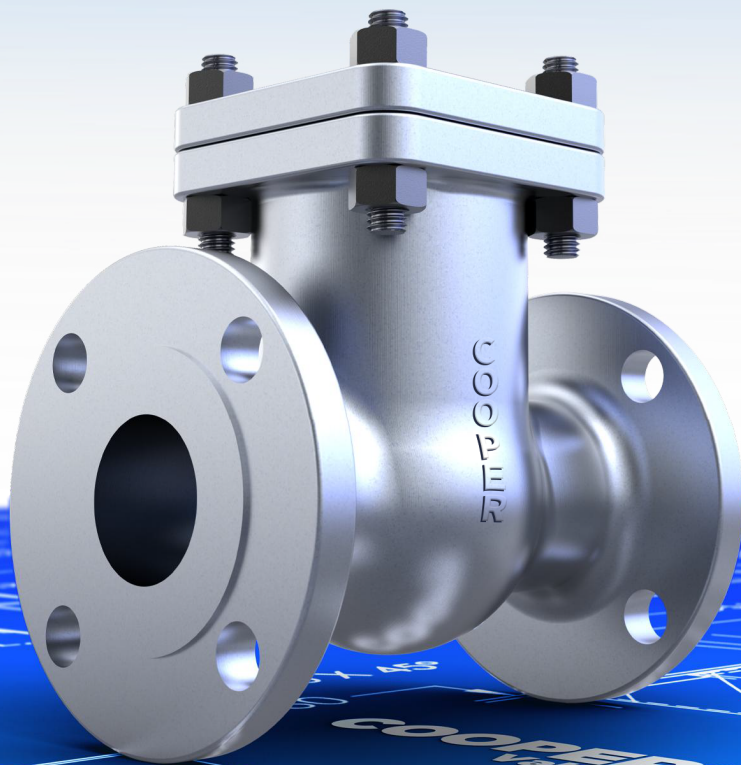




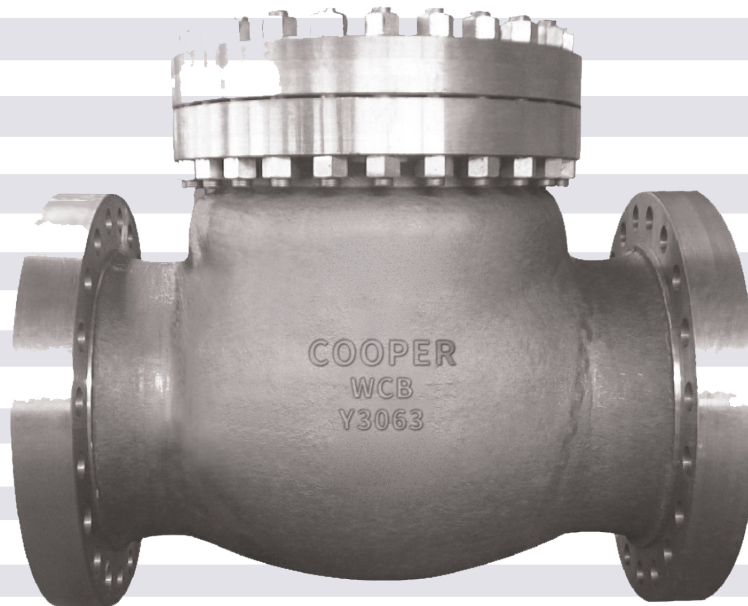
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## Check Valve



# Check Valve

The check valve can also be called as one-way valve and acts at preventing the medium in the pipeline from back-flow. It belongs to the category of automatic valve and is used mainly with the pipeline where the medium flows in one way in order to prevent any accident from happening. Along with different actions and working conditions, there are lift, swing, butterfly, diaphragm etc. several types and made of different materials, it can be separately used for water, steam, oil, nitric acid, acetic acid, oxidizing media, urea etc. multiple media.





