

### Technical Specification

Design and Manufacture: Cast steel check valve to BS 1868, ASME B16.34 and API 6D; Forged steel check valve to API 602.

Inspection and Test: API 598 or API 6D.

End flange dimension: ASME B16.5 (for NPS ≤ 24), ASME B16.47 series B, API 605 or ASME B16.47 series A, MSS SP-44 (for NPS > 24).

BW end dimension: ASME B16.25.

Socket-weld dimension: ASME B16.11.

Face to face and end to end: ASME B16.10.

Pressure-temperature ratings: ASME B16.34.

Wall thickness dimension: API 600 and BS 1868.

### The Features of check Valve

Bolted Bonnet; Swing and lift disc; Metallic seating surfaces.

### Body and Bonnet Connection

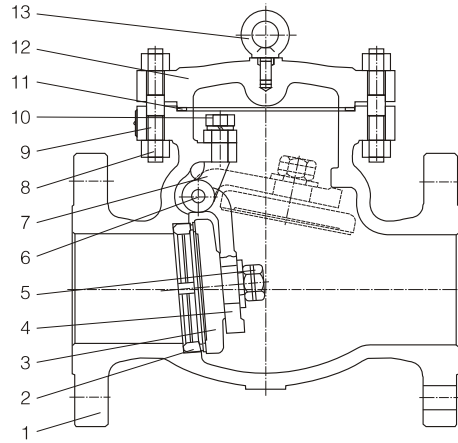
The body and bonnet of Class 150 ~ Class 900 check valves are usually with studs and nuts. And the body and bonnet of Class 1500 ~ Class 2500 check valves are usually of pressurized seal design.

### Body-To-Bonnet Joint

Stainless steel + flexible graphite wounded gasket is used for Class 150 and Class 300 check valve; Stainless steel + flexible graphite wounded gasket is used for Class 600 check valve, and joint gasket is also optional for Class 600 check valve; Ring Joint gasket is used for Class 900 check valve; Pressurized seal design is used for Class 1500 ~ Class 2500 check valve.

### Seat

For carbon steel check valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Renewable threaded seat is used for NPS ≤ 10 check valves, and welded on seat can be also optional if being requested by the customer. Welded on seat is used for NPS ≥ 12 carbon steel check valves. For Stainless steel check valve, integral seat is usually adopted, or to weld hard alloy directly integrally. Threaded or welded on seat is also optional for stainless steel check valve if being requested by the customer.



### Technical Specification

Design and Manufacture: BS1868 or API 6D

Inspection and Test: API 598 or API 6D

End flange dimension: ASME B16.5, ASME B16.47 A, MSS SP-44; ASME B16.47 B, API 605

BW end dimension: ASME B16.25

Face to face and end to end: ASME B16.10

Pressure-temperature ratings: ASME B16.34

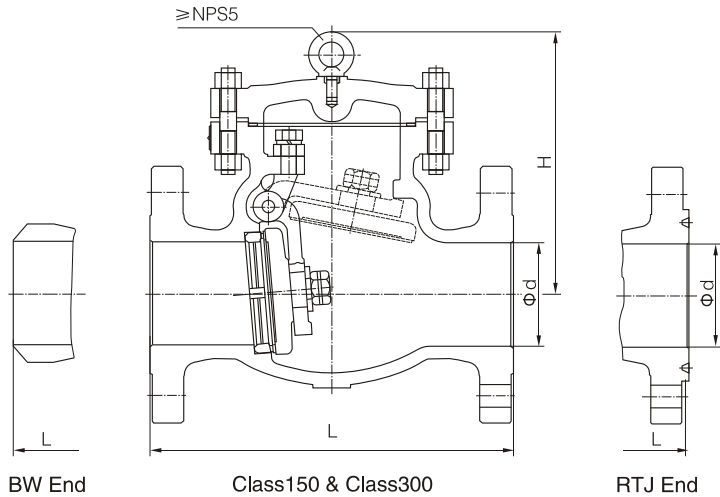
Wall thickness dimension: API 600 and BS 1868

### Form of Major Part Material

Parts No.	Parts Name	Materials				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	CF8/304	CF8M/316
1	Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
2	Seat ring	A105 + 13Cr	A105 + STL	A105 + STL	ASTM A351 CF8	ASTM A351 CF8M
3	Disc	ASTM A216 WCB + 13Cr	ASTM A216 WCB + STL	ASTM A216 WCB + 13Cr	ASTM A351 CF8	ASTM A351 CF8M
4	Arm	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
5	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
6	Arm pin	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
7	Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
8	Bonnet nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
9	Bonnet bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
10	Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
11	Gasket	304 sheet + Graphite	304 sheet + Graphite	304 sheet + Graphite	304 + Graphite	316 + Graphite
12	Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
13	Eye bolt	ASTM A181	ASTM A181	ASTM A181	ASTM A181	ASTM A181

