



Bolted Bonnet



Welded Bonnet



Pressure Seal Bonnet

Gate valves are available in three bonnet designs. The first design is the Bolted 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. On request a full penetration strength welded joint is available. The third design is the pressure seal bonnet, with a threaded and pressure seal bonnet joint.

Gate Valve Design Construction and Specifications:

Gate valves conform to API 602, and ASME B 16.34

Each are tested according to API 598, and marking is per MSS SP-25

Construction is as follows:

Full port or Conventional Port

Outside Screw and Yoke (OS&Y)

Two piece self-aligning packing gland

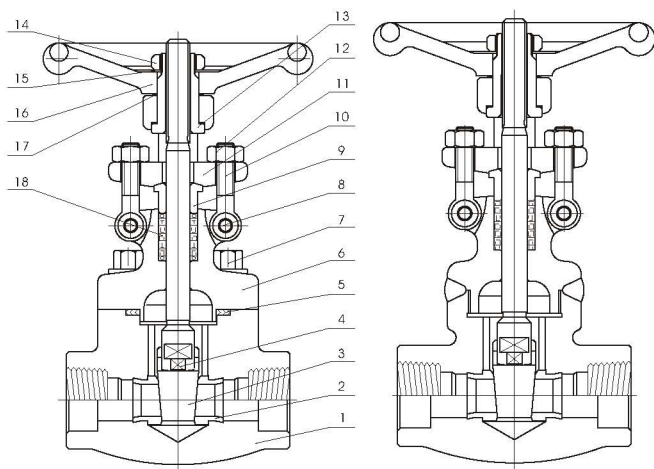
Bolted bonnet with spiral wound gasket, threaded

and seal welded bonnet or threaded and pressure seal bonnet Integral backseat

Socket weld Ends to ASME B16.11

Screwed Ends (NPT) to ANSI/ASME B1.20.1

FEMALE THREADED AND SOCKET WELDED GATE VALVES



Application standards

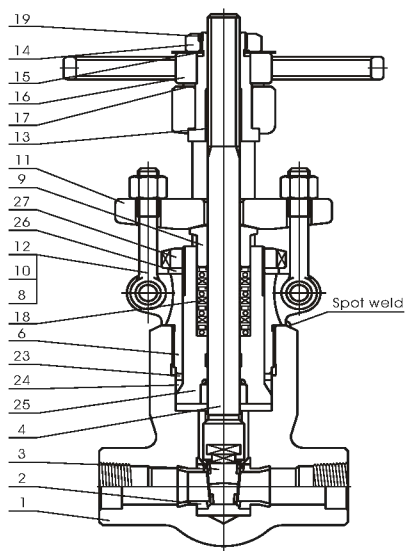
- Design and manufacture conform to:
API 602; BS5352; ANSI B16.34;
- Connection ends conform to:
1) Socket welded dimension conform to ANSI B16.11; JB/T1751
2) Screw ends dimension conform to ANSI B1.20.1; JB/T7306
3) Butt-welded conform to ANSI B16.25; JB/T12224
4) Flanged ends conform to ANSI B16.5; JB79
- Test and inspection conform to:
API 598; GB/T13927; JB/T9092
- Structure features:
Bolted bonnet, outside screw and yoke
Welded bonnet, outside screw and yoke
- Materials conform to ANIS/ASTM.
- Main materials:
A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321;
F51; Monel; 20 Alloy.

Carbon steel temperature-pressure rate

CL150-285 PS.I @ 100° F
CL300-740 PS.I @ 100° F
CL600-1480 PS.I @ 100° F
CL800-1975 PS.I @ 100° F
CL1500-3705 PS.I @ 100° F

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	LF2	F11	F304(L)	F316(L)	F51
2	Seat	410	410HF	304	410HF	304(L)	316(L)	F51
3	Wedge	F6a	F6a	F304	F6aHF	F304(L)	F316(L)	F51
4	Stem	410	410	304	410	304(L)	316(L)	F51
5	Gasket	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	304+ Flexible graphite	316+ Flexible graphite	316+ Flexible 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 eyebolt	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
17	Lubricating gasket	410	410	410	410	410	410	410
18	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite



Application standards

- Design and manufacture conform to API 602, BS5352, ANSI B16.34
- Connection ends conform to:
 - Socket welded dimension conform to ANSI B16.11; JB/T1751
 - Screw ends dimension conform to ANSI B1.20.1; JB/T7306
 - Butt-welded conform to ANSI B16.25; JB/T12224
 - Flanged ends conform to ANSI B16.5; JB79
- Test and inspection conform to: API 598; GB/T13927; JB/T9092
- Structure features: A threaded and pressure seal bonnet
- Materials conform to ANIS/ASTM.
- Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F91; Monel; 20 Alloy.

