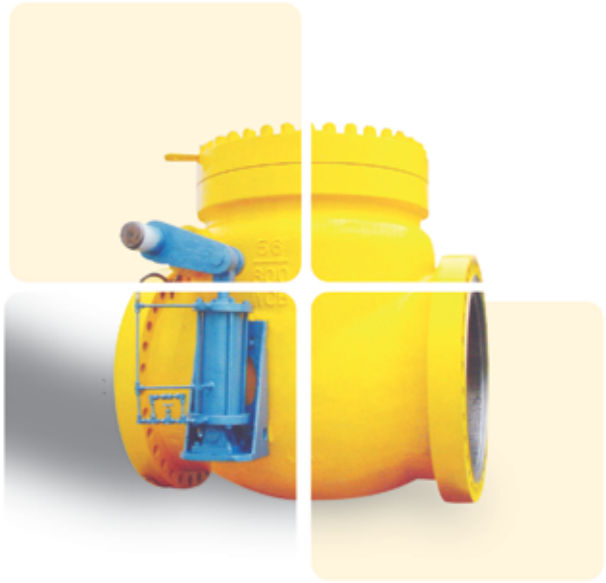
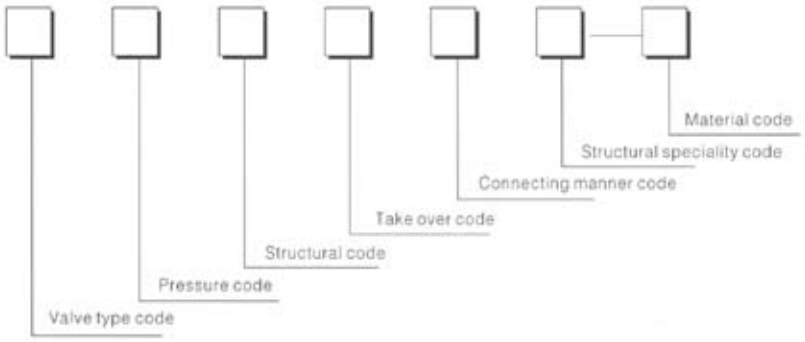
CVI-CHAUL



CHECK VALVE SERIES

CONTENTS

CHECK VALVE MODEL SCHEDULE ILLUSTRATION



★ **Valve type code** H – Check valve

★ **Pressure code** 2 – Class150 3 – Class300 5 – Class600 7 – Class900 8 – Class1500 9 – Class2500
1a – 1.0MPa 2a – 1.6MPa 3a – 2.5MPa 4a – 4.0MPa 5a – 6.4MPa 6a – 10.0MPa
7a – 16.0MPa 8a – 25.0MPa

★ **Structural code** 1 – BC – SWING (Bolted bonnet,Swing type) 1A – PS – SWING (Pressure bonnet,Swing type)
2 – BC – PISTON – LIFT (Bolted bonet, Piston – Lift type) 3 – WAFER – SWING (Wafer & Swing type)
3A – WAFER – PISTON – LIFT (Wafer & Piston – Lift type)

★ **Driving type code** A – Electric driving B – Air motor driving C – Gear driving

★ **Take over code**

Code	Thickness	Code	Thickness	Code	Thickness
S1	SCH10	S4	SCH40	S7	SCH120
S2	SCH20	S5	SCH60	S8	SCH140
S3	SCH30	S6	SCH80	S9	SCH160

★ **Connecting manner code** R – R F (Raised face) J – RJ (Ring joint) F – MF (Male – Female face) W – BW (Butt welded)

★ **Structural speciality code** FS – Bolted bonnet structure PS – Pressure seal structure

★ **Body material code**

1) **Cast carbon steel** CC10 – ASTM A216 – WCB CF11 – ASTM A352 – LCB

2) **Cast alloy steel** CA20 – ASTM A217 – WC1 CA21 – ASTM A217 – WC6 CA22 – ASTM A217 – WC9
CA23 – ASTM A217 – C5 CA24 – ASTM A217 – C12

3) **Cast stainless steel** CS30 – ASTM A351 – CF8 CS31 – ASTM A351 – CF8M CS32 – ASTM A351 – CF8C
CS33 – ASTM A351 – CF3 CS34 – ASTM A351 – CF3M

FLANGED & BUTT-WELDING CONNECTION SWING CHECK VALVE

PRODUCTS DESIGN FEATURES

Flanged & Butt-Welding Ends Shing Check Valves are used in pipes under pressures between PN1.6~16.0MPa,Class150~900Lb, working tempertures between -29~570℃,They are used in industries include oil, chemistry,pharmaceutical,fertilizer, and power generation to prevent the backward flux of the media.

Main structural features:

1. Rational structure, reliable sealing, excellent performance, pretty appearance.
2. Co-radix alloy welded sealing surface, anti-wearing, erosion-proof abrasion-proof and longer use life.
3. Inside-set bolt-bearing structure reduces leakage and reliable use.
4. Under pressures ≥16.0Mpa, Class1500, the valve belly, self-tightening structure offers a tighter sealing for a higher medium pressure.
5. Different parts materials and different sizes for flange, butt-welding are available for sensible combination according to different working facts and customers' requirements.

PRODUCTS SPECIFICATION

Model	Pressure	Structural Type	Nominal size														
			50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
			2	2½	3	4	5	6	8	10	12	14	16	18	20	24	30	36
H2a1RFS	1.6MPa	Bolted bonnet Swing type	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H3a1RFS	2.5MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H4a1FFS	4.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H5a1FFS	6.4MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H6a1JFS	10.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H7a1AJPS	16.0MPa	Pressure bonnet Swing type	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–	–	–	–
H8a1AJPS	25.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–	–	–	–
H21RFS	Class 150	Bolted bonnet Swing type	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H31RFS	Class 300		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H51JFS	Class 600		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H51AS7WPS	Class 600	Pressure bonnet Swing type	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–
H71AS7WPS	Class 900		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–
H81AS9WPS	Class 1500		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–
H91ASPWPS	Class 2500		☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–	–	–

Products performance specificatiion

Pressure grade		1.6~42.0MPa	Class150~2500
Test pressure	Shell test	1.5xPN	
	Sealing test	1.1xPN	
Working temperature		-46℃~+570℃	
Working medium		Water, oil, natural gas, corrosive medium, etc.	

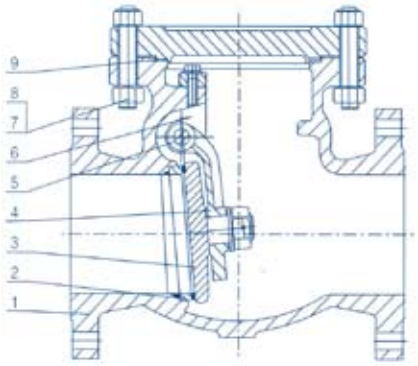
Note: PN is requested pressure for the body material under the 38℃.

BOLTED BONNET SWING CHECK VALVE

Technical specification

Design Standard	GB/T 12236	API 6D API 600
Face to Face	GB/T 12221	API 6D ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5 ASME B16.47
Test & Inspection	GB/T 19672 JB/T 9092	API 598

Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.



Form of major parts materials

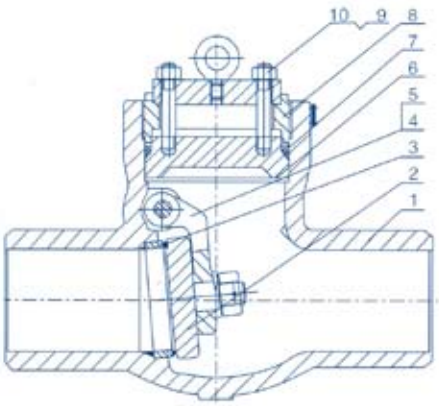
No.	Part name	Material	
		ASTM	GB
1	Body	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
2	Seat	A105、LF2 F11、F22、F5、F9 F304、F316、F321、F304L、F316L	25、1Cr13、2Cr13 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti 20Cr1Mo1V、25Cr2MoV
3	Disc	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
4	Arm	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
5	Pin	F6a、F22 F304、F316、F321、F304L、F316L	1Cr13、2Cr13 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
6	Racking	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
7	Bolt	A193-B7、A320-B8 A193-B8M、A193-L7	35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2
8	Nut	A194-2H、A194-8 A194-8M、A194-4	45、35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2
9	Gasket	Graphite & stainless steel	Graphite & stainless steel

PRESSURE SEALED SWING CHECK VALVE

Technical specification

Design Standard	GB/T 12236	API 600
Face To Face	GB/T 12221	ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

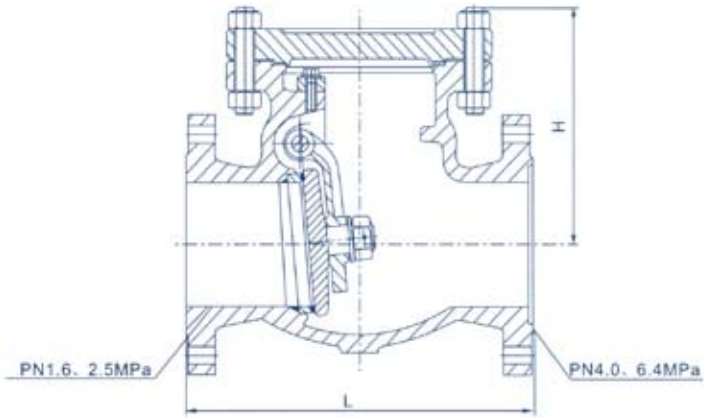
Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.



