

RHT
RADIANT HEAT TECHNOLOGY
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BlueRidge Company
A Radiant Heating, Cooling & Water Management System



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RADIANT HEAT SYSTEMS

Wood Boiler Prefab

Instal Guide

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1. Tools Required

- Adjustable Crescent Wrench
- Phillips Head Screwdriver
- Channel Locks
- 5mm Allen Key (included)
- 6mm Allen Key (included)
- Teflon Tape
- Pipe Dope (thread sealant)
- PEX Cutter
- Drill and Fasteners (e.g., screws)
- 18-Gauge 5-Conductor Solid Wire
- 14-Gauge 2-Conductor Solid Wire

2. Layout and PEX Installation

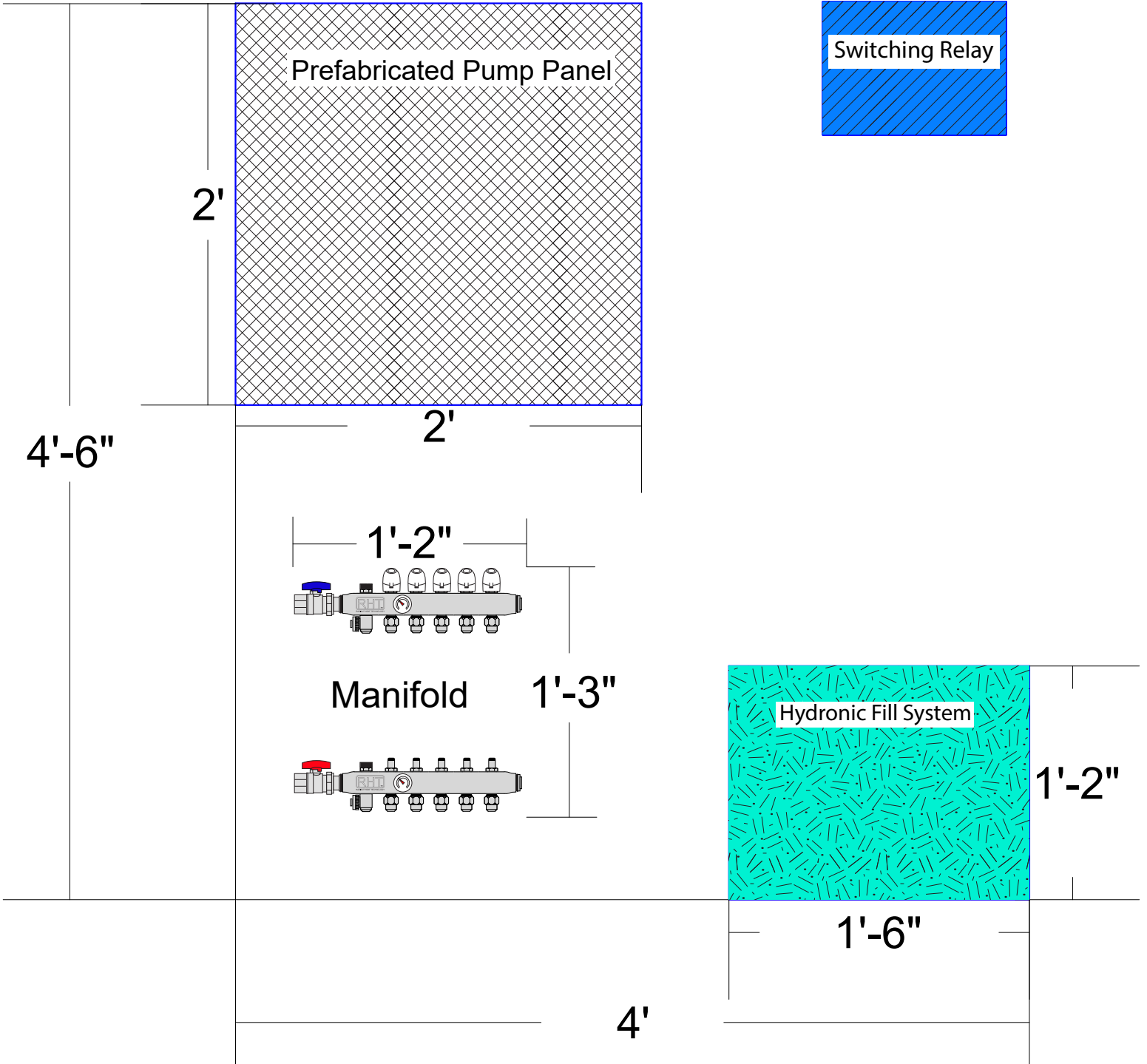
Begin by reviewing your loop layout and installing the PEX tubing. Start from the furthest circuit away from the mechanical location and work your way to the closest circuit.