# Swing Check Valve

## Design

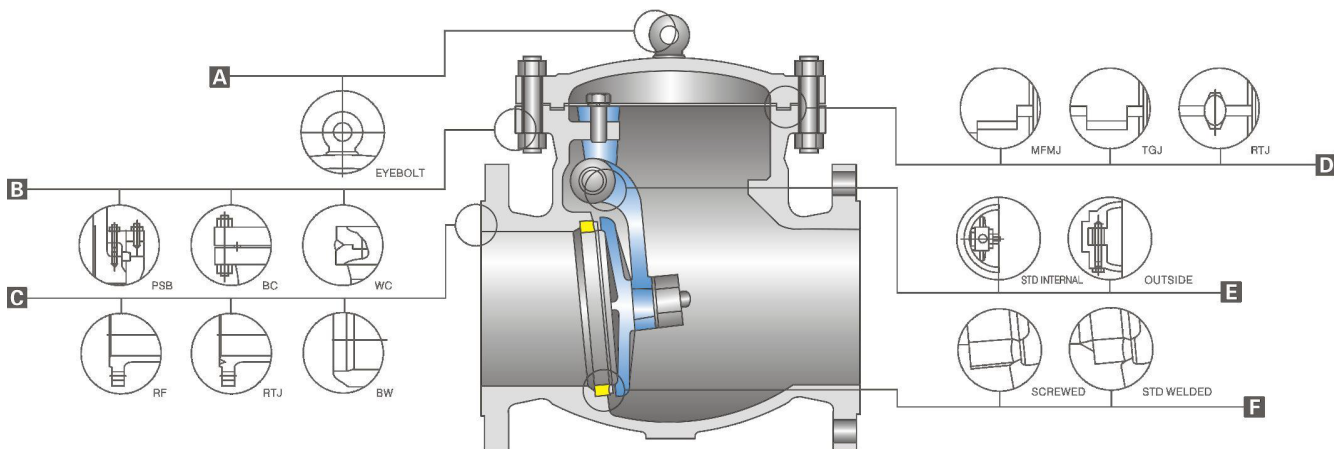
ADVANCED TECHNOLOGY cast steel check valve are designed and manufactured to provide maximum service life and dependability. All check valves meet the design requirements of American Petroleum Institute Standard API 600 & API 6D, BS 1868 and generally conform to American Society of Mechanical Engineers standard ASME B 16.34. Valves are available in a complete range of body/bonnet materials and trims.

## Range of Materials

Standard body/bonnet materials include 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 Modification for ADVANCED TECHNOLOGY 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 bonnet, Welding bonnet and pressure seal cover in services requiring frequent cycling or with high pressure/temperature variations.

### C End Connections

A choice of Flanged, RTJ flanged or Buttwelding 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.

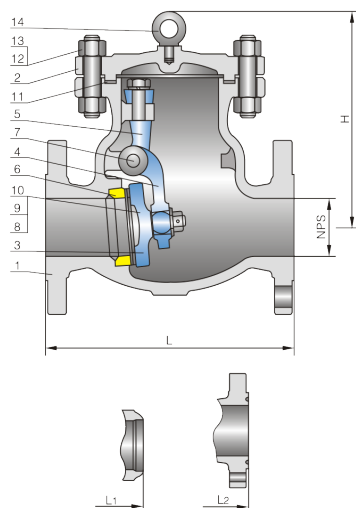
# Swing Check Valve 150Lb/300Lb

## Applicable Standards

- ★ STEEL CHECK VALVES, API 6D, BS1868
- ★ 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 Description

- ▲ BB. BOLTED COVER
- ▲ SWING TYPE, ANTI-ROTATION DISC
- ▲ RENEWABLE SEAT RINGS
- ▲ NON-PENETRATE DISC SHAFT
- ▲ HORIZONTAL OR VERTICAL SERVICE
- ▲ FLANGED OR BUTT WELDING ENDS



