



INSTALLATION MANUAL



VersaFlo™ Integrated Bypass for JXi™ Pool and Spa Heater

WARNING

If these instructions are not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

FOR YOUR SAFETY: This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exists. In the event no such state or local requirement exists, the installer or maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions provided with the heater and any related accessories may result in property damage, personal injury, or death.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Immediately switch off main gas supply.
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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SECTION 1. General Information

1.1 Introduction

Read completely before proceeding with the installation.

This manual provides installation instructions for the VersaFlo Integrated Bypass Accessory Kit for the JXi pool and spa gas heater product line.

SECTION 2. Overview

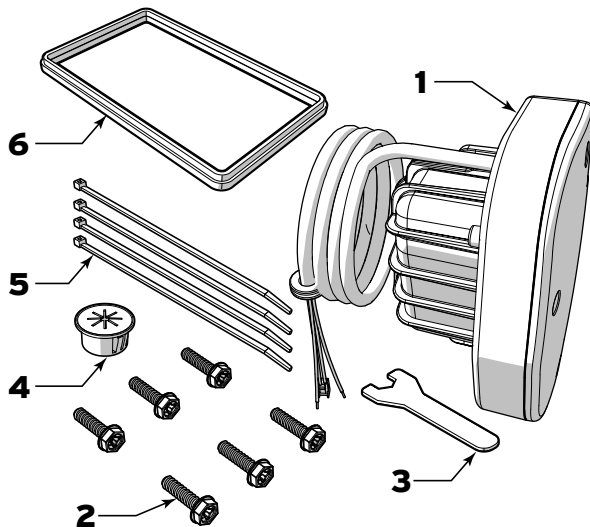
2.1 JXiVFKIT: VersaFlo Integrated Bypass Kit

2.1.1 Package Contents

Before starting, check that you have the correct parts as indicated below. If any parts are missing or incorrect, please call your local distributor or Zodiac Pool Systems technical support at 1-800-822-7933 for assistance.

NOTE: Check the rating plate on your heater and note the serial number revision.
If your heater serial number is revision "G" (GXXXXXX) or earlier you will also need to order:
(R0719500) - PIB Kit
(R0719400) - Flue Sensor Kit
to complete the installation.

Item	Description	Qty.
1	VersaFlo Integrated Bypass W/Wire Harness	1
2	Installation Hardware	6
3	5/16" Light Duty Wrench	1
4	Knockout Bushing	1
5	Zip Tie	4
6	Seal	1



2.1.2 Required Equipment



Safety Eyewear



Gloves



Phillips Screwdriver

1.2 Technical Assistance

For technical support or questions, contact your local Zodiac® distributor or Zodiac Pool Systems, Inc. at 800.822.7933

2.2 Efficiency

The VersaFlo Integrated Bypass allows for increased hydraulic efficiency when the heater is not firing. When the JXi heater is not firing, a flow gate in the bypass assembly is moved to the bypass position, allowing the water flow within the heater header to bypass the heat exchanger and return directly to the pool. Please note, when in the bypass position a small amount of water will still flow through the heat exchanger. When the heater is firing, the flow gate moves to heat position which directs water through the heat exchanger. When the heater is turned off, the bypass will remain in the heat position for approximately one minute before moving to the bypass position.

When the flow gate is in the bypass position and water is bypassing the heat exchanger, the head loss through the heater is significantly reduced as illustrated in Figure 1. To maximize energy savings, combine with an automation system and a variable speed filtration pump to reduce pump speed while flow is bypassing the heater.

Use head loss chart below to determine the best flow rate or filtration run time to best optimize your water circulation system.

