

Instruction Sheet: Aqua-Flash, APCOM Model #FT1 Instant Hot Water Recirculation System

Installation and Operating Instructions NSF 372 Certified

Thank you for choosing the APCOM Model #FT1 Instant Hot Water Recirculation System. 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. After the Flash valve has been installed, system will need to cycle through from hot to cool several times or overnight before normal operation is established.

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.

ELECTRICAL SHOCK RISK

Contact with the electrical parts can result in severe injury or death from electrical shock. To reduce the risk of shock, follow these instructions:

- Turn off power to your water heater at the circuit breaker before installing.
- Turn off power to water heater and recirculation system before servicing.
- Use a non-contact circuit tester to confirm that power is off before working on or near any electrical parts.
- Do not plug in circulation pump until installation is complete and insure that it is plugged into a grounding type receptacle.
- Use only in proper applications and do not install outdoors or in pool or marine areas.
- Observe all applicable electric and plumbing codes.

SCALDING RISK

- Both commercial and residential water heaters can make water hot enough to cause severe burns instantly, resulting in severe injury or death.
- Higher temperatures increase the risk of scalding, but even at 120°F, hot water can scald.
- Always feel water before bathing or showering. Water heaters can generate water hotter than its temperature setting in certain circumstances.
- To reduce the risk of scalding, Thermostatic Mixing Valves (temperature limiting valves) should be installed at each point-of-use. These valves automatically mix hot and cold water to limit the temperature at the tap. Mixing valves are available from your local plumbing supplier. Follow manufacturer's instructions for installation and adjustment of the valves.
- THIS PRODUCT IS NOT AN ANTI-SCALD DEVICE

NOTICE: This circulator has been evaluated for use with water only. The suitability of this circulator for use with liquids other than water is the responsibility of the end user.

The APCOM Model #FT1 includes:

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

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.**
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 thread sealant or Teflon Tape to seal the threads. If flex hoses are used at this connection, then no thread sealant or Teflon Tape are required.
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.

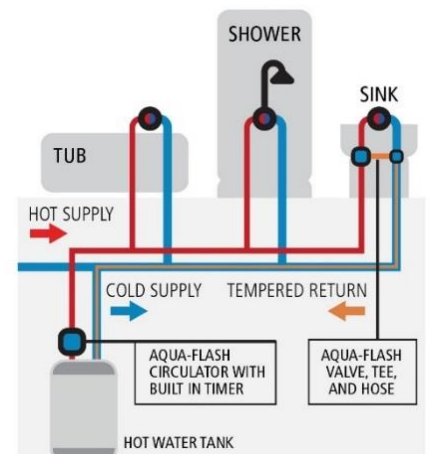


Fig. 1



Fig. 2



Fig. 3

Instruction Sheet: Aqua-Flash, APCOM Model #FT1 Instant Hot Water Recirculation System

Valve Installation

Note: Thread sealant 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.

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.

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).



Fig. 4

Fig. 5



Fig. 6

Fig. 7



Fig. 8

Mechanical 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 mornings 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 the tabs outward during the time period. **Fig. 1.** 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. **Fig. 2.** 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).



Fig. 1



Fig. 2