



FORGED STEEL VALVES



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Our Company

Founded in 1999, Hart Valve has continuously produced high quality valves for Industrial and commercial applications including:

Oil refining, chemical processing, power generation, mining, paper, pharmaceutical processes, as well as, commercial and military shipbuilding.

Product improvement exceeding the latest environmental standards are constantly being implemented. Recently we initiated a totally contained bonnet gasket design, which, with our standard stem packing, exceeds most fugitive emission requirements.

Hart' valves are designed, manufactured and tested to meet and exceeds all applicable specifications to which they are constructed. Our goal is to produce high quality valves, fully traceable, at prices competitive in the global marketplace and deliveries to match the "just in time" requirements of today's business world, In order to accomplish this goal, we maintain large inventories of finished products to support our distribution network.

All products are completely traceable to chemical, physical and pressure test records. Additional non-destructive testing is offered where specified.

We have years of experience working on special requirements: electric, hydraulic or pneumatic automation, gear operators emergency shut-off valves, soft seats and discs, by-pass valve installations and extended bonnets.

We believe that Hart valve has a record of quality equal to or better than any in the valve industry. We are a privately owned company whose accomplishments have been achieved by the dedication and commitment of our employees to provide a standard of excellence in all our products for you, our present and future customers.



Figure Number

Code table 1

BONNET TYPE

F	BB
W	WB
Y	Y-PATTERAN
PS	PRESSURE SEAL
BS	BELLOW SEAL
EX	EXTENDED BODY
YS	Y-STRAINER

BODY MATERIAL

DEF.	A105N
A31	ALLOY31
F2	A350 LF2
F3	A350 LF3
F5	A182 F5
F6	A182 F6
F9	A182 F9
F11	A182 F11
F22	A182 F22
F51	A182 F51
F91	A182 F91
304	A182 F304
304L	A182 F304L
316	A182 F316
316L	A182 F316L
321	A182 F321
347	A182 F347
HB	HASTELLOY B
HC	HASTELLOY C
I800	INCONEL 800
I825	INCONEL 825
T	TITANIUM

Code table 2

ANSI CLASS

1	150
3	300
6	600
8	800
9	900
10	1000
15	1500
25	2500

END CONNECTION

T	NPT THREADED
W	BUTT WELD
SW	SOCKET WELD
RJ	RING JOINT
F	RAISED FACE
S	SPECIAL

SAMPLE

Code Table:

1

2

3

4

Sample Valve:

PS

150

-

1

Result:

PRESSURE
SEAL

Class
1500LB.

REDUCED
PORT

GATE
VALVE

Code table 3

BORE TYPE

-

REDUCED

7

FULL

BODY MATERIAL

1

410

2

304

3

310

4

410HF

5

HF

6

HFS

7

MONEL

8

316

9

MONEL HF

10

316HFS

11

ALLOY20

12

ALLOY20HFS

13

304HF

14

316HF

15

347HF

16

ALLOY20HF

Code table 4

BORE TYPE

1

GATE

2

GLOBE

3

PISTON CHECK

4

SWING CHECK

5

BALL CHECK

6

Y-STRAINER

7

NEEDLE

BODY MATERIAL

C

CRYOGENIC

J

JACKETED

N

NUCLEAR

Forged Steel Gate Valve

Hart valves are available in three bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.
2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.
3. Pressure Seal Bonnet, with a threaded and pressure seal bonnet joint.



Gate valve design Construction and Specifications:

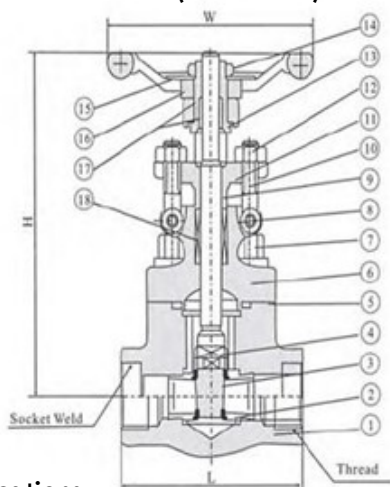
Hart valves confirm to API 602, BS5352, and ASME B 16.34.
They are tested according to API 598, and marked as per MSS SP-25

Construction is as follows:

- ◆ Full Port or Standard Port
- ◆ Outside Screw and Yoke (OS&Y)
- ◆ Two piece self aligning packing gland
- ◆ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet or threaded and pressure seal bonnet.
- ◆ Integral backseat
- ◆ Socket Weld Ends to ASME B16.11
- ◆ Screwed Ends (NPT) to ANSI/ASME B1.20.1

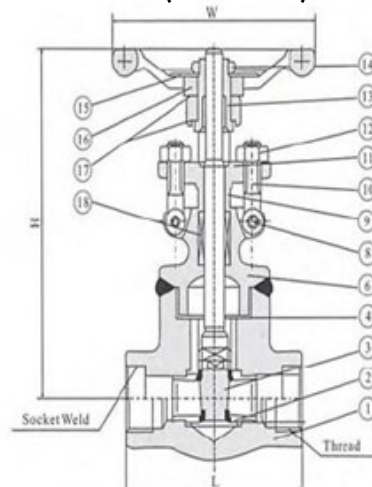
F801 (Conv.Port)

F871 (Full. Port)



W801 (Conv.Port)

W871 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Seat Ring	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
5	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
8	Pin	A276 410	A276 410	A182 F304	A182 F304
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
11	Gland Flange	A105N	A182 F22	A182 F304(L)	A182 F316(L)
12	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
13	Yoke Nut	A 276 410 & 420	A 276 410 & 420	A 276 410 & 420	A 276 410 & 420
14	H.W. Lock Nut	1035+Zin	1035+Zin	A194 8	A194 8M
15	Name Plate	304	304	304	304
16	Hand Wheel	A197	A197	A197	A197
17	Bearing Gasket	A473 431	A473 431	A473 431	A473 431
18	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
L	79	79	92	111	120	120	140	170	180
H (OPEN)	166	166	169	196	223	251	290	333	370
W	100	100	100	125	160	160	180	200	220
D	8	10.5	13.5	18	24	29	36.5	45	51

Forged Steel Gate Valve

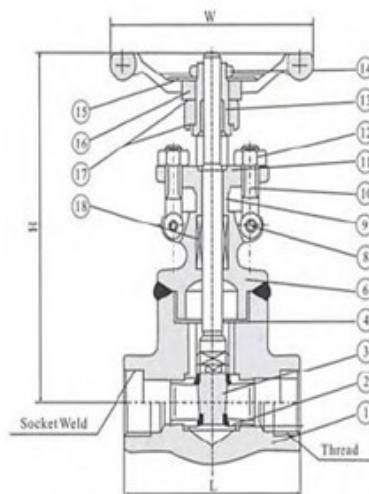
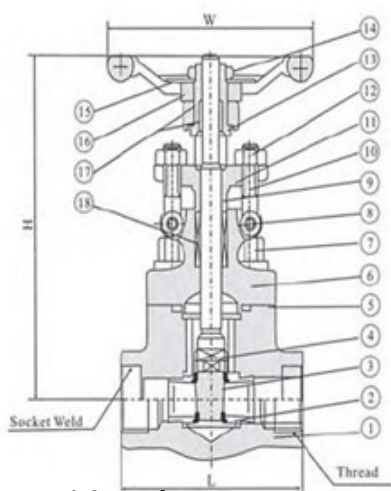
Class 1500lb

F15001 (Conv.Port)

W15001 (Conv.Port)

F15071 (Full. Port)

W15071 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Seat Ring	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
5	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
8	Pin	A276 410	A276 410	A182 F304	A182 F304
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
11	Gland Flange	A105N	A182 F22	A182 F304(L)	A182 F316(L)
12	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
13	Yoke Nut	A 276 410 & 420	A 276 410 & 420	A 276 410 & 420	A 276 410 & 420
14	H.W. Lock Nut	1035+Zin	1035+Zin	A194 8	A194 8M
15	Name Plate	304	304	304	304
16	Hand Wheel	A197	A197	A197	A197
17	Bearing Gasket	A473 431	A473 431	A473 431	A473 431
18	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	92	111	111	120	120	140	178	180
H (OPEN)	191	191	192	219	243	296	316	370
W	100	125	125	160	160	180	200	220
D	8	10.5	13.5	18	24	29	36.5	45

Forged Steel Globe Valve

Hart valves are available in three bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.
2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.
3. Pressure Seal Bonnet, with a threaded and pressure seal bonnet joint.



