



# HIGH PERFORMANCE BEARINGS FOR PRIMARY METALS

## PRIMARY METALS

Operating environments in the primary metals industry are harsh and extreme, often subject to dirty, abrasive conditions where maintenance is difficult. High temperature thermal or chemical transformations are very energy-intensive and therefore costly. Asset failure can be extremely costly and lead to considerable delays. GGB bearing solutions can help extend service life and offer:

- excellent wear resistance
- high shock load capacity
- low friction properties that help reduce power loss
- self-lubricating whilst providing smooth operation
- environmentally friendly

By partnering with you early in the design process, we can review your assemblies and make sure both the bearing and surrounding components are optimized for performance and cost-effectiveness. Partnering early in the design phase also increases your customers' satisfaction with reliable, proven solutions.

Applications in which they are used include:

- milling tools
- conveyor rollers
- ladle cover manipulator
- pinch roll unit polisher
- slide plates for quench machines
- lifting devices
- locking device casting cylinder
- coiler/uncoiler
- cool-bed transfer
- forging manipulator
- ladle hanger
- bloom caster guides

## Stronger. Together.

With our extensive global presence and deep expertise in various applications, our capabilities are pushing the boundaries. We strive to expand the horizons of what's achievable, encouraging customers from all industries to collaborate with us and foster innovation together.

Today, our products can be found everywhere – from scientific vessels at the bottom of the ocean to racecars speeding down the tarmac to the Curiosity rover exploring the surface of the Mars.

## THE GGB ADVANTAGE



### LOWER SYSTEM COST

GGB® bearings can help to reduce shaft costs by eliminating the need for hardening and machining grease paths. Their compact, one-piece construction provides space and weight savings and simplifies assembly.



### LOW FRICTION, HIGH WEAR RESISTANCE

Low coefficients of friction eliminate the need for lubrication, while providing smooth operation, reducing wear and extending service life. Low friction also supports the elimination of the effects of stick-slip or "stiction" during startup.



### MAINTENANCE-FREE

GGB bearings are self-lubricating, making them ideal for applications requiring long bearing life without continuous maintenance, as well as operating conditions with inadequate or no lubrication.



### ENVIRONMENTAL

Greaseless, lead-free GGB bearings comply with increasingly stringent environmental regulations such as the EU RoHS directive, restricting the use of hazardous substances in electrical and electronic equipment.



### CUSTOMER SUPPORT

GGB's flexible production platform and extensive supply network assure quick turnaround and timely deliveries. In addition, we offer local applications engineering and technical support.



### GLOBAL FOOTPRINT

GGB has manufacturing, sales, service and support locations around the globe. This vast network of resources and expertise enables us to respond promptly to your bearing needs wherever you do business.

## RECOMMENDED PRODUCTS

The following products are particularly well suited for dirty, abrasive working applications\*. Contact your local sales representative for bearing product selection and design assistance.



### GGB-CSM®

A thick walled monometal bearing, the self-lubricating and maintenance-free GGB-CSM is produced by metallurgic powder and features homogeneously distributed solid lubricant (graphite, MoS<sub>2</sub>) in the metallic matrix. With lead-free and corrosion resistant alloys available, it can handle temperatures up to 600°C (depending on alloy).



### GGB-CBM®

Thin-walled bimetal GGB-CBM bearings are maintenance-free and offer high load capacity and are suited for a broad temperature range.



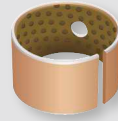
### GGB-DB®

Cast bronze bearing with solid lubricant inserts, offering excellent performance under high loads and intermittent operation, negligible stick-slip effect. Available with PTFE or graphite inserts for temperatures above 250 °C.



### HSG

High Strength GAR-MAX bearings offer twice the static load capacity of standard GAR-MAX, plus very good friction, and wear properties. They also provide excellent resistance to shocks, misalignment, chemicals and contamination.



### DX®10

A Metal-Polymer grease-lubricated bearing solution, the lead-free DX10 features enhanced chemical and erosion resistance and is ideal for harsh environments. From piston and oil pumps to reciprocating bushings, it features great wear and fatigue performance with high loads and temperatures.



### HI-EX®

A Metal-Polymer hydrodynamic composite bearing, the lead-free HI-EX features good wear and chemical resistance under thin film conditions. Suitable for use with low viscosity fluids, it's approved to standard ASTM E595/ECSS-Q-ST-70-02C and rated for a maximum temperature of 250°C.



### DP4®

Lead-free metal-polymer bearing material offering low friction and good wear resistance in both dry and lubricated applications. Suitable for linear, oscillating, and rotating movements.



\*Performance depends on different operating conditions.



[www.ggbearings.com](http://www.ggbearings.com)



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Order-No. 11564

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