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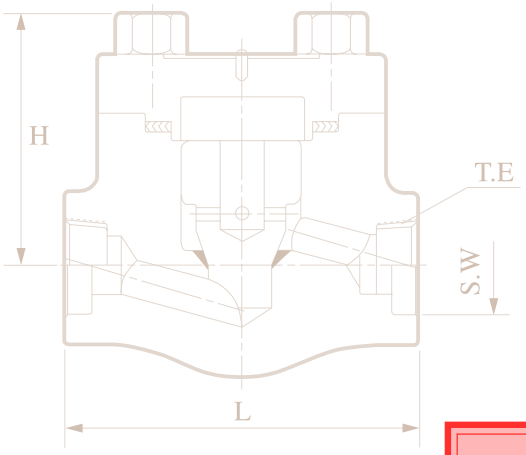
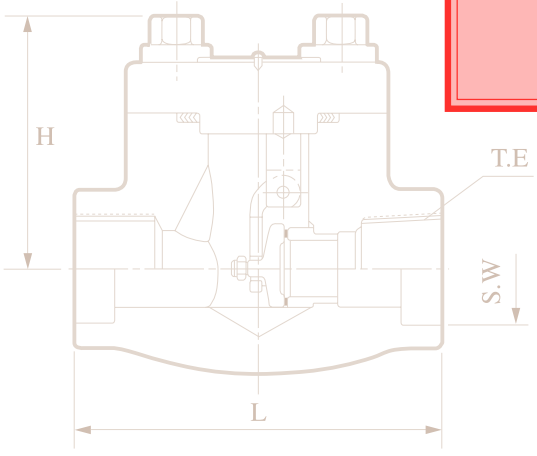
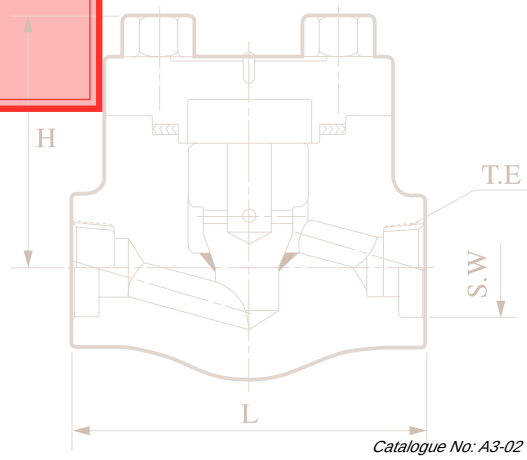


Forged Steel Valves

Gate / Globe / Check





Catalogue No: A3-02

Table of Contents

Introduction

Quality is our commitment, while competitive price and timely delivery is our promise. ***From*** the beginning, the DHV name has become associated with quality in every step of our manufacturing process. For the past decades our customers worldwide have trusted us to provide them with consistent and reliable valve products in their most severe and critical service. ***We*** at DHV are proud of our ability to meet the stringent requirements of Refining, Gas/Oil, Pipeline, Petrochemical and Power Plant.

DHV Forged Steel Valves are designed, manufactured and tested to the latest manufacturing specifications of the American & International Standards Organizations. We welcome your challenges and look forward to serving your critical project needs.

DHV Figure Numbers

Forged Steel Valves

Code

C = Cast Steel Valves
F = Forged Steel Valves
I = Cast Iron Valves
B = Ball Valves
W = Wellhead Valves
WB = Wafer Butterfly Valves

Type

1 = Gate
2 = Globe
3 = Y Pattern Globe
4 = Piston Check
5 = Lift Check With Spring
6 = Swing Check
7 = Y Pattern Check
8 = Needle Globe
9 = Cryogenic Gate
0 = Cryogenic Globe
X = Special

Pressure Class

15 = Class 150
30 = Class 300
40 = Class 400
60 = Class 600
80 = Class 800
90 = Class 900
150 = Class 1500
250 = Class 2500

Body Material

0 = ASTM A105
1 = ASTM A350 LF2
2 = ASTM A182 F5
3 = ASTM A350 LF3
4 = ASTM A182 F11
5 = ASTM A182 F22
6 = ASTM A182 F304
7 = ASTM A182 F316
8 = ASTM A182 F304L
9 = ASTM A182 F316L
A = ASTM A182 F51
X = Special

2˝ Forged Steel Gate Valve, Class 800, A105 Body & Bonnet, Socket Weld End, With HF / HF Trim, Bolted Bonnet, Full Bore.

Example: 2˝ - F 1 8 0 0 S 2 1

End Connection

F = Raised Face Flanged End
P = Plain Flate Face Flanged End
R = Ring Type Joint End
B = Buttweld End
T = Threaded End
S = Socket Weld End

Trim Material

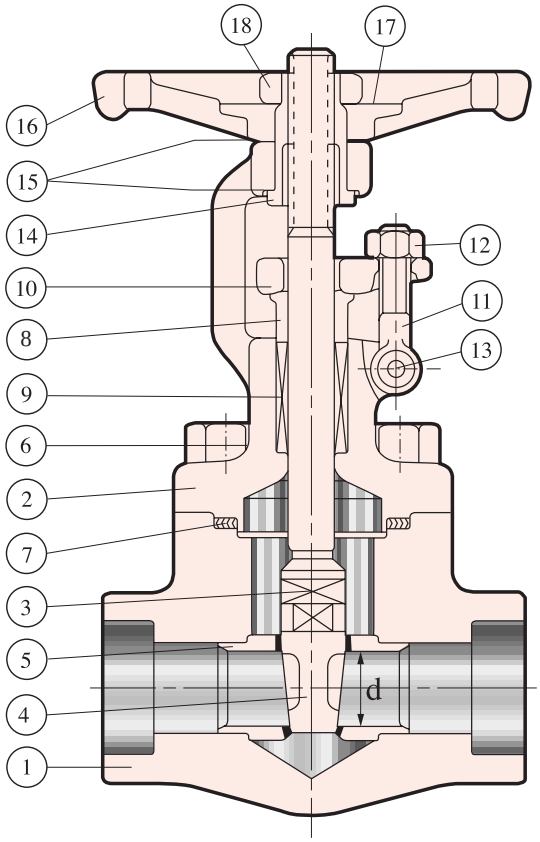
	Seat	Disc	Stem
1 =	13CR	13CR	F6
2 =	HF	HF	F6
3 =	HF	13CR	F6
4 =	MONEL	MONEL	MONEL
5 =	316SS	316SS	F316
6 =	HF	MONEL	MONEL
7 =	HF	316SS	F316
8 =	304SS	304SS	F304
9 =	304L	304L	304L
0 =	316L	316L	316L
A =	F51	F51	F51
B =	Inconel 625		
X =	Special		

Bonnet Connection

1 = Bolted Bonnet - Full Bore
2 = Welded Bonnet - Full Bore
3 = Bolted Bonnet - Reduced Bore
4 = Welded Bonnet - Reduced Bore

Standard Material Specifications

Part No.	Part Name	ASTM Specifications									
		Carbon Steel		Alloy Steel			Stainless Steel				
		A 105	A350	A182							
		(b, c)	LF2	F5	F11(d)	F22	F304 (e)	F304L	F316(e)	F316L	F51
1	**Body**	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
2	**Bonnet**	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
3	**Stem**	A276 - 410					A276 - 304	A276 - 304L	A276 - 316	A276 - 316L	F51
4	**Disc**	A276 - 420					304 + STL	304L + STL	316 + STL	316L + STL	F51
5	**Seat Ring**	A276 - 410 + STL					304 + STL	304L + STL	316 + STL	316L + STL	F51
6	**Bonnet Bolt** (a)	A193 - B7	A320 - L7	A193 - B16			A193 - B8		A193 - B8M		
7	**Gasket**	304 + Graphite					316 + Graphite				
8	**Gland**	A276 - 410					A276 - 304		A276 - 316		F51
9	**Packing**	Flexible Graphite					PTFE				
10	**Gland Flange**	A105	LF2	F11			CF8				F51
11	**Gland Bolt**	A193-B7	A320-L7	A193 - B16			A193 - B8 / B8M				
12	**Gland Bolt Nut**	A194-2H	A194-7	A194 - 4			A194 - 8				
13	**Gland Bolt Pin**	A276 - 410					A276 - 304				F51
14	**Sleeve**	A276 - 410									
15	**Sleeve Washer**	A276 - 410									
16	**Handwheel**	A197									
17	**Nameplate**	Aluminum					304				
18	**Handwheel Nut**	A108 - 1020									



Gate Valve

Notes:

a. Temperature limitations on bolting are as following: Gr B7,1000°F(538°C); Gr L7,1000°F(538°C); Gr B16,1100°F(595°C); Gr B8-CL1,1500°F(816°C); Gr B8M-CL1,1500°F(816°C); Gr B8-CL2,1000°F(538°C); and Gr B8M-CL2,1000°F(538°C).

b. Upon prolonged exposure to temperatures above 800°F(425°C), the carbide phase of carbon steel may be converted to graphite.

c. Only killed steel shall be used above 850°F(455°C).

d. Use normalized and tempered material only.

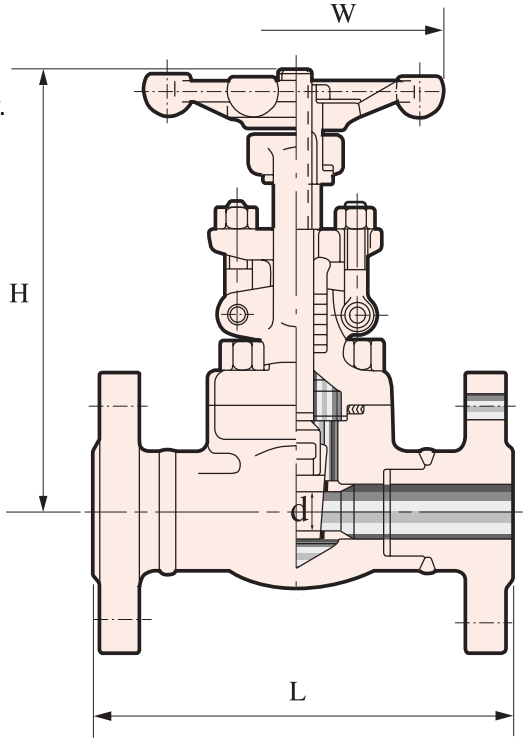
e. At temperatures over 1000°F(538°C), use only when the carbon is 0.04 percent or higher.

