



COMPACT ONE PIECE BALL VALVES & CYLINDRICAL VALVES

HAM-LET H-800 SERIES



- ✓ Designed for working pressures up to 3,000 psig (206 bar)
- ✓ Encapsulated and cylindrical stem mechanism for reduced ope
- ✓ Available in both manual and pneumatic actuation



H-800 FEATURES

- MAWP¹ 3000 psi (206 bar);
- MAWP² 300°F (149°C)
- Low Fugitive Emissions- Certified for ISO 15848-1:2006(E)
- Encapsulated Ball Stem design
- On/off-service, one-piece Ball Valve with 2-way pattern
- Diverter and on/off-service, one-piece Ball Valve with 3-way pattern
- Stainless Steel construction
- Variable end connection types and sizes from 1/16" to 1/2" and 3mm to 12mm
- Allows bi-directional flow in 2-way straight pattern
- Virtually no dead volume
- User-friendly design with low operating torque and convenient panel-mounting capability
- Variable vent options
- Operation with metal handles, colored nylon handles, and ISLT Lockable handle
- Manual and pneumatic actuation

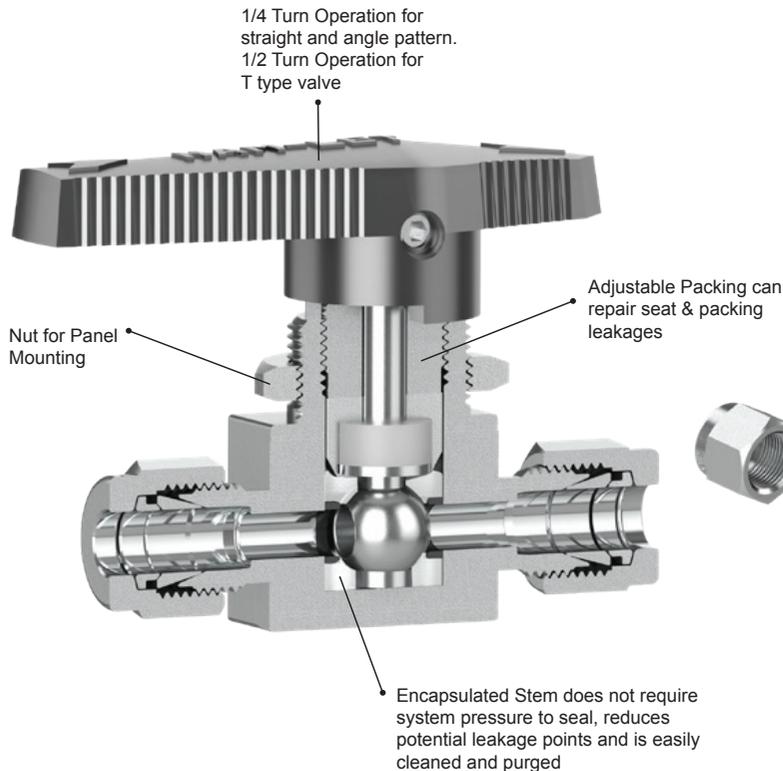
¹Maximum Allowed Working Pressure

²Maximum Allowed Working Temperature

MATERIALS OF CONSTRUCTION

No.	Components	Qty	Material
1	Handle	1	Nylon + glass fiber
2	Set screw	1	SST 304
3	Panel nut	1	SST 304
4	Packing bolt ¹	1	SST 316
5	Gland ¹	1	SST 304
6	Stem packing ¹	1	Virgin PTFE
7	Washer ¹	1	SST 304
8	Ball stem ¹	1	SST 316
9	Seat disc ¹	2	SST 304 (Coated with silicone modified polyester resin)
10	Seat ¹	1	PFA
11	Seat ring ¹	2	SST 304 (Coated with silicone modified polyester resin)
12	Body ¹	1	SST ASTM A351 Gr. CF8M
	Lubricant		Silicone based

