

Valve Series - 10V Series

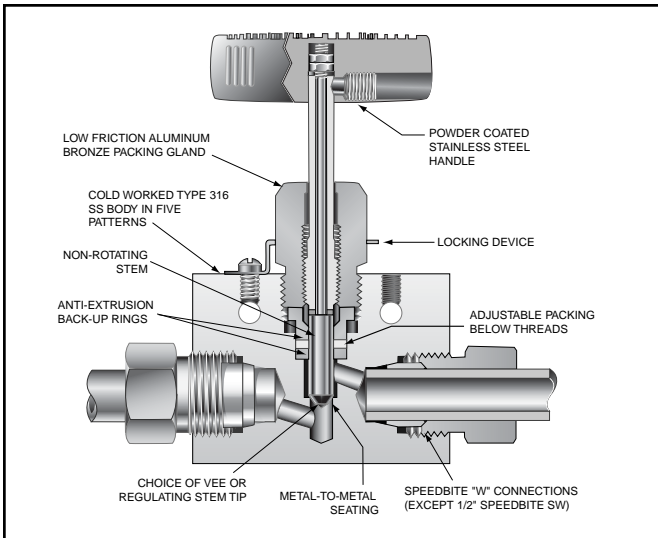
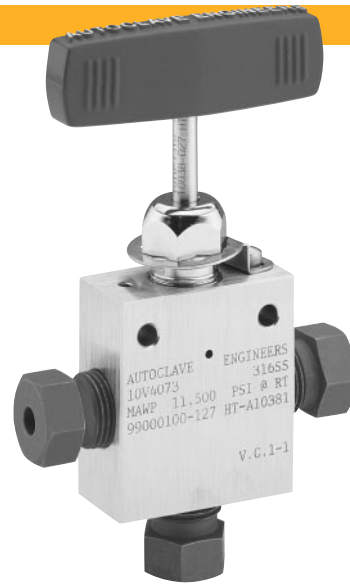
Pressures to 11,500 psi (793 bar)

Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated C_V *	Pres./Temp. Rating psi (bar) @ Room Temperature**
1/8	W125	0.094 (2.39)	0.12	11,000 (758)
1/4	W250	0.125 (3.18)	0.20	11,500 (793)
3/8	W375	0.125 (3.18)	0.20	10,000 (690)
1/2	SW500	0.250 (6.35)	0.86	5,500 (379)

Notes:

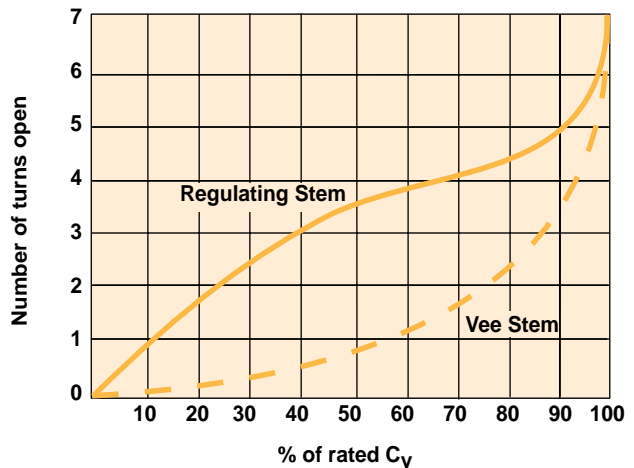
* C_V values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase C_V value 50%. (Based on water)

** For complete temperature ratings see pressure/temperature rating guide in Technical Information section.



To ensure proper fit use Autoclave tubing

Generalized Flow Coefficient Curves (C_V)



Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative. 10V Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **10V4071**

10V	4	07	1	Options
Valve Series	Outside Diameter Tube Size	Stem/Seat Type	Body Pattern	Options
	2-1/8" 4-1/4" 6-3/8" 8-1/2"	07 - non-rotating Vee stem (on-off service) 08 - non-rotating regulating stem (tapered tip for regulating and shutoff) 87 - Vee stem with replaceable seat 88 - Regulating stem with replaceable seat	1 - two-way straight 2 - two-way angle 3 - three-way, two on pressure 4 - three-way, one on pressure 5 - three-way, two stem manifold valve	For extreme temperature and other options, see Valve Options.

