



Case Study

Gate to Greatness: Unveiling Valve Success in the BMX Industry

Problem

In the high-stakes world of international BMX racing, where every millisecond counts, a leading gate supplier was faced with a challenge. Known for providing gating systems for world championships and the Olympic Games, this supplier was in search of a solution that would offer both safety and precision in its gate release mechanisms.

BMX racing relies heavily on a starting gate apparatus, which includes a main platform, multiple connected gates, and a gate actuation setup. This setup drives the gates from a position that halts the bikes to one that releases them, allowing the race to begin. The complexity lies in this system's ability to permit variations in different parameters, including an intermediate stopping position along the gate travel path, the driving force of the gate, and the interval between the initiation of an actuation sequence and the actual actuation of the gate. These features allow the gate to react independently to any obstructions and provide options for reversing or momentarily actuating the gate during the actuation sequence¹.

The gate supplier had previously collaborated with another company without experiencing any significant issues. However, when changes in the gate cylinders started affecting the speed and accuracy of the gate release, the supplier turned to Bimba for assistance.

Solution

Bimba, with its commitment to innovation, customer satisfaction, and problem-solving, was ready for the task. The team of application engineers at Bimba offered the flexibility to customize a solution specific to the BMX gate supplier's needs. The proposed solution was a cylinder capable of completing 12-inch strokes in less than 1.5 seconds, coupled with a quick exhaust valve (QEV). This QEV valve allowed for rapid exhaustion of air from the cylinder, enabling higher cylinder speeds while maintaining reliable operation.

This partnership resulted in the BMX gate supplier achieving efficient and swift gate operations without compromising rider safety. For a company looking to improve performance and achieve success in the high-speed, precision-driven world of BMX racing, Bimba's expertise and experience made it the go-to partner.

That same success translates across all sectors. Bimba continues to push boundaries and set new standards in motion control technology, constantly striving to provide cutting-edge solutions that exceed customer expectations.

In addition to its commitment to innovation and customer satisfaction, Bimba places a strong emphasis on safety. This is evident in the collaboration with the BMX gate supplier, where rider safety was a top priority in finding a solution.

This dedication to safety extends beyond just products: Bimba is committed to safety in its processes and operations, ensuring that every aspect of its business is conducted with the utmost care and consideration for safety.



¹ Barker III, P., Doherty Jr., E. W., & Johns, R. (n.d.). Starting gate for BMX and mountain bike racing.

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