

ANSI Globe Valve



- Standards

Design and Manufacture: Cast steel globe valve to BS 1873 and ASME B16.34; Forged steel globe valve to API 602.

Inspection and Test: API 598.

End flange dimension: ASME B16.5.

BW end dimension: ASME B16.25.

Socket-weld dimension: ASME B16.11.

Face to face and end to end: ASME B16.10.

Pressure-temperature ratings: ASME B16.34.

- The basic features of a globe valve

Bolted Bonnet; Outside Screw and Yoke; Rising stems; and rising handwheel.

- Body and Bonnet Connection

The body and bonnet of Class 150 - Class 900 globe valves are usually with studs and nuts. And the body and bonnet of Class 1500 - Class 2500 globe valves are usually of pressure seal design.

- Gasket of Cover Flange

Stainless steel + flexible graphite wounded gasket is used for Class 300 and 600 globe valves, and ring joint gasket is also optional for Class 600. Ring joint gasket is used for Class 900 globe valve. Pressurized seal design is used for Class 1500 - Class 2500 globe valve.

- Actuation

Hand wheel, impact hand wheel & gear box is usually used for globe valve actuation. Chain wheel and electric actuator can be also used for globe valve actuation if being requested by the customers.

- Packing Seal

Molded flexible graphite is used for packing material. PTFE or combined packing material can be also used if being requested by the customer. The internal surface of the stuffing box, of which area is contacted with the packing, is of excellent finish (Ra 3.2 μm). The stem surface, contacting with the packing, should be precisely machined, so as to reach to the high finish and compactness (Ra 0.8 μm) and ensure the reliable tightness of the stem area.

- Belleville Spring Loaded Packing System

If being requested by the customer, the Belleville spring loaded packing can be adopted for enhancing the durability and reliability of the packing seal.

• Backseat Design

All our globe valves have the back seat design. In most cases, the carbon steel globe valve is fitted with a renewable back seat. For stainless steel globe valve, the back seat is machined directly in the bonnet or is machined after welding. When the globe valve is at fully open position, the sealing of the back seat can be very reliable. However, as per the requirement of API, it is not advisable to add or change packing by mean of back seating when the valve is under pressure.

• Seat

For carbon steel globe valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Renewable threaded seat is used for NPS ≤ 10 globe valve and welded on seat can be also optional if being requested by the customer. Welded on seat is used for NPS ≥ 12 carbon steel globe valves. For stainless steel globe valve, integral seat is usually adopted, or to weld hard alloy directly integrally. Threaded or welded on seat is also optional for stainless steel globe valve if being requested by the customer.

