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CE 0062



ISO9001:2008

Trademark Registration No.40-0663823

PANCHECK

 **WOOSUNG VALVE CO., LTD.**

Check Valves





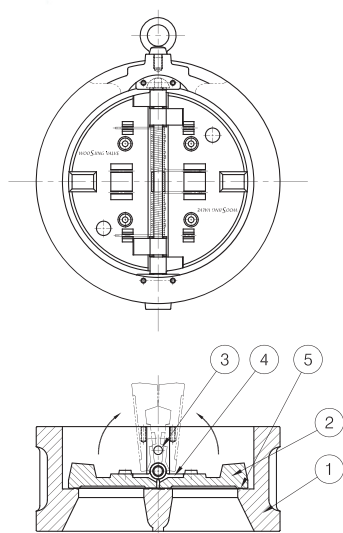
Test Procedures
BS 6364
Shell SPE 77/200

Content

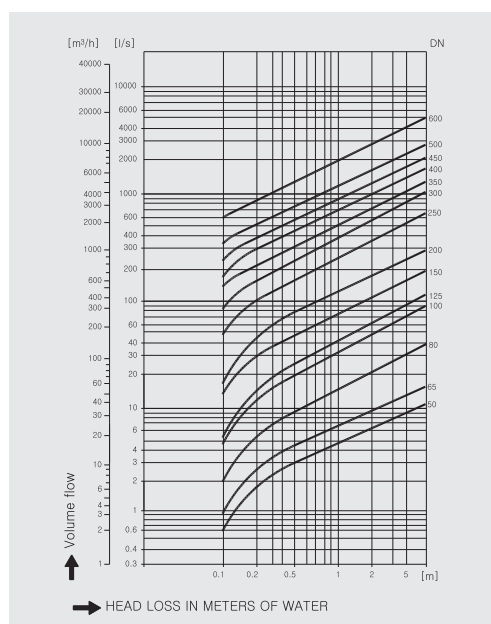
1. Dual disc check valve
2. Non-slam nozzle check valve
3. Tilting check valve
4. Swing pan check valve
5. 5-way union check valve
6. Foot valve
7. Pan check valve
8. Others

DUAL DISC CHECK VALVE

MODEL NO. DD



Pressure drop Chart



Specification

Size	2"(50A) ~ 60"(1500A)	
Service	Oil, Water, Air, Steam, Sea Water, etc.	
Rating	JIS 10K, 20K, Class 150~2500, AWWA C207, etc.	
End connections	Wafer, Lug, Double Flange, Buttwelding, Hub	
Materials	①Body	Cast Iron, Stainless Steel, Duplex, NI_AL_Bronze, etc.
	②Disc	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	③Pin	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	④Spring	Stainless Steel, Inconel, etc.
	⑤Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay.

Flow Characteristics

[Flow Coefficient]

Size		Kv	Cv
in	mm		
2	50	54	62
2 1/2	65	76	88
3	80	148	171
4	100	318	368
5	125	420	485
6	150	738	853
8	200	1323	1530
10	250	2418	2795
12	300	3598	4160
14	350	4963	5738
16	400	7382	8534
18	450	9290	10740
20	500	12240	14150
24	600	19800	22890

[Flow Rate for full open]

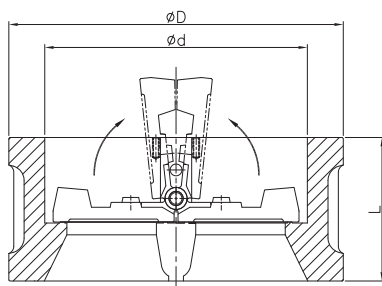
Size		Critical velocity (m/s)	Critical Flow rate (m³/hr)
in	mm		
2	50	1.5	11
2 1/2	65	1.5	18
3	80	1.7	30
4	100	2.2	61
5	125	2.0	87
6	150	2.1	136
8	200	2.4	268
10	250	2.2	395
12	300	2.2	560
14	350	2.0	687
16	400	2.2	987
18	450	2.0	1129
20	500	2.3	1642
24	600	2.4	2487

Notice

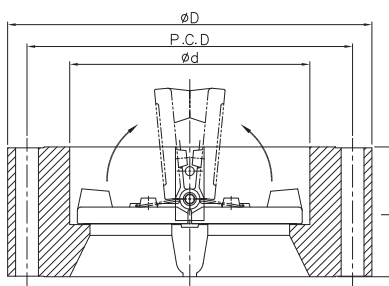
- When the valve is installed at horizontal pipe-line, The eye-bolt is to be upwardly positioned.
- When connecting with Pump, Bend or Elbow, 5times distance of pipe's diameter is recommended.

■ Dimensions

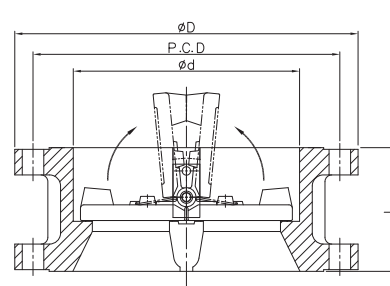
WAFFER (W)



LUG (L)



DOUBLE FLANGE (F)



[ASME B 16.5]

SIZE in.(mm)	RATING	FACING	Face to Face	Diameter	OD			PCD	HOLE NO.	Weight(KG)		
					W	L	F			W	L	F
2"(50)	150	RF	60	60	105	150	—	120,7	4	3	11	—
	300	RF	60	60	111	165	—	127	8	4	11	—
	600	RF/RJ	60	60	111	165	—	127	8	5	12	—
	900	RF/RJ	70	60	143	215	—	165,1	8	8	17	—
	1500	RF/RJ	70	60	143	215	—	165,1	8	13	22	—
	2500	RF/RJ	70	60	146	235	—	171,4	8	14	29	—
3"(80)	150	RF	73	89	137	190	—	152,4	4	6	13	—
	300	RF	73	89	149	210	—	168,3	8	8	23	—
	600	RF/RJ	73	89	149	210	—	168,3	8	9	23	—
	900	RF/RJ	83	89	168	240	—	190,5	8	13	30	—
	1500	RF/RJ	83	89	175	265	—	203,2	8	24	35	—
	2500	RF/RJ	86	89	197	305	—	228,6	8	27	40	—
4"(100)	150	RF	73	114	175	230	—	190,5	8	9	26	—
	300	RF	73	114	181	255	—	200	8	12	49	—
	600	RF/RJ	79	114	194	275	—	215,9	8	15	55	—
	900	RF/RJ	102	114	206	290	—	235	8	37	61	—
	1500	RF/RJ	102	114	210	310	—	241,3	8	40	70	—
	2500	RF/RJ	105	114	235	355	—	273	8	40	82	—
6"(150)	150	RF	98	114	175	280	—	190,5	8	18	42	—
	300	RF	98	114	181	320	—	200	12	29	55	—
	600	RF/RJ	137	114	194	355	—	215,9	12	40	98	—
	900	RF/RJ	159	114	206	380	—	235	12	55	131	—
	1500	RF/RJ	159	114	210	395	—	241,3	12	70	135	—
	2500	RF/RJ	159	114	235	485	—	273	8	90	197	—
8"(200)	150	RF	127	219	279	345	345	298,5	8	33	56	51
	300	RF	127	219	308	380	380	330,2	12	42	98	85
	600	RF/RJ	165	219	321	420	420	349,2	12	68	134	110
	900	RF/RJ	206	219	359	470	470	393,7	12	132	200	177
	1500	RF/RJ	206	219	352	485	485	393,7	12	133	212	199
	2500	RF/RJ	206	219	387	550	550	438,2	12	146	300	238
10"(250)	150	RF	146	273	340	405	405	362	12	60	88	88
	300	RF	146	273	362	445	445	387,4	16	65	148	196
	600	RF/RJ	213	273	400	510	510	431,8	16	140	245	214
	900	RF/RJ	241	273	435	545	545	469,9	16	201	350	301
	1500	RF/RJ	248	273	435	585	585	482,6	12	210	380	355
	2500	RF/RJ	254	273	476	675	675	539,8	12	225	512	420
12"(300)	150	RF	181	324	410	485	485	431,8	12	92	180	130
	300	RF	181	324	422	520	520	450,8	16	105	181	155
	600	RF/RJ	229	324	457	560	560	489	20	179	330	250
	900	RF/RJ	292	324	498	610	610	533,4	20	379	529	349
	1500	RF/RJ	305	324	521	675	675	571,5	16	384	752	470
	2500	RF/RJ	305	324	549	760	760	619,1	12	410	880	595

※ W : Wafer L : Lug F : Flange



[ASME B 16.5]

SIZE in.(mm)	RATING	FACING	Face to Face	Diameter	OD			PCD	HOLE NO.	Weight(KG)		
					W	L	F			W	L	F
14"(350)	150	RF	184	356	451	535	535	476,3	12	107	223	148
	300	RF	222	356	486	585	585	514,4	20	160	312	210
	600	RF/RJ	273	356	492	605	605	527	20	227	442	389
	900	RF/RJ	356	356	541	640	640	558,8	20	450	795	480
	1500	RF/RJ	356	356	578	750	750	635	16	550	923	611
16"(400)	150	RF	191	406	514	595	595	539,8	16	149	284	161
	300	RF	232	406	540	650	650	571,5	20	208	512	285
	600	RF/RJ	305	406	565	685	685	603,2	20	354	680	447
	900	RF/RJ	384	406	575	705	705	616	20	550	850	550
	1500	RF/RJ	384	406	641	825	825	704,8	16	635	1274	835
18"(450)	150	RF/RJ	203	457	549	635	635	577,9	16	171	265	205
	300	RF/RJ	264	457	597	710	710	628,6	24	301	538	388
	600	RF/RJ	362	457	613	745	745	654	20	474	857	560
	900	RF/RJ	451	457	638	785	785	685,8	20	770	1350	850
	1500	RF/RJ	468	457	705	915	915	774,7	16	1062	1760	1020
20"(500)	150	RF/RJ	219	508	606	700	700	635	20	205	313	282
	300	RF/RJ	292	508	654	775	775	685,8	24	381	770	499
	600	RF/RJ	368	508	683	815	815	723,9	24	640	1033	776
	900	RF/RJ	451	508	699	855	855	749,3	20	884	2050	1780
	1500	RF/RJ	533	508	755	985	985	831,8	16	1478	2396	2221
24"(600)	150	RF/RJ	222	610	718	815	815	749,3	20	315	396	410
	300	RF/RJ	318	610	775	915	915	812,8	24	605	1166	760
	600	RF/RJ	438	610	791	940	940	838,2	24	964	1488	1154
	900	RF/RJ	495	610	838	1040	1040	901,7	20	1500	2300	1890
	1500	RF/RJ	559	610	901	1170	1170	990,6	16	3010	3528	3050

[ASME B 16.47 SERIES A]

