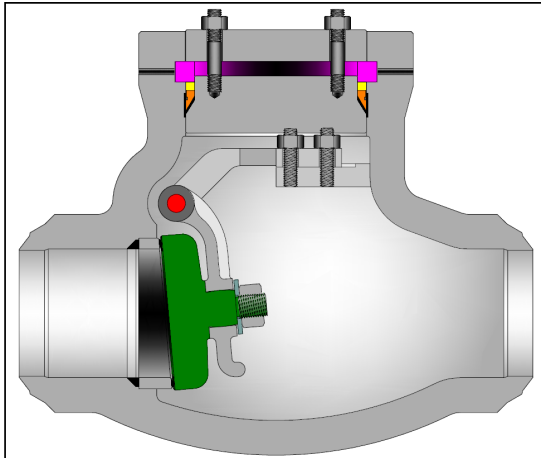


PRESSURE SEAL SWING CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

2 - 24" (50 - 600 mm)

ASME CLASSES 600 - 2500



Class	Figure Number
600	1661
900	1961
1500	1161
2500	1261

Design Specifications

Item	Applicable Specification
Wall thickness	API 600
Pressure - temperature ratings	ASME B16.34
General valve design	ASME B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Butt Weld design	ASME B16.25
Materials	ASTM

STANDARD MATERIALS (Other materials available)

PART	MATERIALS			
Body	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Bonnet	A105	A182 F11	A182 F22	A182 F91
Cap	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Disc	A105 or A216 WCB + Stellite 6 Faced	A182 F11 or A217 WC6 + Stellite 6 Faced	A182 F22 or A217 WC9 + Stellite 6 Faced	A182 F91 or A217 Gr. C12A + Stellite 6 Faced
Seat Ring	Carbon Steel + Stellite 6 Faced	A182 F11 + Stellite 6 Faced	A182 F22 + Stellite 6 Faced	A182 F91 + Stellite 6 Faced
Protective Ring	SST 410			
Segmental Thrust Ring	SST 410			
Gasket	SST 304L			
Carrier	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Carrier Pin	SST 410			
Disc Nut	Series 300 SST			
Disc Carrier Hanger	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Disc Carrier Hanger Bolts	A193 Gr. B7	A193 Gr. B16		
Body / Cap Stud	A193 Gr. B7	A193 Gr. B16		
Body / Cap Nut	A194 Gr. 2H	A194 Gr. 7		

DESIGN FEATURES:

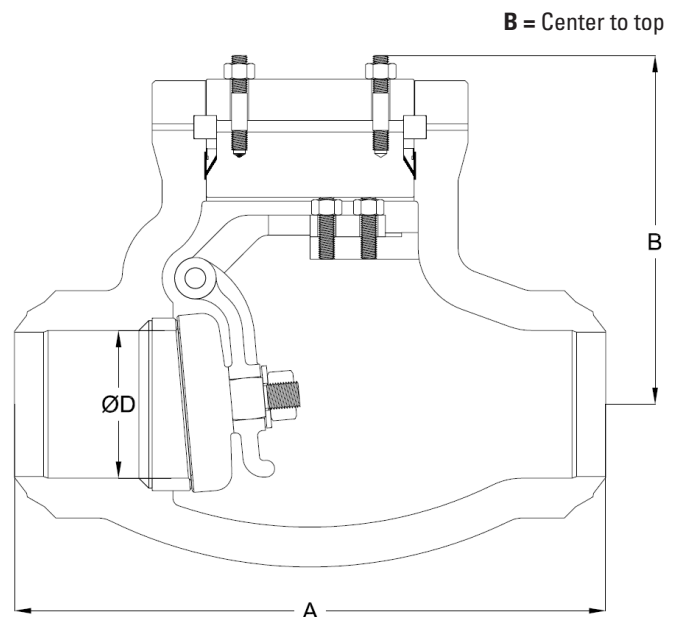
- Standard trim is stellite faced seat and disc seat surfaces, and 13% chrome carrier pin (API trim 5). Other trims available on request.
- Valves are full port design per ASME B16.34 table A-1.
- Seat faces lapped for smooth finish and superior sealing.
- Wall thickness per heavy wall API 600 requirements.
- Swivel disc for improved seat alignment and longer life.
- Each valve is shell and seat pressure tested per industry standard API 598.
- Check valves are suitable for service in horizontal line with cap vertical or in a vertical line with flow upward.
- Carrier Pin is confined within the body wall and is not accessible from the exterior, thus no side body penetrations, eliminating a common leak path.
- Weld end valves are B16.10 short pattern design. Flanged end valves are available on request and are B16.10 long-pattern design. Weld end valve dimensions given in table on next page.
- Each valve has a unique certification number that is traceable to the valve certification sheet which includes MTR data, pressure test, inspection result and certificate of conformance.
- Other available options as follows:
 - » Alternate valve materials such as chrome and stainless steel alloys
 - » Alternate trim materials
 - » Drain and other auxiliary connections
 - » NACE service
 - » Special cleaning for applications such as oxygen or chlorine
 - » Other options available as specified