Globe valve design Construction and Specifications:

Hart valves confirm to API 602, BS5352, and ASME B 16.34.
They are tested according to API 598, and marked as per MSS SP-25

Construction is as follows:

- ♦ Full Port or Standard Port
- ♦ Outside Screw and Yoke (OS&Y)
- ♦ Two piece self aligning packing gland
- ♦ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet or threaded and pressure seal bonnet.
- ♦ Integral backseat
- ♦ Socket Weld Ends to ASME B16.11
- ♦ Screwed Ends (NPT) to ANSI/ASME B1.20.1

Forged Steel Globe Valve

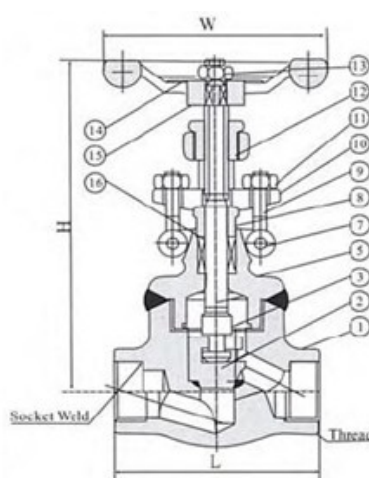
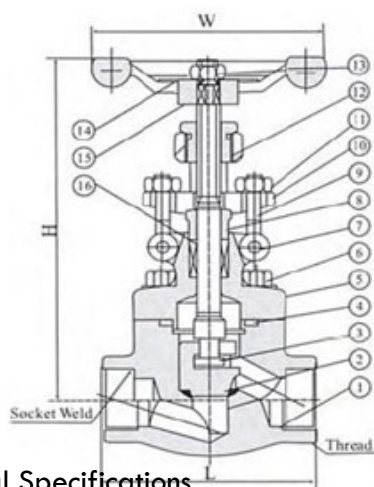
Class 800lb

F802 (Conv.Port)

W802 (Conv.Port)

F872 (Full. Port)

W872 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304	304	304	304
15	Hand Wheel	A197	A197	A197	A197
16	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

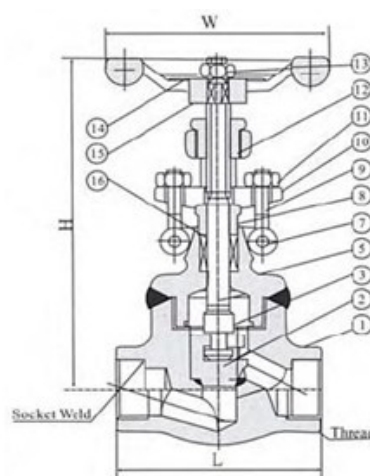
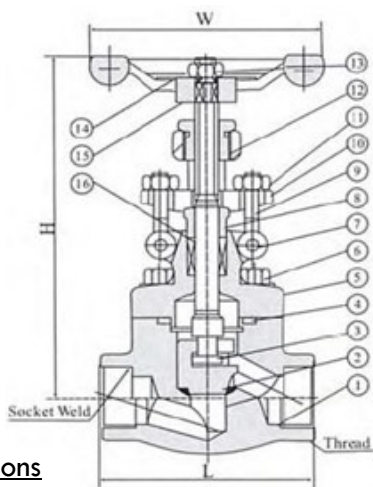
Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	79	79	92	111	120	152	172	200
H (OPEN)	164	164	164	203	224	260	300	355
W	100	100	100	125	160	160	180	200
D	7	9	13	17.5	23	30	35	46

F15002 (Conv.Port)

W15002 (Conv.Port)

F15072 (Full. Port)

W15072 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304	304	304	304
15	Hand Wheel	A197	A197	A197	A197
16	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

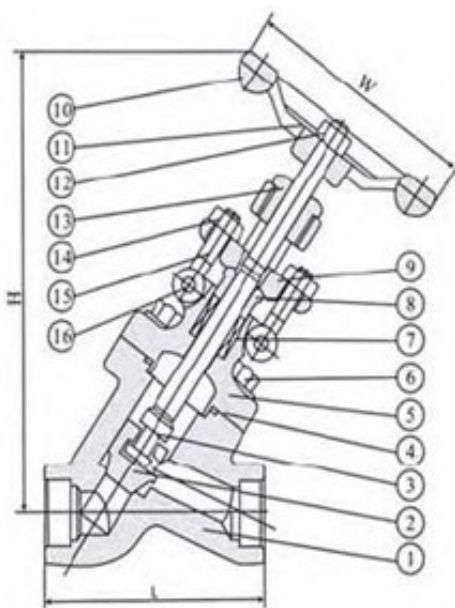
Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	92	111	111	120	152	172	200	220
H (OPEN)	171	207	207	240	258	330	355	370
W	100	125	125	160	160	180	200	240
D	7	12	15	20	28	32	40	45

Forged Steel Globe Valve Y-Pattern

Class 800lb

Y802 (Conv.Port)

Y872 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304	304	304	304
15	Hand Wheel	A197	A197	A197	A197
16	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

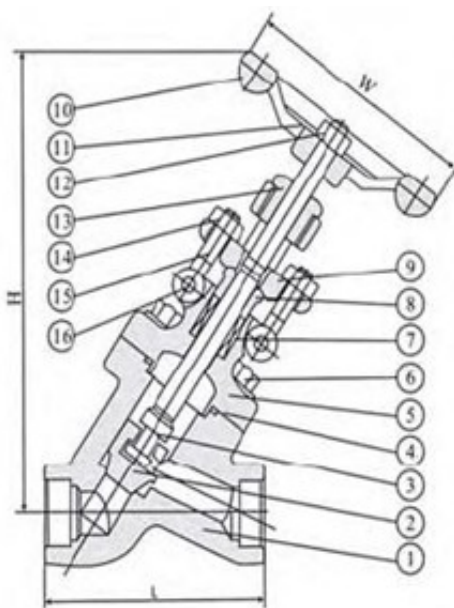
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	98	98	98	111	140	140	155	170
H (OPEN)	180	180	180	188	280	280	295	355
W	100	100	100	125	160	160	180	200
D	7	9	13	17.5	23	30	35	46

Y15002 (Conv.Port)

Y15072 (Full. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304	304	304	304
15	Hand Wheel	A197	A197	A197	A197
16	Stem Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	98	111	111	140	140	155	170
H (OPEN)	175	175	215	215	254	305	305
W	100	125	125	160	160	180	200
D	9	12	15	20	28	32	40

Forged Steel Check Valve

Hart valves are available in three bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.

2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.

3. Pressure Seal Bonnet, with a threaded and pressure seal bonnet joint.

The check valves are also available in three different design configurations: Piston check, ball check or swing check designs.



Check valve design Construction and Specifications:

Hart valves confirm to API 602, BS5352, and ASME B 16.34.

They are tested according to API 598, and marked as per MSS SP-25

Construction is as follows:

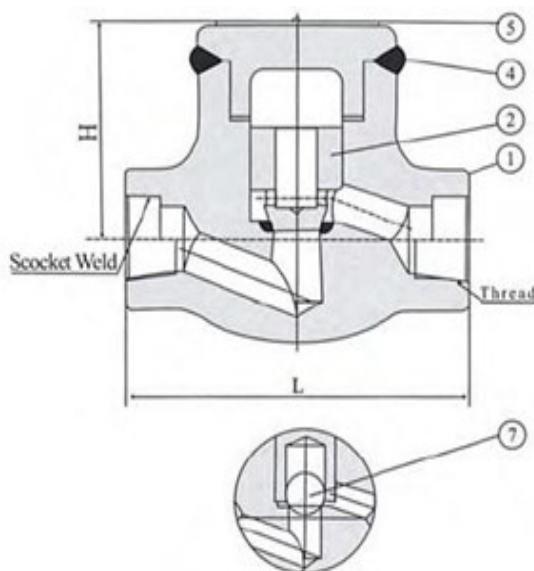
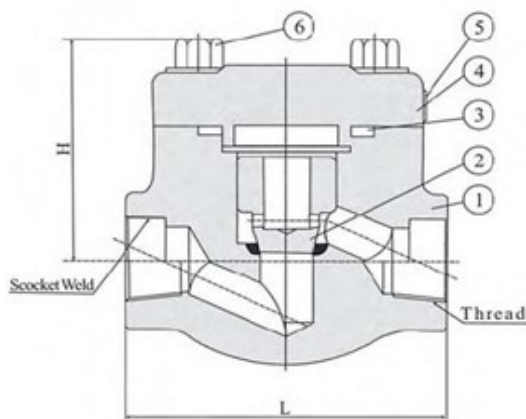
- | | |
|-------------------------------|---|
| ◆ Full Port or Standard Port | ◆ Bolted Bonnet with spiral-wound gasket, |
| ◆ Piston Check | threaded and seal welded bonnet or |
| ◆ Ball Check | threaded and pressure seal bonnet. |
| ◆ Swing Check | ◆ Socket Weld Ends to ASME B16.11 |
| ◆ Spring available on request | ◆ Screwed Ends (NPT) to ANSI/ASME B1.20.1 |

