Water Heater Pump Panel Installation Guide

1. Layout and PEX Installation: Begin by reviewing your loop layout and installing the PEX tubing. Start from the furthest circuit away from the mechanical location and work your way to the closest circuit.

- A link of how to install your pex in a slab on grade system: Creating a Story Pole.
- A link of how to install your pex in a staple up system: Staple Up Installation
- A link of how to install your pex in a floor panel system: RHT Floor Panel System

2. Manifold Mounting: Mount your manifolds on the wall and connect the PEX tubing to the manifold ports. Ensure that the supply/return balancing valves are fully open. We typically design for the manifold to be three feet off the ground. You can refer to this document for more details: Manifold Installation Guide

- **Note: satellite manifolds** in a radiant heating system are a secondary distribution point for the heating system, typically located away from the mechanical room in an access panel. It acts as a hub to distribute heated water to different zones or areas within a building. This setup is often used in large or complex systems where the distance between the main manifold and the heating zones would result in excessive lengths of tubing. Below is an example of a satellite manifold both before and after the concrete is poured.

- **Note:** Please remove the black locking ring depicted in the image below, as it will prevent you from fully opening the supply side Allen valves.

3. Slab Sensors: To prepare for a slab sensor thermostat, install a 6'6" length of scrap PEX tubing with one end placed 5' into the field of a given zone, positioned between two PEX runs. The other end should be swept up 16" into the wall cavity where you plan to install the thermostat. Tape both ends of the PEX to keep out debris and concrete. After the concrete is poured, remove the tape from the exposed end above grade and slide the sensor down the tube into the dry well you've created. Make sure the tube is positioned equidistant between the two PEX runs to avoid an overly hot reading. Here's the link to the RHT Dry Well Slab Sensor instructions: RHT Dry Well Slab Sensor Instructions.

4. Pressure Testing: Perform a pressure test on your system, pressurizing it up to 50 PSI. It's normal for the system to drop 5 PSI overnight. If it drops to 0 PSI, you likely have a leak or need to open the balancing valves on the manifold. To locate the leak, repressurize your circuits and spray the manifold with soapy water. You should see an accumulation of bubbles where your leak is. We recommend keeping your system under pressure when pouring concrete. Find more information on pressure testing here: Pressure Test Instructions

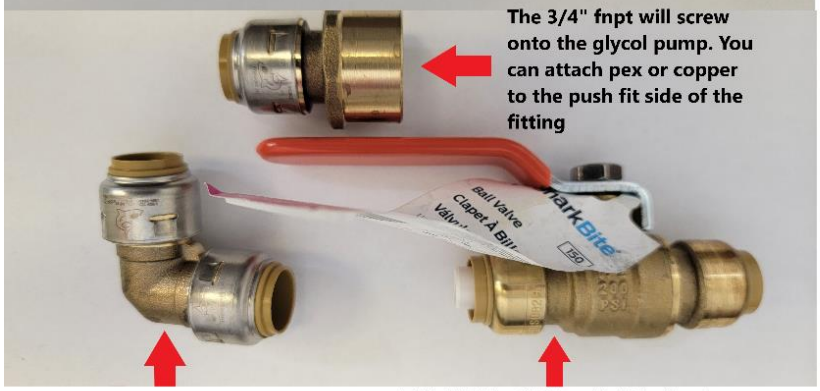
5. Pump Panel Installation: Hang your prefabricated pump panel on the wall using the predrilled holes in the panel. It is best to have at least two people for this part of the installation. We recommend adding additional fasteners if your panel width is longer than three feet. Additional framing materials can be added to provide support as needed.

6. Connect Manifold to Pump Panel: Connect your manifold to the pump distribution panel using copper or PEX piping. The threaded fittings below will attach to the supply/return ball valves on your manifold, while the straight couplers will connect to the supply/return lines on the pump distribution panel.

7. Water Heater Connection: Connect the supply and return lines from your water heater to the prefabricated pump panel using oxygen barrier PEX or copper.

8. Glycol Fill System: Connect your glycol fill system to the water makeup of the prefabricated pump panel using the provided fittings.

