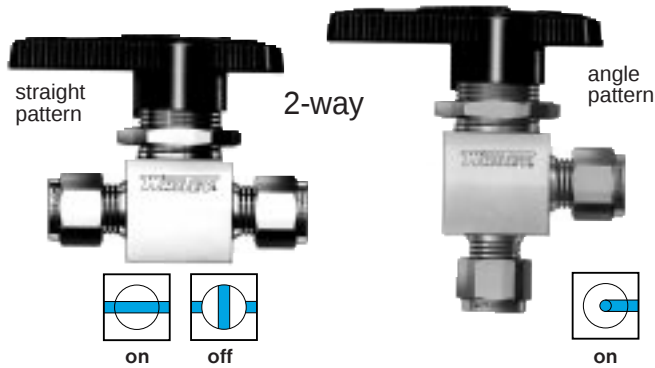


ON-OFF VALVES



Technical Data

Valve Series	Pressure Rating ^①		Temperature Range
	psig	bar	
41, 42, 41-A, 42-A, 43-A	2500	172	50°F to 150°F ^② (10°C to 65°C) ^②
43	3000	206	
44, 45	2500	172	
44-A, 45-A	1500	103	

Dimensions

End Connection		Basic Ordering Number	C _V	Orifice		Inches (mm)									
Type	Size			in.	mm	A	B	B1	D	E	F	G	H	J	W
fractional Swagelok Tube Fitting	1/16	-41S1	0.1	0.052	1.3	1.69 (42.9)	0.84 (21.3)	0.84 (21.3)							
	1/8	-41S2	0.2	0.093	2.4	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	0.34 (8.6)	0.28 (7.1)	1.12 (28.4)	1/4 (6.4)	19/32 (15.1)	1.38 (35.1)	0.58 (14.7)
	1/4	-42S4	0.6	0.125	3.2	2.25 (57.2)	1.12 (28.4)	1.12 (28.4)							
		-43S4	2.4			2.38 (60.5)	1.19 (30.2)	1.19 (30.2)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
	3/8	-43S6	1.5			2.62 (66.5)	1.31 (33.3)	1.31 (33.3)							
		-44S6	6.0	0.281	7.1	3.06 (77.7)	1.56 (39.6)	1.56 (39.6)	0.56 (14.2)	0.56 (14.2)	2.00 (50.8)	3/8 (9.5)	1 1/8 (28.6)	2.06 (52.3)	1.12 (28.4)
	1/2	-45S8	12.0			3.94 (100)	1.94 (49.3)	1.94 (49.3)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)		1 1/2 (38.1)	2.44 (62.0)	1.50 (38.1)
	3/4	-45S12	6.4	0.406	10.3										
metric Swagelok Tube Fitting	3 mm	-41S3MM	0.2	0.093	2.4	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	0.34 (8.6)	0.28 (7.1)	1.12 (28.4)	1/4 (6.4)	19/32 (15.1)	1.38 (35.1)	0.58 (14.7)
	6 mm	-42S6MM	0.6	0.125	3.2	2.25 (57.2)	1.12 (28.4)	1.12 (28.4)							
	8 mm	-43S6MM	2.4			2.38 (60.5)	1.19 (30.2)	1.19 (30.2)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
		-43S8MM	1.5			2.50 (63.5)	1.25 (31.8)	1.25 (31.8)							
	10 mm	-44S10MM	6.0	0.281	7.1	3.06 (77.7)	1.56 (39.6)	1.56 (39.6)	0.56 (14.2)	0.56 (14.2)	2.00 (50.8)	3/8 (9.5)	1 1/8 (28.6)	2.06 (52.3)	1.12 (28.4)
	12 mm	-45S12MM	12.0	0.375	9.5	3.94 (100)	1.94 (49.3)	1.94 (49.3)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)		1 1/2 (38.1)	2.44 (62.0)	1.50 (38.1)
female NPT	1/8	-42F2	0.5	0.125	3.2	1.62 (41.1)	0.81 (20.6)	0.81 (20.6)	0.34 (8.6)	0.28 (7.1)	1.12 (28.4)	1/4 (6.4)	19/32 (15.1)	1.38 (35.1)	0.58 (14.7)
		-43F2	1.2			2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
	1/4	-43F4	0.9			2.06 (52.3)	1.03 (26.2)	1.03 (26.2)							
		-44F4	3.0	0.281	7.1	2.50 (63.5)	1.25 (31.8)	1.25 (31.8)	0.56 (14.2)	0.56 (14.2)	2.00 (50.8)	3/8 (9.5)	1 1/8 (28.6)	2.06 (52.3)	1.12 (28.4)
	3/8	-44F6	2.6			3.12 (79.2)	1.56 (39.6)	1.56 (39.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)		1 1/2 (38.1)	2.44 (62.0)	1.50 (38.1)
	1/2	-45F8	6.3	0.406	10.3										
male NPT	1/4	-43M4	1.2	0.187	4.8	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
male NPT to Swagelok	1/4 to 1/4	-43M4-S4	1.6	0.187	4.8	2.19 (55.6)	1.00 (25.4)	1.19 (30.2)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
ISO female tapered	1/4	-43F4RT	0.9	0.187	4.8	2.06 (52.3)	1.03 (26.2)	1.03 (26.2)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
	3/8	-44F6RT	2.6	0.281	7.1	2.50 (63.5)	1.25 (31.8)	1.25 (31.8)	0.56 (14.2)	0.56 (14.2)	2.00 (50.8)	3/8 (9.5)	1 1/8 (28.6)	2.06 (52.3)	1.12 (28.4)
	1/2	-45F8RT	6.3	0.406	10.3	3.12 (79.2)	1.56 (39.6)	1.56 (39.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)		1 1/2 (38.1)	2.44 (62.0)	1.50 (38.1)
Cajon® VCO®	1/4	-42VCO4	0.6	0.125	3.2	1.75 (44.4)	0.88 (22.4)	0.88 (22.4)	0.44 (11.2)	0.38 (9.7)	1.56 (39.6)	3/16 (4.8)	25/32 (19.8)	1.56 (39.6)	0.78 (19.8)
		-43VCO4	2.4	0.187	4.8	1.88 (47.8)	0.94 (23.9)	0.94 (23.9)							
Cajon VCR®	1/4	-42VCR4	0.6	0.125	3.2	2.12 (53.8)	1.06 (26.9)	1.06 (26.9)	0.44 (11.2)	0.38 (9.7)	1.12 (28.4)	3/16 (4.8)	19/32 (15.1)	1.38 (35.1)	0.78 (19.8)
		-43VCR4	2.4	0.187	4.8	2.06 (52.3)	1.03 (26.2)	1.03 (26.2)			1.56 (39.6)		25/32 (19.8)	1.56 (39.6)	
	1/2	-44VCR8	6.0	0.281	7.1	2.88 (73.2)	1.44 (36.6)	1.44 (36.6)	0.56 (14.2)	0.56 (14.2)	2.00 (50.8)	3/8 (9.5)	1 1/8 (28.6)	2.06 (52.3)	1.12 (28.4)
		-45VCR8	12.0	0.406	10.3	3.12 (79.2)	1.56 (39.6)	1.56 (39.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)		1 1/2 (38.1)	2.44 (62.0)	1.50 (38.1)

