

MobileRO*

Water Treatment System

Description and Use

MobileRO and Extended-Term Reverse Osmosis Water Treatment to serve a variety of needs

For long-term supplemental or emergency reverse osmosis applications, GE Water & Process Technologies' MobileRO Water Treatment System provides quality, reliability and flexibility. (See Figure 1 for MobileRO diagram.) Trailer-mounted for easy portability, the MobileRO System can reject most ionic contaminants as well as organics over 200 molecular weight. The MobileRO System has a total flow capacity of over 200 gpm (45 m³/hr) and can be modified to operate in single pass or two pass mode, with flows of 100 gpm (23 m³/hr) from each of two independently operated arrays. Two 60-inch (152.4 cm) diameter ASME code pressure vessels can be custom-loaded to provide additional treatment such as filtration, softening or dechlorination in either the pre- or post-RO position. Spiral-wound cellulose acetate or polyamide thin-film composite membranes are available, housed in 8-inch diameter stainless steel pressure vessels.

Included in the MobileRO System are chemical injection, full instrumentation and fail-safe shut down controls. Components are housed in a weather-proof, fully-insulated trailer with a self-contained propane heating system, set up and monitored to meet your water quality specifications by one of GE's experienced, extensively trained Field Service Representatives.

Extended-Term Water Treatment with extra value

Your GE multi-year installation can be designed to precise operating specs with the assurance that if circumstances require, GE's fleet of mobile equip-

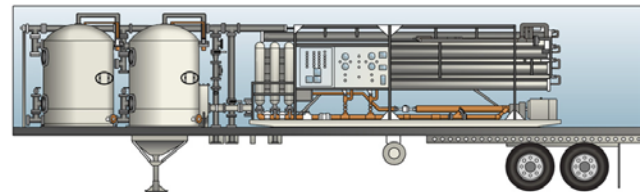


Figure 1: MobileRO

ment stands ready to supplement your permanent system.

GE provides components in custom skid-mount and mobile configurations to suit your specific requirements. Design features ensure system reliability for five years, ten years, and beyond. Value-added benefits include:

1. Guaranteed water quality and quantity.
2. Complete analytical and applications laboratory.
3. Technical, Engineering and Marketing Personnel qualified to meet specific plant requirements.
4. Full-time, experienced, and specifically-trained Field Service Representatives to operate and maintain your on-site system.
5. Full-service regional regeneration centers with regeneration and maintenance facilities, mobile equipment inventory, parts, and resident personnel.
6. 24-hour staffed logistics, Operations and Communications Center which also monitors remote jobsite data acquisition systems.

In Extended-Term applications, GE Reverse Osmosis systems provide treated water in quantities from 100 gpm (22.7 m³/h) to 2,000 gpm (453.5 m³/h) and more. RO units are also part of GE's DeltaFlow*



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e-mailing custhelp@ge.com.

Global Headquarters
Trevose, PA
+1-215-355-3300

Americas
Watertown, MA
+1-617-926-2500

Europe/Middle East/Africa
Heverlee, Belgium
+32-16-40-20-00

Asia/Pacific
Shanghai, China
+86-21-5298-4573

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process. GE can provide the engineering, structure, and operating personnel for Extended-Term applications.

Go with MobileRO for a variety of treatment needs

- TOC reduction for boiler feedwater use.
- TDS reduction prior to demineralization.
- Supplemental or emergency service to support in-house equipment for water purification.
- Post-treatment of DI water to remove bacteria, endo-toxins and other contaminants such as colloidal silica in ultra pure water systems.
- Full scale process testing for a wide variety of applications.

General Properties

The GE MobileRO can be readily installed in either a pre- or post-DI position. Site requirements consist of adequate truck/trailer parking space on a compacted surface near adequate drains. The system can produce a minimum of 200 gpm (45 m³/hr) at 40°F (4.4°C) with a 300 gpm (67.5 m³/hr) feedwater supply at 50 psig (3 bar) minimum pressure. Rejection rates of 90% to 99+% can be obtained, at recovery rates of 65% to 85%, depending on influent TDS and ionic composition. See Table 1 for MobileRO specifications.

Table 1: MobileRO Specifications

	TRAILER	
Dimensions and weights	U.S. Version	International Version
Overall length with tractor	60'-0"	16.5 m
Trailer length	48'-0"	13.2 m
Trailer height	13'-6"	4 m
Trailer width	8'-0"	2.6 m
Gross trailer operating weight	41,400 lbs.	18,800 kg
Lighting and instrumentation	110V, 20 amps	220/240V, 20 amps
RO	480V, 200 amps	380-415V, 200 amps
Connections	All connections are located on underside of trailer, mid-trailer, curbside.	
Inlet/outlet	4" flange	4" flange
RO Reject	2" flange	2" flange
Heating	25,000 BTU/H propane fired heater and propane supply tank.	Electric heater, 3 KW
	RO SYSTEM - ON BOARD	
Specifications	<ul style="list-style-type: none"> • Two pre- or post-treatment ASME code vessels. • 200 GPM (45 m³/hr) @ 40° F (4.4°C) Reverse Osmosis System. • Two x 100 GPM (23 m³/hr) arrays with stainless steel housings. 	
Membranes	<ul style="list-style-type: none"> • Spiral wound cellulose acetate or polyamide thin film composite 	
Instrumentation	<ul style="list-style-type: none"> • Flow indicator and totalizer • System pressure gauges • Conductivity or resistivity meter • Feed pressure control system • pH controller • Acid, chlorine & inhibitor feed systems • 5 micron cartridge prefilter 	