Glide-Pro™ Hinges For Any Applications

Powerbrace offers hinges in a variety of sizes, thicknesses and strengths offering many advantages:

- ***Different hinges to suit different needs***
- ***Interchangeability of hinges with same mounting holes***
- ***Hinges made of four materials for different applications***
- ***Break-away hinge styles to protect doors***
- ***Extensive R&D testing of hinges***

Powerbrace offers a variety of hinge styles to suit customers' needs.

Steel and Stainless Steel: Heavy-Duty, Heavy Weight

Powerbrace steel hinges use the patented Glide-Pro™ bearing system. Glide-Pro bearings with steel or aluminum hinge assemblies show less wear to hinges, pins, butts and bearings. Doors open and close easier, reduce wear, maintain proper door alignment, and eliminate the need for lubrication.

Glide-Pro bearings are used with Powerbrace steel, stainless steel and aluminum hinges. ***(See Technical Bulletin #2 about Glide-Pro bearings.)***

Powerbrace steel hinges can be used on heavy-duty trailers or intermodal containers (moved on railcars), which require AAR endwall tests. With a steel-skinned door, the use of steel hinges minimizes galvanic corrosion. Available in:

- 1/4" thick x 4" wide (Heavy Duty) (available HDG or polished stainless steel)
- 5/16" thick x 2-3/4" wide (Heavier Duty) (Available HDG)
- 5/16" thick x 4" wide (Heaviest Duty) (Available HDG)

They are available in three-hole and four-hole mounting patterns.

Aluminum: Medium Duty, Light Weight

Powerbrace aluminum hinges also use the patented keyed Glide-Pro bearing system, with the same benefits listed for steel hinges. They are designed to break away on impact if an open-door docking collision occurs. This prevents damage to expensive trailer doors, allowing replacement of a hinge and not the entire door.

Aluminum hinges have a low potential for corrosion. All the aluminum hinges are available as: extruded, anodized (light-grey color), or polished (chrome-shiny). Available in:

- 5/16" thick x 2-3/4" wide
- 5/16" thick x 4" wide

They are available with three-hole or four-hole mounting patterns.

Polymer (Plastic): Medium Duty, Lightest Weight.

Powerbrace patented polymer hinges are made of glass-filled nylon as a cost-effective choice. Lighter than aluminum, they do not rust or corrode, looking new longer than metal.

Polymer hinges are designed to break away in an open-door docking collision, preventing damage to expensive trailer doors. Polymer hinges do not use the Glide-Pro bearing, because the entire hinge barrel is polymer, eliminating mounting gaskets or washers. They provide smooth door operation, even under harsh weather and road conditions. These hinges are only available in 3-hole standard bolt pattern (allows for interchangeability with conventional Powerbrace hinges).

Polymer hinges match with Powerbrace 4-inch hinge butts. They come 4" wide only and are stocked in light gray. They can be custom colored to match nearly any trailer body color. Custom colors require a minimum 1,200-piece order.

NOTE: Special custom-ordered sizes of steel or aluminum hinges are available (at a minimum annual usage).

Advantages of Powerbrace Glide-Pro™ Hinges *(continued)*

Hinge Mounting Interchangeability

The mounting bolt holes are the same for hinges of the same size, so a trailer manufacturer can switch to different hinges without changing mounting butts or the hinge mounting-hole pattern.

All 2-3/4" wide hinges use the same 2-3/4" mounting butts. The butts are available in steel, stainless steel, and aluminum, allowing a switch from steel to aluminum hinges at the same setup.

All 4" wide hinges use the same 4" mounting butts. The mounting butts are available in steel or stainless steel. Thus, the manufacturer can easily switch among aluminum, steel, stainless steel or polymer hinges.

Testing of Powerbrace Hinges

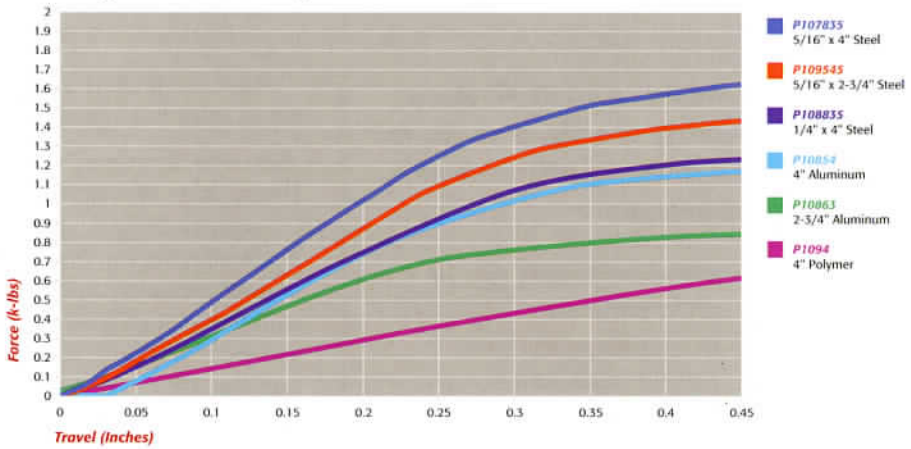
Powerbrace has done extensive testing of its hinges, performed at the R & D facility of Miner Enterprises ***(see Technical Bulletin #6)***. The graph ***(above right)*** illustrates the comparative strengths of Powerbrace hinges.

In this test the hinges were bolted to a fixture the way they would be bolted to a door. A load was placed on the hinge barrel, similar to the type of loading a hinge would receive in an AAR endwall test. ***(See Technical Bulletin "Door Hardware Industry Terms.")***

As the load was applied, the deflection of the hinge was measured. The graph shows the deflection versus load. For example, to deflect the top hinge on the graph (1078) .45", it took 2,100 pounds. To deflect the 1094 hinge sample .45", it took 600 pounds.

Powerbrace tested two of each hinge, and the results are averaged.

Hinge Deflection Comparison



The stiffness of the hinges from most stiff to least stiff is as follows:

- 5/16" x 4" steel (3.73#)
- 5/16" x 2-3/4" steel (2.57#)
- 5/16" x 4" aluminum (1.27#) tied with 1/4" x 4" steel (3.14#)
- 5/16" x 2-3/4" aluminum (.88#)
- 4" polymer (.60#)

(Weights of the hinges are shown in parenthesis.)

In addition to the Glide-Pro™ hinges detailed here, Powerbrace offers lighter-duty hinges for small trailers, truck bodies, belly boxes, and other applications. Ask our Customer Service department for information on our stock hinge products or let us design a hinge for your specific application.

What Is the Most Important Fact about Powerbrace Hinges?

Powerbrace offers a wide variety of hinges in four different materials, to suit various needs, interchangeable within each size.

For Further Information:

For additional information or questions about Powerbrace hinges, call our Customer Service Department at ***262.697.5328***.

Check Our Web Site

Additional information is available at ***www.powerbrace.com***.

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