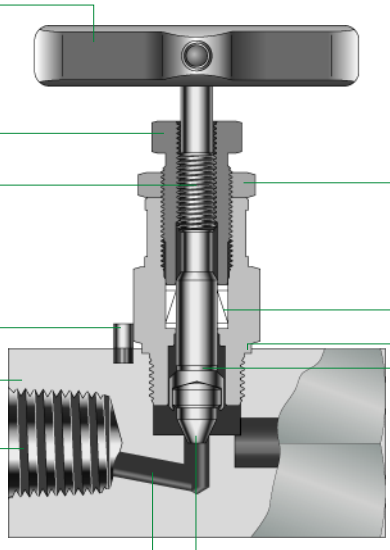
Hy-Lok SVH Series

High Pressure
Bar Stock Needle Valves

Catalog No. H - 103NV
Mar. 2019



Handle
- stainless steel handle.

Packing Bolt
- allows easy packing adjustment for leak tight seal.

Stem Threads
- are rolled and for maximum service life.

Stop Pin
- prevents accidental removal in service.

Rugged Body
- available in straight and angle pattern.

Variety of End Connection
- Hy-Lok Tube Fittings, Male & Female ISO threads, Male & Female NPT.

Orifice Size
- 5.0mm (0.2 inch)

Locking Nut
- prevents packing bolt from loosening.

Stem Packing
- below stem threads
- isolates stem thread from process
- prevents stem lubricant washout
- is PTFE standard with reinforced packing washer and graphite available upon request.

Metal Seal
- construction ensure safety

Back Seating
- provides anti-blow out of stem and secondary stem seal

Variety Stem Tips
- includes non-rotating vee(standard) and ball tip(optional)

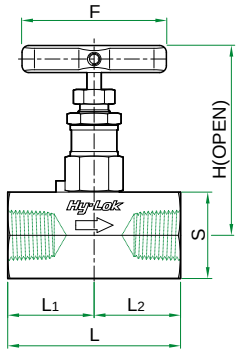
Ball Tip

Features

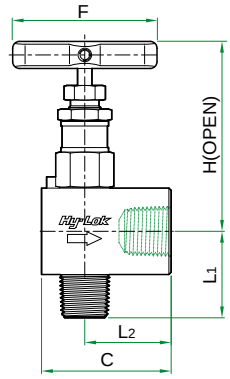
- **Pressure rating** up to 10,000psig(689 bar) @100°F(38°C)
- **Temperature range** from -65°F to 450°F(-23°C to 232°C) with standard PTFE packing and up to 1200°F (649°C) with optional graphite packing.
- **Body materials** available in 316 stainless steel, carbon steel and alloy 400
- 100% factory tested

HY-LOK CORPORATION

SVH1 for 10,000psig



Straight pattern



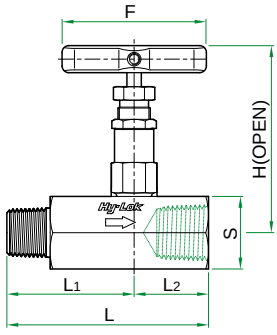
Angle pattern

Table of Dimensions

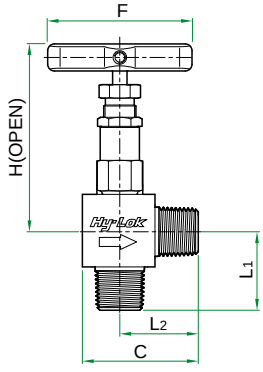
Basic Part No.		Orifice Hole	Cv	End Connections		Dimensions						
				Inlet	Outlet	L	L_1	L_2	C	S	F	H
SVH1	F - 4N	5.0 (0.197)	0.52	1/4" Female NPT		52.4 (2.06)	26.2 (1.03)	26.2 (1.03)	57.2 (2.25)	38.1 (1.50)	64.0 (2.52)	90.0 (3.54)
	F - 8N			1/2" Female NPT		66.7 (2.63)	33.3 (1.31)	33.3 (1.31)				
	F - 12N			3/4" Female NPT					62.5 (2.46)	41.0 (1.61)		91.5 (3.60)
	MF - 4N			1/4" Male NPT	1/4" Female NPT		40.5 (1.59)	26.2 (1.03)				
	MF - 6N			3/8" Male NPT	3/8" Female NPT				57.2 (2.25)	38.1 (1.50)		90.0 (3.54)
	MF - 8N			1/2" Male NPT	1/2" Female NPT	77.8 (3.06)	44.5 (1.75)	33.3 (1.31)				

