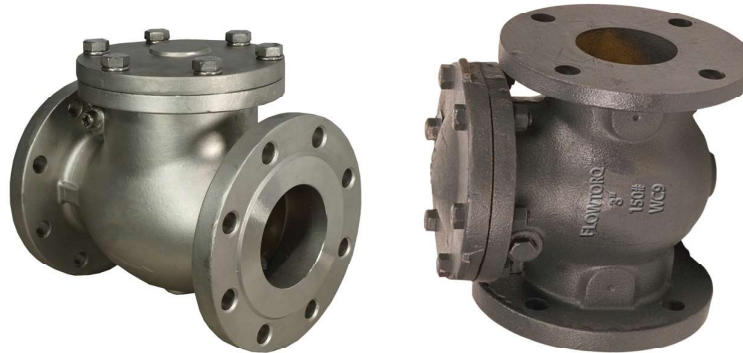




CHECK VALVES - SWING CHECK VALVES



Check Valves come in various designs such as Swing Check, Lift Check (Piston type), Dual Plate, Tilting Disc and Non-Slam types. The basic application for all check valves are totally opposite to all the other valves. It is it prevents the back flow of process fluid. Typically the closure member is the disc which is either self operated by gravity and force by the back flow or either by a spring which forces the disc or plates to rest on body seats thereby sealing and preventing the back flow. Swing check valves are most widely used followed by lift check valves and dual plate check valves.

