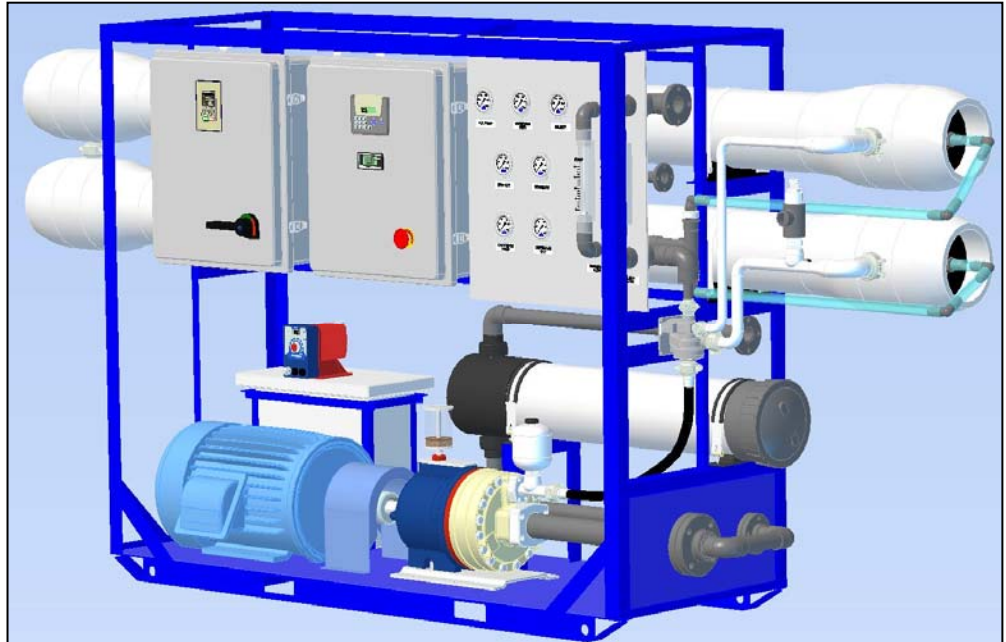


RODI Systems TIGER

Cost-Effective Reverse Osmosis Desalination Units

The RODI Systems TIGER is a cost-effective, high quality, skid-mounted reverse osmosis desal unit. The TIGER can treat virtually any properly pre-treated water supply including fresh water, brackish water, or seawater. It is designed with simplicity and durability in mind and is easy to transport, install, operate, and maintain. The TIGER is suitable for :

- **Emergency Relief**
- **Small Communities**
- **Remote Work Camps**
- **Military Facilities**
- **Hotels and Resorts**
- **Offshore Facilities**



Benefits

The RODI Systems TIGER has a number of benefits that makes it an excellent choice for your desalination or water treatment application.

Low Cost — The TIGER is remarkably low in cost especially when considering the quality of design and construction.

Ease of Operation — Automatic controls and proper instrumentation make it easy to operate and provide protection for valuable system components in case an upset does occur.

Ease of Maintenance — The simplicity of the TIGER design and the accessibility of the components make it easy to conduct both routine and periodic maintenance.

Quality — TIGER systems are designed and built by RODI Systems Corp., a leader in the construction of membrane treatment systems.

Dependability — RODI's membrane systems are serving as dependable sources of clean water around the world.

Features

The RODI Systems TIGER incorporates the following unique features:

Durable High Pressure Pump — All TIGER systems utilize a unique diaphragm high pressure pump that offers superb reliability and economy.

Integrated CIP — The special piping arrangement of the TIGER along with the unique characteristics of the high pressure pump allow a single pump to be used for normal operation as well as membrane cleaning.

Horizontal Cartridge Filter — The horizontal arrangement of the cartridge filter requires less space and prevents debris from entering the membrane modules during filter change.

Reverse Osmosis — Reverse osmosis (RO) is the heart of the TIGER. By utilizing high rejection thin film composite membrane elements, the TIGER is capable of removing a vast number of contaminants from the feed water. This includes salinity, heavy metals, arsenic, organic compounds, not to mention viruses and bacteria.

