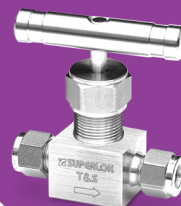
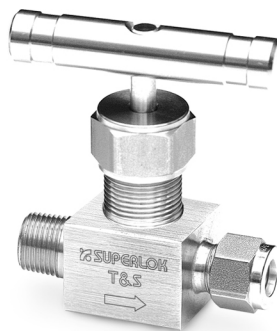
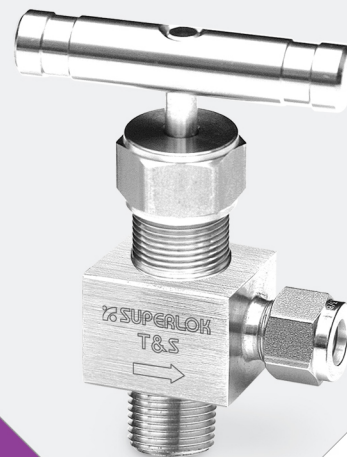
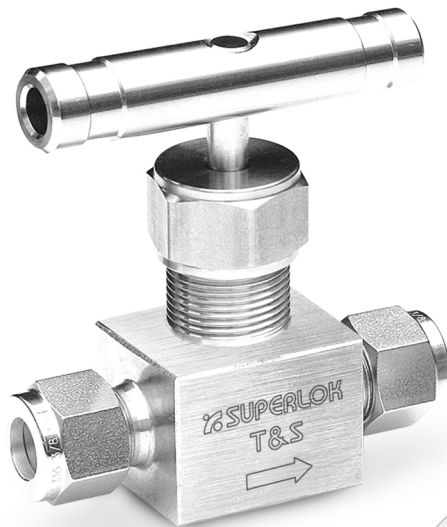


Integral Bonnet Bar Stock Needle Valves

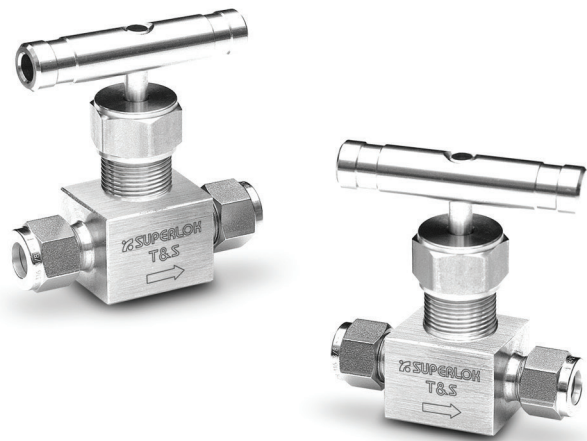


Integral Bonnet Bar Stock Needle Valves

SBNV Series

Features

- Integral bonnet design
- Bar stock body
- Compact design
- Low operating torques
- Variety of End Connections
- Straight and Angle flow patterns
- Each and every valve is tested at the factory



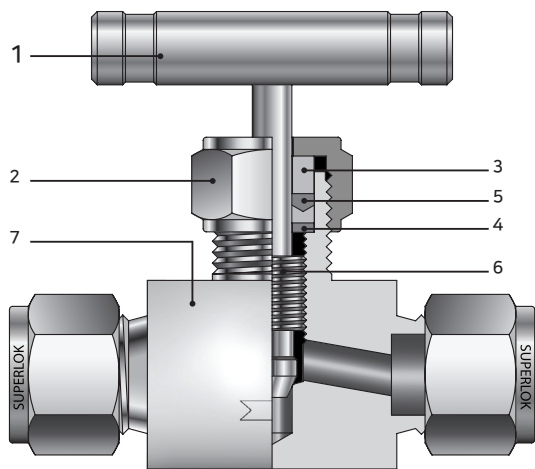
Specifications

Pressure rating	6000psig (413bar)@100°F (38°C)
Temperature rating	-65 to 450°F (-54 to 232°C) with PTFE packing -65 to 600°F (-54 to 315°C) with PEEK packing
Body material	316 stainless steel and Alloy400
Orifice	0.17" and 0.25" (4.3mm and 6.4mm)

Testing

- Each Valve is tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate of 0.1 SCCM.
- Hydrostatic shell test is performed at 1.5 times of the working pressure. (Optional)

