PRODUCT SOLUTION

FORGED GATE, GLOBE AND CHECK VALVE API 602

Engineered for critical isolation service

Premium technical presentation for industrial valve supply, procurement and project coordination across Latin American energy markets.

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FORGED STEEL VALVE

INTRODUCTION

VALPRO forged steel valve has the advantages of small volume and compact type. Bolted bonnet, welded bonnet, pressure bonnet, bellow seal bonnet, high/low temperature extended bonnet and ISO 15848 fugitive emission designed valves are available upon different requests of services.

Forged Steel Gate Valve

VALPRO forged steel gate valves adopt solid gate, renewable seat, rising stem and non-ring hand wheel. It plays the role of pipe opening and closing ultimately through the rotation of the hand wheel to drive the lifting of gate.

Forged Steel Globe Valve

VALPRO forged globe valve offers non-renewable seat by default with rising stem and hand wheel. It blocks the flow of pipeline through the rotation and lifting of hand wheel as well as stem to drive the lift of disc. There is no relative friction between disc and body sealing surface. The globe valves have the feature of long service life for opening and closing, it can be used as a shut-off valve for small-size pipeline.

Forged Steel Check Valve

VALPRO forged check valve is to provide with single disc. With the force of medium, the disc will automatically open or close around the fixed pin shaft. When the media stops the flow, the disc will be closed under its own force. No manual intervention is involved in the whole process;

Check valve is mainly to prevent the media reverse flow and ensure one-way flow of media channels only. It prevents accidents while a sudden loss of power in the pipeline medium such as the power equipment like pump damages, and the medium reserve flow against power source.

FORGED STEEL VALVE

SCOPE OF PRODUCTS ***Forged Steel Valve(Gate, Globe, Check)***

Legends: **A** – Available in Bolted Bonnet **C** – Available in Pressure Seal Bonnet
B – Available in Welded Bonnet

Size in/mm	Class 150 PN 20	Class 300 PN 50	Class 600 PN 100	Class 800 PN 136	Class 900 PN 150	Class 1500 PN 250	Class 2500 PN 420
3/8 *10*	AB	AB	AB	ABC	ABC	ABC	BC
1/2 *15*	AB	AB	AB	ABC	ABC	ABC	BC
3/4 *20*	AB	AB	AB	ABC	ABC	ABC	BC
1 *25*	AB	AB	AB	ABC	ABC	ABC	BC
1-1/4 *32*	AB	AB	AB	ABC	ABC	ABC	BC
1-1/2 *40*	AB	AB	AB	ABC	ABC	ABC	BC
2 *50*	AB	AB	AB	ABC	ABC	ABC	BC
2-1/2 *65*	AB	AB	AB	A	C		
3 *65*							

1.The sizes listed above are normal diameters. Contact our sales representative if any other dimensions are requested;

FLOW COEFFICIENT (Cv)

Nominal Size *in/mm*	Gate Valve		Globe Valve / Piston Check valve			Swing Check Valve	
			T-Type		Y-Type		
	Regular Port	Full Port	Regular Port	Full Port	Full Port	Regular Port	Full Port
3/8 *10*	-	3.9	-	2.2	3	-	4.8
1/2 *15*	3.7	6.7	2	3.8	5.4	4.6	7.7
3/4 *20*	6.4	11.7	3.6	6	11.4	7.4	14.5
1 *25*	11.4	22.5	5.7	9.4	18	14.1	25.5
1-1/4 *32*	22	35.4	8.8	14.7	29.2	25.1	37
1-1/2 *40*	35	54.5	14.3	21.5	45.6	36.7	60.2
2 *50*	53.9	-	21.1	-	72	59.7	-

The above data remains the same based on different pressure rating;

CALCULATION OF FLOW COEFFICIENT

Flow coefficient Cv is the rate of flow in gallon per minute with the pressure drop of 1 psi across the valve. The flow coefficients shown in the above table are determined with equations as follows:

For liquids:

$$Q_l = C_v(\Delta P/SG)^{1/2}$$

Where:
Q_l = Flow of liquid (gallon/minute)
ΔP = Pressure drop in psi (P_1-P_2)
SG = Specific gravity (1 for liquid)

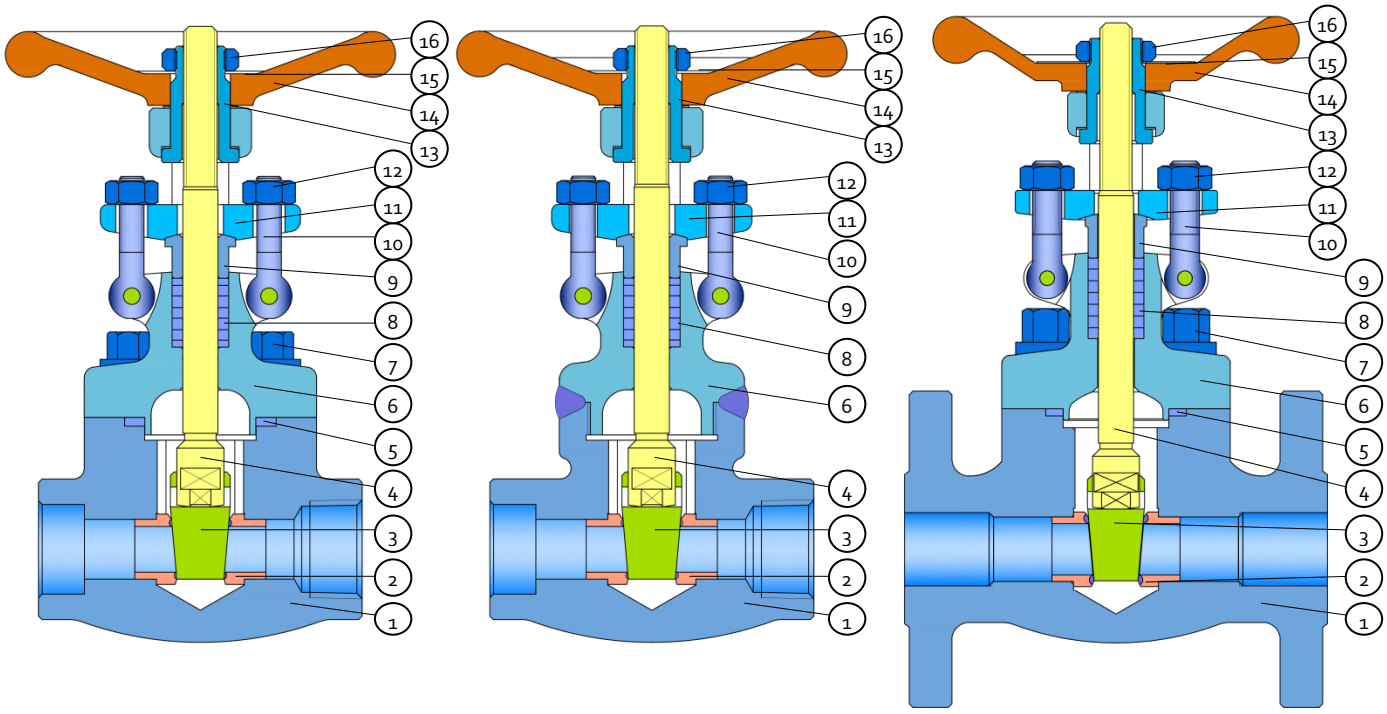
For gases (non-critical):

$$Q_g = 61 \cdot C_v(P_2 \cdot P_1 / SG)^{1/2}$$

Where:
Q_g = Flow of gases (SFH at STP)
P_2 = Outlet pressure (psi)
P_1 = Inlet pressure (psi)
SG = Specific gravity (1 for gas)

FORGED STEEL VALVE

OVERVIEW(Gate Valve)



