



HAM-LET HIGH PERFORMANCE BALL VALVES

H6800 SERIES | H6800 CNG SERIES



H6800 FEATURES

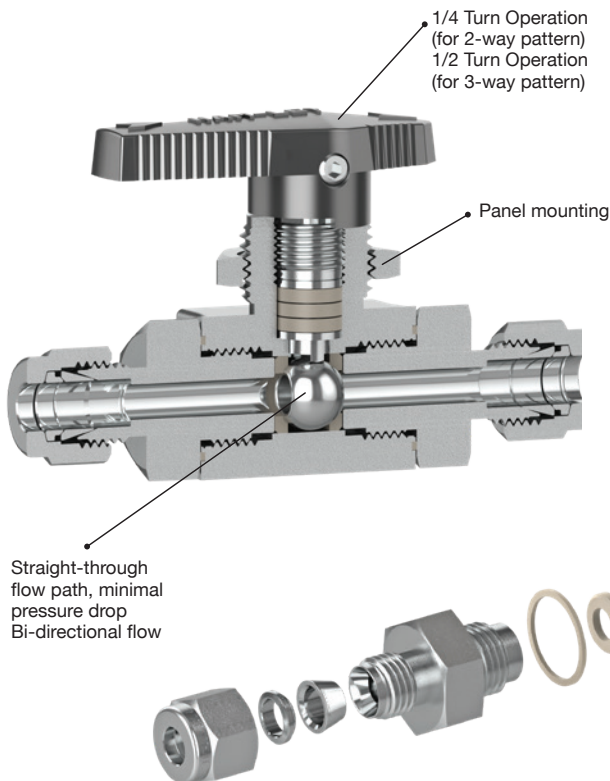
- Certified for ISO 15848-1:2006(E)
- On/off-service ball valve with 2-way pattern
- Diverter-service ball valve with 3-way pattern
- Stainless Steel and Brass construction
- MAWP* 6000 psi (413 bar)
- MAWT* 500°F (260°C)
- Variable end connection types and sizes from 1/16" to 3/4" (3mm to 18mm)
- Operation with colored Nylon handles, metal handle, color
- Anodized aluminum ISLT** (locking device) handles and pneumatically actuated

*Maximum Allowed Working Pressure, Maximum Allowed Working Temperature
 **ISLT – Integral Safety Lock-out Tag-out Patent pending

MATERIALS OF CONSTRUCTION

No.	Part	Qty	Maximum allowed working pressure	
			Up to 3000 psig	Up to 6000 psig
1	Handle	1	Nylon / Metal / ISLT	Nylon / Metal / ISLT
2	Handle Set Screw	1	SST 304	SST 304
3	Packing Bolt	1	SST 316	SST 316
4	Packing	3	Modified PTFE	PCTFE / PEEK
5	Gland*	2	SST 304	SST 304
6	Stem*	1	SST 316	SST 316
7	Ball*	1	SST 316	SST 316
8	Panel Nut*	1	SST 303 / Brass	SST 303
9	End Cap*	2	SST 316 / Brass	SST 316
10	Body Seal*	2	Virgin PTFE	PTFE / PEEK
11	Seat*	2	Modified PTFE	PCTFE / PEEK
12	Body*	1	SST ASTM A351 Gr.CF8M Brass ASTM B-16	SST ASTM A-276
Lubricants			Silicone based and PTFE based	

