

AVANTech designs and manufactures Make-up Water Treatment Systems that remove turbidity, iron, chlorine, ions, and undissolved solids, and reduce Total Organic Carbon (TOC).

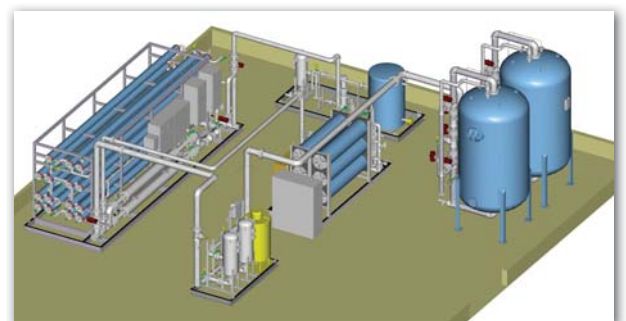
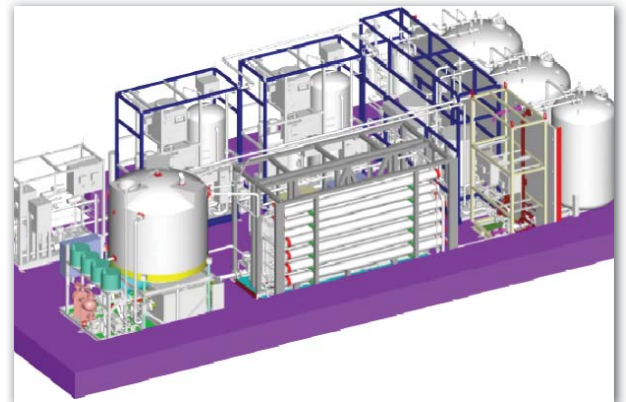
Our systems are used in the U.S. and Puerto Rico, as well as in countries around the world, including Australia, China, Guatemala, Japan, Pakistan, and the State of Qatar.

The Make-up Water Treatment Systems we've delivered to our clients have incorporated chemical feed units, adsorption, filtration, oxidation, removal of carbon dioxide and/or oxygen, softening, and demineralization by ion exchange (cation, anion, mixed bed, packaged bed, and split flow technology). Current design includes nanofiltration, ultrafiltration, reverse osmosis, and electrodeionization.

Most Make-up systems we provide meet, as a minimum, the current standards shown below.

Parameters	Limits	Units
Total Solids	5	ppm
Dissolved Solids	3	ppm
Sodium	0.10	ppm
Silica	0.10	ppm
Turbidity	10	NTU
Conductivity	1-1.5	µmho/cm

AVANTech produces general arrangement and fabrication drawings in Pro-Engineer®. Tis integrated 3D CAD/CAM/CAE software runs on the Microsoft Windows platform, and provides solid modeling, assembly modeling and drafting, and finite element analysis for mechanical engineers.





Our WT Mobile Systems Integrate Double-Pass Reverse Osmosis and Electrodeionization into One Convenient Mobile Operating Unit

Process

The Reverse Osmosis System (ROS) can remove 98% to 99% of most ions, with an 85% recovery. Electrodeionization (EDI) modules remove ions and particles and reduce TOC. Effluent water quality typically approaches 16 to 18 megohms/cm resistivity and 5 ppb silica.

Piping

High pressure piping ≤ 2 " in diameter is stainless steel tubing, while > 3 " is schedule 10 stainless steel piping. High pressure fittings are welded, except where connections are needed to attach sample valves or instruments. Low pressure piping is schedule 80 PVC, per ASTM standards D-2464, D-2467, and D-1784 for plastic pipe.

Controls

Electrical instruments are mounted in a National Electrical Manufacturers Association (NEMA) 4 enclosure. A Programmable logic Controller (PLC) automatically operates the system, based on level in the client's make-up treatment tank. Instrumentation includes pressure indicator, temperature indicator, conductivity indicator and alarm, low pressure switch/alarm, and flow indicator.

Container

System containers can be ISO, Seavan, or trailer mounted. Our standard container is a 40-foot Seavan. The entire water treatment system (with ancillary equipment) is housed in a single, high cube shipping container, 40 feet long.

To make the van a self-contained unit, we include lighting, fire protection, heavy duty thermal insulation, HVAC, and auxiliary power outlets. Interface piping is typically hose that meets client specifications. This equipment will meet European CE requirements, and will be self-certified to the Declaration of Incorporation (DOI) - issued by the Machinery Directive 98/37/EC (Annex B).