

'MRO-8H' Reverse Osmosis Systems



Overview

The Marlo MRO-8H Series Industrial Reverse Osmosis Systems are engineered to economically produce high purity water by removal of dissolved minerals, bacteria, particles, and organic impurities. Each MRO machine is constructed using the highest quality components and materials for reliable operation and exceptional performance. Our standard machines are available with product water outputs from 25-300 GPM (36,000-432,000 GPD).

Marlo also offers a wide variety of machine options, pre/post treatment equipment, distribution pumps, and integrated controls for a complete water treatment system. Our specialty is skid mounted, pre-piped, and pre-wired equipment allowing for quick installation and start-up time. Other types of membrane technology are also available including two-pass, two-train, cellulose acetate (CA), and nanofiltration (NF) for custom applications. Marlo engineers are ready to work with you to design a system meeting your water treatment requirements.

The following are just a few of the industrial applications that benefit from the use of reverse osmosis water:

- Boiler Feedwater
- Chemical Manufacturing
- Humidification
- Ice-making
- Bottled Water
- Small Municipalities
- Electronics Manufacturing
- Ink / Dye Production
- Food / Beverage Production
- Deionizer Pre-treatment

Operating Parameters

- Operating Pressure: 200-250 psig
- Nominal Recovery: 75-80%
- Nominal Salt Rejection: 98-99%
- Operating Temperature: 45-85° F
- Design Temperature: 50° F
- Minimum Inlet Pressure: 30 psig
- Control Circuit: 120 VAC, 1-phase, 60 Hz.

Materials of Construction

- Skid Frame: Epoxy-coated carbon steel
- Membrane Elements: Thin-film Composite (TFC)
- Membrane Housings: FRP (300 psig rated)
- Low pressure piping: Sch 80 PVC
- High pressure piping: Sch 10 304SS

Pump and Motor

- Pump: 304/316SS vertical multi-stage centrifugal
- Motor: TEFC, 460 VAC, 3-phase, 60 Hz.

Standard Features

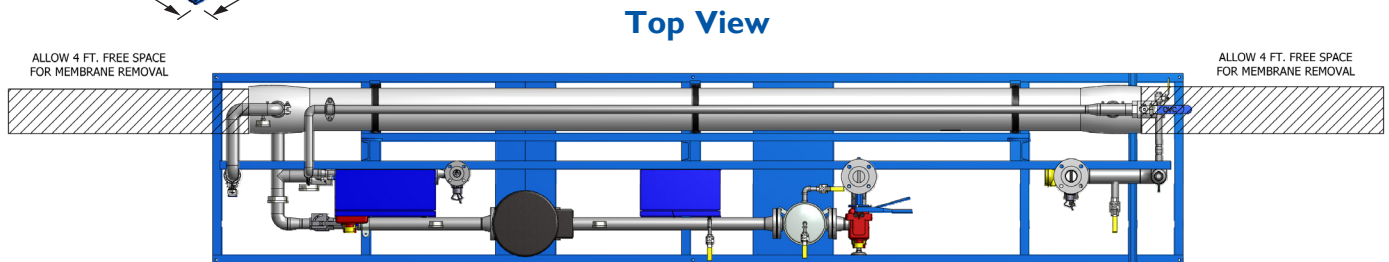
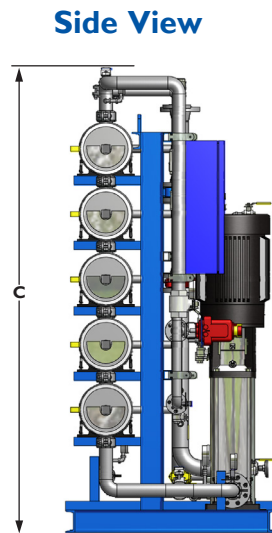
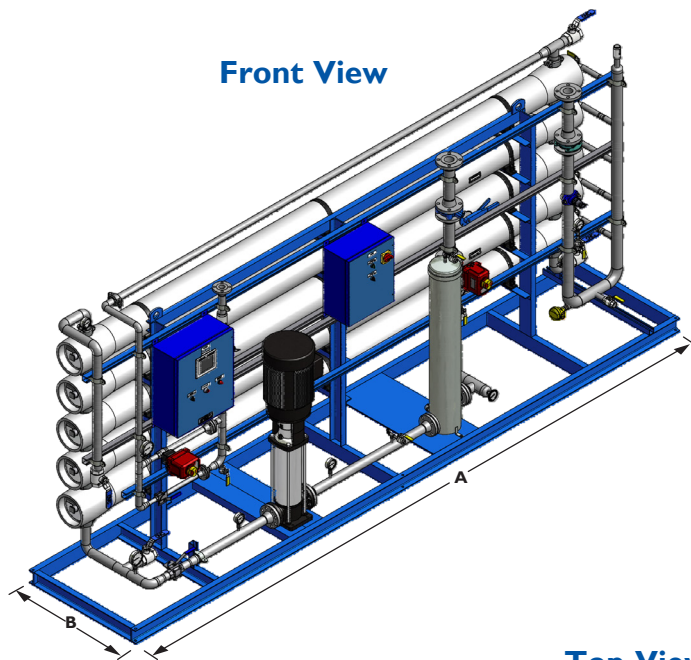
- 8" x 40" High rejection membrane elements
- 5-micron sediment pre-filter housing (304SS)
- Allen Bradley MicroLogix 1200 PLC System with PanelView 600 operator interface
- Prewired motor starter with fused disconnect switch
- NEMA-4 electrical enclosures
- UL-508A Listed electrical panels
- Product water conductivity transmitters
- Product and reject flow transmitters
- 316SS pressure gauges / Inlet pressure switch