SIZE in.(mm)	RATING	FACING	Face to Face	Diameter	OD			PCD	HOLE NO.	Weight(KG)		
					W	L	F			W	L	F
26"(650)	150	RF	279	660	775	870	870	806,5	24	452	987	895
	300	RF/RJ	356	660	834	971	971	876,3	28	710	1649	1354
	600	RF/RJ	457	660	866	1015	1015	914,4	28	918	1890	1422
	900	RF/RJ	533	660	883	1085	1085	952,5	20	1255	2355	2148
28"(700)	150	RF	279	711	832	926	926	863,6	28	584	1254	1080
	300	RF/RJ	381	711	898	1034	1034	939,8	28	775	1540	1260
	600	RF/RJ	483	711	913	1073	1073	965,2	28	925	2022	1610
	900	RF/RJ	572	711	945	1167	1167	1022,4	20	1320	3176	2589
30"(750)	150	RF	305	762	882	983	983	914,4	28	662	1276	1123
	300	RF/RJ	368	762	952	1090	1090	997	28	920	2033	1422
	600	RF/RJ	505	762	972	1129	1129	1022,4	28	1679	3250	1685
	900	RF	635	762	1010	1231	1231	1085,9	20	2328	4055	3265
32"(800)	150	RF	356	813	939	1059	1059	977,9	28	857	3166	1095
	300	RF/RJ	406	813	1005	1148	1148	1054,1	28	1228	3793	1481
	600	RF/RJ	533	813	1021	1192	1192	1079,5	28	1640	4255	2130
	900	RF/RJ	660	813	1072	1312	1312	1155,7	20	2101	4498	3652
36"(900)	150	RF	368	914	1047	1166	1166	1085,9	32	956	1511	1142
	300	RF/RJ	483	914	1118	1269	1269	1168,4	32	1267	2890	2139
	600	RF/RJ	635	914	1129	1312	1312	1193,8	28	2761	4720	2863
	900	RF/RJ	718	914	1199	1460	1460	1289,1	20	3542	6434	
40"(1000)	150	RF	432	1016	1161	1287	1287	1200,2	36	1385	1571	1590
	300	RF	546	1016	1113	1236	1236	1155,7	32	2087	2760	2730
	600	RF	660	1016	1154	1320	1320	1212,9	32	3578	—	—
	900	RF	762	1016	1251	1510	1510	1339,9	21	4570	—	—
48"(1200)	150	RF	524	1219	1383	1510	1510	1422,4	44	2177	4255	2885
	300	RF	629	1219	1324	1465	1465	1371,6	32	2950	6487	5210
60"(1500)	150	RF	660	1524	1715	1850	1850	1759	52	4350	8756	—
	300	RF	838	1524	1644	1808	1808	1701,8	32	5315	11540	—

※ W : Wafer L : Lug F : Flange

[KS B1511 / JIS B2210]

SIZE in. (mm)	RATING	FACING	Face to Face	Diamete	OD			PCD	HOLE NO.	Weight(KG)		
					W	L	F			W	L	F
2"(50)	10K	RF/FF	60	60	101	—	—	120	4	2,5	—	—
	20K	RF/FF	60	60	101	—	—	120	8	2,5	—	—
3"(80)	10K	RF/FF	73	89	131	—	—	150	8	6,5	—	—
	20K	RF/FF	73	89	137	—	—	160	8	6,5	—	—
4"(100)	10K	RF/FF	73	114	156	—	—	175	8	8,1	—	—
	20K	RF/FF	73	114	162	—	—	185	8	8,1	—	—
6"(150)	10K	RF/FF	98	168	217	—	—	240	8	16	—	—
	20K	RF/FF	98	168	235	—	—	260	12	16,2	—	—
8"(200)	10K	RF/FF	127	219	267	—	—	290	12	29	—	—
	20K	RF/FF	127	219	280	—	—	305	12	29,2	—	—
10"(250)	10K	RF/FF	146	273	330	—	—	355	12	48,5	—	—
	20K	RF/FF	146	273	353	—	—	380	12	49	—	—
12"(300)	10K	RF/FF	181	324	375	—	—	400	16	91	—	—
	20K	RF/FF	181	324	703	—	—	430	16	92	—	—
14"(350)	10K	RF/FF	184	356	420	—	—	445	16	90	—	—
	20K	RF/FF	222	356	447	—	—	480	16	92	—	—
16"(400)	10K	RF/FF	191	406	483	—	—	510	16	125	—	—
	20K	RF/FF	232	406	507	—	—	540	16	127	—	—
18"(450)	10K	RF/FF	203	457	538	—	—	565	20	132	—	—
	20K	RF/FF	264	457	572	—	—	605	20	134	—	—
20"(500)	10K	RF/FF	219	508	593	—	—	620	20	185	—	—
	20K	RF/FF	292	508	627	—	—	660	20	188	—	—
24"(600)	10K	RF/FF	222	610	697	—	—	730	24	285	—	—
	20K	RF/FF	318	610	731	—	—	770	24	289	—	—
28"(700)	10K	RF/FF	381	711	807	—	—	840	24	442	—	—
	20K	RF/FF	381	711	852	—	—	900	24	447	—	—
30"(750)	10K	RF/FF	305	762	867	—	—	900	24	576	—	—
	20K	RF/FF	368	762	914	—	—	970	24	579	—	—
32"(800)	10K	RF/FF	356	813	917	—	—	950	28	640	—	—
	20K	RF/FF	406	813	974	—	—	1030	24	647	—	—
36"(900)	10K	RF/FF	368	914	1017	—	—	1050	28	1319	—	—
	20K	RF/FF	483	914	1084	—	—	1140	28	1325	—	—

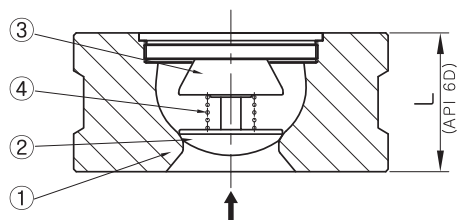
※ **W** : Wafer **L** : Lug **F** : Flange



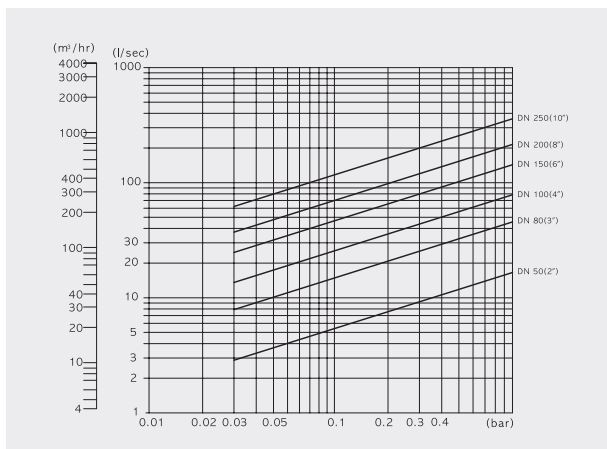
NON-SLAM NOZZLE CHECK (Wafer Type)

CNZ TYPE (Wafer)

< 1"(25A)~10"(250A) >

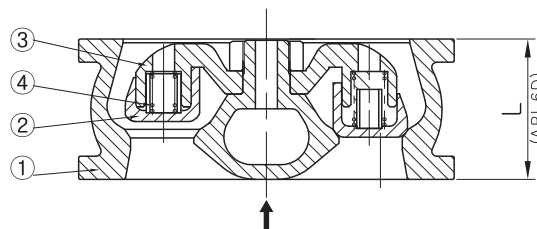


Pressure drop Chart

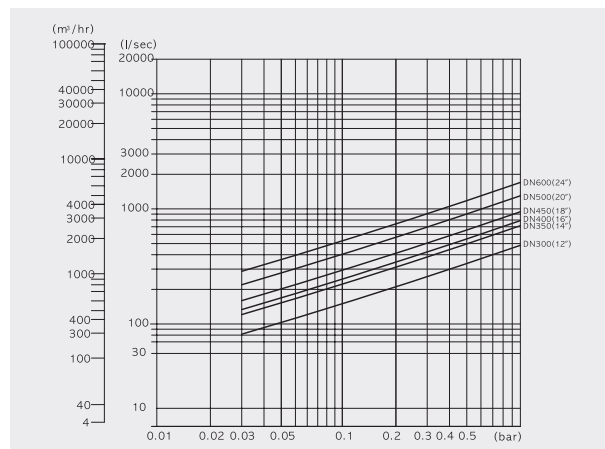


PCN TYPE (Wafer)

< 12"(300A)~60"(1500A) >



Pressure drop Chart



Specification

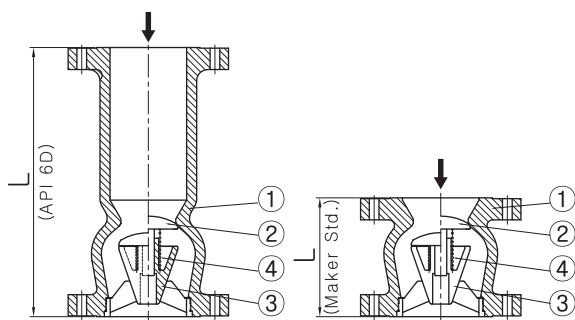
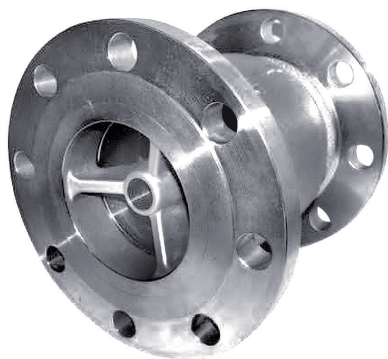
Size		1"(25A) ~ 60"(1500A)
Service		Oil & GAS, Water, Air, Steam, Sea Water, etc.
Rating		Class 150~2500
End connections		Wafer, Lug, Double Flange
Materials	①Body	Carbon Steel, Stainless Steel, Duplex, NI_AL_Bronze, etc.
	②Disc	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	③Guide	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	④Spring	Stainless Steel, Inconel, etc.
	Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay.



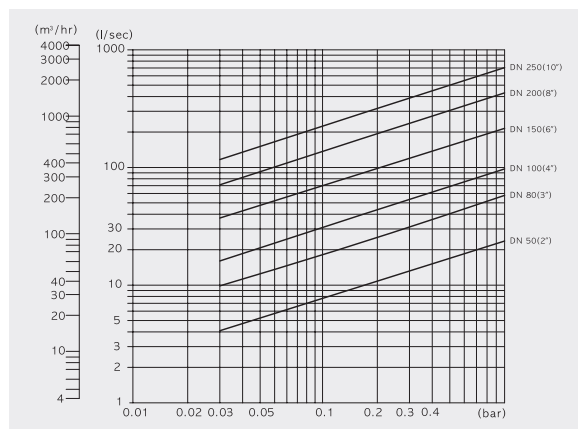
NON-SLAM NOZZLE CHECK VALVE

SNF Type (Single Seat Nozzle)

〈 1"(25A)~10"(250A) 〉

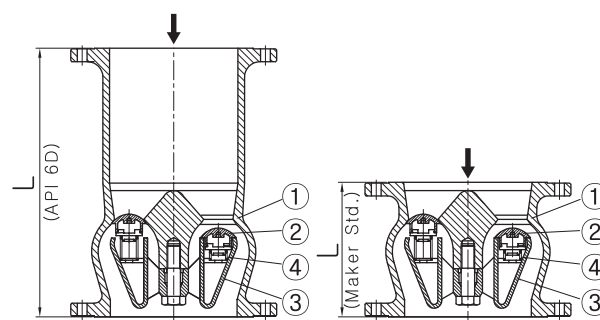


■ Pressure drop Chart

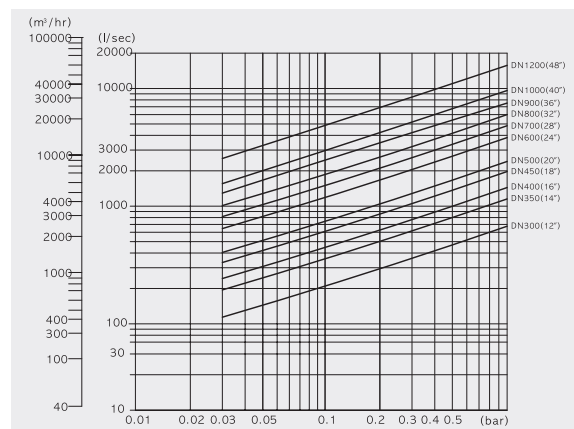


DNF Type (Double seat Nozzle)

〈 12"(300A)~48"(1200A) 〉



■ Pressure drop Chart



■ Specification

Size		1"(25A) ~ 48"(1200A)
Service		OIL & GAS, WATER, AIR, STEAM, SEA WATER, etc.
Rating		Class 150~2500
End connections		Double Flange, Buttwelding, Hub
Materials	①Body	Cast Iron, Stainless Steel, Duplex, NI_AL_Bronze, etc.
	②Disc	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	③Guide	Stainless Steel, Duplex, NI_AL_Bronze, etc.
	④Spring	Stainless Steel, Inconel, etc.
	Seat	Rubber, PTFE, Stainless Steel Stellite Overlay.