Form of major parts materials

No.	Part name	Material	
		ASTM	GB
1	Body	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
3	Seat	A105、LF2 F11、F22、F5、F9 F304、F316、F321、F304L、F316L	25 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti 20Cr1Mo1V、25Cr2MoV
4	Pin	F6a、F22 F304、F316、F321、F304L、F316L	1Cr13、2Cr13 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
5	Arm	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
6	Bonnet	A105、LF2 F11、F22、F5、F9 F304、F316、F321、F304L、F316L	25 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti 20Cr1Mo1V、25Cr2MoV
7	Sealing ring	Flexible Graphite	Flexible Graphite
8	Cover	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
9	Stud	A193-B7、A320-B8 A193-B8M、A193-L7	35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2
10	Nut	A194-2H、A194-8 A194-8M、A194-4	45、35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2

FLANGED CONNECTION SWING CHECK VALVE



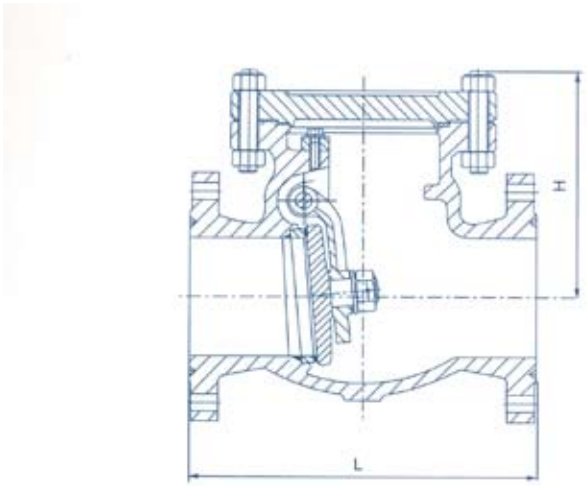
Size & weight

Model		1.6~2.0MPa																	
Size	in.	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L-L1 (RF)	in.	6.5	8	8.5	9.5	11.5	13	14	19.5	24.5	27.5	31	34	38.5	38.5	51	60	77
	mm	165	203	216	241	292	330	356	495	622	698	787	864	978	978	1295	1524	1956
L2 (RTJ)	in.	7.0	8.5	9	10	12	13.5	14.5	20	25	28	31.5	34.5	39	39	51.5	60.5	77.5
	mm	178	216	229	254	305	343	368	508	635	711	800	877	991	991	1308	1537	1969
H	in.	6.69	6.88	7	7.5	8.63	9.25	12.75	15.13	17.63	21.25	22	24.63	25.63	26.63	34.63	45.25	53.13
	mm	170	175	178	191	219	235	324	384	448	540	559	626	651	676	880	1149	1349
WT (kg)	RF	18	20	24	35	55	84	96	160	245	345	510	660	850	1050	1450	2350	3350
	BW	12	14	17	26	37	52	80	133	213	294	440	568	750	920	1270	2250	3150

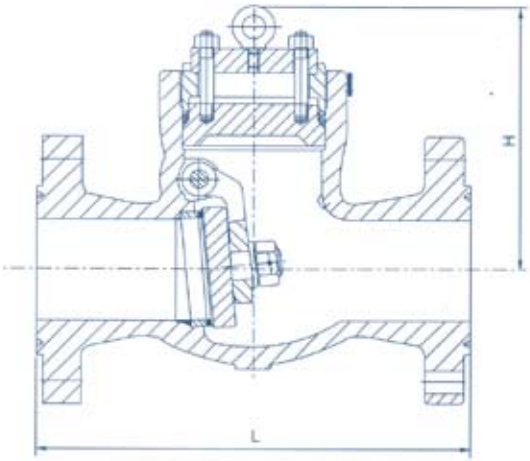
Model		2.5~5.0MPa																
Size	in.	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
L-L1 (RF)	in.	9.5	10.5	11.5	12.5	14	15.75	17.5	21	24.5	28	33	34	38.5	40	53	62.75	82
	mm	241	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1594	2083
L2 (RTJ)	in.	10	11.12	12.12	13.15	14.62	16.37	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	63.75	83.11
	mm	254	283	308	334	371	416	460	549	638	727	854	879	994	1035	1369	1619	2111
H	in.	7.4	7.75	8	8.75	10.88	11.63	13.25	16.25	18.25	22.13	23.5	25.38	29.88	33.63	37	50	60.63
	mm	188	197	203	222	276	295	337	413	464	562	597	645	759	854	940	1270	1540
WT (kg)	RF	31	35	37	60	82	110	155	268	380	495	710	950	1200	1350	2200	3400	5000
	BW	28	32	35	50	65	70	128	230	270	460	555	800	970	1070	1780	2950	4300

Model		10.0MPa																
Size	in.	2	21/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750
L-L1 (RF)	in.	11.5	13	14	17	22	26	31	33	35	39	43	47	55	57	63	65
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1600	1651
L2 (RTJ)	in.	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	57.5	63.5	65.5
	mm	295	333	359	435	562	663	790	841	892	994	1095	1200	1407	1461	1613	1664
H	in.	8.25	8.63	10.5	11.75	15	18.75	21.63	22.63	26.38	30.13	35.25	38.38	43.75	48	53.13	56.25
	mm	210	219	267	299	381	476	549	575	670	765	895	975	1111	1219	1349	1429
WT (kg)	RF	40	55	72	120	270	420	620	810	1100	1450	1800	2100	3000	3500	4100	5000
	BW	31	45	60	85	225	365	500	715	880	1140	1450	1650	2300	3000	3500	4300

FLANGED CONNECTION SWING CHECK VALVE



PN10.0MPa



PN16.0、25.0MPa

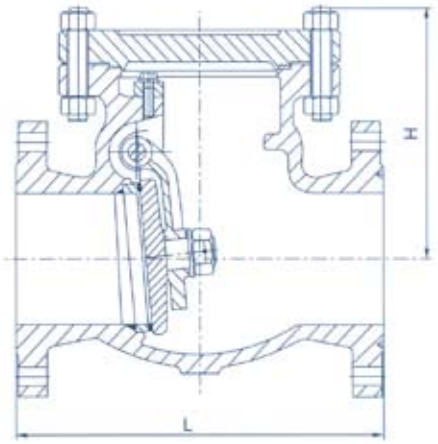
Size & weight

Model		15.0MPa							
Size	in.	2	2½	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L-L1 (RF)	in.	14.5	16.5	15	18	24	29	33	38
	mm	368	419	381	457	610	737	838	965
L2 (RTJ)	in.	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
	mm	371	422	384	460	613	740	841	968
H	in.	12.63	13.75	12.63	16	18.88	22.25	26.13	30.5
	mm	321	349	321	406	479	565	664	775
WT (kg)	RF	70	160	90	150	305	516	810	1120
	BW	50	71	68	11.3	230	387	632	901

Model		25.0MPa							
Size	in.	2	2½	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L-L1 (RF)	in.	14.5	16.5	18.5	21.5	27.75	32.75	39	44.5
	mm	368	419	470	546	705	832	991	1130
L2 (RTJ)	in.	14.62	16.62	18.62	21.62	28	33.15	39.4	45.12
	mm	371	422	473	549	711	842	1000	1146
H	in.	12.63	13.75	14.38	16.5	20.13	26.75	29.75	33.75
	mm	321	349	365	419	511	680	756	857
WT (kg)	RF	70	110	170	300	695	1190	1850	2750
	BW	50	87	135	245	560	965	1480	2180

Model		42.0MPa							
Size	in.	2	2½	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L-L1 (RF)	in.	17.75	20	22.75	26.5	36	40.25	50	56
	mm	451	508	578	673	914	1022	1270	1422
L2 (RTJ)	in.	17.87	20.25	23	26.88	36.5	40.87	50.88	56.88
	mm	454	514	584	683	927	1038	1292	1445
H	in.	16.38	16.5	17.38	18.88	20.13	28	33.5	39.38
	mm	416	419	441	479	511	711	851	1000
WT (kg)	RF	150	240	350	650	1450	2550	3950	5700
	BW	120	195	280	540	1200	2200	3150	4550

FLANGED CONNECTION SWING CHECK VALVE



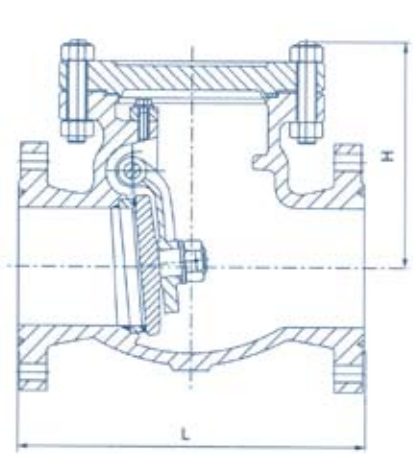
Size & weight — **Class150~600**

Model		Class 150											
Size	mm	50	65	80	100	150	200	250	300	350	400	450	500
	in	2	2½	3	4	6	8	10	12	14	16	18	20
L(mm)		203	216	241	292	356	495	622	699	787	864	978	978
H(mm)		165	182	195	208	260	295	350	405	446	493	515	540
Weight (Kg)		17	26	32	45	75	135	200	275	385	442	630	760

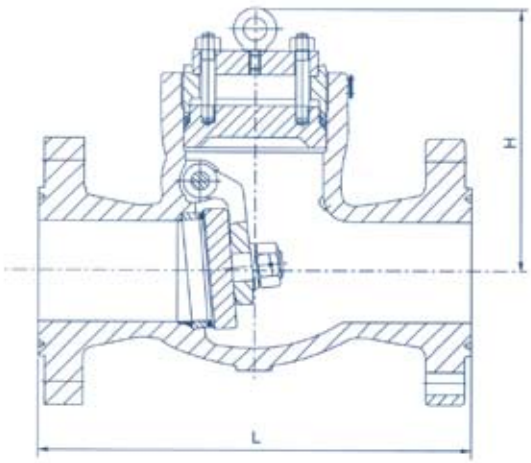
Model		Class 300											
Size	mm	50	65	80	100	150	200	250	300	350	400	450	500
	in	2	2½	3	4	6	8	10	12	14	16	18	20
L(mm)		267	292	318	356	444	533	622	711	838	864	978	1016
H(mm)		175	186	212	238	302	362	392	440	460	530	582	615
Weight (Kg)		22	24	38	52	86	165	204	278	402	545	683	862

Model		Class 600									
Size	mm	50	65	80	100	150	200	250	300	350	400
	in	2	2½	3	4	6	8	10	12	14	16
L(mm)		295	334	359	435	562	664	791	842	892	991
H(mm)		200	219	232	282	330	378	452	575	590	635
Weight (Kg)		32	42	61	112	205	385	575	775	982	1056

FLANGED CONNECTION SWING CHECK VALVE



PN10.0MPa



PN16.0、25.0MPa

Size & weight

Class900

Model		Class 900									
Size	in.	2	2½	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L (BW)	in.	8.5	10	12	14	20	26	31	36	39	43
	mm	216	254	305	356	508	660	787	914	991	1092
L1 (RF)	in.	14.5	16.5	15	18	24	29	33	38	40.5	44.5
	mm	368	419	381	457	610	737	838	965	1029	1130
L2 (RTJ)	in.	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88
	mm	371	422	384	460	613	740	841	968	1038	1140
H	in.	7.4	8.27	8.27	8.5	14.5	20.12	24.17	27.76	28.98	29.76
	mm	188	210	210	216	368	511	614	705	736	756
WT (kg)	RF	48	63	60	122	254	511	938	1448	1723	1832
	BW	33	44	42	76	177	383	703	1128	1353	1463

