

# Hy-Lok GH Series

## High Pressure & Temperature Union Bonnet Valves for Power Plant



Catalog No. H - 104NV  
Sep. 2006

### 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.

### Panel Mounting Nut

- allows easy mounting.

### Back Seating

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

### Rugged Body

- available in straight pattern standard

### Variety of End Connections

- Hy-Lok Tube Fittings,  
Male & Female ISO threads,  
Male & Female NPT,  
and socket weld Ends.

### 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 Bonnet to Body construction

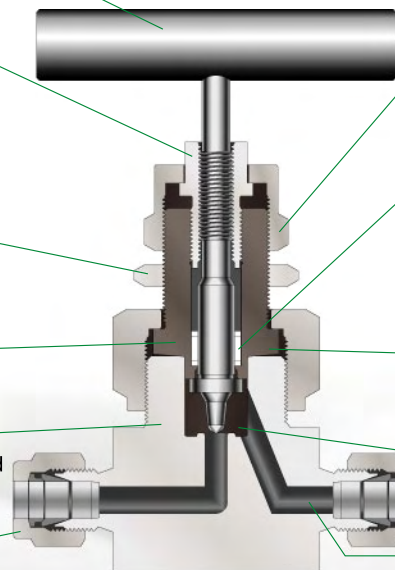
- ensure safety

### Variety Stem Tips

- includes Regulating tip(standard) and ball tip(optional)

### Orifice Size

- 4.0mm (GH1 Series)  
• 6.4mm (GH2 Series)



## Features

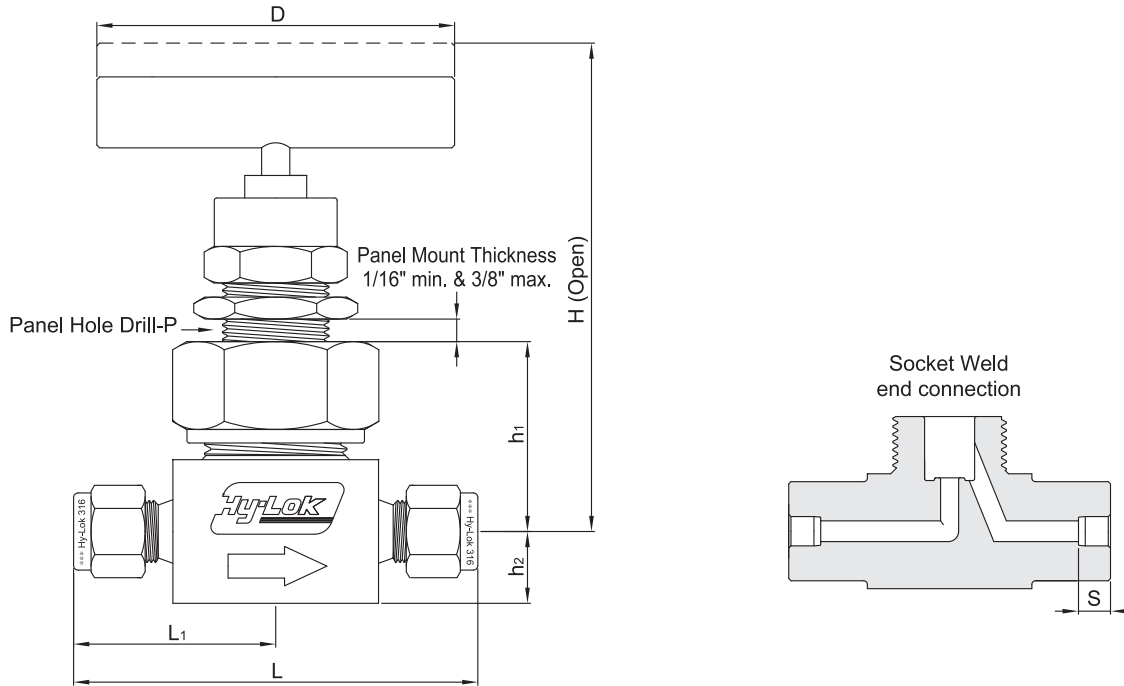
- **Pressure rating** up to **10,000psig(689 bar)** @100 °F(38 °C)
- **Temperature range** from -65 °F to 450 °F(-23 °C to 232 °C) with standard PTFE packing and up to 1200 °F (649 °C) with optional grafoil packing.
- **Body materials** available in 316 stainless steel
- 100% factory tested



