



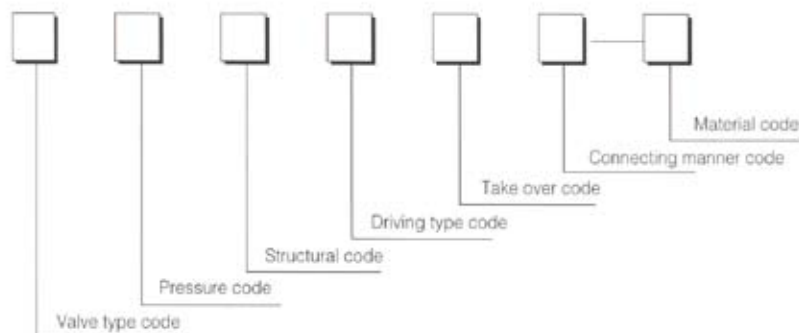
GATE VALVE SERIES



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CAST STEEL GATE VALVE MODEL SCHEDULE ILLUSTRATION



★ Valve type code Z – Gate valve

★ Pressure code
 2 – Class150 3 – Class300 5 – Class600 7 – Class900 8 – Class1500 9 – Class2500
 2a – 1.6MPa 3a – 2.5MPa 4a – 4.0MPa 5a – 6.4MPa 6a – 10.0MPa 7a – 16.0MPa
 8a – 25.0MPa

★ Structural code
 6 – BB–BG–QS&Y (Bolted bonnet, Bolted gland, OS&Y)
 6R – BBR–BG–QS&Y (Bolted bonnet (Ring joint), Bolted gland, OS&Y)
 8 – PS–BG–QS&Y (Pressure bonnet, Bolted gland, OS&Y)

★ Driving type code A – Electric driving B – Air motor driving C – Gear driving

★ Take over code

Code	Thickness	Code	Thickness	Code	Thickness
S1	SCH10	S4	SCH40	S7	SCH120
S2	SCH20	S5	SCH60	S8	SCH140
S3	SCH30	S6	SCH80	S9	SCH160

★ Connecting manner code R – RF (Raised face) J – RJ (Ring joint) F – MF (Male–female face) W – BW (Butt welded)

★ Body material code

1) Cast carbon steel CC10 – ASTM A216–WCB

2) Cast alloy steel CA20 – ASTM A217–WC1
 CA23 – ASTM A217–C5

CA21 – ASTM A351–CF8M
 CA24 – ASTM A217–C12

CA22 – ASTM A217–WC9

3) Cast stainless steel CS30 – ASTM A351–CF8
 CS33 – ASTM A351–CF3

CS31 – ASTM A351–CF8M
 CS34 – ASTM A351–CF3M

CS32 – ASTM A351–CF8C

FLANGED ENDS GB CAST STEEL GATE VALVE

PRODUCTS DESIGN FEATURES

Flanged ends cast steel gate valve are used to cut or connect the pipe media under nominal pressure between PN 1.6–16.0MPa, working temperatures between–46–600°C, in oil industry, chemical industry, fossil-fired power plants.

The main structure features include:

1. sensible products structure, reliable sealing. Excellent performance and good looking.
2. Co hard alloy welded sealing surface, which is wearing resistant, erosion proof, abrasion proof and long-lived.
3. The surface and the adjusting media of the valve shaft are nitrogenized so that it is erosion and abrasion resistant.
4. There is no backward sealing structure in the valve, so the sealing id reliable.
5. The material of the filling and the flange size can be chosen and matched according to the applications and the requirements of the use's.

That can satisfies all kinds of working requirements.

Products specification

Model	Pressure(MPa)	Driving manner	The nominal size range(mm)
Z2a6R	1.6	(Hand operated)	DN15–1500
Z3a6R	2.5	(Hand operated)	DN15–1500
Z4a6F	4.0	(Hand operated)	DN15–800
Z5a6F	6.4	(Hand operated)	DN15–600
Z6a6F	10.0	(Hand operated)	DN40–500
Z7a6(8)J	16.0	(Hand operated)	DN40–300
Z8a6(8)J	25.0	(Hand operated)	DN50–250
Z2a6AR	1.6	(Electric Driving)	DN40–1500
Z3a6AR	2.5	(Electric Driving)	DN40–1500
Z4a6AF	4.0	(Electric Driving)	DN40–800
Z5a6AF	6.0	(Electric Driving)	DN40–600
Z6a6AF	10.0	(Electric Driving)	DN40–500
Z7a6(8)AJ	16.0	(Electric Driving)	DN40–300
Z8a6(8)AJ	25.0	(Electric Driving)	DN50–250

Products performance specification

Nominal pressure	Intensity test pressure	Sealing test	Back seal test	Air test pressure	Temperature	Medium
1.6	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
2.5	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
4.0	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
6.4	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
10.0	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
16.0	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas
25.0	1.5 × PN	1.1 × PN	1.1 × PN	0.4–0.7MPa	≤ 600°C	Water, oil & gas

Note: PN is requested pressure for the body material under the 38°C.



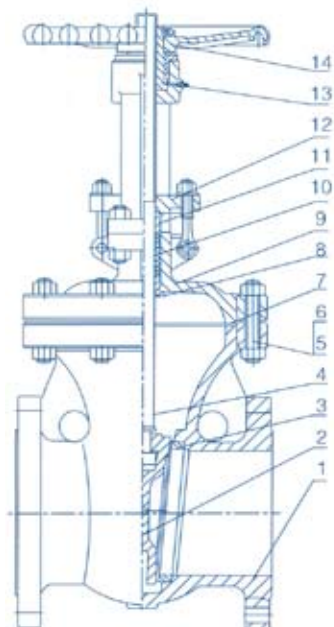
FLANGED ENDS GB CAST STEEL GATE VALVE

Technical specification

Structural formation	BB-BG-OS&Y
Driving	Hand-operated, Gear driving, Electric driving
Design standard	GB/T 12234
Face to face	GB/T 12221
Flanged ends	GB/T 9113, JB/T 79, HG 20592
Test & inspection	JB/T 9092, GB/T 13927

Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.

Form of major parts materials



No.	Part name	Material
1	Body	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
2	Wedge	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
3	Seat	25 304, 1Cr5Mo, 12Cr1Mo1V, 304
4	Stem	1Cr13, 2Cr13 1Cr18Ni9Ti, 0Cr18Ni12Mo2Ti 20Cr1Mo1V, 25Cr2MoV
5	Bolt	35CrMoA 0Cr18Ni9, 0Cr17Ni12Mo2, 25Cr2MoV
6	Nut	45, 35CrMoA, 25Cr2MoV 0Cr18Ni9, 0Cr17Ni12Mo2
7	Gasket	Graphite & stainless steel
8	Back seat	1Cr13, 2Cr13 1Cr18Ni9Ti, 0Cr18Ni12Mo2Ti 20Cr1Mo1V, 25Cr2MoV
9	Bonnet	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
10	Packing	Flexible Graphite
11	Gland	1Cr13, 2Cr13 1Cr18Ni9Ti, 0Cr18Ni12Mo2Ti
12	Gland flange	WCB CF8, CF8M, CF8C, CF3, CF3M
13	Stem nut	Copper alloy
14	Hand wheel	KTH330, QT400-17



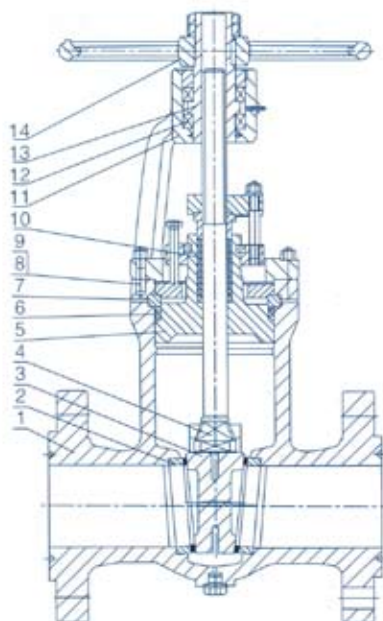
FLANGED ENDS GB CAST STEEL GATE VALVE

Technical specification

Structural formation	PS-BG-OS&Y
Driving	Hand-operated, Gear driving, Electric driving
Design standard	GB/T 12234
Face to face	GB/T 12221
Flanged ends	GB/T 9113, JB/T 79, HG 20596
Test & inspection	JB/T 9092, GT/T13927

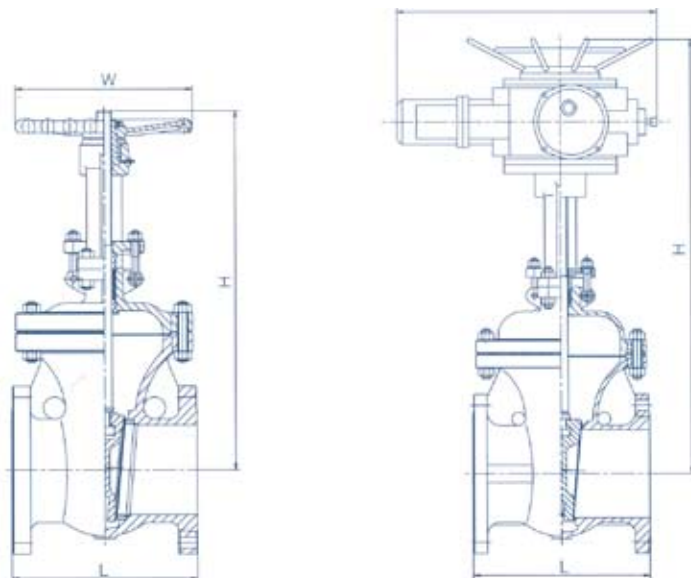
Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.

Form of major parts materials



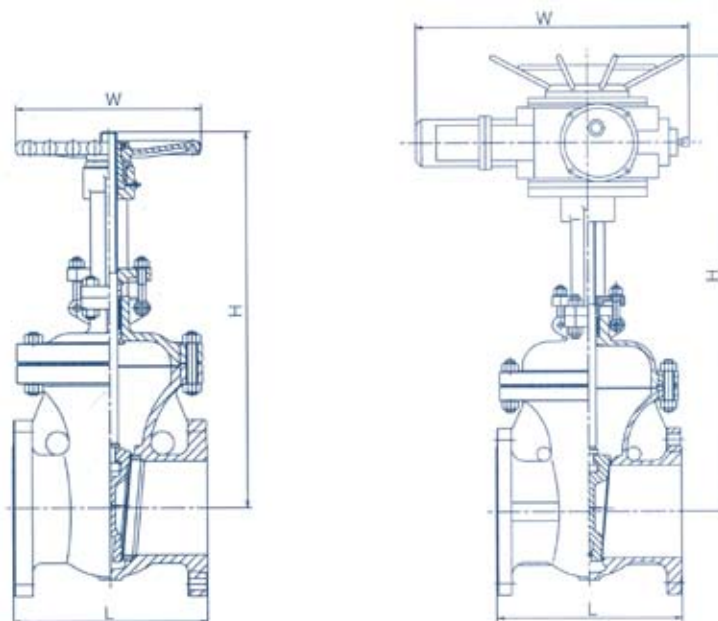
No .	Part name	Material
1	Body	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
2	Seat	25 304, 1Cr5Mo, 12Cr1MoV, 304
3	Wedge	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
4	Stem	1Cr13, 2Cr13 1Cr18Ni9Ti, 0Cr18Ni12Mo2Ti 20Cr1Mo1V, 25Cr2MoV
5	Bonnet	WCB WC1, WC6, WC9, C5 CF8, CF8M, CF8C, CF3, CF3M
6	Seal ring	Flexible Graphite
7	Tetracyclic ring	1Cr13, 2Cr13 38CrMoA1
8	Bolt	35CrMoA 0Cr18Ni9, 0Cr17Ni12Mo2, 25Cr2MoV
9	Nut	45, 35CrMoA, 25Cr2MoV 0Cr18Ni9, 0Cr17Ni12Mo2
10	Packing	Flexible Graphite
11	Yoke	WCB CF8, CF8M, CF8C, CF3, CF3M
12	Bearing	Assembled
13	Stem nut	Copper alloy
14	Hand wheel	KTH330, QT400-17

FLANGED ENDS GB CAST STEEL GATE VALVE



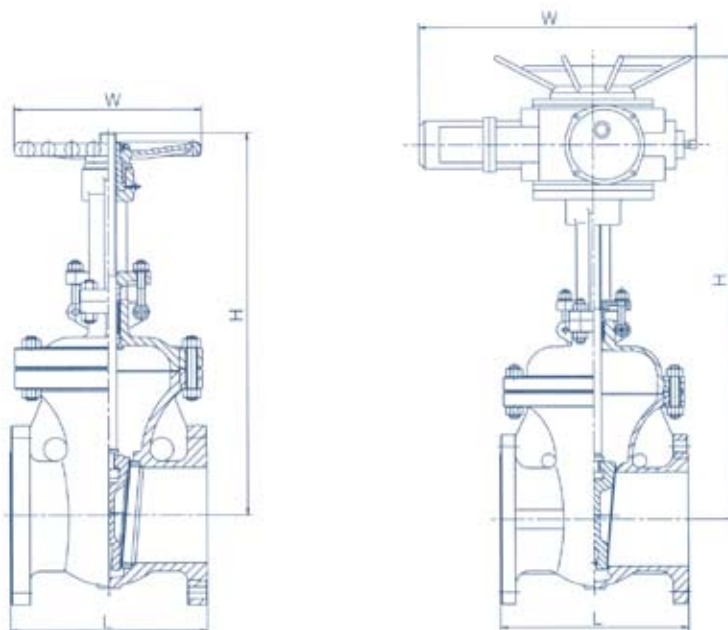
Size & weight									PN1.6MPa	
Model		Z2a6(A)R-CC10、Z2a6(A)R-CA20、Z2a6(A)R-CS30								
Hand Operated					Electric Driving					
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight	
15	108	170	120	5	—	—	—	—	—	
20	117	190	140	6.5	—	—	—	—	—	
25	127	205	160	9	—	—	—	—	—	
32	140	270	180	12	—	—	—	—	—	
40	240	310	200	26.5	240	630	590	DZW10A	87.5	
50	250	358	240	29	250	678	590	DZW10A	90	
65	270	373	240	33	270	693	590	DZW15A	96	
80	280	435	280	45	280	755	590	DZW20A	108	
100	300	500	300	62	300	820	590	DZW20A	126	
125	325	614	320	106	325	934	590	DZW30A	173	
150	350	674	360	135	350	994	590	DZW30A	199	
200	400	818	400	193	400	1138	590	DZW30A	254	
250	450	969	450	273	450	1409	810	DZW45A	310	
300	500	1145	500	380	500	1588	810	DZW60A	391	
350	550	1280	550	590	550	1755	830	DZW90	729	
400	600	1452	600	850	600	1902	830	DZW120	992	
450	650	1541	650	910	650	2141	870	DZW180	1168	
500	700	1676	700	960	700	2276	870	DZW250	1222	
600	800	1874	800	1115	800	2474	870	DZW250	1376	
700	—	—	—	—	900	3046	1170	DZW350	—	
800	—	—	—	—	1000	3250	1170	DZW500	—	
900	—	—	—	—	1100	3509	1060	DZW800	—	
1000	—	—	—	—	1200	3873	1060	DZW1000	—	
1200	—	—	—	—	1500	4229	1060	DZW1000	—	
1500	—	—	—	—	1900	5501	1060	DZW1000	—	

