



REVERSE OSMOSIS SYSTEMS

The Reverse Osmosis system is a fully integrated industrial water purification solution designed to deliver consistent, high-quality permeate for boiler feedwater, process water, and wastewater reuse applications. Engineered for industrial reliability and modular scalability, the system reduces dissolved solids while lowering operating costs, energy consumption, and long-term maintenance requirements.

Designed to integrate seamlessly with Miura boiler systems and water treatment equipment, the RO functions as a critical component within Miura's complete steam and water treatment ecosystem.

TYPICAL APPLICATIONS

- Boiler feedwater treatment
- Industrial manufacturing process water
- Industrial wastewater recycling and reuse
- Facilities focused on reducing water consumption and discharge costs

OPERATIONAL CHALLENGES ADDRESSED

- Inconsistent water quality affecting steam performance
- High dissolved solids reducing equipment efficiency and life
- Water waste from low-recovery systems
- Downtime due to membrane scaling or fouling*
- Limited visibility into system health and diagnostics*
- Manual monitoring burden*

SYSTEM INTEGRATION

- Designed to complement Miura boiler systems
- Works seamlessly with MW water softener pretreatment systems
- Sized and configured to pair with transfer pumps and storage tanks for complete water treatment solutions
- Remote visibility via Miura Connect*
- Modbus support for plant system integration*
- Produces high-purity water suitable for BOILERMATE® chemical treatment

* Available on Premium system only

PRODUCT FEATURES

Core System Design

- Modular skid-mounted design for simplified installation and service
- High-recovery membrane configuration reduces water waste
- Internal recycle system improves efficiency and membrane performance
- Corrosion-resistant stainless steel construction
- Scalable capacities: 10 to 500 GPM (standard models: 15–50 GPM)

Instrumentation & Monitoring (System-Level)

All systems include:

- Multi-point pressure monitoring across membrane stages and filters
- Inlet pressure switch for feed protection
- Pre-filter and post-filter pressure gauges

Premium systems add:

- Pressure transmitters at each bank of membrane vessels
- Flow meters on permeate and concentrate lines
- Continuous permeate conductivity monitoring
- Recirculation flow meter with automated valve control

Available Options (for both Basic and Premium systems):

- Full system automation and sensor suite package
- Granular Activated Carbon (GAC) filtration
- Pre-treatment chemical dosing pumps
- Clean-in-Place (CIP) cleaning systems
- Additional instrumentation and monitoring points

CONTROL OPTIONS

Basic Reverse Osmosis System

Manual control with simplified dual-panel setup, rotameters, manual valves, and two (2) elements per vessel. Ideal for smaller installations with dedicated water treatment personnel.

Premium Reverse Osmosis System with Uptime®

Uptime® control with 15" HMI, remote QR code access, automated alerts, comprehensive instrumentation (flow meters, pressure transmitters, temp/pH/ORP), modulating valves, and Miura Connect integration. Ideal for multi-boiler installations prioritizing uptime and predictive maintenance.

RO System	Model	Permeate Flow Rate		Banking Arrangement	Dimensions			Elements	Design Pressure [†]	Maximum Inlet TDS	Vessel Element Orientation	Element Size	Elements per Vessel	Minimum Temperature	Recovery Rate [‡]	Internal Recycle Included
		gpm	gpd*		Width	Length	Height									
Basic	RO-15	15	21,600	1 : 1			4									
	RO-20	20	28,800	1 : 1 : 1			5									
	RO-25	25	36,000	1 : 1 : 1			7									
	RO-30	30	43,200	2 : 1 : 1	48"	120"	66"	8			Horizontal		2			
	RO-35	35	50,400	2 : 2 : 1				9								
	RO-40	40	57,600	2 : 2 : 1				10								
	RO-50	50	72,000	2 : 2 : 2				12		700		8"			75%	Yes
	PRO-15	15	21,600	1 : 1 : 1 : 1	48"	48"		4	150		Vertical					
	PRO-20	20	28,800	2 : 2 : 1	36"			5								
	PRO-25	25	36,000	3 : 2 : 2				7								
Premium	PRO-30	30	43,200	3 : 3 : 2		60"	66"	8			Horizontal		1			
	PRO-35	35	50,400	3 : 3 : 3	48"			9								
	PRO-40	40	57,600	4 : 3 : 3				10								
	PRO-50	50	72,000	4 : 4 : 4				12								

Note: Standard flow rates shown above. Other sizes are available.

* Based on 24-hour Operation

† Pressure Required for Minimum City Water Temperature

‡ Based on average municipal water quality (TDS, hardness, and other constituents). Water analysis required before order placement. System design may require modification for non-standard water conditions.

Available Features	Basic	Premium
Controls Type	Simplified	Uptime®
HMI Size	-	15"
Panel Quantity	2 - High and Low Voltage	
Inlet Pressure Switch	Included	Included
Permeate Conductivity	-	Included
Permeate Flow Meter/Gauge	Rotameter	Included
Concentrate Flow Meter/Gauge	Rotameter	Included
Recirculation Flow Meter	Rotameter	Included
Vessel Inlet Pressure Transmitter	-	1 per banking arrangement
Vessel Concentrate Pressure Transmitter	-	1 per vessel
Automatic On/Off Inlet Valves	-	Included

Specifications shown are for reference only and may vary by model, configuration, and application. Product features, performance data, and availability are subject to change without notice. Consult Miura America or an authorized Miura representative for the most current specifications and submittal documentation.

UPTIME®

More Than Data, Diagnostics & Alerts

Your equipment is only as effective as the teams who maintain them. That's why Uptime's video library doesn't stop at diagnostics. It delivers direct, visual instruction exactly when and where your team needs it, on the production floor.

- Pinpoint Alert Accuracy
- Step-by-Step Repair Videos
- Faster Resolutions – Reduced Downtime
- On-Demand Training Videos

COMPLETE STEAM SOLUTIONS & LIFECYCLE PARTNERSHIPS

Miura's RO systems perform best as part of Miura's integrated approach. Water treatment mitigates scale damage. Miura Connect provides remote monitoring and diagnostics. For multi-boiler installations, the BP Panel delivers intelligent system control. Miura Care maintenance programs keep your equipment running at peak efficiency. Together, these solutions maximize fuel savings, extend equipment life, and minimize downtime.