F803 (Conv.Port)

W803 (Conv.Port)

F873 (Full. Port)

W873 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F316(L)	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	79	79	92	111	120	120	140	178
H (OPEN)	61	61	61	78	84	84	120	133
D	8	10.5	13.5	18	24	29	36.5	45

Forged Steel Check Valve

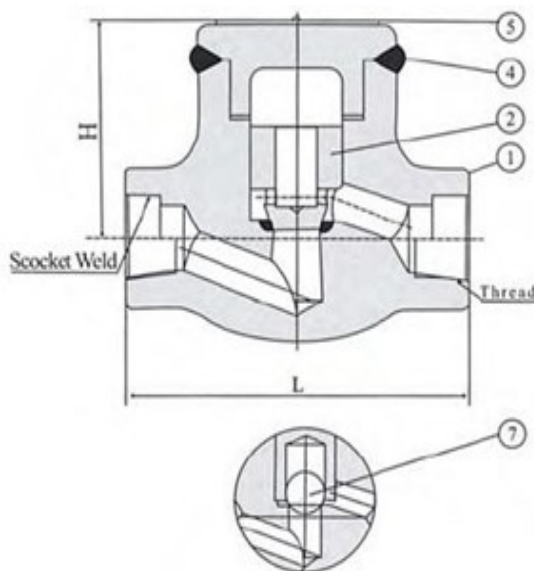
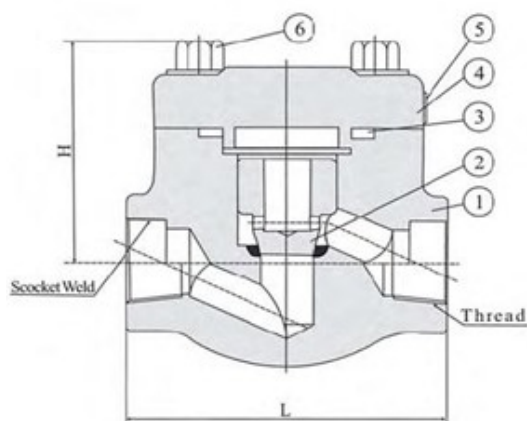
Class 1500lb

F1503 (Conv.Port)

W1503 (Conv.Port)

F1573 (Full. Port)

W1573 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F316(L)	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

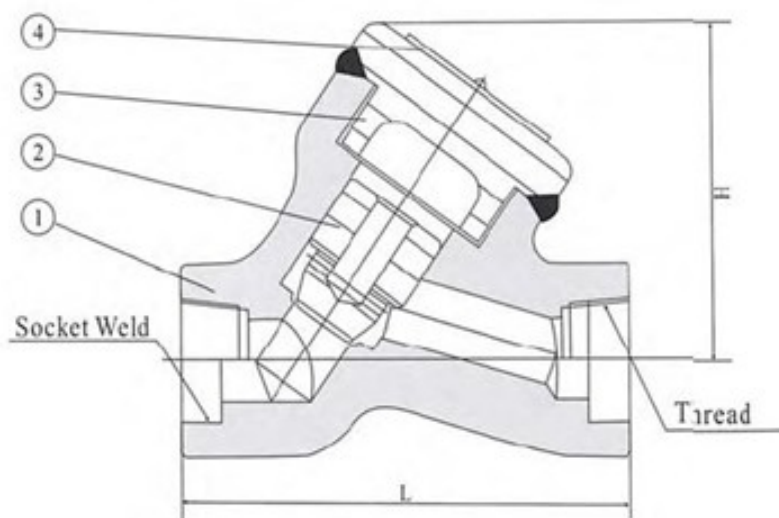
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

	Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"
L		92	111	111	120	120	140	178
H (OPEN)		61	78	78	84	101	120	133

Y803 (Conv.Port)

Y873 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F316(L)	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

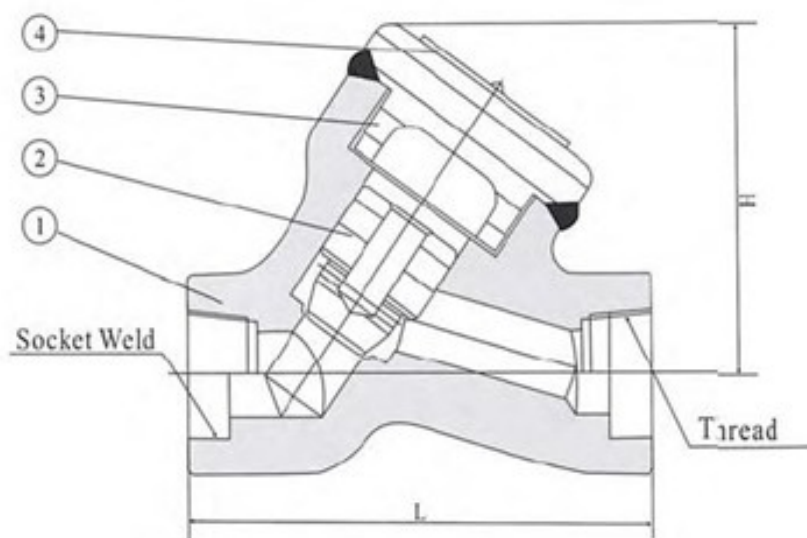
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	98	98	98	111	140	140	155	170
H (OPEN)	70	70	70	100	110	120	120	150
W	7	10	13	17.5	23	30	35	46

Y15003 (Conv.Port)

Y15073 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F316(L)	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Full.	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	98	111	111	140	140	155	170
H (OPEN)	70	70	100	110	110	120	150
W	9	12	15	20	28	32	40

Pressure Seal Valve

Hart pressure seal valves are available in two bonnet de-

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.

2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.

The cryogenic valves are available in gate and globe configurations: Valve are designed with an extended bonnet for use in cold services to -320 degrees F (-196 degrees C.)



Pressure seal valve Design Construction and Specifications:

Hart Pressure Seal gate and globe valves confirm to API 602, MSS-SP-118, and BS 6364. They are tested according to API 598, and marked as per MSS SP-25

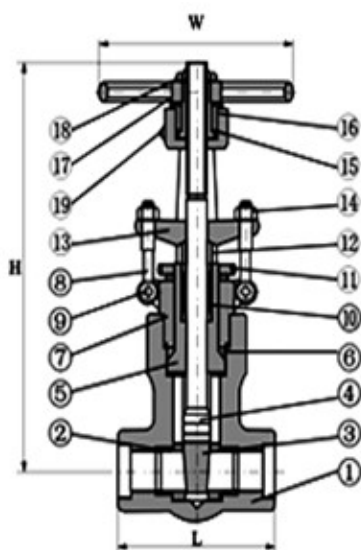
Construction is as follows:

- ♦ Full Port or Standard Port
- ♦ Two piece self aligning packing gland
- ♦ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet or threaded and pressure seal bonnet. Spring available on request
- ♦ Integral backseat
- ♦ Pressure relief hole on seat (for Gate Valves only)
- ♦ Socket Weld Ends to ASME B16.11
- ♦ Screwed Ends (NPT) to ANSI/ASME B1.20.1
- ♦ Special extension ends on request
- ♦ Soft seat for globe valves on request
- ♦ PTFE stem packing on request
- ♦ Special low temperature testing on request
- ♦ Outside Screw and Yoke (OS&Y)