¹Wetted parts

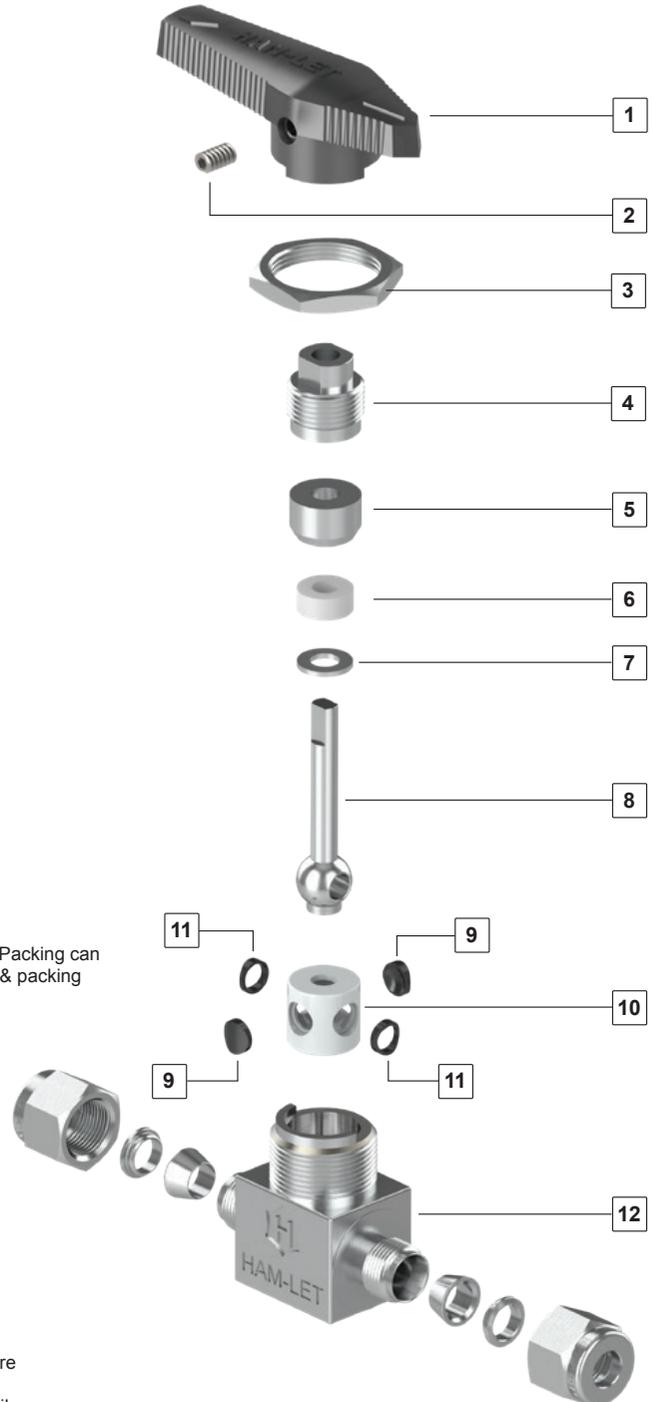


H-800 GENERAL

The H-800, one-piece Ball Valve series is designed for general service and instrumentation panels. Valve design enables low and high working pressure and accommodates a wide temperature range with high life cycle.

One-piece body design reduces possibility of shell leakage. The valves offer tight shut-off, long-life service and low operating torque.

⚠ H-800 Ball Valves are designed for fully open or fully closed operations only. If the valve is not operated for a long period of time, its braking torque may rise.



H-800KL CYLINDRICAL VALVE FEATURES

- MAWP¹ 2500 psi (206 bar);
- MAWT² 300°F (149°C)
- Encapsulated Cylindrical Stem design
- On/off-service, one-piece Cylindrical Valve with 2-way pattern
- Diverter and on/off-service, one-piece Cylindrical Valve with 3-way pattern
- Stainless Steel construction
- Allows bi-directional flow in 2-way straight pattern
- Variable end connection types and sizes from 1/4" to 1/2" or 10mm to 12mm
- No dead volume
- One-piece Cylindrical Stem ensures alignment of stem and orifice
- Easy to use- low operating torque, panel mounting
- Available with colored nylon handles, metal handles, and ISLT lockable handle for enhanced security
- Manual and pneumatic actuation options for versatile operation

