



Compressors

**Engineered GGB Solutions for
Reliable Thermal Management**



Resilience Under Pressure

Dozens of critical industries depend on compressors to keep operations running. That's why compressor failure can lead to critical problems that impact operation - from downtime and costly repairs to total equipment failure. Compressor designers and engineers face unique challenges, from the pressure to optimize development costs, carbon footprint, logistics, and the development of electric motors and battery packs. There's continuing pressure to design compressors that go above and beyond customer needs while achieving a longer product lifespan.

THE SAFE SOLUTION FOR GROWING DEMANDS

Thanks to our global team of Application Engineers experienced in industrial scroll compressor and fluid power applications, our proven solutions are specifically designed to reduce friction and optimize performance and durability across automotive and industrial applications. With our broad customer base, our team is skilled and leverages these experiences into everything we do - giving us a global wealth of knowledge and footprint where we bring our tribological expertise to where you are.



BUILT FOR THE LONG HAUL

INDUSTRIAL APPLICATIONS

Industrial air compressors are designed for a number of applications including spraying crops and ventilating silos in agriculture, general refrigeration equipment, but also Scuba diving, hyperbaric oxygen therapy and other life support devices. Petroleum refineries, natural gas processing plants, petrochemical and chemical plants and similar large industrial plants require compressing for immediate and end-product gases. The trend for compressors goes towards the replacement of lead, increased reliability and efficiency, reduced noise and oil-free compressors for fuel cell technology.



MANUFACTURING A SUPERIOR DRIVING EXPERIENCE

AUTOMOTIVE APPLICATIONS

With the electric vehicle market growing and more electric cars on the road than ever before, manufacturers are being forced to change their designs to meet the updated requirements. Development costs are rising as designs are moving to larger-sized scroll and rotary compressors while the large size of electric car batteries make it difficult to find space and weight savings during the design process. Our bearings and surface solutions meet strict criteria for design and function in addition to helping create cars that have superior thermal management - improving customer satisfaction and allowing them to go the distance in comfort.

By working with you at the very start of the design process, we're able to leverage our tribological expertise, in-house R&D capabilities, and global presence to review and ensure that the bearing and surrounding components are the most cost-effective. As you get started designing and concepting your project, you have plenty of options given our wide array of tribological solutions. Here's a first look at some of the innovations we can bring to your design and manufacturing efforts.



DP31

A Metal-Polymer bearing solution, the lead-free DP31 features excellent low friction and wear resistance performance in piston compressor applications.

DP10

A lead-free Metal-Polymer self-lubricating bearing solution that features low friction performance over a wide range of loads, speeds and temperatures in dry running conditions, especially in the critical start phase.

DTS10

Offers superior and stable performance for plug-in hybrid and electric vehicles as bearing loads have significantly increased due to the weight addition of the electric motor, electronics and battery pack.

TRIBOMATE®

These polymer coating solutions achieve low friction and reduced wear and can enhance the performance of other GGB products when paired either with another coating or with a GGB bearing material and can be an environmental-friendly solution to replace hard chrome, NMP and PFAS.

TRIBOSHIELD®

Able to be applied to nearly any surface, regardless of shape or material, TriboShield® polymer coatings are grease-free solutions that improve performance by reducing friction, increasing wear life, reducing system noise, and greatly improving corrosion resistance. Polymer coatings can be an effective, environmental-friendly solution to replace hard chrome, NMP and PTFS.

BUILT FOR THE LONG HAUL



REDUCED NOISE, VIBRATION AND HARSHNESS (NVH) COMPARED TO ROLLER BEARINGS

Plain bearings and polymer coatings solutions offer low NVH components compared to roller bearings and can significantly reduce size, weight and absorb vibration.



IMPROVED COEFFICIENT OF PERFORMANCE (CoP)

Our low friction surface materials reduce power loss for increased output and volumetric efficiency even at low speed/high pressure conditions, offering high temperature resistance to accommodate the continuous operation needed for heating and/or cooling of batteries.



SUPERIOR MATERIAL PERFORMANCE

From Polymer Coatings and Metal-Polymer bearings to Engineered Plastics bearings, all of our tribological solutions are specifically designed to operate at the highest level of performance to reduce friction and optimize durability.



ENVIRONMENTAL-FRIENDLY SOLUTIONS

With lead-free and grease-free surface materials that comply with the EU End of Life Vehicle (ELV) and the restriction of Hazardous Substances (RoHS) directives, our solutions offer sustainability that can help reduce your carbon footprint and replace hard chrome plating and NMP. We have manufacturing plants all over the world, which reduces transportation time and CO₂ emissions.

Stronger.Together.



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GGB is part of The Timken Company's portfolio of engineered bearings and industrial motion products.