

Check Valve, Cast Steel, Swing



Design

SS VALVE 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/bonnet materials include nine grades of carbon, low alloy and stainless steel, 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 SS VALVE Steel Valves

Trim changes

End connection modifications

Packing and gasket change

Operator mounting

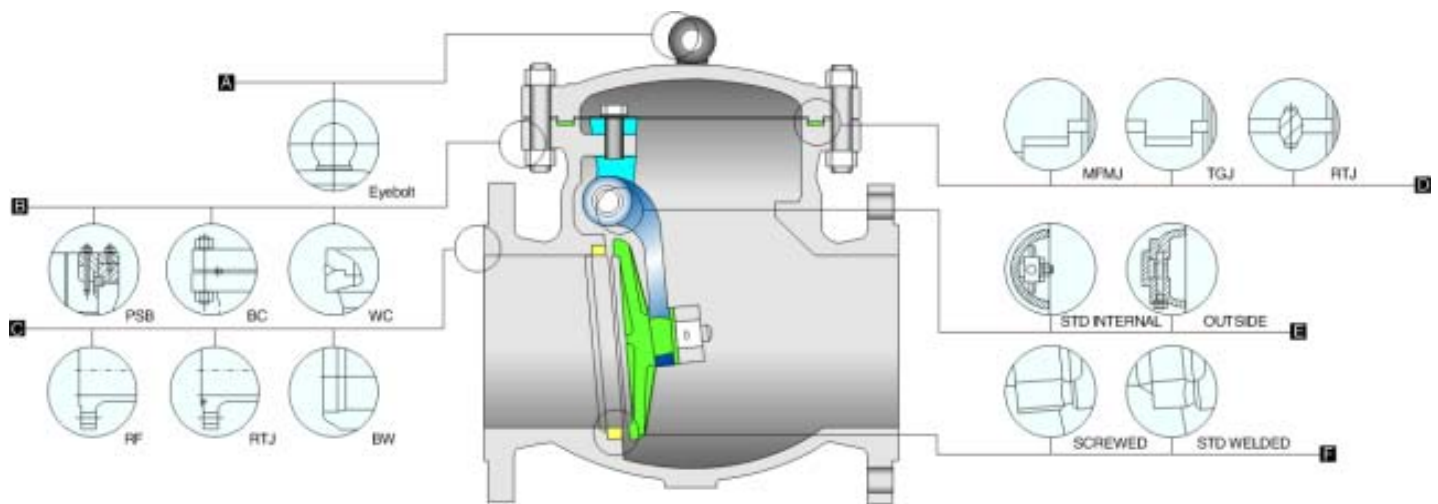
Handwheel extensions

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.

