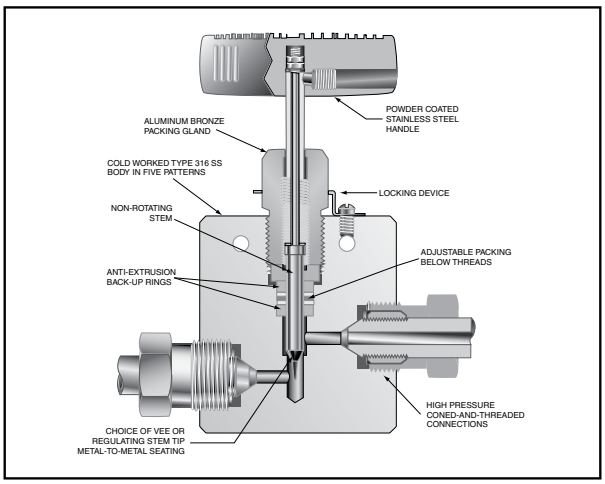
Needle Valves - 60VM Series

Pressures to 60,000 psi (4137 bar)

Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated C_V*	Pressure Rating psi (bar) @ Room Temperature**
1/4	F250C	0.062 (1.57)	0.08	60,000 (4137)
3/8	F375C	0.062 (1.57)	0.09	60,000 (4137)
9/16	F562C	0.078 (1.98)	0.14	60,000 (4137)

Notes:
** C_V values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase C_V value 50%.*

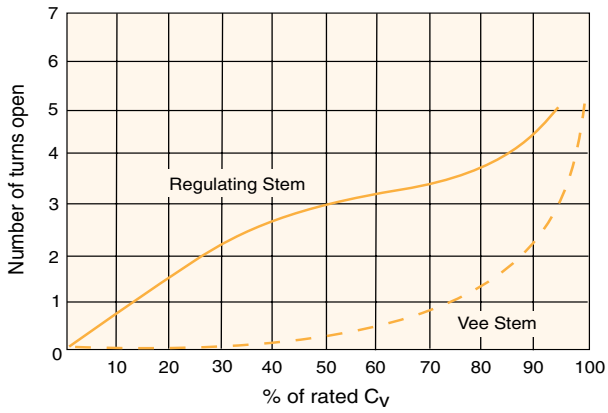
*** For complete temperature ratings see pressure/temperature rating guide in Technical Information section.*



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. The 60VM Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **60VM4071**

60VM — Valve Series

4 — Outside Diameter Tube Size
- **4**-1/4"
- **6**-3/8"
- **9**-9/16"

07 — Stem/Seat Type
- **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 — Body Pattern
- **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

—

XX — Options

For extreme temperature and other options, see Valve Options.

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Valve Options

Extreme Temperatures
Standard Parker Autoclave Engineers valves with PTFE packing may be operated from 0°F (-17.8°C) to 450°F (232°C). High temperature packing is available for service from -423°F (-252°C) to 1200°F (649°C) by adding the following suffixes to catalog order number.

TG - standard valve with PTFE glass packing to 600°F (316°C). **See note below.**
GY - standard valve with graphite braided yarn packing to 800°F (427°C).
HT - extended stuffing box valve with graphite braided yarn packing to 1200°F (649°C).
B - standard valve with cryogenic trim material and PTFE packing to -100°F (-73°C).
LT - extended stuffing box valve with PTFE packing & Cryogenic trim materials to -423°F (-252°C).
K - anti-vibration collet and gland assembly.

Note: 40VM and 60VM valves supplied with Peak/PTFE Glass/Peek

Valve Maintenance

Repair Kits: add "R" to the front of valve catalog number for proper repair kit. (Example: **R60VM4071**)

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

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

2-Way Straight

Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm) A	B	C	D	D_1	E	F	G	G_1	H*	M	N	Block Thickness	Valve Pattern
60VM4071	VEE	1/4	0.062	2.00	1.00	0.50	1.69	1.31	2.12	3.00	1.00	0.22	4.75	0.69	0.38	1.00	See Figure 1
60VM4081	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(42.93)	(33.27)	(53.85)	(76.20)	(25.40)	(5.59)	(120.65)	(17.53)	(9.65)	(25.40)	
60VM6071	VEE	3/8	0.062	2.00	1.00	0.53	1.69	1.31	2.25	3.00	1.00	0.22	4.87	0.69	0.38	1.00	
60VM6081	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(42.93)	(33.27)	(57.15)	(76.20)	(25.40)	(5.59)	(123.70)	(17.53)	(9.65)	(25.40)	
60VM9071	VEE	9/16	0.078	2.62	1.31	0.72	1.75	1.31	2.50	3.00	1.00	0.28	5.13	0.69	0.38	1.50	
60VM9081	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(45.45)	(33.27)	(63.50)	(76.20)	(25.40)	(7.11)	(130.30)	(17.53)	(9.65)	(38.10)	

