

COLORMETRY

Alarm System for Water Hardness Leakage

CMU-124H



*COLORMETRY is a New Technology
that Detects Trace Water Hardness*

INTELLIGENT WATER MANAGER

CMU-124H

*Automatic monitoring system
to detect the slightest
water hardness leakage*

What is COLORMETRY (for Hardness)?

Water hardness is considered to be the most common factor in damaging a boiler. The hardness level (ionic concentration) of water inflow to a boiler has been checked manually by using chemical reagents as an indicators. The manual measurement of these conventional methods comprises such problems as; time consumption; personal error or deviation; and lack of continuity in monitoring hardness leakage. COLORMETRY solves all these problems by offering an automatic monitoring system for sample water collection, chemical reagent injection, mixing and evaluation.

SPECIAL FEATURES

1. Automatic monitoring system for hardness leakage

- Totally automatic control. simple and timesaving procedure.
- No routine calibration necessary.
- Set standard time period for monitor. (for example, everyday between 9:00~17:00)
- With remote control, initiate and terminate the monitoring system from outside the boiler room.
- Monitor hardness leakage at each set time (for example, every hour), which enables early detection of hardness leakage.

2. Detect the slightest hardness leakage

- Detect low levels of hardness leakage such as 1~2 mg/L by optically and electronically monitoring the color of sample water.

3. Easy to read digital screen

- The result of the evaluation for hardness level is shown on the digital screen (for example, 0-1 mg/L), which indicates the efficiency of water softener. Instant recognition of the stage of operation by digital signature.

4. Alarm buzzer for information function

- Buzzer alarms when any hardness leakage is detected. With the external alarm contact outlet, the alarm can be sent to a remote location.
- Equipped with self check/confirm function. In case the device faults, the main cause of the problem is shown in the same manner as the evaluation of hardness leakage on the digital screen.

5. Memory function for recording hardness leakage incidents

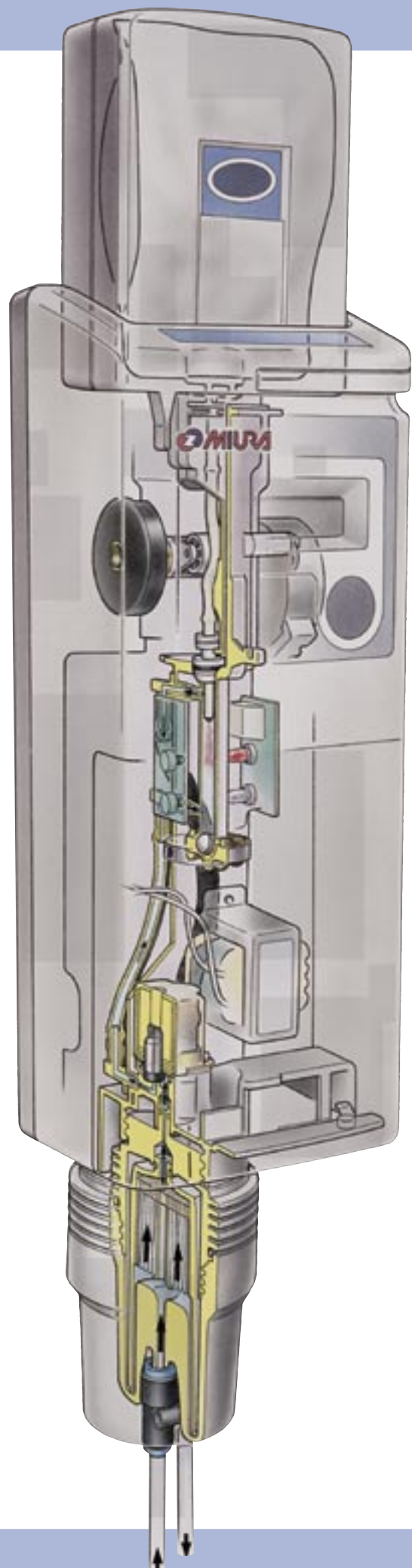
- Memorizes date, time, duration of hardness leakage and time of reinstatement for up to three consecutive incidents. Memory function assists in analysis of the causes of hardness leakage.