Note: Contact Sales for 1/16" tube size or see MVE Series.

All general terms and conditions of sale, including limitations of our liability, apply to all products and services sold.

Valve Options

Extreme Temperatures

Standard Autoclave valves with Teflon packing may be operated to 450°F (232°C). High temperature packing and/or extended stuffing box is available for service from 0°F (-17.8°C) to 650°F (343°C) by adding the following suffixes to catalog order number.†

TG standard valve with Teflon glass packing to 600°F (316°C).

GY standard valve with graphite braided yarn packing to 650°F (343°C).

†Autoclave Engineers does not recommend compression sleeve connections below 0 F (-17.8 C) or above 650 F (343 C). For additional valve options, contact your Sales Representative.

Valve Maintenance

Repair Kits: add "R" to the front of valve catalog number for proper repair kit.
(Example: **R10V4071**)

Valve Bodies: Valve bodies are available. Order using the eight (8) digit part number found on the valve drawing or contact your Sales Representative for information.

Consult your Autoclave representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)												Block Thickness	Valve Pattern
				A	B	C	D	D ₁	E	F	G	G ₁	H*	M	N		

2-Way Straight

10V2071	VEE	1/8**	0.094	1.50	0.75	0.31	1.06	0.81	1.38	3.00	0.62	0.17	3.75	0.56	0.31	0.62	See Figure 1
10V2081	REG	(3.18)	(2.39)	(38.10)	(19.05)	(7.87)	(26.92)	(20.57)	(35.05)	(76.20)	(15.75)	(4.32)	(95.25)	(14.22)	(7.87)	(15.75)	
10V4071	VEE	1/4	0.125	2.00	1.00	0.56	1.19		1.69	3.00	0.97	0.22	4.44	0.69	0.38	1.00	
10V4081	REG	(6.35)	(3.18)	(50.80)	(25.40)	(14.22)	(30.23)		(42.93)	(76.20)	(24.64)	(5.59)	(112.78)	(17.53)	(9.65)	(25.40)	
10V6071	VEE	3/8	0.125	2.00	1.00	0.62	1.19		1.69	3.00	0.97	0.22	4.31	0.69	0.38	1.00	
10V6081	REG	(9.53)	(3.18)	(50.80)	(25.40)	(15.75)	(30.23)		(42.93)	(76.20)	(24.64)	(5.59)	(109.47)	(17.53)	(9.65)	(25.40)	
10V8071	VEE	1/2	0.250	2.50	1.25	0.53	1.25		1.81	3.00	0.97	0.22	4.44	0.69	0.38	1.00	
10V8081	REG	(12.70)	(6.35)	(63.50)	(31.75)	(13.46)	(31.75)		(45.97)	(76.20)	(24.64)	(5.59)	(112.78)	(17.53)	(9.65)	(25.40)	

2-Way Angle

10V2072	VEE	1/8	0.094	1.50	0.75	0.31	0.81		1.56	3.00	0.62	0.17	3.94	0.50	0.31	0.62	See Figure 2
10V2082	REG	(3.18)	(2.39)	(38.1)	(19.05)	(7.87)	(20.57)		(39.62)	(76.20)	(15.75)	(4.32)	(100.08)	(12.70)	(7.87)	(15.75)	
10V4072	VEE	1/4	0.125	2.00	1.00	0.56	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.31	1.00	
10V4082	REG	(6.35)	(3.18)	(50.80)	(25.40)	(14.2)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(7.87)	(25.40)	
10V6072	VEE	3/8	0.125	2.00	1.00	0.62	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.31	1.00	
10V6082	REG	(9.53)	(3.18)	(50.80)	(25.40)	(15.7)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(7.87)	(25.40)	
10V8072	VEE	1/2	0.250	2.50	1.25	0.53	1.25		2.50	3.00	0.97	0.22	5.06	0.69	0.38	1.00	
10V8082	REG	(12.70)	(6.35)	(63.50)	(31.75)	(13.5)	(31.75)		(63.50)	(76.20)	(24.64)	(5.59)	(128.52)	(17.53)	(9.65)	(25.40)	