Part List

1 Body	5 Gasket	9 Gland	13 Stem Nut
2 Seat Ring	6 Bonnet	10 Eyes Bolt	14 Handwheel
3 Disc	7 Bolt	11 Gland Flange	15 Nameplate
4 Stem	8 Packing	12 Nut	16 Nut

Standards

Design & Manufacture	API 602, ISO 15761, ASME B16.34	
Face-to-face	VALPRO STD., ASME B16.10	
End Dimension	ASME B1.20.1 (NPT) ASME B16.11 (SW) ASME B16.25 (BW) ASME B16.5 (RF, RTJ),	
Test & Inspection	API 598	
Typical Materials	Body, Bonnet,Disc	A105,A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5,F11,F22,F91, Monel, Inconel, Hastelloy
	Stem	A276 410, F304, F304L, F316, F316L, F51, F53, Monel, Inconel, Hastelloy

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Gate Valve)

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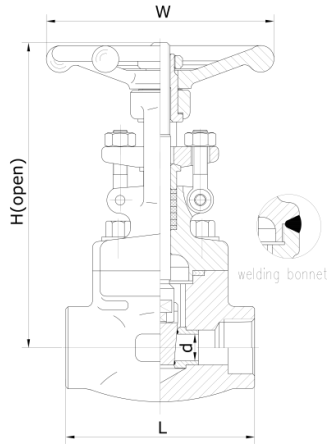

CL800		Bolt Bonnet (**BB**)/Welding Bonnet (**WB**), Reduce Port (**RP**)/Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**),						
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	79	92	111	120	120	140	178
Handwheel Diameter	W	100	100	125	160	160	180	200
Height	H	165	169	207	230	249	283	333
Flow Port Diameter	d	10.3	13.5	18	23	29	36	45
Weight (Kg)	**B.B**	2.2	2.4	4.1	5.5	7.5	10	19
	W.B	2.1	2.3	4	5.5	7.3	9.5	18.5

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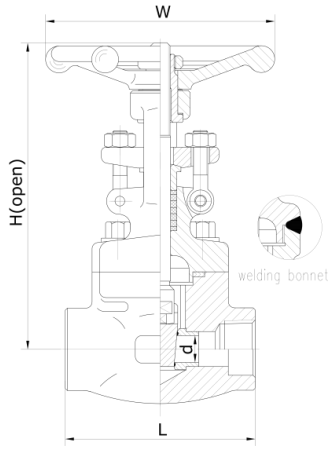

CL900~CL1500		Bolt Bonnet (**BB**)/ Welding Bonnet (**WB**), Reduce Port (**RP**)/ Full Port(**FP**), Outside Screw and Yoke(OS&Y), Thread(NPT), Socket Weld(SW), Butt Weld(BW)						
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	92	111	120	120	140	178	
Handwheel Diameter	W	100	125	160	160	180	200	
Height	H	169	207	230	249	283	333	
Flow Port Diameter	d	10.3	13.5	18	23	29	36	
Weight (Kg)	**B.B**	2.4	4.1	6.2	6.2	8.7	12.5	
	W.B	2.2	4	6	6	8.5	12	

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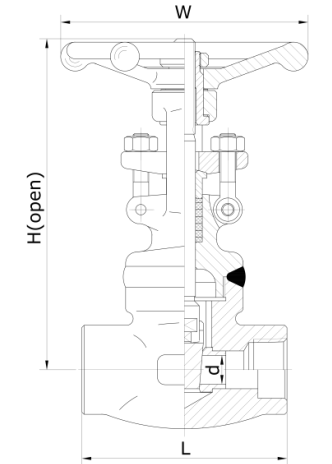

CL2500		Welding Bonnet (**WB**), Reduce Port (**RP**)/Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)						
Size (NPS)	**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L		120	120	120	140	178	178
Handwheel Diameter	W		160	160	160	180	200	200
Height	H		230	235	249	283	333	333
Flow Port Diameter	d		10.3	13.5	18	23	29	36
Weight (Kg)	**W.B**		6.5	6.5	6.5	9	13	13

The dimension and weights are for reference only and subject to change without notice.

1. For more size or dimensional information, please contact our sales representative.
2. CL800 covers CL150, CL300, CL600, CL1500 covers CL900, CL1500.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Gate Valve)

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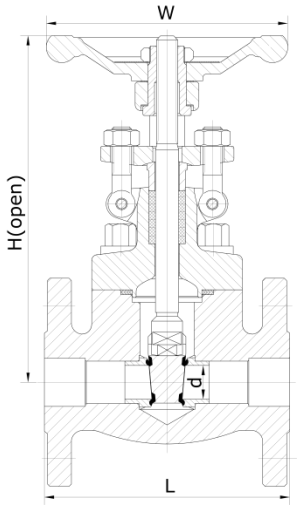

CL150~CL600		Bolt Bonnet (**BB**). Reduce Port (**RP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
Face To Face	CL150	L (RF)	108	117	127	140	165	178	
	CL300		140	152	165	178	190	216	
	CL600		165	190	216	229	241	292	
Handwheel Diameter		W	100	100	125	160	160	180	
Height		H	165	169	207	230	249	283	
Flow Port Diameter		d	10.3	13.5	18	23	29	36	
Weight (Kg)	CL150	**B.B**	4.1	4.8	7.1	10	11.6	20	
	CL300		4.8	6.7	10	13.6	17.2	24	
	CL600		5.4	7.4	10.6	15	19.2	28.8	

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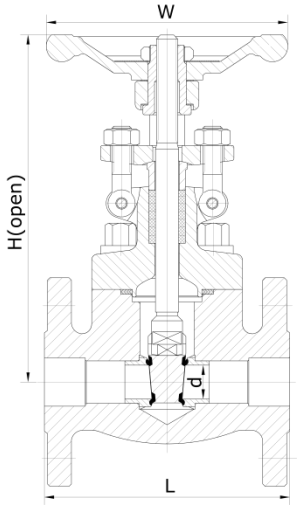

CL900~CL1500		Bolt Bonnet (**BB**). Reduce Port (**RP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
Face To Face	CL90	L (RF)	216	229	254	279	305	368	
	CL1500								
Handwheel Diameter		W	125	125	160	160	180	180	
Height		H	169	207	230	249	283	333	
Flow Port Diameter		d	10.3	13.5	18	23	29	36	
Weight (Kg)	CL900	**B.B**	10.1	13	18.3	26	32.8	54	
	CL1500								

The dimension and weights are for reference only and subject to change without notice.

1.The flanged valve are defaulted by integral flange;

2.For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Gate Valve - Pressure Seal Bonnet)

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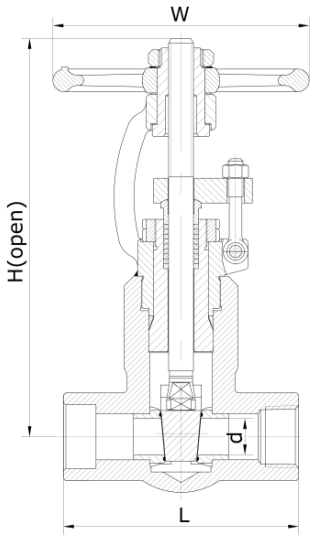

CL900~CL2500		Pressure Seal Bonnet (**PSB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread(**NPT**), Socket Weld(**SW**), Butt Weld (**BW**)							
Size (NPS)		**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L	140	140	140	140	178	178	216
	CL2500		182	182	182	182	232	232	272
Handwheel Diameter	CL900 CL1500 CL2500	W	200	200	200	200	280	280	300
Height	CL900 CL1500	H	308	308	315	315	446	446	540
	CL2500		325	325	325	325	460	460	550
Flow Port Diameter		d	8	10.3	13.5	18	23	29	36
Weight (Kg)	CL900 CL1500	**PSB**	9	9	9	9	26	26	36
	CL2500		11.9	11.9	11.8	11.7	30	28	42

