

# Needle Valves

## Mini Valves

### **MVE/MV Series**

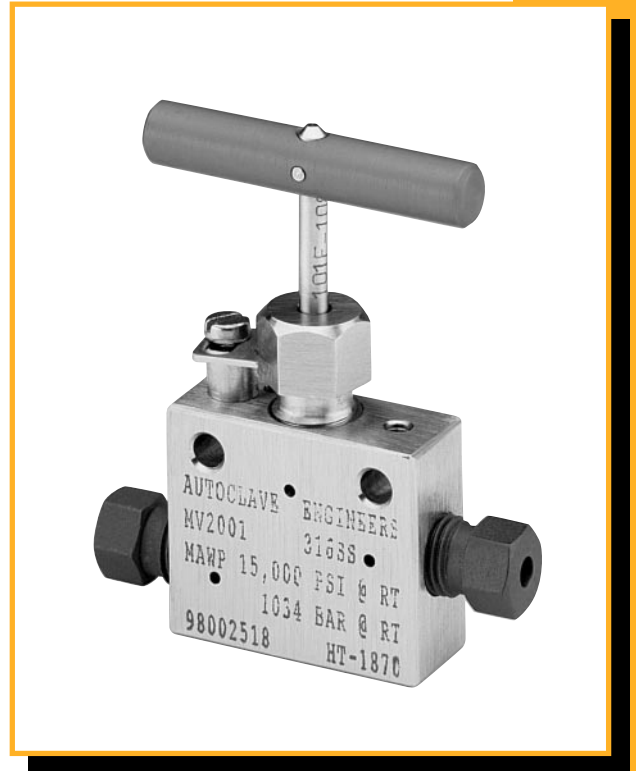
*Pressures to 15,000 psi (1034 bar)*

Since 1945 Autoclave Engineers has designed and built premium quality valves, fittings and tubing. This commitment to engineering and manufacturing excellence has earned Autoclave a reputation for reliable efficient product performance. Autoclave Engineers has long been established as the world leader in high pressure fluid handling components for the chemical/petrochemical, research, and oil and gas industries.

#### **Mini Valve Features:**

- Mini valve provides a rugged compact design.
- Tubing sizes available are 1/16" and 1/8".
- Rising stem/barstock body design.
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem/seat life in abrasive flow, greater durability for repeated on/off cycles and excellent corrosion resistance.
- PTFE (Teflon) encapsulated packing provides dependable stem and body sealing.
- Stem and packing gland design have been selected to achieve extended thread cycle life and reduced handle torque.
- Vee stem tip provided.
- Available in five body patterns.
- Mini valves available with metric tube glands.

Autoclave valves are complemented by a complete line of mini fittings and tubing. The MVE/MV Series uses Autoclave's SpeedBite connection. This single-ferrule compression sleeve connection delivers fast, easy make-up and reliable bubble-tight performance in liquid or gas service.



**Autoclave  
Engineers** 

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Division of Snap-tite, Inc.

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**Needle Valves - MVE/MV Series**  
Mini Valves

