AutoHot®

UNDER SINK CROSSOVER
ON-DEMAND RECIRCULATION SYSTEM

- At the farthest point under a sink -

NO POWER OUTLET REQUIRED UNDER THE SINK

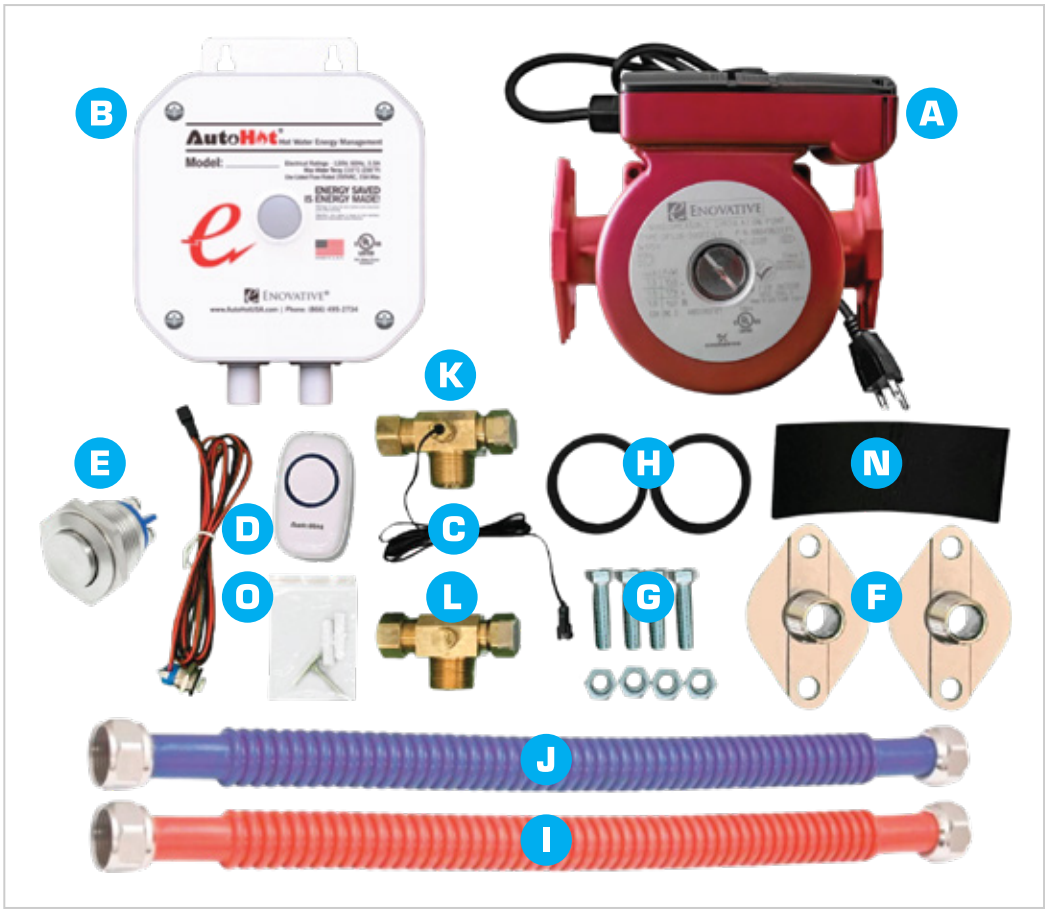
AutoHot®

RETROFIT INSTALLATION INSTRUCTIONS 01

RETROFIT APPLICATIONS-NO RETURN LINE, NO POWER OUTLET NEEDED

OVERVIEW

This guide explains the installation process of the AutoHot® system in retrofit plumbing systems where no return line is present and there is no power outlet under the sink. This setup uses a wireless temperature sensor to eliminate the need for additional electrical work, offering a cost-effective and user-friendly alternative to the traditional under-sink installation.



