PENTAIR POOL

AUTOMATIC BYPASS VALVE KIT

FOR MASTERTEMP® / MASTERTEMP® 125 / MAX-E-THERM® / ETi® 250 HEATERS

INSTALLATION GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

⚠WARNING **FAILURE TO FOLLOW ALL INSTRUCTIONS AND WARNINGS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH. INSTALLERS AND POOL OPERATORS MUST READ ALL WARNINGS AND INSTRUCTIONS BEFORE USING THIS EQUIPMENT. THIS DOCUMENT MUST BE LEFT WITH THE POOL OWNER.**

For additional heater instructions or resources, scan the QR code or visit www.pentair.com.

This document provides instructions describing how to install and configure an Automatic Bypass Valve Kit (P/N 462048).

An automatic bypass valve at the heater, when paired with an IntelliFlo pump, will decrease head loss, reduce pump power usage, and increase the lifespan of the heater by automatically reducing flow through the heater when not actively heating.

Note: IntelliValve can only operate when connected to heaters operated in standalone mode or connected to an IntelliCenter® Control System via RS-485.

Kit Contents

- 2” 3-way Valve (P/N 263026)
- IntelliValve Actuator (P/N 521485)
- 2” Check Valve (P/N 263042)

Required Tools

- #2 Phillips screwdriver
- Hacksaw
- 1/4” Nut Driver

INSTALLING THE 3-WAY VALVE

⚠CAUTION **Disconnect power to the pump and any automated controls at the circuit breaker before cutting plumbing. This ensures the pump will not inadvertently start during valve installation.**

1. Cut the heater inlet and outlet plumbing as necessary.

2. **If the valves will be installed to the RIGHT side of the heater:** Install the 3-way Valve and Check Valve according to **FIGURE 1**.

   If valves will be installed to the LEFT side of the heater: Install the 3-way Valve and Check Valve according to **FIGURE 2**.

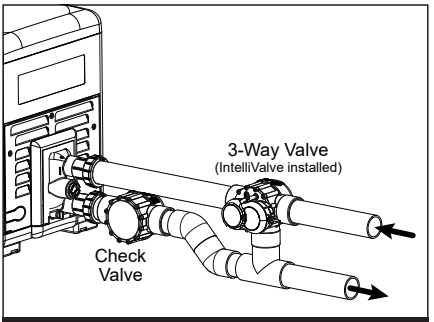


FIGURE 1:
Valve Installed to RIGHT of Heater

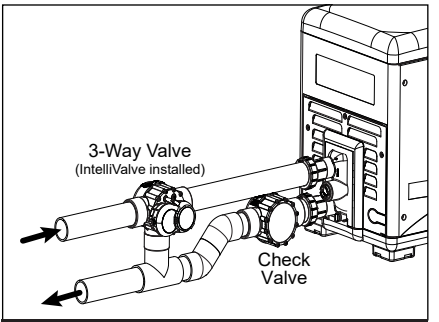


FIGURE 2:
Valve Installed to LEFT of Heater

3. Remove the plastic Thumb Screw (**FIGURE 3**) from the top the 3-way Valve and place the valve handle aside.

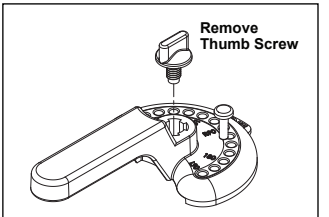


FIGURE 3

INSTALLING THE 3-WAY VALVE (CONT.)

4. **If the 3-way Valve is installed to the RIGHT side of the heater,** remove the four screws highlighted in **FIGURE 4**.

   If the 3-way Valve is installed to the LEFT side of the heater, remove the four screws highlighted in **FIGURE 5.**

   Note: Disregard any directions engraved on the valve. For IntelliValve installation the screws called out below must be removed.

