

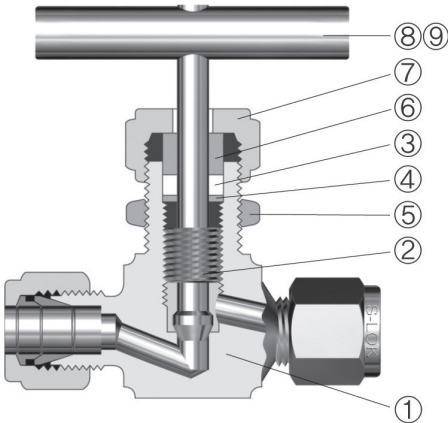
SNV50 Series Integral Bonnet Needle Valves

✦ Features

- Pressure rating up to 5000psig (344bar) 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).
- Forged 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	Brass	Alloy 400
1	Body	SS316/ A182	Brass / B124	Alloy 400 / B564
2	Vee	Chrome Plate SS316 / A479 or A276	SS316 / A479 or A276	Alloy R-405 / B164
	Soft Seat			
	Regulating			
2a	Stem Tip	PCTFE (KEL-F)		
3	Packing	PTFE (Optional PEEK)		
4	Packing Ring	SS316 / A479 or A276	Brass / B16	Alloy R-405 / B164
5	Panel Nut			
6	Gland			
7	Packing Nut	SS316 / A276		
8	Knob Handle	Black Phenolic Knob (Standard)		
	Bar Handle	SS316 / A276		
9	Set Screw	Stainless Steel		

✦ Technical Data

Choice of Stem Tip's Available

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

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 & Regulating Stem (Metal Seat)	-54°C to 232°C (-65°F to 450°F)	5000psig (344 bar)	-54°C to 315°C (-65°F to 600°F)	3130psig (215 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)	4295psig (295 bar)
Brass	Vee & Regulating Stem (Metal Seat)	-54°C to 204°C (-65°F to 400°F)	3000psig (206 bar)	-54°C to 204°C (-65°F to 400°F)	390psig (26 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)	2350psig (161 bar)
Alloy 400	Vee & Regulating Stem (Metal Seat)	-54°C to 232°C (-65°F to 450°F)	3000psig (206 bar)	-54°C to 260°C (-65°F to 500°F)	2375psig (163 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)	2460psig (181 bar)

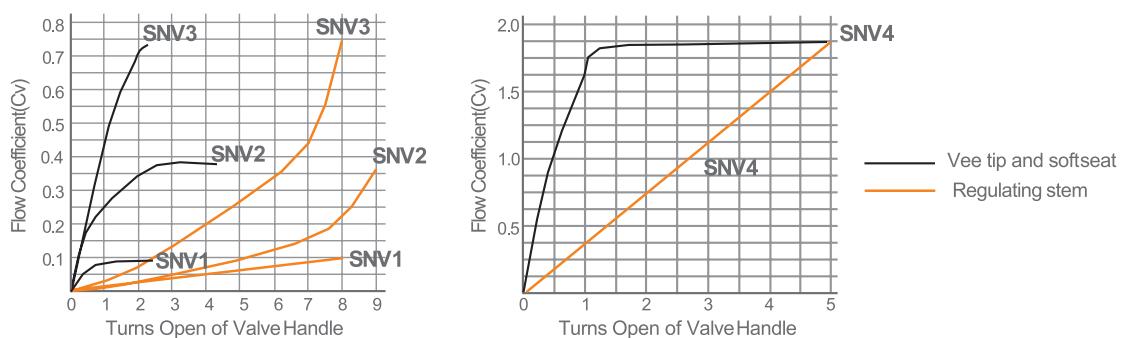
Temperature-Working Pressure

- The class rating and rated working pressure are the way that ASME standards simplify the design process.
- The pressure rating is governed by the allowable stress for each different material group, class rating and service temperature.

ASME Material Group	Table 2-2.2	N/A	Table 2-3.4
ASME Class Rating	2080	N/A	1500
Material Name	Stainless Steel 316	Brass	Alloy 400
Temperature, °C (°F)	Working Pressure, psig (bar)		
-54°C (-65°F) to 38°C (100°F)	5000 (344)	3000 (206)	3000 (206)
93°C (200°F)	4295 (295)	2350 (161)	2630 (181)
148°C (300°F)	3875 (266)	2050 (141)	2450 (168)
204°C (400°F)	3560 (245)	390 (26)	2365 (163)
260°C (500°F)	3310 (228)	-	2365 (163)
315°C (600°F)	3130 (215)	-	-

