

THREE-PIECE BALL VALVES

H500 SERIES



3-PIECE BALL VALVES H500 SERIES

FEATURES

3-piece heavy-duty ball valves with :

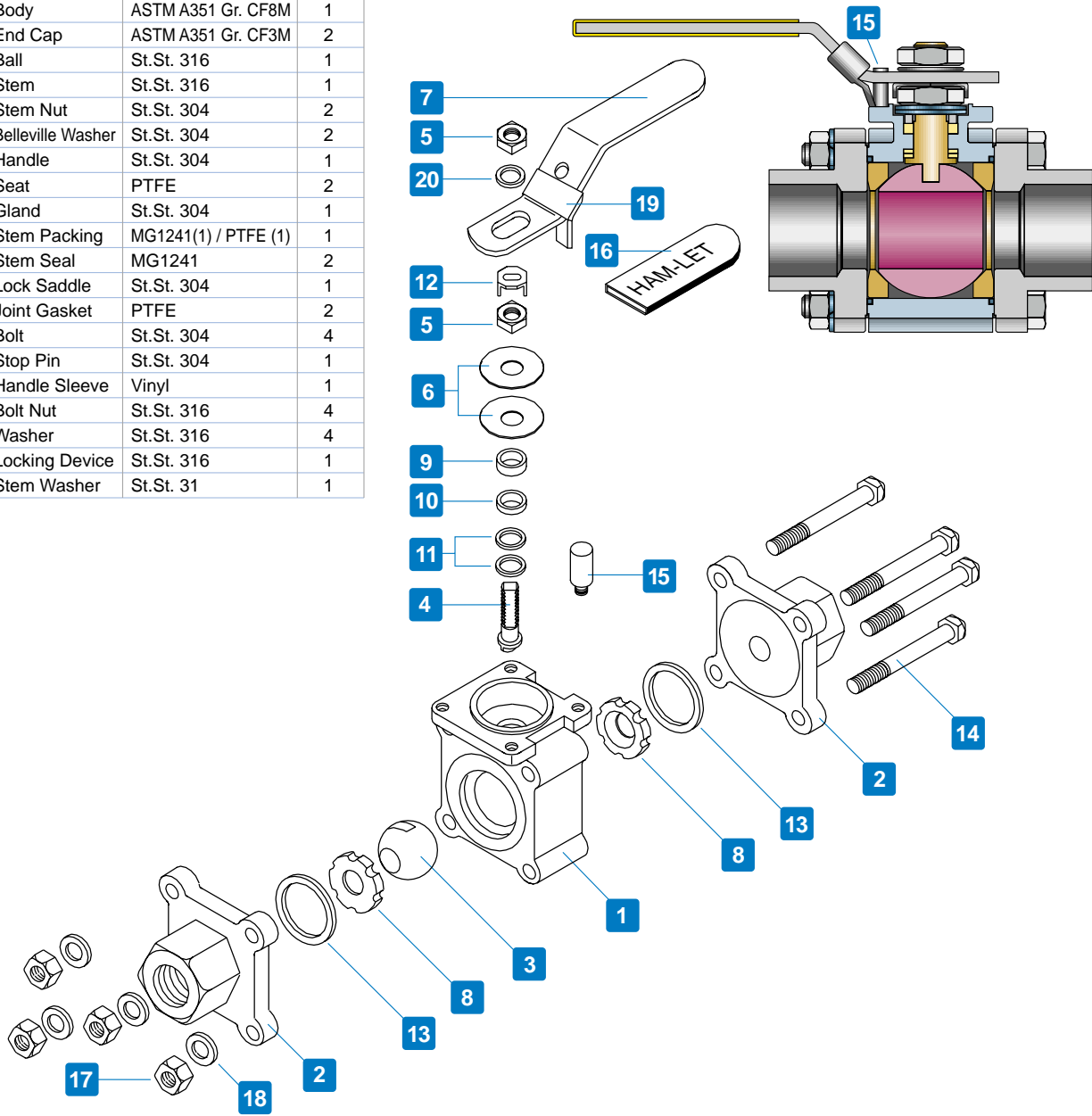
- Precision Investment cast body in CF8M stainless steel
- Precision Investment cast end caps in CF3M stainless steel
- Blow-out proof stem with Belleville washer design for long life stem sealing
- ISO 5211 Mounting Pad for automation
- Manual Operation with integral locking device
- Flow coefficient (Cv) from 1.2 to 24.0
- MAWP 3000 psig (204 Bar)
- MAWT 465°F (240°C)