Model		Class 1500									
Size	in.	2	2½	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L (BW)	in.	8.5	10	12	16	22	28	34	39	42	47
	mm	216	254	305	406	559	711	864	991	1067	1194
L1 (RF)	in.	14.5	16.5	18.5	21.5	27.75	32.75	39	44.5	49.5	54.5
	mm	368	419	470	546	705	832	991	1130	1257	1384
L2 (RTJ)	in.	14.62	16.62	18.62	21.62	28	33.13	39.38	45.12	50.25	55.38
	mm	371	422	473	549	711	841	1000	1146	1276	1407
H	in.	10.43	10.43	10.63	14.57	18.7	22.44	24.8	30.31	31.3	32.44
	mm	265	265	270	370	475	570	630	770	795	824
WT (kg)	RF	58	73	71	128	332	588	1023	1528	1852	2058
	BW	40	51	69	84	228	458	713	1148	1388	1542

Model		Class 2500									
Size	in.	2	2½	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L (BW)	in.	11	13	14.5	18	24	30	36	41	–	–
	mm	279	330	368	457	610	762	914	1041		
L1 (RF)	in.	17.75	20	22.75	26.5	36	40.25	50	56	–	–
	mm	451	508	578	673	914	1022	1270	1422		
L2 (RTJ)	in.	17.87	20.25	23	26.88	36.5	40.87	50.88	56.88	–	–
	mm	454	514	584	683	927	1038	1292	1445		
H	in.	11.02	12	12.2	14.57	19.1	21.42	27.95	31.5	–	–
	mm	280	305	310	370	485	544	710	800		
WT (kg)	RF	86	113	133	213	548	988	1598	2298	–	–
	BW	52	88	93	158	383	638	1198	1723		

FLANGED CONNECTION PISTON- LIFT TYPE CHECK VALVE

PRODUCTS DESIGN FEATURES

Flanged ends piston-lift type check valve are used in pipes under nominal pressures between PN1.6-16.0Mpa, Class150-900, working temperatures between-46-550℃,They are used in industries include oil, chemistry, pharmaceutical, fertilizer,and power generation to prevent the backward flux of the media.

Main structural features:

1. Rational structure, reliable sealing, excellent performance, pretty appearance.
2. Co hard alloy welded sealing surface of the valve discs and seats, which is wearing resistant, erosion proof, abrasion proof andlong-lived.
3. Different parts materials and different sizes for flange, & gasket-welding are available for sensible combination according to different working facts and customer's requirements.

PRODUCTS SPECIFICATION

Model	Pressure	Structural Type	Nominal size								
			DN	50	65	80	100	125	150	200	250	300
			NPS	2	2½	3	4	5	6	8	10	12
H2a2RFS	1.6MPa	Bolted bonnet Piston-lift type		☆	☆	☆	☆	☆	☆	☆	-	-
H3a2RFS	2.5MPa			☆	☆	☆	☆	☆	☆	☆	-	-
H4a2FFS	4.0MPa			☆	☆	☆	☆	☆	☆	☆	-	-
H5a2FFS	6.4MPa			☆	☆	☆	☆	☆	☆	☆	-	-
H6a2JFS	10.0MPa			☆	☆	☆	☆	☆	☆	☆	-	-
H7a2JFS	16.0MPa			☆	☆	☆	☆	-	-	-	-	-
H22RFS	Class 150	Bolted bonnet Piston-lift type		☆	☆	☆	☆	☆	☆	☆	☆	☆
H32RFS	Class 300			☆	☆	☆	☆	☆	☆	☆	☆	☆
H52JFS	Class 600			☆	☆	☆	☆	☆	☆	☆	☆	☆
H72JFS	Class 900			☆	☆	☆	☆	☆	-	-	-	-

Products performance specificatiion

Pressure grade		1.6~16.0MPa	Class150~900
Test pressure	Shell test	1.5xPN	
	Sealing test	1.1xPN	
Working temperature		-46℃~+570℃	
Working Medium		Water, oil, natural gas, corrosive medium, etc.	

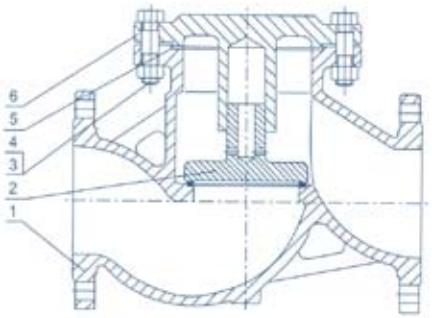
Note: PN is requested pressure for the body material under the 38℃.

FLANGED CONNECTION PISTON- LIFT TYPE CHECK VALVE

Technical specification

Design Standard	GB/T 12235	BS1868
Face to Face	GB/T 12221	ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

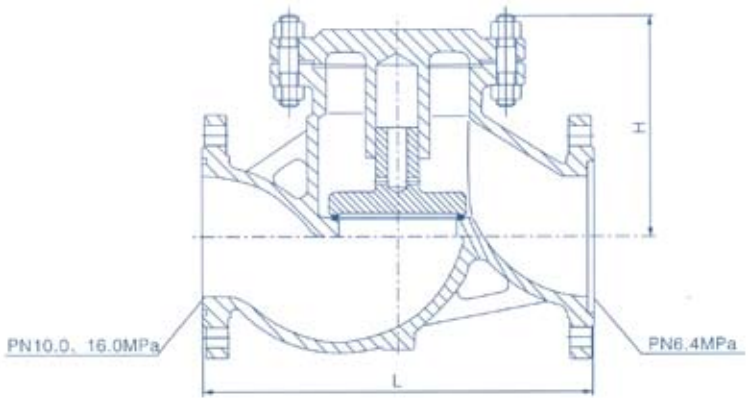
Notes: The sizes of serial valve connecting flange can be designed according to customers' requirement.



Form of major parts materials

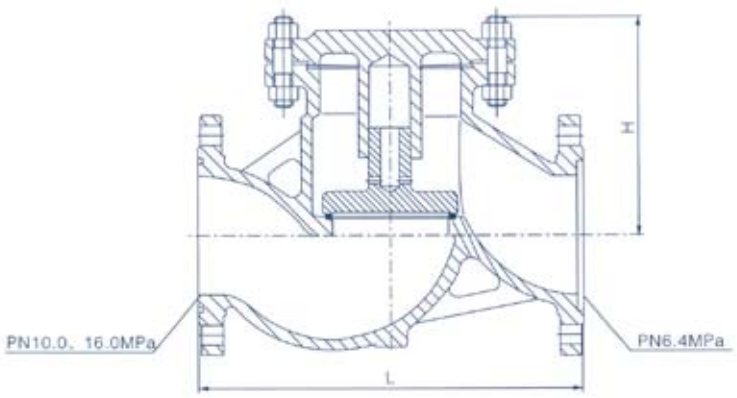
No.	Part name	Material	
		ASTM	GB
1	Body	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M
3	Stud	A193-B7、A320-B8 A193-B8M、A193-L7	35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2
4	Nut	A194-2H、A194-8 A194-8M、A194-4	45、35CrMoA、25Cr2MoV 0Cr18Ni9、0Cr17Ni12Mo2
5	Gasket	Graphite & stainless steel	Graphite & stainless steel
6	Bonnet	WCB、LCB WC1、WC6、WC9、C5、C12 CF8、CF8M、CF8C、CF3、CF3M	WCB WC1、WC6、WC9、C5 CF8、CF8M、CF8C、CF3、CF3M

FLANGED CONNECTION PISTON- LIFT TYPE CHECK VALVE



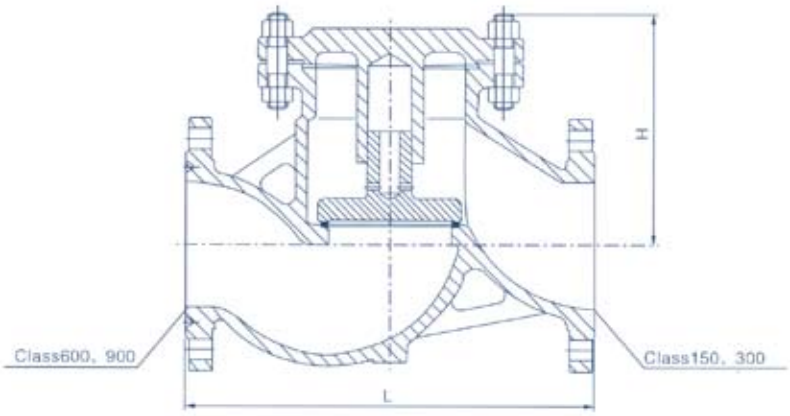
Size & weight							PN1.6~4.0MPa
Model	**H2a2RFS-CC10、CA20、CS30**						
Pressure	1.6MPa						
Size (mm)	50	65	80	100	125	150	200
L (mm)	230	290	310	350	400	480	600
H (mm)	115	140	175	203	228	250	285
Weight (Kg)	20	24	30	42	59	84	100
Model	**H3a2RFS-CC10、CA20、CS30**						
Pressure	2.5MPa						
Size (mm)	50	65	80	100	125	150	200
L (mm)	230	290	310	350	400	480	600
H (mm)	115	140	175	203	228	250	285
Weight (Kg)	21	25	31	42	60	86	102
Model	**H4a2FFS-CC10、CA20、CS30**						
Pressure	4.0MPa						
Size (mm)	50	65	80	100	125	150	200
L (mm)	230	290	310	350	400	480	600
H (mm)	115	160	178	203	228	265	317
Weight (Kg)	17	22	34	42	75	105	150

FLANGED CONNECTION PISTON- LIFT TYPE CHECK VALVE



Size & weight							PN6.4~16.0MPa
Model	**H5a2FFS-CC10、CA20、CS30**						
Pressure	6.4MPa						
Size (mm)	50	65	80	100	125	150	200
L (mm)	300	340	380	430	500	550	600
H (mm)	175	190	208	230	265	312	353
Weight (Kg)	30	36	48	70	102	145	198
Model	**H3a2RFS-CC10、CA20、CS30**						
Pressure	10.0MPa						
Size (mm)	50	65	80	100	125	150	200
L (mm)	300	340	380	430	500	550	600
H (mm)	175	193	238	269	313	355	403
Weight (Kg)	30	43	65	89	102	123	148
Model	**H4a2FFS-CC10、CA20、CS30**						
Pressure	16.0MPa						
Size (mm)	50		65		80		100
L (mm)	300		340		380		430
H (mm)	175		193		238		269
Weight (Kg)	32		46		240		273