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

SVH2 for 6,000psig



Straight pattern



Angle pattern

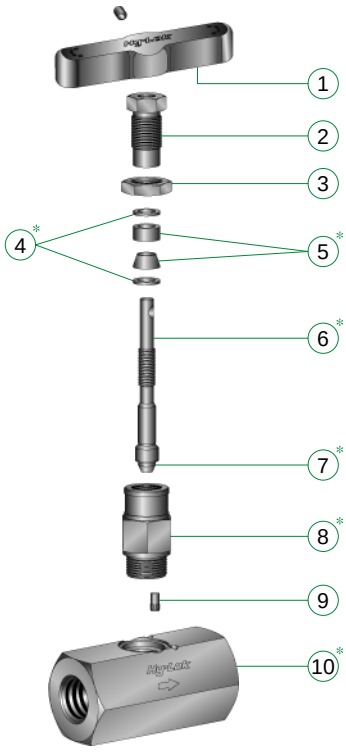
Table of Dimensions

Basic Part No.		Orifice Hole	Cv	End Connections		Dimensions						
				Inlet	Outlet	L	L_1	L_2	C	S	F	H
SVH2	F - 4N	5.0 (0.197)	0.52	1/4" Female NPT		52.4 (2.06)	26.2 (1.03)	26.2 (1.03)	54.1 (2.13)	32.0 (1.26)	64.0 (2.52)	88.5 (3.48)
	F - 6N			3/8" Female NPT								
	F - 8N			1/2" Female NPT		66.7 (2.63)	33.3 (1.31)	33.3 (1.31)				
	F - 12N			3/4" Female NPT					57.2 (2.25)	38.1 (1.50)		91.5 (3.60)
	MF - 8N			1/2" Male NPT	1/2" Female NPT	77.8 (3.06)	44.5 (1.75)		48.8 (1.92)	32.0 (1.26)		88.5 (3.48)
	MF - 12N			3/4" Male NPT	3/4" Female NPT				57.2 (2.25)	38.1 (1.50)		91.5 (3.60)
	H - 6T			3/8" Hy-Lok		91.2 (3.59)	45.6 (1.80)	45.6 (1.80)	61.6 (2.43)	32.0 (1.26)		88.5 (3.48)
	H - 8T			1/2" Hy-Lok		96.2 (3.79)	48.1 (1.89)	48.1 (1.89)	64.1 (2.52)			

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

Technical Data

SVH1,2



Materials of Construction

Description			Grade / ASTM Specification		
			Valve Body Materials		
			SS 316	Carbon Steel	Alloy 400
1	Handle		Stainless Steel	Aluminum Bar	Stainless Steel
2	Packing Bolt		SS316 / A479 or A276		
3	Lock Nut		SS316 / A276		
4	Packing Washer *		Reinforced PTFE		
5	Stem Packing *		PTFE		
6	Stem *		SS316 / A479 or A276		Alloy 400 / B164
7	Stem Tip *	Vee	SS630 / A564		Alloy K500 / B865
		Ball			
8	Bonnet *		SS 316 / A479	1020 / A108 or JIS 4051 S20C	Alloy 400 / B164
9	Stop Pin		Stainless Steel		
10	Body *		SS 316 / A479	1020 / A108 or JIS 4051 S20C	Alloy 400 / B164

Note : "*"marked are wetted parts.

