

# INSTANT-FLOW® MICRO WATER HEATER

## INSTALLATION AND OPERATION INSTRUCTIONS (STANDARD ACTIVATION MODELS)



### TABLE OF CONTENTS

Technical Information . . . . .	2
Dimensional Data . . . . .	3
Installation . . . . .	4-5
Specifications . . . . .	6
Troubleshooting . . . . .	7
Warranty Information . . . . .	8

### REQUIRED ITEMS FOR INSTALLATION NOT SUPPLIED

- ✂ Electrical junction supply box
- ✂ Electrical supply conduit
- ✂ Electrical supply wire
- ✂ Dual outlet angle stop
- ✂ 3/8" flex hose or 3/8" O.D. Tubing (2)
- ✂ Carpenters level
- ✂ Flat head screwdriver
- ✂ Phillip head screwdriver

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COMPLIES WITH  
**STANDARDS**



CALGreen

Member of  
**MORRIS GROUP**  
INTERNATIONAL

**CHRONOMITE**  
Instantaneous  
Water Heaters

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# INSTANT-FLOW® MICRO SPECIFICATIONS



Before installation of heater, review electrical requirements needed for model of heater selected.

INCOMING WATER TEMPERATURE INCREASE					
MODEL	VOLTAGE	ACTIVATION	1.0 GPM [3.8 LPM]	1.5 GPM [5.7 LPM]	2.0 GPM [7.6 LPM]
M-30	208	0.65 GPM [2.5 LPM]	43°F [24°C]	28°F [16°C]	21°F [12°C]
M-30	220-240	0.65 GPM [2.5 LPM]	49°F [27°C]	33°F [18°C]	25°F [14°C]
M-30	277	0.65 GPM [2.5 LPM]	57°F [32°C]	38°F [21°C]	28°F [16°C]
M-40	208	0.65 GPM [2.5 LPM]	57°F [32°C]	38°F [21°C]	28°F [16°C]
M-40	220-240	0.65 GPM [2.5 LPM]	66°F [37°C]	44°F [24°C]	33°F [18°C]
M-40	277	0.65 GPM [2.5 LPM]	76°F [42°C]	50°F [28°C]	38°F [21°C]
M-50	220-240	0.65 GPM [2.5 LPM]	79°F [44°C]	52°F [29°C]	39°F [22°C]

## MICROPROCESSOR LIMITS TEMPERATURE INCREASE ACCORDING TO FACTORY SET TEMPERATURE.

TABLE 1											
MODEL	WATTAGE	VOLTAGE	AMPS	BREAKER SIZE		MODEL	WATTAGE	VOLTAGE	AMPS	BREAKER SIZE	
				INTERMITTENT DUTY	CONTINUOUS DUTY					INTERMITTENT DUTY	CONTINUOUS DUTY
M-30	6240	208	30	30	40	M-40	9600	220-240	40	40	50
M-30	7200	220-240	30	30	40	M-40	11080	277	40	40	50
M-30	8310	277	30	30	40	M-50	11520	220-240	50	50	60
M-40	8320	208	40	40	50						

**NOTE: BEFORE INSTALLATION, COMPARE ELECTRICAL NEEDED FOR THE MODEL OF HEATER SELECTED.**

### INSTANT-FLOW® MICRO SPECIFICATIONS:

**DIMENSIONS:** 6-1/4" [158 MM] X 9-5/8" [259 MM] X 2-3/4" [72 MM]  
**WEIGHT:** 5 LBS. [2.27 KG]  
**MATERIALS:** ALUMINUM HOUSING, CELCON WATERWAYS, NICHROME PARTS  
**COLOR:** WHITE  
**PIPE FITTINGS:** 3/8" COMPRESSION  
**OPERATING PRESSURE RATING:** 25 PSI [172 KPA] MINIMUM, 80 PSI [551.6 KPA] MAXIMUM  
**MAXIMUM PRESSURE RATING:** (150 PSI [1034.2 KPA]) NO PRESSURE RELIEF VALVE NEEDED UNLESS REQUIRED BY LOCAL CODES.  
**MAXIMUM OPERATING TEMP:** 160°F [71°C]  
**MINIMUM OPERATING FLOW RATE:** 0.65 GPM [2.5 LPM]  
**LISTINGS:** UL, HUD, IAPMO, UPC