¹Maximum Allowed Working Pressure

²Maximum Allowed Working Temperature

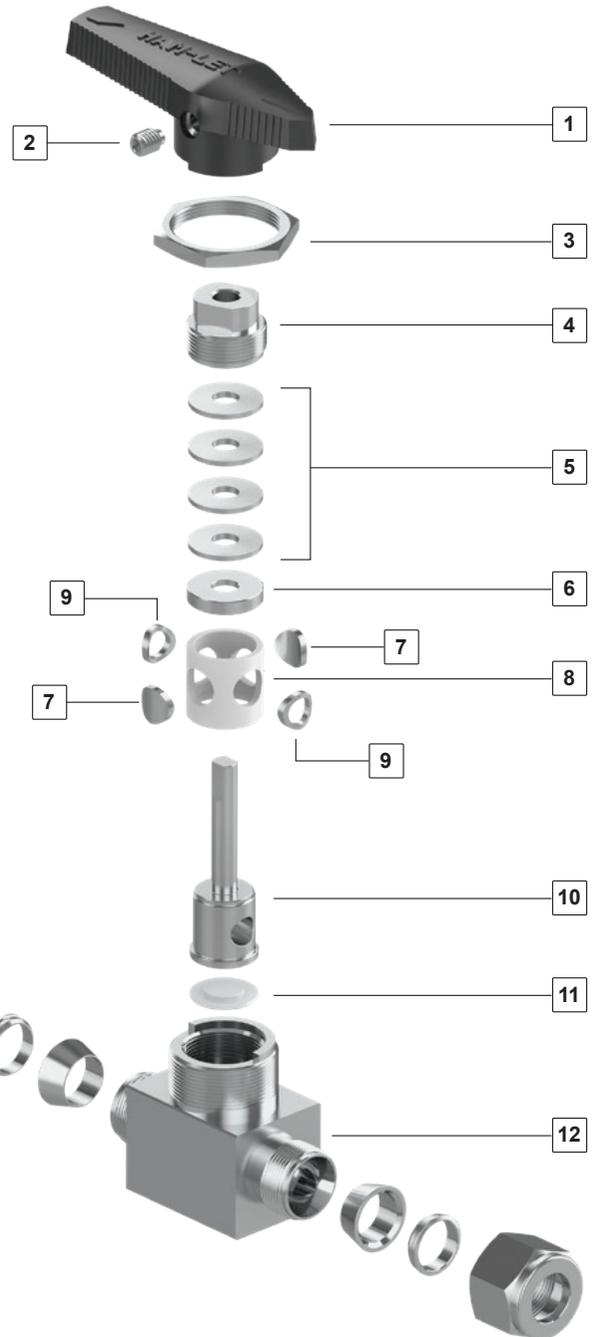
MATERIALS OF CONSTRUCTION

No.	Components	Qty	Material
1	Handle	1	Nylon + glass fiber
2	Set screw	1	SST 304
3	Panel nut	1	SST 304
4	Packing bolt ¹	1	SST 316
5	Belleville washer ¹	4	coated S17700SS/A693
6	Cap ring ¹	1	SST 304
7	Seat disc ¹	2	SST 304 (Coated with silicone modified polyester resin)
8	Seat ¹	1	PTFE
9	Seat ring ¹	2	SST 304 (Coated with silicone modified polyester resin)
10	Cylindrical stem ¹	1	SST 316
11	Base disc ¹	1	PCTFE
12	Body ¹	1	SST ASTM A351 Gr. CF8M
	Lubricant		Silicone based

¹Wetted parts

H-800KL GENERAL

The H-800KL one-piece Cylindrical Valve series is designed for general service and instrumentation panels. Valve design enables low and high working pressure and accommodates a wide temperature range with high life cycle. One-piece body design reduces possibility of shell leakage. The valves offer tight shut-off, long-life service and low operating torque.



TESTING

The H-800 design has been tested for burst and proof. Standard testing for each H-800 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 H-800 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.**

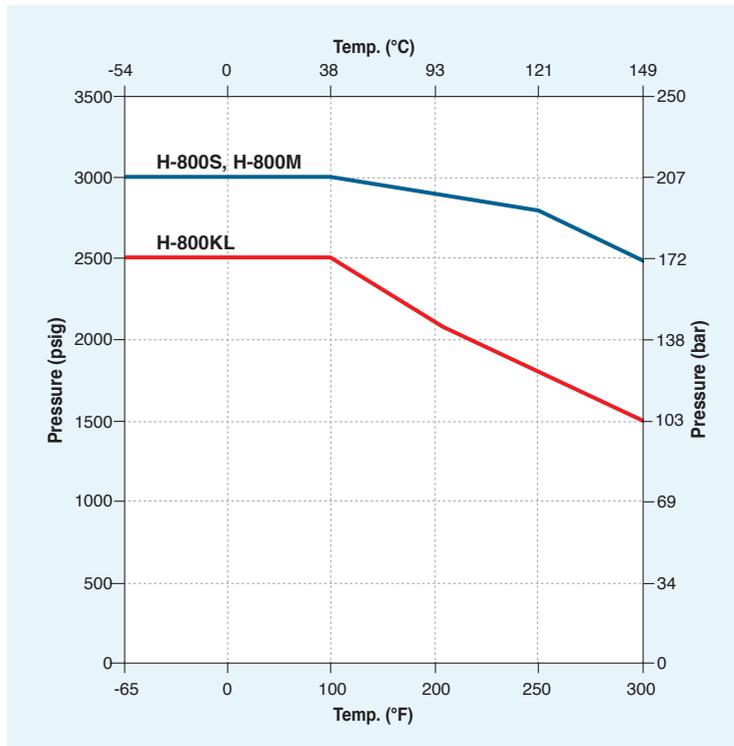
PACKING ADJUSTMENT

Due to the varied service applications of the valve, packing adjustment may occasionally be necessary. Packing adjustment for this valve can fix not only leakage through stem but also leakage through the seats. Packing is factory adjusted to 1000 psig service. Initial adjustment is recommended after installation and prior to start-up. Our Ball Valves are designed for operation in fully closed or fully open position only.

⚠ **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**

PRESSURE TEMPERATURE RATING



For LF Services MAWP: Body size Large → 500psi
Body size Small and Medium → 1000psi

H-800 COLORED AND METAL HANDLES



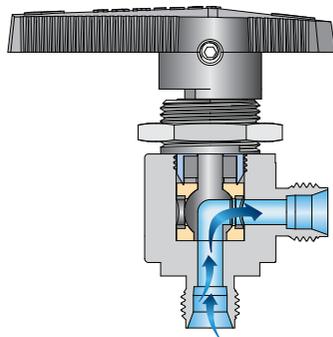
MANUAL OPERATION

- S** - Black handle¹
- B** - Blue handle
- R** - Red handle
- G** - Green handle
- Y** - Yellow handle
- M** - Metal handle

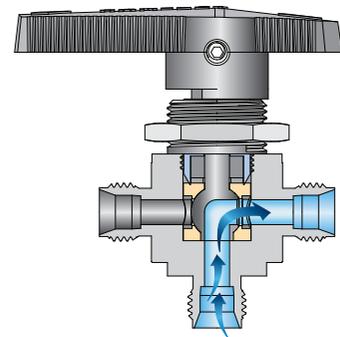
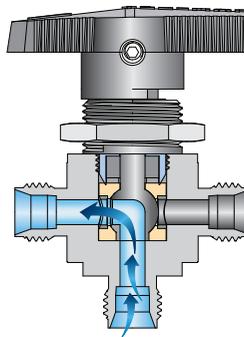
¹Black Nylon handle is standard.