WNF Type

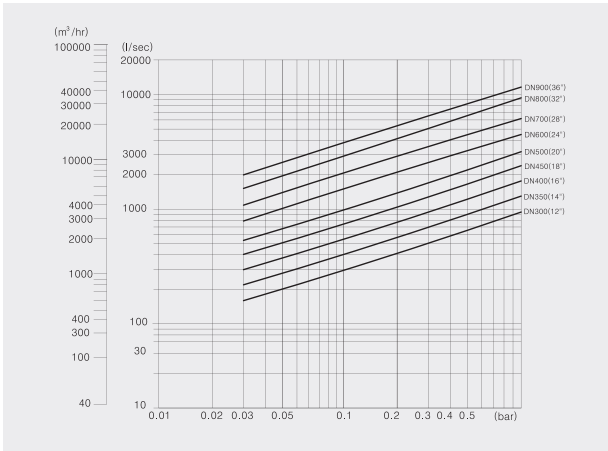
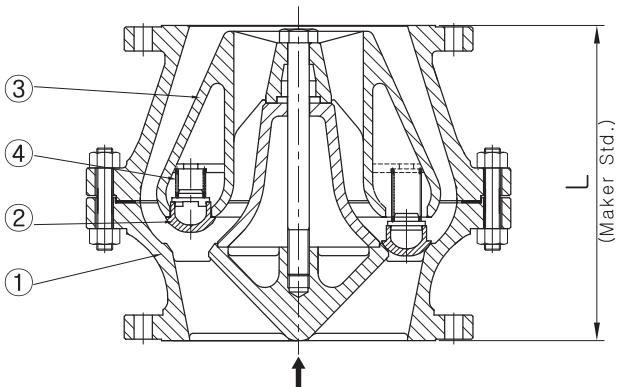


Specification

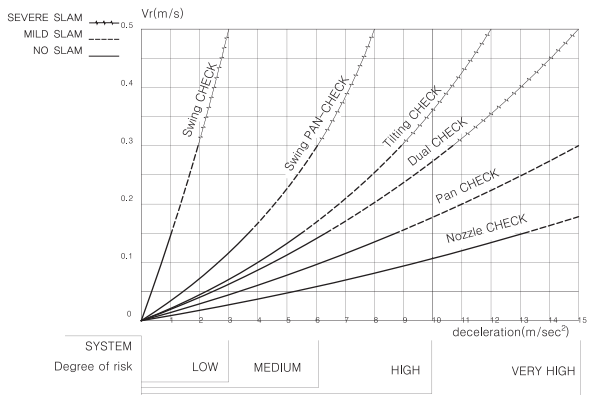
Size		12"(300A) ~ 36"(900A)
Service		OIL & GAS, WATER,AIR,STEAM,SEA WATER..etc.
Rating		Class 150~300
End connections		Double Flange
Materials	①Body	Cast Iron, Stainless Steel, Duplex, NI_AL_Bronze..etc.
	②Disc	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	③Guide	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	④Spring	Stainless Steel, Inconel..etc.
	Seat	Rubber, PTFE, Stainless Steel Stellite Overlay.

NON-SLAM
NOZZLE CHECK VALVE

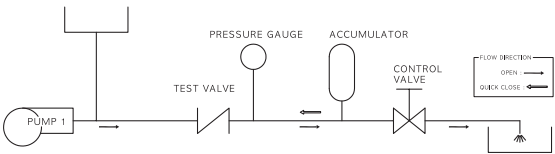
Pressure drop Chart



Check Valves Comparative Table

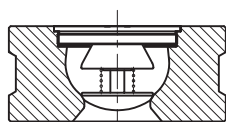


Circuit Diagram

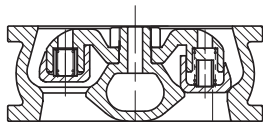




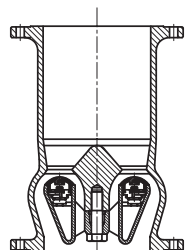
NON-SLAM NOZZLE CHECK VALVE



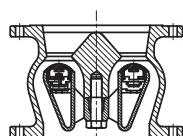
CNZ



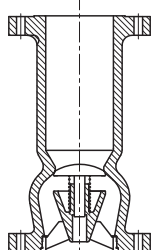
PCN



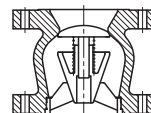
DNF (API 6D)



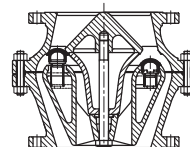
DNF (Maker Std)



SNF (API 6D)



SNF (Maker Std)



WNF (Special)

Type	Description
CNZ	Single seat Nozzle(Wafer)
PCN	Pan Nozzle (Wafer)
DNF	Double seat Nozzle(Flanged)
SNF	Single seat Nozzle(Flanged)
WNF	Woosung Nozzle(Flanged)

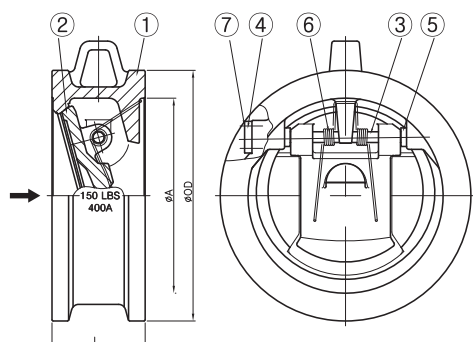
NPS	DN	Type	Face to Face Standard	Class 150		Class 300		Class 600		Class 900		Class 1500		Class 2500	
				L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)
1	25	SNF	API 6D	—	—	—	—	—	—	—	—	—	—	—	—
			Maker Std.	100	4	100	4	100	5	150	9	150	16	160	28
1 1/4	32	SNF	API 6D	—	—	—	—	—	—	—	—	—	—	—	—
			Maker Std.	100	5	100	5	100	9	150	11	150	20	180	35
1 1/2	40	SNF	API 6D	—	—	—	—	—	—	—	—	—	—	—	—
			Maker Std.	120	7	120	7	120	11	170	13	170	23	210	40
2	50	SNF	API 6D	203	9	267	13	292	15	368	37	368	37	451	54
			Maker Std.	120	7	120	9	120	10	170	26	170	26	210	37
2 1/2	65	SNF	API 6D	216	15	292	19	330	23	419	52	419	67	508	81
			Maker Std.	120	10	150	10	150	17	190	25	190	35	240	65
3	80	SNF	API 6D	241	16	318	26	356	30	381	43	470	65	578	119
			Maker Std.	120	13	150	18	150	20	190	32	220	45	270	83
4	100	SNF	API 6D	292	28	356	41	432	63	457	73	546	107	673	178
			Maker Std.	140	20	170	31	170	40	210	53	240	69	310	131
5	125	SNF	API 6D	—	—	—	—	—	—	—	—	—	—	—	—
			Maker Std.	210	31	210	31	210	55	230	85	310	140	370	225
6	150	SNF	API 6D	356	44	445	80	559	137	610	171	705	231	914	487
			Maker Std.	210	38	210	55	210	82	230	107	310	160	430	324
8	200	SNF	API 6D	495	90	533	120	660	213	737	307	832	390	1022	743
			Maker Std.	280	71	280	91	280	135	280	189	350	269	460	480
10	250	SNF	API 6D	622	151	622	184	787	380	838	461	991	710	1270	1442
			Maker Std.	350	120	350	152	350	252	350	303	400	461	580	952
12	300	DNF	API 6D	699	341	711	400	838	623	965	966	1130	1638	1422	2975
			Maker Std.	350	175	350	235	375	310	340	390	440	650	580	1286
14	350	WNF	Special	438	305	438	382	—	—	—	—	—	—	—	—
			PCN	API 6D (wafer)	181	95	181	110	229	180	292	385	305	391	—
16	400	DNF	API 6D	787	480	838	601	889	819	1029	1211	1257	2114	—	—
			Maker Std.	405	245	405	330	440	410	400	510	490	1040	—	—
18	450	WNF	Special	475	432	475	581	—	—	—	—	—	—	—	—
			PCN	API 6D (wafer)	184	110	222	168	273	230	356	467	356	580	—
20	500	DNF	API 6D	864	714	864	805	991	1120	1130	1407	1384	1417	—	—
			Maker Std.	455	345	455	435	500	610	470	760	530	1280	—	—
		WNF	Special	545	691	545	786	—	—	—	—	—	—	—	—
			PCN	API 6D (wafer)	191	156	232	231	305	372	384	582	384	662	—
		DNF	API 6D	978	868	978	1036	1092	1442	1219	1960	1537	3955	—	—
			Maker Std.	520	425	520	580	565	790	530	960	580	1600	—	—
		WNF	Special	610	825	610	1010	—	—	—	—	—	—	—	—
			PCN	API 6D (wafer)	203	183	264	325	362	487	451	810	468	1265	—
		DNF	API 6D	978	970	1016	1217	1194	1840	1321	2422	1664	5124	—	—
			Maker Std.	570	560	570	760	625	1170	595	1260	655	2100	—	—
		WNF	Special	850	895	850	1165	—	—	—	—	—	—	—	—
			PCN	API 6D (wafer)	219	228	292	392	368	375	451	892	533	1587	—

NPS	DN	Type	Face to Face Standard	Class 150		Class 300		Class 600		Class 900		Class 1500		Class 2500	
				L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)
24	600	DNF	API 6D	1295	1691	1346	2177	1397	2513	1549	3661	1943	8183		
			Maker Std.	685	890	685	1240	745	1630	665	1980	750	3300		
		WNF	Special	900	1600	900	2095	—	—	—	—	—	—		
		PCN	API 6D (wafer)	222	336	318	635	438	998	495	1626	559	3120		
26	650	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	356	598	356	732	457	951	533	1360				
28	700	DNF	API 6D	1448	1996	1499	2860	1600	4212						
			Maker Std.	800	1330	800	1800	870	2450	860	2890				
		WNF	Special	945		945		—	—	—	—				
		PCN	API 6D (wafer)	381	615	381	782	483	945	572	1380				
30	750	DNF	API 6D	1524	2353	1594	3523	1651	4784						
			Maker Std.	855	1590	855	2150	1130	930	1232	925				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	305	697	368	943	505	1720	635	2450				
32	800	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	1060	910	1149	910	1194	990	1314	925				
		WNF	Special	1010		1010		—	—	—	—				
		PCN	API 6D (wafer)	356		406		533		660					
34	850	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
36	900	DNF	API 6D	1956	3556	2083	5727	2083	7261						
			Maker Std.	1030	2300	1030	3100	1120	4100	1050	5900				
		WNF	Special	1050		1050		—	—	—	—				
		PCN	API 6D (wafer)	368		483		635		718					
38	950	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
40	1000	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	1135	3400	1135	3900	1240	5400	1185					
		WNF	Special	1185		1185		—	—	—	—				
		PCN	API 6D (wafer)	432		546		660		762					
42	1050	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	1195	3600	1195	4100	1300	5800	1250					
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	432		568		702		787					
44	1100	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
46	1150	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
48	1200	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	1365	5200	1365	6000	1485	8800						
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	524		629		787							
50	1250	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
52	1300	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
54	1350	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	591		718									
56	1400	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
58	1450	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	—	—	—	—	—	—	—	—				
60	1500	DNF	API 6D	—	—	—	—	—	—	—	—				
			Maker Std.	—	—	—	—	—	—	—	—				
		WNF	Special	—	—	—	—	—	—	—	—				
		PCN	API 6D (wafer)	660		838									

