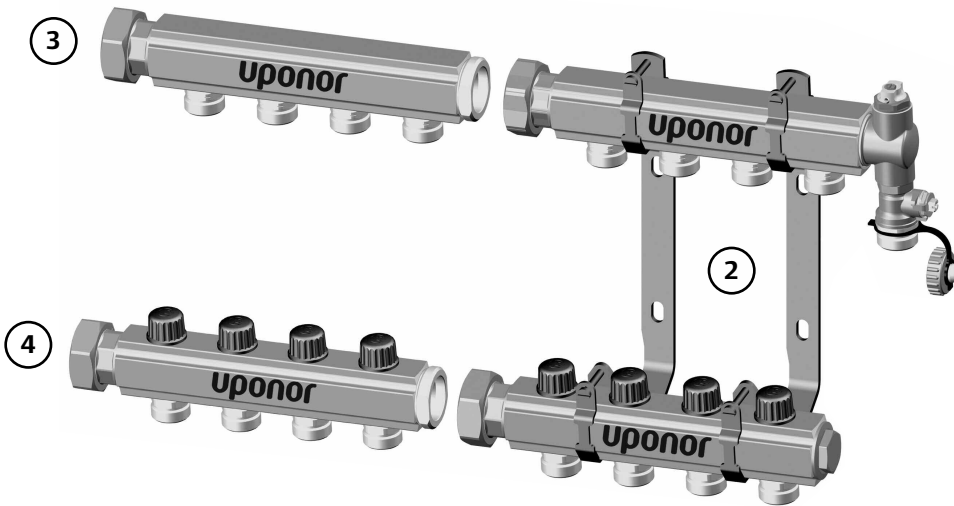




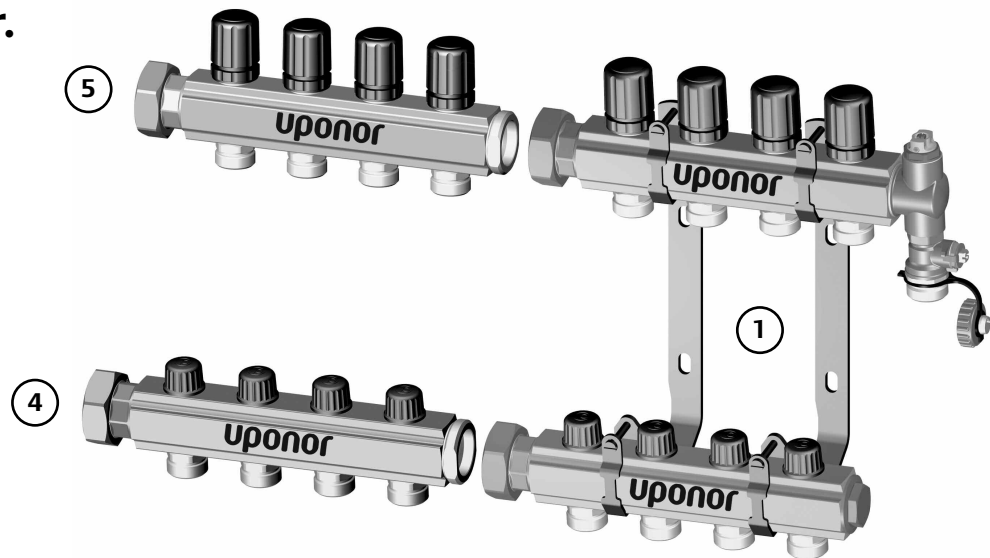
RADIANT HEATING SYSTEMS

TruFLOW™ JR. MANIFOLD

INSTRUCTION SHEET



TruFLOW™ Jr. Assemblies



TruFLOW™ Jr. Manifold System

The TruFLOW Jr. manifold assemblies (**Figures 1 and 2** above) feature an R32 union to connect either an Uponor Manifold Adapter or any of the TruFLOW Jr. add-on modular manifolds (**Figures 3, 4 and 5** above). Use a wrench to tighten the connection.



