



Great Coasters International. Wild, wooden, wonderful, and making people scream

At a Glance

Location:

Sunbury, PA

Founded:

1994

Employees:

12

Specialty:

Design and construction of wooden roller coasters

TERMINATOR, EL-TORO, AND THUNDERHEAD hurtle over their tracks with a thunderous roar to the shrieking delight of passengers. Even though steel has become a popular construction choice in recent decades, these modern wooden roller coasters are still the favorite of amusement-ride fanciers. “We often see whole families, especially the older generation, getting on our wooden roller coasters,” says Chris Gray, procurement and assembly director of Great Coasters International (GCI). “Our rides are nostalgic; they’re as thrilling as the steel roller coasters but not as big or threatening.”

GCI was founded in 1994 by Mike Boodley and Clair Hain, and today is one of the last design-build firms of wooden roller coasters left in the world. As a child, Boodley built roller coasters in his backyard, and Hain, the current president, became involved with roller coasters through a high-school project. Gray was also bitten by the bug early in life. Since the age of eight, he has wanted to build roller coasters, and all his high-school notebooks were filled with endless roller-coaster doodles.

When asked if the business has suffered in the current recession, Gray says, “Here’s the crazy thing: what typically happens in the amusement industry at the start of a recession is that parks will boost everything—even add new rides. They know that no one will be traveling outside the US. For the past three years, our company had some of the best years since 1993. Only recently have we seen a slight decrease, so we’ve started marketing more aggressively in Europe and Asia.”

The average cost to build a wooden roller coaster is between \$4.5 and \$7 million. “It’s cheaper to build with wood,” Gray says. “In 2009, a new 305-foot-high steel roller coaster in Virginia cost \$25 million. Last year we built a wooden racer in Holland for \$10 million. The racers, which are two trains on separate tracks traveling together, cost more than a one-track coaster because there are two rides, more trains, more mechanicals, a maintenance building, and more issues with the control systems.” GCI guarantees their tracks for two years or more, although a track can last for over 50 years.

The mechanical parts of GCI’s coasters are manufactured and assembled within a 60-mile radius of its plant in Pennsylvania. Gray orders truckloads of nails, 30-40 truckloads of lumber, all the mechanical features, and articulated cars and ships everything directly to the customer’s site to be assembled by 30-50 workers. Years ago, all rides were made out of oak, but that wood has been phased out and replaced by southern yellow pine harvested from renewable forests. The lumber is pest- and fire-retardant.

Typically, it takes nine months to a year to complete one coaster. The track is laid first, and then the mechanical side of the ride, such as brakes, sensors, controls, and the transfer maintenance building, are designed and constructed.

Currently, GCI is building a \$10 million terrain roller coaster along the mountain contours in Knight Valley in Shenzhen, China. When completed, this coaster will be

Above: Construction of a \$10 million roller coaster in the valley of Shenzhen, China. Photo: Courtesy of Great Coasters.



4,817 feet long and will feature a 147-foot lift and a 131-foot triple-down first drop. Traditionally, the amusement park names the roller coaster, and this one is scheduled to open in January 2011. It will include a GCI signature station fly-through and 80 degrees of banking. “For terrain rides we try to keep them as low to the ground as possible,” Gray says. “The lower you are to the ground,

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the faster it feels. We can also keep parts of the ride hidden. One of the cool things about some of our rides is that you can be standing on the station, and sections are hidden in the woods. If a park wants to do a tunnel, then we’ll add them.”

Gray also points out that as much as a roller coaster’s design has to do with speed and thrills, it is still a complex



Left: The coaster in China will be 4,817 feet long and will feature a 131-foot initial drop.
Top: One of GCI’s racing coasters, which have two sets of tracks to run cars side by side.
Bottom: The double set of tracks on a racing coaster adds a level of excitement and competition to the ride. Photos: Efteling.

architectural problem. “Our roller coasters should also be as visually stunning as a piece of art or sculpture,” he says. “It should have lots of grace and beauty so that when it functions around the park, it looks like it’s been designed specifically for that spot.”

In 2009, GCI won the Best New Ride from *Amusement Today* for Prowler in Kansas City, Missouri. Thunderhead at Dollywood was named the number one wooden roller coaster ride in the world in 2005 and 2006. GCI sees lots more thrills like these in its future. —Joyce Finn

A Message from Ohio Rod Products

Ohio Rod Products is a recognized leader in the production of long-length, small-diameter metal fasteners for markets ranging from wooden roller coasters to construction, material handling, and power-generation applications. A member of the Elgin Fastener Group, Ohio Rod Products is dedicated to expanding its reputation as a preferred supplier of high-quality headed and threaded fasteners. Ohio Rod Products has supplied Roller Coaster Bolts to Great Coasters International since 2003.