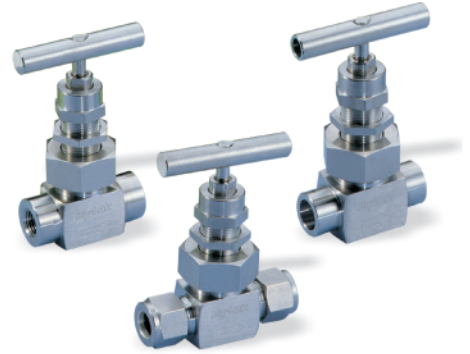
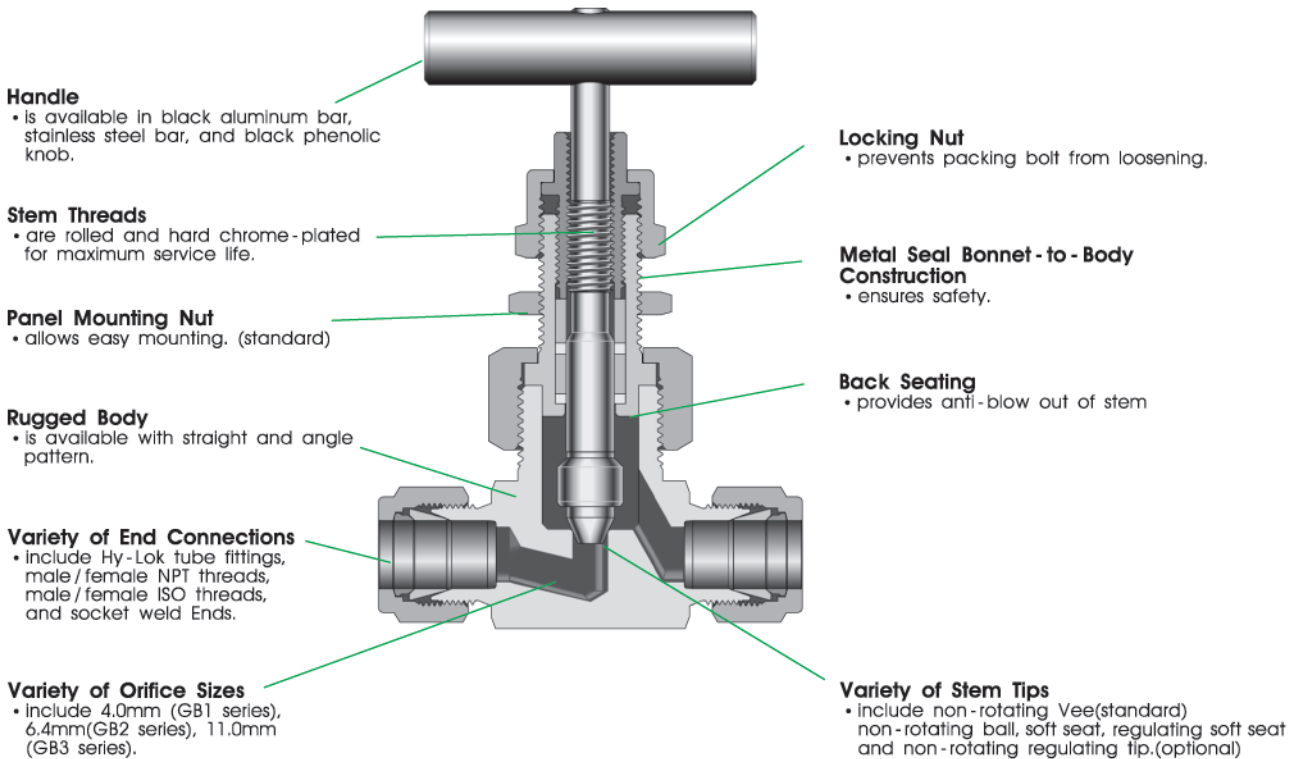


Hy-Lok GB Series

Union Bonnet Valves



Catalog No. H-102NV
Apr. 2006



Ball Tip



Soft Seat Tip



Regulating Soft Seat Tip



Regulating Tip

Features

- **Pressure rating** up to 6000psig (410bar) @ 100°F(38°C)
- **Temperature rating** from -65°F to 450°F(-54°C to 232°C) with standard PTFE packing and up to 1200°F (648°C) with optional Grafoil packing
- **Body materials** available in 316 stainless steel, carbon steel, and alloy 400
- **100% factory tested.**