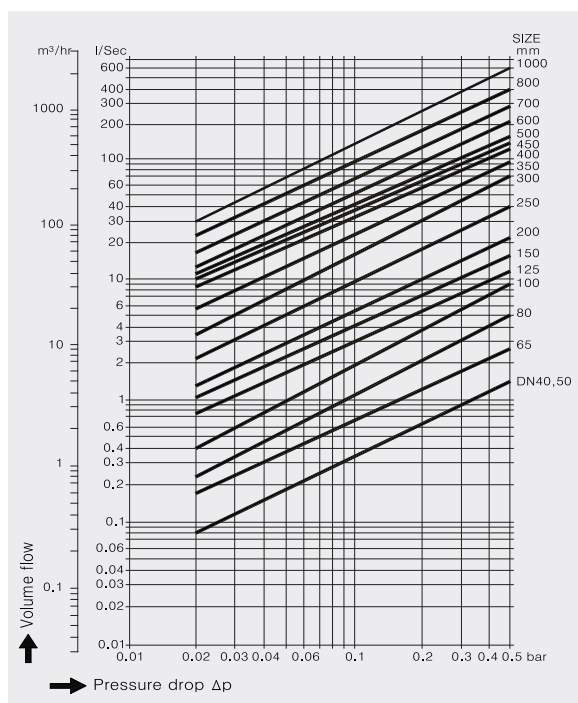
TILTING CHECK VALVE

MODEL NO. TL

< 80(3") ~ 700(28") >



Pressure drop Chart



Specification

Size	80mm(3")~700mm(28")		
Service	Wafer / Flange / Lug		
Rating	10K		Class 150
Test pressure	Body	15Bar	29Bar
	Seat	11Bar	21Bar
Materials	①Body	Carbon Steel / Stainless Steel	
	②Disc	Carbon Steel / Stainless Steel	
	③Pin	SUS 304 / 316 / 316L	
	④Cover	Carbon Steel / Stainless Steel	
	⑤Collar	SUS 304 / 316 / 316L	
	⑥Spring	Stainless Steel	
	⑦Bolt	SCM 435 / SUS 304	

Dimensions

Size mm (Inch)	ØA	10K		Class 150	
		OD	L	OD	L
80 (3")	80	134	57	137	73
100 (4")	100	159	64	175	73
125 (5")	125	190	70	197	82
150 (6")	150	220	76	222	98
200 (8")	200	270	95	279	127
250 (10")	250	333	108	340	146
300 (12")	300	378	143	410	181
350 (14")	350	423	184	451	184
400 (16")	400	486	191	514	191
450 (18")	450	541	203	549	203
500 (20")	500	596	219	606	219
600 (24")	600	700	222	718	222
700 (28")	700	810	321	832	381

※Above dimensions are subject to change for improvement.

Notice

- 1) When the valve is installed at the horizontal pipe line, the lifting lug is to be upwardly positioned.
- 2) When connecting with Pump, Bend or Elbow, 5times distance of pipeis diameter is recommendel.

SWING PAN CHECK VALVE (Wafer Type)

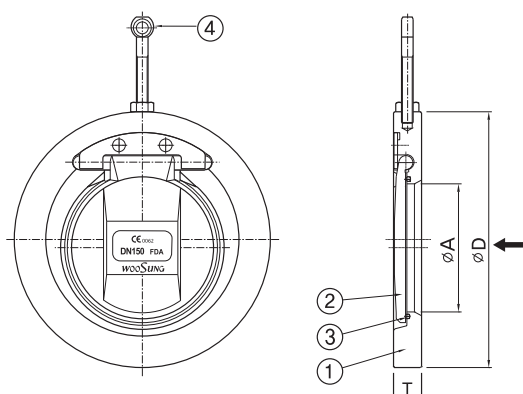
MODEL NO. SP / SPS

〈 40mm(1½") ~ 1000mm(40") 〉

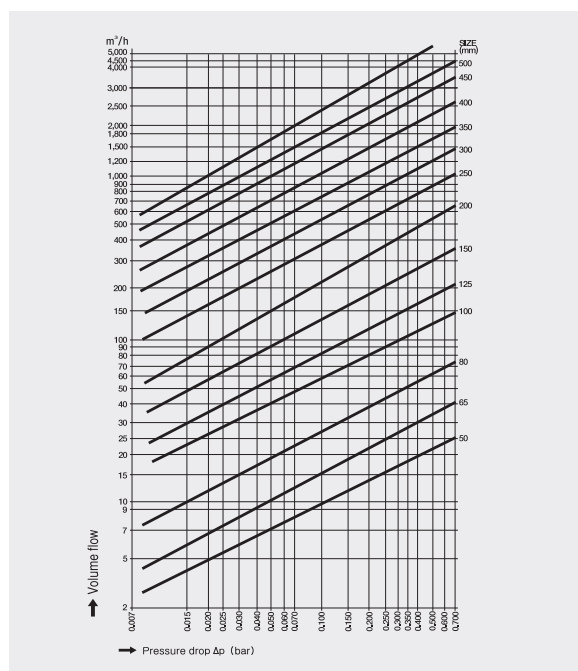


SPS

SP



Pressure drop Chart



Specification

Model	SP	SPS
Size	40mm(1½") ~ 1000mm(40")	80mm(3") ~ 700mm(28")
Rating	10 Bar	Class 150 (PN20)
Max. Pressure	15 Bar	29 Bar
End connections	Wafer	
Materials	①Body	Stainless Steel
	②Disc	Stainless Steel
	③O-Ring	NBR / Viton
	④Bolt	Stainless Steel
Soft Seal	EPDM(E)	-10℃ ~ +130℃
	Viton(V)	-20℃ ~ +150℃

Dimensions

Size mm (Inch)	ØA mm	SP			SPS		
		10K		Weight (kg)	Class 150		Weight (kg)
		ØD(mm)	T(mm)		ØD(mm)	T(mm)	
40 (1½")	22	94	18	1,1	—	—	—
50 (2")	31	104	19	1,2	102	20	1,3
65 (2½")	44	124	19	1,6	121	20	1,7
80 (3")	54	134	19	1,9	137	20	2
100 (4")	76	159	19	2,5	175	22	2,7
125 (5")	90	190	21	3,1	197	24	3,4
150 (6")	110	220	24	4,9	222	26	5,5
200 (8")	143	270	28	11	279	28	13
250 (10")	187	333	30	15	340	34	18
300 (12")	215	378	38	25	410	40	28
350 (14")	260	423	41	35	451	45	40
400 (16")	315	486	48	55	514	51	60
450 (18")	247	541	51	68	549	57	75
500 (20")	390	596	65	108	606	68	120
600 (24")	460	700	75	165	718	78	175
700 (28")	538	813	89	185	832	90	216
800(32")	610	920	102	333	—	—	—
900(36")	700	1020	127	462	—	—	—
1000(40")	795	1124	146	685	—	—	—

※Above dimensions are subject to change for improvement.

Application

AIR, OIL, WATER, ETC.

Features

1) Simple Construction 2) Slim Shape 3) Light Weight

Notice

- When the valve is installed at the horizontal pipe line, the lifting lug is to be upwardly positioned.
- When connecting with Pump, Bend or Elbow, 5times distance of pipeis diameter is recommendel.

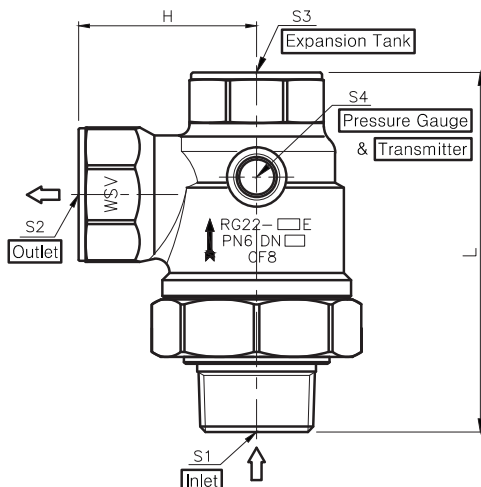
TILTING
CHECK VALVE

SWING
PAN CHECK VALVE

5-WAY UNION CHECK VALVE

MODEL NO. RG

〈 25mm(1") ~ 40mm(1½") 〉



Specification

Size	〈 25mm(1") ~ 40mm(1½") 〉	
Pipe connections	(Screw End)	
Pressure	6 bar	
Test pressure	Body	9 bar
	Seat	7bar
Materials	Body	Stainless Steel
	Nipple	Stainless Steel
	Union Nut	Stainless Steel
	Valve Unit	POM
	Seat	EPDM /Viton / NBR
	Spring	Stainless Steel
Mex.Temp	Max. 80°C	

Dimensions

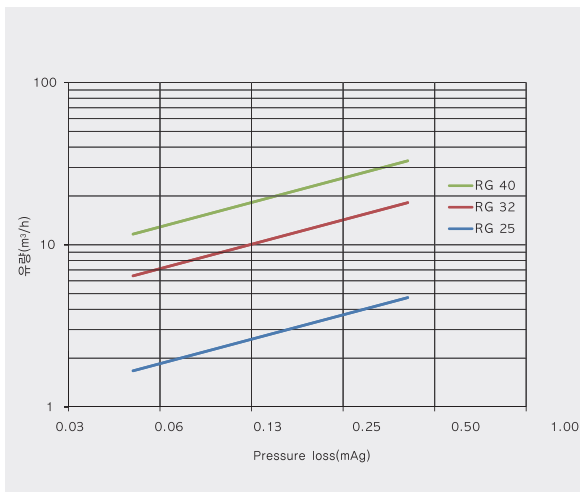
Size		Dimensions					
mm	inch	L	H	S1	S2	S3	S4
25	1"	103	51	R 1"	Rc 1"	Rc 1"	G ¼"
32	1¼"	125	60	R 1¼"	Rc 1¼"	Rc 1"	G ¼"
40	1½"	125	60	R 1½"	Rc 1½"	Rc 1"	G ¼"

※Above dimensions are subject to change for improvement.