Important: Be sure to use the flat gasket supplied with the manifold. Do not over-tighten the union connection.

Installing Actuators

The TruFLOW manifold comes with black plastic caps mounted on the return manifold for manual operation of the on/off valves. To mount either the A3020522 Uponor Motorized Valve Actuator (MVA) or A3010522 Uponor Thermal Actuator, follow the directions below.

1. Remove the plastic cap by loosening the lower ring with a pair of pliers.
2. Install the included brass manifold adapter ring A2620028 (see below). Tighten by hand.

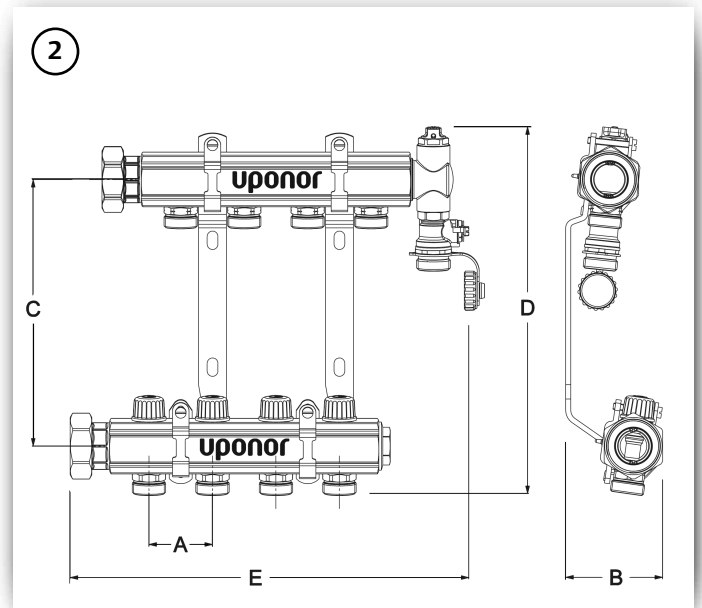
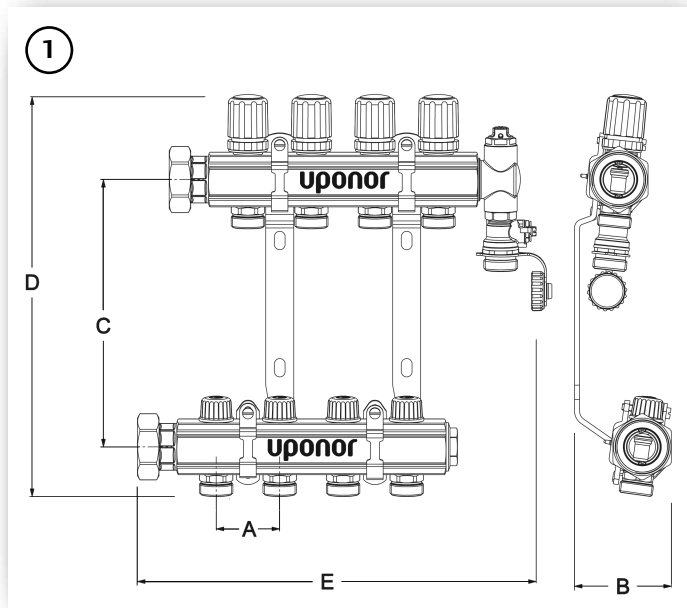


3. Install actuator:

- a. MVA (A3020522): Thread on the MVA until it bottoms out on the brass ring. The alignment dot may not line up. This will not affect the operation of the end switch.
- b. Thermal Actuator (A3010522): Thread on the green plastic ring until it bottoms out on the brass ring. Snap on the actuator head until you hear two clicks indicating that both sides of the actuators have seated properly.