Included in the Under Sink Kit (USK)

- A Water pump (flanged)
- B AutoHot controller
- C Wireless temperature sensor device (includes temperature sensor, receiver/transmitter module, battery-operated with micro-USB port)
- D One wireless push button
- E One wired push button
- F Two flanges
- G Four nuts and bolts
- H Two gaskets
- I One red flexible hose (10")
- J One blue flexible hose (10")
- K One tee with sensor and O-ring (hot water side)
- L One tee with plug and O-ring (cold water side)
- M One check valve (directional: hot to cold)
- N Velcro strip (for mounting wireless temperature device)
- O Plastic anchors and screws

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RETROFIT INSTALLATION INSTRUCTIONS 02

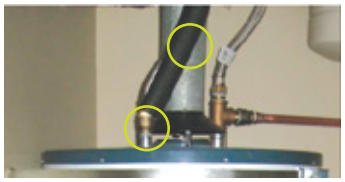
INSTALLATION PROCEDURE

Step 1 : Install the Pump and Controller (Near Heating Fixture)

1. **Turn off the main water supply.**

   Disconnect the hot water out pipe from the heating fixture (conventional water heater, tankless heater, or heat pump). You can disconnet the flexible hose at the nipple or at the pipe going into the wall

   - The pump will sit vertically (sideways) on top of the water heater if installed at the outlet directly from the heater, if installed at the pipe going into the wall the pump will site horizontally (upright)



Disconnect hose at **pipe going into wall** or
Disconnect hose at **nipple directly over tank**

2. **Attach a flange with gasket to each end of the pump.**

3. **Connect one flange to the hot water outlet of the heater using the existing hose or coupling.**

4. **Connect the other flange to the home's existing hot water supply line** (using a coupling if both ends are male).

   Depending how you choose to install the pump, it will be installed sideways over the water heater or upright between the flexible line and the hot line in the wall.

5. **Do not power the pump yet** — wait until the system is fully installed and the water supply is restored to avoid running the pump dry.

6. **Mount the controller on the wall near a power outlet**, ensuring the pump's power cord can reach the female connector on the controller

INSTALLATION PROCEDURE

Step 2 : Install Under-Sink Crossover (Farthest Fixture from Heater)

1. **Choose the farthest fixture from the water heater** — typically under the master bathroom sink.

2. **Shut off and disconnect both hot and cold water angle stops.**

3. **Leave angle stops connected to faucet hoses hanging from faucet connection.**

4. **On the hot water line, install the tee with the wireless temperature sensor device.**

   This is a compression ring connection, ½ inch to the hot water supply (ensure the O-ring is in place).

5. **On the cold water line, install the tee with the plug** (O-ring in place).

6. **Reconnect angle stops to the respective tees.**

7. **Attach the red hose to the hot water tee and the blue hose to the cold water tee.**

8. **Install the check valve between the hoses,** ensuring the direction of flow is from hot to cold.

INSTALLATION PROCEDURE

Step 2 : Install Under-Sink Crossover (Farthest Fixture from Heater)

9. **Mount the wireless temperature sensor device to the cabinet wall using the provided Velcro strip.**

10. **Connect the sensor to the device** — this will read and wirelessly transmit temperature data to the controller.

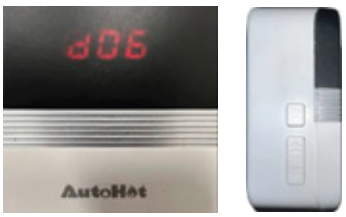
SYSTEM CONFIGURATION

DEFAULT SETTINGS CAN BE ADJUSTED ONLY IF NEEDED.
DEFAULT SETTINGS HAVE BEEN CONFIGURED.

Wireless Temperature Sensor Operation

- The sensor reads water temperature every 3 seconds. Press small top button momentarily to display current temperature.
- A delta temperature rise (default: 2–10°F, adjustable) triggers a signal to stop the pump. Press lower bottom button to display current delta setting.