6. One-Touch Cartridge Replacement

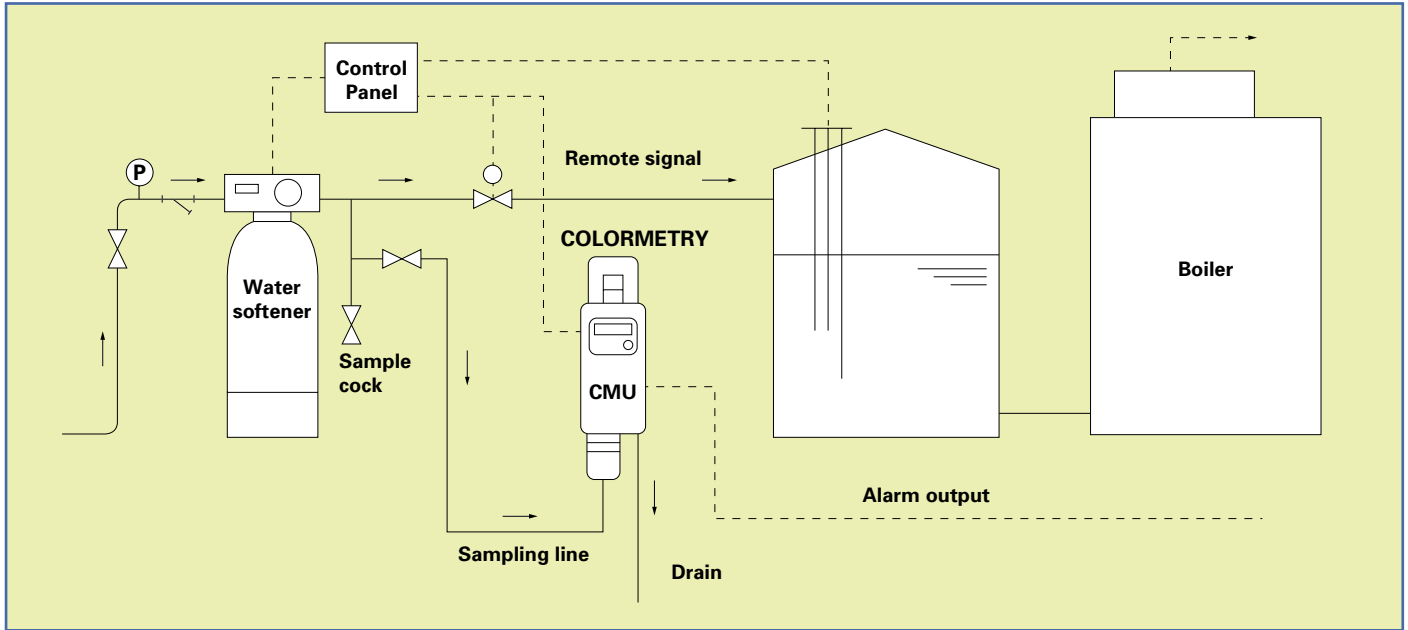
- The cartridge contains all the necessary chemical reagent and can be replaced with a one-touch, simple motion. In normal operation the cartridge does not have to be replaced for approximately 4 months. (Note 1)

7. Compact Design

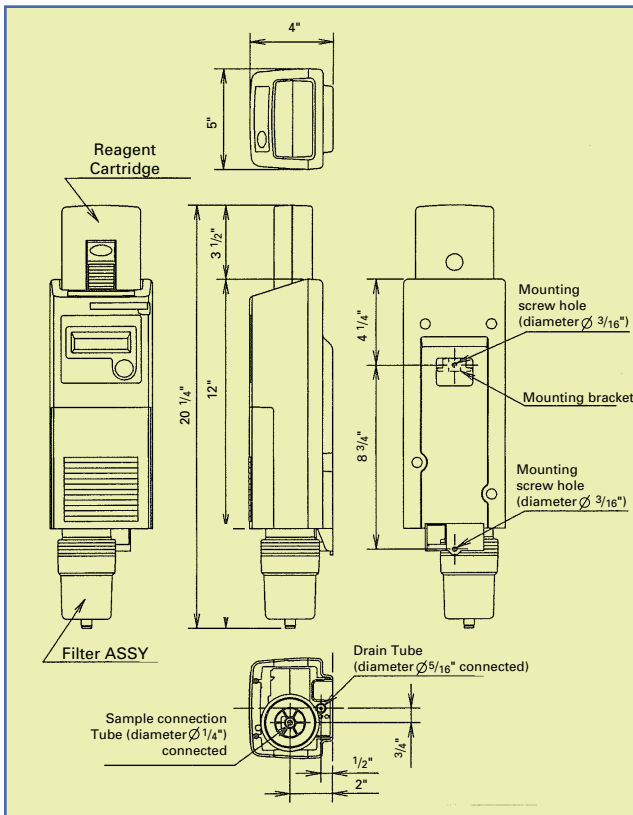
- Unique compact design automatic colorimeter device.
- Easy installation on the wall with mounting brackets attached to the device.
- One-touch connection of collection and drain lines to the device.



INSTALLATION FLOW EXAMPLE



MEASUREMENT



SPECIFICATION

Item	COLORMETRY CMU-124H	
Method	Colormetry analysis	
Monitor Range	0~1mg/L/1~2mg/L/over 2mg/L (3 settings)	
Alarm Set Point	over 1mg/L/over 2mg/L (Choose one)	
External Alarm Output	Alarm output capacity at contact C: AC 24V 1A, Dry Contact	
Operation Output	Open collector output capacity: DC 24V 70mA	
Raw Water Pressure	7~70psi	
Water Temperature	41~104F ^o	
Operation Temperature	41~122F ^o	
Humidity	20~90%RH (no condensation, no freezing)	
Power	AC24V 50/60Hz	
Power Consumption	20W	
Cartridge Replacement	Every 4 months (Note 1)	
Connector Size	Inlet	Ø1/4" (diameter)tube (Note 2)
	Outlet	Ø5/16" (diameter)tube (Note 2)
Installation	Indoor wall mount (Note 3)	
Configuration	5"(W) 4"(L) 20.6"(H)	
Weight	4.6lb	

Note 1: Use the supplied transformer to step down from the AC 120V to 24V and supply 24V to main unit.

