

**QUALITY
IN PURITY**



ThermoSAN C Duplex Systems

RO Water Systems for Sterile Services with Hot Water
Disinfection to 85°C

WHITEWATER

Caring about water since 1932



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RO Water Systems for Sterile Services with Hot Water

Fully compliant with HTM01-01 and ISO EN 15883.

Comprising Duplex RO units with a recirculation skid for 300/600/900 litres per hour @ 15°C, specially designed to meet the requirements of centralised sterile services departments CSSD/SSD/HSDU. These systems provide full redundancy in a 100% duty/standby arrangement.

Maintaining the optimum performance of the RO membranes is paramount and the selection of the correct pre-treatment is a critical factor when designing a system, dictated by the local feed water supply. RO systems normally require media filtration for suspended solids removal, a water softener for scale prevention and carbon filtration for chlorine removal. All ThermoSAN C Duplex systems are supplied with the appropriate pre-treatment for a particular site.

Design

- ➔ 900 litre break tank with Type AB air break CAT 5.
- ➔ Duty/standby fixed speed booster pumps – VSD Optional
- ➔ UF Module - Endotoxin/Final bacteria filter.
- ➔ Duplex Pre-treatment 100% redundancy.
- ➔ Duplex RO units with duty/standby or duty/assist option. 100% redundancy.
- ➔ 300/600/900 litres 316L stainless steel RO water tank.
- ➔ Duplex distribution pumps – fixed speed – VSD optional.
- ➔ Steam or electrically heated.
- ➔ Softened water system for soft water rinse on washer disinfectors and autoclaves.
- ➔ Storage and distribution at 60/65°C.

Features

- ➔ Programmable 85°C hot water disinfection.
- ➔ Touch Screen HMI PLC with real time plant visualisation/graphic display.
- ➔ Remote alarm diagnostic and rectification – optional.
- ➔ Data Logging for:
 - Loop Temperature
 - Loop Conductivity
 - Alarm Malfunctions
- ➔ Higher flow rate versions available up to 2000l/hr

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Purified Water Specification

Model	300/300L	600/600L	900/900L
Pure Water Production	300 l/hr @ 15°C	600 l/hr @ 15°C	900 l/hr @ 15°C
Loop Flow Rate	30 l/min @ 4.5 bar	60 l/min @ 4.5 bar	120 l/min @ 5.5 bar
Inorganic	<30 µS/cm	<30 µS/cm	<30 µS/cm
Bacteria	<10 cfu/100ml	<10 cfu/100ml	<10 cfu/100ml
Endotoxin	<0.25 Eu/ml	<0.25 Eu/ml	<0.25 Eu/ml
Particles	<0.05 micron	<0.05 micron	<0.05 micron

Feedwater Requirements

Item	Measure	Range	Range	Range
Hardness	Total hardness mg/l as CaCO ₃	<600	<600	<600
Total Chlorine	Cl mg/l	<0.2	<0.2	<0.2
Fouling Index	SDI	<5	<5	<5
Iron/Manganese	Fe/Mn mg/l	<0.05	<0.05	<0.05
Conductivity	µS/cm	<800	<800	<800
Temperature	°C	Recommended 15 - 35°C	Recommended 15 - 35°C	Recommended 15 - 35°C
R/W Make-up Flowrate		15 l/min	30 l/min	45 l/min
Drain requirements (gravity fall with air gap) Maximum during sanitization		45 l/min	60 l/min	100 l/min
Feedwater Pressure		6 bar maximum 2 bar minimum	6 bar maximum 2 bar minimum	6 bar maximum 2 bar minimum

Weights, Dimensions and Installation

Item			
Height	1840mm	2000mm	1900mm
Depth	880mm	1000mm	880mm
Width	1850mm	1950mm	2550mm
Supply Weight	280kg	310kg	400kg
Operational Weight	340kg	390kg	580kg
Installation	Floor Mounted*	Floor Mounted*	Floor Mounted*

*safety wheels fitted as standard

Electrical Requirements

Mains Input	380 V AC, 50 Hz	380 V AC, 50 Hz	380 V AC, 50 Hz
Systems control voltage (not including pumps & UV)	24 V DC	24 V DC	24 V DC
Power consumption (peak demand)	25kW	39kW	51kW
Electrical Protection rating	50 amps	63 amps	84 amps
Noise level during recirculation	50 dBA	50 dBA	50 dBA

Contact us for a review of your current system and to find out how we can deliver improved performance, sustainable energy, water and cost savings, and help you reduce your CO₂ footprint.



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DESIGN



INSTALL



SERVICE

ISO 9001:2015
ISO 14001:2015
OHSAS 18001:2007



QUALITY, ENVIRONMENTAL AND
OCCUPATIONAL HEALTH &
SAFETY APPROVED SYSTEM