FLANGED CONNECTION PISTON- LIFT TYPE CHECK VALVE



ize & weight **Class150~900**

Model		H22RFS-CC10、CA20 、CS30							
Pressure		Class150							
Size	mm	50	65	80	100	150	200	250	300
	in	2	2½	3	4	6	8	10	12
L(mm)		203	216	241	292	356	495	622	698
H(mm)		165	175	190	215	265	320	365	415
Weight (Kg)		17	25	29	50	85	150	240	350

Model		H32RFS-CC10、CA20、CS30							
Pressure		Class300							
Size	mm	50	65	80	100	150	200	250	300
	in	2	2½	3	4	6	8	10	12
L(mm)		267	292	318	356	444	533	622	711
H(mm)		190	205	220	245	295	330	420	480
Weight (Kg)		28	33	45	70	150	230	390	520

Model		H52JFS-CC10、CA20、CS30							
Pressure		Class600							
Size	mm	50	65	80	100	150	200	250	300
	in	2	2½	3	4	6	8	10	12
L(mm)		295	334	359	435	562	664	791	842
H(mm)		210	230	255	295	365	420	505	545
Weight (Kg)		33	43	62	113	222	390	630	871

Model		H72JFS-CC10、CA20、CS30				
Pressure		Class900				
Size	mm	50	65	80	100	150
	in	2	2½	3	4	6
L(mm)		372	422	384	460	613
H(mm)		235	270	302	342	425
Weight (Kg)		120	166	176	182	403

WAFER TYPE DOUBLE DISC SWING CHECK VALVE

PRODUCTS DESIGN FEATURES

Wafer type double disc swing check valves are used in all kinds of pipes under the pressure of PN1.6–16.0MPa,class 150–900 and working temperature of –196–425℃. They are mainly used to prevent the reverse flux of the media.

Main structural features:

1. Short length, small volume and light weight.
2. Either soft sealing or hard sealing can be applied for the sealing surface according to different working conditions, both ofwhich promise a perfect sealing effect.
3. With a small starting pressure, the valve discs can be fully opened under a very small pressure difference.
4. Fast discs closing and small water hammer pressure.
5. Convenient installation and applicability on both level and vertical pipes.
6. Different materials for the parts, sizes and forms of the valves surfaces are available for free combination according to the working facts and the customer's requirements.

PRODUCTS SPECIFICATION

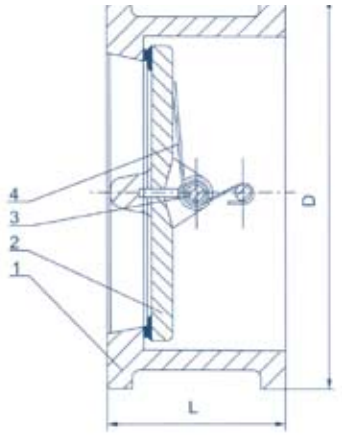
Model	Pressure	Nominal size (mm/in)													
		DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
		NPS	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
H1a3R	1.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H2a3R	1.6MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H3a3R	2.5MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H4a3F	4.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–
H5a3F	6.4MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–
H6a3J	10.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–
H7a3J	16.0MPa		☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–	–	–
H23R	Class 150		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H33R	Class 300		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–
H53J	Class 600		☆	☆	☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–
H73J	Class 900		☆	☆	☆	☆	☆	☆	☆	–	–	–	–	–	–	–

Products performance specificatiion

Pressure grade		1.6~16.0MPa	Class150~900
Test pressure	Shell test	1.5xPN	
	Sealing test	1.1xPN	
Working temperature		-46℃~+425℃	
Working Medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

WAFER TYPE DOUBLE DISC SWING CHECK VALVE



Technical specification

Design Standard	GB/T 12224	API 594
Face to Face	GB/T 12221	API 594 ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of major parts materials

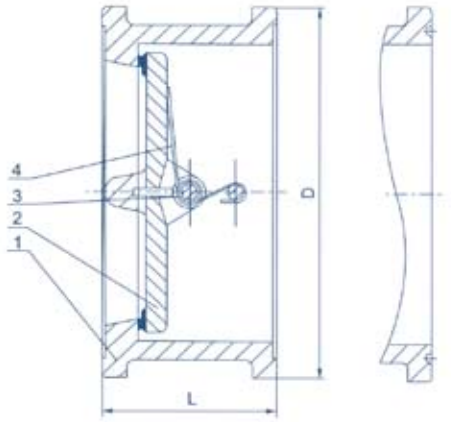
No.	Part Name	Material
1	Body	WCB CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB CF8、CF8M、CF8C、CF3、CF3M
3	Pin	1Cr13、2Cr13 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
4	Spring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti

Size & weight

PN1.0~2.5MPa

Model	H1a3R-CC10、CS30													
Pressure	1.0MPa													
Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L (mm)	60	67	73	73	86	98	127	146	181	184	191	203	219	222
H (mm)	109	129	144	164	194	220	275	330	380	440	492	542	597	698
Weight (Kg)	2	3	4.2	6.2	7.5	11.5	20.2	31	48.2	72.5	104.5	151	180	300
Model	**H2a3R-CC10、CS30**													
Pressure	1.6MPa													
Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L (mm)	60	67	73	73	86	98	127	146	181	184	191	203	219	222
H (mm)	109	129	144	164	194	220	275	332	387	447	498	558	620	734
Weight (Kg)	2	3	4.2	6.2	7.5	11.5	20.2	32	51	73	108	160	200	320
Model	**H3a3R-CC10、CS30**													
Pressure	2.5MPa													
Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L (mm)	60	67	73	73	86	98	127	146	181	184	191	203	219	222
H (mm)	109	129	144	170	197	227	287	343	403	460	518	568	624	734
Weight (Kg)	2	3	4.2	6.2	9	12.5	23	40	55	82	118	212	240	412

WAFER TYPE DOUBLE DISC SWING CHECK VALVE



PN4.0、6.4MMPa　　PN≥10.0MPa

Technical specification

Design Standard	GB/T 12224	API 594
Face to Face	GB/T 12221	API 594 ASME B16.10
Flanged Size	GB/T 9113 JB/T 79	ASME B16.5
Test & Inspection	JB/T 9092	API 598

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of major parts materials

No.	Part Name	Material
1	Body	WCB CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB CF8、CF8M、CF8C、CF3、CF3M
3	Pin	1Cr13、2Cr13 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
4	Spring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti

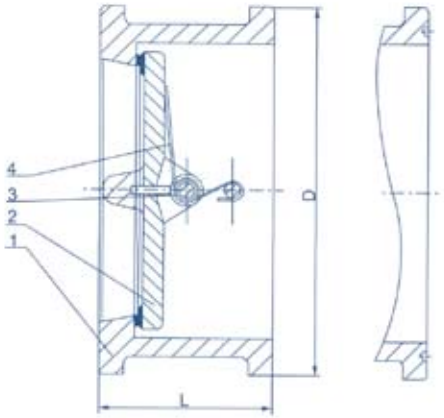
Size & weight　PN4.0~16.0MPa

Model	**H4a3F-CC10、CS30**													
Pressure	4.0MPa													
Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L (mm)	60	67	73	73	86	98	127	146	181	222	232	–	–	–
H (mm)	109	129	144	170	197	227	293	355	420	478	549	–	–	–
Weight (Kg)	3.5	5	7.2	9.3	16	18	30	52	87	121	162	–	–	–

Model	**H5a3F-CC10、CS30**													
Pressure	6.4MPa													
Size (mm)	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L (mm)	60	67	73	79	105	136	165	213	229	–	–	–	–	–
H (mm)	115	140	150	177	213	250	313	364	424	–	–	–	–	–
Weight (Kg)	3.5	5	7.2	12	22	34	48	77	112	–	–	–	–	–

Model	**H6a3J-CC10、CS30**									**H7a3J-CC10、CS30**						
Pressure	10.0MPa									16.0MPa						
Size (mm)	50	65	80	100	125	150	200	250	300	50	65	80	100	125	150	200
L (mm)	60	67	73	73	105	136	165	213	229	70	83	83	102	110	159	206
H (mm)	122	147	157	183	220	260	324	394	458	143	163	178	210	249	282	358
Weight (Kg)	4	6	8	12	21	34	48	77	112	7	10	15	25	30	43	55

WAFER TYPE DOUBLE DISC SWING CHECK VALVE



Class150、300　　Class600、900

Technical specification

Design Standard	API 594
Face to Face	ASME B16.10
Flanged Ends	ASME B16.5
Test & Inspection	API 598

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of major parts materials

No.	Part Name	Material
1	Body	ASTM A216-WCB、ASTM A352-LCB ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
2	Disc	ASTM A216-WCB、ASTM A352-LCB ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
3	Pin	ASTM A182-F6a、ASTM A182-F22 ASTM A182-F304、F316、F321、F304L、F316L
4	Spring	AISI 9260、AISI 6150 ASTM A182-F304、F316、F321、F304L、F316L

Size & weight

Class 150~900

Model H23R-CC10、CS30

Class		150													
Size	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
L(mm)		60	67	73	73	86	98	127	146	181	184	191	203	219	222
H(mm)		103	122	135	173	196	222	279	339	409	450	514	549	606	717
Weight (Kg)		2	3.2	4	6	9	12	22	38	54	80	118	210	240	410

Model H33R-CC10、CS30

Class		300										
Size	mm	50	65	80	100	125	150	200	250	300	350	400
	in	2	2½	3	4	5	6	8	10	12	14	16
L(mm)		60	67	73	73	86	98	127	146	181	222	232
H(mm)		110	129	148	180	215	250	307	361	422	485	539
Weight (Kg)		3.5	5	7	10	18.5	19	33	54	88	128	169

Model		H53J-CC10、CS30											H73J-CC10、CS30					
Class		600											900					
Size	mm	50	65	80	100	125	150	200	250	300	350	400	50	65	80	100	150	200
	in	2	2½	3	4	5	6	8	10	12	14	16	2	2½	3	4	6	8
L(mm)		60	67	73	79	105	136	165	213	229	273	305	70	83	83	102	159	206
H(mm)		110	129	148	192	240	265	319	399	456	489	562	142	164	167	205	288	358
Weight (Kg)		3.5	5	7	12	22.5	35	45	77	110	135	163	6.5	9	14	24	43	56

WAFER TYPE PISTON-LIFT CHECK VALVE

PRODUCTS DESIGN FEATURES

Wafer & Piston-Lift Type Check Valves are used in all Kinds of pipes under the pressure of PN 1.0–16.0Mpa and working temerature of –196–425℃ of class 150–900. They are mainly used to prevent the reverse flux of the media. The main structure features are:

Main structural features:

1. Short length, small volume and light weight.
2. Hard material welded sealing surface, which is wearing resistant, erosion proof, abrasion proof and long-lived.
3. With a small starting pressure, the valve discs can be fully opened under a very small pressure difference.
4. Fast discs closing and small water hammer pressure.
5. Convenient installation and applicability on both level and vertical pipes.
6. Different materials for the parts, sizes and forms of the valves surfaces are available for free combination according to the working facts and the customer's requirements.