FLANGED ENDS GB CAST STEEL GATE VALVE



Size & weight									PN2.5MPa	
Model		Z3a6(A)R-CC10、Z3a6(A)R-CA20、Z3a6(A)R-CS30								
Hand Operated					Electric Driving					
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight	
15	140	170	120	5.5	-	-	-	-	-	
20	152	190	140	7	-	-	-	-	-	
25	165	205	160	11	-	-	-	-	-	
32	178	270	180	14	-	-	-	-	-	
40	240	310	200	30	240	630	590	DZW10A	91	
50	250	358	240	34	250	678	590	DZW10A	95	
65	270	373	240	36	270	693	590	DZW15A	99	
80	280	435	280	50	280	755	590	DZW20A	113	
100	300	500	300	69	300	820	590	DZW20A	132	
125	325	614	320	116	325	934	590	DZW30A	181	
150	350	674	350	141	350	994	590	DZW30A	206	
200	400	818	400	192	400	1138	590	DZW30A	257	
250	450	969	450	207	450	1409	810	DZW45A	317	
300	500	1145	500	400	500	1588	810	DZW60A	412	
350	550	1280	550	631	550	1755	830	DZW90	750	
400	600	1452	600	900	600	1902	830	DZW120	1042	
450	650	1541	650	1013	650	2141	870	DZW180	1274	
500	700	1676	700	1166	700	2276	870	DZW250	1420	
600	800	1874	800	1258	800	2474	870	DZW250	1522	
700	-	-	-	-	900	3046	1170	DZW350	-	
800	-	-	-	-	1000	3250	1170	DZW500	-	
900	-	-	-	-	1100	3509	1060	DZW800	-	
1000	-	-	-	-	1200	3873	1060	DZW1000	-	
1200	-	-	-	-	1500	4229	1060	DZW1000	-	
1500	-	-	-	-	1900	5501	1060	DZW1000	-	

FLANGED ENDS GB CAST STEEL GATE VALVE

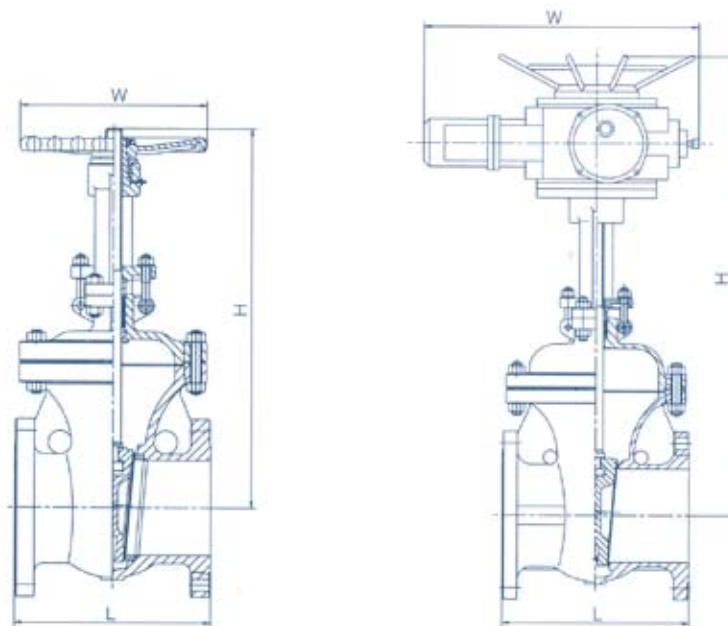


Size & weight

PN4.0MPa

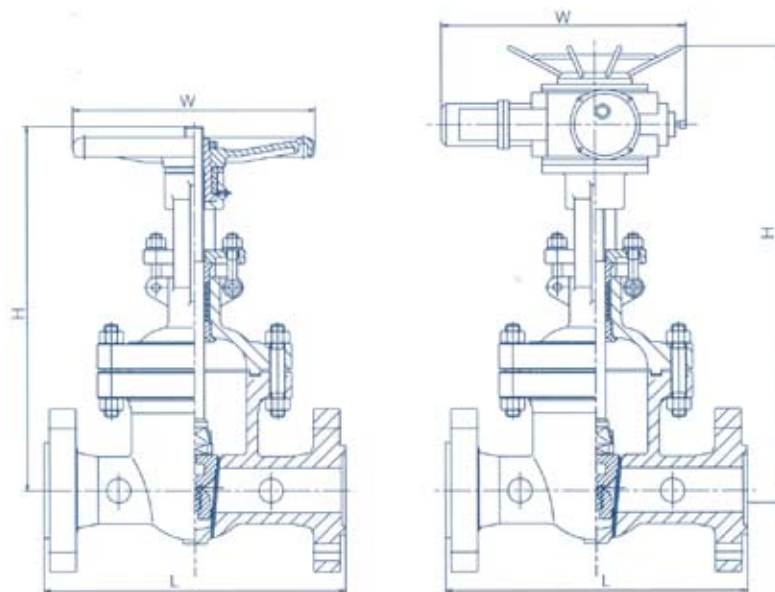
Model		Z4a6(A)F-CC10、Z4a6(A)F-CA20、Z4a6(A)F-CS30							
Hand Operated					Electric Driving				
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight
15	140	135	120	6	-	-	-	-	-
20	152	190	140	8	-	-	-	-	-
25	165	205	160	12	-	-	-	-	-
32	178	270	180	15	-	-	-	-	-
40	240	310	200	31	240	630	590	DZW10A	92
50	250	371	280	34	250	670	590	DZW10A	95
65	280	391	280	39	280	712	590	DZW15A	102
80	310	455	320	52	310	775	590	DZW20A	115
100	350	551	360	80	350	875	590	DZW20A	163
125	400	628	400	127	400	948	590	DZW20A	190
150	450	708	400	154	450	1030	590	DZW30A	219
200	550	885	460	263	550	1325	590	DZW45A	373
250	650	906	560	368	650	1400	810	DZW60A	480
300	750	1203	640	547	750	1655	830	DZW90	686
350	850	1341	640	679	850	1795	830	DZW120	821
400	950	1492	720	953	950	2093	870	DZW180	1214
500	-	-	-	-	1150	2645	870	DZW250	2150
600	-	-	-	-	1350	2865	1170	DZW350	-
700	-	-	-	-	1450	3450	1170	DZW500	-
800	-	-	-	-	1650	3920	1060	DZW800	-

FLANGED ENDS GB CAST STEEL GATE VALVE



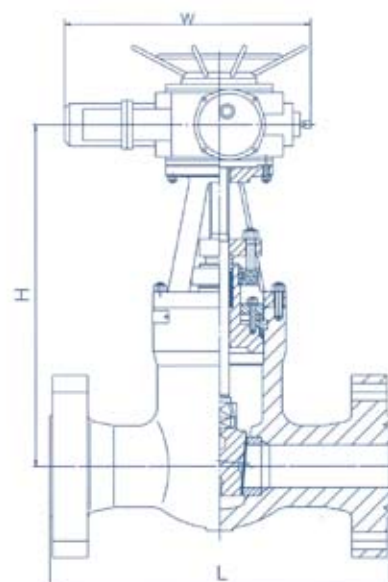
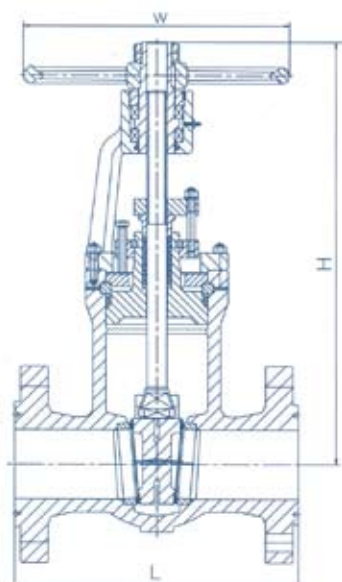
Size & weight								PN6.4MPa	
Model		Z5a6(A)F-CC10、Z5a6(A)F-CA20、Z5a6(A)F-CS30							
Hand Operated					Electric Driving				
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight
15	140	140	100	7	-	-	-	-	-
20	152	140	100	9	-	-	-	-	-
25	165	215	180	12	-	-	-	-	-
32	178	270	180	16	-	-	-	-	-
40	240	345	200	32	240	665	590	DZW10A	93
50	250	470	200	39	250	790	590	DZW15A	102
65	280	520	250	43	280	840	590	DZW20A	106
80	310	570	300	60	310	890	590	DZW20A	123
100	350	700	300	89	350	1020	590	DZW30A	154
125	400	780	350	140	400	1100	590	DZW30A	205
150	450	850	350	207	450	1290	590	DZW45A	317
200	550	1035	400	325	550	1475	810	DZW60A	437
250	650	1050	560	467	650	1500	830	DZW90	606
300	750	1470	640	590	750	1820	830	DZW120	732
350	-	-	-	-	850	2216	870	DZW180	1110
400	-	-	-	-	950	2838	870	DZW250	1540
500	-	-	-	-	1150	3320	1170	DZW350	-
600	-	-	-	-	1350	3684	1170	DZW500	-

FLANGED ENDS GB CAST STEEL GATE VALVE



Size & weight								PN10.0MPa	
Model		Z6a6(A)F-CC10、Z6a6(A)F-CA20、Z6a6(A)F-CS30							
Hand Operated					Electric Driving				
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight
40	240	360	320	50	240	680	590	DZW15A	113
50	250	490	360	60	250	810	590	DZW20A	123
65	280	540	400	70	280	860	590	DZWE20A	133
80	310	572	400	100	310	896	590	DZW30A	165
100	350	573	400	110	350	1013	590	DZW45A	220
125	400	744	560	180	400	1184	810	DZW60A	292
150	450	800	560	250	450	1250	830	DZW90	389
200	550	800	560	360	550	1250	830	DZW120	502
250	650	1050	600	420	650	1650	870	DZW180	790
300	750	1200	640	530	750	1800	870	DZW250	910
350	-	-	-	-	850	2030	1170	DZW350	1610
400	-	-	-	-	950	2250	1170	DZ500	2512
500	-	-	-	-	1150	2550	1060	DZ800	3200

FLANGED ENDS GB CAST STEEL GATE VALVE



Size & weight									PN16.0MPa	
Model	Z7a6J-CC10、CA20、CS30				Z7a8J-CC10、CA20、CS30		Z7a6AJ-CC10、CA20、CS30		Z7a8AJ-CC10、CA20、CS30	
Hand Operated					Electric Driving					
Size	L	H	W	Weight	L	H	W	Electric motor device	Weight	
40	260	395	320	26	260	670	590	DZW15A	118	
50	300	612	360	73	300	832	590	DZW20A	136	
65	340	677	360	110	340	880	590	DZW30A	175	
80	390	686	400	141	390	905	590	DZW30A	206	
100	450	751	450	185	450	1071	590	DZW45A	295	
125	525	868	560	320	525	1163	810	DZW60A	432	
150	600	997	640	462	600	1170	830	DZW90	601	
200	750	1224	720	711	750	1440	830	DZW120	853	
250	-	-	-	-	850	1760	870	DZW180	1300	
300	-	-	-	-	950	2230	870	DZW250	1750	

Size & weight									PN25.0MPa			
Model	Z8a6J-CC10、CA20、CS30				Z8a8J-CC10、CA20、CS30				Z8a6AJ-CC10、CA20、CS30		Z8a8AJ-CC10、CA20、CS30	
Hand Operated					Electric Driving							
Size	L	H	W	Weight	L	H	W	Electric motor device		Weight		
50	350	350	360	69	350	813	590	DZW30A		129		
65	410	410	400	90	410	855	590	DZW30A		154		
80	470	470	400	133	470	1016	590	DZW45A		233		
100	550	550	560	246	550	1099	810	DZW60A		348		
125	650	650	560	480	650	1160	830	DZW90		610		
150	750	750	640	700	750	1240	830	DZW120		840		
200	832	832	720	1075	832	1520	870	DZW180		1225		
250	991	991	800	1980	991	1680	870	DZW250		2130		

FLANGED & BUTT-WELDING ENDS API CAST STEEL GATE VALVE

PRODUCTS DESIGN FEATURES

API cast steel gate valves are used to cut or connect the pipe media in Class 150~2500 and working temperatures $\leq 600^{\circ}\text{C}$, in oil industry, chemical industry, fossil-fired power plants.

1. The products designs are in accordance with the API600 or API6D, with rational structure, reliable seal, excellent performance, and pretty appearance.
2. Co hard alloy welded sealing surface, with pressures \geq Class600 which is wearing resistant, erosion proof, abrasion proof and long-lived.
3. The surface and the adjusting media of the valve shaft are nitrogenized so that it is erosion and abrasion resistant.
4. The central cavity with pressures \geq Class900 adopts self-tightening sealing structure, which means that the sealing will rise with the intramural pressure, and the sealing is highly reliable.
5. There is backward sealing structure in the valve, so the sealing is reliable.
6. The material of the filling and the size of the flanged ends& butt-welding ends can be chosen and matched according to the applications and the applications and the requirements of the users. That can satisfies all kinds of working requirements.

Products specification

Model	Class	Driving manner & structural Type	Connecting Type	Nominal siz
Z26RFS	150	Hand-operated & Bolted bonnet	Flanged ends	2"-36"
Z36RFS	300			2"-24"
Z56RFS	600			2"-24"
Z76JFS	900			2"-12"
Z26CRFS	150			14"-48"
Z36CRFS	300	Electric or Gear driving & Bolted bonnet	Flanged ends	14"-48"
Z56A(C)RFS	600			6"-48"
Z76A(C)JFS	900			3"-16"
Z86A(C)JFS	1500			3"-16"
Z78JPS	900			2"-6"
Z88JPS	1500	Hand-operated & Pressure bonnet	Flanged ends	2"-4"
Z98JPS	2500			2"-4"
Z78S7(1)WPS	900			2"-6"
Z88S9(7)WPS	1500		But-welding ends	2"-4"
Z98S9WPS	2500	2"-4"		
Z78A(C)JPS	900	Electric or Gear driving& Pressure bonnet		3"-20"
Z88A(C)JPS	1500			3"-20"
Z98A(C)JPS	2500		6"-8"	
Z78A(C)S7(1)WPS	900	Electric or Gear driving& Pressure bonnet	But-welding ends	3"-20"
Z88A(C)S9(7)WPS	1500			3"-20"
Z98A(C)S9WPS	2500			6"-8"

Products performance specification

Class	(MPa) Intensity test pressure	(MPa) Sealing test pressure	(MPa) Back seal test	(MPa) Air test pressure	Temperature	Medium
150	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas
300	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas
600	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas
900	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas
1500	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas
2500	1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	$\leq 600^{\circ}\text{C}$	Water, oil & gas

Note: PN is requested pressure for the body material under the 38°C.



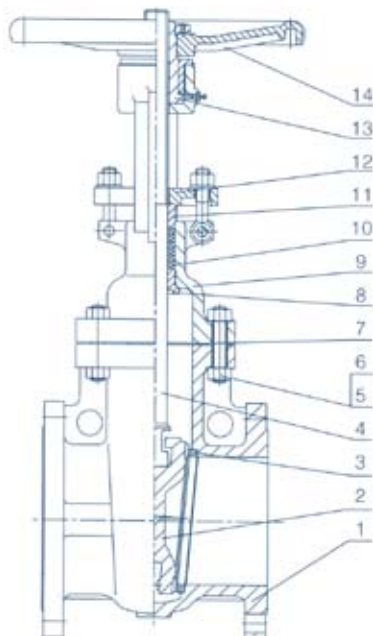
BOLTED BONNET API CAST STEEL GATE VALVE

Technical specification

Structural formation	BB-BG-OS&Y
Driving	Hand-operated, Gear driving, Electric driving
Design standard	API 600
Face to face	ASME B16.10, MSS-SP-44
Flanged ends	ASME B16.5, ASME B16.47
Test & inspection	API 600, API 598, ISO 5208

Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.