- A link of how to install your pex in a slab on grade system: [PEX In Concrete Slab Install Guide](#)
- A link of how to install your pex in a staple up system: [PEX Staple Up Install Guide](#)
- A link of how to install your pex in a floor panel system: [RHT Floor Panel System Install Guide](#)
- A link of how to install your pex in a staple down with topping pour: [PEX Staple Down With Topping Pour](#)

3. 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 should be added to provide support as needed.

Example of mechanical room layout with 1 pump RHT Wood Boiler Pump Distribution Panel, and one RHT 4 port manifold.



4. 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.



5. Boiler Connection

Connect the supply and return lines from your boiler to the prefabricated pump panels primary loop.

6. Filling

Wood fired boilers typically are filled from the boiler itself. Refer to your boiler installation manual to locate where your system will be filled from.

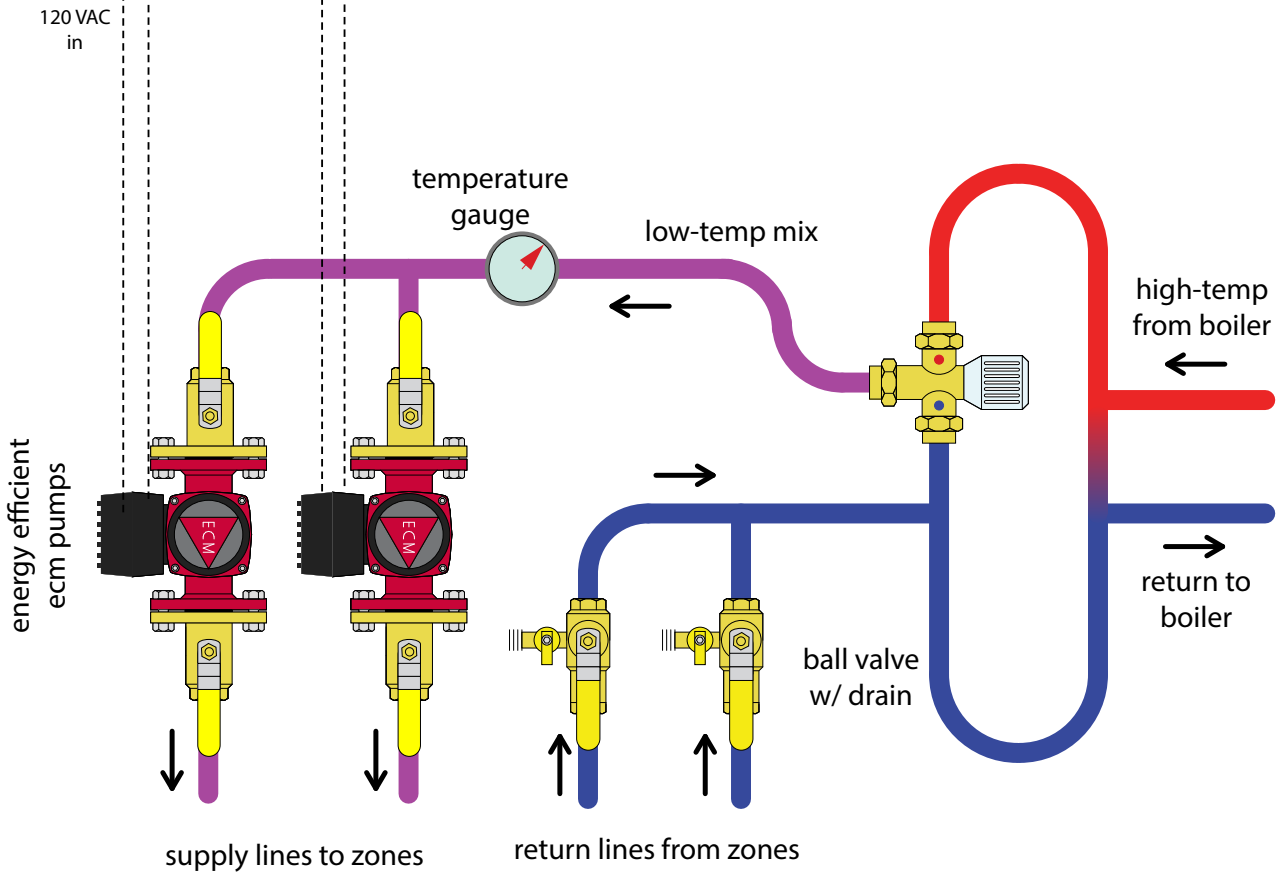
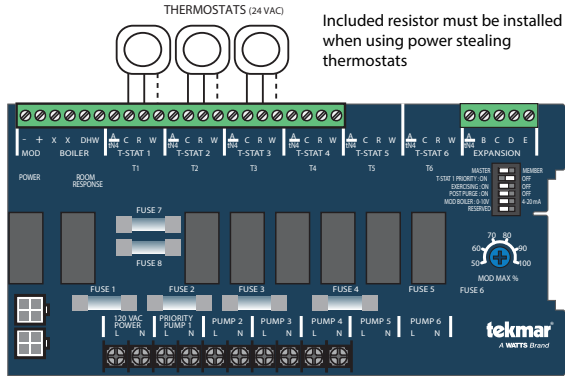
7. Air Purging Procedure

