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GATE

Construction

Forged body and bonnet, OS & Y, solid or flexible wedge, bolted or welded bonnet, pressure seal

- Size Range: from ½" to 2"
- Pressure: class 800# - 2500
- Materials of body/bonnet : Carbon Steel, Low temperature Carbon Steel, Stainless Steel, Duplex, Super Duplex, Low & High Alloy Steel, Titanium and other special on request
- Main Trim Materials: 13Cr, F6, Austenitic Stainless Steel (F304, F316), Monel, Stellite
- Ends for connection: SW, BW, NPT, RF, RTJ
- Options: *Bellows seal valves *With integral extended bodies *With adjustment of ends (re-in/out-forced) *Pressure seal valves *Valves for cryogenic application



GLOBE

Construction

Forged body and bonnet, OS & Y, Disc or Needle type, bolted or welded bonnet, pressure seal

- Size Range: from ½" to 2
- Pressure: class 800# - 2500#
- Materials of body/bonnet : Carbon Steel, Low temperature Carbon Steel, Stainless Steel, Duplex, Super Duplex, Low & High Alloy Steel, Titanium and other special on request
- Main Trim Materials: 13Cr, F6, Austenitic Stainless Steel (F304, F316), Monel, Stellite
- Ends for connection: SW, BW, NPT, RF, RTJ
- Options: *Y-pattern *Angle type bellows seal valves *Pressure seal valves *Valves for special service or cryogenic application



CHECK

Construction

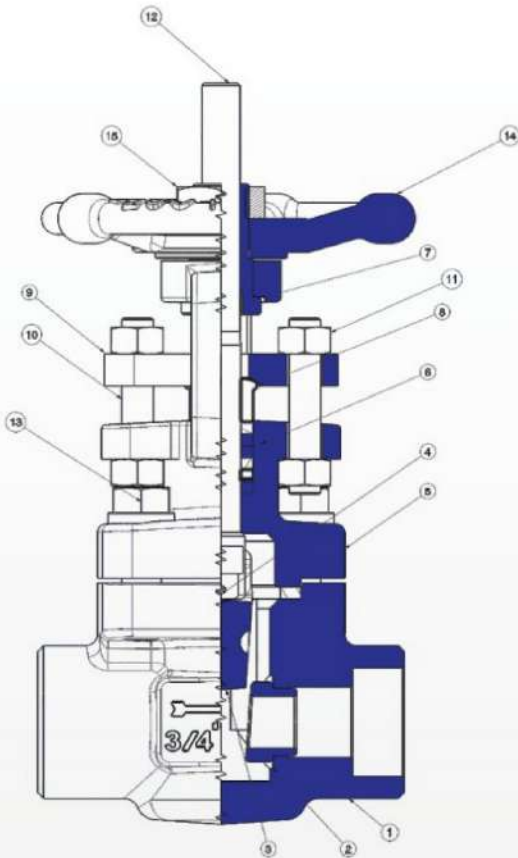
Forged body and bonnet, Piston, Ball or Swing type, bolted or welded bonnet, pressure seal

- Size Range: from ½" to 2
- Pressure: class 800# - 2500#
- Materials of body/bonnet : Carbon Steel, Low temperature Carbon Steel, Stainless Steel, Duplex, Super Duplex, Low & High Alloy Steel, Titanium and other special on request Main Trim Materials: 13Cr, F6, Austenitic Stainless Steel (F304, F316), Monel, Stellite
- Ends for connection: SW, BW, NPT, RF, RTJ
- Options: *Y-pattern *Pressure seal valves



Gate valves are bi-directional valves ideally suited for on-off duties SIG produces various types, with parallel face gates or wedge gates (as closure elements). These valves have a high flow coefficient (Cv), and in the case of parallel gate valves, it is comparable with the straight pipe's Cv. They are usually installed in high pressure fluids applications because the upstream pressure helps the sealing between gate and seat. SIG is continuously studying and improving the surface finish of the seating in order to guarantee the minimum wear under high pressure conditions. Gate valves are supplied in various models that cover a wide range of different and unique services.

Construction
ISO15761 2nd ed. 2002 API602 10th.ed, 2015 ASME B16.34 2013 ed.
Bolted or welded bonnet
size 1/2'-2"
Closed Die Forging
Full and Standard Bore
150. 300. 600. 800, 1500, 2500



1	BODY	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 listed in table 1.
2	SEAT	The base material of the seat ring, when used, shall be of a nominal material composition equal to the body material or the stem material Refer to API 602 (see 6.1.4).
3	WEDGE	The base material of the wedge/disc shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602 (see 6.1.4).
4	GASKET	Refer to API Standard 602 (see 5.5.3).
5	BONNET	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 listed in table 1.
6	PACKING (*)	Non-asbestos material suitable for steam and petroleum fluids over a temperature range of - 29 °C to 540 °C (-20 °F to 1000 °F) and containing a corrosion inhibitor.
7	YOKE NUT	Carbon steel, stainless steel or similar material composition as the bonnet.
8	GLAND	Material with a melting point above 955° C (1750 °F).
9	GLAND FLANGE	Steel.
10	GLAND STUD	Unless other materials are agreed between the purchaser and manufacturer, refer to the recommended bolting material in Annex G of API 602.
11	GLAND NUT	Bolting materials of a Type 300 or Type 400 series stainless steel. Also, material at least equal to either ASTM A307-Grade B or EN 10269-C35E(1.1181) may be used for yoke bolting.
12	STEM	Refer to API Standard 602. Table 12.
13	BOLTS	Unless other materials are agreed between the purchaser and manufacturer, refer to the recommended bolting material In Annex G of API 602.
14	HANDWHEEL	Malleable iron, carbon steel, or ductile iron.
15	WHEELNUT	Austenitic ductile iron, 13Cr steel, or copper alloy having a melting point above 955°C (1750 °F).

DESCRIPTION	A105N/F6	A105N/F6HFS	LF2-316	F11/F6HFS	F304-304	F316-316
WHEELNUT	Galvanized AVP	Galvanized AVP	Galvanized AVP	Galvanized AVP	303	303
NAMEPLATE	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
HANDWHEEL	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel +Black Epoxy	Carbon Steel +Black Epoxy
YOKE NUT	416	416	416	416	416	416
GLAND NUT	2H	2H	GR.8M	GR.8M	Gr.8	Gr.8
GLAND FLANGE	A105	A105	LF2	F6a C1.2	304/304L	316
GLAND STUD	F6a Cl.2 (410)	F6a Cl.2 (410)	B8M CL.1	B8M CL.1	B8 CL.1	B8 CL.1
GLAND	316	316	316	316	316	316
PACKING (☉)	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
BOLTS	B7	B7	L7	B16	B8 CL.1	B8 CL.1
STEM	F6a Cl.2 (410)	F6a Cl.2 (410)	316/316L	F6a Cl.2 (410)	304/304L	316
BONNET	A105N	A105N	LF2	304/304L	304/304L	F316
GASKET	316+Graphite	316+Graphite	316+Graphite	316+Graphite	316+Graphite	Sp. Wound
SEAT	F6a Cl.2 (410)	410 HF	316/316L	410 HF	304/304L	316/316L
WEDGE	F6a Cl.2	F6a Cl.2	316/316L	F6a Cl.2	304/304L	316
BODY	A105N	A105N	LF2	F11 Cl.2	304/304L	316

Socketed weld - butt weld - threaded ends

Bolted bonnet

BOLTED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	B 101			80	8	145	80
3/8	B 102	1/2	BR 103	80	10	145	80
1/2	B 103	3/4	BR 104	90	14	155	80
3/4	B 104	1	BR 105	110	18	185	100
1	B 105	1 1/4	BR 106	127	24	218	120
1 1/4	B 106	1 1/2	BR 107	127	30	255	140
1 1/2	B 107	2	BR 108	130	36,5	277	140
2	B 108			150/210	48	327	170

BOLTED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	9B 101			90	8	152	80
3/8	9B 102	1/2	9BR 103	90	10	152	80
1/2	9B 103	3/4	9BR 104	110	14	180	100
3/4	9B 104	1	9BR 105	120	18	218	120
1	9B 105	1 1/4	9BR 106	130	24	252	140
1 1/4	9B 106	1 1/2	9BR 107	130	29	275	170
1 1/2	9B 107	2	9BR 108	150/210	36,5	320	170
2	9B 108			210	40	325	170

Note: Spiral Wound Gasket = Fig.9B 100 / Ring Joint Gasket = Fig. 14B 100 - 14BR 10