• Stem Design

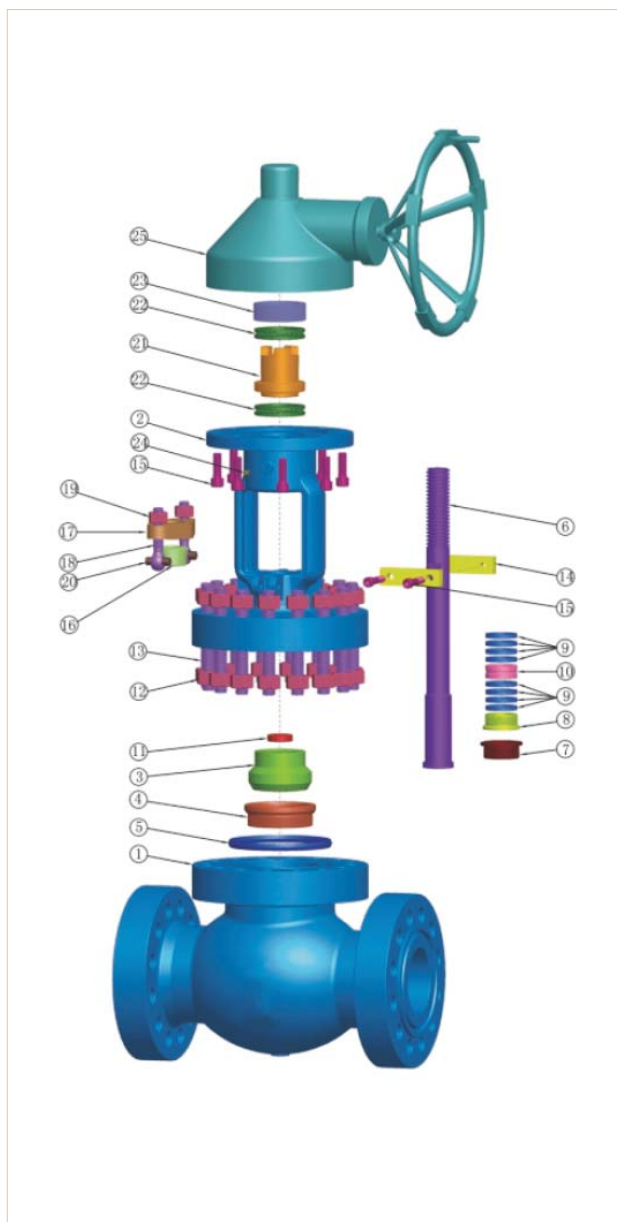
The stem is of integral forged design. The minimum diameter of the stem shall be in acc. with the requirements of the applicable standard.

• Stem Nut

Usually, the stem nut is copper alloy. For large sized globe valve, rolling bearing is fitted at the two sides of stem nut in order to minimize the open and close torque of the globe valve.

• Special Globe Valve

Besides the common globe valves, we also produce cryogenic globe valve, bellows sealed globe valve, Jacketed globe valve, ect.



No	Part Name	No	Part Name	No	Part Name
1	Body	10	Lantern Ring	19	Gland Nut
2	Bonnet	11	Thrust Washer	20	Pin
3	Disc	12	Nut	21	Stem Nut
4	Seating Ring	13	Bolt	22	Bearing
5	Gasket	14	Anti-rotating Device	23	Retaining Nut
6	Stem	15	Screw	24	Nipple
7	Disc Nut	16	Gland	25	Bevel gearbox
8	Backseat Bushing	17	Gland Flange		
9	Stem Packing	18	Gland Eyebolt		



ASTM Material list of BS1873 Cast Steel Globe Valve

No	Part Name	Carbon Steel to ASTM		Stainless Steel to ASTM				Alloy Steel to ASTM		
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5
2	Bonnet	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5
3	Disc	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5
4	Seating Ring	A105N	A350LF2	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A182 F11	A182 F22	A182 F5
5	Gasket	Graphite+ SS304, PTFE								
6	Stem	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
7	Disc Nut	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
8	Backseat Bushing	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
9	Stem Packing	Flexible Graphite								
10	Lantern Ring	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
11	Thrust Washer	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
12	Nut	A194 2H	A194 4	A194 8				A194 7		
13	Bolt	A193 B7	A320 L7	A193 B8				A193 B16		
14	Anti-rotating Device	ANSI 1020		A182 F304				ANSI 1020		
15	Gland	A194 2H		A194 8				A194 2H		
16	Screw	F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304		
17	Gland Flange	A216 WCB	A352 LCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A217 WC6	A217 WC9	A217 C5
18	Gland Eyebolt	A193 B7		A193 B8				A193 B16		
19	Gland Nut	A194 2H		A194 8				A194 7		
20	Pin	ANSI 1045		A182 F304				ANSI 1045		
21	Stem Nut	A439 D2/ B148 952A								
22	Bearing	/								
23	Retaining Nut	ANSI 1020								
24	Nipple	Copper Alloy								
25	Bevel gearbox	/								

