

## MW

### *system integrated water softener*

- ▶ New Split-Flow Regeneration Technology Provides Enhanced Softening
- ▶ Enables 24/7 Monitoring of Water Softener Performance
- ▶ Minimizes Downtime & Maintenance Costs Related to Water Quality Issues
- ▶ Minimizes Downtime and Cleaning Costs Related to Water Quality Issues

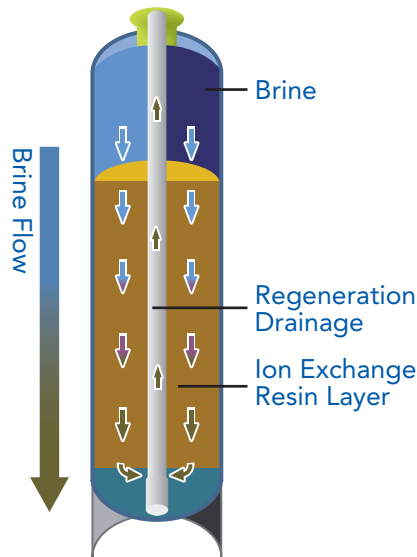


# MW Miura's next-generation MW system is the most advanced answer to a highly softened water supply

Miura's new MW regeneration process is designed to deliver a more consistent, highly softened water supply, with the added reliability of double tank alternation, our system integrated Colormetry hardness detector, and a control panel that interfaces with Miura's MOM and ER dashboard systems.

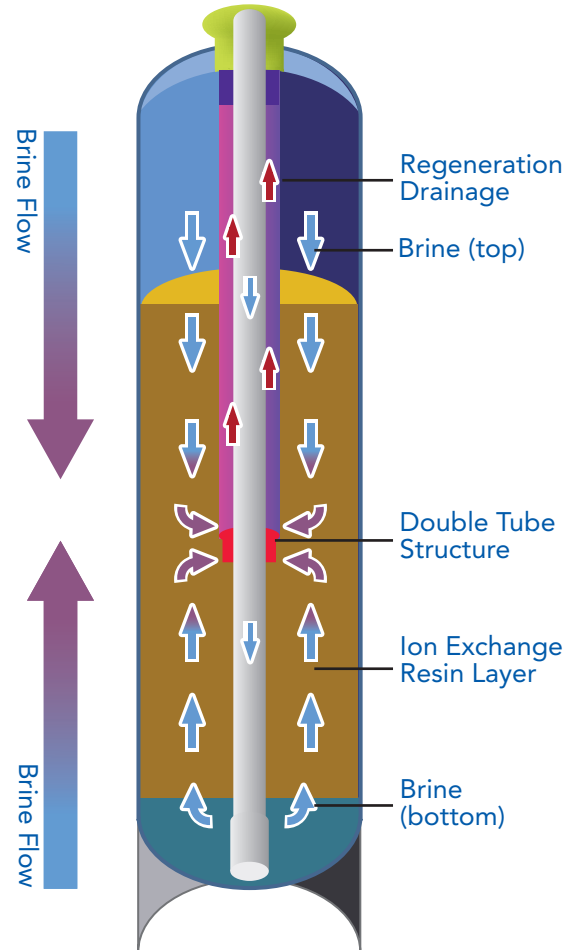
## conventional parallel water flow

(while regenerating)