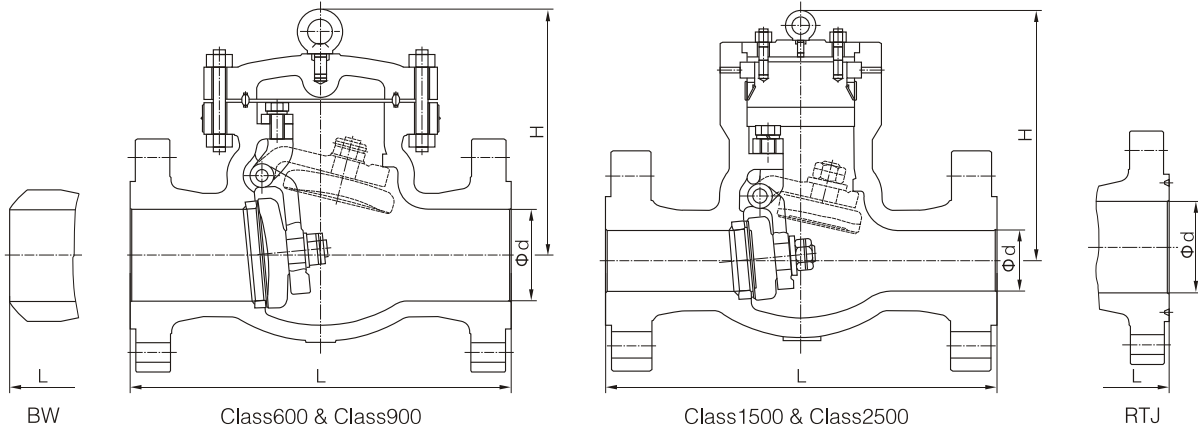
Note: The chart above only lists out some common composition of steel check valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

### Class 150 & Class 300 Cast Steel Swing Check Valve



Size		Class 150						Class 300					
NPS	DN	Dimensions(mm)					Weight (kg)	Dimensions(mm)					Weight (kg)
		L			d	H		L			d	H	
		RF	RTJ	BW				RF	RTJ	BW			
2	50	203	216	203	51	132	15	267	283	267	51	144	20
2 1/2	65	216	229	216	64	147	20	292	308	292	64	149	35
3	80	241	254	241	76	176	27	318	333	318	76	210	40
4	100	292	305	292	102	198	45	356	371	356	102	260	61
5	125	330	343	330	127	255	58	400	416	400	127	295	80
6	150	356	368	356	152	320	69	445	460	445	152	326	130
8	200	495	508	495	203	380	131	533	549	533	203	380	190
10	250	622	635	622	254	440	219	622	638	622	254	440	296
12	300	699	711	699	305	480	321	711	727	711	305	520	450
14	350	787	800	787	337	530	380	838	854	838	337	540	640
16	400	864	876	864	387	580	560	864	879	864	387	588	850
18	450	978	991	978	438	618	630	978	994	978	438	670	1030
20	500	978	991	978	489	657	770	1016	1035	1016	489	720	1330
24	600	1295	1308	1295	591	760	960	1346	1368	1346	591	850	1950
26	650	1295	-	1295	633	840	1250	1346	1372	1346	633	920	2300
28	700	1448	-	1448	684	920	1580	1499	1524	1499	684	1150	2600
30	750	1524	-	1524	735	980	1950	1594	1619	1594	735	1260	3200