Welded bonnet

WELDED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	W 101			80	8	145	80
3/8	W 102	1/2	WR 103	80	10	145	80
1/2	W 103	3/4	WR 104	90	14	155	80
3/4	W 104	1	WR 105	110	18	185	100
1	W 105	1 1/4	WR 106	127	24	218	120
1 1/4	W 106	1 1/2	WR 107	127	30	255	140
1 1/2	W 107	2	WR 108	130	36,5	277	140
2	W 108			150/210	48	327	170

WELDED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	15W 101			90	8	152	80
3/8	15W 102	1/2	15WR 103	90	10	152	80
1/2	15W 103	3/4	15WR 104	110	14	180	100
3/4	15W 104	1	15WR 105	120	18	218	120
1	15W 105	1 1/4	15WR 106	130	24	252	140
1 1/4	15W 106	1 1/2	15WR 107	130	29	275	170
1 1/2	15W 107	2	15WR 108	150/210	36,5	320	170
2	15W 108			210	40	325	170

Bolted bonnet

BOLTED BONNET - Standard bore

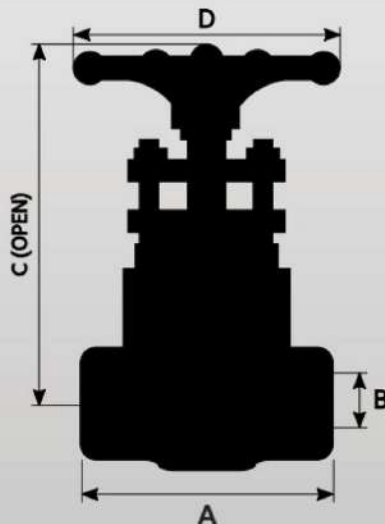
Outside screw & yoke - Threaded and socketed weld ends

Standard bore		A	B	C	D
Size	Fig No	End to end	mm	mm	mm
1/4	25B 101	110	8	205	100
3/8	25B 102	110	10	205	100
1/2	25B 103	110	10	210	100
3/4	25B 104	120	14	255	120
1	25B 105	130	18	265	140
1 1/4	25B 106	210	24	365	170
1 1/2	25B 107	210	29	375	170
2	25B 108	240	36,5	390	260

WELDED BONNET - Standard bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		A	B	C	D
Size	Fig No	End to end	mm	mm	mm
1/4	25W 101	110	8	205	100
3/8	25W 102	110	10	205	100
1/2	25W 103	110	14	210	100
3/4	25W 104	120	18	255	120
1	25W 105	130	24	274	140
1 1/4	25W 106	210	30	365	170
1 1/2	25W 107	210	36,5	380	170
25	25W 108	240	40	390	260



Flanged type

BOLTED & WELDED BONNET - Standard bore
 Outside screw & yoke – Integral flanged ends

CL 150	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	1B 103	1W 103	108	14	180	80
	3/4	1B 104	1W 104	118	18	185	100
	1	1B 105	1W 105	127	24	210	120
	1 1/4	-	-	-	-	-	-
	1 1/2	1B 107	1W 107	165	36,5	270	140
	2	1B 108	1W 108	178	48	300	170

BOLTED & WELDED BONNET - Standard bore
 Outside screw & yoke – Integral flanged ends

CL 300	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	3B 103	3W 103	140	14	180	80
	3/4	3B 104	3W 104	153	18	188	100
	1	3B 105	3W 105	165	24	210	120
	1 1/4	3B 106	3W 106	178	29	260	140
	1 1/2	3B 107	3W 107	191	36,5	270	170
	2	3B 108	3W 108	216	48	312	170

BOLTED & WELDED BONNET - Standard bore
 Outside screw & yoke – Integral flanged ends

CL 600	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	6B 103	6W 103	165	14	180	80
	3/4	6B 104	6W 104	191	18	205	100
	1	6B 105	6W 105	216	24	232	120
	1 1/4	6B 106	6W 106	229	29	245	140
	1 1/2	6B 107	6W 107	241	36,5	278	140
	2	6B 108	6W 108	292	48	327	170

BOLTED & WELDED BONNET - Standard bore
 Outside screw & yoke – Integral flanged ends

CL 1500	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	25BF 103	25WF 103	264	14	250	120
	3/4	25BF 104	25WF 104	273	14	255	120
	1	25BF 105	25WF 105	308	18	270	140
	1 1/2	25BF 107	25WF 107	384	30	385	260
	2	25BF 108	25WF 108	451	36,5	460	260

Reduced bore

BOLTED & WELDED BONNET – Reduced bore
 Outside screw & yoke – Integral flanged ends

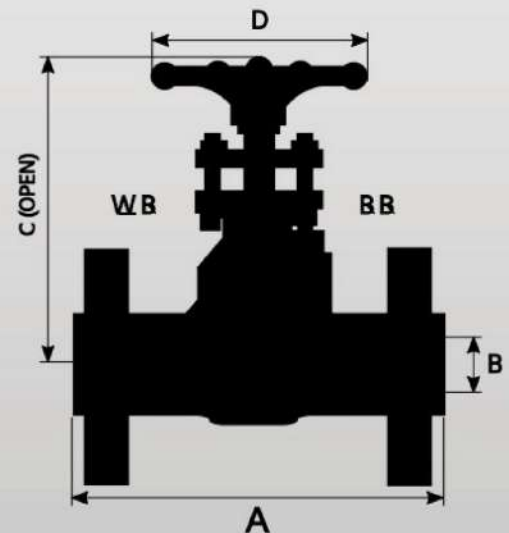
CL 150	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	1BR 103	1WR 103	108	10	173	80
	3/4	1BR 104	1WR 104	118	14	180	80
	1	1BR 105	1WR 105	127	18	205	100
	1 1/4	1BR 106	1WR 106	140	24	235	120
	1 1/2	1BR 107	1WR 107	165	30	260	140
	2	1BR 108	1WR 108	178	36,5	296	170

BOLTED & WELDED BONNET – Reduced bore
 Outside screw & yoke – Integral flanged ends

CL 300	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	3BR 103	3WR 103	140	10	174	80
	3/4	3BR 104	3WR 104	153	14	180	80
	1	3BR 105	3WR 105	165	18	205	100
	1 1/4	3BR 106	3WR 106	178	24	260	140
	1 1/2	3BR 107	3WR 107	191	30	265	140
	2	3BR 108	3WR 108	216	36,5	296	170

BOLTED & WELDED BONNET – Reduced bore
 Outside screw & yoke – Integral flanged ends

CL 600	Standard bore / Figure Number			A	B	C	D
	Size	Bolted b	Welded b	End to end	mm	mm	mm
	1/2	6BR 103	6WR 103	165	10	145	80
	3/4	6BR 104	6WR 104	191	14	155	80
	1	6BR 105	6WR 105	216	18	185	100
	1 1/4	6BR 106	6WR 106	229	29	248	140
	1 1/2	6BR 107	6WR 107	241	30	248	140
	2	6BR 108	6WR 108	292	36,5	273	170



Cryogenic

Threaded-socket weld ends

BOLTED BONNET - Standard & Reduce bore

Outside screw & yoke – Threaded and socked weld ends

WELDED BONNET – Standard bore: Fig.no CW

Reduced bore: Fig.no. CWR

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	CB 101			80	8	405	100
3/8	CB 102	1/2	CBR 103	80	10	410	100
1/2	CB 103	3/4	CBR 104	90	14	420	100
3/4	CB 104	1	CBR 105	110	18	460	120
1	CB 105	1 1/4	CBR 106	127	24	480	140
1 1/4	CB 106	1 1/2	CBR 107	127	30	510	170
1 1/2	CB 107	2	CBR 108	130	36,5	530	170
2	CB 108			150/210	48	600	260

BOLTED BONNET - Standard & Reduce bore

WELDED BONNET – Standard bore: Fig.no 15CW

Reduced bore: Fig.no. 15CWR

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	9CB 101			90	8	410	100
3/8	9CB 102	1/2	9CBR 103	90	10	415	100
1/2	9CB 103	3/4	9CBR 104	110	14	452	120
3/4	9CB 104	1	9CBR 105	120	18	470	140
1	9CB 105	1 1/4	9CBR 106	130	24	480	140
1 1/4	9CB 106	1 1/2	9CBR 107	130	30	510	170
1 1/2	9CB 107	2	9CBR 108	150/210	36,5	530	170
2	9CB 108			210	48	600	260

