AutoHot®

# UNDER SINK KIT

## ON-DEMAND RECIRCULATION SYSTEM

- At the farthest point under a sink -

## POWER OUTLET REQUIRED UNDER THE SINK

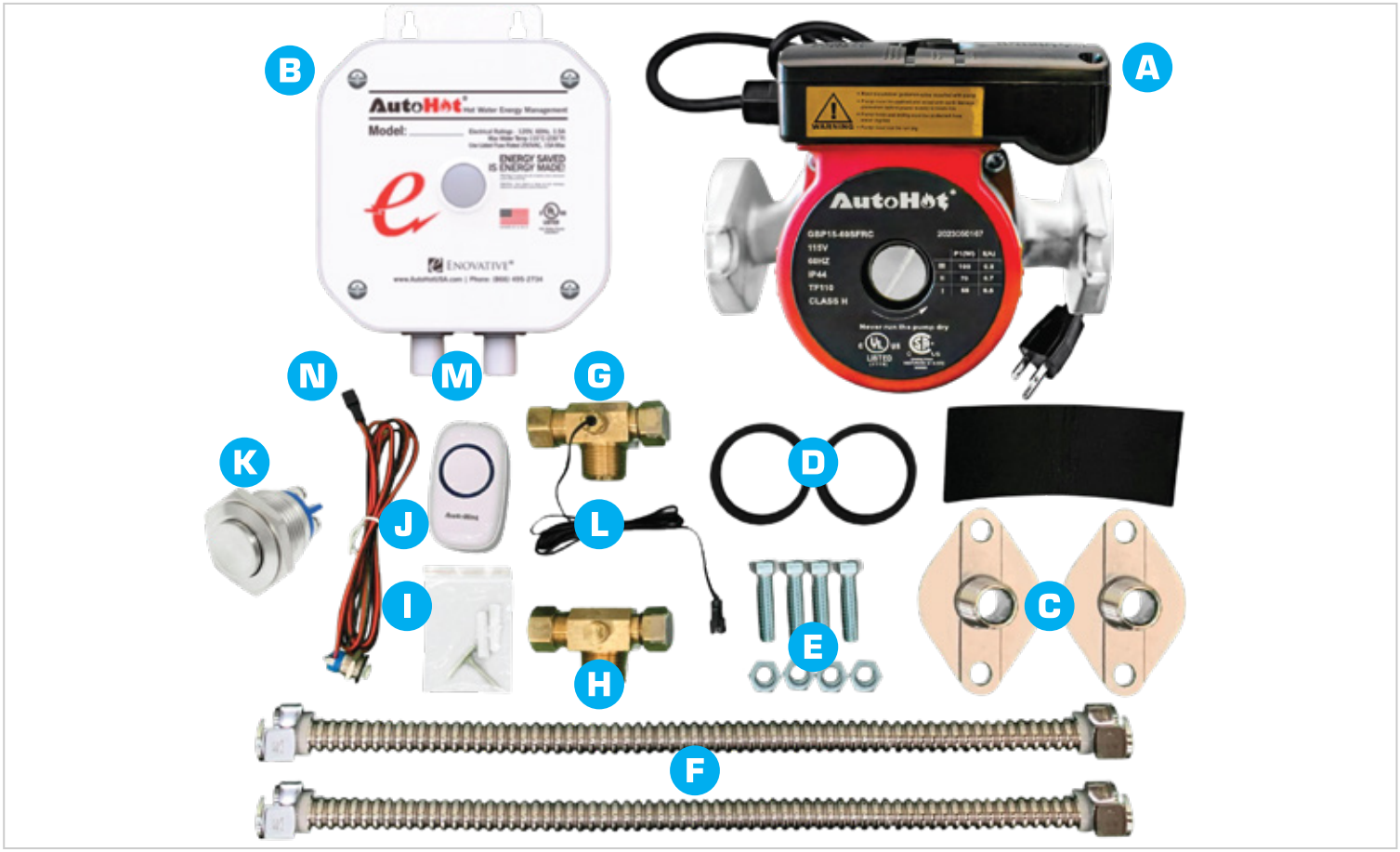
AutoHot®

# INSTALLATION & OPERATION INSTRUCTIONS 01

## RETROFIT APPLICATIONS – NO RETURN LINE, WITH POWER OUTLET UNDER THE SINK

### SYSTEM OVERVIEW

The **AutoHot**® Under Sink Kit (USK) is designed for retrofit installations in homes without a dedicated return line. It enables on-demand hot water circulation by temporarily using the existing cold water line as a return path. The system is typically installed under the sink at the fixture farthest from the water heater (often the master bathroom).




