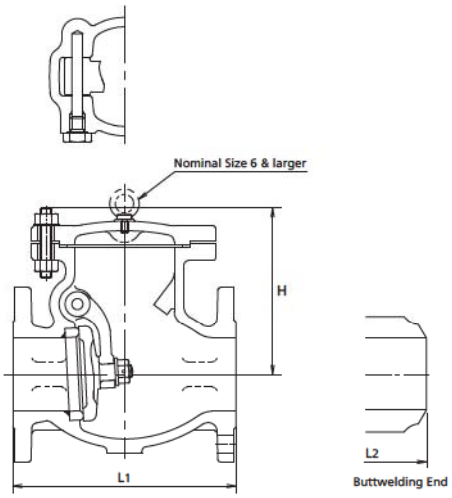
Cast Carbon Steel Check Valve

Bolted cover, Swing type disc.



150SCOS

Fig	End Connections
150SCOS	RF-flanged ends.
W150SCOS	Butt-welding ends.

Standard materials of parts

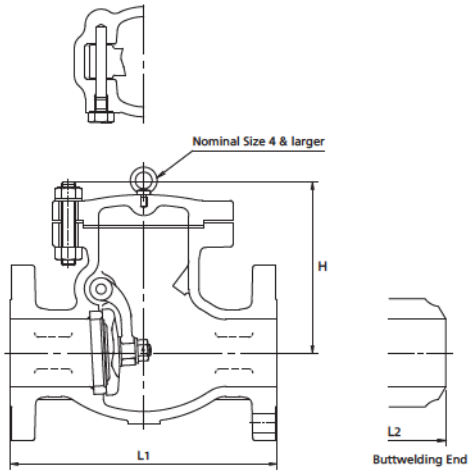
Parts	Materials
Body	ASTM A216 Gr.WCB
Cover	ASTM A105/A216 Gr.WCB
Disc	13Cr/Carbon Steel+13Cr
Disc nut	ASTM A194 Gr.8
Body seat ring	Carbon Steel+HF*
Cover bolt/nut	ASTM A193 Gr.B7/A194 Gr.2H
Arm	ASTM A216 Gr.WCB
Gasket	See Page 6
Plug	ASTM A576 Gr.1045

*Hard facing with Co-Cr-W Alloy.
Note: Refer to Page 3&6 for standard seat material and construction.

Dimensions

Nominal Size		1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	26	28	30
		40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	650	700	750
L_1	in	6.50	8.00	8.50	9.50	11.50	13.00	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	51.00	57.00	60.00
	mm	165	203	216	241	292	330	356	495	622	698	787	864	978	978	1295	1295	1448	1524
L_2	in	—	8.00	8.50	9.50	11.50	13.00	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	51.00	57.00	60.00
	mm	—	203	216	241	292	330	356	495	622	698	787	864	978	978	1295	1295	1448	1524
H	in	5.3	6.0	6.7	7.1	7.9	9.25	9.8	11.6	13.2	14.5	16.3	18.1	20.1	23.0	24.8	26.8	28.2	29.9
	mm	135	152	170	180	200	235	250	295	334	368	415	460	510	583	630	740	810	871

Bolted cover, Swing type disc.



300SCOS

Fig	End Connections
300SCOS	RF-flanged ends.
W300SCOS	Butt-welding ends.

Standard materials of parts

Parts	Materials
Body	ASTM A216 Gr.WCB
Cover	ASTM A105/A216 Gr. WCB
Disc	13Cr/Carbon Steel+13Cr
Disc nut	ASTM A194 Gr.8
Body seat ring	Carbon Steel+HF*
Cover bolt/nut	ASTM A193 Gr.B7/A194 Gr.2H
Arm	ASTM A216 Gr.WCB
Gasket	See Page 6
Plug	ASTM A576 Gr.1045

*Hard facing with Co-Cr-W Alloy.
Note: Refer to Page 3&6 for standard seat material and construction.

Dimensions

Nominal Size		1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	28	30
		40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750
L_1	in	9.50	10.50	11.50	12.50	14.00	15.75	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	59.00	62.75
	mm	241	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1499	1594
L_2	in	—	10.50	11.50	12.50	14.00	15.75	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	59.00	62.75
	mm	—	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1499	1594
H	in	5.5	6.5	7.5	8.1	8.9	9.8	10.7	13.0	14.2	16.0	18.9	21.1	22.6	24.8	31.7	36.6	38.4
	mm	155	165	190	205	225	250	272	330	360	406	480	535	575	630	805	930	975

Pressure - Temperature Ratings <For reference only>
Valves - Flanged and Welding End : Standard Class

