



Swing Check Valves [CSBS]

Standard: BS 1868 (API 6D)

DN 50 (2") ÷ DN 500 (20")
Class 150 ÷ Class 1500

Design

- Casted body and cover
- Bolted cover (BC)
- Anti-blowout design
- The disc can rotate on its axis and thereby prevented the local wear
- Seats are integral or welded on

Applications

- Power plant, Chemical, Petrochemical, Refining, water supply and other

Media

- Depending on the valve materials: water, steam, gas, oil and oil derivatives and other non aggressive media

Class and temperature

(table B.4.4)

- Class 150 ÷ Class 1500
- Temperature up to 600°C

Materials (table B.4.1)

- Carbon, heat resistant alloy and stainless steels

Advantages

- Long service life
- Respect to emission standards
- Easy handling and maintenance

Options

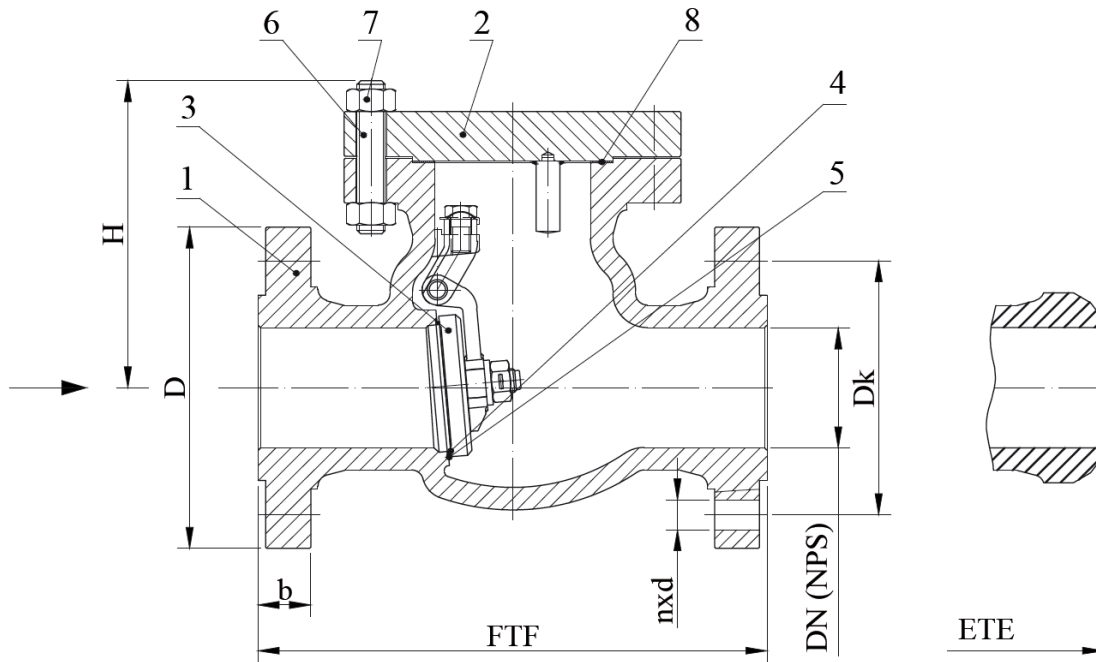
- Seats and sealing made of elastic materials
- Flanges and welding ends according to: GOST, DIN, EN...
- Other paint finishes are available upon customer's request
- Valve complete with counter flanges, bolting and gaskets

Testing

- Every produced valve was tested according to API 598

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SWING CHECK VALVE API 6D Class 150 ÷ Class 1500 DN50 (2") ÷ DN500 (20") type L10 117 (127) xxxx



