

Guide Specifications

A. Manufacturers:

1. Flow Design, Inc., AutoFlow or approved equal. Models YR, AC, MC, WG, WS, WB, WR or WT.

B. Design:

1. The GPM for the automatic flow control valves shall be factory set and shall automatically limit the rate of flow to within 5% of the specified GPM over at least 95 percent of the control range.
2. For 1/2" - 2", the flow cartridge shall be removable from the Y- body housing without the use of special tools to provide access for regulator change-out, inspection and cleaning without breaking the main piping. (Access shall be similar to that provided for removal of a Y-strainer screen).
3. PUMP HEAD REQUIREMENT:
 - The permanent pressure loss added to the pump head shall not exceed seven feet.
4. Each valve shall have two P/T ports.
5. All automatic flow control devices shall be supplied by a single source and certified flow tests, witnessed by a professional engineer, shall be available.
6. Five-year product warranty and free first-year cartridge exchange, up to 10 percent of the total units ordered.

C. Construction:

1. The internal wear surfaces of the valve cartridge shall be stainless steel.
2. The internal flow cartridge body shall have machined threads so the spring free height may be compensated for without the use of fixer shims. A crimped sheet metal design is not acceptable.
3. The internal flow cartridge shall be permanently marked with the GPM and spring range.
4. For 1/2" through 2" pipe sizes: An assembly shall consist of a brass Y-type body, integral brass-body ball valve and 'O' ring type union.; Flow Design Model AC/MC or equal.

5. For 2 1/2" and larger flanged connections: Ductile-iron body suitable for mounting wafer style between standard 150# or 300# flanges. The long flange bolts and nuts shall be provided with each control valve. Flow Design Model WS or equal.

6. All valves shall be factory leak tested at 100 psi air.

D. Minimum ratings:

1. 1/2" through 2" pipe size: 400 PSIG at 250°F
2. 2 1/2" through 14" pipe size: 600 PSIG at 250°F
3. 16" through 30" pipe size: 250 PSIG at 250°F

E. Flow Verification (choose one):

1. The differential pressure across the Automatic Flow Control Valve shall be measured for flow verification and to determine the amount of system over heading or under pumping.
2. The flow shall be verified by measuring the differential pressure across the coil served or the wide-open temperature control valve and calculating the flow using the coil or valve Cv.

F. Test Kit:

An electronic pressure and temperature test kit shall be provided with the ability to read differential pressure from 0 to 75 PSI, and temperature from -10 to 230 F.

G. Installation:

1. Install automatic flow control valves on the return lines of coils as indicated on the plans. A balancing valve on supply side is not acceptable.
2. The standard ports and handles shall clear 1" thick insulation. Handle and port extensions are required for over 1" thick insulation. Do not insulate flow control valves used on heating coils.
3. Install, on the supply side of coils, a Y-strainer with brass blow down valve with 3/4" hose-end connection with cap. Inline (basket) strainer is not acceptable.



Automatic Flow Control Valves

Product Specifications

Model AC - 1/2" - 2" AutoFlow regulator/ball valve/Port section/Union. Directional flow/Dual access ports. SWT or FPT (ball end) by SWT, FPT or MPT (union end). *One reduction size available on union end - 1/2" - 2" SWT, FPT or MPT.*

Model MC - 1/2" - 3/4" AutoFlow regulator and ball valve with Port section/Union. T-Shaped.

Model WB - 2" - 8" Model WS or WU flow control valve with rods, nuts and Model BF butterfly valve. 4" - 8" models have spacer flanges between valves. Components shipped unassembled. Does not include mating flange.

Model WG - 2 1/2" - 14" AutoFlow regulator. Grooved Ends/Directional flow. Steel /Iron/Dual access ports.

Model WR - 3" - 6" AutoFlow regulator and butterfly valve with reduced inlet flange designed to mate with flanged ATC valve. Shipped assembled/Dual access ports/Directional flow.

Model WS - 2 1/2" - 14" AutoFlow regulator/Ductile iron wafer body (150# or 300#). Directional flow/Dual access ports/Wafer style. Shipped w/ rods & nuts for use with customer-supplied companion flanges. 16" - 30" AutoFlow regulator/Fabricated-steel wafer body for 150# ASA flanges. Directional flow/Dual access ports.

Model WT - 2 1/2" - 4" AutoFlow regulator and butterfly valve with reduced threaded inlet designed to mate with threaded brass ATC.

Dielectric fitting included/Directional flow/Dual access ports. Shipped assembled.

Model YR - 1/2" - 2 1/2" AutoFlow regulator/Port section/Directional flow/Dual access ports/Brass body. 1/2" - 1" SWT X SWT or FPT X FPT; 1 1/4" - 2 1/2" FPT X FPT. *SWT X SWT available for 1 1/4" - 2" with addition of brass sweat adapters.*