FLOW DIRECTION

H800- ANGLE-TYPE

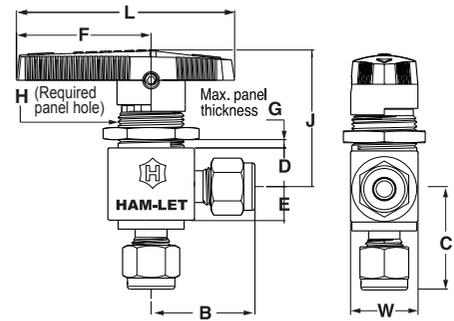
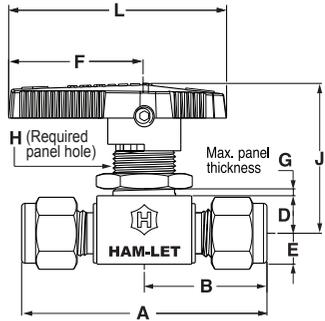


H800- T-TYPE



NOTE: Side entry is allowed and limited to 1500 psi for all sizes

STRAIGHT PORT VALVE & ANGLE PATTERN

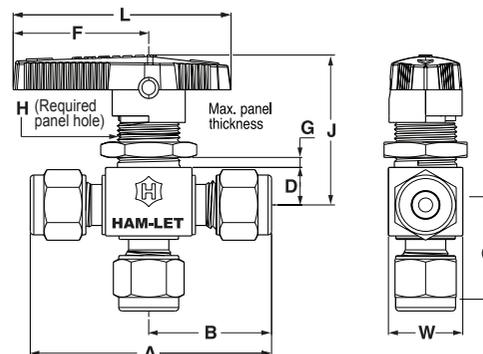


STANDARD CONFIGURATION DIMENSIONS

End Connection		Body Size Designator	Orifice		Cv Straight	Cv Angle	DIMENSIONS																					
Type	Size inch		mm	inch			A		B		C (Angle)		D		E		F		L		G		H (Diameter)		J		W	
							mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Let-Lok Imperial	1/16	S	1.3	0.051	0.1	-	42.7	1.68	21.35	0.84	20.6	0.81	8.60	0.34	7.10	0.28	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
	1/8		2.4	0.094	0.2	0.15	51.1	2.01	25.70	1.01	24.6	0.97																
	1/4	M	3.2	0.126	0.6	0.35	56.1	2.21	28.05	1.10	27.2	1.07	11.2	0.44	9.70	0.38	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
			4.8	0.189	1.4	0.90	60.7	2.39	30.50	1.20	29.7	1.17																
	3/8	KL	6.0	0.279	6.0	2.00	77.5	3.05	38.60	1.52	36.3	1.43	14.2	0.56	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
			7.1	0.279	6.0	4.60	83.12	3.27	41.56	1.63	39.16	1.54																
Let-Lok Metric	3mm	S	2.4	0.094	0.2	0.15	51.1	2.01	25.70	1.01	24.6	0.97	8.60	0.34	7.10	0.28	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
	6mm		3.2	0.126	0.6	0.35	56.1	2.21	28.05	1.10	27.2	1.07																
	8mm	M	4.8	0.189	1.4	0.90	60.7	2.39	30.35	1.20	29.7	1.17	11.2	0.44	9.70	0.38	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
			8mm	1.5	0.90	62.5	2.46	31.25	1.23	30.5	1.20																	
	10mm	KL	6.0	0.279	6.0	2.00	78.0	3.07	38.90	1.53	36.3	1.43	14.2	0.56	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
			12mm	6.0	4.60	83.12	3.27	41.56	1.63	39.16	1.54																	
F-NPT	1/8	S	3.2	0.126	0.5	0.30	41.4	1.63	20.60	0.81	20.6	0.81	8.6	0.34	7.1	0.28	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
			4.8	0.189	1.2	0.70	50.8	2.00	25.40	1.00	25.4	1.00																
	1/4	M	4.8	0.189	0.9	0.75	52.3	2.06	26.20	1.03	26.2	1.03	11.2	0.44	9.7	0.38	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
			7.1	0.279	3.0	1.70	63.5	2.50	31.75	1.25	31.75	1.25																
3/8	KL	7.1	0.279	2.6	1.50	63.5	2.50	31.75	1.25	31.75	1.25	14.2	0.56	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12	
1/4		1.2	0.75	50.8	2.00	25.40	1.00	26.2																				
M-NPT to Let-Lok	1/4	M	4.8	0.189	1.6	0.75	55.9	2.20	30.5	1.20	26.2	1.03	11.2	0.44	9.70	0.38	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
Female ISO 7-1 tapered	1/4	KL	7.1	0.279	0.9	-	52.3	2.06	26.15	1.03	26.15	14.2	0.56	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12	
	3/8				2.6	-	63.5	2.50	31.75	1.25	31.75																	1.25
O-Ring Face Seal	1/4	S	3.2	0.126	0.6	0.35	44.4	1.75	22.40	0.88	23.9	0.94	11.2	0.44	9.07	0.38	31.0	1.22	50	1.97	3.2	0.13	15.1	0.59	34.5	1.36	19.8	0.78
		M	4.8	0.189	2.4	0.90	47.8	1.88	23.90	0.94																		
Face Seal Male	1/4	S	3.2	0.126	0.6	0.35	54.1	2.13	27.05	1.06	27.7	1.09	11.2	0.44	9.07	0.38	31.0	1.22	50	1.97	3.2	0.13	15.1	0.59	34.5	1.36	19.8	0.78
		M	4.8	0.189	2.4	0.90																						
	1/2	KL	7.1	0.279	6.0	-	74.7	2.88	36.60	1.44	-	-	14.2	0.56	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.5

Dimensions are for reference only and subject to change.