TruFLOW Jr. Manifold Specifications	
Maximum Working Pressure	145 psi
Maximum Fluid Temperature	220°F
Manifold Flow Capacity	14 gpm
Loop Flow Capacity	$C_v = 1.9$ gpm
Loop Connection	R20

TruFLOW Jr. Manifold System

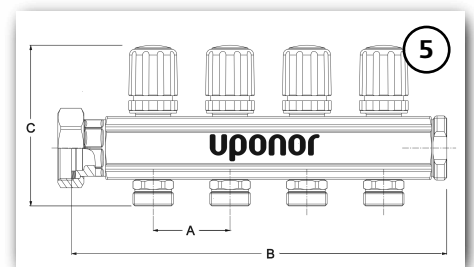
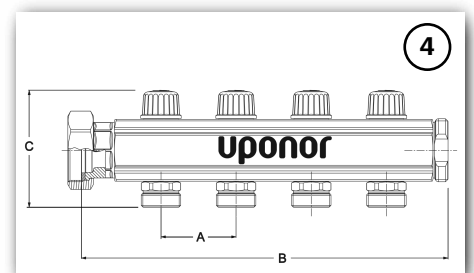
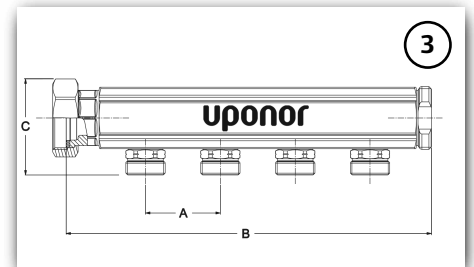


TruFLOW Jr. Manifold Assemblies (Dimensions in inches)