ROUND BOLTED & WELDED BONNET - Standard bore

Outside screw & yoke – Threaded and socked weld ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/4	25CB 101	25CW 101	110	8	460	120
3/8	25CB 102	25CW 102	110	10	460	120
1/2	25CB 103	25CW 103	110	10	470	120
3/4	25CB 104	25CW 104	120	14	500	140
1	25CB 105	25CW 105	130	18	510	170
1 1/4	25CB 106	25CW 106	210	24	610	170
1 1/2	25CB 107	25CW 107	210	29	620	260
2	25CB 108	25CW 108	240	36,5	640	260

Integral flanged ends

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	1CBR 103	1CWR 103	108	10	435	100
3/4	1CBR 104	1CWR 104	118	14	440	100
1	1CBR 105	1CWR 105	127	18	480	120
1 1/4	-	-	-	-	-	-
1 1/2	1CBR 107	1CWR 107	165	30	515	170
2	1CBR 108	1CWR 108	178	36,5	560	170

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	3CBR 103	3CWR 103	140	10	435	100
3/4	3CBR 104	3CWR 104	153	14	445	100
1	3CBR 105	3CWR 105	165	18	480	120
1 1/4	-	-	-	-	-	-
1 1/2	3CBR 107	3CWR 107	191	30	525	170
2	3CBR 108	3CWR 108	216	36,5	560	170

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	6CBR 103	6CWR 103	165	10	145	80
3/4	6CBR 104	6CWR 104	191	14	155	80
1	6CBR 105	6CWR 105	216	18	185	100
1 1/4	-	-	229	29	248	140
1 1/2	6CBR 107	6CWR 107	241	30	248	140
2	6CBR 108	6CWR 108	292	36,5	273	170

BOLTED & WELDED BONNET - Reduced bore

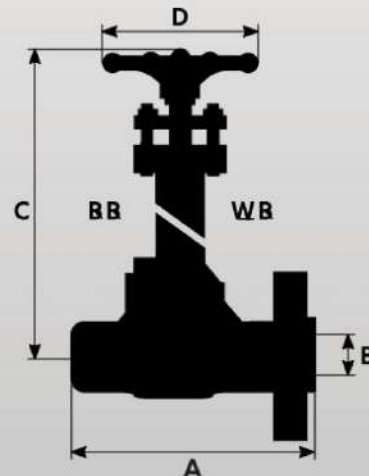
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	15CBF 103	15CWF 103	216	14	465	120
3/4	15CBF 104	15CWF 104	229	18	480	140
1	15CBF 105	15CWF 105	254	24	510	170
1 1/4	-	-	-	-	-	-
1 1/2	15CBF 107	15CWF 107	305	36,5	570	170
2	15CBF 108	15CWF 108	368	40	610	260

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	25CBF 103	25CWF 103	264	14	500	120
3/4	25CBF 104	25CWF 104	273	14	510	140
1	25CBF 105	25CWF 105	308	18	520	170
1 1/4	-	-	-	-	-	-
1 1/2	25CBF 107	25CWF 107	384	30	635	260
2	25CBF 108	25CWF 108	451	36,5	710	260





Globe valves are unidirectional and closing-down valves in which the closure member is moved squarely on and off the seat and are designed to maintain the pressure flowing under the disc. In this way, the opening of the port is directly proportional to the travel of the disc. This proportional relationship is ideally suited for applications that require flowrate regulation.

In order to increase precision in the regulation, the disc element is available in three different configurations: parabolic, needle and v-port. Furthermore the short-travel of the disc between the open and closed positions makes these valves ideally suited for on-off duties when they must be opened and closed frequently.

Construction

ISO15761 2nd ed. 2002
API602 10th.ed. 2015
ASME B16.34 2013 ed.

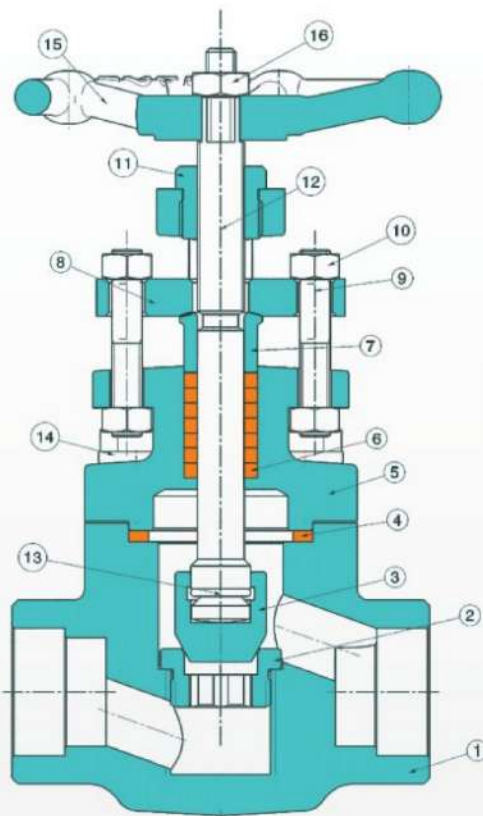
T-body, bolted or
welded bonnet

size 1/2" - 2'

Closed Die Forging

Full and Standard Bore

150, 300, 600, 800,
1500, 2500, 4500



1	BODY	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 and listed in Table 1 of API 602.
2	SEAT	The base material of the seat ring, when used, shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602 (see 6.1.4).
3	DISC	The base material of the wedge/disc shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602 (see 6.1.4).
4	GASKET	Refer to API Standard 602, (see 5.5.3).
5	BONNET	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 and listed in Table 1 of API 602.
6	PACKING (*)	Non-asbestos material suitable for steam and petroleum fluids over a temperature range of -29 °C to 540 °C (-20 °F to 1000 °F) and containing a corrosion inhibitor.
7	GLAND	Material with a melting point above 955 °C (1750 °F).
8	GLAND FLANGE	Steel.
9	GLAND STUD	Unless other materials are agreed between the purchaser and manufacturer, refer to the recommended bolting material in Annex G of API 602.
10	GLAND NUT	Bolting materials of a Type 300 or Type 400 series stainless steel. Also, material at least equal to either ASTM A307-Grade B may be used for yoke bolting.
11	YOKE NUT	Carbon steel, stainless steel or similar material composition as the bonnet.
12	STEM	Refer to API Standard 602, Table 12.
13	LOCK KEY	Carbon Steel
14	BOLTS	Unless other materials are agreed between the purchaser and manufacturer, refer to the recommended bolting material in Annex G of API 602.
15	HANDWHEEL	Malleable Iron, carbon steel, or ductile iron.
16	WHEELNUT	Austenitic ductile Iron, 13Cr steel, or copper alloy having a melting point above 955 °C (1750 °F).

DESCRIPTION	A105N/F6	A105N/F6HFS	LF2/F316	F11/F6HFS	F304-304	F316-316
WHEELNUT	Galvanized AVP	Galvanized AVP	Galvanized AVP	Galvanized AVP	303	303
NAMEPLATE	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
HANDWHEEL	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel Black Epoxy	Carbon Steel Black Epoxy
YOKE NUT	416	416	416	416	416	416
GLAND NUT	2H	2H	GR.8M	GR.8M	Gr.8	Gr.8
GLAND FLANGE	A105	A105	LF2	F6a Cl.2	304/304L	316
GLAND STUD	F6a Cl.2 (410)	F6a Cl.2 (410)	B8M CL.1	B8M CL.1	B8M CL.1	B8M CL.1
GLAND	316	316	316	316	316	316
PACKING (⊛)	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
BOLTS	B7	B7	L7	B16	B8 CL.1	B8 CL.1
STEM	F6a Cl.2 (410)	F6a Cl.2 (410)	316/316L	F6a Cl.2 (410)	304/304L	316
BONNET	A105N	A105N	LF2	F11 Cl.2	304/304L	316/316L
GASKET	316+Graphite	316+Graphite	316+Graphite	316+Graphite	316+Graphite	316+Graphite
SEAT	F6a Cl.2 (410)	410 HF	316/316L	410 HF	304/304L	316
WEDGE	F6a Cl.2(410)	F6a Cl.2(410)	316/316L	F6a Cl.2(410)	304/304L	316
BODY	A105N	A105N	LF2	F11 Cl.2	304/304L	316/316L

Socketed weld - butt weld - threaded ends

Bolted bonnet

BOLTED BONNET – STANDARD & REDUCED BORE

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	B 201			80	7	160	80
3/8	B 202	1/2	BR 203	80	9	160	80
1/2	B 203	3/4	BR 204	90	12,5	170	80
3/4	B 204	1	BR 205	110	17,5	200	100
1	B 205	1 1/4	BR 206	127	22,5	235	120
1 1/4	B 206	1 1/2	BR 207	155	29	270	140
1 1/2	B 207	2	BR 208	170	35	290	170
2	B 208			210	45	345	170

