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SOLID VALVES

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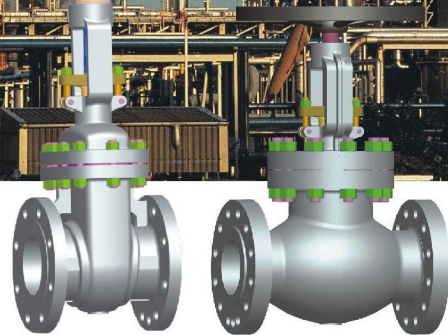
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GAST STEEL VALVE SERIES



API GATE VALVE

Description

Design Features

Design complies with the API 600, API 602, API 603, BS 1414
 Face to Face dimension: ASME B16.10, BS 2080 and ISO 5752
 Flanged End: ASME B16.5, 26" and larger sizes according to
 ASME B16.47 Series A or Series B
 Butt-weld End: ASME B16.25
 Inspection and Test: API 598, BS EN 12266, ISO 5208

Casting Steel Material

Visual check for cast steel material includes: surface quality, dimension, chemical properties, mechanical performance, non-destructive testing to ensure that the comprehensive performance of raw materials comply with the relevant ASTM, BS, EN, JIS standards.

Body

The design provides the whole structure of low flow resistance channel structure, enables the body stiffness and strength to bear the nominal piping pressure and stress loading, the valve body wall thickness design complies with the API 600 with sufficient margin corrosion resistance for the medium.

Bonnet

Bonnet can be designed with a variety of seal structure of body connection to meet the needs of different operating conditions, the structure can be equipped to connect with jacketed, flat, spiral or metal ring gasket, and self pressure-seal valve bonnet for class 900 / 1500 / 2500.

Seat

Seat structure can be designed as per user requirements as a whole alloy steel materials pressed-in sealing structure, welding sealing, or screw connection in assembly. The austenitic stainless steel body material can be provided with integral seat.

Wedge

The wedge structure design can be solid, flexible, or parallel dual plates, and has enough strength and stiffness to ensure the valve sealing performance.

Seat and other seal material

The choice of materials for the seat and other seal material can be as per API 600 standard, or users design and manufacturing requirements.

Stem

The stem is thoroughly forged, its T-shape connecting end is of good stiffness and strength to ensure its safe use and reliability. The stem transmission bearing structure applies sophisticated ACME trapezoidal thread to enable its up and down travel.

Backseat

All backseats are used on the valve seat seal design, they are replaceable, and for austenitic stainless steel material it can be integral backseat design.

Bonnet and Body seal structure

Class 150: jacketed flexible graphite and stainless steel gasket
 Class 300, 600: spiral stainless steel and flexible graphite wound gasket
 Class 900 and above: metal ring gasket
 Choice for bonnet and body seal can be based on the use of specific operating conditions (medium, medium temperature and pressure).

Stuffing box

Stuffing box is designed in accordance with API 600 standards with precise control of surface finish in 32RMS below and its inner verticality.

Packing gland / Bushing

Packing gland / bushing are separate structure to ensure packing seal performance.

Stem Nut

Stem drive nut bearing structure is provided with sophisticated ACME trapezoidal thread, top entry connection design to the yoke, so even the valves are taken off the handwheel at service, the locking device can be ensured to be at original position and working.

Operator

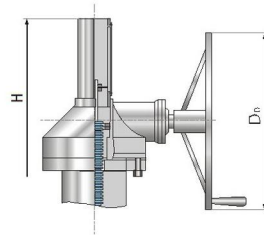
The valve operators are normally handwheel, gearbox, with clear open and close marking.
 Electric, or other operation device can be supplied according to customers requirements.

API GATE VALVE

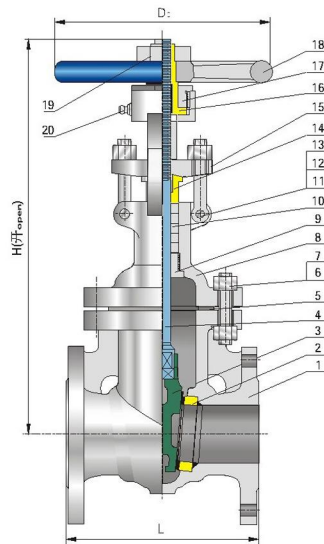
Bolted Bonnet, Outside Screw & Yoke, Rising Stem, Flexible Wedge Class 150/300/600/900

Features

Design and manufacture: API 600 API 603
 Face-to-Face dimension: 36" and smaller to ASME B16.10,
 40" and larger to manufacturer's standard
 Flanged End: 24" and smaller to ASME B16.5
 26" and larger to ASME B16.47 series A
 B.W. End: ASME B16.25
 Shell Wall Thickness: 24" and smaller to API 600
 26" and larger to manufacturer's standard
 8" and smaller valves have a one-piece bonnet and yoke design
 10" and larger valves have a split bonnet and yoke design.



Gear operation for 14" and larger



Parts List

No.	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Wedge	ASTM A216 Gr.WCB+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	3045.S. Jacketed Graphite
6	Stud	ASTM A193 Gr.B7
7	Nut	ASTM A194 Gr.2H
8	Bonnet	ASTM A216 Gr.WCB
9	Backseat	ASTM A276 410
10	Packing	Graphite
11	Pin	C.S.
12	Gland bolt	ASTM A193 Gr.B7
13	Gland nut	ASTM A194 Gr.2H
14	Bushing	ASTM A276 410
15	Gland	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Retaining nut	C.S.
18	Handwheel	Malleable Iron
19	H.W. lock nut	C.S.
20	Lubricator	Assembly

Dimensions & Weights (Class 150)

Valve Size	in. mm	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	28 700
(RF)	in. mm	6.5 165	7 178	7.5 190	8 203	9 229	10 254	10.5 267	11.5 292	13 330	14 356	15 381	16 406	17 432	18 457	20 508	24 610
(BW)	in. mm	6.5 165	8.5 216	9.5 241	11.13 283	12 315	15 188	16.5 419	18 457	19.75 502	22.5 572	24 610	26 283	28 312	32 363	36 414	48 914
L2 (RTJ)	in. mm	7.0 178	7.5 191	8 203	8.5 216	9.5 242	10.5 267	11 279	12 305	13.5 343	14.5 368	15.5 394	16.5 419	17.5 445	18.5 470	20.5 521	24.5 622
H (open)	in. mm	15.7 392	16.13 409	18.56 472	20.94 532	24.13 612	27.94 710	31.75 806	39 990	46.69 1186	55.31 1405	63.56 1615	71.31 1811	78.19 1986	87 2210	106.25 2698	119.31 3030
Do	in. mm	7.86 200	7.86 200	7.86 200	9.86 250	9.86 250	11.81 300	11.81 300	13.75 350	17.69 450	18.13 460	18.13 460	18.13 460	24 610	24 610	24 610	24 610
WT (kg)	RF BW	18.5 15.5	20 17	30 26	36 29	53 46	71 66	85 77	136 116	220 202	323 294	387 350	553 506	660 575	810 720	1250 1130	1931 1765