3-Way / 2 on Pressure

10V2073	VEE	1/8**	0.094	1.50	0.75	0.31	1.06	0.81	1.69	3.00	0.62	0.17	4.06	0.50	0.31	0.62	See Figure 3
10V2083	REG	(3.18)	(2.39)	(38.10)	(19.05)	(7.87)	(26.92)	20.57	(42.93)	(76.20)	(15.75)	(4.32)	(103.12)	(12.70)	(7.87)	(15.75)	
10V4073	VEE	1/4	0.125	2.00	1.00	0.56	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.38	1.00	
10V4083	REG	(6.35)	(3.18)	(50.80)	(25.40)	(14.22)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(9.65)	(25.40)	
10V6073	VEE	3/8	0.125	2.00	1.00	0.62	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.38	1.00	
10V6083	REG	(9.53)	(3.18)	(50.80)	(25.40)	(15.75)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(9.65)	(25.40)	
10V8073	VEE	1/2	0.250	2.50	1.25	0.53	1.19		2.44	3.00	0.97	0.22	5.06	0.69	0.38	1.00	
10V8083	REG	(12.70)	(6.35)	(63.50)	(31.75)	(13.46)	(30.23)		(61.98)	(76.20)	(24.64)	(5.59)	(128.52)	(17.53)	(9.65)	(25.40)	

G - Packing gland mounting hole drill size

G₁ - Bracket mounting hole size

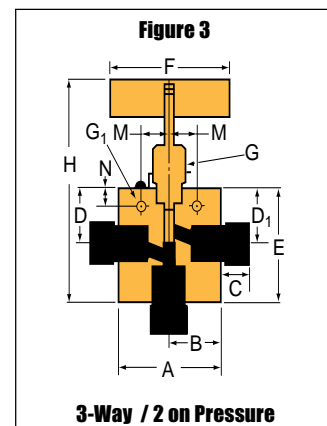
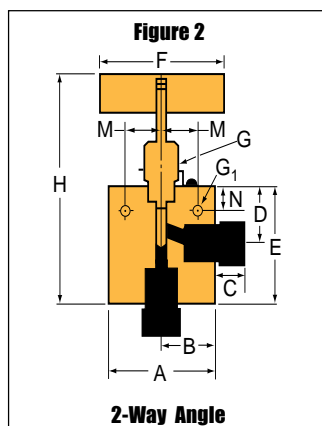
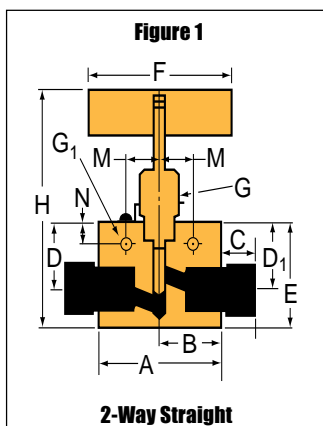
Panel mounting drill size: 0.22" all valves.

* H Dimension is with stem in closed position.

** 1/8" straight and 3-Way/2 on pressure valves have offset tube connections.

For prompt service, Autoclave stocks select products. Consult factory.

All dimensions for reference only and subject to change.



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Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)												Block Thickness	Valve Pattern
				A	B	C	D	D ₁	E	F	G	G ₁	H*	M	N		

3-Way / 1 on Pressure

10V2074	VEE	1/8	0.094	1.50	0.75	0.31	0.81		1.56	3.00	0.62	0.17	3.94	0.50	0.31	0.62	See Figure 4
10V2084	REG	(3.18)	(2.39)	(38.1)	(19.05)	(7.87)	(20.57)		(39.62)	(76.20)	(15.75)	(4.32)	(100.08)	(12.70)	(7.87)	(15.7)	
10V4074	VEE	1/4	0.125	2.00	1.00	0.56	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.38	1.00	
10V4084	REG	(6.35)	(3.18)	(50.8)	(25.40)	(14.22)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(9.65)	(25.40)	
10V6074	VEE	3/8	0.125	2.00	1.00	0.62	1.19		2.19	3.00	0.97	0.22	4.81	0.69	0.38	1.00	
10V6084	REG	(9.53)	(3.18)	(50.8)	(25.40)	(15.75)	(30.23)		(55.63)	(76.20)	(24.64)	(5.59)	(122.17)	(17.53)	(9.65)	(25.40)	
10V8074	VEE	1/2	0.250	2.50	1.25	0.53	1.19		2.44	3.00	0.97	0.22	5.06	0.69	0.38	1.00	
10V8084	REG	(12.70)	(6.35)	(63.5)	(31.75)	(13.46)	(30.23)		(61.98)	(76.20)	(24.64)	(5.59)	(128.52)	(17.53)	(9.65)	(25.40)	