3-WAY VALVE



STANDARD CONFIGURATION DIMENSIONS

End Connection		Body Size Designator	Orifice		CV	DIMENSIONS																			
Type	Size inch		mm	inch		A		B		C		D		F		L		G		H (Diameter)		J		W	
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Let-Lok Imperial	1/16	S	1.3	0.051	0.08	42.7	1.68	21.35	0.84	20.6	0.81	8.60	0.34	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
	1/8		2.4	0.094	0.15	51.1	2.01	25.70	1.01	24.6	0.97														
	1/4	M	3.2	0.126	0.35	56.1	2.21	28.05	1.10	27.2	1.07	11.2	0.44	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
			4.8	0.189	0.90	60.7	2.39	30.50	1.20	29.7	1.17														
	3/8	KL	7.1	0.279	2.00	73.4	2.89	36.80	1.45	36.3	1.43	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
						4.60	79.0	3.11	39.5	1.55	39.1	1.54	14.2	0.56	50.8	2.0	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4
Let-Lok Metric	3mm	S	2.4	0.094	0.15	51.1	2.01	25.70	1.01	24.6	0.97	8.60	0.34	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
	6mm		3.2	0.126	0.35	56.1	2.21	27.90	1.10	27.2	1.07														
	8mm	M	4.8	0.189	0.90	60.7	2.39	30.50	1.20	29.7	1.17	11.2	0.44	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
						0.80	62.5	2.46	31.25	1.23	30.5														
	10mm	KL	7.1	0.279	2.00	73.4	2.89	36.80	1.45	36.3	1.43	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
12mm	4.60					79.0	3.11	39.5	1.55	39.1	1.54	14.2	0.56	50.8	2.0	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
F-NPT	1/8	S	3.2	0.126	0.30	41.4	1.63	20.60	0.81	20.6	0.81	8.6	0.34	31.0	1.22	50	1.97	6.4	0.25	15.1	0.59	34.5	1.36	17	0.67
	1/4	M	4.8	0.189	0.75	52.3	2.06	26.20	1.03	26.2	1.03	11.2	0.44	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78
		KL	7.1	0.279	1.70	63.5	2.50	31.75	1.25	31.75	1.25	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
3/8	KL	7.1	0.279	1.50	63.5	2.50	31.75	1.25	31.75	1.25	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12	
M-NPT to Let-Lok					1/4	M	4.8	0.189	0.80	60.7	2.39	30.50	1.20	26.2	1.03	11.2	0.44	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78
Female ISO 7-1 tapered	1/4	KL	7.1	0.279	1.50	63.5	2.50	31.75	1.25	31.75	1.25	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
	3/8					63.5	2.50	31.75	1.25	31.75	1.25	14.2	0.56	50.8	2	82.3	3.24	9.5	0.38	28.6	1.13	52.6	2.07	28.4	1.12
Face Seal Male	1/4	S	3.2	0.126	0.35	54.1	2.13	27.05	1.06	27.7	1.09	11.2	0.44	31.0	1.22	50	1.97	3.2	0.13	15.1	0.59	34.5	1.36	19.8	0.78
		M	4.8	0.189	0.90							11.2	0.44	38.9	1.53	63	2.48	4.8	0.19	19.8	0.78	37.3	1.47	19.8	0.78

Dimensions are for reference only and subject to change.

H-800 - 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

GENERAL

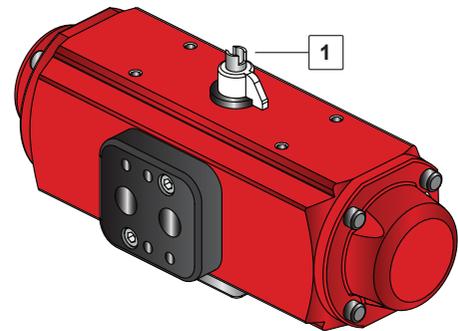
Four standard actuator sizes are available upon request: Mini (designator "A1"), Small (designator "A2"), Medium (designator "A3"), Large (designator "A4") and 180° actuator (designator "A2T"). Improved operational speed enables better valve opening and closing control.

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

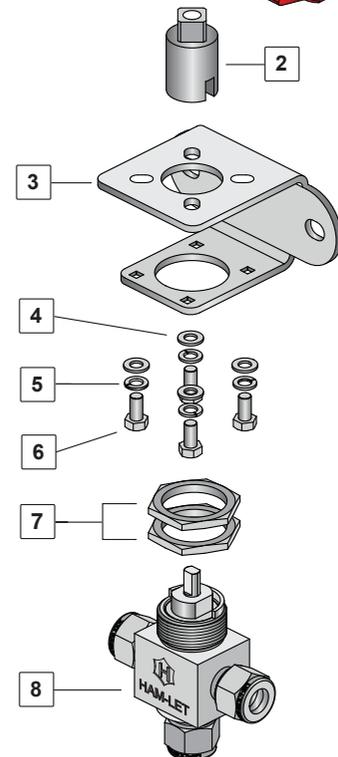
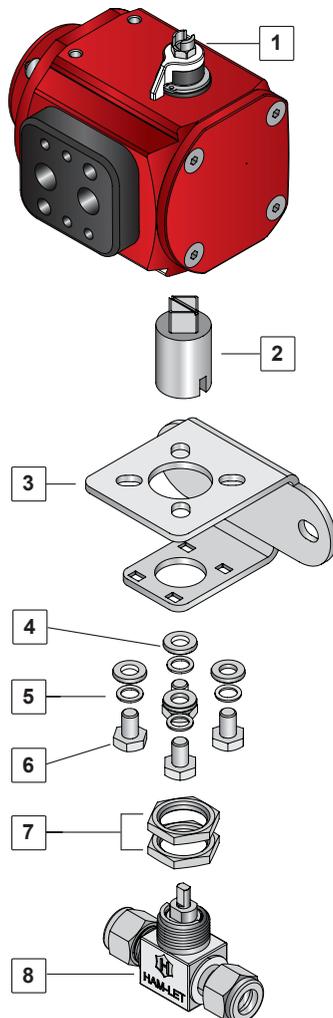
MATERIALS OF CONSTRUCTION