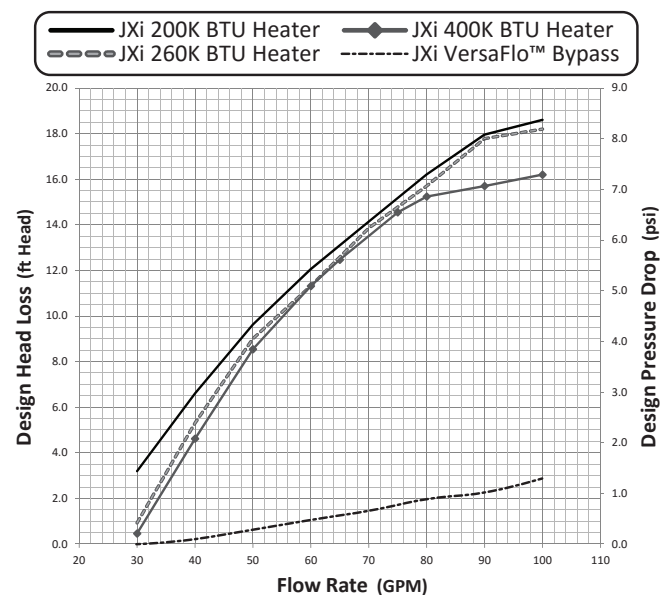


Figure 1. Head Loss Chart

SECTION 3. Electrical Connections

Before beginning the installation or replacement of the VersaFlo Integrated Bypass the following steps must be taken.

- All power to the heater and filter pump must be disconnected at the breakers.
- The gas supply to the heater must be shut off.
- (Optional) The water can be drained from the heater by removing the thumbscrew at the header. See Figure 2.

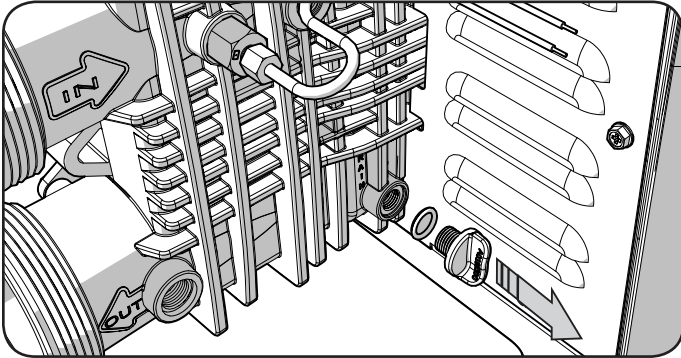


Figure 2. Drain Header

⚠ WARNING/SOCK HAZARD

Follow all applicable installation codes. Prior to Installation or performing any service, turn off all switches and the main breaker in the pool/spa pump electrical circuit. Failure to comply may cause a shock or hazard resulting in severe personal injury or death. While disconnecting and/or connecting any electrical wiring, be careful not to damage or abrade any of the wiring.

⚠ WARNING

In order to prevent the risk of fire or electrocution, all electrical power and gas supply to the heater must be disconnected.

3.1 Open the Heater

- Remove the 4 screws holding the front heater panel in place to expose the raceway. See Figure 3
- Locate the raceway lock release label on the interior of the heater raceway.
- Using a screwdriver or comparable tool; press into the raceway release orifice until the raceway latch releases and the raceway swings free. See Figure 4 (a).
- Swing the raceway up into a horizontal position. See Figure 4 (b).
- Latch raceway into position using the bracket. See Figure 4 (c).
- Remove the 4 screws holding the top cover in place. See Figure 5.
- Remove the top cover being mindful not to damage or strain the user interface wiring. See Figure 5.

