

H6800 SERIES

HIGH PRESSURE INSTRUMENTATION BALL VALVES



Features:

- On/off service ball valve with 2-way pattern.
- Diverter service ball valve with 3-way pattern.
- Stainless Steel and Brass constructions.
- MAWP 6000psi (410bar)
- MAWT 400°F (204°C)
- Flow coefficient (Cv) of 0.05 to 7.02
- Variable end connection types and sizes from 1/16" to 3/4".
- Operates with colored nylon handles, metal handle and colored metal *ISLT (locking device) handles.

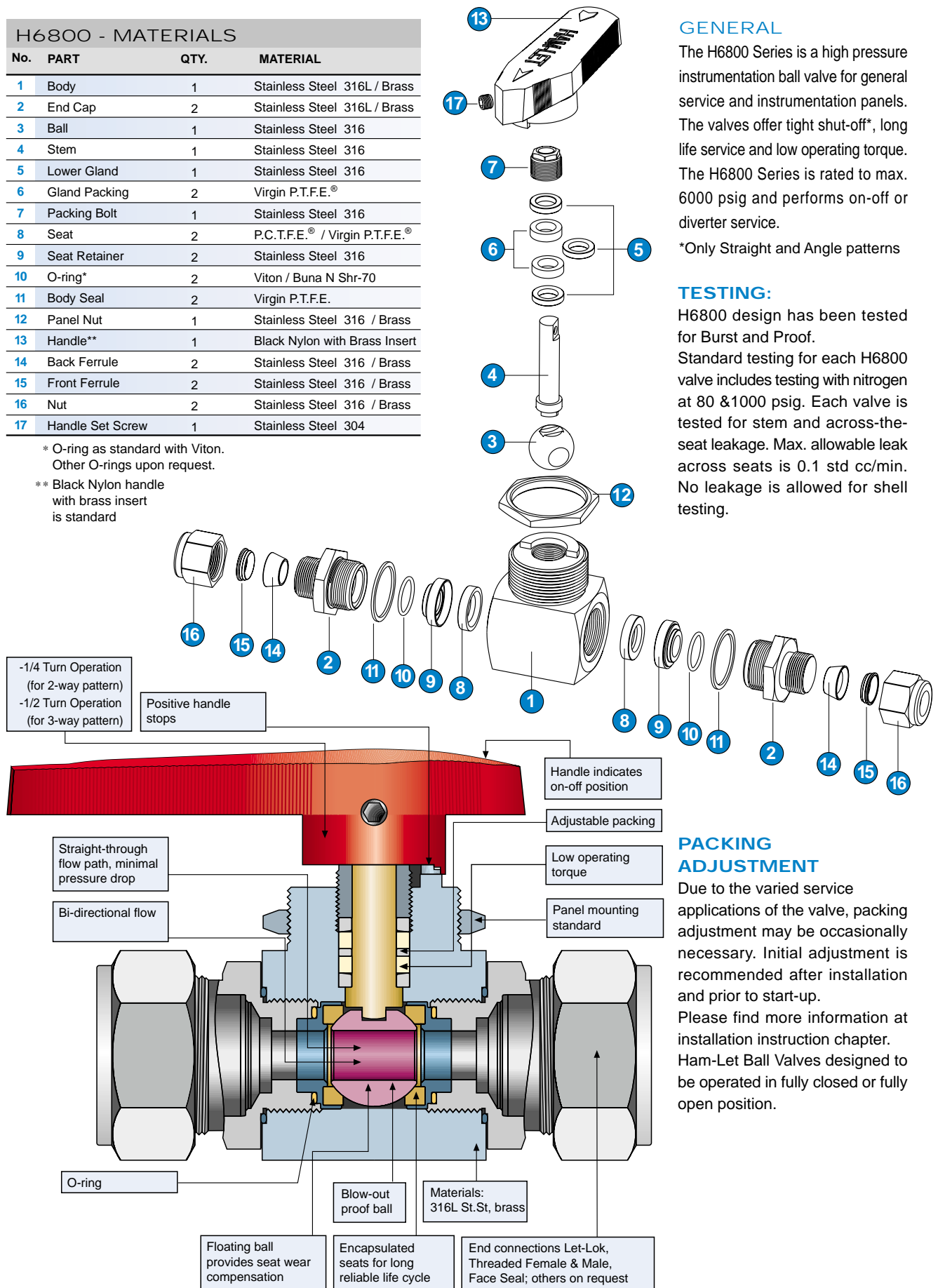
* ISLT – Integrated Safety Lock-out Tag-out Patent pending.

