

RO 1800

Applications

- Air humidification plants
- Automotive Industry
- Autoclaves
- Battery Water
- Brewery
- Boiler Feed
- Car-washing plants
- Chemical industry
- Coolant make up
- District heating plants
- Evaporators
- Food Production
- Green houses
- Laboratories
- Pharmaceutical industry
- Printing process
- Process water
- Steam raising plant
- Surface treatment



Reverse Osmosis

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 $\mu\text{s/cm}$. 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.

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The plant may also be delivered as a complete package including softening and reservoir with reservoir pump.

Technical Specification

Technical Data	RO-1810	RO-1820
Capacity, litres/hour*	500	1000
Maximum recovery, %	75	75
Salt rejection, %*	>98	>98
Typical water quality, $\mu\text{S}/\text{cm}^*$	<30	<30
Treated water tank and pump	Optional	Optional
Softener	Optional	Optional
Electrical supply, V/Hz	3x400/50	3x400/50
Power consumption, kW	2.2	2.2
Inlet pipe diameter (")	3/4	3/4
Concentrate outlet diameter (")	3/4	3/4
Permeate outlet diameter (")	3/4	3/4
Feed water pressure, min/max, bar	3/7	3/7
Dimensions, L x W x H, mm	580 x 620 x 1620	580 x 620 x 1620
Maximum Water Temperature °C	25	25

*Dependent on the water quality. The stated data is nominal and 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.



UK Office:

Envirogen Water Technologies
Unit 14a Bromyard Road Trading Estate
Bromyard Road, Ledbury
Herefordshire HR8 1NS
Tel: +44 (0) 1531 636328
E: info@envirogen.com
www.envirogen.com



Italian Office:

Fluxa Filtri S.p.A
Viale De GASPERI,88/B
20017
Mazzo di Rho
Milano
Tel: +39 (0)2 93959.1
E: info@fluxafiltri.com
www.fluxafiltri.com



USA Office:

Envirogen Technologies Inc
PO Box 5419
Kingwood, TX 7735-5419
Tel: +1 877.312.8950
E: info@envirogen.com
www.envirogen.com