



ENDOTHERM MODULAR COMPACT DUPLEX RO SYSTEM DATA SHEET



Reliable, cost-effective duplex reverse osmosis (RO) water purification systems for large Centralised Endoscopy and Sterile Services Departments.

The EndoTherm Duo Modular is a range of duplex RO systems designed to meet the water quality standards of HTM01-06, HTM01-01, ISO15883 and AS/NZ 4187. This modular and upgradeable range can be set to operate at ambient or elevated temperatures (user adjustable) with automatic thermal sanitisation taking place out of hours.

All models can be electric and/or steam heated. A combination of reverse osmosis, ultra-violet disinfection, sub-micron filtration and constant recirculation all work together to maintain maximum water quality at a range of dispense rates matched to single or multiple decontamination equipment needs.

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

An EndoTherm Modular compact duplex RO System



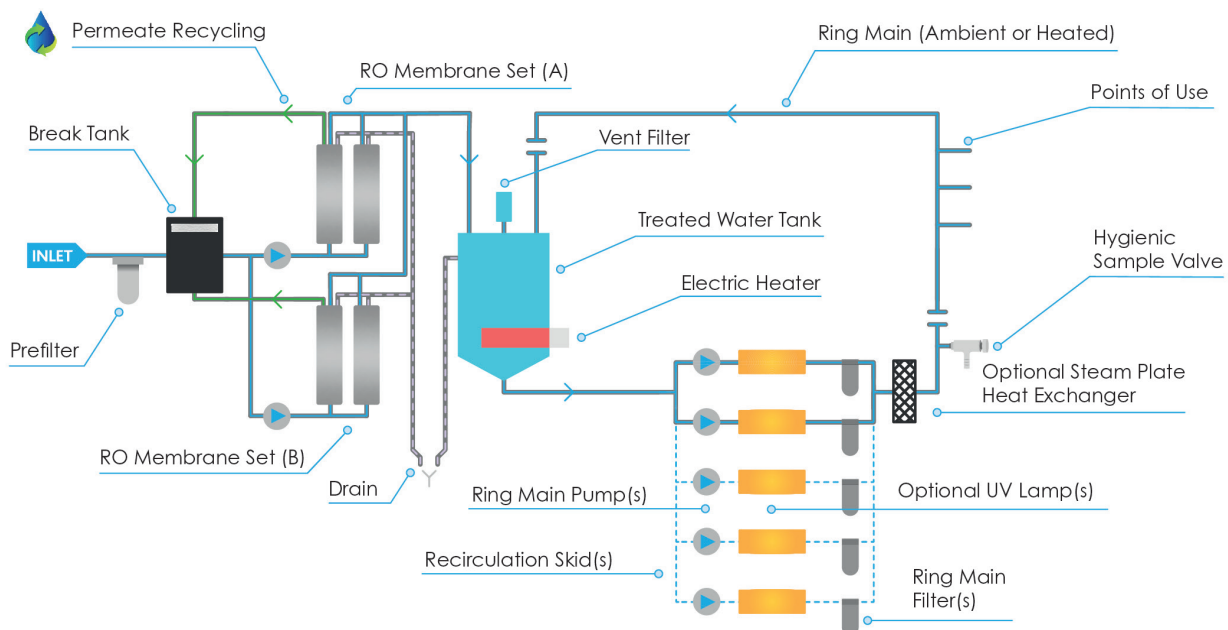
FEATURES & BENEFITS

- Designed to feed multiple endoscopy washers, instrument washers and autoclaves
- Duplex high-efficiency RO systems for maximum resilience with up to 2,400 lph outputs
- Option of electric and/or steam heating
- Prefabricated, skid mounted modular system means quick installation and less downtime
- Thermal sanitisation to >80°C automatically out of hours
- Water can recirculate at elevated temperatures to all points of use if required
- Designed to comply with HTM01-06, HTM01-01, ISO15883 and AS/NZ 4187 requirements
- Range of dispense rates up to 500 lpm for rapid filling and shorter wash cycles
- Distribution loops available in orbitally welded stainless steel
- Selection of high-capacity stainless steel tank sizes to buffer demand
- Hygienic sample valve with easy access to validate and verify product water quality
- PLC controller with colour touch screen HMI for easy system programming
- Removable USB memory stick for data logging system performance and sanitisations
- Twin pass RO models also available
- PureCare RemoteView - remote diagnostic monitoring devices available
- Full system design service with project management on every installation
- Comprehensive service maintenance and support