Class150 / 300 / 600 Forged Steel Gate Valves

Features:

- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel and Flexible Graphite with Controlled Compression.
- Flanged End.
- Compact Outside Screw & Yoke or Compact Inside Screw.
- Renewable Hardfaced Seats.

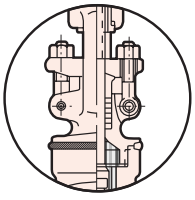
Fig. No. F1150F21
Fig. No. F1300F21
Fig. No. F1600F21



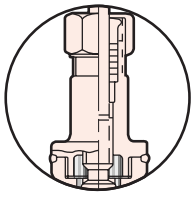
OS & Y B.B

Specifications:

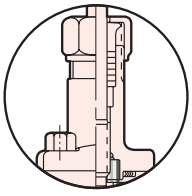
- Basic Design: **API-602 & ANSI B16.34**
- Face to Face: **ANSI B16.10**
- Flanged End: **ANSI B16.5**
- Test and Inspect: **API-598**
- Standard Material: **See Page 3**



OS & Y W.B



Inside Screw W.B



Inside Screw B.B

Dimensions and Weights

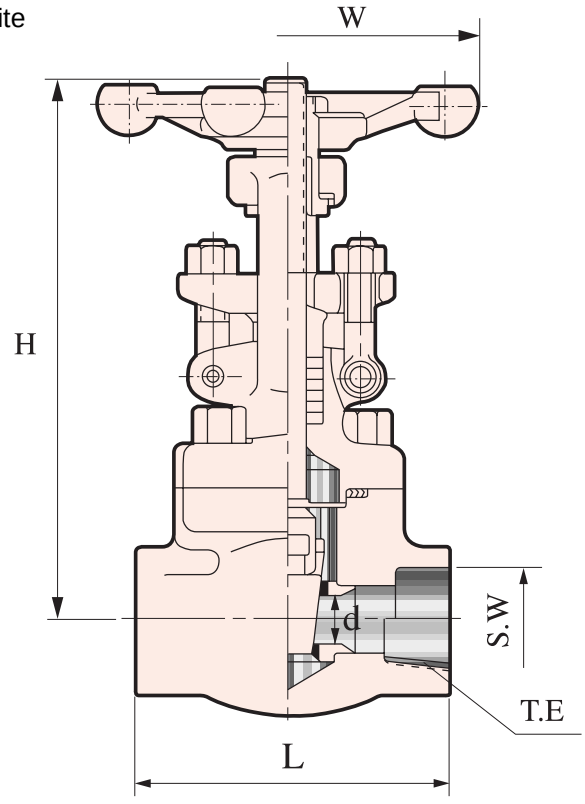
NPS		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.39	0.51	0.71	0.94	1.14	1.46
		mm	10	13	18	24	29	37
L	CLASS 150	inch	4.25	4.62	5.00	5.50	6.50	8.00
		mm	108	117	127	140	165	203
	CLASS 300	inch	5.5	6.0	6.5	7.0	7.5	8.5
		mm	140	152	165	178	190	216
	CLASS 600	inch	6.5	7.5	8.5	9.0	9.5	11.5
		mm	165	190	216	229	241	292
H (OPEN)	CLASS 150 CLASS 300	inch	6.20	6.70	7.80	9.30	9.70	11.10
		mm	158	169	197	236	246	283
	CLASS 600	inch	6.70	7.80	9.30	9.70	11.10	12.60
		mm	169	197	236	246	283	320
W		inch	3.94	3.94	4.92	6.30	6.30	7.10
		mm	100	100	125	160	160	180
WEIGHT	CLASS 150	lb	9.9	11.4	19.8	25..3	27.5	44.7
		kg	4.5	5.2	8.2	11.5	12.5	20.3
	CLASS 300	lb	10.6	13.7	20.5	30.8	34.1	51.5
		kg	4.8	6.2	9.3	14.0	15.5	23.4
	CLASS 600	lb	13.0	16.3	22.9	35.6	38.5	62.3
		kg	5.9	7.4	10.4	16.2	17.5	28.3

Class 800 Forged Steel Gate Valves

Features:

- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel and Flexible Graphite with Controlled Compression.
- Reduced or Full Port.
- Compact Outside Screw & Yoke or Compact Inside Screw.
- Renewable Hardfaced Seats.
- Socket Weld (S.W) or Threaded End (T.E).

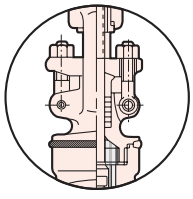
Fig. No. F1800T21
Fig. No. F1800S21



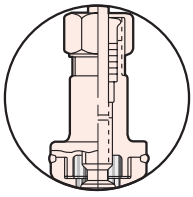
OS & Y B.B

Specifications:

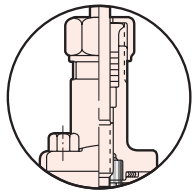
- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End(S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 3**



OS & Y W.B



Inside Screw W.B



Inside Screw B.B

Dimensions and Weights

Normal Diameter	Reduced Port / Full Port		3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″	3″
	Full Port	inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	-
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46	1.81	2.00
		mm	7	10	13	18	24	29	37	46	51
L		inch	3.12	3.12	3.62	4.37	4.75	4.75	5.50	7.00	7.28
		mm	79	79	92	111	120	120	140	178	185
H (OPEN)	Outside Screw & Yoke	inch	6.22	6.22	6.70	7.76	9.30	9.68	11.14	12.99	14.13
		mm	158	158	169	197	236	246	283	330	359
	Inside Screw	inch	6.65	6.65	7.20	8.19	10.60	11.42	12.99	-	-
		mm	169	169	182	208	254	290	330	-	-
W		inch	3.93	3.93	3.90	4.92	6.29	6.29	7.08	7.87	7.87
		mm	100	100	100	125	160	160	180	200	200
Weight	B.B	lb	4.84	4.62	5.06	8.80	13.00	15.20	24.60	34.76	44.00
		kg	2.2	2.1	2.3	4.0	5.9	6.9	11.2	15.8	20.0
	W.B	lb	3.96	3.74	4.62	8.14	11.44	13.64	22.88	32.56	-
		kg	1.8	1.7	2.1	3.7	5.2	6.2	10.4	14.8	-

Class 1500 Forged Steel Gate Valves

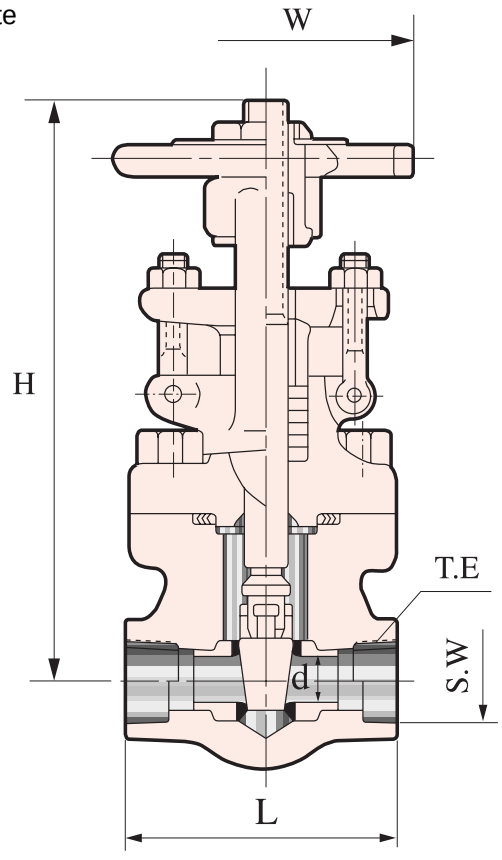
Features:

- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel and Flexible Graphite with Controlled Compression.
- Reduced or Full Port.
- Compact Outside Screw & Yoke or Compact Inside Screw.
- Renewable Hardfaced Seats.
- Socket Weld (S.W) or Threaded End (T.E).

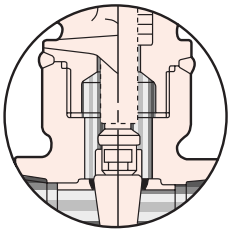
Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 3**

Fig. No. F11500T21
Fig. No. F11500S21



OS & Y B.B



OS & Y W.B

Dimensions and Weights

Normal Diameter	Reduced Port / Full Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
		inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.62	4.37	4.37	4.72	4.75	5.5	7.0
		mm	92	111	111	120	120	140	178
H (OPEN)		inch	6.65	7.75	7.75	9.30	9.69	11.14	13.00
		mm	169	197	197	236	246	283	330
W		inch	3.94	4.92	4.92	6.30	6.30	7.09	7.87
		mm	100	125	125	160	160	180	200
Weight	B.B	lb	10.34	10.12	10.12	13.86	19.14	26.60	37.80
		kg	4.7	4.6	4.6	6.3	8.7	12.2	17.2
	W.B	lb	8.80	8.56	8.56	12.76	17.66	24.64	35.20
		kg	4.0	3.9	3.9	5.8	7.8	11.2	16.0

Class 2500 Forged Steel Gate Valves

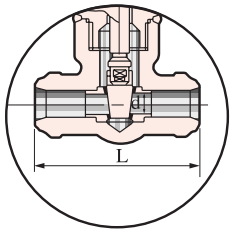
Features:

- Welded Bonnet (W.B).
- Compact Outside Screw & Yoke.
- Socket Weld (S.W), Threaded End (T.E), or Butt-Weld End (B.W).
- Renewable Hardfaced Seats.