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	H-800	1	SST 316

180° ACTUATOR ON T-TYPE VALVE



90° ACTUATOR ON 2-WAY VALVE



ACTUATED H-800 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 the H-800 ball valve pre-assembled with an actuator, simply add the actuator designator to the valve part number/description as indicated in the table below.

Example:

H-800S-SS-L-1/4 with standard Spring Return Aluminum Actuator Normally Closed

H-800S-SS-L-1/4-A1C

To order an actuator and mounting bracket kit for field assembly: Spring Return Actuator ordering number: **Z-A1S** Corresponding mounting bracket kit:

Z-800S-MK-F03-F04-A1

Lubricant-free valves:

For spring return actuator - select one size bigger than 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.

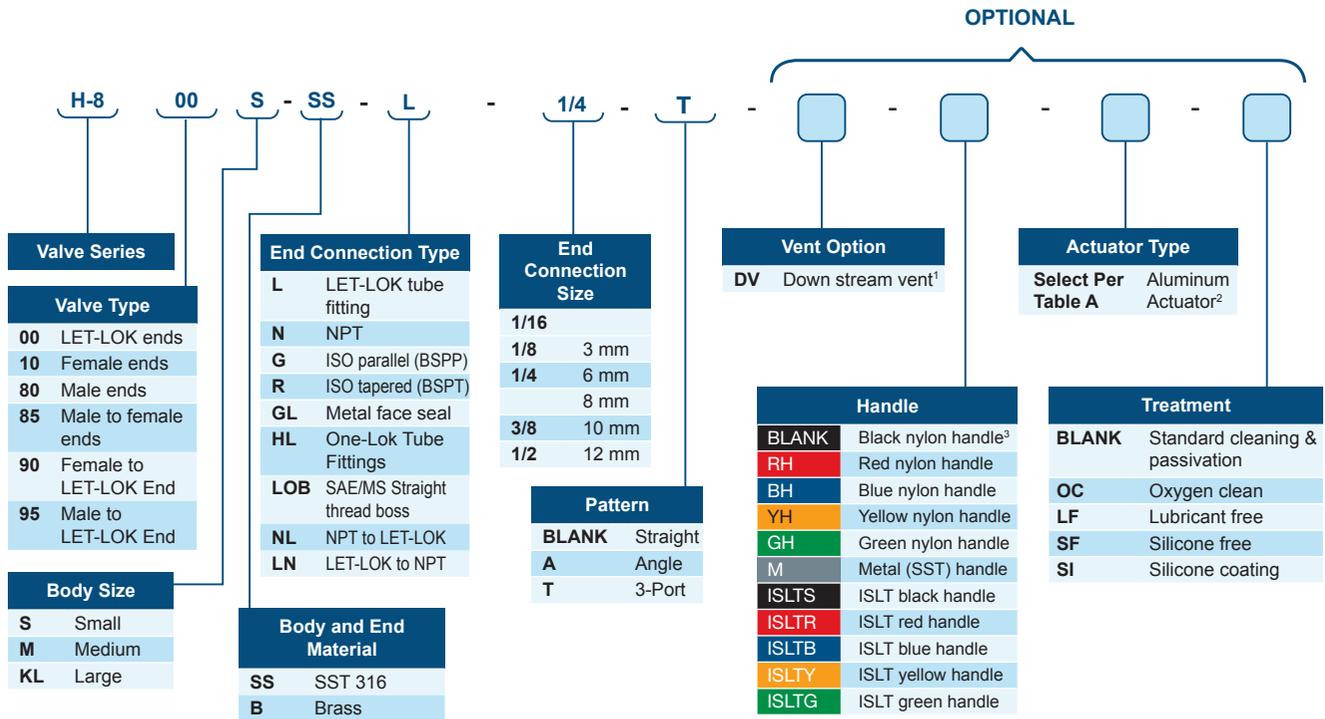
TABLE A: ORDERING INFORMATION FOR ACTUATED VALVES

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				
H-800	S	PFA / PTFE	5 (72.5)	A10	A1C	A1	Z-A1S	Z-A1	Z-800S-MK-F03-F04-A1
	M			A10	A1C		Z-A1S		Z-800M-MK-F03-F04-A1
	KL			A20	A2C		Z-A2S		SR: Z-800L-MK-F03-F04-A2 DA: Z-800L-MK-F03-F04-A1
H-800 T-Type	S	PFA / PTFE	5 (72.5)	A2TS	A2TS	A2T	Z-A2TS	Z-A2T	Z-800S-MK-F03-F04-A2
	M								Z-800M-MK-F03-F04-A2
	KL								Z-800L-MK-F03-F04-A2

Note: For dimensions of Actuators assembled on the H-800 series, please refer to the HPA section.