### FACTORY SET TEMPERATURES:

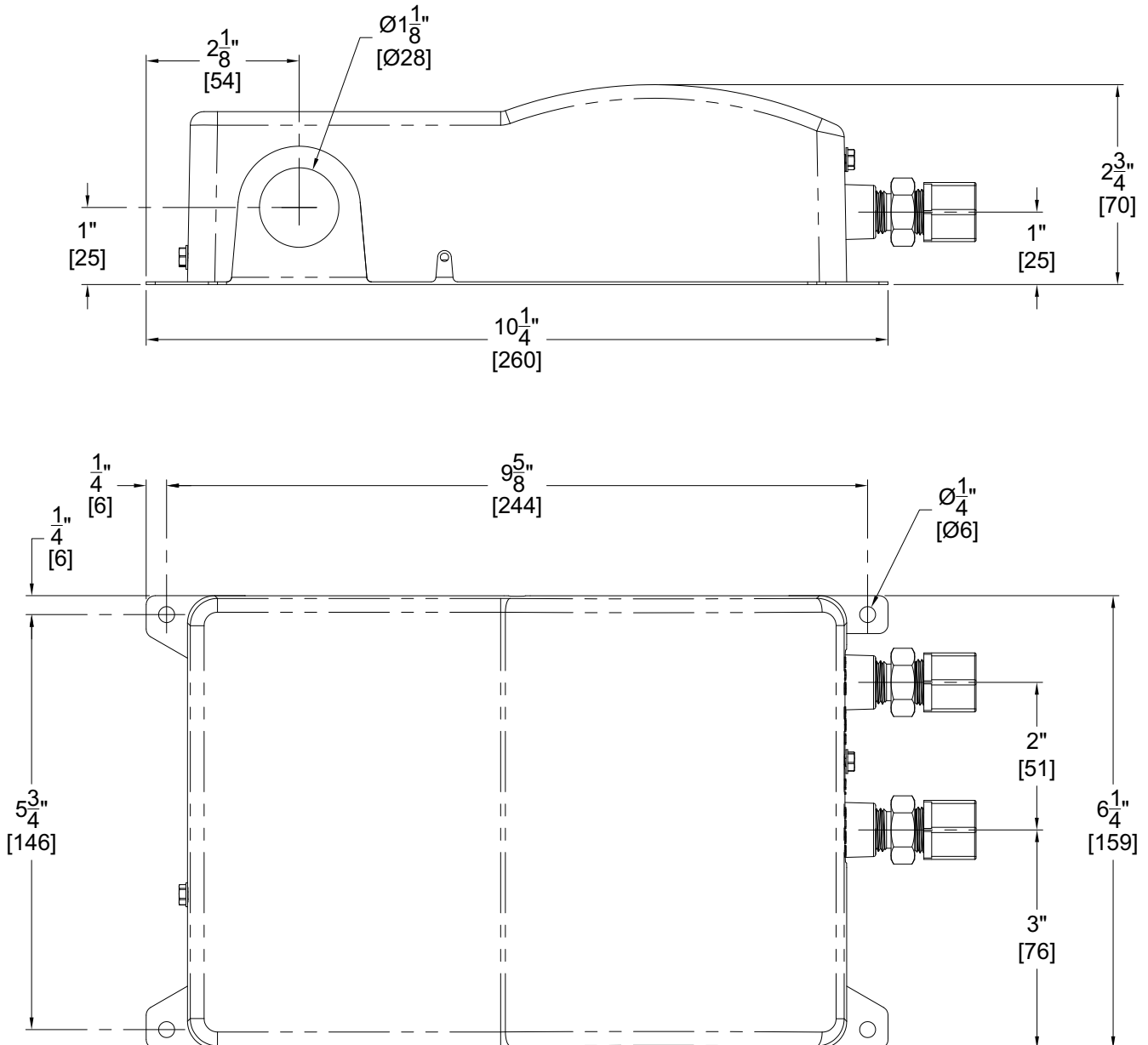
104°F [40°C]  
 110°F [43.3°C]  
 120°F [47.9°C]

