

Design

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, 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/bonnet materials and trims.

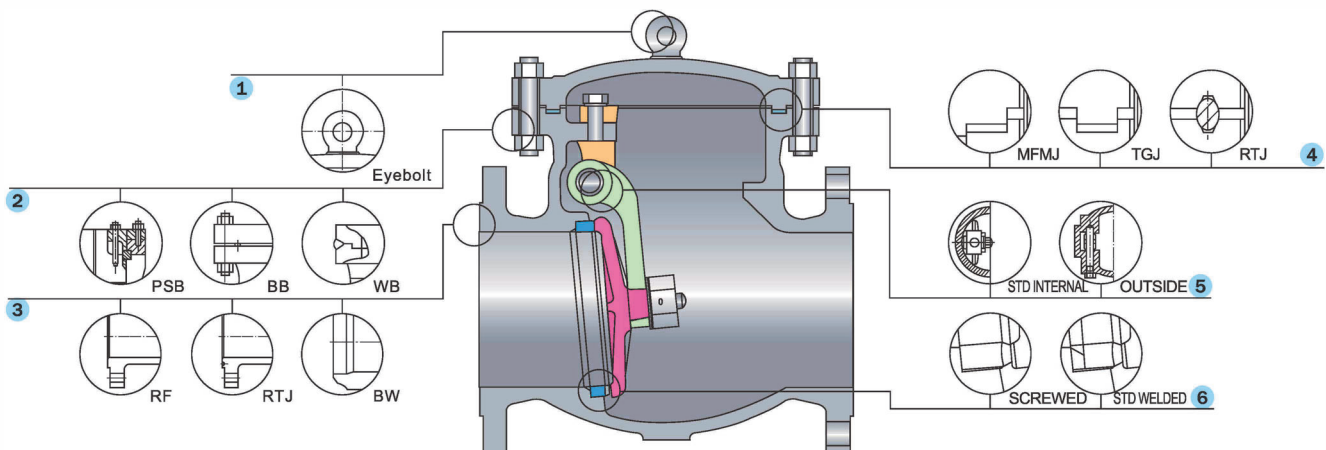
Range of Materials

Standard body/bonnet materials include nine 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 Cast Steel Valves

- *Trim Changes
- *End Connection Modifications
- *Gasket Changes
- *Outside Lever and Weight
- *Slam Retarders

- *Pressure Equalizing
- *Outside Lever and Weight
- *Customer Specified Coatings
- *Weld End Bore Changes
- *Oxygen & Chlorine Cleaning & Packaging



1 Eyebolt

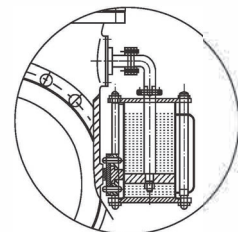
For 1580Lb-8" , 300Lb-8" , 600Lb-6" , 900Lb/1500Lb/ 2500Lb-4" & Over.

3 End Connections

A choice of Flanged, RTJ flanged or Buttwelding end for piping flexibility.

5 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.



2 BB

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

4 Body-to-Bonnet 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 bonnet connection in 900Lb & higher rated valves.

6 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.

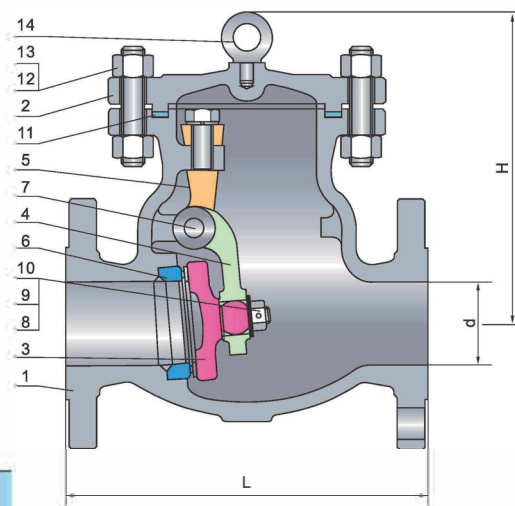
SWING CAST STEEL CHECK VALVE 150LB

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 BONNET CAP
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	1 $\frac{1}{4}$ Cr- $\frac{1}{2}$ Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet Cap	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	Support	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	Bonnet Gasket	Spiral Wound (Graphite+304)		
12	Bonnet Stud	A193-B7	A193-B16	A320-L7
13	Bonnet 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.

Dimensions data

NPS	2	2 $\frac{1}{2}$	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

ANSI Class 150Lb

L.L.1 (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
L.2 (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	51.50	57.50	60.50	77.50	in
	216	229	254	305	368	508	635	711	800	876	991	991	1308	1308	1462	1548	1992	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	293	353	390	432	475	525	582	627	883	910	940	980	1220	mm
(d)	50	63	76	100	150	200	250	300	336	387	438	488	590	641	692	743	876	mm
WT (kg)	14	20	25	40	71	118	177	263	353	542	632	855	970	1275	1600	1990	2760	RF
	10	12	17	29	57	96	143	227	295	468	552	755	831	1120	1420	1760	2230	BW