



Pool party for 60,000? No problem

Waterco filters keep Texans swimming safely

When you're expecting 60,000 people to stop by for a swim, you need some serious equipment to keep the water clean and healthy. That was the challenge faced by the owners of Splash Kingdom when designing their new water park in Nacogdoches, Texas, USA.

It was the fifth Splash Kingdom to open in the Lone Star state, so the park management knew what to expect when the gates opened in 2015. They also knew what to expect in the summer of 2016 – 60,000 visitors cooling off and having fun in the four pools.

Seeking a swift solution

The park's management pride themselves on providing a safe, healthy and fun environment for visitors, so the engineers provided very clear specifications when it came to designing the filtration system for the pools. Not only did the filters need to be able to deal with typical pool water pollutants such as human body oils, dust and food particles, they needed to be resilient enough to cope with 5000 gallons of water coursing through the park every minute.

As with any large scale, complex project, time was of the essence when it came to supply and installation. Any delay would

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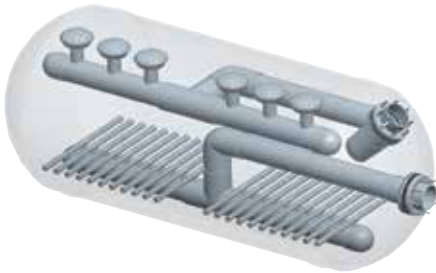
Jared Troutman, General Manager.

have affected other professional trades and potentially resulted in missing the scheduled opening date.

The client also had a strict budget that had to be adhered to.



Micron filters: M5000, M4875, M48106 and HRV 36.



Waterco Micron's hydraulically balanced lateral configuration.



Splash Kingdom, Kids area.



Horizontal filters were the perfect fit

The only outdoor water park to be built in the US in 2015, Splash Kingdom has four pools: Lazy River, Catch Pool, Kids Area and Activity Pool. Waterco installed seven horizontal commercial Micron filters: M5000, M4875, M48106 and HRV 36.

Waterco has introduced a hydraulically balanced lateral configuration for its entire range of commercial horizontal fibreglass filters. A conventional lateral system results in uneven fluidisation of the filter media bed. The beginning of the lateral system experiences a strong flow of water, which gradually decreases along the length of the lateral piping. Backwash flow also decreases towards the end of each lateral, resulting in non-uniform lifting of the filter media bed.

Waterco's new lateral configuration provides a more natural flow of water through the filter, ensuring optimum water filtration and balanced fluidisation of the filter bed during backwashing. Its individual laterals are shortened while maintaining filter media bed coverage to reduce the friction head loss of each lateral and further improve the filter's hydraulic efficiency. This reduces backwash run times, saves valuable water, and produces flatter, more uniform filter media bed after backwashing. The technology proved the right solution for Splash Kingdom.

Construction of the park started on December 20, 2014 and the Waterco filters were installed in the week of July 14, 2015. The park opened for business just 16 days later. General Manager Jared Troutman said Waterco was chosen because it had the right products to fit the entire needs of the water filtration requirements for the park, and they were in stock, ready to ship immediately.

Visitor numbers prove the system's success

The result was that the water filter installation project was completed on time and on budget. "Everything happened on time and Waterco fully delivered on what it promised," Jared said. "The sizing met our filtration needs and they matched the specified requirements of the Aquatic Consultant. Waterco has been a good partner and has addressed all operational concerns."

But at the end of the day, the success of the filtration system and, by extension, the park was in the hands of the paying public. They voted with their feet and the result was an unqualified success. The facility welcomed 1000 visitors a day in its first season, with 60,000 expected in the summer of 2016.

Jared said the price and the result were both favourable. "The water clarity is perfect," he said. "It was also the most budget conscious solution. A big plus here!"

Horizontal Micron filters at a glance

- Compact horizontal design allows installation with minimum waste of space
- The spherical ends are designed to give uniform flow from both inlet and outlet collection assemblies
- Filters are available with a 500mm (M series) filter media bed and a 1200mm (MD series) filter media bed
- Its hydraulically balanced lateral system reduces backwash run times, saves water and produces flatter more uniform filter media bed after backwashing