CORIX Water Systems provides a range of packaged and modular water treatment plants for municipal and industrial applications. Our plants are designed to meet a variety of flow and water quality parameters, producing from 10 to 5,000 gpm (50 to 27,000 m³/d) of clean water in single or multiple train units.

CORIX is committed to designing and building plants that provide safe, pure water, are automated for ease of operation and are cost-effective.

Our engineering team will work with you to select the right solution to reliably meet your project's needs. Once the best process is identified, CORIX designs, fabricates and tests the complete system in our controlled manufacturing facility, which results in improved quality and reduced construction costs and project delivery times for the client.

TREATMENT PROCESSES

Our plants use proven and reliable processes. We provide a wide variety of options for conventional flocculation, clarification and filtration process components. In addition, we assemble our own range of membrane pre-treatment skids, using modules from leading suppliers. These can be used either for polishing after conventional systems for improved quality or for standalone systems.

Flocculation
• Hydraulic or mechanical

Clarification
• Clarification/roughing filtration
• Dissolved air flotation
• Tube or plate settlers
• Hydraulic or mechanical float/sludge removal
• Automatic float/sludge removal

Filtration
• Pressure or gravity
• Direct or in-line
• Conventional or deep bed
• Mono, dual or mixed media
• Water only or air/water backwash systems with filter-to-waste option
• Custom media including green sand and underdrain configurations

Pressure Filters
• Custom media for iron and manganese removal, ion exchange and GAC adsorption
• 2 to 500 gpm (10 to 2,800 m³/d) per train

Direction Filtration (DF) (Hydraulic flocculation and rapid gravity filtration)
• Suitable for lower turbidity waters seldom exceeding 10 NTU with lower threats from pathogens
• 10 to 1,500 gpm (55 to 8,100 m³/d) per train
• Small building footprint

Adsorption Clarification (AC) (Upflow clarification and rapid gravity filtration)
• Suitable for stable waters seldom exceeding 30 NTU turbidity
• 10 to 1,500 gpm (55 to 8,100 m³/d) per train
• Small building footprint
Tube Settler (ST) (Flocculation, high-rate tube settlers and rapid gravity filtration)
• Multi-stage clarification and filtration process for removal of high silt and turbidity loads
• Provides extended detention for thorough and effective purification of hard-to-treat waters
• Hydraulic or mechanical flocculation
• 60° tube settler with automatic sludge removal
• 10 to 800 gpm (55 to 4,400 m³/d) per train

Dissolved Air Flotation (DAF) (Flocculation, dissolved air flotation, clarification and rapid gravity filtration)
• Excellent removal of color, organics, algae and turbidity up to about 100 NTU
• DAF clarifier offers a small footprint and reduced building costs
• Greater tolerance to changing raw water quality
• Easy operation with rapid start-up
• 10 to 1,400 gpm (55 to 7,600 m³/d) per train

Membrane Filtration
• For chemical-free or chemical-enhanced treatment with positive barrier protection against pathogens
• Microfiltration, ultrafiltration, nanofiltration and reverse osmosis options
• Broad selection of membranes to reduce power, improve removal efficiency and increase membrane life
• Automatic pre-treatment and membrane cleaning

PLANT FEATURES AND ADDITIONAL SERVICES
Quality Tank Construction
• Constructed of marine-grade aluminum alloys for long life, durability and corrosion-free service

Cost-Effective
• Pre-assembled and pre-tested in our controlled factory environment, often saving 50% or more over in-situ construction
• Increased savings and reduced project schedule using pre-engineered building systems

Electrical Systems and Control Panels
• Fully integrated automated control and electrical systems
• Remote monitoring, control and SCADA options
• Industrial quality PLC’s with simple plug-in, pre-programmed modules for reduced training and technical support

Chemical Feed Systems
• Fully equipped, pre-assembled chemical feed systems
• Solution and mixing tanks with automatic float/sludge control
• Automatic control based on flow, pH, streaming current, chlorine sensors, etc.