Drawing B.4.1 Parts and dimensions

List of materials

Table B.4.1

Item	Part	Material Group acc. to ASME B16.34					
		1.1	1.3	1.9	1.13	2.2	2.11
		Application					
		-29°C÷425°C	-40°C÷345°C	-29°C÷550°C	-29°C÷550°C	-196°C÷600°C	-196°C÷600°C
		Material Code					
			15	23	27	43	45
1	Body	A216 WCB	A352 LCB	A217 WC6	A217 C5	A351 CF8M	A351 CF8C
2	Cover	A216 WCB	A352 LCB	A217 WC6	A217 C5	A351 CF8M	A351 CF8C
3	Disc	A216 WCB	A352 LCB	A217 WC6	A217 C5	A351CF8M	A351 CF8C
4	Trim	Body Seat	Cr13		HF (Stellite)		Basic Material or Stellite
5		Disc Seat	Cr13		HF (Stellite)		Basic Material or Stellite
6	Stud Bolts	A193 B7		A193 B16 / 1.7709		A193 B8M	
7	Nuts	A194 2H		A194 4 / 1.7709		A194 8M	
8	Covert Gasket	Reinforced pure graphite / Soft Steel / Spiral-wound / Oval Metal Ring					

Standards

Table B.4.2

Swing Check Valves according to BS 1868	Class 150 ÷ Class 1500
Face-to-face dimensions according to	ASME/ANSI B16.10 i API 6D
Flanged ends according to	ASME/ANSI B16.5
End-to-end dimensions according to	ASME/ANSI B16.10 i API 6D
Welding ends according to	ASME/ANSI B16.25

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SWING CHECK VALVE API 6D Class 150 ÷ Class 1500 DN50 (2") ÷ DN500 (20") type L10 117 (127) xxxx

[CSBS] Dimensions

Table B.4.3

DN (NPS)	FTF/ETE	D	b	Dk	d	n	H	FTF	ETE
	↕ (mm)							⚖ (kg)	
Class 150									
50 (2)	203	150	19	120,7	19	4	156	17	13
65 (2 1/2)	216	180	22,7	139,9	19	4	196	25	19
80 (3)	241	190	24	152,4	19	4	185	31	25
100 (4)	292	230	24	190,5	19	8	213	48	39
125 (5)	330	255	25,4	215,9	22,2	8	238	65	45
150 (6)	356	280	25,4	241,3	22,2	8	266	85	68
200 (8)	495	345	29	298,5	22,2	8	346	137	105
250 (10)	622	405	30	361,9	25,4	12	404	207	170
300 (12)	698	485	32,2	431,8	25,4	12	480	310	248
350 (14)	787	535	35,4	476,3	28,6	12	510	430	350
400 (16)	864	595	37,0	539,8	28,6	16	580	621	535
Class 300									
50 (2)	267	165	22	127	19	8	181	26	20
65 (2 1/2)	292	190	25,9	149,2	22,2	8	240	35	27
80 (3)	318	210	28,5	168,3	22,2	8	216	46	37
100 (4)	356	255	32	200	22,2	8	260	72	56
125 (5)	400	280	35,4	235	22,2	8	280	98	72
150 (6)	444	320	36,5	269,9	22,2	12	296	135	100
200 (8)	533	380	41,5	330,2	25,4	12	374	190	143
250 (10)	622	445	48,1	387,4	28,6	16	435	350	280
300 (12)	711	520	51,3	450,8	31,7	16	494	450	375
350 (14)	838	585	54,4	514,4	31,7	20	664	700	555
400 (16)	864	650	57,6	571,5	34,9	20	700	840	765
Class 600									
50 (2)	292	165	31,8	127,0	19	8	150	32	24
65 (2 1/2)	330	190	35,4	149,2	22,2	8	208	45	32
80 (3)	356	210	38,4	168,3	22,2	8	195	54	40
100 (4)	432	275	44,4	215,9	25,4	8	260	102	85
150 (6)	559	355	54,4	292,1	28,6	12	341	245	202
200 (8)	660	420	62,4	349,2	31,7	12	411	385	300
250 (10)	787	510	70,5	431,8	34,9	16	480	566	453
300 (12)	838	560	73,7	489,0	34,9	20	515	790	680
350 (14)	889	605	76,9	527,0	38,1	20	610	930	790
400 (16)	991	685	89,6	603,2	41,3	20	680	1370	1050
500 (20)	1194	815	95,9	723,9	44,5	24	770	2050	1800
Class 900									
50 (2)	368	215	45,1	165,1	25,4	8	243	68	50
80 (3)	381	240	45,1	190,5	25,4	8	269	91	68
100 (4)	457	290	51,5	235	31,7	8	305	138	105
150 (6)	610	380	62,6	317,5	31,7	12	366	292	212
200 (8)	737	470	70,5	393,7	38,1	12	437	485	350
Class 1500									
50 (2)	368	215	45,1	165,1	25,4	8	243	68	50
65 (2 1/2)	419	245	48,3	190,5	28,6	8	300	100	74