Pressure Seal Gate Valve

Class 900-1500lb

PS15071 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A276 420	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Pressure Seat	A105N	304+Graphite	304+Graphite	304+Graphite
5	Pressure Ring	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Pin	A276 420	A276 420	A182 F304(L)	A182 F304(L)
8	P.S. Washer	A105N	A276 410	A182 F304(L)	A182 F316(L)
9	P.S. Lock Nut	A194 2H	A193 B16	A193 B8	A193 8M
10	Stem Packing	Flexible Graphite	Flexible Graphite	SS + PTFE	SS + PTFE
11	Gland	A276 F420	A276 F420	A182 F304(L)	A182 F304(L)
12	Gland Flange	A216 WCB	A216 WCB	A351 CF8	A351 CF8
13	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
14	Gland Nut	A194 2H	A194 4	304	304
15	Yoke Nut	A276 410	A276 410	A276 410	A276 410
16	Hand Wheel	A197	A197	A197	A197
17	Nameplate	SS	SS	SS	SS
18	Gland Nut	A194 2H	A194 4	A194 8	A194 8M

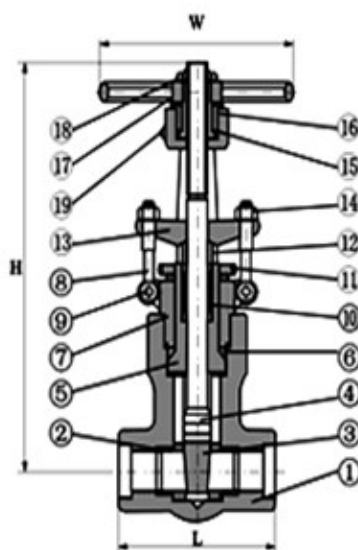
Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 900-1500	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	140	140	140	140	178	178	216
H (OPEN)	318	318	318	322	467	468	540
W	200	200	200	200	280	280	300
D	14	14	14	19	25	30	36.5

PS25071 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A276 420	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Pressure Seat	A105N	304+Graphite	304+Graphite	304+Graphite
5	Pressure Ring	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Pin	A276 420	A276 420	A182 F304(L)	A182 F304(L)
8	P.S. Washer	A105N	A276 410	A182 F304(L)	A182 F316(L)
9	P.S. Lock Nut	A194 2H	A193 B16	A193 B8	A193 8M
10	Stem Packing	Flexible Graphite	Flexible Graphite	SS + PTFE	SS + PTFE
11	Gland	A276 F420	A276 F420	A182 F304(L)	A182 F304(L)
12	Gland Flange	A216 WCB	A216 WCB	A351 CF8	A351 CF8
13	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
14	Gland Nut	A194 2H	A194 4	304	304
15	Yoke Nut	A276 410	A276 410	A276 410	A276 410
16	Hand Wheel	A197	A197	A197	A197
17	Nameplate	SS	SS	SS	SS
18	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M

Note: Other materials are available upon request.
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

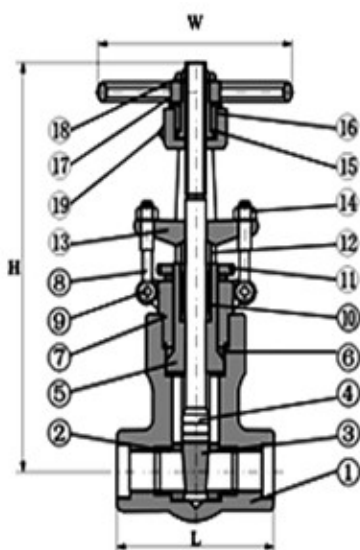
Dimensions (mm)

Class 2500	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	186	186	186	186	232	232	179
H (OPEN)	325	325	325	327	467	468	540
W	200	200	200	200	280	280	300
D	14	14	14	19	25	30	36.5

Pressure Seal Globe Valve

Class 900-1500lb

PS15072 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A276 420	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Pressure Seat	A105N	304+Graphite	304+Graphite	304+Graphite
5	Pressure Ring	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Pin	A276 420	A276 420	A182 F304(L)	A182 F304(L)
8	P.S. Washer	A105N	A276 410	A182 F304(L)	A182 F316(L)
9	P.S. Lock Nut	A194 2H	A193 B16	A193 B8	A193 8M
10	Stem Packing	Flexible Graphite	Flexible Graphite	SS + PTFE	SS + PTFE
11	Gland	A276 F420	A276 F420	A182 F304(L)	A182 F304(L)
12	Gland Flange	A216 WCB	A216 WCB	A351 CF8	A351 CF8
13	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
14	Gland Nut	A194 2H	A194 4	304	304
15	Yoke Nut	A276 410	A276 410	A276 410	A276 410
16	Hand Wheel	A197	A197	A197	A197
17	Nameplate	SS	SS	SS	SS
18	Gland Nut	A194 2H	A194 4	A194 8	A194 8M

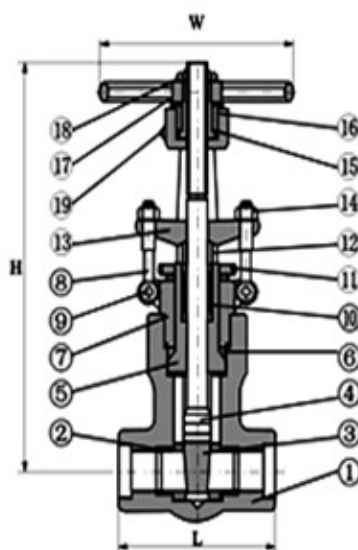
Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 900-1500	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	140	140	140	140	178	178	216
H (OPEN)	318	318	318	322	467	468	540
W	200	200	200	200	280	280	300
D	13	13	18	23	28	36	46

PS25002 (Conv. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A276 420	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Pressure Seat	A105N	304+Graphite	304+Graphite	304+Graphite
5	Pressure Ring	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Pin	A276 420	A276 420	A182 F304(L)	A182 F304(L)
8	P.S. Washer	A105N	A276 410	A182 F304(L)	A182 F316(L)
9	P.S. Lock Nut	A194 2H	A193 B16	A193 B8	A193 8M
10	Stem Packing	Flexible Graphite	Flexible Graphite	SS + PTFE	SS + PTFE
11	Gland	A276 F420	A276 F420	A182 F304(L)	A182 F304(L)
12	Gland Flange	A216 WCB	A216 WCB	A351 CF8	A351 CF8
13	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
14	Gland Nut	A194 2H	A194 4	304	304
15	Yoke Nut	A276 410	A276 410	A276 410	A276 410
16	Hand Wheel	A197	A197	A197	A197
17	Nameplate	SS	SS	SS	SS
18	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M

Note: Other materials are available upon request.
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

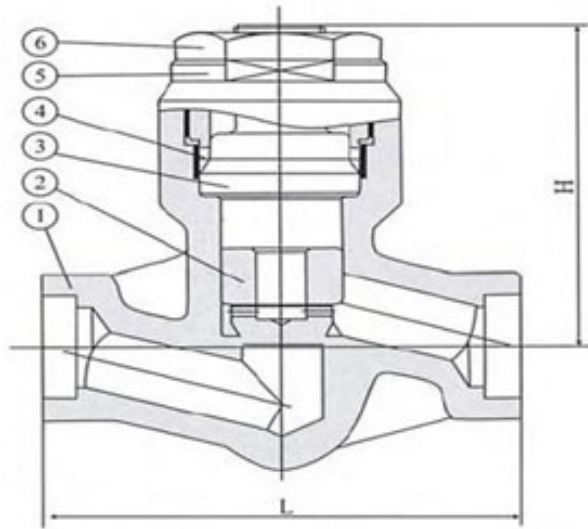
Dimensions (mm)

Class 2500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	186	186	186	232	232	279
H (OPEN)	375	378	380	490	490	540
W	200	200	200	280	280	300
D	11	14	19	25	28	35
Weight (Kg)	12.3	11.6	10.8	26	28.4	60

Pressure Seal Globe Valve

Class 900-1500-2500lb

PS903 – PS15003 (Conv. Port or Full Port)
PS25003 (Conv. Port or Full Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Lift Disc	A276 420	A182 F304	A182 F304(L)	A182 F316(L)
3	Sealing Seat	A105N	A182 F304	A182 F304(L)	A182 F316(L)
4	Pressure Ring	08F	08F	A182 F304(L)	A182 F316(L)
5	Retaining Nut	A194 2H	A194 4	A194 8	A194 8M
6	P.S. Lock Nut	A194 2H	A194 4	A194 8	A194 8M

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 900-1500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	140	140	140	178	216	216
H (OPEN)	117	117	117	152	195	195
D	12	15	20	28	32	40
Weight (Kg)	7.5	7	6.8	18.5	20.3	22

Class 2500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	186	186	186	232	232	279
H (OPEN)	117	117	117	152	152	195
D	11	14	19	25	28	35
Weight (Kg)	11.8	11	10.5	23	26.4	39

Bellows Seal Valve

Hart bellows seal valves are available in two bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.

