



Cast Steel & Stainless Steel Swing & Wafer Type Check Valves

Swing Check Valve, BB, CS

Design

LEAD cast steel check valves are designed and manufactured to provide maximum service life and dependability. All check valves meet the design requirements of American Petroleum Institute standard API600 & 6D, BS EN 13709 and generally conform to American Society of Mechanical Engineers standard ASME B16.34. Valves are available in a complete range of body/cover materials and trims.

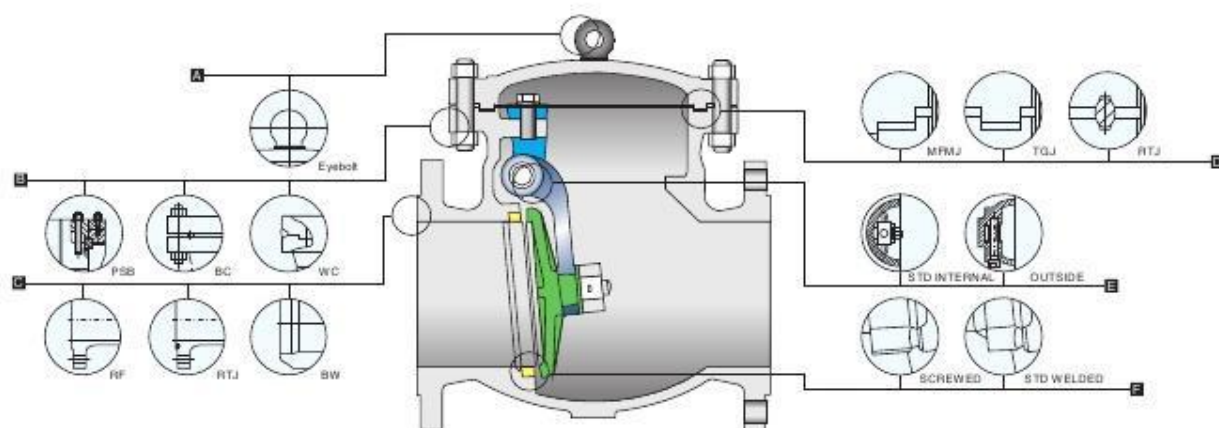
Ranges of Materials

Standard body/cover materials include nine grades of carbon, low alloy and stainless steels, for special applications they can be supplied in other grades of alloy and stainless steel, there's a full range of trim materials to match any service optional packing and gasket materials are available for a full range of service conditions.

Available Modifications For LEAD Cast Steel Valves

Trim changes
End connection modifications
Packing and gasket changes
Operator mounting
Handwheel extensions

Pressure equalizing
Customer specified coatings
Weld end bore changes
Oxygen & chlorine cleaning & packaging



A Eyebolt

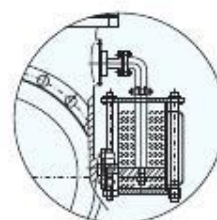
For 150Lb-8", 300Lb-8", 600Lb-6", 900Lb/1500Lb/2500Lb-4" & over.

B BC

Bolted cover, welded cover and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.

C End Connections

A choice of flanged, RTJ flanged or butt welding end for piping flexibility.



D Body-to-Cover Joint

A male and female joint or tongue and groove joint is used 150Lb to 600Lb valves. Ring joint is used in the body to cover connection in 900Lb & higher rated valves.

E Outside Lever And Weight

All external hinge pin swing check valves 12" and smaller are available with an optional outside lever and weight, internal hinge available with all swing check valves.

F Seat Rings

Separate heavy duty, full ported rings for easy maintenance. Screwed or welded connection into body.

HCU weighted mechanical accumulator

This design can be used to either dampen or assist closing of the check valve disc depending on orientation. by using the hydraulic control unit to buffer action the disc, the valve opens at lower flow rates.