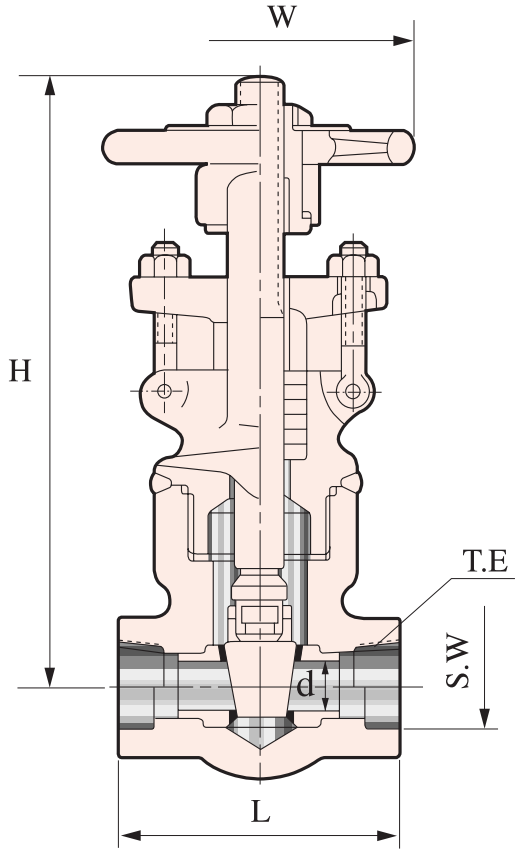
Specifications:

- Basic Design: **ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Butt Weld (B.W): **ANSI B16.25**
- Test and Inspect: **API-598**
- Standard Material: **See Page 3**

Fig. No. F12500T22
Fig. No. F12500S22



OS & Y B.W



OS & Y S.W or T.E

Dimensions and Weights

Normal Diameter		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.51	0.51	0.71	0.94	1.14	1.46
		mm	13	13	18	24	29	37
L	S.W, T.E	inch	7.32	7.32	7.32	9.13	9.13	10.98
		mm	186	186	186	232	232	279
	B.W	inch	8.5	9.0	10.0	11.0	12.0	14.5
		mm	216	229	254	279	305	368
H(OPEN)		inch	8.58	8.58	10.20	12.60	12.60	13.78
		mm	218	218	259	320	320	350
W		inch	4.92	4.92	6.30	7.09	7.09	7.87
		mm	125	125	160	180	180	200
Weight	S.W, T.E	lb	15.4	15.4	30.8	49.5	50.6	61.6
		kg	7	7	14	22.5	23	28
	B.W	lb	24.86	27.50	34.32	39.16	45.98	78.10
		kg	11.3	12.5	15.6	17.8	20.9	35.5

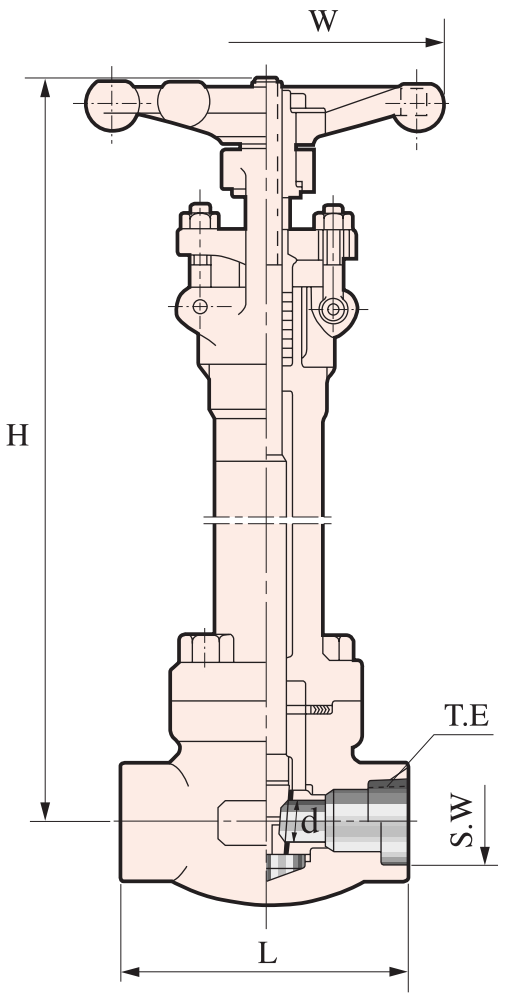
Features:

- Reduced or Full Port.
- Outside Screw & Yoke Long Bonnet.
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Renewable Hardfaced Seats.
- Balancing Hole in Wedge.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **LF2, F304(L) F316(L)**

Fig. No. F9807T71



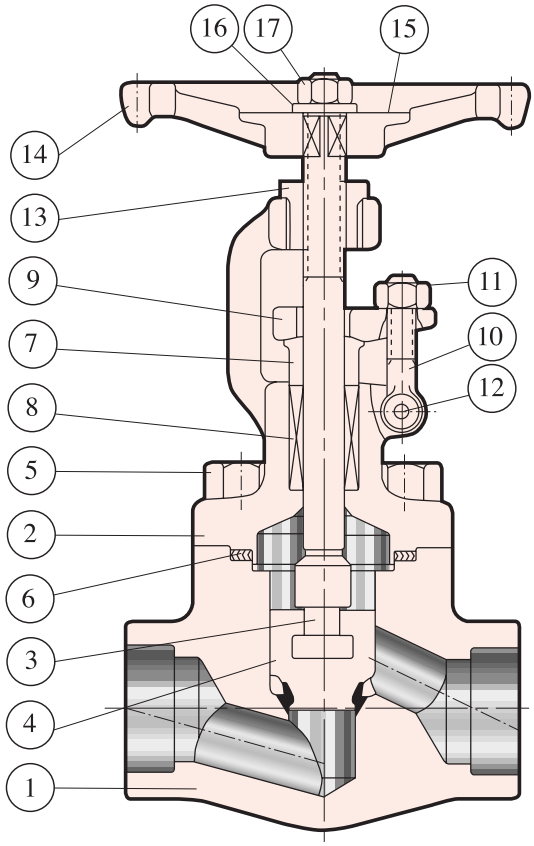
OS & Y S.W or T.E

Dimensions and Weights

Normal Diameter	Reduced Port / Full Port	inch	3/8″ / 1/4″	1/2″ / 3/8″	3/4″ / 1/2″	1″ / 3/4″	1 1/4″ / 1″	1 1/2″ / 1 1/4″	2″ / 1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.12	3.62	4.37	4.72	4.72	5.51	7.00
		mm	79	92	111	120	120	140	178
H (OPEN)		inch	13.00	13.11	14.17	16.02	18.70	18.70	21.69
		mm	330	333	360	407	475	475	551
W		inch	3.94	3.94	4.92	6.30	6.30	7.09	7.87
		mm	100	100	125	160	160	180	200
Weight		lb	11.44	15.64	20.70	29.74	33.04	39.21	61.60
		kg	5.2	7.1	9.4	13.5	15.0	17.8	28.0

Standard Material Specifications

Part No.	Part Name	ASTM Specifications									
		Carbon Steel		Alloy Steel			Stainless Steel				
		A 105	A350	A182							
		(b, c)	LF2	F5	F11(d)	F22	F304 (e)	F304L	F316(e)	F316L	F51
1	Body	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
2	Bonnet	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
3	Stem	A276 - 410					A276 - 304	A276 - 304L	A276 - 316	A276 - 316L	F51
4	Disc	A276 - 420					304 + STL	304L + STL	316 + STL	316L + STL	F51
5	Bonnet Bolt (a)	A193 - B7	A320 - L7	A193 - B16			A193 - B8		A193 - B8M		
6	Gasket	304 + Graphite					316 + Graphite				
7	Gland	A276 - 410					A276 - 304		A276 - 316		F51
8	Packing	Flexible Graphite					PTFE				
9	Gland Flange	A105	LF2	F11			CF8				F51
10	Gland Bolt	A193-B7	A320-L7	A193 - B16			A193 - B8 / B8M				
11	Gland Bolt Nut	A194-2H	A194-7	A194 - 4			A194 - 8				
12	Gland Bolt Pin	A276 - 410					A276 - 304				F51
13	Sleeve	A276 - 410									
14	Handwheel	A197									
15	Nameplate	Aluminum					304				
16	Handwheel Washer	A108 - 1020									
17	Handwheel Nut	A194 - 2H									



Globe Valve

Notes:

a. Temperature limitations on bolting are as following: Gr B7,1000°F(538°C); Gr L7,1000°F(538°C); Gr B16,1100°F(595°C); Gr B8-CL1,1500°F(816°C); Gr B8M-CL1,1500°F(816°C); Gr B8-CL2,1000°F(538°C); and Gr B8M-CL2,1000°F(538°C).

b. Upon prolonged exposure to temperatures above 800°F(425°C), the carbide phase of carbon steel may be converted to graphite.

c. Only killed steel shall be used above 850°F(455°C).

d. Use normalized and tempered material only.

e. At temperatures over 1000°F(538°C), use only when the carbon is 0.04 percent or higher.

Class 150 / 300 / 600 Forged Steel Globe Valves

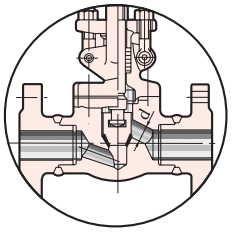
Fig. No. F2150F33
Fig. No. F2300F33
Fig. No. F2600F33

Features:

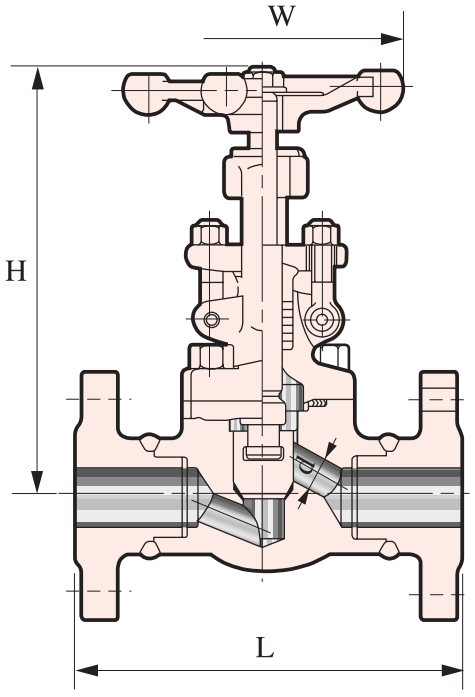
- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel.
- Integral Stellited Seat.
- Flanged End.
- Compact Outside Screw & Yoke.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Face to Face: **ANSI B16.10**
- Flanged End: **ANSI B16.5**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**



OS & Y W. B



OS & Y B. B

Dimensions and Weights

Normal Diameter		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.39	0.51	0.71	0.94	1.14	1.46
		mm	10	13	18	24	29	37
L	CLASS 150	inch	4.25	4.62	5.00	5.50	6.50	8.00
		mm	108	117	127	140	165	203
	CLASS 300	inch	6.0	7.0	8.0	8.5	9.0	10.5
		mm	152	178	203	216	229	267
	CLASS 600	inch	6.5	7.5	8.5	9.0	9.5	11.5
		mm	165	190	216	229	241	292
H (OPEN)	CLASS 150 CLASS 300	inch	6.54	6.73	8.15	9.45	10.12	13.00
		mm	166	171	207	240	256	330
	CLASS 600	inch	6.73	8.15	9.45	10.12	13.00	14.96
		mm	171	207	240	256	330	380
W		inch	3.94	3.94	4.92	6.30	6.30	7.09
		mm	100	100	125	160	160	180
WEIGHT	CLASS 150	lb	7.94	11.02	14.55	21.60	26.45	33.07
		kg	3.6	5.0	6.6	9.8	12.0	15.0
	CLASS 300	lb	8.82	11.46	16.53	24.91	36.37	40.12
		kg	4.0	5.2	7.5	11.3	16.5	18.2
	CLASS 600	lb	12.34	15.21	21.6	27.55	40.56	44.09
		kg	5.6	6.9	9.8	12.5	18.4	20.0