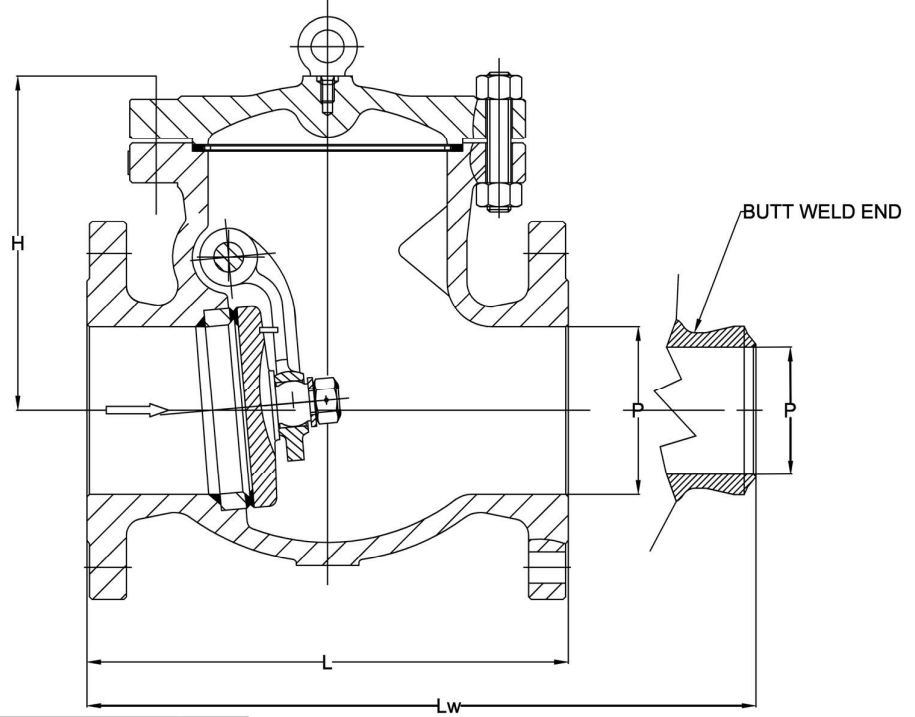


DESIGN STANDARD	
Bolted Bonnet Swing Check Valve	BS1868 & ASME B16.34 & API 6D
Pressure Seal Swing Check Valve (Long & Short pattern)	ASME B16.34
Face to Face / End to End Dimensions	ASME B16.10 / ISO 5752
End Flanged dimensions	ASME B16.5 / ISO 7005-1, ASME B16.47-A&B MSS SP-44 & API 605
Butt-weld End dimensions	ASME B16.25
Valve inspection & testing	BS1868 & ISO 5208 & BS6755
Pressure - Temperature rating	ASME B16.34
TEST / INSPECTION	METHOD
Visual Inspection	MSS SP-55
Marking	MSS SP-25 & ISO5208
Dimensional Inspection	Applicable valve
Chemical Analysis	ASTM E350
Mechanical Properties	ASTM A370
Liquid Penetrant Inspection	ASTM A165
Magnetic Particle Inspection	ASTM E709
Radiographic Inspection	ASME B16.34
Ultrasonic Inspection	ASTM A388
Pressure Testing	API 598 / ISO 5208

API 600 TRIM CHART			
API 600TRIM N ^o	Nominal TRIM	Stem / Backseat	Seating Surface Body / Wedge
1	F6	13Cr	13Cr
2	304	18Cr-8Ni	18Cr-8Ni
3	F310	25Cr-20Ni	25Cr-20Ni
4	Hard F6	13Cr	Hard 13Cr
5	Hardfaced	13Cr	Co-Cr A
5A	Hardfaced	13Cr	Ni-Cr
6	F6 and Cu-Ni	13Cr	13Cr and Cu-Ni
7	F6 and Hard F6	13Cr	13Cr and Hard 13Cr
8	F6 and Hardfaced	13Cr	13Cr and Co-Cr A
8A	F6 and Hardfaced	13Cr	13Cr and Ni-Cr
9	Monel	Ni-Cu Alloy	Ni-Cu Alloy
10	316	18Cr-8Ni-Mo	18Cr-8Ni-Mo
11	Monel and Hardfaced	Ni-Cu Alloy	Ni-Cu Alloy and Trim 5 or 5A
12	316 and Hardfaced	18Cr-8Ni-Mo	18Cr-8Ni-Mo and Trim 5 or 5A
13	Alloy 20	19Cr-29Ni	19Cr-29Ni
14	Alloy 20 and Hardfaced	19Cr-29Ni	19Cr-29Ni and Trim 5 or 5A
15	Hardfaced	18Cr-8Ni	Co-Cr A
16	Hardfaced	18Cr-8Ni-Mo	Co-Cr A
17	Hardfaced	18Cr-10Ni-Cb	Co-Cr A
18	Hardfaced	19Cr-29Ni	Co-Cr A



CHECK VALVES - SWING CHECK VALVES - 150# & 300#



150#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	203	203	135	17
65 (2½")	216	216	155	21
80 (3")	241	241	168	29
100 (4")	292	292	235	42
125 (5")	330	330	249	59
150 (6")	356	356	277	68
200 (8")	495	495	339	118
250 (10")	622	622	398	197
300 (12")	698	698	525	302
350 (14")	787	787	553	372
400 (16")	914	914	584	570
450 (18")	978	978	668	665
500 (20")	978	978	712	900
550 (22")	1067	1067	725	1100
600 (24")	1295	1295	740	1359
650 (26")	1295	1295	780	1850
700 (28")	1448	1448	810	2000
750 (30")	1524	1524	1050	2400
900 (36")	1956	1956	1390	3380

(Code-SS)