H6800 - MATERIALS

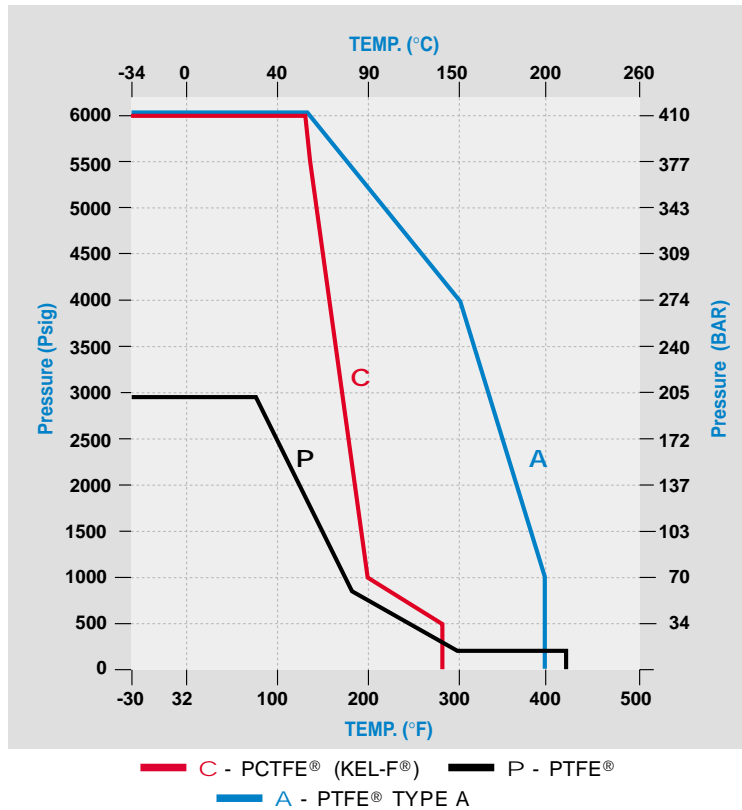
No.	PART	QTY.	MATERIAL
1	Body	1	Stainless Steel 316L / Brass
2	End Cap	2	Stainless Steel 316L / Brass
3	Ball	1	Stainless Steel 316
4	Stem	1	Stainless Steel 316
5	Lower Gland	1	Stainless Steel 316
6	Gland Packing	2	Virgin P.T.F.E. [®]
7	Packing Bolt	1	Stainless Steel 316
8	Seat	2	P.C.T.F.E. [®] / Virgin P.T.F.E. [®]
9	Seat Retainer	2	Stainless Steel 316
10	O-ring*	2	Viton / Buna N Shr-70
11	Body Seal	2	Virgin P.T.F.E.
12	Panel Nut	1	Stainless Steel 316 / Brass
13	Handle**	1	Black Nylon with Brass Insert
14	Back Ferrule	2	Stainless Steel 316 / Brass
15	Front Ferrule	2	Stainless Steel 316 / Brass
16	Nut	2	Stainless Steel 316 / Brass
17	Handle Set Screw	1	Stainless Steel 304

* O-ring as standard with Viton.
Other O-rings upon request.