Class 800 Forged Steel Globe Valves

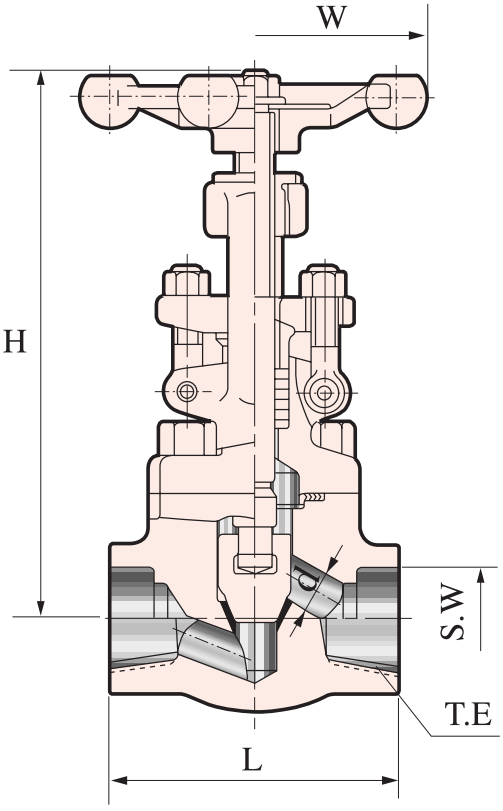
Features:

- Bolted Bonnet (B.B) or Welded Bonnet (W,B).
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Compact Outside Screw & Yoke or Compact Inside Screw.
- Integral Stellited Seat.

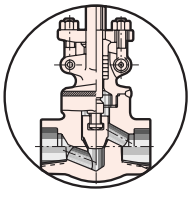
Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**

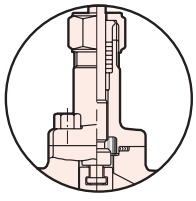
Fig. No. F2800T21
Fig. No. F2800S21



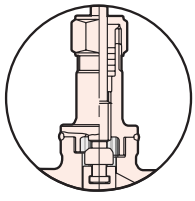
OS & Y B.B



OS & Y W.B



Inside Screw B.B



Inside Screw W.B

Dimensions and Weights

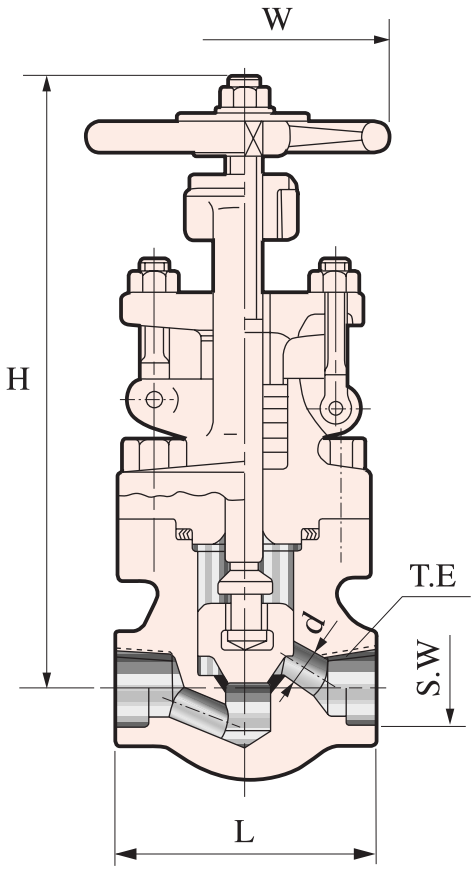
Normal Diameter	Reduced Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	-
	Full Port	inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.39	0.39	0.51	0.71	0.94	1.14	1.46	1.81
		mm	10	10	13	18	24	29	37	46
L		inch	3.12	3.12	3.62	4.37	4.72	5.98	6.77	7.87
		mm	79	79	92	111	120	152	172	200
H (OPEN)	Outside Screw & Yoke	inch	6.54	6.54	6.73	8.15	9.45	10.12	13.00	13.98
		mm	166	166	171	207	240	258	330	355
	Inside Screw	inch	6.18	6.18	6.40	7.68	10.51	10.51	11.85	-
		mm	157	157	162	195	267	267	301	-
W		inch	3.94	3.94	3.94	4.92	6.30	6.30	7.09	7.87
		mm	100	100	100	125	160	160	180	200
Weight	B.B	lb	4.62	4.18	4.62	8.58	12.76	15.80	23.80	35.20
		kg	2.1	1.9	2.1	3.9	5.8	7.2	10.8	16.0
	W.B	lb	3.96	3.74	4.62	8.14	11.44	13.64	22.88	32.56
		kg	1.8	1.7	2.1	3.7	5.2	6.2	10.4	14.8

Class 1500 Forged Steel Globe Valves

Features:

- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Reduced or Full Port.
- Compact Outside Screw & Yoke or Compact Inside Screw.
- Integral Stellited Seat.

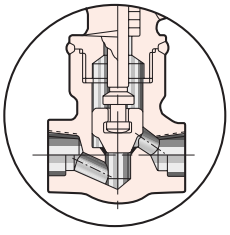
Fig. No. F21500T23
Fig. No. F21500S23



OS & Y B.B

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**



OS & Y W.B

Dimensions and Weights

Normal Diameter	Reduced Port / Full Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
		inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.62	4.37	4.37	4.72	5.98	6.80	7.87
		mm	92	111	111	120	152	172	200
H (OPEN)		inch	6.73	8.15	8.15	9.45	10.16	13.00	13.98
		mm	171	207	207	240	258	330	355
W		inch	3.94	4.92	4.92	6.30	6.30	7.09	7.87
		mm	100	125	125	160	160	180	200
Weight	B.B	lb	10.78	10.34	10.12	14.96	20.24	29.90	45.98
		kg	4.9	4.7	4.6	6.8	9.2	13.6	20.9
	W.B	lb	9.46	9.02	8.80	13.64	18.92	27.94	42.02
		kg	4.3	4.1	4.0	6.2	8.6	12.7	19.1

Class 2500 Forged Steel Globe Valves

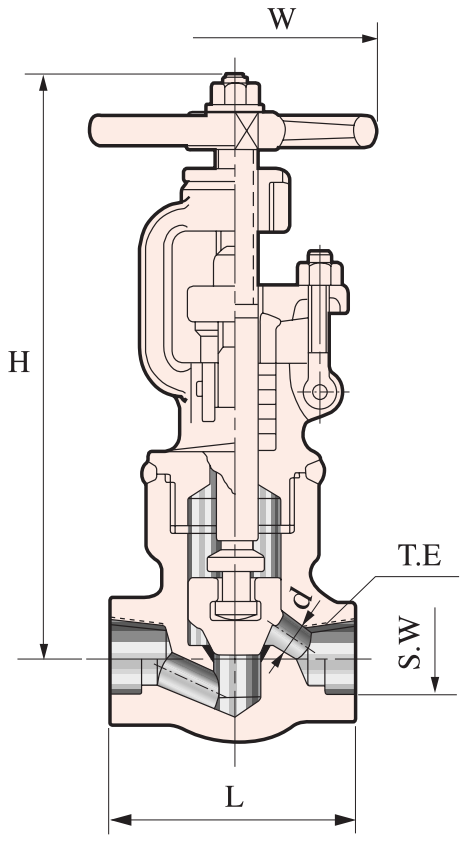
Features:

- Welded Bonnet (W.B).
- Compact Outside Screw & Yoke.
- Socket Weld (S.W), Threaded End (T.E), or Butt Weld End (B.W).
- Integral Stellited Seat.

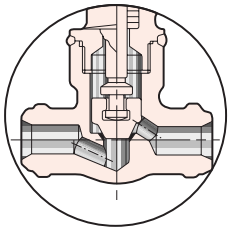
Specifications:

- Basic Design: **ANSI B16.34**
- Socket Weld (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Butt Weld (B.W): **ANSI B16.25**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**

Fig. No. F22500T24
Fig. No. F22500S24



OS & Y T.E or S.W



OS & Y B.W

Dimensions and Weights

Normal Diameter		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.39	0.51	0.71	0.94	1.14	1.46
		mm	10	13	18	24	29	37
L	S.W, T.E	inch	7.32	7.32	7.32	9.13	9.13	10.98
		mm	186	186	186	232	232	279
	B.W	inch	8.50	9.02	10.00	10.98	12.00	14.20
		mm	216	229	254	279	305	368
H (OPEN)		inch	8.94	8.94	11.34	13.00	13.00	14.17
		mm	227	227	288	330	330	360
W		inch	6.30	6.30	6.30	7.87	7.87	8.66
		mm	160	160	160	200	200	220
Weight	B.B	lb	17.6	17.6	37.4	55.0	57.2	74.8
		kg	8	8	17	25	26	34
	W.B	lb	29.4	28.6	44.0	70.4	77.0	88.0
		kg	12	13	20	32	35	40

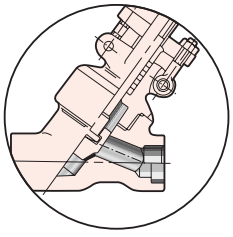
Fig. No. F3800T21
Fig. No. F3800S21
Fig. No. F31500T21
Fig. No. F31500S21

Features:

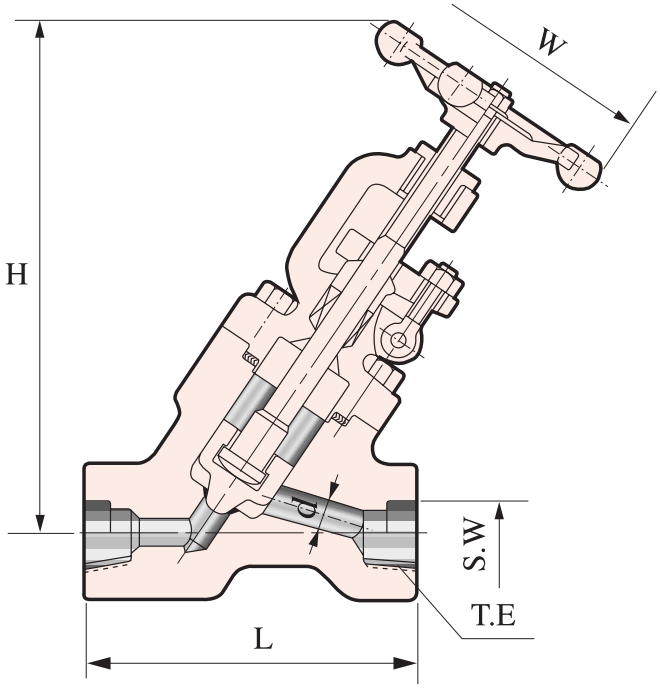
- Welded Bonnet (W.B) or Bolted Bonnet (B.B).
- Compact Outside Screw & Yoke.
- Socket Weld (S.W) or Threaded End (T.E).
- Integral Stellited Seat.