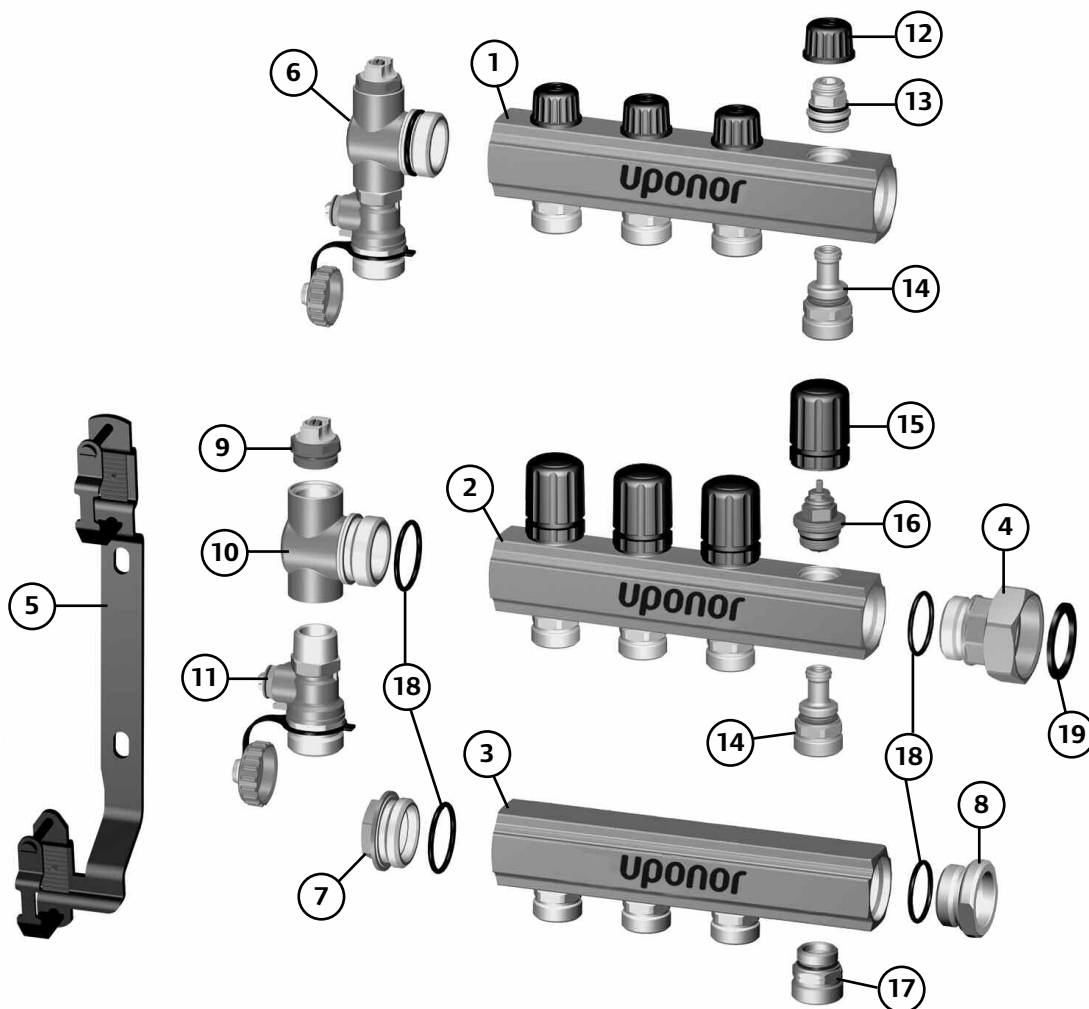
No.	Part No.	Part Description	A	B	C	D	E
1	A2660201	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 2-loop	1.97	3.00	8.25	12.40	8.40
1	A2660301	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 3-loop	1.97	3.00	8.25	12.40	10.34
1	A2660401	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 4-loop	1.97	3.00	8.25	12.40	12.28
1	A2660501	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 5-loop	1.97	3.00	8.25	12.40	14.22
1	A2660601	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 6-loop	1.97	3.00	8.25	12.40	16.16
1	A2660701	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 7-loop	1.97	3.00	8.25	12.40	18.13
1	A2660801	TruFLOW Jr. Assembly with Isolation and Balancing Valves, 8-loop	1.97	3.00	8.25	12.40	20.10
2	A2660200	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 2-loop	1.97	3.00	8.25	11.41	8.40
2	A2660300	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 3-loop	1.97	3.00	8.25	11.41	10.34
2	A2660400	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 4-loop	1.97	3.00	8.25	11.41	12.28
2	A2660500	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 5-loop	1.97	3.00	8.25	11.41	14.22
2	A2660600	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 6-loop	1.97	3.00	8.25	11.41	16.16
2	A2660700	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 7-loop	1.97	3.00	8.25	11.41	18.13
2	A2660800	TruFLOW Jr. Assembly with Balancing Valves and Valveless, 8-loop	1.97	3.00	8.25	11.41	20.10

TruFLOW Jr. Add-on Modular Manifolds (Dimensions in inches)

No.	Part No.	Part Description	A	B	C
3	A2663202	TruFLOW Jr. Valveless Manifold, 2-loop, R32 Male x R32 Union	1.97	5.66	2.30
3	A2663203	TruFLOW Jr. Valveless Manifold, 3-loop, R32 Male x R32 Union	1.97	7.63	2.30
3	A2663204	TruFLOW Jr. Valveless Manifold, 4-loop, R32 Male x R32 Union	1.97	9.60	2.30
4	A2663212	TruFLOW Jr. Manifold with Balancing Valves, 2-loop, R32 Male x R32 Union	1.97	5.66	3.07
4	A2663213	TruFLOW Jr. Manifold with Balancing Valves, 3-loop, R32 Male x R32 Union	1.97	7.63	3.07
4	A2663214	TruFLOW Jr. Manifold with Balancing Valves, 4-loop, R32 Male x R32 Union	1.97	9.60	3.07
5	A2663222	TruFLOW Jr. Manifold with Isolation Valves, 2-loop, R32 Male x R32 Union	1.97	5.66	4.13
5	A2663223	TruFLOW Jr. Manifold with Isolation Valves, 3-loop, R32 Male x R32 Union	1.97	7.63	4.13
5	A2663224	TruFLOW Jr. Manifold with Isolation Valves, 4-loop, R32 Male x R32 Union	1.97	9.60	4.13



