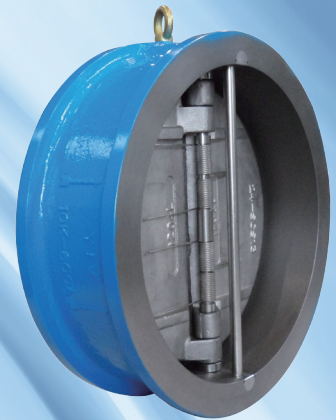
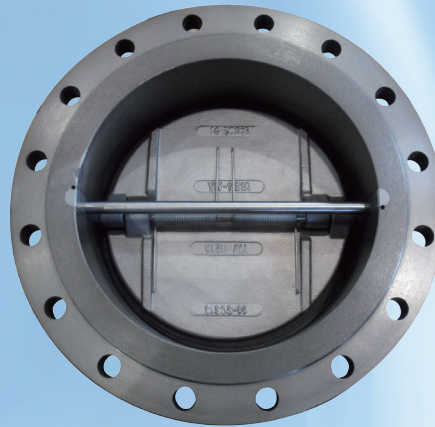


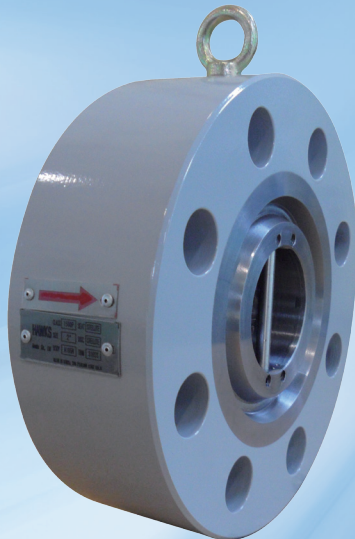
HWASUNG Dual Plate Check Valves



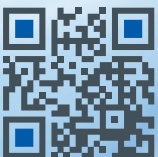
WAFERTYPE



FLANGETYPE



LUGTYPE

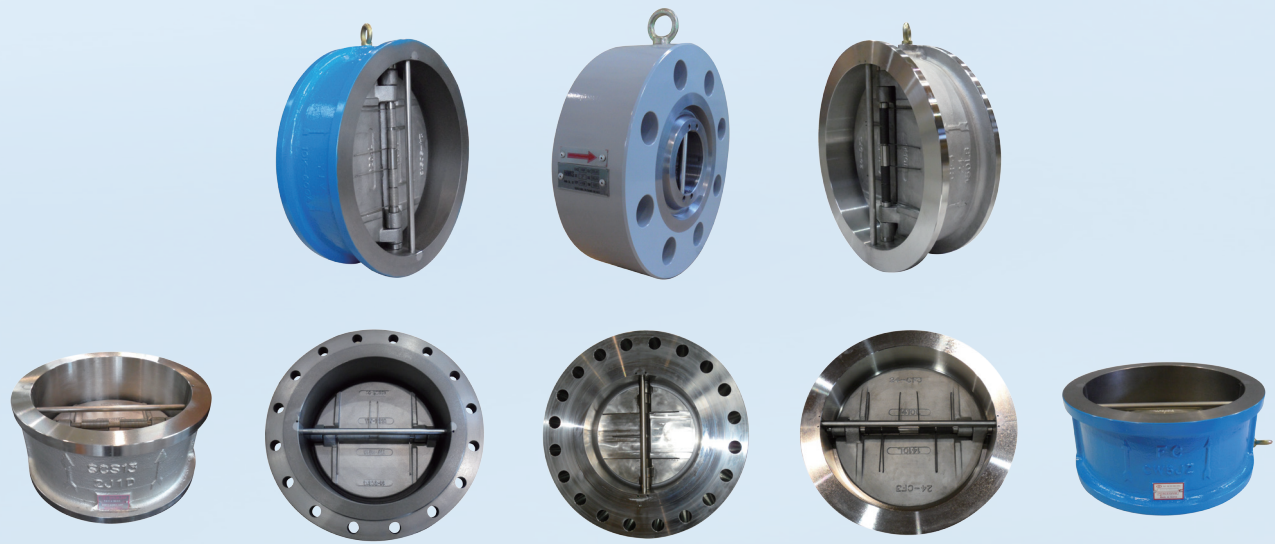


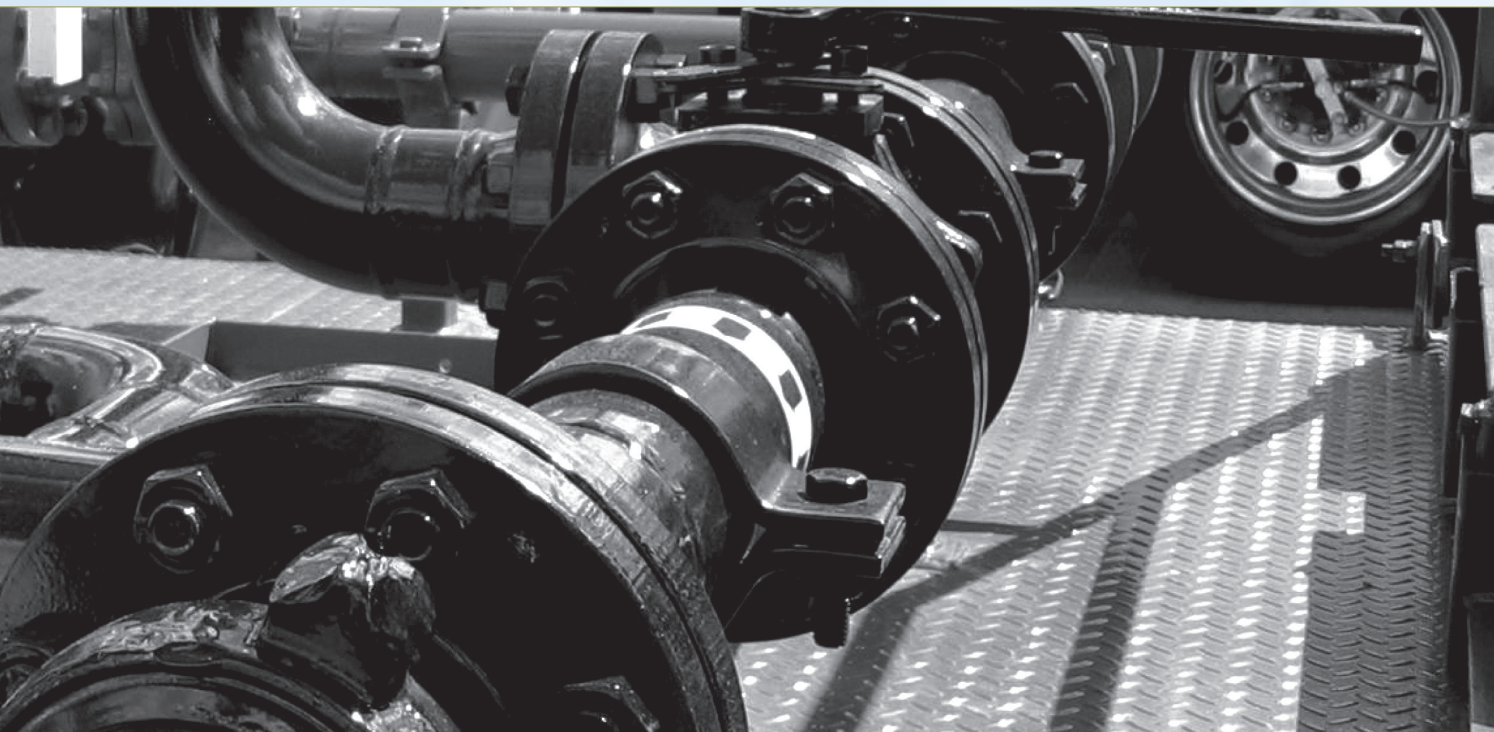
※ 본 카탈로그는 참고용이므로 승인용으로 사용하지 않습니다.



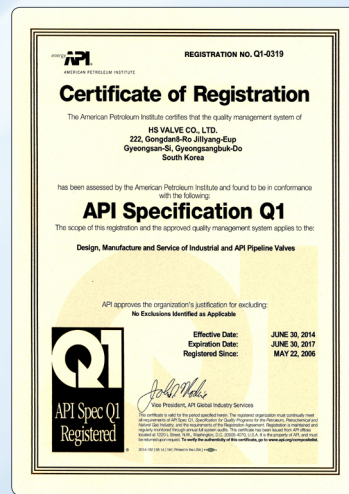
HWA SUNG, The leading Valve manufacturer

The most competitive price . The highest quality. The on time delivery





혁신은 안전만을 연구합니다



Greeting

당사는 1987년 법인 설립 이래 다양한 밸브와 관련 부자재를 생산하여 공급하고 있습니다. 국내최대 밸브종합 메이커로서 소구경 밸브에서, 대구경 화학, 플랜트용까지 고부가 사업육성, 지속적인 신제품 개발, 품질업그레이드로 세계최초로 전기절연밸브 개발 및 특허 획득, ISO, API, Fire Test, CE, GOST, KS, EM 등 세계적인 인증마크를 획득 하였습니다. 항상 무결점 품질을 유지하고자 최선의 노력을 다하고 있으며, ISO-9001:2008, API Q1 & 6D, PED의 요구사항과 고객의 요구사항에 따르며, 최고의 품질로서 고객에게 최고의 신뢰를 주는 것을 품질경영이념으로 정하고, 실천에 옮기도록 노력하고 있습니다. 또한 전사원의 품질경영 의식화, 소비자 요구품질 생산, 전사원의 기술향상이라는 경영이념 아래 전사원이 일치단결하여 국제사회의 필수조건인 품질과 가격을 합리적으로 이룩하여 고객의 요구를 충족시킴과 동시에 한국 경제 발전에 이바지할 수 있도록 노력하고 있습니다.