2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.



Bellows seal valve Design Construction and Specifications:

Hart bellows seal valves confirm to API 602, MSS-SP-118, and BS 5352 and ANSI B16.34. They are tested according to API 598, and marked as per MSS SP-25.

Construction is as follows:

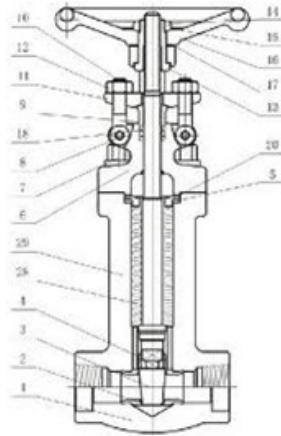
- ◆ Two piece self aligning packing gland
- ◆ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet
- ◆ Integral backseat
- ◆ Socket Weld Ends to ASME B16.11
- ◆ Screwed Ends (NPT) to ANSI/ASME B1.20.1
- ◆ Outside Screw and Yoke (OS&Y)
- ◆ Grease nipple for stem

Bellows Seal Gate Valve

Class 800lb

BS801 (Conv. Port)

BS871 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F11	A182 F304(L)	A182 F316(L)
2	Seat	A276 410	A182 F304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A276 410	304+Graphite	304+Graphite	304+Graphite
5	Gasket	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F11	A182 F304(L)	A182 F316(L)
7	Bolt	A193 B7	1035+Zin	A194 8	A194 8M
8	Pin	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
11	Gland Flange	A105N	A182 F11	A182 F304(L)	A182 F316(L)
12	Hex Nut	A194 2H	A194 8	A194 8	A194 8M
13	Stem Nut	410 Customize			
14	Locking Nut	35 Customize			
15	Nameplate	Pure Aluminum Customize			
16	Hand Wheel	A197 Customize			
17	Lubricating Gasket	410 Customize			
18	Packing	Graphite Customize			
20	Gasket	Flexible Graphite + 304 Customize			
28	Bellow	F316L		F321 Customize	

Note: Other materials are available upon request.

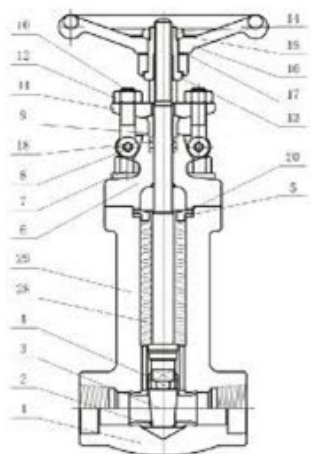
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	80	80	90	110	127	127	127	150
H (OPEN)	262	262	296	353	412	470	531	617
W	90	90	90	110	130	130	180	180
D	8	10	14	19	24	30	36.5	48

BS1501 (Conv. Port)

BS1571 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F11	A182 F304(L)	A182 F316(L)
2	Seat	A276 410	A182 F304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A276 410	304+Graphite	304+Graphite	304+Graphite
5	Gasket	A182 F304(L)	A182 F304(L)	A182 F304(L)	A182 F316(L)
6	Bonnet	A105N	A182 F11	A182 F304(L)	A182 F316(L)
7	Bolt	A193 B7	1035+Zin	A194 8	A194 8M
8	Pin	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
11	Gland Flange	A105N	A182 F11	A182 F304(L)	A182 F316(L)
12	Hex Nut	A194 2H	A194 8	A194 8	A194 8M
13	Stem Nut	410 Customize			
14	Locking Nut	35 Customize			
15	Nameplate	Pure Aluminum Customize			
16	Hand Wheel	A197 Customize			
17	Lubricating Gasket	410 Customize			
18	Packing	Graphite Customize			
20	Gasket	Flexible Graphite + 304 Customize			
28	Bellow	F316L		F321 Customize	

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

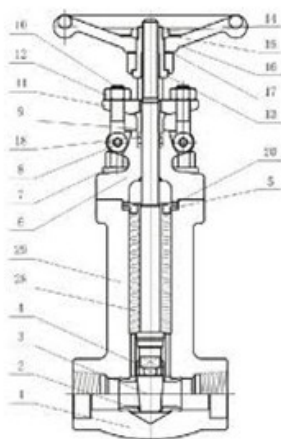
	Conv.		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"
L		90	90	110	127	127	127	150
H (OPEN)		328	331	372	445	479	586	650
W		130	130	130	130	180	180	250
D		8	10	14	19	24	30	37

Bellows Seal Globe Valve

Class 800lb

BS802 (Conv. Port)

BS872 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F11	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A276 410	304+Graphite	304+Graphite	304+Graphite
6	Bonnet	A105N	A182 F11	A182 F304(L)	A182 F316(L)
8	Pin	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
11	Gland Flange	A105N	A182 F11	A182 F304(L)	A182 F316(L)
12	Hex Nut	A194 2H	A194 8	A194 8	A194 8M
13	Stem Nut	410 Customize			
14	Locking Nut	35 Customize			
15	Nameplate	Pure Aluminum Customize			
16	Hand Wheel	A197 Customize			
17	Lubricating Gasket	410 Customize			
18	Packing	Graphite Customize			
28	Bellow	F316L	F316L	F321 Customize	F321 Customize
29	Coupling Pipe	A105N	304	304	316
31	Pin	304	304	316	316

Note: Other materials are available upon request.

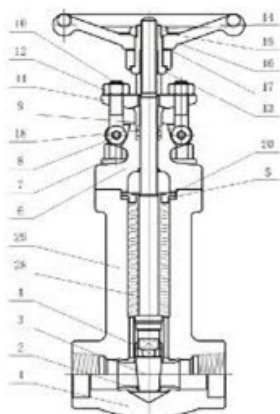
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	80	80	90	127	155	170	210	210
H (OPEN)	244	244	276	311	366	428	462	542
W	90	90	90	110	130	130	180	180
D	8	10	14	19	24	30	36.5	48

BS1502 (Conv. Port)

BS1572 (Full. Port)



Standard Material Specifications

Item	Parts	AS to ASTM	CS to ASTM	SS to ASTM	
		Type A105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F11	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A276 410	304+Graphite	304+Graphite	304+Graphite
6	Bonnet	A105N	A182 F11	A182 F304(L)	A182 F316(L)
8	Pin	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	1035+Zin	A194 8	A194 8M
11	Gland Flange	A105N	A182 F11	A182 F304(L)	A182 F316(L)
12	Hex Nut	A194 2H	A194 8	A194 8	A194 8M
13	Stem Nut	410 Customize			
14	Locking Nut	35 Customize			
15	Nameplate	Pure Aluminum Customize			
16	Hand Wheel	A197 Customize			
17	Lubricating Gasket	410 Customize			
18	Packing	Graphite Customize			
28	Bellow	F316L	F316L	F321 Customize	F321 Customize
29	Coupling Pipe	A105N	304	304	316
31	Pin	304	304	316	316

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Conv.		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
Full.	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	90	90	110	127	155	170	210	210
H (OPEN)	298	301	332	395	419	506	545	705
W	90	130	130	130	180	180	250	250
D	8	10	14	19	24	30	36.5	48

Bellows Seal Globe Valve

Hart extended body valves are available in two bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.

2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.