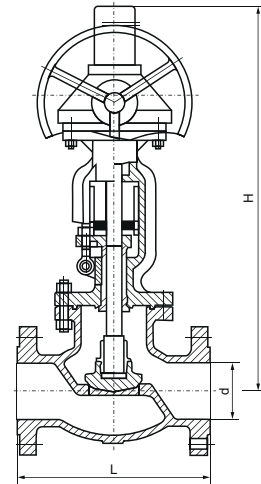
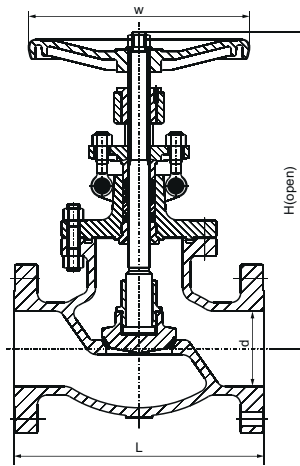
Class ANSI 150 Series 38

- Construction feature

Bolted bonnet
Flat or plug type disc
Renewable seat
(Threaded or welded seat ring)
≥ 10" Thrust bearing design

- API 598 Pressure Test

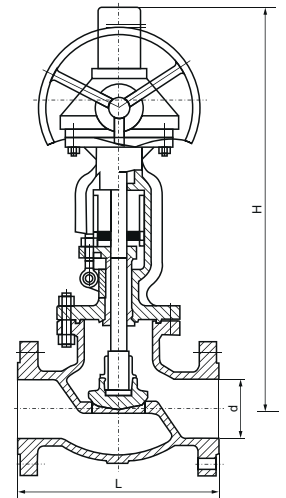
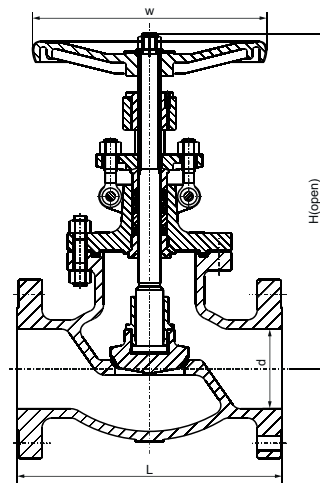
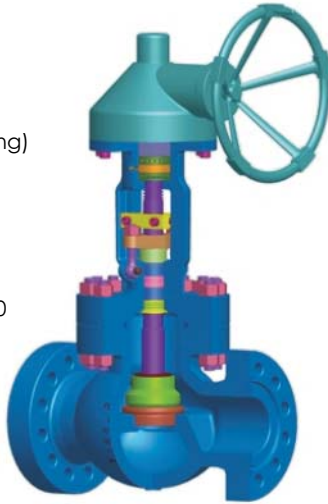
Pressure ratings: Class 150
Hydraulic Shell test: 3.2 MPa
Hydraulic Seat test: 2.2 MPa
Air test: 0.6 MPa



Class	Size		Dimensions (mm)								Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
Class 150	2	50	203	216	203	51	330	-	200	-	19	-
	2 1/2	65	216	229	216	64	360	-	250	-	27	-
	3	80	241	254	241	76	390	-	280	-	36	-
	4	100	292	305	292	102	445	-	300	-	53	-
	5	125	356	369	356	127	480	-	350	-	75	-
	6	150	406	419	406	152	520	556	350	310	94	126
	8	200	495	508	495	203	600	658	400	310	148	180
	10	250	622	635	622	254	773	805	450	460	242	291
	12	300	698	711	698	305	880	955	500	460	438	480
	14	350	787	800	787	337	950	1100	600	460	-	600
	16	400	914	927	914	387	996	1175	600	460	-	850
	20	500	978	991	978	488	-	1450	-	600	-	1650
	24	600	1295	1308	1295	590	-	1690	-	600	-	2200