API GATE VALVE

Bolted Bonnet, Outside Screw & Yoke, Rising Stem, Flexible Wedge Class 300

Dimensions & Weights (Class 300)

Valve Size	in. mm	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	28 700	30 750	32 800	36 900	40 1000	42 1050	48 1200	
L-L1 (RF-BW)	in. mm	7.5 190	8.5 216	9.5 241	11.12 283	12 305	15 188	16.5 419	18 457	19.75 502	20.37 518	30 778	33 854	36 930	39 991	45 1143	54 1372	57 1553	61.12 1553	68 1930	76 1990	78 1981	88 2235	
L2 (RTJ)	in. mm	8.0 203	9.12 232	10.12 257	11.74 298	12.62 321	15.62 397	16.5 419	17.12 435	18.62 473	20.37 518	30.62 778	33.62 854	36.62 930	39.75 1010	45.88 1165	54 1372	56 1422	61.12 1553	69.12 1756	-	-	-	
H (open)	in. mm	14.7 374	15.75 400	18.75 477	21.38 543	25.63 650	30.31 770	34.63 880	40.81 1037	50.19 1275	56.63 1438	65 1650	72.44 1840	79.94 2030	88.19 2240	114.19 2900	122 3100	139.38 3540	152 3860	169.75 4312	188.63 4791	198.13 5032	217.38 5522	
Do	in. mm	7.88 200	7.88 200	9.88 250	9.88 250	11.81 300	11.81 300	13.75 350	13.75 350	17.69 450	18.13 460	18.13 460	18.13 460	24 610	24 610	24 610	24 610	24 610	30 760	30 760	30 760	30 760	24 610	24 610
WT (kg)	RF BW	26 22	30 26	39 34	55 47	83 68	92 77	137 118	240 195	333 271	536 432	699 595	1010 848	1205 1025	1720 1460	2800 2294	3150 2870	3786 3220	4210 3675	6850 4990	8460 6160	9500 6800	12400 9000	

Dimensions & Weights (Class 600)

Valve Size	in. mm	2 50	2-1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	26 650	28 700	30 750	32 800	36 900	
L-L1 (RF-BW)	in. mm	11.5 292	13 330	14 356	17 432	20 508	22 559	26 660	31 787	33 838	35 889	39 991	43 1092	47 1194	55 1397	61 1549	65 1651	70 1778	82 2083	
L2 (RTJ)	in. mm	11.62 295	13.12 333	14.12 359	17.12 435	20.12 511	22.12 562	26.12 663	31.12 790	33.12 841	35.12 892	39.12 994	43.12 1095	47.25 1200	55.38 1407	-	-	-	-	
H (open)	in. mm	18.63 474	21.75 553	23.38 593	28.06 713	30.3 770	38.19 970	44.19 1122	52.38 1330	59.81 1519	68.13 1730	72.75 1835	90.13 2290	98.81 2510	119 3022	127.25 3232	140.25 3562	152.75 3880	163 4140	179.5 4560
Do	in. mm	9.88 250	9.88 250	11.81 300	13.75 350	15.7 400	19.69 500	22.06 560	28.38 720	24 610	24 610	24 610	24 610	30 760	30 760	30 760	30 760	24 610	24 610	
WT (kg)	RF BW	41 35	58 50	88 68	131 104	205 192	253 208	413 328	623 496	784 637	1288 1120	1820 1448	2150 1828	2540 2201	4080 3360	5220 4295	6050 4980	6945 5710	7965 5223	10000 8220

Dimensions & Weights (Class 900)

Valve Size	in. mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	
Class 900	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	18 457	24 610	29 737	33 812	38 968	48 1200
	L2 (RTJ)	in. mm	14.62 371	16.62 422	18.12 460	24.12 613	28.12 714	33.12 841	38.12 968	48.12 1200
	H (open)	in. mm	21.56 547	27.56 700	28.15 715	36.69 929	41 1041	49.63 1260	62.63 1590	70.69 1795
	Do	in. mm	11.81 300	14 350	14 350	17.69 450	22.06 560	24 610	24 610	30 760
	WT (kg)	RF BW	90 82	110 93	123 108	148 122	182 156	250 208	360 300	460 380
Class 1500	L-L1 (RF-BW)	in. mm	17.75 451	20 508	22.75 578	26.5 673	36 914	42.25 1070	50 1270	60 760
	RTJ (L2)	in. mm	17.87 454	20.25 514	23 584	26.88 683	36.5 927	40.87 1038	50.88 1292	60 760
	Open (H)	in. mm	27.56 700	29.5 750	34.63 887	42.5 1079	53.94 1370	60.25 1530	80.5 2045	90 1190
	Do	in. mm	13.75 350	17.75 450	17.75 450	22.06 560	24 610	24 610	30 760	30 760
	WT (kg)	RF-BW	132 99	206 155	256 192	350 271	498 350	720 520	950 680	1230 880

API CHECK VALVE

Description

Design Features

Cast steel swing check valve design is in accordance with the API 600, BS 1868 and the ASME B16.34 standards.
 Face-to-Face dimension: ASME B16.10, BS 2080 and ISO 5752.
 Flanged End: ASME B16.5, 26" and larger sizes according to ASME B16.47 Series A or Series B.
 Butt-weld End: ASME B16.25.
 Shell Wall Thickness: BS1868.
 Inspection and Test: API 598, BS EN 12266, ISO 5208

Casting Steel Material

Visual check for cast steel material includes: surface quality, dimension, chemical properties, mechanical performance, non-destructive testing to ensure that the comprehensive performance of raw materials comply with the relevant ASTM, BS, EN, JIS standards.

Body

The design provides the whole structure of low flow resistance channel structure, enables the body stiffness and strength to bear the nominal piping pressure and stress loading, the valve body wall thickness design complies with the API 600 with sufficient margin corrosion resistance for the medium.