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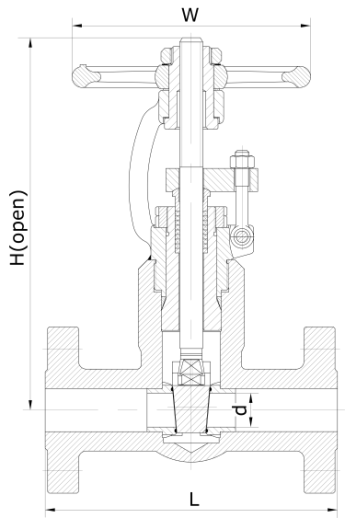


CL900~CL2500		Pressure Seal Bonnet (**PSB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L (RF)		216	229	254	279	305	368
	CL2500			264	273	308	349	384	451
Handwheel Diameter	CL900 CL1500 CL2500	W		200	200	200	280	280	300
Height	CL900 CL1500	H		308	315	315	446	446	540
	CL2500			325	325	325	460	460	550
Flow Port Diameter		d		10.3	13.5	18	23	29	36
Weight (Kg)	CL900 CL1500	**PSB**		11.9	13.7	18	36.8	37	45
	CL2500			13	17	22	30	42	58

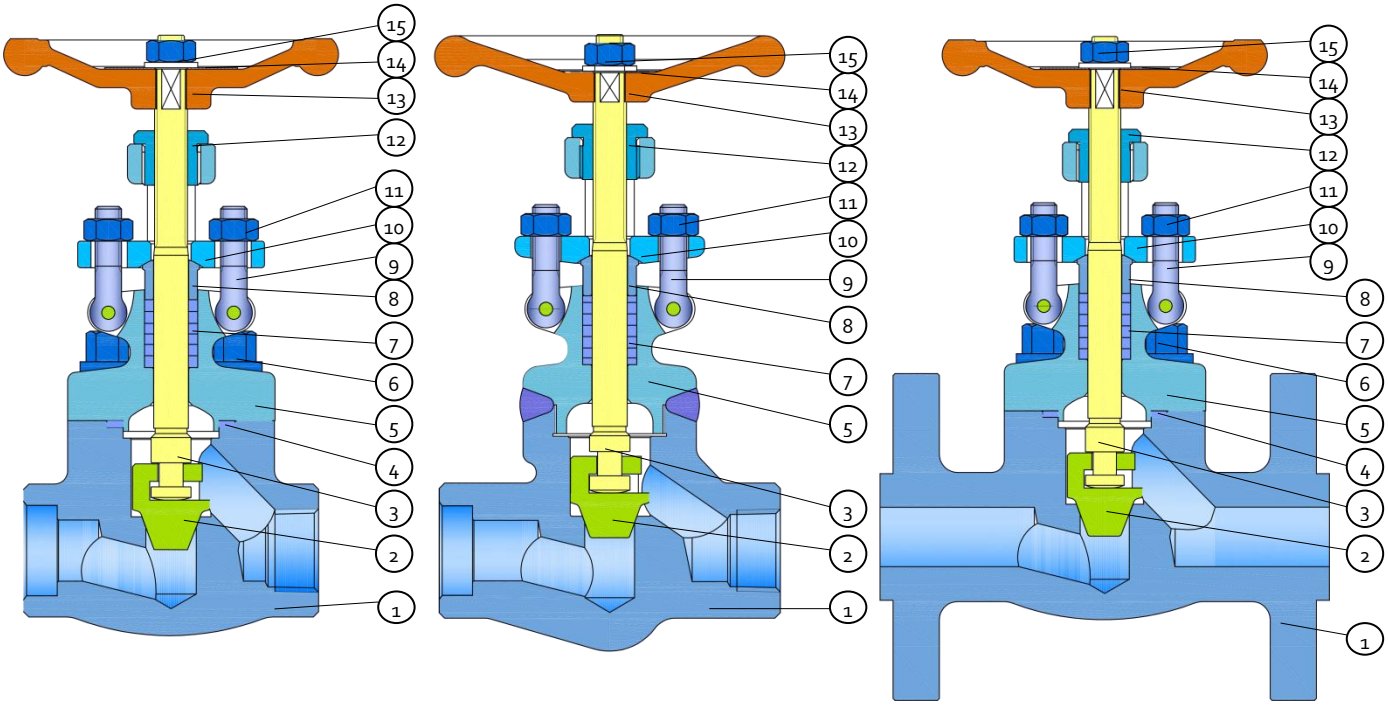
The dimension and weights are for reference only and subject to change without notice.

1.The flanged valve are defaulted by integral flange;

2.For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

OVERVIEW (Globe Valve)



Part List

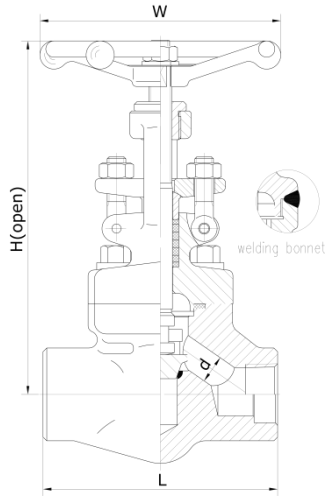
1	Body	5	Bonnet	9	Eyes Bolt	13	Handwheel
2	Disc	6	Bolt	10	Gland Flange	14	Nameplate
3	Stem	7	Packing	11	Nut	15	Nut
4	Gasket	8	Gland	12	Stem Nut		

Standards

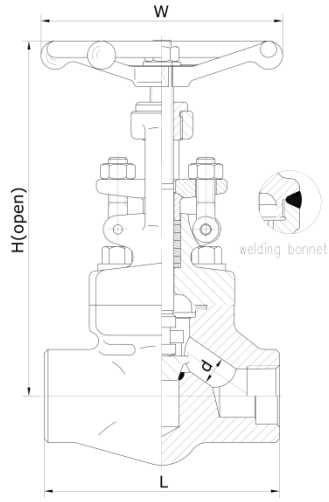
Design & Manufacture	API 602, ISO 15761, ASME B16.34	
Face-to-face	VALPRO STD., ASME B16.10	
End Dimension	ASME B1.20.1 (NPT) ASME B16.11 (SW) ASME B16.25 (BW) ASME B16.5 (RF, RTJ),	
Test & Inspection	API 598	
Typical Materials	Body, Bonnet,Disc	A105,A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5,F11,F22,F91, Monel, Inconel, Hastelloy
	Stem	A276 410, F304, F304L, F316, F316L, F51, F53, Monel, Inconel, Hastelloy

FORGED STEEL VALVE

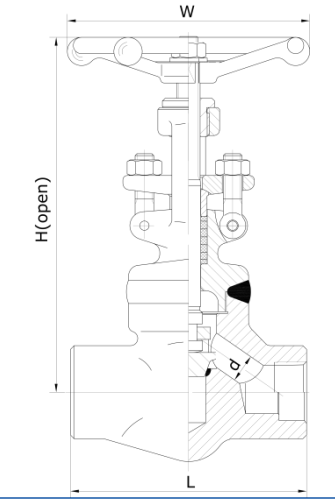
DIMENSIONS AND WEIGHTS (Globe Valve)



CL800	Bolt Bonnet (**BB**)/ Welding Bonnet(**WB**), Reduce Port (**RP**)/Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	79	92	111	120	152	172	220
Handwheel Diameter	W	100	100	125	160	160	180	200
Height	H	170	172	207	228	270	320	356
Flow Port Diameter	d	10.5	13.5	17	22	28	34	44
Weight (Kg)	**B.B**	2.2	2.4	4.1	5.7	7.6	12.2	21
	W.B	1.9	2.1	3.9	5.5	7.4	11.6	19.7



