

H500 SERIES

3 PIECE BALL VALVES



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 (204Bar)
- 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 shut-off, 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	ASTM A351 Gr. CF8M	1
2	End Cap	ASTM A351 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. 301	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

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.

TESTING:

The H500 series Ball Valve designs have been tested for Proof, Burst and Leakage.

Every H500 Ball Valve is factory tested with nitrogen at 1000psi (69 bar). Maximum allowable leak across seats is 0.1 std cc/min.

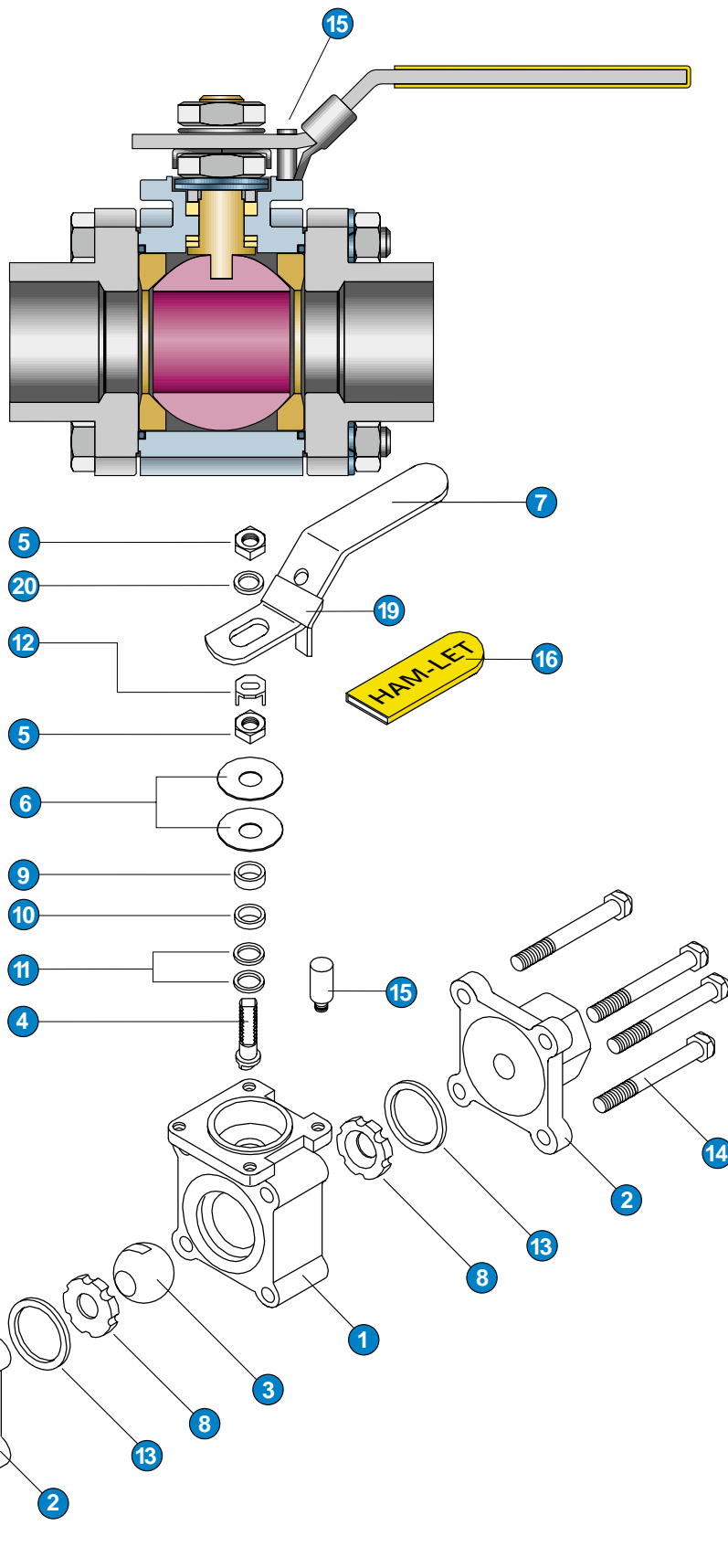
No leakage is allowed for shell testing.

PACKING ADJUSTMENT

Due to the varied service applications of the valve, packing adjustment may be occasionally necessary. Initial adjustment is recommended after installation and prior to start-up.