** Black Nylon handle
with brass insert
is standard



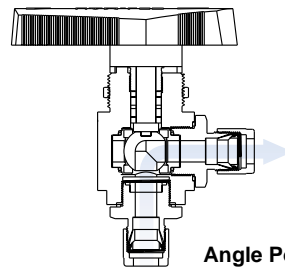
H6800 PRESSURE/TEMPERATURE RATINGS FOR STAINLESS STEEL VALVES



Pressure/temperature ratings based on maximum working pressure and temperature for the end connection.
 O-ring body and stem seal have pressure/temperature rating that is not less than the seat rating.
 Seat washer O-ring types are optional Buna N, EPDM, Kalrez®. For more information: please consult Ham-Let.
 The Pressure/Temperature rating is based on standard O-ring Viton SHR70

CLEANING & PACKAGING:

Ham-Let's H6800 Ball valve is treated with Ham-Let Passivation Cleaning and Packaging (Procedure 8075).
 Ham-Let H6800 Ball valves with face seal end connections are treated with Oxygen Cleaning and Packaging (Procedure 8055). Oxygen Cleaning and Packaging (Procedure 8055) is available as an option.



Angle Port Valve - Bottom Entry

Seat Material Characteristics

PTFE (Virgin Teflon) - Color (White)

A good all around, general purpose seating material. PTFE has outstanding resistance to chemical attack by a broad range of organic chemicals, inorganic chemicals and solvents, and is generally considered chemically inert.
 PTFE is a self lubricating polymer with a very low coefficient of friction, which makes an excellent seating material.

PCTFE (Kel-F) - Color (See - through white)

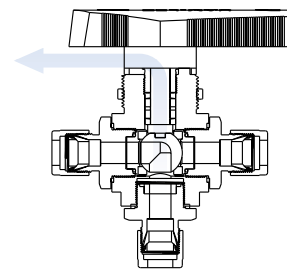
Excellent seat material for cryogenic applications such as: Oxygen, Hydrogen, Nitrogen and more. Suitable for low temperature applications up to -200°C.



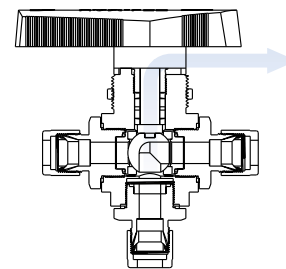
Straight Ball



Angle & 3-Port Ball



Position-A



Position-B

3-Port Valve - Bottom Entry

HANDLES TYPES AND COLORS

*S - Black Handle

B - Blue Handle

R - Red Handle

G - Green Handle

Y - Yellow Handle

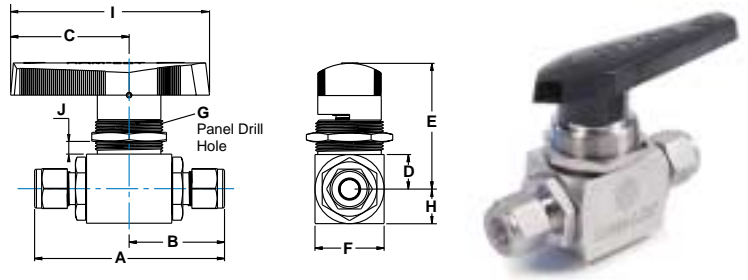
M - Metal Handle



ISLT - Locking Device
 Al6061 anodized Handle
 (st.st. internal components)
 For color selection please see how to order

ISLTS - ISLT Black
ISLTB - ISLT Blue
ISLTR - ISLT Red
ISLTY - ISLT Yellow

For ordering handle type use the ordering code as above.
 *Black Nylon Handle with brass insert is standard.
 Handle Kit includes: Handle and screw set .