* Wetted parts

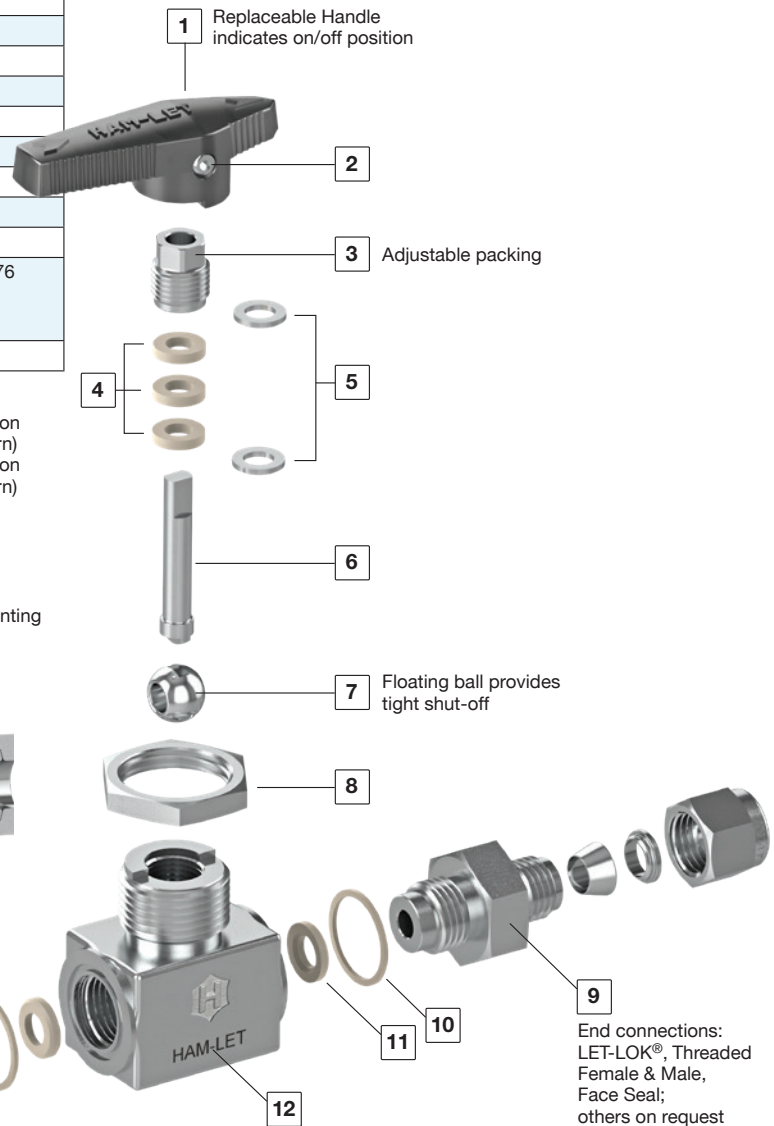


GENERAL

The H6800 Series is a high-performance instrumentation ball valve for general service and instrumentation panels. The valves offer a tight shut-off*, long-life service and a low operating torque. The H6800 Series is rated to max. 6000psig and performs on/off or as a diverter service.

*3-Way H6800 is designed for diverting only and not for shut-off service. Inlet is from the bottom only. 3-Way H6800 is designed to be fully opened to any of the side ports.

⚠ **HAM-LET Ball Valves are designed for operation in the fully closed or fully open position.**



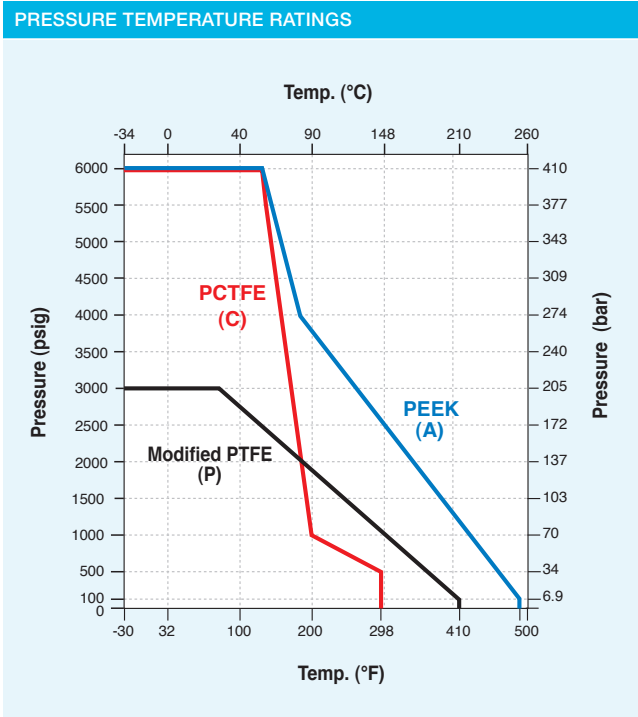
TESTING

The H6800 design has been tested for burst and proof. Standard testing for each H6800 valve includes testing with nitrogen at 80 & 1000 psig. Each valve is tested for leakage through the shell, packing and ball seats. The maximum allowable leakage across the ball seats is 0.1 std cc/min.

CLEANING & PACKAGING

Every H6800 series ball valve is cleaned in accordance with Standard Cleaning and Packaging (procedure 8184), Oxygen Clean & Lubricant-Free Cleaning and packaging, in accordance with Special Cleaning and Packaging (procedure 8185), is available as an option.

⚠ Lubricant-Free cleaned valves have significantly higher actuation torque.



Note: The maximum allowed working pressure that is marked on the valve may be limited according to the pressure limitations that are recommended by the tubing /piping standards (Reference: Let-Lok tube fittings General Information).

SEAT MATERIAL CHARACTERISTICS

MODIFIED PTFE

Excellent seat material for purity applications. Very low residual material during operation. Lower deformation ratio than PTFE, but higher pressure and temperature ratings than PTFE. Rated up to 410°F (210°C). Chemical resistance equal to PTFE material.

PCTFE

Excellent seat material for low temperature applications such as Oxygen and Nitrogen. Suitable for low temperature applications down to -40°C (-40°F).

PEEK (PolyEtherEtherKeton)

Excellent seat material for high-pressure and high-temperature applications. Excellent chemical resistance. Can be used continuously up to 500°F (260°C) and in hot water or steam without permanent loss in physical properties. High strength for harsh environments and high pressure.

Warning: Combination of PEEK seats and hot water may be critical for valve operating torque.

PACKING ADJUSTMENT

Due to the varied service applications of the valve, packing adjustment may be occasionally necessary. Packing is factory adjusted to 1000 psig service. Please find more information in the installation instruction chapter.

