

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.

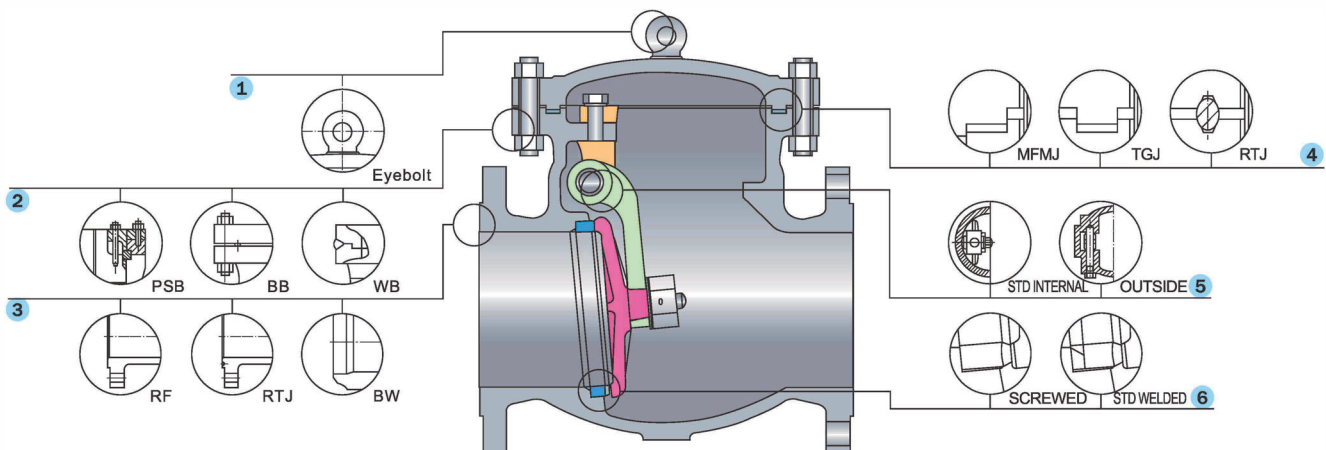
Range of Materials

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

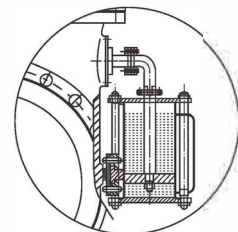
For 1580Lb-8" , 300Lb-8" , 600Lb-6" , 900Lb/1500Lb/ 2500Lb-4" & Over.

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.

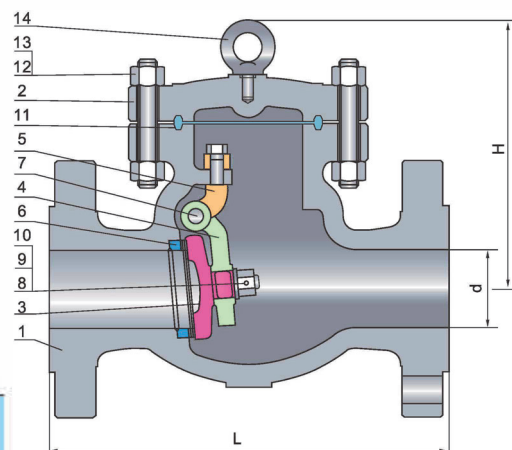
SWING CAST STEEL CHECK VALVE 1500Lb/2500Lb

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



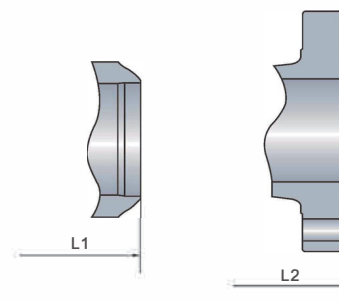
Materials of parts

NO	Part Name	ASTM Material		
		Carbon Steel	1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet Cap	A216-WCB	A217-WC6	A352-LCB
3	Disc ¹⁾	A216-WCB+Cr13	A217-WC6+HF	A352-LCB+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Support	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+HF	A182-F11+HF	A350-LF2+HF
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	Steel Ring	304SS Ring	Steel Ring
12	Bonnet Stud	A193-B7	A193-B16	A320-L7
13	Bonnet Stud Nut	A194-2H	A194-7	A194-4
14	Eye bolt 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 DN	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	in mm
ANSI Class 1500Lb											ANSI Class 2500Lb								
L/L1 (RF/BW)	14.50 368	16.50 419	18.50 470	21.50 546	27.75 705	32.75 832	39.00 991	44.50 1130	49.50 1257	54.50 1384	17.75 451	20.00 508	22.75 578	26.50 673	36.00 914	40.25 1022	50.00 1270	56.00 1422	in mm
L2 (RTJ)	14.62 371	16.62 422	18.62 473	21.62 549	28.00 711	33.12 841	39.38 1000	45.12 1146	50.25 1276	55.38 1407	17.88 454	20.25 514	23.00 584	26.88 683	36.50 927	40.88 1038	50.88 1292	56.88 1445	in mm
H	9.50 240	10.00 256	13.00 330	14.75 375	18.88 480	23.50 595	26.00 660	29.12 740	30.88 785	32.88 835	10.75 275	13.25 335	13.75 350	15.12 385	19.50 495	24.62 625	28.00 712	35.62 905	in mm
(d)	47	57	69	92	136	177	222	263	288	330	38	47	57	72	111	146	184	218	mm
WT (kg)	40 29	63 47	70 49	115 84	250 152	470 310	740 470	1100 710	1410 910	1600 1100	50 35	76 55	85 68	165 115	460 225	900 580	1300 860	1800 1150	RF BW