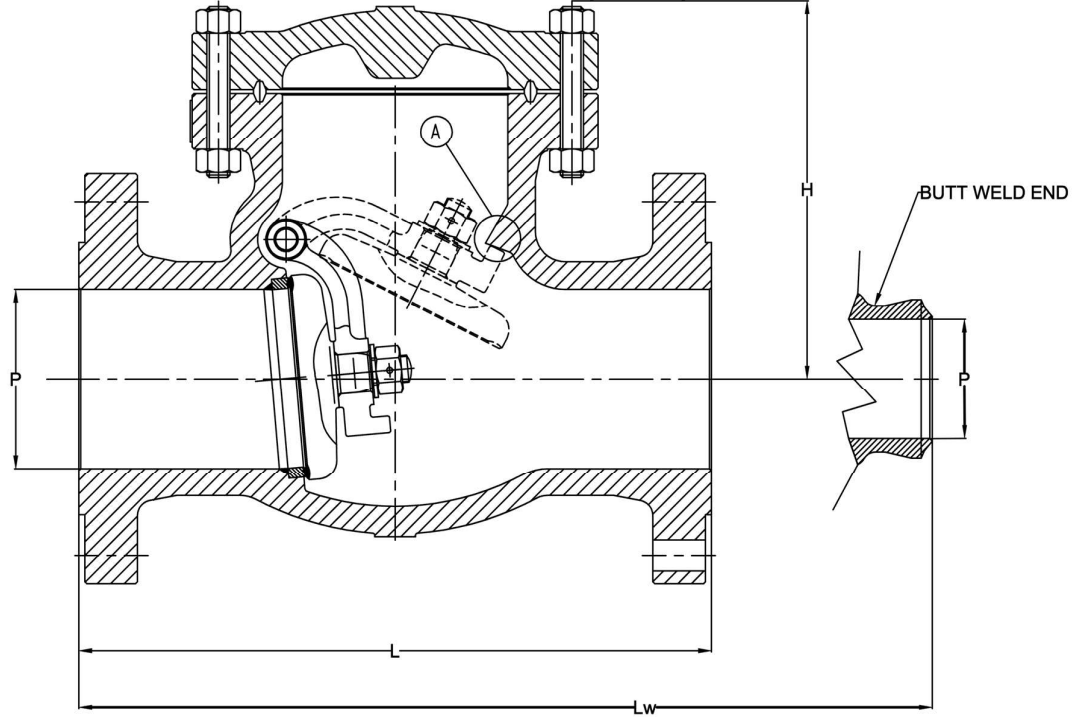
300#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	267	267	158	21
65 (2½")	292	292	167	35
80 (3")	318	318	188	43
100 (4")	356	356	259	60
125 (5")	400	400	281	85
150 (6")	444	444	319	131
200 (8")	533	533	401	213
250 (10")	622	622	483	384
300 (12")	711	711	555	449
350 (14")	838	838	585	680
400 (16")	864	864	615	840
450 (18")	978	978	643	1025
500 (20")	1016	1016	681	1180

(Code-SS)





CHECK VALVES - SWING CHECK VALVES - 600#, 900#, 1500# & 2500#



600#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	292	292	197	26
65 (2½")	330	330	207	45
80 (3")	356	356	231	68
100 (4")	432	432	281	90
125 (5")	508	508	319	140
150 (6")	559	559	362	200
200 (8")	660	660	437	360
250 (10")	787	787	490	673
300 (12")	838	838	528	875
350 (14")	889	889	572	944
400 (16")	991	991	660	1220

(Code-SS)

1500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	265	76
65 (2½")	419	419	275	93
80 (3")	470	470	290	140
100 (4")	546	546	385	232
125 (5")	673	673	430	362
150 (6")	705	705	470	490
200 (8")	832	832	625	990

(Code-SS)

900#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	240	76
65 (2½")	419	419	250	86
80 (3")	381	381	260	98
100 (4")	457	457	320	145
125 (5")	559	559	350	175
150 (6")	610	610	382	259
200 (8")	737	737	530	565

(Code-SS)

2500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	451	451	315	100
65 (2½")	508	508	345	185
80 (3")	578	578	380	225
100 (4")	673	673	410	370
125 (5")	794	794	495	595
150 (6")	914	914	560	805
200 (8")	1022	1022	695	1320

(Code-SS)





CHECK VALVES - WAFER CHECK VALVES



More lighter in weight and even compact than dual plate check valves, Wafer Check Valves are typically employed for low pressure applications in oil & gas, petrochemical, chemical, power and other process industries. A single circular body and circular disc hinged to body with bolts / welded. Very ideal solution for applications where space constraints and weight constraints are critical. Can be used in vertical & horizontal orientations.