SWING CHECK VALVE DIMENSIONS

(CLASSES 600 - 2500)

SIZE	ASME 600			ASME 900			ASME 1500		
	in mm	A	B	D	A	B	D	A	B
2	7	6.8	2.00	8.5	8.6	1.87	8.5	8.7	1.87
50	178	172	51	216	218	48	216	221	48
3	10	8.8	3.00	12.0	10.2	2.87	12.0	10.2	2.75
80	254	224	76	305	259	73	305	259	70
4	12	11.1	4.00	14.0	11.7	3.87	16.0	12.2	3.62
100	305	282	102	356	297	98	406	310	92
6	18	13.0	6.00	20.0	14.3	5.75	22.0	14.5	5.37
150	457	330	152	508	363	146	559	367	136
8	23	14.6	7.87	26.0	16.6	7.50	28.0	18.9	7.00
200	584	370	200	660	422	191	711	480	178
10	28	16.6	9.75	31.0	19.4	9.37	34.0	22.1	8.75
250	711	422	248	787	493	238	864	561	222
12	32	18.2	11.75	36.0	21.7	11.12	39.0	26.3	10.37
300	813	462	299	914	551	282	991	669	263

SIZE	ASME 2500		
	in mm	A	B
2	11.0	9.6	1.50
50	279	244	38
3	14.5	12.4	2.25
80	368	316	57
4	18.0	14.5	2.87
100	457	367	73
6	24.0	16.0	4.37
150	610	408	111
8	30.0	20.1	5.75
200	762	510	146
10	36.0	23.2	7.25
250	914	588	184
12	41.0	26.5	8.62
300	1041	672	219



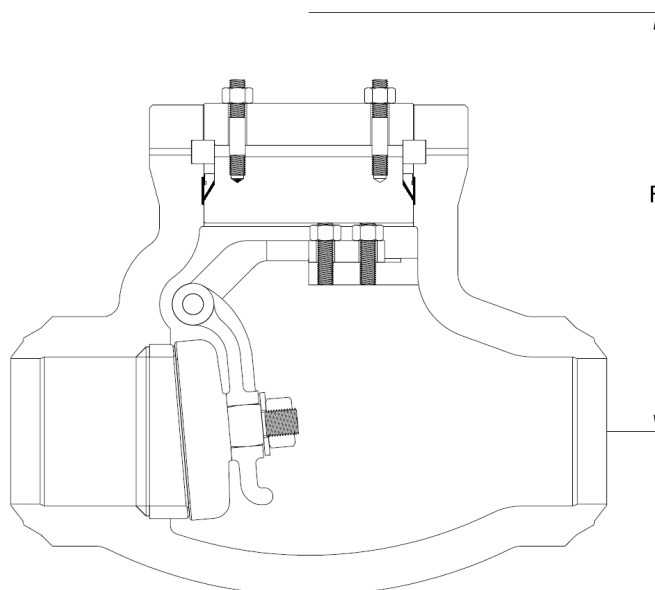
PRESSURE SEAL SWING CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

2 - 24" (50 - 600 mm)

ASME CLASSES 600 - 2500

SIZE	ASME 600					ASME 900					ASME 1500					ASME 2500				
	in mm	F	in mm	WT kg	CV	F	in mm	WT kg	CV	F	in mm	WT kg	CV	F	in mm	WT kg	CV			
2	8.8	40	75	10.6	46	65	10.7	46	65	11.6	117	40								
50	224	18	269	21	272	21	295	53												
3	10.8	71	175	12.2	75	160	12.2	93	145	14.4	196	100								
80	274	32	310	34	310	42	366	89												
4	13.1	121	315	14.7	150	300	15.2	163	260	17.5	313	165								
100	333	55	373	68	386	74	445	142												
6	16.0	287	755	17.3	370	700	17.5	514	610	19.0	628	400								
150	406	130	439	168	445	233	483	285												
8	17.6	573	1350	19.6	1019	1220	22.9	1111	1070	24.1	1319	720								
200	447	260	498	462	582	504	612	598												
10	20.6	816	2070	23.4	1599	1910	26.1	1713	1670	27.2	1727	1140								
250	523	370	594	725	663	777	691	783												
12	22.2	1080	3120	25.7	2362	2790	30.3	2547	2430	31.5	3334	1680								
300	564	490	653	1071	770	1155	800	1512												