2-Way Angle / Replaceable Seat

10V2872	VEE	1/8	0.094	1.50	0.75	0.31	0.81	1.28	1.56	3.00	0.62	0.17	4.50	0.50	0.31	0.62	See Figure 5
10V2882	REG	(3.18)	(2.39)	(38.10)	(19.05)	(7.87)	(20.57)	(32.51)	(39.62)	(76.20)	(15.75)	(4.32)	(114.30)	(12.70)	(7.87)	(15.75)	
10V4872	VEE	1/4	0.125	2.00	1.00	0.56	1.12	2.13	2.25	3.00	0.97	0.22	6.00	0.69	0.38	1.00	
10V4882	REG	(6.35)	(3.18)	(50.80)	(25.40)	(14.22)	(28.45)	(54.10)	(57.15)	(76.20)	(24.64)	(5.59)	(152.40)	(17.53)	(9.65)	(25.40)	
10V6872	VEE	3/8	0.125	2.00	1.00	0.62	1.12	2.28	2.25	3.00	0.97	0.22	6.00	0.69	0.38	1.00	
10V6882	REG	(9.53)	(3.18)	(50.80)	(25.40)	(15.75)	(28.45)	(57.91)	(57.15)	(76.20)	(24.64)	(5.59)	(152.40)	(17.53)	(9.65)	(25.40)	
10V8872	VEE	1/2	0.250	2.50	1.25	0.53	1.00	2.50	2.38	3.00	0.97	0.28	6.06	0.69	0.38	1.00	
10V8882	REG	(12.70)	(6.35)	(63.50)	(31.75)	(13.46)	(25.45)	(63.50)	(60.45)	(76.20)	(24.64)	(7.11)	(153.92)	(17.53)	(9.65)	(25.40)	

3-Way / 2-Stem Manifold

10V2075	VEE	1/8	0.094	1.50	0.75	0.31	1.12	0.81	2.25	3.00	0.62	0.17	4.63	0.50	0.31	0.62	See Figure 6
10V2085	REG	(3.18)	(2.39)	(38.10)	(19.05)	(7.87)	(28.45)	(20.57)	(57.15)	(76.20)	(15.75)	(4.32)	(117.60)	(12.70)	(7.87)	(15.7)	
10V4075	VEE	1/4	0.125	2.00	1.00	0.56	1.69	1.09	3.38	3.00	0.97	0.22	5.82	0.69	0.38	1.00	
10V4085	REG	(6.35)	(3.18)	(50.80)	(25.40)	(14.22)	(42.93)	(27.69)	(85.85)	(76.20)	(24.64)	(5.59)	(147.83)	(17.53)	(9.65)	(25.40)	
10V6075	VEE	3/8	0.125	2.00	1.00	0.62	1.69	1.09	3.38	3.00	0.97	0.22	5.82	0.69	0.38	1.00	
10V6085	REG	(9.53)	(3.18)	(50.80)	(25.40)	(15.75)	(42.93)	(27.69)	(85.85)	(76.20)	(24.64)	(5.59)	(147.83)	(17.53)	(9.65)	(25.40)	
10V8075	VEE	1/2	0.250	2.50	1.25	0.53	1.69	1.03	3.38	3.00	0.97	0.22	5.82	0.69	0.38	1.00	
10V8085	REG	(12.70)	(6.35)	(63.50)	(31.75)	(13.46)	(42.93)	(26.16)	(85.85)	(76.20)	(24.64)	(5.59)	(147.83)	(17.53)	(9.65)	(25.40)	

G - Packing gland mounting hole drill size
G₁ - Bracket mounting hole size
Panel mounting drill size: 0.22" all valves.

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Consult factory.

