# PACKAGED REVERSE OSMOSIS PLANTS



PROXA's ROPack range of Packaged Reverse Osmosis (RO) plants are designed to be a robust and stand-alone solution for a wide range of applications where high quality product water is required. The package plants are compact and easy to install. Operation is easy with minimum maintenance required.

#### TYPICAL APPLICATIONS

- Boiler feed water
- Pre-treatment for de-mineralised water production
- Wash and process water
- Potable water

#### **OPERATING PARAMETERS**

Feed TDS
Recovery
Nominal rejection
Temperature
Operating pressure
Rated pressure

2500mg/l
97 - 80%
15 - 35°C
10 - 16 bar
PN16/PN25

#### PACKAGE PLANT FEATURES

- Complete packaged RO desalination series with nominal permeate capacities of 2.5m³/h to 10m³/h
- $\bullet$  Feed TDS up to 2500 mg/l at a temperature range of 10 35°C
- Easy installation and compact footprint
- Minimum infrastructure and utility requirements
- Integrated cleaning (CIP) system
- Manual or automated feed and recovery control
- Low pressure feed pump
- Cartridge filter
- High pressure feed pump with VSD
- Flow, pressure and analytical instrumentation
- 10" Touch screen control panel
- Optional dosing stations:
  - Anti-scale dosing
  - SMBS dosing
  - Feed pH adjustment
  - Disinfection dosing
- Optional SMS based alarm and trip notification

### MATERIALS OF CONSTRUCTION

Frame 304 SSPiping 316 SS

• Electrical panel CS – Powder coated

## INSTRUMENTATION AND CONTROLS

- Flow meters (E+H)
  - Feed
  - Concentrate
- Pressure (WIKA)
  - Feed
- Permeate
- Concentrate
- Conductivity (E+H)
  - Feed
  - Permeate
- pH (E+H)
  - Feed (Optional)
- ORP (E+H)
  - Feed (Optional)
- Pneumatic actuated control valves
- Electrical actuated control valves (Optional)
- Schneider PLC with 10" Touch screen control panel





MODEL	ROPACK-2.5	ROPACK-5.0	ROPACK-10.0
Permeate Flow Rate	2.5 m <sup>3</sup> /h	5 m³/h	10 m³/h
Feed Flow Rate	3.1 - 5.0 m <sup>3</sup> /h	6.2 - 10 m³/h	12.5 - 20 m³/h
Nominal Rejection	97 – 99%	97 – 99%	97 – 99%
Pressure Rating	PN16/PN25	PN16/PN25	PN16/PN25

LOW PRESSURE FEED PUMP/CIP PUMP				
Manufacturer	Grundfos	Grundfos	Grundfos	
MOC	SS304/SS316	SS304/SS316	SS304/SS316	
Motor Power	1.1 kW	1.5 kW	3 kW	

HIGH PRESSURE FEED PUMP				
Manufacturer	Grundfos	Grundfos	Grundfos	
MOC	SS304/SS316	SS304/SS316	SS304/SS316	
Motor Power	4 kW	5.5 kW	11 kW	

membrane housing and elements				
Membrane Housing Type	8", 3 element	8", 3 element	8", 3 element	
Pressure Rating (Housing)	300/450 PSI	300/450 PSI	300/450 PSI	
MOC (Housing / Elements)	FRP/PA	FRP/PA	FRP/PA	

BATTERY LIMITS AND UTILITY REQUIREMENTS				
Feed	40NB, BS4504 1600/3	50NB, BS4504 1600/3	50NB, BS4504 1600/3	
Permeate	25NB, BS4504 1600/3	40NB, BS4504 1600/3	40NB, BS4504 1600/3	
Concentrate	25NB, BS4504 4000/3	40NB, BS4504 4000/3	40NB, BS4504 4000/3	
CIP Waste	25NB, BS4504 1600/3	40NB, BS4504 1600/3	40NB, BS4504 1600/3	
Instrument Air (Only for Pneumatic Option)	5 – 7 bar, Dry, Oil Free	5 – 7 bar, Dry, Oil Free	5 – 7 bar, Dry, Oil Free	
Electricity	380V/3ph/50Hz	380V/3ph/50Hz	380V/3ph/50Hz	
Power Installed	6.1/8 kW	8/10 kW	10/15 kW	

PACKAGE WEIGHT AND DIMENSIONS				
Width	1 065 mm	1 065 mm	1 065 mm	
Length	3 950 mm	3 950 mm	3 950 mm	
Height	2 000 mm	2 000 mm	2 000 mm	
Weight (Empty / Operating)	980/1750 kg	1 050/1950 kg	1 250/2150 kg	