BOLTED BONNET – STANDARD & REDUCED BORE

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	9B 201			90	7	165	80
3/8	9B 202	1/2	9BR 203	90	9	165	80
1/2	9B 203	3/4	9BR 204	110	11	195	120
3/4	9B 204	1	9BR 205	120	14,5	230	140
1	9B 205	1 1/4	9BR 206	130	19	260	140
1 1/4	9B 206	1 1/2	9BR 207	170	27	285	170
1 1/2	9B 207	2	9BR 208	210	31	330	170
2	9B 208			210	37,5	340	260

Note: Spiral Wound Gasket = Fig.9B 100 / Ring Joint Gasket = Fig. 14B 100 – 14BR100

Welded bonnet

WELDED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	W 201			80	7	160	80
3/8	W 202	1/2	WR 203	80	9	160	80
1/2	W 203	3/4	WR 204	90	12,5	170	80
3/4	W 204	1	WR 205	110	17,5	200	100
1	W 205	1 1/4	WR 206	127	22,5	235	120
1 1/4	W 206	1 1/2	WR 207	155	29	270	140
1 1/2	W 207	2	WR 208	170	35	290	170
2	W 208			210	45	345	170

WELDED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	15W 201			90	7	165	80
3/8	15W 202	1/2	15WR 203	90	9	165	80
1/2	15W 203	3/4	15WR 204	110	11	195	120
3/4	15W 204	1	15WR 205	120	14,5	235	140
1	15W 205	1 1/4	15WR 206	130	19	265	140
1 1/4	15W 206	1 1/2	15WR 207	170	27	280	140
1 1/2	15W 207	2	15WR 208	210	31	335	170
2	15W 208			210	37,5	380	260

Bolted bonnet

ROUND BOLTED BONNET - Standard bore

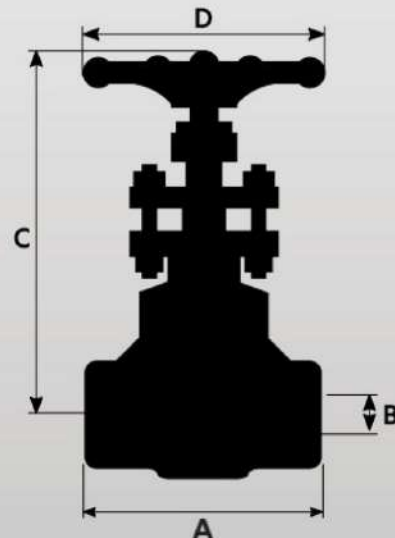
Outside screw & yoke - Threaded and socketed weld ends

Standard bore		A	B	C	D
Size	Fig No	End to end	mm	mm	mm
1/4	25B 201	110	7	260	120
3/8	25B 202	110	8	260	120
1/2	25B 203	110	11	270	120
3/4	25B 204	120	14	275	140
1	25B 205	130	19	290	140
1 1/4	25B 206	210	24	390	170
1 1/2	25B 207	210	28	415	260
2	25B 208	240	36	425	260

WELDED BONNET - Standard & Reduce bore

Outside screw & yoke - Threaded and socketed weld ends

Standard bore		A	B	C	D
Size	Fig No	End to end	mm	mm	mm
1/4	25W 201	110	7	192	120
3/8	25W 202	110	8	194	120
1/2	25W 203	110	11	195	120
3/4	25W 204	120	14	225	140
1	25W 205	130	19	225	140
1 1/4	25W 206	210	24	325	170
1 1/2	25W 207	210	28	330	170
2	25W 208	240	36	370	260



Standard bore

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	1B 203	1W 203	108	12	185	80
3/4	1B 204	1W 204	118	16	195	100
1	1B 205	1W 205	127	21	220	120
1 1/2	1B 207	1W 207	165	33	270	140
2	1B 208	1W 208	203	45	320	170

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	3B 203	3W 203	152,5	12	185	80
3/4	3B 204	3W 204	178	17,5	220	100
1	3B 205	3W 205	203	22	250	120
1 1/2	3B 207	3W 207	229	35	295	170
2	3B 208	1W 208	267	45	350	170

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	6B 203	6W 203	165	12	185	80
3/4	6B 204	6W 204	190,5	17,5	220	100
1	6B 205	6W 205	216	22	250	120
1 1/2	6B 207	6W 207	241,5	35	295	170
2	6B 208	6W 208	292	45	350	170

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	15BF 203	15WF 203	216	11	225	120
3/4	15BF 204	15WF 204	229	14,5	270	140
1	15BF 205	15WF 205	254	19	285	140
1 1/2	15BF 207	15WF 207	305	31	400	170
2	15BF 207	15WF 207	368	37,5	420	260

Reduced bore

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

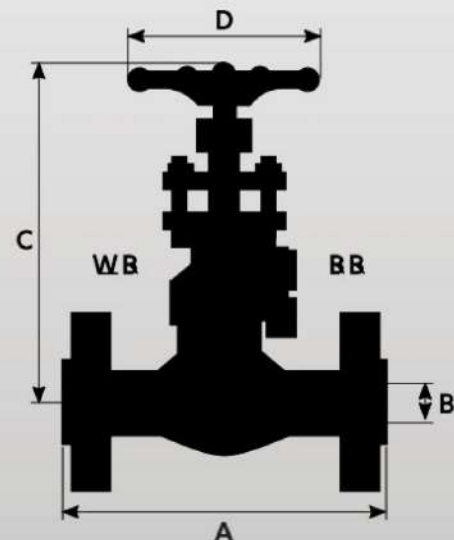
Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	1BR 203	1WR 203	108	9	185	80
3/4	1BR 204	1WR 204	118	12,5	192	80
1	1BR 205	1WR 205	127	17,5	220	100
1 1/2	1BR 207	1WR 207	165	29	265	140
2	1BR 208	1WR 208	203	35	310	170

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	3BR 203	3WR 203	152,5	9	160	80
3/4	3BR 204	3WR 204	178	12,5	168	80
1	3BR 205	3WR 205	203	17,5	200	100
1 1/2	3BR 207	3WR 207	229	29	268	140
2	3BR 208	3WR 208	267	35	290	170

BOLTED & WELDED BONNET - Standard bore
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	6BR 203	6WR 203	165	9	160	80
3/4	6BR 204	6WR 204	190,5	12,5	168	80
1	6BR 205	6WR 205	216	17,5	200	100
1 1/2	6BR 207	6WR 207	241,5	29	268	140
2	6BR 208	6WR 208	292	35	290	170



Cryogenic Threaded – socket weld ends

BOLTED & WELDED BONNET

Welded: Standard B. Fig. no. CW200- Reduced B. Fig. no. CWR200
Outside screw & yoke- Threaded and socketed weld ends.

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	CB 201			80	7	420	100
3/8	CB 202	1/2	CBR 203	80	9	420	100
1/2	CB 203	3/4	CBR 204	90	12,5	425	100
3/4	CB 204	1	CBR 205	110	17,5	475	120
1	CB 205	1 1/4	CBR 206	127	22,5	490	140
1 1/4	CB 206	1 1/2	CBR 207	155	29	530	170
1 1/2	CB 207	2	CBR 208	170	35	550	170
2	CB 208			210	45	600	260

BOLTED & WELDED BONNET

Welded: Standard B. Fig. no. 15CW200- Reduced B. Fig. no. 15CWR200
Outside screw & yoke- Threaded and socketed weld ends.

