

40VM Series: Pressures to 40,000 psi (2760 bar)

For use with 9/16" High Pressure Tubing w/ .250" ID

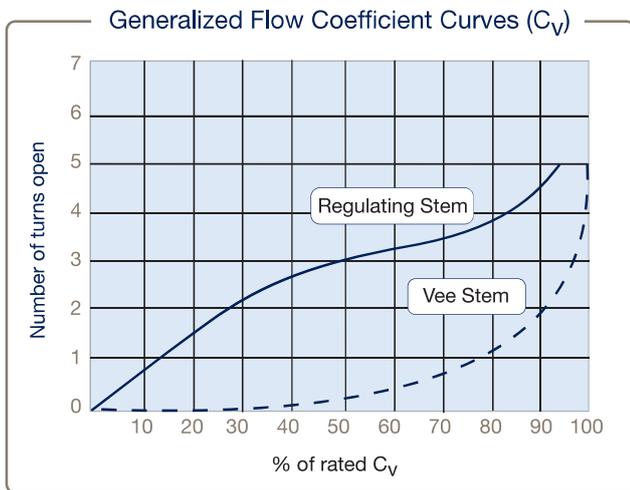


Tube Outside Diameter Size (inches)	Connection Type	Orifice Size Inches (mm)	Rated C_v^*	Pressure Rating psi (bar) @Room Temperature**
9/16	F562C40	0.109 (2.77)	0.28	40,000 (2760)

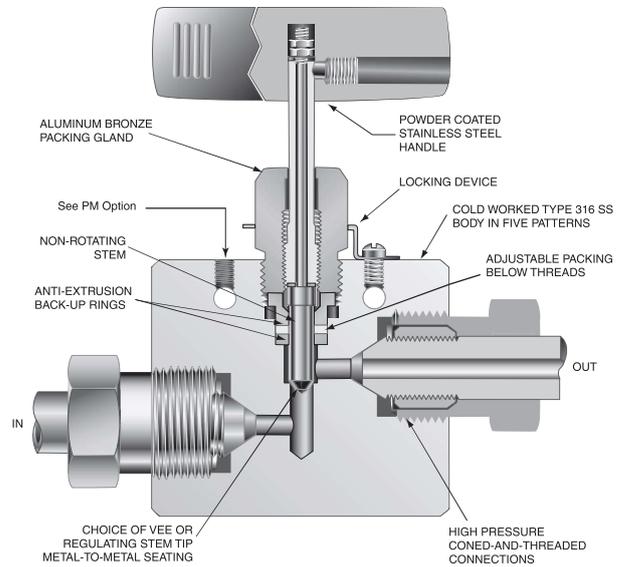
Notes

* C_v values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase C_v value 50%. (Based on water). Formula for converting C_v to volumetric flow can be found in Technical Information section.

** Maximum Allowable Working Pressures decrease as temperatures increase - see pressure/temperature rating guide in Technical Information section.



40VM Series Flow Curve for Vee and Regulating Stem Valves



To ensure proper fit use Parker Autoclave tubing

Valve Packing Options:

Standard Parker Autoclave Engineers valves with nylon/leather/nylon packing may be operated from 40°F (4.4°C) to 230°F (110°C). Extended temperature packing is available for service from -423°F (-252°C) to 1200°F (650°C) by adding the following suffixes to catalog order number:

- B** Cryogenic trim materials and PTFE packing required when below 0°F (-18°C) to -100°F (-73°C)
- LT** Extended stuffing box valve with PTFE packing and Cryogenic trim materials to -423°F (-252°C)
- *TG** Standard valve with PTFE-Glass packing -100°F (-73°C) to 600°F (316°C) (See also -B option above when below 0°F (-18°C))
- GY** Standard valve with Graphite Yarn packing 32°F (0°C) to 800°F (427°C). Used when selecting HT option.
- HT** Extended stuffing box valve with Graphite Yarn packing to 1200°F (650°C)

Note: *40VM and 60VM TG packing options supplied with PEEK/PTFE Glass/PEEK

(See "Technical Brochure" for Pressure/Temperature effect on temperatures above ambient.)

Ordering Guide:

For complete information on available stem types, optional connections and additional valve options, see pages 26-27 or contact your Sales Representative. 40VM Series valves are furnished complete with connection components, unless otherwise specified. See High Pressure Fittings and Tubing brochure for compatible products.

Building a Part Number: Example: 40VM9071

Example Part Number:	40VM	9	07	1	XX
Ordering Parameters/Options:	Valve Series	Outside Diameter Tube Size	Stem/Seat Type	Body Pattern	Options
Table Reference: (see below)	A	B	C	D	E

A - Valve Series

40VM	High Pressure Needle Valve
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B - Outside Diameter Tube Size

9	9/16"
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C - 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 (angle valve only)
88	Regulating Stem with Replaceable Seat (angle valve only)

Notes: Valve Manuals can be found on our website at www.Autoclave.com. Connection, Running and Seating Torques can be found in the product manual or in our Tools and Installation Catalog Section. Valves that have not been cycled for a substantial period of time may require higher initial actuation torque.

