



ENDOTHERM DUO

COMPACT DUPLEX RO SYSTEM

US DATA SHEET



Compact, reliable, cost effective duplex reverse osmosis water purification solutions for endoscopy and sterile processing applications.

Envirogen's EndoTherm range stands out in the market for its unique advantages, leveraging over 15 years of R&D experience in UK healthcare:

- **Unrivalled compliance with a guarantee:** EndoTherm is the only proven product known to exceed the AAMI ST108 standard and includes a performance guarantee.
- **Smallest footprint in the industry:** Advantageous for facilities with limited space.
- **Robust case studies and comprehensive list of reference sites:** Demonstrating proven effectiveness and reliability.

The EndoTherm Duo is a range of duplex reverse osmosis (RO) systems that are designed to deliver purified water to exceed AAMI ST108 standards. EndoTherm Duo units can be set to operate at ambient or elevated temperatures (user adjustable) with automatic thermal sanitization taking place during off hours. All models can be electric or steam heated. A combination of reverse osmosis, ultra-violet disinfection, sub-micron filtration and constant recirculation all work together to maintain good water quality at a range of dispense rates that can be matched to single or multiple decontamination equipment needs.

The full color HMI (human machine interface) touch-screen monitor allows for secure access levels, simple maintenance procedures and displays real-time graphical data. Compact, pre-assembled and skid mounted, EndoTherm Duo units are fast and easy to install, commission and validate. Various service contract options are available as well as remote digital monitoring access.

FEATURES & BENEFITS

- Ideal for single or multiple washers/autoclaves
- Steam heating option available
- Duplex high-efficiency RO systems on the same module for maximum resilience
- Prefabricated, skid mounted modular system means quick installation and less downtime
- Thermal sanitization to >176°F (>80°C) automatically
- Water can recirculate at ambient or elevated temperatures to all points of use
- Designed to comply with AAMI ST108 requirements
- Choice of high dispense rates for rapid filling and shorter cycles, with 15gpm and 30gpm options available
- Distribution loops available in orbitally welded stainless steel or PEX pipework
- High capacity stainless steel tank to buffer demand to multiple washers
- Hygienic sample valve with easy access to validate and verify product water quality
- Upgradeable outputs up to 31 gph (1200 lph) for future expansion
- PLC controller with full color touch screen HMI for easy system programming
- Removable USB memory stick for data logging system performance and sanitizations
- Twin pass option available
- Remote monitoring options available
- Includes performance guarantees and options for service maintenance and support.

TECHNICAL SPECIFICATION

Treated Water Specification - All models

Conductivity	<10 $\mu\text{S}/\text{cm}^*$
Bacteria	<1 CFU/100ml
Endotoxin	<0.25 EU/ml
Particles	<0.2 μm

*Conductivity of <10 μS when deionization (DI) cylinders option is selected

Feed Water Quality - All models

Hardness (CaCO_3)	<50 mg/l
Free Chlorine (Cl_2)	<0.4 mg/l
Iron/Manganese (Fe/Mn)	<0.05 mg/l
Temperature	<20°F (<20°C)
Feedwater Pressure	35-90 psi (2.5-6.0 bar)
Max Conductivity	<1400 $\mu\text{S}/\text{cm}$
Silica (SiO_2)	<30 mg/l

