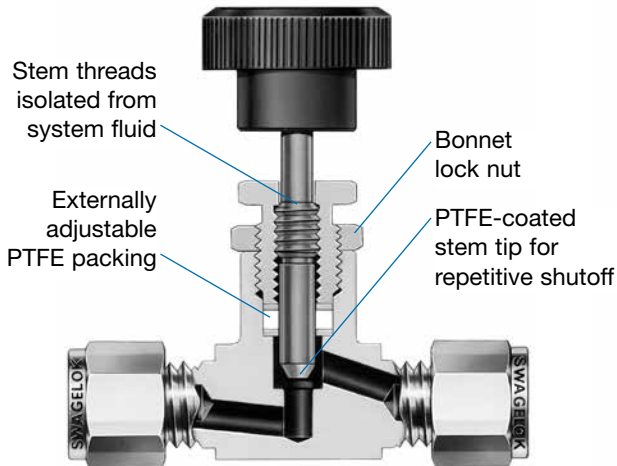


Screwed-Bonnet Needle Valves

JN Series

Features



- Working pressures up to 600 psig (41.3 bar)
- Temperatures up to 300°F (148°C)
- Straight and angle patterns
- Vee stem standard; regulating stem available
- Swagelok® tube fitting and male and female NPT and ISO pipe end connections
- Green handle standard; optional colors available
- Optional panel mounting

Pressure-Temperature Ratings

Material Name	Brass
Temperature °F (°C)	Working Pressure psig (bar)
-40 (-40) to 100 (37)	600 (41.3)
200 (93)	425 (29.2)
300 (148)	250 (17.2)

Materials of Construction



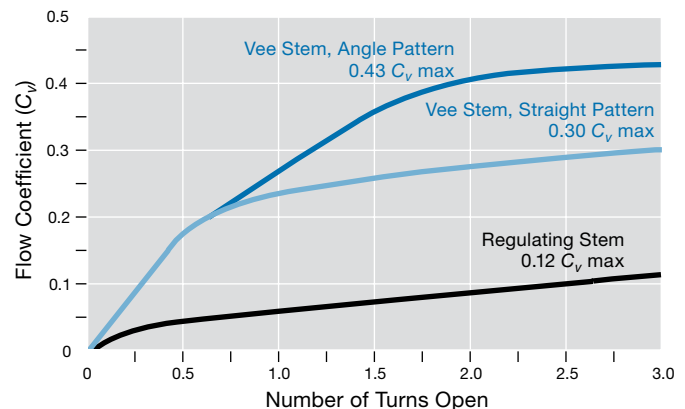
Component	Material Grade/ASTM Specification
1 Handle	Green phenolic
Set screw	Alloy steel/ANSI B18.3
2 Bonnet	Brass 360/B16
3 Lock nut	
4 Stem ^①	<i>Silicon copper 655/B98</i>
5 Glands (2)	<i>Brass 260/B36</i>
Packing	<i>Virgin PTFE</i>
6 Body	<i>Brass 377/B283</i>
Wetted lubricant	<i>Silicone-based</i>
Nonwetted lubricant	Molybdenum disulfide-based

Wetted components listed in *italics*.

① Stem tip is PTFE coated.

Flow Data at 70°F (20°C)

Flow Coefficient at Turns Open

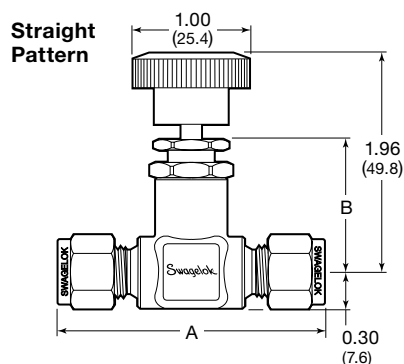


Ordering Information and Dimensions

Straight-Pattern Valves

Select an ordering number.

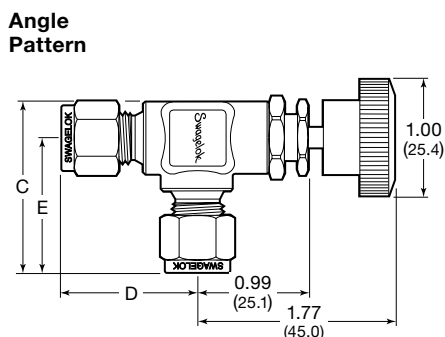
Dimensions, in inches (millimeters), are for reference only and are subject to change.