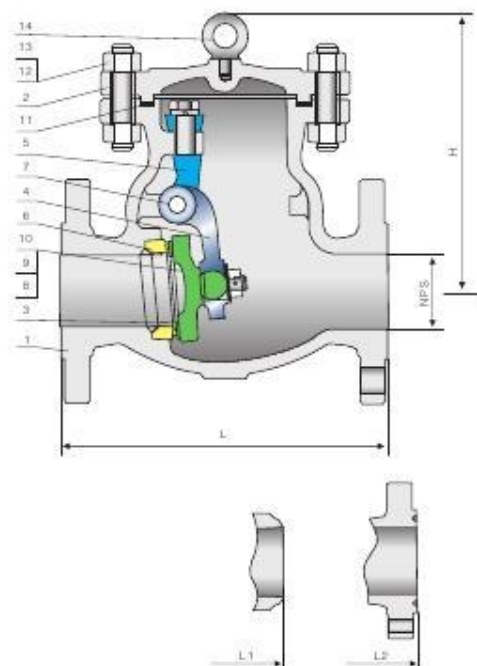
Swing, Cast Steel Check Valve 150Lb/300Lb

Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598/API 6D

Design descriptions:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- RENEWABLE SEAT RINGS
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	ASTM Materials		
		Carbon Steel	1 1/2Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Cover	A216-WCB	A217-WC6	A352-LCB
3	Disc ¹⁾	A105-CR13	A182-F11+HF	A350-LF2+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Fork Part	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Washer	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-7	Carbon Steel
10	Disc Nut Pin	Carbon Steel	A276-420	Carbon Steel
11	Gasket	Spiral Wound(Graphite+304)		
12	Stud	A193-B7	A193-B16	A320-L7
13	Stud Nut	A194-2H	A194-7	A194-4
14	Eyebolt ²⁾	Carbon Steel		

Note:1)Cast steel disc for NPS 4" and above.

2)NPS 6" & larger.

3)Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

Dimensional datas of ANSI Class 150Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	900	mm
L/L1 (RF/BW)	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	51.00	57.00	60.00	77.00	in
	203	216	241	292	356	495	622	699	787	864	978	978	1295	1295	1448	1524	1956	mm
L2 (RTJ)	8.50	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50	-	-	-	-	in
	216	229	254	305	368	508	635	711	800	876	991	991	1308	-	-	-	-	mm
H	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	37.00	37.00	38.62	48.00	in
	152	165	175	204	293	353	390	432	475	525	582	627	883	940	940	980	1220	mm
wt(kg)	14	20	25	40	71	118	177	263	353	542	632	855	970	1600	1600	1990	2760	RF/RTJ
	10	12	17	29	57	96	143	227	295	468	552	755	831	1420	1420	1760	2230	BW

Dimensional datas of ANSI Class 300Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	900	mm
L/L1 (RF/BW)	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	53.00	59.00	62.75	82.00	in
	267	292	318	356	445	533	622	711	838	864	978	1016	1346	1346	1499	1594	2083	mm
L2 (RTJ)	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	54.00	60.00	63.75	-	in
	283	308	333	371	460	549	638	727	854	879	994	1035	1368	1372	1524	1619	-	mm
H	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	35.88	37.00	38.62	48.00	in
	152	165	175	204	292	353	390	432	475	525	582	627	883	910	940	980	1220	mm
wt(kg)	16	23	29	46	82	136	204	302	405	625	730	985	1115	1465	1840	2290	3180	RF/RTJ
	11	13	18	31	61	103	155	245	315	503	593	812	895	1205	1525	1895	2395	BW