Korea TOP 1, Global Marketing, Customer First라는 21C VISION을 설정하고 세계일류밸브 종합메이커로의 도약, 더욱 진일보된 밸브전문회사로 미래를 열어 나아가겠습니다.

주식회사 화 성

Company Profile

은탑산업훈장 수훈(지식경제부 신기술실용화촉진대회)
동탑산업훈장 수훈(대한민국가스안전대상)



1987~1990

- 1987.03 화성산업사 설립
- 1987.04 주식회사 화성 법인 설립

1991~2000

- 1996.12 96년 중소기업 대상 수상(대구광역시)
- 1996.12 절연 밸브 EM인증서 획득
- 1997.11 가스안전촉진대회 대통령상 표창 수상
- 1998.09 대구은행 유망중소기업지정
- 1999.03 ISO9001 & API-6D 인증서 획득
- 1999.09 벤처기업선정(제 1999132439-255 호)
- 1999.09 cUL 인증획득(SA12071-210999)
- 1999.10 신기술실용화대회 대통령표창 수상
- 1999.11 '99대구중소기업인대회 표창장 수상
- 2000.02 기술경쟁력 우수기업 지정
- 2000.03 코스닥증권시장 상장

2001~2010

- 2001.03 Fire tests(Ball valve) 인증서
- 2001.10 우량기술기업선정 - 기술신용보증기금
- 2001.11 신기술실용화대회 대통령표창 수상
- 2002.02 경산진량공단제2공장신축준공
- 2003.03 조세의 날 경제부총리 표창

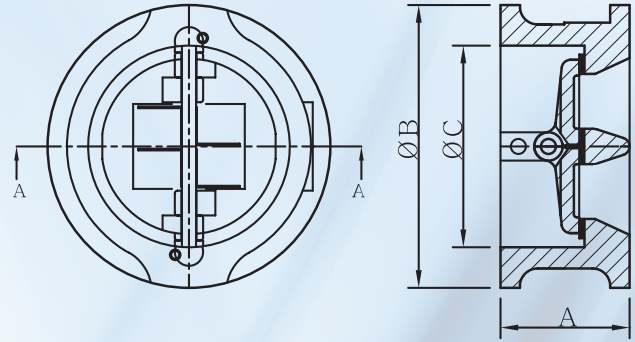
2001~2010

- 2003.06 가스안전촉진대회 가스안전유공자포상
- 2004.01 CE인증 획득(CE0036)
- 2004.07 경상북도지정 세계일류화중소기업 선정
- 2004.12 Fire tests(Ball valve)-VELOSI KOREA
- 2006.05 ISO 9001:2000[0588] 인증서 획득
- 2006.05 ISO/TS 29001[TS-0125] 인증서 획득
- 2006.05 API Specification Q1[Q1-0319] 인증서 획득
- 2006.11 산업자원부 신기술실용화 촉진대회 은탑산업훈장 수훈
- 2008.09 GOST-R 인증획득(POCC KR.AN50.B13106)
- 2008.09 HYGIENIC 인증획득(2043523)
- 2009.06 GOST RTN 인증획득

2011~

- 2011.02 현대중공업 밴더승인(Chevron사 GSEP Project)
- 2011.03 국민은행 국민베스트기업 선정
- 2011.11 경산 제 3공장 준공
- 2012.03 관 이음매 디자인등록(등록 제30-0637159호)
- 2012.05 벤트밸브 일체형 밸브체 특허등록 (특허제10-1144017호)
- 2012.06 접촉 면압 조절형 밸브 특허등록 (특허제10-1156108호)
- 2012.06 위생안전(KC)인증서 획득 불밸브(KSB 2038) 외 8건
- 2012.06 ISO 14001:2004[TUV104-01-2216] 인증서 획득
- 2013.03 경산진량공단제3공장증축
- 2013.05 대한민국가스안전대상 동탑산업훈장수훈
- 2014.07 기술혁신형 중소기업(INNOBIZ) 인증
- 2014.12 스테인리스 강재 용접식 플랜지(KS B 1506)인증서 획득
- 2015.10 쿠웨이트 국영석유공사 "KNPC" 벤더등록

Wafer Type



ANSI B16.5

Dimension Data(ANSI 125-2500LB)