## Materials of Parts

No	Part Name	ASTM Material			
		Carbon Steel		Alloy Steel	Stainless Steel
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8
2	Cover	A216-WCB	A352-LCB	A217-WC6	A351-CF8
3	Disc <sup>1)</sup>	A105+Cr13	A350-LF2	A182-F11+HF	A276-304
4	Arm	A216-WCB	A352-LCB	A217-WC6	A351-CF8
5	End Frame	A216-WCB	A352-LCB	A217-WC6	A351-CF8
6	Seat Ring	A105+Cr13	A350-LF2	A182-F11+HF	A276-304
7	Hinge Pin	A276-420	A276-420	A276-304	A276-304
8	Disc Washer	Carbon Steel		A276-304	A351-CF8
9	Disc Nut	Carbon Steel		A194-7	A194-8
10	Disc Nut Pin	Carbon Steel		A276-420	A276-304
11	Gasket	(Graphite+304) <sup>2)</sup>		(Graphite+304) <sup>2)</sup>	(Graphite+316) <sup>2)</sup>
12	Stud	A193-B7	A320-L7	A193-B7	A193-B8
13	Nut	A194-2H	A194-4	A194-2H	A194-8
14	Eyebolt <sup>3)</sup>	Carbon Steel		A351-CF8	

Notes: 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.

## Dimensions Data ANSI Class 150Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
DN	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

## Dimensions Data ANSI Class 300Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
DN	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 Check Valve 600Lb/900Lb

## Applicable Standards

- ★ STEEL CHECK VALVES, API 6D, BS 1868
- ★ 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 Description

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

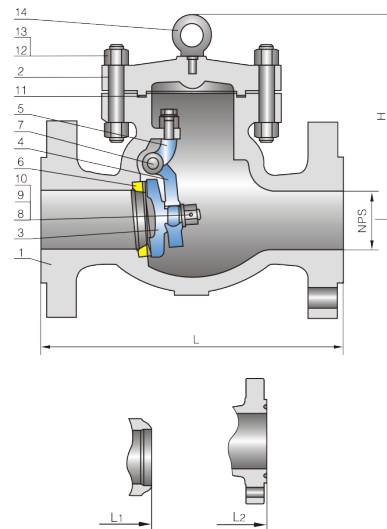
## Materials of Parts

No	Part Name	ASTM Material				
		Carbon Steel	Alloy Steel	Stainless Steel		
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Cover	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
3	Disc <sup>1)</sup>	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
4	Arm	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
5	End Frame	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
6	Seat Ring	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
7	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
8	Disc Washer	Carbon Steel	A276-304	A351-CF8	A351-CF8	A351-CF8M
9	Disc Nut	Carbon Steel	A194-7	A194-8	A194-8	A194-8
10	Disc Nut Pin	Carbon Steel	A276-420	A276-304	A276-304	A276-316
11	Gasket	(Graphite+304) <sup>2)</sup>		(Graphite+316) <sup>2)</sup>	(Graphite+304) <sup>2)</sup>	(Graphite+316) <sup>2)</sup>
12	Stud	A193-B7	A320-L7	A193-B7	A193-B8	A193-B8
13	Nut	A194-2H	A194-4	A194-2H	A194-8	A194-8
14	Eyebolt <sup>3)</sup>	Carbon Steel		A351-CF8		

Notes: 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.



## Dimensions Data ANSI Class 600Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
DN	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

## Dimensions Data ANSI Class 900Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
DN	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

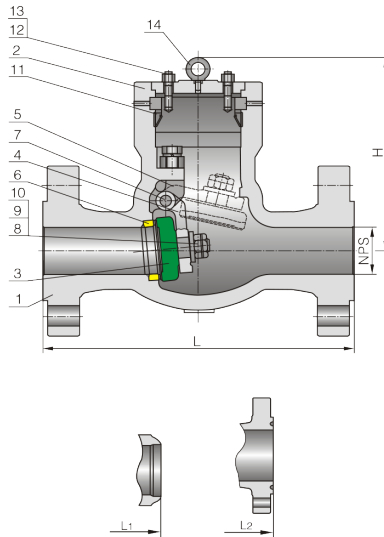
# Swing Check Valve 1500Lb/2500Lb

## Applicable Standards

- ★ STEEL CHECK VALVES, API 6D, BS1868
- ★ 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 Description