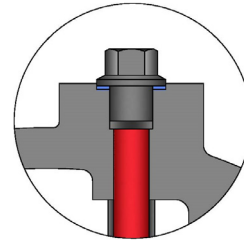
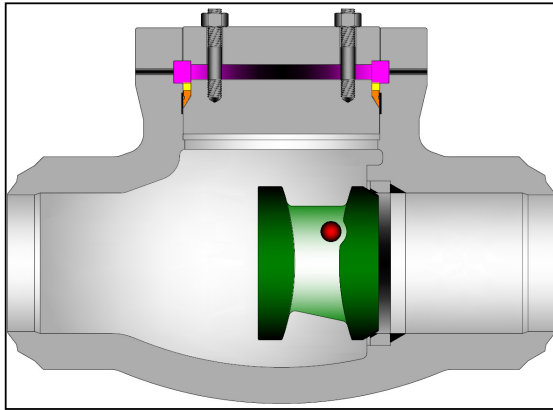
F = Dismantling dimension
WT = Weight
CV = Flow coefficient

PRESSURE SEAL TILTING DISC CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

2 - 24" (50 - 600 mm)

ASME CLASSES 600 - 2500



Side Plug Configuration

Class	Figure Number
600	1695
900	1995
1500	1195
2500	1295

DESIGN FEATURES:

- Standard trim is stellite faced seat and disc seat surfaces, and 13% chrome disc pin (API trim 5). Other trims available on request.
- Valves are full port design per ASME B16.34 Table A-1.
- Seat faces lapped for smooth finish and superior sealing.
- Wall thickness per heavy wall API 600 requirements.
- Body and cap joint accurately machined. Gasket details on page 6.
- Each valve is shell and seat pressure tested per industry standard API 598.
- Check valves are suitable for service in horizontal line with cap vertical or in a vertical line with flow upward.
- Weld end valves are B16.10 short pattern design. Flanged end valves are available on request and are B16.10 long-pattern design. Weld end valve dimensions given in table on next page.
- Each valve has a unique certification number that is traceable to the valve certification sheet which includes MTR data, pressure test, inspection result and certificate of conformance.
- Other available options as follows:
 - » Alternate valve materials such as chrome and stainless steel alloys
 - » Alternate trim materials
 - » Drain and other auxiliary connections
 - » NACE service
 - » Special cleaning for applications such as oxygen or chlorine
 - » Other options available as specified

STANDARD MATERIALS (Other materials available)

PART	MATERIALS			
Body	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Bonnet	A105	A182 F11	A182 F22	A182 F91
Cap	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Disc	A105 or A216 WCB + Stellite 6 Faced	A182 F11 or A217 WC6 + Stellite 6 Faced	A182 F22 or A217 WC9 + Stellite 6 Faced	A182 F91 or A217 Gr. C12A + Stellite 6 Faced
Seat Ring	Carbon Steel + Stellite 6 Faced	A182 F11 + Stellite 6 Faced	A182 F22 + Stellite 6 Faced	A182 F91 + Stellite 6 Faced
Protective Ring	SST 410			
Segmental Thrust Ring	SST 410			
Support Plate	Steel			
Gasket	SST 304L			
Disc Pin	SST 410			
Disc Nut	Series 300 SST			
Pin Plug Bolts	A193 Gr. B7	A193 Gr. B16		
Pin Plug Nuts	A194 Gr. 2H	A194 Gr. 7		
Pin Plug Gasket	Graphite Coated SST			
Bonnet Stud	A193 Gr. B7	A193 Gr. B16		
Bonnet Nut	A194 Gr. 2H	A194 Gr. 7		

Design Specifications

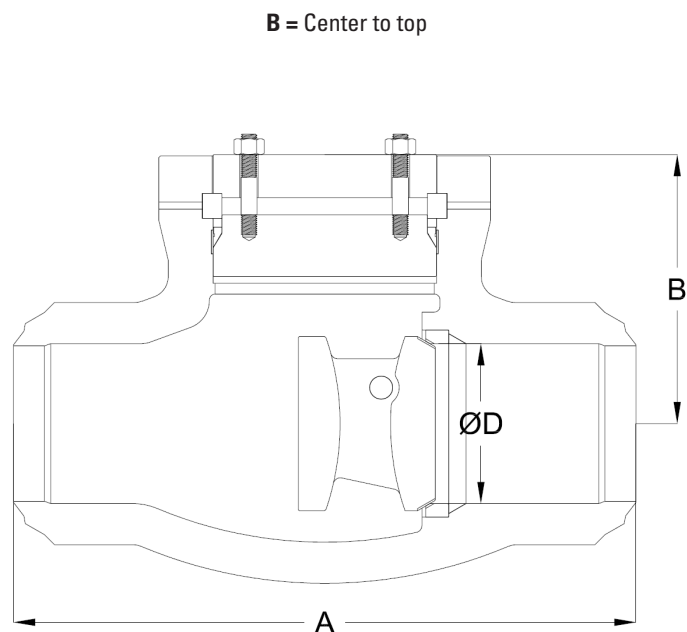
Item	Applicable Specification
Wall thickness	API 600
Pressure - temperature ratings	ASME B16.34
General valve design	ASME B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Butt Weld design	ASME B16.25
Materials	ASTM

TILTING DISC CHECK VALVE DIMENSIONS

(CLASSES 600 - 2500)

