

H 5 0 0 S E R I E S

3 P I E C E B A L L V A L V E S



Description

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.

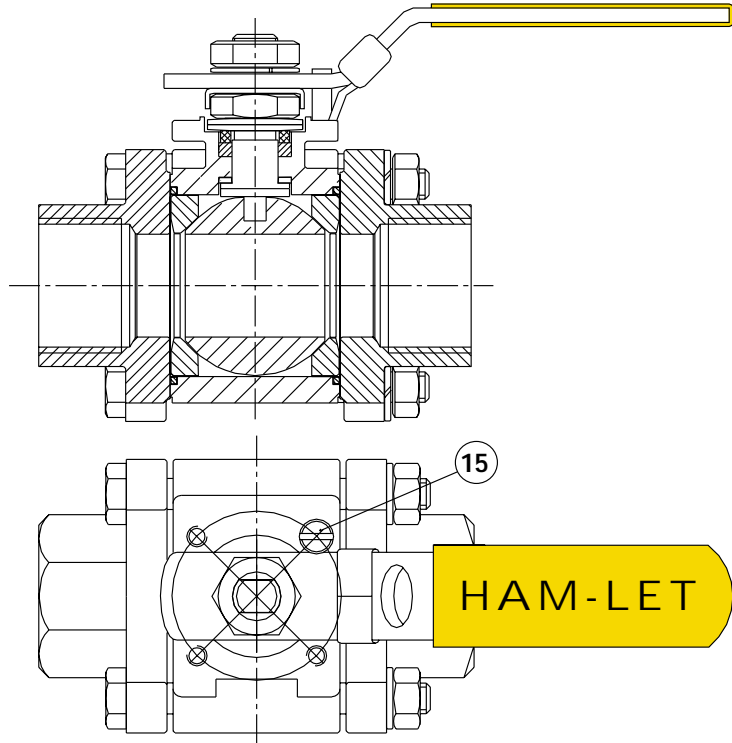
ISO 5211 Mounting Pad for automation.

Manual Operation with integral locking device.

Body MAWP 2000 psig @ 70 deg. °F.

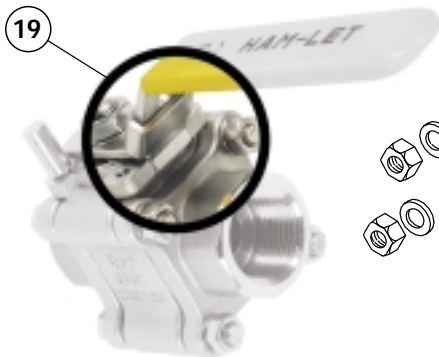
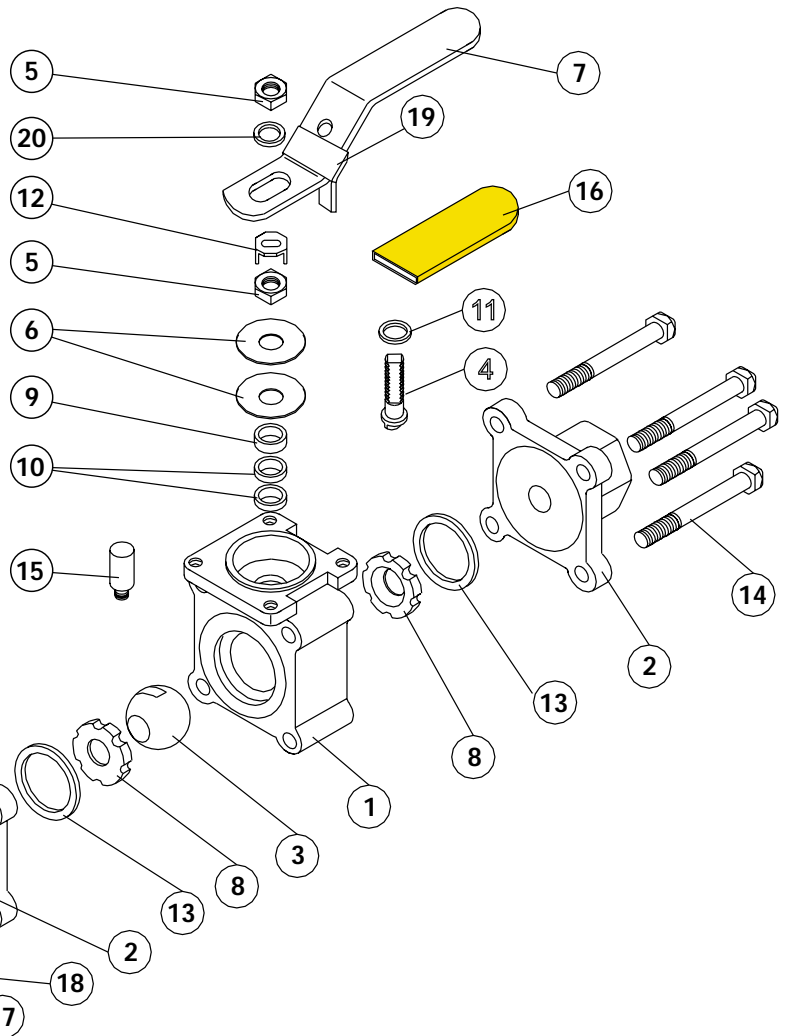
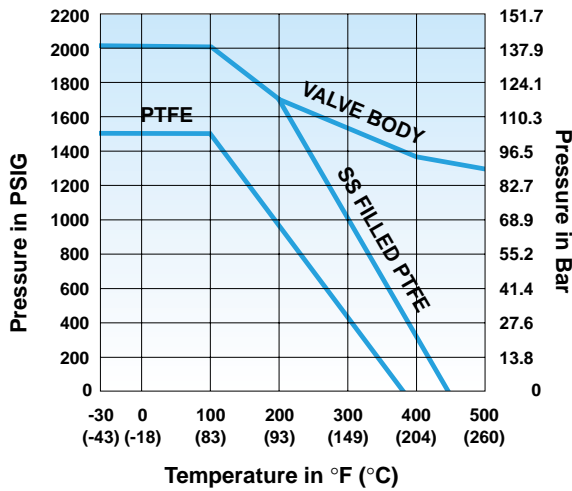
Materials of Construction