Temperature and Pressure Rating

Series	Packing Material	Body Material	Temperature Range	Pressure Rating @ 100°F	Pressure Rating @ Max. Temperature
SVH1	PTFE	Stainless Steel	-65°F ~ 450°F (-54°C ~ 232°C)	10,000 psig	7,435 psig @ 450°F (512 bar @ 232°C)
		Carbon Steel	-20°F ~ 350°F (-29°C ~ 176°C)	10,000 psig	7,435 psig @ 450°F (512 bar @ 232°C)
SVH2	PTFE	Stainless Steel	-65°F ~ 450°F (-54°C ~ 232°C)	6,000 psig	4,130 psig @ 450°F (285 bar @ 232°C)
		Carbon Steel	-20°F ~ 350°F (-29°C ~ 176°C)	6,000 psig	5,230 psig @ 350°F (360 bar @ 176°C)
		Alloy 400	-65°F ~ 450°F (-54°C ~ 232°C)	5,000 psig	3,970 psig @ 450°F (274 bar @ 232°C)
	Graphite	Stainless Steel	-65°F ~ 1200°F (-54°C ~ 648°C)	6,000 psig	1,715 psig @ 1200°F (118 bar @ 648°C)
		Carbon Steel	-20°F ~ 350°F (-29°C ~ 176°C)	6,000 psig	5,230 psig @ 350°F (360 bar @ 176°C)
		Alloy 400	-65°F ~ 500°F (-54°C ~ 260°C)	5,000 psig	3,960 psig @ 500°F ⓐ (273 bar @ 260°C)

ⓐ Not applicable over 500°F(260°C)

Testing

Each high pressure bar stock needle valve is tested with nitrogen @ 1000 psig (69 bar) to Max. leak rate of 0.1 SCCM. Hydrostatic shell test is performed at 1.5 times the working pressure as an option.
Other tests are upon request.

Sour Gas Service

Valves are available in materials which comply with standard NACE MR-01-75 latest revision relating to metalic materials offering optimum resistance to sulfide stress cracking

Maintenance Kits (See page 3)

Basic Ordering No.	Valve Type	Component
KIT-SVH1-SET-**	SVH1	Bonnet, Stem tip, Stem, Stem Packing, Packing Washer, Packing bolt, Handle,Lock nut, Set screw, Locking pin
KIT-SVH2-SET-**	SVH2	Bonnet, Stem tip, Stem, Stem Packing, Packing Washer, Packing Gland, Packing bolt, Handle,Lock nut, Set screw, Locking pin

Stem Tip Shape	Designator
Vee	V
Ball	B

Packing Mat'l	Designator
PTFE	T
Graphite	G

* For a complete ordering number, add the desired stem tip shape & packing material designator as a suffix to the maintenance kit basic ordering number
e.g : KIT-SVH1-SET-VT (Vee tip, PTFE stem packing)

Ordering Information

SVH1 **MH** **A*** **4N6T** **G*** **B*** **SOG*** **S316**

Series Designator
- SVH1 - 10,000psig
- SVH2 - 6,000psig

Body Pattern Designator
- Nil - Straight Pattern (Standard)
- A - Angle Pattern*

Parking Designator
- PTFE - Standard
- G - Graphite*

Sour Gas Service
- Nil - Without(Standard)
- SOG - NACE MR-01-75*

End Connection Designator
- F - Both Ends Female Pipe Thread
- M - Both Ends Male Pipe Thread
- MF - Male Pipe Thread and Female Pipe Thread
- H - Both Ends Hy-Lok Tube Fitting
- SW - Both Ends Socket Welded
- MH - Male Pipe Thread and Hy-Lok Tube Fitting

Size Designator

Stem Tip Designator
- Nil - Non-Rotating Vee (Standard)
- B - Non-rotating Ball*

Material - Designator
- S316 - 316 Stainless Steel
- STEL - Carbon Steel
- MONE - Alloy 400 (Monel)

Pipe Thread Designation NPT (ISO / BSP)

Nom. Size	1 / 8	1 / 4	3 / 8	1 / 2	3 / 4	1
Designator	2N(R)	4N(R)	6N(R)	8N(R)	12N(R)	16N(R)

Tube O.D. Designation

Inch Tube	Tube O.D.	1 / 8	1 / 4	3 / 8	1 / 2	3 / 4	1
	Designation	2T	4T	6T	8T	12T	16T
Metric Tube	Tube O.D.	3mm	6mm	10mm	12mm	20mm	25mm
	Designation	3M	6M	10M	12M	20M	25M

Note * : No designator is required for standard
e.g. SVH1F - 8N - S316

SAFETY in VALVE SELECTION

Proper installation, material compatibility, operation and maintenance of the valves is the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.