TruFLOW Jr. Replacement Parts



No.	Part No.	Part Description
1	A2642200	TruFLOW Jr. Manifold with Balancing Valves, 2-loop, 1" BSP
1	A2642300	TruFLOW Jr. Manifold with Balancing Valves, 3-loop, 1" BSP
1	A2642400	TruFLOW Jr. Manifold with Balancing Valves, 4-loop, 1" BSP
2	A2641200	TruFLOW Jr. Manifold with Isolation Valves, 2-loop, 1" BSP
2	A2641300	TruFLOW Jr. Manifold with Isolation Valves, 3-loop, 1" BSP
2	A2641400	TruFLOW Jr. Manifold with Isolation Valves, 4-loop, 1" BSP
3	A2640200	TruFLOW Jr. Valveless Manifold, 2-loop, 1" BSP
3	A2640300	TruFLOW Jr. Valveless Manifold, 3-loop, 1" BSP
3	A2640400	TruFLOW Jr. Valveless Manifold, 4-loop, 1" BSP
4	A2660032	TruFLOW Jr. Compact Manifold Union, Straight, 1" BSP x R32 Union
5	A2640006	TruFLOW Jr. Manifold Mounting Bracket, single bracket
6	A2641000	TruFLOW Jr. Manifold End Cap with Drain and Vent, 1" BSP

No.	Part No.	Part Description
7	A2641001	TruFLOW Jr. Manifold Basic End Cap, 1" BSP
8	A2661032	TruFLOW Jr. Compact Manifold Male Union, Straight, 1" BSP x R32 Male
9	A2620010	TruFLOW End Cap with Vent Coin Vent
10	A2641250	TruFLOW Jr. Manifold End Cap with Vent Body, 1" BSP
11	A2620012	TruFLOW End Cap with Vent Valve, ½" NPT x ¾" Garden Hose
12	A2620014	TruFLOW Balancing Valve Plastic Cap
13	A2620013	TruFLOW Balancing Valve Body
14	A2620011	TruFLOW Jr. Internal Valve Seat Loop Nipple, R20
15	A2620018	TruFLOW Isolation Valve Plastic Cap
16	A2620017	TruFLOW Isolation Valve Body
17	A2640018	TruFLOW Jr. Loop Nipple for Valveless Manifold
18	A2640004	Replacement O-ring for 1" BSP connections
19	A2620005	Replacement Gasket for R32 Connections