Specifications:

- Basic Design: **ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**



OS & Y W.B



OS & Y B.B

Dimensions and Weights

Normal Diameter			inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		Class 800	inch	0.51	0.71	0.94	1.14	1.46	1.81
			mm	13	18	24	29	37	46
		Class 1500	inch	0.51	0.51	0.75	11.02	11.02	1.49
			mm	13	13	19	28	28	38
L		Class 800	inch	3.86	4.37	4.72	5.51	5.51	6.69
			mm	98	111	120	140	140	170
		Class 1500	inch	5.51	5.51	5.51	7.00	7.00	8.50
			mm	140	140	140	178	178	216
H (OPEN)		Class 800	inch	6.89	8.46	10.00	12.00	12.00	14.37
			mm	175	215	254	305	305	365
		Class 1500	inch	6.69	7.68	9.25	10.94	10.94	12.20
			mm	170	195	235	278	278	310
W		Class 800	inch	3.94	4.92	6.30	6.30	7.09	7.87
			mm	100	125	160	160	180	200
		Class 1500	inch	3.94	4.92	6.30	7.09	7.09	7.87
			mm	100	125	160	180	180	200
Weight	B.B	Class 800	lb	10.12	10.12	16.72	21.56	30.14	30.80
			kg	4.6	4.6	7.6	9.8	13.7	14.0
	W.B	Class 800	lb	7.70	8.36	14.52	18.70	24.86	27.50
			kg	3.5	3.8	6.5	8.5	11.30	12.5
		Class 1500	lb	9.90	13.42	16.72	21.56	31.90	45.76
			kg	4.5	6.1	7.6	9.8	14.5	20.8

Class 150 / 300 / 600 Forged Steel Needle Globe Valves

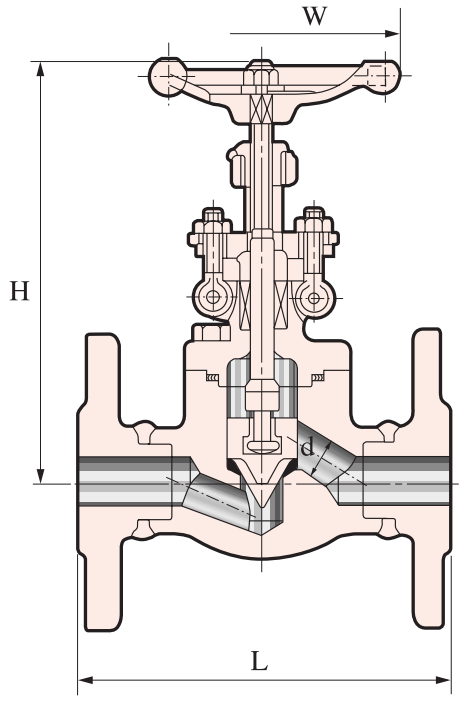
Features:

- Bolted Bonnet (B.B).
- Reduced Port.
- Spiral Wound Gasket of Stainless Steel.
- Flanged End.
- Compact Outside Screw & Yoke.
- Needle Point Flow Control.
- Integral Stellited Seat.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Face to Face: **ANSI B16.10**
- Flanged End: **ANSI B16.5**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**

Fig. No. F8150F23
Fig. No. F8300F23
Fig. No. F8600F23



OS & Y B.B

Dimensions and Weights

Normal Diameter		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.39	0.51	0.71	0.94	1.14	1.46
		mm	10	13	18	24	29	37
L	CLASS 150	inch	4.25	4.62	5.00	5.51	6.50	8.00
		mm	108	117	127	140	165	203
	CLASS 300	inch	6.0	7.0	8.0	8.5	9.0	10.5
		mm	152	178	203	216	229	267
	CLASS 600	inch	6.5	7.5	8.5	9.0	9.5	11.5
		mm	165	190	216	229	241	292
H (OPEN)		inch	6.93	6.93	8.35	9.06	10.00	11.57
		mm	176	176	212	230	254	294
W		inch	3.94	3.94	4.92	6.30	6.30	7.09
		mm	100	100	125	160	160	180
WEIGHT	CLASS 150	lb	7.92	11.00	14.52	21.56	26.40	33.00
		kg	3.6	5.0	6.6	9.8	12.0	15.0
	CLASS 300	lb	8.80	11.44	16.50	24.86	36.30	40.04
		kg	4.0	5.2	7.5	11.3	16.5	18.2
	CLASS 600	lb	12.32	15.18	21.56	27.50	40.48	44.00
		kg	5.6	6.9	9.8	12.5	18.4	20.0

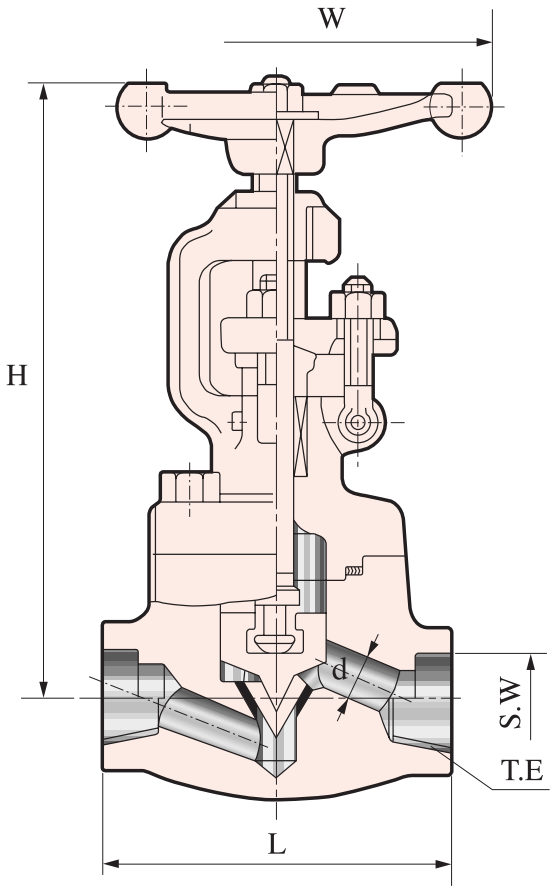
Features:

- Bolted Bonnet (B.B).
- Reduced Port.
- Spiral Wound Gasket of Stainless Steel.
- Compact Outside Screw & Yoke.
- Needle Point Flow Control.
- Integral Stellited Seat.
- Socket Weld (S.W) or Threaded End (T.E).

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 9**

Fig. No. F8800S23
Fig. No. F81500S23



OS & Y T.E or S.W

Dimensions and Weights

Normal Diameter	inch	1/4″	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d	inch	0.28	0.39	0.39	0.51	0.71	0.94	1.14	1.46
	mm	7	10	10	13	18	24	29	37
L	inch	3.11	3.11	3.11	3.62	4.37	4.72	5.98	6.77
	mm	79	79	79	92	111	120	152	172
H (OPEN)	inch	6.93	6.93	6.93	6.93	8.35	9.06	10.00	11.57
	mm	176	176	176	176	212	230	254	294
W	inch	3.94	3.94	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	100	100	125	160	160	180
Weight	lb	5.06	4.84	4.40	4.62	9.24	13.42	16.5	24.64
	kg	2.3	2.2	2.0	2.1	4.2	6.1	7.5	11.2

Class 800 Forged Steel Cryogenic Globe Valves

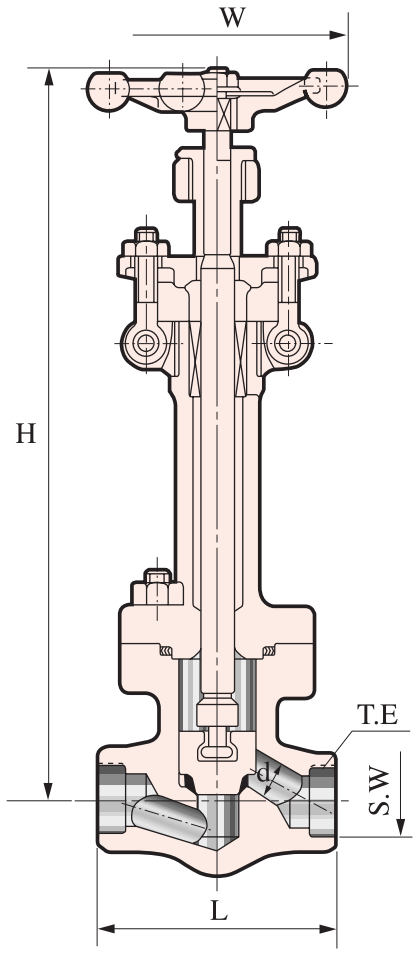
Features:

- Reduced or Full Port.
- Outside Screw & Yoke, Long Bonnet.
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Integral Stellited Seat.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **LF2 F304(L) F316(L)**

Fig. No. F0807T73



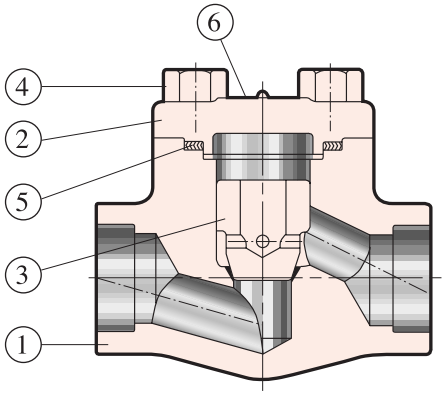
OS & Y B.B

Dimensions and Weights

Normal Diameter	Reduced Port / Full Port								
	Reduced Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
	Full Port	inch	1/4″	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.12	3.62	4.37	4.72	4.72	6.77	7.87
		mm	79	92	111	120	120	172	200
H (OPEN)		inch	13.11	13.26	14.57	14.96	16.41	18.66	21.50
		mm	333	337	370	380	410	474	546
W		inch	3.94	3.94	4.92	6.30	6.30	7.09	7.87
		mm	100	100	125	160	160	180	200
Weight		lb	14.52	14.08	15.84	20.90	29.70	37.40	43.56
		kg	6.6	6.4	7.2	9.5	13.5	17.0	19.8