Application

- Inverter Pump
- Booster Pump
- Electronic control Pump

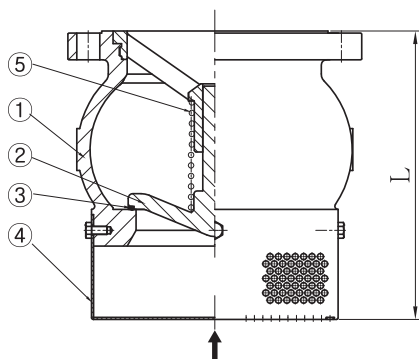
Pressure drop Chart



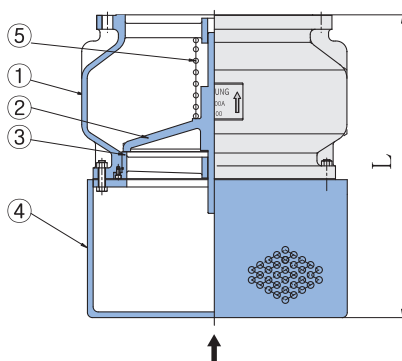
FOOT VALVE

MODEL NO. NSF

< 80mm(3")~250mm(10") >



< 300mm(12")~1000mm(40") >



Specification

Size		80mm(3")~1000mm(40")	
Rating		10K	Class 150
Test pressure	Body	15Bar	29Bar
	Seat	11Bar	21Bar
Materials	①Body	Carbon Steel, Stainless Steel, Bronze	
	②Disc	Carbon Steel, Stainless Steel, Bronze	
	③Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay	
	④Screen	Stainless Steel, Bronze	
	⑤Spring	Stainless Steel, Inconel	

Dimensions

Conclusion Flange	JIS 10K		150 Class	
Size mm (Inch)	L(mm)	Weight(kg)	L(mm)	Weight(kg)
80 (3")	213,8	17	213,8	19
100 (4")	241	25	241	30
125 (5")	257	30	257	35
150 (6")	275	43	275	46
200 (8")	375	75	375	80
250 (10")	482	128	482	135
300 (12")	590	179	590	188
350 (14")	653	222	653	230
400 (16")	734	298	734	313
450 (18")	787	423	787	432
500 (20")	900	521	900	535
600 (24")	1054	715	1054	756
700 (28")	1200	1152	1200	1250
900(36")	2045	2387	2045	2479
1000(40")	2200	3565	2200	3898

※Above dimensions are subject to change for improvement.



5-WAY UNION
CHECK VALVE

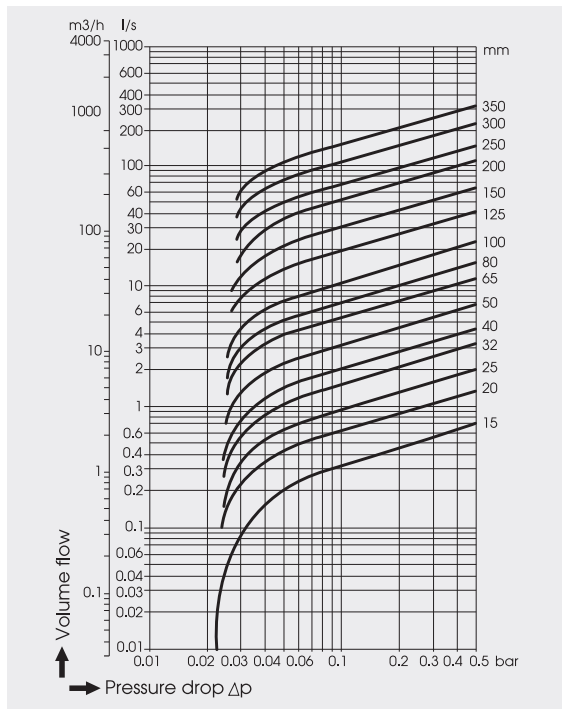
FOOT VALVE

PAN CHECK VALVE

PAN Check Valve Feature

- No water hammering effect**
There is no water hammering effect since the valve is closed by spring before water backflow takes place.
- Thin, Small and Light Structure**
PAN Check Valves have much shorter length and lighter than those of swing or lift check valves because the disc stroke is short and body has no flange.
- Either Horizontal or Vertical Installation**
PAN Check Valves can be horizontally or vertically installed because of their spring compression structure. They can also be installed at the vertical downflow sections.
- Free alteration of opening pressure**
Alteration of opening pressure is available upon consumer's request.

Pressure drop Chart



Notice

- Please contact us when the valve is used in high pressure and temperature.
- Please contact us when the valve is used in excessively frequent open and close condition.

Comparative Table

Size		50	65	80	100	125	150	200	250
Weight (kg)	Pan Check	1,0	1,5	2,1	3,6	9,3	14	29	44
	Swing Check	12	17	21	31	50	70	110	—
	Lift Check	10	14	16	20	30	40	80	—
F to F (mm)	Pan Check	40	46	50	60	90	106	140	170
	Swing Check	200	220	240	290	360	410	500	—
	Lift Check	300	216	241	292	356	406	495	—

Connection Bolts Dimensions (10K)

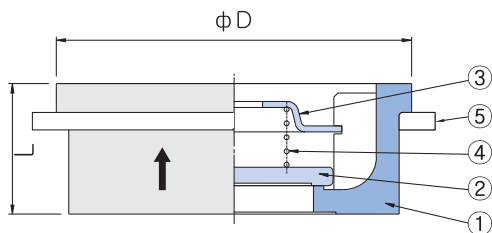
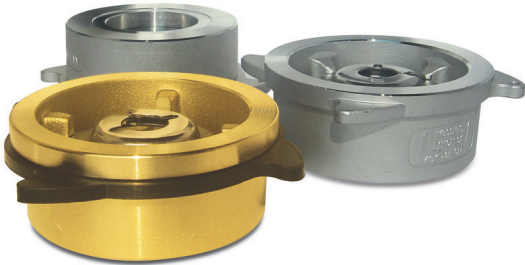
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10
Bolt	Q'ty	4	4	4	4	4	4	4	8	8	8	8	12	12
	M	12	12	16	16	16	16	16	16	16	20	20	20	22
	L	65	70	75	85	90	100	110	120	130	170	190	220	260

PCV Overview table

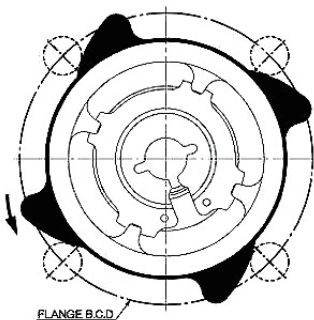
Model	Size (mm)	Max. Pressure	Materials	Internal fittings Material	Fold Genus	Connection sheets
PC	15-80	16	Forged Brass	Stainless Steel	W	Metal to Metal
	100	16	Bronze casting	Stainless Steel	W	Metal to Metal
	15-100	40	Stainless Steel	Stainless Steel	W	Metal to Metal
PA	25-80	10	Stainless Steel	Stainless Steel	W	Rubber to Metal
	25-80	10	Forged Brass	Stainless Steel	W	Rubber to Metal
	25-80	16	Forged Brass	Stainless Steel	W	Metal to Metal
	25-80	40	Stainless Steel	Stainless Steel	W	Metal to Metal
	100	10	Stainless Steel	Stainless Steel	W	Rubber to Metal
	100	10	Bronze casting	Stainless Steel	W	Rubber to Metal
	100	16	Bronze casting	Stainless Steel	W	Metal to Metal
	100	40	Stainless Steel	Stainless Steel	W	Metal to Metal
	25-350	10	Stainless Steel	Stainless Steel	W	Rubber to Metal
	125-250	10	Tak tile	Stainless Steel	W	Rubber to Metal
	25-200	40	Stainless Steel	Stainless Steel	W	Metal to Metal
	250-350	10~20	Stainless Steel	Stainless Steel	W	Metal to Metal
ANA	15-100	150~300 Class	Stainless Steel	Stainless Steel	W	Metal to Metal
CV	15-50	10 Bar	Forged Brass	Stainless Steel	S	Metal to Metal
PCS	15-50	20 Bar	Stainless Steel	Stainless Steel	S	Metal to Metal
UCV	15-50	10 Bar	Forged Brass	POM	S	Rubber to Metal
PAS	25-50	20 Bar	Stainless Steel	Stainless Steel	S	Metal to Metal
BU	08~20	20 Bar	Stainless Steel	Stainless Steel	S	Rubber to Metal
KAI	08~25	20 Bar	Stainless Steel	Stainless Steel	S	Rubber to Metal

MODEL NO. PC

< 50mm ~ 100mm >



Center Rubber How to use



When four points of center rubbers have simultaneous contact with four bolts, it is properly centered.

Notice

Please only use for in compressible fluid.

Specification

Model	PC12	PC22
Seat	Metal Touch	Metal Touch
Size	15mm(1/2")~100mm(4")	15mm(1/2")~100mm(4")
Max. Pressure	16bar	40bar
Test, Press	Body	24bar
	Disc seat	60bar
Test, Press	Body	18bar
	Disc seat	44bar
Pipe connections	Wafer	
Materials	①Body	Forged Brass (100A:Bronze)
	②Disc	Stainless Steel
		Solid Teflon (-40°C ~ +180°C, Pressure 7bar)
	③Spring Seat	Stainless Steel
	④Spring	Stainless Steel, Inconel
⑤Cener Rubber	NBR	Stainless Steel
	Please refer to table 1 of page16.	

Dimensions

Size mm(Inch)	D (mm)	L (mm)	Weight (kg)
15(1/2)	40	16	0.09
20(3/4)	46(50)	19	0.12
25(1)	60	22	0.3
32(1 1/4)	72	28	0.5
40(1 1/2)	86	32	0.7
50(2)	100(102)	40	1.0
65(2 1/2)	120	46	1.5
80(3)	132	50	2.1
100(4)	153	60	3.6

· L : Dim3202, Sheet3, Series K4

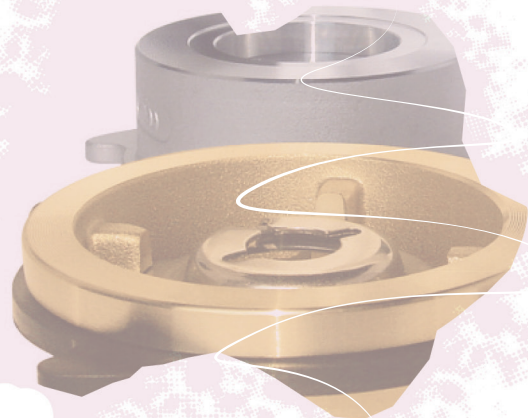
※Above dimensions are subject to change for improvement

Opening Pressure

With spring			Without spring
↑	→	↓	↑
0.053	0.050	0.045	0.004
0.053	0.050	0.045	0.004
0.054	0.050	0.044	0.005
0.053	0.050	0.045	0.004
0.054	0.050	0.044	0.005
0.055	0.050	0.043	0.006
0.055	0.051	0.043	0.006
0.056	0.051	0.042	0.007
0.057	0.051	0.041	0.008

Application

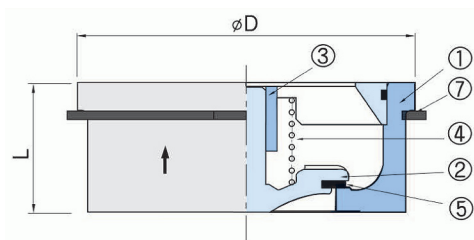
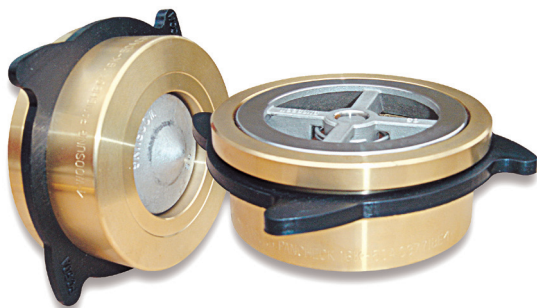
- Water, Oil
- Vacuum Breaker, Float valve
- Onshore, Offshore



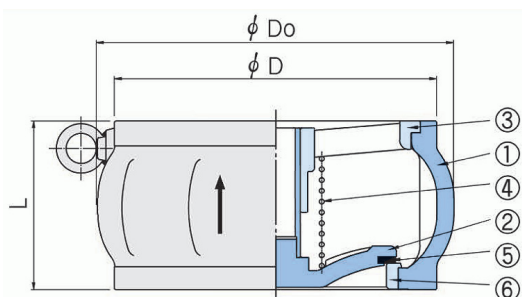
PAN CHECK
VALVE

MODEL NO. PA

< 25mm ~ 100mm >



< 125mm ~ 250mm >



Specification

Model		PA12		PA32	
Seat		Metal	Rubber	Metal	Rubber
Size		25mm(1")~100mm(4")		125mm(5")~250mm(10")	
Max.Pressure		16bar	10bar	10bar	
Test. Press	Body	24bar	15bar	15bar	
	Disc seat	18bar	11bar	11bar	
End connections		Wafer			
Materials	①Body	Forged Brass (100A:Bronze)		Ductile Cast Iron	
	②Cone Disc	Stainless Steel			
	③Guide	Stainless Steel			
	④Spring	Stainless Steel, Inconel			
	⑤Disc Rubber	EPDM -10℃~+130℃ VITON -20℃~+150℃ PTFE -40℃~+180℃			
	⑥Valve Seat	-		Bronze Ring	
	⑦Cener Rubber	NBR(25A~80A)		-	
Pressure Drop		Please refer to table 1 of page16.			

