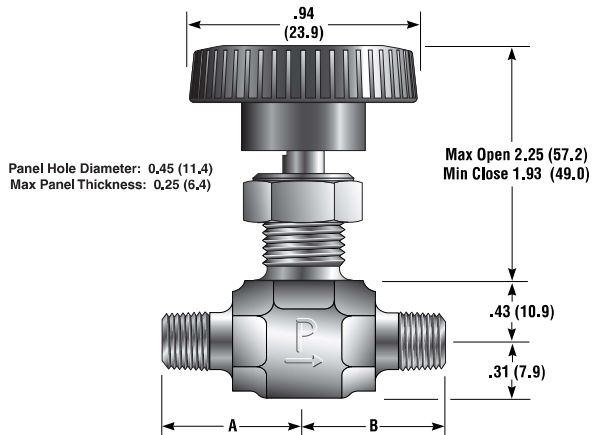
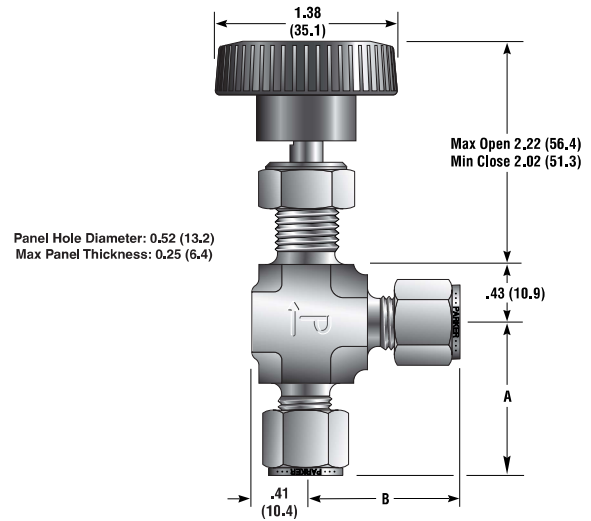


Dimensions / Flow Data

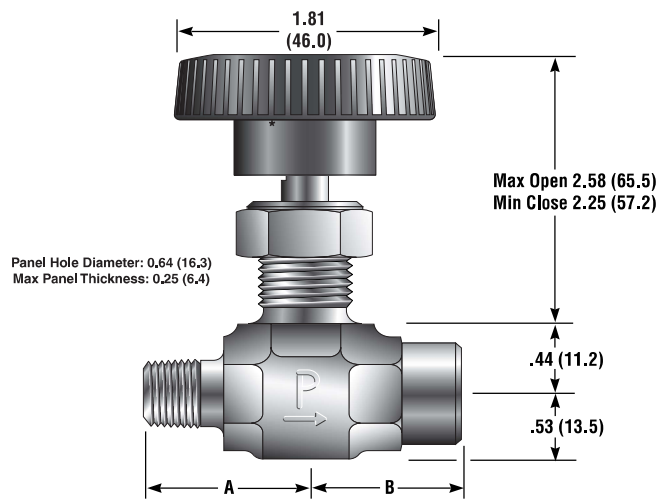
V



Model Shown: 2M-V2LN-SS



Model Shown: 4A-V4AR-BN-B



Model Shown: 6M4F-V6LR-V-SS

* Note: Handle diameter for K Stem V6 Series Valves is 1.38 (35.4)
() Denotes dimensions in millimeters