SIZE in mm	ASME 600			ASME 900			ASME 1500		
	A	B	D	A	B	D	A	B	D
2	7.0	7.5	2.00	8.5	5.6	1.87	8.5	7.6	1.87
50	178	191	51	216	143	48	216	194	48
2½	8.5	7.9	2.50	10.0	8.0	2.25	10	8.1	2.25
65	216	200	64	254	203	57	254	206	57
3	10.0	8.3	3.00	12.0	9.0	2.87	12.0	9.0	2.75
80	254	210	76	305	229	73	305	229	70
4	12.0	9.4	4.00	14.0	9.9	3.87	16.0	9.9	3.62
100	305	238	102	356	251	98	406	251	92
6	18.0	10.6	6.00	20.0	11.6	5.75	22.0	10.3	5.37
150	457	270	152	508	295	146	559	260	136
8	23.0	12.0	7.87	26.0	13.1	7.50	28.0	11.8	7.00
200	584	305	200	660	333	191	711	298	178
10	28.0	13.6	9.75	31.0	15.1	9.37	34.0	15.9	8.75
250	711	346	248	787	384	238	864	403	222
12	32.0	16.1	11.75	36.0	18.1	11.12	39.0	19.0	10.37
300	813	410	298	914	460	282	991	483	263
14	35.0	17.8	12.87	39.0	19.5	12.25	42.0	20.1	11.37
350	889	451	327	991	495	311	1067	511	289
16	39.0	20.1	14.75	43.0	21.9	14.00	47.0	22.3	13.00
400	991	511	375	1092	556	356	1194	565	330
18	43.0	21.8	16.50	48.0	22.9	15.75	60.5	23.3	14.62
450	1092	552	419	1219	581	400	1537	591	371
20	47.0	23.3	18.25	52.0	24.4	17.50	65.5	24.4	16.37
500	1194	591	464	1321	619	445	1664	619	416
24	55.0	25.4	22.00	61.0	27.4	21.00	76.5	28.9	19.62
600	1397	645	559	1549	695	533	1943	733	498

SIZE in mm	ASME 2500		
	A	B	D
2	11.0	7.3	1.50
50	279	184	38
2½	13.0	7.9	1.87
65	330	200	48
3	14.5	9.4	2.25
80	368	238	57
4	18.0	9.9	2.87
100	457	251	73
6	24.0	11.8	4.37
150	610	298	111
8	30.0	14.6	5.75
200	762	371	146
10	36.0	16.6	7.25
250	914	422	184
12	41.0	21.3	8.62
300	1041	540	219
14	44.0	22.9	9.50
350	1118	581	241
16	49.0	20.5	10.87
400	1245	521	276
18	55.0	24.8	12.25
450	1397	629	311



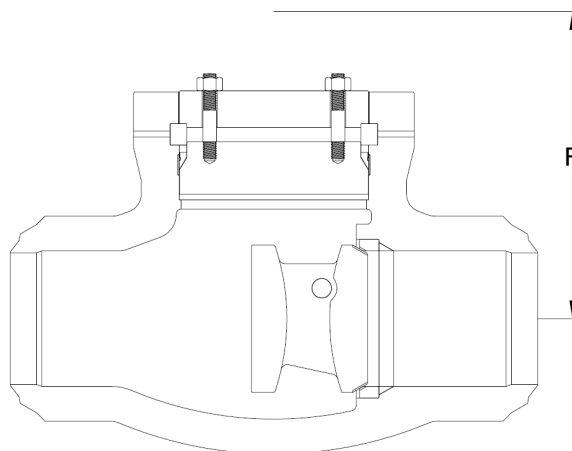
PRESSURE SEAL TILTING DISC CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

2 - 24" (50 - 600 mm)

ASME CLASSES 600 - 2500

SIZE	ASME 600					ASME 900					ASME 1500					ASME 2500				
	in mm	F	in mm	WT lb kg	CV	F	in mm	WT lb kg	CV	F	in mm	WT lb kg	CV	F	in mm	WT lb kg	CV			
2	10.0		90		90	8.2		120		80	10.2		140		80	10.4		200		50
50	254		41			208		54			259		63			264		91		
2½	11.2		90		145	11.1		120		115	11.4		140		115	11.2		200		80
65	284		41			282		54			290		63			284		91		
3	12.1		150		205	12.5		180		190	12.8		210		175	13.0		240		115
80	307		68			318		82			325		95			330		42		
4	14.5		180		375	14.6		210		350	14.9		245		310	14.8		400		200
100	368		82			371		95			378		111			376		100		
6	17.9		245		900	18.4		400		830	17.7		440		720	17.6		560		480
150	455		111			467		181			450		200			448		235		
8	21.3		460		1600	21.9		505		1450	22.1		555		1270	21.9		970		860
200	541		209			556		229			561		252			557		440		
10	25.4		1100		2500	26.5		1160		2300	26.7		1545		2000	26.6		1655		1400
250	645		499			673		526			678		701			676		751		
12	30.1		1735		3700	31.3		1815		3300	32.2		1980		2900	31.9		2840		2000
300	765		787			795		823			818		898			810		1290		
14	33.9		2365		4500	34.2		2470		4000	33.8		3350		3500	34.8		4230		2400
350	861		1073			869		1120			859		1519			884		1918		
16	38.0		2990		5900	38.7		3125		5300	38.5		4720		4500	36.1		5170		3200
400	965		1356			983		1417			978		2141			917		2345		
18	41.2		3620		7600	42.8		3780		6900	42.3		5475		6000	41.5		6990		4200
450	1046		1642			1087		1714			1074		2483			1054		3170		
20	44.6		4250		9300	45.2		4435		8600	45.6		6500		7500					
500	1133		1927			1148		2011			1158		2948							
24	50.7		5880		14000	52.0		6500		12300	52.4		8900		10800					
600	1288		2667			1321		2948			1331		4036							



