



# uponor

RADIANT HEATING SYSTEMS

**TruFLOW™  
ELECTRONIC FLOW/  
TEMPERATURE METER**

**INSTRUCTION SHEET**

## TruFLOW™ Electronic Flow/Temperature Meter

Use the TruFLOW™ Electronic Flow/Temperature Meter on TruFLOW Jr. and TruFLOW Classic manifolds to accurately measure the flow and temperature of hydronic radiant loops.

The meter is available in a low-range (A2620015) which measures 0.15 to 1.3 gallons per minute (gpm) and a high-range (A2620027) which measures 0.37 to 2.0 gpm.

These meters require the FlowMaster electronic readout instrument (A2620001, sold separately) to read both flow and temperature for each loop. See the FlowMaster Instruction Sheet for additional information.

Technical Data	A2620015	A2620027
Measuring Range	0.15 to 1.3 gpm	0.37 to 2.0 gpm
Maximum Working Pressure	145 psi	145 psi
Maximum Working Temperature	220°F	220°F
Precision	0.05 gpm	0.05 gpm
C <sub>v</sub>	1.5 gpm	1.6 gpm
Connection	QS20	QS20

Uponor recommends using a strainer within the system such as the TruFLOW Manifold Supply and Return Ball Valves (A2631250) to keep debris from entering the flow meters. (See **Figure 1** for an example of the ball valves attached to the manifolds.)

### Assembly Instructions

1. Assemble the meter on the return manifold. Use an open-end wrench to keep the meter steady and to avoid excessive torque on the meter as shown in **Figure 1**.
  2. Ensure the water flows in the same direction as the arrow on the body of the meter.
- Note:** You can install the meter in a vertical or horizontal position, but not upside down (arrow pointing downward). This will affect the accuracy of the meter.
3. After balancing the system, replace the dust cover to protect the windows from dust, debris and accidental impact.



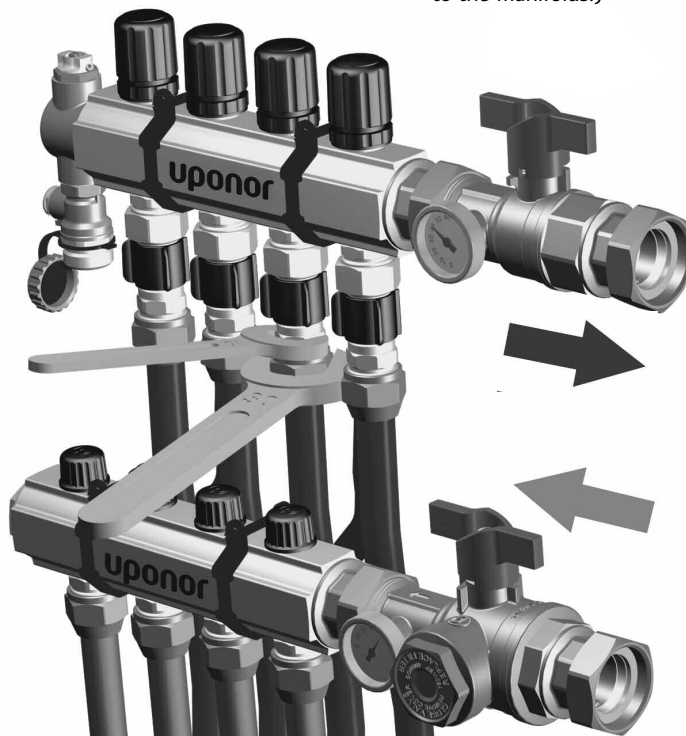
**Warning:** Do not use any solvent-based cleaner to clean the windows.



**Fragile!** The windows on the meter are made of glass.



**Do not use wrenches** or other tools directly on the windows to avoid damage.



**Figure 1: Installation of TruFLOW Electronic Flow/Temperature Meter**



## How to Determine Balancing Turns

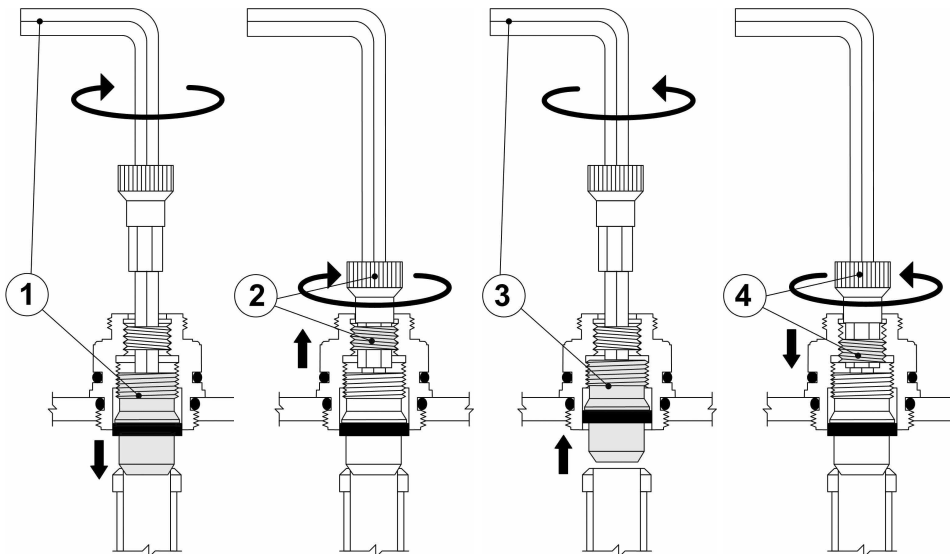
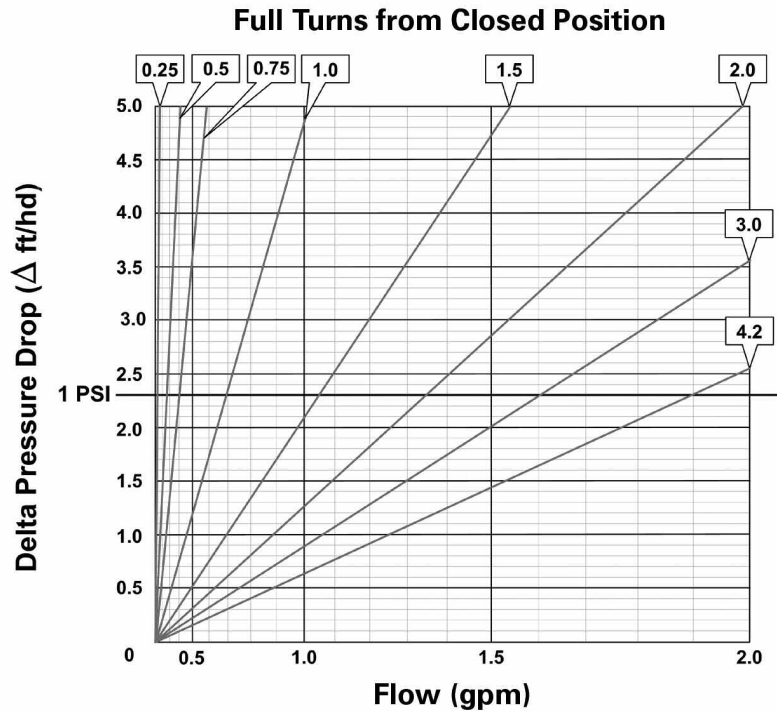
To balance the manifold correctly, determine the flow (gpm) and pressure drop (ft/hd) for each loop on the manifold. To find the required turns, follow directions below.

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, 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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