Disinfection Systems
• Chlorine, chloramination, ozone and UV disinfection systems

Water Quality Monitoring and Pilot Plant Testing
• Analytical packages ranging from benchtop testers to full online instrumentation to monitor water quality
• Pilot testing in order to select and optimize the best process

Pre-Treatment and Other Specialized Processes
• Ion exchange, biological filtration and carbon adsorption systems are also available

RAW WATER QUALITY CHARACTERISTICS

<table>
<thead>
<tr>
<th>Turbidity (NTU)</th>
<th>Total Organics (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>75</td>
<td>20</td>
</tr>
<tr>
<td>100</td>
<td>35</td>
</tr>
</tbody>
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 existence of chemical-free or chemical-enhanced treatment with positive barrier protection against pathogens
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<tr>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>75</td>
<td>20</td>
</tr>
<tr>
<td>100</td>
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</table>
### ABOUT CORIX WATER SYSTEMS

CORIX Water Systems specializes in providing innovative packaged and modular water and wastewater infrastructure solutions for municipal and industrial applications. With more than 500 plants delivered around the world, we offer unmatched expertise and a reputation for delivering reliable, high quality water and wastewater solutions.

### DELIVERING THE CORIX ADVANTAGE

CORIX is a fully integrated provider of utility infrastructure products, services and systems for water, wastewater and sustainable energy. Our “one-stop shop” approach allows us to deliver comprehensive, flexible and innovative solutions to our customers’ most complex utility infrastructure challenges.

### CONTACT CORIX TODAY

info.watersystems@corix.com

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### OPERATING CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>DF</th>
<th>AC</th>
<th>ST</th>
<th>DAF</th>
<th>UF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance to variable raw water quality</td>
<td>Poor</td>
<td>Moderate</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Typical waste production</td>
<td>3 · 4%</td>
<td>4 · 5%</td>
<td>4 · 5%</td>
<td>3 · 4%</td>
<td>6 · 10%</td>
</tr>
<tr>
<td>Operator attendance</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Automatic operation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Power usage (kWhr/1,000 m³)</td>
<td>3 · 5</td>
<td>3 · 4</td>
<td>3 · 5</td>
<td>10 · 15</td>
<td>100 · 150</td>
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<tr>
<td>Chemical usage</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
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<tr>
<td>Membrane replacement</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>3-5 years</td>
</tr>
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### CONTAMINANT REMOVAL

<table>
<thead>
<tr>
<th></th>
<th>DF</th>
<th>AC</th>
<th>ST</th>
<th>DAF</th>
<th>UF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity (NTU)</td>
<td>0 · 30</td>
<td>0 · 30</td>
<td>0 · 1,000</td>
<td>0 · 100</td>
<td>0 · 50⁶</td>
</tr>
<tr>
<td>Silt</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
<td>Poor</td>
<td>Poor⁵</td>
</tr>
<tr>
<td>Colour</td>
<td>Fair</td>
<td>Good</td>
<td>Very Good</td>
<td>Excellent</td>
<td>Poor⁵</td>
</tr>
<tr>
<td>Iron and Manganese</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Moderate²</td>
</tr>
<tr>
<td>Pathogens</td>
<td>2.0 log</td>
<td>2.5 log</td>
<td>2.5 log</td>
<td>2.5 log</td>
<td>4.0 log</td>
</tr>
<tr>
<td>Viruses</td>
<td>1.0 log</td>
<td>2.0 log</td>
<td>2.0 log</td>
<td>2.0 log</td>
<td>4.0 log</td>
</tr>
<tr>
<td>Algae</td>
<td>Poor</td>
<td>Moderate</td>
<td>Good</td>
<td>Excellent</td>
<td>Moderate⁴</td>
</tr>
<tr>
<td>Dissolved Organics</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Good</td>
<td>Good</td>
<td>Poor⁵</td>
</tr>
</tbody>
</table>

### NOTES

1. Pre-oxidation and/or adsorption media may be required.
2. Upstream Iron (Fe) and Manganese (Mn) or sequestering may be required to protect membrane.
3. Typical USEPA credits; actual performance often better, pilot testing may be required to verify higher credits.
4. Pre-treatment may be required to prevent rapid blinding of membrane.
5. Upstream chemical coagulation/flocculation or use of ultra/nano filtration required.
6. Higher turbidities with pre-treatment allowed.