Dimensions

Size mm(Inch)	D (mm)	Do (mm)	L (mm)	Weight (kg)
25(1)	60	-	22	0,35
32(1¼)	72	-	28	0,55
40(1½)	86	-	32	0,8
50(2)	102	-	40	1,1
65(2½)	120	-	46	1,6
80(3)	133	-	50	2,3
100(4)	153	170	60	3,8
125(5)	186	212	90	9
150(6)	215	247	106	13,5
200(8)	265	295	140	28,3
250(10)	330	355	170	44

Opening Pressure

With spring			Without spring
↑	→	↓	↑
0,055	0,051	0,043	0,006
0,052	0,048	0,041	0,005
0,055	0,050	0,042	0,006
0,055	0,050	0,041	0,007
0,056	0,050	0,040	0,008
0,057	0,050	0,039	0,009
0,058	0,051	0,038	0,010
0,060	0,051	0,035	0,012
0,060	0,050	0,032	0,014
0,062	0,049	0,027	0,018
0,064	0,050	0,025	0,019

· L : Dim3202, Sheet3, Series K4

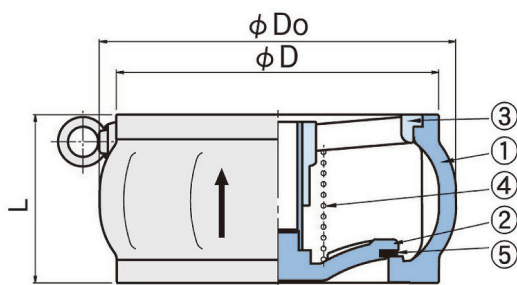
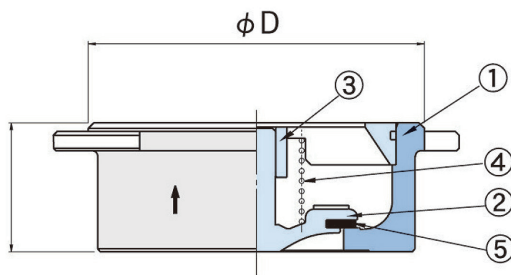
※Above dimensions are subject to change for improvement

Application

- Water, Oil
- Vaccum Breaker, Float valve
- Onshore, Offshore

MODEL NO. PA

< 25mm ~ 350mm >



Specification

Seat		Metal Touch		Rubber Touch
Size		25mm(1")~100mm(4")	250mm(10")~350mm(14")	25mm(1")~350mm(14")
Max. Pressure		40bar	20bar	10bar
Test. Press.	Body	60bar	30bar	15bar
	Disc seat	44bar	22bar	11bar
Rating and Temperature		40bar	34bar	32bar
		120℃	200℃	300℃
End connections		Wafer		
Materials	①Body	Stainless Steel		
	②Cone Disc	Stainless Steel		
	③Guide	Stainless Steel		
	④Spring	Stainless Steel, Inconel		
	⑤Disc Rubber	EPDM -10℃~+130℃ VITON -20℃~+150℃ PTFE -40℃~+180℃		
Pressure Drop		Please refer to table 1 of page16.		

※20Bar Rubber Touch products, please contact us, (PAG-type)

Dimensions

Size mm(Inch)	D (mm)	Do (mm)	L (mm)	Weight (kg)
25(1)	61	—	22	0,35
32(1¼)	72	—	28	0,55
40(1½)	87	—	32	0,8
50(2)	101	—	40	1,1
65(2½)	119	—	46	1,6
80(3)	133	—	50	2,3
100(4)	153	170	60	3,8
125(5)	186	212	90	9
150(6)	215	247	106	13,5
200(8)	265	295	140	28,3
250(10)	330	355	170	44
300(12)	403	430	192	75
350(14)	447	477	222	94

· L : Dim3202, Sheet3, Series K4

※Above dimensions are subject to change for improvement

Opening Pressure

With spring			Without spring
↑	→	↓	↑
0,055	0,051	0,043	0,006
0,052	0,048	0,041	0,005
0,055	0,050	0,042	0,006
0,055	0,050	0,041	0,007
0,056	0,050	0,040	0,008
0,057	0,050	0,039	0,009
0,058	0,051	0,038	0,010
0,060	0,051	0,035	0,012
0,060	0,050	0,032	0,014
0,062	0,049	0,027	0,018
0,064	0,050	0,025	0,019
0,068	0,048	0,016	0,026
0,068	0,050	0,019	0,024

Application

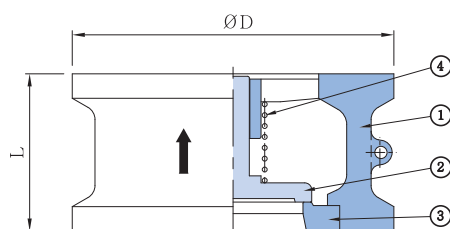
- Water, Oil
- Vacuum Breaker, Float valve
- Onshore, Offshore



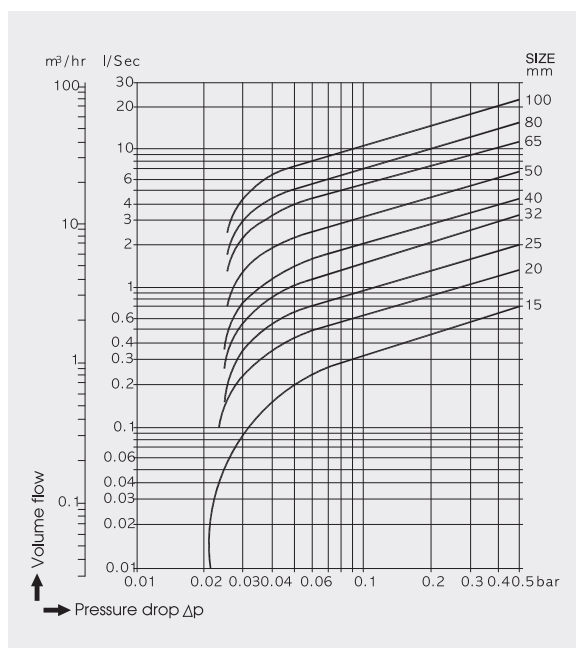


MODEL NO. ANA

〈 15mm(1/2") ~ 100mm(4") 〉



Pressure drop Chart



Specification

Seat		Metal Touch		
Size		15mm(1/2")~100mm(4")		
Rating		Class 150 (PN20)	Class 300 (PN50)	Class 600 (PN100)
Test, Press	Body	15bar	30bar	60bar
	Disc seat	11bar	22bar	44bar
Pressure and Temperature		ASME B16.34 Pressure and Temperature Reference		
Pipe connections		Wafer		
Materials	①Body	Stainless Steel		
	②Cone Disc	Stainless Steel		
	③Seat	Stainless Steel		
	④Spring	Stainless Steel, Inconel		

Dimensions

Size mm (Inch)	Class(PN)	D(mm)	L(mm)	W,t(kg)
15(1/2)	150(20)	45	25	0.2
	300(50)	51	25	0.25
	600(100)	51	25	0.3
20(3/4)	150(20)	54	31.5	0.37
	300(50)	64	31.5	0.46
	600(100)	64	31.5	0.55
25(1)	150(20)	64	35.5	0.47
	300(50)	70	35.5	0.54
	600(100)	70	35.5	0.65
32(1 1/4)	150(20)	73	40	0.7
	300(50)	80	40	0.77
	600(100)	80	40	0.92
40(1 1/2)	150(20)	83	45	1
	300(50)	92	45	1.2
	600(100)	92	45	1.44
50(2)	150(20)	102	60(50)	1.8
	300(50)	109	60(50)	2
	600(100)	109	60(50)	2.4
65(2 1/2)	150(20)	121	67(63)	2.7
	300(50)	127	67(63)	2.9
	600(100)	127	67(63)	3.48
80(3)	150(20)	134	73(71)	3.7
	300(50)	146	73(71)	4.3
	600(100)	146	73(71)	5.16
100(4)	150(20)	172	73(80)	6.8
	300(50)	178	73(80)	7.1
	600(100)	178	73(80)	8.52

· L (surface spacing): The ASME B16.10 standards and () inside dimensions Din 3202, Sheet 3, Series K4 standards.

※Above dimensions are subject to change for improvement

Application

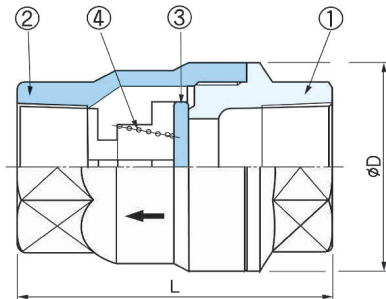
Horizontal pipe standards

Application

- Water, Oil
- Vacuum Breaker, Float valve
- Onshore, Offshore

MODEL NO. CV

< 15mm ~ 50mm >



Specification

Seat		Metal Touch
Size		15mm(1/2") ~ 50mm(2")
Rating		10bar
Test		15bar
End connections		Screwed End
Materials	①Body	Forged Brass
	②Cap	Forged Brass
	③Disc	Stainless Steel Solid Teflon (−40℃~+180℃, Pressure 7bar)
	④Spring	Stainless Steel

Dimensions

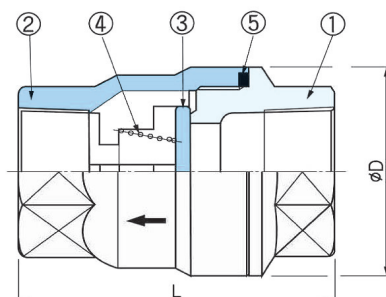
Size mm(Inch)	D (mm)	L (mm)	Weight (kg)
15(1/2)	33	48	0.15
20(3/4)	41	58	0.26
25(1)	50.4	66	0.49
32(1 1/4)	58	74.5	0.65
40(1 1/2)	71	84.5	0.88
50(2)	88	95.5	1.2

Opening Pressure

With spring →
0.05
0.05
0.05
0.05
0.05
0.05

MODEL NO. PCS

< 15mm ~ 50mm >



Specification

Seat		Metal Touch
Size		8mm(1/4") ~ 50mm(2")
Max.Pressure		20bar
Pressure test		30bar
End connection		Screwed End
Materials	①Body	Stainless Steel
	②Cap	Stainless Steel
	③Disc	Stainless Steel
		Solid Teflon (−40℃~+180℃, Pressure 7bar)
	④Spring	Stainless Steel
⑤O-Ring	NBR	

Dimensions

Size mm(Inch)	D (mm)	L (mm)	W.T (kg)
8(1/4), 10(3/8)	27	42	0.13
15(1/2)	35	48	0.18
20(3/4)	43	61	0.3
25(1)	54	73	0.6
32(1 1/4)	62	81	0.8
40(1 1/2)	75	87	1.2
50(2)	90	100	1.8

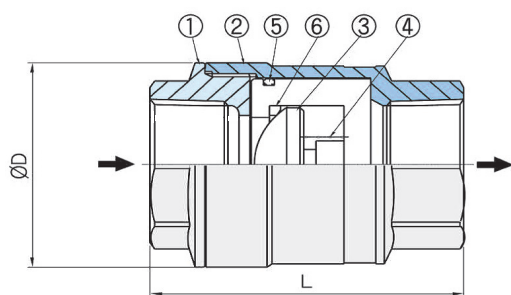
Tightening torque

Please keep below Tightening torque to prevent valve body from twisting.