Size in(mm)	ANSI Rating	End Facing	A(mm)	B(mm)	C(mm)	Weight(kg)
1.5 (40)	150	RF	60	86	52	1.8
	300	RF/RJ	60	95	52	1.8
	600	RE/RJ	60	95	52	1.8
2 (50)	125	FF	54	105	60	2
	150	RF	60	105	60	3.2
	300	RF/RJ-23	60	111	60	3.2
	600	RF/RJ-23	60	111	60	3.2
	900	RF/RJ-24	70	143	60	8.2
	1500	RF/RJ-24	70	143	60	8.2
		RF/RJ-26	70	146	60	29
2.5 (65)	125	FF	54	124	64	2.9
	150	RF	60	124	64	5
3 (80)	125	FF	57	137	81	3.2
	150	RF	73	137	81	5.9
	300	RF	73	149	81	5.9
	600	RF	73	149	81	5.9
	900	RF/RJ-31	83	168	81	12
	1500	RF/RJ-35	83	175	81	12.7
		RF/RJ-32	86	197	81	15.9
4 (100)	125	FF	64	172	106	5
	150	RF	73	175	106	8.2
	300	RF	73	181	106	8.2
	600	RF/RJ-37	79	194	106	12.8
	800	RF/RJ-37	102	206	106	19.1
	1500	RF/RJ-39	102	210	106	20.5
		RF/RJ-38	105	235	106	29.1
5 (125)	125	FF	70	197	130	5.8
	150	RF	86	197	130	6.7
6 (150)	125	FF	76	220	157	9.5
	150	RF	98	222	157	12.3
	300	RF	98	251	157	15.9
	600	RF/RJ-45	137	267	157	20
	900	RF/RJ-45	159	289	157	36.4
	1500	RF/RJ-46	159	283	157	53
	2500	RF/RJ-47	159	318	157	70

※ 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

Size in(mm)	ANSI Rating	End Facing	A(mm)	B(mm)	C(mm)	Weight(kg)
8 (200)	125	FF	96	277	206	22.8
	150	RF	127	279	206	28.6
	300	RF	127	308	206	34.5
	600	RF/RJ-49	165	321	206	72.7
	900	RF/RJ-49	206	359	206	123.2
	1500	RF/RJ-50	206	352	206	116.8
	2500	RF/RJ-51	206	387	206	133.2
10 (250)	125	FF	108	338	255	31.8
	150	RF	146	340	255	48.2
	300	RF	146	362	255	57.3
	600	RF/RJ-53	213	400	255	118.2
	900	RF/RJ-53	241	435	255	197.3
	1500	RF/RJ-54	248	435	255	204.1
	2500	RF/RJ-55	254	476	255	218.2
12 (300)	125	FF	143	407	306	50
	150	RF	181	410	306	81.8
	300	RF	181	422	306	90.9
	600	RF/RJ-57	229	457	306	163.6
	900	RF/RJ-57	292	498	306	292.7
	1500	RF/RJ-58	305	521	306	374.5
	2500	RF/RJ-60	305	549	306	395
14 (350)	125	FF	184	448	340	77.3
	150	RF	184	451	340	122.7
	300	RF	222	586	340	177.3
	600	RF/RJ-61	273	492	340	186.4
	900	RF/RJ-62	356	521	340	396.4
	1500	RF/RJ-63	356	578	340	485.5
16 (400)	125	FF	191	511	390	102.3
	150	RF	191	514	390	134.1
	300	RF	232	540	390	208.2
	600	RF/RJ-65	305	564	390	330.9
	900	RF/RJ-66	384	575	390	533.6
	1500	RF/RJ-67	384	641	390	588.6
18 (450)	125	FF	203	546	438	127.3
	150	RF	203	549	438	141.8
	300	RF	264	597	438	295.5
	600	RF/RJ-69	362	613	438	399.5
	900	RF/RJ-70	451	638	438	610.9
	1500	RF/RJ-71	468	705	438	793.2
20 (500)	125	FF	219	603	487	177.3
	150	RF	219	606	487	214.5
	300	RF	292	654	487	364.1
	600	RF/RJ-73	368	683	487	543.6
	900	RF/RJ-74	451	699	487	639.1
	1500	RF/RJ-75	533	756	487	1278.2
24 (600)	125	FF	222	714	579	268.2
	150	RF	222	718	579	358.2
	300	RF	318	775	579	526.4
	600	RF/RJ-77	438	791	579	819.1
	900	RF/RJ-78	495	838	579	1233.2
	1500	RF/RJ-79	559	902	579	2712.7