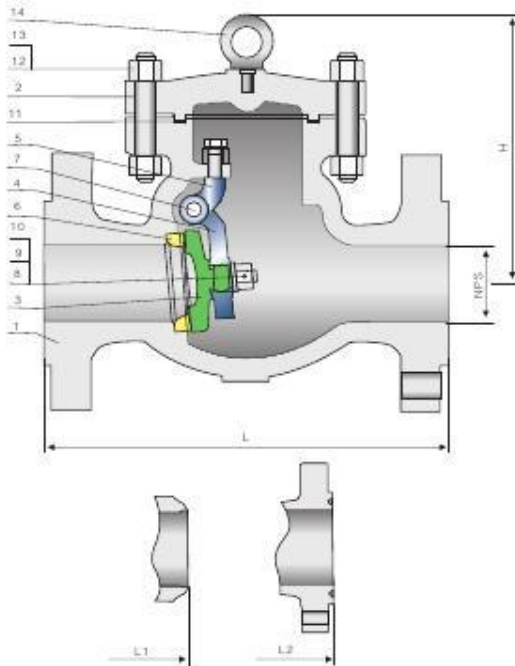
Swing, Cast Steel Check Valve 600Lb/900Lb

Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598/API 6D

Design descriptions:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- RENEWABLE SEAT RINGS
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/2Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Cover	A216-WCB	A217-WC6	A352-LCB
3	Disc ⁽¹⁾	A216-WCB+CR13	A182-F11+HF	A350-LCB+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Fork Part	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Washer	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-7	Carbon Steel
10	Disc Nut Pin	Carbon Steel	A276-420	Carbon Steel
11	Gasket	Spiral Wound (Graphite+304)		
12	Stud	A193-B7	A193-B16	A320-L7
13	Stud Nut	A194-2H	A194-7	A194-4
14	Eyebolt ⁽²⁾	Carbon Steel		

Note: 1) NPS 6" & larger

2) Disc and seal ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

Dimensional datas of ANSI Class 600Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L/L1 (RF/BW)	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00	in
	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	mm
L2 (RTJ)	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	in
	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	mm
H	7.50	8.00	8.75	10.00	14.50	17.50	19.25	21.38	23.38	25.75	28.75	31.00	43.50	in
	190	205	222	255	368	445	490	540	595	655	730	785	1105	mm
wt(kg)	24	35	44	70	125	207	310	460	615	945	1105	1495	1695	RF/RTJ
	16	19	26	44	87	147	220	350	452	720	845	1160	1280	BW

Dimensional datas of ANSI Class 900Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L/L1 (RF/BW)	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	40.50	44.50	48.00	52.00	-	in
	368	419	381	457	610	737	838	965	1029	1130	1219	1321	-	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.50	52.50	-	in
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	-	mm
H	9.50	10.00	11.00	12.50	18.12	22.00	24.00	26.50	29.38	32.00	33.50	38.75	-	in
	240	256	278	320	460	560	610	675	745	815	850	985	-	mm
wt(kg)	37	54	68	109	195	321	481	711	956	1468	1870	2316	-	RF/RTJ
	21	25	34	58	115	194	290	461	597	950	1210	1533	-	BW

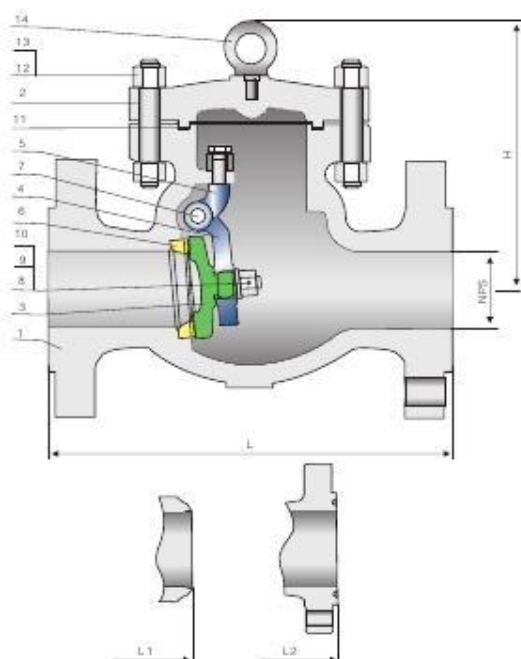
Swing, Cast Steel Check Valve 1500Lb/2500Lb

Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598/API 6D

Design descriptions:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- RENEWABLE SEAT RINGS
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	ASTM Materials		
		Carbon Steel	1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Cover	A216-WCB	A217-WC6	A352-LCB
3	Disc ¹⁾	A216-WCB+CR13	A182-F11+HF	A350-LCB+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Fork Part	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Washer	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-7	Carbon Steel
10	Disc Nut Pin	Carbon Steel	A276-420	Carbon Steel
11	Gasket	Spiral Wound(Graphite+304)		
12	Stud	A193-B7	A193-B16	A320-L7
13	Stud Nut	A194-2H	A194-7	A194-4
14	Eyebolt ²⁾	Carbon Steel		

Note 1) NPS 6" & larger.

2) Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

Dimensional datas of ANSI Class1500Lb

NPS	DN	L/L1 (RF/BW)		L2 (RTJ)		H		WT(kg)	
2	50	14.50	368	14.62	371	9.50	240	40	29
2 1/2	65	16.50	419	16.62	422	10.00	256	63	47
3	80	18.50	470	18.62	473	13.00	330	70	49
4	100	21.50	546	21.62	549	14.75	375	115	84
6	150	27.75	705	28.00	711	18.88	480	250	152
8	200	32.75	832	33.12	841	23.50	595	470	310
10	250	39.00	991	39.38	1000	26.00	660	740	470
12	300	44.50	1130	45.12	1146	29.12	740	1100	710
14	350	49.50	1257	50.25	1276	30.88	785	1410	910
16	400	54.50	1384	55.38	1407	32.88	835	1600	1100
in	mm	in	mm	in	mm	in	mm	RF/RTJ	BW

Dimensional datas of ANSI Class2500Lb

NPS	DN	L/L1 (RF/BW)		L2 (RTJ)		H		WT(kg)	
2	50	17.75	451	17.88	454	10.75	275	50	35
2 1/2	65	20.00	508	20.25	514	13.25	335	76	55
3	80	22.75	578	23.00	584	13.75	350	85	68
4	100	26.50	673	26.88	683	15.12	385	165	115
6	150	36.00	914	36.50	927	19.50	495	460	225
8	200	40.25	1022	40.88	1038	24.62	625	900	580
10	250	50.00	1270	50.88	1292	28.00	712	1300	860
12	300	56.00	1422	56.88	1445	35.62	905	1800	1150
14	350	-	-	-	-	-	-	-	-
16	400	-	-	-	-	-	-	-	-
in	mm	in	mm	in	mm	in	mm	mm	mm

Wafer Cast Steel Check Valve 150Lb/300Lb

Applicable Standards:

- STEEL CHECK VALVES, API 594/API 6D
- STEEL CHECK VALVES, ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- INSPECTION AND TEST, API 598/API 6D

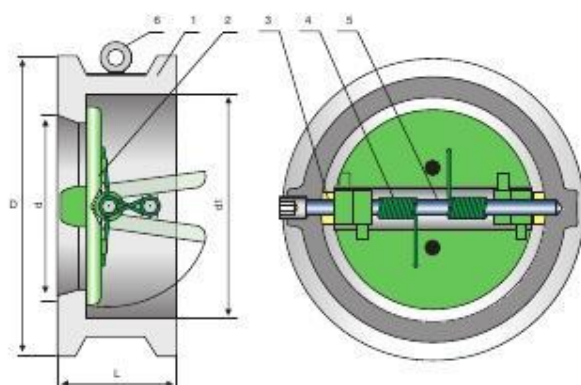
Design descriptions:

- ONE PIECE BODY
- BUTTERFLY SWING TYPE
- DUAL-PLATE DISC, LONG-PATTERN
- RENEWABLE SPLIT DISC
- HORIZONTAL OR VERTICAL SERVICE
- WAFER ENDS
- AVAILABLE WITH FLANGED ENDS