GENERAL

The H500 Series is a moderate-pressure instrumentation ball valve for general service and instrumentation panels. The valves offer large ports for high flow, tight shutoff, long-life service and low operating torque. The H500 Series can be used for bi-directional flow and is rated to max. 3000 psig (204 Bar) and performs on/off service.

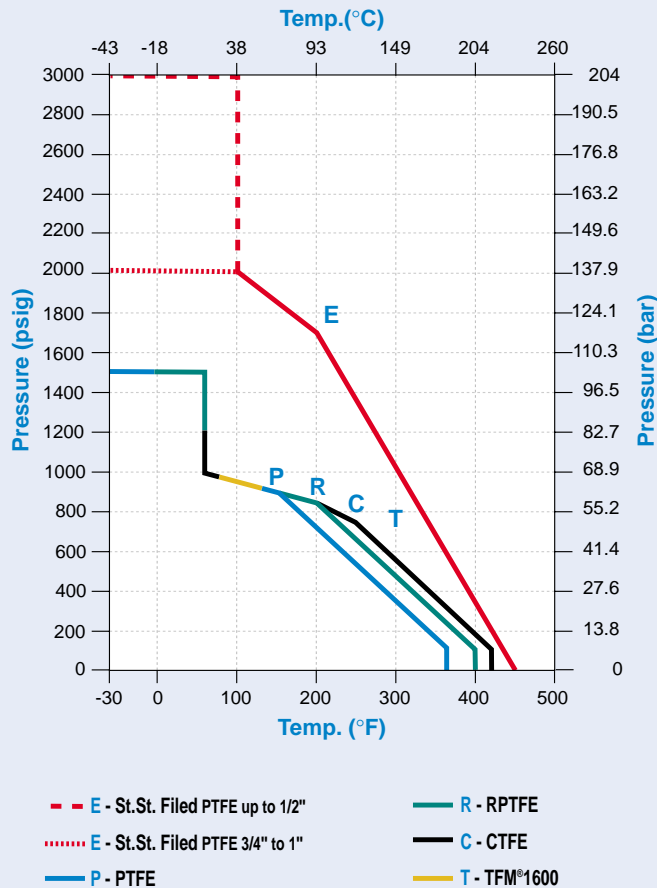
MATERIALS

No.	Part No.	Material	Qty
1	Body	ASTMA351 Gr. CF8M	1
2	End Cap	ASTMA351 Gr. CF3M	2
3	Ball	St.St. 316	1
4	Stem	St.St. 316	1
5	Stem Nut	St.St. 304	2
6	Belleville Washer	St.St. 304	2
7	Handle	St.St. 304	1
8	Seat	PTFE	2
9	Gland	St.St. 304	1
10	Stem Packing	MG1241(1) / PTFE (1)	1
11	Stem Seal	MG1241	2
12	Lock Saddle	St.St. 304	1
13	Joint Gasket	PTFE	2
14	Bolt	St.St. 304	4
15	Stop Pin	St.St. 304	1
16	Handle Sleeve	Vinyl	1
17	Bolt Nut	St.St. 316	4
18	Washer	St.St. 316	4
19	Locking Device	St.St. 316	1
20	Stem Washer	St.St. 31	1



PRESSURE AND TEMPERATURE

For Valve 1/4" to 1"



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.