DIMENSIONS								
Size		P	L	D				
DN	Inch			PN10	PN16	BS10D	BS10E	ANSI 150#
25	1"	14	16	72	72	69	69	64
40	1.5"	22	19	93	93	86	86	83
50	2"	30	19	108	108	97	97	102
65	2.5"	40	19	128	128	110	110	121
80	3"	52	19	143	143	129	129	134
100	4"	71	19	163	163	161	161	172
125	5"	93	19	193	193	193	193	194
150	6"	114	19	219	219	218	215	220
200	8"	157	28.5	274	274	274	272	277
250	10"	195	28.5	329	329	335	335	337
300	12"	230	38	379	385	385	383	407
350	14"	270	44.5	438	444	446	446	448
400	16"	310	51	489	496	496	496	512
450	18"	360	60.5	538	555	559	559	545
500	20"	406	63.5	593	616	616	616	602
600	24"	490	70	695	733	727	724	714

(Code-SV)

DESIGN STANDARD	
Check Valve	ASME B16.34 & API 6D
Face to Face / End to End Dimensions	API6D, ASME B16.34
Valve inspection & testing	API598
Pressure - Temperature rating	ASME B16.34

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Applicable valve
Chemical Analysis	ASTM E350	Applicable Standard
Mechanical Properties	ASTM A370	Applicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598	API 598

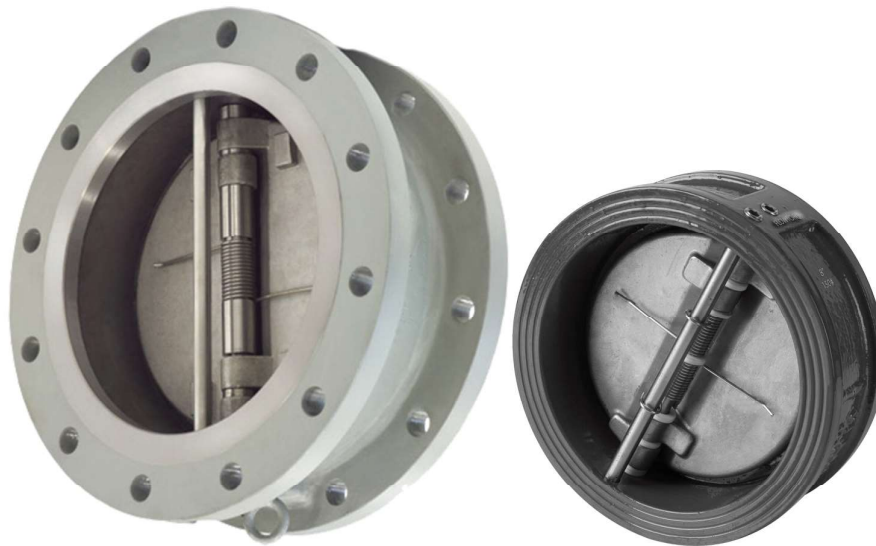




CHECK VALVES - DUAL PLATE CHECK VALVES



Comparatively lighter in weight and compact in construction with swing check valves, Dual Plate Check Valves provide cutting edge technology and application in oil & gas, petrochemical, chemical, power and other process industries. It houses two separate discs hinged to a stem (hinge pin) and forced by a spring for closing while on other hand force of service medium serves to open. Ideal for backflow prevention, pump outlet, prevent gravitational drainage, etc.



DESIGN STANDARD	
Dual Plate Check Valve	API594, ASME B16.34 & API 6D
Face to Face / End to End Dimensions	API594, ASME B16.5, ASME B16.47
Valve inspection & testing	API598
Pressure - Temperature rating	ASME B16.34