⚠ Initial packing adjustment is recommended after installation and prior to start-up

⚠ Valves that have not been operated for a period of time will introduce a higher actuation torque

BODY & SEAT MATERIAL COMBINATIONS

Body Material	MAWP*	MAWT**	Seat Material
SST ASTM A351 Gr. CF8M	3000psi (206bar)	410°F (210°C)	Modified PTFE
SST ASTM A-479	6000psi (413 bar)	500°F (260°C)	PEEK***
SST ASTM A-479	6000psi (413 bar)	298°F (148°C)	PCTFE
Brass ASTM B-16	3000psi (206 bar)	410°F (210°C)	Modified PTFE
Super duplex	6000psi (413 bar)	410°F (210°C)	Modified PTFE
Super duplex	6000psi (413 bar)	500°F (260°C)	PEEK***
Super duplex	6000psi (413 bar)	298°F (148°C)	PCTFE
Alloy C-276	3000psi (206 bar)	410°F (210°C)	Modified PTFE
Alloy C-276	3000psi (206 bar)	500°F (260°C)	PEEK***
Alloy C-276	3000psi (206 bar)	298°F (148°C)	PCTFE
Alloy 400	3000psi (206 bar)	410°F (210°C)	Modified PTFE
Alloy 400	3000psi (206 bar)	500°F (260°C)	PEEK***
Alloy 400	3000psi (206 bar)	298°F (148°C)	PCTFE

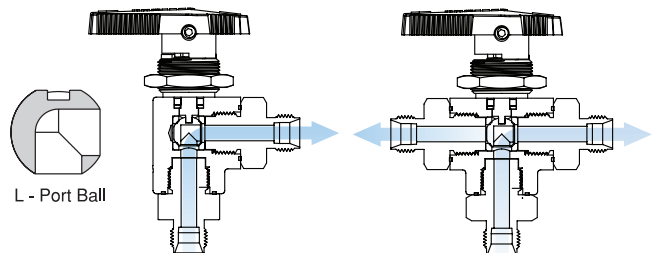
For other body and seat combinations, please contact our customer service.

*Maximum Allowed Working Pressure.