# Needle Valves - MVE/MV Series

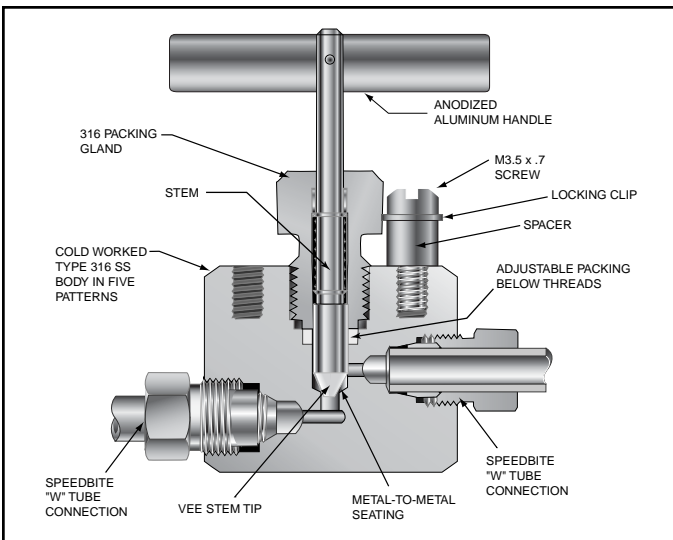
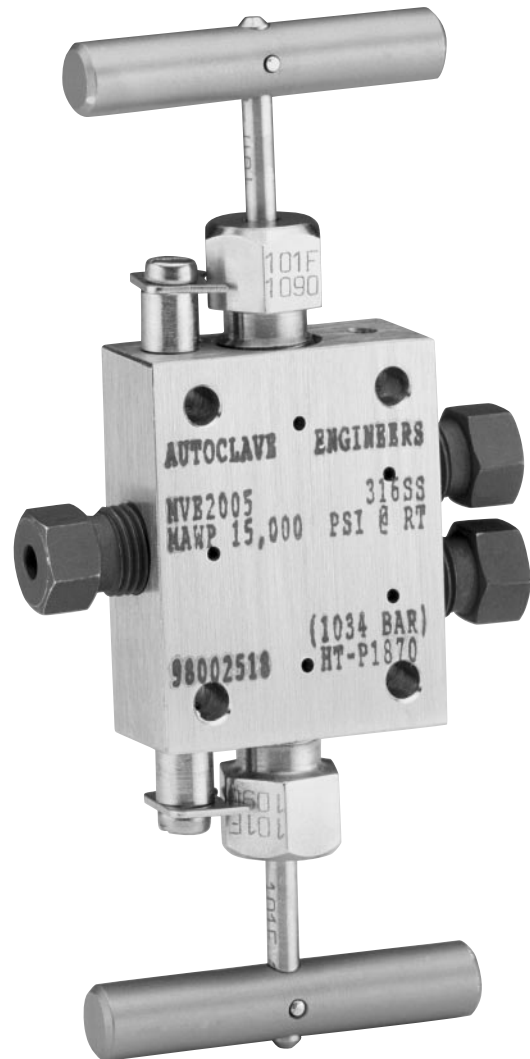
**Pressures to 15,000 psi (1034 bar)**

Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated $C_v^*$	Pressure/Temperature Rating psi (bar) @ Room Temperature**
1/16	W062	0.055 (1.40)	0.05	15,000 (1034)
1/8	W125	0.078 (1.98)	0.11	15,000 (1034)

*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.

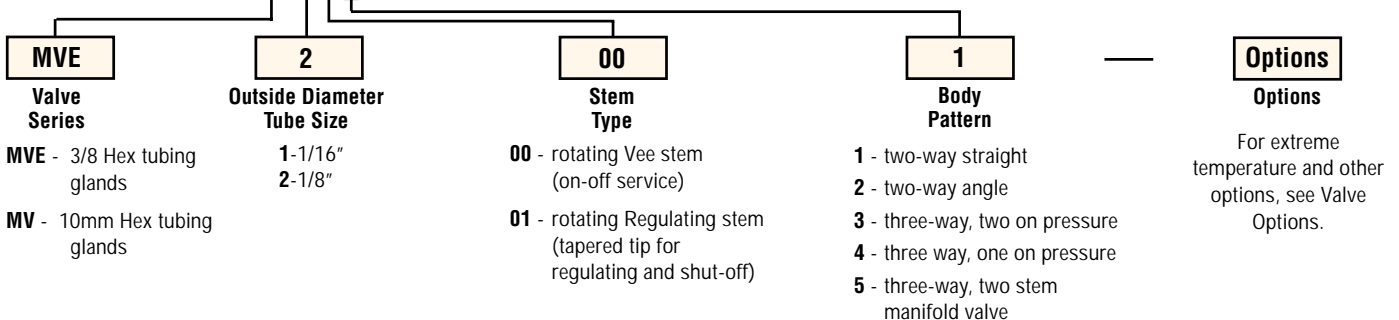


To ensure proper fit use Autoclave tubing

## Ordering Procedure

For complete information on valve options, contact your Sales Representative. MVE Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **MVE2001**