### Included in the Under Sink Kit (USK)

- **A** 1 × Recirculation pump (flanged)
- **B** 1 × AutoHot controller
- **C** 2 × Pump flanges ([size])
- **D** 2 × Flange gaskets
- **E** 4 × Nuts and bolts (for securing pump flanges)
- **F** 2 × Flexible hoses ([size], 18")
- **G** 1 × Tee with integrated temperature sensor and O-ring
- **H** 1 × Tee with plug and O-ring
- **I** 2 × Plastic anchors and screws (for mounting controller)
- **J** 1 × Wireless push button
- **K** 1 × Wired push button
- **L** 1 × Temperature sensor (screwed into tee)
- **M** Pre-installed controller harnesses:
  - Red & Black: Dry contact input (wired switch)
  - Black & Green: Power output for wired motion sensor
  - 2 × Black: Temperature sensor input
  - White & Green: Power for LED indicators
- **N** Matching plug-in harnesses for activation devices

## 1. INSTALLATION SITE REQUIREMENTS

- Select the sink farthest from the water heater (commonly in the master bathroom).
- Ensure there is a 120V outlet accessible inside the cabinet for powering the controller.
- Shut off water supplies before installation

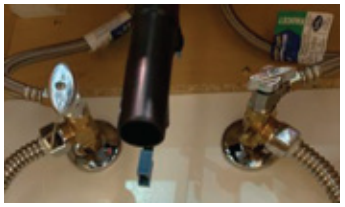
## 2. PLUMBING INSTALLATION

1. Disconnect the hot and cold water supply lines at the angle stops.

2. Leave the flexible supply hoses connected to the faucet and the angle stops.

3. Install the tee with the sensor on the hot water supply (typically left side). Compression ring to the water supply, nut with O ring for the angle stop.
   - Ensure O-ring is seated properly to prevent leaks.
4. Install the tee with the plug on the cold water supply (right side).
   - Ensure plug and O-ring are secure.

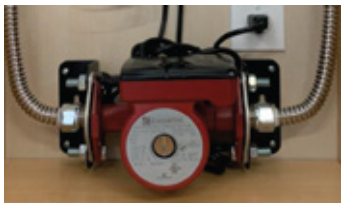
5. Reconnect the angle stops to the respective tees.
6. Connect the included flexible hoses to the bottom ports of both tees, directing flow downward toward the pump.



## 2. PLUMBING INSTALLATION

7. Install a flange on each side of the pump using:
   - 1 × Gasket between each flange and the pump
   - 2 × Nuts and bolts per flange (4 total)

8. Connect the flexible hose from the hot side to the inlet flange of the pump.
9. Connect the hose from the cold side to the outlet flange of the pump.
   - Ensure proper directional flow: **Hot > Pump > Cold.**



## 3. CONTROLLER INSTALLATION

1. Mount the controller inside the cabinet, on the wall, using the included plastic anchors and screws.
2. Do not plug the pump into the controller's female power outlet yet, do not run pump dry.
3. Plug the controller into a nearby 120V wall outlet only if water has been turned on.

## 4. TEMPERATURE SENSOR SETUP

The temperature sensor is pre-installed in the tee on the hot water line, it's screwed and sealed into the Tee. **Do not remove/unscrew the sensor from the Tee**, it will break the seal and it could leak.

Ensure the temperature sensor plugs are connected correctly making a good electrical connection.

## 5. ACTIVATION DEVICE INSTALLATION

- **Wired Push Button**:
  - Connect to red and black wires (dry switch).
  - If equipped with LED indicator, connect to white and green wires for LED power.

For low voltage wiring, home run wiring is suggested for easier troubleshooting when needed.

## 5. ACTIVATION DEVICE INSTALLATION

- **Wireless Push Button and Wireless Motion Sensor**:

  Pair to the controller via the built-in receiver.

  **Pairing a Wireless Push Button**

  - Press and hold the soft button located at the center of the AutoHot controller for 3 seconds, or until the button starts blinking rapidly.
  - Release the button to activate pairing mode.
  - Press the wireless push button once.
  - The rapid blinking on the controller will stop, confirming that the device has been successfully paired.
  - Press the wireless push button again.
  - The soft button LED on the controller should blink once, indicating successful pairing and communication.