Materials of Construction

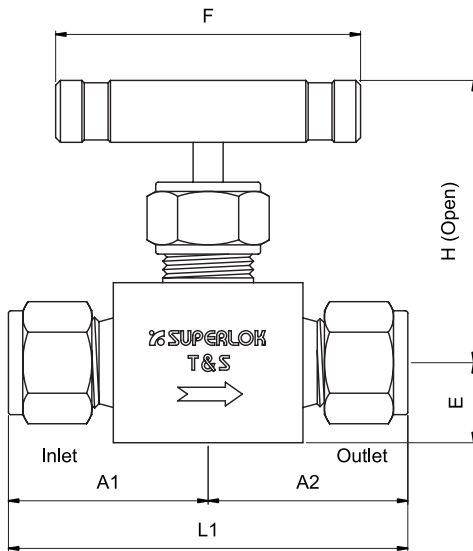


No.	Component	Material Grade / ASTM Specification	
		Stainless Steel	Alloy 400
1	Bar Handle	Stainless Steel	
	Knob Handle	Phenolic with brass insert	
	Set Screw	Stainless Steel	
2	Packing Nut	SS316 / A276	Alloy R-405/B164
3	Packing Gland		
*4	Packing Support		
*5	Packing	PTFE (Standard), PEEK (Optional)	
*6	Vee Stem	SS316 / A276	Alloy R-405/B164
	Soft Seat Stem	SS316 / A276 with PCTFE	ALLOY R-405/B164 with PCTFE
*7	Body	SS316 / A276	ALLOY R-405/B164

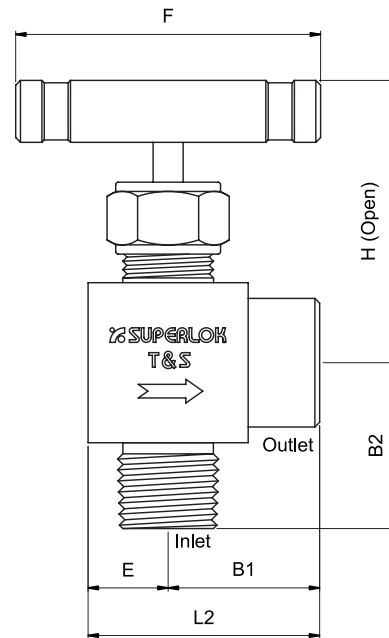
* Wetted Components

- Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

SBNV Series



Straight Flow Pattern



Angle Flow Pattern

Table of Dimensions

Part No.		Orifice	Cv	End Connections		Dimensions									
				Inlet	Outlet	L1	A1	A2	L2	B1	B2	E	F	H	
SBNV1	F4N	4.3	0.37	1/4" FEMALE NPT		47.6	23.8	23.8	36.5	25.4	25.4	11.1	45.0	51.0	
	M4N			1/4" MALE NPT		49.2	24.6	24.6	-	-	-	-			
	M4N-F4N			1/4" MALE NPT	1/4" FEMALE NPT	48.4		23.8	36.5	25.4	26.2	11.1			
	M4N-S4			1/4" MALE NPT	1/4" SUPERLOK	53.3		28.7	39.8	28.7					
	S4			1/4" SUPERLOK		62.4		31.2		31.2					29.7
SBNV2	F6N	6.4	0.73	3/8" FEMALE NPT		64.0	32.0	32.0	48.6	31.8	31.8	16.8	64.0	63.0	
	F8N			1/2" FEMALE NPT							35.8				
	M6N-F6N			3/8" MALE NPT	3/8" FEMALE NPT						31.0				
	M8N-F8N			1/2" MALE NPT	1/2" FEMALE NPT	64.5	32.5				35.8				
	M12N-F8N			3/4" MALE NPT	1/2" FEMALE NPT	63.8	31.8	41.9	-	-	-	-			
	M6N-S8			3/8" MALE NPT	1/2" SUPERLOK	73.7									
	S6			3/8" SUPERLOK		78.2	39.1								39.1
	S8			1/2" SUPERLOK		83.8	41.9								41.9

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Technical Data

Pressure - Temperature Rating

Body Material	Stem	Temperature Rating	Pressure Rating@ -65°F~-100°F (-54°C~38°C)
SS316	Vee	-65°F~450°F (-54°C~232°C)	6000psig (413 bar)
	Soft Seat	-65°F~200°F (-54°C~93°C)	
Alloy 400	Vee	-65°F~450°F (-54°C~232°C)	5000psig (345 bar)
	Soft Seat	-65°F~200°F (-54°C~93°C)	

*The above ratings are for a standard valve with PTFE packing.

*Extreme temperature fluctuations may require packing adjustment.

