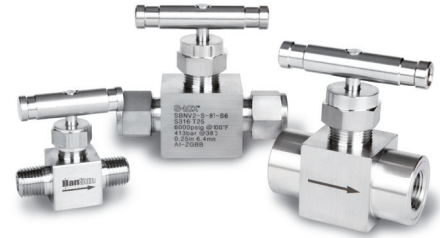


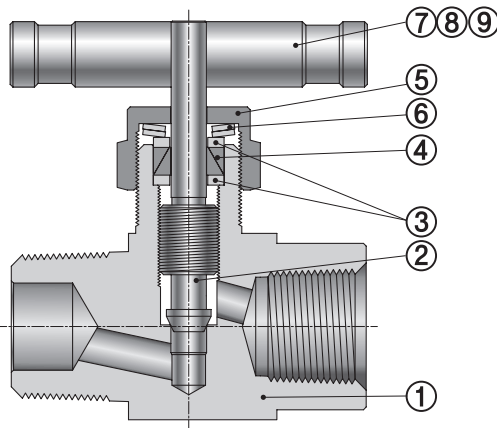
SBNV60 Series Integral Bonnet Bar Stock Needle Valves

Features

- Pressure rating up to 6000psig (413bar) at 21°C (70°F).
- Temperature rating from -54°C (-65°F) to 232°C (450°F) with standard PTFE packing and up to 315°C (600°F) with optional PEEK packing.
- Choice of material : Standard SS316 and available in Alloy 400 & Brass.
- Available Sour Gas service per NACE MR0175
- Applications : General Purpose Gas, Water and Oil
- Variety stem tips include Vee, Regulating and Soft-Seat with PCTFE (KEL-F).
- Bar stock body with straight and angle patterns.
- Stem threads are hard chrome-plated for maximum service life.
- Packing nut enables easy external adjustments to ensure leak-free stem seal.
- Variety of end connections include reliable S-LOK tube fittings, male/female NPT & ISO threads.



Materials of Construction



No	Component	Material	
		Stainless Steel	Alloy 400
1	Body	SS316 / A479 or A276	Alloy 400 / B564
2	Stem	Vee	Chrome Plate
		Soft Seat	SS316 / A479 or A276
2a	Stem Tip	PCTFE (KEL-F)	
3	Packing Ring	SS316 / A479 or A276	Alloy R-405 / B164
4	Packing	PTFE(Optional PEEK)	
5	Packing Nut	SS316 / A276	
6	Packing Spring	17-7PH	
7	Bar Handle	SS316 / A276 (Standard)	
8	Set Screw	Stainless Steel	
9	Handle Pin	Stainless Steel	

Technical Data

Pressure-Temperature Rating with Packing and Body Material

Valve Material	Stem	PTFE Packing (Standard)		PEEK Packing (Optional)	
		Temperature Range °C (°F)	Pressure Rating @38°C(100°F)	Temperature Range °C (°F)	Pressure Rating @Max. Temp.
Stainless Steel 316	Vee Stem (Metal Seat)	-54°C to 232°C (-65°F to 450°F)	6000psig (413 bar)	-54°C to 315°C (-65°F to 600°F)	3760psig (259 bar)
	Soft Stem (PCTFE Seat)	-54°C to 93°C (-65°F to 200°F)		-54°C to 93°C (-65°F to 200°F)	5160psig (355bar)
Alloy 400	Vee Stem (Metal Seat)	-54°C to 232°C (-65°F to 450°F)	5000psig (344 bar)	-54°C to 260°C (-65°F to 500°F)	3940psig (271 bar)
	Soft Stem (PCTFE Seat)	-54°C to 93°C (-65°F to 200°F)		-54°C to 93°C (-65°F to 200°F)	4380psig (301bar)

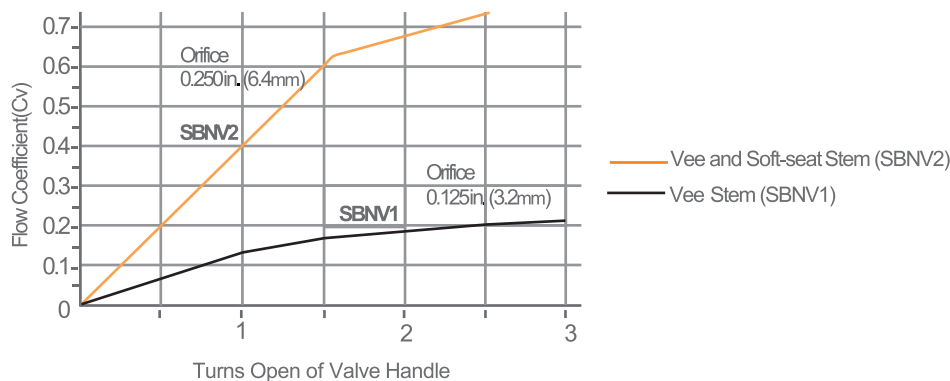
* Not applicable over 260°C(500°F) PEEK is not recommended for service with aromatic heat transfer fluids or concentrated sulfuric and nitric acids. Other limitations may apply.