- ▲ PRESSURE SEAL
- ▲ 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 Material				
		Carbon Steel		Alloy Steel	Stainless Steel	
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Cover	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
3	Disc <sup>1)</sup>	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
4	Arm	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
5	End Frame	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
6	Seat Ring	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
7	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
8	Disc Washer	Carbon Steel		A276-304	A351-CF8	A351-CF8M
9	Disc Nut	Carbon Steel		A194-7	A194-8	A194-8
10	Disc Nut Pin	Carbon Steel		A276-420	A276-304	A276-316
11	Gasket	(Graphite+304) <sup>2)</sup>		(Graphite+316) <sup>2)</sup>	(Graphite+304) <sup>2)</sup>	(Graphite+316) <sup>2)</sup>
12	Stud	A193-B7	A320-L7	A193-B16	A193-B8	A193-B8
13	Nut	A194-2H	A194-4	A194-4	A194-8	A194-8
14	Eyebolt <sup>2)</sup>	Carbon Steel			A351-CF8	

Notes: 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.

## Dimensions Data ANSI Class 1500Lb

## ANSI Class 2500Lb

NPS	DN	L/L1 (RF/BW)		L2 (RTJ)		H		WT(kg)		L/L1 (RF/BW)		L2 (RTJ)		H		WT(kg)	
2	50	14.50	368	14.62	371	9.50	240	40	29	17.75	451	17.88	454	10.75	275	50	35
2 1/2	65	16.50	419	16.62	422	10.00	256	63	47	20.00	508	20.25	514	13.25	335	76	55
3	80	18.50	470	18.62	473	13.00	330	70	49	22.75	578	23.00	584	13.75	350	85	68
4	100	21.50	546	21.62	549	14.75	375	115	84	26.50	673	26.88	683	15.12	385	165	115
6	150	27.75	705	28.00	711	18.88	480	250	152	36.00	914	36.50	927	19.50	495	460	225
8	200	32.75	832	33.12	841	23.50	595	470	310	40.25	1022	40.88	1038	24.62	625	900	580
10	250	39.00	991	39.38	1000	26.00	660	740	470	50.00	1270	50.88	1292	28.00	712	1300	860
12	300	44.50	1130	45.12	1146	29.12	740	1100	710	56.00	1422	56.88	1445	35.62	905	1800	1150
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	in	mm	in	mm	in	mm	RF/RTJ	BW



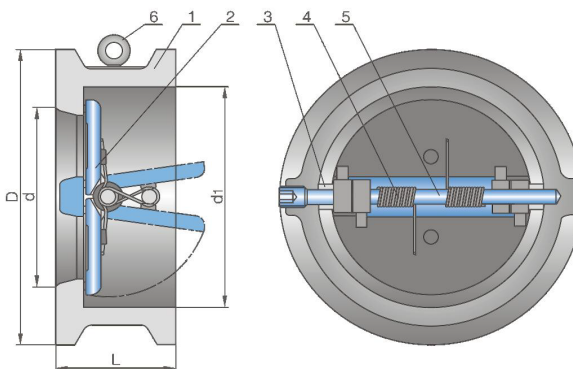
# Wafer Check Valve 150Lb/300Lb

## 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 Description

- ▲ 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 Material				
		Carbon Steel		Alloy Steel	Stainless Steel	
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Plate	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
3	Stop Pin	A276-420	A276-420	A276-304	A276-304	A276-316
4	Back Spring	A313-304	A313-304	A313-316	A313-316	A313-316
5	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
6	Eyebolt <sup>1)</sup>	Carbon Steel			A351-CF8	

Notes: 1). NPS 8" & larger.

