

# Hy-Lok SVH Series

## High Pressure Bar Stock Needle Valves



Catalog No. H - 103NV  
Jan. 2005

### Handle

- robust stainless steel bar handle.

### Packing Bolt

- allows easy packing adjustment for leak tight seal.

### Stem Threads

- rolled and hard chrome-plated for maximum service life.

### Stop Pin

- prevents accidental removal in service.

### Rugged Body

- available in straight and angle pattern.

### Variety of End Connections

- Hy-Lok Tube Fittings,  
Male & Female ISO threads,  
Male & Female NPT.

**Orifice Size**  
• 5.0mm

### Locking Nut

- prevents packing bolt from loosening.

### Packing

- below stem threads
- isolates stem thread from process
- prevents stem lubricant washout
- is PTFE standard with reinforced packing washer and grafoil 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)

## Features

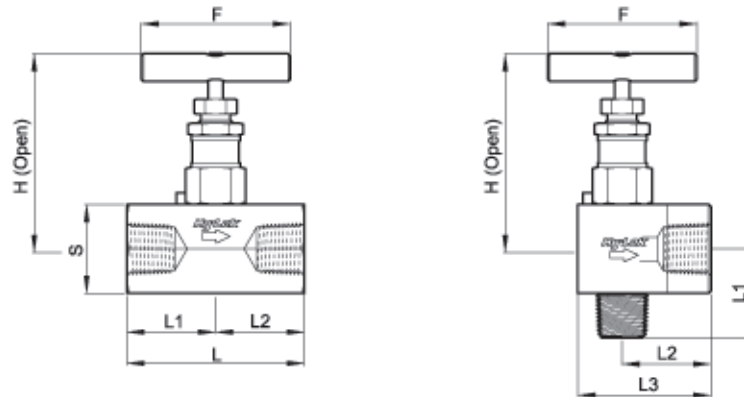
- **Pressure rating** up to 10,000psig(689 bar) @100°F(38°C)
- **Temperature range** from -65°F to 450°F(-23°C to 232°C) with standard PTFE packing and up to 1200°F (649°C) with optional grafoil packing.
- **Body materials** available in 316 stainless steel, carbon steel and alloy 400
- 100% factory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



# HY-LOK CORPORATION

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## SVH1 for 10,000psig

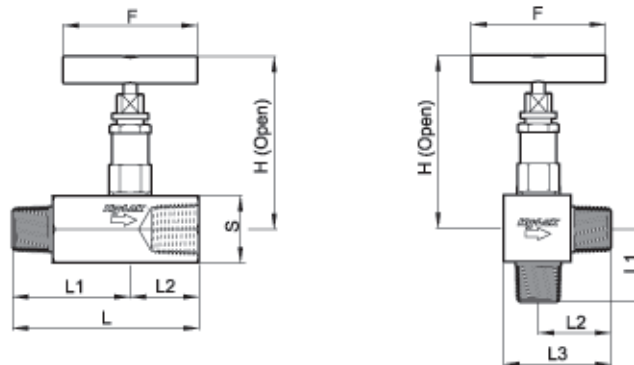


## Table of Dimensions

Basic Part NO.			Orifice Hole	Cv Factor	End Connection		Dimensions						
					Inlet	Outlet	L	L1	L2	L3	S	F	H
SVH1	F	-4N-	0.197 (5.0)	0.52	1/4 Female NPT	1/4 Female NPT	3.00 (76.2)	1.50 (38.1)	1.50 (38.1)	2.25 (57.2)	1.50 (38.1)	2.52 (64.0)	3.54 (90.0)
	MF	-4N-			1/4 Male NPT	1/4 Female NPT							
	F	-8N-			1/2 Female NPT	1/2 Female NPT	3.31 (84.0)	1.65 (42.0)	1.65 (42.0)	2.46 (62.5)	1.61 (41.0)		
	F	-12N-			3/4 Female NPT	3/4 Female NPT							
	MF	-6N-			3/8 Male NPT	3/8 Female NPT	3.24 (82.2)	1.74 (44.1)	1.50 (38.1)	2.25 (57.2)	1.50 (38.1)		
	MF	-8N-			1/2 Male NPT	1/2 Female NPT	3.43 (87.1)	1.93 (49.0)	1.50 (38.1)	2.25 (57.2)	1.50 (38.1)		