Products specification

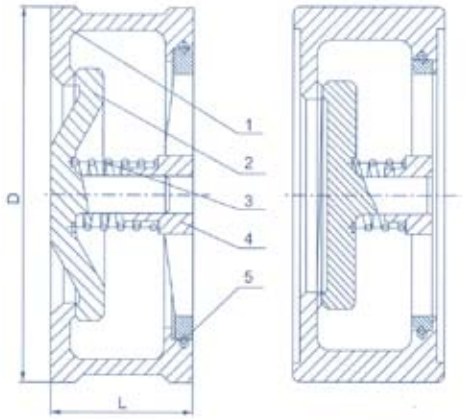
Model	Pressure	Nominal size (mm/in)											
		DN	15	20	25	32	40	50	65	80	100	125	150
H1a3R	1.0MPa	NPS	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6
H1(2)a3AR	1.0/1.6MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H3a3AR	2.5MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H4a3AF	4.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H5a3AF	6.4MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H6a3AJ	10.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H7a3AJ	16.0MPa		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H23AR	Class 150		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H33AR	Class 300		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H53AJ	Class 600		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
H73AJ	Class 900		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆

Products performance specificatiion

Pressure grade		1.6~16.0MPa	Class150~900
Test pressure	Shell test	1.5xPN	
	Sealing test	1.1xPN	
Working temperature		-46℃~+425℃	
Working Medium		Water, oil, natural gas, corrosive medium, etc.	

Note: PN is requested pressure for the body material under the 38℃.

WAFER TYPE PISTON-LIFT CHECK VALVE



PN≤2.5MPa PN≥4.0MPa

Technical specification

Design Standard	GB/T 12224
Face to Face	GB/T 15188.2
Flanged Ends	JB/T 79
Test & Inspection	JB/T 9092

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

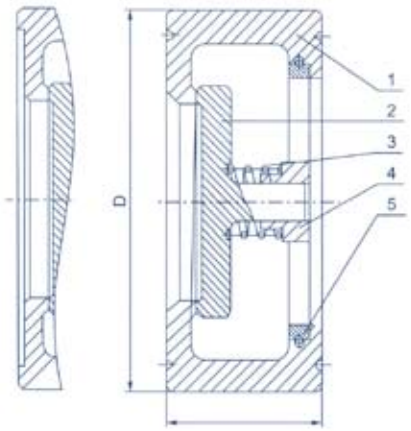
Form of major parts materials

No.	Part Name	Material
1	Body	WCB CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB CF8、CF8M、CF8C、CF3、CF3M
3	Spring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
4	Plate	WCB CF8、CF8M、CF8C、CF3、CF3M
5	Lock ring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti

Size & weight — PN1.0~4.0MPa

Model	H1(2)a3$_A$R-CC10、CS30										
Pressure	1.0、1.6MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	16	19	22	28	31.5	40	46	50	60	90	106
H (mm)	53	63	73	84	94	109	129	144	164	194	220
Weight (Kg)	0.15	0.25	0.4	0.55	0.75	1.2	2.0	2.6	5.7	10	13
Model	**H3a3$_A$R-CC10、CS30**										
Pressure	2.5MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	16	19	22	28	31.5	40	46	50	60	90	106
H (mm)	53	63	73	84	94	109	129	144	170	197	220
Weight (Kg)	0.2	0.3	0.45	0.6	0.8	1.2	2.3	3.0	7.0	12	13
Model	**H4a3$_A$F-CC10、CS30**										
Pressure	4.0MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	25	31.5	35.5	40	45	60	63	71	80	110	125
H (mm)	63	74	84	90	105	115	140	150	177	213	250
Weight (Kg)	0.3	0.4	0.6	1.0	1.5	2.0	3.2	7.2	11	18	22

WAFER TYPE PISTON-LIFT CHECK VALVE



PN6.4MPa PN≥10.0MPa

Technical specification

Design Standard	GB/T 12224
Face to Face	GB/T 15188.2
Flanged Ends	JB/T 79
Test & Inspection	JB/T 9092

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of major parts materials

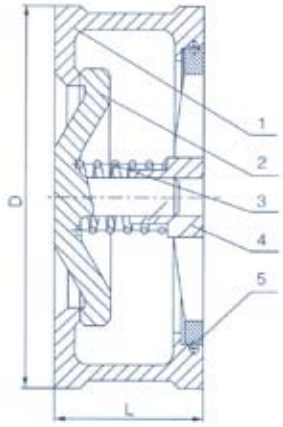
No.	Part Name	Material
1	Body	WCB CF8、CF8M、CF8C、CF3、CF3M
2	Disc	WCB CF8、CF8M、CF8C、CF3、CF3M
3	Spring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti
4	Plate	WCB CF8、CF8M、CF8C、CF3、CF3M
5	Lock ring	4Cr13、60Si2Mn 1Cr18Ni9Ti、0Cr18Ni12Mo2Ti

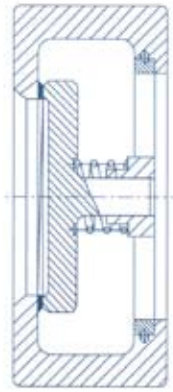
Size & weight — PN6.4~16.0MPa

Model	**H5a3$_A$F-CC10、CS30**										
Pressure	6.4MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	25	31.5	35.5	40	45	56	63	71	80	110	125
H (mm)	63	74	84	90	105	115	140	150	177	213	250
Weight (Kg)	0.3	0.4	0.6	1.0	1.5	2.0	3.2	7.2	11	18	22
Model	**H6a3$_A$J-CC10、CS30**										
Pressure	10.0MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	25	31.5	35.5	40	45	56	63	71	80	110	125
H (mm)	63	74	84	90	105	122	147	157	183	220	260
Weight (Kg)	0.3	0.4	0.6	1.0	1.5	2.2	3.5	7.5	12	18	24
Model	**H7a3$_A$J-CC10、CS30**										
Pressure	16.0MPa										
Size (mm)	15	20	25	32	40	50	65	80	100	125	150
L (mm)	25	31.5	35.5	40	45	56	63	71	80	110	125
H (mm)	59	70	80	93	101	143	163	178	210	249	282
Weight (Kg)	0.3	0.4	0.6	1.0	1.5	2.2	3.5	7.5	12	19	24

WAFER TYPE PISTON-LIFT CHECK VALVE

Class 150/R F





Class 300/R F

Class 600、900/RTJ

Technical specification

Design Standard	API 594
Face to Face	ASME B16.10
Flanged Ends	ASME B16.5
Test & Inspection	API 598

Notes: The sizes of serial valve connecting flange can be designed according to customer's requirement.

Form of major parts materials

No.	Part Name	Material
1	Body	ASTM A216-WCB、ASTM A352-LCB ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
2	Disc	ASTM A216-WCB、ASTM A352-LCB ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
3	Spring	AISI 9260、AISI 6150 ASTM A182-F304、F316、F321、F304L、F316L
4	Plate	ASTM A216-WCB、ASTM A350-LF2 ASTM A351-CF8、CF8M、CF8C、CF3、CF3M
5	Lock ring	AISI 9260、AISI 6150 ASTM A182-F304、F316、F321、F304L、F316L

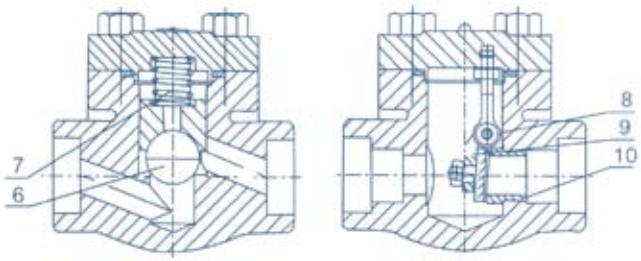
Size & weight

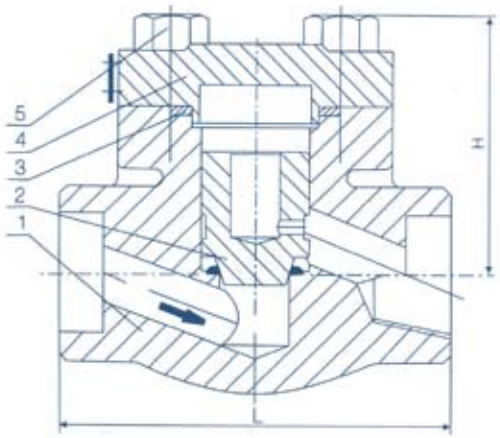
Class150~900

Model		H23AR-CC10、CS30											H33AR-CC10、CS30										
Class		150											300										
Size	mm	15	20	25	32	40	50	65	80	100	125	150	15	20	25	32	40	50	65	80	100	125	150
	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6
L(mm)		16	19	22	28	31.5	40	46	50	60	90	106	25	31.5	35.5	40	45	56	63	71	80	110	125
H(mm)		47	57	66	75	85	103	122	135	173	196	222	53	65	72	81	95	110	129	148	180	215	250
Weight (Kg)		0.2	0.3	0.45	0.6	0.8	1.2	2.3	3.0	7.0	12	15	0.23	0.36	0.52	0.75	1.1	1.95	2.9	5.5	9.0	15	20

Model		H53AJ-CC10、CS30											H73AJ-CC10、CS30										
Class		600											900										
Size	mm	15	20	25	32	40	50	65	80	100	125	150	15	20	25	32	40	50	65	80	100	125	150
	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6
L(mm)		25	31.5	35.5	40	45	56	63	71	80	110	125	25	31.5	35.5	40	45	56	63	71	80	110	125
H(mm)		53	65	72	81	95	110	129	148	192	240	265	63	69	78	88	98	142	164	167	205	247	288
Weight (Kg)		0.25	0.38	0.55	0.8	1.2	2.0	2.0	6.0	10	17	22	0.3	0.4	0.6	1.0	1.5	2.5	4.0	8.0	13	20	25

