

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



**Ceramet**

**SELF-LUBRICATING  
BEARINGS**  
for hydropower industry

Revision: October 2022

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# CERAMET

## About us

**Ceramet manufactures maintenance free, self lubricating bearings, wear plates and bushings. We produce a material that combines graphite and bronze to form a single self-lubricating metal compound.**

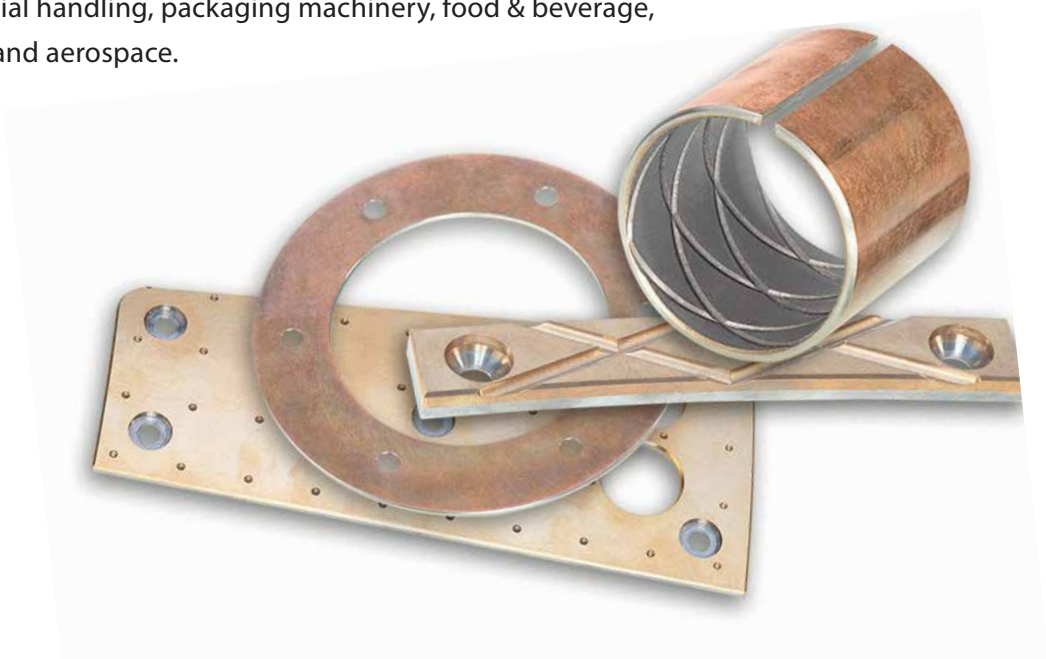
Ceramet, trusted manufacturer of plain bearings, bushings, sliding plates and wear parts made of sintered self-lubricating material containing graphite as solid lubricant uniformly distributed throughout the metallic matrix. Ceramet, a well-known specialty powder metallurgy manufacturer, was founded in 1965 in Poland.

Ceramet 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

Ceramet 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.



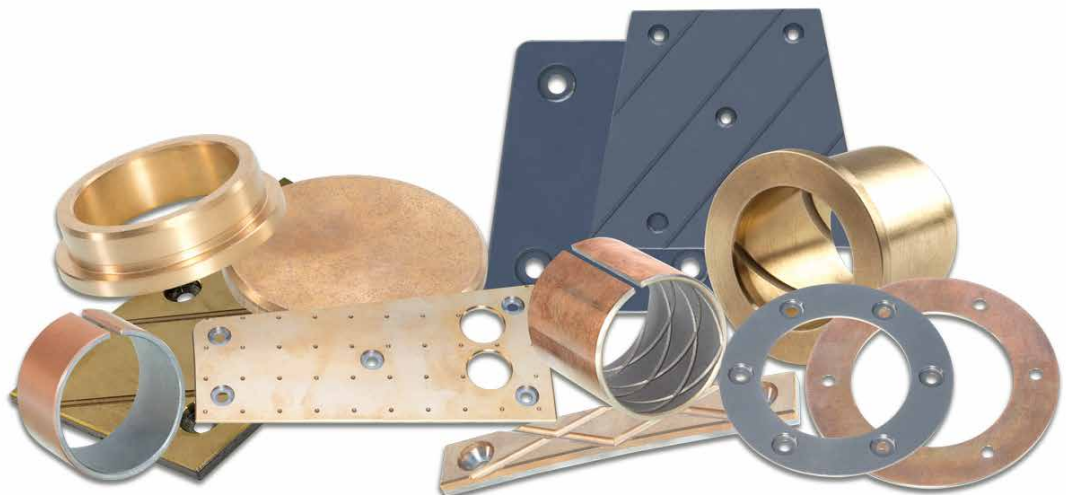
# CERAMET Cooperation Benefits

## BENEFITS FROM TEAMING UP WITH CERAMET

- 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
- 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



# CERAMET for Hydropower Industry

CERAMET 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. Powder metallurgy based materials provide reliable and high-performance no-grease solutions.

## MECHANICAL PROPERTIES & APPLICATION DATA

### CER.BM 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 CERAMET 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