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	9CB 201			90	7	420	100
3/8	9CB 202	1/2	9CBR 203	90	9	425	100
1/2	9CB 203	3/4	9CBR 204	110	11	470	120
3/4	9CB 204	1	9CBR 205	120	14,5	490	140
1	9CB 205	1 1/4	9CBR 206	130	19	525	170
1 1/4	9CB 206	1 1/2	9CBR 207	170	27	550	170
1 1/2	9CB 207	2	9CBR 208	210	31	590	260
2	9CB 208			210	37,5	620	260

ROUND BOLTED & WELDED BONNET - Standard bore

Outside screw & yoke – Threaded and socketed weld ends

Standard bore		Reduced bore		A	B	C	D
Size	Fig No	Size	Fig No	End to end	mm	mm	mm
1/4	25CB 201		25CW 201	110	7	500	120
3/8	25CB 202	1/2	25CW 202	110	8	500	120
1/2	25CB 203	3/4	25CW 203	110	11	510	120
3/4	25CB 204	1	25CW 204	120	14	530	140
1	25CB 205	1 1/4	25CW 205	130	19	540	170
1 1/2	25CB 207	2	25CW 207	210	28	660	260
2	25CB 208		25CW 208	240	36	680	260

Flanged type

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	1CBR 203	1CWR 203	108	9	445	100
3/4	1CBR 204	1CWR 204	118	12,5	455	100
1	1CBR 205	1CWR 205	127	17,5	500	120
1 1/2	1CBR 207	1CWR 207	165	29	545	170
2	1CBR 208	1CWR 208	203	35	575	170

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	3CBR 203	3CWR 203	152,5	9	420	100
3/4	3CBR 204	3CWR 204	178	12,5	430	100
1	3CBR 205	3CWR 205	203	17,5	470	120
1 1/2	3CBR 207	3CWR 207	229	29	530	170
2	3CBR 208	3CWR 208	267	35	600	170

BOLTED & WELDED BONNET - Reduced bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	6CBR 203	6CWR 203	165	9	420	100
3/4	6CBR 204	6CWR 204	190,5	12,5	430	100
1	6CBR 205	6CWR 205	216	17,5	470	120
1 1/2	6CBR 207	6CWR 207	241,5	29	530	170
2	6CBR 208	6CWR 208	292	35	600	170

ROUND BOLTED & WELDED BONNET - Standard bore

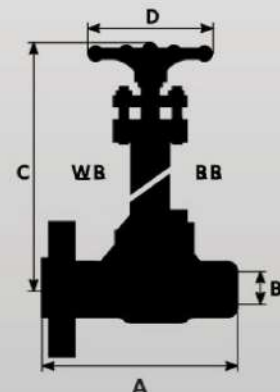
Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	15CBR 203	15CWR 203	216	11	480	120
3/4	15CBR 204	15CWR 204	229	14	490	140
1	15CBR 205	15CWR 205	254	19	530	170
1 1/2	15CBR 207	15CWR 207	305	31	590	260
2	15CBR 208	15CWR 208	368	37,5	630	260

ROUND BOLTED & WELDED BONNET - Standard bore

Outside screw & yoke – Integral flanged ends

Standard bore / Figure Number			A	B	C	D
Size	Bolted b	Welded b	End to end	mm	mm	mm
1/2	25CBR 203	25CWR 203	264	11	480	120
3/4	25CBR 204	25CWR 204	273	14	490	140
1	25CBR 205	25CWR 205	306	19	530	170
1 1/2	25CBR 207	25CWR 207	384	28	610	260
2	25CBR 208	25CWR 208	451	35	650	260





Check valves are unidirectional self-activated valves used to prevent systems' reverse flow and to protect other pipeline devices (pumps, compressors, etc.).

SIG manufactures three different closure element versions to meet a wide variety of applications: Piston, Ball and Swing.

Our piston check valves (as per SIG's standard) are supplied with a spring, an added feature that makes possible their installation throughout the pipeline, vertically or horizontally; critical to completing systems design.

It is worth mentioning that, unless requested by the customer, SIG's ball check valves, are supplied without spring.

SIG pays attention to any detail to its design and manufacturing processes, in order to lower noise in operation conditions and unusual excessive wear on the closure components; guaranteeing the best of performances in the valve's lifetime.

Construction

ISO15761 2nd ed. 2002
API602 10th.ed. 2015
ASME B16.34 2013 ed.

T-Pattern, bolted or
welded bonnet

size 1/2"-2"

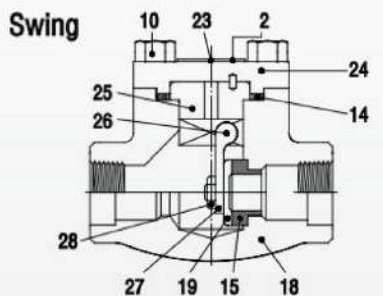
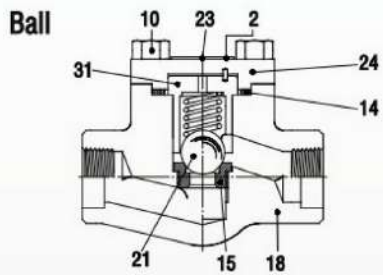
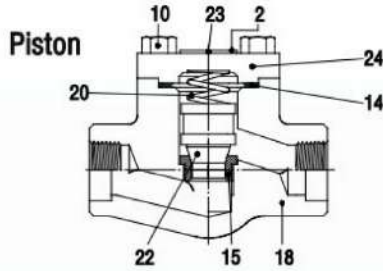
Close Die Forging

Full and Standard Bore

150, 300, 600, 800,
1500, 2500, 4500

CHECK VALVES

CHECK VALVES



2	NAMEPLATE	A corrosion resistant metal.
10	BOLTS	Unless other materials are agreed between the purchaser and manufacturer, refer to the recommended bolting material in Annex G of API 602.
14	GASKET	Refer to API 602 (see 5.5.3).
15	SEAT	The base material of the seat ring, when used, shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602 (see 6.1.A).
18	BODY	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 and listed in Table 1 of API 602.
19	DISC	The base material of the wedge/disc shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602. (see 6.1.4).
20	SPRING	Similar material composition as would be used for a valve stem, based on the valve trim requirement.
21	BALL	The base material of the wedge/disc shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602. (see 6.1.4).
22	PISTON	The base material of the wedge/disc shall be of a nominal material composition equal to the body material or the stem material. Refer to API 602. (see 6.1.4).
23	RIVET *	Manufacturer standard, refer to table below.
24	BONNET	A forging, forged bar or casting material as selected from ASME B16.34, Group 1, 2 or Group 3 and listed in Table 1 of API 602.
25	SUPPORT *	Manufacturer standard, refer to table below.
26	HINGE PIN	Similar material composition as would be used for a valve stem, based on the valve trim requirement.
27	DISC HINGE	Similar material composition as would be used for a valve stem, based on the valve trim requirement.
28	DISC NUT	Similar material composition as would be used for a valve stem, based on the valve trim requirement.
31	BALL GUIDE*	Manufacturer standard, refer to table below.

DESCRIPTION	A105N/F6	A105N/F6HFS	LF2/F304	F11/F6HFS	F304/F304	F316/F316
RIVET	316	316	316	316	316	316
NAMEPLATE	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
BOLTS	B7	B7	L7	B16	B8M CL.1	B8M CL.1
BONNET/COVER	A105N	A105N	LF2	F11 C1.2	304/304L	316/316L
GASKET	316+Graphite	316+Graphite	316+Graphite	316+Graphite	316+Graphite	316+Graphite
SEAT	F6a Cl.2 (410)	410 HF	304/304L	410 HF	304/304L	316
SPRING (*)	AISI 301	AISI 301	AISI 301	AISI 301	AISI 301	X-750
PISTON	F6a Cl.2 (410)	F6a Cl.2 (410)	304/304L	F6a Cl.2 (410)	304/304L	316
BODY	A105N	A105N	LF2	F11 C12	304/304L	316/316L
BALL	F6a Cl.2 (410)	F6a Cl.2 (410)	316	F6a Cl.2 (410)	316	316
BALL GUIDE	LF2	LF2	LF2	316	316	316
DISC	F6a Cl.2 (410)	F6a Cl.2 (410)	304/304L	F6a Cl.2 (410)	304/304L	316
SUPPORT	LF2	LF2	LF2	316	316	316
HINGE PIN	F6a Cl.2 (410)	F6a Cl.2 (410)	316	F6a Cl.2 (410)	316	316
DISC HINGE	F6a Cl.2 (410)	F6a Cl.2 (410)	316	F6a Cl.2 (410)	316	316
DISC NUT	Gr.8M	Gr.8M	Gr.8M	Gr.8M	Gr.8M	Gr.8M

Piston/Ball/Swing type

Threaded and socked weld ends

BOLTED COVER-Standard & Reduced bore

Standard bore		Reduced bore		A	B	B	C
Size	Fig No	Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	B 301			80	7	-	49
3/8	B 302	1/2	BR 303	80	9	10	49
1/2	B 303	3/4	BR 304	90	12,5	14	55
3/4	B 304	1	BR 305	110	17,5	18	70
1	B 305	1 1/4	BR 306	127	22,5	24	77
1 1/4	B 306	1 1/2	BR 307	155*	29	29,5	105
1 1/2	B 307	2	BR 308	170*	35	36,5	120
2	B 308			210*	45	48	145