Swing, Cast Steel Check valve 150Lb/300Lb

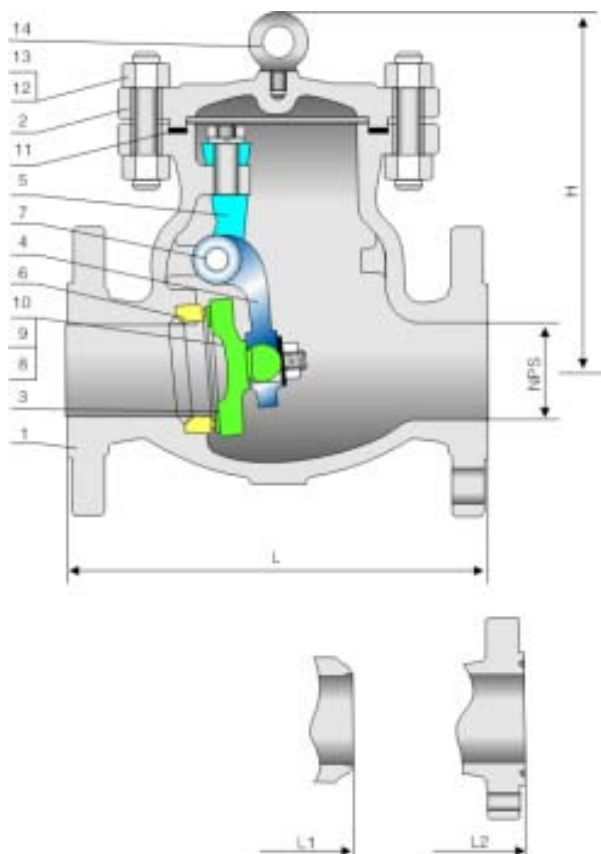


Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO14313
- 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 1½Cr - ½Mo
1	Body	A216-WCB	A352-LCB	A217-WC6
2	Cover	A216-WCB	A352-LCB	A217-WC6
3	Disc ¹⁾	A105-CR13	A350-LF2+CR13	A182-F11+HF
4	Hinge	A216-WCB	A352-LCB	A217-WC6
5	Fork Part	A216-WCB	A352-LCB	A217-WC6
6	Seat Ring	A105+CR13	A350-LF2+CR13	A182-F11+HF
7	Hinge Pin	A276-420	A276-420	A276-304
8	Disc Washer	Carbon Steel	Carbon Steel	A276-304
9	Disc Nut	Carbon Steel	Carbon Steel	A194-7
10	Disc Nut Pin	Carbon Steel	Carbon Steel	A276-420
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 (50)	2½ (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)	28 (700)	30 (750)	36 (900)	in (mm)
L/L1 (RF/BW)	8	8.5	9.5	11.5	14	19.5	24.5	27.5	31	34	38.5	38.5	51	51	57	60	77	in
	203	216	241	292	356	495	622	699	787	864	978	978	1295	1295	1448	1524	1956	mm
L2 (RTJ)	8.5	9	10	12	14.5	20	25	28	31.5	34.5	39	39	51.5	-	-	-	-	in
	216	229	254	305	368	508	635	711	800	876	991	991	1308	-	-	-	-	mm
H	6	6.5	6.88	8	11.5	13.88	15.38	17	18.75	20.62	22.88	24.62	34.75	37	37	38.62	48	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 (50)	2½ (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)	28 (700)	30 (750)	36 (900)	in (mm)
L/L1 (RF/BW)	10.5	11.5	12.5	14	17.5	21	24.5	28	33	34	38.5	40	53	53	59	62.75	82	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	60	63.75	-	in
	283	308	333	371	460	549	638	727	854	879	994	1035	1368	1372	1524	1619	-	mm
H	6	6.5	6.88	8	11.5	13.88	15.38	17	18.75	20.62	22.88	24.62	34.75	35.88	37	38.62	48	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

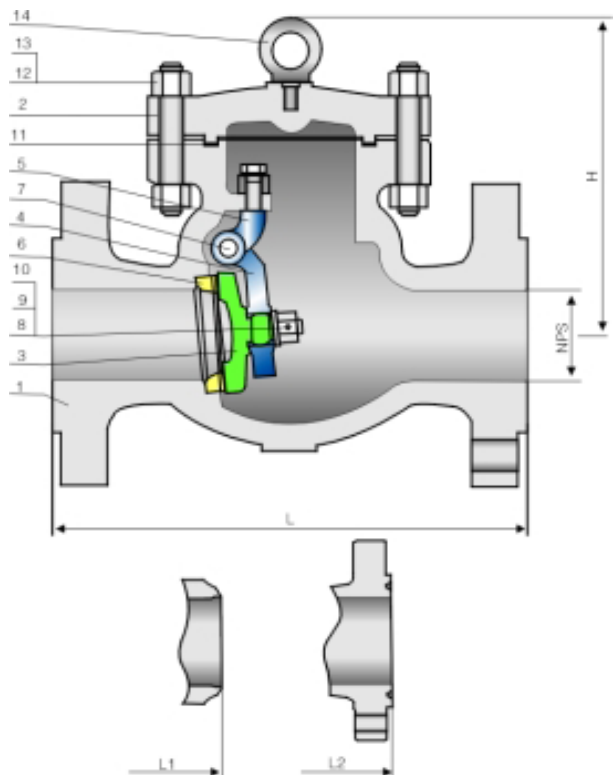


Applicable Standards:

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- STEEL CHECK VALVES, ISO14313
- 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

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- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

NO	Part Name	Carbon Steel		ASTM Materials
1	Body	A216-WCB	A352-LCB	A217-WC6
2	Cover	A216-WCB	A352-LCB	A217-WC6
3	Disc ¹⁾	A216-WCB+CR13	A350-LCB+CR13	A182-F11+HF
4	Hinge	A216-WCB	A352-LCB	A217-WC6
5	Fork Part	A216-WCB	A352-LCB	A217-WC6
6	Seat Ring	A105+CR13	A350-LF2+CR13	A182-F11+HF
7	Hinge Pin	A276-420	A276-420	A276-304
8	Disc Washer	Carbon Steel	Carbon Steel	A276-304
9	Disc Nut	Carbon Steel	Carbon Steel	A194-7
10	Disc Nut Pin	Carbon Steel	Carbon Steel	A276-420
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 class 600Lb

NPS DN	2 (50)	2½ (65)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)	18 (450)	20 (500)	24 (600)	in (mm)
L/L1 (RF/BW)	11.5	13	14	17	22	26	31	33	35	39	43	47	55	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	7.5	8	8.75	10	14.5	17.5	19.25	21.38	23.38	25.75	28.75	31	43.5	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 (50)	2½ (65)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)	18 (450)	20 (500)	24 (600)	in (mm)
L/L1 (RF/BW)	14.5	16.5	15	18	24	29	33	38	40.5	44.5	48	52	-	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	48.5	52.5	-	in
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	-	mm
H	9.5	10	11	12.5	18.12	22	24	26.5	29.38	32	33.5	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