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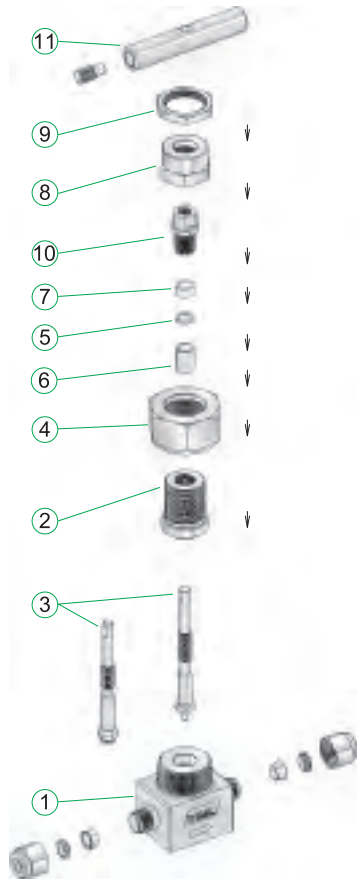


## Table of Dimensions

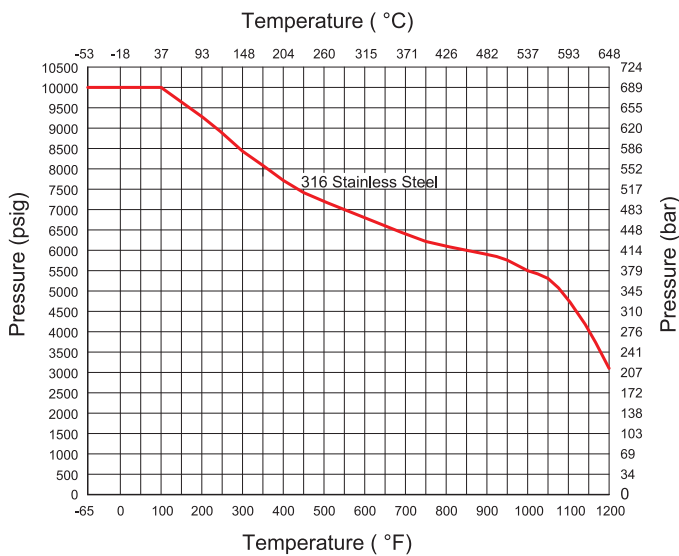
Basic Part NO.			Orifice Hole	Cv Factor	End Connection		Dimensions, mm (in.)												
Series	Part No.				Inlet	Outlet	D	H	h1	h2	L	L1	P	S					
GH1	F-	2N	4.0 mm (0.157 in)	0.35	1/8" Female NPT	1/8" Female NPT	63.5 (2.50)	84.1 (3.31)	35.1 (1.38)	12.7 (0.50)	71.4 (2.81)	35.7 (1.40)	20.6 (0.81)	-					
	F-	4N			1/4" Female NPT	1/4" Female NPT													
	M-	4N			1/4" Male NPT	1/4" Male NPT													
	MF-	4N			1/4" Male NPT	1/4" Female NPT					57.2 (2.25)	28.6 (1.13)							
	H-	4T			1/4" Hy-Lok	1/4" Hy-Lok													
	SW-	4T			1/4" Tube Weld	1/4" Tube Weld									7.1 (0.28)				
GH2	F-	4N	6.4 mm (0.252 in)	0.86	1/4" Female NPT	1/4" Female NPT	88.9 (3.50)	105 (4.13)	46.0 (1.81)	16.0 (0.63)	79.5 (3.13)	39.75 (1.56)	26.9 (1.06)	-					
	F-	8N			1/2" Male NPT	1/2" Male NPT													
	M-	8N			1/2" Female NPT	1/2" Female NPT									108 (4.25)	49.3 (1.94)	19.8 (0.78)	82.6 (3.25)	41.3 (1.63)
	MF-	8N			1/2" Male NPT	1/2" Female NPT													

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

## Technical Data



## Pressure / Temperature Data



## Materials of Construction

Description	Grade / ASTM Specification	
	Valve Body Materials	
	SS 316	
1	Body*	316SS / A479
2	Bonnet*	316SS / A479
3	Stem*	316SS / A479
4	Bonnet Nut	316SS / A479
5	Packing*	PTFE (Available Grafoil)
6	Packing Washer*	PTFE (Glass Filled)
7	Packing Gland	SS316 / A479
8	Gland Screw	SS630 / A479
9	Gland Nut	SS316 / A479
10	Lock Nut	SS316 / A479
11	Handle	Stainless Steel

Note : "\*" marked are wetted parts.