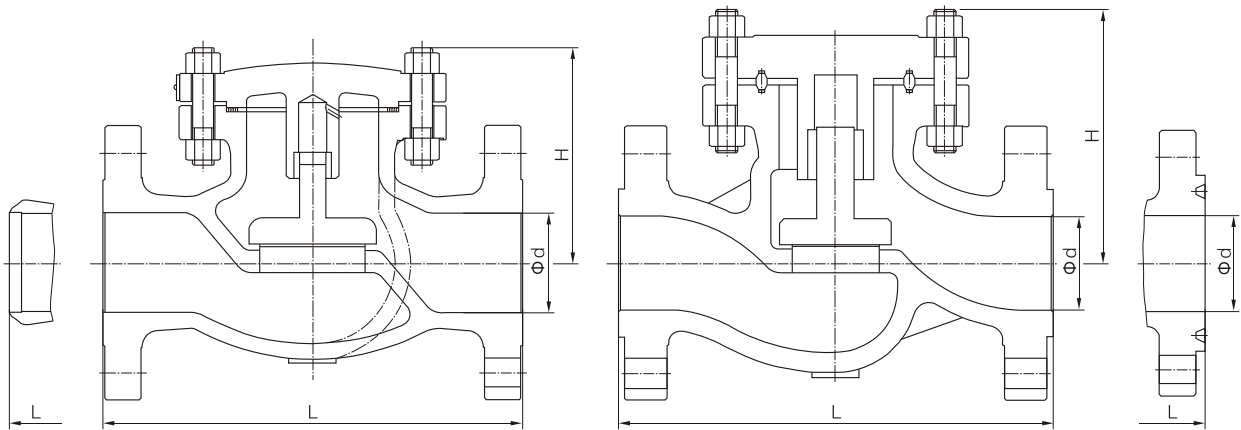
### Class 600 ~ Class 2500 Cast Steel Swing Check Valve



Size		Class 600						Class 900					
NPS	DN	Dimensions(mm)					Weight (kg)	Dimensions(mm)					Weight (kg)
		L			d	H		L			d	H	
		RF	RTJ	BW				RF	RTJ	BW			
2	50	292	295	292	51	170	28	368	371	368	51	200	48
2 1/2	65	330	333	330	64	178	40	419	422	419	64	220	75
3	80	356	359	356	76	246	68	381	384	381	76	280	95
4	100	432	435	432	102	290	117	457	460	457	102	320	135
5	125	508	511	508	127	320	155	559	562	559	127	360	200
6	150	559	562	559	152	360	192	610	613	610	152	400	264
8	200	660	664	660	203	430	340	737	740	737	203	480	424
10	250	787	791	787	254	502	515	838	841	838	254	560	730
12	300	838	841	838	305	554	750	965	968	965	305	632	1070
14	350	889	892	889	337	595	890	1029	1038	1029	322	680	1180
16	400	991	994	991	387	680	1303	1130	1140	1130	373	780	1790
18	450	1092	1095	1092	438	778	1800	1219	1232	1219	423	880	250
20	500	1194	1200	1194	489	970	2150	1321	1334	1321	471	1050	3080
24	600	1397	1407	1397	591	1100	3200	1549	1568	1549	522	1200	4600

Size		Class 1500						Class 2500					
NPS	DN	Dimensions(mm)					Weight (kg)	Dimensions(mm)					Weight (kg)
		L			d	H		L			d	H	
		RF	RTJ	BW				RF	RTJ	BW			
2	50	368	371	368	51	210	48	451	454	451	42	230	68
2 1/2	65	419	422	419	64	240	75	508	514	508	52	260	100
3	80	470	473	470	76	303	120	578	584	578	62	330	165
4	100	546	549	546	102	340	180	673	683	673	87	370	260
5	125	673	676	673	127	380	294	794	807	794	96	410	440
6	150	705	711	705	144	430	385	914	927	914	131	460	580
8	200	832	841	832	192	500	634	1022	1038	1022	179	530	970
10	250	991	1000	991	239	590	1140	1270	1292	1270	223	620	1700
12	300	1130	1146	1130	287	660	1650	1422	1445	1422	265	690	2600
14	350	1257	1276	1257	315	710	2000	-	-	-	-	-	-
16	400	1384	1407	1384	360	820	2700	-	-	-	-	-	-