CL900~CL1500	Bolt Bonnet (**BB**)/ Welding Bonnet (**WB**), Reduce Port (**RP**)/Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	92	111	120	152	172	220	
Handwheel Diameter	W	100	125	160	160	180	200	
Height	H	172	207	228	270	320	387	
Flow Port Diameter	d	10.5	13.5	17	22	28	34	
Weight (Kg)	**B.B**	4.1	5.6	6.7	7.6	12.2	21	
	W.B	3.8	5.4	6.5	7.4	12	20.2	



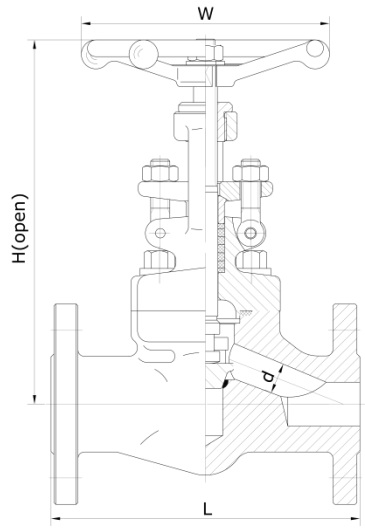
CL2500	Welding Bonnet (**WB**), Reduce Port (**RP**)/Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L		120	120	152	172	220	220
Handwheel Diameter	W		160	160	160	180	200	200
Height	H		228	228	270	320	387	396
Flow Port Diameter	d		10.5	13.5	17	22	28	34
Weight (Kg)	**W.B**		6.7	6.5	7.6	12.2	21	20.7

The dimension and weights are for reference only and subject to change without notice.

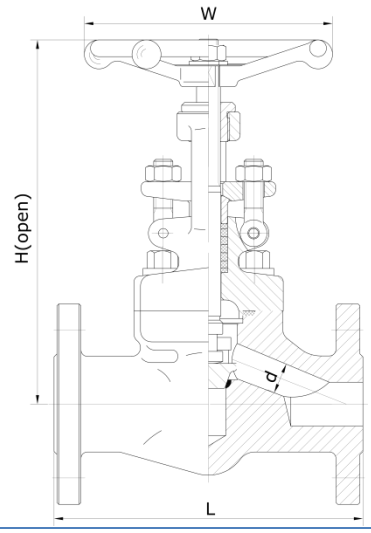
1. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Globe Valve)



CL150~CL600		Bolt Bonnet (**BB**), Reduce Port (**RP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
Face To Face	CL150	L (RF)	108	117	127	140	165	203	
	CL300		152	178	203	216	229	267	
	CL600		165	190	216	229	241	292	
Handwheel Diameter		W	100	100	125	160	160	180	
Height		H	170	172	207	228	270	320	
Flow Port Diameter		d	10.5	13.5	17	22	28	34	
Weight (Kg)	CL150	**B.B**	4.1	4.8	7.1	10	12.7	21	
	CL300		4.8	6.7	10	14.5	18.3	25.2	
	CL600		5.4	7.4	11	16	19.2	28.8	



CL900~CL1500		Bolt Bonnet (**BB**), Reduce Port (**RP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
Face To Face	CL900	L (RF)	216	229	254	279	305	368	
	CL1500								
Handwheel Diameter		W	100	100	125	160	160	180	
Height		H	170	172	207	228	270	320	
Flow Port Diameter		d	10.5	13.5	17	22	28	34	
Weight (Kg)	CL900	**B.B**	10.1	13	18.3	26	32.8	54	
	CL1500								

The dimension and weights are for reference only and subject to change without notice.

1. The flanged valve are defaulted by integral flange;
2. For more size or dimensional information, please contact our sales representative.

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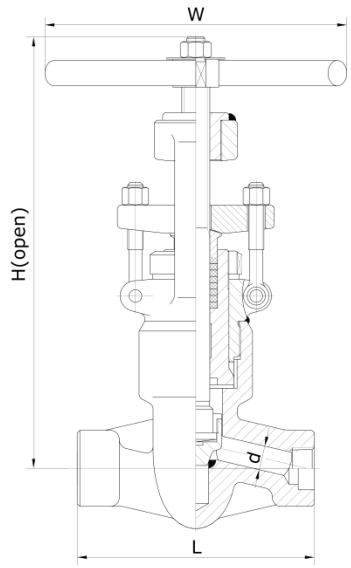
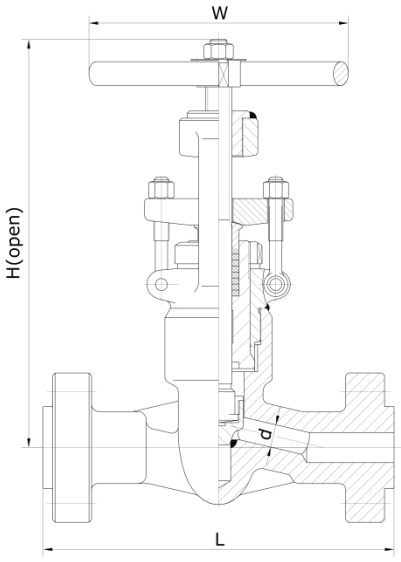
FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Globe Valve-Pressure Seal Bonnet)



CL900~CL2500		Pressure Seal Bonnet (**PSB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)		**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L	140	140	140	140	178	178	216
	CL2500		182	182	182	182	232	232	272
Handwheel Diameter	CL900 CL1500 CL2500	W	160	160	160	160	180	180	200
Height	CL900 CL1500	H	325	325	325	325	430	430	495
	CL2500		330	330	330	330	480	480	530
Flow Port Diameter		d	8	13.5	17	22	28	34	42
Weight (Kg)	CL900 CL1500	**PSB**	9	9	8.9	8.8	26	25.6	45
	CL2500		12.3	12.3	11.6	11	26	28.4	60



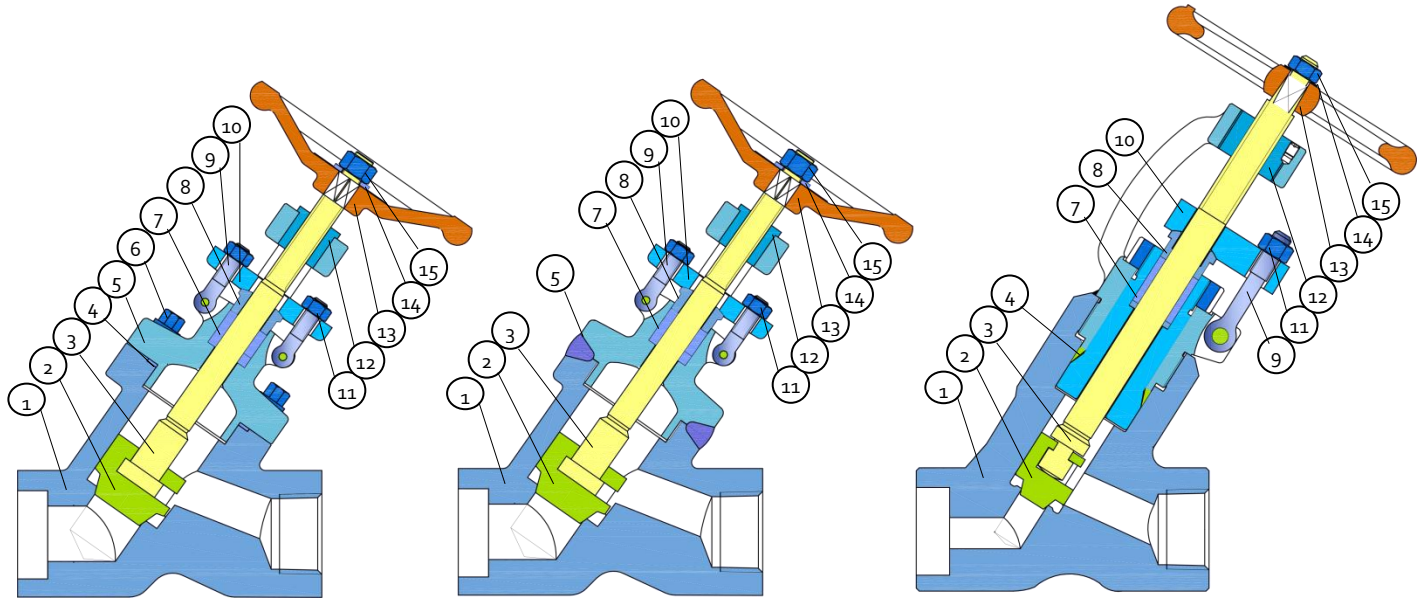
CL900~CL2500		Pressure Seal Bonnet (**PSB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Flanged (**RF/RTJ**)							
Size (NPS)		**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L (RF)		216	229	254	279	305	368
	CL2500			264	273	308	349	384	451
Handwheel Diameter	CL900 CL1500 CL2500	W		160	160	160	180	180	200
Height	CL900 CL1500	H		325	325	325	430	430	495
	CL2500			330	330	330	480	480	530
Flow Port Diameter		d		13.5	17	22	28	34	42
Weight (Kg)	CL900 CL1500	**PSB**		11.9	13.7	18	36.8	37	45
	CL2500			13	17	22	30	42	58