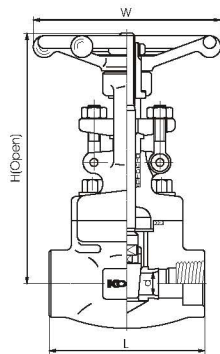
Carbon steel temperature-pressure rate

CL1500-3705 PS.I @ 100° F

CL2500-6170 PS.I @ 100° F

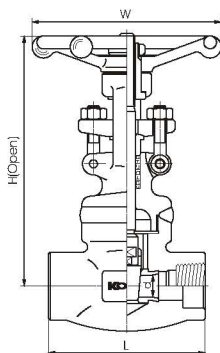
Main part materials list

NO.	Part name	A105/F6a	A105/F6aHFS	LF2/304	F11/F6aHF	F304(L)/304(L)	F316(L)/316(L)	F91/410 HF
1	Body	A105	A105	LF2	F11	F304(L)	F316(L)	F91
2	Seat	410	410HF	304	410HF	304(L)	316(L)	410HF
3	Wedge	F6a	F6a	F304	F6aHF	F304(L)	F316(L)	F6aHF
4	Stem	410	410	304	410	304(L)	316(L)	410
6	Bonnet	A105	A105	LF2	F11	F304(L)	F316(L)	F91
8	Pin	410	410	410	410	304	304	410
9	Gland	410	410	304	410	304	316	410
10	Gland eyebolt	B7	B7	L7	B16	B8(M)	B8(M)	B8
11	Gland flange	A105	A105	LF2	F11	F304	F304	F91
12	Hex nut	2H	2H	2H	2H	8(M)	8(M)	8
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	A190
17	Lubricating gasket	410	410	410	410	410	410	410
18	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
19	Stop nut	35	35	35	35	35	35	35
23	Seal gasket	420	420	304	304	304(L)	316(L)	420
24	P.S. ring	304	304	304	304	304	316	316
25	P.S. seat	420	420	304	304	304(L)	316(L)	F91
26	Nut pad	410	410	410	410	410	410	410
26	Packing nut	Cast steel	Cast steel	Cast steel	Cast steel	Stainless steel	Stainless steel	Cast steel



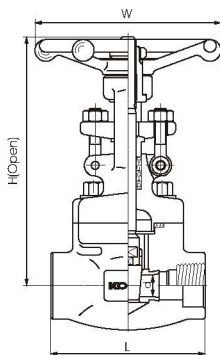
CL800 Bolted bonnet, full port reducing port outside screw and yoke(OS & Y)
Threaded, butt-welded or socket welded ends; design to API 602

Specification (NPS)	R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L	79	79	92	111	120	120	140	178	180
Handwheel diameter	W	100	100	100	125	160	160	180	200	220
Height	H	161	161	163	196	223	251	290	333	370
Flow port dimension	d	8	10.5	13.5	18	24	29	36.5	45	51
Weight(Kg)		2.3	2.22	2.39	4.24	5.7	7.05	10.9	16.8	24



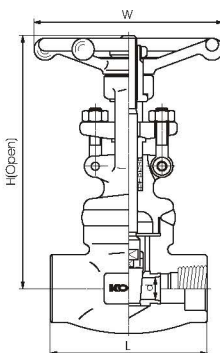
CL800 Welded bonnet, full port reducing port outside screw and yoke(OS & Y)
Threaded, butt-welded or socket welded ends; design to API 602

Specification (NPS)	R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L	79	79	92	111	120	120	140	178	180
Handwheel diameter	W	100	100	100	125	160	160	180	200	220
Height	H	161	161	163	196	223	251	290	333	370
Flow port dimension	d	8	10.5	13.5	18	24	29	36.5	45	51
Weight(Kg)		1.9	1.9	2.1	3.2	5.2	6.9	10.4	15.8	22