Note 2: Even in standard case of hourly monitoring, Abnormally frequent detection of hardness may require more frequent replacement of the reagent cartridge than the normal 4 months.

Note 3: The inlet and outlet tubes are attached to the device.

Note 4: The mounting bracket is attached to the device.

Caution

- The instructions in the operation manual must be followed exactly.
- Even though COLORMETRY is a device for hardness leakage detection, excessive contamination other than the composition of hardness in sample water may affect the results. Therefore the sample water for the device has to be collected directly from outflow of the water softener. (at gauge cock)
- The shelf life for the cartridge is about one year after the date manufactured.
- Water quality affects the filter. Hard water shortens the filter life.

Actual Efficiency! - Real Savings!

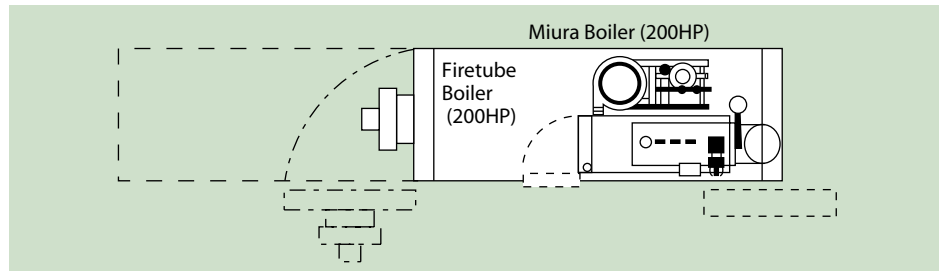
Within 5 minutes from cold start

Super small size, high capacity boiler made in North America with the latest Japanese technologies. This boiler has achieved large savings on fuel expenses where fuel and rentable lands are extremely high.



Save Space

- 1) Miura Boiler can save approximately **48%** in floor space compared to conventional firetubes. You can use the extra space to do anything you want. Increase boiler capacity without building a new boiler room or use the extra space for production.
- 2) Any Miura LX series (up to 200HP) can be installed through a standard 3' x 7' door. Save on building construction costs.

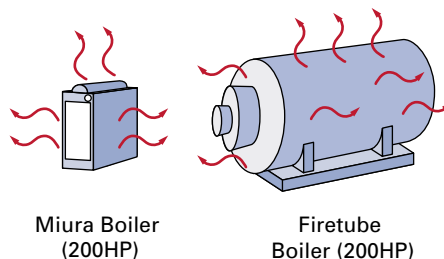


Save Thousands of Dollars on Fuel

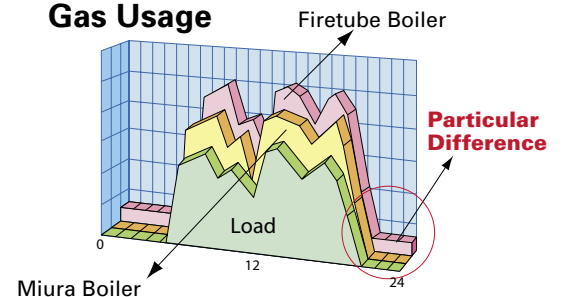
you can save an average of **15~25% on fuel costs** after switching to a Miura Boiler. This is due to **In-Service Efficiency**. Radiation loss from a boiler is constant, whether the boiler runs at 100% fire rate or 0% fire rate. The Miura, 200BHP, LX model is only about **25%** the surface area of a 200 BHP firetube. This translates to real savings in fuel cost.



Radiation Loss



Gas Usage



Low NOx Boiler

With NOx emission less than **20ppm** without add on devices such as FGR systems.



Visit our web page at www.miuraboiler.com

MIURA Boiler Co., LTD.

8 Copernicus Boulevard
Brantford, Ontario
N3P 1Y4 Canada

Phone: (519) 758-8111

Fax: (519) 758-5294

e-mail: canada@miuraboiler.com

MIURA Boiler, Inc. (L.A.)

1945 South Myrtle Av.
Monrovia, CA
91016-4854

Phone: (626) 305-6622

Fax: (626) 305-6624

e-mail: LA@miuraboiler.com

MIURA Boiler, Inc. (Chicago)

600 Northgate Parkway, Suite M
Wheeling, IL
60090-3201

Phone: (847) 465-0001

Fax: (847) 465-0011

e-mail: chicago@miuraboiler.com

Distributed By:

Printed in USA

December 02

Version 1

The descriptions and specifications are approximate.

Specifications subject to change to incorporate engineering advances. Manufacturer reserves the right to change specifications and dimensions at any time without liability for equipment previously or subsequently sold.