**Maximum Allowed Working Temperature.

***Lubricant-Free cleaned valves with PEEK seats, MAWP is 3000 (260 bar) psi.

ANGLE AND T-TYPE VALVE



NOTE: Bottom entry only

NOTE: - Bottom entry only
- Not suitable for shut-off application

MANUAL OPERATION

S - Black Handle*

B - Blue Handle

R - Red Handle

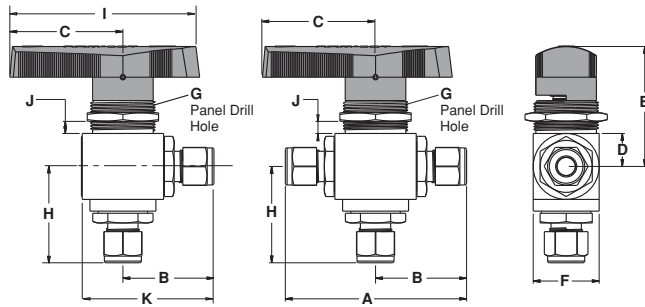
G - Green Handle

Y - Yellow Handle

Metal Handle

*Black nylon handle with brass insert is standard Add ISLT handle

ANGLE & 3-PORT VALVE



ANGLE & 3-PORT, STANDARD CONFIGURATION DIMENSIONS

Size	End Connection		Orifice		Cv	A		K		B		C		D		E		F		G		H		I*		J**	
	mm	inch	mm	inch		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
1/16"	LET-LOK Inch	1.3	0.051	0.08	70.2	2.76	46.2	1.82	35.1	1.38	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	37.9	1.49	50.0	1.96	6.5	0.255	
1/8"		2.4	0.094	0.15	78.6	3.09	50.4	1.95	39.3	1.55	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	42.1	1.66	50.0	1.96	6.5	0.255	
1/4"		4.8	0.189	0.90	83.6	3.29	52.9	2.08	41.8	1.65	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	44.6	1.76	50.0	1.96	6.5	0.255	
3/8"		4.8	0.189	0.60	86.3	3.40	54.25	2.13	43.15	1.70	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	46.0	1.81	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	4.6	102.5	4.04	67.3	2.65	51.25	2.02	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	57.5	2.26	80.0	3.15	6.5	0.255	
3/4"		10.3	0.40	3.8	102.5	4.04	67.3	2.65	51.25	2.02	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	57.5	2.26	80.0	3.15	6.5	0.255	
3mm	LET-LOK Metric	2.4	0.094	0.15	78.6	3.09	52.0	2.05	39.3	1.55	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	42.1	1.66	50.0	1.96	6.5	0.255	
6mm		4.8	0.189	0.90	83.6	3.29	52.8	2.08	41.8	1.65	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	44.6	1.76	50.0	1.96	6.5	0.255	
8mm		4.8	0.189	0.80	84.8	3.34	53.5	2.1	42.4	1.67	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	45.2	1.78	50.0	1.96	6.5	0.255	
10mm		4.8	0.189	0.60	86.4	3.40	54.3	2.14	43.2	1.70	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	46.0	1.81	50.0	1.96	6.5	0.255	
12mm		10.3	0.40	4.6	102.5	4.04	67.3	2.65	51.25	2.02	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	57.5	2.11	80.0	3.15	6.5	0.255	
18mm		10.3	0.40	2.5	102.5	4.04	67.3	2.65	51.25	2.02	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	57.5	1.19	80.0	3.15	6.5	0.255	
1/8"	Female NPT/ BSPT	4.8	0.189	0.3	63.6	2.50	42.9	1.7	32.0	1.26	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	34.6	1.36	50.0	1.96	6.5	0.255	
1/4"		4.8	0.189	0.75	64.0	2.52	43.1	1.69	31.8	1.25	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	34.8	1.37	50.0	1.96	6.5	0.255	
3/8"		4.8	0.189	0.5	69.6	2.74	45.9	1.8	34.8	1.37	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	37.6	1.48	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	3.5	87.4	3.44	59.7	2.35	43.7	1.72	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	50.0	1.97	80.0	3.15	6.5	0.255	
3/4"		10.3	0.40	2.5	91.0	3.58	61.5	2.42	45.5	1.79	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	50.0	1.97	80.0	3.15	6.5	0.255	
1/8"	Female BSPP	4.8	0.189	0.3	63.6	2.50	42.9	1.7	32.0	1.26	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	34.6	1.36	50.0	1.96	6.5	0.255	
1/4"		4.8	0.189	0.75	64.0	2.52	43.1	1.69	31.8	1.25	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	34.8	1.37	50.0	1.96	6.5	0.255	
3/8"		4.8	0.189	0.5	69.6	2.74	45.9	1.8	34.8	1.37	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	37.6	1.48	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	3.5	87.4	3.44	59.7	2.35	43.7	1.72	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	50.0	1.97	80.0	3.15	6.5	0.255	
3/4"		7.1	0.40	2.5	91.0	3.58	61.5	2.42	45.5	1.79	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	50.0	1.97	80.0	3.15	6.5	0.255	
1/8"	Male NPT/ BSPT	4.8	0.189	0.9	67.6	2.66	44.9	1.76	33.8	1.33	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	36.6	1.44	50.0	1.96	6.5	0.255	
1/4"		4.8	0.189	0.6	76.6	3.02	49.4	1.94	38.3	1.51	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	41.1	1.62	50.0	1.96	6.5	0.255	
3/8"		4.8	0.189	0.35	76.6	3.02	49.4	1.94	38.3	1.51	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	41.1	1.62	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	3.0	92.4	3.64	62.2	2.45	46.2	1.82	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	52.5	2.07	80.0	3.15	6.5	0.255	
3/4"		10.3	0.40	2.0	94.4	3.71	63.2	2.49	47.2	1.86	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	53.5	2.1	80.0	3.15	6.5	0.255	
1/8"	Male BSPP	4.8	0.189	0.9	65.4	2.57	43.8	1.72	32.7	1.29	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	36.6	1.44	50.0	1.96	6.5	0.255	
1/4"		4.8	0.189	0.6	76.6	3.02	49.4	1.94	38.3	1.51	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	41.1	1.62	50.0	1.96	6.5	0.255	
3/8"		4.8	0.189	0.35	76.6	3.02	49.4	1.94	38.3	1.51	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	41.1	1.62	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	3.0	92.4	3.64	62.2	2.45	46.2	1.82	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	52.5	2.07	80.0	3.15	6.5	0.255	
3/4"		10.3	0.40	2.0	94.4	3.71	63.2	2.49	47.2	1.86	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	53.5	2.1	80.0	3.15	6.5	0.255	
1/4"	Face Seal Male	4.5	0.18	0.9	75.0	2.95	48.6	1.91	37.5	1.47	31.0	1.22	11.1	0.44	38.85	1.53	22.2	0.87	19.3	0.76	40.3	1.58	50.0	1.96	6.5	0.255	
1/2"		10.3	0.40	4.6	93.8	3.69	62.9	2.47	46.9	1.85	50.0	1.97	16.0	0.63	50.0	1.97	32.0	1.26	20.8	0.82	53.2	2.09	80.0	3.15	6.5	0.255	

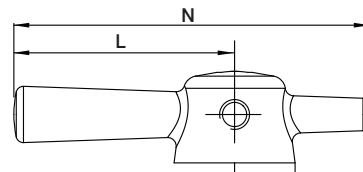
Dimensions are for reference only and are subject to change without notice.

* Refers to standard nylon handle.