Form of major parts materials



No.	Part name	Material
1	Body	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
2	Wedge	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
3	Seat	ASTM A105, ASTM A350-LF2 ASTM A182-F11, F22, F5, F9
4	Stem	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
5	Bolt	ASTM A193-B7, A320-B8, A193-B8M, A193-L7
6	Nut	ASTM A194-2H, A194-8, A194-8M, A193-4
7	Gasket	Graphite & stainless steel
8	Back seat	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
9	Bonnet	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
10	Packing	Flexible Graphite
11	Gland	ASTM A276 410 ASTM A276-304, 316, 321, 304L, 316L
12	Gland flange	ASTM A216-WCB ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
13	Stem nut	ASTM A439-D2C
14	Hand wheel	ASTM A47-32510



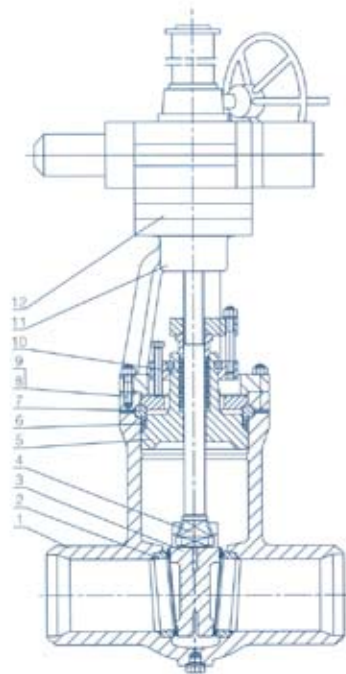
PRESSURE SEALED API CAST STEEL GATE VALVE

Technical specification

Structural formation	BB-BG-OS&Y
Driving	Hand-operated, Gear driving, Electric driving
Design standard	API 600
Face to face	ASME B16.10
Flanged ends	ASME B16.5, MSS –SP–44
Butt-welding ends	ASME B16.25
Test & inspection	API 600, API 598, ISO 5208

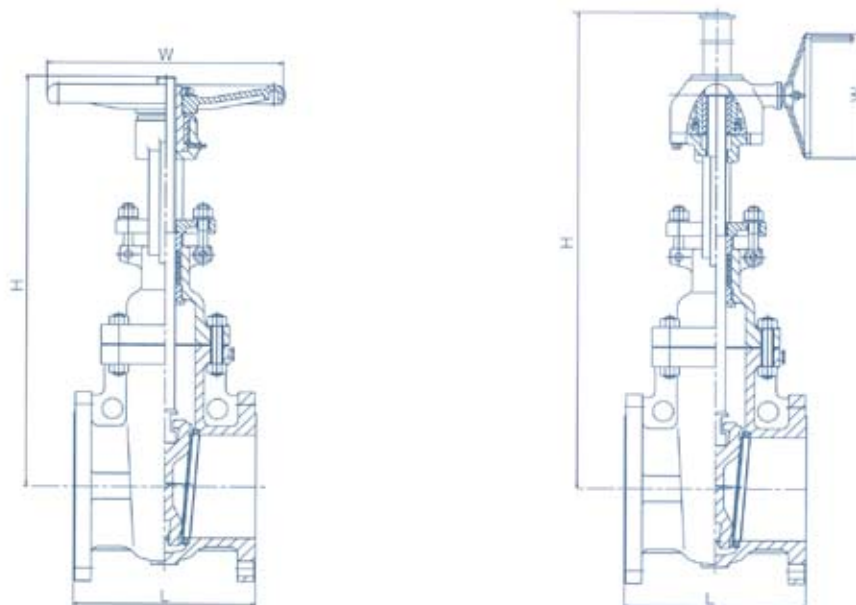
Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.

Form of major parts materials



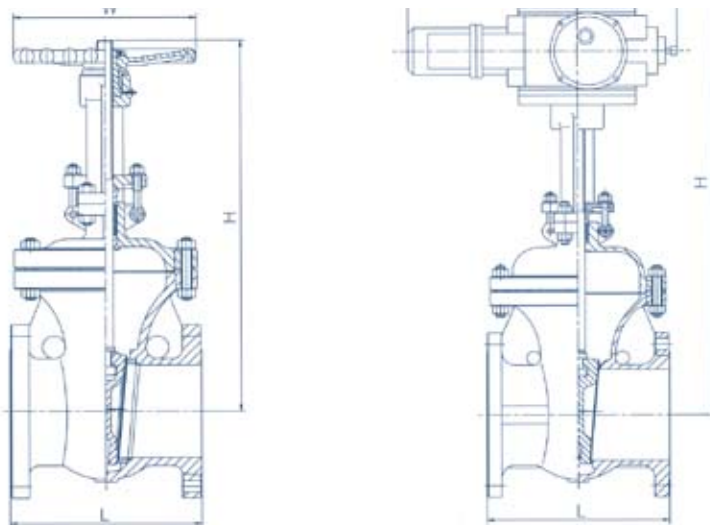
No.	Part name	Material
1	Body	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
2	Seat	ASTM A105, ASTM A350-LF2 ASTM A182-F11, F22, F5, F9
3	Wedge	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
4	Stem	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
5	Bonnet	ASTM A216-WCB, ASTM A352-LCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
6	Seal ring	Flexible Graphite
7	Tetracyclic ring	ASTM A182-F6a, ASTM A182-F22
8	Bolt	ASTM A193-B7, A320-B8, A193-B8M
9	Nut	ASTM A194-2H, A194-8, A194-8M
10	Packing	Flexible Graphite
11	Yoke	ASTM A216-WCB ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
12	Driving device	Electric driving

BOLTED BONNET API CAST STEEL GATE VALVE



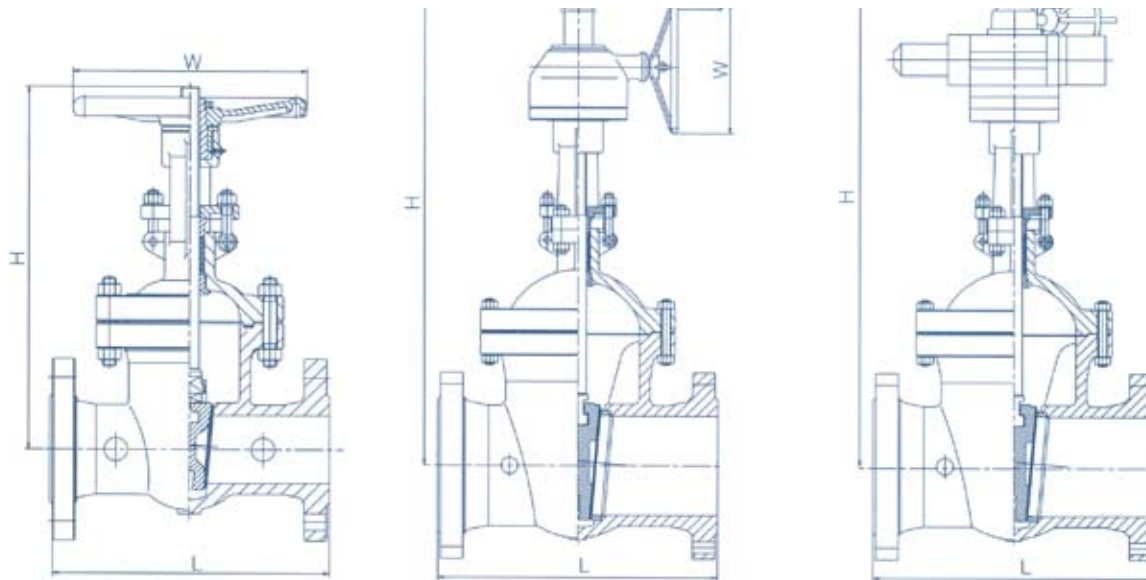
Size & weight								Class 150	
Model		Z26(C)R-CC10、CA20、CS30							
Hand Operated					Gear Driving				
Size	L	H	W	Weight	L	H	W	Gear device	Weight
2	178	360	200	22	-	-	-	-	-
2½	190	410	200	31	-	-	-	-	-
3	203	440	250	45	-	-	-	-	-
4	229	500	250	61	-	-	-	-	-
5	254	580	300	89	-	-	-	-	-
6	267	660	300	121	-	-	-	-	-
8	292	775	350	134	-	-	-	-	-
10	330	925	450	280	-	-	-	-	-
12	356	1100	500	321	-	-	-	-	-
14	381	1295	600	450	381	1651	310	BA-0	455
16	406	1435	600	605	406	1879	460	BA-1	645
18	432	1626	650	810	432	2184	460	BA-1	850
20	457	1829	650	880	457	2431	610	BA-2	950
24	508	2175	700	1490	508	2873	610	BA-2	1460
26	559	2235	750	1750	559	3086	610	BA-2	1830
28	610	2310	750	2010	610	3327	610	BA-2	2080
30	610	2695	800	2268	610	3606	610	BAA-3	2565
32	-	-	-	-	660	3708	610	BAA-3	3100
36	-	-	-	-	711	3924	610	BAA-3	3950
40	-	-	-	-	762	4318	610	BAA-3	4650
42	-	-	-	-	813	4546	610	BAA-3	5100
48	-	-	-	-	864	5181	610	BAA-3	6500
54	-	-	-	-	1016	5501	610	BAA-3	7900
60	-	-	-	-	1067	6066	610	BAA-3	9300

BOLTED BONNET API CAST STEEL GATE VALVE



Size & weight									Class 300	
Model		Z36(C)R-CC10、CA20、CS30								
Hand Operated					Gear Driving					
Size	L	H	W	Weight	L	H	W	Gear device	Weight	
2	216	380	200	24	-	-	-	-	-	
2½	241	410	250	34	-	-	-	-	-	
3	282	450	250	49	-	-	-	-	-	
4	305	530	300	70	-	-	-	-	-	
5	381	700	300	115	-	-	-	-	-	
6	403	730	350	133	-	-	-	-	-	
8	419	820	450	231	-	-	-	-	-	
10	457	1010	500	329	-	-	-	-	-	
12	502	1130	560	530	-	-	-	-	-	
14	762	1489	600	730	762	1790	460	BA-1	850	
16	838	1580	650	930	838	1968	460	BA-1	1105	
18	914	2017	700	1250	914	2273	610	BA-2	1300	
20	991	2228	700	1520	991	2482	610	BA-2	1625	
24	1143	2650	750	2340	1143	3054	610	BA-2	2800	
26	-	-	-	-	1245	3219	610	BA-2	3100	
28	-	-	-	-	1346	3378	610	BAA-3	3600	
30	-	-	-	-	1397	3530	610	BAA-3	4200	
32	-	-	-	-	1524	3695	610	BAA-3	4850	
36	-	-	-	-	1727	3987	610	BAA-3	5900	
40	-	-	-	-	1955	4445	610	BAA-3	8100	
42	-	-	-	-	2032	4699	610	BAA-3	9750	
48	-	-	-	-	2966	5435	610	BAA-3	13050	

BOLTED BONNET API CAST STEEL GATE VALVE

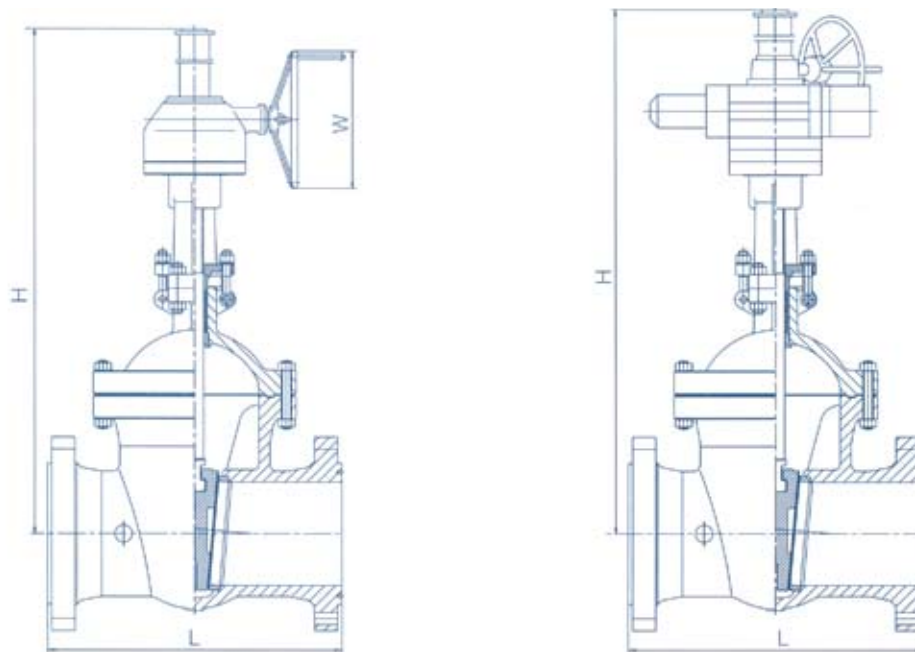


Size & weight

Class 600

Model Z56(A, C)R-CC10, CA20, CS30													
Hand Operated					Gear Driving					Electric Driving			
Size	L	H	W	Weight	L	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight
2	292	425	250	42	-	-	-	-	-	292	550	200	112
2½	330	485	300	62	-	-	-	-	-	330	600	200	135
3	356	510	300	85	-	-	-	-	-	356	660	300	194
4	432	610	400	120	-	-	-	-	-	432	780	300	223
5	508	700	450	176	-	-	-	-	-	508	850	400	296
6	559	820	500	230	559	840	310	BA-0	255	559	990	600	385
8	660	920	600	390	660	930	310	BA-0	418	660	1130	900	541
10	787	1080	600	620	787	1105	460	BA-1	674	787	1360	1200	816
12	838	1220	650	880	838	1220	460	BA-1	935	838	1520	1800	1090
14	889	1473	700	1350	889	1380	610	BA-2	1440	889	1730	2500	1560
16	991	1651	800	1700	991	1435	610	BA-2	1790	991	1840	3500	1950
18	1092	1727	800	2140	1092	1915	610	BA-2	2230	1092	2370	5000	2390
20	1194	2019	800	2450	1194	2095	610	BAA-3	2540	1194	2600	8000	2580
24	-	-	-	-	1397	2155	610	BAA-3	4550	1397	3160	12000	4580
26	-	-	-	-	1448	2271	610	BAA-3	5260	-	-	-	-
28	-	-	-	-	1549	2436	610	BAA-3	5960	-	-	-	-
30	-	-	-	-	1651	2577	610	BAA-3	6700	-	-	-	-
32	-	-	-	-	1778	2781	610	BAA-3	8312	-	-	-	-
36	-	-	-	-	2083	3113	610	BAA-3	10125	-	-	-	-
40	-	-	-	-	2149	3241	610	BAA-3	14300	-	-	-	-
42	-	-	-	-	2260	3572	610	BAA-3	16460	-	-	-	-
48	-	-	-	-	2667	4261	610	BAA-3	22900	-	-	-	-