Standard Material Specifications — Piston Check & Lift Check with Spring Valve

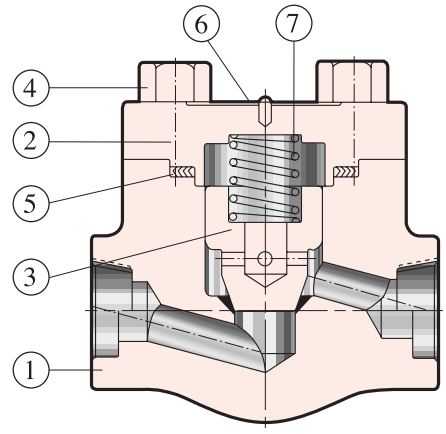
Part No.	Part Name	ASTM Specifications									
		Carbon Steel		Alloy Steel			Stainless Steel				
		A 105	A350	A182							
		(b, c)	LF2	F5	F11(d)	F22	F304(e)	F304L	F316(e)	F316L	F51
1	Body	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
2	Cover	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
3	Disc	A276 - 420					304+ STL	304L+ STL	316+ STL	316L+ STL	F51
4	Cover Bolt (a)	A193-B7	A320-L7	A193 - B16			A193 - B8		A193 - B8M		
5	Gasket	304 + Graphite					316 + Graphite				
6	Nameplate	Aluminum					304				
7	Spring	Stainless Steel									



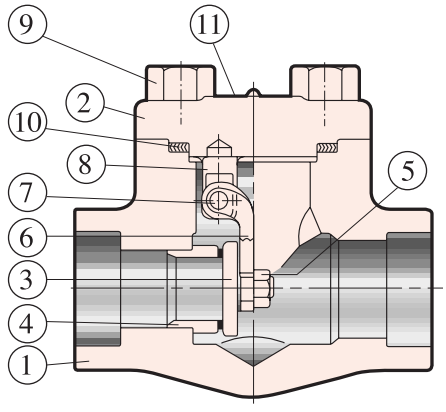
Piston Check Valve

Standard Material Specifications — Swing Check Valve

Part No.	Part Name	ASTM Specifications									
		Carbon Steel		Alloy Steel			Stainless Steel				
		A 105	A350	A182							
		(b, c)	LF2	F5	F11(d)	F22	F304(e)	F304L	F316(e)	F316L	F51
1	Body	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
2	Cover	A 105	LF2	F5	F11	F22	F304	F304L	F316	F316L	F51
3	Disc	A276 - 420					304+ STL	304L+ STL	316+ STL	316L+ STL	F51
4	Seat Ring	A276-410 + STL					304+ STL	304L+ STL	316+ STL	316L+ STL	F51
5	Retaining Nut	A194 - 2H					A194 - B8				
6	Hing	A276 - CA40					A351 - CF8M				
7	Hing Pin	A276 - 410					A276 - 304				
8	Supporter	A276 - 304					A276 - 304		A276 - 316		
9	Cover Bolt (a)	A193-B7	A320-L7	A193 - B16			A193 - B8		A193 - B8M		
10	Gasket	304 + Graphite					316 + Graphite				
11	Nameplate	Aluminum					304				



Lift Check with Spring Valve



Swing Check Valve

Notes:

a. Temperature limitations on bolting are as following: Gr B7,1000°F(538°C); Gr L7,1000°F(538°C); Gr B16,1100°F(595°C); Gr B8-CL1,1500°F(816°C); Gr B8M-CL1,1500°F(816°C); Gr B8-CL2,1000°F(538°C); and Gr B8M-CL2,1000°F(538°C).

b. Upon prolonged exposure to temperatures above 800°F(425°C), the carbide phase of carbon steel may be converted to graphite.

c. Only killed steel shall be used above 850°F(455°C).

d. Use normalized and tempered material only.

e. At temperatures over 1000°F(538°C), use only when the carbon is 0.04 percent or higher.

Class 150 / 300 / 600 Forged Steel Check Valves

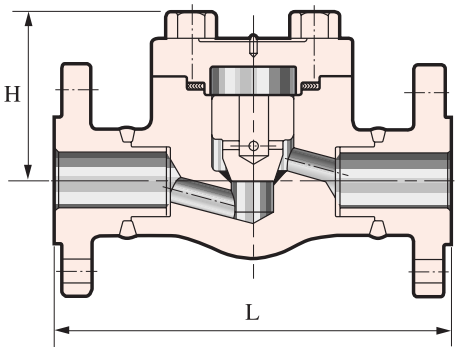
Fig. No. F4150F21 Fig. No. F6150F21
Fig. No. F4300F21 Fig. No. F6300F21
Fig. No. F4600F21 Fig. No. F6600F21

Features:

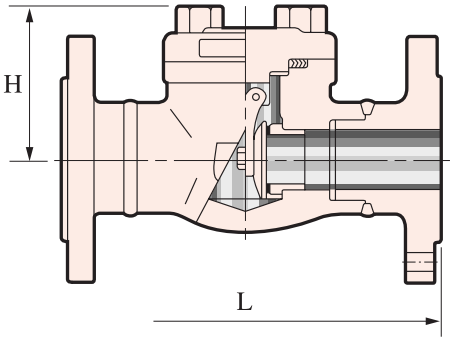
- Bolted Bonnet (B.B).
- Spiral Wound Gasket of Stainless Steel.
- Integral or Renewable Hardfaced Seat.
- Flanged End.
- Piston or Swing Check Valve.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Face to Face: **ANSI B16.10**
- Flanged End: **ANSI B16.5**
- Test and Inspect: **API-598**
- Standard Material: **See Page 18**



Piston Check Valve



Swing Check Valve

Dimensions and Weights

Normal Diameter		inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d		inch	0.51	0.71	0.94	1.14	1.46	1.81
		mm	13	18	24	29	37	46
L	CLASS 150	inch	4.25	4.62	5.00	5.50	6.50	8.00
		mm	108	117	127	140	165	203
	CLASS 300	inch	6.0	7.0	8.0	8.5	9.0	10.5
		mm	152	178	203	216	229	267
	CLASS 600	inch	6.5	7.5	8.5	9.0	9.5	11.5
		mm	165	190	216	229	241	292
H	CLASS 150 CLASS 300	inch	2.40	2.40	3.11	3.74	4.06	4.65
		mm	61	61	78	95	103	118
	CLASS 600	inch	2.40	3.11	3.74	4.06	4.65	5.31
		mm	61	79	95	103	118	135
WEIGHT	CLASS 150	lb	5.72	7.48	9.68	18.04	19.80	27.72
		kg	2.6	3.4	4.4	8.2	9.0	12.6
	CLASS 300	lb	5.94	8.14	10.34	19.36	21.12	30.14
		kg	2.7	3.7	4.7	8.8	9.6	13.7
	CLASS 600	lb	6.60	8.80	12.76	20.90	22.00	34.32
		kg	3.0	4.0	5.8	9.5	10.0	15.6

Class 800 Forged Steel Check Valves

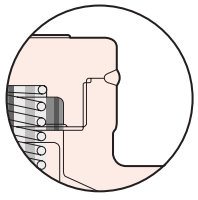
Features:

- Reduced or Full Port.
- Piston or Swing Check Valve.
- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Renewable or Integral Hardfaced Seat.

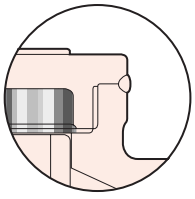
Fig. No. F4800T21 **Fig. No. F6800T21**
Fig. No. F4800S21 **Fig. No. F6800S21**
Fig. No. F5800T21
Fig. No. F5800S21

Specifications:

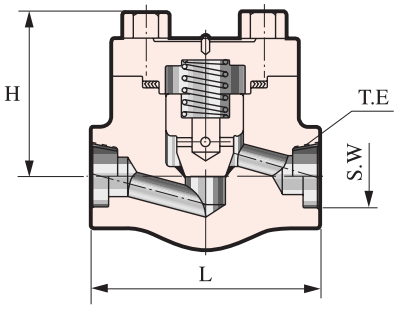
- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 18**



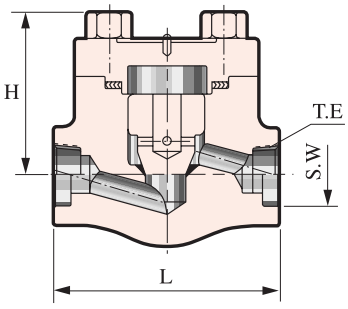
Lift Check with Spring Valve W.B



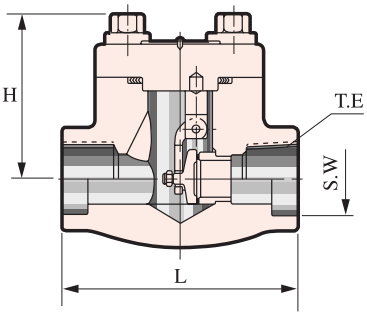
Piston Check Valve W.B



Lift Check with Sping Valve B.B



Piston Check Valve B.B



Swing Check Valve B.B

Dimensions and Weights

Piston Check Valve

Normal Diameter	Reduced Port / Full Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
		inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.12	3.12	3.62	4.37	4.72	5.98	6.8
		mm	79	79	92	111	120	152	172
H		inch	2.40	2.40	2.56	3.11	3.74	4.06	4.56
		mm	61	61	65	79	95	103	118
Weight		lb	3.08	2.64	3.08	5.06	8.58	12.3	19.6
		kg	1.4	1.2	1.4	2.3	3.9	5.6	8.9

Swing Check Valve

Normal Diameter	Reduced Port / Full Port	inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
		inch	-	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.12	3.12	3.62	4.37	4.72	4.72	5.51
		mm	79	79	92	111	120	120	140
H		inch	2.40	2.40	3.07	3.31	3.98	4.72	5.24
		mm	61	61	78	84	101	120	133
Weight		lb	2.64	2.20	2.42	4.18	7.48	9.90	16.06
		kg	1.2	1.0	1.1	1.9	3.4	4.5	7.3

Class 1500 Forged Steel Check Valves

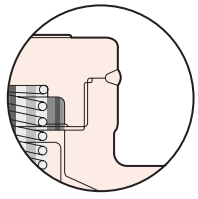
Features:

- Reduced or Full Port.
- Lift, Piston or Swing Check Valve.
- Bolted Bonnet (B.B) or Welded Bonnet (W.B).
- Spiral Wound Gasket of Stainless Steel.
- Socket Weld (S.W) or Threaded End (T.E).
- Renewable or Integral Hardfaced Seat.