Temperature-Working Pressure

ASME Material Group	Table 2-2.2	Table 2-3.4
ASME Class Rating	2500	
Material Name	Stainless Steel 316	Alloy 400
Temperature, °C (°F)	Working Pressure, psig (bar)	
-54°C (-65°F) to 38°C (100°F)	6000 (413)	5000 (344)
93°C (200°F)	5160 (355)	4380 (301)
148°C (300°F)	4660 (321)	4080 (281)
204°C (400°F)	4280 (295)	3940 (271)
260°C (500°F)	3980 (274)	3940 (271)
315°C (600°F)	3760 (259)	3940 (271)




- Pressure ratings of valves with S-LOK end connections are determined by the tubing material and wall thickness.
- For more information about pressure ratings of valves with tube fitting end connections.
- Pressure rating of valve is sometimes limited to the working pressure of pipe ends and the tubing connected.

Flow Coefficient (Cv) with Number of Handle Turns



Choice of Stem Tip's & Handle Available

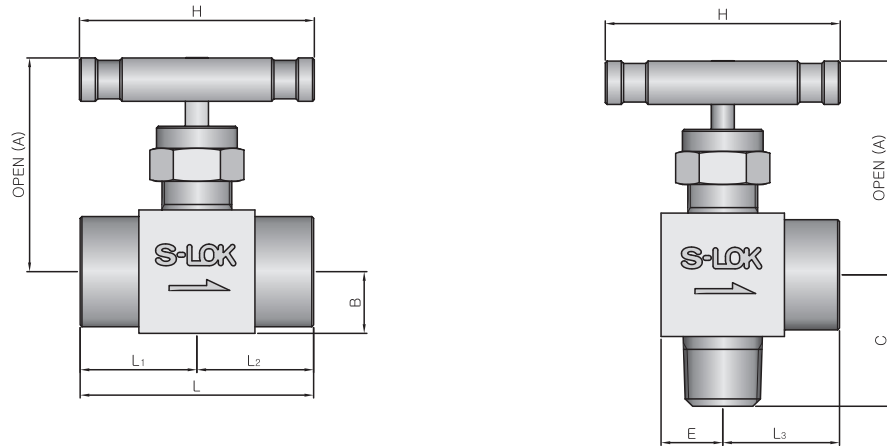
- Stainless steel bar handle is standard all valves.
- Black phenolic knob is standard for soft seat stem valves

Vee Stem	Regulating Stem	Soft Seat Stem
For pressure tightness even at elevated temperatures	For flow rate control	For repetitive shut-off
		

Testing

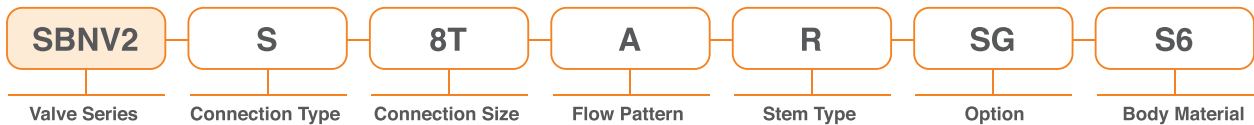
- Every valve is factory tested with Nitrogen @ 1000psig (69bar)
- Seats have a maximum allowable leak of 0.1 (SSCM).
- Hydrostatic shell tests is performed optional with water at 1.5 times the working pressure.

Ordering Information & Dimensions



Ordering Number	Orifice (mm)	Cv	End Connections		Dimensions (mm)										
			Inlet	Outlet	A	B	C	L	L ₁	L ₂	L ₃	E	H		
SBNV1	F-4N	3.2	0.21	1/4" Female NPT		42.2	11.2	25.4	47.8	23.9		25.4	11.2	44.5	
	F-4R			1/4" Female ISO Thread				-	49.2	24.6		-			
	M-4N			1/4" Male NPT				26.2	48.5	24.6	23.9	26.2			
	MF-4N			1/4" Male NPT	1/4" Female NPT										
	MS-4N4T			1/4" Male NPT	1/4" S-LOK			29.5	62.5	31.2		29.5			
	S-4T			1/4" S-LOK											
SBNV2	F-6N	6.4	0.73	3/8" Female NPT		58.7	16.8	31.8	63.5	31.8		16.8	64.0		
	F-8N			1/2" Female NPT				35.8						31.8	
	F-8R			1/2" Female ISO Thread				31.0							
	MF-6N			3/8" Male NPT	3/8" Female NPT			35.8		64.8	33.0			31.8	31.8
	MF-8N			1/2" Male NPT	1/2" Female NPT										
	MF-12N8N			3/4" Male NPT	1/2" Female NPT			-		63.5	31.8			-	
	S-6T			3/8" S-LOK				-		78.2	39.1			-	
	S-8T			1/2" S-LOK				-		83.8	41.9			-	

* Dimensions are for reference only and are subject to change.



- Nil : Straight
- Nil : Vee Stem
- Nil : Standard
- S6 : 316 Stainless Steel
- A : Angle Pattern
- R : Regulating Stem
- PK : PEEK Packing
- A400 : Alloy 400
- K : Soft Seat Stem
- SG : Sour Gas Service