



# HIGH PERFORMANCE BEARINGS FOR CONSTRUCTION

## CONSTRUCTION

Tough jobs demand even tougher surface solutions. Long lasting performance in harsh environments and durable dependability of bearings, difficult maintenance, and repairs or even component replacement can be complex, expensive and time-consuming. GGB's reliable and greaseless bearings for construction and off-highway offer:

- grease-free operation to reduce maintenance intervals
- low friction properties that reduce power loss
- excellent wear resistance and high shock load capacity
- elimination of the need for hardening and machining grease paths resulting in extended service life and compliance with increasingly stringent environmental regulations.

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.

GGB's bearing solutions are used in a wide range of construction and off-highway equipment such as:

- articulating joints
- kingpins
- lift and hydraulic cylinders
- scissor lifts
- motor graders
- axle trunnions
- bucket pivots
- conveyors
- steering cylinders
- low arrow cranes
- critical clearance joints
- rock shafts

## PUSHING BOUNDARIES TO CO-CREATE A HIGHER QUALITY OF LIFE

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.

# GGB PRODUCTS

The following products are particularly well suited for construction applications\*. Contact your local Timken sales representative for bearing product selection and design assistance.



### DP4<sup>®</sup> self-lubricating bearings:

- suitable for dry operation, which eliminates the need for greases and oils
- resistant to high loads for extended operating life
- suitable for linear, oscillating, and rotating movements



### DP10 antifriction bearings:

- suitable for linear, oscillating, and rotating movements
- offer good wear and low friction performance over a wide range of loads, speeds, and temperatures in dry running conditions
- ensure a very good performance in lubricated applications, particularly in marginally lubricated applications



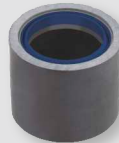
### DX<sup>®</sup> marginally lubricated bearings:

- allow reduced maintenance intervals
- provide optimum performance under high loads and low speeds
- suitable for linear, oscillating, and rotating movements



### GAR-MAX<sup>®</sup> self-lubricating bearings:

- offer exceptional performance under heavy load and slow speed
- provide excellent resistance to shock, misalignment, chemicals, and contamination
- very good dry wear performance



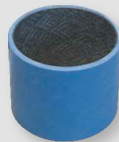
### SBC with GAR-MAX<sup>®</sup> sealed bearings:

- offer excellent resistance to shock loading and misalignment
- sealed to exclude contaminations
- provide very good friction and wear properties



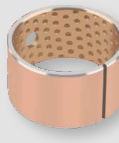
### HSG high-load bearings:

- offer high static load capacity
- provide excellent shock and misalignment resistance
- ensure excellent contamination resistance



### HPMB<sup>®</sup> high precision bearings:

- pre-machined for immediate installation
- offer low friction with negligible stick-slip
- ensure dimensional stability - very low water absorption, low swelling



### AuGlide<sup>®</sup> machinable bimetel bearings:

- suitable for high loads and high temperatures
- offer excellent fatigue strength under dynamic and shock load conditions
- suitable for hydrodynamic operation



\*Performance depends on different operating conditions.



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



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