

CHECK VALVES

Beaver API 600 Cast Steel Bolted Bonnet Swing Check Valve

A fast closing, non-return valve designed for high pressures involving clear fluid or gas.

C31, C32, C33



B | E | A | V | E | R

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Beaver C31–C33 API 600 Cast Steel Bolted Bonnet Swing Check Valve



Beaver C31 Swing Check Valve

The Beaver Cast Steel Bolted Bonnet Swing Check Valve is a series of heavy-duty, non-return valves designed to API 600 standards for petroleum and natural gas applications.

These valves provide a tight seal in both horizontal and vertical positions. They are also fully ported and spherical for minimal resistance, flow turbulence, and stress on the valve.

The valve's hinge arm pivots on the hinge pin which is attached near the disc's center of gravity. The hinge arm also has a built-in disc stop to provide a positive stop in the open position.

The disc surface is mated to the seat ring to ensure a tight seal. The seat ring can be forged and rolled in one piece and seal welded.

KEY FEATURES

- Valve design ensures quick, tight seal in high pressure and high velocity applications.
- Fully ported, spherical valve that maintains consistent flow rate with minimal resistance and turbulence.
- Can be fitted in horizontal or vertical pipe runs while still maintaining tight shut-off.
- Available in three pressure classes (Class 150, 300, and 600).

Need technical advice? Our friendly specialists are here to help.

C31-C33

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Tables 1-2. C31-C33 Specifications

Technical Specifications		Material Specifications	
Brand	Beaver	Body, cover, hinge	A216 WCB, A352 LCC, A217 WC6, A217 WC9, A217 C5, A217 C12, A351 CF8M
Model	C31 (Class 150) C32 (Class 300) C33 (Class 600)	Disc	A216 WCB + 13CR, A352 LCC + 316 SS, A217 WC6 + 13CR, A217 WC9 + 13CR, A217 C5 + 13 CR, A217 C12 + 13 CR, A315 CF8M
Size range	Class 150: DN40-900 (1½-36") Class 300: DN50-900 (2-36") Class 600: DN50-600 (1½-24")	Seat ring	A105, LF2, A182 F11, A182 F22, A182 F5, A182 F9, A182 F316 all with Stellite
Pressure class	Class 150/300/600	Hinge pin, split pin	A276 410, A276 316
Face to face	ASME B16.10	Disc washer	Carbon steel
End flange	ASME B16.5	Disc nut, cover bolt	A193 B7, A320 L7, A193 B16, A193 B8
Buttweld	ASME B16.25	Cover nut	A194 2H, A194 4, A194 8
		Eye bolt	ASTM A181
		Gasket	(Class 150 and 300) Spiral wound 316 SS + graphite (Class 600) soft ring joint
		Nameplate	Stainless steel

Diagram 1. C31-C33 Parts

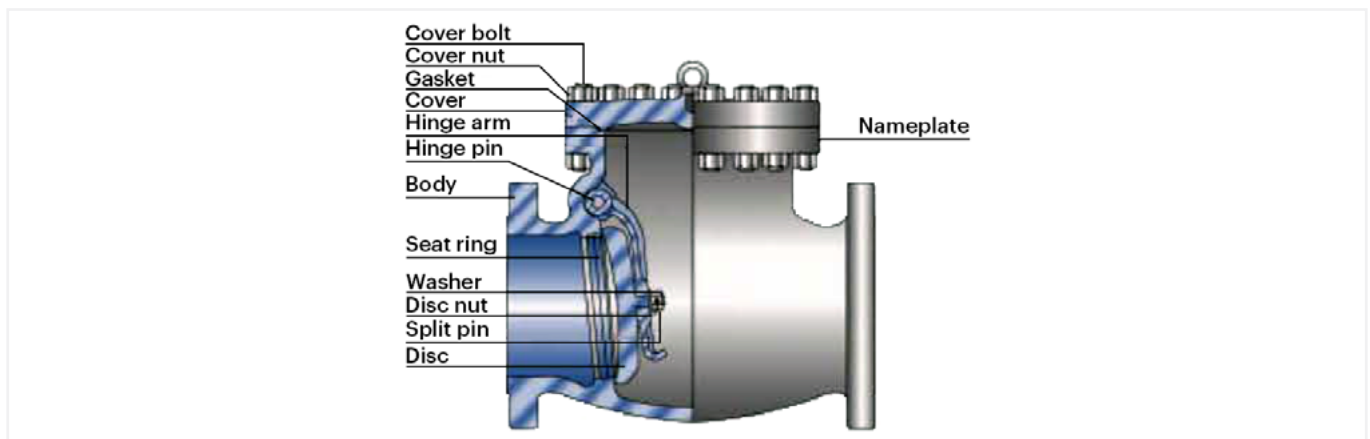
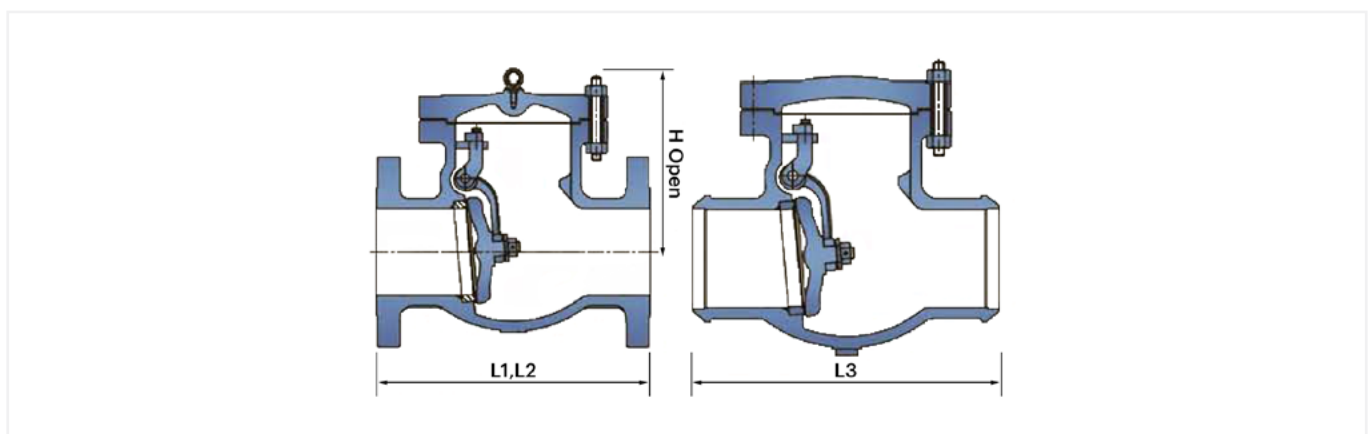