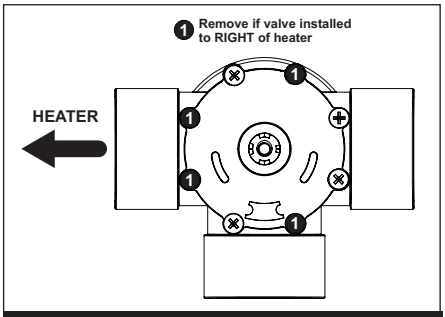


FIGURE 4: Valve Installed to RIGHT of Heater

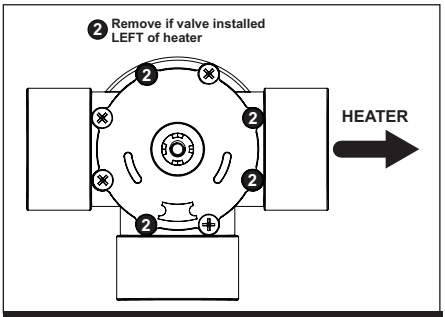


FIGURE 5: Valve Installed to LEFT of Heater

MOUNTING THE INTELLIVALVE ACTUATOR

1. Align the IntelliValve actuator shaft with the 3-way valve handle shaft and lower the IntelliValve onto the valve.
2. With the IntelliValve seated on the 3-way valve, rotate the actuator until either the 0 or 24 position aligns with the bypass port of the 3-way valve.

   Refer to **FIGURE 5** or **FIGURE 6**, depending on where the valve is installed relative to the heater.

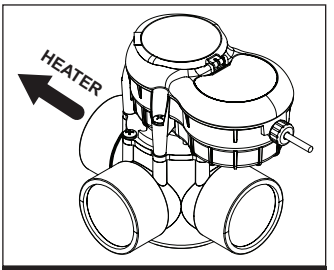


FIGURE 5: Valve Installed to RIGHT of Heater

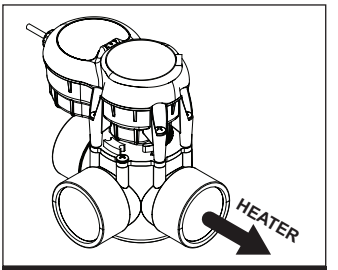


FIGURE 6: Valve Installed to LEFT of Heater

3. Secure the IntelliValve to the valve with the four provided mounting screws. DO NOT OVERTIGHTEN!
4. Route the IntelliValve cord through the louves in the side panel of the heater.
5. Connect the IntelliValve to the BP_VLV Terminal (**FIGURE 7**) on the back of the heater control panel.

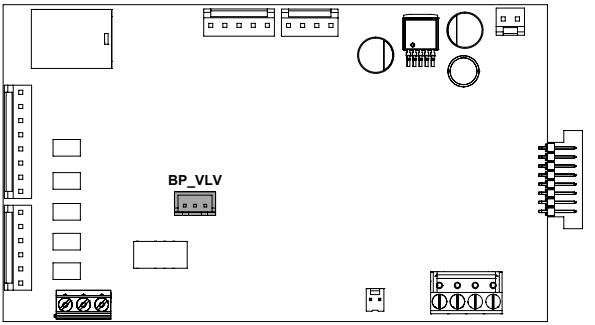


FIGURE 7: Heater Control Board Connection

PROGRAMMING THE INTELLIVALVE

(if IntelliValve is installed to the LEFT of the heater)

⚠CAUTION **NEVER ALLOW THE AUTOMATIC BYPASS VALVE TO COMPLETELY SHUT OFF FLOW TO THE HEATER. Allowing a small amount of flow to pass through the heater each the pump activates will prevent entrapped stagnant water from corroding the heat exchanger.**

1. Reestablish power to the heater at the circuit breaker and ensure the pump and heater are both OFF. The valve will power up and the AUTO/OFF LED will illuminate green.
2. Press the MODE button until SET LED illuminates blue. Refer to **FIGURE 8.**
3. When the Position LED “0” illuminates, press the SAVE button to set “0” as the Open position. Refer to **FIGURE 8**.
4. Press and hold the RED ARROW button until position LED 4 illuminates. This indicates valve is in Position “4”.
5. Press the SAVE button to set “4” as the Bypass position. All LEDs between 0 and 4 will flash several times, then position LED 4 will remain illuminated.
6. The Open and Bypass positions are now set. The SERVICE LED will illuminate yellow.
7. Press the MODE button. The AUTO/OFF LED will illuminate green and the valve will rotate to Position “0”.