Class ANSI 300 Series 38

- Construction feature
 - Bolted bonnet
 - Flat or plug type disc
 - Renewable seat
(Threaded or welded seat ring)
 - ≥10" Thrust bearing design
- API 598 Pressure Test
 - Pressure ratings: Class 300
 - Hydraulic Shell test: 7.8 MPa
 - Hydraulic Seat test: 5.7 MPa
 - Air test: 0.6 MPa



Class	Size		Dimensions (mm)								Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1		
			RF	RTJ	BW						H.W	G.O
Class 300	2	50	267	283	267	51	385	-	200	-	25	-
	2½	65	292	308	292	64	420	-	200	-	42	-
	3	80	318	333	318	76	440	-	280	-	46	-
	4	100	356	371	356	102	515	-	350	-	74	-
	5	125	400	416	400	127	580	-	350	-	111	-
	6	150	444	460	444	152	660	690	400	310	165	195
	8	200	559	575	559	203	900	950	550	460	275	327
	10	250	622	638	622	254	950	990	600	460	400	452
	12	300	711	727	711	305	1030	1080	700	460	624	725
	14	350	762	854	762	337	1130	1155	-	600	-	880
	16	400	864	879	864	387	1310	1325	-	600	-	1300
	18	450	977	-	977	431	-	1473	-	720	-	1600
	20	500	1016	-	1016	482	-	1574	-	720	-	2100

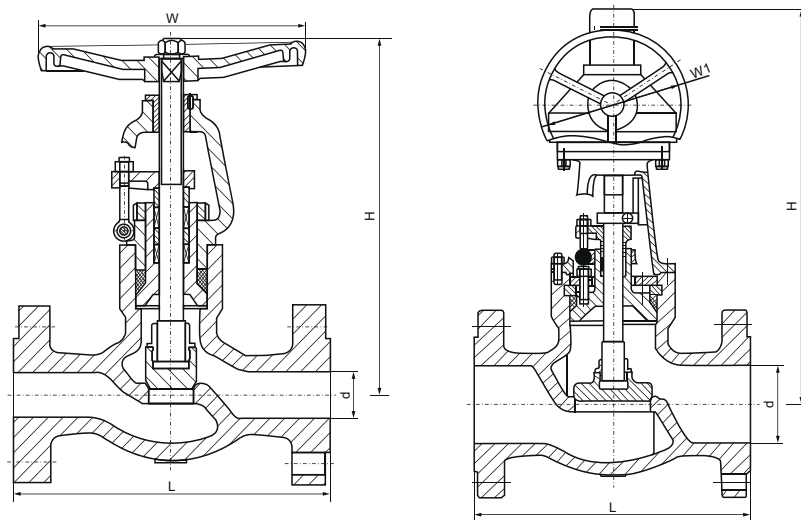
Class ANSI 600/900/1500 Series 38

- Construction feature

Pressure seal
Flat or plug type disc
Renewable seat
(Threaded or welded seat ring)
≥ 6" Thrust bearing design

- API 598 Pressure Test

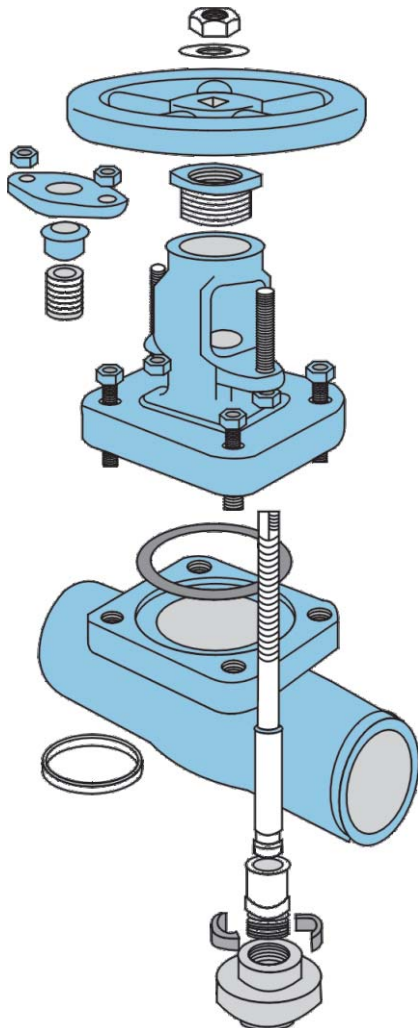
Pressure ratings: Class: 600 - 900
Hydraulic Shell test: 15.6 MPa, 23.3 MPa
Hydraulic Seat test: 11.4 MPa, 17.1 MPa
Air test: 0.6 MPa