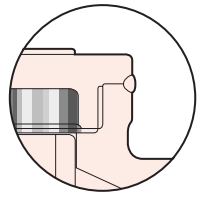
Fig. No. F41500T21 Fig. No. F41500S21
Fig. No. F51500T21 Fig. No. F51500S21
Fig. No. F61500T21 Fig. No. F61500S21

Specifications:

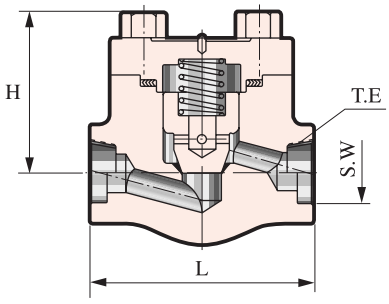
- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 18**



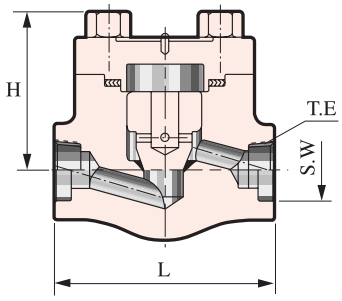
Lift Check with Sping Valve W.B



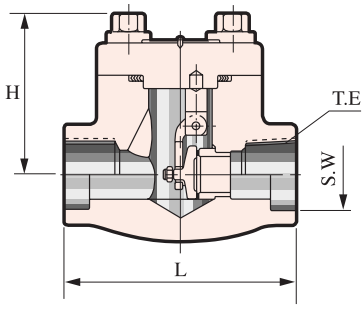
Pistoan Check Valve W.B



Lift Check with Sping Valve B.B



Piston Check Valve B.B



Swing Check Valve B.B

Dimensions and Weights

Piston Check / Lift Check Valve

Normal Diameter	Reduced Port / Full Port	inch	3/8″ / -	1/2″ / 3/8″	3/4″ / 1/2″	1″ / 3/4″	1 1/4″ / 1″	1 1/2″ / 1 1/4″	2″ / 1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.62	4.37	4.37	4.72	5.98	6.77	7.87
		mm	92	111	111	120	152	172	200
H		inch	2.56	3.12	3.12	3.82	4.09	4.72	5.47
		mm	65	79	79	97	104	120	139
Weight		lb	6.60	6.60	7.48	10.56	15.18	23.54	32.12
		kg	3.0	3.0	3.4	4.8	6.9	10.7	14.6

Swing Check Valve

Normal Diameter	Reduced Port / Full Port	inch	3/8″ / -	1/2″ / 3/8″	3/4″ / 1/2″	1″ / 3/4″	1 1/4″ / 1″	1 1/2″ / 1 1/4″	2″ / 1 1/2″
d		inch	0.28	0.39	0.51	0.71	0.94	1.14	1.46
		mm	7	10	13	18	24	29	37
L		inch	3.62	4.37	4.37	4.72	4.72	5.51	7.00
		mm	92	111	111	120	120	140	178
H		inch	3.12	3.12	3.12	3.82	4.13	4.72	5.51
		mm	79	79	79	97	105	120	140
Weight		lb	6.82	6.60	7.92	9.46	13.42	19.4	27.72
		kg	3.1	3.0	3.6	4.3	6.1	8.8	12.6

Class 2500 Forged Steel Check Valves

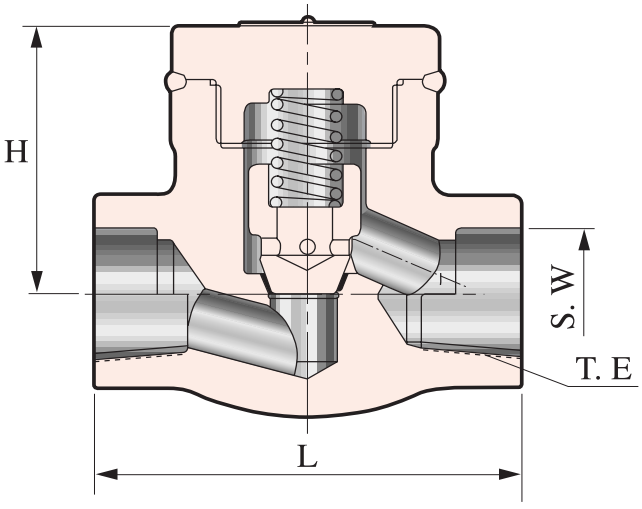
Fig. No. F42500T22
Fig. No. F42500S22
Fig. No. F52500T22
Fig. No. F52500S22

Features:

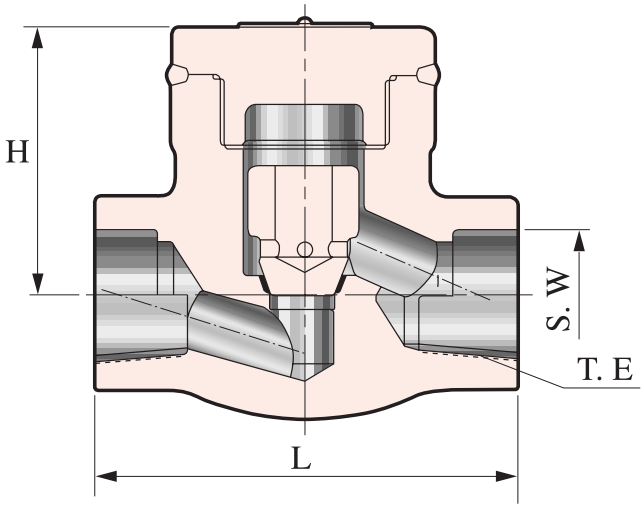
- Lift or Piston Check Valve.
- Welded Bonnet (W.B).
- Socket Weld (S.W) or Threaded End (T.E).
- Integral Hardface Seat.

Specifications:

- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598 or ANSI B16.34**
- Standard Material: **See Page 18**



Lift Check With Spring Valve W.B



Piston Check Valve W.B

Dimensions and Weights

Normal Diameter	inch	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d	inch	0.39	0.51	0.71	0.94	1.14	1.46
	mm	10	13	18	24	29	37
L	inch	7.32	7.32	7.32	9.13	9.13	10.98
	mm	186	186	186	232	232	279
H	inch	3.12	3.90	4.33	4.33	6.69	6.69
	mm	79	98	110	110	170	170
Weight	lb	14.52	25.96	38.72	37.18	47.3	46.86
	kg	6.6	11.8	17.6	16.9	21.5	21.3

Class 800 / 1500 Forged Steel Y-Pattern Check Valves

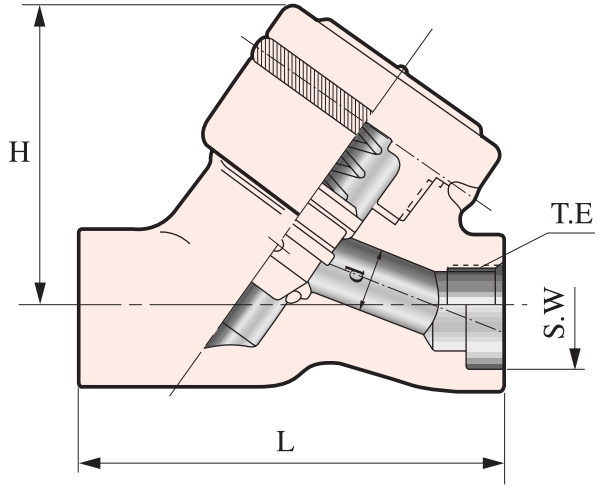
Features:

- Lift Check Valve.
- Welded Bonnet (W.B).
- Socket Weld (S.W) or Threaded End (T.E).
- Integral Hardfaced Seat.

Fig. No. F7800T22
Fig. No. F7800S22
Fig. No. F71500T22
Fig. No. F71500S22

Specifications:

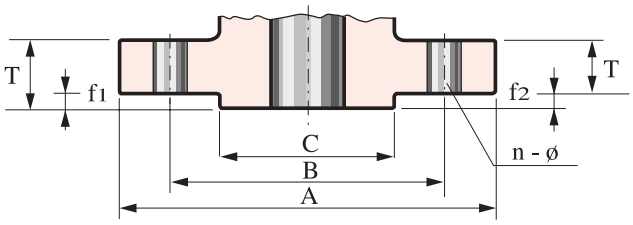
- Basic Design: **API-602 & ANSI B16.34**
- Socket Weld End (S.W): **ANSI B16.11**
- Threaded End (T.E): **ANSI B1.20.1**
- Test and Inspect: **API-598**
- Standard Material: **See Page 18**



Lift Check With Spring Valve W.B

Dimensions and Weights

Normal Diameter		inch	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″
d	Class 800	inch	0.39	0.51	0.71	0.94	1.14	1.46	1.81
		mm	10	13	18	24	29	37	46
	Class 1500	inch	0.39	0.51	0.67	0.91	1.18	1.46	1.83
		mm	10.0	13.0	17.0	23.0	30.0	37.0	46.5
L	Class 800	inch	3.86	3.86	4.33	4.72	5.51	1.51	6.69
		mm	98	98	110	120	140	140	170
	Class 1500	inch	4.01	4.01	4.01	5.12	5.90	7.48	7.48
		mm	102	102	102	130	150	190	190
H	Class 800	inch	3.30	3.30	3.30	4.01	4.40	4.49	5.71
		mm	84	84	84	102	114	114	145
	Class 1500	inch	3.54	3.54	3.98	4.92	5.19	5.63	7.99
		mm	90	90	101	125	132	143	203
Weight	Class 800	lb	6.60	6.38	8.14	14.30	18.70	21.10	23.76
		kg	3.0	2.9	3.7	6.5	8.5	9.6	10.8
	Class 1500	lb	7.04	7.04	9.02	15.84	23.10	25.5	26.3
		kg	3.2	3.2	4.1	7.2	10.5	11.6	12.0