BOLTED BONNET API CAST STEEL GATE VALVE



Size & weight

Class 900

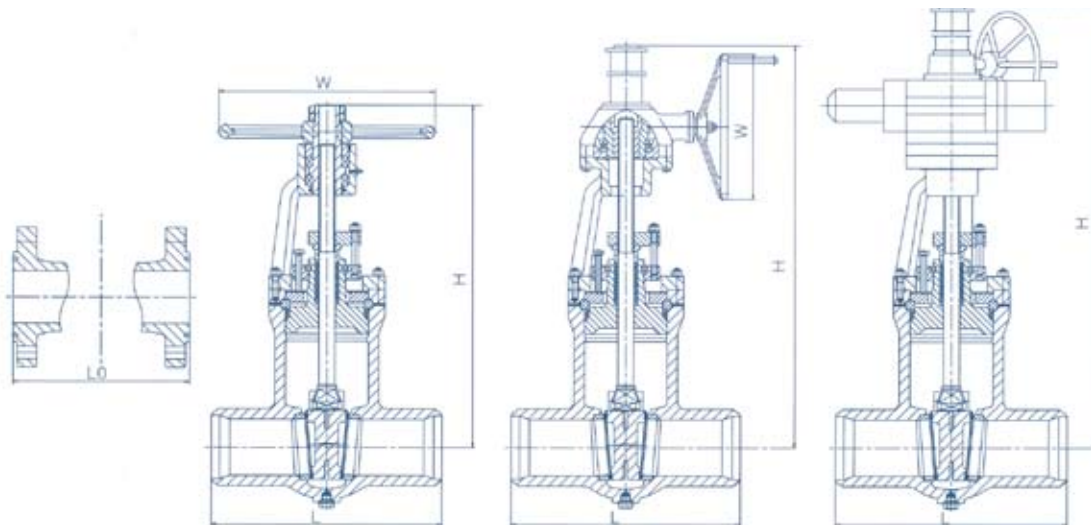
Z76(A, C)J-CC10, CA20, CS30													
Hand Operated					Gear Driving					Electric Driving			
Size	L	H	W		L	H	W	Gear device	Weight	L	H	Torque	Weight
2	368	540	300	65	-	-	-	-	-	-	-	-	-
2½	419	555	350	83	-	-	-	-	-	-	-	-	-
3	381	625	350	115	-	-	-	-	-	384	910	300	300
4	457	730	400	195	-	-	-	-	-	460	1020	450	325
6	610	860	600	410	610	895	460	BA-1	440	613	1060	900	570
8	737	930	600	720	737	1070	460	BA-1	720	740	1150	1200	885
10	838	1090	650	1090	838	1290	610	BA-2	1140	841	1320	1800	1300
12	965	1245	700	1625	965	1540	610	BA-2	1720	968	1580	2500	1870
14	-	-	-	-	1029	1620	610	BAA-3	2400	1038	1660	3500	2370
16	-	-	-	-	1130	1730	610	BAA-3	3040	1140	1780	5000	3010

Size & weight

Class 1500

Z86A(C)J-CC10, CA20, CS30										
Gear Driving						Electric Driving				
Size	L	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight	
3	-	-	-	-	-	473	960	450	335	
4	-	-	-	-	-	549	1040	450	445	
6	705	1250	460	BA-1	640	711	1250	1800	785	
8	832	1600	460	BA-1	990	841	1600	1800	1140	
10	-	-	-	-	-	1000	1860	1800	1790	
12	-	-	-	-	-	1146	2150	2500	2810	

PRESSURE SEALED API CAST STEEL GATE VALVE



Size & weight Class 900

Model		Z78(A, C)J-CC10, CA20, CS30											
Connecting manner		(Flanged ends) (RTJ)											
Driving		Hand Operated				Gear Driving					Electric Driving		
Size	L0	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight
2	371	550	250	88	-	-	-	-	-	-	-	-	-
3	384	605	350	105	-	-	-	-	-	384	975	300	142
4	460	750	400	140	-	-	-	-	-	460	1200	450	204
6	613	840	500	300	613	895	460	BA-1	350	613	1280	900	356
8	-	-	-	-	740	1370	460	BA-1	530	740	1372	1200	530
10	-	-	-	-	841	1495	610	BA-2	950	841	1495	1800	950
12	-	-	-	-	968	1830	610	BA-2	1400	968	1830	2500	1400
14	-	-	-	-	1038	2145	610	BA-2	2010	1038	2144	3500	1800
16	-	-	-	-	1140	2405	610	BAA-2	2700	1140	2406	5000	3000
20	-	-	-	-	1334	2750	610	BAA-2	4400	1334	2800	6500	3800

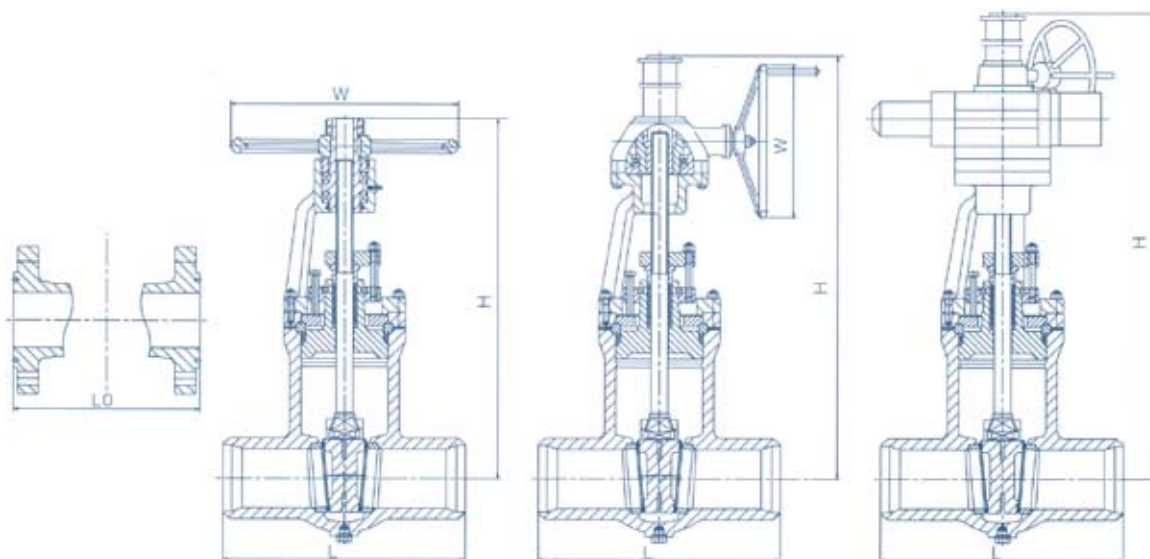
Size & weight Class 900

Model		Z78(A, C)S7(1)W-CC10, CA20, CS30											
Connecting manner		(Butt welding ends)											
Driving		Hand Operated				Gear Driving					Electric Driving		
Size	L	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight
2	216	550	250	68	-	-	-	-	-	-	-	-	-
3	305	605	350	85	-	-	-	-	-	305	975	300	135
4	356	750	400	102	-	-	-	-	-	356	1200	450	202
6	508	840	500	200	508	895	460	BA-1	280	508	1280	900	293
8	-	-	-	-	660	1370	460	BA-1	460	660	1372	1200	472
10	-	-	-	-	787	1495	610	BA-2	820	787	1495	1800	844
12	-	-	-	-	914	1830	610	BA-2	1150	914	1830	2500	1184
14	-	-	-	-	991	2145	610	BA-2	1500	991	2144	3500	1579
16	-	-	-	-	1092	2405	610	BAA-2	2100	1092	2406	5000	2136
20	-	-	-	-	1320	2750	610	BAA-2	3400	1320	2800	6500	3485

Pipe thickness 2"-6" SCH120, 8"-20" SCH100

Notes: The size of piping can be selected and allocated according to the requirement of users.

PRESSURE SEALED API CAST STEEL GATE VALVE



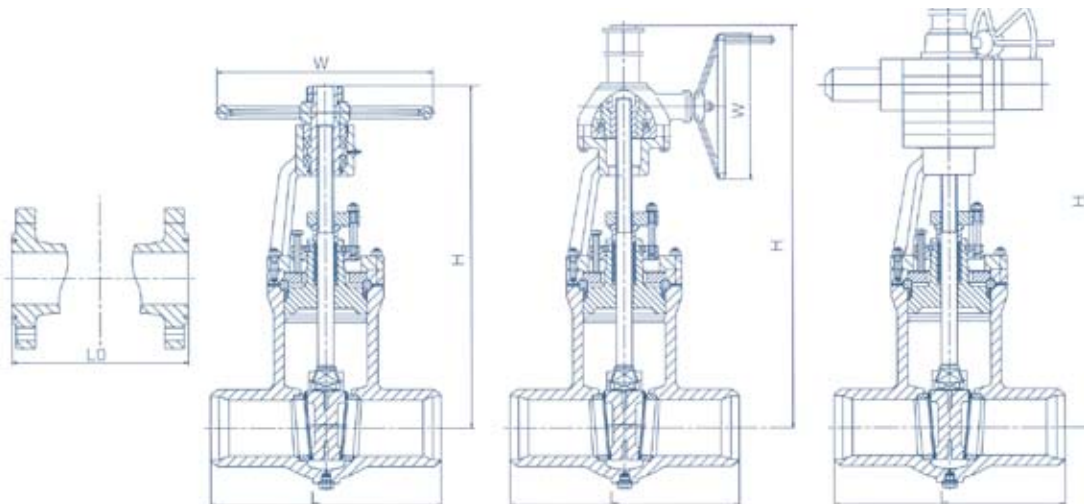
Size & weight												Class 1500		
Model		Z88(A, C)J-CC10, CA20, CS30												
Connecting manner		(Flanged ends) (RTJ)												
Driving	Hand Operated				Gear Driving						Electric Driving			
Size	L0	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight	
2	371	590	300	100	-	-	-	-	-	-	-	-	-	
3	473	711	350	130	-	-	-	-	-	473	736	450	210	
4	549	774	450	200	-	-	-	-	-	549	831	450	290	
6	-	-	-	-	711	1170	610	BA-2	544	711	1054	1800	560	
8	-	-	-	-	841	1370	610	BA-2	825	841	1422	1800	980	
10	-	-	-	-	1000	1655	610	BA-2	1375	1000	1714	1800	1470	
12	-	-	-	-	1146	1810	610	BA-2	2085	1146	1905	2500	2220	
14	-	-	-	-	1276	1981	610	BAA-2	2940	1276	1990	8000	2970	
16	-	-	-	-	1407	2108	610	BAA-2	3790	1407	2210	12000	3900	
20	-	-	-	-	1686	2387	610	BAA-2	5130	1686	2432	20000	5250	

Size & weight											Class 1500			
Model					Z88(A, C)S7(1)W-CC10, CA20, CS30									
Connecting manner					(Butt welding ends)									
Driving		Hand Operated			Gear Driving					Electric Driving				
Size	L	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight	
2	216	550	250	89	-	-	-	-	-	-	-	-	-	
3	305	620	350	110	-	-	-	-	-	305	736	450	185	
4	406	750	400	180	-	-	-	-	-	406	831	450	268	
6	-	-	-	-	559	1170	610	BA-2	370	559	1054	1800	472	
8	-	-	-	-	711	1370	610	BA-2	610	711	1422	1800	754	
10	-	-	-	-	864	1655	610	BA-2	1300	864	1714	1800	1411	
12	-	-	-	-	991	1810	610	BA-2	2000	991	1905	2500	2133	
14	-	-	-	-	1067	1981	610	BAA-2	2900	1067	1990	8000	2912	
16	-	-	-	-	1194	2108	610	BAA-2	3490	1194	2210	12000	3516	
20	-	-	-	-	1473	2387	610	BAA-2	4800	1473	2432	20000	4922	

Pipe thickness 2"-4" SCH160, 6"-20" SCH120

Notes: The size of piping can be selected and allocated according to the requirement of users.

PRESSURE SEALED API CAST STEEL GATE VALVE



Size & weight													Class 2500	
Model		Z98(A, C)J-CC10, CA20, CS30												
Connecting manner		(Flanged ends) (RTJ)												
Driving		Hand Operated				Gear Driving					Electric Driving			
Size	L0	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) Torque	Weight	
2	454	570	450	185	-	-	-	-	-	-	-	-	-	
3	584	596	500	215	-	-	-	-	-	584	654	500	315	
4	683	698	600	335	-	-	-	-	-	683	781	500	445	
6	-	-	-	-	927	876	610	BAA-2	890	927	977	1800	970	
8	-	-	-	-	1038	1493	610	BAA-2	1420	1038	1523	1800	1520	
10	-	-	-	-	1292	1600	610	BAA-2	2560	1292	1645	1800	2630	
12	-	-	-	-	1445	1752	610	BAA-2	3740	1445	1802	2700	3823	

Size & weight													Class 2500	
Model					Z98(A, C)J-CC10, CA20, CS30									
Connecting manner					(Flanged ends) (RTJ)									
Driving		Hand Operated			Gear Driving					Electric Driving				
Size	L0	H	W	Weight	L0	H	W	Gear device	Weight	L	H	(N.m) torque	Weight	
2	279	502	450	11	—	—	—	—	—	—	—	—	—	
3	368	596	500	135	368	654	610	BA-2	203	368	683	500	199	
4	457	698	600	215	457	781	610	BA-2	305	457	806	500	294	
6	—	—	—	—	610	977	610	BAA-2	650	610	1024	1800	664	
8	—	—	—	—	762	1493	610	BAA-2	900	762	1508	1800	924	
10	—	—	—	—	914	1600	610	BAA-2	1600	914	1620	1800	1674	
12	—	—	—	—	1041	1752	610	BAA-2	2300	1041	1790	2700	2312	
14	—	—	—	—	1118	1879	610	BAA-2	3200	1118	1893	8000	3245	
16	—	—	—	—	1245	1981	610	BAA-2	4100	1245	1997	10000	4112	
20	—	—	—	—	1397	2111	610	BAA-2	6800	1397	2355	20000	6867	

Pipe thickness SCH160

Notes: The size of piping can be selected and allocated according to the requirement of users. ing to the requirement of users.

CAST STEEL RING JOINT GATE VALVE

Products design features

Cast steel ring joint gate valve is a kind of non-standard gate valve which is developed by our company to solve the long-standing problem of valve leakage at connecting section of return oil, thick oil and raw material oil delivery and production pipes.

It's particularly fit for the stage with temperature change and violent vibration.

The main structure features include

1. Sensible products structure, reliable sealing, Excellent performance and good looking.
2. Co hard alloy welded sealing surface, which is wearing resistant erosion proof, abrasion proof and long-lived.
3. The surface and the adjusting media of the valve shaft are nitrogenized so that it is erosion and abrasion resistant.
4. The middle flange, left flange and right flange all adopt metal ring connection, which effectively ensures that valves will not leak at the high-temperature or high pressure work condition.
5. There is no backward sealing structure in the valve, so the sealing is reliable.
6. The material of the filling and the flange size can be chosen and matched according to the applications and the requirements of the users. That can satisfies all kinds of working requirements.

