

V5013N Three-Way Threaded Globe Valve



The V5013N is a three-way threaded globe valve for control of hot water, cold water, and glycol solutions (up to 50 percent concentration) in heating or cooling HVAC applications. The valve is used for mixing service to direct flow from one of two inlets to a common outlet in two-position or modulating control systems.

SPECIFICATION DATA

FEATURES

- Red brass body with NPT-threaded connections.
- Stainless steel stem and brass plug.
- Low seat leakage rate (≤ 0.05 percent of C_v).
- 50:1 rangeability per VDI/VDE 2173.
- Spring-loaded, self-adjusting packing.
- Constant total flow throughout full stem travel.
- Accurate positioning to ensure state of the art temperature control.
- Sizes range from 1/2 in. to 2 in.
- Suitable for pneumatic or electric/electronic actuation.
- Repack and rebuild kits available for field servicing.

SPECIFICATIONS

Models:

- V5013N Valve: Three-way mixing valve for water and glycol. NPT-threaded pipe connections. Constant total flow. Push down valve stem to close bottom (B) port.

Valve Sizes and Flow Capacities:

Size (in.)	Capacity (C_v)
1/2	2.9
	4.7
3/4	7.3
1	11.7
1-1/4	18.7
1-1/2	29.3
2	46.8

Pipe Connections:

- Female NPT-threaded connections.

Seat:

- 1/2 in.: Replaceable stainless steel upper, replaceable brass lower.
- 3/4 in. to 2 in.: Integral brass upper, replaceable brass lower.

ANSI Body Class:

- 150 psi.

Stem:

- Stainless steel.

Plug:

- Brass.

Stroke:

- 3/4 in. (20 mm).

Approximate Leakage Rate:

- 0.05 percent C_v .

Body Material:

- Red brass.

Packing:

- Spring-loaded, carbon fiber reinforced PTFE V-rings.

Pressure-Temperature Body Ratings:

- Water:
 - 36°F to 248°F, 217 psi (15 bar).
 - 248°F to 337°F, 185 psi (12.8 bar).
 - Maximum water differential pressure: 230 psid (15.8 bar).

Valve Flow Characteristics:

- Equal percentage port A-AB, linear port B-AB. Movement of the valve stem at any point of the flow range does not significantly change the total flow rate at the AB outlet port (constant total flow).

Close-Off Pressure Ratings:

- Refer to the product data, 63-2549.

Maximum Pressure Differential for Quiet Water Service:

- 20 psi differential.

Rangeability:

- 50:1 per VDI/VDE 2173.

Motor and Linkage Selection:

Electric	Pneumatic
ML6421/ML6425	MP953C (5 and 8 in.)
ML7421/ML7425	MP953E (5 and 8 in.)
ML7984/ML6984	—
Modutrol IV with Q5001	—
Damper DCA with Q5020	—



ACCESSORIES

Stem Button:

- 0901116

Repack Kits:

- 0901786 for 1/4 in. stems (1/2 in. through 1-1/4 in. valves).
- 0901787 for 3/8 in. stems (1-1/2 in. through 2 in. valves).

Rebuild Kits:

- Refer to V5013N Three-Way Threaded Globe Valve Product Data, form 63-2549.

TYPICAL SPECIFICATIONS

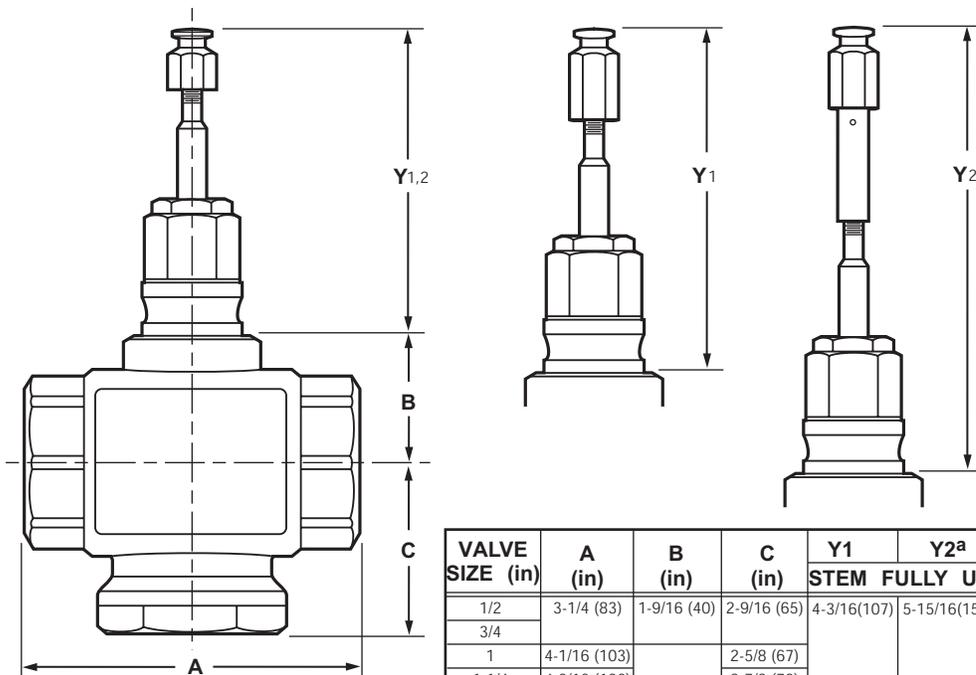
Automatic control valves shall have NPT threaded type fitting, 1/2 in. through 2 in. sizes, and shall be ANSI-rated to withstand the pressures and temperatures encountered.

Valves shall have metal-to-metal seats, stainless-steel stems, and replaceable spring-loaded reinforced carbon filled teflon packing.

Valves shall have a leakage rate of 0.05% C_v or less. Valves shall have a 50:1 rangeability or better.

All three way water valves shall be provided with throttling plugs such that the total flow through the valve remains constant regardless of the valves position.

Dimensions:



VALVE SIZE (in)	A (in)	B (in)	C (in)	Y1 STEM FULLY UP	Y2 ^a
1/2	3-1/4 (83)	1-9/16 (40)	2-9/16 (65)	4-3/16(107)	5-15/16(151)
3/4					
1	4-1/16 (103)		2-5/8 (67)		
1-1/4	4-3/16 (106)		2-7/8 (73)		
1-1/2	4-3/4 (120)	1-13/16 (46)	3-1/16 (77)		
2	5-1/4 (134)		3-5/16 (84)		

^a Y₂ WITH STEM EXTENSION FOR MP953C,E (8 IN. ONLY) M17379A

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