  **Pairing a Wireless Motion Sensor**

  - Press and hold the soft button on the controller for 3 seconds, or until it starts blinking rapidly.
  - Release the button to initiate pairing.
  - Slide the motion sensor switch to the ON position.
  - The sensor will automatically send a signal to the controller.
  - Once the signal is received, the controller's soft button LED will stop blinking, confirming successful pairing.
  - To test, walk within range of the sensor. The controller's LED should blink each time motion is detected.

- **Wired Motion Sensors (Optional):**
  - Wire switch to red and black.
  - Power the sensor using black and green wire harness.

- **Wired LED decorative rocker switch (Optional):**
  - Wire switch to red and black.
  - Power the sensor using white and green wire harness.

- **Wired decorative rocker switch (Optional):**
  - Wire switch to red and black.

- **Wired LED Push Button: (Optional):**
  - Wire switch to red and black.
  - Power the LED using the white and green wire harness.

- **Thermo Mode:**
  - Activated by jumpering the red and black wires.
  - In this mode, the pump cycles on and off automatically based on temperature readings without user input.

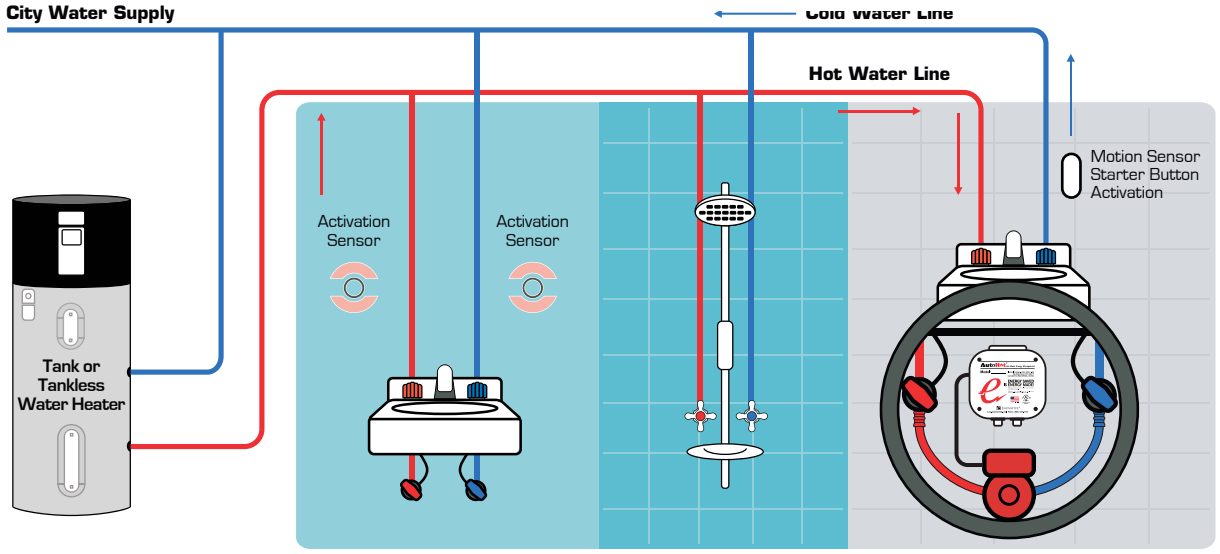
**Use remaining wire ties to organize and secure wires neatly inside the cabinet.**

## 6. SYSTEM OPERATION

**When activated (via push button or sensor):**

- The pump draws hot water through the hot line and temporarily pushes cooler water into the cold line.
- Once the temperature sensor detects hot water at the tee, the pump shuts off (default lockout: 105°F).
- The system remains idle until the temperature drops by ~7°F and a new activation signal is received.

### FOR USE ON STANDARD PLUMBING (NO RETURN LINE)




## 7. FINAL SETUP AND TESTING

1. Open water supply valves and check for leaks.
2. Plug in recirculation pump to the controller's female power cord, power on the controller and activate the system using one of the activation devices.
3. Confirm:
   - Pump runs and shuts off correctly when the temperature hits delta or lock out temperatures
   - LED indicators (if used) respond to temperature status, slow blinking the pump is running, solid on the water temp is over lockout temp.
- Wireless buttons and motion sensors and controller soft button blink when activated

4. Organize and secure wires inside the cabinet with included ties.

## ADDITIONAL NOTES

- Ensure correct flow direction (**hot** > **pump** > **cold**).
- Avoid kinks in flexible hoses.
- If pairing multiple wireless devices, follow pairing instructions provided with each component one by one.
- O-rings on the tees must be properly seated to prevent leaks.