Products specification

Model	Pressure(MPa)	Driving manner	The nominal size range(mm)
Z3a6 _{ij} J	2.5	Hand operated	DN50~400
Z4a6 _{ij} J	4.0		DN50~400
Z5a6 _{ij} J	6.4		DN50~400
Z3a6 _{ij} A(C)J	2.5	Gear operated, Electric Driving	DN50~400
Z4a6 _{ij} A(C)J	4.0		DN50~400
Z5a6 _{ij} A(C)J	6.4		DN50~400

Products performance specification

Nominal	(MPa) Pressure	(MPa) Intensity test pressure	(MPa) Sealing test	(MPa) Back seal test	(MPa) Air test pressure	Temperature	Medium
2.5		1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	≤550°C	Water, oil & gas
4.0		1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	≤550°C	Water, oil & gas
6.4		1.5 × PN	1.1 × PN	1.1 × PN	0.4~0.7MPa	≤550°C	Water, oil & gas

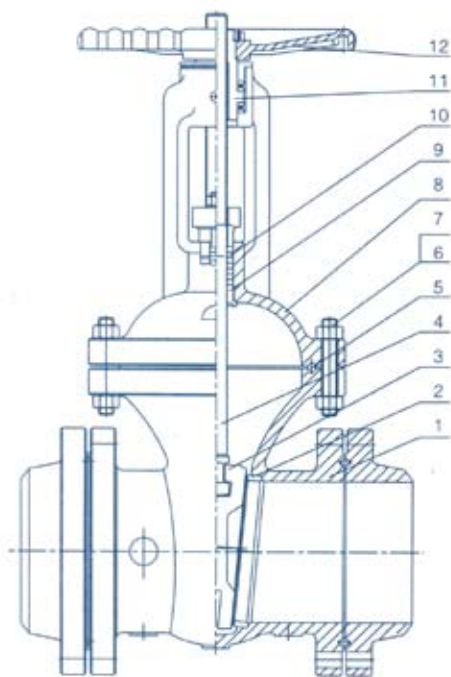
Note: PN is requested pressure for the body material under the 35°C.

CAST STEEL RING JOINT GATE VALVE

Technical specification

Structural formation	BB _{90°} -BG-OS&Y
Driving	Hand-operated, Gear-operated, Electric-driving
Design standard	GB/T 12234
Face to face	GB/T 12221
Flanged ends	GB/T 9113, JB/T 79, HG 20596
Test & inspection	JB/T 9092, GB/T 13927

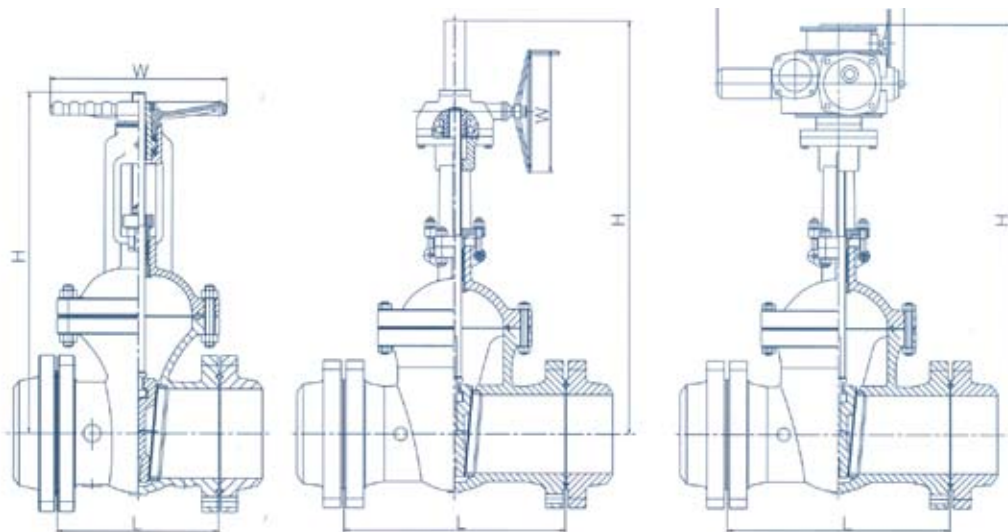
Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.



Form of major parts materials

No.	Part name	Material	
		GB	ASTM
1	Body	WCB, WC6, WC9, CF8, CF3	A216-WCB, A217-WC6, WC9, C5, A351-CF8, CF3, CF8M, CF3M, A352-LCB
2	Seat	25, 12Cr1MoV	A105, A182-F11, F22, F5, F9
3	Wedge	WCB, WC6, WC9, CF8, CF3	A216-WCB, A217-WC6, WC9, C5, A351-CF8, CF3, CF8M, CF3M, A352-LCB
4	Stem	1Cr13, 20Cr1Mo1V1A, 38CrMoA1A, 304, 316	A182-F6a, F22, F304, F316, F321, F304L, F316L
5	Seal ring	08, 0Cr13, 0Cr18Ni9, 0Cr17Ni12Mo2	Soft steel, A182-F6, A182-F304, F316L
6	Bolt	35CrMoA, 25Cr2Mo1V, F304, F316	A193-B7, A320-B8, A193-B8M, A193-L7
7	Nut	35, 25CrMo1V, F304, F316	A194-2H, A194-8, A194-8M, A194-4
8	Bonnet	WCB, WC6, WC9, CF8, CF3, LCB	A216-WCB, A217-WC6, WC9, C5, C12, A351-CF8, CF3, CF8M, CF3M, A352-LCB
9	Back seat	1Cr13, 0Cr18Ni9	A182-F6a, A182-F304
10	Packing	Flexible Graphite	Flexible Graphite
11	Stem nut	ZQA19-4	Copper alloy
12	Hand wheel	QT400-17	A47-32510

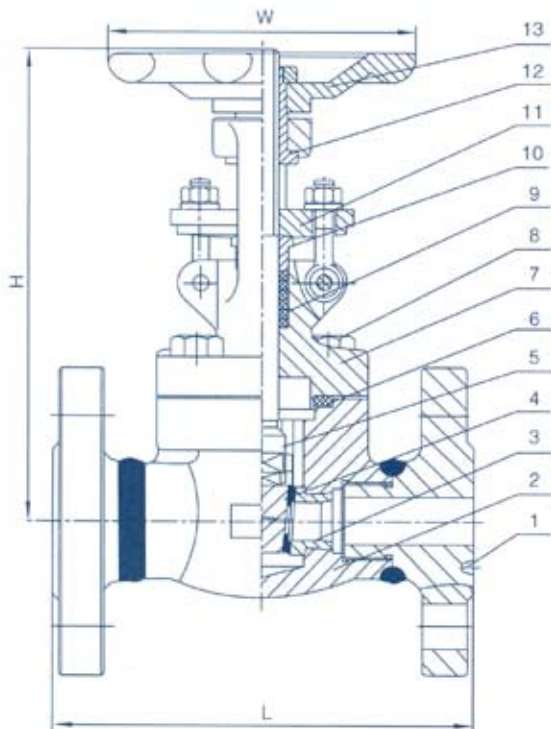
CAST STEEL RING JOINT GATE VALVE



Size & weight														2.5、4.0MPa	
Model					Z3(4)a6R(A、C)J-CC10、CA20、CS30										
Driving		Hand Operated			Gear Driving						Electric Driving				
Size	L	H	W	Weight	L	H	W	Gear device	Weight	L	H	W	(N.m) Torque	Weight	
50	232	371	280	28	-	-	-	-	-	232	670	590	DZW10A	85	
65	257	391	280	36	-	-	-	-	-	257	712	590	DZW15A	90	
80	298	455	320	46	-	-	-	-	-	298	775	590	DZW20A	102	
100	321	551	360	72	-	-	-	-	-	321	875	590	DZW20A	150	
125	397	628	400	117	-	-	-	-	-	397	948	590	DZW20A	182	
150	419	708	400	143	-	-	-	-	-	419	1030	590	DZW30A	198	
200	435	885	450	260	-	-	-	-	-	435	1325	590	DZW45A	360	
250	473	906	560	355	-	-	-	-	-	473	1400	810	DZW60A	468	
300	518	1203	640	530	-	-	-	-	-	518	1655	830	DZW90	668	
350	778	1341	640	660	778	1595	610	BA-1	710	778	1795	830	DZW120	802	
400	854	1492	720	630	854	1735	610	BA-1	980	854	2093	870	DZW180	1195	

尺寸及重量Size & weight														6.4 Mpa	
Model					Z5a6R(A, C)J-CC10, CA20, CS30										
Driving		Hand Operated			Gear Driving						Electric Driving				
Size	L	H	W	Weight	L	H	W	Gear device	Weight	L	H	W	(N.m) Torque	Weight	
50	295	470	200	41	-	-	-	-	-	295	665	590	DZW10A	110	
65	333	520	250	50	-	-	-	-	-	333	790	590	DZW15A	116	
80	359	570	300	66	-	-	-	-	-	359	840	590	DZW20A	135	
100	435	700	300	96	-	-	-	-	-	435	890	590	DZW20A	168	
125	511	780	350	146	-	-	-	-	-	511	1020	590	DZW30A	220	
150	562	850	350	217	-	-	-	-	-	562	1100	590	DZW30A	332	
200	664	1035	400	335	-	-	-	-	-	664	1290	810	DZW45A	450	
250	791	1050	560	485	-	-	-	-	-	791	1475	830	DZW60A	623	
300	841	1470	640	605	-	-	-	-	-	841	1500	830	DZW90	750	
350	-	-	-	-	892	1950	600	BA-1	1137	892	1820	870	DZW120	1128	
400	-	-	-	-	994	2230	600	BA-1	1715	994	2216	870	DZW180	1560	

FORGED STEEL GATE VALVE



Technical specification

Structural formation	BB-BG-OS&Y (WB-BG-OS&Y)
Driving manner	Hand-operated
Design standard	API 602, BS 5352
Structural length	ASME B16.10
Flanged ends	ASME B16.5
Test & inspection	API 598

Form of major parts materials

No.	Accessory name	Material
1	Flange	ASTM A105 A350-LF2 ASTMA182-F11, F22, F5, F9 ASTMA182-F304, F316, F321, F304L, F316L
2	Body	ASTM A105 A350-LF2 ASTMA182-F11, F22, F5, F9 ASTMA182-F304, F316, F321, F304L, F316L
3	Seat	ASTM A105 A350-LF2 ASTMA182-F11, F22, F5, F9 ASTMA182-F304, F316, F321, F304L, F316L
4	Wedge	ASTM A105 A350-LF2 ASTMA182-F11, F22, F5, F9 ASTMA182-F304, F316, F321, F304L, F316L
5	Stem	ASTMA182-F6a, ASTM A182-F22 ASTMA182-F304, F316, F321, F304L, F316L
6	Gasket	Graphite & stainless steel
7	Bonnet	ASTM A105 A350-LF2 ASTMA182-F11, F22, F5, F9 ASTMA182-F304, F316, F321, F304L, F316L
8	Bolt	ASTMA193-B7, A320-B8, F321, F304L, F316L
9	Packing	Flexible Graphite
10	Gland	ASTMA182-F6a, ASTM A182-F22 ASTMA182-F304, F316, F321, F304L, F316L
11	Gland flange	ASTMA216-WCB, ASTM A305-LF2 ASTMA351-CF8, CF8M, CF8C, CF3, CF3M
12	Stem nut	Copper alloy
13	Hand wheel	ASTM A47-32510

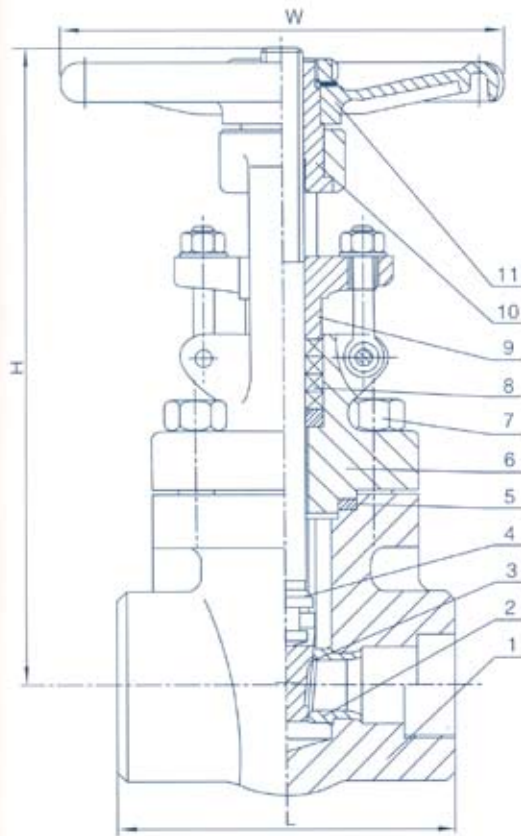
Size & weight

Class 150, 300, 600

Model	Z26(A)R(J)-C10, A20, S30							Z36(A)R(J)-C10, A20, S30							Z56(A)R(J)-C10, A20, S30						
Class	150							300							600						
Size	mm	15	20	25	32	40	50	15	20	25	32	40	50	15	20	25	32	40	50		
	in	1/2	3/4	1	1 1/4	1 1/2	2	1/2	3/4	1	1 1/4	1 1/2	2	1/2	3/4	1	1 1/4	1 1/2	2		
L (mm)	RF	108	117.5	127	140	165	178	140	152.5	165	178	190.5	216	165	190.5	216	229	241	292		
	RTJ	119	130	140	153	178	216	151	165	178	191	203	232	163.5	190.5	216	229	241	295		
H ⁽¹⁾ (mm)		160	165	192	220	245	285	160	165	192	220	245	285	160	165	192	220	245	285		
W (mm)		100	100	125	160	160	180	100	100	125	160	160	180	100	100	125	160	160	180		
Weight(Kg)		4.5	5.1	8.5	11.5	11.2	20	4.8	6.2	9.4	14.2	15.5	23.5	5.8	7.5	10.3	16.3	17.5	28.4		

Notes: H represents the height in full opening condition of valve.

FORGED STEEL GATE VALVE DRIVEN BUTTERFLY VALVE



Technical specification

Structural formation	BB-BG-OS&Y (WB-BG-OS&Y)
Driving manner	Hand-operated
Design standard	API 602, BS 5352
Thread ends	ASME B1.20.1
Socket welded ends	ASME B16.11
Test & inspection	API 598

Form of major parts materials

No.	Accessory name	Material
1	Body	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316
2	Seat	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316
3	Wedge	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
4	Stem	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
5	Gasket	Graphite & stainless steel
6	Bonnet	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316
7	Bolt	ASTM A193-B7, A320-B8, A193-B8M ASTM A193-L7
8	Packing	Flexible Graphite
9	Gland flange	ASTM A216-WCB ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
10	Stem nut	Copper alloy
11	Hand wheel	ASTM A47-32510

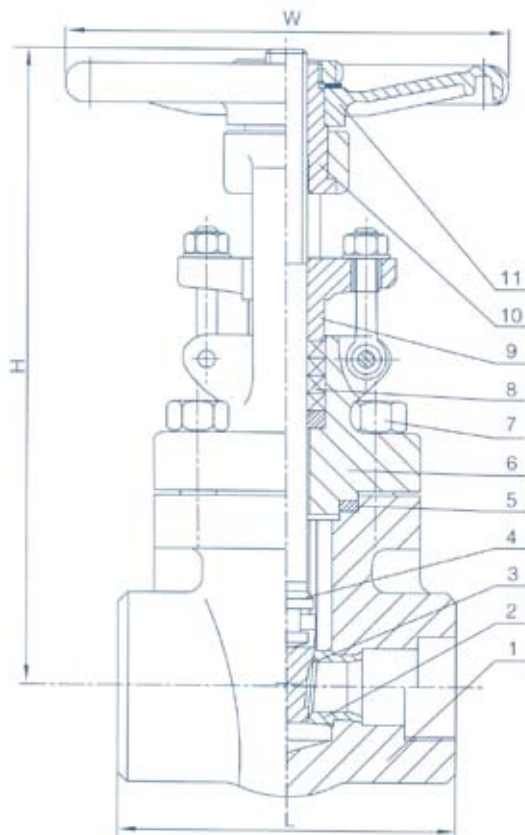
Size & weight

Class 800

Model		Z66(A)SF-C10、A20、S30			Z66(A)TF-C10、A20、S30			
Class		800						
Size	mm(in) Reduced bore	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)	
	mm(in) Full bore	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2) 50(2)	
L (mm)		80	92	111	120	120	140	172
H [†] (mm)		160	165	192	220	245	285	392
W (mm)		100	100	125	160	160	180	200
Weight(Kg)		1.9	2.1	3.2	6.9	6.9	10.4	15.8

Notes: H represents the height in full opening condition of valve.

