



Ecosoft MO-4 Midi

Reverse osmosis system series Ecosoft MO4 Midi capacity of 4.0 m³ / h.

Is a compact functionally complete module. System equipment, Instrumentation, tube piping, regulating and valves mounted on a metal frame.

Mission:

Reverse osmosis system series Ecosoft MO-4 designed for demineralization of water for the manufacture of pharmaceutical, food, electronics industry, energy.

Capacity: 4.0 m³/ Hour

Type membrane element: Standard - Filmtec XLE 440, Dow Chemical, USA

Special - Filmtec LE 440, BW 440, HRLE 440

Number of membrane elements: 4 pieces

Diameter of the pipe connections: DN 50, DN40

The system is a compact, functionally complete module. Equipment system, Instrumentation, Piping, regulating valves are mounted on metal frame.

Demineralization process is carried out on a reverse osmosis membrane elements Filmtec manufactured by DOW Chemical (USA).

During operation in the membrane module system is separated into two streams of water:

Demineralized water - and permeate water with high salt content - concentrate.

Part of concentrate during operation of the module is reset to the sewer, and some sent to the high pressure pump inlet, the so called recycle concentrate. The system has

adjustable recycle line, which allows to control and regulate the amount of dumping

concentrate. Demineralized water (permeate) is fed into the collection (not included in the set), which is mounted with float switch that turns off the system when the maximum level reached.

Automation of the system provides electrical protection for the pump from dry running, protect membranes from high pressure, provides activation and deactivation of the system in terms of the permeate collector, make automatic hydraulic washing membranes.

Periodically reverse osmosis membrane module needs a chemical washing.

Note: If necessary, the proposed model can be equipped with antiscalant dosing pump.

Supplies: Antiscalant, reagents for chemical cleaning of the membranes ROClean, mechanical cleaning filter cartridges

Information for professionals

Scope of delivery

Prefilter cartridge fine filter BB-20, 5 micron	2 pcs.
Antiscalant dosing pump *	1 pc.
High Pressure Pump Grundfos	1 pc.
Filmtec XLE membrane element 440 (8 ")	4 pcs.
Membrane holder	2 pcs.
Control panel and managing electronic controller	1 pc.
Equipment, Including:	set
- Flow meters, pressure gauges, dry running	
- Automatic valves	
- Float switch	
- Sensor and controller conductivity *	
Ports connect for chemical washing	2 pc.
Frame installation	1 pc.

Valves and control valves	set
Piping	set

* - Options

Requirements for the water to be treated:

The temperature of the water to be treated	°C	4 - 30
Residual chlorine, no more than	mg / l	0.1
Hardness, up to	mg/l	3.0 (30.0 *)
Iron, up to	mg / l	0.1 (3.0 *)
Manganese, up to	mg / l	0.05 (0.1 *)
Silicates, up to	mg / l	20.0 (250.0 *)
Oxidability, up to	mgO2/l	4.0

* - Values in () - when use antiscalant dosing pump

Performance and technical data

Performance at 15 °C and the salt content of 2 g / l	m3/ Hour	4.0-5.0
Power		380 V, 50 Hz
Pump power	kW	7.5 – 15.0
Inlet pressure	atm	2.0 - 4.0
Operating pressure in the module	Atm	11.0 - 15.0
Water consumption during operation	m3/ Hour	5.5 – 7.0
Water consumption in the hydraulic flushing mode	m3/ Hour	18.0 - 22.0
Connection diameter:		
- Set input		2 "(DN50)
- Permeate output		1 1/4 "(DN32)
- concentrate reset		1 1/2 "(DN40)
Overall dimensions (width x depth x height)	mm	3100x1100x1950

* For stable operation of the plant requires a stable pressure (+/- 0.5 bar) in the above range