CV 15	1,050 kg · cm
PCS 22-8	800 kg · cm
PCS 22-10	1,200 kg · cm
PCS 22-15	1,500 kg · cm



MODEL NO. UCV



Specification

Seat	Rubber Touch	
Size	15mm(1/2") ~ 50mm(2")	
Rating	10bar	
Test, Press	15bar	
End connections	Screwed End	
Materials	①Body	Forged Brass
	②Cap	Forged Brass
	③Valve Unit	POM
	④Spring	Stainless Steel
	⑤O-Ring	NBR
	⑥Disc Rubber	EPDM
Mex.Temp	Max, 80°C	

Dimensions

Size mm(Inch)	D (mm)	L (mm)	W,T (kg)
15(1/2)	31,6	51	0,11
20(3/4)	40	58	0,25
25(1)	51,7	69	0,4
32(1 1/4)	60	80	0,6
40(1 1/2)	75	93	1,1
50(2)	94	102	1,5

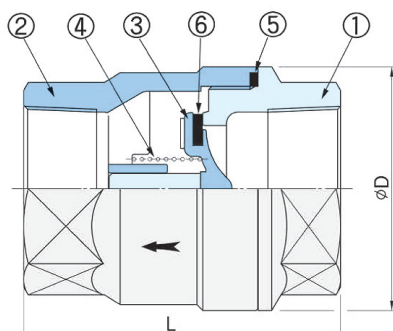
Opening Pressure

0.05kgf/cm²

Features

- 1) Suitable for low working pressure
- 2) Less noise

MODEL NO. PAS



Specification

Seat	Metal Touch	Rubber Touch
Size	25mm(1") ~ 50mm(2")	
Rating	20bar	10bar
Test, Press	30bar	15bar
Pipe connections	Screwed End	
Materials	①Body	Stainless Steel
	②Cap	Stainless Steel
	③Disc	Stainless Steel
	④Spring	Stainless Steel
	⑤O-Ring	NBR
	⑥Disc Rubber	EPDM (-10°C ~ + 130°C) VITON (-20°C ~ + 150°C)

Dimensions

Size mm(Inch)	D (mm)	L (mm)	W,T (kg)
8(1/4), 10(3/8)	27	42	0.13
15(1/2)	35	48	0.18
20(3/4)	43	61	0.3
25(1)	54	73	0.6
32(1 1/4)	62	81	0.8
40(1 1/2)	75	87	1.2
50(2)	90	100	1.8

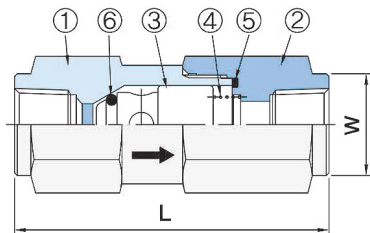
Tightening torque

Please keep below Tightening torque to prevent valve body from twisting.

CV 15	1,050 kg · cm
PCS 22-8	800 kg · cm
PCS 22-10	1,200 kg · cm
PCS 22-15	1,500 kg · cm

MODEL NO. BU

< 6mm ~ 20mm >



Specification

Materials	Stainless Steel
Max. Pressure	Rubber : 20 Bar
Part name	①Body ②Cap ③Poppet ④Spring ⑤O-Ring ⑥Seat O-Ring

Dimensions

Size mm(Inch)	W (mm)	L (mm)	W.T (kg)
6(1/8)	22	48	0,8
8(1/4)	22	57	1,2
10(3/8)	22	57	1,2
15(1/2)	31	70	0,31
20(3/4)	38	82	0,48

※Above dimensions are subject to change for improvement.

Tightening torque

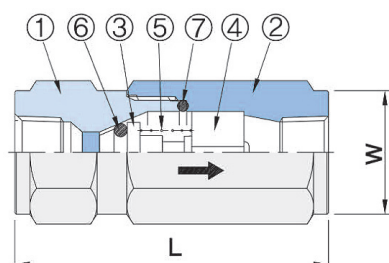
BU22-6/8	800 kg · cm
BU 22-10	1,200 kg · cm
BU 22-15	1,500 kg · cm

Opening Pressure

0,1Bar (Horizontal pipe standards)

MODEL NO. KAI

< 6mm ~ 25mm >



Specification

Materials	Stainless Steel / C3604
Max. Pressure	20 Bar
Part name	①Body ②Cap ③Disc ④Guide ⑤Spring ⑥Seat O-Ring ⑦O-Ring

Dimensions

Size mm(Inch)	W (mm)	L (mm)	W.T (kg)
6(1/8)	17	42	0,6
8(3/8)	19	46	0,12
10(1/3)	24,8	52	1,2
15(1/2)	30,5	65	0,42
20(3/4)	36,5	78	0,72
25(1)	45,5	90	1,34

※Above dimensions are subject to change for improvement.

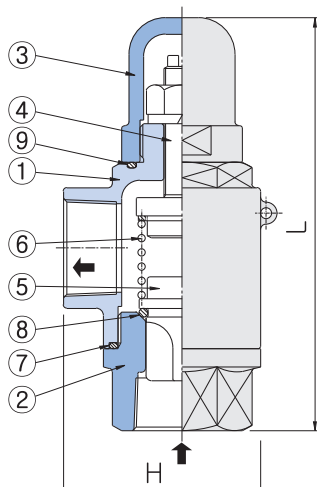
Opening Pressure

0,05Bar (Horizontal pipe standards)

VACUUM REGULATING VALVE (Screwed End Type)

MODEL NO. RVC

< 20mm, 25mm >



Specification

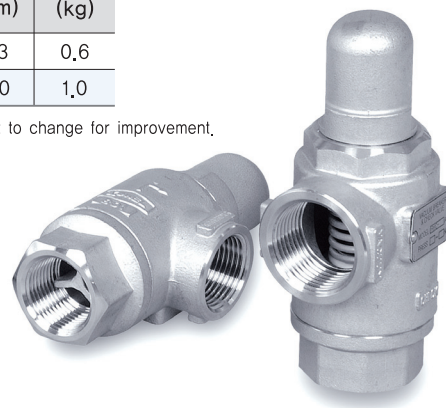
Materials	Stainless Steel
Part name	①Body ②Valve Seat ③Cap ④Bolt ⑤Poppet ⑥Spring ⑦ ⑧ ⑨O-Ring

· And adjustment to maintain a constant vacuum valve

Dimensions

Size mm(Inch)	H (mm)	L (mm)	W,T (kg)
20(3/4)	54	113	0.6
25(1)	62	130	1.0

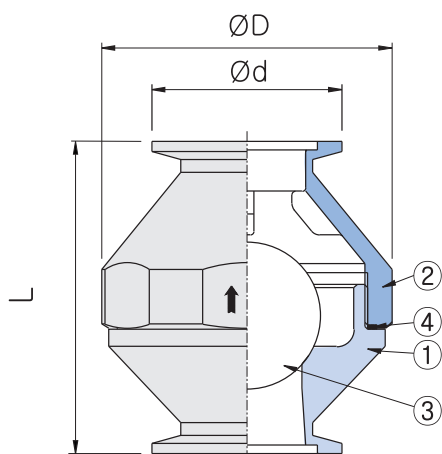
※Above dimensions are subject to change for improvement.



BALL CHECK VALVE (Clamp)

MODEL NO. BC

< 40mm, 50mm >



Specification

Materials	Stainless Steel
Max. Pressure	10 Bar
Part name	①Body ②Cap ③Ball ④Gasket

Dimensions

Size mm(Inch)	D (mm)	d (mm)	L (mm)	W,T (kg)
40(1 1/2)	84	55	90	1.2
50(2)	96	75	108	1.7

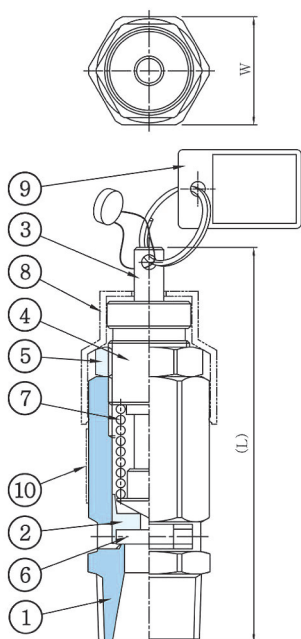
※Above dimensions are subject to change for improvement.



SAFETY VALVE

MODEL NO. SA

< 8mm, 15mm, 20mm, 25mm >



Specification

Max.Pressure		1 Mpa
Set pressure		Set within 1 Mpa
Stop spewing pressure		More than 10% of the set pressure
Lift type		Yangjeongsik
Materials	①Body	Brass Bar
	②Disc	Brass Bar
	③Stem	SM45C
	④Guide	SM45C
	⑤Lock Nut	SM45C
	⑥Seat	Rubber
	⑦Spring	PW-2 / SWOSC
	⑧Cap	PE
	⑨Tag	AL
	⑩Label	
Temperature		-20℃ ~ +80℃

※1Mpa longer than ~ 3Mpa product types are produced separately approved by the order.

Dimensions

Size mm(Inch)	H (open) (mm)	L (mm)	W.T (kg)
8(1/4)	16	49	0,05
15(1/2)	22	80	0,16
20(3/4)	27	121	0,37
25(1)	34	124	0,60

※Above dimensions are subject to change for improvement.

