Waterco New Zealand

Swimming pool water treatment

Christchurch, New Zealand



Small-footprint commercial pool filter provides absolute 3-micron filtration

With public swimming pools considered a core council business and valuable community asset, facilities like Pioneer Recreation and Sport Centre in New Zealand are relying on new technologies to cut operational costs while helping people stay fit and water safe.

Pioneer — one of five indoor pools operated by Christchurch City Council — upgraded its commercial pool filtration equipment with a system that not only provides ultra-fine filtration but also reduces expenses associated with backwash, electricity, chemicals, and maintenance.

LiqTech is an all-inone, complete turnkey system, which makes it simple to install and service.



"When media filtration is not an option due to spacial limitations, or where ultra-fine filtration is absolutely required, LiqTech Water offers innovative stand-alone or complete turnkey commercial pool filters based on high-quality silicon carbide (SiC) ceramic filters providing high efficiency and reduced life cycle costs," says Waterco commercial and water treatment specialist, Andy Gale.



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"Ceramic membranes deliver a much more thorough filtration process that removes bacteria, pathogens and viruses," he explains. "This ultimately delivers cleaner water and a safer pool and spa environment. They're also made of some of the hardest materials in the world, resulting in an extremely durable and long-lasting product.

Save water and space

Upgraded with the latest software and valves for increased reliability, LiqTech Water offers a compact commercial swimming pool filtration system with the smallest footprint on the market — taking up to 65 per cent less valuable real estate in plantrooms.

As Gale explains, LiqTech's commercial pool filters are highly flexible.

"The 'ambidextrous' design allows all process connections to be installed from either side," he explains. "Moreover, it is a modular system to which additional housings can be added after installation."





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Key features and benefits of LiqTech Water's commercial pool filtration system:

- Up to 65% footprint reduction the smallest on the market
- Absolute 3-micron filtration
- ≥99% removal of microorganisms, e.g., Cryptosporidium alveolates
- 70% water reduction in a backwash
- 30% lower chemical usage
- At least 40% lower residual turbidity
- Up to 40% reduction in combined chlorine
- Up to 40% fewer trihalomethanes (THM)
- · Improved and consistent water quality
- Uses less water and chemicals
- High efficiency and low life cycle costs
- Automatic chemical cleaning
- Modular system design for flexible installation and capacity upgrades
- No media costs low OPEX
- · On-site and remote control of the system
- Fully automated low maintenance system

The significantly reduced skid footprint with up to $75m^3/$ hour per $1.5m^2$ filtration capacity fits through a standard doorway and can be made even smaller if required.

13

LiqTech's SiC membrane technology has a dead-end design, which ensures no contaminated water passes through the filter. The pore size of the membrane walls allow water to pass through while retaining impurities. Dirty water in, clean water out. It's that simple.

"All this makes it perfect for both new-build and retrofit installation with significant savings on space and onsite installation costs," he says. "For Pioneer, installing LiqTech eradicated the need to rebuild an entirely new plantroom due to existing space restrictions."



"The space saving design uses substantially less footprint, which is ideal when you have narrow access like we did or a plantroom with minimal room." Says Nick Yannakis, Powell Fenwick Technical Director.

Complete turnkey system

Powell Fenwick Technical Director Nick Yannakis says specifying LiqTech made sense for several reasons.

"This system produces very high-water quality without ongoing, labour-intensive maintenance," he explains. "LiqTech's ceramic membrane filter technology also eliminates health and safety concerns that come when handling hazardous materials associated with other forms of filter media. And while there may be a high capital cost, this is soon offset by low operational costs."

Rob Hough, Mechanical Estimator for Hanlon Plumbing & Pipe Services agrees with Yannakis' description of LiqTech's low fuss design.

"For example, unlike sand filtration, LiqTech is an all-inone, complete turnkey system, which makes it simple to install and service," he says. "The space saving design uses substantially less footprint, which is ideal when you have narrow access like we did or a plantroom with minimal room."





The upgraded commercial pool filtration equipment not only provides ultra-fine filtration for a safer pool and spa environment, but also reduces expenses associated with backwash, electricity, chemicals, and maintenance.

A water smart, cost-effective solution

Not only is the LiqTech pool filtration system easy to clean, but it also uses less water for cleaning. In fact, water consumption for backwash can be reduced by 70 per cent.

"All things considered, LiqTech's commercial pool filtration system requires minimum effort to operate and maintain due to automated processes," Gale explains. "The continuous real-time data accuracy and lowered water consumption ensure a precise and cost-effective solution."

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