RPTFE (15% Glass Fiber Filled PTFE) - Color (Off White)

Short stand glass fibers are used as a reinforcement in valve seats.

Adding reinforcements increases the pressure containing properties of PTFE by reducing its tendency to cold flow.

25% Carbon Fiber Filled PTFE (CTFE) - Color (Black)

Excellent seat material for steam applications, as well as high efficiency oil-based thermal fluids. It has a very good cycle life and withstands well to wear and tear. Chemical resistance is equal to other PTFE and filled PTFE products.

TFM[®]1600 - (PFA and PTFE composite) - Color (Bright White)

Excellent seat material for purity applications, very low residual material during operation. It has lower deformation ratio than PTFE, but higher pressure and temperature rating than PTFE. Chemical resistance is equal to PTFE material.

St.St. Powder Filled PTFE - Color (Gray)

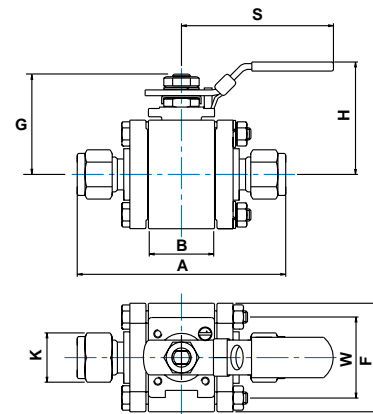
Excellent seat material for general applications to prevent over expansion and seat extrusion. It has lower deformation ratio than PTFE, but higher pressure and temperature rating than PTFE. Chemical resistance is equal to PTFE material.

3-PIECE BALL VALVES H500 SERIES



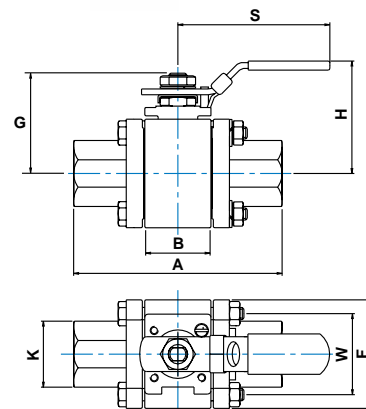
H500 LET-LOK - DIMENSIONS

Valve size		Orifice	Cv	A	B	F	G	H	K	S	W
mm	in										
6	1/4"	4.80	1.20	58.0	20.6	44.4	38.0	57.0	14.3	122	32.0
		0.189		2.283	0.811	1.748	1.496	2.244	0.563	4.803	1.260
10	3/8"	7.10	3.8	59.6	20.6	44.4	38.0	57.0	17.5	122	32.0
		0.280		2.346	0.811	1.748	1.496	2.244	0.689	4.803	1.260
12	1/2"	10.5	7.6	67.7	20.6	44.4	38.0	57.0	22.2	122	32.0
		0.413		2.665	0.811	1.748	1.496	2.244	0.874	4.803	1.260
20	3/4"	13.0	14.0	71.7	24.6	50.4	40.0	60.0	28.6	122	38.0
		0.512		2.823	0.968	1.984	1.575	2.362	1.126	4.803	1.496
25	1"	19.5	24.0	121.9	31.8	60.0	56.0	75.0	38.1	151	52.0
		0.768		4.8	1.252	2.362	2.205	2.952	1.500	5.945	2.047