Other temperature settings are available upon request up to 160°F [71°C]. Temperature settings are not field adjustable. 110°F [43.3°C] / 120°F [47.9°C] settings are recommended with cold water mixing faucets.

### HOW INSTANT-FLOW® MICRO WORKS

The engineered plastic case houses a series of ingeniously designed coils that instantly heat water as it flows through the vessel. A unique power switch automatically applies electrical current to the coils when hot water is requested. The electrical current is not applied when the water is not in use. The microprocessor is internally preset at the factory to maintain a constant output temperature with varying flow rates.

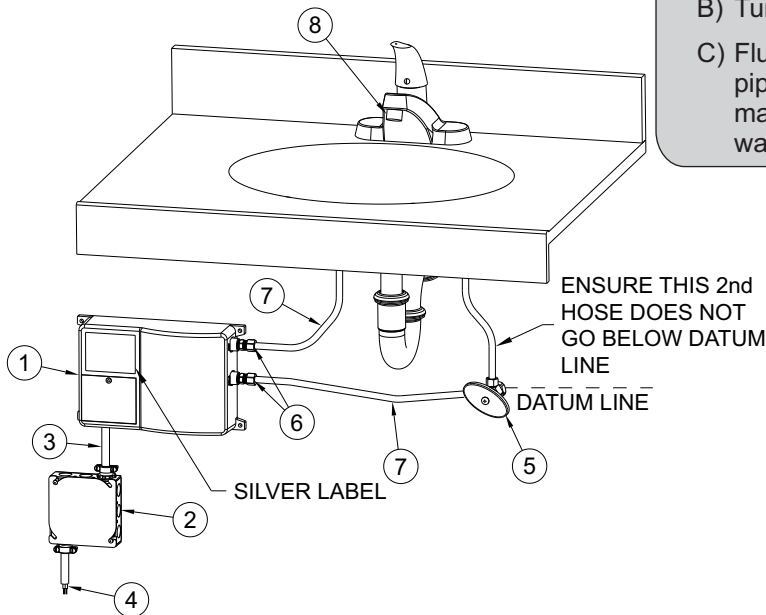
# INSTANT-FLOW® MICRO DIMENSIONAL DATA



# INSTANT-FLOW® MICRO INSTALLATION



- A) Turn off the circuit breaker to avoid dangerous electrical shocks.
- B) Turn off the water supply.
- C) Flush supply line of all foreign material such as pipe dope, pipe chips, solder, sand, etc. before making up supply connections after working on water piping.



**FIGURE 1 INSTALLATION LAYOUT**

- ① Chronomite Instant-Flow® MICRO  
See page 2 for selection
- ② Electrical junction supply box (optional)
- ③ Electrical supply conduit
- ④ Electrical supply wire
- ⑤ Dual outlet stop 3/8" Comp outlet connections
- ⑥ Fittings (supplied) 3/8" Comp x 1/4" NPT
- ⑦ Faucet supply inlet hoses 3/8" NPS
- ⑧ Flow control A212 (supplied) Dual threads 15/16 Male and 55/64 Female

## **HEATER INSTALLATION:**

1. Remove cover off of water heater. Attach conduit to the conduit connection punching. Then feed wires. Do not attach wiring.
2. Mount unit horizontally against the wall so the silver label reads correctly (See Figure 1). Use level to ensure unit is level and mount with four screws through the flanges located on each corner using molly anchors or fasteners.
3. Connect plumbing. Use hose with 3/8" compression at cold water inlet and hot water outlet to 3/8" compression faucet inlet connections (See Figure 1).
4. Run water through the unit to expel all air bubbles. Cycle hot side of faucet 10 times to assist in removing air bubbles. Check for leaks at all fitting joints. If no leaks proceed to electrical installation.