How to Determine Balancing Turns

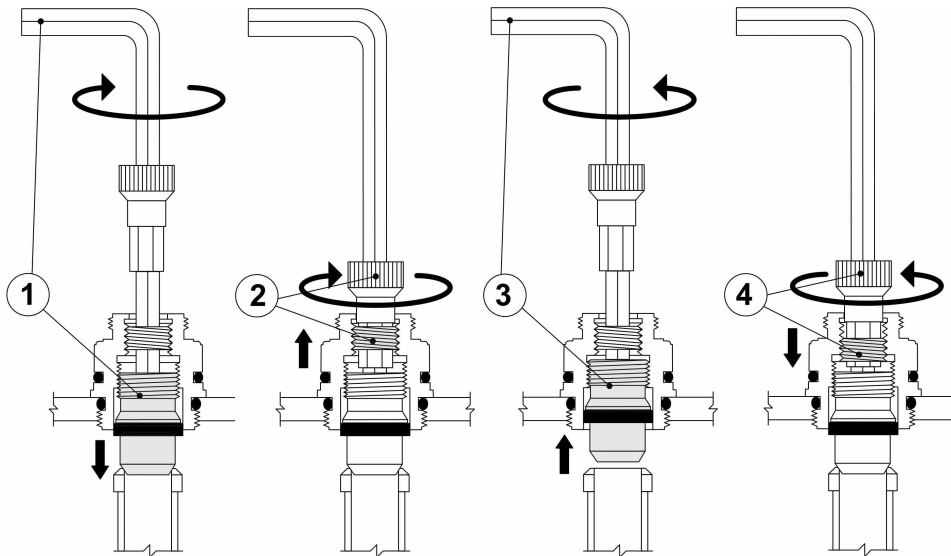
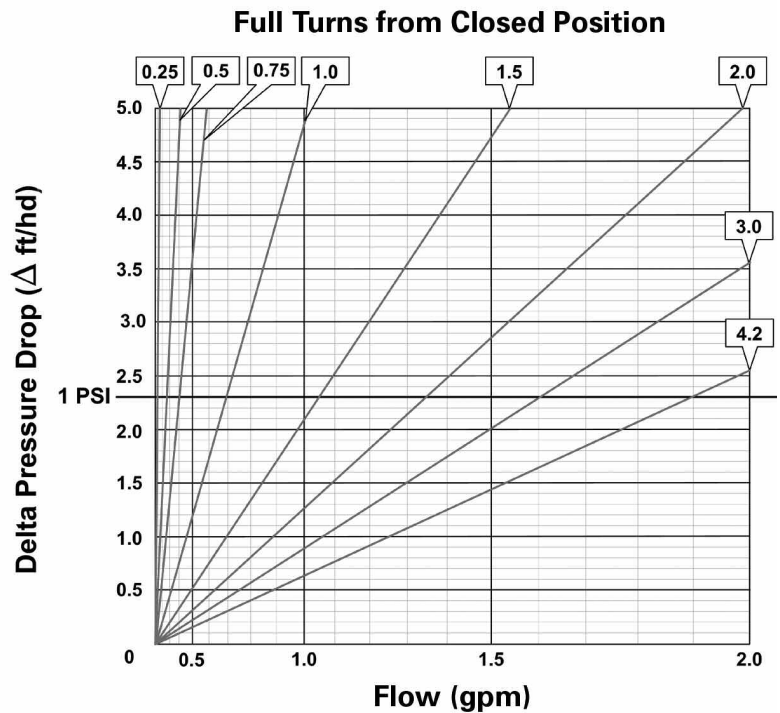
To balance the manifold correctly, determine the flow (gpm) and pressure drop (ft/hd) for each loop on the manifold. To find the required turns, follow directions below.

1. On the manifold to be balanced, find the loop with the highest pressure drop (ft/hd). This loop does not need any balancing, and will be fully open (4.25 turns from closed position).
2. To balance all other loops on the manifold, find the pressure drop (ft/hd) for each loop and subtract from the loop with the highest pressure drop (same as the loop figured in step 1). The difference is the delta ft/hd. Use this number on the balancing chart to find the required number of balancing turns.

Example: If the highest pressure-drop loop has 7 ft/hd and the loop that needs to be balanced has 5 ft/hd, subtract 5 from 7 for a difference of 2 delta ft/hd.

3. Locate the delta ft/hd number on the vertical scale located on the left side of the balancing chart.
4. Locate the gallons per minute (gpm) on the horizontal scale at the bottom of the balancing chart.
5. Locate where the delta ft/hd and gpm intersect on the chart.
6. The closest diagonal line to this intersection represents the number of full valve turns from closed to open to accurately balance the loop. If the intersection falls between two diagonal lines, estimate the distance between the lines and adjust the turns accordingly.

Balancing Chart



Valve Setting

To balance and preset the manifold assembly, proceed as follows.

1. Using the chrome allen key (6mm), turn main valve clockwise until it stops.
2. Using the small brass key, turn memory stop clockwise until it stops.
3. Using the chrome allen key, turn the main valve counter-clockwise to set the loop flow or balancing turns for that loop.
4. Using the small brass key, turn memory stop counter-clockwise until it stops.

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