*Replaceable seat option is sold with two (2) seat surfaces 180° apart.

D - Body Pattern

1	Two-Way Straight
2	Two-Way Angle (required with replaceable seat option)
3	Three-Way, Two on Pressure
4	Three-Way, One on Pressure
5	Three-Way, Two Stem Manifold Valve

E - Options

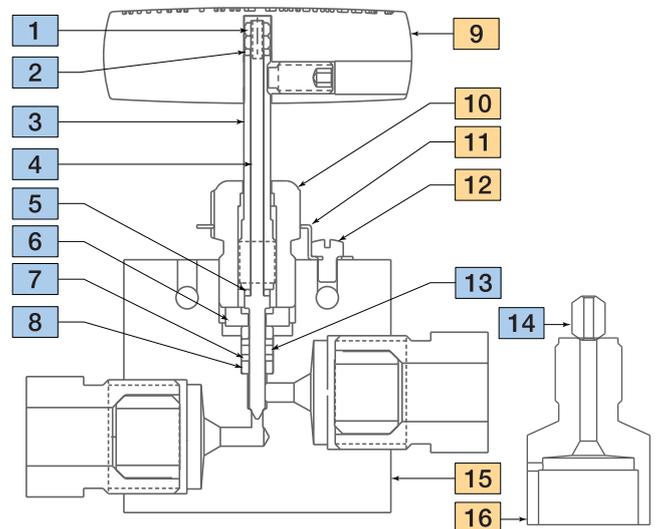
K	Antivibration Gland (replaces standard gland)
B	All 316 SS Materials required when below 0°F (-18°C) (included in LT)
LT	Low Temperature Extension (to -423°F) (includes PTFE packing)
TG	PTFE Glass (25%) Packing (to 600°F)
GY	Graphite Yarn Packing (to 800°F)
HT	High Temperature Extension (to 1200°F) (includes GY packing)

Actuator Options - see Actuator brochure for Suffix Codes
Other materials available upon request. See Technical Brochure for list of common options.
See "Technical Brochure" for Pressure/Temperature effect on temperatures above ambient.

Material of Construction:

Item #	Description	Material
1	Hex Nut	300 Series SS
2	Thrust Washer	17-4 PH
3	Stem Sleeve	304 SS
4	Vee Stem, (9/16" 40VM shown)	316 SS
5	Thrust Washer	17-4 PH
6	Backup Washer	17-4 PH
7	Packing	Nylon
8	Packing Washer	17-4 PH
9	Handle, 3"	Aluminum
10	Packing Gland	AMPCO 45
11	Locking Device	302 SS
12	Screw, #10	18-8 SS
13	Packing	Leather
14	Replaceable Seat	17-4 PH
15	Valve Body	316 SS
16	Seat Retainer	316 SS

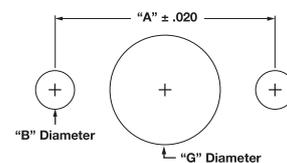
Typical spare parts found in Repair Kits



Panel Hole Sizes:

Valve Size	Inches			
	A	B	Screw Size	G
4 and 6	1.38	.22	#10-24	1.00
9	1.38	.22	#10-24	1.00

Use suffix **-PM** for extra mounting hardware



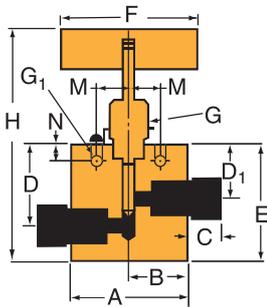
Needle Valve Panel Mount

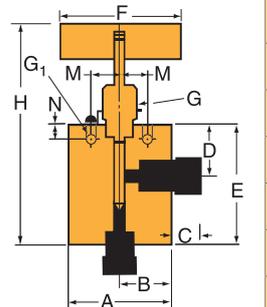
Basic Repair Kits for 316 SS Material:

Stem Type		Basic Repair Kit for 316 SS Material	
		Outside Diameter Tube:	
		9/16"	
2 Way Straight, 2 Way Angle 3 Way 2 On-Pressure, 3 Way 1 On-Pressure	VEE	R40VM7	
	REG	R40VM8	
2 Way, Replaceable Seat and Stem	VEE	R40VM872	
	REG	R40VM882	
3 Way, 2 Stem Manifold	VEE	R40VM075	
	REG	R40VM085	

When ordering for valves bought with additional suffix options, please include those exact suffix codes when ordering repair kit. (Example: the stem for a manual valve is manufactured differently for a pneumatically actuated valve and the repair kit must include the exact actuator suffix codes).
Valve Manuals can be found on our website at www.Autoclave.com,
Connection, Running and Seating Torques can be found in the product manual or in our Tools and Installation Catalog Section.

