

Super 300HP MobileRO*

FACT SHEET

WATER TECHNOLOGIES



Reverse osmosis for high brackish feed water applications, with integral Activated Carbon filter pretreatment

Description and Use

MobileRO reverse osmosis (RO) containers are specifically designed to provide flexible, reliable pure water solutions for industrial applications, whether for emergency, intermittent, or long-term use. The Super 300HP MobileRO, depicted in Figure 1, offers advanced configurability and high efficiency:

- **Single-Pass Mode:** Capable of producing up to 250 gpm or (55 m³/h).
- **Two-Pass Mode:** Capable of producing up to 100 gpm or (23 m³/h).
- The unit is fully equipped with advanced monitoring tools to ensure efficient operation and high-quality output:
- **Conductivity Meters:** Measures the electrical conductivity in the inlet and permeate water.
- **pH and ORP Meters:** Monitors the acidity and oxidation-reduction potential of the inlet water.
- **Flow Meters:** Tracks the flow rate of concentrate and permeate streams.
- **Pressure Transmitters:** Includes pre-filter, post-filter, primary, and final pressure transmitters to monitor system pressures.
- **Turbidity Meter:** Positioned downstream to assess the clarity of pretreated water.

Standard Features

- **Configurable RO Process Flow:** Adaptable to meet diverse water demands with options for two-pass or two-train operations within a single system.
- **High Rejection Rates:** Rejection rates of 90% to 99+% can be obtained, at recovery rates of 50% to 75%, depending on influent TDS and ionic composition.
- **Versatile Service Options:** Designed for emergency, intermittent, and long-term RO water needs.

- **VFD-Controlled High-Pressure Pumps:** Enables precise pressure adjustments and improves energy efficiency.
- **Centralized Gauge Panel:** Facilitates convenient monitoring of all critical system parameters from a single location.
- **Robust Membrane Housing:** Features a 1000 psi-rated membrane housing with Super duplex side ports for enhanced durability and performance.
- **High-Pressure Capability:** Includes pumps rated up to 800psi, suitable for high-demand applications.
- **Durable Construction:** Utilizes Duplex/Super Duplex materials for valves, pipes, and pumps to ensure longevity and resistance to corrosion.
- **System Integration:** Can be seamlessly combined with other Veolia Mobile units to expand capabilities and adapt to changing needs.
- **Advanced Filtration System:** Equipped with 1-micron cartridge filtration and a 40-micron bag filter for superior protection of reverse osmosis elements.

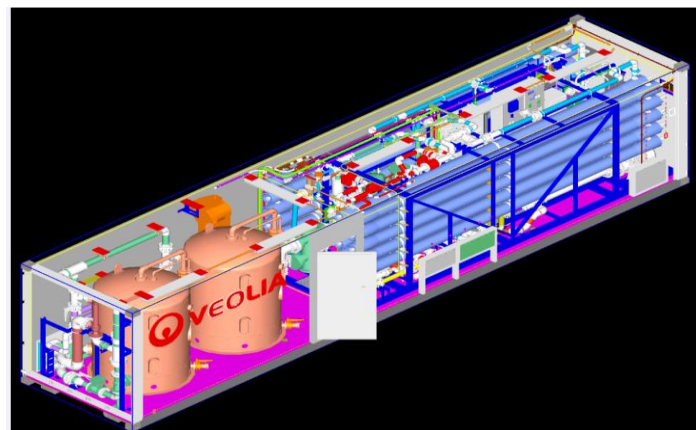


Figure 1: Super 300HP MobileRO

General Properties

Single Pass Product Flow Up to 250 gpm (55 m³/h)
 Two Pass Product Flow Up to 100 gpm (23 m³/h)
 Recovery 50 to 75%
 Nominal rejection 95 to 99%
 Operating range ¹ 35° to 105°F (2° to 40°C)
 Minimum inlet pressure 30 PSIG (2 bar)
 Maximum inlet pressure 60 PSIG (4 bar)
 SDI₁₅ 3
 Max. Feed TDS/Chloride ² 25000/5000ppm

¹ Flow limited by membrane flux at high temperatures.

² Feedwater chloride and conductivity limitations based on site conditions and process review required.

Container-40' High Cube

Item	Description
Length	40' 0" (12.2 meters)
Height	9' 6" (2.9 meters) 13' 6" (on chassis)
Width	8' (2.4 meters)
Gross shipping weight (approx.)	45,745 lbs. (20,750 kg)
Gross shipping weight (approx.) - with Media, Membrane and preserve	51,000 lbs. (23,135 kg)
Gross operating weight (approx.)	56,000 lbs. (25,400 kg)

PLC / instrumentation

PLC			Instrumentation
Parameter	Inlet	Outlet(s)	Allen Bradley
Flow	X	X	Analog (4-20 mA) and/or discrete tank level inputs are available for customer automatic shutdown and control.
Pressure	X		
Turbidity	X		
pH/ORP	X		
Temperature	X		
Conductivity	X	X	

Connections

Connections	Type ANSI 150
Feed PSV outlet	6 inches (160 mm)-Gravity
Raw water inlet	6 inches (160 mm)
Concentrate outlet	4 inches (110 mm)
Permeate outlet	4 inches (110 mm)
CIP inlet	4 inches (110 mm)
CIP concentrate outlet	4 inches (110 mm)
CIP permeate outlet (1 per train)	3 inches (90 mm)
ACF Backwash /Rince outlet	3 inches (90 mm)
T1 PSV out-Permeate/Conc.	4 inches (110 mm)-Gravity
T2 PSV out-Permeate/Conc.	4 inches (110 mm)-Gravity
Power supply	3" FNPT
Control Cables	1.5" FNPT
Feed SBS/Antiscalant/Acid Injections	1/4" FNPT
T2-Caustic injection	1/2" FNPT

Electrical

Item	Description
Service	380/460 VAC, 3-phase, 50/60Hz
Service Main	400 Amp
Full load amps Main	352/319 Amp

Contact Us

Veolia's Mobile Water Services provide customers with the quantity and quality of water needed with emergency, short and long-term contracts. If you would like more information about how a Super 300HP MobileRO or other mobile water solution can provide you with the same, please contact your Veolia account representative or visit our website.