2-Way Angle

60VM4072	VEE	1/4	0.062	2.00	1.00	0.50	1.31		2.38	3.00	1.00	0.22	5.00	0.69	0.38	1.00	See Figure 2
60VM4082	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(33.27)		(60.45)	(76.20)	(25.40)	(5.59)	(127.00)	(17.53)	(9.65)	(25.40)	
60VM6072	VEE	3/8	0.062	2.00	1.00	0.53	1.31		2.62	3.00	1.00	0.22	5.25	0.69	0.38	1.00	
60VM6082	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(33.27)		(66.55)	(76.20)	(25.40)	(5.59)	(133.35)	(17.53)	(9.65)	(25.40)	
60VM9072	VEE	9/16	0.078	2.62	1.31	0.72	1.31		2.81	3.00	1.00	0.28	5.44	0.69	0.38	1.50	
60VM9082	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(33.27)		(71.37)	(76.20)	(25.40)	(7.11)	(138.18)	(17.53)	(9.65)	(38.10)	

3-Way / 2 on Pressure

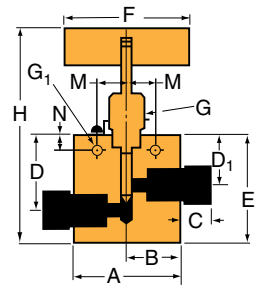
60VM4073	VEE	1/4	0.062	2.00	1.00	0.50	1.69	1.31	2.38	3.00	1.00	0.22	4.75	0.69	0.38	1.00	See Figure 3
60VM4083	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(42.93)	(33.27)	(60.45)	(76.20)	(25.40)	(5.59)	(120.65)	(17.53)	(9.65)	(25.40)	
60VM6073	VEE	3/8	0.062	2.00	1.00	0.53	1.69	1.31	2.75	3.00	1.00	0.22	4.87	0.69	0.38	1.00	
60VM6083	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(42.93)	(33.27)	(68.86)	(76.20)	(25.40)	(5.59)	(123.70)	(17.53)	(9.65)	(25.40)	
60VM9073	VEE	9/16	0.078	2.62	1.31	0.72	1.75	1.31	3.03	3.00	1.00	0.28	5.13	0.69	0.38	1.50	
60VM9083	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(45.45)	(33.27)	(76.96)	(76.20)	(25.40)	(7.11)	(130.30)	(17.53)	(9.65)	(38.10)	

G - Packing gland mounting hole drill size
G_1 - Bracket mounting hole size
Panel mounting drill size: 0.22" all valves.

** H Dimension is with stem in closed position.*
All dimensions for reference only and subject to change.

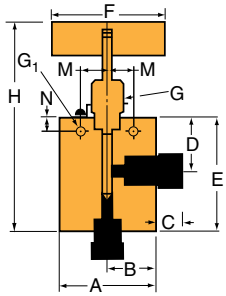
For prompt service, Parker Autoclave Engineers stock select products. Consult factory.