40VM Series Dimensions:

2 Way Straight			
Stem Type	VEE REG	Catalog Number	
		40VM9071 40VM9081	
Outside Diameter Tube		9/16 (14.29)	
Orifice Diameter		0.312 (7.93)	
Dimensions: inches (mm)	A	2.62 (66.55)	
	B	1.31 (33.35)	
	C	0.72 (18.29)	
	D	1.75 (44.45)	
	D1	1.31 (33.32)	
	E	2.50 (63.50)	
	F	3.00 (76.20)	
	G	1.00 (25.40)	
	G1	0.28 (7.11)	
	H*	5.01 (127.25)	
	M	0.69 (17.53)	
	N	0.38 (9.65)	
	Block Thickness		1.50 (38.10)

2 Way Angle			
Stem Type	VEE REG	Catalog Number	
		40VM9072 40VM9082	
Outside Diameter Tube		9/16 (14.29)	
Orifice Diameter		0.312 (7.93)	
Dimensions: inches (mm)	A	2.62 (66.55)	
	B	1.31 (33.35)	
	C	0.72 (18.29)	
	D	1.31 (44.45)	
	D1	-	
	E	2.81 (71.37)	
	F	3.00 (76.20)	
	G	1.00 (25.40)	
	G1	0.28 (7.11)	
	H*	5.32 (135.13)	
	M	0.69 (17.53)	
	N	0.38 (9.65)	
	Block Thickness		1.50 (38.10)

G - Packing Gland mounting hole drill size • G1 - Bracket mounting hole size • H* - Dimension is with stem in closed position
All dimensions for reference only and subject to change • For prompt service, Parker Autoclave stocks select products. Consult factory.

40VM Series Dimensions:

3 Way, 2 On Pressure		
		Catalog Number
Stem Type	VEE REG	40VM9073 40VM9083
Outside Diameter Tube		9/16 (14.29)
Orifice Diameter		0.312 (7.93)
Dimensions: inches (mm)	A	2.62 (66.55)
	B	1.31 (33.35)
	C	0.72 (18.29)
	D	1.75 (44.45)
	D1	1.31 (33.32)
	E	3.13 (79.38)
	F	3.00 (76.20)
	G	1.00 (25.40)
	G1	0.28 (7.11)
	H*	5.64 (143.13)
	M	0.69 (17.53)
	N	0.38 (9.65)
Block Thickness		1.50 (38.10)

3 Way, 1 On Pressure		
		Catalog Number
Stem Type	VEE REG	40VM9074 40VM9084
Outside Diameter Tube		9/16 (14.29)
Orifice Diameter		0.312 (7.93)
Dimensions: inches (mm)	A	2.62 (66.55)
	B	1.31 (33.35)
	C	0.72 (18.29)
	D	1.31 (44.45)
	D1	-
	E	2.81 (71.37)
	F	3.00 (76.20)
	G	1.00 (25.40)
	G1	0.28 (7.11)
	H*	5.32 (135.13)
	M	0.69 (17.53)
	N	0.38 (9.65)
Block Thickness		1.50 (38.10)

2 Way Angle Replaceable Seat		
		Catalog Number
Stem Type	VEE REG	40VM9872 40VM9882
Outside Diameter Tube		9/16 (14.29)
Orifice Diameter		0.312 (7.93)
Dimensions: inches (mm)	A	2.62 (66.55)
	B	1.31 (33.35)
	C	0.72 (18.29)
	D	1.31 (33.35)
	D1	2.68 (68.07)
	E	2.63 (66.80)
	F	3.00 (76.20)
	G	1.00 (25.40)
	G1	0.28 (7.11)
	H*	6.85 (173.99)
	M	0.69 (17.53)
	N	0.38 (9.65)
Block Thickness		1.50 (38.10)

3 Way, 2 Stem Manifold		
		Catalog Number
Stem Type	VEE REG	40VM9075 40VM9085
Outside Diameter Tube		9/16 (14.29)
Orifice Diameter		0.312 (7.93)
Dimensions: inches (mm)	A	2.62 (66.55)
	B	1.31 (33.35)
	C	0.72 (18.29)
	D	2.06 (52.37)
	D1	1.31 (33.32)
	E	4.12 (104.65)
	F	3.00 (76.20)
	G	1.00 (25.40)
	G1	0.28 (7.11)
	H*	6.63 (168.40)
	M	0.69 (17.53)
	N	0.38 (9.65)
Block Thickness		1.50 (38.10)

G - Packing Gland mounting hole drill size • G1 - Bracket mounting hole size • H* - Dimension is with stem in closed position
All dimensions for reference only and subject to change • For prompt service, Parker Autoclave stocks select products. Consult factory.