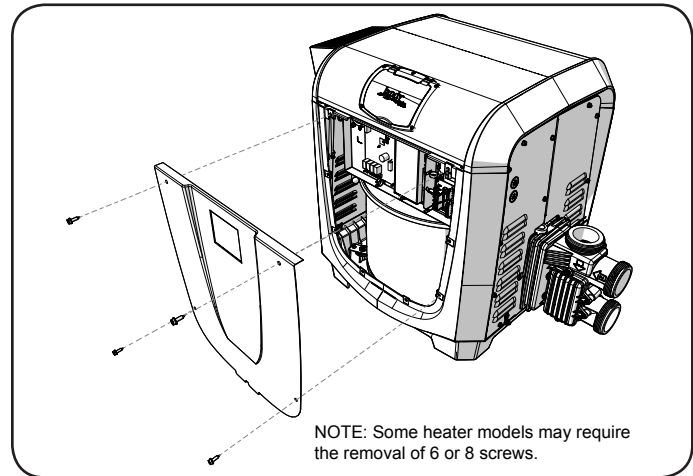


Figure 3. Remove Front Panel

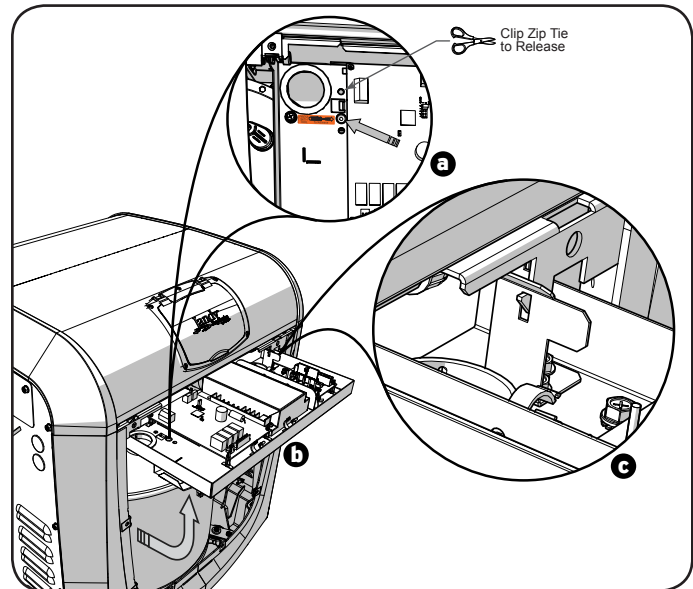


Figure 4. Access and Latch Raceway

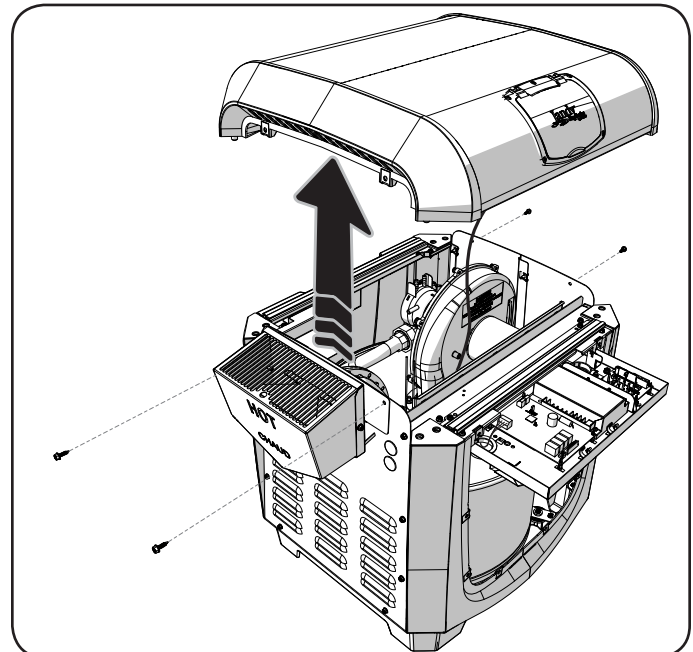


Figure 5. Remove Top Panel

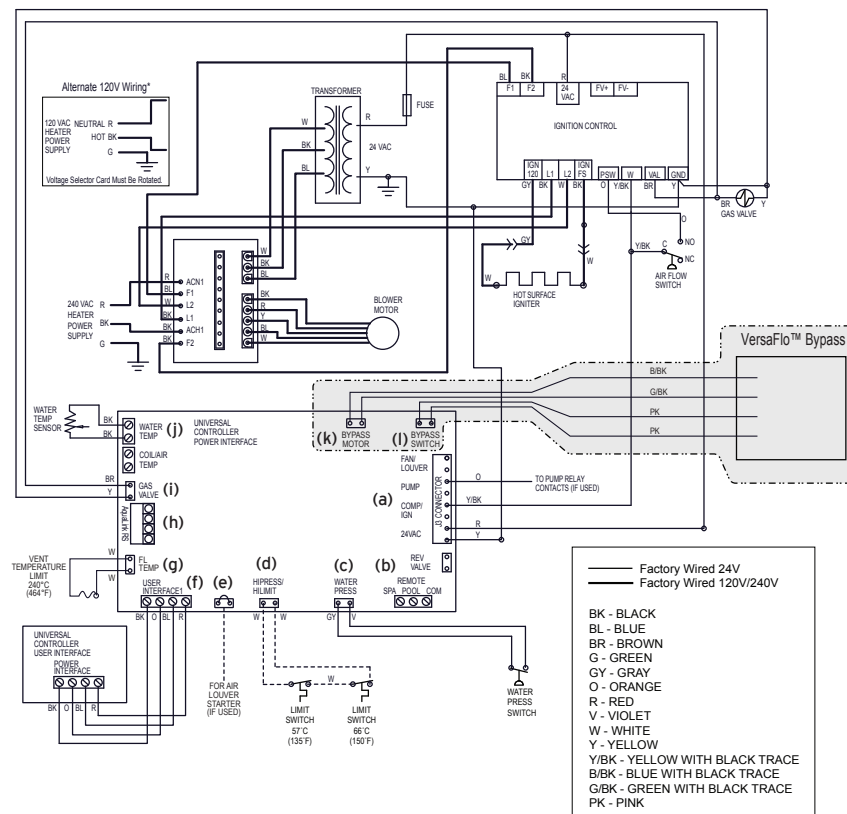


Figure 6. Wiring Diagram

3.2 Route Wire Harness

1. Examine the electrical connectors and wires to ensure that none of the wires or connectors are damaged or abraded.
2. Feed the electrical harness through the electrical orifice on the side panel. See Figure 7 (a). If using the low voltage knockout you may need to remove the cap and replace with the included knockout bushing.

NOTE: If your heater serial number is revision "G" (GXXXXXX) or earlier you will need to use the low voltage knockout to wire the heater. See Figure 7.

3. Route the wire along the interior of the heater and behind the high voltage raceway. See Figure 8.