ASTM Material Standard-to ASME B16.34 2013

Temperature		Working Pressures by Class, psig														
		Class 150					Class 300					Class 600				
°F	°C	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)
-20 to 100	-29 to 38	285	290	290	290	290	740	750	750	750	750	1,480	1,500	1,500	1,500	1,500
200	93	260	260	260	260	260	680	750	750	750	750	1,360	1,500	1,500	1,500	1,500
300	149	230	230	230	230	230	655	720	730	730	730	1,310	1,445	1,455	1,455	1,455
400	204	200	200	200	200	200	635	695	705	705	705	1,265	1,385	1,410	1,410	1,405
500	260	170	170	170	170	170	605	665	665	665	665	1,205	1,330	1,330	1,330	1,330
600	316	140	140	140	140	140	570	605	605	605	605	1,135	1,210	1,210	1,210	1,210
650	343	125	125	125	125	125	550	590	590	590	590	1,100	1,175	1,175	1,175	1,175
700	371	110	110	110	110	110	530	570	570	570	555	1,060	1,135	1.135	1.135	1,110
750	399	95	95	95	95	95	505	530	530	530	505	1,015	1,065	1,065	1,065	1,015
800	427	80	80	80	80	80	410	510	510	510	410	825	1,015	1,015	1,015	825
850	454	65	65	65	65	65	320	485	485	485	320	640	975	975	975	640
900	482	50	50	50	50	50	230	450	375	450	225	460	900	745	900	445
950	510	35	35	35	35	35	135	320	275	375	135	275	640	550	755	275
1000	538	20	20	20	20	20	85	215	200	255	85	170	430	400	505	170
1050	566		20	20	20			145	145	170			290	290	345	
1100	593		20	20	20			95	100	115			190	200	225	
1150	621		20	20	20			65	60	75			130	125	150	
1200	649		15	15	20			40	35	50			80	70	105	

Temperature		Working Pressures by Class, psig														
		Class 900					Class 1500					Class 2500				
°F	°C	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)	WCB (a)	WC6 (b)	C5 (c)	C12 (c)	LCC (d)
-20 to 100	-29 to 38	2,220	2,250	2,250	2,250	2,250	3,705	3,750	3,750	3,750	3,750	6,170	6,250	6,250	6,250	6,250
200	93	2,035	2,250	2,250	2,250	2,250	3,395	3,750	3,750	3,750	3,750	5,655	6,250	6,250	6,250	6,250
300	149	1,965	2,165	2,185	2,185	2,185	3,270	3,610	3,640	3,640	3,640	5,450	6,015	6,070	6,070	6,070
400	204	1,900	2,080	2,115	2,115	2,110	3,170	3,465	3,530	3,530	3,520	5,280	5,775	5,880	5,880	5,865
500	260	1,810	1,995	1,995	1,995	1,995	3,015	3,325	3,325	3,325	3,325	5,025	5,540	5,540	5,540	5,540
600	316	1,705	1,815	1,815	1,815	1,815	2,840	3,025	3,025	3,025	3,025	4,730	5,040	5,040	5,040	5,040
650	343	1,650	1,765	1,765	1,765	1,765	2,745	2,940	2,940	2,940	2,940	4,575	4,905	4,905	4,905	4,905
700	371	1,590	1,705	1,705	1,705	1,665	2,665	2,840	2,840	2,840	2,775	4,425	4,730	4,730	4,730	4,630
750	399	1,520	1,595	1,595	1,595	1,520	2,535	2,660	2,660	2,660	2,535	4,230	4,430	4,430	4,430	4,230
800	427	1,235	1,525	1,525	1,525	1,235	2,055	2,540	2,540	2,540	2,055	3,430	4,230	4,230	4,230	3,430
850	454	955	1,460	1,460	1,460	955	1,595	2,435	2,435	2,435	1,595	2,655	4,060	4,060	4,060	2,655
900	482	690	1,350	1,120	1,350	670	1,150	2,245	1,870	2,245	1,115	1,915	3,745	3,115	3,745	1,855
950	510	410	955	825	1,130	410	685	1,595	1,370	1,885	685	1,145	2,655	2,285	3,145	1,145
1000	538	255	650	595	760	255	430	1,080	995	1,270	430	715	1,800	1,655	2,115	715
1050	566		430	430	515			720	720	855			1,200	1,200	1,430	
1100	593		290	300	340			480	495	565			800	830	945	
1150	621		195	185	225			325	310	375			545	515	630	
1200	649		125	105	155			205	170	255			345	285	430	

(a) Upon prolonged exposure to temperatures above 800°F, the carbide phase of steel may be converted to graphite. Permissible, but not recommended for prolonged use above 800°F
(b) Use normalized and tempered material only. Permissible, but not recommended for prolonged use above 1100°F
(c) Use normalized and tempered material only.
(d) Not to be used over 650°F.