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

## SVH2 for 6,000psig



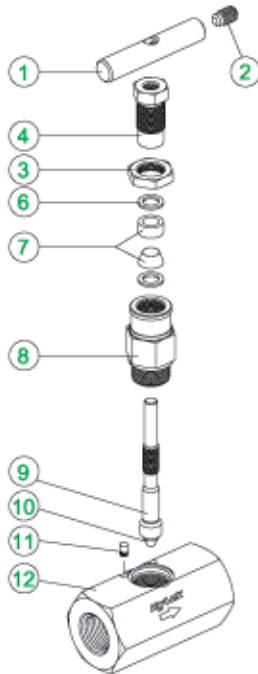
## Table of Dimensions

Basic Part NO.			Orifice Hole	Cv Factor	End Connection		Dimensions						
					Inlet	Outlet	L	L1	L2	L3	S	F	H
SVH2	F	-4N-	0.197 (5.0)	0.52	1/4 Female NPT	1/4 Female NPT	3.00 (76.2)	1.50 (38.1)	1.50 (38.1)	2.13 (54.1)	1.26 (32.0)	2.52 (64.0)	3.48 (88.5)
	F	-6N-			3/8 Female NPT	3/8 Female NPT				2.25 (57.2)	1.50 (38.1)		
	F	-8N-			1/2 Female NPT	1/2 Female NPT							
	F	-12N-			3/4 Female NPT	3/4 Female NPT	3.50 (88.9)	2.21 (56.1)	1.29 (32.8)	1.92 (48.8)	1.26 (32.0)		
	MF	-8N-			1/2 Male NPT	1/2 Female NPT							
	MF	-12N-			3/4 Male NPT	3/4 Female NPT	4.50 (114.3)	3.00 (76.2)	1.50 (38.1)	2.25 (57.2)	1.50 (38.1)		
	H	-6T-			3/8 Hy-Lok	3/8 Hy-Lok	3.59 (91.2)	1.80 (45.6)	1.80 (45.6)	2.43 (61.6)	1.26 (32.0)		
	H	-8T-			1/2 Hy-Lok	1/2 Hy-Lok	3.79 (96.2)	1.89 (48.1)	1.89 (48.1)	2.52 (64.1)			
	SW	-4P-			1/4 Pipe Weld	1/4 Pipe Weld	2.56 (65.0)	1.28 (32.5)	1.28 (32.5)	1.91 (48.5)	1.26 (32.0)		
	SW	-8P-			1/2 Pipe Weld	1/2 Pipe Weld							
	SWF	-4P4N-			1/4 Pipe Weld	1/4 Female NPT	3.00 (76.2)	1.50 (38.1)	1.50 (38.1)	2.13 (54.1)	1.26 (32.0)		
	SWF	-8P8N-			1/2 Pipe Weld	1/2 Female NPT							

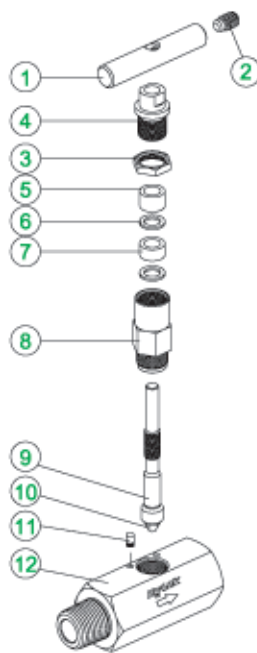
Dimensions in inches and (millimeters) are for reference only, subject to change.