Bonnet

Bonnet can be designed with a variety of seal structure of body connection to meet the needs of different operating conditions, the structure can be equipped to connect with jacketed, flat, spiral wound or metal ring gasket, or pressure-seal valve bonnet for Calss900/1500 / 2500.

Seat

Seat structure can be designed as per user requirements as a whole alloy steel materials pressed-in sealing structure, welding sealing , or screw connection in assembly. The austenitic stainless steel body material can be provided with integral seat.

Plate components

Plate components include: plate, hanger, washer, gland or locking nut, locking pin. Swing check valve can be maintained on pipeline directly, and its plate design applies often the conventional rigid parallel seal structure.

Seat and other seal material

The choice of materials for the Seat and other seal material can be as per API 600 standard, or users design and manufacturing requirements.

Bonnet and body seal structure

Class 150,300, 600: spiral stainless steel and flexible graphite wound gasket
 Class 900 and above: metal ring gasket
 According to specific operating conditions (medium, medium temperature and pressure), other sealing material can be applied.

API SWING CHECK VALVE

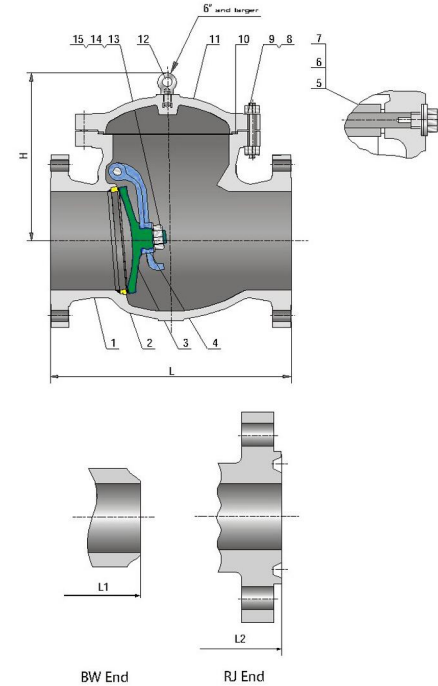
Bolted Cover, Swing Type Disc, Cast Steel
 Class150/300/600/900

Features

Design and manufacture: API 600 and BS 1868
 Face-to-Face dimension: ASME B16.10
 Flanged dimension: 24" and smaller valves: ASME B16.5
 26" and larger valves: ASME B 16.47 series A and B
 B. W. End: ASME B16.25
 Shell Wall Thickness: 24" and smaller to API 600 BS 1868
 26" and larger to manufacturer s standard

Parts List

NO	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A216 Gr.WCB+13Cr
4	Hinge	ASTM A216 Gr.WCB
5	Hinge pin	ASTM A276 410
6	Washer	ASTM A276 410
7	Plug	ASTM A276 410
8	Cover bolt	ASTM A193 Gr.B7
9	Cover nut	ASTM A194 Gr.2H
10	Gasket	304S.S. Jacketed Graphite
11	Cover	ASTM A216 Gr.WCB
12	Eye bolt	C.S.
13	Pin	ASTM A276 410
14	Nut	304S.S.
15	Washer	ASTM A276 410



Dimensions & Weights (Class 150)

Valve Size	in.	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L150	in.	6.5	8	8.5	9.5	11.5	13	14	19.5	24.5	27.5	31	34	38.5	38.5	51	60	77
L300	mm	165	203	216	241	292	330	356	495	622	698	787	864	978	978	1295	1524	1956
L2	in.	7.0	8.5	9	10	12	13.5	14.5	20	25	28	31.5	34.5	39	39	51.5	60.5	77.5
(RTJ)	mm	178	216	229	254	305	343	368	508	635	711	800	877	991	991	1308	1537	1969
H	in.	6.69	6.88	7	7.5	8.63	9.25	12.75	15.13	17.63	21.25	22	24.63	25.63	26.63	34.63	45.25	53.13
(open)	mm	170	175	178	191	219	235	324	384	448	540	559	626	651	676	880	1149	1349
WT	RF	18	20	24	35	55	84	96	160	245	345	510	660	850	1050	1450	2350	3350
(kg)	BW	12	14	17	26	37	52	80	133	213	294	440	568	750	920	1270	2250	3150

API SWING CHECK VALVE

Bolted Cover, Swing Type Disc, Cast Steel
Class300/600/900

Main dimensions and weights (Class 300)

Valve Size	in.	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L-L1 (RF-BW)	in.	9.5	10.5	11.5	12.5	14	15.75	17.5	21	24.5	28	33	34	38.5	40	53	62.75	82
	mm	241	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1594	2083
L2 (RTJ)	in.	10	11.12	12.12	13.15	14.62	16.37	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	63.75	83.11
	mm	254	283	308	334	371	416	460	549	638	727	854	879	994	1035	1369	1619	2111
H (open)	in.	7.4	7.75	8	8.75	10.88	11.63	13.25	16.25	18.25	22.13	23.5	25.38	29.88	33.63	37	50	60.63
	mm	188	197	203	222	276	295	337	413	464	562	597	645	759	854	940	1270	1540
WT (kg)	RF	31	35	37	60	82	110	155	268	380	495	710	950	1200	1350	2200	3400	5000
	BW	28	32	35	50	65	70	128	230	270	460	555	800	970	1070	1780	2950	4300

Dimensions & Weights (Class 600)

Valve Size	in.	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750
L-L1 (RF-BW)	in.	11.5	13	14	17	22	26	31	33	35	39	43	47	55	57	63	65
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1600	1651
L2 (RTJ)	in.	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	57.5	63.5	65.5
	mm	295	333	359	435	562	663	790	841	892	994	1095	1200	1407	1461	1613	1664
H (open)	in.	8.25	8.63	10.5	11.75	15	18.75	21.63	22.63	26.38	30.13	35.25	38.38	43.75	48	53.13	56.25
	mm	210	219	267	299	381	476	549	575	670	765	895	975	1111	1219	1349	1429
WT (kg)	RF	40	55	72	120	270	420	620	810	1100	1450	1800	2100	3000	3500	4100	5000
	BW	31	45	60	85	225	365	500	715	880	1140	1450	1650	2300	3000	3500	4300

Dimensions & Weights (Class 900/1500)