## Dimensions Data ANSI Class 150Lb

NPS	2	2½	3	4	6	8	10	12	14	16	18	20	24	in
DN	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

## Dimensions Data ANSI Class 300Lb

NPS	2	2½	3	4	6	8	10	12	14	16	18	20	24	in
DN	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	200	254	305	350	400	450	500	600	mm
d1	2.25	2.88	3.50	4.25	6.38	8.27	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

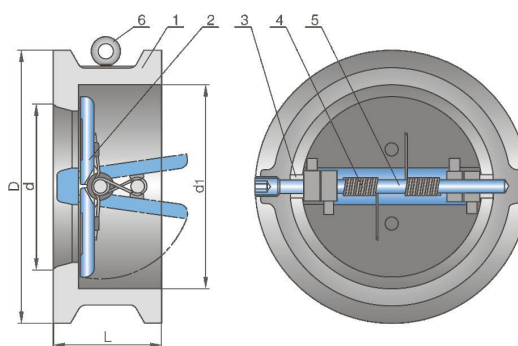
# Wafer Check Valve 600Lb/900Lb

## 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 Description

- ▲ 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 Material				
		Carbon Steel		Alloy Steel	Stainless Steel	
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Plate	A105+Cr13	A350-LF2	A182-F11+HF	A276-304	A276-316
3	Stop Pin	A276-420	A276-420	A276-304	A276-304	A276-316
4	Back Spring	A313-304	A313-304	A313-316	A313-316	A313-316
5	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
6	Eyebolt <sup>2)</sup>	Carbon Steel			A351-CF8	

Notes: 1). NPS 8" & larger.

## Dimensions Data ANSI Class 600Lb

## ANSI Class 900Lb

NPS	DN	L		D		d		d <sub>1</sub>		WT	L		D		d		d <sub>1</sub>		WT
2	50	2.38	60	4.38	110	2.00	51	2.25	58	4	2.75	70	5.50	140	2.00	51	2.25	58	8
2 1/2	65	2.62	67	5.00	128	2.50	65	2.88	73	5	3.25	83	6.38	162	2.50	65	2.88	73	11
3	80	2.88	73	5.75	147	3.00	80	3.50	88	8	3.25	83	6.50	165	3.00	80	3.50	88	14
4	100	3.12	79	7.50	191	4.00	102	4.25	108	11	4.00	102	8.00	204	4.00	102	4.25	108	20
6	150	5.38	137	10.38	264	6.00	152	6.38	162	26	6.25	159	11.25	286	6.00	152	6.38	162	42
8	200	6.50	165	12.50	318	7.88	200	8.38	212	55	8.12	206	14.00	356	7.88	200	8.38	212	84
10	250	8.38	213	15.62	398	9.88	250	10.50	266	95	9.50	241	17.00	432	9.88	250	10.50	266	145
12	300	9.00	229	17.88	455	12.00	305	12.25	312	140	11.50	292	19.50	495	12.00	305	12.25	312	220
14	350	10.75	273	19.25	490	13.25	337	14.00	355	223	-	-	-	-	-	-	-	-	-
16	400	12.00	305	22.12	562	15.25	387	15.75	400	360	-	-	-	-	-	-	-	-	-
in	mm	in	mm	in	mm	in	mm	in	mm	kg	in	mm	in	mm	in	mm	in	mm	kg

# Forged Steel Check Valve

## Applicable Standards

- ★ STEEL CHECK VALVES, API 602
- ★ STEEL VALVES, ASME B16.34
- ★ FACE TO FACE, MANUFACTURER STANDARD
- ★ FACE TO FACE, FLANGED, ASME B16.10
- ★ END FLANGES, ASME B16.5
- ★ BUTTWELDING ENDS, ASME B16.25
- ★ SOCKET-WELDING ENDS, ASME B16.11
- ★ SCREWED ENDS, ASME B1.20.1
- ★ INSPECTION AND TEST, API 598