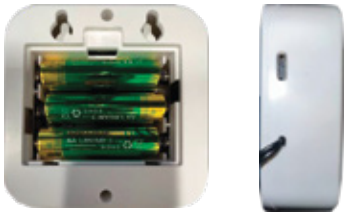
- The pump stops when the sensor detects a sudden rise in temperature, indicating hot water has arrived.
- The system will restart the pump only if a new activation signal is received and the temperature is below the lockout threshold..



- Lockout temperature is adjustable; default is 105°F. Press and hold for 2 seconds top button to display lock out temperature
- The sensor mimics the wired sensor's behavior and prevents redundant pump operation.

BATTERY AND POWER NOTES

- The sensor operates on battery power by default.
- A micro-USB port is included for optional wired power when available.
- The device notifies low battery via beeping and LED indicator.



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.

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.

- **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.

ACTIVATION DEVICE INSTALLATION

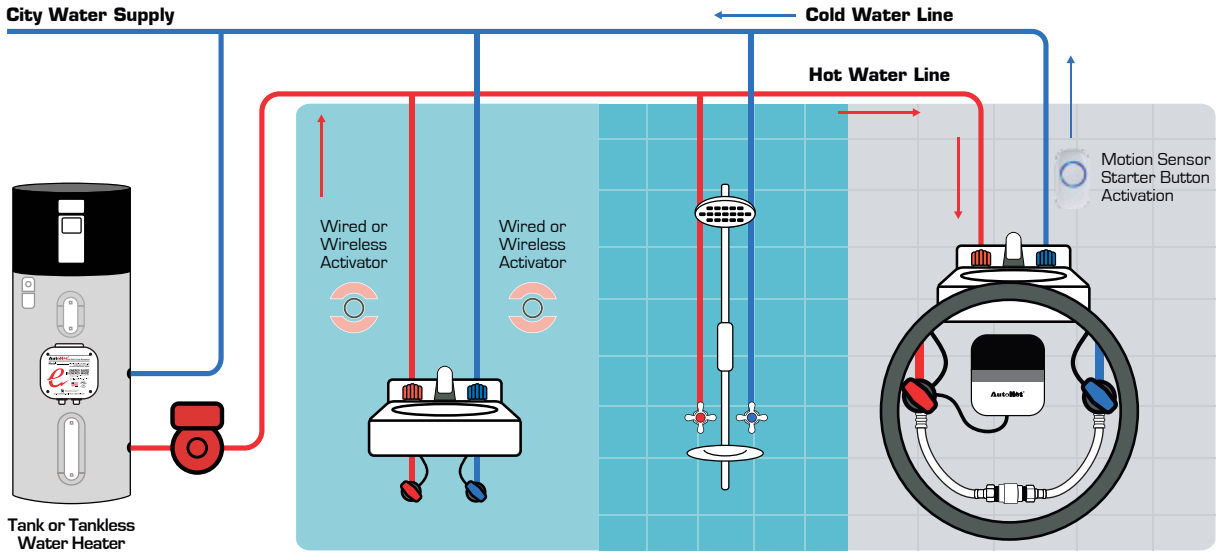
- **Wired Motion Sensors (Optional):**
  - Wire switch to red and black.
  - Power the sensor using black and green wire harness.
- **Wired LED decorative rocker switch (Optional):**
  - Wire switch to red and black.
  - Power the sensor using white and green wire harness.
- **Wired decorative rocker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

SYSTEM OPERATION

Temp sensor sends a wireless signal to turn the pump off when it sees a 6 degree rise in temperature, ensuring no hot water crosses into the cold line while getting hot water to the end within seconds.

FOR USE ON STANDARD PLUMBING (NO RETURN LINE)



FINAL STEPS

1. Reopen the main water supply.
2. Check all connections for leaks.
3. Plug the controller into the outlet and then plug in the pump.
4. Test system activation using the push button or motion sensor.
5. Confirm the pump stops automatically when hot water is detected.