Class 900	Valve Size	in.	2	2-1/2	3	4	5	6	8	10	12
		mm	50	65	80	100	150	200	250	300	350
L-L1 (RF-BW)	in.	14.5	16.5	15	18	24	29	33	38	45	53
	mm	368	419	381	457	610	737	838	965	1130	1341
L2 (RTJ)	in.	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	45.12	53.12
	mm	371	422	384	460	613	740	841	968	1130	1341
H (open)	in.	12.63	13.75	12.63	16	18.88	22.25	26.13	30.5	37.5	44.5
	mm	321	349	321	406	479	565	664	775	940	1130
WT (kg)	RF-BW	70	160	90	150	305	516	810	1120	1445	1815
		50	71	68	113	230	387	632	901	1130	1445
Class 1500	L-L1 (RF-BW)	in.	14.5	16.5	18.5	21.5	27.75	32.75	39	44.5	53
		mm	368	419	470	546	705	832	991	1130	1341
L2 (RTJ)	in.	14.62	16.62	18.62	21.62	28	33.15	39.4	45.12	53.12	
	mm	371	422	473	549	711	842	1000	1146	1341	
H (open)	in.	12.63	13.75	14.38	16.5	20.13	26.75	29.75	33.75	37.75	
	mm	321	349	365	419	511	680	756	857	968	
WT (kg)	RF-BW	70	110	170	300	695	1190	1850	2750	3500	
		50	87	135	245	560	965	1480	2180	2800	

API GLOBE VALVE

Description

Design Features

Cast steel globe valve design is as per the API 600, BS 1873 and the ASME B16.34 standards.
Face-to-Face dimension: ASME B16.10, BS 2080 and ISO 5752.
Flanged End: ASME B16.5.
Butt-weld End: ASME B16.25.
Shell Wall Thickness: API 600 BS1873.
Inspection and Test: API 598, BS EN 12266, ISO 5208

Casting Steel Material

Visual check for cast steel material includes: surface quality, dimension, chemical properties, mechanical performance, non-destructive testing to ensure that the comprehensive performance of raw materials comply with the relevant ASTM, BS, EN, JIS standards.

Body

The design provides the whole structure of low flow resistance channel structure, enables the body stiffness and strength to bear the nominal piping pressure and stress loading, the valve body wall thickness design complies with the API 600, BS 1873 with sufficient margin corrosion resistance for the medium.

Bonnet

Bonnet can be designed with a variety of seal structure of body connection to meet the needs of different operating conditions, the structure can be equipped to connect with jacketed, flat, spiral wound or metal ring gasket, or pressure-seal valve bonnet for Class 900/1500 / 2500.

Seat

Seat structure can be designed as per user requirements as a whole alloy steel materials pressed-in sealing structure, welding sealing, or screw connection in assembly. The austenitic stainless steel body material can be provided with integral seat.

Plate

Disc design applies conventional seal structure of rigid cone with plug-oriented, plunger-seal structure, the pressure balance disc, large-sized valves can be provided with dual plates for easy operation.

Seat and other seal material

The choice of materials for the seat and other seal material can be as per API 600 standard, or users design and manufacturing requirements.

Stem

The stem is wholly forged, its T-shape connecting end is of good stiffness and strength to ensure its safe use and reliability. The stem transmission bearing structure applies ACME trapezoidal thread to enable its up and down travel.

Backseat

All backseats are used on the valve seat seal design, they are replaceable, and for austenitic stainless steel material it can be integral backseat design.

Bonnet and Body seal structure

Class 150, 300, 600: spiral stainless steel and flexible graphite wound gasket Class 600, 900 and above: metal ring gasket Choice for bonnet and body seal can be based on the use of specific operating conditions (medium, medium temperature and pressure).

Stuffing box

Stuffing box is designed in accordance with API 600 standards with precise control of surface finish in 32RMS below and its inner versatility.

Packing gland / bushing

Packing gland / bushing are separate structure to ensure packing seal performance.

Stem Nut

Stem drive nut bearing structure is provided with sophisticated ACME trapezoidal thread, top entry connection design to the yoke, so even the valves are taken off the handwheel at service, the locking device can be ensured to be at original position and working.

Operator

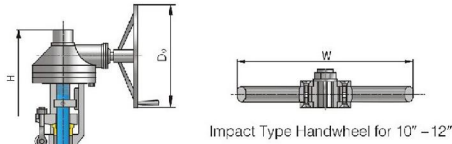
The valve operators are normally handwheel, gearbox, with clear open and close marking. Electric, or other operation device can be supplied according to customers requirements.

API GLOBE VALVE

Bolted Bonnet, Outside Screw & Yoke, Rising Stem, Plug Type Disc
Class 150/300/600/900/1500

Features

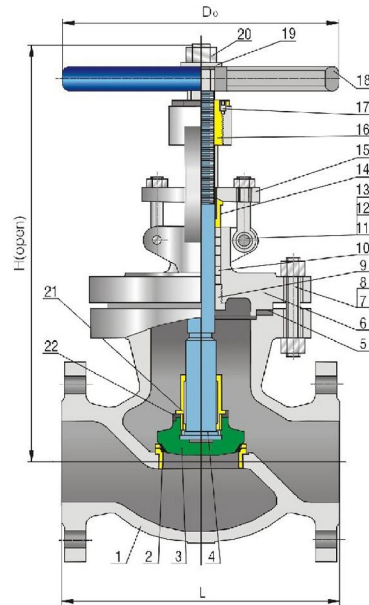
Design and manufacture: API 600 and BS 1873
Face-to-Face dimension: ASME B16.10
Flanged End: ASME B16.5
B. W. End: ASME B16.25
Shell Wall Thickness: API 600 BS 1873



Gear operation for 14" and larger

Parts List

NO	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat ring	ASTM A105+13Cr
3	Disc	ASTM A105+13Cr
4	Stem	ASTM A182 F6a
5	Gasket	304S.S. Jacketed Graphite
6	Bonnet	ASTM A216 Gr.WCB
7	Stud	ASTM A193 Gr.B7
8	Nut	ASTM A194 Gr.2H
9	Backseat	ASTM A276 410
10	Packing	Graphite
11	Gland bolt	ASTM A193 Gr.B7
12	Gland nut	ASTM A194 Gr.2H
13	Pin	C.S.
14	Bushing	ASTM A276 410
15	Gland	ASTM A216 Gr.WCB
16	Stem nut	Aluminum Bronze
17	Screw	C.S.
18	Handwheel	Malleable Iron
19	Washer	C.S.
20	Nut	C.S.
21	Disc cover	ASTM A276 410
22	Washer	S.S.