Diagram 2. C31-C33 Dimensions



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Table 3. C31 Class 150 Dimensions

Product Dimensions (mm)									
Size		40	50	65	80	100	150	200	250
Face to face	L1 (RF)	165.1	203.2	215.9	241.3	292.1	355.6	495.3	622.3
	L2 (RTJ)	165.1	203.2	215.9	241.3	292.1	355.6	495.3	622.3
	L3 (BW)	165.1	203.2	215.9	241.3	292.1	355.6	495.3	622.3
Open height (H)		129.8	160.0	170.2	190.2	225.3	258.6	320.0	348.5
Weight (kg)	RF	15.0	17.2	21.8	30.8	49.9	92.1	135.6	195.0
	BW	12.7	14.1	17.2	25.4	43.1	83.0	120.7	128.8

Product Dimensions (mm)									
Size		300	350	400	450	500	600	750	900
Face to face	L1 (RF)	698.5	787.4	863.6	977.9	977.9	1295.4	1524.0	1955.8
	L2 (RTJ)	698.5	787.4	863.6	977.9	977.9	1295.4	1524.0	1955.8
	L3 (BW)	698.5	787.4	863.6	977.9	977.9	1295.4	1524.0	1955.8
Open height (H)		380.0	401.1	460.0	505.0	563.9	683.0	914.4	1054.1
Weight (kg)	RF	284.9	420.0	499.9	640.0	780.2	1490.1	2302.9	3701.3
	BW	259.5	364.7	444.5	526.2	678.1	1335.8	1957.3	3179.7

Table 4. C32 Class 300 Dimensions

Product Dimensions (mm)									
Size		50	65	80	100	150	200	250	300
Face to face	L1 (RF)	266.7	292.1	317.5	355.6	444.5	533.4	622.3	711.2
	L2 (RTJ)	282.7	308.1	338.6	371.6	460.5	549.4	638.3	727.2
	L3 (BW)	266.7	292.1	317.5	355.6	444.5	533.4	622.3	711.2
Open height (H)		160.0	189.0	198.9	227.1	277.9	322.1	383.0	435.1
Weight (kg)	RF	25.4	32.7	49.0	72.6	135.6	184.2	298.0	415.5
	BW	19.5	24.9	39.9	46.3	108.9	143.8	238.1	340.2

Product Dimensions (mm)									
Size		350	400	450	500	600	750	900	
Face to face	L1 (RF)	838.2	863.6	977.9	1016.0	1346.2	1593.9	2082.8	
	L2 (RTJ)	854.2	879.6	993.9	1035.1	1368.6	1619.3	2108.2	
	L3 (BW)	838.2	863.6	977.9	1016.0	1346.2	1593.9	2082.8	
Open height (H)		510.0	521.0	572.0	628.9	712.0	939.8	1091.9	
Weight (kg)	RF	681.7	748.0	951.2	1131.3	2041.2	2653.5	4762.7	
	BW	562.9	591.9	817.8	975.2	1755.4	2277.0	4286.4	

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Table 5. C33 Class 600 Dimensions

Product Dimensions (mm)							
Size		50	80	100	150	200	250
Face to face	L1 (RF)	292.1	355.6	431.8	558.8	660.4	787.4
	L2 (RTJ)	295.4	358.9	435.1	562.1	663.7	790.7
	L3 (BW)	292.1	355.6	431.8	558.8	660.4	787.4
Open height (H)		187.5	209.6	255.5	328.7	363.5	463.6
Weight (kg)	RF	32.2	59.0	112.0	215.0	385.1	612.8
	BW	29.9	49.9	101.2	165.1	311.2	490.3

Product Dimensions (mm)							
Size		300	350	400	450	500	600
Face to face	L1 (RF)	838.2	889.0	990.6	1092.2	1193.8	1397.0
	L2 (RTJ)	841.5	892.3	993.9	1095.5	1200.2	1406.7
	L3 (BW)	889.0	889.0	990.6	1092.2	1193.8	1397.0
Open height (H)		485.9	571.5	660.4	711.2	787.4	863.6
Weight (kg)	RF	870.0	938.0	1349.9	2018.9	2390.0	3007.3
	BW	728.0	767.9	1119.9	1724.6	2015.3	2330.1



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