Figure 1



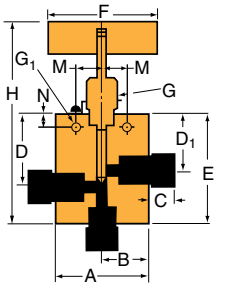
2-Way Straight

Figure 2



2-Way Angle

Figure 3



3-Way / 2 on Pressure

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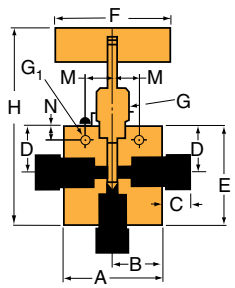
Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)												Block Thick-ness	Valve Pattern
				A	B	C	D	D_1	E	F	G	G_1	H*	M	N		
3-Way / 1 on Pressure																	
60VM4074	VEE	1/4	0.062	2.00	1.00	0.50	1.31		2.38	3.00	1.00	0.22	5.00	0.69	0.38	1.00	See Figure 4
60VM4084	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(33.27)		(60.45)	(76.20)	(25.40)	(5.59)	(127.00)	(17.53)	(9.65)	(25.40)	
60VM6074	VEE	3/8	0.062	2.00	1.00	0.53	1.31		2.62	3.00	1.00	0.22	5.25	0.69	0.38	1.00	
60VM6084	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(33.27)		(66.55)	(76.20)	(25.40)	(5.59)	(133.35)	(17.53)	(9.65)	(25.40)	
60VM9074	VEE	9/16	0.078	2.62	1.31	0.72	1.31		2.81	3.00	1.00	0.28	5.44	0.69	0.38	1.50	
60VM9084	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(33.27)		(71.37)	(76.20)	(25.40)	(7.11)	(138.18)	(17.53)	(9.65)	(38.10)	
2-Way Angle / Replaceable Seat																	
60VM4872	VEE	1/4	0.062	2.00	1.00	0.50	1.31	2.12	2.62	3.00	1.00	0.22	6.28	0.69	0.38	1.00	See Figure 5
60VM4882	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(33.27)	(53.85)	(66.55)	(76.20)	(25.40)	(5.59)	(159.51)	(17.53)	(9.65)	(25.40)	
60VM6872	VEE	3/8	0.062	2.00	1.00	0.53	1.31	2.36	2.62	3.00	1.00	0.22	6.52	0.69	0.38	1.00	
60VM6882	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(33.27)	(59.94)	(66.55)	(76.20)	(25.40)	(5.59)	(165.60)	(17.53)	(9.65)	(25.40)	
60VM9872	VEE	9/16	0.078	2.62	1.31	0.72	1.31	2.68	2.62	3.00	1.00	0.28	6.90	0.69	0.38	1.50	
60VM9882	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(33.27)	(68.07)	(66.55)	(76.20)	(25.40)	(7.11)	(175.26)	(17.53)	(9.65)	(38.10)	
3-Way / 2-Stem Manifold																	
60VM4075	VEE	1/4	0.062	2.00	1.00	0.50	1.72	1.31	3.44	3.00	1.00	0.22	6.07	0.69	0.38	1.00	See Figure 6
60VM4085	REG	(6.35)	(1.57)	(50.80)	(25.40)	(12.70)	(43.69)	(33.27)	(87.38)	(76.20)	(25.40)	(5.59)	(154.18)	(17.53)	(9.65)	(25.40)	
60VM6075	VEE	3/8	0.062	2.00	1.00	0.53	1.88	1.31	3.75	3.00	1.00	0.22	6.37	0.69	0.38	1.00	
60VM6085	REG	(9.53)	(1.57)	(50.80)	(25.40)	(13.46)	(47.75)	(33.27)	(95.25)	(76.20)	(25.40)	(5.59)	(161.80)	(17.53)	(9.65)	(25.40)	
60VM9075	VEE	9/16	0.078	2.62	1.31	0.72	2.06	1.31	4.12	3.00	1.00	0.28	6.37	0.69	0.38	1.50	
60VM9085	REG	(14.29)	(1.98)	(66.55)	(33.27)	(18.29)	(52.32)	(33.27)	(104.65)	(76.20)	(25.40)	(7.11)	(161.80)	(17.53)	(9.65)	(38.10)	

G - Packing gland mounting hole drill size
G_1 - Bracket mounting hole size
Panel mounting drill size: 0.22" all valves.

** H Dimension is with stem in closed position.*
All dimensions for reference only and subject to change.

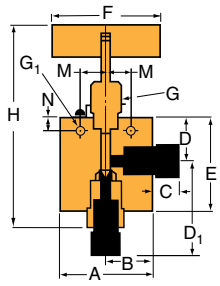
For prompt service, Parker Autoclave Engineers stock select products. Consult factory.

Figure 4



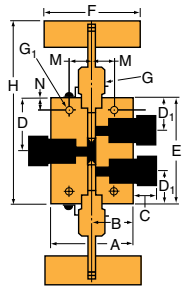
3-Way / 1 on Pressure

Figure 5



2-Way Angle / Replaceable Seat

Figure 6



3-Way / 2 Stem Manifold

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