FORGED STEEL GATE VALVE



Technical specification

Structural formation	BB-BG-OS&Y (WB-BG-OS&Y)
Driving manner	Hand-operated
Design standard	API 602, BS 5352
Thread ends	ASME B1.20.1
Socket welded ends	ASME B16.11
Test & inspection	API 598

No. Accessory name

Material

1	Body	ASTM A105 A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
2	Seat	ASTM A105 A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
3	Wedge	ASTM A105 A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
4	Stem	ASTM A182-F6a ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
5	Gasket	Graphite & stainless steel
6	Bonnet	ASTM A105 A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
7	Bolt	ASTM A193-B7, A320-B8, A193-B8M
8	Packing	Flexible Graphite
9	Gland flange	ASTM A216-WCB ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
10	Stem nut	Copper alloy
11	Hand wheel	ASTM A47-32510

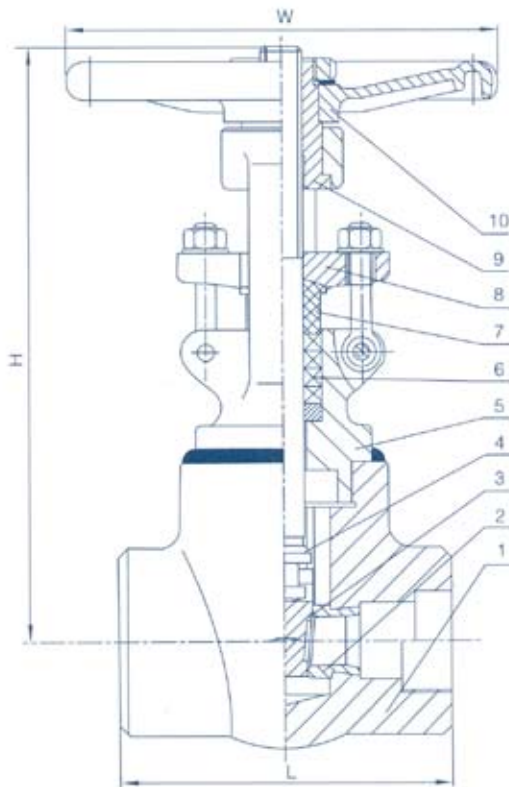
Size & weight

Class 1500

型号Model		Z86(A)S-C10、A20、S30			Z86(A)T-C10、A20、S30			
Class		1500						
Size	mm(in) Reduced bore	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)	
	mm(in) Full bore	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
L (mm)		111	111	115	120	140	162	180
H ⁽¹⁾ (mm)		203	203	216	235	275	320	368
W (mm)		125	125	160	160	180	200	250
Weight(Kg)		4.2	4.6	6.2	8.2	11.0	15.8	24.5

Notes: H represents the height in full opening condition of valve.

FORGED STEEL GATE VALVE



Technical specification

Structural formation	WB-BG-OS&Y
Driving manner	Hand-operated
Design standard	API 602, BS 5352
Thread ends	ASME B1.20.1
Socket welded ends	ASME B16.11
Test & inspection	API 598

Form of major parts materials

No.	Accessory name	Material
1	Body	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
2	Seat	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
3	Wedge	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
4	Stem	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
5	Bonnet	ASTM A105 ASTM A350-LF2 ASTM A182-F11, F22, F5, F9 ASTM A182-F304, F316, F321, F304L, F316L
6	Packing	Flexible Graphite
7	Gland	ASTM A182-F6a, ASTM A182-F22 ASTM A182-F304, F316, F321, F304L, F316L
8	Gland flange	ASTM A216-WCB ASTM A351-CF8, CF8M, CF8C, CF3, CF3M
9	Stem nut	Copper alloy
10	Hand wheel	ASTM A47-32510

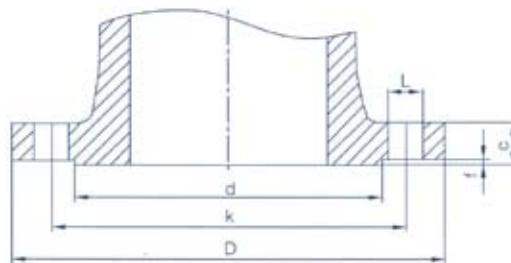
Size & weight

Class 2500

Model		Z96(A)S-C10、A20、S30			Z96(A)T-C10、A20、S30			
Class		2500						
Size	mm(in) Reduced bore	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)	
	mm(in) Full bore	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
L (mm)		111	127	127	127	140	210	230
H ¹ (mm)		185	215	245	276	276	340	405
W (mm)		125	140	160	160	180	200	240
Weight(Kg)		5.2	5.5	7.4	9.5	9.8	19.5	29

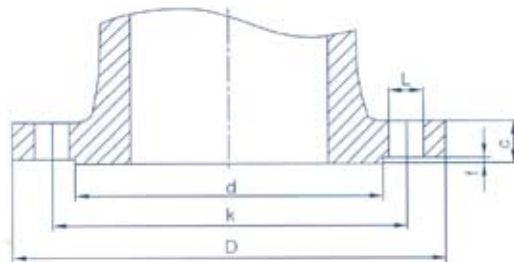
Notes: H represents the height in full opening condition of valve.

RAISED FACE INTEGRAL STEEL PIPE FLANGE



JB/T 79.1-94 PN1.6MPa											
DN	Size ends					Sealing size		C	Welding neck		
	Nominal size	Outside diameter of flange series1/series2	Diameter of bolt Circle	Diameter of bolt holes series1/series2	Bolt	d	f		Nmax	Smax	R
					Number of bolts			Thickness of flange			
					Thread series1/series2						
15	95	65	14	4	M12	45	2	14	39	12	4
20	105	75	14	4	M12	55	2	14	44	12	4
25	115	85	14	4	M12	65	2	14	49	12	4
32	140/135	100	18	4	M16	78	2	16	56	12	4
40	150/145	110	18	4	M16	85	3	16	64	12	4
50	165/160	125	18	4	M16	100	3	16	74	12	5
65	185/180	145	18	4	M16	120	3	18	95	15	5
80	200/195	160	18	8	M16	135	3	20	110	15	5
100	220/215	180	18	8	M16	155	3	20	130	15	5
125	250/245	210	18	8	M16	185	3	22	161	18	6
150	285/280	240	23	8	M20	210	3	24	186	18	6
(175)	310	270	23	8	M20	240	3	26	215	20	6
200	340/335	295	23	12	M20	265	3	26	240	20	6
(225)	365	325	23	12	M20	295	3	26	269	22	6
250	405	355	26/25	12	M24/M22	320	3	30	298	24	8
300	460	410	26/25	12	M24/M22	375	4	30	348	24	8
350	520	470	26/25	16	M24/M22	435	4	34	402	26	8
400	580	525	30	16	M27	485	4	36	456	28	10
450	640	585	30	20	M27	545	4	40	510	30	10
500	715/705	650	34	20	M30	608	4	44	564	32	10
600	840	770	36/41	20	M33/M36	718	5	48	672	36	10
700	910	840	36/41	24	M33/M36	788	5	50	776	38	12
800	1025/1020	950	41	24	M36	898	5	52	880	40	12
900	1125/1120	1050	41	28	M36	998	5	54	984	42	12
1000	1255	1170	42/48	28	M39/M42	1110	5	56	1084	42	12
1200	1485	1390	48/54	32	M45/M48	1325	5	58	1288	44	15
1400	1685	1590	48/54	36	M45/M48	1525	5	60	1492	46	15
1600	1930	1820	58	40	M52	1750	5	68	1704	52	15

RAISED FACE INTEGRAL STEEL PIPE FLANGE

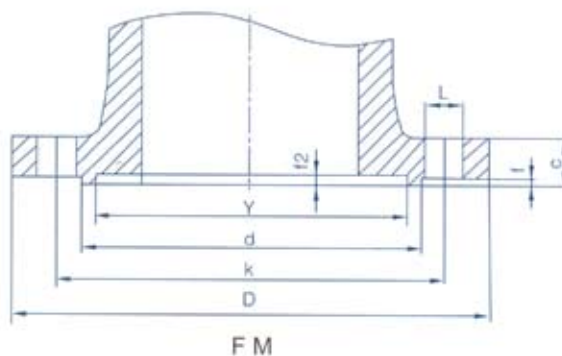


JB/T 79.1-94

PN2.5MPa

DN	Size ends					Sealing size		C	Welding neck		
	Nominal size	Outside diameter of flange series1/series2	Diameter of bolt Circle	Diameter of bolt holes series1/series2	Number of bolts	Thread series1/series2	d		f	Thickness of flange	N _{max}
15	95	65	14	4	M12	45	2	16	39	12	4
20	105	75	14	4	M12	55	2	16	44	12	5
25	115	85	14	4	M12	65	2	16	49	12	5
32	140/135	100	18	4	M16	78	2	18	62	15	5
40	150/145	110	18	4	M16	85	3	18	70	15	5
50	165/160	125	18	4	M16	100	3	20	80	15	5
65	185/180	145	18	8	M16	120	3	22	101	18	6
80	200/195	160	18	8	M16	135	3	22	116	18	6
100	230	190	23	8	M20	160	3	24	136	18	6
125	270	220	26/25	8	M24/M22	188	3	28	169	22	8
150	300	250	26/25	8	M24/M22	218	3	30	198	24	8
(175)	330	280	26/25	12	M24/M22	248	3	32	223	24	8
200	360	310	26/25	12	M24/M22	278	3	34	252	26	8
(225)	395	340	30	12	M27	302	3	36	281	28	8
250	425	370	30	12	M27	332	3	36	306	28	10
300	485	430	30	16	M27	390	4	40	360	30	10
350	555/550	490	34	16	M30	448	4	44	418	34	10
400	620/610	550	36/34	16	M33/M30	505	4	48	472	36	10
450	670/660	600	36/34	20	M33/M30	555	4	50	522	38	12
500	730	660	36/41	20	M33/M36	610	4	52	580	40	12
600	845/840	770	41	20	M36	718	5	56	684	42	12
700	960/955	875	42/48	24	M39/M42	815	5	60	792	46	12
800	1085/1070	990	48	24	M45/M42	930	5	64	896	48	15
900	1185/1180	1090	48/54	28	M45/M48	1025	5	66	1000	50	15
1000	1320/1305	1210	58	28	M52	1140	5	68	1104	52	18
1200	1520/1525	1420	58	32	M52	1350	5	72	1308	54	18
1400	1755/1750	1640	65	36	M56	1560	5	78	1516	58	18

MALE-FEMALE INTEGRAL STEEL PIPE FLANGE



JB/T 79.2-94

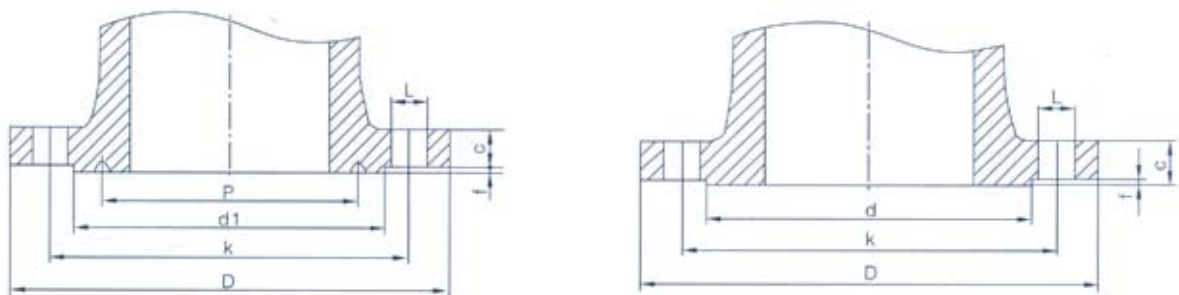
PN4.0MPa

DN	Size ends					Sealing size					C	Welding neck			
	Nominal size	Outside diameter of flange series1/ series2	Diameter of bolt Circle	Diameter of bolt holes series1/ series2	Number of bolts	Thread series1/ series2	X	Y	f	f1, f2		Thickness of flange	Nmax	Smax	F
15	95	65	14	4	M12	45	39	40	2	4	16	39	12	4	
20	105	75	14	4	M12	55	50	51	2	4	16	44	12	5	
25	115	85	14	4	M12	65	57	58	2	4	16	49	12	5	
32	140/135	100	18	4	M16	78	65	66	2	4	18	62	15	5	
40	150/145	110	18	4	M16	85	75	76	3	4	18	70	15	5	
50	165/160	125	18	4	M16	100	87	88	3	4	20	80	15	5	
65	185/180	145	18	8	M16	120	109	110	3	4	22	101	18	6	
80	200/195	160	18	8	M16	135	120	121	3	4	22	116	18	6	
100	235/230	190	23	8	M20	160	149	150	3	4.5	24	140	20	6	
125	270	220	26/25	8	M24	188	175	176	3	4.5	28	169	22	8	
150	300	250	26/25	8	M24/M22	218	203	204	3	4.5	30	198	24	8	
(175)	350	295	30	12	M27	258	233	234	3	4.5	34	231	28	10	
200	375	320	30	12	M27	282	259	260	3	4.5	38	256	28	10	
(225)	415	355	34	12	M30	315	286	287	3	4.5	40	285	30	10	
250	450/445	385	34	12	M30	345	312	313	3	4.5	42	314	32	10	
300	515/510	450	34	16	M30	408	363	364	4	4.5	46	368	34	12	
350	580/570	510	36/34	16	M33/M30	465	421	422	4	5	52	430	40	12	
400	660/655	585	41	16	M36	535	473	474	4	5	58	488	44	12	
450	685/680	610	41	20	M36	560	523	524	4	5	60	542	46	14	
500	755	670	42/48	20	M39/M42	612	575	576	4	5	62	592	46	15	
600	890	795	48/54	20	M45/M48	730	675/677	676/678	5	6	62	696	48	15	
700	995	900	48/54	24	M45/M48	835	777/767	778/768	5	6	68	804	52	18	
800	1140/1135	1030	58	24	M52	960	882/875	883/876	5	6	76	920	60	18	

