

Proteus RO type fresh water generators

Seawater desalination systems

Hatenboer-Water designs and develops durable reverse osmosis units for any type of vessel or offshore structure. Easy to install, operate and maintain, these solutions can be delivered in a customized or standard set-up.

Standard

The standard series offer a plug & play, economical and quickly supplied alternative to traditional solutions. Units can be rented out to your facilities for a short or longterm period.

Application

The Proteus series covers a range of 36-100 m³/day fresh water production on any sea. Proteus water treatment systems are highly suitable for ships and offshore installations such as jack-up rigs, offshore platforms, cruise ships, accommodations, cattle ships, ferries, AHTS and so on.



Standard features

- Touch screen Hatenoer-Water X7 microcontroller
- Membrane configuration accommodating varying seawater salinity levels and temperatures
- 3 years free of charge 'log sheet data support'
- Continuous monitoring of permeate quality and automatic dump.
- X7-Controller for remote monitoring

Key specifications

Seawater TDS design	35000 ppm
Design seawater temperature	15°C
Produced water quality	< 500 ppm @ 25°C

Features	DPS 80-2	DPS 80-3	DPS 80-4	DPS 80-6
Capacity	36 m³ per day	55 m³ per day	70 m³ per day	100 m³ per day
Installed power HP pump	11 kW	11 kW	15 kW	18.5 kW
Seawater feed flow	4.0 m ³ /h	5.2 m ³ /h	7.0 m ³ /h	8.9 m ³ /h
Dimensions (LxWxH)	1800x1500x 1800mm	1800x1650x 1800mm	2800x1700x 1800mm	2800x1700x 1800mm
Weight (dry /operating)	800 kg / 1350 kg	1100 kg / 1900 kg	1150 kg / 2300 kg	1200 kg / 2450 kg

**ABS design
assessed**



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Low maintenance

The Proteus RO series is equipped with:

- Large pre-filtration surface and multimedia filtration for increased performance
- Conservative membrane design with low loads to minimise fouling
- Automatic fresh flush system to prevent fouling in standby modus
- Chemical cleaning unit for cleaning fouled membranes
- Chemical conservation for membrane preservation in longterm offline modus.

Heavy duty design

- Box type ridged steel base frames for safe transport and easy installation
- Duplex stainless steel high pressure manifolds for long life time
- Slow running high pressure pump for long life time and minimal down time.

Optional features

The following components are available for the Proteus series:

- Automatic operation multimedia filter
- Seawater feed pre-heater (for seawater $< 5^{\circ}\text{C}$)
- Hadex[®] disinfectant dosing unit for chlorination of RO permeate
- Neutralising filter for post-treatment of RO permeate.

Standards and guidelines

Electrical

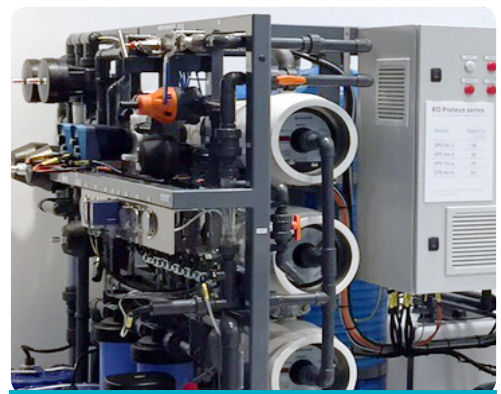
- IEC 61892-1 – 61892-7
- IEC 60092-350
- IEC 60092-351
- IEC 60092-353
- IEC 60228, class 2 & 5

NORSOK (optional)

- S-001
- P-001 § 5.2
- P-100 § 22
- P-002 § 27
- E-001

Directives and guidelines

- MLC, 2006
- WHO
- EC directives
- Machinery safety (2006/42/EC)
- EMC directive (2014/30/EU)
- Low voltage directive (2014/35/EU)
- MODU CODE



HATENBOERWATER

Fresh in water since 1906.