**CAUTION: HEATING ELEMENTS MAY BURN OUT IF UNIT IS NOT MOUNTED HORIZONTALLY**

## **ELECTRICAL INSTALLATION:**

1. Connect power supply wires appropriately sized and protected by circuit breaker to the input terminals on the heater (hard wired) as shown in the Figure 2 wiring diagram.
2. Refer to Table 1 above on Page 2 for the voltage and amperage of the supply power.
3. Ensure each wire L2/N, G, L1 are connected to the respective terminals.
4. Ensure water inlet valve to heater is open.
5. Turn on circuit breaker. Turn on water flow to exceed activation point listed in chart 2. The unit is almost ready for use. Shut off circuit breaker.
6. Check for leaks at all fitting joints and also inside heater.
7. Install cover. Turn on circuit breaker. Unit is now ready for use.
8. Local plumbing and electrical codes must be followed in this installation of water heater and the accessories.

## **NOTES:**

1. Failure to comply with code requirements voids the warranty.
2. Failure to install faucet flow control as shown on (Figure 3 page 6) may cause unsatisfactory operation of the heater.

# INSTANT-FLOW® MICRO INSTALLATION cont.

## **! IMPORTANT**

The manufacturer of this water heater will not be liable for any damages due to the failure to follow these installation and operation instructions.

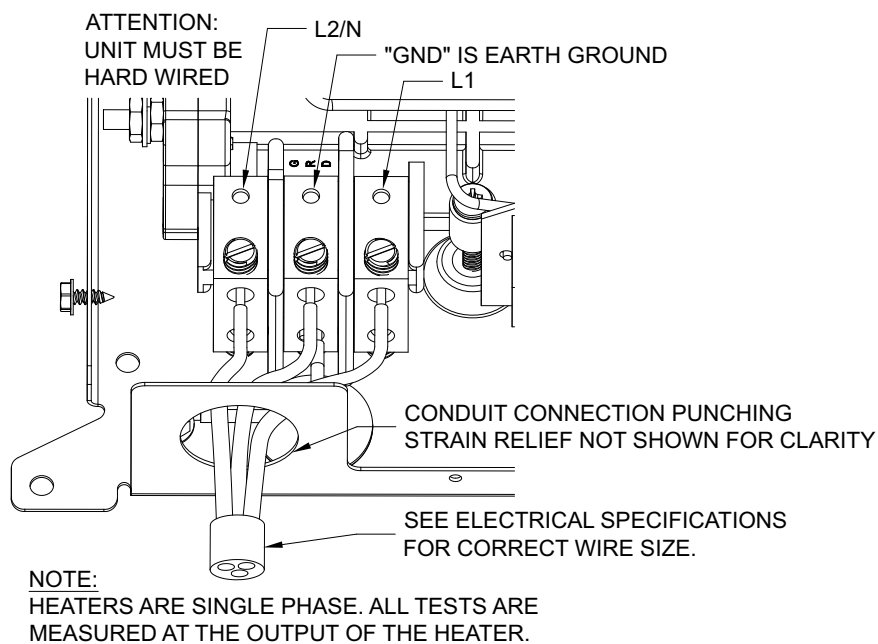


FIGURE 2 WIRING CONNECTION

## **! NOTICE**

Air in the heater may cause the elements to burn out. If the water lines are drained, allowing air into the heater, be sure to follow the following start-up procedure:

### **START UP PROCEDURE:**

1. Turn off electrical supply - open circuit breaker
2. Turn on water supply. Cycle hot side of faucet 10 times to assist in removing air bubbles.
3. Expel all air from lines and heater. Check for leaks at all fittings, joints and at water heater.
4. Turn on electrical power supply - close circuit breaker.

