Water Treatment

Source Water Reservoirs  Water Treatment  Distribution Solutions  Wastewater Collections & Treatment  Stormwater & Reuse

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MIEX® technologies are a proven & trusted solution for consistent treated water quality results.

The name MIEX® comes from the term “Magnetic Ion Exchange”.

The MIEX® Treatment Process is an advanced ion exchange process that uses MIEX® Resin to remove target contaminants from water and wastewater streams. MIEX® Treatment Systems have very low waste volumes and are not subject to chromatographic peaking which allows ion exchange to be used in a wide variety of applications and throughputs. The MIEX® Process is scalable to fit your needs.

MIEX® Resins have a magnetic property that allows them to agglomerate and settle rapidly, or fluidize at high hydraulic loading rates. Because of this unique feature, MIEX® resin is used in a continuous process with ion exchange occurring in a fluidized bed reactor vessel.

Dissolved Organic Carbon (DOC)- The primary application for MIEX® is for DOC removal to reduce disinfection by-product (DBP) formation downstream. This leads to a host of additional treatment benefits including but not limited to better floc formation, decreased chemical use and a more stable disinfectant residual in distribution.

PFAS/PFOS/PFOA- MIEX® is an emerging alternative technology for removal and management of PFAS contamination in groundwater and surface water. MIEX® can remove over 99% of a range of PFAS compounds including PFOS and PFOA!
**MIEX® High Rate**

Next generation dissolved organic carbon removal.

With a MIEX® High Rate Configuration, ion exchange occurs in a fluidized bed reactor. Raw water is fed to the base of the reactor vessel and mixed with the MIEX® Resin. Within the fluidized bed, the magnetic resin beads are attracted to each other to produce large agglomerates that form uniform resin suspension. This allows for hydraulic loading rates of at least 10 gpm/ft².

An agitator operating at low speeds maintains a uniform resin/water suspension. A small stream of resin is withdrawn from the reactor vessel, regenerated and returned to maintain the ion exchange capacity of the process.

A series of tube settlers (or plates) at the top of the reactor vessel separate the resin from the water. Treated effluent overflows into collection launders to downstream treatment.

The MIEX® High Rate Configuration can be provided as an open tank gravity flow system or an enclosed pressurized system.

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**The MIEX® Mini**

A powerful treatment option for small packaged plants.

The MIEX® Mini is a packaged fluidized ion exchange system to remove targeted contaminants from water and wastewater streams in low flow applications.

It features both upflow fluidized treatment and downflow “in situ” regeneration which gives small water treatment plants the pretreatment benefit of DOC reduction, without the additional capital expenditure of the separate regeneration skid and controls.

Raw water is fed to the base of the reactor vessel for upflow fluidization. Inclined plate settlers at the top of the reactor vessel assist with resin/water separation. Treated effluent overflows into collection launders and to downstream treatment processes. After a pre-defined volume of water has been treated, flow stops and the resin regeneration processes occur. Water is drained from the vessel and the resin regeneration process begins. The regeneration cycle takes approximately 3 hours, after which the Mini system will resume treating water.

For Continuous Use: Two MIEX® Mini systems can alternate for continuous duty and plant expansions are easy with the addition of redundant units.
Ixom Watercare combines innovative water quality solutions with top notch manufacturing and nationwide in-field service capabilities to create trusted, full circle support our Customers depend on.

We design and manufacture many trusted brands including GridBee®, SolarBee®, MIEX®, and ResidualHQ© for use across the water quality spectrum. This includes solutions for Water Treatment, Distribution Treatment, Wastewater Treatment and Lakes & Source Water Reservoirs.

Ixom has thousands of installations and is an industry-leader solving water quality problems across the United States, Canada and the world.

Contact us today to discuss your water quality challenges.