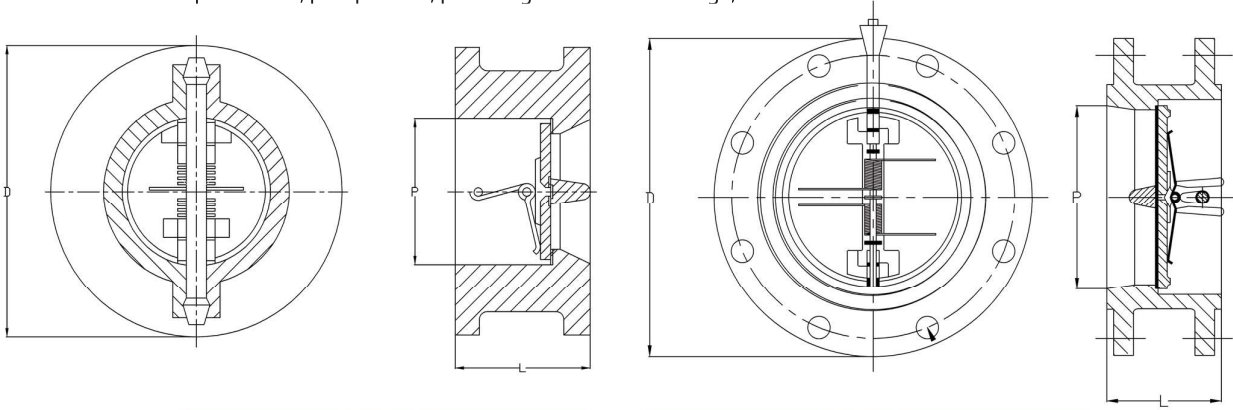
TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Applicable valve
Chemical Analysis	ASTM E350	Applicable Standard
Mechanical Properties	ASTM A370	Applicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598	API 598



CHECK VALVES - DUAL PLATE CHECK VALVES



Comparatively lighter in weight and compact in construction with swing check valves, Dual Plate Check Valves provide cutting edge technology and application in oil & gas, petrochemical, chemical, power and other process industries. It houses two separate discs hinged to a stem (hinge pin) and forced by a spring for closing while on other hand force of service medium serves to open. Ideal for backflow prevention, pump outlet, prevent gravitational drainage, etc.



150# - Wafer Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	105	60	2.4
65 (2½")	73	124	67	4.3
80 (3")	89	137	73	5.7
100 (4")	114	175	73	7.5
125 (5")	141	197	86	12
150 (6")	168	222	98	16
200 (8")	219	279	127	33
250 (10")	273	340	146	50
300 (12")	324	410	181	79
350 (14")	356	451	184	93
400 (16")	406	514	191	159
450 (18")	457	549	203	178
500 (20")	508	606	219	234
600 (24")	610	718	222	740
650 (26")	660	773	222	692
700 (28")	711	832	305	835
750 (30")	762	883	305	665
800 (32")	813	940	356	1197

(Code - SV)

150# - Flange Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	165	60	7.4
65 (2½")	73	191	67	7.4
80 (3")	89	210	73	8.4
100 (4")	114	229	73	13.5
125 (5")	141	254	86	16
150 (6")	168	279	98	22
200 (8")	219	343	127	44
250 (10")	273	406	146	86
300 (12")	324	483	181	100
350 (14")	356	533	184	127
400 (16")	406	597	191	162
450 (18")	457	635	203	190
500 (20")	508	699	219	254
600 (24")	610	813	222	403
650 (26")	660	870	222	482
700 (28")	711	927	305	543
750 (30")	762	984	305	696
800 (32")	813	1060	356	855

(Code - SV)

300# - Wafer Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	111	60	3
65 (2½")	73	130	67	5
80 (3")	89	149	73	7
100 (4")	114	181	73	9
125 (5")	141	216	86	14
150 (6")	168	251	98	18
200 (8")	219	308	127	37
250 (10")	273	362	146	55
300 (12")	324	422	181	87
350 (14")	356	486	222	103
400 (16")	406	540	232	175
450 (18")	457	597	264	196
500 (20")	508	654	292	258
600 (24")	610	775	318	383
650 (26")	660	835	318	814
700 (28")	711	903	318	762
750 (30")	762	953	368	919
800 (32")	813	1006	368	732

(Code - SV)

300# - Flange Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	165	60	10
65 (2½")	73	191	67	10
80 (3")	89	210	73	11
100 (4")	114	254	73	18
125 (5")	141	279	86	21
150 (6")	168	318	98	29
200 (8")	219	381	127	58
250 (10")	273	445	146	112
300 (12")	324	521	181	130
350 (14")	356	584	222	166
400 (16")	406	648	232	211
450 (18")	457	711	264	247
500 (20")	508	775	292	331
600 (24")	610	914	318	524
650 (26")	660	972	318	627
700 (28")	711	1035	318	706
750 (30")	762	1092	368	905
800 (32")	813	1149	368	1112

