

Reverse Osmosis Plant



RO - 2700

Reverse Osmosis is a membrane process where water is pumped at high pressure through a semi permeable membrane. The membrane pore structure is very fine and allows the passage of water whilst at the same time rejecting the dissolved salts. The Reverse Osmosis process will reduce the concentration of dissolved salts by up to 99% when new. The permeate (pure water) production rate is normally 70% to 75% of the feed flow with the concentrate (waste water) being 25% to 30%, these figures are based on a softened water feed.

The purity of the permeate depends on the quality of the feed water and the efficiency of any pre treatment required. Most UK water are below 350ppm dissolved solids and typical water qualities produced will be in the range 10 to 30 $\mu\text{s}/\text{cm}$. The water quality is measured on the outlet by a conductivity monitor and this instrument can be linked to a dump valve to ensure out of specification water is diverted to drain. The purified water will need to be collected in a suitable treated water tank prior to being pumped to the process or further treatment.

Reverse osmosis will also remove bacteria, pyrogens and yeast cells, however, to keep the water in this clean state further treatment may be required. The RO-2700 range includes PLC with HMI panel with trending and data logging capability.

Application

With years of experience we are able to solve and optimize various tasks involving reverse osmosis, e.g.

- Autoclaves
- Evaporators
- Food industry
- Chemical industry
- Component washing
- Printing houses
- District heating plants
- Nursery gardens
- Cooling water
- Waste water recovery
- Car washing
- Process water
- Humidifiers
- Laboratories
- Boiler water and steam production

Options

- Anti-scalant dosing
- Membrane monitoring
- Internet PLC access
- Clean in place (CIP) unit
- GSM modem for remote monitoring
- Automatic conductivity and or timer controlled membrane flushing

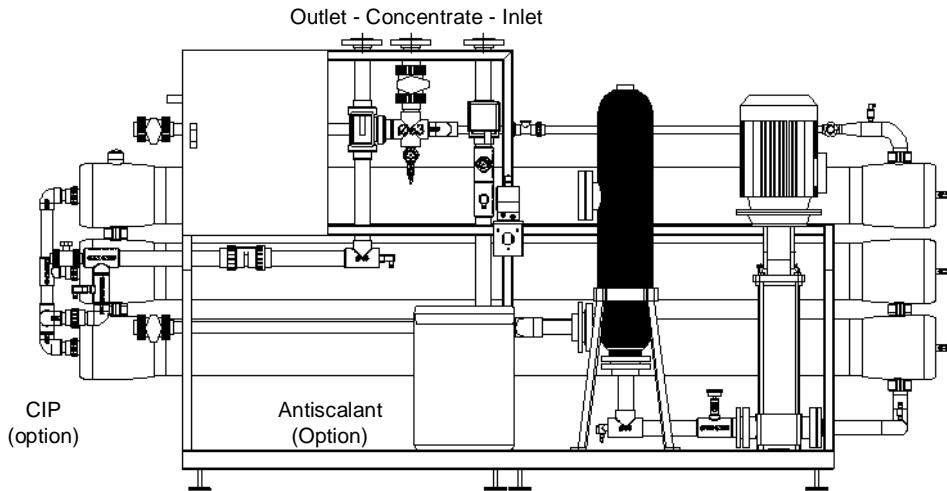
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Total Capability in Water Purification and Water Treatment



RO-2700



Technical specifications

Technical Data	RO-2710	RO-2720	RO-2730	RO-2740	RO-2750	RO-2760	RO-2780
Permeate output, m ³ /h* (± 15%)	6	8	10	12	14	16	20
Maximum recovery, %*	75	75	75	75	75	75	75
Salt rejection, %*	>98	>98	>98	>98	>98	>98	>98
Typical water quality, µS/cm*	<30	<30	<30	<30	<30	<30	<30
Electrical supply, V/Hz	3x400/ 50	3x400/ 50	3x400/ 50	3x400/ 50	3x400/ 50	3x400/ 50	3x400/ 50
Power consumption, kW**	11	11	11	15	15	15	15
Inlet termination, mm	50	50	50	50	50	50	50
Drain termination, mm	50	50	50	50	50	50	50
Outlet termination, mm	50	50	50	50	50	50	50
Dimensions, L x W x H, mm	1015 x 3800 x 1800	1015x 800 x 1800	1015 x 3800 x 1800	1015 x 3800 x 1800	1015 x 4800 x 1800	1015 x 3800 x 1800	1015 x 4800 x 1800
Maximum water temp °C	25	25	25	25	25	25	25
Feed water pressure, min/max, bar	3/7	3/7	3/7	3/7	3/7	3/7	3/7

*Nominal, based on a potable feed water supply with a maximum total dissolved solids level of 500 mg/l, a minimum temperature of 10°C and a 3 bar inlet pressure.

** Without CIP-unit

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