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)	2
11	Stem Seal	MG1241	1
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. 316	1



Pressure and Temperature

for Valve 1/4" to 1"



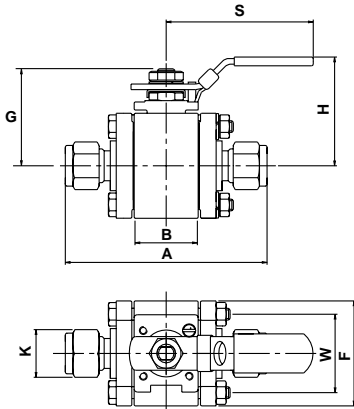
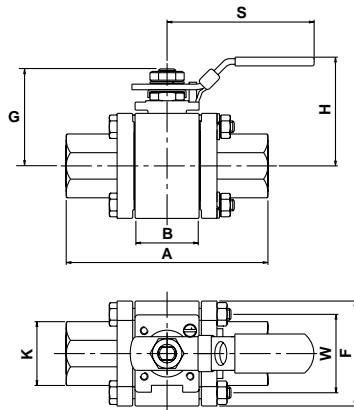


TABLE OF DIMENSIONS

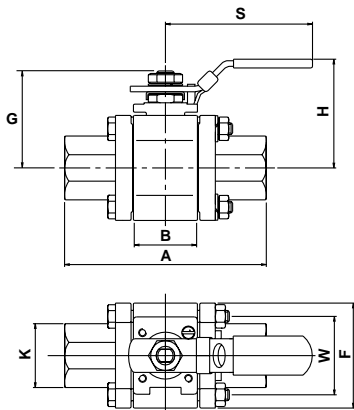
H500 LET-LOK

Valve size		Port DIA	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
10	3/8"	7.10	3.8	59.6	20.6	44.4	38.0	57.0	17.5	122	32.0
12	1/2"	10.4	7.6	67.7	20.6	44.4	38.0	57.0	22.2	122	32.0
20	3/4"	13.0	14.0	71.7	24.6	50.4	40.0	60.0	28.6	122	38.0
25	1"	19.5	24.0	89.5	31.8	60.0	56.0	75.0	38.1	151	52.0



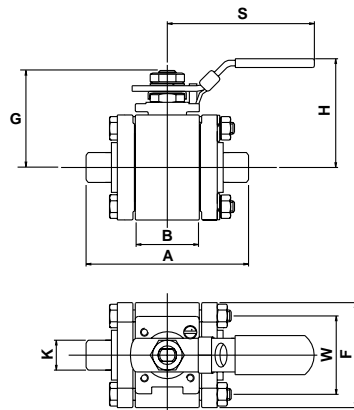
H500 NPT FEMALE

Valve size		Port DIA	Cv	A	B	F	G	H	K	S	W
mm	inch										
6	1/4"	10.5	5.10	65.6	20.6	44.4	38.0	57.0	27.0	122	32.0
10	3/8"	10.5	5.10	68.6	20.6	44.4	38.0	57.0	27.0	122	32.0
12	1/2"	10.5	5.10	73.6	20.6	44.4	38.0	57.0	27.0	122	32.0
20	3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	33.0	122	38.0
25	1"	19.5	24.0	97.8	31.8	60.0	56.0	75.0	42.0	151	52.0