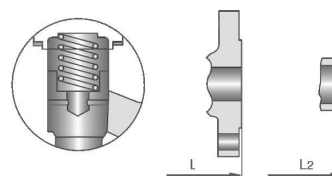
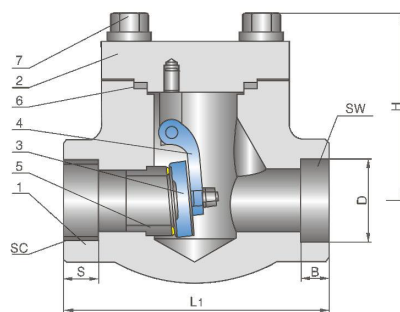
## Design Description

- ▲ BOLTED COVER
- ▲ CHOICE OF WB, WELDING COVER
- ▲ LIFT OR SWING TYPE
- ▲ SEAT RINGS INTEGRAL WITH BODY OF LIFT
- ▲ HORIZONTAL OR VERTICAL SERVICE
- ▲ SW, SOCKET-WELDING ENDS
- ▲ SC, SCREWED ENDS
- ▲ BW, BUTT WELDING ENDS
- ▲ FLANGED ENDS

## Materials of Parts

No	Part Name	ASTM Material			
		CS	Alloy Steel	Stainless Steel	
1	Body	A105	A182-F11	A182-F304	A182-F316
2	Cover	A105	A182-F11	A182-F304	A182-F316
3	Disc	A182-F6a	A182-F6a+HF	A182-F304	A182-F316
4	Hinge	A276-410	A276-410	A276-410	A276-410
5	Seat	A276-410	A276-410+HF	A182-F304	A182-F316
6	Gasket <sup>2)</sup>	Spiral wound(Graphite+304)		Spiral wound(Graphite+316)	
7	Stud	A193-B7	A193-B16	A193-B8	A193-B8M

Notes: 1). Lift type check valve seat ring integral with body.  
2). Spiral wound construction.



## Dimensions Data

NPS DN	Unit	L <sup>1)</sup>	L(Flanged Ends)			d	SW		SC		H	WT <sup>2)</sup> (kg)
			150Lb	300Lb	600Lb		D	B	NPT	S		
3/8	in	3.12	4.00	6.00	6.50	0.354	0.693	0.378	3/8	0.540	2.40	3.8/2.8
10	mm	79	102	152	165	9	17.3	9.6		13.6	61	
1/2	in	3.12	4.25	6.00	6.50	0.354	0.858	0.378	1/2	0.535	2.40	5.6/3.4
15	mm	79	108	152	165	10	21.8	9.6		13.6	61	
3/4	in	3.62	4.62	7.00	7.50	0.512	1.067	0.500	3/4	0.547	2.40	7.8/4.7
20	mm	92	117	178	190	13	27.1	12.7		13.9	61	
1	in	4.38	5.00	8.00	8.50	0.689	1.331	0.500	1	0.681	3.07	12.5/9.2
25	mm	111	127	203	216	17.5	33.8	12.7		17.3	78	
1 1/4	in	4.75	5.50	8.50	9.00	0.906	1.677	0.500	1 1/4	0.709	3.31	17/10.5
32	mm	120	140	216	229	23	42.6	12.7		18	84	
1 1/2	in	4.75	6.50	9.00	9.50	1.142	1.917	0.500	1 1/2	0.724	10.25	23.5/13.3
40	mm	120	165	229	241	30	48.7	12.7		18.4	3.98	
2	in	5.50	8.00	10.50	11.50	1.378	2.406	0.626	2	0.756	4.72	38.8/18.9
50	mm	140	203	267	292	35	61.1	15.9		19.2	120	