Dimensions & Weights (Class 150)

Valve Size	in. mm	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400
L-L1 300LB	in. mm	6.5 165	8 203	8.5 216	9.5 241	11.5 292	14 356	16 406	19.5 495	24.5 622	27.5 698	31 787	36 914
H (open)	in. mm	14.25 326	14.69 373	15.38 390	16.56 421	20.25 515	21.19 538	22.31 567	24.63 626	28 712	39 990	51 1295	63.75 1619
Do	in. mm	7.88 200	7.88 200	9.88 250	9.88 250	11.81 300	11.81 300	13.75 350	15.75 400	17.75 450	20 500	24 610	24 610
WT (kg)	RF	19	22	29	42	64	77	105	154	288	507	690	950

API GLOBE VALVE

Bolted Bonnet, Outside Screw & Yoke, Rising Stem, Plug Type Disc
Class 300/600/900/1500

Dimensions & Weights (Class 300)

Valve Size	in. mm	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400
L-L1 (RF-BW)	in. mm	9 229	10.5 267	11.5 292	12.5 318	14 356	15.75 400	17.5 444	22 559	24.5 622	28 711	33 838	34 864
L2 (RTJ)	in. mm	9.5 241	11.12 283	12.12 308	13.12 333	14.62 371	16.37 416	18.12 460	22.62 575	25.12 638	28.62 727	33.62 854	34.62 879
H (open)	in. mm	14.17 360	15.69 398	17.13 436	18.19 462	22.06 560	24.38 620	27.31 694	38.63 982	44.5 1130	41.31 1049	61.25 1556	67 1700
Do	in. mm	7.88 200	7.88 200	9.88 250	9.88 250	13.75 350	15.75 400	17.75 450	22.06 560	34 860	24 610	24 610	24 610
WT (kg)	RF BW	26 21	31 26	43 38	57 44	86 68	130 110	168 138	280 228	385 329	724 618	1500 1350	2200 2000

Dimensions & Weights (Class 600)

Valve Size	in. mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400
L-L1 (RF-BW)	in. mm	11.5 292	13 330	14 356	17 432	22 559	26 660	31 787	33 838	35 889	39 991
L2 (RTJ)	in. mm	11.62 295	13.12 333	14.12 359	17.12 435	22.12 562	26.12 663	31.12 791	33.12 841	35.12 892	39.12 994
H (open)	in. mm	16.75 425	19.75 502	20.5 521	24.38 620	34.88 886	36.69 932	41 1040	50.38 1280	70.88 1800	76 1930
Do	in. mm	9.88 250	11.81 300	13.75 350	17.75 450	28.38 720	18.13 460	24 610	30 760	30 760	30 760
WT (kg)	RF BW	39 33	58 48	73 61	120 95	327 261	482 385	700 588	900 795	2700 2510	3600 3350

Dimensions & Weights (Class 900/1500)

Class	Valve Size	in. mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250
	Class 900	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832
	L2 (RTJ)	in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.13 841	-
	H (open)	in. mm	9.44 240	10.25 260	10.25 260	12.63 320	15 382	20.88 530	27.17 690
	Do	in. mm	13.75 350	15.75 400	17.75 450	22.06 560	24 610	24 610	24 610
	WT (kg)	RF BW	100 75	118 94	131 105	150 185	218 340	452 630	710 1870
Class 1500	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832	-
	L2 (RTJ)	in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.13 841	-
	H (open)	in. mm	23.31 592	26 660	27.25 692	35.69 907	40 1015	45.06 1145	-
	Do	in. mm	13.75 350	15.75 400	17.75 450	22.06 560	24 610	24 610	-
	WT (kg)	RF BW	112 84	141 115	141 115	228 183	336 277	822 7150	990 830

Description

General

Since 1950 Ball valve has been available as a valve, and become one of the fastest-growing varieties of the valves in the last decades. Ball valve is not only of simple structure, good sealing, but also of smaller size, lighter weight, lower cost, easier installation, less driving torque value, easier operation, quicker opening and closure to a certain nominal range. During the past 50 years, Ball has developed into one of the main valve of the category. Ball valve can be used to cut off or access medium, and also control or regulate the fluid, while the V-ball valve can achieve more precise flow regulation and control. As one of the leading Chinese manufacturers of industrial valves, is well capable of the production for various types of industrial valves. Ball valves have been serving in a wide range of rigorous conditions and demand of oil, natural gas, refining, petrochemicals, ships, power plants, as well as Pipeline industry. production of the ball valve is in full compliance with relevant API, ANSI, BS, DIN, GB. This catalogue presents research and development one-piece floating-ball valve, two-piece floating casting or forged steel ball valve, two-piece trunnion casting steel ball valve, three-piece trunnion mounting casting or forged steel ball valve, three-piece trunnion mounting V-ball valve, and metal seated ball valve.

Floating ball valve features

Floating ball structure is simple and a good seal for CLASS 150 ~ CLASS 600 pressure class to cut off or access the medium in all kinds of pipeline. Ball valve with different materials, can be applied to water, steam, oil products, liquefied natural gas, gas, nitric acid, acetic acid, such as oxidizing medium.

Ball valve includes: one-piece type, Two-piece type, Three-piece type. All the floating ball are in accordance with API 608/BS 5351, and other standard design, fire test to meet the requirements of API 607, pressure range: CLASS 150 ~ CLASS 600; operating temperature range: -196 °C ~ 540 °C; Size range: NPS 1 / 2 ~ NPS 8.

The ball valve structure

1.Small fluid resistance:

The ball valve is of least fluid resistance in all types of valves, even reduced bore ball valve, the fluid resistance is quite small.

2.Quick and easy opening and closing:

As long as the stem turns 90°, the ball valve will be able to complete the full open or closure actions.

3.Good sealing performance:

The general use of ball valve seat ring, such as PTFE flexible materials, is easy to achieve sealing performance, and the sealing capability increases with the power of the medium pressure.

4. Reliable stem sealing:

Because of the rotation actions of the operation, the stem packing seals will not be easily destroyed, and the sealing capability increases with the power of the medium pressure.

5. Easy remote control:

Since the control of the ball valve needs only 90° rotation, it is easy to control and automate the remote control, so the ball valve can be mounted with pneumatic actuator, electrical actuator, hydraulic actuator, gas-liquid interaction actuator, or electro-hydraulic interaction actuator.