Dimensions / Flow Data

Basic Part Number		End Connections		Stem Type	Flow Data				Dimensions		
		Inlet (Port 1)	Outlet (Port 2)		Orifice		Inline		Angle		A† and B†
Inline	Angle				Inch	mm	C _V	X _T *	C _V	X _T *	Inch (mm)
2A-V2LR-SS	2A-V2AR-SS	1/8" Compression A-LOK®		Blunt	0.078	2.0	0.12	0.78	0.14	0.67	1.01 (25.7)
2A-V2LN-SS	2A-V2AN-SS			Needle			0.12	0.80	0.14	0.63	
2A-V2LK-SS	2A-V2AK-SS			PCTFE			0.13	0.83	0.14	0.63	
2F-V2LR-SS	2F-V2AR-SS	1/8" Female NPT		Blunt	0.093	2.4	0.13	0.61	0.16	0.49	0.94 (23.9)
2F-V2LN-SS	2F-V2AN-SS			Needle			0.12	0.66	0.18	0.39	
2F-V2LK-SS	2F-V2AK-SS			PCTFE			0.12	0.73	0.17	0.54	
2M-V2LR-SS	2M-V2AR-SS	1/8" Male NPT		Blunt	0.093	2.4	0.13	0.61	0.16	0.49	0.75 (19.1)
2M-V2LN-SS	2M-V2AN-SS			Needle			0.12	0.66	0.18	0.39	
2M-V2LK-SS	2M-V2AK-SS			PCTFE			0.12	0.73	0.17	0.54	
2Z-V2LR-SS	2Z-V2AR-SS	1/8" Compression CPI™		Blunt	0.078	2.0	0.12	0.78	0.14	0.67	1.01 (25.7)
2Z-V2LN-SS	2Z-V2AN-SS			Needle			0.12	0.80	0.14	0.63	
2Z-V2LK-SS	2Z-V2AK-SS			PCTFE			0.13	0.83	0.14	0.63	
2F-V4LR-SS	2F-V4AR-SS	1/8" Female NPT		Blunt	0.176	4.5	0.43	0.77	0.55	0.63	0.81 (20.6)
2F-V4LN-SS	2F-V4AN-SS			Needle			0.43	0.69	0.55	0.63	
2F-V4LK-SS	2F-V4AK-SS			PCTFE			0.45	0.55	0.58	0.68	
4A-V4LR-SS	4A-V4AR-SS	1/4" Compression A-LOK®		Blunt	0.176	4.5	0.43	0.85	0.55	0.63	1.15 (29.2)
4A-V4LN-SS	4A-V4AN-SS			Needle			0.43	0.77	0.55	0.63	
4A-V4LK-SS	4A-V4AK-SS			PCTFE			0.45	0.69	0.58	0.68	
4M-V4LR-SS	4M-V4AR-SS	1/4" Male NPT		Blunt	0.176	4.5	0.43	0.85	0.55	0.63	0.94 (23.9)
4M-V4LN-SS	4M-V4AN-SS			Needle			0.43	0.77	0.55	0.63	
4M-V4LK-SS	4M-V4AK-SS			PCTFE			0.45	0.69	0.58	0.68	
4Z-V4LR-SS	4Z-V4AR-SS	1/4" Compression CPI™		Blunt	0.176	4.5	0.43	0.85	0.55	0.63	1.15 (29.2)
4Z-V4LN-SS	4Z-V4AN-SS			Needle			0.43	0.77	0.55	0.63	
4Z-V4LK-SS	4Z-V4AK-SS			PCTFE			0.45	0.69	0.58	0.68	
M6A-V4LR-SS	M6A-V4AR-SS	6mm Compression A-LOK®		Blunt	0.156	4.0	0.37	0.78	0.48	0.60	1.15 (29.2)
M6A-V4LN-SS	M6A-V4AN-SS			Needle			0.37	0.72	0.48	0.58	
M6A-V4LK-SS	M6A-V4AK-SS			PCTFE			0.39	0.62	0.51	0.64	
M6Z-V4LR-SS	M6Z-V4AR-SS	6mm Compression CPI™		Blunt	0.156	4.0	0.37	0.78	0.48	0.60	1.15 (29.2)
M6Z-V4LN-SS	M6Z-V4AN-SS			Needle			0.37	0.72	0.48	0.58	
M6Z-V4LK-SS	M6Z-V4AK-SS			PCTFE			0.39	0.62	0.51	0.64	
4F-V6LR-SS	4F-V6AR-SS	1/4" Female NPT		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	0.94 (23.9)
4F-V6LN-SS	4F-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
4F-V6LK-SS	4F-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	
6A-V6LR-SS	6A-V6AR-SS	3/8" Compression A-LOK®		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	1.29 (32.8)
6A-V6LN-SS	6A-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
6A-V6LK-SS	6A-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	
6M-V6LR-SS	6M-V6AR-SS	3/8" Male NPT		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	1.03 (26.2)
6M-V6LN-SS	6M-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
6M-V6LK-SS	6M-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	
6Z-V6LR-SS	6Z-V6AR-SS	3/8" Compression CPI™		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	1.29 (32.8)
6Z-V6LN-SS	6Z-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
6Z-V6LK-SS	6Z-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	
M10A-V6LR-SS	M10A-V6AR-SS	10mm Compression A-LOK®		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	1.30 (33.0)
M10A-V6LN-SS	M10A-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
M10A-V6LK-SS	M10A-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	
M10Z-V6LR-SS	M10Z-V6AR-SS	10mm Compression CPI™		Blunt	0.228	5.8	0.73	0.90	1.23	0.50	1.30 (33.0)
M10Z-V6LN-SS	M10Z-V6AN-SS			Needle			0.55	0.61	0.92	0.62	
M10Z-V6LK-SS	M10Z-V6AK-SS			PCTFE			0.80	0.87	1.23	0.56	