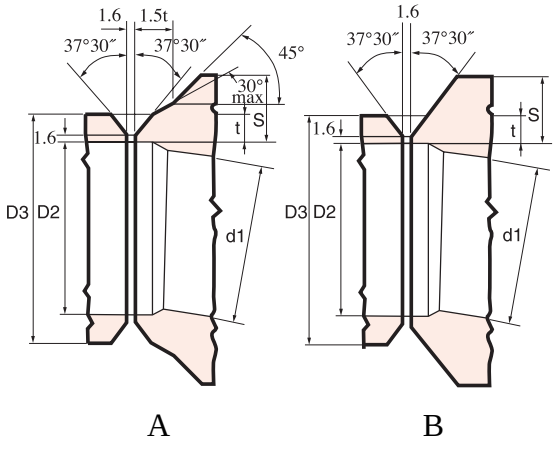


Flanged End: **ANSI B 16.5**

f1. 1/16″ Raised face for 150 and 300 LB (included in flange thickness)
f2. 1/4″ Raised face for 600 and 1500 LB (not included in flange thickness)

Dimensions (ANSI B16.5) (ANSI B 16.10)

Class	Valve Size		A		B		C		T		f		Ø		Number of Bolts
	DN	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	n
150	15	1/2	89	3.50	60	2.38	35	1.38	11.5	0.44	1.6	0.06	16	0.62	4
	20	3/4	99	3.88	70	2.75	43	1.69	13.0	0.50			16	0.62	
	25	1	108	4.25	79	3.12	51	2.00	14.3	0.56			16	0.62	
	32	1 1/4	117	4.62	89	3.50	64	2.50	15.8	0.62			16	0.62	
	40	1 1/2	127	5.00	99	3.88	73	2.88	17.5	0.69			16	0.62	
	50	2	152	6.00	121	4.75	92	3.62	19.5	0.75			20	0.75	
300	15	1/2	95	3.75	67	2.62	35	1.38	14.3	0.56	1.6	0.06	16	0.62	4
	20	3/4	117	4.62	83	3.25	43	1.69	15.8	0.62			20	0.75	
	25	1	124	4.88	89	3.50	51	2.00	17.5	0.69			20	0.75	
	32	1 1/4	133	5.25	99	3.88	64	2.50	19.5	0.75			20	0.75	
	40	1 1/2	155	6.12	114	4.50	73	2.88	20.6	0.81			22	0.88	
	50	2	165	6.50	127	5.00	92	3.62	22.5	0.88			20	0.75	8
600	15	1/2	95	3.75	67	2.62	35	1.38	14.3	0.56	6.4	0.25	16	0.62	4
	20	3/4	117	4.62	83	3.25	43	1.69	15.8	0.62			20	0.75	
	25	1	124	4.88	89	3.50	51	2.00	17.5	0.69			20	0.75	
	32	1 1/4	133	5.25	99	3.88	64	2.50	20.6	0.81			20	0.75	
	40	1 1/2	155	6.12	114	4.50	73	2.88	22.5	0.88			22	0.88	
	50	2	165	6.50	127	5.00	92	3.62	25.4	1.00			20	0.75	8



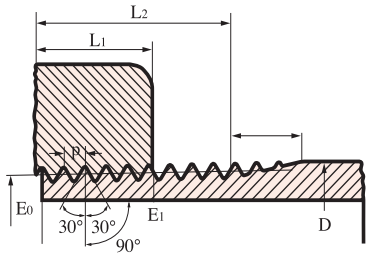
Buttweld End: ANSI B16.25

Dimension of Pipes (mm)

Size	Schedule 80			Schedule160			Schedule xx-stg		
(in.)	D3	D2	t	D3	D2	t	D3	D2	t
1/4	13.7	7.7	3.0	-	-	-	-	-	-
3/8	17.1	10.7	3.2	-	-	-	-	-	-
1/2	21.3	13.9	3.7	21.3	11.8	4.8	21.3	6.4	7.5
3/4	26.7	18.8	3.9	26.7	15.6	5.6	26.7	11.9	7.8
1	33.4	24.4	4.5	33.4	20.7	6.4	33.4	15.2	9.1
1 1/2	48.3	38.1	5.1	48.3	34.0	7.1	48.3	27.9	10.2
2	60.3	49.3	5.5	60.3	42.9	8.7	60.3	38.2	11.1

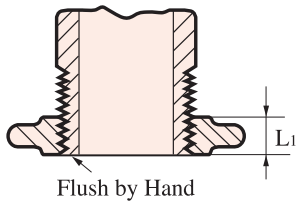
Fig A: Applicable for thickness of valve wall s > 22.2mm
Fig B: Applicable for thickness of valve wall s ≤ 22.2mm
— Dimension d1 depends on requested schedule.

Taper Pipe Threads End (NPT) and Socket Weld End (S.W)

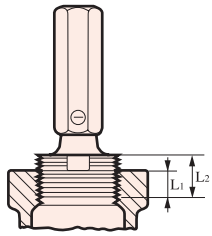


Eo = D-(0.050D+1.1)p
E1(d) = Eo+0.0625L1
L2 = (0.80+6.8)p

p = Pitch
Depth of thread = 0.80p
Total Taper 3/4-inch per Foot



Tolerance on Product.
One turn large or small from notch on plug gauge or face of ring gauge.



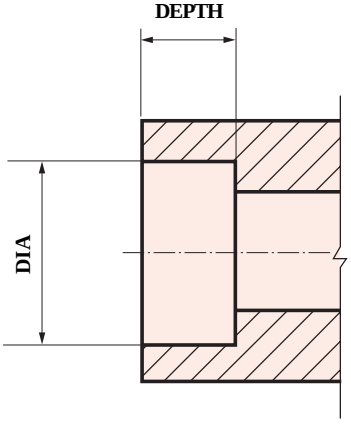
Notch flush with face of fitting. If chamferd, notch with bottom of chamfer.

Dimensions in inches

Normal pipe size	D Outside diameter of pipe	Number of threads per inch	P Pith of thread	Eo Pich diameter at beginning of external thread	E1 (a) Pich diameter at end of external threads	L1 (b) Normal engagement by and between external and internal threads	L2 (c) Lengh of effective external thread	Height of thread
1/16	0.3125	27	0.03704	0.27118	0.28118	0.160	0.2611	0.02963
1/8	0.405	27	0.03704	0.36351	0.37360	0.1615	0.2639	0.02963
1/4	0.540	18	0.05556	0.47739	0.49163	0.2278	0.4018	0.04444
3/8	0.675	18	0.05556	0.61201	0.62701	0.240	0.4078	0.04444
1/2	0.840	14	0.07143	0.75843	0.77843	0.320	0.5337	0.05714
3/4	1.050	14	0.07143	0.96768	0.98887	0.339	0.5457	0.05714
1	1.315	11.5	0.08696	1.21363	1.23863	0.400	0.6828	0.06957
1 1/4	1.660	11.5	0.08696	1.55713	1.58338	0.420	0.7068	0.06957
1 1/2	1.900	11.5	0.08696	1.79609	1.82234	0.420	0.7235	0.06957
2	2.375	11.5	0.08696	2.26902	2.29627	0.436	0.7565	0.06957

(a) Also pitch diameter at gauging notch.
(b) Also lenth of thin ring gauge, and length from gauging notch to small end of plug gauge.
(c) Also lenth of plug gauge.
(d) For the 1/8-27 and 1/4-18 sizes... E1 approx.=D-(0.05D+0.827) P.

Above information extracted from American National Standard for Pipe Threads, ANSI B1.20.1



Socket Weld ANSI B16.11

Dimensions

Normal Pipe Size		Socket Bore DIA. Inches		Socket Bore DIA. Millimeters		Socket Depth Min.	
NPS	DN	Max.	Min.	Max.	Min.	inch	mm
1/4	8	0.565	0.555	14.35	14.10	0.38	9.6
3/8	10	0.700	0.690	17.78	17.53	0.38	9.6
1/2	15	0.865	0.855	21.97	21.72	0.38	9.6
3/4	20	1.075	1.065	27.30	27.05	0.50	12.7
1	25	1.340	1.330	34.04	33.78	0.50	12.7
1 1/4	32	1.685	1.675	42.80	42.54	0.50	12.7
1 1/2	40	1.925	1.915	48.90	48.64	0.50	12.7
2	50	2.416	2.406	61.37	61.11	0.62	15.8

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We reserve the right to institute changes in material ,design and specification without notice.

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Any claim for defect goods should be by written notice to DHV Industries,Inc. immediately upon discovery. NO warranty shall apply to our product which has been modified or changed in design or function, misused, or impropery maintained. DHV Industries,Inc.shall be able to inspect claimed defects at original buyer's facility to determine its obligation.Without authorization of DHV Industries, Inc. any repair labor or material is not allowed. No goods may be returned without permission from DHV Industries,Inc.

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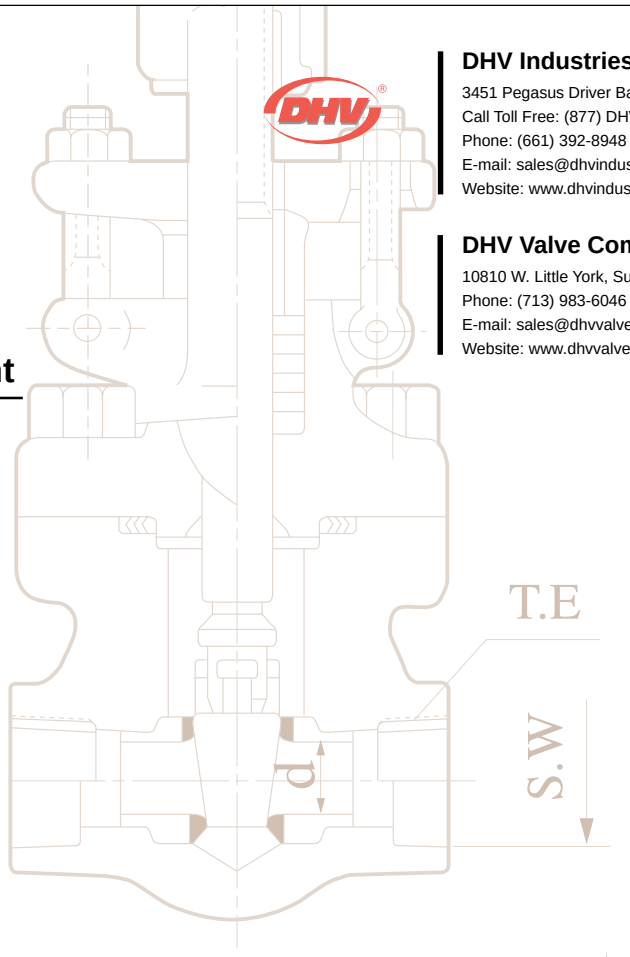

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