## Pressure-Temperature Ratings

ASME Class	N / A
Material Group	N / A
Material Name	S316
Temperature °F ( °C)	Working Pressure psig (bar)
-65 (-53) to 100 (37)	10 000 (689)
200 (93)	9 290 (640)
250 (121)	8 840 (609)
300 (148)	8 390 (578)
350 (176)	8 045 (554)
400 (204)	7 705 (530)
450 (232)	7 435 (512)
500 (260)	7 165 (493)
600 (315)	6 770 (466)
650 (343)	6 660 (458)
700 (371)	6 480 (446)
750 (398)	6 335 (436)
800 (426)	6 230 (429)
850 (454)	6 085 (419)
900 (482)	5 905 (406)
950 (510)	5 795 (399)
1000 (537)	5 450 (375)
1050 (565)	5 400 (372)
1100 (593)	4 835 (333)
1150 (621)	4 115 (283)
1200 (648)	3 085 (212)

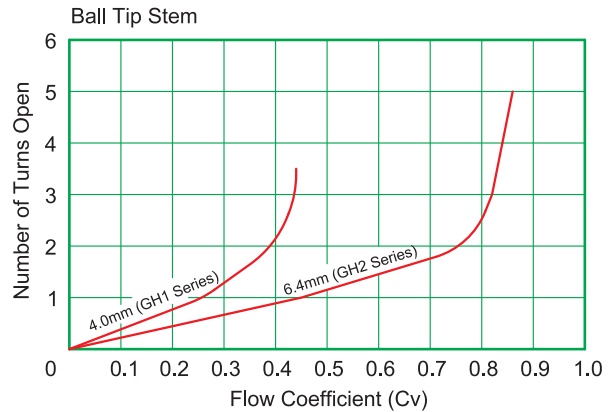
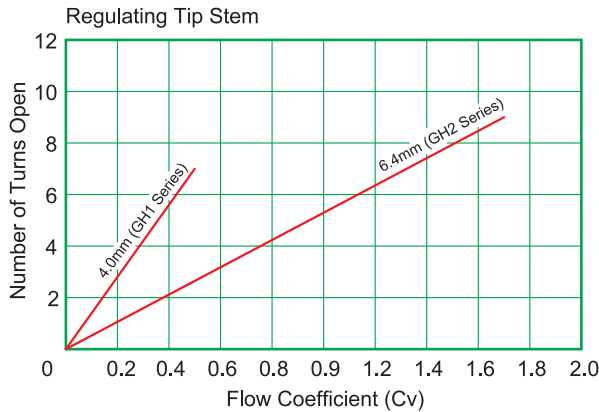
## Testing

- 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.

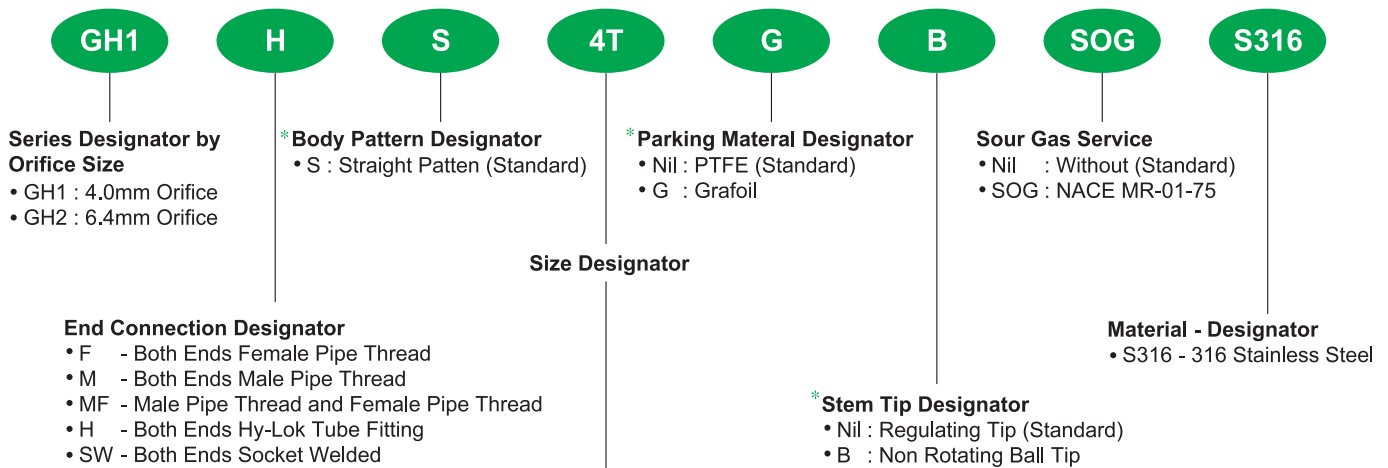
## Sour Gas Service

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

## Flow Coefficient (Cv) vs Number of Handle Turns



## 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
Designator		2T	4T	6T	8T	12T	16T
Metric Tube	Tube O.D.	3mm	6mm	10mm	12mm	20mm	25mm
Designator		3M	6M	10M	12M	20M	25M

Note \* : No designator is required for standard  
e.g. GH2MF - 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.

### QUALITY SYSTEM CERTIFICATES



ISO 9001  
CERTIFICATE NO. QCC 212

ASME SECT III (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



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