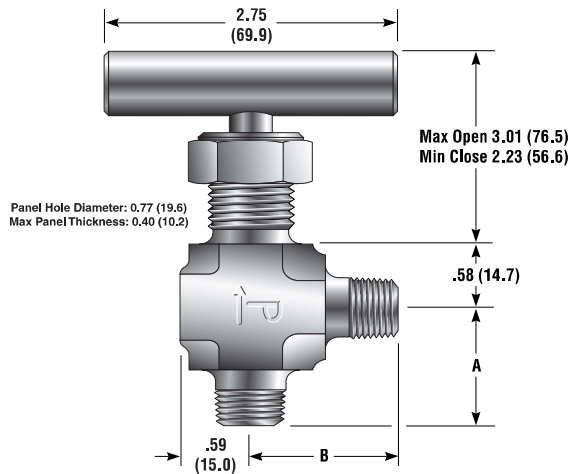
* Tested in accordance with ISA S75.02. Gas flow will be choked when $P_1 - P_2 / P_1 = x_T$.

† For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position.

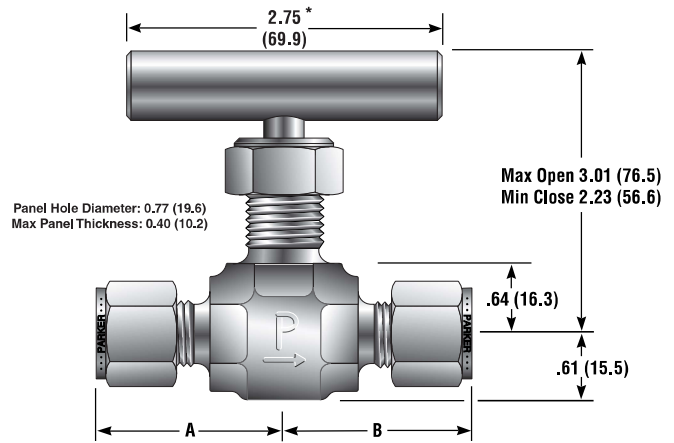
() Denotes dimensions in millimeters

Dimensions in inches/millimeters are for reference only, subject to change.

