Velocity Magnetics Introduces the Magna-Brake™

The Magna-Brake™ is the latest invention from Velocity Magnetics, Inc., and a piece that compliments their current offering of static and actuating magnetic brakes. This new brake is different because it offers an alternative to the standard roller coaster friction brakes that have been around for decades. The bladder brake, common on many steel coasters, and the spring-powered pinch brake, a staple on wooden coasters, have been the only choice of amusement parks. However, the Magna-Brake™ offers maintenance directors a choice that reduces annual expenditures, increases uptime, and results in a better guest experience at the park.

Velocity Magnetics’ new friction brake is a large step forward the in concept and execution of a braking system. The company’s president, Domenic Marzano, said, ‘We took a step back during the design process and said to ourselves, ‘what works?’ At Velocity, our goal is always to create an application that functions better than everything the market currently offers. We do not want to mimic a customer’s current choices, we want to offer a new alternative.”

The differences can be found throughout the Magna-Brake™. While the bladder brakes can fail if an air line is ruptured and the can brakes have springs that can pose a safety hazard, the Magna-Brake™ is simple and safe for maintenance staff to use. The two armatures are held apart by compressed air and a strong magnetic attraction provides the return. Capable of a 200 milli-second pulse, this mechanically simple and effective system represents a new generation of friction brakes.

The braking unit’s other revolutionary advantage is the quick-change liners. Velocity Magnetics developed a unique composite liner that can be easily swapped out; trained maintenance personnel can remove worn pads and install new ones within 20 minutes. When compared to brass the Magna-Brake™ saves both labor time and material costs. These pads can also be used on fins utilized for magnetic braking.
Entertainment Management Group is Velocity Magnetics’ sales agent and installation team for all braking retrofit projects. Technical Director Bill Wright is excited about the option the new brake offers parks. He said, “The Magna-Brake™ is a big step in the right direction, for the first time in decades we have the ability to offer park owners a new option for their friction braking. These can be installed as replacement brakes or in conjunction with other Velocity Magnetics’ products like the Slidematic™ or Dyna Brake®. They are currently the only company designing & fabricating both types of brakes, and maintenance directors know just how critical it is to get all of your system’s equipment from one source.”

Visit booth 4444 to meet with Entertainment Management Group (www.EntertainmentManagementGroup.com) and discuss retrofitting your roller coaster with the Magna-Brake™ or any other Velocity Magnetics product.

System Specs.
- Up to 2000lbs Braking Force
- Armature Length: 46 Inches and Operates at 80psi
- Capable of 200ms pulse
- Magnetic Field Closes Brake Upon Loss of Air Pressure or Power
- 12 Grease Points For Extended Life Operation
- Designed to Fit Two (2) Brake Units Between One Traditional Wooden Coaster Bent
- Proprietary Brake Lining That will Not Harm Magnetic Brake Fins
- Available With a Specially Designed Pneumatic Air Panel Complete Plug & Play System