

**Instruction Sheet**  
**Aqua – On Demand**  
**Model AMH1K-7ODRN**  
**For Tank/Tankless Hot Water Heaters with Single Pipe Systems**

**APPLICATION**

The Aqua-On Demand Kit is an NSF372 approved circulator and under sink valve for use on home systems that do not have dedicated hot water return lines. With the kit installed water savings can be as great as 12,000-15,000 gallons per year in a home with 4-5 taps.

The valve installs under the furthest fixture from the tankless hot water heater. The valve works in conjunction with the circulator to supply hot water. When hot water is called for with an On-Demand AMK-WB device the circulator forces the cooled water in the hot water line into the cold water supply line, at the fixture where the under sink valve is installed, which returns the water to the hot water heater. As hotter water reaches the valve under the fixture the valve closes until a 95°F temperature is reached at which point the valve automatically adjusts to maintain this temperature as long as the circulator is operating. The AMK-WB receiver that the circulator is plugged into comes factory set to run the circulator for 5 min. The receiver can be reprogrammed (see On-Demand Operating Instructions) for longer run times if desired. When the circulator is activated by the AMK-WB device hot water from the hot water heater will begin to flow to the fixture. Due to varying pipe lengths, pipe diameters and pipe types in homes the time required for hot water to reach the fixture will vary from home to home. A rule of thumb is that hot water will reach the sink in the same amount of time as running hot water at the fixture required.

**General Safety**

**Read and follow the general safety instructions.**

Maintain safety labels, replace missing or damaged labels.

- 1) Follow all local and national plumbing, building and electrical codes when installing the pump and valve.
- 2) **“Warning” Hazardous Pressure.** Do not use this pump with inlet pressure greater than 80 psi. If not already in the plumbing system, install a pressure relief valve rated at 125 psi. If local code requires installation of a pressure relief valve rated at a pressure less than 125 psi, follow the code requirements.
- 3) **Never run the pump dry.** This can damage internal parts of the pump or cause the pump to overheat and void the warranty.
- 4) **“Warning” Risk of fire and explosion.** To avoid risk of fire and explosion, **Pump Water Only** with this pump. Do not pump flammable liquids or chemicals. Do not use the pump near gas pilot lights or where chemical or gas fumes are present. Use of an electric pump with liquids other than water or in an atmosphere containing chemical or gas fumes may ignite those liquids or gases and cause injury or death due to explosion or fire.
- 5) **“Caution” Do not touch an operating motor.** Modern motors operate at high temperatures. To avoid burns when servicing the pump, allow it to cool for 20 minutes after shutting down before handling.
- 6) **“Warning” Risk of electric shock.** This pump has not been investigated for use in swimming pool or marine areas.

**Electrical Safety**

**“Warning” Hazardous Voltage. Can shock, burn or cause death. Shut power off to the pump prior to doing any work on the pump or motor.**

**Do not allow water to come in contact with the motor, pump, internal wiring or power cords.**

**Plug the pump into a GFCI protected outlet.**

**General Information**

- Pump only clear water
- The water supply line to the pump should be 1/2” or larger
- Mount the pump securely and level to minimize movement and vibration

**SYSTEM REQUIREMENTS**

Minimum water pressure 20 psi Maximum water pressure 125 psi Maximum water temperature 150F (65C)

**SHIPMENT INSPECTION**

Examine all components carefully to ensure they are all present and they have not been damaged in transit to you. Care should be taken to avoid dropping or mishandling the circulator. Damage to the circulator may occur if it is dropped.

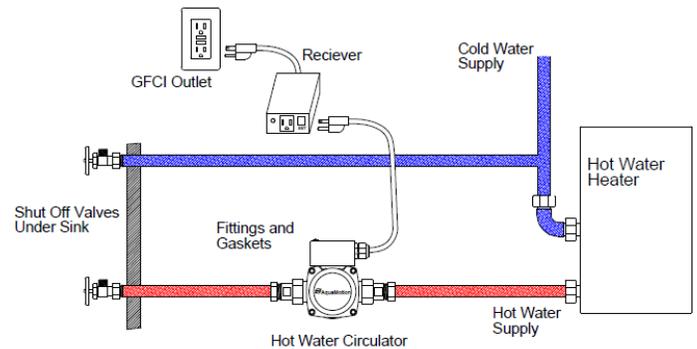
## KIT CONTENTS

The AMH1K-7ODRN kit includes:

- (1) Pump, model AM7-SUV1L with pre-wired 10-foot flexible cord.
- (1) UK75T 3/4" NPT male Fitting Kit
- (1) AMK-ODR Under Sink Valve Kit
- (1) AMK-WB: Wireless Button and Receiver Kit

## REQUIRED TOOLS

- 2 - Pipe wrenches which open to at least 1 1/2"
- 2 - Adjustable wrench which opens to at least 1 1/2"
- 1 - Teflon tape or pipe dope for flange connection



## INSTALLATION INSTRUCTIONS

1. Turn off the power to your hot water heater at the circuit breaker.
2. Close the valve on the cold water supply line to the hot water heater. If you do not have a valve on the cold water supply line, close the main water valve to the house.
3. Attach a hose to the drain valve on your heater and run the hose to a drain or into bucket.
4. Open the drain valve and allow the system to drain down. Note: Opening the faucet at a sink may speed the draining process.

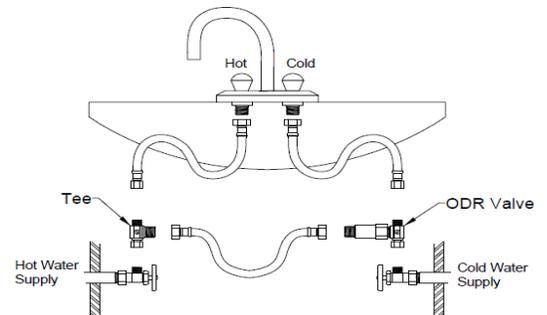
### Pump Installation

5. Separate the piping where you will be installing the circulator into the hot water outlet piping of your hot water heater.
6. Apply pipe dope or Teflon tape to the fixture to the male threads of one of the fittings. Insert the fitting through the union nut fitting supplied in the kit and install onto the hot water supply line using an appropriate adapter from your pipe type to 3/4" female NPT.
7. Allow a 5-inch space for the circulator to be installed between the fittings. Apply pipe dope or Teflon tape to the threads of the remaining fittings and install the fitting onto the other separated end of the hot water line from the hot water heater using an appropriate adapter.

8. Install the pump between the fittings with the gaskets positioned between the pump fittings and the pump unions. Tighten the union nuts.

### Valve Installation

9. Close the shut off valves under the sink.
10. Separate the hot faucet hose from the hot shut off valve and install the tee fitting from the kit onto the hot shut off valve.
11. Attach the hot faucet hose to the tee.
12. Attach the hose from the kit to the tee.
13. Separate the hot faucet hose from the hot shut off valve and install the ODR valve onto the cold shut off valve.
14. Attach the cold faucet hose to the ODR valve.
15. Attach the other end of the hose from the kit to the ODR Valve.



### Powering up

16. Open the hot and cold shutoff valves. If a leak occurs shut off the water supply valve, drain the system and repair the leak.
17. Run the hot and cold faucets to purge air from the system.
18. Plug in the On Demand receiver into a grounded outlet.
19. Plug-in the pump into the receiver.

**Note:** When the hot water reaches the ODR Valve, the valve will maintain the temperature at the sink at approximately 95°F when the pump is operating.



### ON DEMAND



AMK-WB  
Wireless Button and Receiver