

# SIRION™ Mega

High Flux and Low Energy Reverse Osmosis systems

SIRION Mega reverse osmosis systems produce high purity water, removing up to 98% of dissolved inorganics and over 99% of large dissolved organics, colloids and particles.

Flow rates from 5 to 139 m<sup>3</sup>/h. (22 gpm-612 gpm)

- Versions available according to American and European standards

## Options

- Concentrate flush
- Concentrate Recirculation
- Permeate Divert
- Permeate Flush (must include Concentrate Flush)
- Feed ORP measurement
- Feed pH measurement
- Antiscalant dosing
- Sodium Bisulfite dosing
- pH adjustment dosing
- Ethernet communication
- External CIP Skid
- Vision™ cloud based integration and reporting\*

\* Vision™ is a cloud-based program that allows you to monitor your system performance, day or night, with secure, real-time data available over any internet or cellular connection.

## Features & Benefits

- Low energy membranes result in lower operating pressures and cost savings
- Feedwater salinity 1,000 to 5,000 ppm TDS (NaCl)
- Frequency controlled variable speed pump (VFD) can save up to 50% on electrical power compared to conventional systems
- 5 micron pre-filtration included within the unit for membrane protection
- Built-in Ethernet port, touch screen HMI and Vision™ ready to facilitate local or remote monitoring and operation
- Dry run and high pressure protection
- Treated water diverted at start-up, ensures water quality
- Timed recirculation rinse to reduce membrane fouling
- **Skid-mounted, standardised systems: short lead times, quick installation and start-up**

## Applications

Sirion Mega produces high purity water, purified water and utility water for :

- Boiler feed
- Industrial process water
- Cooling water
- Reuse / recycling
- Healthcare
- Biotechnologies
- Electronics
- Hospitals
- Chemical industry
- Primary metals

## Related Services

Local aftermarket service and support teams offer preventative and corrective maintenance programs to ensure the long-term, efficient operation of installed plants.

## Hydrex® Chemicals

Hydrex® 4000 water treatment chemicals from Veolia Water Technologies are recommended for optimised plant operation.



## System Performance

Model		110 x 2	110 x 3	110 x 4	210 x 4	211 x 4	211 x 5	320 x 5	420 x 6	420 x 7	840 x 6	840 x 7	1260 x 6	1260 x 7
Nominal Flows at 12°C*														
Permeate	m³/h	5*	7.5*	10*	15*	20*	25*	30*	32-40	37-47	64-80	75-93	96-119	112-139
Feed	m³/h	6.3	9.4	12.5	18.8	25	31.3	37.5	40-53	46-56	78-106	91-112	117-160	137-168
Recovery	%	80	80	80	80	80	80	80	70-82	70-82	70-82	70-82	70-82	70-82
Feed Water Temperature	°C	12	12	12	12	12	12	12	8 to 25	8 to 25	8 to 25	8 to 25	8 to 25	8 to 25
Inlet salinity TDS (NaCl)	ppm	1000**	1000**	1000**	1000**	1000**	1000**	1000**	Max 5000 ppm					
Typical Salt Rejection	%	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98	96-98
Pump Motor Size	kW	7.5	11	11	15	18.5	22	30	22-37	30-45	37-75	55-75	110-75	132-75

\* Flow rates are dependent on feed water quality, those quoted are typical values based on 1000 ppm TDS & SDI <3.

\*\* Up to 5000 ppm TDS upon request

## System Dimensions

Model		110 x 2	110 x 3	110 x 4	210 x 4	211 x 4	211 x 5	320 x 5	420 x 6	420 x 7	840 x 6	840 x 7	1260 x 6	1260 x 7
Height	mm	1750	1850	1850	1850	2150	2255	2280	2400	240	2650	2650	3080	3080
Depth	mm	900	900	900	900	900	900	900	1000	1000	1400	1400	1800	1800
Width	mm	4100	4100	4900	4900	4900	5900	5900	7920	7920	7920	7920	7920	7920
Weight (dry)	kg	980	1100	1150	1200	1350	1700	1700	2200	2200	4800	4800	6800	6800
Operating Weight	kg	1850	2050	1850	2150	2550	1850	1850	4100	4100	8100	8100	11600	11600

## Pipe Connections

Model		110 x 2	110 x 3	110 x 4	210 x 4	211 x 4	211 x 5	320 x 5	420 x 6	420 x 7	840 x 6	840 x 7	1260x 6	1260x 7
Feed		DN 40	DN 40	DN 50	DN 50	DN 65	DN 65	DN 80	DN 100	DN 100	DN 125	DN 125	DN 150	DN 150
Permeate		DN 40	DN 40	DN 40	DN 50	DN 50	DN 65	DN 65	DN 80	DN 80	DN 125	DN 125	DN 125	DN 125
Concentrate		DN 40	DN 40	DN 40	DN 40	DN 40	DN 40	DN 50	DN 50	DN 50	DN 80	DN 80	DN 80	DN 80

## Feed Water Supply Quality

Water free from organic contamination, chlorine and suspended matter. A softened water supply is normally required.

Supply Pressure	min. 2 bar	max. 6 bar
temperature	min. 2°C	max. 30°C

## Utility requirements

Voltage	400 VAC - 3 ph
Product pressure available	0.7 bar (10PSIG)
Silt Density Index (SDI)	<3
Maximum free	<0.1 ppm
Maximum turbidity	<1NTU

## Electrical Supply

All models 380/415V, 3phase, 50 Hz standard

## General specifications

- PLC and HMI (human machine interface) for local control and monitoring on touch screen.
- Built-in Ethernet port and Vision™ ready (remote monitoring).
- Variable Frequency Drive (VFD) for flow control and energy saving.
- Dry contacts available to connect chemicals pumps, pretreatment equipments, permeate and feed water tank level.
- Flow monitoring by optional electromagnetic flowmeter.
- Pre-filtration cartridge filter housing on skid & 5µm rated cartridges.
- CIP on external skid (option).
- Frame materials: painted carbon steel.
- pH control and ORP monitoring available (option).
- Choice of membrane for flexible use on high total dissolved solids (TDS) low temperature feed water.

Options specifications	Standard	Option
Automatic valves	Pneumatic actuators	Motorized valves
Flow meters configuration	Feed and concentrate flow meter & permeate flow calculated	Feed and permeate flow meter & concentrate flow calculated
CIP on external skid	Flange only (Both stages in once)	1- Hard pipes & valves (CIP stage by stage) 1 Ro & 1 CIP station
Product divert	no	1-Permeate 2- Permeate diversion plus pressure relief
Concentrate recirculation	no	yes
External flushing	no	yes

Visit our website: [www.veoliawatertechnologies.com/sirion/en/](http://www.veoliawatertechnologies.com/sirion/en/)

In keeping with the progressive nature of the company, we reserve the right to amend details without notice.

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