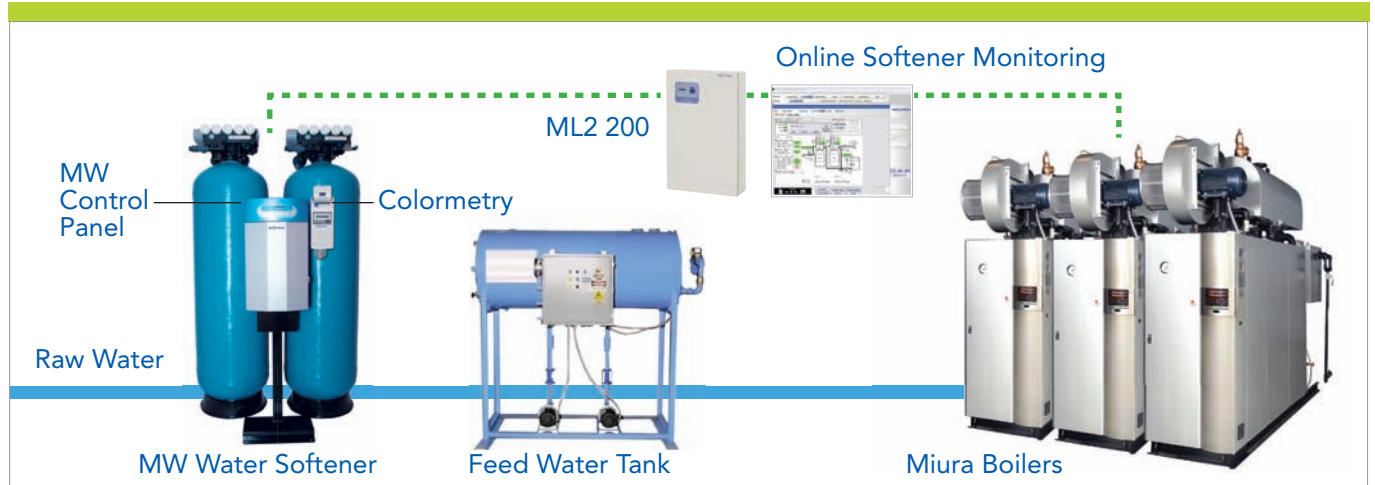
As brine circulates from top to bottom, it absorbs the hardness released from the resin, but does not fully regenerate the bottom portion of the layer.

## split flow



Quality brine is supplied throughout the entire resin layer so ideal regeneration is performed every cycle.

## flow diagram example



# utilize “smart” water softener system for optimized boiler operation



The MW will automatically engage a 24 hour regeneration for each tank in the event the integral water totalizer is compromised. (Connection from a makeup water solenoid valve is required).



Monitoring the brine flow rate with a flow meter at the brine input line, the MW prevents hardness leakage by managing regeneration of the brine amount and detecting brine introduction failure.



If Colormetry detects hardness leakage, it sends a signal to the boiler's hardness alarm contactor, and will automatically switch tanks to continue to supply softened water. The control system interfaces with the boiler controller to initiate automatic blowdown after receiving hardness alarms.



A brine concentration sensor monitors the specific gravity of the brine, detecting the status of the regenerating salt and preventing regeneration failure in the event the tank is allowed to run empty.

## colormetry\* (CMU-224H hardness)

Water hardness is a common cause of boiler damage. Typically, water-hardness levels are checked manually through the use of chemical reagents. Such measurements are time-consuming and can result in incorrect readings.

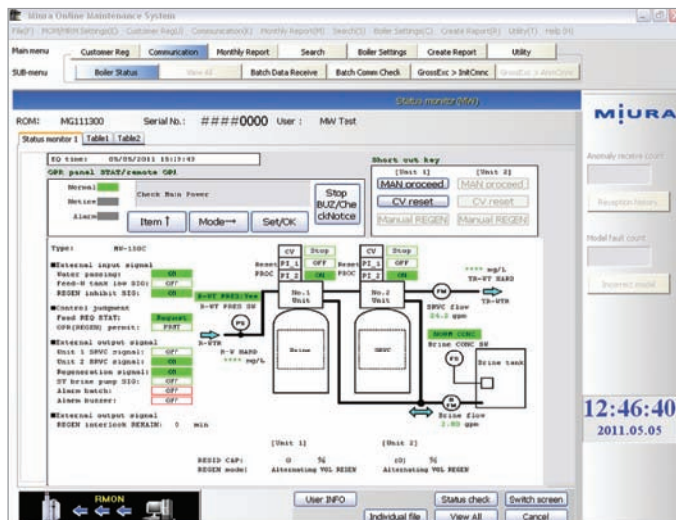
Colormetry solves all these problems by offering automated reagent injection, mixing and evaluation integrated into the boiler control system.

