

Membrane Technologies

REVERSE OSMOSIS JURBYFLOW®

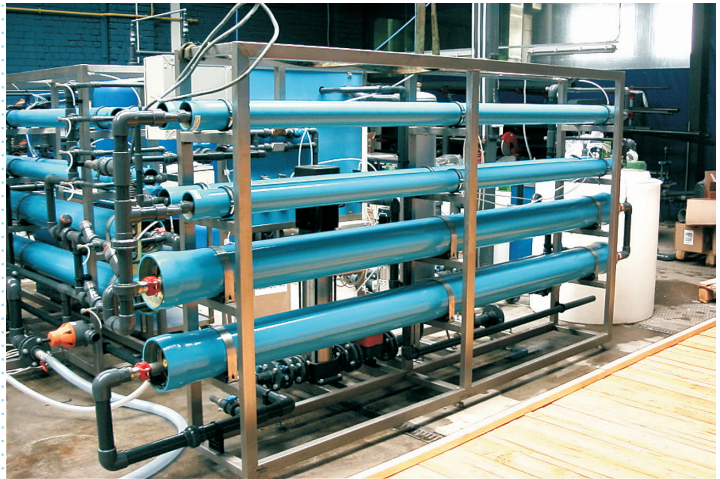


Reverse osmosis is the water treatment technology applied for water demineralisation and desalination.

Due to high pressure of raw water input, water molecules pass through semipermeable membrane from more concentrated solution to less concentrated. The salts, heavy metals, organic compounds and microorganisms, dissolved in water are not capable to penetrate through a membrane and are drained as concentrate. Reverse osmosis technology enables to remove 80 – 99.7 % of all dissolved salts, depending on water composition, used type of membranes and the scheme of plant.

Applications:

- Production of alcohol and soft drinks
- Bottling of mineral/drinking water
- Production of juice
- Food industry
- Electronic industry
- Feed water for steam and heating boilers
- Pharmacy



Reverse Osmosis Equipment JurbyFlow®

Advantages:

- Unique design
- Easy maintenance
- Flexible assembling
- Pretreatment systems
- Turn-key projects
- Installation and service

Depending on water salinity (brackish, sea water) JurbyFlow® equipment can be of the following technological types:

- Equipment for demineralisation of brackish and low-mineralised water
- Equipment for desalination of sea water

Commercial Equipment

Equipment JurbyFlow® with flow rate from 0,08 up to 1,3 m³/h is delivered in two variants: **ECONOM** and **EXTRA**.

Features of **ECONOM** systems are as follows:

- Stainless steel frame
- Stainless steel pump
- Mechanical filter
- Membrane elements and pressure vessels
- Pressure switch
- Pump control block
- Vibrostable manometers
- Permeate flowmeter

Additional features of **EXTRA** systems are as follows:

- Flowmeter
- Operation controller
- Water conductivity meter
- Stream control system
- Automatic water flush



Industrial Equipment

Equipment JurbyFlow® with flow rate from 0,08 up to 1,3 m³/h includes:

- Stainless steel frame
- Stainless steel pump
- Mechanical filter
- Membrane elements and pressure vessels
- Operation controller
- Stream control system
- Automatic flush valve
- Stream regulation system
- Vibrostable manometers
- Water conductivity meter
- Pressure switch
- Thermometer
- Automatic water flush



Technical Data of Reverse Osmosis Equipment JurbyFlow®

Type		Flow rate		Maximum recovery	Operating pressure	Electrical engine	Element size
		(m³/day)	(m³/h)				
Brackish water	B 0,08-2,5-1 – B 0,34-2,5-4	2 – 8	0,08 – 0,34	50 – 75	9 – 14	0,2 – 0,4	2,5"
	B 0,45-4-2 – B 1,3-4-6	11 – 31	0,45 – 1,3	50 – 75	10 – 14	0,7 – 1,2	4"
	B 1,5-4-6 – B 5,25-4-21	36 – 126	1,5 – 5,25	75 – 80	13 – 14	3 – 5,5	4"
	B 6-8-6 – B 45-8-40	144 – 1080	6,0 – 45,0	65 – 80	12 – 16	5,5 – 37	8"
TDS 2000 ppm, selectivity according NaCl 95-98%, SDI < 3							
Sea water	S 1,3-8-2 – S 7,3-8-11	36 – 144	1,3 – 7,3	40 – 50	68 – 79	13 – 49	8"
	S 8-8-12 – S 26-8-39	192 – 432	8 – 26	50	75 – 79	54 – 176	8"
TDS 30000 ppm, selectivity according NaCl 95-98%, SDI < 3							

CODIFICATION 0,08 - 2,5 - 1 – number of membranes - element size - flow rate

Additional options for JurbyFlow® equipment:

- CIP station and tank for chemical cleaning of membranes
- Dosing station for chemical pretreatment
- PLC operating controller
- Process visualisation
- Monitoring of system parameters
- Additional conductivity meter
- Pressure drop switches
- Electromagnetic flowmeters
- Temperature switch
- Frequency inverter for pump control

Chemical Water Treatment JurbySoft®

Application of JurbySoft® products enables:

- to prolong the lifetime of membrane
- to reduce the frequency of chemical cleaning
- to reduce the service costs
- to optimize percent of recovery
- to save energy and water

Antiscalants

Prevent formation of hard mineral deposits on membranes surfaces. Antiscalants can replace softening and acid addition.

JurbySoft M422 – for brackish water.

JurbySoft M423 – for water with high level of sulphates.

JurbySoft M424 – for water with high silica content.

JurbySoft M420 – for sea water.

Chemicals for preservation.

Protect surfaces of membranes from harmful influence of environment and microorganisms. Preservation is applied for new membrane systems before transportation or in case of long-term shut-down of equipment.

JurbySoft M401 – for preservation.

JurbySoft M402 – for preservation in subzero temperature.

Cleaners of membrane systems.

During the operation of reverse osmosis equipment, nonsoluble mineral salts, microorganisms, biological substances and colloidal organic compounds can cause fouling of membranes thus reducing equipment capacity and treated water quality.

JurbySoft M431 – non-oxidizing broad spectrum microbicide.

JurbySoft M432 – alkaline concentrate for cleaning from organics and oils.

JurbySoft M433 – acid concentrate for removal of calcium – ferrous deposits.



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