DIMENSIONS STRAIGHT PORT VALVE

** Refers to standard nylon handle * Minimum height for panel

SIZE	End Connexion	Orifice		Cv		A		B		C		D		E		F		G		H		**I		J	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
1/16"	LET-LOK - INCH	1.27	0.05	0.1	70.2	2.76	35.1	1.38	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/8"		2.4	0.09	0.23	78.6	3.09	39.3	1.55	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"		4.8	0.19	2.4	83.6	3.29	41.8	1.65	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
3/8"		4.8	0.19	2.4	86.3	3.40	43.15	1.70	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/2"		10.4	0.40	7.02	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	19.10	0.75	108.7	4.28	1.5	0.06	
3/4"		10.4	0.40	7.02	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	19.10	0.75	108.7	4.28	1.5	0.06	
6mm	LET-LOK - Metric	4.8	0.19	2.4	83.6	3.29	41.8	1.65	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
8mm		4.8	0.19	1.5	84.8	3.34	42.4	1.67	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
10mm		4.8	0.19	1.5	86.4	3.40	43.2	1.70	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
12mm		10.4	0.40	7.02	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	19.10	0.75	108.7	4.28	1.5	0.06	
1/8"	Female NPT	4.8	0.19	1.2	54.8	2.16	27.4	1.08	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"		4.8	0.19	3	63.6	2.50	31.8	1.25	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
3/8"		4.8	0.19	2.6	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/2"		10.4	0.40	7.02	89.6	3.53	44.8	1.76	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	19.10	0.75	108.7	4.28	1.5	0.06	
1/8"	Female BSPT/BSPP	4.8	0.19	2.4	54.8	2.16	27.4	1.08	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"		4.8	0.19	2.4	63.6	2.50	31.8	1.25	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
3/8"		4.8	0.19	2.4	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/8"	Male NPT	4.8	0.19	2.4	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"		4.8	0.19	1.2	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
3/8"		4.8	0.19	2.4	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/8"	Male BSPT/BSPP	4.8	0.19	2.4	65.4	2.57	32.7	1.29	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"		4.8	0.19	2.4	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
3/8"		4.8	0.19	2.4	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/4"	Face Seal Male	4.5	0.18	2.4	79.8	3.14	39.9	1.57	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	11.20	0.44	47.0	1.85	1.0	0.04	
1/2"		10.1	0.40	6.62	93.8	3.69	46.9	1.85	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	19.10	0.75	108.7	4.28	1.5	0.06	

Dimensions are for reference only, and are subject to change Face to Face dimensions for Let-Lok End Connection (Dimension A) are finger-tight

PATENT PENDING

INTEGRATED SAFETY LOCKOUT-TAGOUT DEVICE.



GENERAL

The integral locking mechanism enables safe and easy to use solution for valve position locking and tagging.

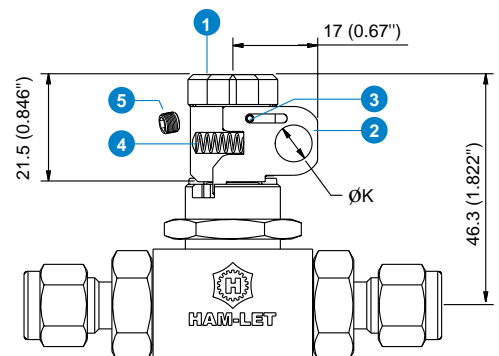
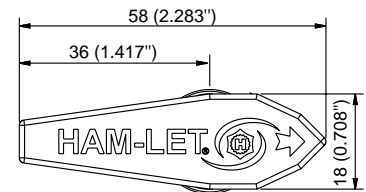
The design prevents un-desirable valve position change, even if no locking equipment is used.

Available for 2 - way straight and angle pattern in locked open and locked close positions.