(Code - SV)

600# - Wafer Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	111	60	4
65 (2½")	73	130	67	6
80 (3")	89	149	73	9
100 (4")	114	194	79	11
125 (5")	141	241	105	17
150 (6")	168	267	136	22
200 (8")	219	321	165	45
250 (10")	273	400	213	66
300 (12")	324	457	229	105
350 (14")	356	492	273	124
400 (16")	406	565	305	210
450 (18")	457	613	362	236
500 (20")	508	683	368	310
600 (24")	610	791	438	460
650 (26")	660	867	438	977
700 (28")	711	915	438	915
750 (30")	762	968	505	1103
800 (32")	813	1024	505	879

(Code - SV)

600# - Flange Type				
DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	60	165	13
65 (2½")	73	67	191	13
80 (3")	89	73	210	15
100 (4")	114	79	273	24
125 (5")	141	105	330	28
150 (6")	168	136	356	38
200 (8")	219	165	419	76
250 (10")	273	213	508	146
300 (12")	324	229	559	169
350 (14")	356	273	603	216
400 (16")	406	305	686	275
450 (18")	457	362	743	322
500 (20")	508	368	813	431
600 (24")	610	438	940	682
650 (26")	660	438	1016	816
700 (28")	711	438	1073	918
750 (30")	762	505	1130	1177
800 (32")	813	505	1194	1446

(Code - SV)

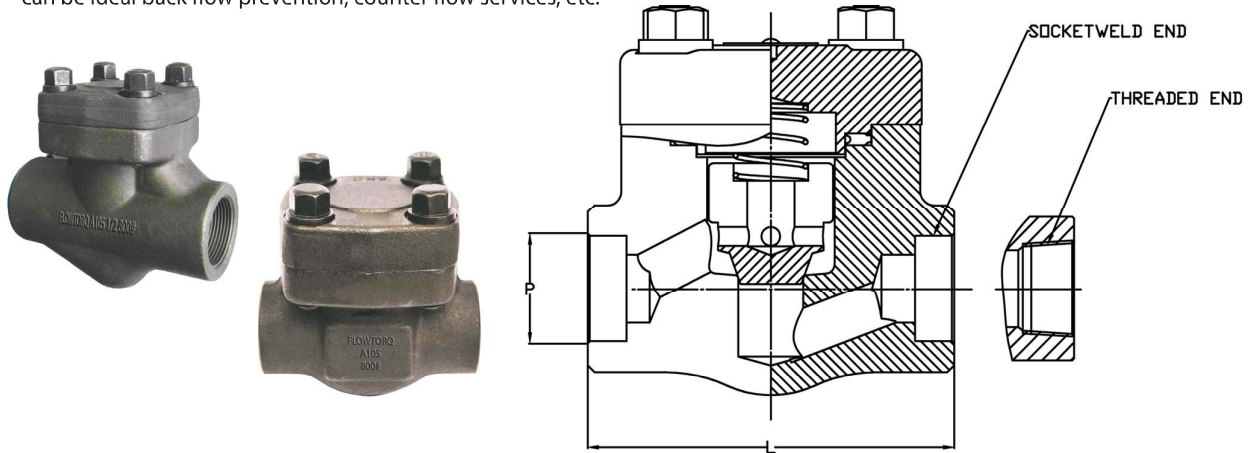




CHECK VALVES - FORGED STEEL LIFT CHECK VALVES - 800#, 1500# & 2500#. Socket Weld / Threaded Ends



FLOWTORQ Forged Steel lift check valves are manufactured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel check valves can be ideal back flow prevention, counter flow services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

800# - Socket Weld					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	87	92	106	127	142
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	1	1.3	2.2	4.7	8.2