The dimension and weights are for reference only and subject to change without notice.

3. The flanged valve are defaulted by integral flange;
4. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Globe Valve-Y-Type)



Part List

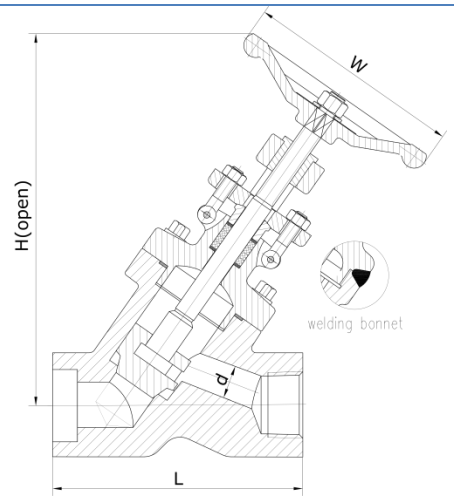
1	Body	5	Bonnet	9	Eyes Bolt	13	Handwheel
2	Disc	6	Bolt	10	Gland Flange	14	Nameplate
3	Stem	7	Packing	11	Nut	15	Nut
4	Gasket	8	Gland	12	Stem Nut		

Standards

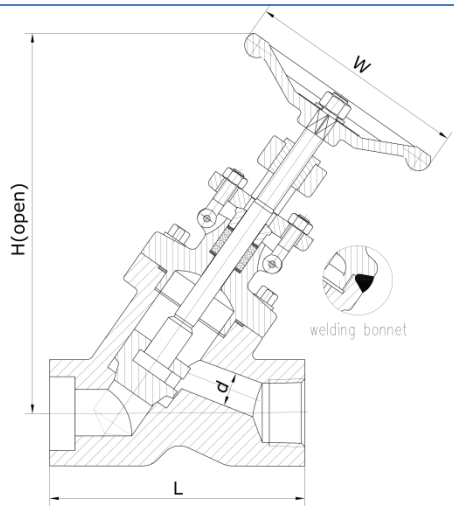
Design & Manufacture	ASME B16.34	
Face-to-face	VALPRO STD.	
End Dimension	ASME B1.20.1 (NPT) ASME B16.11 (SW) ASME B16.25 (BW) ASME B16.5 (RF, RTJ),	
Test & Inspection	API 598	
Typical Materials	Body, Bonnet,Disc	A105,A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5,F11,F22,F91, Monel, Inconel, Hastelloy
	Stem	A276 410, F304, F304L, F316, F316L, F51, F53, Monel, Inconel, Hastelloy

FORGED STEEL VALVE

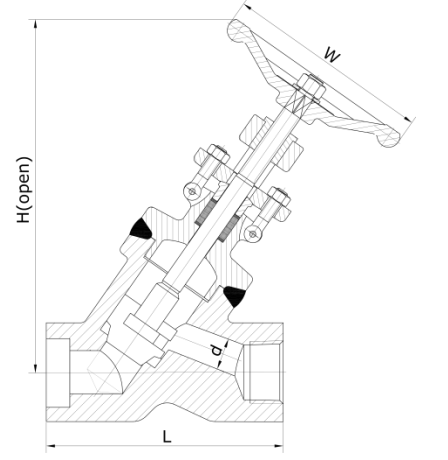
DIMENSIONS AND WEIGHTS (Globe Valve-Y-Type)



CL800	Bolt Bonnet (**BB**)/ Welding Bonnet (**WB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	100	100	100	120	140	140	172
Handwheel Diameter	W	100	125	160	160	160	180	200
Height	H	180	180	188	280	280	295	350
Flow Port Diameter	d	10	13.5	17	22	28	34	42
Weight (Kg)	**B.B**	3.8	4.6	4.6	9.3	14	14	19.6
	W.B	3.7	4.5	4.5	9	13.5	13.5	19.1



CL900~CL1500	Bolt Bonnet (**BB**)/ Welding Bonnet (**WB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	100	100	120	140	140	172	220
Handwheel Diameter	W	125	160	160	160	180	200	200
Height	H	180	188	280	280	295	350	365
Flow Port Diameter	d	10	13.5	17	22	28	34	42
Weight (Kg)	**B.B**	4.6	4.6	9.3	14	14	19.6	38.6
	W.B	4.5	4.5	9	13.5	13.5	19.1	38



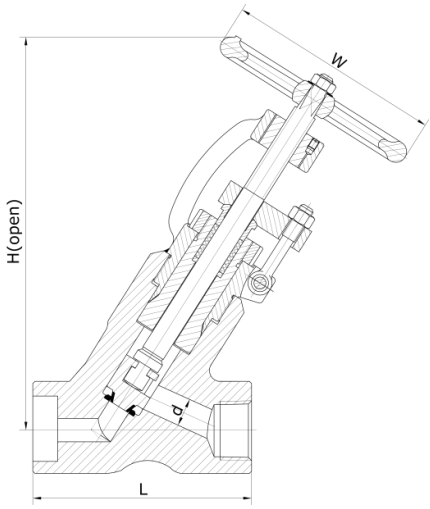
CL2500	Welding Bonnet (**WB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**F.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L		120	140	140	172	220	232
Handwheel Diameter	W		160	160	180	200	200	250
Height	H		280	280	295	350	365	400
Flow Port Diameter	d		17	22	28	34	42	55
Weight (Kg)	**W.B**		9.3	14	14	19.6	38.6	53.5

The dimension and weights are for reference only and subject to change without notice.

1. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Globe Valve-Pressure Seal Bonnet)



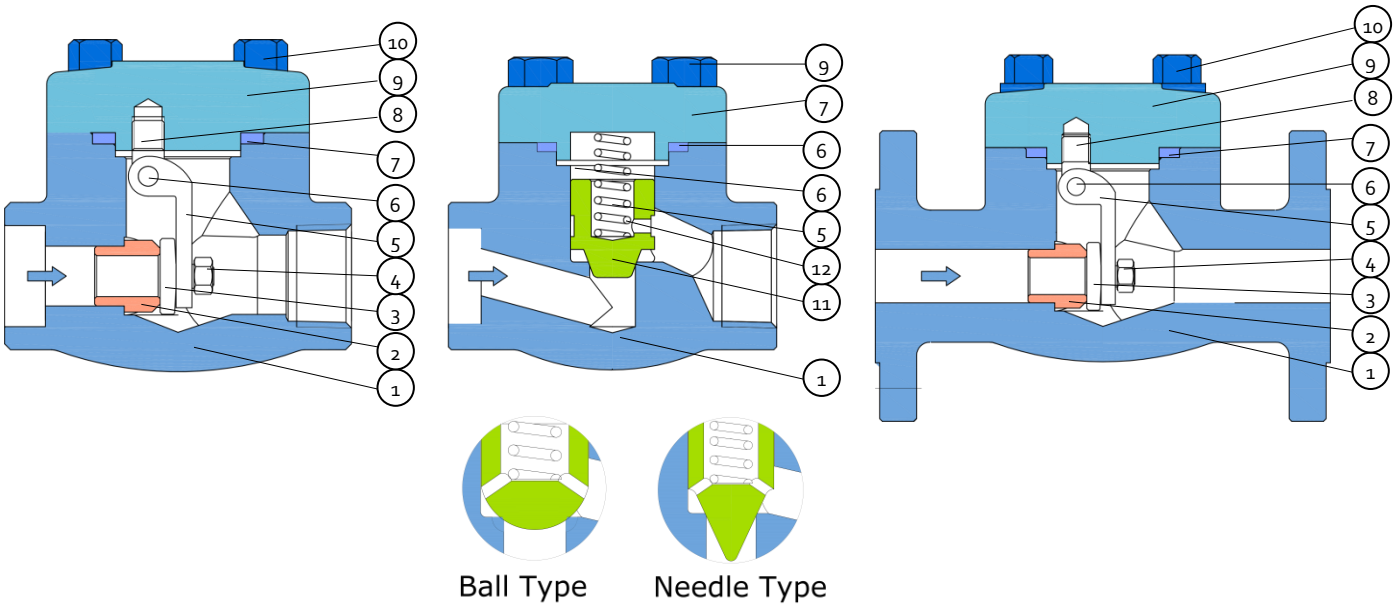
CL900~CL2500		*Pressure Seal Bonnet (**PSB**), Full Port (**FP**), OutSide Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)*							
Size (NPS)		***F.P***	*3/8*	*1/2*	*3/4*	*1*	*1-1/4*	*1-1/2*	*2*
Face To Face	*CL900 CL1500*	*L*	*140*	*140*	*140*	*140*	*232*	*232*	*232*
	CL2500		*140*	*140*	*140*	*140*	*232*	*232*	*272*
Handwheel Diameter	*CL900 CL1500*	*W*	*160*	*160*	*160*	*180*	*200*	*200*	*250*
	CL2500								
Height	*CL900 CL1500*	*H*	*280*	*280*	*280*	*295*	*350*	*365*	*400*
	CL2500		*280*	*280*	*280*	*295*	*350*	*365*	*420*
Flow Port Diameter		*d*	*13*	*17*	*22*	*28*	*34*	*42*	*55*
Weight (Kg)	*CL900 CL1500*	***PSB***	*12.5*	*12.5*	*12.5*	*12.5*	*28*	*26.5*	*36*
	CL2500		*12.5*	*12.5*	*12.5*	*12.5*	*28*	*26.5*	*42*

The dimension and weights are for reference only and subject to change without notice.

1. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

OVERVIEW (Check Valve)



Part List

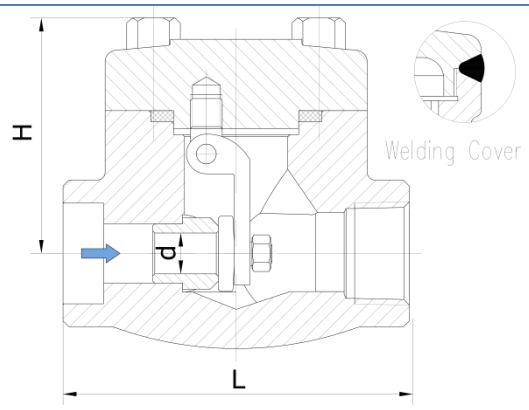
1	Body	5	Hinge	9	Cover
2	Seat	6	Pin	10	Bolt
3	Disc	7	Gasket	11	Plug
4	Nut	8	Bolt	12	Spring

Standards

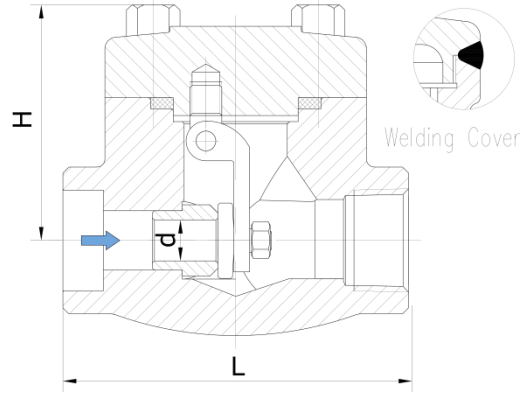
Design & Manufacture	API 602, ISO 15761, ASME B16.34	
Face-to-face	VALPRO STD., ASME B16.10	
End Dimension	ASME B1.20.1 (NPT) ASME B16.11 (SW) ASME B16.25 (BW) ASME B16.5 (RF, RTJ),	
Test & Inspection	API 598	
Typical Materials	Body, Cover Disc	A105,A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L, F51, F53, F5,F11,F22,F91, Monel, Inconel, Hastelloy
	Hinge	A351 CF8M, Monel, Inconel, Hastelloy

FORGED STEEL VALVE

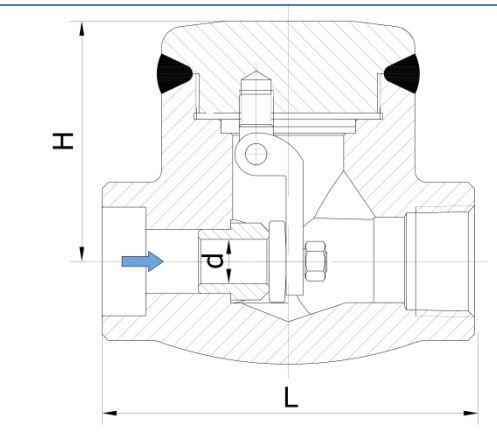
DIMENSIONS AND WEIGHTS (Check Valve - Swing Type)



CL800	Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**)/Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	79	92	111	120	120	140	
Height	H	55	60	80	90	100	105	
Flow Port Diameter	d	10.5	13.5	17	22	28	34	
Weight (Kg)	**B.B**	1.8	2	3.8	4.5	5.5	9	
	W.B	1.7	1.9	3.6	4.3	5.3	8.7	



CL900 CL1500	Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**)/Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	92	111	120	120	140	178	
Height	H	60	80	90	100	105	115	
Flow Port Diameter	d	10.5	13.5	17	22	28	34	
Weight (Kg)	**B.B**	2	3.9	4.5	5.5	9	16	
	W.B	1.9	3.6	4.3	5.3	8.7	15.5	



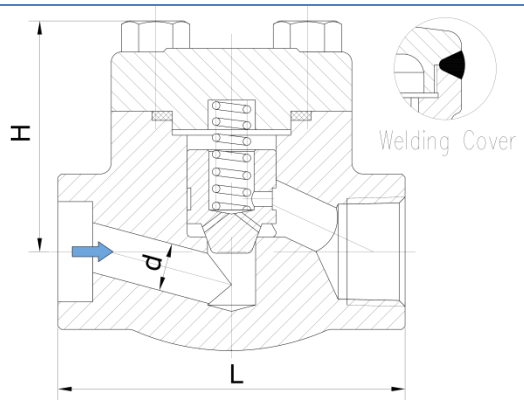
CL2500	Welding Cover (**WC**), Reduce Port (**RP**)/Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L		120	120	120	140	178	178
Height	H		90	100	105	115	115	115
Flow Port Diameter	d		10.5	13.5	17	22	28	34
Weight (Kg)	**W.B**		4.5	5.5	9	16	23	23

The dimension and weights are for reference only and subject to change without notice.