4. Secure at raceway brace corner using the installed P-Clamp or the zip ties included with the kit. See Figure 8.
5. Route through the standoff along center of the raceway brace. If no standoff is installed please secure with zip ties. See Figure 8.
6. Pass the harness through the grommet at the low voltage raceway. See Figure 7 (b).

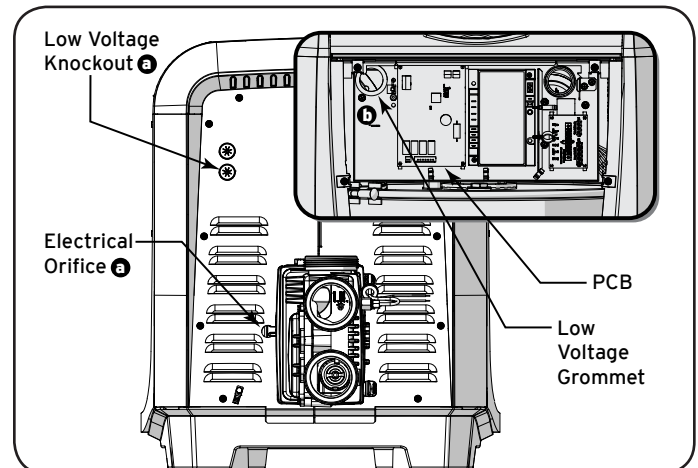


Figure 7. Bypass Harness Routing

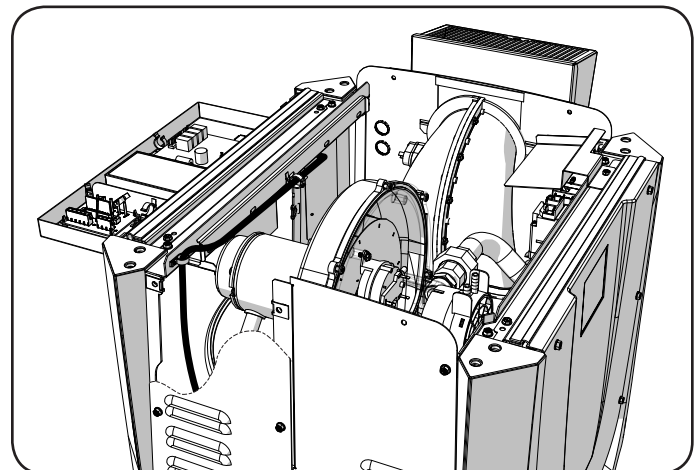


Figure 8. Bypass Harness Routing

3.3 Connect at PCB

1. Remove factory installed jumper from Bypass Switch (J22). See Figure 6 (I).
2. Connect the 2 pin GR/BK and B/BK at the board position Bypass Motor (J21). See Figure 6 (k).
3. Connect the 2 pink wires to the 2 terminal connector at board position Bypass Switch (J22) polarity does not matter. See Figure 6 (l).

