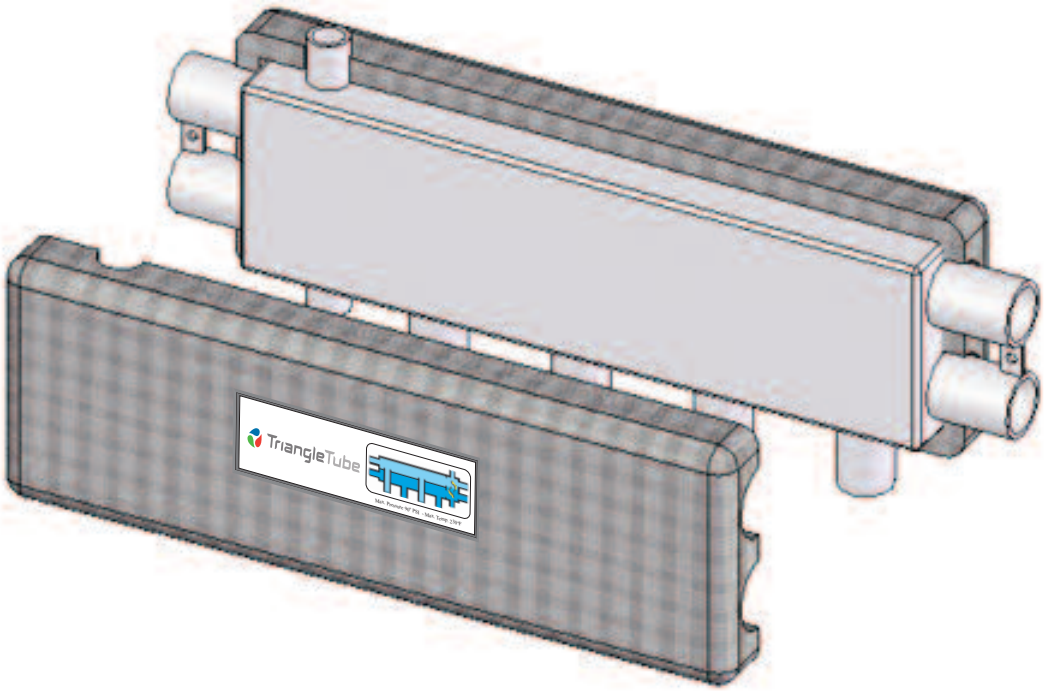
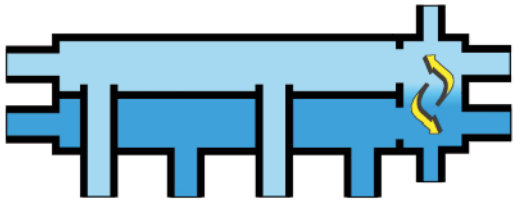
Primary/Secondary Manifold



Installation Manual

Triangle Tube's Primary/ Secondary manifold is a combination hydronic separator, pressure equalizer and distribution manifold. This manifold ensures a proper primary/secondary piping arrangement for up to three zones of heat on a Prestige or Challenger installation.

Easy to install and compact, the manifold is a point of low pressure allowing the primary and secondary circuits connected to it to be hydraulically independent of each other. This allows multiple zone circulators to operate at the same time without interfering with boiler flow.



Primary/Secondary Manifold

The PS Manifold provides a low pressure loss zone which enables the primary and secondary circuits connected to it to be hydraulically independent of each other.

The PS Manifold enables zones to be produced which are thermally independent of each other. The PS Manifold creates zones where the required temperature can be maintained and the heat consumed is measured.

PS Manifold Specifications

Maximum Working Pressure - 90 psi
Maximum Working Temperature - 230ºF
Minimum Working Temperature - 32ºF

Maximum allowable percentage of glycol - 50%

Locating the PS Manifold

The PS Manifold should be installed in accordance with the diagrams shown in these instructions. See Fig. 2, page 2 for mounting configurations.

BEST PRACTICE

For optimum air elimination, the PS Manifold should be installed in the horizontal position as shown in these instructions.

If you elect to install the manifold in a vertical position, the primary boiler connections must be at the top and the air vent must also be installed vertically with a 90º street elbow.

The PS Manifold may be rotated around to allow the primary connections to enter either from the left or right side. See Fig. 2, page 2 for mounting configurations.

The PS Manifold may be flipped to allow the branch circuit to enter from the bottom or the top of the manifold.

Install the PS Manifold in a location so that any water leaking from the manifold or connections will not cause damage to the area surrounding the manifold.

Piping the PS Manifold

Maximum allowable Primary Side (boiler) flow rate - 9gpm

Maximum allowable Secondary Side (total of 3 circuits) flow rate - 22 gpm

The PS Manifold must be installed in accordance with the diagrams shown in these instructions.

Use appropriate pipe sealant supplied with manifold and ensure all piping connections are tight and leak free. Seal 1/2" (air vent and drain valve) connections with thread sealant provided in kit. Apply a generous amount of sealant completely around these threads.