## Valve Options

### Extreme Temperatures

Standard Autoclave valves with Teflon packing may be operated to 450°F (232°C). High temperature packing is available for service from 0°F (-17.8°C) to 600°F (316°C) by adding the following suffixes to catalog order number.†

**TG** standard valve with Teflon glass packing to 600°F (316°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

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 <sub>1</sub>	E	F	G	G <sub>1</sub>	H*	M	N		

### 2-Way Straight

MVE1001	VEE	1/16	0.055	1.38	0.69	0.45	0.81	0.56	1.13	1.75	0.56	0.16	2.38	0.45	0.20	0.56	See Figure 1
MV1001	VEE	(1.57)	(1.40)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(28.58)	(44.45)	(14.27)	(4.04)	(60.38)	(11.49)	(5.16)	(14.27)	
MVE2001	VEE	1/8	0.094	1.38	0.69	0.45	0.81	0.56	1.13	1.75	0.56	0.16	2.38	0.45	0.20	0.56	
MV2001	VEE	(3.18)	(2.39)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(28.58)	(44.45)	(14.27)	(4.04)	(60.38)	(11.49)	(5.16)	(14.27)	

### 2-Way Angle

MVE1002	VEE	1/16	0.055	1.00	0.69	0.45	0.56		1.38	1.75	0.56	0.16	2.63	0.45	0.22	0.56	See Figure 2
MV1002	VEE	(1.57)	(1.40)	(25.40)	(17.45)	(11.43)	(14.30)		(34.93)	(44.45)	(14.27)	(4.04)	(66.75)	(11.49)	(5.54)	(14.27)	
MVE2002	VEE	1/8	0.094	1.00	0.69	0.45	0.56		1.38	1.75	0.56	0.16	2.38	0.45	0.22	0.56	
MV2002	VEE	(3.18)	(2.39)	(25.40)	(17.45)	(11.43)	(14.30)		(34.93)	(44.45)	(14.27)	(4.04)	(60.38)	(11.49)	(5.54)	(14.27)	

### 3-Way / 2 on Pressure

MVE1003	VEE	1/16	0.055	1.38	0.69	0.45	0.81	0.56	1.44	1.75	0.56	0.16	2.69	0.45	0.20	0.56	See Figure 3
MV1003	VEE	(1.57)	(1.40)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(36.50)	(44.45)	(14.27)	(4.04)	(68.30)	(11.49)	(5.16)	(14.27)	
MVE2003	VEE	1/8	0.094	1.38	0.69	0.45	0.81	0.56	1.44	1.75	0.56	0.16	2.69	0.45	0.20	0.56	
MV2003	VEE	(3.18)	(2.39)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(36.50)	(44.45)	(14.27)	(4.04)	(68.30)	(11.49)	(5.16)	(14.27)	

G - Packing gland mounting hole drill size

G<sub>1</sub> - Bracket mounting hole size

Panel mounting screws are M3.5 x .7 thd.

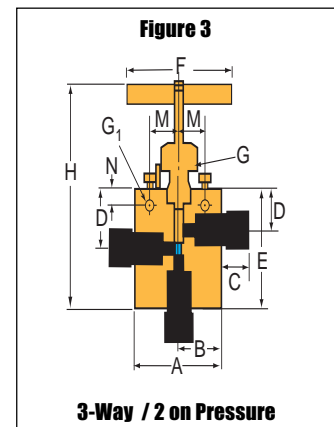
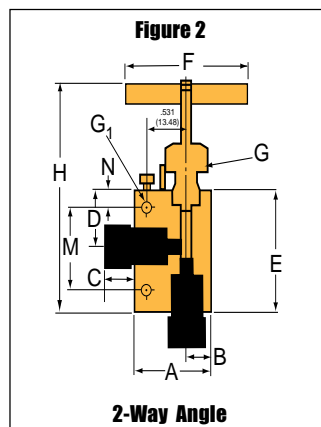
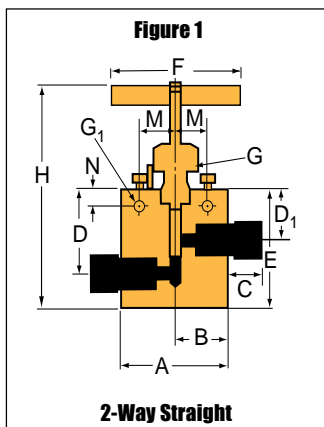
Tube glands are 3/8" hex on standard MVE models