*FOR SWING TYPE END TO END: $\phi 11/4"=127$ - $\phi 11/2"=130$ - $\phi 2"=150/210$

BOLTED COVER-Standard & Reduced bore

Standard bore		Reduced bore		A	B	B	C
Size	Fig No	Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	9B 301			90	7	-	55
3/8	9B 302	1/2	9BR 303	90	9	10	55
1/2	9B 303	3/4	9BR 304	110	11	14	70
3/4	9B 304	1	9BR 305	120	14,5	18	77
1	9B 305	1 1/4	9BR 306	130	19	24	105
1 1/4	9B 306	1 1/2	9BR 307	170*	27	29,5	115
1 1/2	9B 307	2	9BR 308	210	31	36	145
2	9B 308			210	37,5	40	145

*FOR SWING TYPE END TO END: $\phi 11/4"=130$

BOLTED COVER-Standard & Reduced bore

Standard bore		A	B	B	C
Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	25B 301	110	7	-	105
3/8	25B 302	110	8	10	105
1/2	25B 303	110	11	10	105
3/4	25B 304	120	14	14	110
1	25B 305	130	19	19	125
1 1/2	25B 307	210	28	30	160
2	25B 308	240	36	36,5	170

Welded cover

WELDED COVER-Standard & Reduce bore

Standard bore		Reduced bore		A	B	B	C
Size	Fig No	Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	W 301			80	7	-	49
3/8	W 302	1/2	WR 303	80	9	10	49
1/2	W 303	3/4	WR 304	90	12,5	14	56
3/4	W 304	1	WR 305	110	17,5	18	69
1	W 305	1 1/4	WR 306	127	22,5	24	80
1 1/4	W 306	1 1/2	WR 307	155*	29	29,5	95
1 1/2	W 307	2	WR 308	170*	35	36,5	105
2	W 308			210*	45	48	125

*FOR SWING TYPE END TO END: $\phi 11/4"=127$ - $\phi 11/2"=130$ - $\phi 2"=150/210$

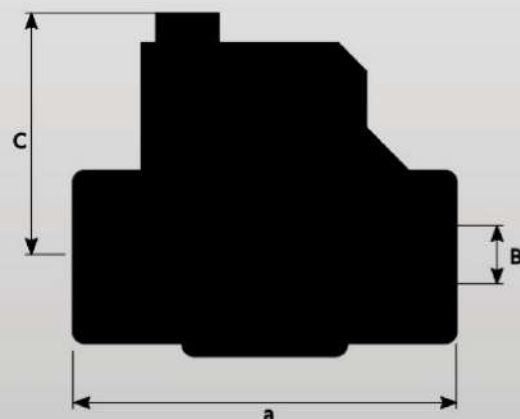
WELDED COVER-Standard & Reduce bore

Standard bore		Reduced bore		A	B	B	C
Size	Fig No	Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	15W 301			90	7	-	55
3/8	15W 302	1/2	15WR 303	90	9	10	55
1/2	15W 303	3/4	15WR 304	110	11	14	70
3/4	15W 304	1	15WR 305	120	14,5	18	80
1	15W 305	1 1/4	15WR 306	130	19	24	90
1 1/4	15W 306	1 1/2	15WR 307	170*	27	29,5	100
1 1/2	15W 307	2	15WR 308	210	31	36	115
2	15W 308			210	37,5	40	130

*FOR SWING TYPE END TO END: $\phi 11/4"=130$

WELDED COVER-Standard & Reduce bore

Standard bore		A	B	B	C
Size	Fig No	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/4	25W 301	110	7	-	70
3/8	25W 302	110	8	10	70
1/2	25W 303	110	11	10	70
3/4	25W 304	120	14	14	85
1	25W 305	130	19	18	90
1 1/4	25W 306	210	24	24	130
1 1/2	25W 307	210	28	29	130



CHECK VALVES

CHECK VALVES

SIG

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SIG

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SIG

Flanged Type

Piston/Ball/Swing type

BOLTED & WELDED COVER - Standard bore

Integral flanged ends

CL 150						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	1B 303	1W 303	108	12	14	76
3/4	1B 304	1W 304	118	16	18	80
1	1B 305	1W 305	127	21	24	92
1 1/2	1B 307	1W 307	165	33	36,5	100
2	1B 308	1W 308	203	45	48	140

BOLTED & WELDED COVER - Standard bore

Integral flanged ends

CL 600						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	6B 303	6W 303	165	12	14	80
3/4	6B 304	6W 304	191	16	18	85
1	6B 305	6W 305	316	22	24	95
1 1/2	6B 307	6W 307	241	34	36	102
2	6B 308	6W 308	292	45	48	145

ROUND BOLTED & WELDED COVER - Standard bore

Integral flanged ends

CL 2500						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	25BF 303	25WF 303	264	10	10	105
3/4	25BF 304	25WF 304	273	14	14	110
1	25BF 305	25WF 305	308	19	19	125
1 1/2	25BF 307	25WF 307	384	28	30	160
2	25BF 308	25WF 308	451	35	36,5	170

BOLTED & WELDED COVER - Reduced bore

Integral flanged ends

CL 150						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	1BR 303	1WR 303	108	9	10	70
3/4	1BR 304	1WR 304	118	12,5	10	80
1	1BR 305	1WR 305	127	17,5	18	92
1 1/2	1BR 307	1WR 307	165	29	29,5	100
2	1BR 308	1WR 308	203	35	36,5	140

BOLTED & WELDED COVER - Reduced bore

Integral flanged ends

CL 600						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	6BR 303	6WR 303	165	9	10	50
3/4	6BR 304	6WR 304	191	12,5	14	55
1	6BR 305	6WR 305	210	17,5	18	70
1 1/2	6BR 307	6WR 307	241	29	30	98
2	6BR 308	6WR 308	292	35	36,5	100

BOLTED & WELDED COVER - Standard bore

Integral flanged ends

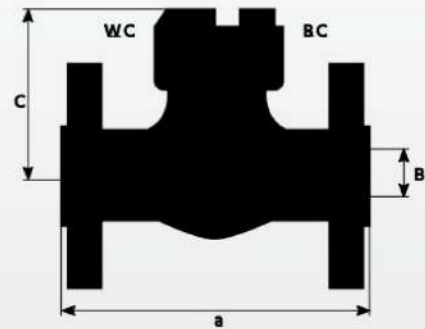
CL 300						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	3B 303	3W 303	152,2	12	14	80
3/4	3B 304	3W 304	178	17,5	18	85
1*	3B 305	3W 305	203	21	24	95
1 1/2*	3B 307	3W 307	229	35	36,5	102
2*	3B 308	3W 308	267	45	48	145

*For swing type end to end: $\emptyset 1 = 216 - \emptyset 11/4 = 229 - \emptyset 11/2 = 241$

BOLTED & WELDED COVER - Standard bore

Integral flanged ends

CL 1500						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	15BF 303	15WF 303	216	11	14	90
3/4	15BF 304	15WF 304	229	14,5	18	105
1*	15BF 305	15WF 305	254	19	24	120
1 1/2*	15BF 307	15WF 307	305	31	36	160
2*	15BF 308	15WF 308	368	37,5	40	170



BOLTED & WELDED COVER - Reduced bore

Integral flanged ends

CL 300						
Standard bore / Figure Number			A	B	B	D
Size	Bolted b	Welded b	End to end	Dia of port piston/Ball mm	Dia of port swing mm	mm
1/2	3BR 303	3WR 303	152,5	9	10	50
3/4	3BR 304	3WR 304	178	12,5	14	55
1	3BR 305	3WR 305	203	17,5	18	70
1 1/2	3BR 307	3WR 307	229	29	30	98
2	3BR 308	3WR 308	267	35	36,5	110

*For swing type end to end: $\emptyset 1 = 216 - \emptyset 11/4 = 229 - \emptyset 11/2 = 241$



CV COEFFICIENT

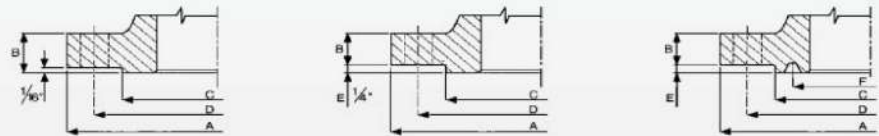
The cv factors (us gallons per minute of water at 70 F flowing through the valve at a pressure drop of one p.s.i) for standard design SIG valves are listed below.

