

2014/ Reverse osmosis systems

For desalination of filtered and softened or chemically conditioned water with a max. salinity of 1.000 mg/l (to be free of Chlorine, colloidal Silica, parameters as Ba, Sr, Mn, Al, F, PO4 and COD to be within WHO standards, turbidity ≤ 0.5 NTU and SDI ≤ 3),consisting of:

- 1 compact frame made of stainless steel
- 1 front table for control instruments made of PP
- 1 pre-filter made of PP incl. 5 μ m filter cartridges
- 3 set of glycerol filled pressure gauges, housing, housing made of stainless steel
- 1 solenoid valve made of brass for raw water
- 1 pressure switch for raw water, made of brass
- 1 high pressure Grundfos centrifugal pump with 3phase motor
- 1 set of pressure vessels made of fiber glass
- 1 set of membrane modules made of composite membrane (PE, PS, PA*)
- 1 regulation valves of the by-pass of high pressure pump and regulation valve of the pressure and flow after high pressure pump
- 1 concentrate valve for regulation of pressure and flow of concentrate
- 3 flow meters for permeate, concentrate, concentrate recirculation made of polyamide
- 1 interconnecting piping made of PVC
- 1 system for automatic rinsing of membrane modules before and after the water production
- 1 CIP system for chemical cleaning, disinfecting or stand still conservation of modules and piping incl. Grundfos pump made of stainless steel, CIP tank
- 1 Microprocessor control panel according to EN 60204, DIN VDE 0113 standard - protection class IP 54 incl. digital conductivity meter, digital thermometer, adjustable limit value, operation meter, operation and malfunction LEDs, main switch, 1 potential-free contact for remote alarm, terminals for pre-treatment units as softener, feeder, hardness control, as well as level control for permeate tank.

Unit wired, pre-assembled and ready for installation.

* PE = Polyester, PS = Polysulfon, PA= Polyamide ; PP= Polypropylene

Attention:

We are produced according to EC (European Community) standards and will be delivered incl. EC conformity declaration as well as CE (Certificate European) plate.

* The max. recovery can only be adjusted in case of best raw water quality, fouling index $\leq 3,0$ problem free operation, and according to the needed permeate quality.

Part No.	Products description	Flow 25-10°C	Connection	High pressure pump	Pump Power	Prefilters Membranes
BlueClear-RO-3000	Industrial reverse osmosis system with CIP system With membranes	3540 2610 L/h	Inlet—5/4" Outlet—1" Drain—1"	Grundfos CM10-7	5.8 kW 3x400V 11.8A	2pc FCPPS-20B05 3pc ULP-22-8040
BlueClear-RO-4000	Industrial reverse osmosis system with CIP system without membranes	4720 3480 L/h	Inlet—6/4" Outlet—5/4" Drain—5/4"	Grundfos CM10-7	5.8 kW 3x400V 11.8A	3pc FCPPS-20B05 4pc ULP-22-8040
BlueClear-RO-5000	Industrial reverse osmosis system with CIP system With membranes	5900 4350 L/h	Inlet—6/4" Outlet—5/4" Drain—5/4"	Grundfos CM10-8	5.8 kW 3x400V 11.8A	3pc FCPPS-20B05 5pc ULP-22-8040
BlueClear-RO-6000	Industrial reverse osmosis system with CIP system With membranes	7080 5220 L/h	Inlet—6/4" Outlet—5/4" Drain—5/4"	Grundfos CM10-8	5.8 kW 3x400V 11.8A	5pc FCPPS-4005 6pc ULP-22-8040
BlueClear-RO-8000	Industrial reverse osmosis system with CIP system With membranes	9440 6960 L/h	Inlet—2" Outlet—6/4" Drain—6/4"	Grundfos CR15-9	7.5 kW 3x400V 15.2A	5pc FCPPS-4005 7pc ULP-22-8040
BlueClear-RO-10000	Industrial reverse osmosis system with CIP system With membranes	11800 8700 L/h	Inlet—2" Outlet—6/4" Drain—6/4"	Grundfos CR15-9	7.5 kW 3x400V 15.2A	5pc FCPPS-4005 9pc ULP-22-8040
BlueClear-RO-12000	Industrial reverse osmosis system with CIP system With membranes	14160 10440 L/h	Inlet—2" Outlet—6/4" Drain—6/4"	Grundfos CR15-10	11 kW 3x400V 21.5A	5pc FCPPS-4005 10pc ULP22-8040
BlueClear-RO-15000	Industrial reverse osmosis system with CIP system With membranes	17700 13050 L/h	Inlet—2 1/2" Outlet—6/4" Drain—6/4"	Grundfos CR15-14	11 kW 3x400V 21.5A	10pc FCPPS-4005 12pc ULP22-8040
BlueClear-RO-20000	Industrial reverse osmosis system with CIP system With membranes	23600 17400 L/h	Inlet—2 1/2" Outlet—2" Drain—2"	Grundfos CR20-14	15 kW 3x400V 28.7A	10pc FCPPS-4005 18pc ULP22-8040
BlueClear-RO-25000	Industrial reverse osmosis system with CIP system With membranes	29500 21750 L/h	Inlet—3" Outlet—2" Drain—2"	Grundfos CR32-8	15 kW 3x400V 28.7A	10pc FCPPS-4005 24pc ULP22-8040

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BlueClear-RO-40000

Technical Data	Blue Clear-RO-3000	Blue Clear-RO-4000	Blue Clear-RO-5000	Blue Clear-RO-6000	Blue Clear-RO-8000	Blue Clear-RO-10000	Blue Clear-RO-12000	Blue Clear-RO-15000	Blue Clear-RO-20000	Blue Clear-RO-25000	unit
Permeate flow rate at 15°C	appro x. 3,0	appro x. 4,0	appro x. 5,0	appro x. 6,0	appro x. 8,0	approx . 10,0	approx . 12,0	approx . 15,0	approx . 20,0	approx . 25	(m ³ /h)
Operating pressure	appro x. 10	appro x. 10	appro x. 10	appro x. 10	appro x. 10	approx . 10	approx . 10	approx . 10	approx . 10	approx . 10	(bar)
Recovery*	max. 75	max. 75	max. 75	max. 75	max. 75	max. 75	max. 75	max. 75	max. 75	max. 75	(%)
Raw water consumption	appro x. 4,0	appro x. 5,3	appro x. 6,7	appro x. 8,0	appro x. 10,7	approx . 13,3	approx . 16,0	approx . 20,0	approx . 26,7	approx . 33,3	(m ³ /h)
Required raw water pressure (min./max.)	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	3 / 6	(bar)
Rejection rate	90—95	90—95	90—95	90—95	90—95	90—95	90—95	90—95	90—95	90—95	(%)
Mains supply	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50	(V/Hz)
Power installed	5,8	5,8	5,8	5,8	7,5	7,5	11,0	11,0	15,0	15	(kW)
Connections: raw water, permeate, concentrate	5/4, 1, 1	6/4, 5/4, 5/4	6/4, 5/4, 5/4	6/4, 5/4, 5/4	2, 6/4, 6/4	2, 6/4, 6/4	2, 6/4, 6/4	2 1/2, 6/4, 6/4	2 1/2, 2, 2	3, 2, 2	(")
Dimensions: H x W x D	1800 x 4000 x 1000	1800 x 3000 x 1000	1800 x 4000 x 1000	1800 x 4000 x 1000	1800 x 4000 x 1000	1800 x 4000 x 1000	1800 x 5000 x 1000	1800 x 5000 x 1000	1800 x 7000 x 1000	1800 x 7000 x 1000	(mm)