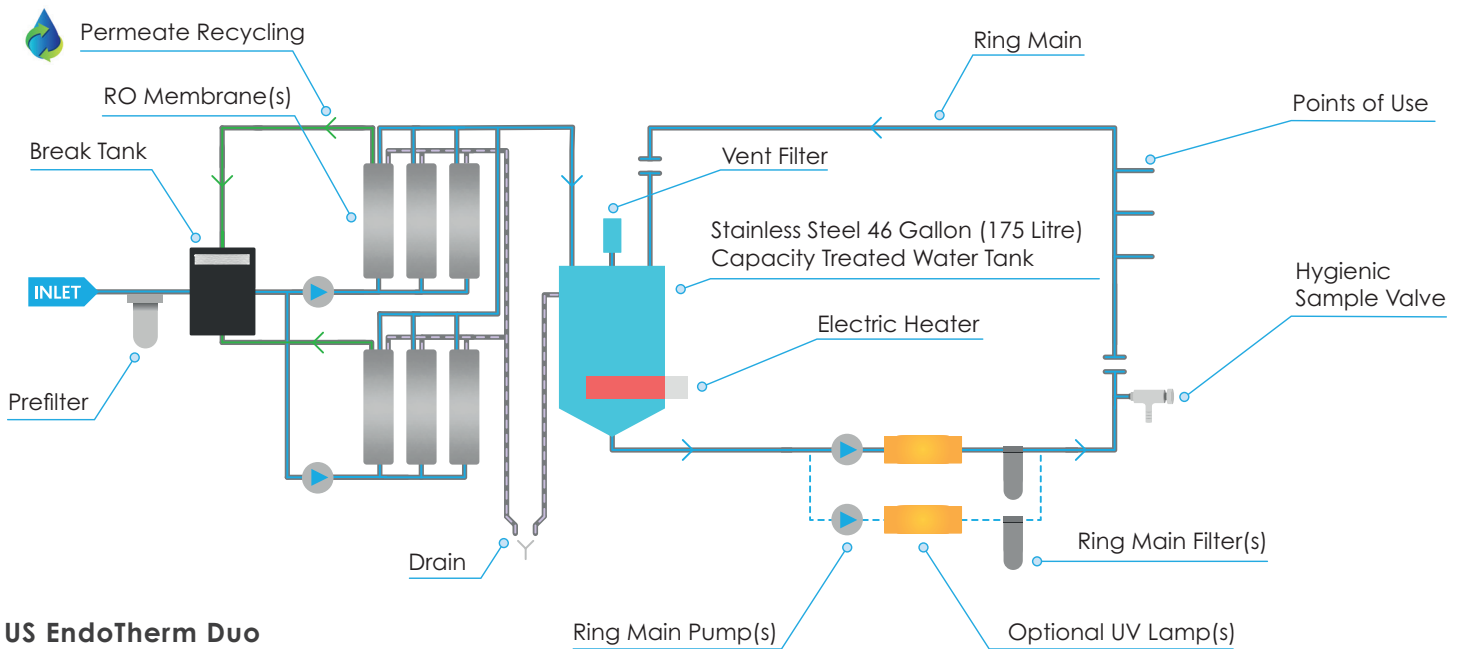


An EndoTherm Duo duplex RO System



Remote wall-mounted alarm indicator

SYSTEM FLOW DIAGRAM



US EndoTherm Duo

PRODUCT SPECIFICATION

EndoTherm Duo Model		ETD-300	ETD-600	ETD-900	ETD-1200
Production Rate @ 59°F (15°C)	gph (l/hr)	70 (300)	158 (600)	237 (900)	317 (1200)
Max Dispense Rate	gpm (l/pm)	Up to 31 (120)			
Max RO Recovery Rate	%	75			
Dimensions: Depth	inches (mm)	33 (830)			
Dimensions: Width	inches (mm)	54 (1360)			
Dimensions: Height	inches (mm)	72 (1840)			
Shipping Weight	lbs (kg)	739 (335)	838 (172)	882 (400)	882 (400)
Inlet Connection	NPT	1"			
Drainage Connection	-	Minimum 1.25" (32 mm) upstand to drain			
Ringmain Connection	NPT	1"			
Electrical Supply (Inc. Max Power Consumption)	Low Flow	12kW heater - 3ph, 480VAC, 35A, 23kW 18kW heater - 3ph, 480VAC, 40A, 29kW			
	High Flow	12kW heater - 3ph, 480VAC, 35A, 25kW 18kW heater - 3ph, 480VAC, 45A, 31kW			
Noise Level during Recirculation	dB	<50			

ABOUT ENVIROGEN

Envirogen is a leading international provider of water and wastewater treatment solutions. We solve complex challenges relating to water availability and quality, and help our customers to increase productivity, reduce costs and meet environmental and sustainability targets.

We do this through offering:

- Best in class water and wastewater treatment and process filtration technology
- Expertise in design, project management and engineering
- World class manufacturing and servicing capability



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