Optional Equipment Available

- Variable Frequency Drives (VFD)
- pH/ORP monitors
- Low energy membrane elements
- All stainless steel piping and/or skid
- Ethernet/Modbus PLC communications
- Atmospheric storage tanks with level control and repressurization pump systems
- Membrane clean-in-place (CIP) systems
- Pretreatment chemical injection systems

SPECIFICATIONS

MODEL NUMBER	CAPACITY		ELEMENT QUANTITY	VESSEL STAGING	RO FEED	RO REJECT	SYSTEM PIPING CONNECTIONS (INCHES)			PUMP HP	OVERALL DIMENSIONS (INCHES)			SHIPPING WEIGHT
	GPM	GPD			GPM	GPM	INLET FEED	PERMEATE	RO REJECT		A LENGTH	B WIDTH	C HEIGHT	LBS.
MRO-36K-8H	25	36,000	6	1/1	33	8	1 1/2	1 1/2	1	10	146	40	82	3150
MRO-50K-8H	35	50,400	9	1/1/1	47	12	2	1 1/2	1	15	146	40	82	3550
MRO-72K-8H	50	72,000	12	2/1/1	67	17	2	2	1	20	146	40	82	3800
MRO-94K-8H	65	93,600	16	2/1/1	87	22	2 1/2	2	1 1/2	25	194	46	82	4300
MRO-115K-8H	80	115,000	20	2/2/1	107	27	2 1/2	2 1/2	1 1/2	25	194	46	82	4600
MRO-144K-8H	100	144,000	24	3/2/1	132	32	2 1/2	2 1/2	1 1/2	30	194	46	94	5100
MRO-180K-8H	125	180,000	30	3/2	167	42	3	3	2	40	274	50	86	5700
MRO-216K-8H	150	216,000	36	4/2	197	47	3	3	2	50	274	50	94	6100
MRO-288K-8H	200	288,000	48	5/3	267	67	4	4	2	60	274	70	86	7100
MRO-360K-8H	250	360,000	60	6/4	333	83	6	6	3	75	274	76	86	8000
MRO-432K-8H	300	432,000	72	8/4	400	100	6	6	3	100	274	76	97	10,600



Notes

- 1 Feed flow based on 75% recovery.
- 2 Motor horsepower based on 50°F feedwater and high rejection membranes. Lower horsepower models are available for warmer feedwater and/or higher flow membranes. Consult factory.
- 3 Requires minimum of 48" additional length on each side of the skid for membrane removal.
- 4 Feedwater to RO system must be free of chlorine and pre-conditioned by water softening or polymer injection to prevent membrane scaling.