

# RO 2000

## Applications

- Autoclaves
- Battery water
- Car washing plants
- Evaporator
- District heating plants
- Pharmaceutical industry
- Food industry
- Nursery gardens
- Boiler water and steam production
- Chemical industry
- Coolants
- Laboratories
- Air moistening plants
- Process water
- Printing offices

These reverse osmosis plants are primarily used where reduction of the salt content of the water is of significance.



## Advantages

- |   |   |
|---|---|
| Compact   | Fast and simple plumbing and electrical wiring      |
| High capacity system  | Fully assembled panel with built-in micro processor |
| Permeate and concentrate flow meters                                | Low Pressure inlet sensor                           |
| Complete with Grundfos pump, all mounted on a stainless steel frame |   |

## 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  $\mu\text{s}/\text{cm}$ . 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 plant is also available as a complete package including softening and treated water tank with T.W. pump.

## Technical Specification

Technical Data	RO-2010	RO-2020	RO-2030	RO-2040	RO-2060	RO-2080
Capacity, litres/hour*	600	1200	1700	2300	2800	3300
Maximum Recovery %	75	75	75	75	75	75
Salt rejection, %	>98	>98	>98	>98	>98	>98
Typical water quality, µS/cm*	<30	<30	<30	<30	<30	<30
Treated water tank & pump	Optional	Optional	Optional	Optional	Optional	Optional
Softener	Optional	Optional	Optional	Optional	Optional	Optional
Electrical Supply, V/Hz	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50
Power consumption, kW	2.2	2.2	4	4	4	4
Inlet pipe diameter, (")	3/4	3/4	3/4	3/4	1	1
Concentrate outlet diameter, (")	3/4	3/4	3/4	3/4	1	1
Permeate outlet diameter, (mm)	14	14	14	14	14	14
Feed water pressure, min/max, bar	3/7	3/7	3/7	3/7	3/7	3/7
Dimensions, D x W x H, mm	720 x 760 x 1690	720 x 760 x 1690	720 x 760 x 1690	720 x 760 x 1690	720 x 760 x 1690	720 x 760 x 1690
Maximum water temp °C	25	25	25	25	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.



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