### Class 150 ~ Class 900 Cast Steel Lift Check Valve



BW End

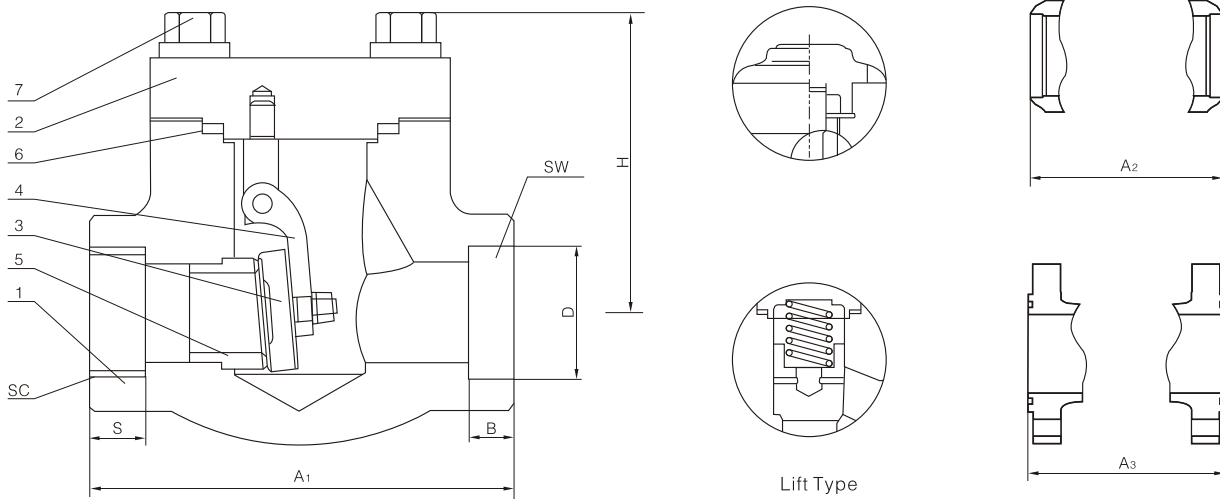
Class150 ~ Class600

Class900

RTJ End

Size		Class 150						Class 300					
NPS	DN	Dimensions(mm)					Weight (kg)	Dimensions(mm)					Weight (kg)
		L			d	H		L			d	H	
		RF	RTJ	BW				RF	RTJ	BW			
1/2	15	108	119	108	13	76	3	152	162	152	13	78	5
3/4	20	117	130	117	19	76	4	178	191	178	19	82	6
1	25	127	140	127	25	98	5	203	216	203	25	102	8
1 1/4	32	140	153	140	32	102	7	216	229	216	32	106	11
1 1/2	40	165	178	165	38	115	8	229	242	229	38	118	13
2	50	203	216	203	51	140	15	267	283	267	51	140	26
2 1/2	65	216	229	216	64	162	22	292	308	292	64	164	33
3	80	241	254	241	76	168	28	318	333	318	76	178	50
4	100	292	305	292	102	194	42	356	371	356	102	195	86
5	125	356	368	356	127	210	60	400	416	400	127	223	120
6	150	406	419	406	152	226	75	445	460	445	152	245	180
8	200	495	508	495	203	250	118	533	549	533	203	280	220
10	250	622	635	622	254	275	194	622	638	622	254	336	310
12	300	699	711	699	305	332	320	711	727	711	305	380	510

Size		Class 600						Class 900					
NPS	DN	Dimensions(mm)					Weight (kg)	Dimensions(mm)					Weight (kg)
		L			d	H		L			d	H	
		RF	RTJ	BW				RF	RTJ	BW			
2	50	292	295	292	51	152	32	368	371	368	50	180	50
2 1/2	65	330	333	330	64	167	45	419	422	419	64	200	65
3	80	356	359	356	76	178	68	381	384	381	74	235	88
4	100	432	435	432	102	215	98	457	460	457	100	270	140
5	125	508	511	508	125	240	155	559	562	559	125	300	210
6	150	559	562	559	152	279	230	610	613	610	150	350	300
8	200	660	664	660	200	328	300	737	740	737	200	400	390



### Technical Specification

Steel Check Valves, API 602  
 Steel Valves, ASME B16.34  
 Face to Face, Manufacturer Standard  
 Face to Face, Flanged, ASME B16.10  
 End Flanges, ASME B16.5  
 Buttwelding Ends, ASME B16.25  
 Socket-welding Ends, ASME B16.11  
 Screwed Ends, ASME B1.20.1  
 Inspection and Test, API 598

### Design Description

Bolted Bonnet Cap  
 Choice of WB, Welding Bonnet  
 Lift or Swing Type  
 Seat Rings Integral with Body of Lift  
 Horizontal or Vertical Service  
 Socket Weld Ends  
 SW, Socket-welding Ends  
 SC, Screwed Ends  
 BW, Buttwelding Ends  
 Flanged Ends

### Form of Major Part Material

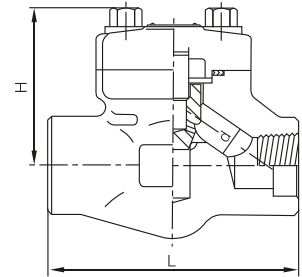
No.	Part Name	ASTM Material							
		Carbon Steel	F11	F22	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A105	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
2	Bonnet	A105	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
3	Disc	A182 F6a	A182 F11+HF	A182 F22+HF	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
4	Hinge	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Seat	A182 F6a	A182 F11+HF	A182 F22+HF	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
6	Bonnet Gasket	304+Graphit	304+Graphit	304+Graphit	304+Graphit	316+Graphit	304L+Graphit	316L+Graphit	316+Graphit
7	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M

### Class800 Main Outline Dimensions & Weight

Bold valve cover.