MALE-FEMALE INTEGRAL STEEL PIPE FLAN-

JB/T 79.2-94														PN6.3MPa	
15	105	75	14	4	M12	55	39	40	2	4	18	45	15	4	
20	130/125	90	18	4	M16	68	50	51	2	4	20	52	16	5	
25	140/135	100	18	4	M16	78	57	58	2	4	22	61	18	5	
32	155/150	110	23	4	M20	82	65	66	2	4	24	68	18	5	
40	170/165	125	23	4	M20	95	75	76	3	4	24	80	20	5	
50	180/175	135	23	4	M20	105	87	88	3	4	26	90	20	5	
65	205/200	160	23	8	M20	130	109	110	3	4	28	111	23	6	
80	215/210	170	23	8	M20	140	120	121	3	4	30	128	24	6	
100	250	200	26/25	8	M24/M22	168	149	150	3	4.5	32	152	26	6	
125	295	240	30	8	M27	202	175	176	3	4.5	36	181	28	8	
150	345/340	280	34	8	M30	240	203	204	3	4.5	38	210	30	8	
(175)	370	310	34	12	M30	270	233	234	3	4.5	42	239	32	10	
200	405	345	36/34	12	M33/M30	300	259	260	3	4.5	44	268	34	10	
(225)	430	370	36/34	12	M33/M30	325	286	287	3	4.5	46	301	38	10	
250	470	400	36/41	12	M33/M36	352	312	313	3	4.5	48	326	38	10	
300	530	460	36/41	16	M33/M36	412	363	364	4	4.5	54	384	42	12	
350	600/595	525	41	16	M36	475	421	422	4	5	60	442	46	12	
400	670	585	42/48	16	M39/42	525	473	474	4	5	66	500	50	12	
500	800	705	48/54	20	M45/M48	640	575	576	4	5	70	610	55	18	
600	930	820	58	20	M52	750	675/677	676/678	5	6	76	720	60	18	
JB/T 79.2-94														PN10.0MPa	
15	105	75	14	4	M12	55	39	40	2	4	20	45	15	4	
20	130/125	90	18	4	M16	68	50	51	2	4	22	54	17	4	
25	140/135	100	18	4	M16	78	57	58	2	4	24	61	18	4	
32	155/150	110	23	4	M20	82	65	66	2	4	24	68	18	4	
40	170/165	125	23	4	M20	95	75	76	3	4	26	80	20	4	
50	195	145	26/25	4	M24/M22	112	87	88	3	4	28	94	22	4	
65	220	170	26/25	8	M24/M22	138	109	110	3	4	32	115	25	5	
80	230	180	26/25	8	M24/M22	148	120	121	3	4	34	132	26	5	
100	265	210	30	8	M27	172	149	150	3	4.5	38	160	30	5	
125	315/310	250	34	8/12	M30	210	175	176	3	4.5	42	189	32	6	
150	355/350	290	34	12	M30	250	203	204	3	4.5	46	222	36	6	
(175)	380	320	34	12	M30	280	233	234	3	4.5	48	251	38	8	
200	430	360	36/41	12	M33/M36	312	259	260	3	4.5	54	284	42	8	
(225)	470	400	41	12	M36	352	286	287	3	4.5	56	313	44	8	
250	505/500	430	41	12	M36	385	312	313	3	4.5	60	346	48	8	
300	585	500	42/48	16	M39/M42	442	363	364	4	4.5	70	408	54	10	
350	655	560	48/54	16	M45/M48	498	421	422	4	5	76	466	58	12	
400	715	620	48/54	16	M45/M48	558	473	474	4	5	80	520	60	12	

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE



GB/T 9113.1-2000

PN1.6MPa 16bar

DN	Size ends					Sealing size		C	Welding neck	
	Nominal size	Outside diameter of flange	Diameter of bolt Circle	Diameter of bolt holes	Number of bolts				Diameter of bolt	d
10	90	60	14	4	M12	41	2	14	28	3
15	95	95	14	4	M12	46	2	14	32	3
20	105	75	14	4	M12	56	2	16	40	4
25	115	85	14	4	M12	65	2	16	50	4
32	140	100	18	4	M16	76	2	18	60	5
40	150	110	18	4	M16	84	2	18	70	5
50	165	125	18	4	M16	99	2	20	84	5
65	185	145	18	4	M16	118	2	20	104	6
80	200	160	18	8	M16	132	2	20	120	6
100	220	180	18	8	M16	156	2	22	140	6
125	250	210	18	8	M16	184	2	22	170	6
150	285	240	22	8	M20	211	2	24	190	8
200	340	295	22	12	M20	266	2	24	246	8
250	405	355	26	12	M24	319	2	26	296	10
300	460	410	26	12	M24	370	2	28	350	10
350	520	470	26	16	M24	429	2	30	410	10
400	580	525	30	16	M27	480	2	32	458	10
450	640	585	30	20	M27	548	2	40	516	12
500	715	650	33	20	M30	609	2	44	576	12
600	840	770	36	20	M33	720	2	54	690	12
700	910	840	36	24	M33	794	5	40	760	12
800	1025	950	39	24	M36	901	5	42	862	12
900	1125	1050	39	28	M36	1001	5	44	962	12
1000	1255	1170	42	28	M39	1112	5	46	1076	12
1200	1485	1390	48	32	M45	1328	5	52	1282	12
1400	1685	1590	48	36	M45	1530	5	58	1482	12
1600	1930	1820	55	40	M52	1750	5	64	1696	12

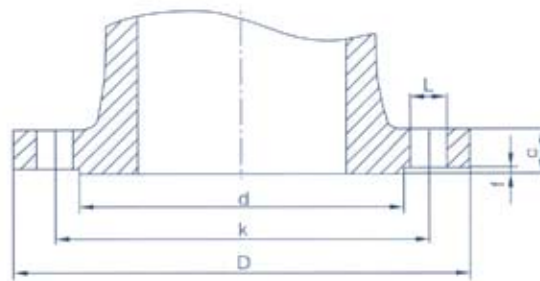
FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE

						GB/T 9113.1-2000			PN2.5MPa 25bar	
10	90	60	14	4	M12	41	2	14	28	3
15	95	95	14	4	M12	46	2	14	32	3
20	105	75	14	4	M12	56	2	16	40	4
25	115	85	14	4	M12	65	2	16	50	4
32	140	100	18	4	M16	76	2	18	60	5
40	150	110	18	4	M16	84	2	18	70	5
50	165	125	18	4	M16	99	2	20	84	5
65	185	145	18	4	M16	118	2	22	104	6
80	200	160	18	8	M16	132	2	24	120	6
100	235	190	22	8	M20	156	2	24	142	6
125	270	220	26	8	M24	184	2	26	162	6
150	300	250	26	8	M24	211	2	28	192	8
200	360	310	26	12	M24	274	2	30	252	8
250	425	370	30	12	M27	330	2	32	304	10
300	485	430	30	16	M27	389	2	34	364	10
350	555	490	33	16	M30	448	2	38	418	10
400	620	550	36	16	M33	503	2	40	472	10
450	670	600	36	20	M33	548	2	46	520	12
500	730	660	36	20	M33	609	2	48	580	12
600	845	770	39	20	M36	720	2	58	684	12
700	960	875	42	24	M39	820	5	50	780	12
800	1085	990	48	24	M45	928	5	54	882	12
900	1185	1090	48	28	M45	1028	5	58	982	12
1000	1320	1210	55	28	M52	1140	5	62	1086	12
1200	1530	1420	55	32	M52	1350	5	70	1296	12
1400	1755	1640	60	36	M56	1560	5	76	1508	12
1600	1975	1860	60	40	M56	1780	5	84	1726	12
						GB/T 9113.1-2000			PN4.0MPa 40bar	
10	90	60	14	4	M12	41	2	14	28	3
15	95	95	14	4	M12	46	2	14	32	3
20	105	75	14	4	M12	56	2	16	40	4
25	115	85	14	4	M12	65	2	16	50	4
32	140	100	18	4	M16	76	2	18	60	5
40	150	110	18	4	M16	84	2	18	70	5
50	165	125	18	4	M16	99	2	20	84	5
65	185	145	18	4	M16	118	2	22	104	6
80	200	160	18	8	M16	132	2	24	120	6
100	235	190	22	8	M20	156	2	24	142	6
125	270	220	26	8	M24	184	2	26	162	6
150	300	250	26	8	M24	211	2	28	192	8
200	375	320	30	12	M27	284	2	34	254	8
250	450	385	33	12	M30	345	2	38	312	10
300	515	450	33	16	M30	409	2	42	378	10
350	580	510	36	16	M33	465	2	46	432	10
400	660	585	39	16	M36	535	2	50	498	10
450	685	610	39	20	M36	560	2	57	522	12
500	755	670	42	20	M39	615	2	57	576	12
600	890	795	48	20	M45	735	2	72	686	12

FLAT & RAISED FACE INTEGRAL STEEL PIPE FLANGE

GB/T 9113.1-2000 PN6.3MPa 63bar										
10	100	70	14	4	M12	41	2	20	40	4
15	105	75	14	4	M12	46	2	20	45	4
20	130	90	18	4	M16	56	2	20	50	4
25	140	100	18	4	M16	65	2	24	61	4
32	155	110	22	4	M20	76	2	24	68	4
40	170	125	22	4	M20	84	2	26	82	4
50	180	135	22	4	M20	99	2	26	90	5
65	205	160	22	8	M20	118	2	26	105	5
80	215	170	22	8	M20	132	2	28	122	5
100	250	200	26	8	M24	156	2	30	146	5
125	295	240	30	8	M27	184	2	34	177	6
150	345	280	33	8	M30	211	2	36	204	6
200	415	345	36	12	M33	284	2	42	264	8
250	470	400	36	12	M33	345	2	46	320	8
300	530	460	36	16	M33	409	2	52	378	10
350	600	525	39	16	M36	465	2	56	434	10
400	670	585	42	16	M39	535	2	60	490	12
GB/T 9113.1-2000 PN10.0MPa 100bar										
10	100	70	14	4	M12	41	2	20	40	4
15	105	75	14	4	M12	46	2	20	45	4
20	130	90	18	4	M16	56	2	20	50	4
25	140	100	18	4	M16	65	2	24	61	4
32	155	110	22	4	M20	76	2	24	68	4
40	170	125	22	4	M20	84	2	26	82	4
50	195	145	26	4	M24	99	2	28	96	5
65	220	170	26	8	M24	118	2	30	113	5
80	230	180	26	8	M24	132	2	32	128	5
100	265	210	30	8	M27	156	2	36	150	5
125	315	250	33	8	M30	184	2	40	185	6
150	355	290	33	12	M30	211	2	44	216	6
200	430	360	36	12	M33	284	2	52	278	8
250	505	430	39	12	M36	345	2	60	340	8
300	585	500	42	16	M39	409	2	68	402	10
350	655	560	48	16	M45	465	2	74	460	10
400	715	620	48	16	M45	535	2	82	518	12
GB/T 9113.1-2000 PN16.0MPa 160bar										
10	100	70	14	4	M12	41	2	24	40	4
15	105	75	14	4	M12	46	2	26	45	4
20	130	90	18	4	M16	56	2	30	50	4
25	140	100	18	4	M16	65	2	32	61	4
32	155	110	22	4	M20	76	2	34	68	4
40	170	125	22	4	M20	84	2	6	82	4
50	195	145	26	4	M24	99	2	38	96	5
65	220	170	26	8	M24	118	2	42	113	5
80	230	180	26	8	M24	132	2	46	128	5
100	265	210	30	8	M27	156	2	52	150	5
125	315	250	33	8	M30	184	2	56	184	6
150	355	290	33	8	M30	211	2	62	224	6
200	430	660	36	12	M33	284	2	66	288	8
250	515	430	42	12	M39	345	2	76	346	8
300	585	500	42	16	M39	409	2	88	414	10

INTEGRAL STEEL PIPE FLANGE



CLASS 150, 300, 400, 600 R F ASME B 16.5, B 16.47

CLASS 150 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	152	120.5	18	4-M16	92	2	16
2-1/2	178	139.5	18	4-M16	105	2	18
3	190	152.5	18	4-M16	127	2	19
4	229	190.5	18	8-M16	157	2	24
5	254	216	22	8-M20	186	2	24
6	279	241.5	22	8-M20	216	2	26
8	343	298.5	22	8-M20	270	2	29
10	406	362	26	12-M24	324	2	31
12	483	432	26	12-M24	381	2	32
14	533	476	29.5	12-M27	413	2	35
16	597	540	29.5	16-M27	470	2	37
18	635	578	32.5	16-M30	533	2	40
20	699	635	32.5	20-M30	584	2	43
24	813	749.5	35.5	30-M33	692	2	48
26	870	806.5	35	24-M33	749	2	68
28	927	863.6	35	28-M33	800	2	72
30	984	914	35	28-M33	857	2	75
32	1060	978	41	28-M39	914	2	81
36	1168	1086	41	32-M39	1022	2	90
40	1289	1200	41	36-M39	1124	2	90
42	1346	1257	41	36-M39	1194	2	97
48	1511	1422	41	44-M39	1359	2	108

CLASS 600 R F ASME B16.5, ASEM B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	19	8-M16	92	6.4	25.5
2-1/2	190	149.2	22	8-M20	105	6.4	29
3	210	168.3	22	8-M20	127	6.4	32
4	254	200	26	8-M24	157	6.4	35
5	279	234.9	26	8-M24	186	6.4	38.5
6	318	269.9	26	12-M24	216	6.4	41.5
8	381	330.2	29	12-M27	270	6.4	48
10	445	387.3	32	16-M30	324	6.4	54
12	520	450.8	35	16-M33	381	6.4	57.5
14	585	514.3	35	20-M33	413	6.4	60.5
16	650	571.5	39	20-M36	470	6.4	63.5
18	710	628	39	24-M36	533	6.4	67
20	775	685.8	42	24-M39	584	6.4	70
24	915	812.8	48	24-M45	692	6.4	76.5
26	851	781	39	28-M36	711	6.4	89
28	914	838	41	24-M39	762	6.4	95
30	972	895.4	41	28-M39	819	6.4	102
32	1035	952.5	44	28-M42	873	6.4	108

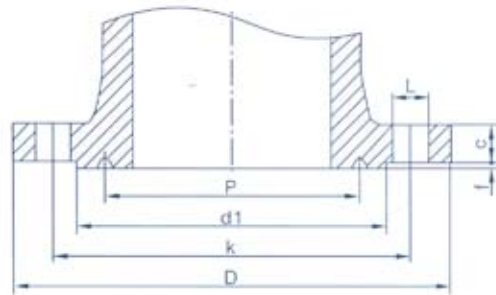
CLASS 300 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	18	8-M16	92	2	23
2-1/2	190	149	18	8-M20	105	2	26
3	210	168.5	18	8-M20	127	2	29
4	254	200	18	8-M20	157	2	32
5	279	235	22	8-M20	186	2	35
6	318	270	22	12-M20	216	2	37
8	381	330	22	12-M24	270	2	42
10	445	387.5	26	16-M27	324	2	48
12	521	451	26	16-M30	381	2	51
14	584	514.5	29.5	20-M30	413	2	54
16	648	571.5	29.5	20-M33	470	2	58
18	711	628.5	32.5	24-M33	533	2	61
20	775	686	32.5	24-M33	584	2	64
24	914	813	35.5	24-M39	692	2	70
26	972	876	35	28-M42	749	2	79
28	1035	940	35	28-M42	800	2	86
30	1092	997	35	28-M45	857	2	92
32	1149	1054	41	28-M48	914	2	99
36	1270	1168	41	32-M52	1022	2	105
40	1238	1156	41	32-M42	1086	2	114
42	1289	1206.5	41	32-M42	1137	2	119
48	1467	1372	41	32-M48	1302	2	133

CLASS 600 R F ASME B16.5, ASME B16.47

DN	D	K	L	(Bolt)n-Th	d	f	C
2	165	127	19	8-M16	92	6.4	26
2-1/2	190	149	22	8-M20	100	6.4	29
3	210	168	22	8-M20	127	6.4	32
4	273	216	26	8-M24	157	6.4	38
5	330	266.5	29	8-M27	186	6.4	45
6	356	292	29	12-M27	216	6.4	48
8	419	349	32	12-M30	270	6.4	56
10	508	432	35	16-M33	324	6.4	64
12	559	489	35	20-M33	381	6.4	67
14	603	527	38	20-M36	413	6.4	70
16	686	603	41	20-M39	470	6.4	77
18	743	654	44	20-M42	533	6.4	83
20	813	724	44	24-M42	584	6.4	89
24	940	838	52	24-M48	692	6.4	102
26	1016	914.4	51	28-M48	749	6.4	108
28	1073	965.2	54	28-M48	800	6.4	111
30	1130	1022.4	54	28-M52	857	6.4	114
32	1194	1079.5	60	28-M56	914	6.4	117