# INSTANT-FLOW® MICRO SPECIFICATIONS

## OPERATION INSTRUCTIONS:

- Turn the hot water fixture to activate the flow switch. The flow switch activates at 0.65 gallons per minute (GPM) [2.5 LPM] and deactivates at 0.50 gallons per minute (GPM) [1.9 LPM].
- If you increase the flow rate of the water the water temperature will become cooler. Cold water can always be mixed just as with a conventional system if using a two handle faucet. Select the appropriate flow control.
- Once you decrease the hot water flow rate to 0.50 GPM [1.9 LPM] the unit will deactivate. It is not advisable to operate the heater at 0.50 GPM [1.9 LPM] hot water flow rate.

## NOTE:

1. Periodically inspect (4 times a year) the supply lines, connections and heater for any moisture, corrosion or other potential preventable problems.
2. Prior to shutting off water valves for servicing, winterization, etc, always disconnect power from unit 1st.
3. Unit is intended to heat water only, and does not provide a means of cooling if inlet temperature exceeds set point temperature of heater.

## OPTIONS / FLOW CONTROLS

You may want to install the supplied flow control in your design. This high-quality control makes the water heating system operate more effectively, as well as save water. the supplied 2.0 GPM [7.6 LPM] flow control assures that the flow rate will not exceed 2 GPM [7.6 LPM]. however, less water can always be used. Consumer can mix the cold water as with a conventional system.

## LOW FLOW RATE SYSTEM

For applications where 0.5 GPM [1.9 LPM] flow rate is desirable and / or where only 110 VAC is available, see our low flow rate system outlined in installation #927

## FLOW CONTROL SPECIFICATIONS

**MATERIAL:** Chrome plated, brass housing.  
**THREADING:** MODEL 2.2 has DUAL threads 15/16" male  
 55/64" female

**NOTE:** Flow controls are adaptable to other thread configurations.  
 Please call factory if adapter or vandal proof model is needed.



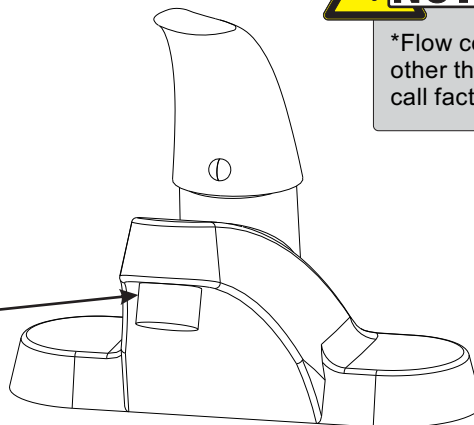
**NOTICE**


\*Flow controls are adaptable to other thread configurations. Please call factory if adapter is needed.

## FLOW CONTROL MODELS

Model	GPM	LPM
A212	2.0	7.6

**FIGURE 2**  
 FLOW CONTROL INSTALLATION  
 (See Parts List #8)





**IMPORTANT**

Periodically inspect (4 times a year) the supply lines, connections and heater for any moisture, corrosion or other potential preventable problems.

