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## Installation and Operating Instructions

### NSF 372 Certified

Thank you for choosing the Aqua-Flash Instant Hot Water Recirculation System by AquaMotion, Inc. Please read and follow these step by step instructions to ensure that the system operates properly and reliably. Since the cold water supply line will be used to return the cooling hot water to the hot water heater you will experience some warm water from the cold water line. Opening the cold water faucet fully will flush the warm water from the cold line in a short period of time.

**Warning:** This is not an anti-scald valve.

### Inspection

Inspect the system components to ensure no damage has occurred to them during shipping. Avoid dropping the circulator which may get damaged if dropped.

The Aqua-Flash includes:

AM3 AquaMotion Circulator with a built-in timer and a 10 Ft line cord.

AquaMotion Flash By-Pass Valve

3/8" x 1/2" x 3/8" Compression Tee

3/4" NPT Female Tail Piece with 1 1/2" Union Nut and Gasket

12" Long 1/2" x 1/2" Flex Hose

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### Tools Needed:

5/8" open end wrench

15/16" open end wrench or an adjustable crescent wrench that opens to 1"

Pipe wrench that opens to 2"

### Limits

Maximum water temperature 110°C/230°F

Maximum Pressure Rating 125 psi

### Pump Installation

**Warning:** For Indoor Use Only

**Warning:** Do not plug the pump in until the pump installed is complete.

- 1) Shut off the cold water supply to the water heater. This may be on the cold supply line above the tank or located where the water line enters the residence.
- 2) Open a hot water faucet in the residence and allow the water to run until it stops. Leave the faucet open until the installation has been completed.
- 3) Remove the hot water line from the hot water heater at the threaded outlet pipe at the top of the tank.
- 4) Place the large union nut over the threaded outlet pipe before threading the 3/4" NPT Tail Piece onto the threaded outlet pipe. **Fig. 1.**



**Fig. 1.**



**Fig. 2.**

- 5) Place the union gasket on the tail piece and thread the large union nut onto the circulator. **Fig. 2.**
- 6) Reconnect the hot water line that was removed in step 3 to the circulator. **Fig. 3.** Use pipe dope or Teflon Tape to seal the threads. If flex hoses are used at this connection, then no pipe dope or Teflon Tape are required.



Fig. 3.



Fig. 4.

- 7) Reopen the cold water supply valve to the hot water heater. Allow the water to run at the faucet to purge the air from the lines. Close the faucet.
- 8) Plug in the circulator into a properly grounded 115V outlet.

### Valve Installation

**Note:** Pipe dope and Teflon tape are not required for any of the valve threads.

The valve is normally installed at the faucet that is furthest away from the hot water heater. If there are separate hot water branches in the residence, additional valves may be required.

- 1) Close both the hot and cold angle stop valves under the sink. Fig. 4.
- 2) Open both the hot and cold water faucets to relieve the water pressure.
- 3) Disconnect the riser pipes or hoses from the angle stop valves. Place a pan or rag below the connections to catch any water that may leak from the risers. Fig. 5.
- 4) Attach the cold water riser to the 3/8" thread on the tee.
- 5) Install the tee from the kit to the cold water angle stop valve using the 3/8" nut on the tee. Fig. 6.
- 6) Attach the 1/2" hose from the kit to the 1/2" connection on the tee. Fig. 7.
- 7) Attach the Flash valve to the hot water angle stop valve using the 3/8" nut on the Flash valve.
- 8) Attach the hot water riser to the 3/8" thread on the Flash valve.
- 9) Attach the 1/2" hose from the kit to the 1/2" connection on the Flash valve. Fig. 8.
- 10) Open the hot and cold Close angle to stop valves and purge air from the lines using the faucets.

**Note:** The spacing dimensions between angle stops vary. Position the valve and tee hose connections to suit your system.



Fig. 5.



Fig. 6.



Fig. 7.

### Timer Operation

The timer will turn the circulator on and off based on the times when hot water is needed. This may only be in the morning or mornings and evenings depending on the schedules of the residence.



Fig. 8.

### Mechanical Timer Operation

The timer will turn the circulator on and off based the times when hot is needed. This may only be in the morning and evenings depending on the schedules of the residence.

### Setting Instructions

- 1) To set the current time, rotate the outer ring until the arrow head lines up with the correct time. This is a 24-hour clock so 1 to 12 on the clock indicates 1am to noon and 13 to 24 on the clock indicates 1pm to midnight.
- 2) To set the time that the pump will operate, move all tabs outward during the time period. Example: To set on at 7:00am and OFF at 10:00am, move all of the tabs between 7 and 10 to outward position.
- 3) By following the instructions in step 2 multiple on-off cycles can be set.
- 4) The override switch has 3 positions The "I" indicates the pump will run continuously (24 hours a day). The position next to the clock symbol indicates the pump will follow the settings of the tabs. The "O" indicates the pump is off (not running).

**For Digital Timer models refer to the attached Grasslin Model FM1D14 Instructions.**