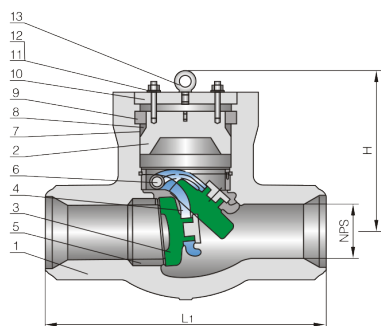
# Pressure Seal Swing Check Valve

## 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 Description

- ▲ PSB, PRESSURE SEAL BONNET
- ▲ FLEXIBLE DISC, FULLY GUIDED
- ▲ RENEWABLE SEAT RINGS
- ▲ FLANGED OR BUTT WELDING ENDS

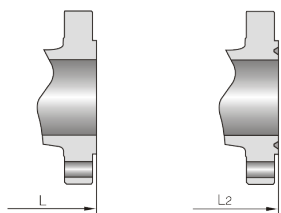


## Materials of Parts

No	Part Name	ASTM Material				
		Carbon Steel		Alloy Steel	Stainless Steel	
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Pres.Seal Bonnet	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
3	Disc	A105+HF	A350-LF2	A182-F11+HF	A240-304+FL	A240-316+FL
4	Hinge	A182-F6a	A182-F6a	A182-F11	A276-304	A182-F316S
5	Seat Ring	A105+HF	A350-LF2	A182-F11+HF	A240-304+FL	A240-316+FL
6	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
7	Bonnet Gasket <sup>1)</sup>	Spiral wound(Graphite+304)		Spiral wound(Graphite+316)		
8	Adapter	Carbon Steel		A276-420	A276-304	A276-316
9	Retainer Ring	Carbon Steel		A276-420	A276-304	A276-316
10	Cover	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
11	Stud	A193-B7	A320-L7	A193-B7	A193-B8	A193-B8
12	Nut	A194-2H	A194-4	A194-2H	A194-8	A194-8
13	Eyebolt	Carbon Steel			Stainless Steel	

Notes: 1). Graphite optional.

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.



## Dimensions Data ANSI Class 900Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	16	in
DN	50	65	80	100	150	200	250	300	350	400	mm
L <sub>1</sub> (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	in
	216	254	305	356	508	660	787	914	991	1092	mm
L (RF)	14.50	16.60	15.00	18.00	24.00	29.00	33.00	38.00	40.5	44.5	in
	368	419	381	457	610	737	838	965	1029	1130	mm
L <sub>2</sub> (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	in
	371	422	384	460	613	740	841	968	1038	1140	mm
H	9.50	9.50	10.00	13.38	15.75	18.12	21.62	24.00	27.00	29.50	in
	240	240	255	340	400	460	550	610	685	750	mm
WT(kg)	22	34	38	71	176	485	761	1125	1345	1490	BW
	44	55	61	116	255	630	940	1433	1710	1820	RF/RTJ



# Pressure Seal Swing Check Valve

## Applicable Standards

- ★ STEEL CHECK VALVES, BS EN 13709/API 600
- ★ 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 Description

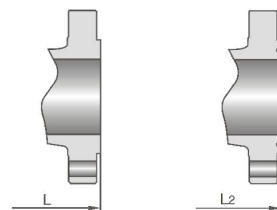
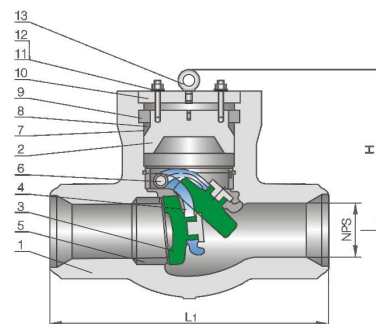
- ▲ PSB, PRESSURE SEAL BONNET
- ▲ FLEXIBLE DISC, FULLY GUIDED
- ▲ RENEWABLE SEAT RINGS
- ▲ FLANGED OR BUTTWELDING ENDS