6. Smooth channel disables easy medium deposition, ensures smooth pipeline transit.

Fire Safe Design

When the ball valve site happens to be on fire, and non-metallic sealing materials are destroyed after pyrolysis, ball valve with specially designed metal to metal seal auxiliary structure, can achieve effective control of valve in and out leakage.

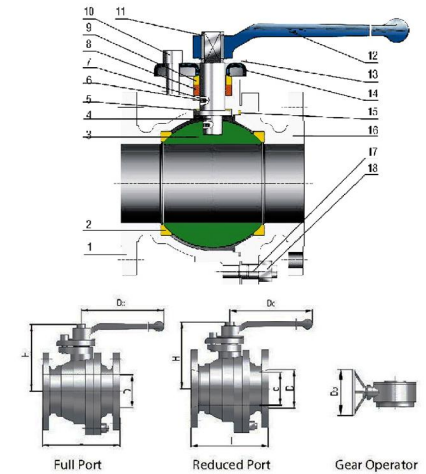
Two-piece, Split Body, Side Entry Design, Floating Ball Cast Steel Class 150/300

Features

Design and manufacture: API 608/BS 5351/API 6D
Face-to-Face dimension: ASME B16.10
Flanged End: ASME B16.5
Shell Wall Thickness: BS 5351
Valve Test: API 598

Material List

No.	Parts	Material
1	Body	ASTM A216 Gr.WCB
2	Seat/Seal	PTFE
3	Ball	304S.S.
4	Stem	ASTM A182 F6a
5	Gasket	PTFE
6	Spring	304 S.S.
7	Steel Ball	304 S.S.
8	Packing	PTFE
9	Packing Bushing	ASTM A276 410
10	Nut	ASTM A193 Gr.B7
11	Retaining Ring	304 S.S.
12	Lever	ASTM A216 Gr.WCB
13	Gauge Block	AISI 1010Zinc-coated
14	Packing Gland	ASTM A216 Gr.WCB
15	Body Gasket	PTFE
16	Bonnet	ASTM A216 Gr.WCB
17	Stud	ASTM A193 Gr.B7
18	Nut	ASTM A194 Gr.2H



Dimensions & Weights

Class 150

	NPS(in)	1/2	3/4	1	1-1/2	2	3	4	6	8
Full bore	D(mm)	13	19	25	38	51	64	76	102	203
	L(mm)	108	117	127	165	178	190	229	394	457
	H(mm)	61	66	76	95	142	156	181	270	345
	Do(mm)	130	130	160	230	400	400	700	300*	300*
	Weight(kg)	2.4	3.3	4.8	8.2	15.6	19.8	32.0	94.0	162.0
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2	4*3	6*4	8*6	10*8
	L(mm)	117	127	165	178	190	229	267	292	330
	D(mm)	19	25	38	63	76	102	152	203	254
	H(mm)	82	85	100	120	153	162	191	290	340
	Do(mm)	130	130	160	230	400	400	460	300*	300*
d(mm)	13	19	25	51	63	76	105	152	203	
Weight(kg)	2.6	4.5	6.0	14.6	19.0	32.5	58.0	117.0	160.0	

Class 300

	NPS(in)	1/2	3/4	1	1-1/2	2	3	4	6	8
Full bore	D(mm)	13	19	25	38	51	64	76	102	203
	L(mm)	140	152	165	190	216	241	305	403	419
	H(mm)	62	68	80	100	148	162	188	283	360
	Do(mm)	150	150	180	250	400	400	700	300*	400*
	Weight(kg)	3.0	3.5	6.2	11.0	25.0	40.0	57.5	128.0	252.0
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2	4*3	6*4	8*6	10*8
	L(mm)	152	165	190	216	241	305	403	419	419
	D(mm)	19	25	38	63	76	102	152	203	254
	H(mm)	82	85	100	120	153	162	191	290	340
	Do(mm)	130	130	160	230	400	400	460	300*	300*
d(mm)	13	19	25	50	63	76	102	152	203	
Weight(kg)	3.5	5.5	10.0	23.5	29.0	55.0	80.0	162.0	162.0	

2PC BALL VALVE

Two-piece, Split Body, Side Entry Design, Floating Ball Cast Steel
Class 600/900/1500/2500

Class 600

	NPS(in)	1/2		3/4		1		1-1/2		2		3	
		L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	(Kg)	L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	(Kg)
Full bore	L(mm)	165	190	216	241	292	356						
	D(mm)	13	19	25	38	51	76						
	H(mm)	98	103	122	135	151	177						
	Dc(mm)	140	140	170	260	300	450						
	Weight(Kg)	3.0	4.8	6.5	12.0	15.0	28.0						
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2							
	L(mm)	190	216	241	292	356							
	D(mm)	19	25	38	51	76							
	H(mm)	98	103	122	135	151							
	Weight(Kg)	2.8	3.2	5.5	7.1	12.8							

Class 900

	NPS(in)	1/2		3/4		1		1-1/2		2		3	
		L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)	L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)
Full bore	L(mm)	216	229	254	305	368	381						
	D(mm)	13	19	25	38	51	76						
	H(mm)	115	122	125	157	178	208						
	Dc(mm)	160	230	230	400	400	500						
	Weight(Kg)	4.2	9.6	13.8	21.8	39.0	58.0						
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2							
	L(mm)	229	254	305	368	381							
	D(mm)	19	25	38	51	76							
	H(mm)	115	122	125	157	178							
	Weight(Kg)	5.6	6.8	12.0	16.5	24.0							

Class 1500

	NPS(in)	1/2		3/4		1		1-1/2		2		3	
		L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)	L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)
Full bore	L(mm)	216	229	254	305	368	470						
	D(mm)	13	19	25	38	49	74						
	H(mm)	75	91	108	133	150	160						
	Dc(mm)	140	180	250	400	500	500						
	Weight(Kg)	-	-	-	-	-	-						
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2							
	L(mm)	216	229	254	305	368	-						
	D(mm)	13	19	25	38	49	-						
	H(mm)	75	91	108	133	150	-						
	Weight(Kg)	-	-	-	-	-	-						