Tube glands are 10mm hex on MV models.

\* H Dimension is with stem in closed position.

All dimensions for reference only and subject to change.

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



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

### 3-Way / 1 on Pressure

MVE1004	VEE	1/16	0.055	1.38	0.69	0.45	0.56	0.56	1.44	1.75	0.56	0.16	2.69	0.45	0.20	0.56	See Figure 4
MV1004	VEE	(1.57)	(1.40)	(34.93)	(17.45)	(11.43)	(14.22)	(14.30)	(36.50)	(44.45)	(14.27)	(4.04)	(68.30)	(11.49)	(5.16)	(14.27)	
MVE2004	VEE	1/8	0.094	1.38	0.69	0.45	0.56	0.56	1.44	1.75	0.56	0.16	2.69	0.45	0.20	0.56	
MV2004	VEE	(3.18)	(2.39)	(34.93)	(17.45)	(11.43)	(14.22)	(14.30)	(36.50)	(44.45)	(14.27)	(4.04)	(68.30)	(11.49)	(5.16)	(14.27)	

### 3-Way / 2-Stem Manifold

MVE1005	VEE	1/16	0.055	1.38	0.69	0.45	0.81	0.56	1.63	1.75	0.56	0.16	4.11	0.45	0.20	0.56	See Figure 5
MV1005	VEE	(1.57)	(1.40)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(41.28)	(44.45)	(14.27)	(4.04)	(104.44)	(11.49)	(5.16)	(14.27)	
MVE2005	VEE	1/8	0.094	1.38	0.69	0.45	0.81	0.56	1.63	1.75	0.56	0.16	4.11	0.45	0.20	0.56	
MV2005	VEE	(3.18)	(2.39)	(34.93)	(17.45)	(11.43)	(20.65)	(14.30)	(41.28)	(44.45)	(14.27)	(4.04)	(104.44)	(11.49)	(5.16)	(14.27)	

G - Packing gland mounting hole drill size

G<sub>1</sub> - Bracket mounting hole size

Panel mounting screws are M3.5 x .7 thd.

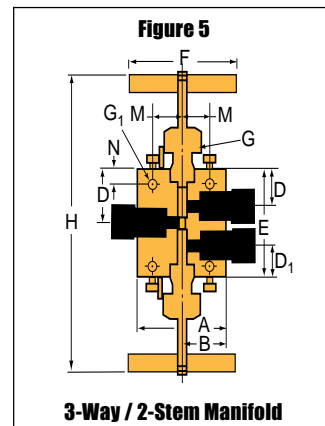
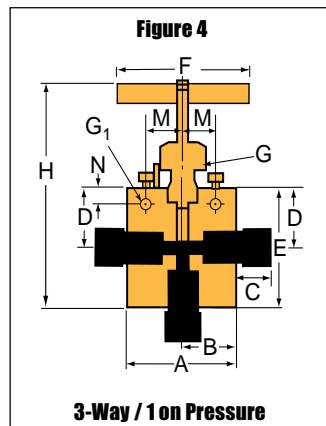
Tube glands are 3/8 hex on standard MVE models

Tube glands are 10mm hex on MV models

\* H Dimension is with stem in closed position.

All dimensions for reference only and subject to change.

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