



# glebusalloys

## SELF-LUBRICATING BEARINGS FOR HYDROPOWER INDUSTRY

Taming friction and wear for smooth &  
efficient operation of your machinery

# GLEBUS ALLOYS

## About us

## glebusalloys

Glebus Alloys manufactures maintenance free, self lubricating bearings, wear plates and bushings. We produce G-METAL™, a material that combines graphite and bronze to form a single self-lubricating metal compound.

The Glebus Alloys technology of sintered metallic graphite impregnated self-lubricating materials originates from a well-known specialty powder metallurgy manufacturer Ceramet founded in 1965 in Poland. Adding up of more than 25 years of own industrial application experience Glebus Alloys manufactures and supplies reliable low friction self-lubricating components, advanced tribological solutions and provides professional application engineering support services. We are proud of our heritage and our manufacturing mastery.

### REFERENCES

Glebus Alloys track record includes successful long term cooperation and partnership with many global leaders in various industrial areas, including manufacturing of tires, presses, calenders, metallurgy, fluid power, gear pumps and compressors, wind and hydropower clean energy, steam and gas turbines, waste-to-energy, farm, industrial and construction equipment, material handling, packaging machinery, food & beverage, marine, offshore, and aerospace.



# GLEBUS ALLOYS

## Cooperation Benefits

### **BENEFITS FROM TEAMING UP WITH GLEBUS ALLOYS**

- Own manufacturing plant based in the EU
- Successful track record since 1965
- Integrated supply chain and short lead-times
- Application engineering customer support
- Own R&D and testing
- Focus on sintered self-lube parts
- Competitive pricing
- Global footprint

### **SELF-LUBRICATING PLAIN BEARINGS, BUSHINGS & SLIDING PLATES PROVIDE THE GREATEST ADVANTAGE IN CRITICAL APPLICATIONS**

- Maintenance-free service
- Inexpensive, easy and fast to replace
- Suitable for intermittent movements
- Great at service requiring higher tolerances, higher flexibility or shock absorption
- Allowing for enormous variability in shapes and sizes, solutions taking less space possible
- Great emergency running properties
- Performing particularly well in wet environments
- No moisture absorption, maximum dimensional accuracy and stability
- Providing no threat to environment by potential oil or lead contamination



# G-METAL<sup>®</sup>

## for Hydropower Industry

G-Metal self-lubricating bimetallic plain bearings and bushings consisting of stainless or low carbon steel backing covered with a sintered sliding layer are especially suitable for continuous operations in wet environment. Sintering technology allows for construction and manufacturing of wide range of complex shapes with consistent self-lubricating properties throughout the whole lifecycle of the critical moving parts. G-Metal based materials provide reliable and high-performance no-grease solutions.

### MECHANICAL PROPERTIES & APPLICATION DATA

#### G-METAL CBM 441; 442\*

\*Same base alloy, with running in film

Compression Strength	300 MPa	Max. PV value dry	1 N/mm <sup>2</sup> x m/s
Min. hardness	40 HB	Typical coefficient of friction, dry	0.10 - 0.20
Density	6.2 g/cm <sup>3</sup>	Typical coefficient of friction, wet	0.10 - 0.15
Type of solid lubricant	C	Service temperature min/max	-150/280 °C
Max. static load	290 MPa	Min. hardness counter material	250 HB
Max. dynamic load	100 MPa	Recommended surface roughness, counter material Ra	0.2 - 0.8 µm
Max. sliding speed, dry	0.5 m/s		

Carrier linear coeff. of thermal exp.: 16 (10<sup>6</sup>/K)

### BEST FIT FOR GLEBUS BEARINGS IN HYDROPOWER EQUIPMENT

- Wicket Gate bearings and other regulating mechanisms
- Linkage bearings and thrush washers
- Operating Ring wear pads
- Servomotors bearings and washers
- Kaplan Runner Hub bearings
- Gates
- Chains
- Sluices
- Butterfly or spherical valves
- Cylinders