

# PureSep RO

## The hygienic design Reverse Osmosis plant



***The PureSep RO supplies high quality permeate for food and beverage applications, where high quality treated water is required. Hygienic materials and components prevent microbial risks and ensure optimum product quality.***

The PureSep RO supplies high quality permeate for boilers, closed/open cold water cycles in climate systems and cooling towers, closed hot water systems and other process water for food and beverage applications, where high quality treated water is required. Hygienic materials and components prevent microbial risks and ensure optimum product quality.



### Features and Benefits

- Hygienic design with 316-grade stainless steel components
- High efficiency, low energy membranes
- Frequency-control of high pressure pump ensures low energy consumption
- Self-regulating concentrate valve – ensures stable permeate quality at fluctuating feed water quality
- Time and quality flush, ensuring improved water quality and longer lifespan of membranes
- PLC & HMI control system ensuring sophisticated monitoring and operational status indication
- Alarms for plant protection and historical diagnosis
- Remote control via web/GPRS and alarms via mail/SMS (trend curves remotely accessible)
- Easy access to components means that surfaces can be cleaned and sanitised in place
- Pre-packaged, skid-mounted system minimises installation, commissioning and start-up time
- Service friendly design for ongoing stable operation
- Straightforward service and maintenance with access to a network of nationwide after-sales and support teams.

### Additional options

- Clean-In-Place (CIP) unit for effective cleaning of the membranes
- Anti-scalant dosing option instead of traditional base exchange water softening
- Nanofiltration (NF) recovery for increase utilisation of the raw water up to 90%
- Sodium Bisulfite (SBS) dosing for free chlorine removal

## Technical Specification

PureSep RO-Flowrate Model		5M <sup>3</sup>	10M <sup>3</sup>	15M <sup>3</sup>	25M <sup>3</sup>	30M <sup>3</sup>	50M <sup>3</sup>
Nominal Permeate Performance*	m3/h	5	10	15	25	30	50
Salt Reduction	%	>98					
Water Utilisation WCF (max)**	%	80					
Recovery Rate (Nom.)	%	75					
System Inlet Pressure (Min/Max)	Bar	3.0 / 7.0					
RO Feed Pressure	Bar	11.1	13.6	15.2	16.2	13.4	16.3
Raw Water Temperature	°C	5-25					
Ambient Temperature	°C	5-35					
Raw Water Inlet (Flange)	DN	50	50	80	80	80	100
Permeate Outlet (Flange)	DN	40	50	50	80	80	100
Concentrate Outlet (Flange)	DN	40	50	50	50	50	50
RO Divert (Flange)	DN	40	50	50	80	80	100
CIP Inlet (Flange)	DN	40	40	50	50	80	80
CIP Permeate Out (Flange)	DN	40	40	50	50	80	80
CIP Concentrate Out (Flange)	DN	40	40	50	50	80	80
Length	mm	5806	5806	5806	5806	5806	5806
Width	mm	1210	1210	1210	1210	1520	1854
Height	mm	1790		1885		2036	
Weight (Dry) (approx.)	Kg	1100	1265	1370	2050	2150	3200
Electrical Supply	V/ph/Hz	400/3/50					
Fuse Rating	A	20	20	32	40	63	90
Power Consumption	kW / A	5.5 / 11	5.5 / 11	11 / 21	15 / 28	30 / 57	45 / 80
Protection Class	IP	54					

\* For water quality of 10°C, 3.0 Bar. TDS ≤ 500mg/l ± 15%., SDI ≤ 3.0, oxidants ≤ 0.5 mg/l.

\*\* Based on water quality of TDS ≤ 500 mg/l, with softening as a pre-treatment and by using anti-scalant.

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