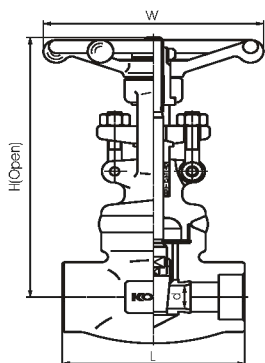
CL900-CL1500 Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)
Threaded, butt-welded or socket welded ends; design to API 602

Specification (NPS)	R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L	92	111	111	120	120	140	178	180	-
Handwheel diameter	W	100	125	125	160	160	180	200	220	-
Height	H	191	191	192	219	243	296	316	370	-
Flow port dimension	d	8	10.5	13.5	18	24	29	36.5	45	-
Weight(Kg)		2.4	4.4	4.3	6	7.2	11.4	16	23	-



CL900-CL1500 Welded bonnet, full port reducing port outside screw and yoke(OS&Y)
Threaded, butt-welded or socket welded ends; design to API 602

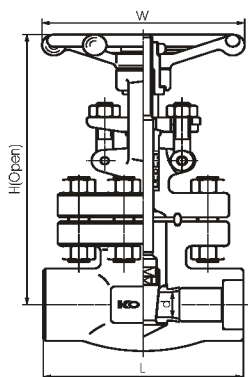
Specification (NPS)	R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L	92	111	111	120	120	140	178	180	-
Handwheel diameter	W	100	125	125	160	160	160	200	220	-
Height	H	171	207	207	240	258	330	355	370	-
Flow port dimension	d	8	10.5	13.5	18	24	29	36.5	45	-
Weight(Kg)		2.3	4	4	4.8	7.1	11	16	22.8	-



CL2500

Welded bonnet, full port outside screw and yoke (OS & Y)
Socket welded ends, design conform to ASME B16.34

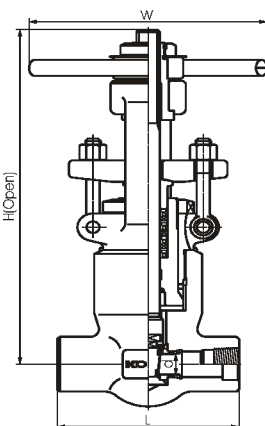
Specification(NPS)		1/4	3/8	1/2	3/4	1	1 1/4	2	
Face to face	L	111	120	120	120	140			
Handwheel diameter	W	125	160	160	180	220			
Height	H	215	218	220	238	281			
Flow port dimension	d	14	14	14	19	25			
Weight(Kg)		7	8.7	8.5	11.7	17			



CL1500-CL2500

Bolted bonnet, full port outside screw and yoke (OS & Y)
Socket welded ends, design conform to ASME B16.34

Specification(NPS)	F.P		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L	CL1500	110	150	150		210	235	
		CL2500	150	150	210		235	235	
Handwheel diameter	W	CL1500	110	130	130		180	250	
		CL2500	130	130	250		300	300	
Height	H	CL1500	277	300	390		400	435	
		CL2500	293	300	390		435	435	
Flow port dimension	d	CL1500	14	17	22		35	37	
		CL2500	14	14	14		25	30	
Weight(Kg)		CL1500	5.1	11	12.1		22	37	
		CL2500	11	11.3	22.4		38	38	



CL1500-CL2500

Pressure seal bonnet, full port outside screw and yoke (OS & Y)
Socket welded ends, design conform to ASME B16.34

Specification(NPS)	F.P		3/8	1/2	3/4	1	1 1/4	1 1/2	2
Face to face	L	CL900~1500	140	140	140	140	178	178	216
		CL2500	186	186	186	186	232	232	279
Handwheel diameter	W	CL900~1500	200	200	200	200	280	280	300
		CL2500	200	200	200	200	280	280	300
Height	H	CL900~1500	318	318	318	322	467	468	540
		CL2500	325	325	325	327	467	468	540
		CL900~1500	14	14	14	19	25	30	36.5
		CL2500	14	14	14	19	25	30	36.5
Weight(Kg)		CL900~1500	11.5	11.5	10.8	10.5	19.6	21.0	55.4
		CL2500	12.3	12.3	11.6	10.8	26.0	28.4	60.0