

Design

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 API 600 & API 6D, BS 1988, BS EN 13708 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.

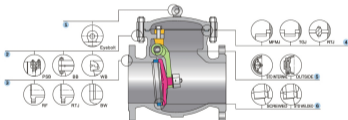
Available Modifications for Cast Steel Valves

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

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 is a full range of trim materials to match any service. Optional packing and gasket materials are available for a full range of service conditions.

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



1 Eyebolt

For 1500Lb-S + , 300Lb-S + , 800Lb-S + , 900Lb/1500Lb/ 2500Lb-4 + & Over.

2 End Connections

A choice of Flanged, RTJ flanged or Butt-welding and for piping flexibility.

3 Outside Lever and Weight

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



4 BB

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

5 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

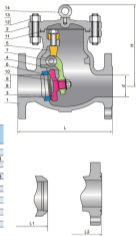
This design can be used to either dampen or assist closing of the check valve disc depending on orientation. By using the Hydraulic Control Unit to buffer action the disc, the valve opens at lower flow rates.

Applicable standards:

STEEL CHECK VALVES, API 600/605/608
STEEL CHECK VALVES, ISO 14313
STEEL VALVES, ASME B16.34
FACE TO FACE, ASME B16.10
END FLANGES, ASME B16.5
BUTT WELDING ENDS, ASME B16.25
INSPECTION AND TEST PLAN, API 600

Design description:

BS - BOLTED BONNET CAP
SWING TYPE - ANTI-ROTATION DISC
REVERSIBLE 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	1¼Cr-½Mo	Carbon Steel
1	Body	A216-WCB	A217-WC9	A352-LC9
2	Bonnet Cap	A216-WCB	A217-WC9	A352-LC9
3	Disc	A105-CR13	A162-F11+HF	A356-LF2+CR13
4	Hinge	A216-WCB	A217-WC9	A352-LC9
5	Support	A216-WCB	A217-WC9	A352-LC9
6	Seat Ring	A105+CR13	A162-F11+HF	A356-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Wrench	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-T	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-T	A194-L
14	Eyebolt*	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	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
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ANSI Class 150LB

LL1 (RF&W)	6.00 203	6.50 216	6.50 216	6.50 241	11.50 292	14.00 356	15.50 395	24.50 622	27.50 699	31.00 787	34.00 864	35.50 915	36.50 928	51.00 1295	51.00 1295	57.00 1445	60.00 1524	77.00 1956	in mm
L2 (RT-J)	6.60 216	6.60 216	6.60 229	6.60 254	10.00 305	12.00 388	14.00 358	20.00 508	25.00 635	28.00 711	31.80 809	34.60 878	36.00 914	36.00 914	51.00 1308	-	-	-	in mm
H	6.00 152	6.50 165	6.88 175	6.88 204	8.00 203	11.50 293	13.88 353	15.38 390	17.00 432	18.75 475	20.62 525	22.88 580	24.62 627	34.75 883	35.88 910	37.00 940	38.62 980	48.00 1220	in mm
(d)	50	62	78	100	150	200	250	300	300	330	367	438	468	500	641	692	743	876	mm
WT (kg)	18	20	25	40	71	118	177	263	353	542	632	855	970	1275	1630	1990	2790	89	mm
	18	12	17	29	57	96	143	227	295	468	652	755	831	1120	1420	1760	2230	89	mm