V



Model Shown: 8M-V8AN-EPR-SS



Model Shown: 10Z-V12LN-B

Dimensions / Flow Data - continued

Basic Part Number		End Connections		Stem Type	Flow Data				Dimensions		
		Inlet (Port 1)	Outlet (Port 2)		Orifice		Inline		Angle		A† and B†
Inline	Angle				Inch	mm	C_V	X_T^*	C_V	X_T^*	Inch (mm)
6F-V8LR-SS	6F-V8AR-SS	3/8" Female NPT		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.34 (34.0)
6F-V8LN-SS	6F-V8AN-SS			Needle			1.05	0.83	1.28	0.80	
6F-V8LK-SS	6F-V8AK-SS			PCTFE			1.29	0.91	1.90	0.76	
8A-V8LR-SS	8A-V8AR-SS	1/2" Compression A-LOK®		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.53 (38.9)
8A-V8LN-SS	8A-V8AN-SS			Needle			1.05	0.83	1.28	0.80	
8A-V8LK-SS	8A-V8AK-SS			PCTFE			1.29	0.91	1.90	0.76	
8M-V8LR-SS	8M-V8AR-SS	1/2" Male NPT		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.34 (34.0)
8M-V8LN-SS	8M-V8AN-SS			Needle			1.05	0.83	1.28	0.80	
8M-V8LK-SS	8M-V8AK-SS			PCTFE			1.29	0.91	1.90	0.76	
8Z-V8LR-SS	8Z-V8AR-SS	1/2" Compression CPI™		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.53 (38.9)
8Z-V8LN-SS	8Z-V8AN-SS			Needle			1.05	0.83	1.28	0.80	
8Z-V8LK-SS	8Z-V8AK-SS			PCTFE			1.29	0.91	1.90	0.76	
M12A-V8LR-SS	M12A-V8AR-SS	12mm Compression A-LOK®		Blunt	0.281	7.1	1.13	0.79	1.52	0.66	1.51 (38.4)
M12A-V8LN-SS	M12A-V8AN-SS			Needle			0.97	0.78	1.18	0.75	
M12A-V8LK-SS	M12A-V8AK-SS			PCTFE			1.18	0.80	1.69	0.66	
M12Z-V8LR-SS	M12Z-V8AR-SS	12mm Compression CPI™		Blunt	0.281	7.1	1.13	0.79	1.52	0.66	1.51 (38.4)
M12Z-V8LN-SS	M12Z-V8AN-SS			Needle			0.97	0.78	1.18	0.75	
M12Z-V8LK-SS	M12Z-V8AK-SS			PCTFE			1.18	0.80	1.69	0.66	
8F-V12LR-SS	8F-V12AR-SS	1/2" Female NPT		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.38 (35.1)
8F-V12LN-SS	8F-V12AN-SS			Needle			1.05	0.83	1.28	0.80	
8F-V12LK-SS	8F-V12AK-SS			PCTFE			1.29	0.91	1.90	0.76	
10A-V12LR-SS	10A-V12AR-SS	5/8" Compression A-LOK®		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.52 (38.6)
10A-V12LN-SS	10A-V12AN-SS			Needle			1.05	0.83	1.28	0.80	
10A-V12LK-SS	10A-V12AK-SS			PCTFE			1.29	0.91	1.90	0.76	
10Z-V12LR-SS	10Z-V12AR-SS	5/8" Compression CPI™		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.52 (38.6)
10Z-V12LN-SS	10Z-V12AN-SS			Needle			1.05	0.83	1.28	0.80	
10Z-V12LK-SS	10Z-V12AK-SS			PCTFE			1.29	0.91	1.90	0.76	
12A-V12LR-SS	12A-V12AR-SS	3/4" Compression A-LOK®		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.52 (38.6)
12A-V12LN-SS	12A-V12AN-SS			Needle			1.05	0.83	1.28	0.80	
12A-V12LK-SS	12A-V12AK-SS			PCTFE			1.29	0.91	1.90	0.76	
12Z-V12LR-SS	12Z-V12AR-SS	3/4" Compression CPI™		Blunt	0.312	7.9	1.23	0.87	1.66	0.72	1.52 (38.6)
12Z-V12LN-SS	12Z-V12AN-SS			Needle			1.05	0.83	1.28	0.80	
12Z-V12LK-SS	12Z-V12AK-SS			PCTFE			1.29	0.91	1.90	0.76	

* Tested in accordance with ISA S75.02. Gas flow will be choked when $P_1 - P_2 / P_1 = x_T$.

† For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position.