* 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

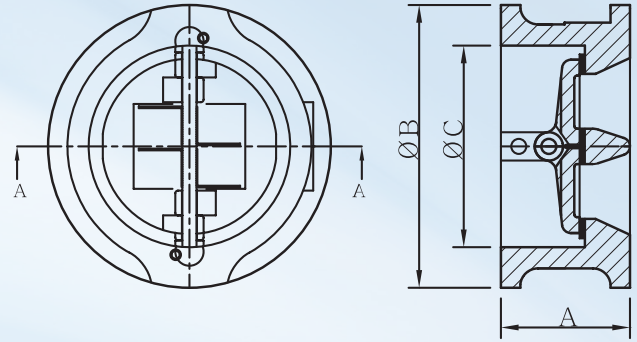
Dimension Data(DN10-DN40)

Size in(mm)	ANSI Rating	End Facing	A(mm)	B(mm)	C(mm)	Weight(kg)
2 (50)	PN10		60	109	60	3.2
	PN16		60	109	60	3.2
	PN25		60	109	60	3.2
	PN40		60	109	60	3.2
3 (80)	PN10		73	144	81	7.7
	PN16		73	144	81	7.7
	PN25		73	144	81	7.7
	PN40		73	144	81	7.7
5 (125)	PN10		73	164	106	9
	PN16		73	164	106	9.5
	PN25		73	170	106	10
	PN40		73	170	106	10.5
6 (150)	PN10		98	220	157	15.5
	PN16		98	220	157	16
	PN25		98	226	157	19.4
	PN40		98	226	157	20
8 (200)	PN10		127	275	206	35
	PN16		127	275	206	36
	PN25		127	286	206	38
	PN40		127	293	206	40
10 (250)	PN10		146	330	255	51
	PN16		146	331	255	52
	PN25		146	343	255	54
	PN40		146	355	255	56
12 (300)	PN10		181	380	306	94
	PN16		181	386	306	97
	PN25		181	403	306	98
	PN40		181	420	306	99
14 (350)	PN10		184	440	340	122
	PN16		184	446	340	123
	PN25		222	460	340	174
	PN40		222	477	340	176
16 (400)	PN10		191	491	390	131
	PN16		191	498	390	133
	PN25		232	517	390	204
	PN40		232	549	390	207
18 (450)	PN10		203	541	438	141
	PN16		263	558	438	284
	PN25					
	PN40		263	574	438	294
20 (500)	PN10		219	596	487	215
	PN16		292	620	487	354
	PN25		292	627	487	359
	PN40		292	631	487	363
24 (600)	PN10		222	698	579	358
	PN16		318	737	579	518
	PN25		318	734	579	516
	PN40		318	750	579	521

※ 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

Wafer Type

Cast Iron
 Douctile Iron
 Carbon Steel
 Stainless Steel



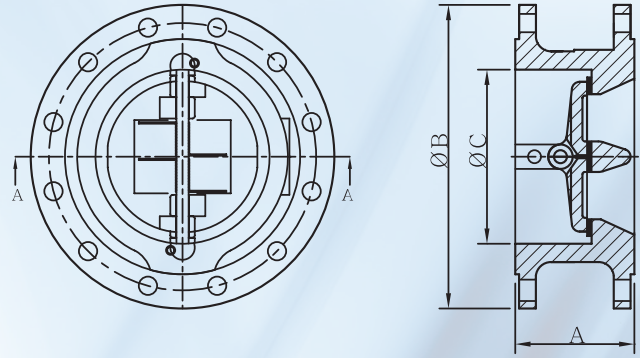
JIS 2210 & KS B1511

Dimension Data(JIS 10K - 20K)