Actuated valves- in cases the valve will be cycled less frequently than once per 3 days or more frequently than once per hour, please contact your Ham-Let representative.

ORDERING INFORMATION H-800 SERIES



FOR ACTUATED VALVES

- If special cleaning is required, LF / OC will be added in the end, and be applicable for the Valve only. Example: H - 800S - SS - L - 1/4 - A1 - OC
- For ordering information of actuators for high temperatures, please refer to HAM-LET Pneumatic Actuator Catalog
- For double mounting actuators, please contact your local representative
- Actuators Accessories (Limit Switch, Solenoid Valve please refer to HAM-LET Pneumatic Actuator Catalog
- For Stainless Steel Actuators or Electric Actuators please contact your local representative

HANDLE KIT

Handle kit contains handle and set screw



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.

¹MAWP = 500 psi

²See Notes "For actuated valve"

³Black Nylon handle is standard.

H-840/H850 FEATURES

- On/off-service ball valve
- Stainless Steel Constructions
- MAWP 3000 psi (207 bar)
- MAWT 300°F (149°C)
- Variable end connection sizes: Male Let-Lok 1/8"; FNPT1/8"; FNPT1/4"
- Operation with colored ISLT handle

MATERIALS OF CONSTRUCTION

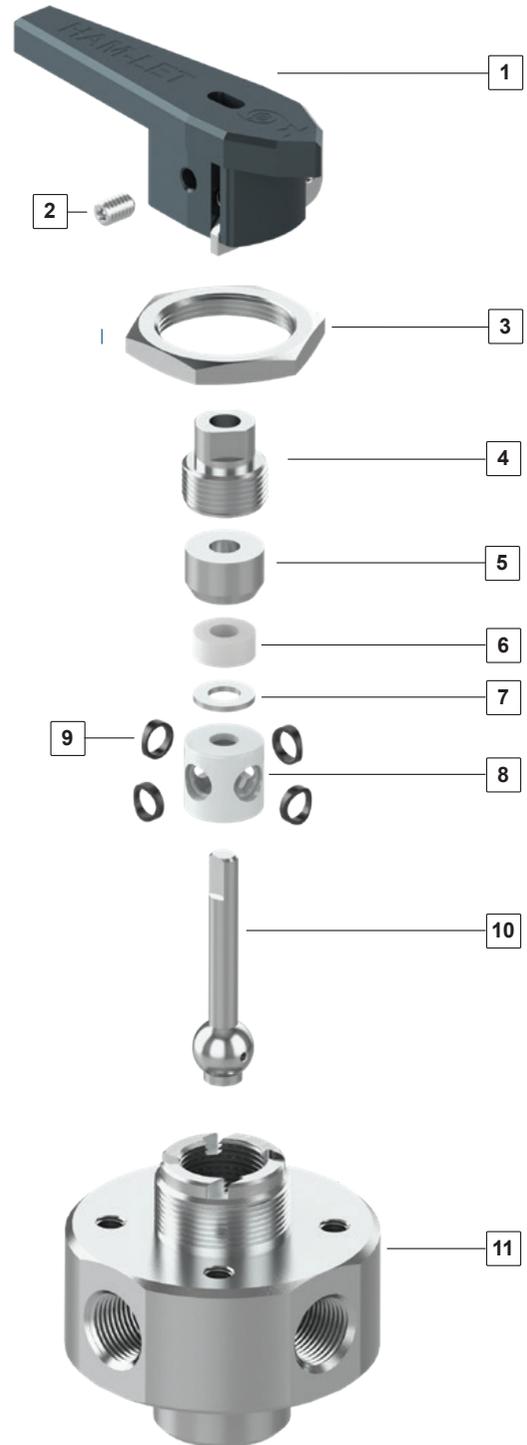
No.	Components	Qty	Material
1	Handle	1	Nylon + glass fiber
2	Set screw	1	SST 304
3	Panel nut	1	SST 304
4	Packing bolt ¹	1	SST 316
5	Gland ¹	1	SST 304
6	Stem packing ¹	1	Virgin PTFE
7	Washer ¹	1	SST 304
8	Seat ¹	1	PFA
9	Seat ring ¹	2	SST 304 (Coated with silicone modified polyester resin)
10	Ball stem ¹	1	SST 316
11	Body	1	SST ASTM A351 Gr. CF8M
	Lubricant		Silicone based

¹Wetted parts



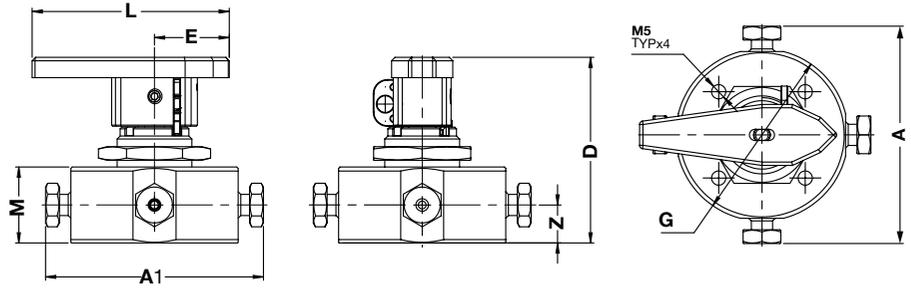
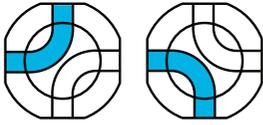
H-850 GENERAL

The H-84/50 one-piece Ball Valve series is designed for flow switched from multiple outlets and vice versa.