Designs according to BS5,352.

R.P		1/2	3/4	1	1 1/4	1 1/2	2		
F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	Lift	79	79	92	111	120	152	172	200
	Swing	79	79	92	111	120	120	140	178
H	Lift	61	61	61	78	84	84	118	132
	Swing	61	61	61	78	84	84	120	133
d	Lift	7	9	13	17.5	23	30	35	46
	Swing	8	10.5	13.5	18	24	29	36.5	45
Weight (kg)	Lift	1.2	1.5	1.7	3.3	4.2	4.2	10.5	12.5
	Swing	1.4	1.5	1.7	3.3	4.2	4.2	8.5	10.9

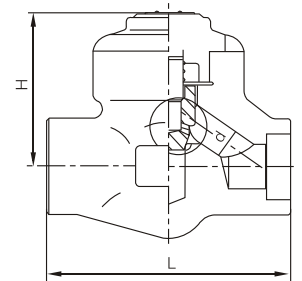


### Class800 Main Outline Dimensions & Weight

Weld valve cover.

Designs according to BS5,352.

R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	
F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		79	79	92	111	120	152	172	200
H		61	61	61	78	84	103	118	132
d		7	9	13	17.5	23	30	35	46
Weight(kg)		1.2	1.3	1.5	3.0	3.9	6.0	10	12

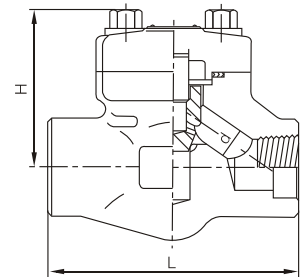


### Class900 ~ 1500 Main Outline Dimensions & Weight

Bold valve cover.

Designs according to BS5,352.

R.P		1/2	3/4	1	1 1/4	1 1/2	2		
F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	Lift	92	111	111	120	152	172	200	-
	Swing	92	111	111	120	120	140	178	-
H	Lift	61	78	78	84	103	118	132	-
	Swing	61	78	78	84	101	120	133	-
d	Lift	7	12	15	20	28	32	40	-
	Swing	8	10.5	13.5	18.7	24	29	45	-
Weight (kg)	Lift	1.5	3.4	3.3	4.2	6.3	10.5	12.5	-
	Swing	1.5	3.4	3.3	4.2	5.0	8.5	10.9	-

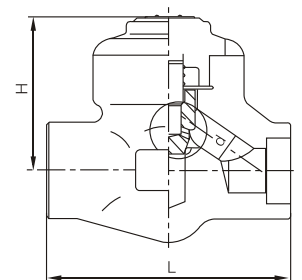


### Class900 ~ 1500 Main Outline Dimensions & Weight

Weld valve cover.

Designs according to BS5,352.

R.P	-	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	
F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		92	111	111	120	152	172	200	-
H		61	78	78	84	103	118	132	-
d		7	12	15	20	28	32	40	-
Weight(kg)		1.3	3.1	3.1	3.9	5.8	10.0	11.5	-

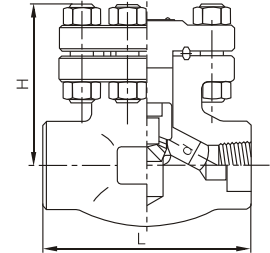


### Class900 ~ 1500 Main Outline Dimensions & Weight

Bold valve cover.

Designs according to BS5,352.

F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		110	110	110	110	150	150	210	235
H		166	166	171	207	240	258	330	355
d	Lift	9	10	12	15	20	28	32	40
	Swing	8	10.5	13.5	18	24	29	36.5	45
Weight (kg)	Lift	2	2.1	1.9	4	5.1	7.2	12.1	14
	Swing	1.9	2.3	2.3	4.35	5.25	7.8	12.5	14.6

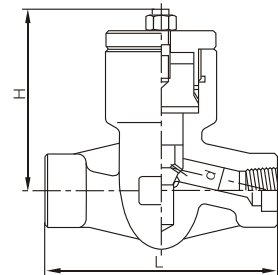


### Class900 ~ 1500 Main Outline Dimensions & Weight

Pressure seal bonnet.