⚠ WARNING/SHOCK HAZARD

Follow all applicable installation codes. Prior to Installation or performing any service, turn off all switches and the main breaker in the pool/spa pump electrical circuit. Failure to comply may cause a shock or hazard resulting in severe personal injury or death. While disconnecting and/or connecting any electrical wiring, be careful not to damage or abrade any of the wiring.

SECTION 4. Bypass Physical Connections

4.1 Remove Access Plate

1. Remove the six screws securing the access plate.
2. Remove the access plate and seal.

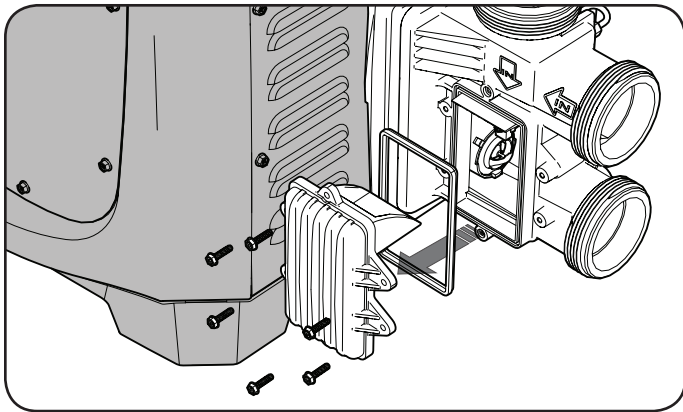


Figure 9. Remove Access Panel

4.2 Remove Bypass Assembly.

1. Remove the three screws holding the bypass cover in place.
2. Remove the six screws securing the bypass assembly.
3. Remove the previously installed bypass and seal.
4. It is advised that the removed bypass and seal be marked to ensure that they are not confused with the replacement/upgrade equipment.

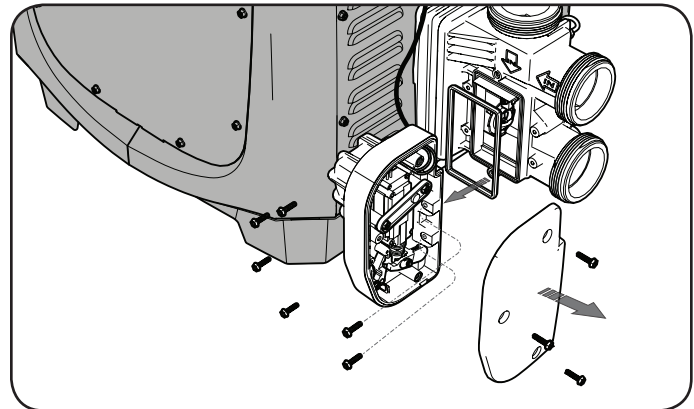


Figure 10. Remove VersaFlo Assembly




4.3 Install New Bypass Assembly

1. Remove the three screws holding the bypass cover in place.
2. Ensure that the seal is properly seated.
3. Secure the bypass assembly to the header with six screws.
 - a. The two screws inside the bypass housing (see Figure 10) should be started by hand.
 - b. Install the remaining screws around the perimeter of the bypass assembly.
 - c. Using the included 5/16" wrench torque down the interior 2 screws. Do Not Overtighten!


SECTION 5. Initial startup

5.1 Test Bypass assembly

1. Restore electrical power to the heater and filter pump.
2. Confirm that the VersaFlo Integrated Bypass is enabled at the heater.
3. On heater user interface;


press and hold the ,  and  buttons

for several seconds (while heater is off).

4. The service menu will activate.
Using  scroll to bypass option.
5. Verify that the bypass option is enabled



If not, enable the bypass option.

