Two-Position Three-Way Air Valve

MODEL NUMBER VP519C

General

The VP519C operates as an air switch in large Day-Nite or Summer-Winter switch-over systems, providing two-position action.

Features

- Spring-loaded, self-adjusting Teflon cone packing.
- Removable composition upper and lower seats.
- Operator rotates on bonnet, permitting alignment of air connection with control air or relay piping.
- Right-angle mounting bracket permits mounting on a wall or panel.



Specifications

DIMENSIONS

See Fig. 1 and Table 1.

Table 1. Approximate A and B Dimensions in Inches (Millimeters).

Valve Size	A	В		
1/2 in.	3-1/8 (79)	2-3/4 (70)		
3/4 in.	3-3/8 (86)	2-19/32 (66)		

BODY

NOMINAL BODY RATING 150 lb/in² (1034 kPa) maximum.

CONNECTIONS

1/2 in. NPT for 1/2 in. valve. 3/4 in. NPT for 3/4 in. valve.

DISCS

Removable composition (upper and lower). Refer to Table 2 for disc limitations.

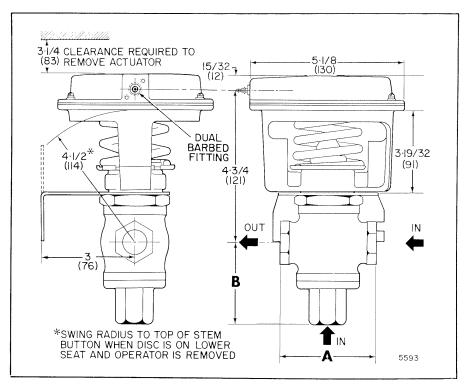


FIG. 1. VP519C APPROXIMATE DIMENSIONS IN INCHES (MILLIMETERS) SEE TABLE 1 FOR A AND B DIMENSIONS

SEATS

Upper Seat: Integral in bronze body. Lower Seat: Integral in lower brass inlet.

FLOW CHARACTERISTIC

Two-position.

OPERATOR

DIAPHRAGM

Neoprene rubber.

MAXIMUM SAFE AIR PRESSURE

25 lb/in² (172 kPa).

MAXIMUM AMBIENT TEMPERATURE

160 F (71 C).

OPERATING RANGE

6 to 9 Ib/in^2 (41 to 62 kPa), non-adjustable.

STARTING POINT

Non-adjustable.

CONNECTIONS

Dual barbed connection for 5/32 in. (4 mm) or 1/4 in. (6 mm) plastic tubing.

CLOSE-OFF RATINGS AT VARIOUS AIR PRESSURES

See Fig. 2.

WHEN ORDERING, SPECIFY

Valve (pipe) size.

Table 2. Body Specifications.

Valve Size	Cv	Travel in. (mm)	Packing Limitations			Disc Limitations		
			Temp Limits of Agent		Press. Limits	Temp. Limits of Agent		Max. Press.
			Max. F (C)	Min. F (C)	of Agent lb/in ² (kPa)	Max. F(C)	Min. F (C)	Differential Ib/in ² (kPa)
1/2 in.	5.5	1/4 (6)	337 (169)	40 (4)	150 (1034)	115		75 (517)
3/4 in.	7.5	9/32 (7)				(46)		

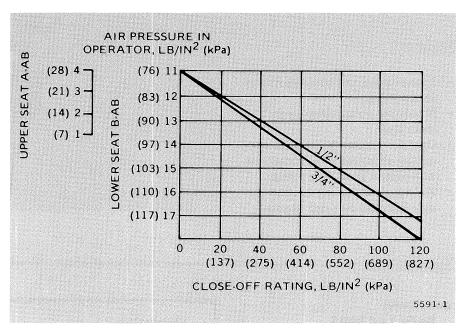


FIG. 2. MAXIMUM DIFFERENCE IN PRESSURE BETWEEN OUTLET AND INLET

Typical Operation

With 0 lb/in² (0 kPa) pilot pressure, Port AB is open to Port B and closed to Port A, furnishing 18 lb/in² (124 kPa) supply pressure to the system. With 13 lb/in² (90 kPa) pilot pressure, Port AB is open to Port A and closed to Port B, furnishing 13 lb/in² (90 kPa) supply pressure to the system (Fig. 3).

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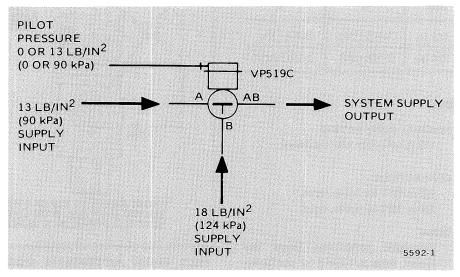


FIG. 3. VP519C TYPICAL OPERATION