



Tribology  
Keeps You  
Cycling

PERFORMANCE  
IN ALL SHAPES

**GGB EP® RANGE**

Engineered Plastics Solutions



 **GGB**

# The Next Evolution of Cycle Bearing Solutions

To create innovative and improved bicycles, engineers face a daunting challenge: reduce weight and increase durability while keeping costs to a minimum. And with the growing popularity of e-bikes, there's a new set of challenges to meet—from maximizing battery life and improving electronic corrosion resistance to creating lightweight, durable and quiet motor and drivetrain components. Meeting these demands requires careful consideration of every component involved in the production of both standard bicycles and e-bikes.

At GGB, we aren't afraid to take risks for our customers. As a tribological leader, we take pride in working closely with customers in the early stages of design to think broadly and boldly while expanding beyond traditional surface engineered solutions. A relationship with GGB is one based on trust, compassion, determination, collaboration and respect—a true partnership.

We're here to work with you, pushing the boundaries of possibility to inspire customers across all markets to partner—and innovate—alongside us. By partnering with us as early as possible in the system design process, we can adapt our solutions to the needs, demands, and requirements of cycling and e-bike parts and components. This allows you to take full advantage of part shape and size throughout the design process. With this freedom to innovate, you can help transform bicycle technology for the e-bike future.

## Engineered Plastic Solutions

### EP®22

An injection-molded, Engineered Plastic bearing that provides excellent wear resistance and low friction over a wide range of both dry and lubricated conditions.

#### Hydraulic Seat Post

Smooth and maintenance-free, making for a better, more comfortable ride.

#### Brake Levers

Excellent wear resistance and low friction for improved function in any condition.



#### Front Fork

Lightweight and durable with excellent wear resistance and low friction for precision riding.

### EP®43

An environmentally friendly Engineered Plastic bearing that provides extremely low friction and is optimized for dry running conditions, offering high dimensional stability, chemical resistance and low humidity absorption.

#### Rear Suspension Arms

Smooth and consistent vibration damping properties for a smoother ride.

#### Bike Pedals

Incredible wear resistance and maintenance-free for long rides.



#### Shock Absorber

Lightweight, impact-resistant for increased comfort and control.

#### Wheel Hub

Improved low-friction properties reduce power losses for reliable, long-running performance.

#### Shock Tubes

Stable and durable, yet lightweight, for high-impact bike riding.

#### Guide Pulley

Low-friction properties for more efficient riding.

# Performance in All Shapes

## COLLABORATE. INNOVATE. WORLDWIDE.

Our series of Engineered Plastic bearings provides excellent wear resistance and low friction in both dry and lubricated operating conditions. In addition to their high shock-load resistance and noise-dampening properties, our Engineered Plastic bearings provide environmentally friendly, grease-free operation. This helps minimize maintenance and the chance of grease washing away during riding and cleaning. Plus, Engineered Plastics are an ideal alternative for roller bearings in bicycle applications which are subject to brinelling damage under high loads with small oscillation movements.



Dry operation, no lubrication needed



Lightweight components reduce unnecessary weight for improved e-bike and battery performance



Wear- and corrosion-resistance, ideal for harsh, dirty, damp environments



Damping and stick-slip-free properties reduce noise problems



Injection molding offers flexible design options



Excellent dimensional stability and low coefficients of friction



THE TRIBOLOGICAL SOLUTION PROVIDER FOR INDUSTRIAL PROGRESS, REGARDLESS OF SHAPE OR MATERIAL



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