

## 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, PO<sub>4</sub> and COD to be within WHO standards, turbidity  $\leq$  0.5 NTU and SDI  $\leq$  3) ,consisting of:

- 1 compact frame made of stainless steel
- 1 front table for control instruments made of PP
- 1 bigblue 20" pre-filter made of PP incl. 5 $\mu$ m filter cartridges
- 1 bigblue 20" activate carbon filter cartridges (option)
- 2 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 stainless steel
- 1 set of membrane modules made of composite membrane (PE, PS, PA\*)
- 1 set of regulation valves for regulation of pressure and concentrate, made of brass
- 2 flow meters for permeate, concentrate made of polyamide
- 1 flow meters for concentrate recirculation made of polyamide (option)
- 1 interconnecting piping made of PVC
- 1 system for automatic rinsing of membrane modules before and after the water production
- 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-250	Industrial reverse osmosis system With membranes	349-220 L/h	Inlet—1/2" Outlet—3/8" Drain—3/8"	Grundfos CM3-12	1,58kW 3x400 V 3.25 A	1pc FCPPS-20B05 1pc ULP-21-4040
BlueClear-RO-500	Industrial reverse osmosis system With membranes	696-439 L/h	Inlet—3/4" Outlet—1/2" Drain—1/2"	Grundfos CM3-12	1,58kW 3x400 V 3.25 A	1pc FCPPS-20B05 2pc ULP-21-4040
BlueClear-RO-750	Industrial reverse osmosis system With membranes	1045-659 L/h	Inlet—3/4" Outlet—1/2" Drain—1/2"	Grundfos CM3-12	1,58kW 3x400 V 3.25 A	1pc FCPPS-20B05 3pc ULP-21-4040
BlueClear-RO-1000	Industrial reverse osmosis system With membranes	1394-878 L/h	Inlet—3/4" Outlet—1/2" Drain—1/2"	Grundfos CM3-12	1,58kW 3x400 V 3.25 A	1pc FCPPS-20B05 4pc ULP-21-4040
BlueClear-RO-1250	Industrial reverse osmosis system With membranes	1741- 1098 L/h	Inlet—1" Outlet—3/4" Drain—3/4"	Grundfos CM3-14	2,2kW 3x400 V 4.7 A	1pc FCPPS-20B05 5pc ULP-21-4040
BlueClear-RO-1500	Industrial reverse osmosis system With membranes	2090—1317 L/h	Inlet—1" Outlet—3/4" Drain—3/4"	Grundfos CM3-14	2,2kW 3x400 V 4.7 A	1pc FCPPS-20B05 6pc ULP-21-4040
BlueClear-RO-2000	Industrial reverse osmosis system With membranes	2360-1740 L/h	Inlet—5/4" Outlet—3/4" Drain—3/4"	Grundfos CM5-13	3,2 kW 3x400V 6.8A	1pc FCPPS-20B05 8pc ULP-21-4040
BlueClear-RO-2500	Industrial reverse osmosis system With membranes	2950-2175 L/h	Inlet—5/4" Outlet—3/4" Drain—3/4"	Grundfos CM5-13	3,2 kW 3x400V 6.8A	1pc FCPPS-20B05 9pc ULP-21-4040

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Technical Data	BlueClear -RO-250	BlueClear -RO-500	BlueClear -RO-750	BlueClear -RO-1000	BlueClear -RO-1250	BlueClear -RO-1500	BlueClear -RO-2000	BlueClear -RO-2500	unit
Permeate flow rate at 15°C	approx. 0,25	approx. 0,5	approx. 0,75	approx. 1	approx. 1,25	approx. 1,5	approx. 2,0	approx. 2,5	(m <sup>3</sup> /h)
Operating pressure	approx. 8	approx. 8	approx. 8	approx. 8	approx. 8	approx. 8	approx. 8	approx. 8	(bar)
Recovery*	max. 50	max. 50	max. 50	max. 50	max. 50	max. 50	max. 50	max. 50	(%)
Raw water consumption	approx. 0,5	approx. 1,0	approx. 1,5	approx. 2,0	approx. 2,5	approx. 3,0	approx. 4,0	approx. 5,0	(m <sup>3</sup> /h)
Required raw water pressure (min./max.)	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	(%)
Membrane connection	1/1	1/2	1/3	1/4	1/5	1/6	2/2, 1/4	2/3, 1/3	
Mains supply	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50	(V/Hz)
Power installed	1,58	1,58	1,58	1,58	2,2	2,2	3,2	3,2	(kW)
Connections: raw water, permeate, concentrate	1/2, 3/8, 3/8	3/8, 1/2, 1/2	3/4, 1/2, 1/2	3/4, 1/2, 1/2	1, 3/4, 3/4	1, 3/4, 3/4	5/4, 3/4, 3/4	5/4, 3/4, 3/4	(")
Dimensions: H x W x D	1420 x 850 x 850	1420 x 850 x 850	1420 x 850 x 850	2400 x 850 x 850	2400 x 850 x 850	2400 x 850 x 850	2400 x 850 x 850	2400 x 850 x 850	(mm)



BlueClear-RO-500



BlueClear-RO-1500