HY-LOK CORPORATION

© 1997, 1998, 2000, 2002, 2003, 2006 HY-LOK CORPORATION All rights reserved

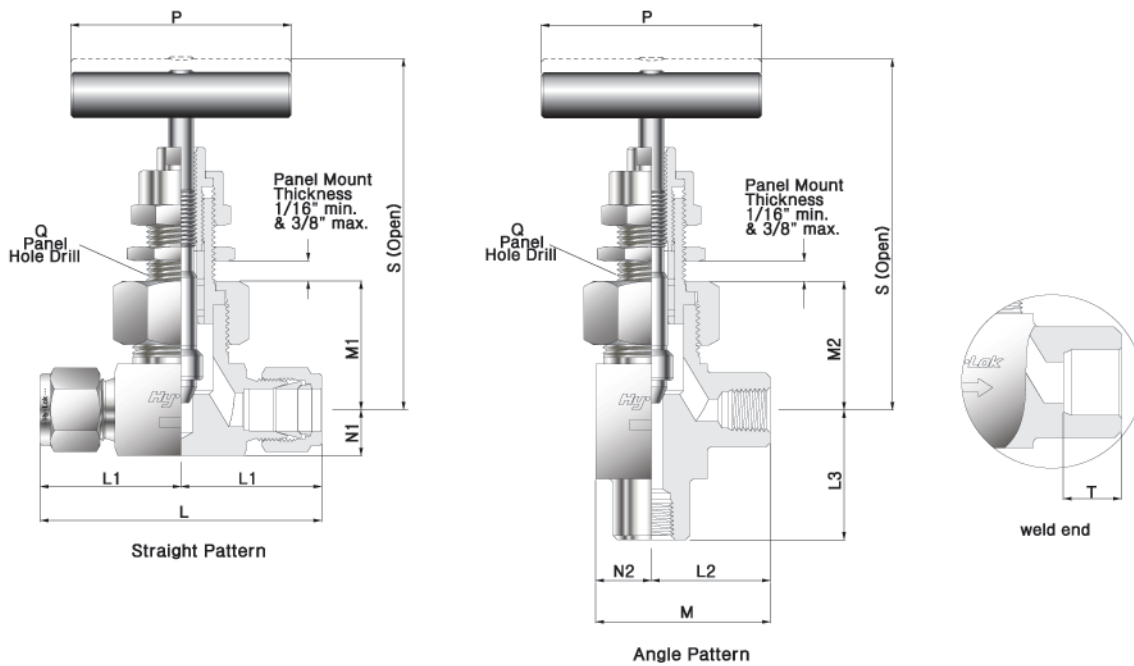


Table of Dimensions

Basic Part No.	Orifice	Cv	End Connections		Dimensions																
			Inlet / Outlet	L	L1	L2	L3	M	M1	M2	N1	N2	P	Q	S Straight	S Angle	T				
GB1	F -2N-	4.0	0.35	1/8" Female NPT	50.8	25.4	23.0		32.6												
	F -4N-			52.4	26.2		25.4														
	M -4N-			50.8	25.4	25.4		35.0													
	MF -4N-			52.4	26.2	23.0		32.6													
	H -6M-			61.9	31.0	29.4	37.3	38.9		27.8		9.6	9.6	45	15.1	77.8					
	H -4T-																				
	SW -4T-																				7.2
	H -8M-																				
GB2	F -4N-	6.4	0.86	1/4" Female NPT	57.2	28.6	25.4	28.6	38.1			37.3							96.9		
	F -6N-			73.0	36.5	33.3	39.7	46.1		34.2								93.7			
	H -10M-																		90.5		
	H -6T-																			93.7	
	H -12M-																			93.7	
	H -8T-																			93.7	
	SW -4P-																			9.6	
	SW -6T-																			8.0	
	SW -8T-																			9.6	
																					9.6
GB3	F -8N-	11.0	2.2	1/2" Female NPT	79.4	39.7	33.3	39.7	50.8	46.1	50.8	15.9	17.5					121.5	126.2		
	F -12N-			82.6	41.3	-	-	-	48.4	-	19.9	-							123.9	-	
	F -16N-			92.1	46.0	-	-	-	54.0	-	25.4	-							129.4	-	
	MF -8N-			79.4	39.7	33.3	39.7	50.8	46.0	50.8	15.9	17.5							121.5	126.2	
	MF -12N-			82.6	41.3	-	-	-	48.4	-	19.9	-								123.9	-
	MF -16N-			92.1	46.0	-	-	-	54.0	-	25.4	-								129.4	-
	H -12M-															89	26.2			-	
	H -8T-																			-	
	H -12T-																			-	
	H -16T-																			9.6	
	SW -8P-																			123.1	-
	SW -8T-																			126.2	9.6
	SW -8T-																			123.1	9.6
	SW -12T-																			121.5	-
																	-	11.1			

All dimensions in millimeters. Dimensions shown with Hy-Lok nuts in finger-tight position, where applicable.

