

For Residential, Commercial and Snowmelt Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Pressure Differential By-Pass

Stainless Steel Manifolds

Sizes: 1" Manifold

The Stainless Steel Manifold By-Pass is designed for manifolds utilizing circuit thermal actuators. If the manifold uses three or more individually controlled actuators, a by-pass is recommended. The goal of the by-pass is to regulate the flow rate and pressure drop through open circuits, providing balanced flow regardless of the number of circuits open.

Specifications

The By-Pass assembly is designed for use with Watts Radiant's 1" Stainless Steel manifolds. All standard 1" accessory items are compatible with the by-pass unit. These items include vent/purge assembly and end caps.

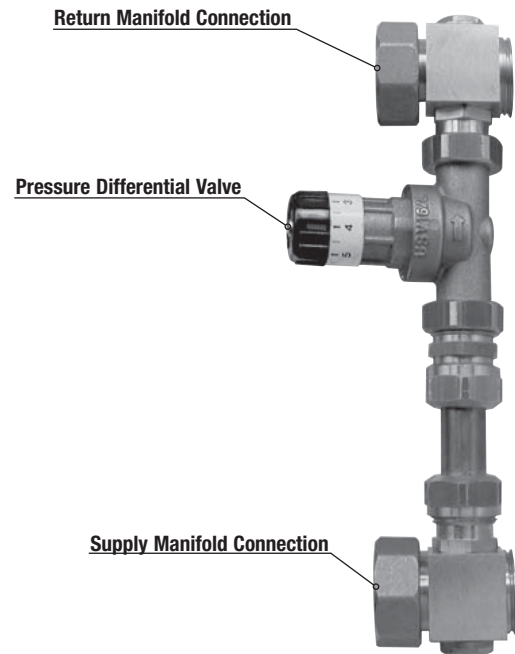
Technical Details	
Material	Brass and Copper
Size	8.27" x 2.56"
Max. Flow Rate	8.5 gpm
Max. Pressure Drop	22 ft. head (9.5 psi)
Max. Operating Temperature	167°F
Max. Operating Pressure	87 psi
Manifold-side Fittings	1" Female BSP Threads
Accessory-side Fittings	1" Male BSP Threads

Installation

Attach the By-Pass to the Stainless Steel manifold. Make sure the direction of flow, indicated on the By-Pass by an arrow, matches the intended flow direction. If necessary, loosen the union connections on the main By-Pass valve and rotate the valve to allow for easier attachment. Retighten the unions.

Set the By-Pass to the desired pressure drop rating found on the chart below. Desired pressure drop should be 20% higher than system. Example: if the system pressure drop is 4 gpm at 5 feet of head, the by-pass should be set for 6 feet of head, or setting between 3 & 4.

Alternatively, set the valve by: 1) Opening all zones and let operate for several minutes. 2) Slowly opening the bypass until hot water is felt on the outlet of valve, indicating flow 3) Closing the valve slightly so there



Stainless Steel manifold pressure differential by-pass valve

no flow in the bypass when all zones are calling. To adjust the valve setting, loosen the Locking Screw, turn the Adjustment Wheel to select a pressure setting, retighten the Locking Screw.

An average setting of 4 gives a differential pressure of about 6.5 feet of water.

Do not exceed the recommended flow rate and/or pressure rating as damage to the valve may occur over time.

All connections are either 1" female or male BSP straight threads. Do not connect to tapered NPT threads.

The Stainless Steel Manifold Differential By-Pass does not include end caps, vent/purge assembly or other accessories. These items must be ordered separately.

Qty	Description	Model #	Order #
	Pressure Differential By-pass, Stainless Steel Manifold	D4402050	81005345

 **Watts Radiant**
Floor Heating & Snowmelting

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