Class	Size		Dimensions (mm)								Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
Class 600	2 1/2	50	292	295	292	51	360	-	250	-	32	-
	2	65	330	333	330	64	410	-	280	-	42	-
	3	80	356	359	356	76	465	-	300	-	63	-
	4	100	432	435	432	102	545	575	400	310	107	138
	5	125	508	511	508	127	625	660	500	310	185	215
	6	150	559	562	559	152	785	820	550	460	290	342
	8	200	660	664	660	200	930	960	650	460	540	645
Class 900	2 1/2	50	368	371	368	47	480	-	350	-	55	-
	2	65	419	422	419	57	520	-	350	-	68	-
	3	80	381	384	381	73	564	630	400	310	95	128
	4	100	457	460	457	98	685	720	450	310	160	210
	5	125	559	562	559	121	780	840	550	460	270	325
	6	150	610	613	610	146	950	1015	650	460	410	480

Class	DN		RTJ							
	mm	in	L	D	D1	D2	b	n- d	H	DO
Class 1500	65	2 1/2	422	244	190.5	108.0	49.0	8- 28.5	461	400
	80	3	473	267	203.2	136.5	55.7	8- 32	554	450
	100	4	549	311	241.3	161.9	61.8	8- 35	639	500
	125	5	676	375	292.1	193.7	81.1	8- 41	780	560
	150	6	711	394	317.5	211.1	92.1	12- 38	904	630
	200	8	841	483	393.7	269.9	103.0	12- 44.5	1140	680

Forged Steel Globe Valves

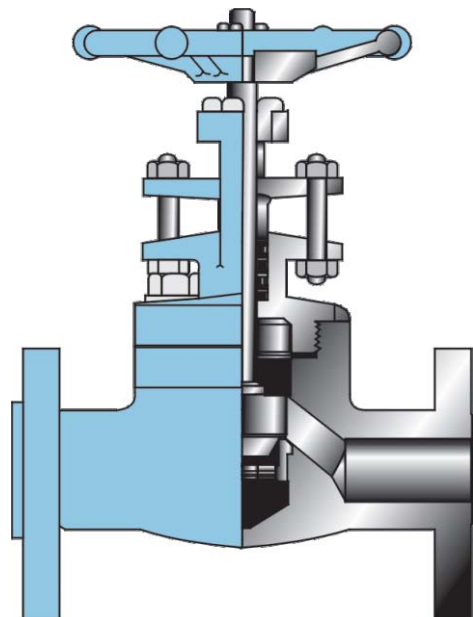


- Construction feature

Are available in three bonnet designs. The first design is the pressure seal bonnet, with male-Female joint, spiral wound gasket, made in F304L/graphite, Ring joint gasket are also available on request. The second design is the welded bonnet, with a threaded and seal welded joint. The third design is the pressure seal bonnet, with a threaded and pressure seal bonnet joint.

- Construction is as follows

- Full port or conventional 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 ASME B1.20.1
- Disc are plug type and upon request throttle type, needle type, ball type and check type.