F = Dismantling dimension

WT = Weight

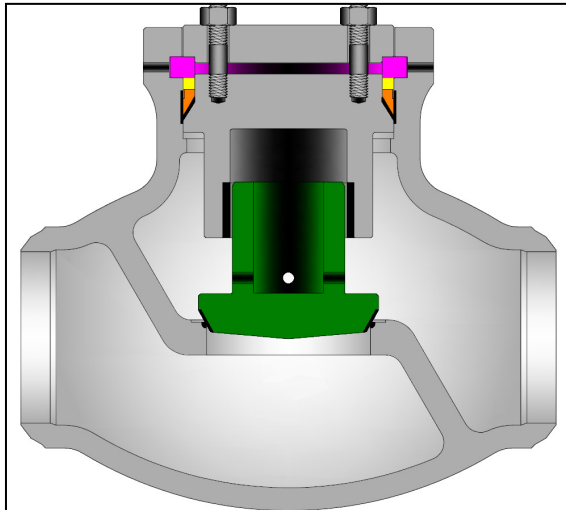
CV = Flow coefficient

PRESSURE SEAL LIFT CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

3 - 12" (80 - 300 mm)

ASME CLASSES 600 - 2500



Class	Figure Number
600	1665
900	1965
1500	1165
2500	1265

STANDARD MATERIALS (Other materials available)

PART	MATERIALS			
Body	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Bonnet	A105	A182 F11	A182 F22	A182 F91
Cap	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Disc	A105 or A216 WCB + Stellite 6 Faced	A182 F11 or A217 WC6 + Stellite 6 Faced	A182 F22 or A217 WC9 + Stellite 6 Faced	A182 F91 or A217 Gr. C12A + Stellite 6 Faced
Seat Ring	Carbon Steel + Stellite 6 Faced	A182 F11 + Stellite 6 Faced	A182 F22 + Stellite 6 Faced	A182 F91 + Stellite 6 Faced
Protective Ring	SST 410			
Segmental Thrust Ring	SST 410			
Gasket	SST 304L			
Bonnet Stud	A193 Gr. B7	A193 Gr. B16		
Bonnet Nut	A194 Gr. 2H	A194 Gr. 7		

DESIGN FEATURES:

- Standard trim is stellite faced seat and disc seat surfaces (API trim 5). Other trims available on request.
- Valves are full port design per ASME B16.34 table A-1.
- Seat faces lapped for smooth finish and superior sealing.
- Wall thickness per heavy wall API 600 requirements.
- Body and cap joint accurately machined. Gasket details on page 6.
- Each valve is shell and seat pressure tested per industry standard API 598.
- Application: These valves can be used in horizontal line with cap vertical only.
- Weld end valves are B16.10 short pattern design. Flanged end valves are available on request and are B16.10 long-pattern design. Weld end valve dimensions given in table on next page.
- Each valve has a unique certification number that is traceable to the valve certification sheet which includes MTR data, pressure test, inspection result and certificate of conformance.
- Other available options as follows:
 - » Alternate valve materials such as chrome and stainless steel alloys
 - » Alternate trim materials
 - » Drain and other auxiliary connections
 - » NACE service
 - » Special cleaning for applications such as oxygen or chlorine
 - » Other options available as specified

