

100VM & 150V Series: Pressures to 150,000 psi (10350 bar)

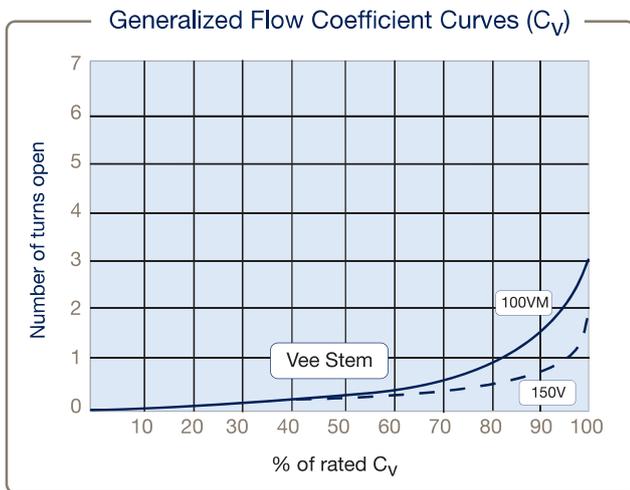


Tube Outside Diameter Size (inches)	Connection Type	Orifice Size Inches (mm)	Rated C_V^*	Pressure Rating psi (bar) @Room Temperature**
1/4 (100VM)	F312C150	0.062 (1.57)	0.09	100,000 (10350)
5/16 (100VM)	F312C150	0.062 (1.57)	0.09	100,000 (10350)
3/8 (100VM)	F312C150	0.062 (1.57)	0.09	100,000 (10350)
9/16 (100VM)	F562C	0.188 (4.75)	0.65	100,000 (10350)
5/16 (150V)	F312C150	0.062 (1.57)	0.06	150,000 (10342)

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.



100VM and 150V Series Flow Curve for Vee Stem Valves

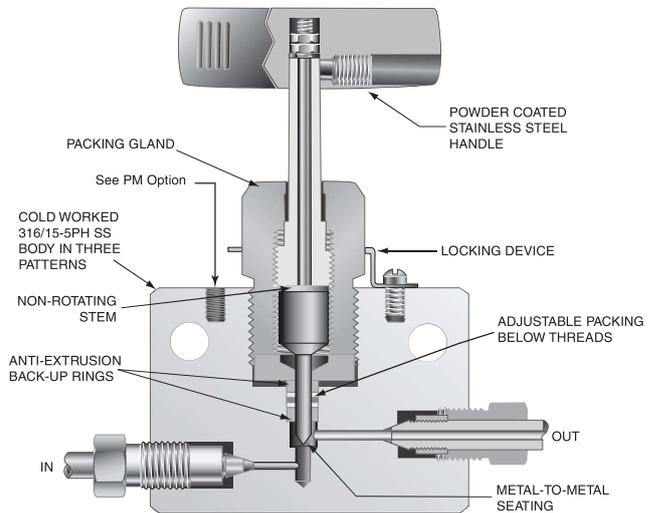
Valve Packing Options:

Standard Parker Autoclave Engineers valves with nylon/leather/nylon packing may be operated from 40°F (4.4°C) to 230°F (110°C).

Note: Stem must be actuated with 15/16" hex size torque wrench (offered in Tools and Installation Catalog)