Size in(mm)	KS/JIS Rating	End Facing Type	A(mm)		B(mm)		C(mm)		Weight(kg)	
			Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B
1.5(40)	10K 20K	RF/FF	60	54	86	86	52	52	2.3	2
			60		86		52		2.3	
2(50)	10K 20K	RF/FF	60	54	101	101	60	60	2.3	2
			60		101		60		2.4	2
2.5(65)	10K 20K	RF/FF	67	54	121	121	64		3.2	2.9
			67		121		64	64	3.9	
3(80)	10K 20K	RF/FF	73	57	131	131	81		4.1	3.2
			73		137		81	81	4.3	
4(100)	10K 20K	RF/FF	73	64	156	156	106		6.1	5
			73		162		106	106	8.2	
5(125)	10K 20K	RF/FF	86	70	187	187	130		9.1	6.7
			86		200		130	130	12.1	
6(150)	10K 20K	RF/FF	98	76	217	217	157		13	9.5
			98		235		157	157	13.3	
8(200)	10K 20K	RF/FF	127	96	267	267	206		22	16.6
			127		280		206	206	29.2	
10(250)	10K 20K	RF/FF	146	108	330	330	255		43	28.3
			146		353		255	255	44	
12(300)	10K 20K	RF/FF	181	143	375	375	306		67	46
			181		403		306	306	70	
14(350)	10K 20K	RF/FF	184	184	420	420	340		81	72
			222		447		340	340	83	
16(400)	10K 20K	RF/FF	191	191	483	483	390		104	96
			232		507		390	390	135	
18(450)	10K 20K	RF/FF	203	203	538	538	438		132	132
			264		572		438	438	183	
20(500)	10K 20K	RF/FF	219	219	593	593	487		170	170
			292		627		487	487	246	
24(600)	10K 20K	RF/FF	222	222	697	697	579		230	230
			318		731		579	579	423	
28(700)	10K 20K	RF/FF	321	321	807	807	680		510	511
			381		852		680	680	576	
30(750)	10K 20K	RF/FF	305	305	867	867	735		536	536
			368		914		735	735	718	
32(800)	10K 20K	RF/FF	356	356	917	917	784		690	690
			406		974		784	784	900	
36(900)	10K 20K	RF/FF	368	368	1017	1017	865		840	840
			483		1084		865	865	1300	
40(1000)	10K	RF/FF	432	406	1121	1121	987	987	1190	1190
48(1200)	10K	RF/FF	524	524	1341	1341	1193	1193	2200	2200
54(1350)	10K	RF/FF	540	540	1495	1495	1281	1281	2700	2700

※ 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

Flanged Type Sold Lug Type



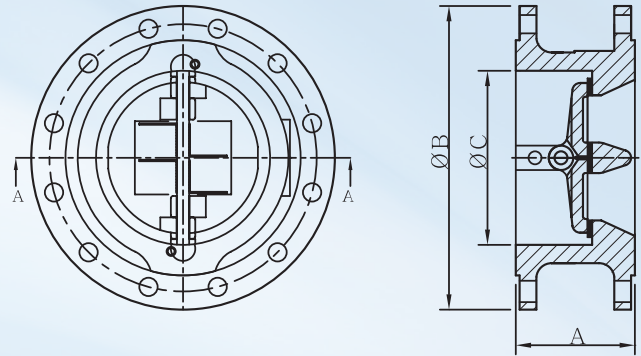
ANSI B16.5

Dimension Data(ANSI 125-2500LB)

Size in(mm)	ANSI Rating	End Facing	A(mm)	B(mm)	C(mm)	Q'ty(EA)	Dia in(mm)	Length in(mm)	Weight(kg)
2 (50)	150	RF	60	152	60	4	0.63(16)	6.00(152)	7
	300	RF/RJ-23	60	165	60	8	0.63(16)	6.88(175)	8
	600	RF/RJ-23	60	165	60	8	0.63(16)	6.88(175)	8
	900	RF/RJ-24	70	216	60	8	0.88(22)	8.75(222)	16
	1500	RF/RJ-24	70	216	60	8	0.88(22)	8.75(222)	16
	2500	RF/RJ-26	70	235	60	8	1.00(25)	10.00(254)	19
2.5(65)	150	RF	67	178	64	4	0.63(16)	6.38(162)	12
3 (80)	150	RF	73	191	81	8	0.63(16)	7.00(178)	12
	300	RF	73	210	81	8	0.75(19)	8.13(207)	14
	600	RF	73	210	81	8	0.75(19)	8.13(207)	14
	900	RF/RJ-31	83	241	81	8	0.88(22)	9.50(241)	25
	1500	RF/RJ-35	83	267	81	8	1.13(29)	10.50(267)	29
	2500	RF/RJ-32	86	305	81	8	1.25(32)	12.25(311)	38
4 (100)	150	RF	73	229	106	8	0.63(16)	7.00(178)	19
	300	RF	73	254	106	8	0.75(19)	8.13(207)	23
	600	RF/RJ-37	79	273	106	8	0.88(22)	9.50(241)	30
	900	RF/RJ-37	102	292	106	8	1.13(29)	11.00(279)	45
	1500	RF/RJ-39	102	311	106	8	1.25(32)	12.00(305)	51
	2500	RF/RJ-38	105	356	106	8	1.50(38)	14.63(371)	69
5(125)	150	RF	86	254	130	8	0.75(19)	7.48(190)	
6 (150)	150	RF	98	279	157	8	0.75(19)	8.00(203)	32
	300	RF	98	318	157	12	0.75(19)	9.63(245)	45
	600	RF/RJ-45	136	356	157	12	1.00(25)	12.38(314)	81
	900	RF/RJ-45	159	381	157	12	1.13(29)	14.00(355)	115
	1500	RF/RJ-46	159	394	157	12	1.38(35)	16.75(425)	119
	2500	RF/RJ-47	159	483	157	8	2.00(51)	20.50(520)	184
8 (200)	150	RF	127	343	206	8	0.75(19)	9.75(248)	49
	300	RF	127	381	206	12	0.88(22)	11.25(286)	78
	600	RF/RJ-49	165	419	206	12	1.13(29)	14.50(368)	134
	900	RF/RJ-49	206	470	206	12	1.38(35)	17.13(435)	217
	1500	RF/RJ-50	206	483	206	12	1.63(41)	20.25(514)	283
	2500	RF/RJ-51	206	552	206	12	2.00(51)	24.00(610)	283
10 (250)	150	RF	146	406	255	12	0.88(22)	11.00(279)	82
	300	RF	146	445	255	16	1.00(25)	12.75(324)	115
	600	RF/RJ-53	213	508	255	16	1.25(32)	17.13(435)	183
	900	RF/RJ-53	241	545	255	16	1.38(35)	19.00(483)	330
	1500	RF/RJ-54	248	584	255	12	1.88(48)	23.50(597)	361
	2500	RF/RJ-55	254	673	255	12	2.50(64)	30.50(775)	489