This is how you will receive your glycol fittings



The 3/4" fnpt will screw onto the glycol pump. You can attach pex or copper to the push fit side of the fitting

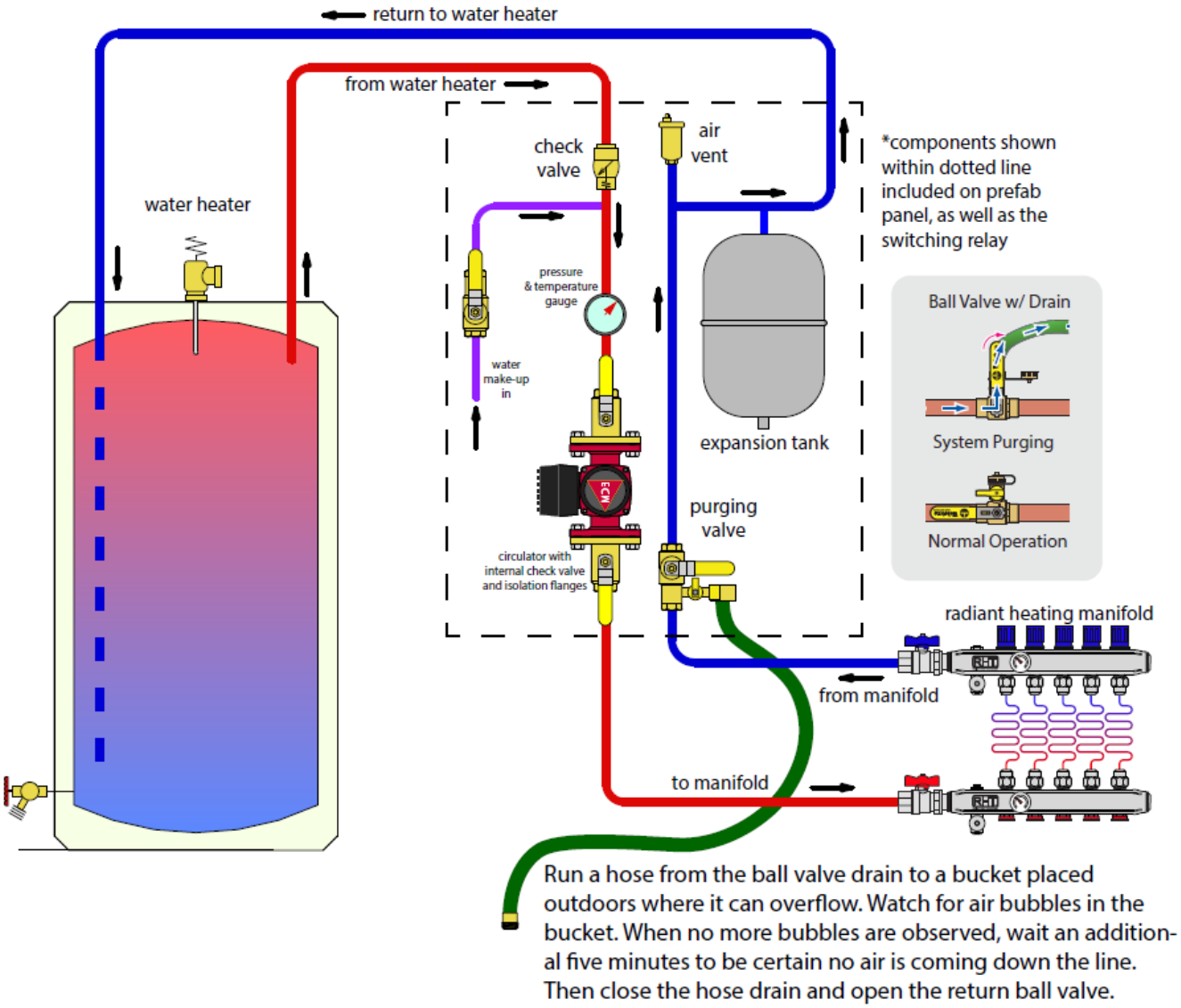
This 1/2" to 1/2" push fit elbow will allow you to make a 90° turn into the 1/2" ball valve.

This 1/2" to 1/2" push fit ball valve w attach to your water make up on you pump distrabution panel.

9. Glycol Filling: Fill your glycol tank. We recommend sourcing 95% Propylene glycol and for residential systems, a recommended mixture is 30% Propylene glycol and 70% water.

