SIRION™ Mega

Reverse Osmosis for Process Water

**SIRION™ Mega reverse osmosis system produce high purity water, removing up to 98% of dissolved inorganics and over 99% of large dissolved organics, colloids and particles.
Plug & play unit suitable for transportation into a container. 7 models available.
All versions available according to European standards.**

Flow rates
From 5 to 30
m^3/h

Pharma
Cosmetics
Food
Beverage
Power
General Industry

FEATURES & BENEFITS

- Low energy membranes result in lower operating pressure; cost savings.
- Feed salinity up to 1000 ppm TDS (NaCl).
- Chemical injections points only (no dosing set).
- 5 µm pre-filtration included within the unit for membrane protection.
- Dry run monitor; pump protection.
- Frequency controlled variable speed pump can save up to 50% of electrical power required by conventional systems.
- Concentrate throttling valve for flow adjustment
- Concentrate Recirculation.
- Skid-mounted, standardized systems; short lead times, quick installation and start-up.
- CIP connections.
- Programmable user interface; simple operation, monitoring and storage of pressure, flow rate, conductivity and temperature values. (For PLC only.)
- Modem & RS232 connections.

APPLICATIONS

- Boiler feed water treatment
- Industrial process water production
- Cooling water
- Water recycling & reuse
- Utility water

OPTIONS

- Concentrate dump valve
- 1st stage backpressure valve
- 1st stage CIP flush valve
- Permeate divert
- HMI/PLC version

HYDREX™ CHEMICALS

Hydrex® 4000 water treatment chemicals from Veolia Water Technologies should be used for optimized plant operation.

ASSOCIATED SERVICES

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

System Operating Parameters

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5	320x5
Inlet Salinity TDS (NaCl)	mg/l	Up to 1000 mg/L						
Typical Design Flux	l/h/m²	30.50						
Permeate Nominal Flowrate	m³/h	5	7.5	10	15	20	25	30
Nominal Feed Flowrate	m³/h	6.30	9.40	12.50	18.80	25.00	31.30	37.50
Recovery	%	75 - 80						
Installed Power	kW	8	11	11	15	19	22	30

Selection of models must be done following RO projections based on project specific inlet water characteristics. Flow rates and installed power are dependent on feed water quality, those quoted are typical values based on 1000 ppm TDS & SDI <3.

System Dimensions

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5	320x5
Total Installed Length	m	4.10	4.10	4.90	4.90	4.90	5.90	5.90
Total Installed Width	m	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Total Installed Height	m	1.75	1.85	1.85	1.85	2.15	2.26	2.28
Empty Weight	kg	980	1100	1150	1200	1350	1700	1700

Pipes Connections

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5	320x5
Feed	DN	40	40	50	50	65	65	80
Permeate	DN	40	40	40	50	50	65	65
Permeate diversion	DN	32	32	32	40	40	50	50
Concentrate	DN	40	40	40	40	40	40	50
CIP Inlet	DN	40	40	50	50	50	50	65
CIP concentrate outlet	DN	40	40	40	50	50	50	65
CIP permeate outlet	DN	40	40	40	50	50	50	65

Environmental Conditions

Parameter	Unit	Value
Minimum ambient temperature	°C	5
Maximum ambient temperature	°C	40
Maximum humidity	%	90

Indoor Design. Non-corrosive atmosphere.

Feed water Requirements

Parameter	Unit	Value
Minimum water temperature	°C	5
Maximum water temperature	°C	30
Minimum supply pressure	barg	2
Maximum supply pressure	barg	6
Max Silt Density Index (SDI)	-	< 3
Max Oil and Grease	mg/l	0
Maximum Inlet Turbidity	NTU	< 1
Max inlet Free Chlorine Cl_2	mg/l	< 0.1
Max inlet Iron Fe^{3+}	mg/l	< 0.05
Max inlet Manganese Mn^{2+}	mg/l	< 0.05
Max inlet Aluminium Al^{3+}	mg/l	< 0.05

Non corrosive water.

Materials of Construction

Skid	Epoxy-polyester coated carbon steel
Control Cabinet	Mild Steel, RAL 7035, IP54
Low pressure Pipework	PVC-U
HIgh pressure Pipework	AISI 316L

Power Requirements

Parameter	Unit	Value
Voltage	V	380 / 420
Frequency	Hz	50
Phases	-	3

Other voltage or frequency available on request.

Typical Treated Water Quality

Parameter	Unit	Value
Typical Salt Rejection	%	96-98
Permeate Pressure	barg	inlet pressure