Working Pressure - Temperature

Temperature Rating		Pressure psig(bar) @ Temperature Rating	
		SS316	Alloy 400
-65°F (-54°C) to	100°F (38°C)	6000psig (413bar)	5000psig (435 bar)
	200°F (93°C)	5160psig (355bar)	4400psig (303 bar)
	300°F (148°C)	4660psig (321bar)	4120psig (284 bar)
	350°F (176°C)	4470psig (308bar)	4050psig (279 bar)
	400°F (204°C)	4280psig (295bar)	3980psig (274bar)
	450°F (232°C)	4130psig (284bar)	3970psig (273 bar)

Packing and Body material - Temperature and Pressure Rating

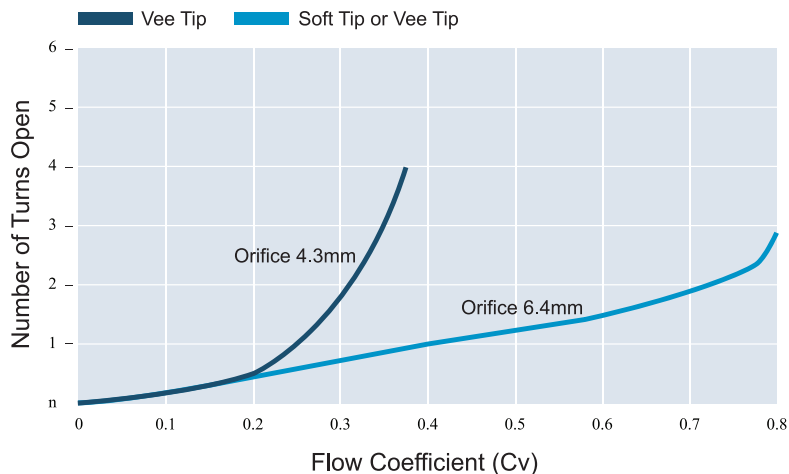
Packing Material	Body Material	Temperature Rating	Pressure Rating@ Max. Temperature
PTFE (Standard)	SS316	-65°F~450°F (-54°C~232°C)	4130psig (284 bar)
	Alloy 400		3970psig (273 bar)
PEEK	SS316	-65°F~600°F (-54°C~315°C)	3760psig (259bar)
	Alloy 400	-65°F~500°F (-54°C~260°C)	3960psig (272bar)

* Alloy 400 not applicable over 500 °F(260 °C)

* PEEK is not recommended for service with aromatic heat transfer or concentrated sulfuric and nitric acids. Other limitations may apply.

Flow Data at 100°F (37°C)

Flow Coefficient at Turns Open



Handle

- 316 Stainless steel bar handles are standard.
- Black phenolic knob is standard for soft seat stem Valves.
- Anodized black aluminum bar handles

Available Stem Type

Two stem types

- Vee stem : All metal, Vee stem tip (Standard)
- Soft Seat Stem: PCTFE stem tip (Optional)

- Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

Ordering Information

Example 1 :

SBNV2

-

M6N

-

S8

-

SS

-

PE

-

KH

-

M40

1

2

3

2

3

4

5

6

7

Example 2 :

SBNV1

-

S4

1

2

3

1. Valve Series

Straight Flow Pattern

- ☐ **SBNV1** = 4.3mm Orifice
- ☐ **SBNV2** = 6.4mm Orifice

Angle Flow Pattern

- ☐ **SBNV1A** = 4.3mm Orifice
- ☐ **SBNV2A** = 6.4mm Orifice

2. Port Type

- ☐ **S** = SUPERLOK Tube Fitting
- ☐ **M** = Male Pipe Thread
- ☐ **F** = Female Pipe Thread

3. Port Size

Pipe Thread Designator

Size (inch)	1/8	1/4	3/8	1/2	3/4	1
Screwed BSPT	2R	4R	6R	8R	12R	16R
Screwed NPT	2N	4N	6N	8N	12N	16N

Tube O.D Designator

Tube O.D (inch)	1/4	3/8	1/2	3/4	1
Designator	4	6	8	12	16
Tube O.D (mm)	6	10	12	20	25
Designator	6M	10M	12M	20M	25M

4. Stem Type

- ☐ **(Blank)** = Vee Stem (Standard)
- ☐ **SS** = Soft Seat Stem

5. Packing Material

- ☐ **(Blank)** = PTFE (Standard)
- ☐ **PE** = PEEK

6. Handle

- ☐ **(Blank)** = Stainless Steel Bar Handle (Standard)
- ☐ **KH** = Black Phenolic Knob Handle
- ☐ **AH** = Anodized black aluminum bar handle

7. Body Material

- ☐ **(Blank)** = 316 Stainless Steel
- ☐ **M40** = Alloy 400 (Monel)



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