FORGED STEEL CHECK VALVE





Technical specification

Structural Formation	BC–SWING、BC–PISTON–LIFT
Design Standard	ASME B16.34、BS 5352
Thread Ends	ASME B1.20.1
Socket Welded Ends	ASME B16.11
Test & Inspection	API 598

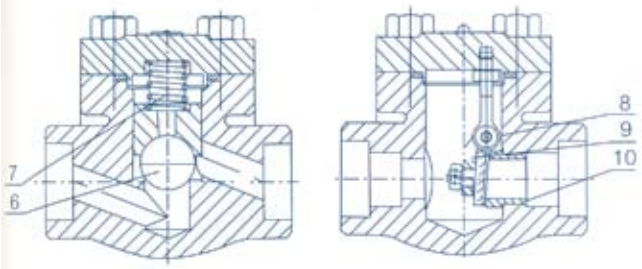
Form of major parts materials

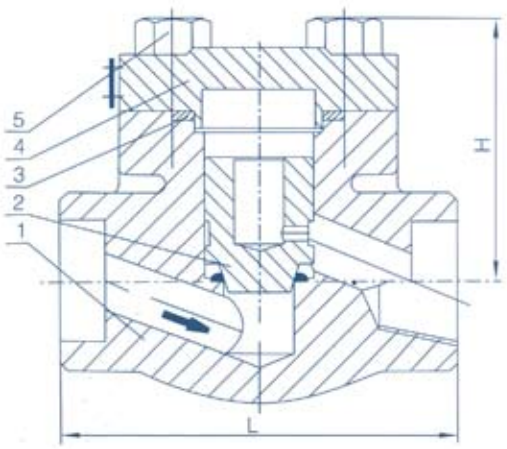
No.	Part Name	Material
1	Body	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
2	Disc	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
3	Gasket	Graphite & stainless steel
4	Bonnet	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
5	Bolt	ASTM A193–B7、A320–B8、A193–B8M A193–L7
6	Ball	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
7	Spring	AISI 9260、AISI 6150 ASTM A182–F304、F316、F321、F304L、F316L
8	Pin	ASTM A182–F6a、ASTM A182–F22 ASTM A182–F304、F316、F321、F304L、F316L
9	Arm	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
10	Seat	ASTM A105 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L

SIZE & WEIGHT — Class 1500

Model		H81S(T)FS–C10、H81S(T)FS–A20、H81S(T)FS–S30						
Class					1500			
Size	Reduced bore mm(in)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)	
	Full bore mm(in)	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)		111	111	120	140	140	160	220
H (mm)		79	79	96	105	120	140	160
Weight(Kg)		3.3	3.6	4.3	6.0	8.7	12.5	16.0
Model		H82S(T)FS–C10、H82S(T)FS–A20、H82S(T)FS–S30						
Class					2500			
Size	Reduced bore mm(in)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)	
	Full bore mm(in)	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)		111	111	130	150	172	220	130
H (mm)		79	79	96	105	120	140	160
Weight(Kg)		3.0	3.5	4.7	7.0	10.5	14.5	16.5

FORGED STEEL CHECK VALVE





Technical specification

Structural Formation	BC–SWING、BC–PISTON–LIFT
Design Standard	ASME B16.34、BS 5352
Thread Ends	ASME B1.20.1
Socket Welded Ends	ASME B16.11
Test & Inspection	API 598

Form of major parts materials

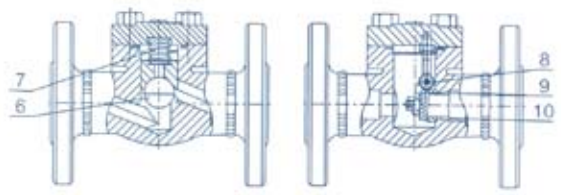
No.	Part Name	Material
1	Body	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
2	Disc	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
3	Gasket	Graphite & stainless steel
4	Bonnet	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
5	Bolt	ASTM A193–B7、A320–B8、A193–B8M A193–L7
6	Ball	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
7	Spring	AISI 9260、AISI 6150 ASTM A350–LF2 ASTM A182–F304、F316、F321、F304L、F316L
8	Pin	ASTM A182–F6a、ASTM A182–F22 ASTM A182–F304、F316、F321、F304L、F316L
9	Arm	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
10	Seat	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L

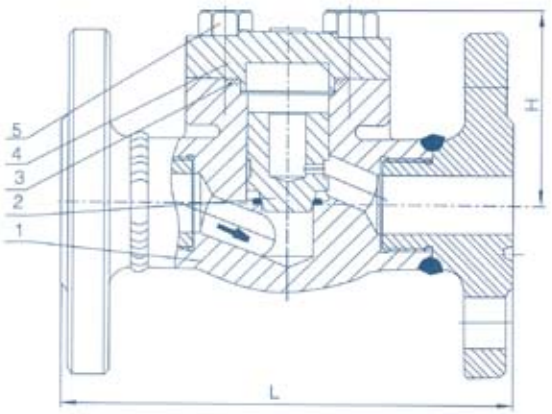
SIZE & WEIGHT — Class 800

Model		H61S(T)–C10、H61S(T)–A20、H61S(T)–S30						
Class					800			
Size	Reduced bore mm(in)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)	
	Full bore mm(in)	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)		80	92	111	120	120	140	170
H (mm)		61	61	78	85	103	119	132
Weight(Kg)		1.0	1.1	1.8	3.2	4.5	7.3	9.8

Model		H62S(T)–C10、H62S(T)–A20、H62S(T)–S30						
Class					800			
Size	Reduced bore mm(in)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)	
	Full bore mm(in)	10(3/8)	15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)		80	92	111	120	152	172	200
H (mm)		61	61	78	85	103	119	132
Weight(Kg)		1.2	1.4	2.5	3.9	5.5	8.9	12.5

FORGED STEEL CHECK VALVE





Technical specification

Structural Formation	BC–SWING、BC–PISTON–LIFT
Design Standard	ASME B16.34、BS 5352
Structural Length	ASME B16.10
Flanged Ends	ASME B16.5
Test & Inspection	API 598

Form of major parts materials

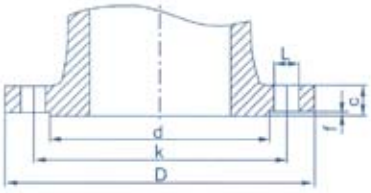
No.	Part Name	Material
1	Body	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
2	Disc	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
3	Gasket	Graphite & stainless steel
4	Bonnet	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
5	Bolt	ASTM A193–B7、A320–B8、A193–B8M A193–L7
6	Ball	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316
7	Spring	AISI 9260、AISI 6150 ASTM A182–F304、F316、F321、F304L、F316L
8	Pin	ASTM A182–F6a、ASTM A182– F22 ASTM A182–F304、F316、F321、F304L、F316L
9	Arm	ASTM A105 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L
10	Seat	ASTM A105 ASTM A350–LF2 ASTM A182–F11、F22、F5、F9 ASTM A182–F304、F316、F321、F304L、F316L

SIZE & WEIGHT

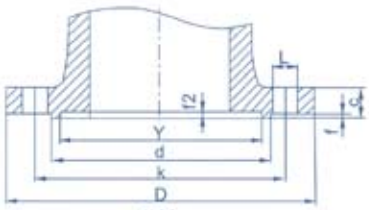
Class 150、300、600

Model		H21(2)R(J)–C10、H21(2)R(J)–A20、H21(2)R(J)–S30					
Class		150					
Size mm(in)		15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)	RF	108	117.5	127	140	165	203
	RTJ	119	130	140	153	178	216
H (mm)		60	60	76	85	103	118
Weight (Ⅰ、Ⅱ、Ⅲ)(Kg)		2.5(2.5)	3.3(3.4)	4.8(4.4)	7.0(8.2)	7.5(8.9)	11.0(12.5)
Model		**H31(2)R(J)–C10、H31(2)R(J)–A20、H31(2)R(J)–S30**					
Class		300					
Size mm(in)		15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)	RF	152.5	178	203	216	228.5	266.5
	RTJ	163.5	191	216	229	241	282
H (mm)		60	60	76	85	103	118
Weight (Ⅰ、Ⅱ、Ⅲ)(Kg)		2.5(2.7)	3.5(3.5)	5.0(4.8)	7.5(8.8)	7.9(9.8)	11.6(13.5)
Model		**H51(2)R(J)–C10、H51(2)R(J)–A20、H51(2)R(J)–S30**					
Class		600					
Size mm(in)		15(1/2)	20(3/4)	25(1)	32(1¼)	40(1½)	50(2)
L (mm)	RF	165	191	216	229	241	292
	RTJ	163.5	190.5	216	229	241	295
H (mm)		60	60	76	85	103	118
Weight (Ⅰ、Ⅱ、Ⅲ)(Kg)		2.8(3.0)	4.2(4.1)	5.2(5.8)	7.7(9.5)	9.3(10.0)	13.2(15.5)

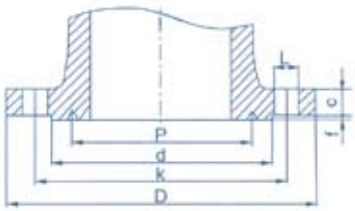
INTEGRAL STEEL PIPE FLANGE



RF



FM



RTJ

PN1.6、2.5MPa RF JB/T 79.1

PN1.6MPa RF

DN	D	K	L	(Bolt)n–Th	d	f	C
50	165	125	18	4–M16	100	3	16
65	185	145	18	4–M16	120	3	18
80	200	160	18	8–M16	135	3	20
100	220	180	18	8–M16	155	3	20
125	250	210	18	8–M16	185	3	22
150	285	240	23	8–M20	210	3	24
200	340	295	23	12–M20	265	3	26
250	405	355	26	12–M24	320	3	30
300	460	410	26	12–M24	375	4	30
350	520	470	26	16–M24	435	4	34
400	580	525	30	16–M27	485	4	36
450	640	585	30	20–M27	545	4	40
500	715	650	30	20–M30	608	4	44