Connect a hose from the return ball valve drain of a specific zone to your fill tank. Orient the valves for air purging as depicted in the illustration on the next page. Make sure that the reservoir remains adequately filled throughout the process. Refer back to page one of this document for guidance: [Pump Panel Diagram](#)



Prefabricated Wood-fired Boiler Pump Panel

RADIANT HEAT TECHNOLOGY



11/24 revision

8. 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 a zone, close the corresponding return ball valve and move onto purging the next zone until all zones are purged.

9. Valve Adjustment

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

10. Wiring

Wire the system following the recommended wiring diagram. It's advisable to have a licensed electrician handle all high voltage wiring. The recommended wiring diagram can be found here on page two: [Pump Panel Diagram](#)

11. Slab Sensor Minimum Temperature

If you installed a slab sensor remember to set the floor minimum temperature. Available when an auxiliary floor sensor is connected, and the built-in room sensor is on.

- Tekmar 519 Thermostat:

Setting	Display
User settings. Press the Δ and ∇ buttons together for 3 seconds to enter and advance to the next setting.	
MODE Select heat or off. Range: HEAT, OFF	MODE HEAT Default: HEAT
UNITS Select the temperature units. Range: °F or °C	UNITS F Default: °F
LIGHT Select when the display back light should operate. Auto operates the backlight for 30 seconds after a keystroke. Range: OFF, AUTO, ON	LIGHT AUTO Default: AUTO
SET FLOOR Set the floor minimum temperature. Available when an auxiliary floor sensor is connected and the built-in room sensor is on. Range: OFF, 40 to 122°F (4.5 to 50.0°C)	SET FLOOR 72 Default: 72°F (22.0°C)
TYPE Device Type number. Hold the Δ button to view the software version.	TYPE 519
ESCAPE Release the Δ and ∇ buttons to return to the home screen.	ESCAPE

- Tekmar 561 Thermostat:

Setup - Temp		
Setting	Range	Default
<i>Screen Page 1</i>		
FLOOR MIN - WAKE Select the floor temperature while in the wake schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
FLOOR MIN - LEAVE Select the floor temperature while in the leave schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
FLOOR MIN - RETURN Select the floor temperature while in the return schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
FLOOR MIN - SLEEP Select the floor temperature while in the sleep schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
FLOOR MIN - AWAY Select the floor temperature while in away. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off

12. 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.