

GUIDE SPECIFICATIONS – MANUAL VENTURI BALANCING VALVES

MANUFACTURER

1. Macon Balancing, Models MB or MBF

DESIGN

1. Flow devices shall be Venturi type as recommended by ASHRAE.
2. Devices shall have a precision-machined throat and have a stated catalog accuracy of 3% of flow rate.
3. **MINIMUM GAUGE READING:**
The gauge reading (flow signal) shall be at least two feet at the design flow with the valve in the wide open position.
4. The valves are to have differential readout ports fitted with check valve and protective cap, and are to have a memory stop to allow complete shut-off and return to set position with out losing the set point.
5. **PUMP HEAD REQUIREMENTS:**
The permanent pressure loss added to the pump head shall not exceed two feet, per device, at the design GPM in the wide-open position.

CONSTRUCTION

1. All devices shall have a Venturi section and a throttling valve with a memory stop on the downstream side of the Venturi.
2. Sizes .50" - 2.0" shall have a brass alloy body with sweat or threaded (NPT) connections, ball valve shall have a plated brass ball, blowout-proof brass stem, union end which will except various type tailpieces, Teflon seat, EPDM o-ring seals, and a steel handle.
Sizes 2.5" – 6" shall have a cast steel body.
Flanges shall be compatible with ANSI B16.5-1968 150lb. Butterfly Valve shall be ductile iron lug type, with EPDM seats, 416 SS stem, Teflon bushing, aluminum/bronze disc.
3. All valves .50" – 2.0" shall be factory leak tested at 100PSI air under water.

MINIMUM RATINGS

1. Devices with sweat or NPT connections
.50" – 2": 400 PSIG @ 250°F.
2. Devices with Flanged connections
2" – 10": 200 PSIG @ 250°F.

READOUT METER KIT

Provide a portable readout meter kit by the manufacturer of the balancing devices.

1. The meter shall be housed in a durable case complete with two 10' color coded hoses with shut-off valves at the end that connects to the balancing valve so that water does not drain out between readings.
2. Meter shall have a 6" diameter face and $\pm 1.75\%$ full-scale accuracy.
3. Meter shall have a forged brass body and a three-valve manifold for over-range protection.
4. Meter shall have a dual scale reading inches and feet W.C.

INSTALLATION

1. The straight pipe required to achieve 3% F.S. accuracy shall be incorporated as an integral part of the .50" to 2" valve assembly. Five pipe diameters of straight pipe are required from a control valve for sizes 2.5" – 10".
2. Install balancing valves on the return lines of the coil as recommended by ASHRAE.
3. Install in accordance with the manufacturer's instructions.