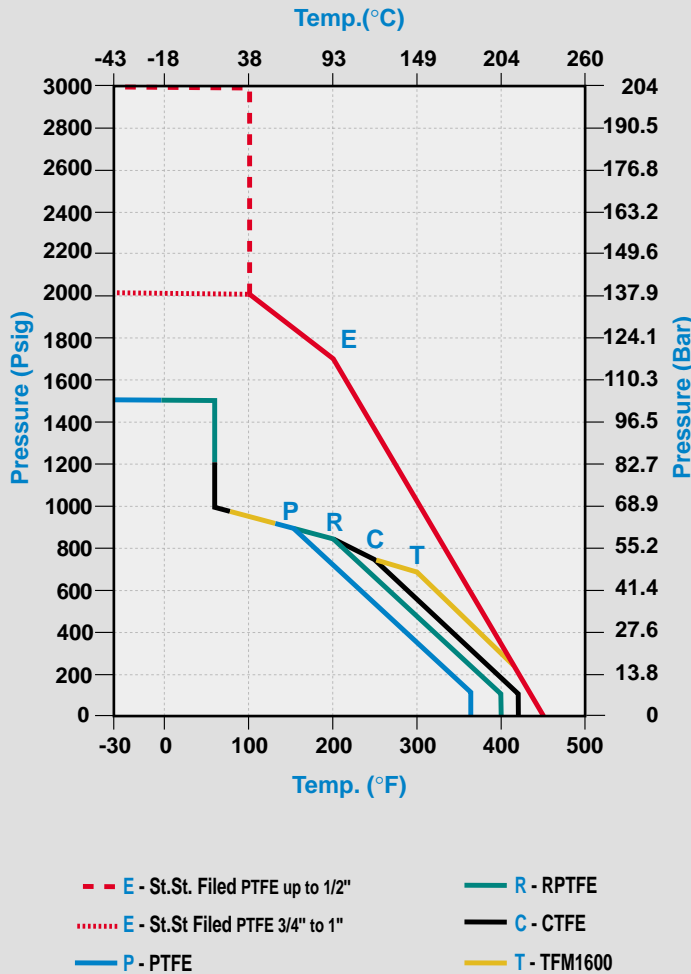
Please find more information at installation instruction chapter.

Ham-Let Ball Valves designed to be operated in fully closed or fully open position.



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 (Of 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. Chemicals resistance is equal to other PTFE and filled PTFE products.

TFM1600 - (PFA and PTFE composite) - Color (Bright White)

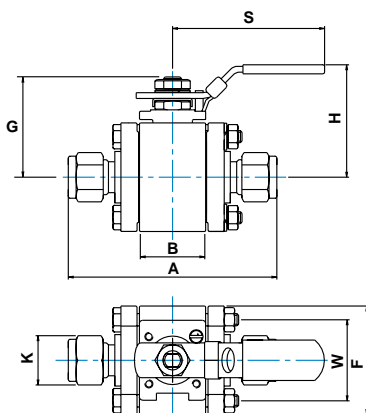
Excellent seat material for purity applications, very low residual material during operation. It has lower deformation ratio than PTFE, but higher pressure and temperature rating than PTFE. Chemical resistance is equal to PTFE material.

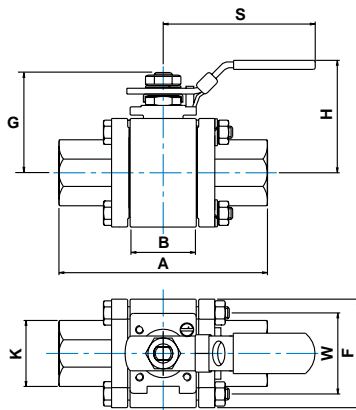
St.St Powder Filled PTFE - Color (Gray)

Excellent seat material for general applications, prevent over expention 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.

Dimensions
H500 LET-LOK

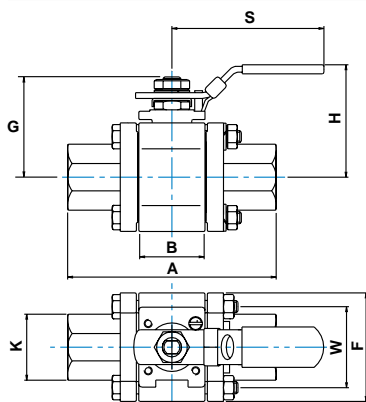
Valve size		Orifice	Cv	A	B	F	G	H	K	S	W
mm	inch										
6	1/4"	4.80	1.20	58.0	20.6	44.4	38.0	57.0	14.3	122	32.0
		0.189		2.283	0.811	1.748	1.496	2.244	0.563	4.803	1.260
10	3/8"	7.10	3.8	59.6	20.6	44.4	38.0	57.0	17.5	122	32.0
		0.280		2.346	0.811	1.748	1.496	2.244	0.689	4.803	1.260
12	1/2"	10.5	7.6	67.7	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