Designs according to BS5,352.

R.P		1/2	3/4	1	1 1/4	1 1/2	2
F.P		3/8	1/2	3/4	1	1 1/4	1 1/2
L		140	140	140	178	216	216
H		117	117	117	152	195	195
d		12	15	20	28	28	40
Weight (kg)		7.5	7.0	6.8	18.5	18.5	22

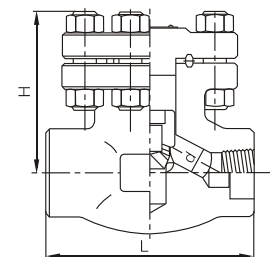


### Class2500 Main Outline Dimensions & Weight

Bold valve cover.

Designs according to BS5,352.

F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		150	150	150	150	210	235	235	235
H		166	166	171	207	240	258	330	355
d		7.5	10.5	11	14	19	25	28	35
Weight (kg)		1.9	2.3	17	46	62	73	58	85

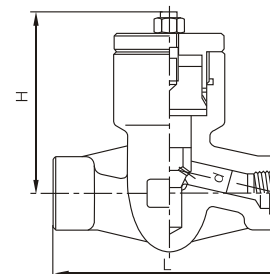


### Class2500 Main Outline Dimensions & Weight

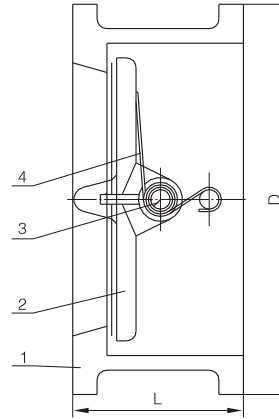
Pressure seal bonnet.

Designs according to BS5,352.

F.P		1/2	3/4	1	1 1/4	1 1/2	2
L		186	186	186	232	232	279
H		117	117	117	152	150	195
d		11	14	14	25	28	35
Weight (kg)		11.8	11	11	23	26.4	39







### Technical Specification

Structural formation: Dual-disc swing type check valve

Design standard: API 594

Face to face: ASME B16.0

Flanged ends: ASME B16.5

Test & inspection: API 598

### Form of Major Part Material

Parts No.	Parts Name	Materials
1	Body	ASTM A216-WCB、ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
2	Disc	ASTM A216-WCB、ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
3	Pivot	ASTM A182 Gr.F6a、ASTM A182 F22、ASTM A182-F304、F316、F321、F304L、F316L
4	Spring	AISI 9260、AISI 6150、ASTM A182-F304、F316、F321、F304L、F316L

### Main Size of Outside & Weight

Model: H76H、H76Y

Class	DN (mm)	NPS (in)	Dimensions(mm)		Weight (kg)	Class	DN (mm)	NPS (in)	Dimensions(mm)		Weight (kg)	Class	DN (mm)	NPS (in)	Dimensions(mm)		Weight (kg)
			L	D					L	D					L	D	
150	50	2	60	103	2	300	50	2	60	110	3.5	600	50	2	60	110	3.5
	65	2 1/2	67	122	3.2		65	2 1/2	67	148	5		65	2 1/2	67	129	5
	80	3	73	135	4		80	3	73	248	7		80	3	73	148	7
	100	4	73	173	6		100	4	73	180	10		100	4	79	192	12
	125	5	86	196	9		125	5	86	215	18.5		125	5	105	240	22.5
	150	6	98	222	12		150	6	98	250	19		150	6	137	265	35
	200	8	127	279	22		200	8	127	307	33		200	8	165	319	45
	250	10	146	339	38		250	10	146	361	54		250	10	213	399	77
	300	12	181	409	54		300	12	181	422	88		300	12	229	456	110
	350	14	184	450	80		350	14	222	485	128		350	14	273	489	135
	400	16	191	514	118		400	16	232	539	169		400	16	305	562	163
	150	50	2	70	142		6.5	900	50	2	70		142	6.5	900	50	2
65		2 1/2	83	164	9	65	2 1/2		83	164	9	65	2 1/2	83		164	9
80		3	83	167	14	80	3		83	167	14	80	3	83		167	14
100		4	102	205	24	100	4		102	205	24	100	4	102		205	24
150		6	159	288	43	150	6		159	288	43	150	6	159		288	43
200		8	206	358	56	200	8		206	358	56	200	8	206		358	56