

Swing Check Valve: BS 1868 / API 6D, Class 150–2500

In a swing check valve a hinged disc opens with the flow and, when flow stops or reverses, closes onto the seat under its own weight and reverse pressure. With most of the flow path clear when fully open, the pressure drop is low.

Technical specifications

Size	2"–60" (DN50–DN1500); larger sizes on a project basis
Pressure class	ASME Class 150–2500
End connections	RF / RTJ flanged, butt-weld
Bonnet	Bolted; pressure seal in high classes
Seat	Renewable (threaded or welded) ring; Stellite hard-facing option
Materials	WCB, LCC, WC6, CF8M; duplex
Options	Counterweight, external lever, damper; piggable design



Key features

- Low pressure drop
- Easy maintenance: bolted bonnet and renewable seat
- Closing control with counterweight
- Piggable pipeline version

Face-to-face dimensions (mm)

Flanged face-to-face dimensions of BS 1868 / API 6D swing check valves (ASME B16.10):

NPS	DN	Class 150	Class 300	Class 600
2	50	203	267	292
2½	65	216	292	330
3	80	241	318	356
4	100	292	356	432
6	150	356	444	559
8	200	495	533	660
10	250	622	622	787
12	300	698	711	838

NPS	DN	Class 150	Class 300	Class 600
14	350	787	838	889
16	400	864	864	991
18	450	978	978	1092
20	500	978	1016	1194
24	600	1295	1346	1397

Values are for raised-face (RF) flanged ends and conform to ASME B16.10. Ring-type joint (RTJ) ends are slightly longer; butt-weld (BW) end-to-end dimensions are listed separately in the standard. Exact dimensions are shown on the general arrangement (GA) drawing supplied with the quotation.

Typical part materials

Part	Carbon steel	Low temperature	Stainless steel	Alloy steel (high temperature)
Body, cover, disc	A216 WCB	A352 LCB / LCC	A351 CF8, CF8M, CF3, CF3M	A217 WC6, WC9, C5
Seat ring	A105N (hardfaced)	A350 LF2	Same stainless grade as body	A182 F11, F22, F5
Hinge and pin	A216 WCB / A182 F6a	A352 LCB / A182 F304	Same as body / F316	A217 WC6 / A182 F6a
Stud bolts / nuts	A193 B7 / A194 2H	A320 L7 / A194 7	A193 B8, B8M / A194 8, 8M	A193 B16 / A194 4

In all material groups, the standard gasket is spiral-wound SS304/SS316 with graphite filler and the standard packing is flexible graphite (PTFE on request). The stem nut is austenitic ductile iron (A439 D2) or copper alloy, and the handwheel is malleable iron. For sour (H₂S) service, materials and hardness are selected to NACE MR0175 / ISO 15156.