Materials of parts

No	Part Name	ASTM Materials		
		Carbon Steel	18Cr-9NiMo	Carbon Steel
1	Body	A216-WCB	A351-CF8M	A352-LCB
2	Plate	A216-WCB+CR13	A351-CF8M+HF	A350-LCB+CR13
3	Stop Pin	A276-420	A276-304	A276-420
4	Back Spring	A313-304	A313-316	A313-304
5	Hinge Pin	A276-420	A276-304	A276-420
6	Eyebolt ⁽²⁾	Carbon Steel		

Note: 1) NPS 8" & larger.



Dimensional datas of ANSI Class 150Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L	2.38	2.62	2.88	2.88	3.88	5.00	5.75	7.12	7.25	7.50	8.00	8.62	8.75	in
	60	67	73	73	98	127	146	181	184	191	203	219	222	mm
D	4.00	4.88	5.38	6.75	8.62	10.88	13.25	16.00	17.62	20.12	21.50	23.75	28.12	in
	103	122	135	173	220	277	337	407	448	512	547	604	715	mm
d	2.00	2.50	3.25	4.00	6.00	8.00	10.00	12.00	13.75	15.75	17.75	19.75	23.62	in
	51	65	80	102	152	203	254	305	350	400	450	500	600	mm
D1	2.25	2.88	3.50	4.25	6.25	8.25	10.50	12.12	14.00	16.00	18.00	19.88	23.75	in
	56	73	88	108	160	210	266	310	355	405	455	505	605	mm
WT	2	3	4	6	13	25	39	54	80	117	138	163	331	kg

Dimensional datas of ANSI Class 300Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L	2.38	2.62	2.88	2.88	3.88	5.00	5.75	7.12	8.75	9.12	10.38	11.50	12.50	in
	60	67	73	73	98	127	146	181	222	232	264	292	318	mm
D	4.25	5.00	5.75	7.00	9.88	12.00	14.12	16.50	19.00	21.12	23.38	25.62	30.38	in
	110	128	147	179	249	305	359	420	483	537	594	652	772	mm
d	2.00	2.50	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	24.00	in
	51	65	80	102	152	8.25	254	305	350	400	450	500	600	mm
D1	2.25	2.88	3.50	4.25	6.38	203	10.50	12.25	14.00	16.00	18.00	20.00	24.00	in
	58	73	88	108	160	210	266	310	355	405	455	505	608	mm
WT	3	4	6	8	18	31	51	77	117	190	200	265	410	kg

Wafer Cast Steel Check Valve 600Lb/900Lb

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- END FLANGES, ASME B16.5
- INSPECTION AND TEST, API 598/API 6D

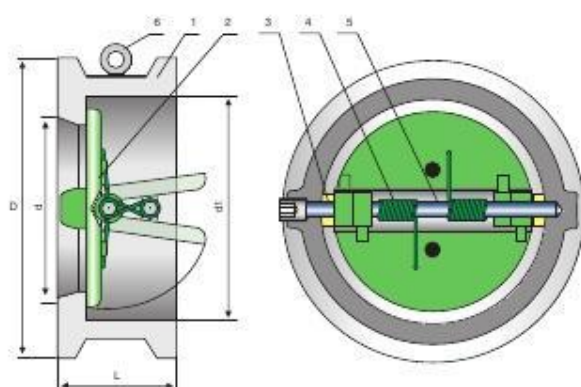
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Materials of parts

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2	Plate	A216-WCB+CR13	A351-CF8M+HF	A350-LCB+CR13
3	Stop Pin	A276-420	A276-304	A276-420
4	Back Spring	A313-304	A313-316	A313-304
5	Hinge Pin	A276-420	A276-304	A276-420
6	Eyebolt ⁽²⁾	Carbon Steel		

Note: 1) NPS 2" & larger.