RODI Systems TIGER

Specifications

The RODI Systems TIGER incorporates a number of specifications which make it a high quality choice for your desalination application.

Skid — The TIGER units are mounted inside a heavy duty, epoxy-coated steel skid. The skid is designed with multiple lifting points to facilitate moving and installing the equipment. Skid dimensions are optimized to allow the maximum amount of units to be shipped inside intermodal containers.

Construction — The TIGER is constructed of new, industrial quality materials. Piping, vessels, and other system components are supported inside the skid with fiberglass structural members and stainless steel fasteners.

Piping — All low pressure piping is Schedule 80 PVC or other non-metallic materials. High pressure piping and pump utilize 316 stainless steel. Welded joints are used wherever possible and threaded joints are avoided as much as possible to prevent leaks. All valves and fittings are of industrial quality.

Pressure Vessels — Membrane pressure vessels are filament wound using fiberglass roving and sealed with an epoxy resin. The cartridge filter vessel is constructed of PVC. This results in corrosion-proof vessels that will last for years with little or no maintenance.

Membrane Elements — The TIGER utilizes spiral wound membrane elements with thin film composite membrane. This results in high quality permeate with only a single pass, low operating pressures, and a long service life.

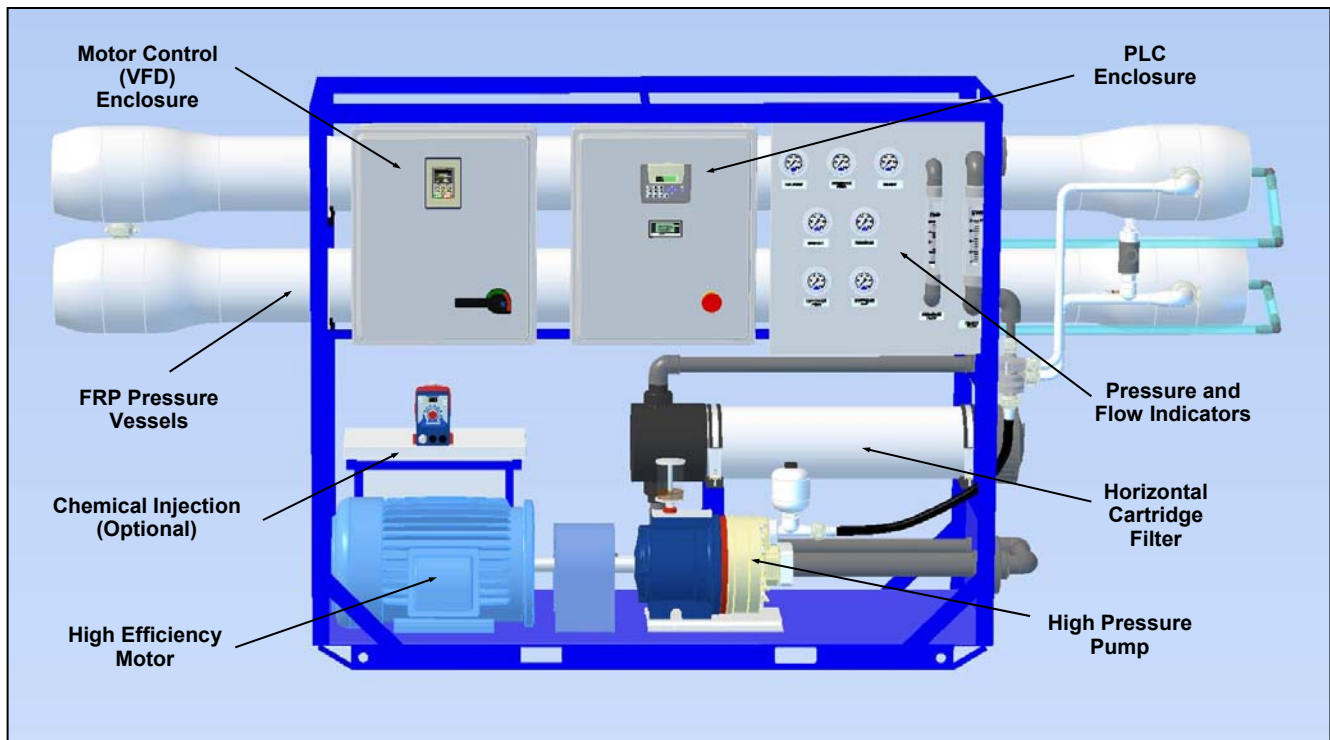
High Pressure Pump — The TIGER utilizes a unique high pressure diaphragm pump. These pumps are chosen for their efficiency, dependability, and compact size. The pump is controlled with a variable frequency drive (VFD) for smooth operation and maximum efficiency. The unique flow and pressure characteristics of this pump allow it to be used for all unit functions including flush and membrane cleaning.