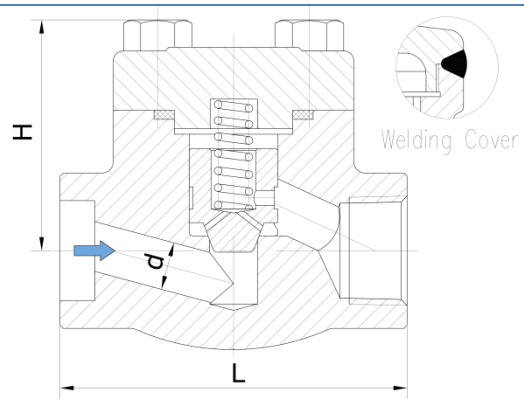
1. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

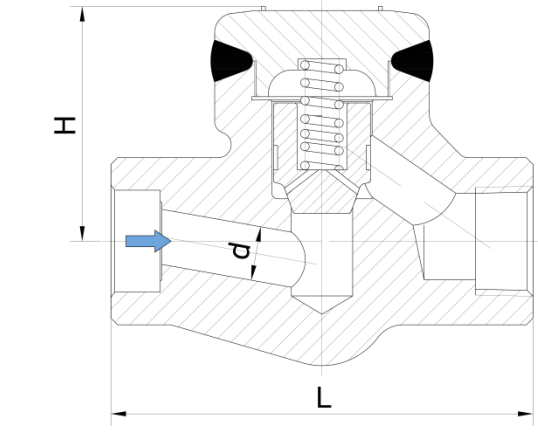
DIMENSIONS AND WEIGHTS (Check Valve - Lift Type)



CL800	Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**)/ Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	79	92	111	120	152	172	
Height	H	55	55	65	80	85	105	
Flow Port Diameter	d	10.5	13.5	17	22	28	34	
Weight (Kg)	**B.B**	1.2	1.5	2.1	3.5	4.8	7.6	
	W.B	1.1	1.3	2	3.3	4.6	7.4	



CL900 CL1500	Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**)/ Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L	92	111	120	152	172	220	
Height	H	55	65	80	85	105	115	
Flow Port Diameter	d	10.5	13.5	17	22	28	34	
Weight (Kg)	**B.B**	1.5	2.1	3.5	4.8	7.6	12.5	
	W.B	1.3	2	3.3	4.6	7.4	12.1	



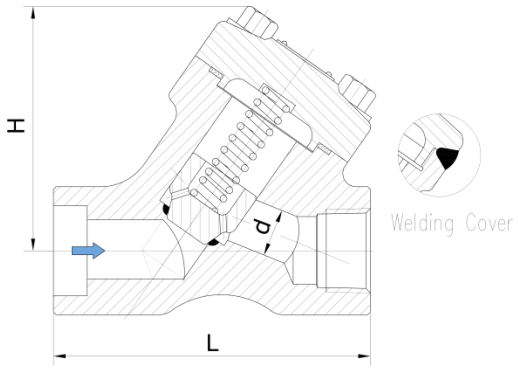
CL2500	Welding Cover (**WC**), Reduce Port (**RP**)/Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)	**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	L		120	120	152	172	220	220
Height	H		80	80	85	105	115	115
Flow Port Diameter	d		10.5	13.5	17	22	28	34
Weight (Kg)	**W.B**		3.5	3.5	4.8	7.6	12.5	12.5

The dimension and weights are for reference only and subject to change without notice.

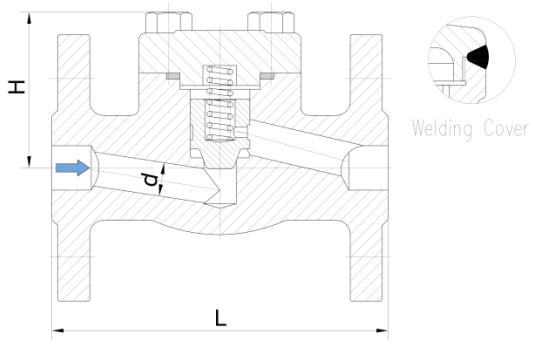
1. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

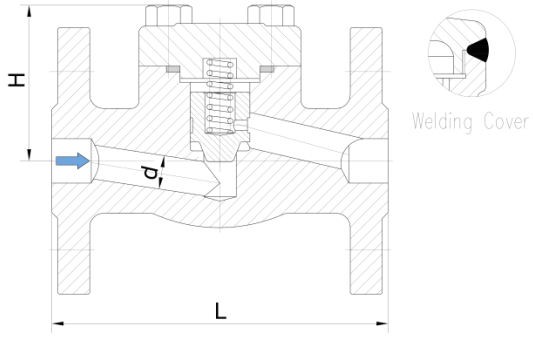
DIMENSIONS AND WEIGHTS (Check Valve)



CL800 CL900~CL1500		*Bolt Cover (**BC**)/ Welding Cover (**WC**) Full Port (**FP**) Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)*						
Size (NPS)		***F.P***	*1/2*	*3/4*	*1*	*1-1/4*	*1-1/2*	*2*
Face To Face	*CL800*	*L*	*100*	*100*	*120*	*140*	*140*	*172*
	CL900 CL1500		*100*	*120*	*140*	*140*	*172*	*220*
Height		*H*	*70*	*70*	*70*	*100*	*110*	*120*
Flow Port Diameter		*d*	*13.5*	*17*	*22*	*28*	*34*	*44*
Weight (Kg)	*CL800*	***B.B***	*2.2*	*2.2*	*2.2*	*4.2*	*9*	*9*
		W.B	*2.1*	*2.1*	*2.1*	*4*	*8.8*	*8.8*
	CL900 CL1500	***B.B***	*4.2*	*9*	*9*	*10*	*18.6*	*20*
		W.B	*4*	*8.8*	*8.8*	*9.7*	*18.2*	*19.5*



CL150~CL600		*Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**), Flanged (**RF/RTJ**)*						
Size (NPS)		***R.P***	*1/2*	*3/4*	*1*	*1-1/4*	*1-1/2*	*2*
Face To Face	*CL150*	*L (RF)*	*108*	*117*	*127*	*140*	*165*	*203*
	CL300		*152*	*178*	*203*	*216*	*229*	*267*
	CL600		*165*	*190*	*216*	*229*	*241*	*292*
Height		*H*	*55*	*55*	*65*	*80*	*85*	*105*
Flow Port Diameter		*d*	*10.5*	*13.5*	*17*	*22*	*28*	*34*
Weight (Kg)	*CL150*	***B.B***	*3.5*	*3.5*	*4.7*	*8.5*	*11.5*	*13*
	CL300		*3.5*	*3.5*	*5.6*	*8.6*	*12*	*14*
	CL600		*3.5*	*3.5*	*6.5*	*10.5*	*16*	*22*



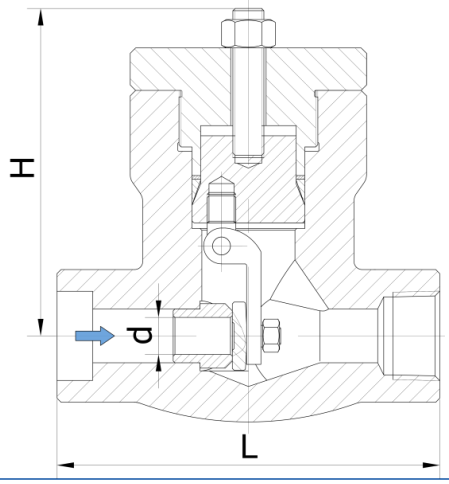
CL900 CL1500		*Bolt Cover (**BC**)/ Welding Cover (**WC**) Reduce Port (**RP**), Flanged (**RF/RTJ**)*						
Size (NPS)		***R.P***	*1/2*	*3/4*	*1*	*1-1/4*	*1-1/2*	*2*
Face To Face	*CL900 CL1500*	*L (RF)*	*216*	*229*	*254*	*279*	*305*	*368*
Height		*H*	*55*	*55*	*65*	*80*	*85*	*105*
Flow Port Diameter		*d*	*10.5*	*13.5*	*17*	*22*	*28*	*34*
Weight (Kg)	*CL150 CL300*	***B.B***	*4.5*	*5.8*	*8.7*	*14.5*	*22*	*32*

The dimension and weights are for reference only and subject to change without notice.