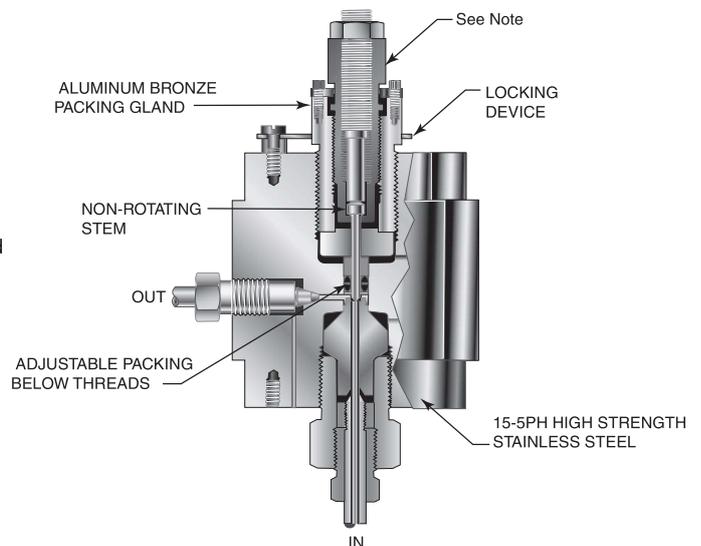
Shut-off torque = 32 ft-lbf (force in excess could damage stem)

Running torque = 26 ft-lbf



100VM Series

Note: 100VM9 Series comes with a T-Handle. To ensure proper fit use Parker Autoclave tubing



150V Series

To ensure proper fit use Parker Autoclave tubing

Ordering Guide:

For complete information on available stem types, optional connections and additional valve options, see pages 26-27 or contact your Sales Representative. 100VM Series valves are furnished complete with connection components, unless otherwise specified.

Building a Part Number: Example: 100VM4071

Example Part Number:	100VM	4	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	
100VM	High Pressure Needle Valve
150V	High Pressure Needle Valve (5/16" 150Ksi tubing only)

D - Body Pattern	
1	Two-Way Straight
2	Two-Way Angle (Required for 150V valves)

B - Outside Diameter Tube Size	
4	1/4"
5	5/16"
6	3/8"
9	9/16" (this size requires -155 material option)

E - Options	
Pneumatic Actuator Options - see Actuator brochure for Suffix Codes	
-155	15-5 PH material (mandatory for size 9 valve)

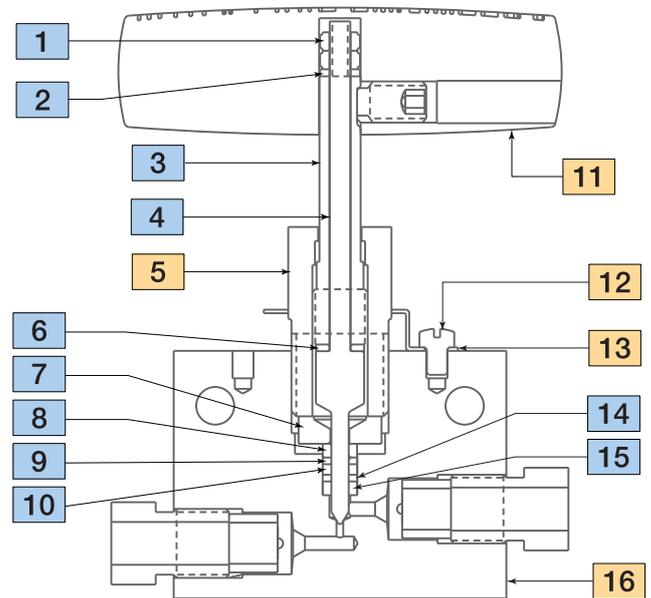
C - Stem/Seat Type	
07	Non-Rotating Vee Stem (on-off service)
87	Vee Stem with Replaceable Seat (angle valve only)

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.

