



# CASE STUDY

## PLASTIC BUSHINGS FOR ROLLERCOASTER

### APPLICATION OVERVIEW:

iglide® Z plastic bushings reduced surface pressure and shaft wear for this rollercoaster at one of America's leading theme parks.

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**“After six months of continuous operation during the height of the season, the iglide® Z bearing was inspected and the results were amazing. There was virtually no noticeable wear on the bearing or shaft.**

"Its high flexibility and resistance to misalignment improve installation and removal of the bearing and make it less susceptible to damage. Maintenance is reduced by 95%. Annual cost of replacement parts is reduced by at least 54% and labor costs are reduced by almost 9%."

- Corporate Engineer

### Increased reliability, reduced maintenance costs

Six Flags Theme Park, located in California, is home to the "X" rollercoaster - the only one of its kind that travels through four dimensions. This creates a unique sensation for riders who sit each side of the ride rack and rotate independently of the ride vehicle.

A special component of the chassis, called the X-Bogie, enables the unique rotation of the seat on the X-Trains. It has four wheels, which travel along the track and are attached to pivot housings responsible for the suspension.

Loads induced on the vehicle components tax both the bearings and lubricants. Space restrictions also make it difficult to lubricate or to perform any regular maintenance. Due to its complex design, the "X"-Bogie requires a special bushing that is both lubrication- and

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maintenance-free. It also needs to be highly flexible to achieve the vibration dampening essential for optimal performance.

iglide<sup>®</sup> Z plastic bushings were chosen because they possess a larger length and surface area than bronze bushings and also reduce surface pressure and shaft wear. iglide<sup>®</sup> Z is dry running and maintenance-free.

Six Flags has benefited in many ways from using iglide<sup>®</sup> Z. After switching out the bronze bushings it had been using, the “X” rollercoaster encountered fewer technical problems and benefited from increased reliability, a longer service life, as well as reduced maintenance costs.



### **More information**

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