1. The flanged valve are defaulted by integral flange.
2. For more size or dimensional information, please contact our sales representative.

FORGED STEEL VALVE

DIMENSIONS AND WEIGHTS (Check Valve - Pressure Seal Cover)



CL900~CL2500		Pressure Seal Bonnet (**PSB**), Reduce Port (**RP**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)		**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L	140	140	140	140	178	178	216
	CL2500		182	182	182	182	232	232	272
Height		H	115	115	115	115	150	150	195
Flow Port Diameter		d	8	10.3	13.5	18	23	29	36
Weight (Kg)	CL900 CL1500	**PSB**	7.5	7.5	7.5	7.5	10.5	10.3	22
	CL2500		11.8	11.8	11	11	23	26.5	39

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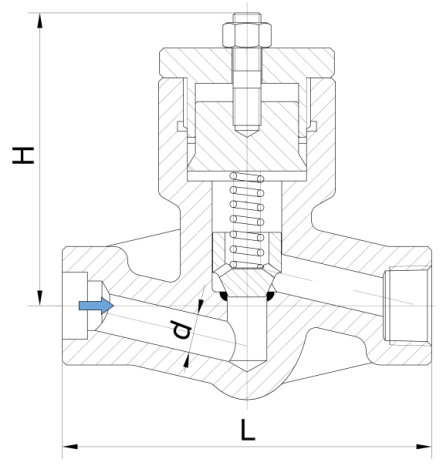

CL900~CL2500		Pressure Seal Bonnet (**PSB**), Full Port (**FP**), Outside Screw and Yoke (**OS&Y**), Thread (**NPT**), Socket Weld (**SW**), Butt Weld (**BW**)							
Size (NPS)		**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L	140	140	140	140	178	178	216
	CL2500		182	182	182	182	232	232	272
Height		H	115	115	115	115	150	150	195
Flow Port Diameter		d	8	13.5	17	22	28	34	42
Weight (Kg)	CL900 CL1500	**PSB**	7.5	7.5	7.5	7.5	10.5	10.3	22
	CL2500		11.8	11.8	11	11	23	26.5	39

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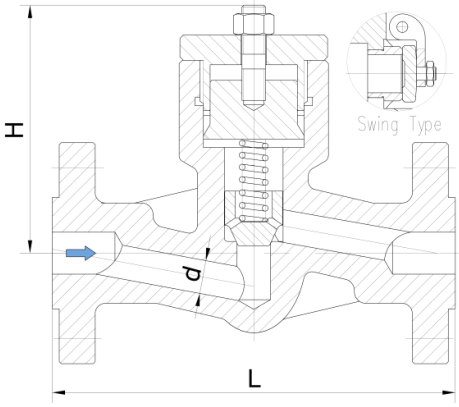

CL900~CL2500		Pressure Seal Bonnet (**PSB**), Reduce Port (**RP**), Flanged (**RF/RTJ**)							
Size (NPS)		**R.P**	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face To Face	CL900 CL1500	L (RF)		216	229	254	279	305	368
	CL2500			264	273	308	349	384	451
Height		H		115	115	115	150	150	195
Flow Port Diameter		d		13.5	17	22	28	34	42
Weight (Kg)	CL900 CL1500	**PSB**		10.5	12	14	20	27	33
	CL2500			13	15	17	25	30	35

1. The flanged valve are defaulted by integral flange.
2. The dimension and weights are for reference only and subject to change without notice.
3. For more dimensional information, please contact our sales representative.

FORGED STEEL VALVE

OVERVIEW (Special Type Forge Steel Valve)

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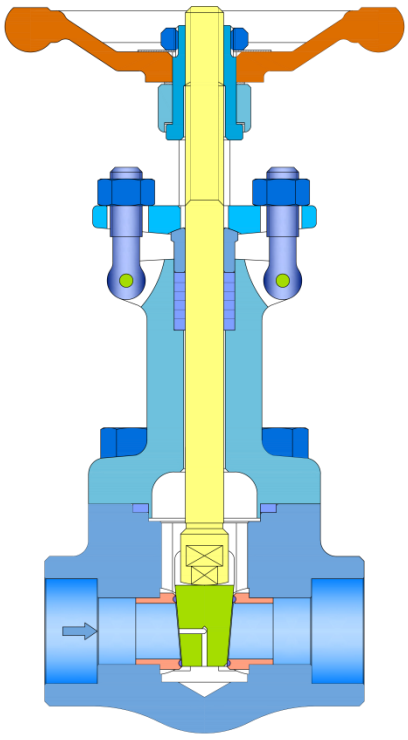	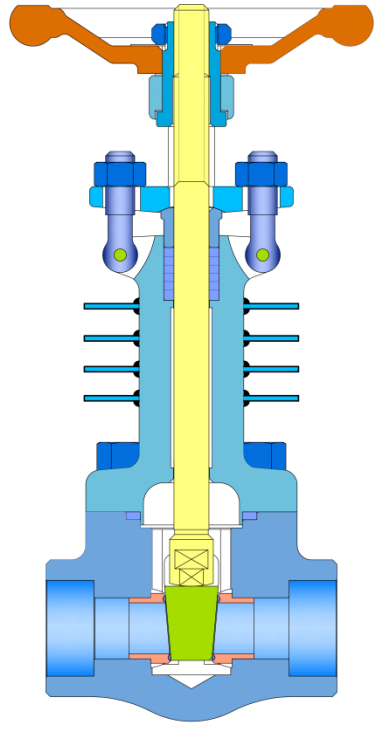	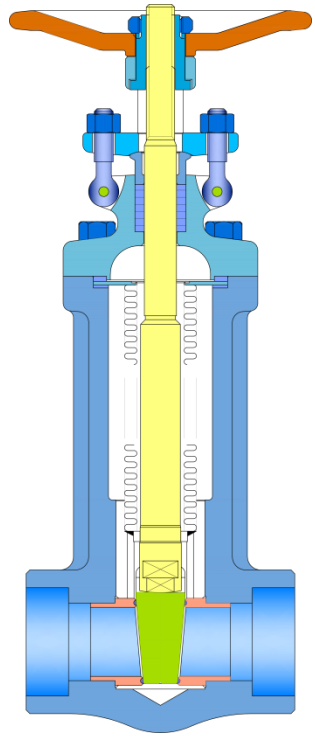
Low Temperature Extension	High Temperature Extension	Bellow Seal Extension
Structure characteristics: 1. The bonnet are extended for low temperature service, the packing position are raised to avoid the freeze of packing which will affect packing sealing performance; 2. The gate valve shall have relief hole on upstream direction while the pressure may remain in the cavity; 3. Low temperature cold isolation can be an option to prevent cold heat exchange	Structure characteristics: 1. The high temperature extended structure is mainly to prevent scald operator during operation. 2. The cooling fin can be selected to help heat radiation.	Structure characteristics: 1. Bellow seal extension has the bellow inside of the cavity, the effective compression of the bellows must be greater than the opening stroke of the valve; 2. Bellow seal structure can effectively reduce the leakage of valve stem, the primary seal is for bellows and secondary seal as a filler.
1. The above schematics for extension are based on gate valves , it can apply to both forged gate and globe valve; 2. Welded bonnet is available other than the above mentioned bolted bonnet.		

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