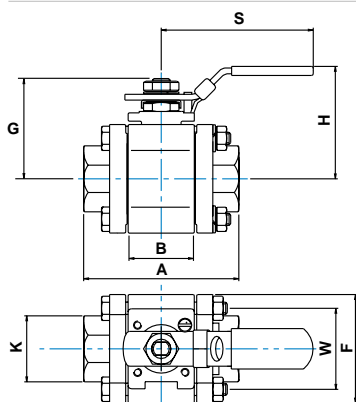
H510 NPT FEMALE

Valve size inch	Orifice	Cv	A	B	F	G	H	K	S	W
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



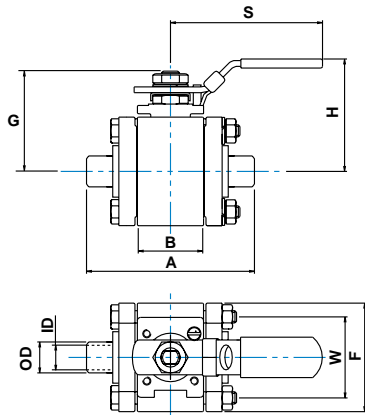
H500 SOCKET WELD TUBE

Valve size mm	Valve size inch	Orifice	Cv	A	B	F	G	H	K	S	W
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



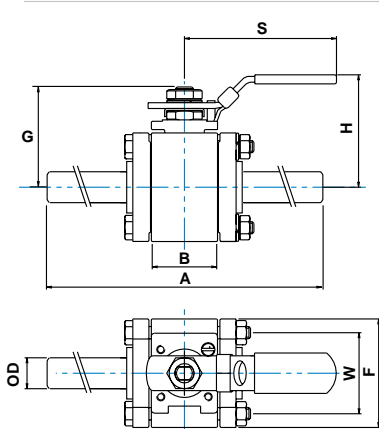
H500 SOCKET WELD PIPE

Valve size mm	Valve size inch	Orifice	Cv	A	B	F	G	H	K	S	W
6	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
10	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
12	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
20	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
25	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



H500 PIPE BUTTWELD

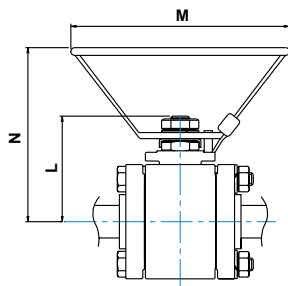
Valve size	Orifice	Cv	Schedule										
			A	B	F	G	H	OD	10 ID	40 ID	80 ID	S	W
1/4"	7.1	3.8	65.6	20.6	44.4	38.0	57.0	13.7	10.4	9.24	7.7	122	32.0
	0.280		2.283	2.283	1.748	1.496	2.244	0.539	0.410	0.364	0.302	4.803	1.260
3/8"	10.5	7.60	68.6	20.6	44.4	38.0	57.0	17.1	13.85	12.5	10.75	122	32.0
	0.413		2.346	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



EXTENDED AND SHORT TUBE BUTTWELD

size		Orifice	Cv	A		B	F	G	H	K	S	W
mm	inch			Extended	Short							
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

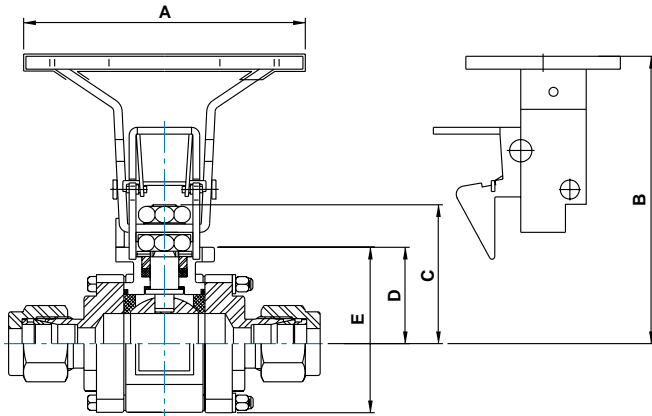
Oval Handle



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

VALVE TORQUE KGF
CM (LBF X INCH)


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)



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	BV	P	OPTIONAL: 
Valve Series	Series Designator	Structure Material	End Connection	Size	Seat Material	Handle
	00 - Let-Lok 10 - Female End	Body: ASTM A351 Gr. CF8M End cups: ASTM A351 Gr. CF3M	L - Let-Lok N - Female NPT BU - ButtWeld SW - Socket weld	1/4" 6mm 3/8" 10mm 1/2" 12mm 3/4" 20mm 1" 25mm	P - PTFE E - Extended Temperature Seat & Seal	P - Oval Handle G - Grip Handle

Spare Parts Kit - Repair Kit

Spare parts kit is available for each valve.
The kit includes Gaskets, Seats, Stem Packing, Stem Seal,
To order a spare parts kit, use the following format:

H500	-	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 - TFM1600
25mm 1"				E - St.St.Filled PTFE

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.

Standard is with
St.St. 304 banded
handle