** Maximum panel thickness.

DIMENSIONS FOR METAL HANDLE

VALVE END CONNECTIONS	Handle Designator	N	L
Up to 3/8 ends	M	50 MM	31 MM
Up to 3/8 ends	M7	70 MM	45 MM
From 1/2 to 3/4 ends	M	110 MM	80 MM



See Ordering Information

H6800 CNG FOR THE CNG / NGV

FEATURES

- ECE R110, Class 0 approved for the CNG / NGV
- MAWP* 3770 psig (260 barg)
- Temperature range: -40°C (-40°F) to 120°C (248°F)
- Variable LET-LOK end connection sizes: 1/4", 3/8", 6mm, 8mm, 10mm
- Stainless Steel construction with spring loaded seats
- ECE Approved for 20,000 cycles

* Maximum Allowed Working Pressure.

GENERAL

The H6800 CNG Series is a high-performance instrumentation manual ball valve for the CNG / NGV with ECE R110-type approval. The valves offer a tight shut-off, long-life service and low operating torque. The H6800 CNG Series ball valve is rated to max. 3770 psig and performs as a manual on/off service.

MATERIALS OF CONSTRUCTION

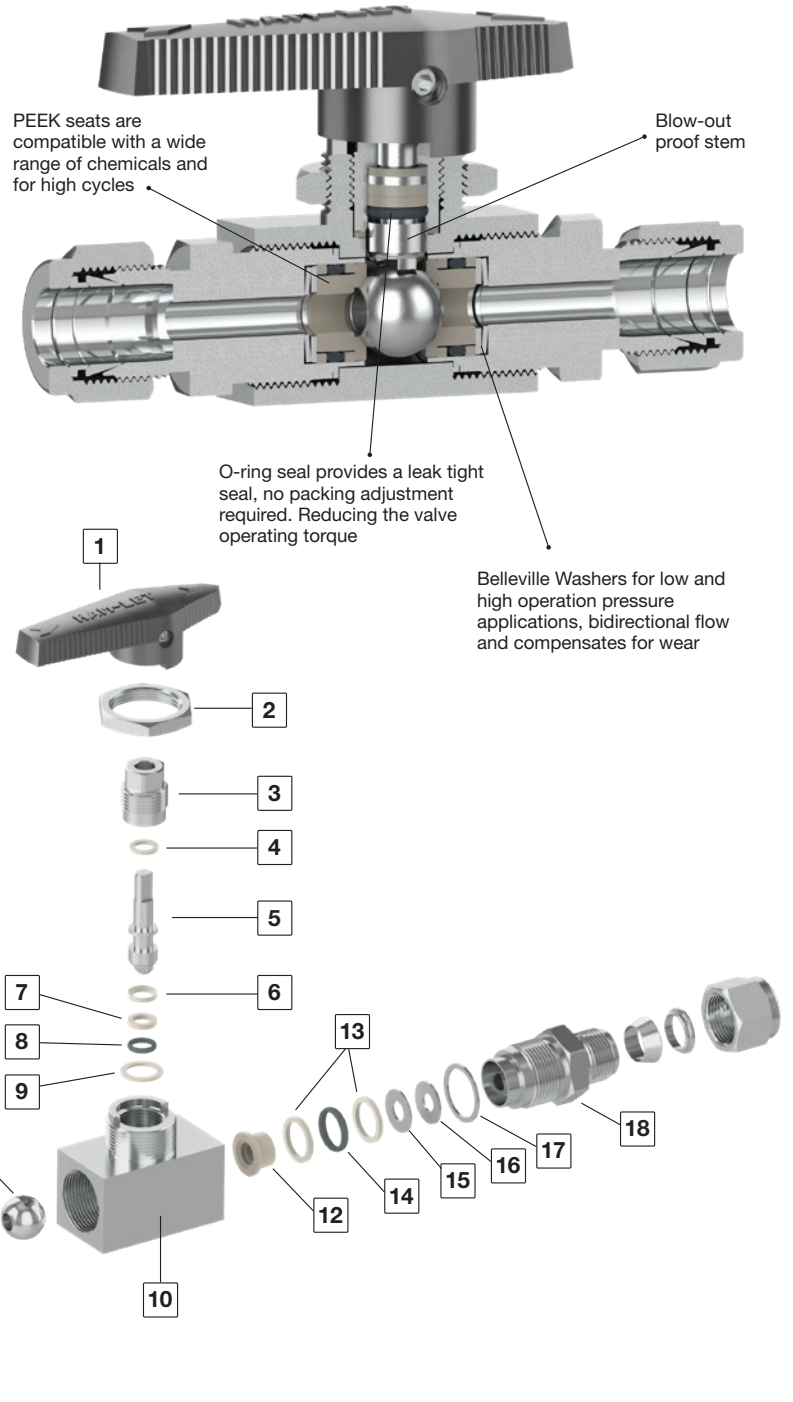
No.	Part	Qty	Material
1	Handle	1	Nylon
2	Panel Nut	1	SST 316 ASTM A-276 / A-479
3	Packing Bolt	1	SST 316 ASTM A-276 / A-479
4	Stem Washer	1	PEEK
5	Stem*	1	SST 316 ASTM A-276 / A-479
6	Stem Upper Packing	1	PEEK
7	Stem Lower packing	1	PTFE
8	Stem O-Ring	1	Low Temperature Fluorocarbon FKM
9	Packing Bolt Gasket*	1	Silver Plated SST 316
10	Body*	1	SST ASTM A-479
11	Ball*	1	SST 316 ASTM A-276 / A-479
12	Seats*	2	PEEK
13	Seat Back Up Sealing	4	PTFE
14	Seat O-Rings*	2	Low Temperature Fluorocarbon FKM
15	Seat Gasket*	2	SST 316 ASTM A-276 / A-479
16	Seat Spring*	2	SST 316 ASTM A-276 / A-479
17	Body Seal Gasket*	2	Silver Plated SST 316
18	End Cap*	2	SST 316 ASTM A-276 / A-479
	Lubricants		Silicone Based