Controls and Instrumentation — The TIGER control system includes a touch screen PLC that provides automatic operation for normal service. A complete set of electronic sensors insures operation within acceptable parameters.

Electrical — All electrical construction is done to recognized standards. Rigid or flexible PVC conduit and PVC junction boxes are used to prevent corrosion. Only NEMA 4X non-metallic enclosures are used. For reasons of safety, high voltage components are mounted inside a separate enclosure from low voltage control components.

Documentation — All TIGER units are provided with a complete set of documentation which includes component O&M manuals and wiring diagrams.

Major Components



RODI Systems TIGER

Specifications

System Specifications			
Production (Gal/Day) ¹	5,000	12,500	25,000
Minimum Feed Flow (Gal/Min)	7	21	35
Dimensions (L x W x H) (ft)	12.5 x 2.5 x 6	12.5 x 2.5 x 6	12.5 x 2.5 x 6
Vessel Array (Number of Elements/Vessel)	1:1 (3 x 4")	1 (3 x 8")	1:1 (3 x 8")
Power (VAC) (50/60 Hz)	240 1 Φ 380-460 3 Φ	380-460 3 Φ	380-460 3 Φ
Pump HP	5	15	25
¹ Assuming a flux rate of 9.5 gallons per day per square foot of membrane surface area. Actual production will vary depending upon feed water quality and operating conditions.			

Operating Specifications	
Recovery ¹	35-50 %
Minimum Feed Pressure	10 psig
Maximum Feed TDS ²	45,000
Maximum Feed Temperature	110 Deg F
Feed Water Quality ³	SDI <5; 0 ppm Cl ₂ ; <0.1 ppm Fe
¹ Actual recovery will vary depending upon feed water quality and operating conditions. ² Can vary depending upon feed water quality and temperature. ³ Feed water must be properly pretreated before any RO system. Contact RODI Systems for more information on pretreatment requirements.	

RODI Systems TIGER

Options

The RODI Systems TIGER desalination units are available with a number of options. This allows clients to customize a system to fit their particular water treatment application.

Tanks — The TIGER systems require tanks for feed and permeate flush. These tanks are often available locally but RODI can provide suitable tanks with proper fittings and level sensors should the client so desire.



Scale Inhibitor Injection — A chemical injection system can be provided to inject scale inhibitor into the inlet of the TIGER. This chemical helps inhibit the formation of insoluble scale precipitate in the membrane elements when sparingly soluble compounds are present in the feed water. The injection system includes an injection pump and chemical day tank.



Hypochlorite Injection — A chemical injection system can be provided to inject sodium hypochlorite

(bleach) into the RO permeate to insure disinfection of the stored permeate. The hypochlorite injection system includes an injection pump and chemical day tank.

Pretreatment — Many applications will require additional pretreatment of the feed water to lower the silt density index or remove other constituents. RODI can provide high performance pretreatment systems for virtually any feed water condition.

Ultraviolet Treatment — Additional bacterial protection can be provided in the form of a UV treatment system on the product water before final chlorination.

Operator Training — Training is available at RODI's facility for those individuals responsible for operating and maintaining the TIGER units. Training and technical support are also available on-site for most locations.



Remote Monitoring — This option allows the system to be monitored remotely via the GSM cellular phone network.



NOTE: All specifications are subject to change without notice. V1.10

505-334-5865 ph 505-334-5867 fax
 www.rodissystems.com
 email: info@rodissystems.com
 936 Highway 516 Aztec, NM 87410



RODI
systems