INTEGRAL STEEL PIPE FLANGE

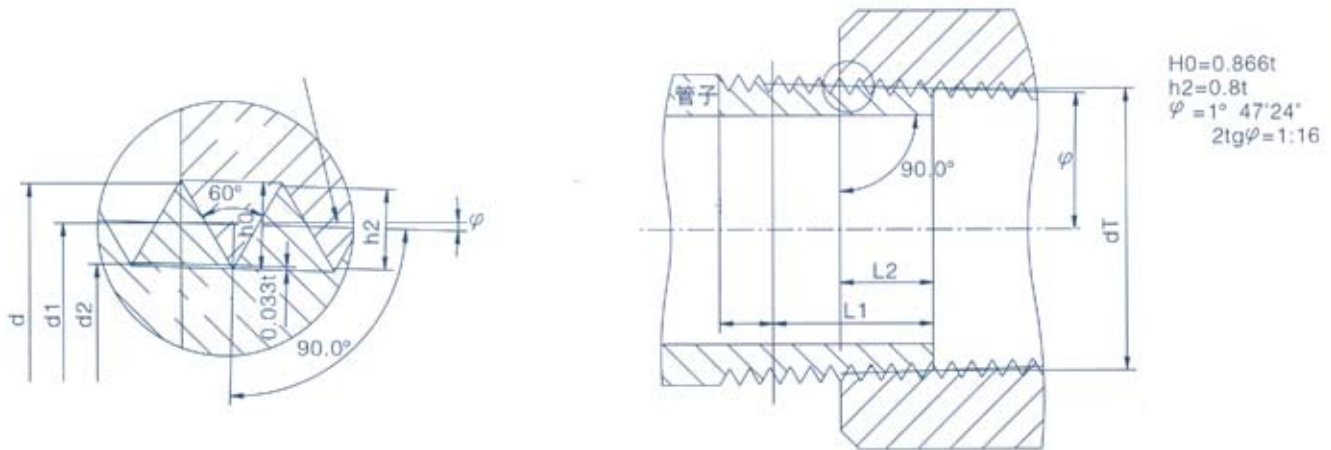


RTJ

CLASS 900	RTJ	ASME B 16.5	ASME B 16.47					
DN	D	K	L	(Bolt)n-Th	d1	P	f	C
2	216	165.1	26	8-M24	124	95.25	8	38.5
2-1/2	244	190.5	29	8-M27	137	107.95	8	41.5
3	241	190.5	26	8-M27	168	123.82	8	38.5
4	292	234.9	32	8-M30	194	149.22	8	44.5
5	349	279.4	35	8-M33	229	180.98	8	51
6	381	317.5	32	12-M30	248	211.12	8	56
8	470	393.7	39	12-M36	318	269.88	8	63.5
10	545	469.9	39	16-M36	371	323.85	8	70
12	610	533.4	39	20-M36	438	381	11.13	79.5
14	640	558.8	42	20-M39	489	419.1	11.13	86
16	705	615.9	45	20-M42	546	469.9	12.7	89
18	785	685.8	51	20-M48	613	533.4	12.7	102
20	855	749.3	54	20-M52	673	584.2	15.88	108
24	1040	901.7	67	20-M64	794	692.15	17.48	140
26	1086	952.5	73	20-M70	832	749.3	17.48	140
28	1168	1022.4	79	20-M76	889	800.1	17.48	143
30	1232	1085.9	79	20-M76	946	857.25	17.48	149
32	1314	1155.7	86	20-M84	1003	914.4	17.48	159

CLASS 1500	RTJ	ASME B 16.5						
DN	D	K	L	(Bolt)n-Th	d1	P	f	C
2	215	165	26	8-M24	92	95.25	7.92	38.5
2-1/2	245	190.5	29.5	8-M27	105	107.95	7.92	41.5
3	265	203	32.5	8-M30	127	136.52	7.92	48
4	310	241.5	35.5	8-M33	157	161.92	7.92	54
5	375	292	42	8-M39	186	193.68	7.92	73.5
6	395	317.5	39	12-M36	216	211.12	9.52	83
8	485	393.5	45	12-M42	270	269.88	11.13	92
10	585	482.5	51	12-M48	324	323.85	11.13	108
12	675	571.5	55	16-M52	381	381	14.27	124
14	750	635	60	16-M56	413	419.1	15.88	133.5
16	825	705	68	16-M64	470	469.9	17.48	146.5
18	915	774.5	74	16-M70	533	533.4	17.48	162
20	985	832	80	16-M76	584	584.2	17.48	178
24	1170	990.5	94	16-M90	692	692.15	20.62	203.5

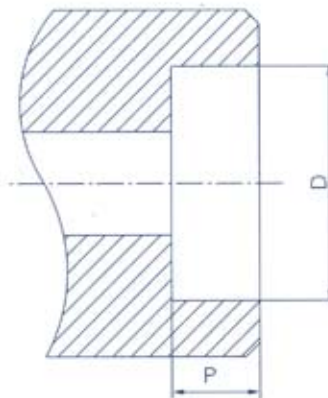
TABLES



National taper pipe thread

ASME B1.20.1

Nominal Size		Threads Per Inch	Pitch of Thread	Thread Length		DIA. at Reference Surface			Root DIA. Of the Pipe Thread	Height
in	mm	n	p	L1	L2	d	d1	d2	dT	h1
3/8	10	18	1.411	10.5	6.096	17.055	15.926	14.797	14.416	1.129
1/2	15	14	1.814	13.5	8.128	21.223	19.772	18.321	17.813	1.451
3/4	20	14	1.814	14	8.611	26.568	25.117	23.666	23.128	1.4851
1	25	11-1/2	2.209	17.5	10.160	33.228	31.461	29.694	29.059	1.767
1 1/4	32	11-1/2	2.209	18	10.668	41.985	40.218	38.451	37.784	1.767
1 1/2	40	11-1/2	2.209	18.5	10.668	48.054	46.287	44.520	43.853	1.767
2	50	11-1/2	2.209	19	11.074	60.092	58.325	56.558	55.866	1.767

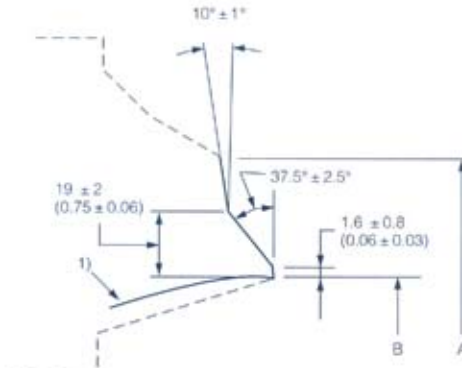
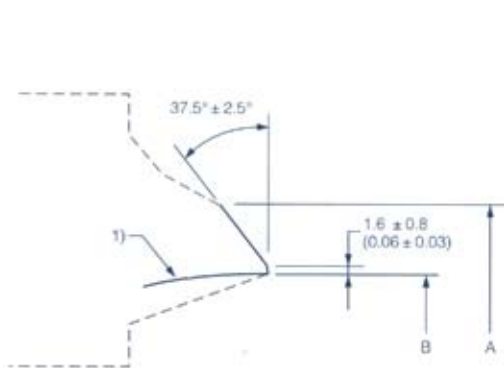


Socket welded ends

ASME B16.11

Nominal Size	in	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	mm	10	15	20	25	32	40	50
D	mm	17.53	21.72	27.05	33.78	42.54	48.64	61.11
Pmin	mm	9.6	9.6	12.7	12.7	12.7	12.7	15.8

BUTT-WELDING ENDS



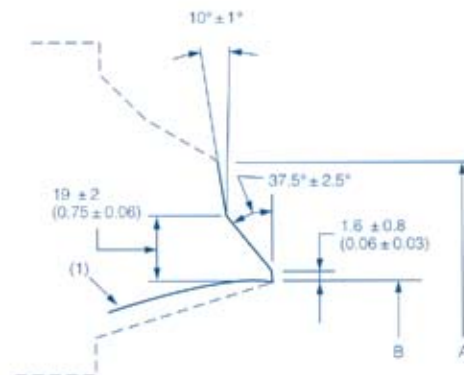
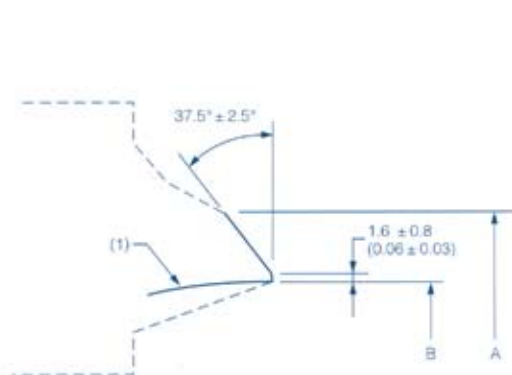
DN65-250

Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
65	40	73.0	75	62.5	662.93	5.16
	80	73.0	75	59	59.69	7.01
	160	73.0	75	54	55.28	9.35
	XXS	73.0	75	45	47.43	14.02
80	40	88.9	91	78	78.25	5.49
	80	88.9	91	73.5	74.53	7.62
	160	88.9	91	66.5	68.38	11.13
	XXS	88.9	91	58.5	61.19	15.24
90	40	101.6	105	90	90.52	5.74
	80	101.6	105	85.5	86.42	8.08
100	40	114.3	117	102	102.73	6.02
	80	114.3	117	97	98.28	8.56
	120	114.3	117	92	93.78	11.13
	160	114.3	117	87.5	89.65	13.49
	XXS	114.3	117	80	83.30	17.12
	40	141.3	144	128	128.80	6.55
125	80	141.3	144	122	123.58	9.3
	120	141.3	144	116	118.04	12.70
	160	141.3	144	109.5	112.47	15.88
	XXS	141.3	144	103	106.92	19.05
	40	168.3	172	154	154.82	7.11
	80	168.3	172	146.5	148.06	10.97
150	120	168.3	172	140	142.29	14.27
	160	168.3	172	132	135.31	18.26
	XXS	168.3	172	124.5	128.85	21.95
	40	219.1	223	203	203.75	8.18
	60	219.1	223	198.5	200.02	10.31
	80	219.1	223	193.5	195.84	12.70
200	100	219.1	223	189	191.65	15.09
	120	219.1	223	182.5	186.11	18.26
	140	219.1	223	178	181.98	20.62
	XXS	219.1	223	174.5	179.16	22.23
	160	219.1	223	173	177.79	23.01
	40	273.0	278	254.5	255.74	9.27
250	60	273.0	278	247.5	249.74	12.70
	80	273.0	278	243	245.55	15.09
	100	273.0	278	236.5	240.01	18.26
	120	273.0	278	230	234.44	21.44
	140	273.0	278	222	227.51	25.40
	160	273.0	278	216	221.95	28.58

DN300-450

Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
300	STD	323.8	329	305	306.08	9.53
	40	323.8	329	303	304.72	10.31
	XS	323.8	329	298.5	300.54	12.70
	60	323.8	329	295	297.79	14.27
	80	323.8	329	289	292.17	17.48
	100	323.8	329	281	285.24	21.44
	120	323.8	329	273	278.31	25.40
	140	323.8	329	266.5	272.75	28.58
	160	323.8	329	257	264.45	33.32
	STD	355.6	362	336.5	337.88	9.53
350	40	355.6	362	333.5	335.08	11.13
	XS	355.6	362	330	332.34	12.70
	60	355.6	362	325.5	328.15	15.09
	80	355.6	362	317.5	321.22	19.05
	100	355.6	362	308	312.86	23.83
	120	355.6	362	300	305.93	27.79
	140	355.6	362	292	299.00	31.75
	160	355.6	362	284	292.07	35.71
	STD	406.4	413	387.5	388.68	9.53
	40	406.4	413	381	383.14	12.70
400	60	406.4	413	373	376.21	16.66
	80	406.4	413	363.5	367.84	21.44
	100	406.4	413	354	359.53	26.19
	120	406.4	413	344.5	351.18	30.96
	140	406.4	413	333.5	341.43	36.53
	160	406.4	413	325.5	334.50	40.49
	STD	457.2	464	438	439.48	9.53
	40	457.2	464	432	433.94	12.70
	XS	457.2	464	428.5	431.19	14.27
	60	457.2	464	419	422.82	19.05
450	80	457.2	464	409.5	414.46	23.83
	100	457.2	464	398.5	404.78	29.36
	120	457.2	464	387.5	395.03	34.93
	140	457.2	464	378	386.77	39.67
	160	457.2	464	366.5	376.99	45.24

BUTT-WELDING ENDS



DN500-800						
Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
500	STD	508.0	516	489	490.28	9.53
	XS	508.0	516	482.5	484.74	12.70
	40	508.0	516	478	480.55	15.09
	60	508.0	516	467	470.88	20.62
	80	508.0	516	455.5	461.13	26.19
	100	508.0	516	443	450.02	32.54
	120	508.0	516	432	440.29	38.10
	140	508.0	516	419	429.17	44.45
550	160	508.0	516	408	419.44	50.01
	STD	558.8	567	539	541.08	9.53
	XS	558.8	567	533	535.54	12.70
	60	558.8	567	514	518.86	22.23
	80	558.8	567	501	507.75	28.58
	100	558.8	567	488.5	496.63	34.93
	120	558.8	567	476	485.52	41.28
	140	558.8	567	463	474.41	47.63
600	160	558.8	567	450.5	463.30	53.98
	STD	609.6	619	590.5	591.88	9.53
	XS	609.6	619	584	586.34	12.70
	30	609.6	619	581	583.59	14.27
	40	609.6	619	574.5	577.97	17.48
	60	609.6	619	560.5	565.49	24.61
	80	609.6	619	547.5	554.38	30.96
	100	609.6	619	532	540.49	38.89
650	120	609.6	619	517.5	528.03	46.02
	140	609.6	619	505	516.91	52.37
	160	609.6	619	490.5	504.37	59.54
	10	660.4	670	645.5	645.50	7.92
	20	660.4	670	635	637.14	12.70
	30	711.2	721	695.5	696.30	7.92
	40	711.2	721	686	687.94	12.70
	60	711.2	721	679.5	682.37	15.88
700	80	711.2	721	672	677.10	7.92
	10	762.0	772	746	747.10	7.92
	20	762.0	772	736.5	738.74	12.70
	30	762.0	772	730	733.17	15.88
	40	812.8	825	797	797.90	7.92
	60	812.8	825	787.5	789.54	12.70
	80	812.8	825	781	783.97	15.88
	100	812.8	825	778	781.17	17.48

DN850-900						
Pipe nominal specification (DN)	Series of pipe schedule thickness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
850	10	863.6	876	848	848.70	7.92
	20	863.6	876	838	840.34	12.70
	30	863.6	876	832	834.77	15.88
	40	863.6	876	828.5	831.97	17.48
900	10	914.4	927	898.5	889.50	7.92
	20	914.4	927	889	891.14	12.70
	30	914.4	927	882.5	885.57	15.88
	40	914.4	927	876.5	880.02	19.05

Note:(1)Characters stand for:

(a)STD=Standard schedule thickness

(b)XS=Thickened

(c)XSS=Super thickened

(2)All the diameters are not required size, just be convenient for users.

(3)Gasket rings for Dn50 and below size are not considered to manufacture.



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