# INSTANT-FLOW<sup>®</sup> MICRO TROUBLESHOOTING GUIDE

## **TROUBLESHOOTING GUIDE**

Your Instant-Flow Micro water heater has no internal user serviceable parts and should be returned to the factory for repair or replacement. Please contact factory for return authorization. If after following the Installation Instructions, your Instant-Flow MICRO does not heat water in accordance with this literature, please check the following:

1. **Low Power** – Verify your voltage by using a voltage meter. You should obtain your reading off the two outside terminals located on the heater. Compare the reading against the voltage specified in the Installation Instructions. The center terminal is always the earth ground. The hot and neutral legs, in the case of 110 V heaters, are attached on the two outside terminals.
2. **Low Voltage** – The percentage of reduction in voltage will result in a like reduction in temperature increase.
3. **Check Low Amperage Draw** – Check amperage draw using an Amperage Probe. Please compare your results with the Installation Instructions (Table 1) to determine if the heater is operating correctly.
4. **Length of Pipe** - Length of pipe run will affect the temperature increase. The heater should be mounted no more than 12-18 inches [ 305mm-457mm] from the point of use.
5. **Check shut off valve.** Check shut-off valve and make sure valve is open 100% to allow full water pressure and flow to the heater.
6. **Check Flow Rate** – Controlling flow rate is essential to insure proper temperature increase. In the case of the low flow rate heater it is mandatory that the flow control be attached to the end of the faucet. Check your flow rate to insure proper operation of the heater. Standard Flow Rate Models require 0.65 GPM (2.5 LPM) to activate.
7. **Installation** – Heater must be installed in a horizontal position. The silver label will then be located in the upper left corner as you face the heater.
8. **Water Supply** – Do not throttle water supply to inlet of Instant-Flow MICRO. Operating conditions shall not exceed specification on page 2.
9. **Freezing** – Instant-Flow MICRO heaters must be drained and stored if installed in a location subject to freezing. Disconnect the inlet/outlet compression fittings and blow air through one side of the heater to assist draining. Failure to completely remove water from the unit will result in freezing and cracking.
10. **Problems?**- Call our toll-free hotline 800-447-4962 or 626-937-4270

## **WARNING**

- This water heater is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the water heater by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the water heater.
- The water resistivity must not be less than 1100 OHM-CM.
- The water heater must be earth grounded.
- The water heater is not to be installed in locations where freezing can occur.



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## WARRANTY INFORMATION

Your Instant-Flow Micro water heater has been engineered and built to the highest quality standards and is backed by a full, factory warranty. Every Instant-Flow MICRO water heater is guaranteed to be free from defects in material and workmanship for a period of (1) year from the date of purchase. The above warranty applies to original purchaser if unit is installed per Chronomite Laboratories, Inc.'s Installation Instructions. Chronomite Laboratories, Inc. will repair or exchange parts at the factory at no cost. This warranty is limited to repairing or replacing said products which prove to be defective upon factory inspection, F.O.B. City of Industry, California.

### EXCLUSION OF COVERAGE FROM THIS LIMITED WARRANTY:

1. Manufacturer is not liable under this limited warranty or otherwise if the water heater has not been installed or maintained in accordance with manufacturer's printed instructions or installed with improper installation materials. In addition, the water heater or any of its component parts have been subject to misuse, neglect, alteration or accident and the water heater has not been installed in accordance with the applicable local plumbing and or building codes and/or regulations.
2. Manufacturer is not liable for any water damage or other damages arising directly or indirectly from/and defect in the Chronomite tankless water heater component part(s) or from its use.
3. Manufacturer is not liable under this warranty if the water heater has not been continuously supplied with potable water or the water inlet temperature is above manufacturer recommended maximum temperature. In addition, water heater experiences any water pressure or flow interruptions, normal operation inlet water pressure is outside of the published specification (UPC 2009) for the heater, or exposed to any condition that causes the heater to turn on before the air is purged from the heater also known as "dry fire."
4. Manufacturer is not liable if the water heater has been exposed to conditions resulting from floods, earthquakes, winds, fire, freezing, lightning or circumstances beyond the manufacturer's control or the water heater has been removed from its original installation or the water heater has been used for other than the intended purpose.
5. If violation occurs from the stated exclusions of coverage from this limited warranty; owner, and not manufacturer or its agent/representative, is liable for and shall pay for all field charges for labor or other expenses incurred in the removal and/or repair of the water heater or any expense incurred by owner in order to repair the water heater.