

# CAST STEEL CHECK VALVES

## # 7.150

ANSI Class 150

ANSI B16.34

Carbon steel  
ASTM A216 WCB

Flanged ANSI 150 RF

Full bore

Swing type

DN50 to DN300

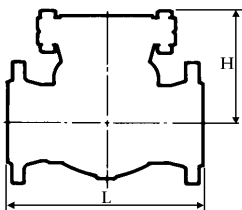


## # 7.150

Bolted cover

Metal disk

Welded-in seat ring



API

**Applications** – suitable for uni-directional flow in horizontal lines and upward flow in vertical lines in Class 150 piping systems within the P/T limits shown. Automatically actuated by velocity pressure and gravity the seating load and tight closure depend on sufficient back pressure. Correct sizing is important to avoid continuous movement, premature wear noise and vibration. The minimum velocity required to hold the valve in a stable and fully open position is calculated by the formula  $v = 60 \sqrt{V}$  where  $v$  = velocity (m/s) and  $V$  = fluid volume ( $m^3/kg$ ). Calculation may show that a check valve with DN smaller than pipe size should be fitted with no adverse effect on  $\Delta p$ . Correct sizing plus the careful use of reducers will result in longer valve life and lower costs.

**Specification** – manufacture is to ANSI B16.34. The robust construction ensures maximum safety throughout the P/T range. The valves are full bore from inlet to seat to avoid turbulence. The outlet side is carefully contoured and generously proportioned permitting full disk swing and minimizing flow resistance and erosion. The body/cover joint is male/female. The welded-in body seat ring is a one-piece component and heat treated to ensure sufficient surface hardness to resist erosion/corrosion. End connections are flanged and drilled ANSI 150 RF; face-to-face to ANSI B16.10. Body marking is to MSS-SP-25.

**P/T ratings** – in accordance with ANSI B16.34

Temperature °Celsius	-29° +38°	100°	150°	200°	250°	300°	350°	375°	400°	425°	* 450°	* 475°	* 500°	* 538°
Pressure bar	19,7	17,7	15,8	14,0	12,1	10,2	8,4	7,4	6,5	5,6	4,6	3,7	2,8	1,4

\* Prolonged temperatures above 425° Celsius may result in deterioration of the carbon phase of carbon steel.

**Materials** – to ANSI B16.34

Part	Material	Part	Material
Body	ASTM A216 WCB*	Cover bolt	ASTM A193 B7
Cover	ASTM A216 WCB	Cover nut	ASTM A194 2H
Disk	ASTM A217 CA15	Disk nut	ASTM A307B
Body seat ring	CS 1020 + Tp 410	Disk washer	Steel
Hinge	ASTM A216 WCB	Split pin	ASTM A580-304
Hinge pin	ASTM A479 Tp 410	Gasket	Soft steel
Plug	ASTM A479 Tp 410	Plug gasket	Soft steel

\* ASTM A216 WCB contains typically Carbon 0,25; Manganese 1,0; Phosphorus 0.04; Sulphur 0,05; Silicon 0,60; all maximum values.

**Testing** – in accordance with ANSI B16.34; body 30 bar; seat 22 bar.

## Dimensions mm/Weights

DN	50	65	80	100	150	200	250	300
in	2	2½	3	4	6	8	10	12
L	203	216	241	292	356	495	622	699
H	160	170	190	225	260	320	350	380
kg	17	22	31	50	92	136	195	285

**Options** – sizes DN40, DN350 through DN900, and larger on request; end connections to ANSI 150 FF; butt weld ends to ANSI B16.25; RTJ to ANSI B16.5/B16.10.

Special materials include carbon steels ASTM A352 LCB, A352 LC2; alloy steels A217 WC6, A217 WC9, A217 C5 and A217 C12.