• Applicable standards

1 Design and manufacture conform to BS5352, MSS SP-118

2 Connection ends conform to

1)Socket welded ends conform to ANSI B16.11

2)Screw ends NPT to ASME B1.20.1

3)Butt-welded ends conform to ANSI B16.25

4)Flanged ends conform to ANSI B16.5

3 Test and inspection conform to

API 598

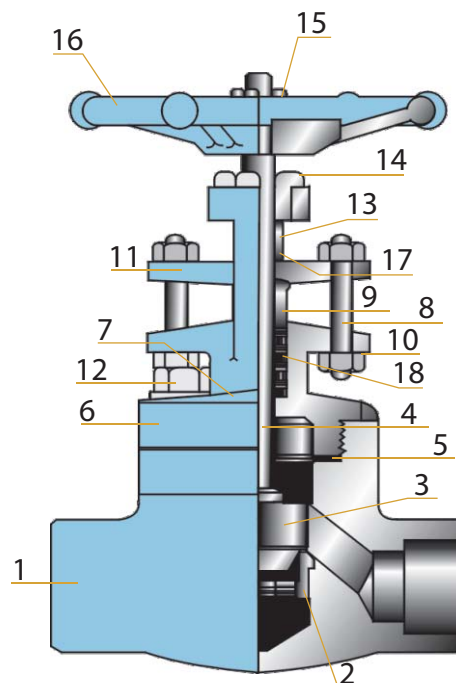
4 Structure features

Bolted bonnet, outside screw and yoke;

Welded bonnet, outside screw and yoke.

5 Materials conform to ASTM.

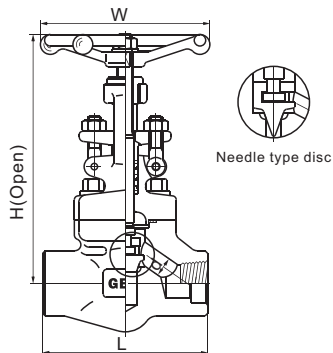
6 A105 LF2 F5 F11 F22 304(L) 316(L) F347 F321 F51



Main part materials list

NO.	Part name	A105/F6a	A105/F6aHFS	LF2/304	F11/F6aHF	F304(L)/304(L)	F316(L)/316(L)	F51/F51
1	Body	A105	A105+HF	LF2	F11+HF	F304(L)	F316(L)	F51
3	Disc	F6a	F6a	F304	F6aHF	F304(L)	F316(L)	F51
4	Stem	410	410	304	410	304(L)	316(L)	F51
5	Gasket	304+ graphite	304+ graphite	304+ graphite	304+ graphite	304+ graphite	316+ graphite	316+ graphite
6	Bonnet	A105	A105	LF2	F11	F304(L)	F316(L)	F51
7	Bolt	B7	B7	L7	B16	B8(M)	B8(M)	B8M
8	Pin	410	410	410	410	304	304	304
9	Gland	410	410	304	410	304	316	F51
10	Gland eye bolt	B7	B7	L7	B16	B8(M)	B8(M)	B8M
11	Gland flange	A105	A105	LF2	F11	F304	F304	F304
12	Hex nut	2H	2H	2H	2H	8(M)	8(M)	8M
13	Stem nut	410	410	410	410	410	410	410
14	Locking nut	35	35	35	35	35	35	35
15	Nameplate	AL	AL	AL	AL	AL	AL	AL
16	Handwheel	A197	A197	A197	A197	A197	A197	A197
18	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite

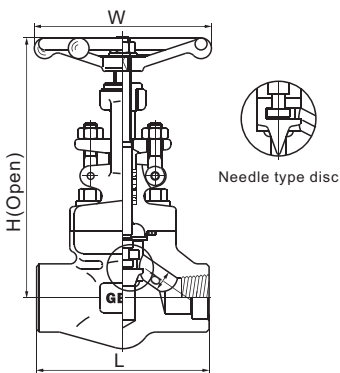
Series 40



CL800

Bolted bonnet, full port or reduced port outside screw and yoke(OS&Y)
THD., SW or BW ends, design standard: BS 5352

