



WARNING: Label Part No. V56873 installed in this location (under Bell & Gossett). If missing it must be replaced.

Venturi/Ball Valve Combination Model MV

INSTALLER: PLEASE LEAVE THIS MANUAL FOR THE OWNER'S USE.



SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**

OPERATIONAL LIMITS

**WORKING PRESSURE & TEMPERATURE LIMITS
(SOLDER TYPE LIMITS FOR ANSI STD. B.16.18)**

TYPE OF SOLDER	MAXIMUM LIMITATIONS 1/2" - 1"		MAXIMUM LIMITATIONS 1 1/4" - 2"	
	PRESSURE PSI (kPa)	TEMP °F (°C)	PRESSURE PSI (kPa)	TEMP °F (°C)
95-5	300 (2069)	200 (93)	300 (2069)	175 (79)
TIN-	250 (1724)	225 (107)	250 (1724)	200 (93)
ANTIMONY	200 (1379)	250 (121)	175 (1207)	250 (121)

NPT

Maximum Operating Pressure 400 psig (2758 kPa)
Maximum Operating Temperature 250°F (121°C)

DESCRIPTION

The Bell & Gossett Model MV is a combination calibrated balance, commissioning and positive shutoff valve for use in HVAC systems. An efficient brass venturi design provides accurate flow balancing with minimal system pressure loss. Valves are furnished with two readout valves (pressure and temperature ports), standard port ball valve with memory stop, and a hanging ID tag for commissioning. A variety of end connections are available on both the fixed and union ends.

Venturi/Ball valve provides highly accurate flow measurement capabilities.





WARNING: Damage to the Venturi/Ball valve or failure of solder sealing joints may occur if these operational limits are exceeded. This can result in water leakage. Failure to follow this instruction can cause serious personal injury and/or property damage.

INSTALLATION INSTRUCTIONS

1. For installing Sweat Connections:


- Clean tube ends and valve connections thoroughly per good piping practices with a fine grade emery cloth or fine grit sandpaper.
- For soldering, use 95-5 (Tin-Antimony) solder and a good grade of flux.
- Use a torch with a sharp pointed flame.
- When sweating the joints, first adjusting the valve in the full open position, then wrap the valve with a cool wet rag and then direct the flame with care to avoid subjecting the valve to excessive heat. Allow the valve to cool before touching or operating.
- Check the soldered connection for leaks.

 **WARNING:** Use of improper procedures to sweat valve model with union connection into system can damage valve. Before installing sweat union connection to valve, remove the union nut and O-ring from the valve body, then union tailpiece with union nut must be sweated (soldered) into place. Failure to follow this instruction could result in property damage and/or moderate personal injury.

 **CAUTION:** Heat Associated with the use of silver solder may damage a Venturi/Ball valve and void the product warranty. Do not use silver solder. Failure to follow these instructions could result in property damage and/or moderate personal injury

2. For installing NPT connections:


Apply pipe compound conservatively to male connecting fittings only.

 **CAUTION:** The use of PTFE impregnated pipe compound and PTFE tape on pipe threads provides lubricity. Care should be taken to prevent overtightening which may damage the valve body. Failure to follow these instructions can result in moderate personal injury and/or property damage.

After installation check all joints for leakage and retighten where necessary.

OPERATION INSTRUCTIONS

1. Energize the zone, circuit and/or system pump(s) as applicable.
2. Using Bell & Gossett Model RP-250B Readout Probes, sequentially attach a Bell & Gossett differential pressure readout kit to the readout valves on each Venturi/Ball valve.

 **WARNING:** Hot water leakage can occur from readout valves during probe insertion and during hookup of readout kit. Follow the instruction manuals supplied with readout probes and readout kits for safe use. Failure to follow these instructions could result in serious personal injury or death and property damage.

3. Read the differential pressure across the orifice of the Venturi/Ball valve.
4. Using the differential pressure data sheet #EP-600 of the Venturi/Ball valve to read actual GPM.


Example: The Venturi/Ball valve model 3/4" L. If the differential pressure across the orifice read at 46" W.C. the flow rate is 4 GPM.

HOW TO USE THE MEMORY STOP FEATURE

1. Make the final degree of closure setting.
2. Loosen the handle nut and rotate memory stop until against the body locking.
3. Tighten the handle nut.

SERVICE INSTRUCTIONS

Periodically inspect the Venturi/Ball for signs of leakage or corrosion.

 **WARNING:** Corrosion or leakage is indication, that the Venturi/Ball must be replaced. Failure to follow these instructions could result in serious personal injury or death and property damage.



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