Angle-Pattern Valves

Insert **A** after **JN** in an ordering number with C, D, and E dimensions listed.

Example: B-2JNA



End Connections		Ordering Number	Dimensions, in. (mm)					
Inlet/Outlet	Size		Orifice ^①	A	B	C	D	E
Swagelok tube fittings	1/8 in.	B-2JN	0.082 (2.1) ^②	2.27 (57.7)	1.18 (30.0)	1.45 (36.8)	1.14 (29.0)	
	1/4 in.	B-4JN	0.156 (4.0)	2.33 (59.2)		1.47 (37.3)	1.17 (29.7)	
	3/8 in.	B-6JN		2.42 (61.5)		1.51 (38.4)	1.21 (30.7)	
	6 mm	B-6JN-MM		2.33 (59.2)		1.47 (37.3)	1.17 (29.7)	
Female NPT	1/4 in.	B-4JN4	0.156 (4.0)	2.13 (54.1)	1.13 (28.7)	—	—	
Male NPT	1/8 in.	B-2JN2	0.125 (3.2) ^③	1.75 (44.4)	1.18 (30.0)	1.18 (30.0)	0.88 (22.4)	
	1/4 in.	B-4JN2	0.156 (4.0)	1.84 (46.7)		1.22 (31.0)	0.92 (23.4)	
Female ISO ^④	1/4 in.	B-4JN4-RT	0.156 (4.0)	2.13 (54.1)	1.13 (28.7)	—	—	
Male ISO ^④	1/8 in.	B-2JN2-RT	0.125 (3.2) ^③	1.75 (44.4)	1.18 (30.0)	1.18 (30.0)	0.88 (22.4)	
	1/4 in.	B-4JN2-RT	0.156 (4.0)	1.84 (46.7)		1.22 (31.0)	0.92 (23.4)	
Male NPT/ Swagelok tube fitting	1/8 in./ 1/4 in.	B-2/4JN1	0.156 (4.0)	2.01 (51.1)	1.18 (30.0)	1.18 (30.0)	0.92 (23.4)	0.88 (22.4)
	1/4 in./ 1/4 in.	B-4JN1		2.09 (53.1)		1.47 (37.3)	0.92 (23.4)	1.17 (29.7)
Male/ female NPT	1/4 in./ 1/4 in.	B-4JN5	0.156 (4.0)	2.13 (54.1)	1.13 (28.7)	—	—	

Dimensions shown with Swagelok nuts finger-tight.

- ① Orifice is the diameter of the most restricting flow path.
 ② Angle-pattern valve orifice is 0.094 in. (2.4 mm).
 ③ Angle-pattern valve orifice is 0.156 in. (4.0 mm).
 ④ See specifications ISO 7/1, DIN-2999, BS EN 10226-1, and JIS B0203.

Caution: Do not mix or interchange parts with those of other manufacturers.

Testing

Every JN series needle valve is factory tested with nitrogen at 100 psig (6.8 bar). Seats have a maximum allowable leak rate of 0.1 std cm³/min.

Shell testing is performed with nitrogen at 200 psig (13.7 bar) to a requirement of no detectable leakage with a liquid leak detector.

Cleaning and Packaging

All JN series needle valves are cleaned and packaged in accordance with Swagelok *Standard Cleaning and Packaging (SC-10)* (MS-06-62).

Options and Accessories

Regulating Stem



Insert **R** after **JN** or **JNA** in the ordering number.

Examples: B-2JNR
B-4JNAR

Handle Colors

Add a designator to the valve ordering number.

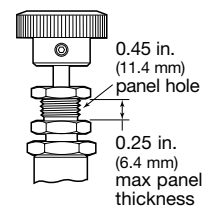
Example:
B-2JN-BK

Color	Designator
Black	-BK
Blue	-BL
Red	-RD
Yellow	-YW

Panel Mounting

Panel mounting adds 0.37 in. (9.4 mm) to the overall height of the valve. Add **-PM** to the ordering number.

Example: B-2JN-PM



⚠ A packing adjustment may be required periodically to increase service life and to prevent leakage.

⚠ Valves that have not been cycled for a period of time may have a higher initial actuation torque.

⚠ To increase service life, ensure proper valve performance, and prevent leakage, apply only as much torque as is required to achieve positive shutoff.

About this document

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Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Warranty Information

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