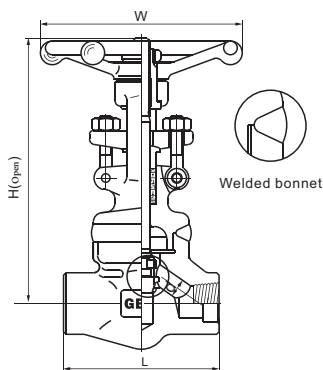
Specification	R.P	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2	2 ¹ / ₂
	F.P	3/8	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2
Face to face	L	79	92	111	120	152	172	200
Handwheel diameter	W	100	100	125	160	160	180	200
Height	H	164	164	203	224	260	300	355
Flow port dimension	d	9	13	17.5	23	30	35	46
Weight(Kg)		2.28	2.37	4.3	5.75	7.8	12.5	17.5



CL900-CL1500

Bolted bonnet, reduced port or full port outside screw and yoke(OS&Y)
THD.,BW or SW ends, design standard: BS 5352

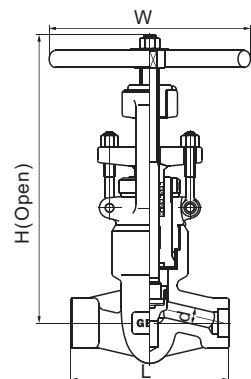
Specification	R.P	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2	2 ¹ / ₂
	.P	3/8	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2
Face to face	L	111	111	120	152	172	200	220
Handwheel diameter	W	125	125	160	160	180	200	240
Height	H	207	207	240	258	330	355	370
Flow port dimension	d	12	15	20	28	32	40	45
Weight(Kg)		3.7	3.6	6.8	7.6	11.6	15	21.9



CL2500

Welded bonnet (RJ), reduced port, outside screw and yoke(OS&Y)
SW ends, design standard: ASME B 16.34

Specification	F.P	1/2	3/4	1	1 ¹ / ₂	2
Face to face	L	150	150	210	235	235
Handwheel diameter	W	130	130	250	300	300
Height	H	293	300	390	435	435
Flow port dimension	d	11	14	19	28	35
Weight(Kg)		10	10.3	22.4	38	38

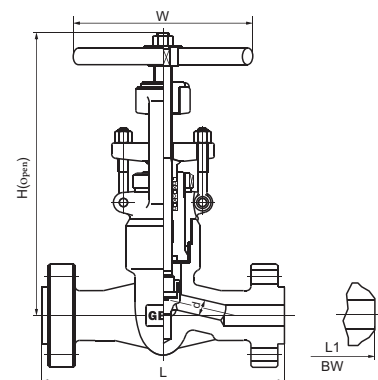
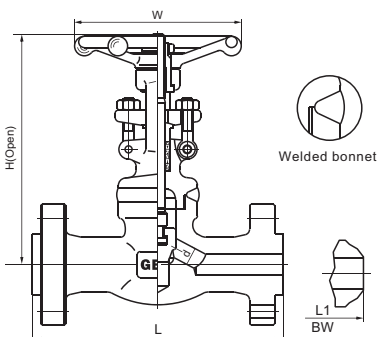
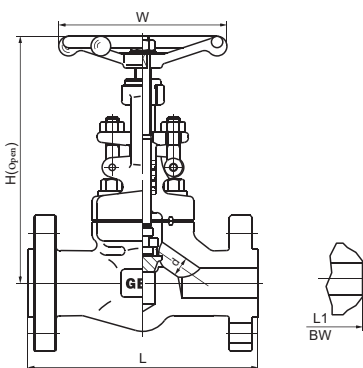
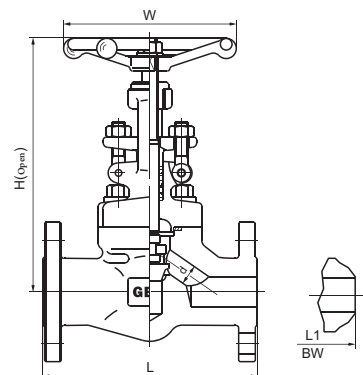