Class 2500

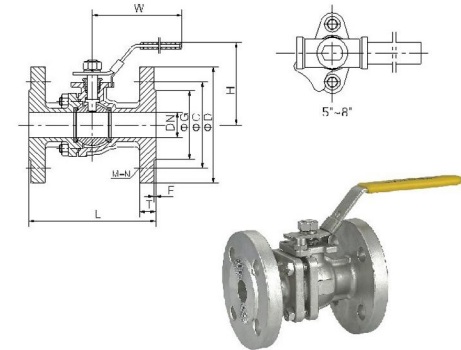
	NPS(in)	1/2		3/4		1		1-1/2		2		3	
		L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)	L(mm)	D(mm)	H(mm)	Dc(mm)	d(mm)	Weight(Kg)
Full bore	L(mm)	264	273	308	384	451	578						
	D(mm)	13	19	25	38	42	74						
	H(mm)	88	117	128	148	183	220						
	Dc(mm)	230	230	300	400	500	800						
	Weight(Kg)	-	-	-	-	-	-						
Reduced bore	NPS(in)	3/4*1/2	1*3/4	1-1/2*1	2*1-1/2	3*2							
	L(mm)	273	308	384	451	578	-						
	D(mm)	13	19	25	38	42	-						
	H(mm)	88	117	128	148	183	-						
	Weight(Kg)	-	-	-	-	-	-						

DIN BALL VALVE

2PC, DIN PN1.6/4.0MPa

Features

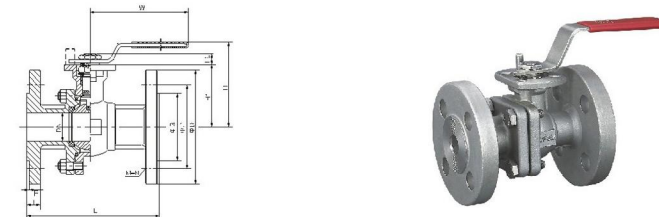
Size: 1/2" - 8"
Material: CF8M (S.S 316, 1.4408), CF8(SS 304, 1.4308)
Investment casting body.
Face to face: DIN 3202 F4/F5
Flanged end: DIN 2533
Anti-static and fire safe device.
Locking Device available.
Suitable medium: water, oil, air and Some corrosive liquids.
Pneumatic operated available.



Main Dimensions

(Low mount pad)

Size	DN(mm)	D	C	G	T	F	L	W	H	M-N	ISO 5211
1/2"	15	95	65	45	14	2	115	115	73	4-14	F04
3/4"	20	105	75	58	16	2	120	135	74.5	4-14	F04
1"	25	115	85	68	16	2	125	135	81.5	4-14	F04
1 1/4"	32	140	100	78	16	2	130	150	90	4-18	F04
1 1/2"	40	150	110	88	16	3	140	184	94	4-18	F05
2"	50	165	125	102	20	3	150	215	123	4-18	F07
2 1/2"	65	185	145	122	18	3	170	265	141	4-18	F07
3"	80	200	160	138	20	3	180	265	148	8-18	F07
4"	100	220	180	158	20	3	190	315	175	8-18	F07/F10
5"	125	250	210	188	22	3	325	497	262	8-18	F12
6"	150	285	240	212	22	3	350	545	293	8-22	F12
8"	200	340	295	268	24	3	400	745	345	12-22	F12



Main Dimensions

(Low mount pad)

Size	DN(mm)	D	C	G	T	L	W	H	H1	H2	M-N	ISO 5211
1/2"	15	95	65	45	16	115	120	74	48	8	4-14	F03/F04
3/4"	20	105	75	58	18	120	120	85	54	9.5	4-14	F03/F04
1"	25	115	85	68	18	125	137	89	59	9.5	4-14	F04/F05
1 1/4"	32	140	100	78	18	130	187	106	72	10	4-18	F04/F05
1 1/2"	40	150	110	88	18	140	187	112	82	14	4-18	F05/F07
2"	50	165	125	102	20	150	187	115	87	14	4-18	F05/F07
2 1/2"	65	185	145	122	18	170	315	175	102	18.5	4-18	F07/F10
3"	80	200	160	138	20	180	315	185	111	18.5	8-18	F07/F10
4"	100	220	180	158	20	190	315	212	138	18.5	8-18	F07/F10

DIN LIFT TYPE CHECK VALVE

DIN PN16/25/40, Cast Steel, Lift Disc, Bolt Bonnet

Features

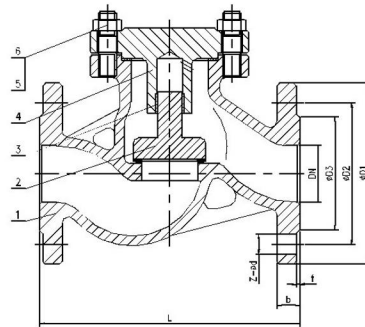
- 1、Spring lift disc
- 2、DIN PN1.6/2.5/4.0MPa
- 3、Face to face: DIN 3202
- 4、Flanged end: DIN 2543~2546
- 5、Check and test: DIN3230~75



Parts List

Parts	Body/Bonnet	Hoist Parts	Sealing surface	Bolt parts
Material	GS-C25	2Cr13	2Cr13/STL	Carbon

PN	1.6MPa	2.5MPa	4.0MPa
Shell Strength	2.4MPa	3.8MPa	6.0MPa
Seal test	1.8MPa	2.8MPa	4.4MPa
Suitable temperature	-20~350°C		
Applicable medium	Water, steam, oil, etc.		



Main Dimension & Weight (PN16/25/40)

DN	L	H	Kv	Weight(kg)		
				PN16	PN25	PN40
15	130	70	5.7	2.4	3.5	3.8
20	150	70	7.8	3.0	4.4	4.9
25	160	80	11.8	3.8	5.0	5.9
32	180	80	17.9	5.7	6.0	7.1
40	200	85	27.5	7.4	8.0	10.4
50	230	95	48.0	10.3	11.0	12.3
65	290	110	77.6	15.2	16.0	22.7
80	310	130	109.0	20.4	21.0	28.5
100	350	155	168.0	31.0	32.0	40.0
125	400	165	251.0	49.0	51.0	64.0
150	480	215	289.0	69.0	70.0	90.0
200	600	285	664.0	132.0	136.0	170.0
250	730	325	1017.0	198.0	218.0	240.0
300	850	365	1446.0	278.0	330.0	370.0

DIN GLOBE VALVE

Cast Steel Plug Disc, Flanged End or BW End DIN PN16/25/40

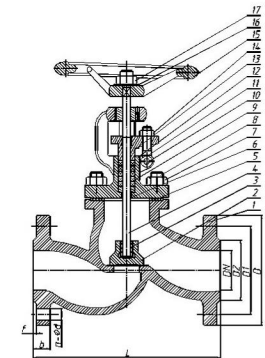
Features

- Valve design and manufacture standard: DIN3556-82;
Face to face: DIN3202;
Flange standard: DIN2543- DIN2546;
valve and check test: DIN3230-75

Parts List

Body/Bonnet	Stem	Hoist Parts	Sealing surface
GS C25	SS410	410	410+STL

Parts	1.6MPa	2.5MPa	4.0MPa
Shell Strength	2.4MPa	3.8MPa	6.0MPa
Seal test	1.8MPa	2.8MPa	4.4MPa
Suitable temperature	-20~350°C		
Applicable medium	Water, steam, oil, etc.		