H500 SOCKET WELD

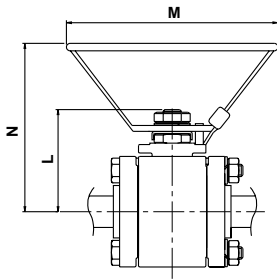
Valve size		Port DIA	Cv	A	B	F	G	H	K	S	W
mm	inch										
6	1/4"	4.80	1.20	65.6	20.6	44.4	38.0	57.0	27.0	122	32.0
10	3/8"	7.10	3.80	68.6	20.6	44.4	38.0	57.0	27.0	122	32.0
12	1/2"	10.5	7.60	73.6	20.6	44.4	38.0	57.0	27.0	122	32.0
20	3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	33.0	122	38.0
25	1"	19.5	24.0	97.8	31.8	60.0	56.0	75.0	42.0	151	52.0



H500 BUTT WELD

Valve size		Port DIA	Cv	A	B	F	G	H	K	S	W
mm	inch										
6	1/4"	7.1	3.80	65.6	20.6	44.4	38.0	57.0	13.7	122	32.0
10	3/8"	10.5	7.60	68.6	20.6	44.4	38.0	57.0	17.1	122	32.0
12	1/2"	10.5	7.60	73.6	20.6	44.4	38.0	57.0	21.3	122	32.0
20	3/4"	13.0	14.0	77.6	24.6	50.4	40.0	60.0	26.7	122	38.0
25	1"	19.5	24.0	97.8	31.8	60.0	56.0	75.0	33.4	151	52.0

Optional Oval Handle



SIZE	L	M	N
1/4";3/8";1/2";3/4"	38.0	85.0	65
1"	56.0	105.0	85

Valve Torque (Kgf - cm)

size	Break-Away Torque	Running Torque
1/4"	30	15
3/8"	30	15
1/2"	30	15
3/4"	35	22
1"	45	25

Sizing Equations

The Cv factor is a flow coefficient expressing the rate of flow in U.S. gallons per minute of water at 60°F (16°C) with a pressure drop of 1 psi across the valve. The flow depends on the inlet and outlet pressures, temperature, specific gravity and the Cv coefficient.

For Liquids at 60°F

$$Cv = \frac{USGPM}{\sqrt{\frac{(\Delta P)}{(SG)}}} \text{ OR } USGPM = Cv \sqrt{\frac{(\Delta P)}{(SG)}}$$

Where:

- ΔP = P₁ - P₂ in PSI
- P₁ = Inlet pressure in PSIA
- P₂ = Outlet pressure in PSIA
- USGPM = Flow in US gallons per minute
- SG = Specific gravity of liquid (water = 1at 60°F)

For Gas at 70°F

$$Cv = \frac{SCFH}{1360 \sqrt{\frac{(\Delta P)(P_1)}{(460+T)(SG)}}} \text{ OR } SCFH = 1360Cv \sqrt{\frac{(\Delta P)(P_1)}{(460+T)(SG)}}$$

Where:

- ΔP = P₁ - P₂ in PSI
- P₁ = Inlet pressure in PSIA
- P₂ = Outlet pressure in PSIA
- SCFH = Flow in standard cubic feet per hour
- SG = Specific gravity of gas (air = 1at 70°F (21°C) and 14.7 PSIA (1 ATM.)
- T = Temperature in °F

Note: Maximum ΔP for compressible fluids is $\frac{(P_1)}{2}$

How to Order

H500	SS	L	1/4	P	Ø
Series Designator	Material Designator	Ends Connections	Size	Designator	Options
H510 Female Ends	SS- 316SS	<ul style="list-style-type: none"> L = Let-Lok N = Female NPT T = Sanitary BU = Butt weld SW = Socket weld 	<ul style="list-style-type: none"> 1/4" 3/8" 1/2" 3/4" 1" 	<ul style="list-style-type: none"> P = PTFE E = Extended Temperature seat & seal 	<ul style="list-style-type: none"> O = Oval handle R = Regular