H840 4 WAY

Flow Pattern

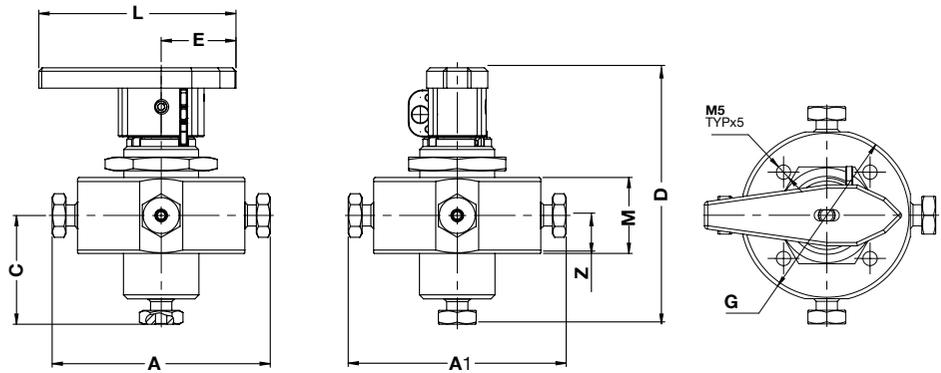
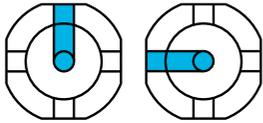


STANDARD CONFIGURATION DIMENSIONS

SIZE	End connection	Orifice	A/A1		B		D		F		L		M		N		G	
			mm	In														
1/8	Let-Lok	2.30	64.10	2.52	32.05	1.26	54.80	2.16	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00
1/8	FNPT	4.80	48.40	1.90	24.20	0.95	54.80	2.16	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00
1/4	FNPT	4.80	48.40	1.90	24.20	0.95	54.80	2.16	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00

H850 5 WAY

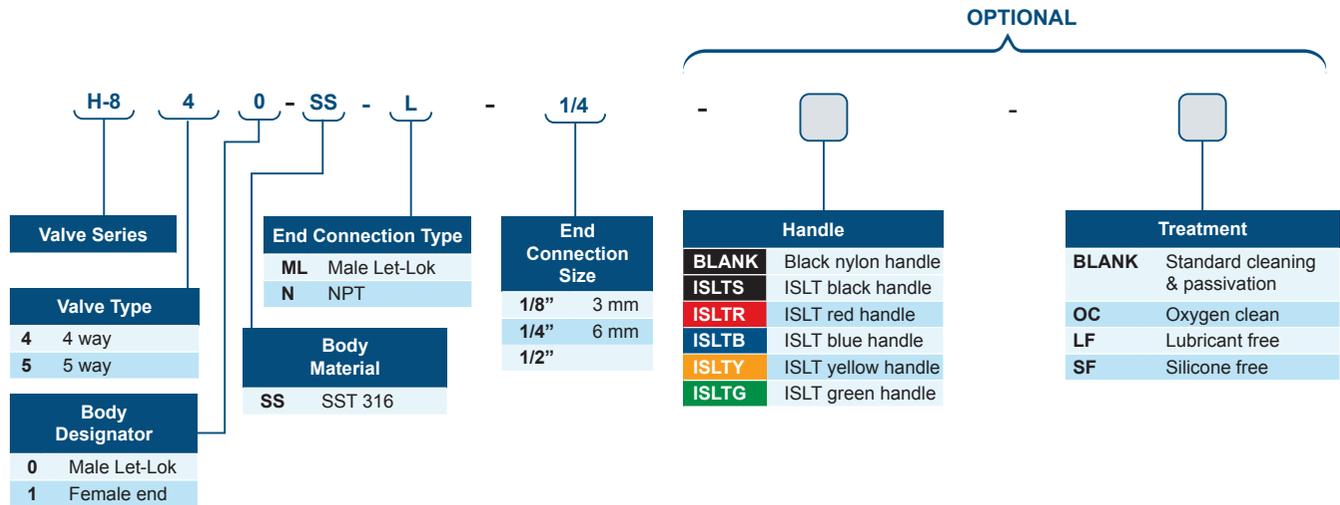
Flow Pattern



STANDARD CONFIGURATION DIMENSIONS

SIZE	End connection	Orifice	A/A1		B		C		D		F		L		M		N		G	
			mm	In																
1/8	Let-Lok	2.30	64.10	2.52	32.05	1.26	32.10	1.26	75.60	2.97	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00
1/8	FNPT	4.80	48.40	1.90	24.20	0.95	24.20	0.95	75.60	2.97	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00
1/4	FNPT	4.80	48.40	1.90	24.20	0.95	24.20	0.95	75.60	2.97	36.00	1.42	58.00	2.28	22.40	0.88	11.20	0.44	50.80	2.00

ORDERING INFORMATION H-840/H850



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