Gate and Globe valves Design Construction and Specifications:

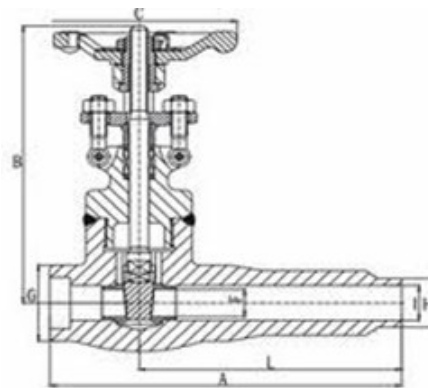
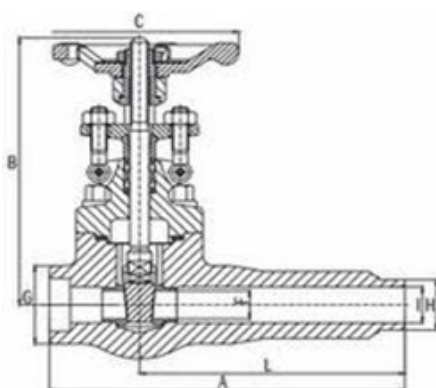
Hart bellows seal valves confirm to API 602 and API606
They are tested according to API 598, and marked as per MSS SP-25

Construction is as follows:

- ♦ Two piece self aligning packing gland
- ♦ Integral extended body with threaded, socket weld or butt weld connection
- ♦ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet
- ♦ Integral backseat
- ♦ Socket Weld Ends to ASME B16.11
- ♦ Screwed Ends (NPT) to ANSI/ASME B1.20.1
- ♦ Outside Screw and Yoke (OS&Y)

EX801 (Conv. Port)

EX15001 (Conv. Port)



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Seat	A276 410	A182 F304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A276 410	A276 410	A182 F304(L)	A182 F316(L)
5	Gasket	304+Flexible Graphite	304+Flexible Graphite	304+Flexible Graphite	304+Flexible Graphite
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bolt	A193 B7	A193 B7	A193 B8(M)	A193 B8(M)
8	Pin	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	Gland Eyebolt			
11	Gland Flange	Gland Flange			
12	Hex Nut	Hex Nut			
13	Stem Nut	Stem Nut			
14	Locking Nut	Locking Nut			
15	Nameplate	Nameplate			
16	Hand Wheel	A197	A197	A197	A197
17	Lubricating Gasket	410	410	410	410
18	Packing	Graphite	Graphite	Graphite	Graphite

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 800	1/2"	3/4"	1"	-	1 1/2"	2"	
Class 1500		1/2"	3/4"	1"	-	1 1/2"	2"
L	196	220	244	265	265	270	270
L1 (Center to Male End)	156	175	189	201	201	206	195
H (OPEN)	148	163	178	210	243	262	325
W	90	90	110	110	130	130	180
D (Class 800)	10	14	19	-	30	37	-
D (Class 1500)		10	14	19	-	30	37

Flanged End Valve

Hart Valves are available in three bonnet designs:

1. Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.

2. Welded Bonnet, with a threaded and seal welded joint. On request a full penetration welded joint is available.

3. Pressure Seal Bonnet, with a threaded and pressure seal bonnet joint.

Flanged end valves are available in gate, globe, piston check and swing check designs configuration. Integral Flanges available on request.



Flanged End Valves Design Construction and Specifications:

Hart flanged valves confirm to API 602, MSS-SP-118 and ANSI B 16.34. They are tested according to API 598, and marked as per MSS SP-25

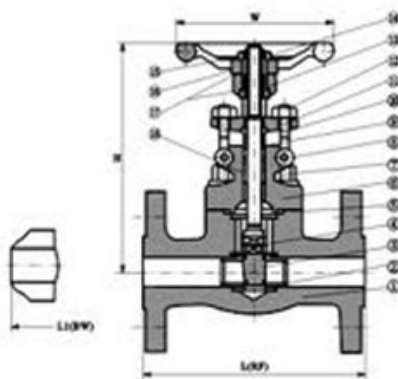
Construction is as follows:

- ♦ Full Port or Standard Port
- ♦ Face to Face according to ANSI B16.10
- ♦ Flanges according to ANSI B16.5
- ♦ Pressure seal bonnet
- ♦ Outside Screw and Yoke (OS&Y)
- ♦ Two piece self aligning packing gland
- ♦ RTJ body bonnet gasket ring type joint
- ♦ Bolted Bonnet with spiral-wound gasket, threaded and seal welded bonnet or threaded and pressure seal bonnet.
- ♦ Integral backseat
- ♦ Butt welded ends to ASME B16.25 Grease nipple for stem

F151 (Conv. Port)

F301 (Conv. Port)

F601 (Conv. Port)



Standard Material Specifications

Integral Flanges Available

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Seat Ring	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
5	Gasket	304+Graphite			
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
8	Pin	A276 410	A276 410	A182 F304	A182 F304
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
11	Gland Flange	A105N	A182 F22	A182 F304(L)	A182 F316(L)
12	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
13	Yoke Nut	A 276 410 & 420			
14	H.W. Lock Nut	1035+Zin	1035+Zin	A194 8	A194 8M
15	Nameplate	304			
16	Hand Wheel	A197			
17	Bearing Gasket	A473 431			
18	Stem Packing	Graphite			

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

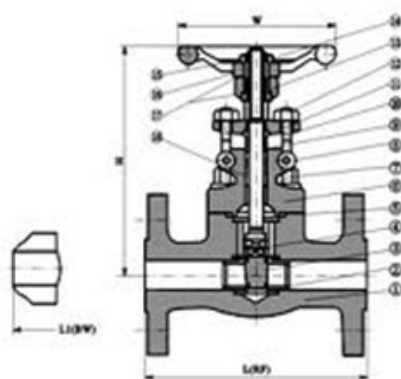
Dimensions (mm)

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
L - L1 (Class 150)	108	117	127	140	165	178	190
L - L1 (Class 300)	140	152	165	178	190	216	241
L - L1 (Class 600)	165	190	216	229	241	292	330
H (OPEN)	176	184	217	226	250	290	357
W	125	125	160	180	200	200	200
D	10	13.5	18	24	29	36.5	45

Flanged End Gate Valve

Class 1500lb

F1501 (Conv. Port)



Standard Material Specifications

Integral Flanges Available

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Seat Ring	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Wedge	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
5	Gasket	304+Graphite			
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
8	Pin	A276 410	A276 410	A182 F304	A182 F304
9	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
10	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
11	Gland Flange	A105N	A182 F22	A182 F304(L)	A182 F316(L)
12	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
13	Yoke Nut	A 276 410 & 420			
14	H.W. Lock Nut	1035+Zin	1035+Zin	A194 8	A194 8M
15	Nameplate	304			
16	Hand Wheel	A197			
17	Bearing Gasket	A473 431			
18	Stem Packing	Graphite			

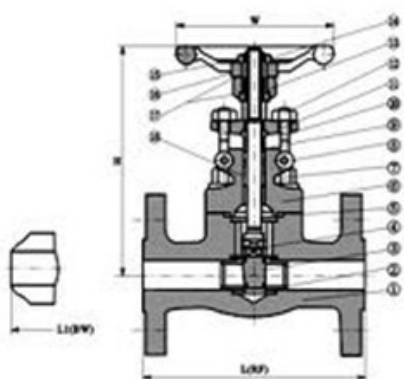
Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 1500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L - L1	216	229	254	279	305	368
L(RTJ)	216	229	254	279	305	371
H (OPEN)	191	192	219	257	296	316
W	125	125	160	180	200	220
D	13.5	18	24	29	36.5	45

F152 (Conv. Port)
F302 (Conv. Port)
F602 (Conv. Port)



Standard Material Specifications

Integral Flanges Available

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304			
15	Hand Wheel	A197			
16	Stem Packing	Graphite			

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

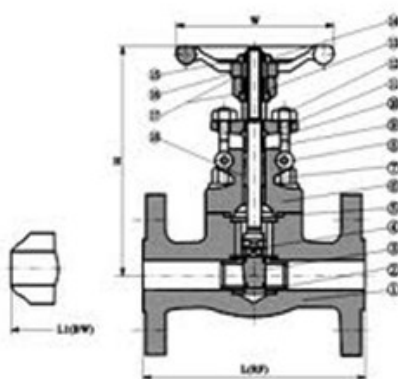
Dimensions (mm)

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L - L1 (Class 150)	108	117	127	140	165	203
L - L1 (Class 300)	152	178	203	216	229	267
L - L1 (Class 600)	165	190	216	229	241	292
H (OPEN)	180	184	217	224	260	300
W	125	125	160	160	180	200
D	9	13	17.5	23	30	35

Flanged End Globe Valve

Class 1500lb

F1502 (Conv. Port)



Integral Flanges Available

Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
3	Stem	A182 F6a	A182 F304	A182 F304(L)	A182 F316(L)
4	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
5	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
6	Bonnet Bolt	A193 B7	A193 B16	A193 B8	A193 B8M
7	Pin	A276 410	A276 410	A182 F304	A182 F304
8	Gland	A276 410	A276 410	A182 F304(L)	A182 F316(L)
9	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
10	Gland Flange	A105N	A105N	A182 F304(L)	A182 F316(L)
11	Gland Nut	A194 2H	A194 2H	A194 8	A194 8M
12	Yoke Nut	A 276 410	A 276 410	A 276 410	A 276 410
13	H.W. Nut	1035+Zin	1035+Zin	A194 8	A194 8M
14	Name Plate	304			
15	Hand Wheel	A197			
16	Stem Packing	Graphite			