Dimensional datas of ANSI Class 600Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	in mm
L	2.38 60	2.62 67	2.88 73	3.12 79	5.38 137	6.50 165	8.38 213	9.00 229	10.75 273	12.00 305	in mm
D	4.38 110	5.00 128	5.75 147	7.50 191	10.38 264	12.50 318	15.62 398	17.88 455	19.25 490	22.12 562	in mm
d	2.00 51	2.50 65	3.00 80	4.00 102	6.00 152	7.88 200	9.88 250	12.00 305	13.25 337	15.25 387	in mm
D1	2.25 58	2.88 73	3.50 88	4.25 108	6.38 162	8.38 212	10.50 266	12.25 312	14.00 355	15.75 400	in mm
WT	4	5	8	11	26	55	95	140	223	360	kg

Dimensional datas of ANSI Class 900Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	in mm
L	2.75 70	3.25 83	3.25 83	4.00 102	6.25 159	8.12 206	9.50 241	11.50 292	- -	- -	in mm
D	5.50 140	6.38 162	6.50 165	8.00 204	11.25 286	14.00 356	17.00 432	19.50 495	- -	- -	in mm
d	2.00 51	2.50 62	3.00 80	4.00 102	6.00 152	7.88 200	9.88 250	12.00 305	- -	- -	in mm
D1	2.25 58	2.88 73	3.50 88	4.25 108	6.38 162	8.38 212	10.50 266	12.25 312	- -	- -	in mm
WT	8	11	14	20	42	84	145	220	- -	- -	kg

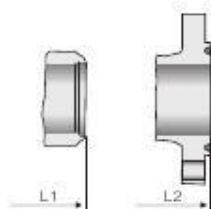
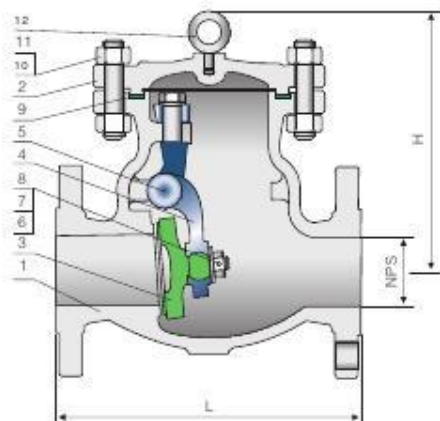
API 603 Corrosion-Resistant Valves Cast Stainless Steel Swing Check Valves 150Lb

Applicable Standards:

- STEEL CHECK VALVES, API 603
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598

Design descriptions:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- SEAT RINGS INTEGRAL WITH BODY
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Cover	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Hinge	A351-CF8	A351-CF8M	A351-CF3M
5	Hinge Pin	A276-304	A276-316	A276-316L
6	Disc Washer	A276-304	A276-316	A276-316L
7	Disc Nut	A193-B8	A193-B8M	A193-B8M
8	Disc Nut Pin	A276-304	A276-316	A276-316L
9	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
10	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
11	Bonnet Stud Nut	A194-B	A194-8M	A194-8M
12	Eyebolt ²⁾	A194-B	A194-8	A194-8

Note: 1) Spiral wound construction, Incon optional

2) NPS 6" & larger

3) Disc and seat integral with body may either be solid facing material or a base material equal to or better than body/bonnet material with facing as shown.

Dimensional datas

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	26 650	in mm
ANSI Class 150Lb																			
L/L1 (RF/BW)	4.25	4.62	5.00	6.50	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	-	in
	108	117	127	165	203	216	241	292	356	495	622	699	787	864	978	978	1295	-	mm
L2 (RTJ)	-	-	-	-	8.50	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50	-	in
	-	-	-	-	216	229	254	305	368	508	635	711	800	876	991	991	1308	-	mm
H	3.12	3.38	3.88	4.38	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	-	in
	80	85	100	110	152	165	175	204	293	353	390	432	475	525	582	627	883	-	mm
WT(kg)	2.5	3.5	5	7.5	14	20	25	40	71	118	177	263	353	542	632	855	970	-	BW
	2	3	3.5	5.5	10	12	17	29	57	96	143	227	295	468	552	755	831	-	RF/RTJ

