

# PACKAGED ULTRA FILTRATION (UF) PLANTS



PROXA's UF Pack range of Packaged Ultra Filtration (UF) 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

- Reverse Osmosis (RO) Feed Water
- Pre-treatment for De-mineralised water production
- Wash and process water
- Potable water

## OPERATING PARAMETERS

- Feed Turbidity < 300NTU
- Recovery Up to 98%
- Filtrate Turbidity  $\leq 0.1$  NTU
- Bacteria removal  $\geq 4$  log
- Temperature 15 – 35°C
- Operating Pressure 3.5 bar
- Design Pressure PN10

## PACKAGE PLANT FEATURES

- Complete packaged UF filtration series with nominal permeate capacities of 5m<sup>3</sup>/h to 30m<sup>3</sup>/h
- Feed Turbidity up to 300 NTU at a temperature range of 10 – 35°C
- Easy installation and compact footprint
- Minimum infrastructure and utility requirements
- Integrated cleaning (MC) system
- Automated feed and recovery control
- Low pressure feed pump
- Feed strainer
- Flow pressure and analytical instrumentation
- Touch screen HMI with PLC for easy monitoring and control
- Optional dosing stations:
  - Battery Acid dosing
  - Caustic Soda dosing
  - Disinfection dosing
- Optional SMS based alarm and trip notification

## MATERIALS OF CONSTRUCTION

- Frame 304 SS
- Piping HDPE
- Electrical panel Fibre Glass

## INSTRUMENTATION AND CONTROLS

- Flow meters (E+H magnetic flow meter)
  - Feed/Product
- Pressure (WIKA)
  - Feed
  - Filtrate
  - Air
- Turbidity (E+H)
  - Feed (Optional)
- pH (E+H)
  - Feed (Optional)
- Pneumatic actuated valves
- Electrical actuated valves (Optional)
- Schneider PLC with Touch screen HMI



MODEL	UFPACK-5.0	UFPACK-10.0	UFPACK-20.0	UFPACK-30.0
Filtrate Flow Rate	5 m <sup>3</sup> /h	10 m <sup>3</sup> /h	20 m <sup>3</sup> /h	30 m <sup>3</sup> /h
Feed Flow Rate	3.1 – 5.0 m <sup>3</sup> /h	6.2 – 10 m <sup>3</sup> /h	12.5 – 20 m <sup>3</sup> /h	20.0 – 30 m <sup>3</sup> /h
Recovery	Up to 98.5%	Up to 98.5%	Up to 98.5%	Up to 98.5%

LOW PRESSURE FEED PUMP/MC PUMP				
Manufacturer/Model	Grundfos	Grundfos	Grundfos	Grundfos
MOC	SS304/SS316	SS304/SS316	SS304/SS316	SS304/SS316
Motor Power	1.1 kW	2.2 kW	4 kW	5.5 kW

MEMBRANES				
Membrane Housing Type	8", HydracapMAX 60	8", HydracapMAX 60	8", HydracapMAX 60	8", HydracapMAX 60
Pressure Rating (Housing)	5 Bar	5 Bar	5 Bar	5 Bar
MOC (Housing/Membranes)	FRP/PVDF	FRP/PVDF	FRP/PVDF	FRP/PVDF
Operating Mode	Outside to Inside	Outside to Inside	Outside to Inside	Outside to Inside
	Dead End Filtration	Dead End Filtration	Dead End Filtration	Dead End Filtration

BATTERY LIMITS AND UTILITY REQUIREMENTS				
Feed	32NB, BS4504 1600/3	40NB, BS4504 1600/3	50NB, BS4504 1600/3	75NB, BS4504 1600/3
Filtrate	32NB, BS4504 1600/3	40NB, BS4504 1600/3	50NB, BS4504 1600/3	75NB, BS4504 1600/3
MC Waste	32NB, BS4504 1600/3	40NB, BS4504 1600/3	50NB, BS4504 1600/3	75NB, 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	5 – 7 bar, Dry, Oil Free
Electricity	380V/3ph/50Hz	380V/3ph/50Hz	380V/3ph/50Hz	380V/3ph/50Hz
Power Installed	2 kW	3 kW	5 kW	7 kW

PACKAGE WEIGHT AND DIMENSIONS				
Width	1 000 mm	1 000 mm	1 000 mm	1 188 mm
Length	2 500 mm	3 000 mm	3 500 mm	4 100 mm
Height	2 365 mm	2 365 mm	2 365 mm	2 485 mm
Weight (Empty / Operating)	750/1050 kg	800/1 100 kg	900/1 200 kg	1050/1 350 kg