NOTICE

DO NOT use the 1/2" connections for branch circuits. Those connections are reserved for the air vent and drain valve.

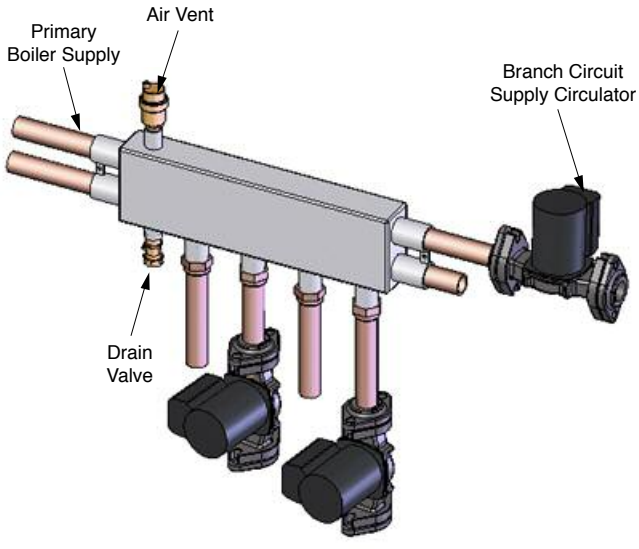
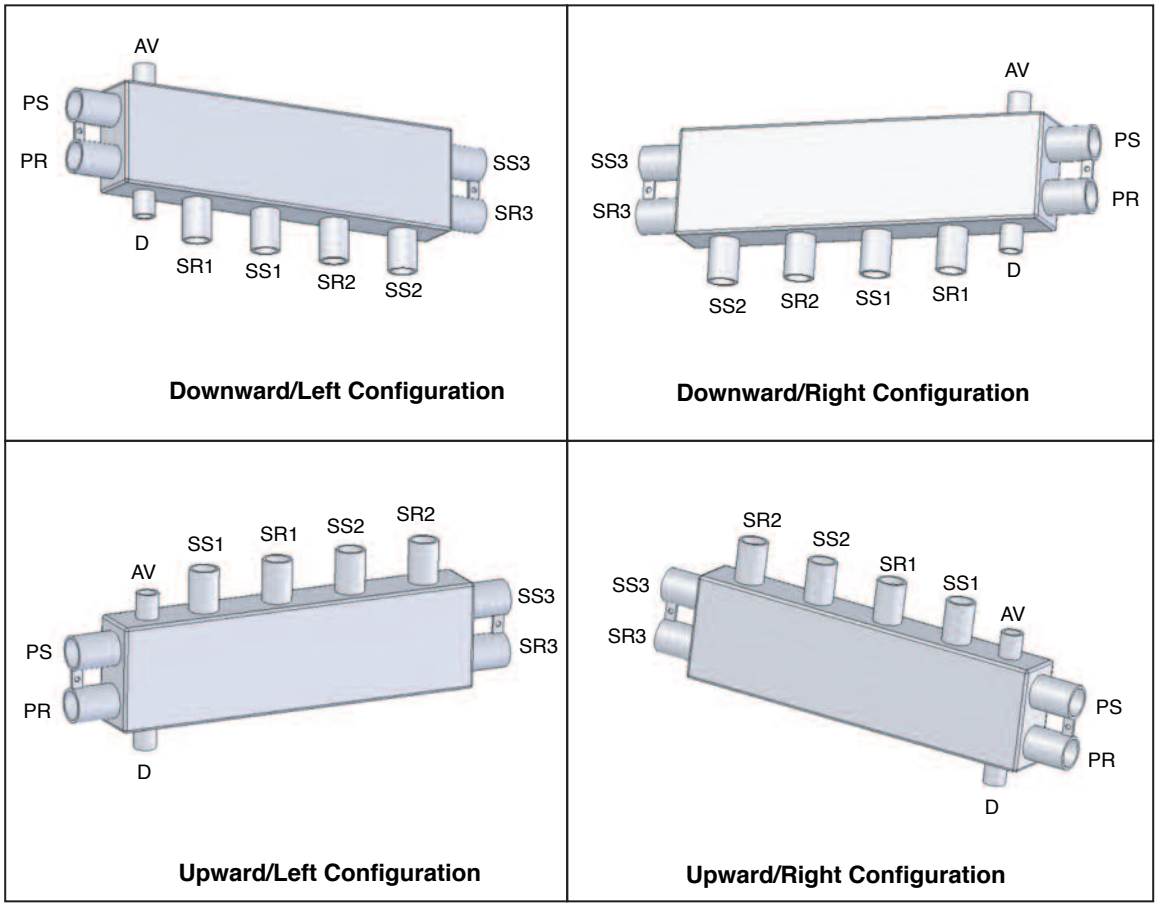


Fig. 1: Typical Piping Configuration



Legend

PS - Primary Supply Connection from Boiler
PR - Primary Return Connection to Boiler
SS1- Secondary Branch Circuit 1 Supply
SR1- Secondary Branch Circuit 1 Return
SS2- Secondary Branch Circuit 2 Supply
SR2- Secondary Branch Circuit 2 Return
SS3- Secondary Branch Circuit 3 Supply
SR3- Secondary Branch Circuit 3 Return
AV - Air Vent
D - Drain