BlueRidge Company™
RADIANT HEAT SYSTEMS

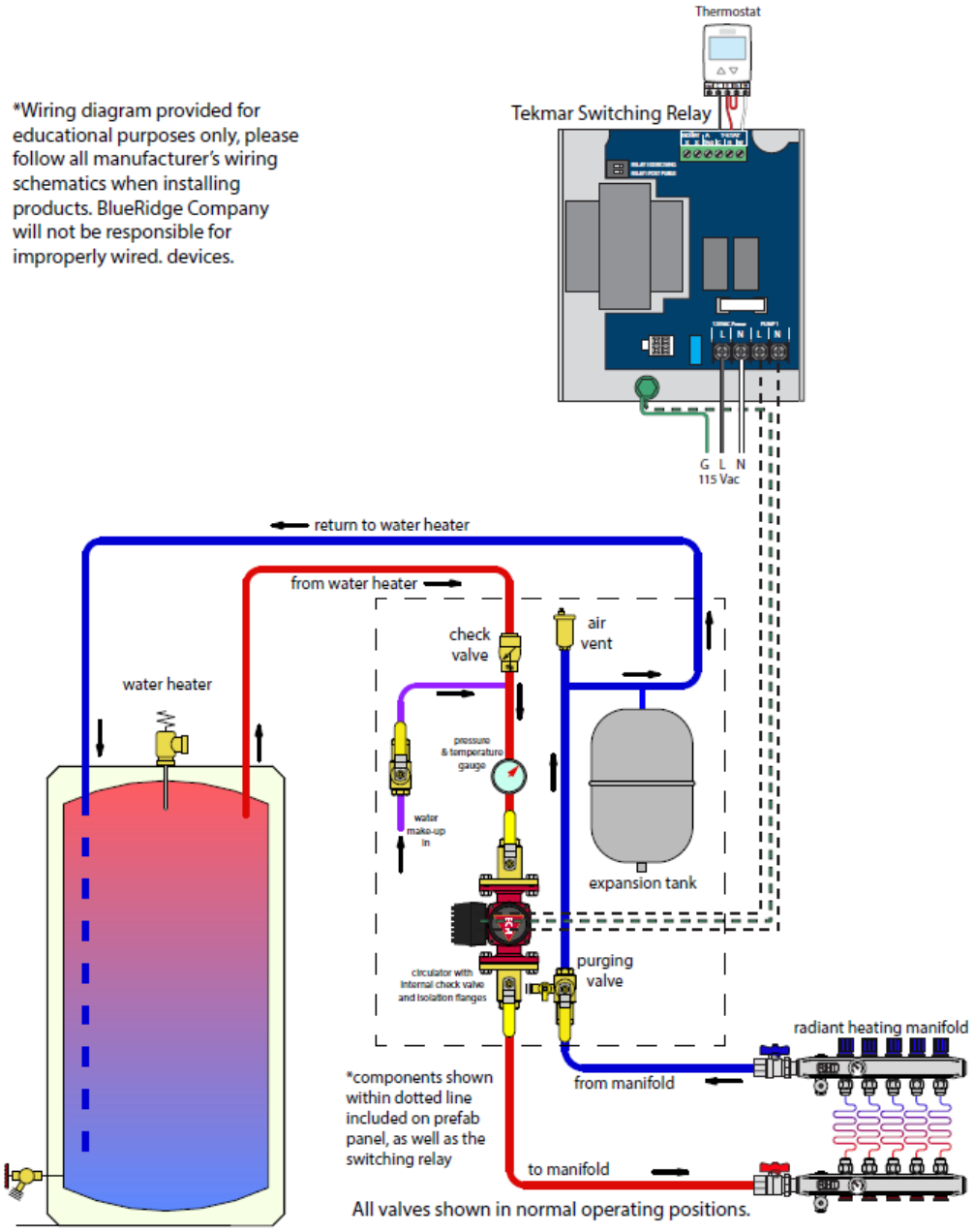
10. Air Purging Procedure: Run a hose from the ball valve drain to a bucket placed outdoors where it can overflow. Orient the valves for air purging as depicted in the illustration below and begin your purge. Refer back to page one of this document for guidance: Pump Panel Diagram



11. Zone Purging: When no more air bubbles are observed, wait an additional five minutes to be certain no air is coming down the line. Once there is no more air in each zone, close the corresponding return ball valve and move onto purging the next zone until all zones are purged. The glycol pump will turn off automatically when you close the hose valve. It's crucial to keep the glycol fill plugged in and connected, as it is responsible for maintaining pressure within your system.

12. Valve Adjustment: Set all valves to their operating positions as shown on page two of the Column Pump Distribution Panel diagram.

13. Wiring: Wire the system following the recommended wiring diagram. It's advisable to have an electrician handle any high voltage wiring. The recommended wiring diagram can be found here on page two: Pump Panel Diagram



14. Set Thermostats Target Air Temperature: On the home screen of your thermostat, set the desired temperature for that zone.

If you have any questions, please do not hesitate to reach out at 866-361-4782 and dial 3 for technical support.