

INSTALLATION GUIDE

BALANCING VALVE WITH FLOW METER

The balancing valve allows you to adjust the flow rate of the water circulating in a heating or cooling system. This valve is equipped with a flow meter for a direct reading of the flow rate. The flow meter is housed in a by-pass circuit on the valve body and allows fast and easy balancing of circuits without the need for differential pressure gauges or diagrams. It can be shut off during normal functioning. The valve with flow meter can be installed in either the horizontal or vertical position.



Pictured:
Balancing Valve

Part Number	Connection	Version
800-775	1"	Valve with flow meter
800-775NF	1"	Valve without flow meter
800-FM-318	1/4"	Flow meter with housing

TECHNICAL DATA

Working Temperature Range:	40°-195°F - with flow meter 40°-230°F - without flow meter
Max Working Pressure:	90 psi - with flow meter 200 psi - without flow meter
Compatible Fluids:	water, glycol solutions (max concentration of glycol 50 %)
Connections:	1" with tail pieces set.
Flow rate Range:	0-13 GPM

Other Features

Equipped with mechanical memory stop (1.5mm allen key) that limits the hand wheel travel, allowing the user to set a maximum flow rate.

Drain port in the bottom of the valve.

Connections	Cv (Venturi flow meter)	Cv (complete valve)
1"	9.5	6.0

Flow rate values related to differential pressure on Venturi flow meter (*) or for the complete value (**).

Connections	.77 psi (*)	.44 psi (*)	1.45 psi (**)
1"	3.4 GPM	8.37 GPM	9.69 GPM

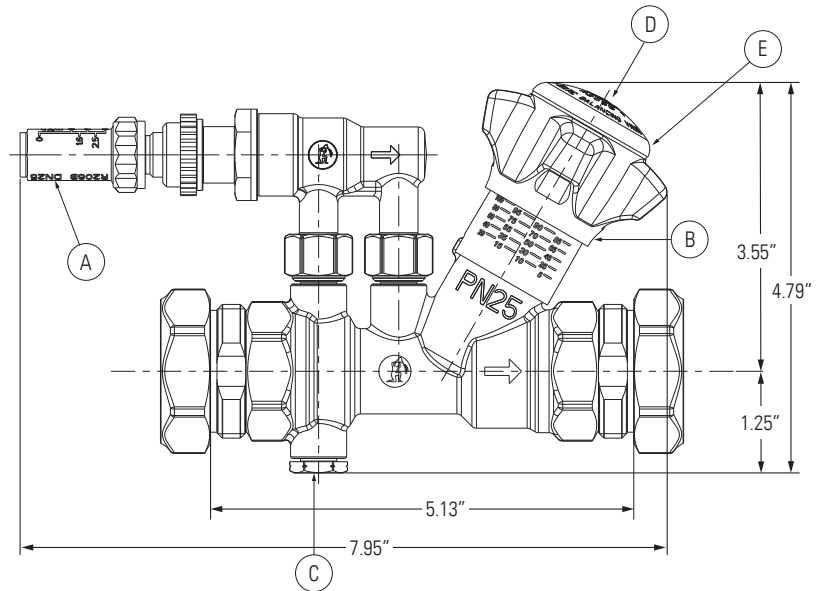
Legend	
A	Flow meter
B	Hand wheel
C	Drain 1/4"
D	Removable cap (for presetting)
E	Memory stop (under cap) 1.5mm screw

OPERATION

With Flow Meter

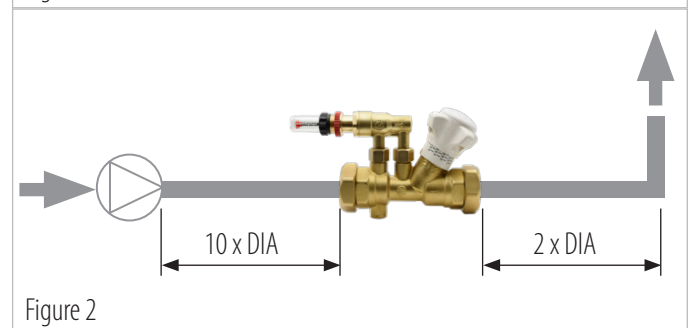
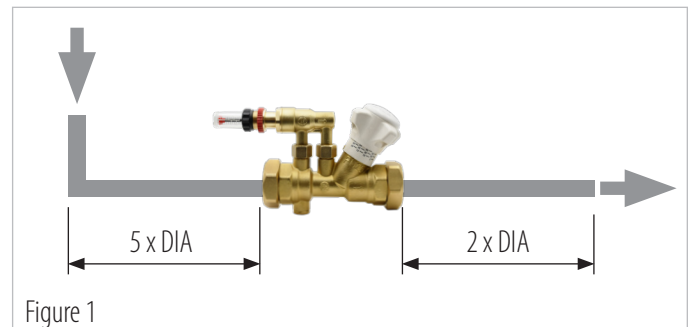
To enable the operation of the flow meter, fully open by turning it counter-clockwise.

To disable the operation of the flow meter, fully close by turning it clockwise.



INSTALLATION

- The valve must be installed maintaining free access to the flow meter, drain and hand wheel.
- The valve and the pipe on which it is installed must have the same nominal diameter.
- Flush the system before installing the valve.
- Insert a strainer upstream of the valve.
- Verify the flow direction stamped on the valve's body.
- The valve can be installed in horizontal or vertical pipes.
- If the valve is installed after an elbow, it is recommended to maintain a minimum length of straight pipe equal to 5 pipe diameters before the valve and 2 pipe diameters after the valve. (Figure 1)
- If there is a pump immediately upstream the valve, the minimum recommended length of the straight pipe is 10 times the nominal diameter before the valve and 2 times the pipe diameter after the valve. (Figure 2)
- Reference the LegendConnect IOM for installation of the different connection types to the piping.



The following instructions are specifically for mounting a Legend 800-FM-318 flow meter housing onto a Legend 800-775NF balance valve without flowmeter.

- Using a 16mm, or 5/8", open end wrench, remove one of the plugs from the top side of the valve.
- Verify that there is a black rubber washer inside the opening. If there is not one, install one from the provided parts bag.
- Using a 6mm allen wrench, install and fully tighten in one of the threaded adapters.
- Repeat the previous 3 steps for the second port.
- From the parts bag, place a blue fiber gasket on top of each of the adapters that were just installed.
- Carefully place the flowmeter assembly on top of the two blue gaskets, and hand tighten both of the nuts.
- Using a 19mm, or 3/4", open end wrench, finish tightening both of the flow meter assembly nuts.

PRESSURE DROP