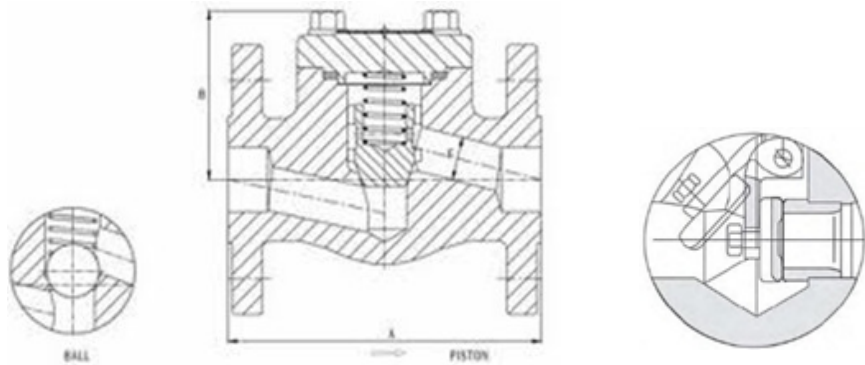
Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 1500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L - L1	216	229	254	279	305	368
H (OPEN)	207	207	230	260	300	355
W	125	125	160	160	180	200
D	12	15	20	28	32	40

F153 (Conv. Port)
F303 (Conv. Port)
F603 (Conv. Port)



Integral Flanges Available

Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

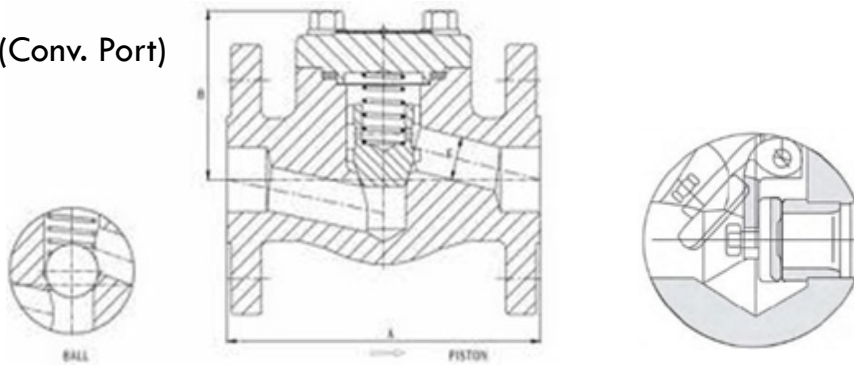
Dimensions (mm)

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L - L1 (Class 150)	108	117	127	140	165	203
L - L1 (Class 300)	153	178	203	216	229	267
L - L1 (Class 600)	165	191	216	229	241	292
H (OPEN)	77	81	93	95	103	118
D	10.5	13.5	18	24	29	36.5

Flanged End Check Valve

Class 1500lb

F1503 (Conv. Port)



Integral Flanges Available

Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Piston Disc	A276 410	A276 304	A182 F304(L)	A182 F316(L)
3	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
4	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Name Plate	304	304	304	304
6	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
7	Ball	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 1500	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L - L1	216	229	254	280	305	371
H (OPEN)	81	93	95	101	118	130
D	13.5	18	24	29	36.5	45

Forged Steel Y-Strainer

Hart Forged Steel Y-Strainer

Bolted Bonnet, with male-female joint, spiral wound gasket, made in F304L/graphite. Ring joint gasket is also available on request.



Flanged End Valves Design Construction and Specifications:

Hart Y-Strainer to API 602, MSS-SP-118 and ANSI B 16.34.
They are tested according to API 598, and marked as per MSS SP-25

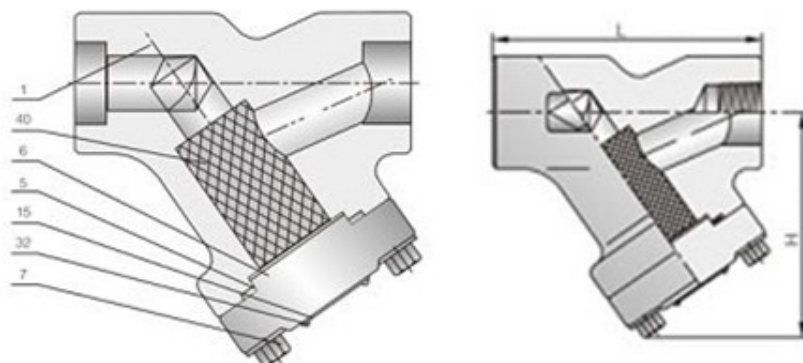
Construction is as follows:

- ♦ Full Port or Standard Port
- ♦ Bolted bonnet spiral wound gasket seal bonnet
- ♦ Socket weld ends to ASME B16.11
- ♦ Screwed ends (NPT) to ANSI/ASME B1.20.1
- ♦ Equip blow down tap and renewable strainer

Forged Steel Y-Strainer

Class 800-1 500lb

YS806
YS1506



Standard Material Specifications

Item	Parts	CS to ASTM	AS to ASTM	SS to ASTM	
		Type F22	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
5	Gasket	304+Graphite	304+Graphite	304+Graphite	304+Graphite
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Bolt	A193 B7	A193 B16	A193 B8(M)	A193 B8(M)
15	Name Plate	304	304	304	304
32	Rivet	H62	H62	H62	H62
40	Filter Screen	A182 F304	A182 F304	A182 F304	A182 F304

Note: Other materials are available upon request.

CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel

Dimensions (mm)

Class 800	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
L	96	96	96	111	140	140	155	170
H (OPEN)	70	70	70	100	110	120	120	
D	7	9	13	17.5	30	30	35	

Class 1500	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
L	98	111	111	140	140	140	155	170
H (OPEN)	70	70	100	110	120	120	150	
D	9	12	15	20	28	32	40	

Materials

HART valves are manufactured in a wide range of material, supplied by the best available steel mills, forged by well known forgery with outstanding equipment and experience. All the material can be certified in the chemical composition and the mechanical characteristic.

BODY AND BONNET STANDARD MATERIAL				
Materials	Description	Service Recommendations	Casting Eq.	Temperature
ASTM A105	Carbon Steel	General service: oil, oil vapor, gas, steam and water	A216-WCB	-20 to 100°F
ASTM A350 LF2	Low Temperature Carbon Steel	Low temperature applications	A352-LCB	-50 to 650°F max
ASTM A182 F11	1 1/4% cr, 1/2% Mo Alloy Steel	To minimize Graphitization	A217-WC6	-20 to 1100°F
ASTM A182 F22	2 1/4% cr, 1% Mo Alloy Steel	For service requiring greater strength than F11	A217-WC9	-20 to 1100°F
ASTM A182 F5	5% cr, 1/2% Mo Alloy Steel	Corrosive / erosive refinery use	A217-C5	-20 to 1100°F
ASTM A182 F9	9% cr, 1% Mo Alloy Steel	Services involving media with higher sculpture content	A217-C12	-20 to 1100°F
ASTM A182 F304	18% cr, 8% NI Stainless Steel	Corrosive & cryogenic service	A351-CF8	-20 to 1100°F
ASTM A182 F316	18% cr, 8% NI, 2% Mo Stainless Steel	Superior resistance to corrosion	A351-CF8M	up to 1100°F

BODY AND BONNET STANDARD MATERIAL			
Materials	Description	Service Recommendations	Temperature
HASTELLOY	Nickel Alloy	Excellent corrosion resistance in hydrochloric acid	high temp
INCONEL INCOLOY	Nickel-Copper Alloy	Nuclear applications	high temp
MONEL	Nickel-Copper Alloy	Corrosive service, resistant to sea water, acids and alkalis	450°C
TITANIUM	Metal	Good resistance to corrosion with low specific weight	-
ASTM A182 F51	Ferric-Austenitic Stainless Steel	High strength, resistance to corrosion, pitting and stress	-
ASTM A182 F316	Austenitic Stainless Steel	Very high strength, high resistance to corrosion	-