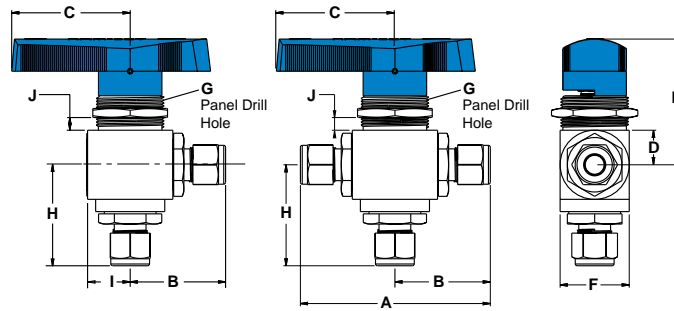
For 3 - way pattern - left & right locked position

ISLT DEVICE CONSTRUCTION

No.	PART	QTY	MATERIAL
1	Handle	1	Aluminum anodized
2	Latch	1	St.St.304
3	Pin	1	St.St.304
4	Spring	1	St.St.302
5	Set Screw	1	St.St.304



K - Locking bar diameter:
Min. ϕ 3.2mm (0.123") Max. ϕ 7.2mm (0.283")



DIMENSIONS ANGLE & 3-PORT VALVE														* Minimum height for panel											
SIZE	End Connexion	Orifice		Cv		A		B		C		D		E		F		G		H		I		J	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
1/16"	LET-LOK - INCH	1.27	0.05	0.08	70.2	2.76	35.1	1.38	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	37.9	1.49	16.0	0.63	1.0	0.04	
1/8"		2.4	0.09	0.17	78.6	3.09	39.3	1.55	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	42.1	1.66	16.0	0.63	1.0	0.04	
1/4"		4.8	0.19	0.90	83.6	3.29	41.8	1.65	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	44.6	1.76	16.0	0.63	1.0	0.04	
3/8"		4.8	0.19	0.90	86.3	3.40	43.15	1.70	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	45.95	1.81	16.0	0.63	1.0	0.04	
1/2"		10.4	0.40	6.50	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	53.65	2.11	23.5	0.92	1.5	0.06	
3/4"		10.4	0.40	6.50	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	56.7	2.23	23.5	0.92	1.5	0.06	
6mm	LET-LOK - Metric	4.8	0.19	0.90	83.6	3.29	41.8	1.65	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	44.6	1.76	16.0	0.63	1.0	0.04	
8mm		4.8	0.19	0.90	84.8	3.34	42.4	1.67	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	45.2	1.78	16.0	0.63	1.0	0.04	
10mm		4.8	0.19	2	86.4	3.40	43.2	1.70	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	46.0	1.81	16.0	0.63	1.0	0.04	
12mm		10.4	0.40	6.50	102.5	4.04	51.25	2.02	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	53.65	2.11	23.5	0.92	1.5	0.06	
1/8"	Female NPT	4.8	0.19	0.90	54.8	2.16	27.4	1.08	28.0	1.10	11.30	0.44	39.5	1.52	22.2	0.87	20.6	0.81	30.2	1.19	16.0	0.63	1.0	0.04	
1/4"		4.8	0.19	0.90	63.6	2.50	31.8	1.25	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	34.6	1.36	16.0	0.63	1.0	0.04	
3/8"		4.8	0.19	0.90	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	36.6	1.44	16.0	0.63	1.0	0.04	
1/2"		10.4	0.40	6.50	89.6	3.53	44.8	1.76	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	49.2	1.94	23.5	0.92	1.5	0.06	
1/8"	Female BSPT/BSPP	4.8	0.19	0.90	54.8	2.16	27.4	1.08	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	30.2	1.19	16.0	0.63	1.0	0.04	
1/4"		4.8	0.19	0.90	63.6	2.50	31.8	1.25	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	34.6	1.36	16.0	0.63	1.0	0.04	
3/8"		4.8	0.19	0.90	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	36.6	1.44	16.0	0.63	1.0	0.04	
1/8"	Male NPT	4.8	0.19	0.90	67.6	2.66	33.8	1.33	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	36.6	1.44	16.0	0.63	1.0	0.04	
1/4"		4.8	0.19	0.90	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	41.1	1.62	16.0	0.63	1.0	0.04	
3/8"		4.8	0.19	0.90	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	41.1	1.62	16.0	0.63	1.0	0.04	
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3/8"		4.8	0.19	0.90	76.6	3.02	38.3	1.51	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	41.1	1.62	16.0	0.63	1.0	0.04	
1/4"	Face Seal Male	4.5	0.18	0.90	79.8	3.14	39.9	1.57	28.0	1.10	11.30	0.44	39.5	1.55	22.2	0.87	20.6	0.81	42.7	1.68	16.0	0.63	1.0	0.04	
1/2"		10.1	0.40	6.13	93.8	3.69	46.9	1.85	77.0	3.03	19.00	0.75	64.1	2.52	38.1	1.50	38.1	1.50	49.3	1.94	23.5	0.92	1.5	0.06	