Design Specifications

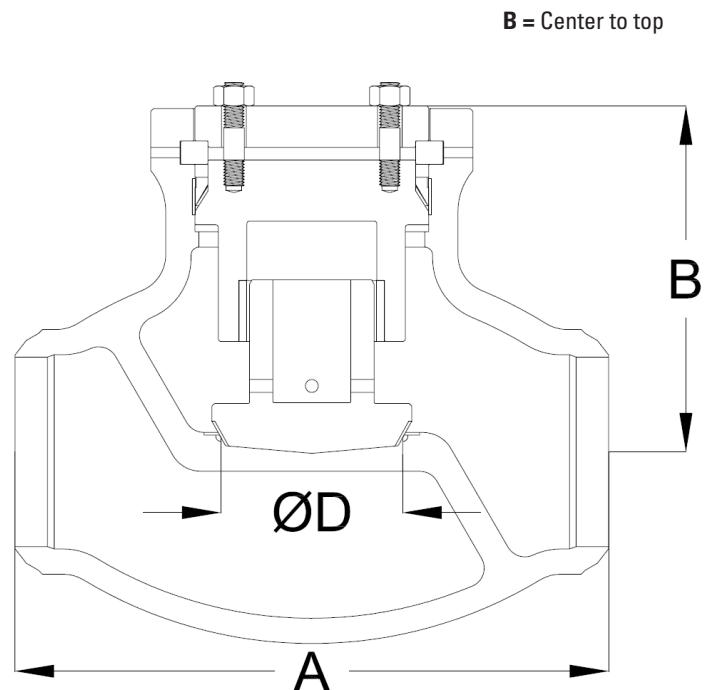
Item	Applicable Specification
Wall thickness	API 600
Pressure - temperature ratings	ASME B16.34
General valve design	ASME B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Butt Weld design	ASME B16.25
Materials	ASTM

LIFE CHECK VALVE DIMENSIONS

(CLASSES 600 - 2500)

SIZE	ASME 600			ASME 900			ASME 1500		
	in	A	B	D	A	B	D	A	B
3	10	8.3	3.00	12	8.3	2.87	12	8.5	2.75
80	254	211	76	305	211	73	305	216	70
4	12	10.3	4.00	14	11.3	3.87	16	11.3	3.62
100	305	262	102	356	287	98	406	287	92
6	18	17.3	6.00	20	17.3	5.75	22	17.5	5.37
150	457	439	152	508	439	146	559	445	136
8	23	18.8	7.87	26	20.0	7.50	28	21.0	7.00
200	584	478	200	660	508	191	711	533	178
10	28	23.3	9.75	31	24.5	9.37	34	25.0	8.75
250	711	592	248	787	622	238	864	635	222
12	32	28.0	11.75	36	28.0	11.12	39	29.0	10.37
300	813	711	298	914	711	282	991	737	263

SIZE	ASME 2500		
in	A	B	D
3	14.5	12.5	2.25
80	368	318	57
4	18.0	15.0	2.87
100	457	381	73
6	24.0	18.3	4.37
150	610	465	111
8	30.0	22.5	5.75
200	762	572	146
10	36.0	25.5	7.25
250	914	648	184
12	41.0	30.0	8.62
300	1041	762	219



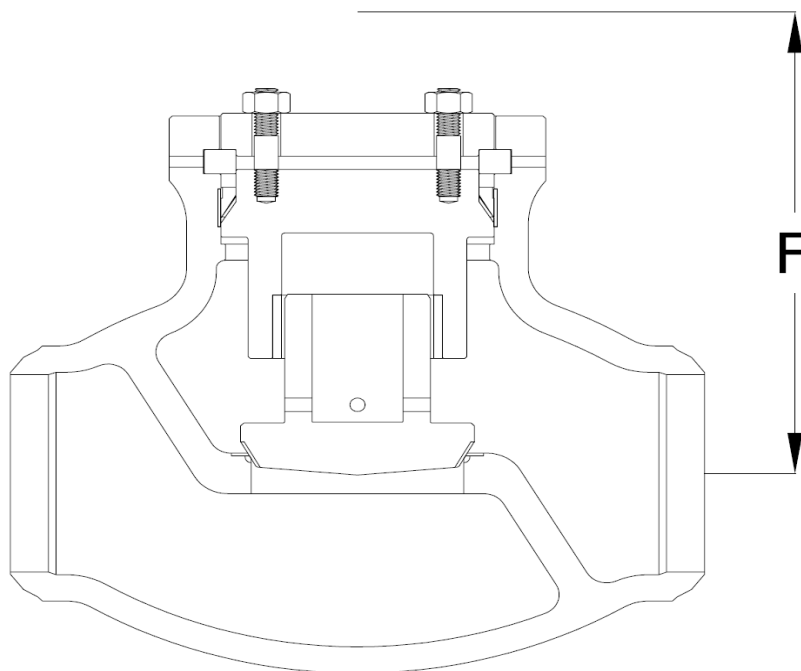
PRESSURE SEAL LIFT CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

3 - 12" (80 - 300 mm)