6. Press  to exit service mode.
7. Turn on the filter pump.

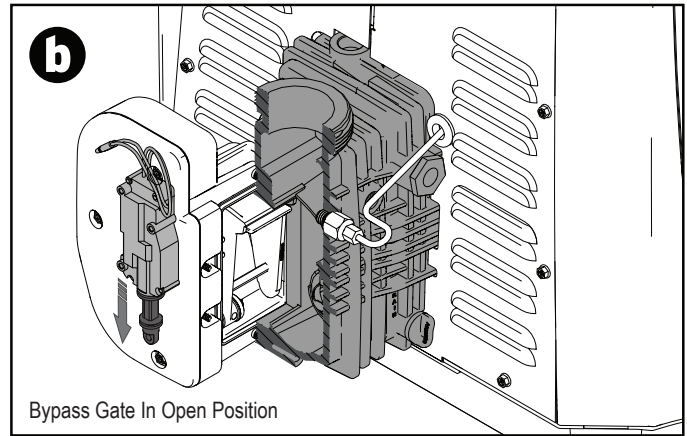
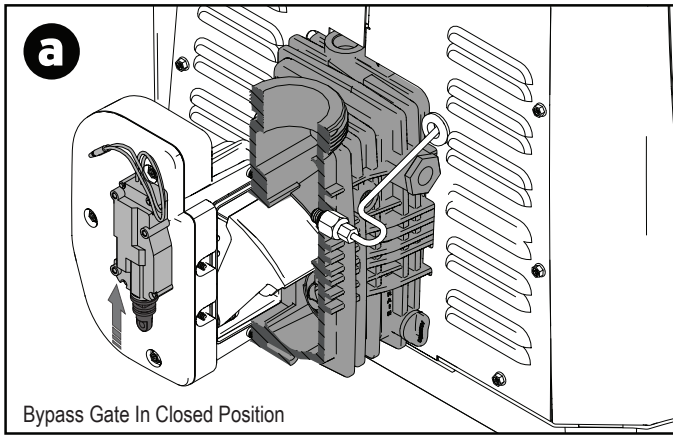


Figure 11. Bypass Gate and Actuator Positions

8. Inspect for leaks at the bypass header seal and look for any leaks inside the bypass housing.
9. If no leaks are observed, turn on power to the heater and activate.
10. Keep the heater control in the OFF position. The actuator will be in the down stroke (extended) position, see Figure 11.
11. Restore gas to the heater.
12. Turn the heater ON and observe that shortly before the heater fires, the actuator will move to the up stroke (drawn in) position. See Figure 11 (a).
13. Turn the heater off. After approximately a one-minute delay the actuator will return to the down position. See Figure 11 (b).
14. After completing all of the steps to test the bypass accessory and confirming correct operation, replace the bypass housing cover using three (3) screws.

SECTION 6. Professional Service and Maintenance

6.1 Servicing

⚠ WARNING

SERVICING SAFETY: Service procedures can be hazardous because they involve fuel, gas, electricity, moving parts and procedures which require testing or temporary bypass of safety controls. For this reason, the heater must be serviced only by a qualified professional service technician.

IMPROPER SERVICE HAZARD: The heater incorporates unique design features. Incorrect service of this heater can result in personal injury or damage to property. To avoid such hazards, the heater must be serviced only by a qualified professional service technician.

Zodiac Pool Systems, Inc. requires that you call a qualified service technician to perform all service and repairs on the heater. To locate a licensed or qualified technician or independent service company in your area, contact Zodiac® Technical Support at: 1-800-822-7933 or www.jandy.com.

Before servicing the heater:

- Confirm that the heater control is set to either POOL or SPA.
- Confirm the temperature set point for either POOL or SPA is high enough to make the heater run given the

current water temperature.

- Inspect the Thermal Regulator Valve (TRV) for proper operation and replace if there are signs of scaling or corrosion.

NOTE: The TRV ensures the heater operates at optimal efficiency and proper maintenance of the TRV can extend the life of the heater.

6.2 Winterizing and Spring Startup

In areas where freezing temperatures occur in Winter and the pool or spa will not be used, the pool should be winterized by a qualified pool service technician. Refer to the JXi Installation and Operation Manual provided with the heater for complete instructions on winterizing and spring startup.

6.3 Occasional Freezing Temperatures

In areas where there are occasional overnight freezing temperatures, the filter pump is often used to keep water circulating through the pool equipment. Although the heater control is OFF, power to the heater must be left on. The bypass accessory has a feature built into the controller circuit board to sense the ambient air temperature. When the air temperature approaches freezing, the bypass gate closes to keep water circulating through the heat exchanger and avoid freezing. Power to the heater must be left on to allow the circuit board to operate.

Zodiac Pool Systems LLC

2882 Whiptail Loop # 100, Carlsbad, CA 92010
1.800.822.7933 | jandy.com

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