GE Infrastructure
Water & Process Technologies

Fact Sheet

Hot-Water Sanitizable RO Systems

Specifications

Pharmaceutical companies rely on GE Infrastructure Water & Process Technologies hot-water sanitizable RO systems to ensure product quality and reliability. GE has been supplying and supporting pharmaceutical water treatment systems for over 30 years.

GE systems utilize an integral heat exchanger to heat water to 90˚C (194˚F). The water is circulated through the RO system in 30-minute cycles at 25 psig, which maintains the elevated, sanitizing temperature throughout the cycle.

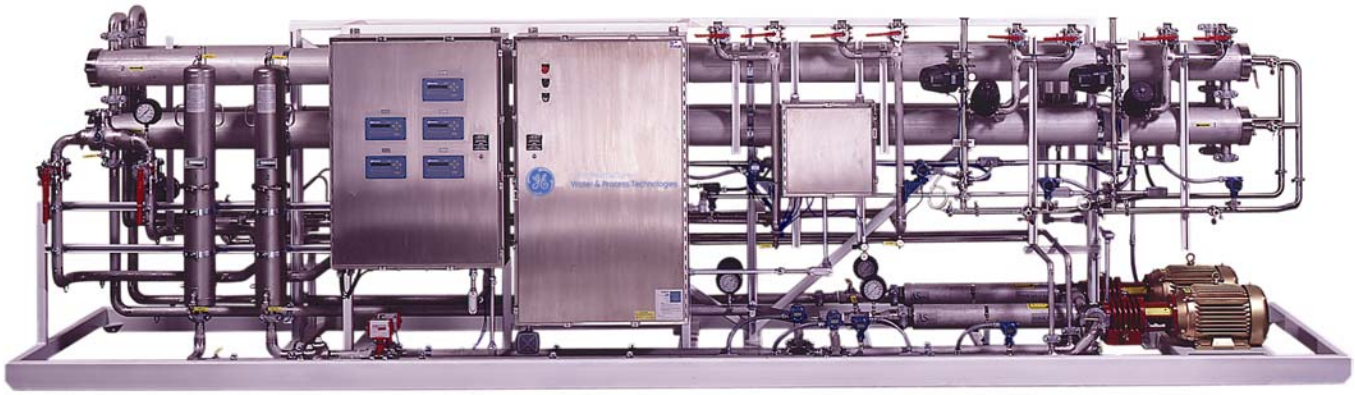
When the sanitization cycle is complete, the system returns to its normal operating temperature until the next cycle. The sanitizing system consists of the all-stainless steel RO, special instruments, gauges, cartridge filters, membranes, pumps, and seals designed specifically for high-temperature applications.

With a clear advantage over other sanitization methods, GE hot-water sanitizable RO systems feature:

- Duratherm membrane elements, which provide reliable performance at the high temperatures required for durable and economic hot-water sanitizing systems
- Greater effectiveness than chemical (cleaning) sanitization for the most effective means available

- A solution that's less costly and less hazardous than chemical (cleaning) sanitization
- The capability to sanitize more than one component at a time for greater efficiency
- All-stainless steel construction for long-lasting durability
- Single-pass or two-pass RO that provides a sanitizable barrier as protection for production of USP Purified Water or as pre-treatment to a Water-For-Injection (WFI) still

As your single source for all hot-water RO components and the world leader in crossflow membrane systems, GE offers flexible design configurations and quicker delivery.



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Standard Components for Hot-Water Sanitizable RO Systems

Our custom equipment sales group draws from decades of experience with membrane systems to configure the model exactly right for your application. Proven system components include:

Cartridge Filter and Housing	316 stainless steel housing with Hytrex* 5-micron, pure polypropylene depth filter
Pump	Multi-stage Tonkaflo* centrifugal pump, 316 stainless steel construction and 304 stainless steel internals
Motor	Totally enclosed fan cooled design (TEFC); premium efficiency available
Membrane Element	Duratherm patented, turbulent-flow GE thin-film, composite-type membranes in industry standard 4-inch and 8-inch diameters
Membrane Housing	Four-port, side-entry membrane housings in 316 stainless steel rated to 600 psi operating pressure Endcaps are 316 stainless steel
Skid and Frame	Welded carbon steel, epoxy-primed with corrosion-resistant phenolic overcoat. Specially welded stainless steel skid and frames are also available
Permeate Piping	316L stainless steel with 25 Ra electropolished finish
Low-Pressure Piping	316 stainless steel
High-Pressure Piping	316 stainless steel
Power Requirements	Three-phase and single-phase power in 50 or 60 Hz
Electronic Controls	Comprehensive PLC package with optional PanelView* machine/operator interface. Enclosures are rated for IEC or NEMA standards. Isolatable alarms: • Low inlet pressure • High temperature • High/Low pH • High permeate conductivity • High permeate and concentrate backpressure
Instrumentation	• Pre-filter pressure • Post-filter pressure • Primary pressure • Final pressure • Permeate pressure • Hour-meter • Feed flow meter • Inlet pH monitor • Feed and permeate conductivity monitor • Concentrate flow meter • Temperature
System Documentation	Customized instruction manuals provided for validation support and equipment operation instruction. Manuals include: component cut sheets, complete drawing packages, sequence of operations, hard copy of PLC program, major components lists, material certification, NIST traceable instruments, welding documentation (when requested), Factory Acceptance Testing report (when requested). Other documentation available upon request.

Modular Platforms

Model	**Capacity**		**Dimensions**	
	gpm	m^3/hr	L x W x H (in.)	(L x W x H (cm)
OSMO-USP-10-HW	7-12	1.6-2.7	194 x 54 x 74	493 x 137 x 188
OSMO-USP-20-HW	15-25	3.4-5.7	194 x 54 x 74	493 x 137 x 188
OSMO-USP-50-HW	30-55	6.8-13.0	194 x 54 x 74	493 x 137 x 188
OSMO-USP-100-HW	70-110	15.9-25.0	194 x 54 x 74	493 x 137 x 188
OSMO-USP-150-HW	120-165	27.3-37.5	274 x 54 x 74	696 x 137 x 188

For more information call +1-800-805-6698 or visit www.gewater.com.