIONS					
Shaft surface roughness, Ra		µin	8 - 32	µm	0.2 - 0.8
Shaft surface hardness		HB	> 180	HB	> 180
		HRC	> 45	HRC	> 45

* Bearing properties and recommendations depending on GGB-CSM® material grade. This information is available by downloading the GGB-CSM® brochure.

OPERATING PERFORMANCE	
Dry	Good
Oil lubricated	Good
Grease lubricated	Good
Water lubricated	Depending on Alloy
Process fluid lubricated	Depending on Fluid and Alloy

MICROSECTION