Technical Data

Materials of Construction

Description	Grade / ASTM Specification		
	Valve Body Materials		
	SS 316	Carbon Steel	Alloy 400
Handle	Stainless Steel	Aluminum	Stainless Steel
Lock Nut	SS 316 / A479	12L14 / A108	Alloy R - 405 / B164
Packing Bolt	SS316 / A479		
Packing Gland	SS 316 / A479	Alloy R - 405 / B164	
Packing Support*	Glass Filled PTFE		
Packing*	PTFE		
Bonnet*	SS 316 / A479	12L14 / A108	Alloy R 405 / B164
Stem*	Vee Tip	SS 316 / A479	Alloy R - 405 / B164
	Ball Tip		
	Soft Tip		
	Regulating		
Body*	SS 316 / A479	12L14 / A108	Alloy 400 / B164

Note : "*"marked are wetted parts.
Nickel anti-seize lubricant for PTFE packed valves and fluorinated grease for PEEK and Grafoil packed valves.

Temperature vs Working Pressure

Temperature	Pressure (psig) @ Temperature Rating			
	ANSI Group	2.2	NA	3.4
	Materials	SS316	Carbon Steel†	Alloy 400
	ANSI Class	2500	NA	2500
-65°F(-54 °C)	100 °F (38 °C)	6000	6000	5000
	200 °F (93 °C)	5160	5420	4400
	300 °F (148 °C)	4660	5320	4120
	350 °F (176 °C)	4470	5230	4050
	400 °F (204 °C)	4280	-	3980
	450 °F (232 °C)	4130	-	3970

- † Rated at a low temperature of -20°F(-29°C)
- To determine kPa, multiply psig by 6.89 and bar by 0.0689.
- When valves with Hy-Lok fitting end connections are connected to tubing, the working pressure of tubing must be considered in the calculation of total system working pressure.

Sour Gas Service

- Is provided to meet NACE Standard MR-01-75.

Testing

- Each valve is tested with nitrogen @ 1000psig(69bar) to a max leak rate of 0.1SCCM.
- Hydrostatic shell test is performed at 1.5 times the working pressure.
- Optional tests are available upon request.

Temperature and Pressure Rating

Body Material	Stem Tip	Temperature Rating	Pressure Rating @ -65°F ~ 100°F (-54°C ~ 38°C)
316 Stainless Steel	NR Vee, NR Ball Regulating	-65°F ~ 450°F (-54°C ~ 232°C)	6000 psig
	NR Soft seat (Kel - F)	-65°F ~ 200°F (-54°C ~ 93°C)	
Carbon Steel	NR Vee, NR Ball, Regulating	-20°F ~ 350°F (-29°C ~ 176°C)	6000 psig
	NR Soft Seat (Kel - F)	-20°F ~ 200°F (-29°C ~ 93°C)	
Alloy 400 (monel)	NR Vee, NR Ball, Regulating	-65°F ~ 450°F (-54°C ~ 232°C)	5000 psig
	NR Soft Seat (Kel - F)	-65°F ~ 200°F (-54°C ~ 93°C)	

- NR stands for non-rotating.
- The above ratings are for a standard valve with PTFE packing. For optional packing materials, refer to the table shown below.
- Extreme temperature fluctuations may require packing adjustment.

Packing and Body Materials vs Temperature and Pressure Rating

Packing Material	Body Material	Temperature	Pressure @ Temp Rating
PTFE (Standard)	316 Stainless Steel	-65°F ~ 450°F (-54°C ~ 232°C)	4130 psig
	Alloy 400*		3970 psig
PEEK†	316 Stainless Steel	-65°F ~ 600°F (-54°C ~ 315°C)	3760 psig
	Alloy 400*		-65°F ~ 500°F (-54°C ~ 260°C)
Grafoil	316 Stainless Steel	-65°F ~ 1200°F (-54°C ~ 648°C)	1715 psig
	Carbon Steel	-20°F ~ 350°F (-29°C ~ 176°C)	5230 psig
	Alloy 400*	-65°F ~ 500°F (-54°C ~ 260°C)	3960 psig

- * Not applicable over 500°F(260°C).
- † PEEK is not recommended for service with aromatic heat transfer fluids or concentrated sulfuric and nitric acids. Other limitations may apply.

Handles

- Standards are black aluminum bar for carbon steel body and stainless steel bar for SS316 and Alloy 400 body.
- Black phenolic knob handle is available as an option for GB1, GB2 series.