CL2500

Pressure seal bonnet, reduced port, outside screw and yoke(OS&Y)
SW ends, design standard:ASME B 16.34

Specification	F.P	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2
Face to face	L	186	186	186	232	232	279
Handwheel diameter	W	200	200	200	280	280	300
Height	H	375	378	380	490	490	540
Flow port dimension	d	11	14	19	25	28	35
Weight(Kg)		12.3	11.6	10.8	26.0	28.4	60

Series 40



CL150-300-600

Bolted bonnet, reduced port, outside screw and yoke(OS&Y)

Flanged or BW ends, design standard: BS 5352

Specification			R.P	1/2	3/4	1	1 1/4	1 1/2	2
Face to face	CL150	L(RF) L1(BW)	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	CL150/CL300	H	180	184	217	224	260	300	
	CL600		164	164	203	224	260	300	
Flow port dimension(mm)			d	9	13	17.5	23	30	35
Weight (Kg)	CL150	R F	3.45	4.00	6.19	9.6	10.5	17	
		BW	2.3	3.6	7.8	8.2	12.0	15.0	
	CL300	R F	3.8	5.1	7.2	12	13.5	19.7	
		BW	2.8	4.0	8.5	9.2	12.6	16.8	
	CL600	R F	5.6	7.8	12.5	17	23.5	38.8	
		BW	3.4	4.7	9.2	10.5	13.3	18.9	

CL900-CL1500

Bolted bonnet, reduced port, outside screw and yoke(OS&Y)

Flanged or BW ends, design standard: BS 5352

Specification	F.P	1/2	3/4	1	1 ¹ /4	1 ¹ /2	2
Face to face (mm)	L(RF),L1(BW)	216	229	254	279	305	368
	L(RTJ)	216	229	254	279	305	371
Handwheel diameter(mm)	W	125	125	160	160	180	200
Height(mm)	H	207	207	230	160	300	355
Flow port dimension(mm)	d	12	15	20	28	32	40
Weight (Kg)		11	13.2	17.4	19	24.5	31

CL2500

Welded bonnet, reduced port, outside screw and yoke(OS&Y)

Flanged or BW ends, design standard: ASME B 16.34

Specification		F.P	1/2	3/4	1	1 ¹ / ₂	2
Face to face (mm)	L(RF), L1(BW)		264	273	308	384	451
	L(RTJ)		264	273	308	387	454
Handwheel diameter(mm)		W	125	160	200	250	240
Height(mm)		H	207	240	258	355	300
Flow port dimension(mm)		d	11	14	19	28	35
Weight (Kg)			19.5	21.5	42	65	95

CL2500

Pressure seal bonnet, reduced port, outside screw and yoke(OS&Y)

Flanged or BW ends, design standard: ASME B 16.34

Specification		F.P	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2
Face to face (mm)	L(RF), L1(BW)		264	273	308	349	384	451
	L(RTJ)		264	273	308	349	387	454
Handwheel diameter(mm)		W	200	200	280	280	280	300
Height(mm)		H	320	320	320	440	440	490
Flow port dimension(mm)		d	11	14	19	25	28	35
Weight (Kg)			21.5	24.7	30.4	48.1	58.1	130



KASKO DEMİRÇELİK MAKİNE VE İNŞAAT SANAYİ TİCARET LİMİTED ŞİRKETİ

**Güzelyurt Mah. Mehmet Akif Ersoy Cad. No: 38 Gökdemir Plaza Kat: 3 Ofis: 24 Zip Code:
34524 Esenyurt / İSTANBUL**

Tel: +90 850 441 25 67

Cell: +90 541 699 01 34

info@kaskomakine.com

kaskomakine.com