SYCHEM

SychemWATER

ECO & ULTRA RO RANGE

Reverse osmosis water systems for endoscopy and sterile services, designed and built by Sychem in the UK and delivered pre-assembled.

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SychemWATER ECO & ULTRA RO Range

Simplex and duplex reverse osmosis systems for washer-disinfectors and sterilisers in endoscopy units and sterile services departments.

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Overview

The Sychem Water ECO & ULTRA RO Range is designed and manufactured by Sychem in the UK to supply water suitable for use with washer-disinfectors complying with EN ISO 15883, and for HTM 01-01 and HTM 01-06 final rinse water requirements, when installed and maintained in accordance with the manual. There are two systems: Sychem Water ECO, a simplex unit with one RO stream in a small footprint enclosure, and Sychem Water ULTRA, a duplex unit with two RO streams on a single skid. If one stream is down for maintenance or a fault, the other keeps producing water.

Water quality is held by prefiltration, reverse osmosis, sub-micron filtration, UV disinfection (standard on ECO, optional on ULTRA) and continuous recirculation. Operating temperature can be set to ambient or elevated, and thermal sanitisation (>80°C) runs automatically out of hours.

Each system arrives pre-assembled, which shortens installation, commissioning and validation. Our engineers can then look after it under a service maintenance contract with water testing to HTM 01-06 / 01-01 requirements, and our remote digital monitoring programmes are also available.









Features & Benefits

- Supplies a single washer or steriliser, or several from one system
- Two ranges to match your site: ECO (simplex) and ULTRA (duplex), with outputs from 160 to 1210 L/hr
- ULTRA: two RO streams on one skid, so one can keep running while the other is serviced
- ECO: one RO stream in a small footprint enclosure
- Automatic thermal sanitisation to >80°C, run out of hours
- Electric heating as standard; steam optional
- Recirculates to every point of use at ambient or elevated temperature
- Designed to supply water suitable for washer-disinfectors complying with EN ISO 15883, and for HTM 01-01 and HTM 01-06 final rinse water requirements
- Dispense rates up to 120 L/min, so machines fill faster and cycle times come down
- Stainless steel treated water tank holds a buffer for sites running several washers (125 litre ECO, 500 litre ULTRA)
- Hygienic sample valve, positioned for easy access during validation and routine water quality checks
- Production output can be upgraded as demand grows (ECO up to 910 L/hr, ULTRA up to 1,210 L/hr)
- PLC control with a 9” colour touch screen HMI and USB data logging
- Stainless steel 316 distribution pipework as standard, with alternative options available
- Remote monitoring available
- Serviced and supported by our national network of trained Sychem engineers

SychemWATER ECO (Simplex)

Product Specification	Sychem Water ECO 160	Sychem Water ECO 310	Sychem Water ECO 510	Sychem Water ECO 910
Product Code	SWE160	SWE310	SWE510	SWE910
Production Rate @ 15°C (L/hr)	160	310	510	910
Max Dispense Rate (L/min)	60			120
Max RO Recovery Rate (%)	75			
Dimensions: Depth (mm)	625			1050
Dimensions: Width (mm)	550			650
Dimensions: Height (mm)	1980			
Shipping Weight (kg)	175		185	225
Inlet Connection (BSP)	3/4”			
Drainage Connection	Minimum 32mm upstand to drain			
Ringmain Connection (tri-clamp)	1”			
Electrical Supply	1ph & N, 230VAC, 50Hz, 32A			3ph & N, 400VAC, 50Hz, 32A
Max Power Consumption (kW)	7.1			17
Sound Pressure Level (dB(A))	<63 production, <50 recirculation only			

Standard Features

- One RO stream (simplex) housed in a small footprint enclosure
- Prefiltration, RO membranes and a sub-micron filter on the ring main
- UV lamp built into the ring main as standard
- Thermal sanitisation (>80°C), automated to run out of hours
- 125 litre stainless steel treated water tank
- PLC control with 9” full-colour HMI touch-screen, logging data to USB memory stick
- Hygienic sample valve for validation and water testing
- Electric heater