Valve type	Rating	Bore	Dimenze/size							
			1/4 "	3/8 "	1/2 "	3/4 "	1"	1 1/4 "	1 1/2 "	2"
Gate	150+800	full	2	4,8	12,3	23,2	43	57	98	200
Gate	150+800	reduced			6	10	26	44	65	103
Gate	1500	full	2,1	5	12,5	23,7	44	59	100	*
Gate	1500	reduced			6,2	10,5	26,5	45	65,5	99
Gate	2500	full			5	12,1	23	42,5	56	97
Globe	150+800	full	0.9	1,5	3,2	5,8	11,5	15,2	20,9	38,3
Globe	150+800	reduced			1,5	3,7	6,4	10,4	17,8	21,5
Globe	1500	full			2,8	6	12		20	24
Globe	1500	reduced			1,7	2,9	5,8		15,5	19,8

Prutoky: *40mm=>155-*48mm=>200/bores:*40mm=>155-*48mm=>200

NOTE: The cv valve is affected by several factors(e.g.shape of piston or disc, presence of spring, profile of internal bore, etc). The data shown in the above table are therefore approximate. When the cv value is critical for the process or when ever the exact value is required, please contact our sales department.

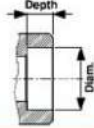
ANSI B16.5



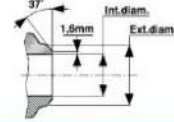
class	size	A		B MIN		C		D		RING JOIT FACING						RING N°	BOLT HOLES		
										C	F	E		SIZE	N°				
150	1/2	89	3,50	11,5	0,44	34,9	1,38	60,3	2,38	-	-	-	-	-	-	-	16	0,62	4
	3/4	98	3,88	13,0	0,50	42,9	1,69	69,0	2,75	-	-	-	-	-	-	-	16	0,62	4
	1	108	4,25	14,5	0,55	50,8	2,00	79,4	3,12	63,5	2,50	47,62	1,875	6,3	0,250	R 15	16	0,62	4
	1 1/4	117	4,62	16,0	0,62	68,5	2,50	88,9	3,50	73,0	2,88	57,15	2,250	6,3	0,250	R 17	16	0,62	4
	1 1/2	127	5,00	17,5	0,69	73	2,88	98,4	3,88	82,5	3,25	65,07	2,562	6,3	0,250	R 19	16	0,62	4
300	2	152	6,00	19,5	0,75	92,1	3,62	120,6	4,75	102,0	4,00	82,55	3,250	6,3	0,250	R 22	19	0,75	4
	1/2	95	3,75	14,5	0,56	34,9	1,38	66,7	2,62	51,0	2,00	34,14	1,344	5,6	0,219	R 11	16	0,62	4
	3/4	117	4,62	16,0	0,62	42,9	1,69	82,5	3,25	63,5	2,50	42,88	1,688	6,3	0,250	R 13	19	0,75	4
	1	124	4,88	17,5	0,69	50,8	2,00	88,9	3,50	70,0	2,75	50,80	2,000	6,3	0,250	R 16	19	0,75	4
	1 1/4	133	5,25	19,5	0,75	68,5	2,50	98,4	3,88	79,5	3,12	60,32	2,375	6,3	0,250	R 18	19	0,75	4
600	1 1/2	156	6,12	21,0	0,81	73,0	2,88	114,3	4,50	90,5	3,56	68,28	2,688	6,3	0,250	R 20	22,5	0,88	4
	2	165	6,50	22,5	0,88	92,1	3,62	127,0	5,00	108,0	4,25	82,55	3,250	7,9	0,312	R 23	19	0,75	8
	1/2	95	3,75	14,5	0,56	34,9	1,38	66,7	2,62	51,0	2,00	34,14	1,344	5,6	0,219	R 11	16	0,62	4
	3/4	117	4,62	16,0	0,62	42,9	1,69	82,5	3,25	63,5	2,50	42,88	1,688	6,3	0,250	R 13	19	0,75	4
	1	124	4,88	17,5	0,69	50,8	2,00	88,9	3,50	70,0	2,75	50,80	2,000	6,3	0,250	R 16	19	0,75	4
1500	1 1/4	133	5,25	21,0	0,81	63,5	2,50	98,4	3,88	79,5	3,12	60,32	2,375	6,3	0,250	R 18	19	0,75	4
	1 1/2	156	6,12	22,5	0,88	73,0	2,88	114,3	4,50	90,5	3,56	68,28	2,688	6,3	0,250	R 20	22,5	0,88	4
	2	165	6,50	25,5	1,00	92,1	3,62	127,0	5,00	108,0	4,25	82,55	3,250	7,9	0,312	R 23	19	0,75	8
	1/2	121	4,75	22,5	0,88	34,9	1,38	82,5	3,25	60,5	2,38	39,67	1,562	6,3	0,250	R 12	25,5	0,88	4
	3/4	130	5,12	25,5	1,00	42,9	1,69	88,9	3,50	66,5	2,62	44,45	1,750	6,3	0,250	R 14	25,5	0,88	4
2500	1	149	5,88	29,0	1,12	50,8	2,00	101,6	4,00	71,5	2,81	50,80	2,000	6,3	0,250	R 16	25,5	1,00	4
	1 1/4	159	6,25	29,0	1,12	63,5	2,50	111,1	4,38	81,0	3,19	60,32	2,375	6,3	0,250	R 18	25,5	1,00	4
	1 1/2	178	7,00	32,0	1,25	73	2,88	123,8	4,88	92,0	3,62	68,28	2,688	6,3	0,250	R 20	28,5	1,12	4
	2	216	8,50	38,5	1,50	92,1	3,62	165,1	6,50	124,0	4,88	95,25	3,750	7,9	0,312	R 24	25,5	1,00	8
	1/2	133,5	5,25	30,5	1,19	34,9	1,38	88,9	3,50	65,0	2,56	42,88	1,688	6,3	0,250	R 13	22,5	0,88	4
2500	3/4	139,5	5,50	32,0	1,25	42,9	1,69	95,3	3,75	73,2	2,88	50,80	2,000	6,3	0,250	R 16	22,5	0,88	4
	1	159	6,25	35,0	1,38	50,8	2,00	108,0	4,25	82,5	3,25	60,32	2,375	6,3	0,250	R 18	25,5	1,00	4
	1 1/4	184	7,25	38,5	1,50	63,5	2,50	130,2	5,12	101,6	4,00	72,24	2,844	7,9	0,312	R 21	28,5	1,12	4
	1 1/2	203	8,00	44,5	1,75	73	2,88	146,1	5,75	114,3	4,50	82,55	3,250	7,9	0,312	R 23	32,5	1,25	4
	2	235	9,25	51,0	2,00	92,1	3,62	171,5	6,75	133,4	5,25	101,60	4,000	7,9	0,312	R 26	28,5	1,12	8

DIMENSIONS SW-BW-NPT
DIMENSION SW-BW-NPT

**SW
(ANSI B16.11)**



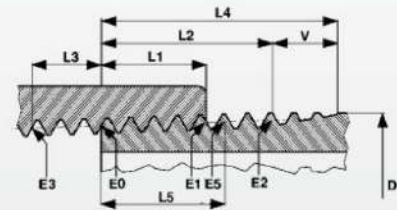
**BW
(ANSI B16.25)**



Size		Diameter	Diameter	depth
1/4"	Mm,	14,10	14,35	9,65
	in	0,555	0,565	0,380
3/8"	Mm,	17,53	17,78	9,65
	in	0,690	0,700	0,380
1/2"	Mm,	21,72	21,97	9,65
	in	0,855	0,865	0,380
3/4"	Mm,	27,05	27,30	12,70
	in	1,065	1,075	0,500
1"	Mm,	33,78	34,04	12,70
	in	1,330	1,340	0,500
1 1/4"	Mm,	42,55	42,80	12,70
	in	1,675	1,685	0,500
1 1/2"	Mm,	48,64	48,90	12,70
	in	1,915	1,925	0,500
2"	Mm,	61,11	61,37	15,75
	in	2,406	2,416	0,620
2 1/2"	Mm,	74,20	74,46	15,75
	in	2,921	2,931	0,620
3"	Mm,	90,20	90,46	15,75
	in	3,551	3,561	0,620

size		Diameter	Sch.5	Sch.10	Sch.40	Sch.80	Sch.160	Sch.XXS
1/4"	Mm,	13,75	-	10,41	9,25	7,76	-	-
	in	0,540	-	0,410	0,364	0,302	-	-
3/8"	Mm,	17,15	-	13,84	15,52	10,74	-	-
	in	0,675	-	0,545	0,493	0,423	-	-
1/2"	Mm,	21,34	18,03	17,12	15,80	13,87	11,84	6,40
	in	0,840	0,710	0,674	0,622	0,546	0,466	0,252
3/4"	Mm,	26,67	23,37	22,45	20,93	18,85	15,60	11,02
	in	1,050	0,920	0,884	0,824	0,742	0,614	0,434
1"	Mm,	33,40	30,10	27,86	26,64	24,31	20,70	15,21
	in	1,314	1,185	1,097	1,049	0,957	0,815	0,599
1 1/4"	Mm,	42,16	38,86	36,63	35,05	32,46	29,46	22,76
	in	1,660	1,530	1,442	1,380	1,278	1,160	0,896
1 1/2"	Mm,	48,26	44,96	42,72	40,89	38,10	33,99	27,94
	in	1,900	1,770	1,682	1,610	1,500	1,338	1,100
2"	Mm,	60,33	57,02	54,79	52,50	49,25	42,90	38,18
	in	2,375	2,245	2,157	2,067	1,939	1,689	1,503
2 1/2"	Mm,	73,02	66,78	66,90	62,71	59,00	53,97	44,98
	in	2,874	2,629	2,633	2,468	2,322	2,124	1,770
3"	Mm,	88,90	-	-	-	73,65	66,65	58,40
	in	3,500	-	-	-	2,899	2,624	2,299