1500# - Socket Weld				
Size	1/2"	3/4"	1"	1 1/2"
L	92	106	127	142
H	56	66	86	104
P	8	9	14	25
Weight Kg	1.5	2.5	5.6	9

2500# - Socket Weld				
Size	1/2"	3/4"	1"	
L	106	127	142	
H	66	86	104	
P	7	8	12	
Weight Kg	2.9	6.4	10.8	

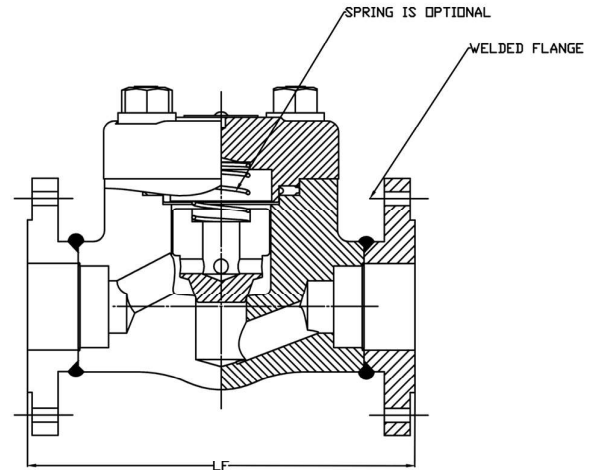
(Code-AHV)



CHECK VALVES - FORGED STEEL LIFT CHECK VALVES - 150#, 300# & 600#. Welded Flange Ends



FLOWTORQ Forged Steel lift check valves are manufactured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel check valves can be ideal back flow prevention, counter flow services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

150# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	108	117	127	165	203
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.2	2.9	4.4	7.9	12

300# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	152	178	293	229	267
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.4	3.1	4.6	8.1	12.2

600# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	165	190	216	241	292
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.6	3.3	4.8	8.3	12.5

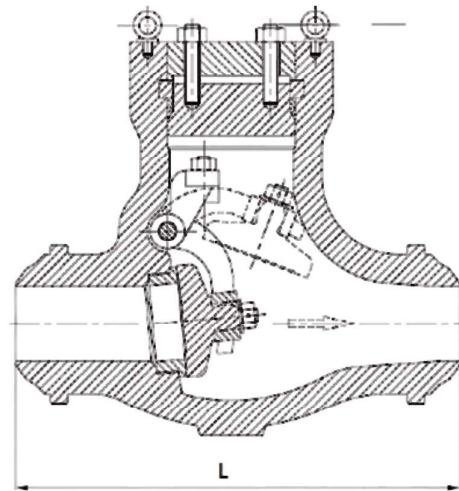
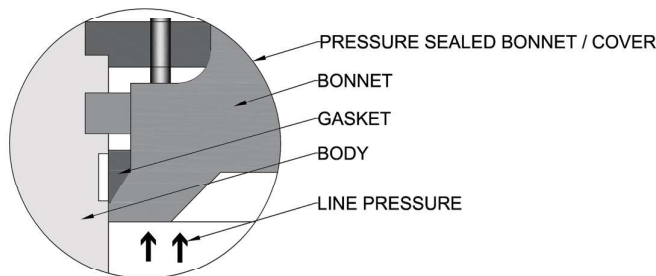
(Code-AHV)



CHECK VALVES - PRESSURE SEALED SWING CHECK VALVES



Likewise Pressure Sealed Gate & Globe Valves, FLOWTORQ Pressure Sealed Check Valves are best suited for high pressure applications like steam, liquid, catalytic reformers, hydrocrackers and other tough services. For High pressure, High temperature applications, Pressure seal globe valves continue to cater a wide range of industries with a safest, leakage free, pressure holding service. In opposition to bolted-cover valves, internal pressure applied to a pressure seal valve forces the sealing parts into more tighter contact—the higher the internal pressure, the tighter the seal. Afterwards the line pressure provides extra force to seal the gasket. Thus, as line pressure increases, the chances for leakage through the body-cover joint is less.