H510 FEMALE NPT / BSPT

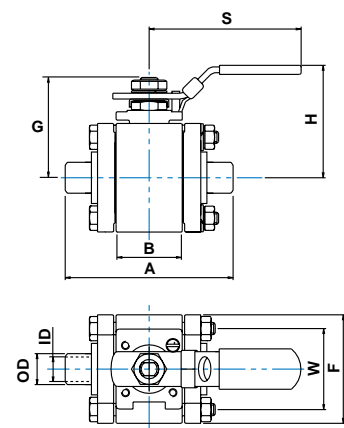
Valve size	Orifice	Cv	A	B	F	G	H	K	S	W
in										
1/4"	10.5	5.10	65.6	20.6	44.4	38.0	57.0	27.0	122	32.0
	0.413		2.283	0.811	1.748	1.496	2.244	1.063	4.803	1.260
3/8"	10.5	5.10	68.6	20.6	44.4	38.0	57.0	27.0	122	32.0
	0.413		2.346	0.811	1.748	1.496	2.244	1.063	4.803	1.260
1/2"	10.5	5.10	73.6	20.6	44.4	38.0	57.0	27.0	122	32.0
	0.413		2.665	0.811	1.748	1.496	2.244	1.063	4.803	1.260
3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	33.0	122	38.0
	0.512		2.823	0.968	1.984	1.575	2.362	1.30	4.803	1.496
1"	19.5	24.0	121.9	31.8	60.0	56.0	75.0	42.0	151	52.0
	0.768		4.8	1.252	2.362	2.205	2.952	1.653	5.945	2.047



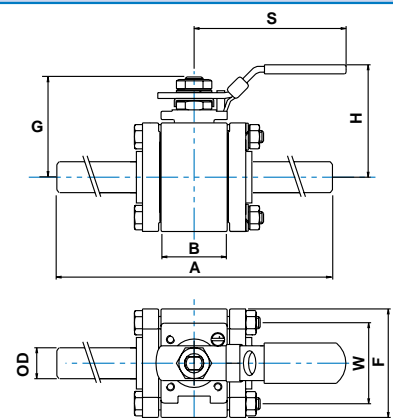
3-PIECE BALL VALVES H500 SERIES



H580 PIPE BUTTWELD													
Valve size	Orifice	Cv	A	B	F	G	H	OD	Schedule			S	W
									10 ID	40 ID	80 ID		
1/4"	7.1	3.8	65.6	20.6	44.4	38.0	57.0	13.7	10.4	9.24	7.7	122	32.0
	0.280		2.283	2.283	1.748	1.496	2.244	0.539	0.410	0.364	0.302	4.803	1.260
3/8"	10.5	7.60	68.6	20.6	44.4	38.0	57.0	17.1	13.85	12.5	10.75	122	32.0
	0.413		2.346	2.346	1.748	1.496	2.244	0.673	0.545	0.492	0.423	4.803	1.260
1/2"	10.5	7.60	73.6	20.6	44.4	38.0	57.0	21.3	17.1	15.8	13.9	122	32.0
	0.413		2.665	2.665	1.748	1.496	2.244	0.838	0.674	0.622	0.546	4.803	1.260
3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	26.7	22.45	20.9	18.85	122	38.0
	0.512		2.823	2.823	1.984	1.575	2.362	1.051	0.884	0.824	0.742	4.803	1.496
1"	19.5	24.0	97.8	31.8	60.0	56.0	75.0	33.4	27.85	26.64	24.3	151	52.0
	0.768		3.523	3.523	2.362	2.205	2.952	1.315	1.097	1.049	0.956	5.945	2.047



H580 EXTENDED AND SHORT TUBE BUTTWELD														
Valve size	Orifice	Cv	A		B	F	G	H	K	S	W			
			Extended	Short								mm	in	
6	1/4"	4.80	1.20	-	52.6	20.6	44.4	38.0	57.0	6.35	122	32.0		
		0.189		-	2.07	0.811	1.748	1.5	2.244	0.25	4.8	1.26		
10	3/8"	7.1	3.8	-	52.6	20.6	44.4	38.0	57.0	9.5	122	32.0		
		0.280		-	2.07	0.811	1.748	1.5	2.244	0.374	4.8	1.26		
12	1/2"	10.4	7.6	140	52.6	20.6	44.4	38.0	57.0	12.7	122	32.0		
		0.409		5.5	2.07	0.811	1.748	1.5	2.244	0.5	4.8	1.26		
20	3/4"	13.0	14.0	150	56.6	24.6	50.4	40.0	60.0	19.1	122	38.0		
		0.512		5.9	2.228	0.968	1.984	1.57	2.362	0.75	4.8	1.496		
25	1"	21.1	24.0	161	66.8	31.8	60.0	56.0	75.0	25.4	151	52.0		
		19.5		6.338	2.629	1.25	2.362	2.20	2.952	1	5.944	2.047		