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

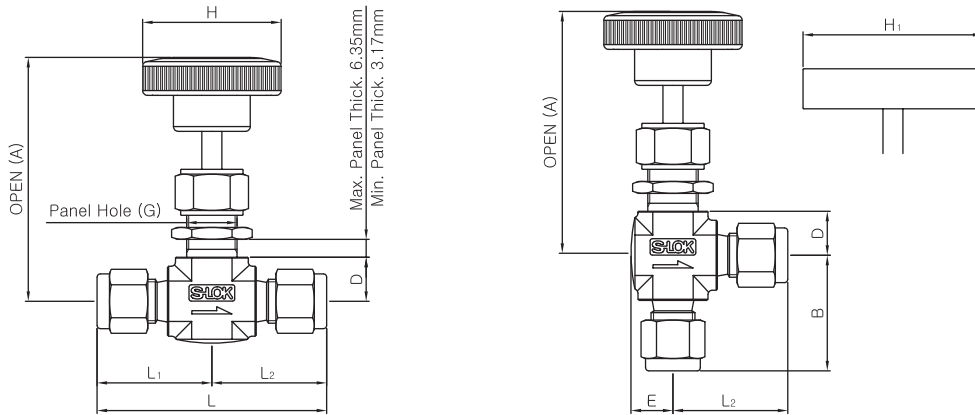
Flow Coefficient (Cv) with Number of Handle Turns



Testing

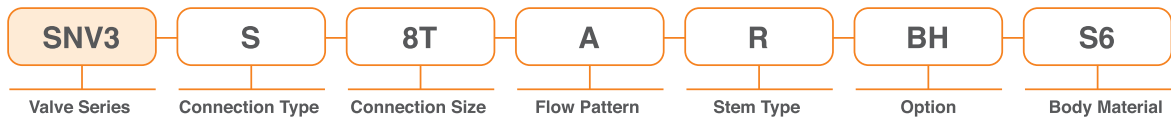
- Every valve is factory tested with Nitrogen @ 1000psig (69bar)
- Seats have a maximum allowable leak of 0.1 (SSCM).
- Hydrostatic shell tests is performed optional with water at 1.5 times the working pressure.

Ordering Information & Dimensions



Ordering Number	Orifice (mm)	Cv	End Connections		Dimensions (mm)											
			Inlet	Outlet	A	B	L	L ₁	L ₂	E	D	H	H ₁	G		
SNV1	F-2N	2.0	0.09	1/8" Female NPT		61.0	21.0	42.0	21.0		9.5	11.0	35.0	32.0	13.5	
	M-2N			1/8" Male NPT												
	MS-2N2T			1/8" Male NPT	1/8" S-LOK			26.0	52.0	26.0						
	S-2T			1/8" S-LOK												
	S-3M			3mm S-LOK												
SNV2	F-2N	4.4	0.37	1/8" Female NPT		61.0	21.0	42.0	21.0		9.5	11.0	35.0	45.0	13.5	
	M-2N			1/8" Male NPT												
	M-4N			1/4" Male NPT				25.0	50.0	25.0						
	MS-4N4T			1/4" Male NPT	1/4" S-LOK											29.0
	S-6M			6mm S-LOK												
	S-4T			1/4" S-LOK												
	S-8M			8mm S-LOK												
SNV3	F-4N	6.4	0.73	1/4" Female NPT		77.0	28.0	56.0	28.0		13.0	13.5	47.0	64.0	19.8	
	F-4R			1/4" Female ISO Thread												
	MF-4N			1/4" Male NPT	1/4" Female NPT			61.2	28.0	33.2						
	MS-4N6T			1/4" S-LOK	3/8" S-LOK											
	M-6N			3/8" Male NPT				29.0	62.2	29.0						33.2
	MS-6N6T			3/8" Male NPT	3/8" S-LOK											
	MS-6N8T			3/8" Male NPT	1/2" S-LOK			33.0	66.4	33.2						
	S-10M			10mm S-LOK												
	S-6T			3/8" S-LOK				36.0	72.0	36.0						
	S-12M			12mm S-LOK												
	S-8T			1/2" S-LOK												
	SNV4			F-6N	9.5			1.80	3/8" Female NPT							92.0
F-6R		3/8" Female PT														
F-8N		1/2" Female NPT														
F-8R		1/2" Female ISO Thread														
M-8N		1/2" Male NPT														
MF-8N		1/2" Male NPT	1/2" Female NPT	49.0		97.0	48.5									
S-8T		1/2" S-LOK														
S-12T		3/4" S-LOK														

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



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