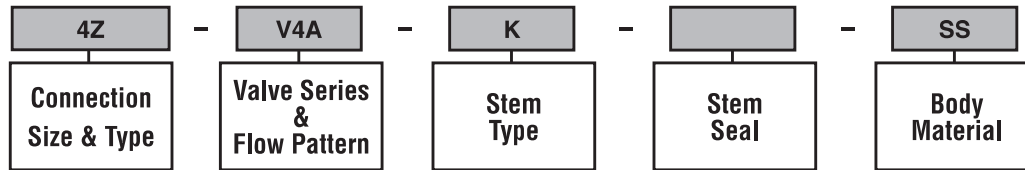
() Denotes dimensions in millimeters

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How to Order

The part number sequence identifies product characteristics as shown below

Example: 4Z-V4AK-SS describes an angle pattern V4 Series needle valve equipped with 1/4" CPI™ compression inlet and outlet ports, a PCTFE tipped stem, PTFE seals, and stainless steel construction.



How to Order Options

O-Ring Packing - Add the designator corresponding to the desired elastomer to the part number **BN** - Nitrile Rubber, **EPR** - Ethylene Propylene Rubber, or **V** - Fluorocarbon Rubber. **Example : 6A-V6LN-EPR-SS**

Available Body Materials - **B** (Brass) or - **M** (Monel® Alloy 400) **Example: 8Z-V8LN-B**

Oxygen Cleaning – Add the suffix **-C3** to the end of the part number to receive valves cleaned in accordance with ASTM G93 level C, class 500. This ASTM details cleaning methods and cleanliness levels for materials and equipment used in oxygen-enriched environments. **Example: 4A-V4AN-EPR-SS-C3**

How to Order Components

Colored Round Nylon Handles with Handle Screw – Valve Series-Handle-Color (**B** - blue, **G** - green, **R** - red)
Example: V4-HANDLE-BLUE

Stainless Steel T-Bar Handles with Handle Screw – **Examples:** V2: V2-BAR-HANDLE-SS;
V4: V4-BAR-HANDLE-SS; V6: V6-BAR-HANDLE-SS; V8: U12-BAR-HANDLE-SS; V12: U12-BAR-HANDLE-SS

Aluminum T-Bar Handles with Handle Screw – **Examples:** V2: Not available; V4: V4-BAR-HANDLE-AL;
V6: V4-BAR-HANDLE-AL; V8: U12-BAR-HANDLE-AL; V12: U12-BAR-HANDLE-AL

Panel Mounting Nuts – **Examples:** V2: 2-Panel-Nut-SS; V4: 4-Panel-Nut-SS; V6: 6-Panel-Nut-SS;
V8: 8-Panel-Nut-SS

How to Order Maintenance Kits

PTFE Packing Stem Kits – Consists of One Stem; One PTFE Packing; One Upper Packing Washer; One Lower Packing Washer; One Packing Nut; Maintenance Instructions.

Kit-Valve Series and StemType-Body Material. **Examples: KIT-V4K-SS; KIT-V6N-B**

Fluorocarbon Rubber Packing Stem Kits – Consists of One Stem; One Fluorocarbon Rubber O-ring Seal; One O-ring Back-up Gland; One O-ring Gland; One Lower Packing Washer; One Packing Nut; Maintenance Instructions.

Kit-Valve Series and Stem Type-V-Body Material. **Examples: KIT-V2R-V-B; KIT-V4K-V-SS**

Nitrile Rubber Packing Stem Kits – Consists of One Stem; One Nitrile Rubber O-ring Seal; One O-ring Back-up Gland; One O-ring Gland; One Lower Packing Washer; One Packing Nut; Maintenance Instructions.

Kit-Valve Series and Stem Type-BN-Body Material. **Examples: KIT-V2R-BN-B; KIT-V4K-BN-SS**

Ethylene Propylene Rubber Packing Stem Kits – Consists of One Stem; One Ethylene Propylene Rubber O-ring Seal; One O-ring Back-up Gland; One O-ring Gland; One Lower Packing Washer; One Packing Nut; Maintenance Instructions.

Kit-Valve Series and Stem Type-EPR-Body Material. **Examples: KIT-V2R-EPR-B; KIT-V4K-EPR-SS**