VALVE TORQUE KGF CM (LBF X INCH)		
Valve size	Break-away Torque	Running Torque
1/4"	30 (26)	15 (13)
3/8"	30 (26)	15 (13)
1/2"	30 (26)	15 (13)
3/4"	35 (30.4)	22 (19.1)
1"	45 (39)	25 (21.7)

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. Initial packing adjustment is recommended after installation and prior to start-up. Please find more information at H500 under nstallation instruction.

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

TESTING

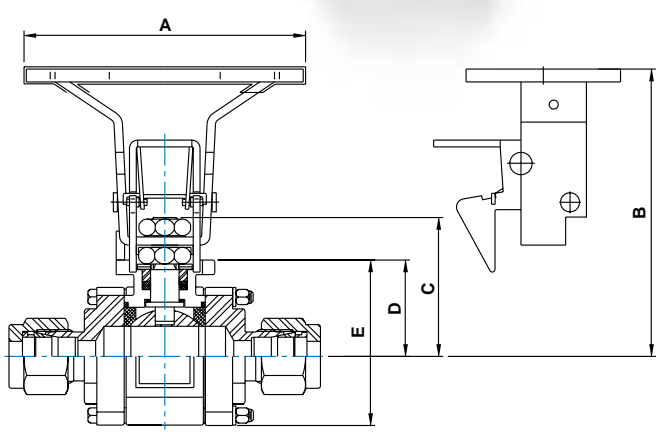
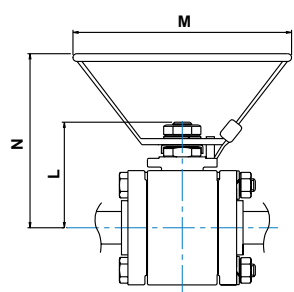
The H500 Series Ball Valve designs have been tested for Proof and Burst. Every H500 Ball Valve is factory tested with nitrogen at 1000 psi (69 bar). Maximum allowable leak age across seats is 0.1 std cc/min.


CLEANING & PACKAGING

HAM-LET's H500 Ball Valve is treated with HAM-LET Passivation Cleaning and Packaging (Procedure 8075). Oxygen Cleaning and Packaging (Procedure 8055) is available as an option.

OVAL HANDLE					
Size	L	M	N		
1/4";3/8";1/2";3/4"	38.0	85.0	65		
	1.50	3.346	2.560		
1"	56.0	105.0	85		
	2.20	4.134	3.346		

H500 GRIP HANDLE (OVAL)					
Size	A	B	C	D	E
1/4"	104	94.5	40.5	27.5	49.5
3/8"	104	94.5	40.5	27.5	49.5
1/2"	104	94.5	40.5	27.5	49.5
1/4"	104	98	44	30.5	56



ORDERING INFORMATION						
H5	00	SS	L	1/4	P	OPTIONAL:
						
Valve Series	Series Designator	Structure Material	End Connection	Size	Seat Material	Handle
	00 - LET-LOK® 10 - Female End 80 - Male End	Body: ASTM A351 Gr. CF8M End cups: ASTM A351 Gr. CF3M	L - LET-LOK® HL - ONE-LOK® N - NPT R - BSPT TSW - Tube socket weld TBW - Tube butt weld XTBW - Extended Tube butt weld PSW - Pipe socket weld PBW1 - Pipe butt weld sch10 PBW4 - Pipe butt weld sch40 PBW8 - Pipe butt weld sch80	1/4" 6 mm 3/8" 10 mm 1/2" 12 mm 3/4" 20 mm 1" 25 mm	P - PTFE E - Extended Temperature Seat & Seal	OV - Oval Handle GR - Grip Handle

Standard is with St.St. 304 banded handle.