Dimensions & Weights

DN	L	H	W		Weight(kg)		
			PN16 25	PN16 40	PN16	PN25	PN40
15	130	191	120	140	3.7	4.3	4.3
20	150	191	120	140	4.4	4.8	4.8
25	160	197	140	140	5.1	6.3	6.3
32	180	200	140	160	7.5	7.8	7.8
40	200	218	160	180	8.8	10.3	10.3
50	230	220	180	180	12.2	12.6	12.6
65	290	238	180	200	16.1	19.0	19.0
80	310	257	200	250	21.4	25.0	25.0
100	350	340	250	300	33.0	35.0	35.0
125	400	260	300	350	51.0	56.0	56.0
150	480	390	300	350	69.0	74.0	74.0
200	600	530	400	450	105.0	144.0	160.0
250	730	665	520	520	180.0	238.0	260.0
300	850	720	520	520	265.0	339.0	370.0

WAFER SPRING CHECK VALVE

Wafer Spring Check Valve Wafer Body, Spring Lift Disc, Cast Steel

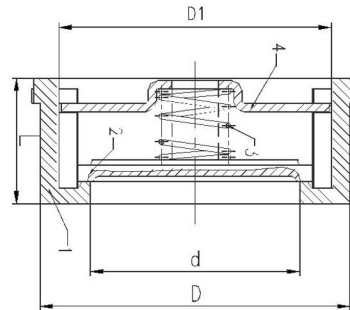
Design & Manufacture Standard

Design & Manufacture as per ASME B16.34, API 594, API 6D
 Connection ends dimension as per ASME B16.5, ASME B16.47
 Face to face dimension as per API 594, API 6D
 Inspection and test as per API 598



Part List

No.	Part name	Material
1	Body	WCB, CF8, CF8M, CF3, CF3M
2	Plate	WCB, CF8, CF8M, CF3, CF3M
3	Spring	INCOMEL, 17-7PH
4	Valve shaft	F6a, 304, 316, 304L, 316L, 17-7PH



Dimension & Weight

Size	Class150			Class300			Class600			Class900		
	L	D	WT	L	D	WT	L	D	WT	L	D	WT
inch	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg
1/2	25	46	0.28	25	52	0.3	26	52	0.4	25	62	0.6
3/4	31.5	56	0.42	31.5	65	0.46	31.5	65	0.8	31.5	69	0.9
1	35.5	65	0.56	35.5	72	0.6	35.5	72	1.0	35.5	77	1.2
1-1/4	40	74	0.75	40	81	0.8	40	81	1.3	40	87	1.5
1-1/2	45	84	1.3	45	94	1.5	45	94	1.8	45	97	2.0
2	56	103	2.1	56	110	2.4	53	110	2.8	56	140	5.5
2-1/2	63	122	2.8	63	128	3.0	63	128	4	63	162	7.5
3	71	135	3.6	71	147	4.0	71	147	0	71	165	8
4	80	173	4.8	80	179	5.5	80	191	11	80	204	14
5	110	195	12	110	214	13	110	239	25	110	245	27
6	125	220	17	125	129	22	125	264	32	125	286	41
8	160	277	19	160	305	36	160	318	52	160	356	76

WAFER DUAL PLATE CHECK VALVE

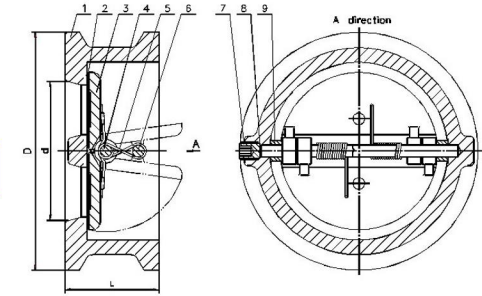
Wafer Body, Dual Plate, Cast Steel, Class150/300/600/900/1500

Design & manufacture standard

Design & manufacture as per ASME B16.34, API594, API6D
 connection ends dimension as per ASME B16.5, ASME B16.47
 face to face dimension as Per API594, API6D
 Inspection and test as per API598

Part List

NO.	Part name	Material
1	Body	WCB, CF8, CF8M, CF3, CF3M
2	plate	WCB, CF8, CF8M, CF3, CF3M
3	spring	INCONEL, 17-7PH
4	valve shaft	F6a/304/316/304L/316L/17-7PH



Dimension & Weight

Size	Class150			Class300			Class600			Class900			Class1500		
	L	D	WT	L	D	WT	L	D	WT	L	D	WT	L	D	WT
inch	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg
2	60	103	2	60	110	3	60	110	4	70	140	8	70	140	8
2-1/2	67	122	3	67	128	4	67	128	5	83	162	11	83	162	11
3	73	135	4	73	147	6	73	147	8	83	165	14	83	172	19
4	73	173	6	73	179	8	79	191	11	102	204	20	102	207	26
5	86	195	8	86	214	15	105	239	20	110	245	30	110	252	51
6	98	220	13	98	249	18	136	264	26	159	286	42	159	280	68
8	127	277	25	127	305	31	165	318	55	206	356	84	206	350	130
10	146	337	39	146	359	51	213	398	95	241	432	145	248	433	210
12	181	407	54	181	420	77	229	455	140	292	495	220	305	518	384
14	184	448	80	222	483	117	273	490	223	356	518	350	356	576	550
16	191	512	117	232	537	190	305	562	360	384	572	470	384	639	635
18	203	547	138	264	594	200	362	610	395	451	635	605	-	-	-
20	219	604	163	292	652	265	368	680	518	451	695	820	-	-	-
24	222	715	331	318	772	410	438	786	836	495	835	1050	-	-	-
28	305	773	380	-	-	-	-	-	-	-	-	-	-	-	-
30	305	824	425	368	882	660	-	-	-	-	-	-	-	-	-
32	305	878	560	-	-	-	-	-	-	-	-	-	-	-	-