Features

- Designed accdrding to KS B 6216
- Lift Safety Valve
- Opening Pressure is revisable upon request
- Approval of KOSHA



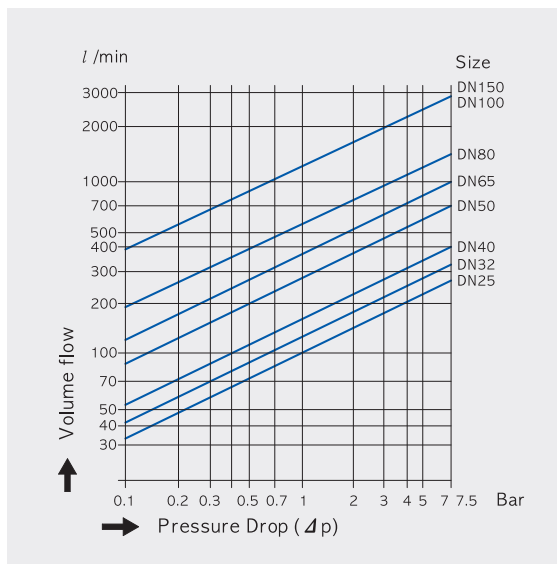
BALL FLOAT VALVE

MODEL NO. LF



〈 25mm ~ 150mm 〉

Pressure drop Chart



Specification

Size		25mm(1") ~ 150mm(6")
Max. Pressure		7 Bar
Hydrostatic test	Body	11 Bar
	Disc seat	8 Bar
Mex. Temp		60
Pipe connections		PF screwed end
Materials	1~8, 10~19	Stainless steel
	9	Rubber (EPDM/Viton)

Dimensions

Size mm(Inch)	25 (1")	32 (1 1/4")	40 (1 1/2")	50 (2")	65 (2 1/2")	80 (3")	100 (4")	150 (6")
Ød(mm)	120	120	120	160	160	190	190	190
F1, F2	PF1", PF1 1/4"	PT1 1/4", PF1 1/4"	PT1 1/2", PF1 1/2"	PT2", PF2"	PF2 1/2"	PF3"	PF4"	PF6"
H1(mm)	78	80	87	97	122	138	172	211
H2(mm)	190	266	302	324	286	312	329	329
H3(mm)	110	180	186	188	195	243	266	266
L1(mm)	85	72	78	93	118	129	160	163
L2(mm)	466	424	471	526	724	875	972	974
L3(mm)	490	477	541	599	760	900	994	996
W.T(kg)	—	—	—	3.8	5.9	8.1	12.3	15.2

※25 (1"), 40 (1 1/2") is being developed.

※"F1" is Flange Type the Option in part.

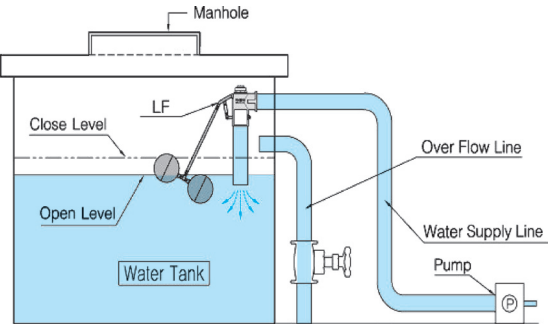
Features

LF Ball Float Valve has many features as belows :

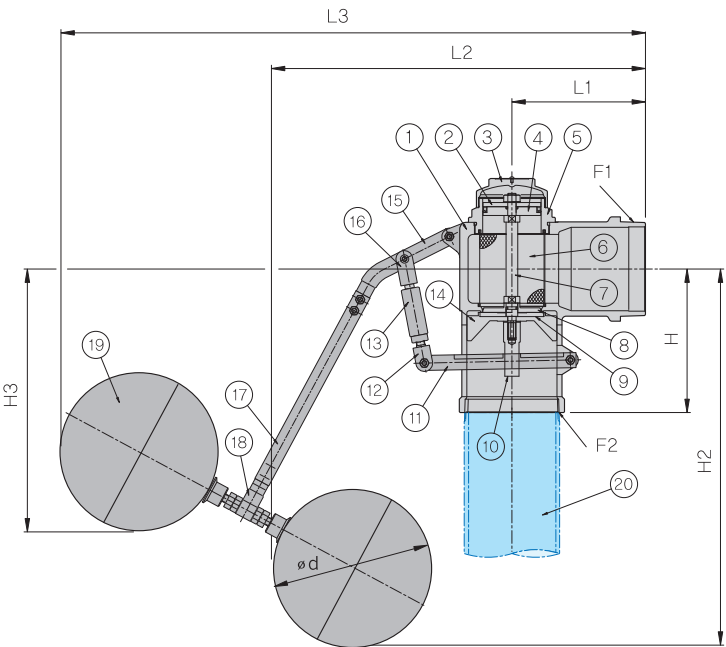
- **Anti Corrosive** : Long life is guaranteed with stainless steel material.
- **No water hammering, No chattering** : Smooth operation from the balanced pressure construction brings no water hammering and no chattering.
- **Enhanced Stability** : The one submerged ball of 2 float balls helps the valve keep stable.
- **Teflon coating effect** : Teflon coated cylinder inside ensures perfect sealing and smooth operation.
- **Internal strainer** : Internal strainer prevents inflow of foreign substances.
- **Extra exhaust-pipe available** : Extra pipe can be connected for little noise and wave in the water tank.
- **Long lasting structure**



Piping Diagram



Drawing



- | | | | |
|----------------|---------------|------------------|----------------|
| ① Body | ⑥ Strainer | ⑪ Straight lever | ⑯ Top joint |
| ② Piston cover | ⑦ Spindle | ⑫ Bottom joint | ⑰ Rod |
| ③ Cap | ⑧ Seat cover | ⑬ Adjust nut | ⑱ Pod joint |
| ④ Piston head | ⑨ Seat | ⑭ Disc guide | ⑲ Float |
| ⑤ Cylinder | ⑩ Lever guide | ⑮ Angle lever | ⑳ Exhaust pipe |



STRAINER

MODEL NO. SCW-F

〈 Size 40mm ~ 250mm (flange type) 〉



MODEL NO. SCW-S

〈 Size 40mm ~ 50mm (Screwed Type) 〉



Specification

Model	SCW-F	SCW-S
Size	40mm(1 1/2")~250mm(10")	40mm(1 1/2")~50mm(4")
connections	KS 10K Flange	Screwed End
Materials	Stainless Steel	Stainless Steel

Dimensions (SCW-F)

Size (mm)	L	D ₁ (mm)	D ₂ (mm)	W.T (kg)
40	62	46	80	0.07
50	77	58	95	0.13
65	102	74	114	0.17
80	118	87	124	0.23
100	143	112	149	0.38
125	183	137	181	0.54
150	213	163	210	0.77
200	283	214	259	1.51
250	353	265	320	2.96

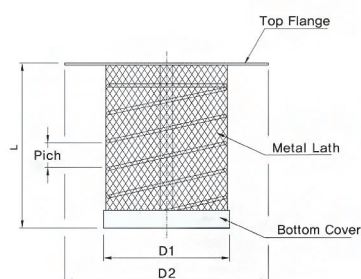
Dimensions (SCW-S)

Size (mm)	L ₁	L ₂ (mm)	D (mm)	W.T (kg)
40	86	65	65	0.29
50	100	76	79	0.45

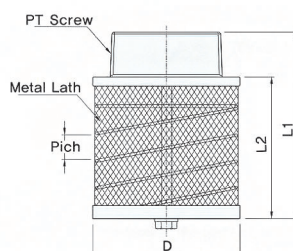
※Please consult with us except the aperture.

Features

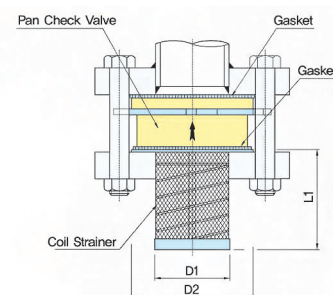
- Coil strainer is very strong and elegant because of being made up of stainless steel coil spring.
- Because filtering surface areas are 4-5 times larger than nominal size areas of each size, There is no suction resistance.
- A much lighter and reliable foot valve is created from assembling a Pancheck valve and a coil strainer.
- It is possible to make very fine mesh by putting a fine wire mesh over the coil strainer.



< SCW-F >



< SCW-S >



<SCW-F Assembled shapes>

Fluid and materials

Fluid name Materials	Valve materials				Seat Material		
	Bronze	Cast iron	Stainless	Pearl	NBR	VITON	EPDM
Water	◎	○	◎	○	◎	◎	◎
Hot Water	◎	○	◎	○	◎	◎	◎
Sea Water	○	△	○	△	◎	◎	◎
Alcohol	◎	○	◎	○	△	△	◎
Ether	○	○	◎	○	×	×	×
Acetone	◎	◎	◎	◎	×	×	△
Benzene	○	○	◎	○	×	△	×
Sulfuric acid	×	×	×	×	×	○	△
Nitric acid	×	×	○	×	×	○	×
Hydrochloric acid	×	×	×	×	×	○	○
Acetic acid	×	×	×	×	×	×	×
Acetic acid 100%	△	×	◎	×	△	○	△
Formic acid	×	×	○	×	×	△	×
Potassium cabonate(Strong)	△	△	○	△	◎	—	—
Potassium cabonate(Weak)	△	△	○	△	◎	◎	◎
Caustic soda	△	△	○	△	△	△	×
Gasoline	◎	○	◎	◎	×	○	×
Light oil(Diesel)	○	◎	◎	◎	○	◎	×
Heavy oil	○	◎	◎	◎	○	◎	×
Lubricating oil	○	◎	◎	◎	○	◎	×
Oxygen gas	◎	◎	◎	◎	△	◎	◎
Hydrogen gas	◎	◎	◎	◎	◎	◎	◎
Nitrogen gas	◎	◎	◎	◎	◎	◎	◎
Sulphite gas(Dry)	○	○	○	○	△	○	○
Carbon onoxide(Dry)	△	◎	◎	◎	◎	◎	△
Carbon dioxide(Dry)	○	◎	◎	◎	○	◎	◎
Ammonia	×	○	○	○	△	×	—
Chlorine(Dry)	○	○	○	○	△	○	×
Chlorine(Wet)	×	×	×	×	△	○	△

◎ : Very good ○ : good △ : Usually × : Inadequate — : No data

Requirement for model selection

- | | | |
|-----------------|---------------------|-------------------|
| 1 Size | 6 Flow rate | 11 Delivery time |
| 2 Working Press | 7 Operating cycle | 12 Flow direction |
| 3 Opening Prss | 8 Leakage allowance | 13 Space |
| 4 Sort of Fluid | 9 Usage | 14 Pipe Diagram |
| 5 Temperature | 10 Quantity | 15 Etc. |

Flow rate (Water)

Size	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
Flow rate(m³/hr)	2.4	5	9	14	20	32	50	70	120	210	330	520



Major trading partners and countries list

SPX

DOOSAN 덕산중공업

한화건설

BOOSTER CO., LTD.

SAMSUNG SAMSUNG TECHWIN

HYOSUNG EBARA CO., LTD.

GS Caltex Corporation

HANKOOK PERFORMANCE TIRES

WILO

CJ 건설

STX 중공업

대림산업주식회사

Wp 한국수력발전주

HYUNDAI

LS Mtron

CHE [주] 엘에치이
LEADER HEAT EXCHANGER

posco e&c

LG Display

HONG KONG
CHI FUNG PUMPING

U.S.A
DEKKER VACUUM

FRANCE
FG INOX

SPAIN
OK VALVES

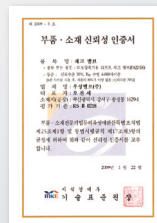
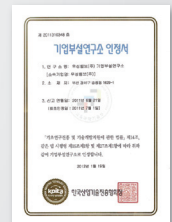
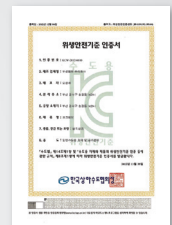
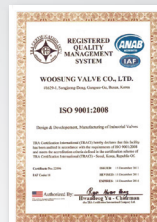
JAPAN
TERRAL PUMP

SINGAPORE
SENG CHOOH

ARAB EMIRATES
ECONOSTO

MALAYSIA
PETRONAS

Certificate



memo

Handwriting practice lines consisting of 20 horizontal dashed lines.





Check Valves