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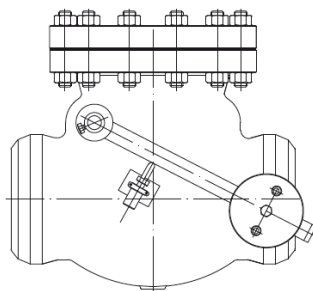
SWING CHECK VALVE API 6D Class 150 ÷ Class 1500 DN50 (2") ÷ DN500 (20") type L10 117 (127) xxxx

Range of application

Table B.4.4

Material Group (Code)	Materials	Class	Pressure (bar) / temperature (°C) ratings according to ANSI B16.34																			
			-29 ÷ 38	50	100	150	200	250	300	325	350	375	400	425	450	475	500	538	550	575	600	
1.1 (13)	A 216 WCB	150	20	19	18	16	14	12	10	9	8	7	7	6	5	4	3	1				
		300	51	50	47	45	44	42	40	39	38	36	35	29	23	17	12	6				
		600	102	100	93	90	88	84	80	77	75	73	69	58	46	35	24	12				
		900	153	150	140	135	131	126	120	116	113	109	104	86	69	52	35	18				
		1500	255	251	233	225	219	210	199	194	188	182	174	144	115	87	59	30				
1.3 (15)	A 352 LCB	150	18	18	17	16	14	12	10	9	8	7	7	6	5	4	3	1				
		300	48	48	45	44	43	41	39	38	36	35	33	27	22	16	11	6				
		600	96	95	91	88	85	82	77	75	73	70	65	55	43	31	22	12				
		900	144	142	136	132	128	122	116	113	109	105	98	82	65	47	33	18				
		1500	240	237	227	220	213	204	193	188	182	175	163	137	109	78	55	30				
1.9 (23)	A 217 WC6	150	20	20	18	16	14	12	10	9	8	7	7	6	5	4	3	1	1	1	1	
		300	52	52	52	50	48	46	43	41	40	39	37	35	34	32	26	15	13	9	6	
		600	103	103	103	100	96	93	86	83	80	78	73	70	68	63	52	30	25	18	12	
		900	155	155	154	149	144	139	129	124	121	117	110	105	101	95	77	45	38	26	18	
		1500	259	259	257	249	240	232	214	207	201	194	183	175	169	158	129	75	64	44	31	
1.13 (27)	A 217 C5	150	20	20	18	16	14	12	10	9	8	7	7	6	5	4	3	1	1	1	1	
		300	52	52	52	50	49	46	43	41	40	39	37	35	34	28	21	14	12	9	6	
		600	103	103	103	100	97	93	86	83	80	78	73	70	68	56	43	27	24	18	13	
		900	155	155	155	151	146	139	129	124	121	117	110	105	101	84	64	41	36	27	19	
		1500	259	259	258	251	243	232	214	207	201	194	183	175	169	139	107	69	60	44	31	
2.2 (43)	A 351 CF8M	150	19	18	16	15	14	12	10	9	8	7	7	6	5	4	3	1	1	1	1	
		300	50	48	42	39	36	33	32	31	30	30	29	29	29	29	28	25	25	24	20	
		600	99	96	84	77	71	67	63	62	61	60	59	58	58	57	57	50	50	48	40	
		900	149	144	127	116	107	100	95	93	91	90	88	87	87	86	85	75	75	72	60	
		1500	248	241	211	193	178	170	158	154	152	149	147	146	144	143	141	126	125	120	100	
2.11 (45)	A 351 CF8C	150	19	19	17	16	14	12	10	9	8	7	7	6	5	4	3	1	1	1	1	
		300	50	49	45	43	40	38	36	35	35	34	34	34	34	32	28	25	25	24	20	
		600	99	98	91	85	80	76	72	71	70	68	68	67	67	63	57	50	50	48	40	
		900	149	146	136	127	120	113	108	106	104	103	102	101	100	95	85	75	75	72	59	
		1500	248	244	227	212	200	189	180	177	174	171	170	168	167	158	141	126	123	120	99	

Optional execution



Swing check valves with counterweight