



SIRION™ Mega SF and HF

High flux and low energy
reverse osmosis.

WATER TECHNOLOGIES



Looking for the best packaged range for highly purified water production?

In a number of industrial sectors, the production of pure water relies on reverse osmosis. This process is also key for recycling. For the customers involved in such projects, it is vital to use the correct water quality to match the required procedures and appliances.

As time is money, they look for effective solutions delivered, installed, and commissioned quickly, enabling them to reduce their infrastructure and civil engineering costs.

In a context of economic pressure, they expect reliable, proven standardized solutions and high level local services that will avoid costly downtime and maintenance while minimizing as much as possible their plant's environmental footprint.

Veolia Water Technologies, as an expert in water treatment solutions, has developed and continuously optimizes two SIRION™ Mega product lines. These packaged reverse osmosis systems use high-rejection, high-flow, low-energy membranes and Variable Frequency Drive (VFD) pumps.

Purpose

High purity water, purified water and utility water produced by SIRION™ Mega is particularly suitable for :

Markets :

- Healthcare
- Biotechnologies
- Hospitals
- Primary Metals
- Electronics
- Chemical Industry

Applications :

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



SIRION™ Mega

The high performance skid-mounted range of reverse osmosis units

The SIRION™ Mega systems are fully standardized solutions developed for pure water production and water reuse applications, and for all water applications and budgets.

Skid mounted and pre-commissioned, they offer cost-effective units with minimal requirements for civil engineering and extremely short delivery and start-up times.

They remove 98% of dissolved organics and over 99% of large dissolved organics, colloids, and particles from brackish water. SIRION™ Mega's unique and proven design helps reduce water consumption and can save up to 50 % on electrical power compared to conventional units.

Two product lines



SIRION™ Mega SF

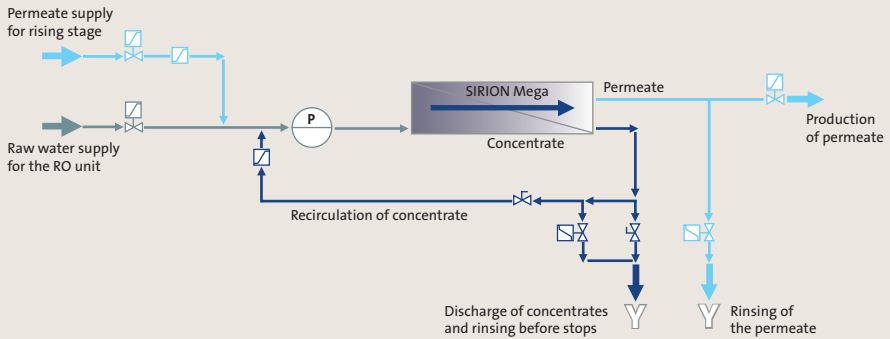
- Flow rate : 5 - 30 m³/h
- TDS : Up to 1 000 mg/L
- 7 models and 7 options
- RO-40 or PLC version available
- Touchscreen HMI and Hubgrade™ ready



SIRION™ Mega HF

- Flow rate : 32 - 139 m³/h
- TDS : Up to 5 000 mg/L
- 6 models and 7 options
- PLC version available
- Touchscreen HMI and Hubgrade™ ready

Operating principle



A full SIRION™ Mega range to suit your needs

Reverse osmosis consists of applying high pressure to the salty water and forcing it through a membrane. Under this process, only the water molecules pass through the membrane, thereby producing freshwater.

Reverse osmosis is a process that uses membranes to remove over 95% of dissolved salts, such as sodium chloride, from water. It is used either alone or in combination with processes such as ion exchange in a variety of applications where the total dissolved solids (TDS) concentration in water has to be reduced.

Options

SIRION™ Mega SF

- Concentrate dump valve
- RO 1st stage back pressure valve and pressure gauge
- RO 1st stage CIP flushing valve
- CIP automatic valves
- pH and/or ORP measurement
- Siemens HMI/PLC
- Hubgrade™

SIRION™ Mega HF

- Feed ORP measurement
- Feed pH measurement
- Feed conductivity measure
- Concentrate recirculation
- External CIP skid
- Hubgrade™
- Set of automatic valves for:
 - RO flush with permeate (need CIP tank and pump)
 - Semi-automatic CIP.



Advantages

- Fully standardized units
- Short lead times, quick installation and commissioning
- Flow rates from 5 to 139 m³/hr
- Smaller footprint
- Energy efficiency
- High water quality
- Lower operating costs
- Optimum RO and pumps performances
- Higher operational simplicity and security: new HMI and fully automatic controls features.





Also available at Veolia Water Technologies

Full standard pre-treatment line

We can provide the appropriate standard technologies to be used as pre-treatment line upstream of the SIRION™ Mega, according to the inlet water quality (river, well water, potable water, reuse water).

Raw water



ACTIFLO™ Pack
Clarification

possible alternative:
MULTIFLO™ Pack



FILTRAFLO™ Pack
Filtration

possible alternative:
UFLEX™



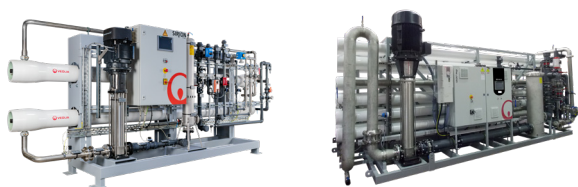
IONSOFT™
Softening

if required:
Midi or Maxi or Mega



SIRION™ Mega

1 pass reverse osmosis





Maintenance and service support

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

Onsite services

Instrument calibration, water analysis, routine maintenance (pump seals etc), membrane CIP, optimisation of performance, corrective maintenance.

Hubgrade™

Hubgrade is a combination of digital solutions and expertise to remotely monitor, assess and optimize the management of water, waste and energy resources. Hubgrade allows clients to access process experts remotely.



Hubgrade

Powered by



SIRION™ Mega complementary products

Consumables, spare parts

A complete list available by criticality level for start up, including FILO cartridge filters and VRO membranes.

Cleaning in place (CIP)

SOLYS can provide the appropriate standard CIP station for cleaning of fouled or scaled RO membranes.

HYDREX® chemicals

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



Resourcing the world

Your local contact



Veolia Water Technologies

To find your local contacts, visit

<https://www.veoliawatertechnologies.com/en/technologies/sirion-mega>