## Technical Data

### SVH1



### SVH2



## Materials of Construction

Description	Grade / ASTM Specification		
	Valve Body Materials		
	316SS	Carbon Steel	Alloy 400
1 Handle	Stainless Steel	Aluminum	Stainless Steel
2 Set Screw	Stainless Steel		
3 Lock Nut	316SS / A479		
4 Packing Bolt	316SS / A479		
5 Packing Gland*	316SS / A479		
6 Packing Washer*	Reinforced PTFE		
7 Packing*	PTFE, Grafoil		
8 Bonnet*	316SS / A479	C.Steel / A105	Alloy 400 / B164
9 Stem*	316SS / A479		
10 Vee Tip*	630SS / A564		Alloy 500 / B865
10 Ball Tip*			
11 Stop Pin	Stainless Steel		
12 Body	316SS / A479	C.Steel / A105	Alloy 400 / B164

Note : "\*"marked are wetted parts.  
Grafoil is trade mark of UCAR

## 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	4,000 psig @ 500°F (276 bar @ 260°C)
		Carbon Steel	-20°F ~ 350°F (-29°C ~ 176°C)	10,000 psig	4,000 psig @ 500°F (276 bar @ 260°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)
	Grafoil	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 <sup>@</sup> (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 metallic materials offering optimum resistance to sulfide stress cracking

## Maintenance Kits (See page 3)

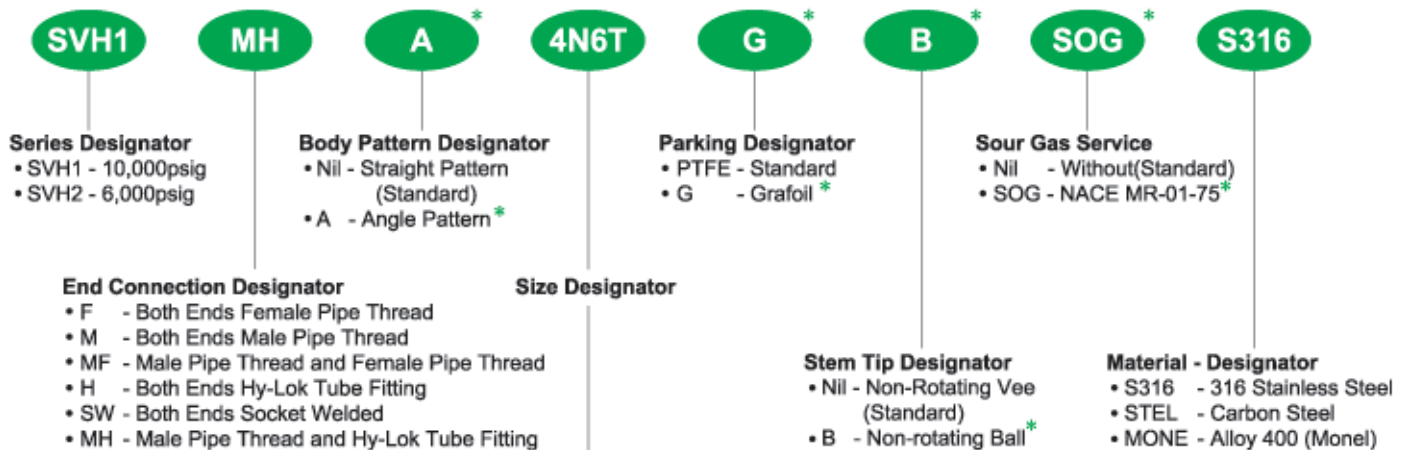
Basic Ordering No.	Valve Type	Component
KIT-SVH1-SET-**	SVH1	Bonnet, Stem tip, Stem, Packing, Packing Washer, Packing bolt, Handle, Lock nut, Set screw, Locking pin
KIT-SVH2-SET-**	SVH2	Bonnet, Stem tip, Stem, Packing, Packing Washer, Packing Gland, Packing bolt, Handle, Lock nut, Set screw, Locking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

Stem Tip Shape	Designator
Vee	V
Ball	B

Packing Mat'l	Designator
PTFE	T
Grafoil®	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



### 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

### QUALITY SYSTEM CERTIFICATES



ISO 9001  
 CERTIFICATE NO.GQC 212

ASME SECT II (MO)  
 CERTIFICATE NO. QSC 584

### TYPE APPROVALS (for Hy-Lok Tube Fittings)



American Bureau Shipping  
 CERTIFICATE NO.00-BK50288-X



Lloyd's Register  
 CERTIFICATE NO.01/10075



GERMANISCHER LLOYD  
 CERTIFICATE NO.57798-91 HH



DET NORSKE VERITAS  
 CERTIFICATE NO.P-9100

### 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.



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