PN2.5MPa RF

DN	D	K	L	(Bolt)n–Th	d	f	C
50	165	125	18	4–M16	99	3	20
65	185	145	18	8–M16	118	3	22
80	200	160	18	8–M16	132	3	22
100	230	190	23	8–M20	156	3	24
125	270	220	26	8–M24	184	3	28
150	300	250	26	8–M24	211	3	30
200	360	310	26	12–M24	274	3	34
250	425	370	30	12–M27	330	3	36
300	485	430	30	16–M27	389	4	40
350	555	490	34	16–M30	448	4	44
400	620	550	36	16–M33	503	4	48
450	670	600	36	20–M33	548	4	50
500	730	660	36	20–M33	609	4	52

PN4.0、6.3MPa FM JB/T 79.2

PN4.0MPa FM

DN	D	K	L	(Bolt)n–Th	d	Y	f	f2	C
50	165	125	18	4–M16	100	88	3	4	20
65	185	145	18	8–M16	120	110	3	4	22
80	200	160	18	8–M16	125	121	3	4	22
100	235	190	23	8–M20	160	150	3	4.5	24
125	270	220	26	8–M24	188	176	3	4	28
150	300	250	26	8–M24	218	204	3	4	30
200	375	320	30	12–M27	282	260	3	4	38
250	450	385	34	12–M30	345	313	3	4	42
300	515	450	34	16–M30	408	364	4	4	46
350	580	510	36	16–M33	465	422	4	5	52
400	660	585	41	16–M36	535	474	4	5	58
450	685	610	41	20–M36	560	524	4	5	60
500	755	670	42	20–M39	612	576	4	5	62

PN6.3MPa FM

DN	D	K	L	(Bolt)n–Th	d	Y	f	f2	C
50	180	135	23	4–M20	105	88	3	4	26
65	205	160	23	8–M20	130	110	3	4	28
80	215	170	23	8–M20	140	121	3	4	30
100	250	200	26	8–M24	168	150	3	4.5	32
125	295	240	30	8–M27	202	176	3	4.5	36
150	345	280	34	8–M30	240	204	3	4.5	38
200	405	345	36	12–M33	300	260	3	4.5	44
250	470	400	36	12–M33	352	313	3	4.5	48
300	530	460	36	16–M33	412	364	4	4.5	54
350	600	525	41	16–M36	475	422	4	5	60
400	670	585	42	16–M39	525	474	4	5	66
450	–	–	–	–	–	–	–	–	–
500	800	705	48	20–M45	640	576	4	5	70

PN10.0、16.0MPa RTJ JB/T 79.4

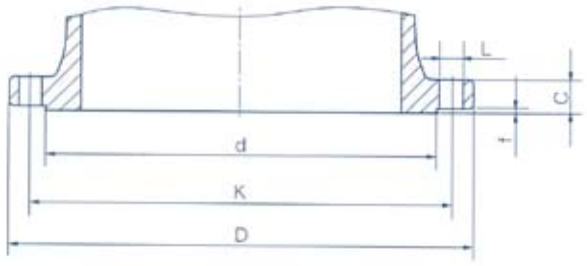
PN10.0MPa RTJ

DN	D	K	L	(Bolt)n–Th	d	P	f	C
50	195	145	26	4–M24	112	85	8	28
65	220	170	26	8–M24	138	110	8	32
80	230	180	26	8–M24	148	115	8	34
100	265	210	30	8–M27	172	145	8	38
125	315	250	34	8–M30	210	175	8	42
150	355	290	34	12–M30	250	205	8	46
200	430	360	36	12–M33	312	265	8	54
250	505	430	41	13–M36	382	320	8	60
300	585	500	42	16–M39	442	375	8	70

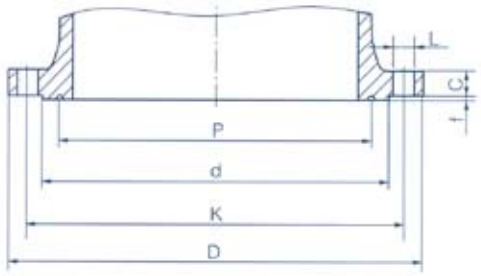
PN16.0MPa RTJ

DN	D	K	L	(Bolt)n–Th	d	P	f	C
50	215	165	25	8–M22	132	95	8	36
65	245	190	30	8–M27	152	110	8	44
80	260	205	30	8–M27	168	130	8	46
100	300	240	34	8–M30	200	160	8	48
125	355	285	41	8–M36	238	190	8	60
150	390	318	41	12–M36	270	205	10	66
200	480	400	48	12–M42	345	275	11	78
250	580	485	54	12–M48	425	330	11	88
300	665	570	54	16–M48	510	380	11	100

INTEGRAL STEEL PIPE FLANGE



R F



RTJ

CLASS 150 R F

NPS	1/2	3/4	1	1¼	1½	2	2½	3	4	6	8	10	12	14	16
D	90	100	110	120	130	152	178	190	229	279	343	406	483	533	597
K	60.5	70	79.5	89	98.5	120.5	139.5	152.5	190.5	241.5	298.5	362	432	476	540
L	16	16	16	16	16	18	18	18	18	22	22	26	26	29	29
n–Th	4–M14	4–M14	4–M14	4–M14	4–M14	4–M16	4–M16	4–M16	8–M16	8–M20	8–M20	12–M24	12–M24	12–M27	16–M27
d	35	43	51	63.5	73	92	105	127	157	216	270	324	381	413	470
f	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
c	10	10	11.5	13	14.5	16	18	19	24	26	29	31	32	35	37

CLASS 300 R F

NPS	1/2	3/4	1	1¼	1½	2	2½	3	4	6	8	10	12	14	16
D	90	120	125	135	155	165	190	210	254	318	381	445	521	584	648
K	66.5	82.5	89	98.5	114.5	127	149	168.5	200	270	330	387.5	451	514.5	571.5
L	16	18	18	18	22	18	22	22	22	22	26	29.5	32.5	32.5	35
n–Th	4–M14	4–M16	4–M16	4–M16	4–M20	8–M16	8–M20	8–M20	8–M20	12–M20	12–M24	16–M27	16–M30	20–M30	20–M33
d	35	43	51	63.5	73	92	105	127	157	216	270	324	381	413	470
f	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
c	14.5	16	17.5	19.5	21	23	26	29	32	37	42	48	51	54	58

CLASS 600 RTJ

NPS	2	2½	3	4	6	8	10
D	165	190	210	275	355	420	510
K	127	149	168.5	216	292	349	432
L	18	22	22	26	29.5	32.5	35.5
n–Th	8–M16	8–M20	8–M20	8–M24	12–M27	12–M30	16–M33
d1	108	127	146	175	241	302	356
P	82.55	101.6	123.825	149.225	211.138	269.876	323.851
f1	7.9	7.9	7.9	7.9	7.9	7.9	7.9
C1	25.5	29	32	38.5	48	55.5	63.5

CLASS 900 RTJ

NPS	2	2½	3	4	6	8	10
D	216	244	241	292	381	470	545
K	165.1	190.5	190.5	234.9	317.5	393.7	469.9
L	26	29.5	26	32.5	32.5	39	39
n–Th	8–M24	8–M27	8–M24	8–M30	12–M30	12–M36×3	16–M36×3
d1	124	137	156	181	214	308	362
P	95.25	107.95	123.82	149.22	211.12	269.88	323.85
f1	7.9	7.9	7.9	7.9	7.9	7.9	7.9
C1	38.5	41.5	38.5	44.5	56	63.5	70

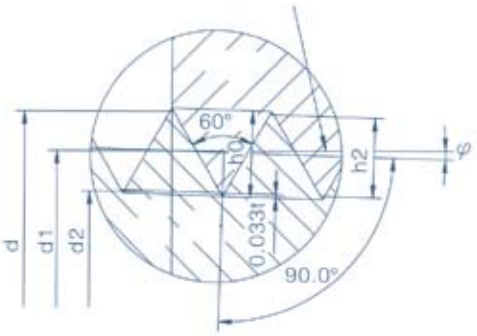
CLASS 1500 RTJ

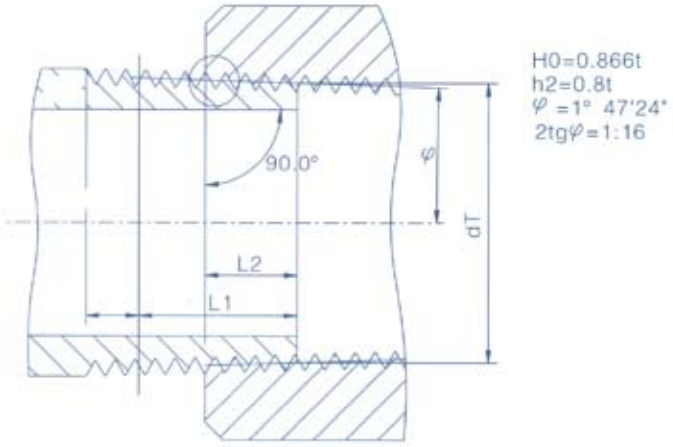
NPS	2	2½	3	4	6	8	10
D	216	244	265	310	395	485	585
K	165.1	190.5	203	241.5	317.5	393.7	482.5
L	26	29.5	32.5	35.5	39	45	51
n–Th	8–M24	8–M27	8–M30	8–M33	12–M36×3	12–M42×3	16–M48×3
d1	124	137	168	194	248	318	371
P	95.25	107.95	136.52	161.92	211.12	269.88	323.85
f1	7.9	7.9	7.9	7.9	9.52	11.13	11.13
C1	38.5	41.5	48	54	83	92	108

CLASS 2500 RTJ

NPS	2	2½	3	4	6	8	10
D	235	265	305	355	485	550	675
K	171.5	197	228.5	273	368.5	438	539.5
L	29.5	32.5	35.5	42	55	55	68
n–Th	8–M27	8–M30	8–M33	8–M39×3	8–M52×3	12–M52×3	16–M64×3
d1	133	149	168	203	279	340	425
P	101.6	111.12	127	157.18	228.6	279.4	342.9
f1	7.92	9.52	9.52	11.13	1.7	14.27	17.48
C1	51	57.5	57.5	76.5	108	127	165.5