BODY AND BONNET STANDARD MATERIAL			
Materials	Description	Service Recommendations	Temperature
13%Cr, Type 410 Stainless Steel	Nickel Alloy	For oil and oil vapors and general services with heat treaded seats and wedges	high temp
13%Cr, Type 410 Hard facing	Nickel-Copper Alloy	Universal trim for general service requiring long lift	1100°F
Type 316 Stainless	18% Cr, 8% NI, 2% Mo Stainless Steel	For liquids and gasses corrosive	Up to 850°F
MONEL	Nickel-Copper Alloy	Corrosive service such as acids, alkalis, salt solutions	Up to 850°F
NACE	Specially treated 316 Trim combined With B7M Bolts and 2HM Nuts	To meet NACE MR-01-75 requirements	-
Satellite	Austenitic Stainless Steel	Premium trim, suitable for severe services	Up to 1200°F

Pressure-Temperature Ratings

According to API 602, 5th edition

CLASS 800

SERVICE	A105 (1)	A182 (3)	A182 (3)	A182	A182	A182	A182	A182	A182	SERVICE	A105 (1)	A182 (3)	A182 (3)	A182	A182	A182	A182	A182	A182
TEMPER	LF2 (2)	F11	F22	F5	F9	F304	F316	F304L	F316L	TEMPER	LF2 (2)	F11	F22	F5	F9	F304	F316	F304L	F316L
F	psi	psi	psi	psi	psi	psi	psi	psi	psi	C	bar	bar	bar	bar	bar	bar	bar	bar	bar
-20	1975	2000	2000	2000	2000	1920	1920	1600	1920	-29	136.2	137.9	137.9	137.9	137.9	132.4	132.4	110.3	132.4
200	1800	1900	1910	2000	2000	1600	1655	1350	1695	93.5	124.1	131.0	131.7	137.9	137.9	110.3	114.1	93.1	116.9
300	1750	1795	1805	1940	1940	1410	1495	1210	1570	149	120.7	123.8	124.5	133.8	133.8	97.2	103.1	83.4	108.3
400	1690	1755	1730	1880	1880	1255	1370	1100	1480	204.5	116.6	121.0	119.3	129.7	129.7	86.5	94.5	75.9	102.1
500	1595	1710	1705	1775	1775	1165	1275	1020	1380	260	110.0	117.9	117.6	122.4	122.4	80.3	87.9	70.3	95.2
600	1460	1615	1615	1615	1615	1105	1205	960	1310	315.5	100.7	113.4	113.4	113.4	113.4	76.2	83.1	66.2	90.3
650	1430	1570	1570	1570	1570	1090	1185	935	1280	343.5	98.6	108.3	108.3	108.3	108.3	75.2	81.7	64.5	88.3
700	1420	1515	1515	1515	1515	1075	1150	915	1250	371	97.9	104.5	104.5	104.5	104.5	74.1	79.3	63.1	86.2
750	1345	1420	1420	1420	1420	1060	1130	895	1230	399	92.7	97.9	97.9	97.9	97.9	73.1	77.9	61.7	84.8
800	1100	1355	1355	1325	1355	1050	1105	875	1215	426.5	75.9	93.4	93.4	91.4	93.4	72.4	76.2	60.3	83.8
850	715	1300	1300	1170	1300	1035	1080	860	1185	454.5	79.3	89.7	89.7	80.7	89.7	71.4	74.5	59.3	81.7
900	460	1200	1200	940	1200	1025	1050		1150	482	31.7	82.8	82.8	64.8	82.8	70.7	72.4		79.3
950	275	1005	1005	695	985	1000	1030		1030	510	19	69.3	69.3	47.9	67.9	69.0	71.0		71.0
1000	140	595	715	510	780	860	970		970	538	9.7	41.0	49.3	32.5	53.8	59.3	66.9		66.9
1050		365	530	375	505	825	960		960	565.5		25.2	36.6	25.9	34.8	56.9	66.2		66.2
1100		255	300	275	300	685	860		860	593.5		17.6	20.7	19.0	20.7	47.2	59.3		59.3
1150		140	275	185	200	520	735		735	921		9.7	19.0	12.8	13.8	35.9	50.7		50.7
1200		95	145	120	140	415	550		460	649		6.6	10.0	8.3	9.6	28.6	37.9		31.7
1250						295	485		330	676.5						20.3	33.4		22.8
1300						218	365		250	704.5						15.0	25.2		17.2
1350						165	275		180	732.5						11.4	19.0		12.4
1400						130	200		140	760.5						9.0	13.8		9.6
1450						95	155		110	788.5						6.6	10.7		7.6
1500						65	110		95	815.5						4.5	7.6		6.6

Notes: (1) Permissible, but not recommended for prolonged use above 800F (2) Not to be used over 650F
(3) Permissible, but not recommended for prolonged use above 1050F

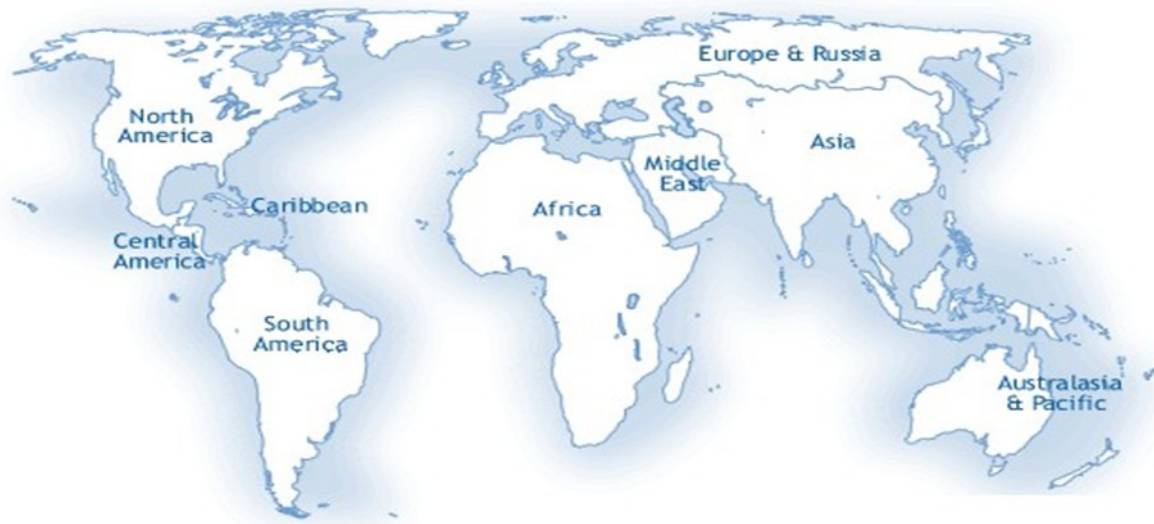
According to ANSI B16.34

CARBON STEEL A105(1) & A350 LF2(2)

SERVICE	150	300	600	1500	2500	SERVICE	150	300	600	1500	2500
TEMPER						TEMPER					
F	psi	psi	psi	psi	psi	C	bar	bar	bar	bar	bar
-20	285	740	1480	3705	6170	38	19.6	51.1	102.1	255.3	425.5
200	260	675	1350	3375	5625	50	19.2	50.1	100.2	25.4	417.3
300	230	655	1315	3280	5470	100	17.7	46.4	92.8	231.9	386.5
400	200	635	1270	3170	5280	150	15.8	45.2	90.5	226.1	376.9
500	170	600	1200	2995	4990	200	14.0	46.2	90.5	226.1	376.9
600	140	550	1095	2735	4560	250	12.1	41.7	83.4	208.6	347.7
650	125	535	1075	2685	4475	300	10.2	38.7	77.5	193.7	322.8
700	110	535	1065	2665	4440	350	8.4	37.0	73.9	184.8	308.0
750	95	505	1010	2520	4200	375	7.4	36.5	72.9	182.3	303.9
800	80	410	825	2060	3430	400	6.5	34.5	69.0	172.5	287.5
850	65	270	535	1340	2230	425	5.6	28.8	57.5	143.8	239.6
900	50	170	345	860	1430	450	4.7	20.0	40.1	100.2	166.9
950	35	105	205	515	860	475	4	13.5	27.1	67.7	112.9
1000	20	50	105	260	430	500	2.8	8.8	17.6	44.0	73.3
1050						525	1.9	5.2	10.4	25.9	43.2
1100						540	1.3	3.3	6.5	16.3	27.2

Notes: (1) Permissible, but not recommended for prolonged use above 800F (2) Not to be used over 650F

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