   Note: If the valve does not rotate to Position “0”, then press the RED and YELLOW ARROW buttons simultaneously to swap Open/Bypass positions.
8. To enable the valve to communicate with the heater, press the MENU/BACK button at the heater control panel.
9. Scroll through the menu until “BP-Valve” displays, then press SELECT.
10. Press the UP arrow to enable, then press SELECT to save.
11. Press the POOL/SPA button to reactivate the heater.
    When there is a call for heat the valve should rotate to Position “0” and allow full flow through the heater.

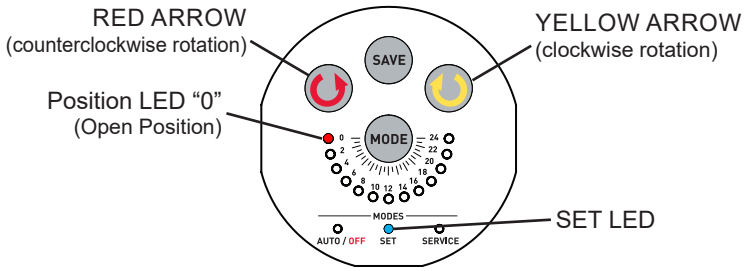


FIGURE 8: IntelliValve Open Position
(if installed to LEFT of heater)

PROGRAMMING THE INTELLIVALVE

(if IntelliValve is installed to the RIGHT of the heater)

⚠CAUTION **NEVER ALLOW THE AUTOMATIC BYPASS VALVE TO COMPLETELY SHUT OFF FLOW TO THE HEATER. Allowing a small amount of flow to pass through the heater each the pump activates will prevent entrapped stagnant water from corroding the heat exchanger.**

1. Reestablish power to the heater at the circuit breaker and ensure the pump and heater are both OFF. The valve will power up and the AUTO/OFF LED will illuminate green.
2. Press the MODE button. The SET LED will illuminate blue (**FIGURE 9**).
3. Press and hold the RED ARROW button until position LED 20 illuminates. This indicates valve is in Position “20”.
4. Press the SAVE button to set “20” as the Bypass position.
5. Press and hold the RED ARROW Button until Position LED “24” illuminates (**FIGURE 9**).
6. Press SAVE to set “24” as the Open position. All LEDs between 20 and 24 will flash several times, then position LED 24 will remain illuminated.
7. The Open and Bypass positions are now set. The SERVICE LED will illuminate yellow.
8. Press the MODE button. The AUTO/OFF LED will illuminate green and the valve should remain in Position “24”.

   Note: If the valve rotates to Position “20”, then press the RED and YELLOW ARROW buttons simultaneously to swap Open/Bypass positions. The valve should then return to Position “24”.
9. To enable the valve to communicate with the heater, press the MENU/BACK button at the heater control panel.
10. Scroll through the menu until “BP-Valve” displays, then press SELECT.
11. Press the UP arrow to enable, then press Select to save.
12. Press the POOL/SPA button.
    When there is a call for heat the valve should rotate to Open Position “24” and allow full flow through the heater.

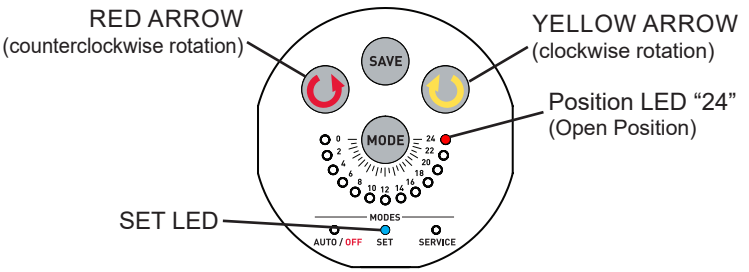


FIGURE 9: IntelliValve Open Position
(if installed to RIGHT of heater)

PENTAIR POOL

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