* Wetted parts

ORDERING INFORMATION:

H 6800 SS L 3/8 A S S CNG

End Connection Size	
1/4	6MM
-	8MM
3/8	10MM
1/2	12MM
3/4	16MM



H6800 - PNEUMATIC ACTUATED VALVES

FEATURES

- 90° Actuation for 2-way valves (Straight & Angle)
- 180° Actuation for T-type valves
- Actuators comply with industry standards for interface with ISO 5211, NAMUR and VDI/VDE 3845
- Actuated valves are available factory assembled or separately, actuator and mounting kits
- Limit switches, proximity sensors, position indicators, solenoid valves, and other accessories are available upon request
- Standard temperature range: -32°C to 90°C (-25.6°F to 194°F)
- Optional: High Temperature, Low Temperature

MATERIALS OF CONSTRUCTION

No.	Part	Qty	Material
1	Actuator	1	AL 356-T5
2	Coupling	1	SST 316
3	Bracket	1	SST 304
4	Washer Flat	4	SST 304
5	Washer Spring	4	SST 304
6	Screw	4	SST 304
7	Panel Nut	2	SST 316
8	H6800	1	SST 316 / Brass *

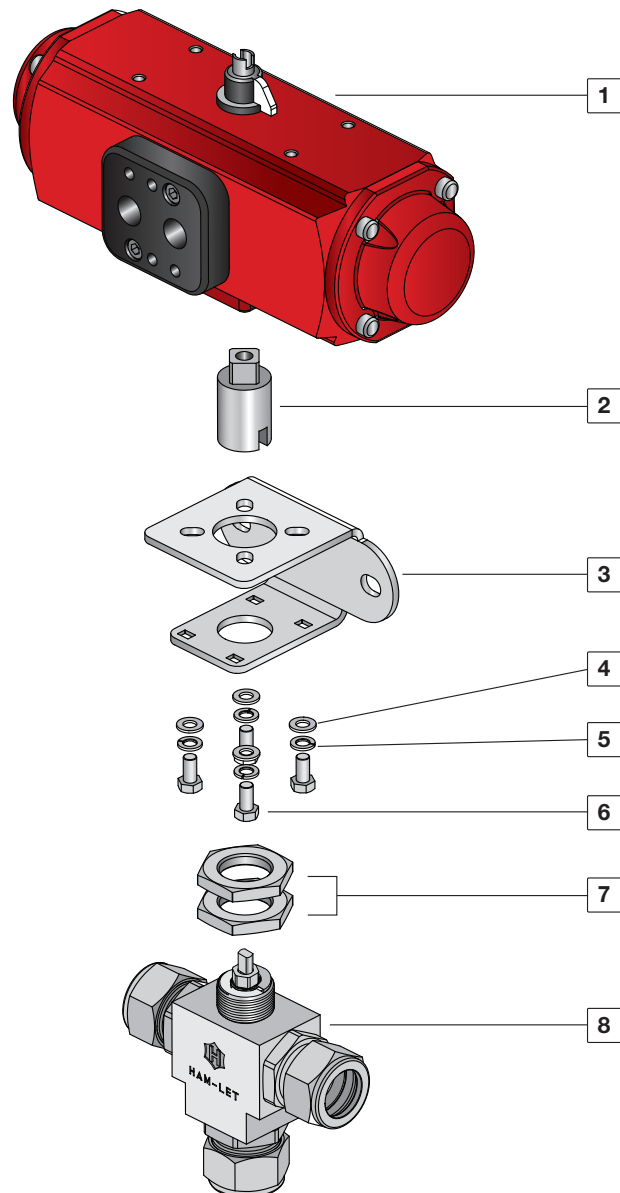
* Body material: SST ASTM A-276;
SST ASTM A351 Gr. CF8M; Brass ASTM B-16