※ 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

Flanged Type Sold Lug Type



ANSI B16.5

Dimension Data(ANSI 125-2500LB)

Size in(mm)	ANSI Rating	End Facing	A(mm)	B(mm)	C(mm)	Q'ty(EA)	Dia in(mm)	Length in(mm)	Weight(kg)
12 (300)	150	RF	181	483	306	12	0.88(22)	5.5(140)	125
	300	RF	181	521	306	16	1.13(29)	7.5(191)	153
	600	RF/RJ-57	229	559	306	20	1.25(32)	9(29)	239
	900	RF/RJ-57	292	610	306	20	1.38(35)	10.25(260)	347
	1500	RF/RJ-58	305	673	306	16	2.00(51)	23.5(600)	637
	2500	RF/RJ-60	305	762	306	12	2.75(70)	34.5(876)	747
14 (350)	150	RF	184	533	340	12	1.00(25)	6(152)	144
	300	RF	222	584	340	20	1.13(29)	7.75(197)	207
	600	RF/RJ-61	273	603	340	20	1.38(35)	9.5(241)	378
	900	RF/RJ-62	356	640	340	20	1.50(38)	11.25(286)	560
	1500	RF/RJ-63	356	749	340	16	2.25(57)	31.5(800)	109
16 (400)	150	RF	191	597	390	16	1.00(25)	6(152)	717
	300	RF	232	648	390	20	1.25(32)	8.25(216)	630
	600	RF/RJ-65	305	686	390	20	1.50(38)	10.25(260)	145
	900	RF/RJ-66	384	705	390	20	1.63(38)	11.75(298)	1547
	1500	RF/RJ-67	384	826	390	16	2.50(64)	31.5(870)	1152
18 (450)	150	RF	203	635	438	16	1.13(29)	6.5(165)	210
	300	RF	264	711	438	24	1.25(32)	8.5(216)	393
	600	RF/RJ-69	362	743	438	20	1.63(38)	11(279)	598
	900	RF/RJ-70	451	785	438	20	1.88(48)	13.5(343)	835
	1500	RF/RJ-71	468	914	438	16	2.75(70)	39.75(1010)	1775
20 (500)	150	RF	219	699	487	20	1.13(29)	7(178)	270
	300	RF	292	775	487	24	1.25(32)	9(229)	489
	600	RF/RJ-73	368	813	487	24	1.63(38)	11.75(298)	762
	900	RF/RJ-74	451	855	487	20	2.00(51)	14.5(368)	1783
	1500	RF/RJ-75	533	984	487	16	3.00(76)	44.25(1124)	2675
24 (600)	150	RF	222	813	579	20	1.25(32)	7.5(191)	520
	300	RF	318	914	579	24	1.50(38)	10.25(260)	756
	600	RF/RJ-77	438	940	579	24	1.88(48)	13.5(343)	1143
	900	RF/RJ-78	495	1041	579	20	2.50(64)	18.25(464)	1888
	1500	RF/RJ-79	559	1168	579	16	3.50(89)	48.5(1232)	3280

* 위 치수는 제품의 개선을 위해 변경될 수 있습니다.