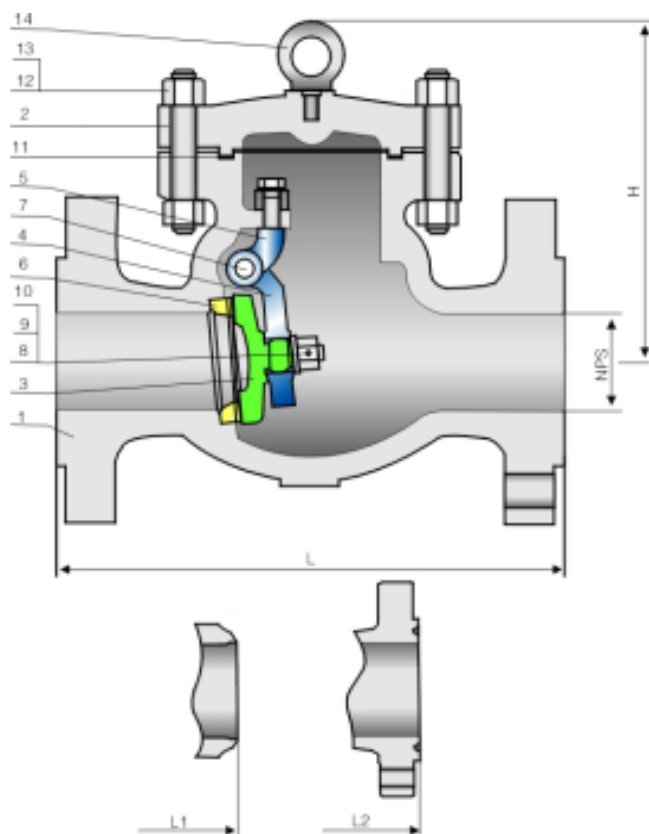


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Materials of parts

NO	Part Name	Carbon Steel		ASTM Materials 1¼Cr - ½Mo
1	Body	A216-WCB	A352-LCB	A217-WC6
2	Cover	A216-WCB	A352-LCB	A217-WC6
3	Disc ¹⁾	A216-WCB+CR13	A350-LCB+CR13	A182-F11+HF
4	Hinge	A216-WCB	A352-LCB	A217-WC6
5	Fork Part	A216-WCB	A352-LCB	A217-WC6
6	Seat Ring	A105+CR13	A350-LF2+CR13	A182-F11+HF
7	Hinge Pin	A276-420	A276-420	A276-304
8	Disc Washer	Carbon Steel	Carbon Steel	A276-304
9	Disc Nut	Carbon Steel	Carbon Steel	A194-7
10	Disc Nut Pin	Carbon Steel	Carbon Steel	A276-420
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 class 1500Lb

NPS	DN	L / L1 (RF / BW)		L2 (RTJ)		H		WT(kg)	
2	50	14.5	368	14.62	371	9.5	240	40	29
2½	65	16.5	419	16.62	422	10	256	63	47
3	80	18.5	470	18.62	473	13	330	70	49
4	100	21.5	546	21.62	549	14.75	375	115	84
6	150	27.75	705	28	711	18.88	480	250	152
8	200	32.75	832	33.12	841	23.5	595	470	310
10	250	39	991	39.38	1000	26	660	740	470
12	300	44.5	1130	45.12	1146	29.12	740	1100	710
14	350	49.5	1257	50.25	1276	30.88	785	1410	910
16	400	54.5	1384	55.38	1407	32.88	835	1600	1100
in	mm	in	mm	in	mm	in	mm	RF/RTJ	BW

Dimensional datas of ANSI class 2500Lb

NPS	DN	L / L1 (RF / BW)		L2 (RTJ)		H		WT(kg)	
2	50	17.75	451	17.88	454	10.75	275	50	35
2½	65	20	508	20.25	514	13.25	335	76	55
3	80	22.75	578	23	584	13.75	350	85	68
4	100	26.5	673	26.88	683	15.12	385	165	115
6	150	36	914	36.5	927	19.5	495	460	225
8	200	40.25	1022	40.88	1038	24.62	625	900	580
10	250	50	1270	50.88	1292	28	712	1300	860
12	300	56	1422	56.88	1445	35.62	905	1800	1150
14	350	-	-	-	-	-	-	-	-
16	400	-	-	-	-	-	-	-	-
in	mm	in	mm	in	mm	in	mm	mm	mm