GENERAL

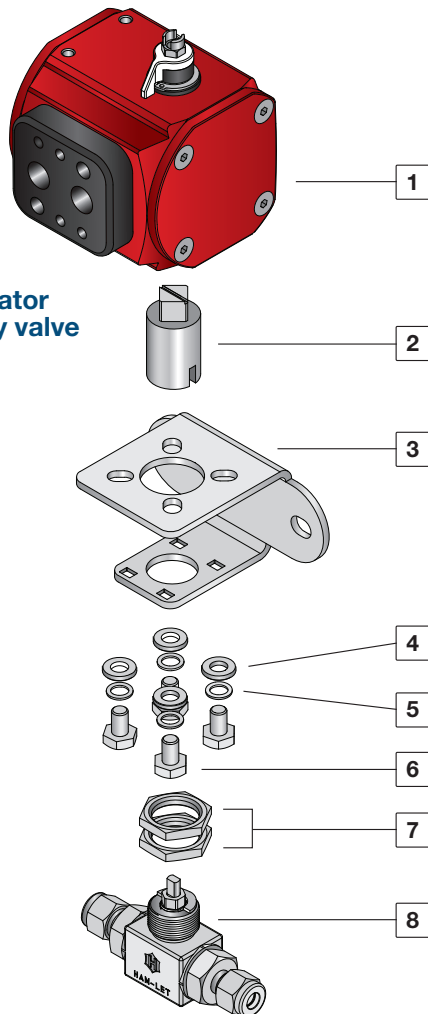
Four standard actuator sizes are available upon request: Mini (designator "A1"), Small (designator "A2"), Medium (designator "A3"), Large (designator "A4") and 180° Actuator (designator "A2T"). Improved operational speed enables better valve opening and closing control.

ATEX certification of Valve-Actuators assemblies are available on request at the time of order quotation.

180° Actuator on T-type valve



90° Actuator on 2-way valve



ACTUATED H6800 SERIES



The selection of Valve-Actuator assemblies provided herein is based on:

- Valve maximum allowable working pressure
- Ambient temperature (50 to 100°F /10 to 37°C)
- Actuator fits to valve based on operating pressure of 6 bar, as per table A.

To order H6800 ball valve factory assembled with an actuator, add the actuator designator to the valve part number / description per the below table.

Example:

H6800SSL1/4PSS with standard Double Acting Aluminum Actuator
H6800SSL1/4PS-A1

To order an actuator and mounting kit for field assembly:

Double acting Actuator ordering number: Z-A1

Corresponding mounting kit: Z-6800-MK-1/4-F03-F04-A1

Lubricant Free Valves:

For Spring Return Actuator - select one size bigger then offered in the table below. Example:

If the offered actuator in the table is A2C, select A3C

For Double Acting Actuator - please contact your local representative

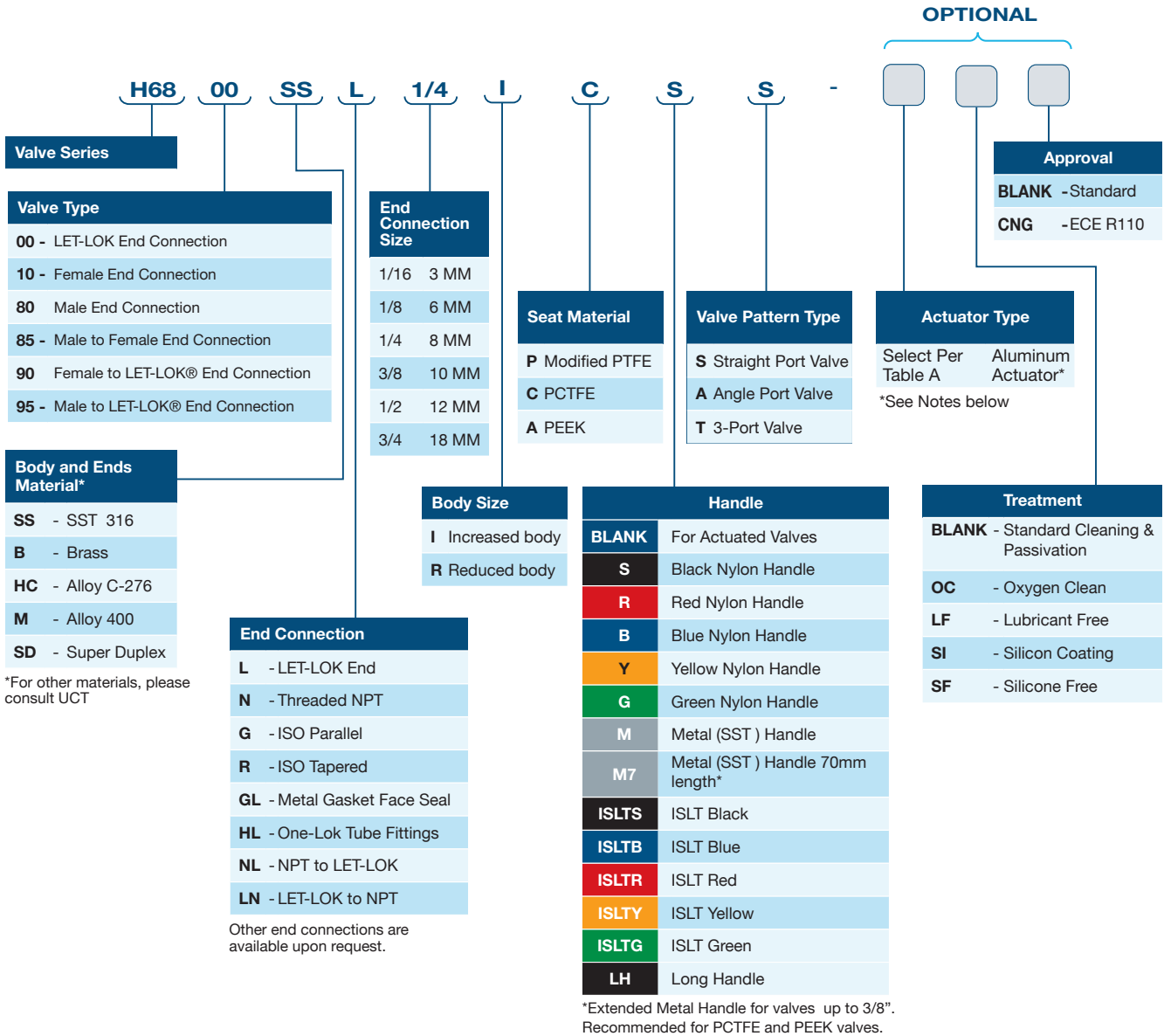
Table A: Ordering information for Actuated Valves