Optional Extras & Configurable Options

- Service maintenance contract, including water testing to HTM 01-06 / 01-01 requirements
- 60 L/min or 120 L/min pump, for machines that need filling at high dispense rates
- Production output can be upgraded later, up to 910 L/hr
- Access to our remote digital monitoring programmes
- Wall-mounted remote alarm indicator panel
- Steam heating, instead of or as well as electric heating
- DI cylinders for applications needing <5 µS/cm conductivity
- Alternative distribution pipework options to suit the site
- Can be shipped disassembled and rebuilt on site where access is restricted

SychemWATER ULTRA (Duplex)

Product Specification	Sychem Water ULTRA 310	Sychem Water ULTRA 610	Sychem Water ULTRA 910	Sychem Water ULTRA 1210
Product Code	SWU310	SWU610	SWU910	SWU1210
Production Rate @ 15°C (L/hr)	310	610	910	1210
Max Dispense Rate (L/min)	60 (120 optional)			
Max RO Recovery Rate (%)	75			
Dimensions: Depth (mm)	850			
Dimensions: Width (mm)	1750			
Dimensions: Height (mm)	1850			
Shipping Weight (kg)	375	395	420	On application
Inlet Connection (BSP)	3/4”			
Drainage Connection	Minimum 32mm upstand to drain			
Ringmain Connection (tri-clamp)	1"			
Electrical Supply	3ph & N, 400VAC, 50Hz, 40A			On application
Max Power Consumption (kW)	27			On application
Sound Pressure Level (dB(A))	<63 production, <50 recirculation only			

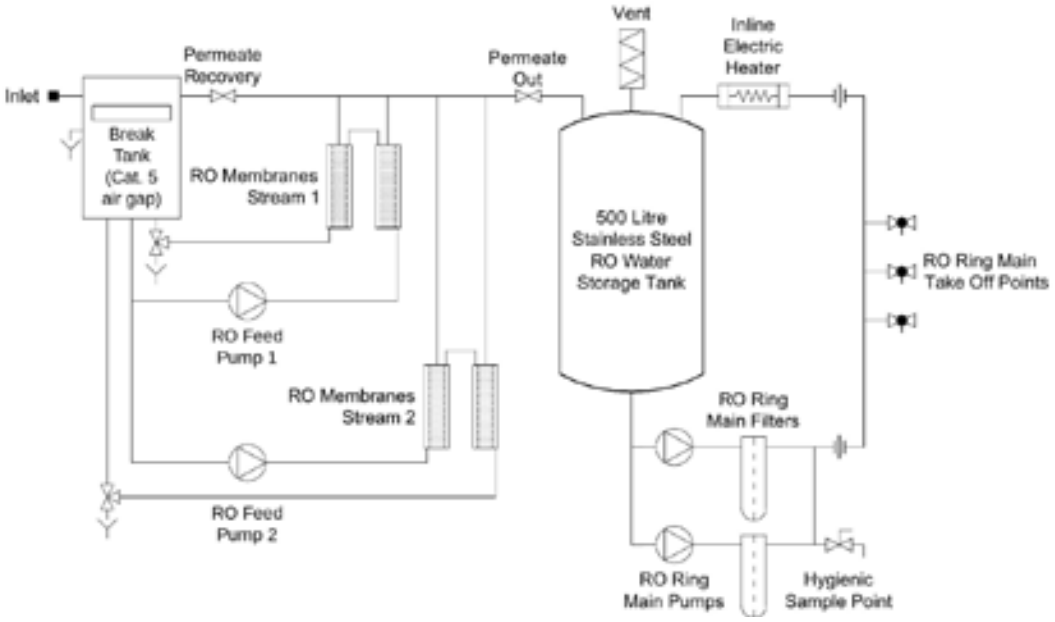
Standard Features

- Two RO streams (duplex) on a single skid, so one can keep running while the other is serviced
- Prefiltration, RO membranes and a sub-micron filter on the ring main
- Recirculation loop integrated into the system
- Thermal sanitisation (>80°C), run automatically out of hours
- 500 litre stainless steel treated water tank
- PLC control with 9” full-colour HMI touch-screen, logging data to USB memory stick
- Hygienic sample valve for validation and water testing
- 18 kW electric heater