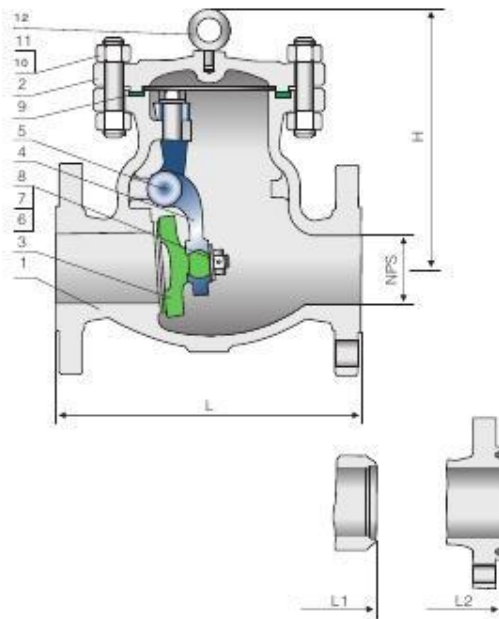
API 603 Corrosion-Resistant Valves Cast Stainless Steel Swing Check Valves 300Lb/600Lb

Applicable Standards:

- STEEL CHECK VALVES, API 603
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598

Design descriptions:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- SEAT RINGS INTEGRAL WITH BODY
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Cover	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Hinge	A351-CF8	A351-CF8M	A351-CF3M
5	Hinge Pin	A276-304	A276-316	A276-316L
6	Disc Washer	A276-304	A276-316	A276-316L
7	Disc Nut	A193-B8	A193-B8M	A193-B8M
8	Disc Nut Pin	A276-304	A276-316	A276-316L
9	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
10	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
11	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
12	Eyebolt ²⁾	A194-8	A194-8	A194-8

Note: 1) Spiral wound construction, teflon optional.

2) Nps 6" & larger

3) Disc and seat integral with body may either be solid facing material or a base material equal to or better than body/bonnet. Material with facing as shown.

Dimensional datas of ANSI Class 300Lb

NPS DN	2/1	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	in
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	650	mm
L/L1 (RF/BW)	6.00	7.00	8.00	9.00	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	—	in
	152	178	203	229	267	292	318	356	445	533	622	711	838	864	978	1016	1346	—	mm
L2 (RTJ)	—	—	—	—	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	—	in
	—	—	—	—	283	308	333	371	460	549	638	727	854	879	994	1035	1368	—	mm
H	3.12	3.38	3.88	4.38	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	—	in
	80	85	100	110	152	165	175	204	293	353	390	432	457	525	582	627	883	—	mm
wt(kg)	3	4	6	10	16	23	29	46	82	136	204	302	405	625	730	985	1115	—	RF/RTJ
	2.5	3.5	5	7	11	13	18	31	61	103	155	245	315	503	593	812	895	—	BW

Dimensional datas of ANSI Class 600Lb

NPS DN	2/1	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	in
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	650	mm
L/L1 (RF/BW)	6.50	7.50	8.50	9.50	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00	—	in
	165	190	216	241	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	—	mm
L2 (RTJ)	—	—	—	—	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	—	in
	—	—	—	—	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	—	mm
H	3.38	3.50	4.50	5.50	7.50	8.00	8.75	10.00	14.50	17.50	19.25	21.38	23.38	25.75	28.75	31.00	43.50	—	in
	85	90	115	140	190	205	222	255	368	445	490	540	595	655	730	785	11305	—	mm
wt(kg)	5.5	7.5	12	15	24	35	44	70	125	207	310	460	615	945	1105	1495	1695	—	RF/RTJ
	4	6	8	12.5	16	19	26	44	87	147	220	350	452	720	845	1160	1280	—	BW