Series	Ends Size	Seats	Minimum Actuator Operating Pressure Bar (Psi)	Actuator Designators (Factory assembled)			Actuator Ordering Code		Mounting Kit Ordering Info
				Spring Return		Double Acting	Spring Return	Double Acting	
				NO	NC				
H6800	1/16"-3/8" (3mm-10mm)	Modified PTFE PCTFE	5 (72.5)	A1O	A1C	A1	Z-A1S	Z-A1	Z-6800-MK-1/4"-F03-F04-A1
		PEEK	5 (72.5)	A2O	A2C		Z-A2S		Z-6800-MK-1/4"-F03-F04-A2
	1/2"-3/4" (12mm-18mm)	Modified PTFE	5 (72.5)	A1O	A1C	A1	Z-A1S	Z-A1	Z-6800-MK-1/2"-F03-F04-A1
		PCTFE	5 (72.5)	A2O	A2C		Z-A2S		Z-6800-MK-1/2"-F03-F04-A2
		PEEK	5 (72.5)	A3O	A3C	A2	NC: Z-A3S	Z-A2	Z-6800-MK-1/2"-F03-F04-A3
							NO: Z-A3S		
H6800 T-type	1/16"-3/8" (3mm-10mm)	Modified PTFE PCTFE PEEK	5 (72.5)	A2TS	A2TS	A2T	Z-A2TS	Z-A2T	Z-6800-MK- 1/4"-F03-F04-A2
	1/2"-3/4" (12mm-18mm)								Z-6800-MK-1/2"-F03-F04-A2

Note: For dimensions of Actuators assembled on the H6800 series, please refer to the HPA section.

Actuated valves- in cases the valve will be cycled less frequently than once per day or more frequently than once per hour, please contact your UCT representative.

ORDERING INFORMATION H6800-HIGH PERFORMANCE BALL VALVES



ORDERING INFORMATION FOR SPARE KITS

SEAL KIT

Seal Kit includes seats, stem packings, body seals and label.

Z	-	6800	-	SK	-	1/4	-	A	-	2 WAY	
				Kit Type			Body Designator per End Connection			Seat Material	Valve Pattern
				SK - Seal Kit			1/4 1/16 to 3/8 3MM to 10MM			P Modified PTFE	2 Way For straight and angle Valves
							1/2 1/2 to 3/4 12MM to 18MM			C PCTFE	3 Way For T Port Valves
										A PEEK	

NOTE:

For Seal kits for "Old Design" valves, please contact a UCT representative.

HANDLE KIT

Handle kit includes handle and set screw. To order a spare-parts kit, use the following format:

Z	-	6800	-	HK	-	1/4	-	S
				Kit Type			Body Designator Per End Connection	Handle Type
				HK -Handle Kit			1/4 1/16 to 3/8 3MM to 10MM	S Black Nylon Handle
							1/2 1/2 to 3/4 12MM to 18MM	R Red Nylon Handle
								B Blue Nylon Handle
								Y Yellow Nylon Handle
								G Green Nylon Handle
								M Metal (SST) Handle
								M7 Metal St.St Handle 70 mm*
								ISLTS ISLT Black**
								ISLTB ISLT Blue**
								ISLTR ISLT Red**
								ISLTY ISLT Yellow**
								ISLTG ISLT Green**
								LH Long Handle



INTEGRAL SAFETY LOCK-OUT TAG-OUT DEVICE

The integral locking mechanism enables safe and easy use for valve position locking and tagging. The design prevents undesirable valve position changes, without the requirement for additional locking equipment.

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

For 3-way pattern valves, the ISLT handle can lock in the left, center and right position.

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

*Extended Metal Handle for valves up to 3/8".
Recommended for PCTFE and PEEK valves.
** Does not fit the standard valve.