ASME CLASSES 600 - 2500

SIZE	ASME 600					ASME 900					ASME 1500					ASME 2500				
	in mm	F	in mm	WT kg	CV	F	in mm	WT kg	CV	F	in mm	WT kg	CV	F	in mm	WT kg	CV			
3	12.7		86	110	12.7	93	100	13.0	166	90	19.0	294	60							
80	323		39		323	42		330	75		483	133								
4	15.7		109	200	17.2	138	190	17.2	241	160	23.0	483	100							
100	399		49		437	62		437	109		584	219								
6	26.2		273	480	26.5	518	440	26.8	760	380	28.0	926	250							
150	665		124		673	235		681	345		711	420								
8	28.7		641	850	30.5	814	770	32.0	1994	670	34.5	2778	450							
200	729		291		775	369		813	904		876	1260								
10	35.7		1091	1300	37.3	1820	1200	39.0	3154	1000	41.0	3512	720							
250	907		495		947	825		991	1430		1041	1593								
12	42.8		1495	2000	42.8	2392	1800	46.0	4076	1500	47.0	4878	1100							
300	1087		678		1087	1085		1168	1849		1194	2212								



F = Dismantling dimension

WT = Weight

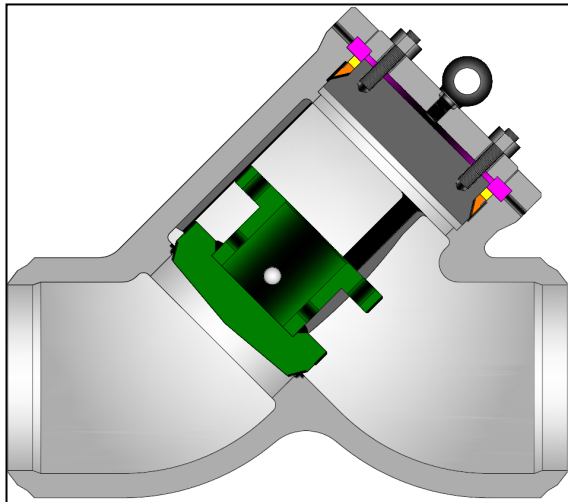
CV = Flow coefficient

PRESSURE SEAL Y-PATTERN LIFT CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

3 - 12" (80 - 300 mm)

ASME CLASSES 600 - 2500



Class	Fig. Number (1)
600	1665
900	1965
1500	1165
2500	1265

(1) An option code is needed to specify a y-pattern. See page 5 for more details.

STANDARD MATERIALS (Other materials available)

PART	MATERIALS			
Body	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Bonnet	A105	A182 F11	A182 F22	A182 F91
Cap	A216 Gr. WCB	A217 Gr. WC6	A217 Gr. WC9	A217 Gr. C12A
Disc	A105 or A216 WCB + Stellite 6 Faced	A182 F11 or A217 WC6 + Stellite 6 Faced	A182 F22 or A217 WC9 + Stellite 6 Faced	A182 F91 or A217 Gr. C12A + Stellite 6 Faced
Seat Ring	Carbon Steel + Stellite 6 Faced	A182 F11 + Stellite 6 Faced	A182 F22 + Stellite 6 Faced	A182 F91 + Stellite 6 Faced
Protective Ring	SST 410			
Segmental Thrust Ring	SST 410			
Gasket	SST 304L			
Bonnet Stud	A193 Gr. B7	A193 Gr. B16		
Bonnet Nut	A194 Gr. 2H	A194 Gr. 7		

Design Specifications

Item	Applicable Specification
Wall thickness	ASME B16.34
Pressure - temperature ratings	ASME B16.34
General valve design	ASME B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Butt Weld design	ASME B16.25
Materials	ASTM

DESIGN FEATURES:

- Standard trim is stellite faced seat and disc seat surfaces (API trim 5). Other trims available on request.
- Valves are full port design per ASME B16.34 table A-1.
- Seat faces lapped for smooth finish and superior sealing.
- Wall thickness per heavy wall API 600 requirements.
- Body and cap joint accurately machined. Gasket details on page 6.
- Each valve is shell and seat pressure tested per industry standard API 598.
- Application: These valves can be used in horizontal line with cap vertical only.
- Weld end valves are B16.10 short pattern design. Flanged end valves are available on request and are B16.10 long-pattern design. Weld end valve dimensions given in table on next page.

- Each valve has a unique certification number that is traceable to the valve certification sheet which includes MTR data, pressure test, inspection result and certificate of conformance.
- Other available options as follows:
 - » Alternate valve materials such as chrome and stainless steel alloys
 - » Alternate trim materials
 - » Drain and other auxiliary connections
 - » NACE service
 - » Special cleaning for applications such as oxygen or chlorine
 - » Other options available as Specified

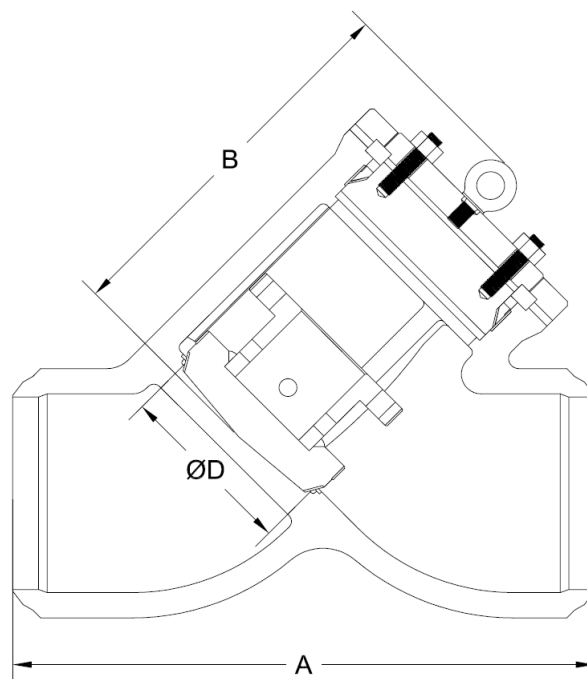
LIFE CHECK VALVE DIMENSIONS

(CLASSES 600 -2500)