Fig. 2: Recommended Mounting Configurations

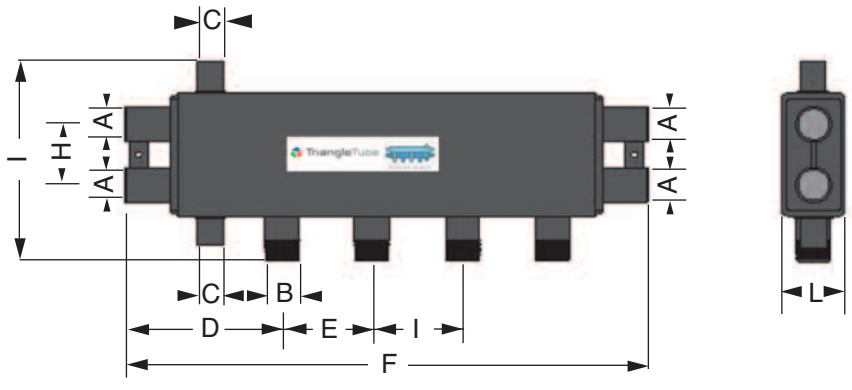


Fig. 3: Dimensional Data

A	1”
B	1”
C	1/2”
D	6 1/4”
E	3 1/2”
F	22 7/8”
H	2 3/8”
I	7 1/8”
L	2 3/8”
Weight (lb)	16
Volume (Gal.)	1

Mounting the PS Manifold

Weight of PS Manifold - 16 lbs (empty)

The mounting brackets on the PS manifold are designed for 20 inch spacing. A solid / secure mounting surface must be provided for installation of the manifold.

Ensure PS Manifold is level while maintaining centering on the mounting surface.

When mounting the manifold onto wood studs or backing board use 1/4" x 3 1/2" lag screws (supplied with manifold). Ensure both lag screws are installed securely in the studs.

- Mark the location of the manifold mounting bracket holes with a pencil and drill a 1/8 inch diameter pilot hole.

When mounting the manifold onto metal studs, use 1/4 inch toggle bolts and washers (not supplied with manifold).

When mounting the manifold onto masonry walls use appropriate wall anchors with 1/4 inch bolts (not supplied with the manifold).

NOTICE

DO NOT install or attempt to install the PS Manifold onto hollow sheet rock or lathe walls.

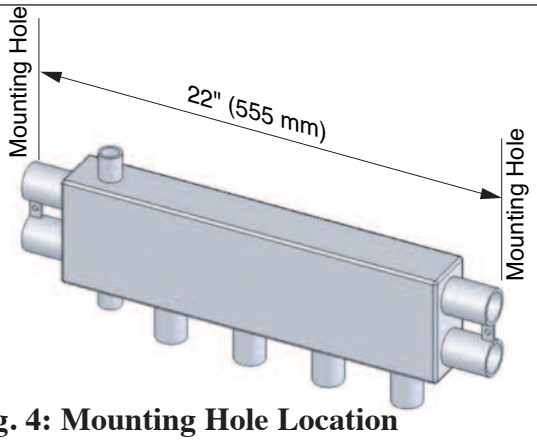


Fig. 4: Mounting Hole Location

Installing Insulation Cover

The insulation cover may be installed prior to mounting and piping the PS Manifold.

It is recommended to place the insulation cover over the manifold as a means of maintaining thermal efficiency.

To Install the Insulation Cover

1. Remove the protection film from the surface adhesive located on the inside surfaces of the insulation cover.

2. Apply a bead of silicon sealant along the mating edge of the insulation cover halves.

3. Assemble cover over manifold.

Service and Maintenance

There is no required service or maintenance for the PS Manifold.

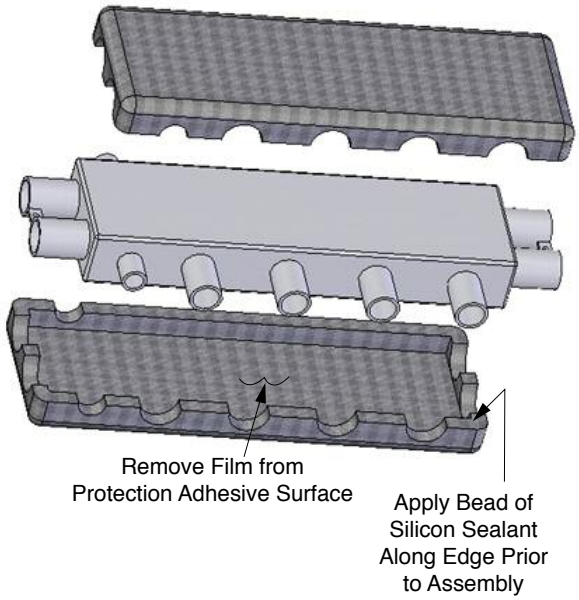


Fig. 5: Installing Insulation Cover