Optional Extras & Configurable Options

- Service maintenance contract, including water testing to HTM 01-06 / 01-01 requirements, other standards available on request
- Twin pass RO: water passes through a second set of membranes for higher purity and resilience
- 120 L/min dispense rate (60 L/min as standard)
- Production output can be upgraded later, up to 1,210 L/hr
- UV lamp(s) on the ring main
- Access to our remote digital monitoring programmes
- Wall-mounted remote alarm indicator panel
- Steam heating, instead of or as well as electric heating
- DI cylinders for applications needing <5 µS/cm conductivity
- Alternative distribution pipework options to suit the site
- Can be shipped disassembled, with an external tank system, and rebuilt on site where access is restricted

System Flow Diagram



Indicative system schematic (duplex configuration shown). Tank size and fitted options vary by model.

Technical Specification

Treated Water Specification: All models*

Max Conductivity	<30 µS/cm
Max Bacteria	<1 CFU/100ml
Max Endotoxin	<0.25 EU/ml
Filtration	0.2 µm sub-micron filter (Standard) 0.05 µm sub-micron filter (Endoscopy)

Feed Water Quality: All models*

Max Hardness (CaCO3)	<50 mg/L
Max Free Chlorine (Cl2)	<0.4 mg/L
Max Iron/Manganese (Fe/Mn)	<0.05 mg/L
Feedwater Pressure	2.5-6.0 bar
Max Conductivity	<1400 µS/cm
Max Silica (SiO2)	<30 mg/L

*Specifications subject to change without notice.
Values apply to all models unless stated.

Materials of Construction

Frame	Stainless Steel 304
RO Tank	Stainless Steel 316, Internal Finish 0.8Ra
Break Tank	Stainless Steel
Pipework (Distribution)	Stainless Steel 316, Internal Finish 0.8Ra
Pipework (Production)	PVC
Connections	Distribution: Tri-clamp; Production: BSP

Reverse Osmosis (RO) System Servicing

Keeping your water treatment compliant, efficient and running.

We service, maintain and test reverse osmosis (RO) water treatment systems for endoscopy units, sterile services departments and laboratories. Our nationwide engineers carry out planned maintenance, sanitisation and water quality testing.

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What services can we offer?

Planned Preventative Maintenance

Six-monthly and annual visits, scheduled around your endoscopy lists. Quarterly visits are available for high-usage sites.

Non-Contractual Support

Ad hoc servicing, repairs and emergency call-out support, with no contract required.

Validation & Compliance Testing

Annual TVC and endotoxin water testing to HTM 01-06 and HTM 01-01.

What's Included?

- Pre-filter, carbon filter and 0.2 µm terminal filter changes
- Softener and membrane performance checks
- UV lamp replacement
- Storage tank and ring main inspection
- Valve servicing and O-ring replacement
- Performance validation of water quality and output
- Water quality testing to HTM 01-06 and HTM 01-01, other standards available on request

Water testing

Annual water samples are taken at the 12-month service, with interim endotoxin tests on endoscopy systems. Mycobacteria testing at commissioning, by 28-day culture or rapid PCR, is available on request.

Testing to your requirements

In addition to testing to HTM 01-06 and HTM 01-01, we can test to the standards and parameters your site requires. Custom sampling is available on request.

We service most makes & models

We service RO and deionised (DI) water systems from most manufacturers. We survey older and end-of-life units first, with a condition report confirming the support available.

SYCHEM

Quality you can trust,

solutions you'll love.

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