900#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	240	76
65 (2½")	419	419	250	86
80 (3")	381	381	260	98
100 (4")	457	457	320	145
125 (5")	559	559	350	175
150 (6")	610	610	382	259
200 (8")	737	737	530	565

(Code-SS)

1500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	265	76
65 (2½")	419	419	275	93
80 (3")	470	470	290	140
100 (4")	546	546	385	232
125 (5")	673	673	430	362
150 (6")	705	705	470	490
200 (8")	832	832	625	990

(Code-SS)

2500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	451	451	315	100
65 (2½")	508	508	345	185
80 (3")	578	578	380	225
100 (4")	673	673	410	370
125 (5")	794	794	495	595
150 (6")	914	914	560	805
200 (8")	1022	1022	695	1320

(Code-SS)

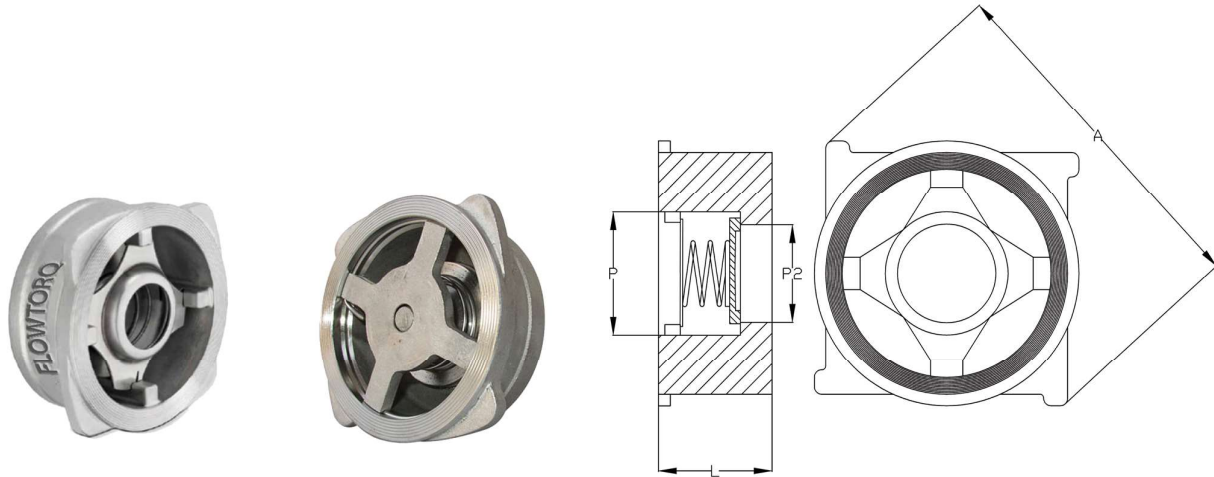




CHECK VALVES - SPRING LOADED DISC CHECK VALVES



A development with a combination of Dual Plate Check Valve and Wafer Type Check Valve, Spring Loaded Disc Check Valves houses a disc which is loaded against body by spring force. The body houses the spring, disc, stopper pins and screwed part as a retainer. Suited for high pressure and low pressure applications in oil & gas, petrochemical, chemical, power and other process industries. Ideal solution for applications where space constraints and weight constraints are critical. Can be used in vertical, horizontal and angular orientations as well.



Upto - 20 Bar						
Size		P	P2	L	A	D
DN	Inch					
15	1/2"	29	15	19	60	38
20	3/4"	36	20	19	70	45
25	1"	44	25	2	80	56
32	1.25"	55	32	28	90	65
40	1.5"	66	40	31	98	74
50	2"	77	50	40	112	85
65	2.5"	98	65	46	141	107
80	3"	111	80	50	151	122
100	4"	130	100	60	181	142
125	5"	161	125	90	215	170
150	6"	190	150	105	255	202
200	8"	250	200	140	320	261

(Code - AZV)

DESIGN STANDARD	
Check Valve	ASME B16.34, Mnfr's Std
Face to Face / End to End Dimensions	API6D, ASME B16.34, Mnfr's Std
Valve inspection & testing	API598, BS 5146
Pressure - Temperature rating	ASME B16.34