Material of Construction (100VM):

Item #	Description	Material
1	Hex Nut, #10-32	316 SS
2	Thrust Washer	17-4 PH
3	Stem Sleeve	304 SS
4	Vee Stem, (3/8" 100VM shown)	MP35N
5	Packing Gland	AMPCO 45
6	Thrust Washer	17-4 PH
7	Backup Washer	15-5 PH
8	Packing Washer	Berylco
9	Packing	Nylon
10	Packing	Leather
11	Handle	316 SS
12	Screw, #10	18-8 SS
13	Locking Device	302 SS
14	Packing	Nylon
15	Packing Washer	Berylco
16	Body, (3/8" 100VM shown)	316 SS
•	Replaceable Seat	17-4 PH
•	Seat Retainer	316 SS

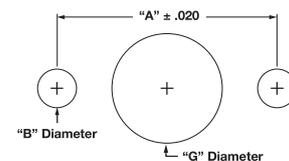
Typical spare parts found in Repair Kits



Panel Hole Sizes:

Valve Size	Inches			
	A	B	Screw Size	G
4 and 6	2.25	.22	#10-24	1.12
9	1.75	.22	#10-24	1.12

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



Needle Valve Panel Mount

Material of Construction (150V):

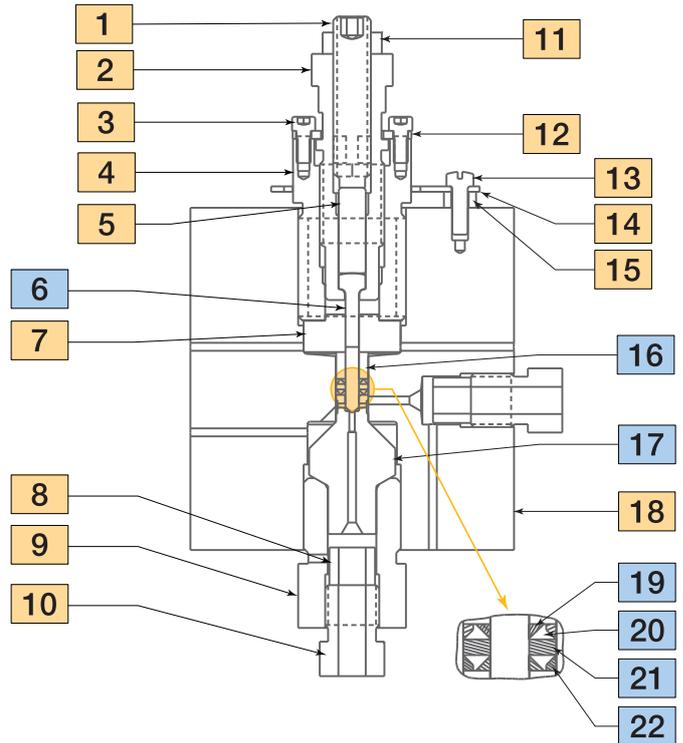
Item #	Description	Material
1	Hex Nut, 7/16-14	300 Series SS
2	Stem Retainer	316 SS
3	Stem Sleeve	AMPCO 45
4	Packing Gland	MP35N
5	Dowel Pin, 5/16"	Steel
6	Stem	Tool Steel
7	Packing Washer	E52100 Steel
8	Collar	316 SS
9	Seat Nut	630 SS
10	Gland	316 SS
11	Hex Nut, 7/16 - 14	300 Series SS
12	Stop Segment	Carbon Steel
13	Screw, #10	300 Series SS
14	Locking Device	302 SS
15	Spacer	304 SS
16	Bottom Washer	Tool Steel
17	Seat	NI Maraging Steel
18	Body, (6/16" 150VM shown)	4340
19	Wedge Ring	Berylco
20	Packing	PTFE
21	Packing	Leather
22	Wedge Ring	Berylco

Typical spare parts found in Repair Kits

Note:

150V Shutoff torque = 32 ft-lbf (Force in excess could damage stem)

150V Running torque = 26 ft-lbf

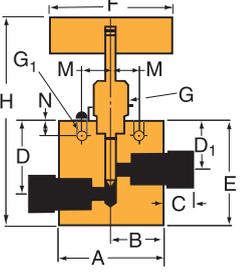


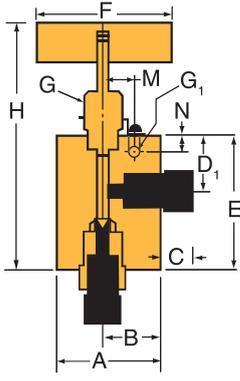
Basic Repair Kits for 316 SS Material:

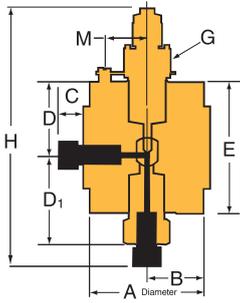
Stem Type		Basic Repair Kit for 316 SS Material		
		Valve Type		
		100VM4 to 6	100VM9	150V
2 Way Straight, 2 Way Angle 3 Way 2 On-Pressure, 3 Way 1 On-Pressure (All sizes)	VEE	R100VM407 R100VM507 R100VM607	R100VM907	N/A
	VEE	R100VM872	R100VM9872	R150V5072

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.

100VM & 150V Series Dimensions:

2-Way Straight		Catalog Number				
Stem Type	VEE	100VM				
Outside Diameter Tube		1/4 (6.35)	5/16 (7.93)	3/8 (9.53)	9/16 (14.3)	
Orifice Diameter		0.94 (2.39)	0.062 (1.57)	0.125 (3.18)	0.188 (4.8)	
	Dimensions: inches (mm)	A		3.00 (76.20)		
	B	1.50 (38.10)		1.50 (38.10)		
	C	0.52 (13.21)		0.75 (19.05)		
	D	1.75 (44.45)		2.68 (68.07)		
	D1	1.44 (36.58)		2.18 (55.37)		
	E	2.25 (57.15)		3.50 (88.9)		
	F	4.00 (101.60)		10.34 (262.6)		
	G	1.12 (28.45)		1.12 (28.45)		
	G1	0.34 (8.64)		0.44 (11.18)		
	H*	5.35 (136.00)		6.8 (172.7)		
	M	0.88 (22.4)		0.88 (22.4)		
	N	0.50 (12.70)		0.63 (16.0)		
	Block Thickness		1.38 (35.05)		2.00 (50.8)	

2 Way Angle Replaceable Seat		Catalog Number				
Stem Type	VEE	100VM				
Outside Diameter Tube		1/4 (6.35)	5/16 (7.93)	3/8 (9.53)	9/16 (14.3)	
Orifice Diameter		0.94 (2.39)	0.062 (1.57)	0.125 (3.18)	0.188 (4.8)	
	Dimensions: inches (mm)	A		2.25 (57.15)		
	B	1.50 (38.10)		1.50 (38.10)		
	C	0.52 (13.21)		0.72 (18.28)		
	D	-		-		
	D1	1.44 (36.58)		2.20 (55.88)		
	E	3.00 (76.20)		3.80 (96.52)		
	F	4.00 (101.60)		10.34 (262.6)		
	G	1.12 (28.45)		1.12 (28.45)		
	G1	0.34 (8.64)		0.44 (11.18)		
	H*	7.57 (192.30)		7.1 (180.3)		
	M	0.88 (22.4)		0.88 (22.4)		
	N	0.50 (12.70)		0.63 (16.0)		
	Block Thickness		1.38 (35.05)		2.00 (50.8)	

2 Way Angle Replaceable Seat (150V Valve only)		Catalog Number	
Stem Type	VEE	150V5072	
Outside Diameter Tube		5/16 (7.93)	
Orifice Diameter		0.062 (1.57)	
	Dimensions: inches (mm)	A	3.75 (95.25)
	B	1.88 (47.63)	
	C	0.52 (13.21)	
	D	2.25 (57.15)	
	D1	2.63 (66.80)	
	E	4.00 (101.60)	
	F	-	
	G	1.65 (41.91)	
	G1	-	
	H*	7.12 (180.85)	
	M	1.25** (31.75)	
N	-		
		**(2) 1/4"-20 mounting holes 180° apart and (1) locking device screw 90° apart	

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.