Remote wall-mounted alarm indicator

SYSTEM FLOW DIAGRAM



Each system is based on four prefabricated modules for fast installation and optimum use of available space. The size of these modules is selected based on the decontamination equipment to be fed:

Module 1: Duplex RO system

- Either single or twin pass designs
- Three single pass models and two twin pass options available
- RO Membranes sets (A) and (B) can have 1-6 membranes on each

Module 2: Stainless steel treated water tank

- Four capacities available: 500, 100, 1500, 2000 litre

Module 3: Recirculation skid

- Four RO pump option outputs available: 120, 240, 360, 500 lpm flow rates
- Optional UV Lamp(s) available for systems running at elevated temperatures for SSD
- The number of ring main pumps, UV lamps, and ring main filters must be equal for each system:
 - The 120 lpm flow rate unit has x2 ring main pumps, x2 UV lamps, x2 ring main filters
 - The 240 lpm unit has x3 of each, the 360 lpm unit has x4 of each, the 500 lpm unit has x5 of each

Module 4: Optional steam plate heat exchanger

TECHNICAL SPECIFICATION

Treated Water Specification - All models

Conductivity	<30 µS/cm
Endotoxin	<0.25 EU/ml

Treated Water Specification - All models

Conductivity	<30 µS/cm
Bacteria	<1 CFU/100ml
Endotoxin	<0.25 EU/ml
Particles	<0.2 µm

PRODUCT SPECIFICATION - RO OUTPUT OPTIONS

Module 1		900	1800	2400
Single Pass	l/hr	900*	1800*	2400*
Twin Pass Option	l/hr	-	500*	1000*
Typical RO Recovery Rate	%	75	75	75
**Dimensions: Depth	mm	800	1070	1190
**Dimensions: Width	mm	600	600	600
**Dimensions: Height	mm	1840	1840	1840
Shipping Weight	Kg	260	290	330
Inlet Connection	BSP	3/4" BSPM		2" Solvent
Electrical Supply	-	3ph+N+E, 415V, 20A		
Power Consumption	kW	4	7	7
Noise Level	dBA	< 70	< 70	< 70

*Production Rate at >15°C

**Options available for large or small electrical panel (dimensions for smaller units displayed)

PRODUCT SPECIFICATION - TANK OPTIONS

Module 2		500	1000	1500	2000
Tank Capacity	l	500	1000	1500	2000
*Dimensions: Depth	mm	1180	1180	1530	1530
*Dimensions: Width	mm	730	730	780	980
*Dimensions: Height	mm	1360	2055	2055	2055
Shipping Weight	Kg	152	175	225	254
Inlet Connection	BSP	1	1	1	1
Ringmain Connection Return (Triclamp)	inch	1.5	1.5	1.5	1.5
Electrical Heater Size	kW	18-36	18-36	72-120	72-120

*Options available for large or small electrical panel (dimensions for smaller units displayed)

PRODUCT SPECIFICATION - RO DELIVERY PUMP OPTIONS

Module 3		120	240	360	500
Maximum Flow Rate	l/min	120	240	360	500
*Dimensions: Depth	mm	890	1150	1450	1725
*Dimensions: Width	mm	675	680	680	680
*Dimensions: Height	mm	1250	1250	1250	1250
Shipping Weight	Kg	155	200	250	295
Ringmain Connection (Triclamp)	inch	1.5	2.0	2.5	3.0
Electrical Supply	-	3ph+N+E, 415V, 32A		3ph+N+E, 415V, 63A	
Power Consumption	kW	20	20	25	25
Noise Level	dBa	< 70	< 70	< 70	< 70

*Options available for large or small electrical panel (dimensions for smaller units displayed)

PRODUCT SPECIFICATION - OPTIONAL PLATE HEAT EXCHANGER

Module 4 (Optional)		120	240	360	500
Maximum Flow Rate	l/min	120	240	360	500
*Dimensions: Depth	mm	1000	1000	1000	1000
*Dimensions: Width	mm	1100	1100	1100	1100
*Dimensions: Height	mm	750	750	1000	1000
Shipping Weight	Kg	150	175	200	250
Ringmain Connection (Triclamp)	inch	1.5	2.0	2.5	3.0
Steam Supply	Kg/hr (2-4 Bar)	150	300	425	585

*Options available for large or small electrical panel (dimensions for smaller units displayed)



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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