

Customer testimonial: Orica Watercare's MIEX®

COMPLETE WATER TREATMENT SKID BUILD,
DESIGNED WITH INDUSTRY PIONEER ORICA

“Orica selected Bürkert to supply all valves and fluid control technologies, as well as the build, programming and automation of the enclosure, for its high-quality componentry, experience and ability to efficiently plan and implement projects within deadline and budget.”

Bürkert Fluid Control Systems has built a turnkey water treatment system for water treatment pioneer Orica Watercare. The comprehensive contract for this system involves the design and development of a pilot unit for Orica Watercare's MIEX® Treatment Process. The MIEX® Technology comprises a magnetic ion exchange resin applied in a continuous flow process. The technology is used for dissolved organics removal, as well as other trace components such as heavy metals (Cu, Zn), arsenic and phosphates. MIEX® Technology is used in both municipal and industrial applications.

As comprehensive systems integrators, Bürkert's Project Team work not only with Bürkert product, but also with third party accessories and instruments where required. For example, Bürkert's AirLINE pneumatic pilot valves integrate directly into the Allen-Bradley Point I/O system, running on EtherNET/IP to the Rockwell Logix platform.

This simplified panel design and all but eliminated duplication of terminations. The MIEX® Process control system was fully integrated by Bürkert, including a comprehensive SCADA package. From this SCADA terminal, operator and engineer alike are able to monitor, control and collect data from the process, as well as to automate process alarm monitoring.

To complement the innovative control package, the MIEX® Pilot Unit uses state-of-the-art field equipment, including a range of Bürkert process valves and instruments for level, flow and analytical applications.



Dr Thomas Dahlke working in Orica Watercare's MIEX® Pilot Unit

Bürkert electro-pneumatic valve banks, including IP67



Bürkert instrumentation for level, flow & analytical measurement



Bürkert process valves with ControlTop and SideControl





Left: Control panel in the MIEX® Pilot Plant, featuring Bürkert pneumatic valves working in concert with Allen-Bradley IO. to control processes within the plant.
Right: Feature of Bürkert process valves with integrated position feedback.

Bürkert Smart Systems Partnership

The mobile MIEX® Pilot Unit, developed specially to be transported direct to customer sites, offered potential customers the opportunity to trial MIEX® Technology on their site Fieldbus and with their own treatment processes.

Dr Thomas Dahlke, Development Engineer with Orica Watercare, said that the Bürkert sales and engineering teams worked closely with his team to produce the robust system and ensure the enclosure was suitable for continual transport, ultimately enclosing the MIEX® Pilot Unit within a standard half size shipping container.

The MIEX® Pilot Unit network was designed and programmed by Bürkert's Project Team for simple and straightforward connection with the customer's industrial network system and Fieldbus protocol.

"Customers trialling our MIEX® Process expect a strong and robust construction that will deliver on our projections for improved water quality and throughput," says Dr Dahlke.

"Orica Watercare therefore required a guarantee of high-quality dependable equipment, as well as assurance that spare parts and support would still be available over the next few years to service our ongoing plant construction needs.

"Orica Watercare and Bürkert have worked in partnership, seeking together for the best solution, rather than following a traditional supplier arrangement.

"Bürkert's partnership capabilities, coupled with their national and international presence, makes us comfortable that the plant can be supported wherever it is posted."

Contact Bürkert to discover more about our world-class products and customised solution packages for Water Treatment.

Bürkert - the Smart Choice in Fluid Control Systems

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MIEX® Plant components include:

- 25mm and 50mm Ball Valves
- 15mm, 25mm and 50mm Angle Seat Valves
- Integrated position feedback on all valves
- Pneumatic valve banks
- IO modules
- Level switches
- Mag flow meters
- Conductivity meters
- pH metres
- Suspended solids metres
- Variable speed drive motors
- Tanks, piping and accessories



With thanks to Paul Smith & Thomas Dahlke of Orica Watercare for permission to develop this case study.