

RO-100R Compact Reverse Osmosis

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The HOH Group has for decades been working for better water for households and industries by providing world-wide supply and consultancy services. The company is based in Denmark, employs 250 people and has subsidiaries in the Nordic countries.

HOH provides contracting services in all aspects of water supply and in design and construction of water treatment plants for industries, power plants, waterworks and district heating boiler houses. And every day we work in close cooperation with industry, public waterworks, authorities and research institutes.

We also supply small standard water treatment units to be used in hotels, restaurants, holiday resorts, construction sites, etc. for purification and softening of water. The basic technologies applied in the standard programmes are reverse osmosis (RO), ion exchange and filtration.



Applications:

- Humidification - where bacterial growth must be minimised
- Laboratories - as pre-treatment to laboratory equipment
- Dental units - where bacterial growth is unwanted

The plant is specially designed for industries where hygiene is given high priority:

- minimum risk of bacterial growth
- continuous recirculation of the water
- recirculated water is UV-treated

HOH's complete reverse osmosis plants:

- UV treatment of recirculated water
- Compact with everything in one unit
- Easy to install where space is limited
- Manufactured from high quality components such as Grundfos motor, Danfoss valve, including an integral electronic control unit, all within a protective cabinet of PE
- Ready-assembled control panel - no extra electrical installations
- Flowmeter and manometer for simple monitoring of permeate performance and pressure
- Automatic cut out switch protects plant when sensing low inlet pressure
- High capacity per membrane
- Simple electrical and plumbing installations

Function

Reverse osmosis is a membrane separation process whereby water is pumped at high pressure onto a semi permeable membrane. The dissolved salts (concentrate) are rejected by the membrane and water molecules flow through the membrane as purified water (permeate).

Over 99% of dissolved salts are removed including the rejection of micro organisms such as bacteria and pyrogenics.

The treated water (the permeate) is stored in the reservoir tank of the plant and from here it is pumped to point of use. The concentrate is piped to drain.

Pressure

The plant is supplied with a reservoir pump supplying a consistent pressure to points of use eg 250 l/hr at 1.5 bar pressure.

Reservoir

The RO-114R series differs from most other RO units as the reservoir is a separate, closed tank with a sterile air filter. The water in the tank

is recirculated via a UV steriliser to minimize the possible growth of bacteria.

The reservoir comes complete with a connection to allow for external recirculation. When the unit is installed in this way the treated water will be fully recirculated ensuring that micro biological growth is reduced to a minimum to the points of use.

Quality

Water purity is dependant on the feedwater quality. Typically on mains water the unit will produce a water quality of approximately 10-20 $\mu\text{S}/\text{cm}$ or better. A conductivity meter can be added as optional equipment.



The RO-114R series with closed, integrated 20 liter reservoir and pump.



The reservoir pump supplies a stable flow of 250 litres per hour at 1.5 bar pressure.

Technical data	RO-111R	RO-112R	RO-113R	RO-114R
Capacity, litres/hour*	50	100	150	200
Water utilisation max., %	40-80	40-80	40-80	40-80
Salt retention, %	> 98	> 98	> 98	> 98
Water quality, $\mu\text{S}/\text{cm}$	< 20	< 20	< 20	< 20
Reservoir/pressure tank, litres	20	20	20	20
Electrical connection, V/Hz	230/50	230/50	230/50	230/50
Installed output, kW	1.3	1.3	1.3	1.3
Electrical consumption, m^3/kWh	4.60	2.25	1.60	1.30
Inlet, \varnothing "	1/2	1/2	1/2	1/2
Drain, \varnothing "	1/2	1/2	1/2	1/2
Outlet, \varnothing mm	10	10	10	10
Inlet pressure, min./max., bar	2/7	2/7	2/7	2/7
Measures W x D x H, mm	580 x 580 x 850	580 x 580 x 850	580 x 580 x 850	580 x 580 x 850

* Afhænger af \square tilgangstryk på 3 bar.