

Reverse Osmosis Systems

Type *High Pressure* 6.000 – 24.000



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reverse osmosis unit *High Pressure 12.000*
with hardness control monitor (option)
(modifications possible)

Compact R.O. system consisting of:

Rigid frame made of aluminium profile and PVC-u mounting plate; 20” sediment 50 µm and 20” combi filter (activated carbon plus 5 µm sediment) with drain valve for maintenance; **pre pressure switch** (feed pressure) for protecting the pump against cavitations and running dry; inlet **servo solenoid** made of brass; multistage high pressure **circulation pump** (type *Grundfos*) made of stainless steel with air-cooled motor IP 44 (only: HP 6,000: roto vane pump made of brass); **high pressure tubing** made of austenitic stainless steel 1.4571 (316 Ti); connections made with *Victaulic* and stainless steel fittings; **low pressure tubing** made of PVC-U and PE (Polyethylene); **pressure vessels** (type *Codeline*) made of fibre glass reinforced plastic FPR, surface with paint coat; bacteria resistant low energy thin film composite **TFC membranes** made of polyamide and polysulfone (type *CSM*, optional others); **flushing solenoid** made of brass; **flow meter** for permeate and concentrate (float system); glycerine filled **pressure gauges** for pre pressure, filter pressure, pump pressure, permeate pressure; **sample valves** for permeate, concentrate and feed; **conductivity cell** for measuring electrical conductivity (proportional to TDS); **reject flow** and **operation pressure** adjusted with needle valves made of brass; **check valve** for permeate outlet made of PVC; **electric box** with all necessary components and R.O. micro-processor control “RO-matic” with: two row text display (English or German; optional: other languages) and membrane keyboard; displays: electrical conductivity of permeate, flushing function, control of high pressure pump, unit shut off if inlet pressure is lost, control for dosing system or softener unit (if connected), hour meter for high pressure pump, connections for water level in the collecting tank, potential-free switches for permeate alarm and a general fault signal.

Options: stainless steel frame; hardness control monitor; mixing valve with hard water; conductivity meter for mixed water; PLC; pressure tank with control;

Technical data of HP 6,000...24,000

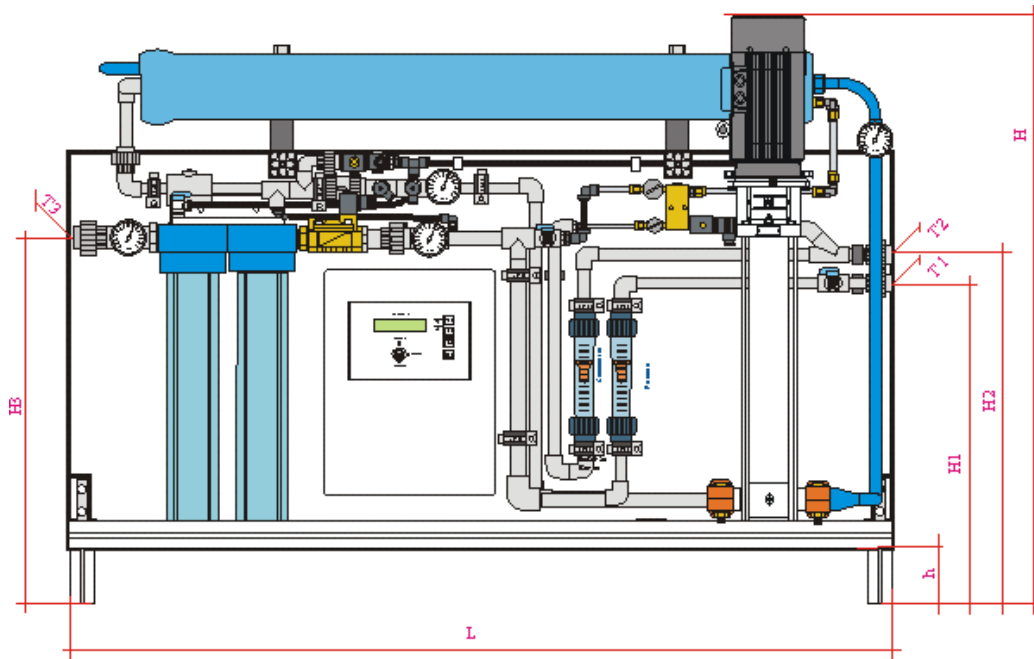
Type	HP6,000	HP12,000	HP18,000	HP24,000
Order number	141-006	141-012	141-018	141-024
Capacity in m ³ /h*	0.25	0.50	0.75	1.00
Capacity in m ³ per day*	6	12	18	24
Recovery**	75%			
Salt Rejection**	97%			
Operation temperature in °C	4...30°C			
Ambient temperature in °C	4...40°C			
Feed pressure during operation	1...6 bar			
Operation pressure	< 17 bar			
Concentrate circulation	yes			
Size of modules	4040			
Number of modules	1	2	3	4
Type of membrane	TFC made of polyamide (PA)			
Number of membranes	1	2	3	4
Water connections	feed d32 (DN25); permeate and concentrate d20 (DN15)			
Power connection in kW	0.8	1.5		
Power consumption in kW	0.8	1.4		
Electrical connection***	230 V, 50 Hz	400 V, 3PNE, 50 Hz		
Footprint size in mm	1,450 × 400	1,450 × 630		
Height in mm****	1,100	1,200		
Weight in kg	75	90	120	150
Shipping weight in kg	105	120	150	180

* all data at 15°C, 2 bar inlet pressure and 500 ppm inlet water quality

Attention! Inlet water quality: iron < 0.1 mg/l; manganese < 0.05 mg/l; barium and strontium not detectable; chlorine < 0.1 mg/l if any activated carbon filter is mounted at inlet; maximum 2,000 µS/cm (1,300 ppm); SDI_{15min} < 3.0. Data will vary with other feed water conditions.

** depending on feed water quality and pre-treatment; ***other connections possible

Dimensions of the units



Type		HP 6,000	HP 12,000	HP 18,000	HP 24,000
Length in mm	L	1,450			
Height in mm****	H	1,100	1,200		
Depths in mm		400	630		
Ground clearance in mm	h	100			
Height / Depths in mm of connectors					
permeate	H1 / T1	485 / 85	750 / 85		
concentrate	H2 / T2	535 / 85	620 / 85		
feed	H3 / T3	645 / 145			

**** depends on built-in pump and feed water quality / all dimensions are for planning and may vary.