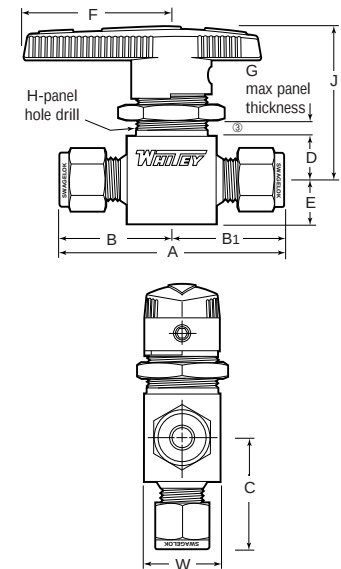
Flow Data

C _V	Pressure Drop to Atmosphere (Δp) psi					
	Air			Water		
	std ft³/min at 70°F (21°C)			U.S. gal/min at 70°F (21°C)		
	10	50	100	10	50	100
0.1	1.1	3.0	5.3	0.3	0.7	1.0
0.2	2.3	6.0	11.0	0.6	1.4	2.0
0.5	5.6	15.0	27.0	1.6	3.5	5.0
0.6	6.8	18.0	32.0	1.9	4.2	6.0
0.9	10.0	27.0	48.0	2.8	6.4	9.0
1.2	14.0	36.0	64.0	3.8	8.5	12.0
1.5	17.0	45.0	80.0	4.7		15.0
1.6	18.0	48.0	85.0	5.0	11.0	16.0
2.4	27.0	72.0	120.0	7.6	17.0	24.0
2.6	29.0	78.0	140.0	8.2	18.0	26.0
3.0	34.0	90.0	160.0	9.5	21.0	30.0
6.0	68.0	180.0	320.0	19.0	42.0	60.0
6.3	71.0		330.0			63.0
6.4	72.0		340.0			64.0
12.0	130.0	360.0	640.0	38.0	85.0	120.0

Notes:

Angle pattern valves have the same flow capacity and C dimension as the 3-way switching valves, see page 5.

To determine the flow capacity of the valve, match the C_V in the Dimensions table with the C_V in the Flow Data chart.



How to Order

Materials

Add **SS** for 316 stainless steel

B for brass

M for alloy 400

as a prefix to the Basic Ordering Number. Example: **SS-43S4**

Angle Pattern (40-A Series)

Add **-A** as a suffix to the Valve Ordering Number.

Example: **SS-43S4-A**

^①Pressure ratings for tubing used with Swagelok tube fitting ended valves are determined by the tubing material and wall thickness. Please see the *Tubing Data* sheet, located in subsection 5 *Technical* of your

Information

Master Product Binder. It contains suggested working pressures for various tubing sizes, materials, and wall thicknesses.

^②For valves rated as low as -65°F (-53°C), see Live-loaded 40 Series Ball Valves section on page 6.