- ▶ Automatically monitors water quality
- ▶ Controls MW regeneration if hardness is detected
- ▶ Alarm and fault history logging
- ▶ One-touch reagent replacement
- ▶ Compact design



\*see colormetry brochure for more information

## remote dashboard monitoring



The MW system is fully compatible with Miura's PC dashboard monitoring systems, as well as third-party PLC integration (Modbus & BACnet), to further enhance oversight of softener performance. Integrating the softener system into the comprehensive boiler controls/monitoring system maximizes operational awareness and provides real-time boiler water quality management, acknowledging its role in supporting overall system optimization.

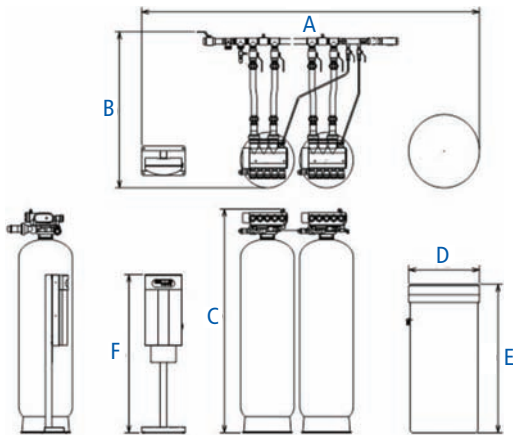
\*see Online Monitoring brochure for more information

# standard specification

ITEM		UNITS	SYSTEM WATER SOFTENER			
Model		—	MW-150U	MW-250U	MW-400U	
Resin volume		CFT	5.3 × 2	8.8 × 2	14.1 × 2	
Standard flow rate		GPH	1300	2000	2600	
Pressure loss (At normal operation)		psi	10	17	28	Note 1
Required salt per regeneration		lb	29.8-79.4	49.6-132.2	52.9-211.6	Note 2
Hardness removal capacity per generation		x1000 grain CaCO <sub>3</sub>	82-120	136-199	214-315	Note 3
Maximum salt storage weight		lb	531	564	1102	
Raw water temperature range		°F	39–104 (no freezing)			
Raw water pressure range		psi	22–71			Note 4
Regeneration drain	Drain per regeneration	Gal	260–480	480–565	770–1000	Note 5
	Peak flow	GPM	4.6–8.7	12.8–14.5	17.8–23.6	Note 6
Power supply		—	100–220 VAC, 50/60 Hz, single-phase			
Rated power consumption		W	22			
Electric capacity		VA	22			
Connection diameter	Inlet/outlet port	inch	1 1/2" (Internal thread: accessory piping)			
	Drain port		1" (External thread: control valve)			
Dry weight	Water softener unit	lb	474	838	1323	Note 7
	Brine tank		33	44	77	
Operational weight	Water softener unit	lb	827	1466	2183	Note 8
	Brine tank		882	1213	2205	

- Note 1: This is the pressure loss during normal operation. (With water flowing through one unit and other unit on standby, at standard flow rate, with a water temperature of 68°F)
- Note 2: This is the amount of salt per regeneration; settings are changeable.
- Note 3: This value expresses hardness removal capacity per unit, which increases and decreases depending on the set amount of regeneration salt.
- Note 4: Minimum pressure is the water pressure required for regeneration; maximum pressure is the maximum allowable water pressure of the unit.
- Note 5: This is the value for the specified pressure range when the amount of regenerating salt is set to default.
- Note 6: This is the value for the specified pressure range.
- Note 7: This is the value per unit.
- Note 8: This is the value per unit.

# measurement



	A	B	C	D	E	F
MW-150U	122"	54 3/8"	78 1/8"	25 5/8"	51 3/4"	55 1/8"
MW-250U	138"	57 1/8"	85 3/4"	30 7/8"	52 1/2"	55 1/8"
MW-400U	155 5/8"	60 1/8"	82 1/2"	42 1/8"	50 3/4"	55 1/8"



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# Miura

Miura Steam is Engineered for Greater Efficiency,  
 Lower Costs, and Reduced Environmental Impact.