## Materials of Parts

No	Part Name	ASTM Material				
		Carbon Steel		1 1/4Cr-1/2Mo	Stainless Steel	
1	Body	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
2	Pres.Seal Bonnet	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
3	Disc	A105-HF	A350-LF2	A182-F11+HF	A240-304+FL	A240-316+FL
4	Hinge	A182-F6a	A182-F6a	A182-F11	A276-304	A182-F316S
5	Seat Ring	A105-HF	A350-LF2	A182-F11+HF	A240-304+FL	A240-316+FL
6	Hinge Pin	A276-420	A276-420	A276-304	A276-304	A276-316
7	Bonnet Gasket <sup>1)</sup>	Spiral wound(Graphite+304)		Spiral wound(Graphite+316)		
8	Adapter	Carbon Steel		A276-420	A276-304	A276-316
9	Retainer Ring	Carbon Steel		A276-420	A276-304	A276-316
10	Cover	A216-WCB	A352-LCB	A217-WC6	A351-CF8	A351-CF8M
11	Stud	A193-B7	A320-L7	A193-B7	A193-B8	A193-B8
12	Nut	A194-2H	A194-4	A194-2H	A194-8	A194-8
13	Eyebolt	Carbon Steel		Stainless Steel		

Notes: 1). Graphite optional.

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.



## Dimensions Data ANSI Class 1500Lb

## ANSI Class 2500Lb

NPS	2	2 1/2	3	4	6	8	10	12	14	2	2 1/2	3	4	6	8	10	12	in
DN	50	65	80	100	150	200	250	300	350	50	65	80	100	150	200	250	300	mm
L <sub>1</sub> (BW)	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	in
	216	254	305	406	559	711	864	991	1067	279	330	368	457	610	762	914	1041	mm
L (RF)	14.50	16.50	18.50	21.50	27.75	32.75	39	44.5	49.5	17.75	20.00	22.75	26.50	36.00	40.25	50	56	in
	368	419	470	546	705	832	991	1130	1257	451	508	578	673	914	1022	1270	1422	mm
L <sub>2</sub> (RTJ)	14.62	16.62	18.62	21.62	28.00	33.12	39.38	45.12	50.25	17.88	20.50	23.00	26.88	36.50	40.88	50.88	56.88	in
	371	422	473	549	711	842	1000	1146	1276	454	514	584	683	927	1038	1292	1445	mm
H	9.50	9.50	11.88	15.38	18.00	20.62	24.00	27.00	30.00	10.25	10.25	13.75	16.12	18.88	22.38	25.25	32.00	in
	240	240	300	390	455	525	610	685	760	260	260	350	410	480	570	640	815	mm
WT(kg)	22	37	45	78	245	530	815	1213	1555	55	78	95	182	300	630	825	1580	BW
	44	61	110	155	378	675	1160	1710	2315	93	130	170	315	618	1125	1760	2910	RF/RTJ

## About us



### Our History

COOPER Valves was founded in 1930 and in 1934 COOPER's foundry developed the first successful technique to pour 304 stainless steel. Since then COOPER has become a well-respected and approved valve manufacturer that specializes in exotic alloy valves, serving the downstream and mid-stream chemical, petrochemical, oil and gas, water, power, mining and refining industries for over 90 years. COOPER's success is derived from its dedication to building dependable valves through advanced engineering, experienced personnel, controlled manufacturing processes, and a wide level of end-user's approvals.

### Our Mission Statement

**To manufacture and deliver to our customers the finest valves in the world.**

Our motto is "Quality without Compromise". We strive to make every valve we produce "bullet proof" because we know that our quality directly impacts our end users, our community, and our environment. An American classic, Cooper's vision is to grow and maintain our market position as the leading manufacturer and supplier of high alloy and nickel valves in a global market.

We believe through hard work, intelligent decision making and effective management we can deliver the highest quality, shortest delivery products to our client base at a fair price. We believe that our employees and their dedication to preserving and protecting our core values will be our basis for success. We are all like-minded people with shared beliefs in striving to always do the best.

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