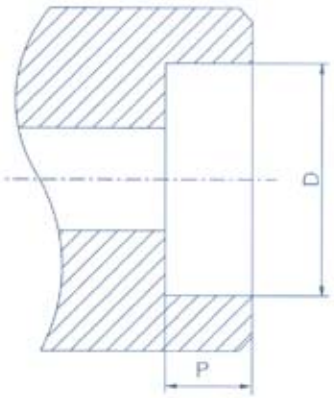
TABLES





NATIONAL TAPER PIPE THREAD — ASME B1.20.1

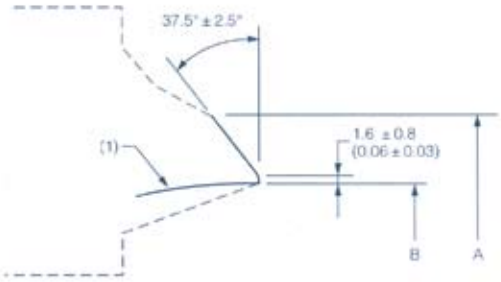
Nominal size		Threads Per Inch	Pitch of thread	Thread length		DIA.at reference surface			Boot DIA.of the pipe thread	Height
in	mm	n	p	L1	L2	d	d1	d2	dT	h1
3/8	10	18	1.411	10.5	6.096	17.055	15.926	14.797	14.416	1.129
1/2	15	14	1.814	13.5	8.128	21.223	19.772	18.321	17.813	1.451
3/4	20	14	1.814	14	8.611	26.568	25.117	23.666	23.128	1.4851
1	25	11-1/2	2.209	17.5	10.160	33.228	31.461	29.694	29.059	1.767
1¼	32	11-1/2	2.209	18	10.668	41.985	40.218	38.451	37.784	1.767
1½	40	11-1/2	2.209	18.5	10.668	48.054	46.287	44.520	43.853	1.767
2	50	11-1/2	2.209	19	11.074	60.092	58.325	56.558	55.866	1.767

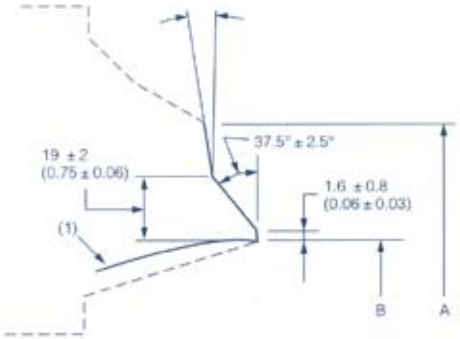


SOCKET WELDED ENDS — ASME B16.11

	in	3/8	1/2	3/4	1	1¼	1½	2
Nominal Size	mm	10	15	20	25	32	40	50

BUTT-WELDING ENDS





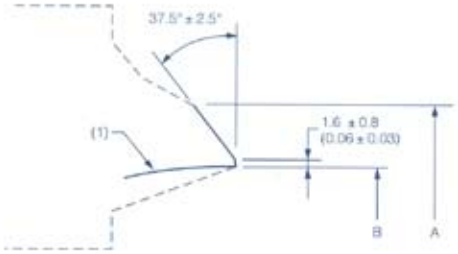
DN65–250

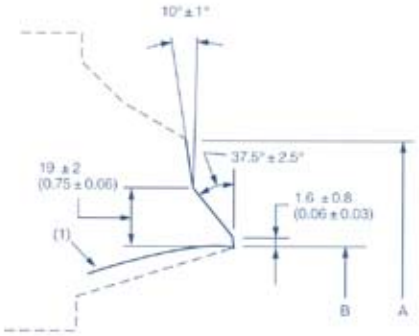
Pipe nominal specification (DN)	Series of pipe schedule thikness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
65	40	73.0	75	62.5	662.93	5.16
	80	73.0	75	59	59.69	7.01
	160	73.0	75	54	55.28	9.35
	XXS	73.0	75	45	47.43	14.02
80	40	88.9	91	78	78.25	5.49
	80	88.9	91	73.5	74.53	7.62
	160	88.9	91	66.5	68.38	11.13
	XXS	88.9	91	58.5	61.19	15.24
90	40	101.6	105	90	90.52	5.74
	80	101.6	105	85.5	86.42	8.08
100	40	114.3	117	102	102.73	6.02
	80	114.3	117	97	98.28	8.56
	120	114.3	117	92	93.78	11.13
	160	114.3	117	87.5	89.65	13.49
	XXS	114.3	117	80	83.30	17.12
125	40	141.3	144	128	128.80	6.55
	80	141.3	144	122	123.58	9.3
	120	141.3	144	116	118.04	12.70
	160	141.3	144	109.5	112.47	15.88
	XXS	141.3	144	103	106.92	19.05
150	40	168.3	172	154	154.82	7.11
	80	168.3	172	146.5	148.06	10.97
	120	168.3	172	140	142.29	14.27
	160	168.3	172	132	135.31	18.26
	XXS	168.3	172	124.5	128.85	21.95
200	40	219.1	223	203	203.75	8.18
	60	219.1	223	198.5	200.02	10.31
	80	219.1	223	193.5	195.84	12.70
	100	219.1	223	189	191.65	15.09
	120	219.1	223	182.5	186.11	18.26
	140	219.1	223	178	181.98	20.62
	XXS	219.1	223	174.5	179.16	22.23
	160	219.1	223	173	177.79	23.01
250	40	273.0	278	254.5	255.74	9.27
	60	273.0	278	247.5	249.74	12.70
	80	273.0	278	243	245.55	15.09
	100	273.0	278	236.5	240.01	18.26
	120	273.0	278	230	234.44	21.44
	140	273.0	278	222	227.51	25.40
	160	273.0	278	216	221.95	28.58

DN300–450

Pipe nominal specification (DN)	Series of pipe schedule thikness [Note(1)]	Welded-end out diameters		B	C[Note(3)]	t
		Forged or manufactured components [Note(1)]A	Casting steel valve [Note(2)]A			
300	STD	323.8	329	305	306.08	9.53
	40	323.8	329	303	304.72	10.31
	XS	323.8	329	298.5	300.54	12.70
	60	323.8	329	295	297.79	14.27
	80	323.8	329	289	292.17	17.48
	100	323.8	329	281	285.24	21.44
	120	323.8	329	273	278.31	25.40
	140	323.8	329	266.5	272.75	28.58
	160	323.8	329	257	264.45	33.32
350	STD	355.6	362	336.5	337.88	9.53
	40	355.6	362	333.5	335.08	11.13
	XS	355.6	362	330	332.34	12.70
	60	355.6	362	325.5	328.15	15.09
	80	355.6	362	317.5	321.22	19.05
	100	355.6	362	308	312.86	23.83
	120	355.6	362	300	305.93	27.79
	140	355.6	362	292	299.00	31.75
	160	355.6	362	284	292.07	35.71
400	STD	406.4	413	387.5	388.68	9.53
	40	406.4	413	381	383.14	12.70
	60	406.4	413	373	376.21	16.66
	80	406.4	413	363.5	367.84	21.44
	100	406.4	413	354	359.53	26.19
	120	406.4	413	344.5	351.18	30.96
	140	406.4	413	333.5	341.43	36.53
	160	406.4	413	325.5	334.50	40.49
450	STD	457.2	464	438	439.48	9.53
	40	457.2	464	432	433.94	12.70
	XS	457.2	464	428.5	431.19	14.27
	60	457.2	464	419	422.82	19.05
	80	457.2	464	409.5	414.46	23.83
	100	457.2	464	398.5	404.78	29.36
	120	457.2	464	387.5	395.03	34.93
	140	457.2	464	378	386.77	39.67
	160	457.2	464	366.5	376.99	45.24

BUTT-WELDING ENDS





DN500–800

Pipe nominal specification (DN)	Series of pipe schedule thikness [Note(1)]	Welded-end out diameters: Forged or manufactured components [Note(1)]A	Welded-end out diameters: Casting steel valve [Note(2)]A	B	C[Note(3)]	t
500	STD	508.0	516	489	490.28	9.53
	XS	508.0	516	482.5	484.74	12.70
	40	508.0	516	478	480.55	15.09
	60	508.0	516	467	470.88	20.62
	80	508.0	516	455.5	461.13	26.19
	100	508.0	516	443	450.02	32.54
	120	508.0	516	432	440.29	38.10
	140	508.0	516	419	429.17	44.45
	160	508.0	516	408	419.44	50.01
550	STD	558.8	567	539	541.08	9.53
	XS	558.8	567	533	535.54	12.70
	60	558.8	567	514	518.86	22.23
	80	558.8	567	501	507.75	28.58
	100	558.8	567	488.5	496.63	34.93
	120	558.8	567	476	485.52	41.28
	140	558.8	567	463	474.41	47.63
	160	558.8	567	450.5	463.30	53.98
600	STD	609.6	619	590.5	591.88	9.53
	XS	609.6	619	584	586.34	12.70
	30	609.6	619	581	583.59	14.27
	40	609.6	619	574.5	577.97	17.48
	60	609.6	619	560.5	565.49	24.61
	80	609.6	619	547.5	554.38	30.96
	100	609.6	619	532	540.49	38.89
	120	609.6	619	517.5	528.03	46.02
	140	609.6	619	505	516.91	52.37
	160	609.6	619	490.5	504.37	59.54
650	10	660.4	670	645.5	645.50	7.92
	20	660.4	670	635	637.14	12.70
700	10	711.2	721	695.5	696.30	7.92
	20	711.2	721	686	687.94	12.70
	30	711.2	721	679.5	682.37	15.88
750	10	762.0	772	746	747.10	7.92
	20	762.0	772	736.5	738.74	12.70
	30	762.0	772	730	733.17	15.88
800	10	812.8	825	797	797.90	7.92
	20	812.8	825	787.5	789.54	12.70
	30	812.8	825	781	783.97	15.88
	40	812.8	825	778	781.17	17.48

DN850–900

Pipe nominal specification (DN)	Series of pipe schedule thikness [Note(1)]	Welded-end out diameters: Forged or manufactured components [Note(1)]A	Welded-end out diameters: Casting steel valve [Note(2)]A	B	C[Note(3)]	t
850	10	863.6	876	848	848.70	7.92
	20	863.6	876	838	840.34	12.70
	30	863.6	876	832	834.77	15.88
	40	863.6	876	828.5	831.97	17.48
900	10	914.4	927	898.5	889.50	7.92
	20	914.4	927	889	891.14	12.70
	30	914.4	927	882.5	885.57	15.88
	40	914.4	927	876.5	880.02	19.05

Note:(1)Characters stand for:
(a)STD=Standard schedule thikness
(b)XS=Thickened
(c)XXS=Super thickened
(2)All the diameters are not reguired size, just be convenient for users.
(3)Gasket rings for DN50 and below size are not considered to manufactur

CHECK VALVE SERIES

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