ORDERING INFORMATION: SPARE-PARTS KIT / REPAIR KIT

A Spare-Parts kit is available for each valve. The kit includes gaskets, seats, stem packing and stem seal. To order a Spare-Parts Kit, use the following format:

Z500 - **1/4** - **P**

End Connection Size	Seat Material
6mm 1/4"	P-PTFE
10mm 3/8"	R-RPTFE
12mm 1/2"	C-CTFE
20mm 3/4"	T-TFM®1600
25mm 1"	E-St.St.Filled PTFE

Warning

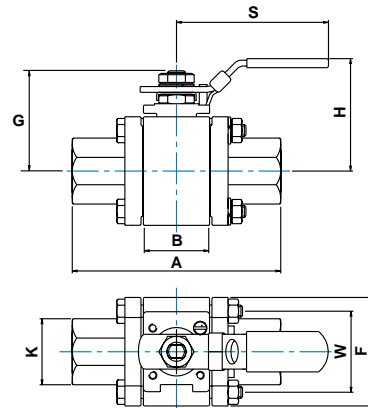
Select the right component for safety's sake: The total design of the system must be taken into consideration when selecting components in order to ensure that your HAM-LET products provide safe, trouble-free operation. It is the responsibility of the system designer and the user to consider the compatibility 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.

3-PIECE BALL VALVES H500 SERIES



H510 TUBE SOCKET WELD

Valve size		Orifice	Cv	A	B	F	G	H	K	S	W
mm	in										
6	1/4"	4.80	1.20	65.6	20.6	44.4	38.0	57.0	27.0	122	32.0
		0.189		2.283	0.811	1.748	1.496	2.244	1.063	4.803	1.260
10	3/8"	7.10	3.80	68.6	20.6	44.4	38.0	57.0	27.0	122	32.0
		0.280		2.346	0.811	1.748	1.496	2.244	1.063	4.803	1.260
12	1/2"	10.5	7.60	73.6	20.6	44.4	38.0	57.0	27.0	122	32.0
		0.413		2.665	0.811	1.748	1.496	2.244	1.063	4.803	1.260
20	3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	33.0	122	38.0
		0.512		2.823	0.968	1.984	1.575	2.362	1.30	4.803	1.496
25	1"	19.5	24.0	121.9	31.8	60.0	56.0	75.0	42.0	151	52.0
		0.768		4.8	1.252	2.362	2.205	2.952	1.653	5.945	2.047



H510 PIPE SOCKET WELD

Valve size		Orifice	Cv	A	B	F	G	H	K	S	W
in											
1/4"	4.80	1.20	70	20.6	44.4	38.0	57.0	13.7	122	32.0	
	0.189		2.756	0.811	1.748	1.496	2.244	0.54	4.803	1.260	
3/8"	7.10	3.80	70	20.6	44.4	38.0	57.0	17.1	122	32.0	
	0.280		2.756	0.811	1.748	1.496	2.244	0.673	4.803	1.260	
1/2"	10.5	7.60	70	20.6	44.4	38.0	57.0	21.3	122	32.0	
	0.413		2.756	0.811	1.748	1.496	2.244	0.838	4.803	1.260	
3/4"	13.0	14.0	74	24.6	50.4	40.0	60.0	27.1	122	38.0	
	0.512		2.913	0.968	1.984	1.575	2.362	1.067	4.803	1.496	
1"	19.5	24.0	99	31.8	60.0	56.0	75.0	34.1	151	52.0	
	0.768		3.9	1.252	2.362	2.205	2.952	1.342	5.945	2.047	

