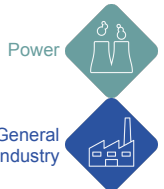
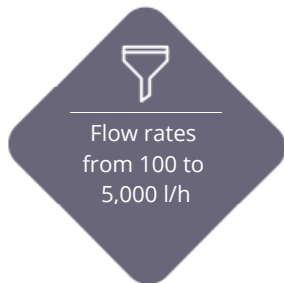


SIRION™ Advanced & Pro

Reverse Osmosis for Process Water

SIRION™ Advanced & Pro reverse osmosis system produce high purity water, removing up to 98% of dissolved inorganics and over 99% of large dissolved organics, colloids and particles. Advanced version against Pro equipped with plastic covers granting protection and robust design. Plug & play unit suitable for transportation into a container. All versions available according to European standards.



FEATURES & BENEFITS

- Low energy Membranes result in lower operating pressure; cost savings.
- Feed salinity up to 1000 mg/l TDS (NaCl).
- 1 µm pre-filtration included within the unit for membrane protection.
- Dry run monitor; pump protection.
- Concentrate throttling valve for flow adjustment and concentrate recirculation.
- Instrument allocated in frontal control block part for comfortable accessibility and workability.
- Skid-mounted, standardized systems; short lead times, quick installation and start-up.
- CIP connections forwards installed.
- HMI Touchscreen 7" modern interface user friendly. Fully configurable and simple operation, monitoring of pressure, flow rate, conductivity and temperature values.
- AQUAVISTA™ compatible
- Data logging
- Comms via Modbus TCP or Aquavista
- OPC Compliant



APPLICATIONS

- Boiler feed water treatment
- Industrial process water production
- Utility water
- Water recycling & reuse
- Hospital water for sterilization
- Analytical water grade 3 production



OPTIONS

1. VFD for HP pump
2. Conductivity/temperature sensor feed water
3. pH measurement concentrate
4. Acid/caustic dosing station
5. Antiscalant dosing station
6. Raw water automatic / manual blending
7. Additional universal inputs / outputs
8. AQUAVISTA™⁽²⁾
9. Front and side covers⁽³⁾
10. PP version⁽⁴⁾

(1) All options available for Advanced model. Pro model compatible with options 1, 3, 6 and 8.
(2) AQUAVISTA™ 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.
(3) Option available for SIRION Pro and SIRION Advanced in PVC version.
(4) SIRION Advanced in PP version includes front and side covers.

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

1000 mg/l configuration ⁽¹⁾	Unit	100	200	300	500	750	1000	1500	2000	3000	4000	5000
Inlet Salinity TDS (NaCl)	mg/l	Up to 1000 mg/l										
Typical Design Flux	l/h/m ²	23-31										
Permeate Nominal Flowrate	l/h	100	200	300	500	750	1000	1500	2000	3000	4000	5000
Nominal Feed Flowrate	l/h	150	290	430	715	1070	1430	2145	2860	4285	5715	7145
Recovery	%	70-80										
Installed Power	kW	1.5 (Adv.) 0.5 (Pro)	1.5 (Adv.) 0.5 (Pro)	1.5 (Adv.) 0.5 (Pro)	1.5	1.5	2.2	3	3	3	5.5	5.5

Selection of models must be done following RO projections based on project specific inlet water characteristics.

(1) Flow rates and installed power are dependent on feed water quality, those quoted are typical values based on 1000 ppm TDS & SDI <3

Dimensions (unit in operation)

Model	Unit	100	200	300	500	750	1000	1500	2000	3000	4000	5000
Total Installed Length	m	0.80	0.80	0.80	0.80	0.80	0.96	0.96	0.96	1.11	1.60	1.60
Total Installed Width	m	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Total Installed Height	m	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Empty Weight	kg	190	195	200	220	230	280	300	320	375	590	600
Operating Weight	kg	199	208	220	242	260	322	359	396	483	765	776

Pipes Connections

Model	Unit	100	200	300	500	750	1000	1500	2000	3000	4000	5000
Feed	-	d22/18	d22/18	d22/18	d22/18	d22/18	DN 32	DN 32	DN 32	DN 32	DN 32	DN 32
Permeate	-	d15/12	d15/12	d15/12	d15/12	d15/12	DN 25	DN 25	DN 25	DN 25	DN 32	DN 32
Concentrate	-	d15/12	d15/12	d15/12	d15/12	d15/12	DN 25	DN 25	DN 25	DN 25	DN 25	DN 25
CIP Inlet ⁽²⁾	-	d15/12	d15/12	d15/12	d15/12	d15/12	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"
CIP outlet ⁽²⁾	-	d15/12	d15/12	d15/12	d15/12	d15/12	1"	1"	1"	1"	1"	1"
Permeate outlet (to CIP)	-	d15/12	d15/12	d15/12	DN 15	DN 15	DN 15	DN 15	DN 15	DN15	DN 20	DN 20

(2) BSPT (R/Rp) – British Standard Tapered Pipe, for pipes and tapered thread

Materials of Construction

Model	-	100	200	300	500	750	1000	1500	2000	3000	4000	5000
Skid	-	Epoxy-polyester coated carbon steel										
Low pressure Pipework	Adv	PA			PVC-U & PA PP & PA ⁽³⁾			PVC-U PP ⁽³⁾				
	Pro	PA			PVC-U & PA			PVC-U				
High pressure Pipework	Adv	PVC-U & PA AISI 316L & PA ⁽³⁾			PVC-U AISI 316L & high pressure hose ⁽³⁾			PVC-U AISI 316L ⁽³⁾				
	Pro	PVC-U & PA			PVC-U			PVC-U				

(3) Materials available when selecting the Sirion Advanced PP Configuration

Feed water requirements⁽⁴⁾

Well water or surface water

Parameter	Unit	Value
Minimum water temperature	°C	5
Maximum water temperature	°C	25
Minimum supply pressure	barg	2
Maximum supply pressure	barg	6
Max Silt Density Index (SDI)	-	< 3
Maximum Inlet Turbidity	NTU	< 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
Max Oil and Grease	mg/l	0
Max inlet Free Chlorine Cl ₂	mg/l	< 0.1

(4) Non corrosive water. *** To consult Solys. Temperature range depending on TDS

Environmental conditions⁽⁵⁾

Parameter	Unit	Value
Minimum ambient temperature	°C	5
Maximum ambient temperature	°C	35
Maximum humidity	%	90

(5) Indoor Design. Non-corrosive atmosphere

Power requirements⁽⁶⁾

Voltage	230 V (100-300 model) 380 / 420 V
Frequency	50Hz
Phases	1 (100-300 model) / 3

(6) Other voltage or frequency available on request.

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