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

Face to Face dimensions for Let-Lok End Connection (Dimension A) are finger-tight

PNEUMATIC ACTUATOR

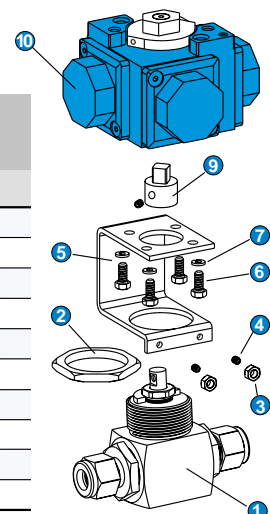


H6800 Series Straight and Angle Port Valves, can be actuated by a pneumatic actuator, double acting or spring return. The actuator can be operated by standard air supply at a pressure from 40 to 120 psi.

*The actuator stop plate indicates valve position
For technical information and assembly dimensions drawing please consult Ham-Let

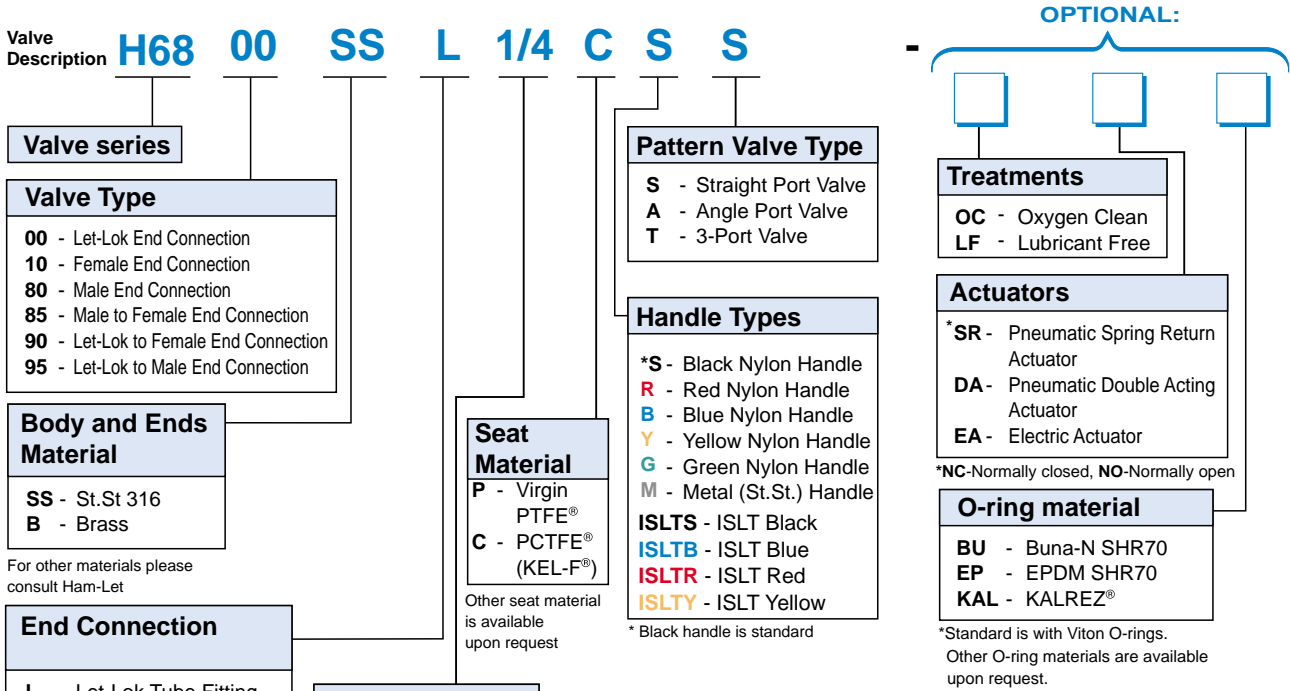
ACTUATOR ASSEMBLY CONSTRUCTION

No.	PART	MATERIAL
1	Body	St.St. 316L
2	Panel Nut	St.St. 316
3	Nut	St.St. 316
4	Set Screw	St.St. 304
5	Bridge	St.St. 304
6	Bolt	St.St. 316
7	Washer	St.St. 316
8	Adaptor Screw	St.St. 304
9	Adaptor	St.St. 303
10	Actuator	AL



ORDERING INFORMATION

Your Safety is important to us. Please ensure proper reference to our latest catalog



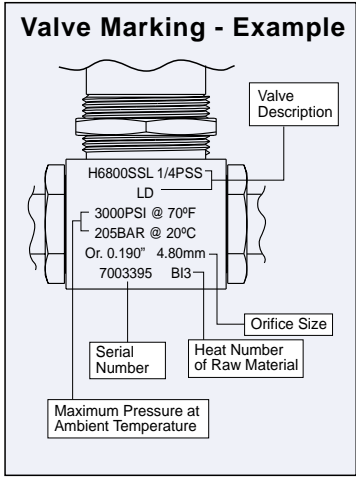
End Connection Size

1/16 inch	6mm
1/8 inch	8mm
1/4 inch	10mm
3/8 inch	12mm
1/2 inch	
3/4 inch	

Other end connections are available upon request

O-Rings Different materials are available for special applications.

O-Ring Material	Temperature rating °F (°C)
Buna N	-30 to 250 (-34 to 121)
Ethylene Propylen	-70 to 250 (-57 to 121)
Viton (Fluorocarbon)	-15 to 400 (-26 to 204)
Kalrez	-15 to 500 (-26 to 260)



Spare Parts Kit - Repair Kit

Spare parts kit is available for each valve. The kit includes seats, seat retainer, body seals and stem seals. To order a spare parts kit, use the following format:

H6800 - 1/4 - C - S - EPDM

End Connection Size	Seat Material	Pattern Valve Type	Features
1/16 inch	P - PTFE® C - PCTFE® (KEL-F®)	S - Straight port valve A - Angle port valve T - 3-port valve	BUNA - Seat washer O-ring Buna SHR70 EPDM - Seat washer O-ring EPDM SHR70 KALREZ® - Seat washer O-ring KALREZ® VITON - Seat washer O-ring Viton
1/8 inch			
1/4 inch			
3/8 inch			
1/2 inch			
3/4 inch			
6 mm			
8 mm			
10 mm			
12 mm			

For any other ordering combination or special features please contact Ham-Let customer support. For more technical information and data see our catalog T-3300 Corrosion Data.

Warning - for your safety:
Select the right component for safety's sake: The total design of the system must be taken into consideration when selecting components in order to ensure that your Ham-Let products provide safe, trouble-free operation. It is the responsibility of the system designer and the user to consider the compatibility of the materials, of the components and system, the function of the component, appropriate ratings and to ensure proper installation, operation and maintenance. Improper selection or use of products can cause property damage or personal injury, in respect of which the system designer and/or the user shall be solely liable and responsible.

® Registered trademark: PCTFE, KEL-F, PTFE TM 3M Company, KALREZ DuPont

For more information and local representatives - please check our web site. at www.ham-let.com

HIGH PRESSURE BALL VALVES