**NPT
(ANSI B1.20.1)**



Size		D	N	P	E0	L1	E1	L2	E2	L3	E3	V	L4	L5	E5	H
1/4"	MM,	13,72	18	1,41	12,13	5,79	12,49	10,21	12,76	4,23	11,86	4,90	15,10	7,38	12,59	1,13
	IN	0,540		0,056	0,477	0,228	0,492	0,402	0,503	0,167	0,467	0,193	0,595	0,291	0,496	0,044
3/8"	MM,	17,15	18	1,14	15,55	6,10	15,93	10,36	16,19	4,23	15,28	4,90	15,26	7,54	16,02	1,13
	IN	0,675		0,056	0,612	0,240	0,627	0,408	0,638	0,167	0,602	0,193	0,601	0,297	0,631	0,044
1/2"	MM,	21,34	14	1,81	19,26	8,13	19,77	13,56	20,11	5,44	18,92	6,29	19,85	9,93	19,88	1,45
	IN	0,840		0,071	0,758	0,320	0,778	0,534	0,792	0,214	0,745	0,248	0,782	0,391	0,783	0,057
3/4"	MM,	26,67	14	1,81	24,58	8,61	25,12	13,86	25,45	5,44	24,24	6,29	20,15	10,23	25,22	1,45
	IN	1,050		0,071	0,968	0,339	0,989	0,546	1,002	0,214	0,954	0,248	0,794	0,403	0,993	0,057
1"	MM,	33,40	11,5	2,21	30,83	10,16	31,46	17,34	31,91	6,63	30,41	7,66	25,01	12,93	31,63	1,77
	IN	1,315		0,087	1,214	0,400	1,239	0,683	1,256	0,261	1,197	0,302	0,985	0,509	1,245	0,070
1 1/4"	MM,	42,16	11,5	2,21	39,55	10,67	40,22	17,95	40,67	6,63	39,14	7,66	25,63	13,54	40,40	1,77
	IN	1,660		0,087	1,557	0,420	1,583	0,707	1,601	0,261	1,541	0,302	1,009	0,533	1,590	0,070
1 1/2"	MM,	48,26	11,5	2,21	45,62	10,67	46,29	18,38	46,77	6,63	45,21	7,66	26,04	13,96	46,49	1,77
	IN	1,900		0,087	1,796	0,420	1,822	0,724	1,841	0,261	1,780	0,302	1,025	0,550	1,830	0,070
2"	MM,	63,3	11,5	2,21	57,63	11,07	58,33	19,22	58,83	6,63	57,22	7,66	26,88	14,80	58,56	1,77
	IN	2,375		0,087	2,269	0,436	2,269	0,757	2,316	0,261	2,253	0,302	1,058	0,583	2,305	0,070
2 1/2"	MM,	73,02	8	3,17	69,07	17,32	70,16	28,89	71,02	6,35	68,69	11,02	39,91	22,54	70,48	2,54
	IN	2,875		0,125	2,719	0,682	2,762	1,137	2,791	0,250	2,703	0,433	1,571	0,887	2,775	0,100
3"	MM,	88,90	8	3,17	84,85	19,46	86,07	30,48	86,76	6,35	84,45	11,02	41,50	24,13	86,36	2,54
	IN	3,500		0,125	3,341	0,766	3,388	1,200	3,416	0,250	3,325	0,433	1,634	0,950	3,400	0,100

- D O.D OF PIPE
- N THREADS/IN
- P PITCH OF THREAD
- E0 PITCH DIAM AT BEGINNING OF EXTERNAL THREAD
- L1 LENGTH OF HANDTIGHT ENGAGEMENT
- E1 DIAMETER OF HANDTIGHT ENGAGEMENT
- L2 LENGTH OF EFFECTIVE THREAD, EXTERNAL
- E2 DIAMETER OF EFFECTIVE THREAD EXTERNAL
- L3 LENGTH OF WRENCH MAKEUP, INTERNAL
- E3 DIAMETER OF WRENCH MAKEUP, INTERNAL
- V VANISH THREAD
- L4 OVER ALL LENGTH EXTERNAL THREAD
- L5 LENGTH OF NOMINAL COMPLETE EXTERNAL THREADS
- E5 DIAMETER OF NOMINAL COMPLETE EXTERNAL THREADS
- H HEIGHT OF THREAD

Materials

The most of the above material grades may be provided fully suitable for sour service as defined by NACE MR 0175 and MR 0103 standard

Body & Bonnet Materials

Material	Description	Service Recommendations	Temperature
A105	Carbon steel	General service: oil, oil vapor, gas, steam, water	-10 * 540 °C
LF2	Low temp Carbon steel	Low temperature application	-46 * 425 °C
LF3	Low temp Carbon steel	Low temperature application	-101 * 345°C
F11	125 Cr, 0 5 Mo alloy steel	To minimize graphitization	-29 * 600 °C
F22	2 25 Cr, 1 Mo alloy steel	For service requiring greater strength than 11	-29 * 600 °C
F5	5 Cr, 0 5 Mo alloy steel	Corrosive/erosive refinery use	-29 * 600 °C
F9	9 Cr, 1 Mo alloy steel	For media with higher sulphur content	-29 * 600 °C
F44	Austenitic stainless steel	Very high strength, high resistance to corrosion	-29 * 400 °C
F304DG	18 Cr, 8 Ni stainless steel	Corrosive and cryogenic service	-29 * 540 °C
F316DG	18 Cr, 8 Ni, 2 Mo stainless steel	As F304 with superior resistance to corrosion	-29 * 540 °C
F51,F53,F55	Ferritic-austenitic stainless stell	High strength, resistance to coroosion, pitting amd stress corrosion in chloride media	-29 * 540 °C
Titanium	Metal	Good resistance to corossion with low weight	-29 * 540 °C
Monel	Nickel-copper alloy	Resistance to corrosion, sea water, acids and alkalies	-29 * 540 °C
Incoloy	Nickel alloy	Resistance to corrosion, nuclear application	High temperature
Hastelloy	Nickel alloy	Excellent corrosion resistance in hydrochloric acid	High temperature

Main Trim Materials

Material	Description	Service Recommendations	Temperature
13Cr, F6	Stainless steel	General service: oil, oil vapor, gas, steam, water	High temperature
F304 F316	Austenitic stainless steel	Corrosive service	-29 - 540 °C
Monel	Nickel-copper alloy	Corrosive sercice such as acids, alkalies salt solution	-196 - 482 °C
Stellite	Hard facing overlay	Premium trim, suitable for server service	≤ 649 °C

Trim

Api 600 Ri	1	2	3	4	5	6	7	8	9
Wedge, Check disk Seat ring	F6	F304	F310	F4 Hard	Stellite	F6	F6	F6	Monel
Monel						Hard F5	Hard F5		
Globe disk Seat ring				Hard F6	Hard F6				
Black seat Stem - Hinge PIN				F6 Hard	F4	F6			

Api 600 Ri	10	11	12	13	14	15	16	17	18
Wedge, Check disk Seat ring	316	Monel	316	Alloy 20	Alloy 20	Stellite	Stellite	147	Stellite
Stellite		Stellite	Stellite						
Globe disk Seat ring		Monel	316		Alloy 20				
Stellite		Stellite	Stellite						
Black seat Stem - Hinge PIN		Monel	316		Alloy 20	304	316		B473

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