Needle Valves

Medium Pressure

15SM Series

Pressures to 15,000 psi (1034 bar)



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

Medium Pressure Valve Features:

- Largest-port valve available for medium pressure applications.
- Tubing size 1-1/2".
- Rising stem/barstock body design.
- Non-rotating stem prevents stem/seat galling.
- New one piece stem design permits ease of assembly and packing replacement.
- 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 encapsulated packing provides dependable stem and body sealing.
- Stem sleeve and packing gland materials have been selected to achieve extended thread cycle life and reduced handle torque.
- Choice of Vee or Regulating stem tip.
- Available in two body patterns.

Parker Autoclave Engineers valves are complemented by a complete line of fittings and tubing. The SM Series uses Parker Autoclave Engineers' Medium pressure coned and threaded connection.

Parker

Autoclave Engineers

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Needle Valves - SM Series

Medium Pressure

Needle Valves - 15SM Series

Pressures to 15,000 psi (1034 bar)

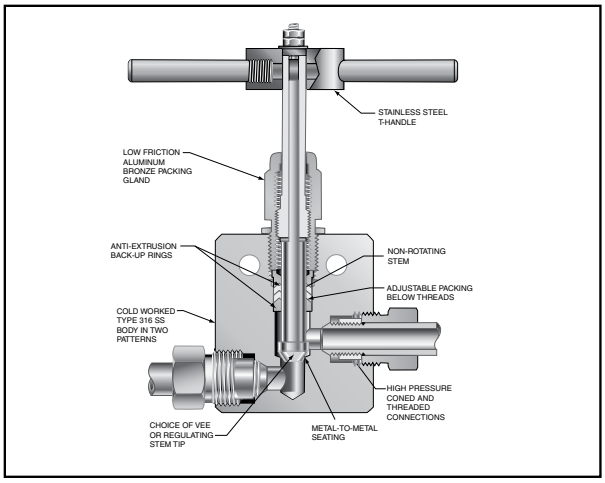
Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated C_V*	Pressure Rating psi (bar) @ Room Temperature**
1-1/2	SF1500CX	.937 (23.80)	14	15,000 (1034)

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)*

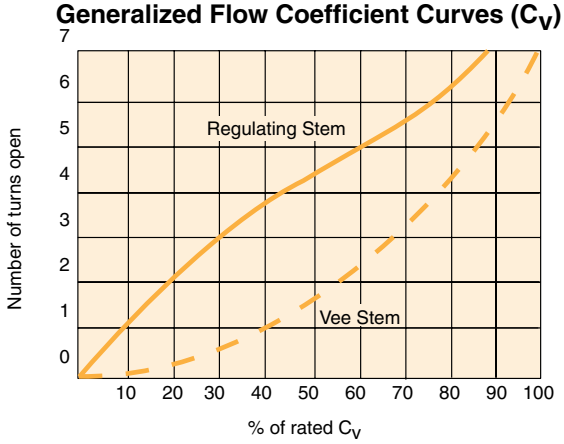
** *For complete temperature ratings see pressure/temperature rating guide in Technical Information section.*





To ensure proper fit use Parker 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. 15SM Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **15SM24071**

15SM	24	07	1	—	XX
Valve Series	**Outside Diameter Tube Size**	**Stem/Seat Type**	**Body Pattern**		**Options**
	24-1-1/2"	**07** - non-rotating Vee stem (on-off service) **08** - non-rotating regulating stem (tapered tip for regulating and shutoff)	**1** - two-way straight **2** - two-way angle		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 and/or extended stuffing box are 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).
GY standard valve with graphite braided yarn packing to 800°F (427°C).
Note: Contact factory for pressure ratings using graphite yarn packing.
HT extended stuffing box valve with graphite braided yarn packing to 1200°F (649°C).
B standard valve with cryogenic trim materials and PTFE packing to -100°F (-73°C).
LT extended stuffing box valve with PTFE packing and cryogenic trim materials to -423°F (-252°C).
K anti-vibration collet and gland assembly

See needle valve options for stem and seat coating for erosive service.

Valve Maintenance

Repair Kits: add "R" to the front of valve catalog number for proper repair kit. (Example: **R15SM24071**)

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 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.

Note: Caution should be exercised in proper selection of medium pressure tubing based on actual operating conditions. Two tubing series available in some sizes: 15,000 psi (1034 bar) and 20,000 psi (1380 bar).

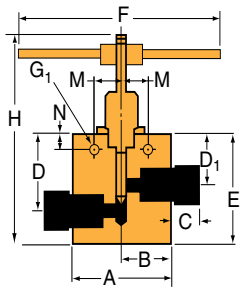
Catalog Number	Stem Type	Pipe Size	Orifice Dia.	Dimensions - inches (mm)												Block Thickness	Fitting Pattern
				A	B	C	D	D¹	E	F	G	G¹	H	M	N		
2-Way Straight																	
15SM24071	VEE	1-1/2	0.937	5.75	2.88	1.00	5.25	3.75	6.38	23.75		0.75	10.98	1.88	1.50	2.25	See Fig. 1
15SM24081	REG	(38.10)	(23.80)	(146.05)	(73.03)	(25.40)	(133.35)	(95.25)	(161.93)	(603.25)		(19.05)	(278.79)	(47.63)	(38.10)	(57.15)	
2-Way Angle																	
15SM24072	VEE	1-1/2	0.937	5.75	2.88	1.00	3.75		6.75	23.75		0.75	11.35	1.88	1.50	2.25	See Fig. 2
15SM24082	REG	(38.10)	(23.80)	(146.05)	(73.03)	(25.40)	(95.25)		(171.45)	(603.25)		(19.05)	(288.32)	(47.63)	(38.10)	(57.15)	

G - Packing gland mounting hole drill size
G_1 - Bracket mounting hole size
Panel mounting drill size: 0.75" all valves.

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

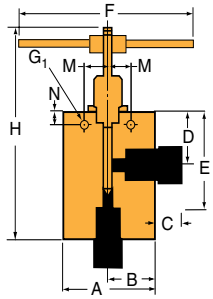
For prompt service, Parker Autoclave Engineers stock select products. Consult factory.

Figure 1



2-Way Straight

Figure 2



2-Way Angle

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