SIZE	ASME 600			ASME 900			ASME 1500		
in	A	B	D	A	B	D	A	B	D
mm									
3	10	8.8	3.00	12	8.8	2.87	12	9.0	2.75
80	254	220	76	305	220	73	305	230	70
4	12	10.8	4.00	14	11.8	3.87	16	11.8	3.62
100	305	275	102	356	300	98	406	300	92
6	18	17.8	6.00	20	18.3	5.75	22	18.5	5.37
150	457	450	152	508	465	146	559	470	136
8	23	19.8	7.87	26	21.0	7.50	28	22.0	7.00
200	584	500	200	660	535	191	711	560	178
10	28	24.8	9.75	31	25.5	9.37	34	26.0	8.75
250	711	625	248	787	650	238	864	660	222
12	32	29.5	11.75	36	29.5	11.12	39	30.0	10.37
300	813	750	298	914	750	282	991	760	263

SIZE	ASME 2500		
in	A	B	D
mm			
3	14.5	13.0	2.25
80	368	330	57
4	18.0	16.0	2.87
100	457	405	73
6	24.0	19.3	4.37
150	610	490	111
8	30.0	24.0	5.75
200	762	610	146
10	36.0	27.0	7.25
250	914	685	184
12	41.0	32.0	8.62
300	1041	815	219

B = Center to top



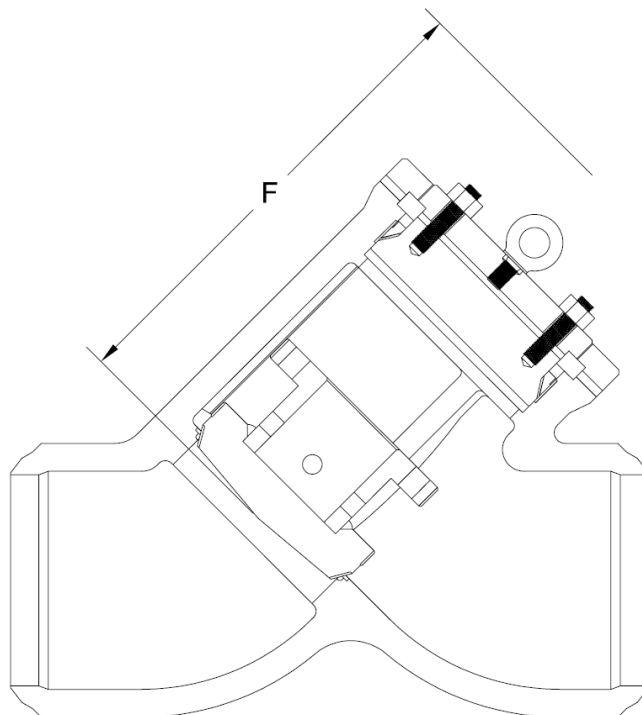
PRESSURE SEAL LIFT CHECK VALVES

CAST CARBON, STAINLESS STEEL OR ALLOY STEEL

3 - 12" (50 - 300 mm)

ASME CLASSES 600 - 2500

SIZE	ASME 600				ASME 900				ASME 1500				ASME 2500							
	F	in mm	WT	lb kg	CV	F	in mm	WT	lb kg	CV	F	in mm	WT	lb kg	CV					
3		13.2	90		240		13.2	98		220		13.5	174		200		19.5	309		130
80		330	41				330	44				345	79				495	140		
4		16.2	114		440		17.7	145		410		17.7	253		360		24.0	512		230
100		413	52				450	66				450	115				608	232		
6		26.7	287		1050		27.5	549		960		27.8	806		840		29.0	982		560
150		675	130				698	249				705	365				735	445		
8		29.7	679		1900		31.5	863		1700		33.0	2094		1500		36.0	2972		1000
200		750	308				876	391				840	950				915	1348		
10		37.2	1156		2900		38.3	1929		2700		40.5	3758		2300		42.0	3375		1600
250		938	525				975	875				1028	1705				1067	1531		
12		44.3	1585		4300		44.3	2559		3900		48.0	4361		3400		48.0	5268		2300
300		1125	719				1125	1161				1220	1978				1223	2390		



F = Dismantling dimension

WT = Weight

CV = Flow coefficient