Available Materials

Valve Body Material

- Cast Iron : A126. CI.B, A395, A536, A439. D2
- Carbon Steel : A216. WCB/C, A352. LCB/C
- Stainless Steel : A351. CF8/CF8M/CF3/CF3M/CG8M/CG3M
- Aluminium Bronze : BS1400, AB2, B148, C95400/C95800
- Duplex Stainless : A890. 4A/5A, CD4MCU
- Alloy Steel : Alloy20, CN3MN, Inconel 625, Hastelloy B/C, Monel 400/500
- Titanium : B348. Gr2/B381. F2, B367.Gr2/Gr3/Gr5

Valve Disc(Plate) Material

- Stainless Steel : A351. CF8/CF8M/CF3/CF3M/CG8M/CG3M
- Aluminium Bronze : BS1400. AB2, B148. C95400/C95800
- Duplex Stainless : A890, 4A/5A, CD4MCU
- Alloy Steel : Alloy20, CN3MN, Inconel 625, Hastelloy B/C, Monel 400/500
- Titanium : B348. Gr2/B381. F2, B367.Gr2/Gr3/Gr5

Valve Trim Material

- 410SS, 304SS, 316SS, 304L, 316L, Monel 400, Hastelloy B/C, Inconel 625, B348. Gr2/B381. F2

Valve Spring Material

- 304SS, 316SS, Inconel 625, Inconel X 750, TITANIUM

Valve Seat Material

- EPDM, BUNA-N, VITON, 410SS, STELLITE 6, AS PLATE

Body & Plate Material

FIG	MATERIAL	SPECIFICATION
Y1	Carbon Steel	ASTM 2A16WCB
Y2	Low Temp Carbon Steel	ASTM A352 LCB
Y3	Low Temp Carbon Steel	ASTM 352 LCC
Y4	High Temp Cr Mo Steel	ASTM A217 WC6
Y5	Low Alloy Steel	ASTM A487 GR 4N
Y6	Low Alloy Steel	ASTM A487 GR4C
Y7	410 Stainless Steel	ASTM A21 CA15
Y8	5% Cr Steel	ASTM A217 C5
Y9	9% Cr Steel	ASTM A217 C12
Y10	Low Temp 13% Cr 4% Ni	ASTM A352 CA6NM
Y11	316 Stainless Steel	ASTM A182 F316/A351 CF8M
Y12	316L Stainless Steel	ASTM A182 F316/A351 CF3M
Y13	347 Stainless Steel(High Temp)	ASTM A351 CF8C
Y14	22% Chrome Duplex	ASTM A890 4A
Y15	Ferrallium 255-3SC	UNS S32550
Y16	25% Chrome Super Duplex	UNS S32760
Y17	Alloy 825	UNS N008825
Y18	Alloy 625	ASTM A494 CW6MC
Y19	Hastelloy C276	UNS N10276/ASTM A494 CWRMN
Y20	Monel	ASTM A494-M35-2
Y21	Nicke Aluminium Bronze	BS 1400 AB2/ASTM B148 C95800
Y22	Chromium Molybdenum Steel	ASTM A217 GR WC9
Y23	3.5% Nickel Steel	ASTM A352 LC3
Y24	304 Stainless Steel	ASTM A351 CF8
Y25	304L Stainless Steel	ASTM A352 CF3
Y26	Alloy 20	ASTM A351 CN7M
Y27	317 Stainless Steel	ASTM A352 CG8M
Y28	Carbon Molybdenum Steel	ASTM A352 LC1
Y29	Gray Iron	ASTM A126 Class B
Y30	Ductile Iron	ASTM A395
Y31	To Be Specified	TO BE SPECIFIED

Material Temperature Limits

Upper Temperature Limits

Material	Upper Limit F(°C)
316SS	250(121)
Inconel X 750	1000(537)
Monel	400(204)
Hastelloy	800(426)
Alloy20	250(121)
Buna-N(NBR)	250(121)
EPDM	300(149)
PTFE	450(232)
Metal Overlay	As Body
Metal to Metal	As Body

Lower Temperature Limits

Material	Lower Limit F(°C)
WCB	-20(-28.9)
LCC	-50(-45.6)
CF8M	-450(-268)
Buna-N(NBR)	-70(-56.7)
EPDM	-14(-11.4)
Viton	-40(-40)
PTFE	-200(-129)
Metal to Metal	As Body

Valve Type

Valve Body Material

- Y1 WAFER
- Y2 FLANGED
- Y3 SOLID LUG

Body & Plate Material

FIG	MATERIAL	OPERATING TEMP RANG(°C)
Y1	Same as Body/Plate	-AS Body/Plate
Y2	410 Stainless Steel	-29 to 538
Y3	316 Stainless Steel	-267 to 815
Y4	316L Stainless Steel	-316L
Y5	Stellite	-267 to 815
Y6	Vition GLT	-30 to 204
Y7	Vition A	-40 to 204
Y8	Buna-N	-57 to 121
Y9	Neoprene	-40 to 121
Y10	Teflon	-129 to 232
Y11	EPDM	-10 to 110

Spring Material

FIG	MATERIAL
Y1	316 Stainless Steel
Y2	Inconel X750
Y3	Inconel 625
Y4	Monel K500
Y5	Carpenter 20
Y6	To be Specified

Special Features

FIG	MATERIAL
Y1	No Special Features
Y2	To be specified in order and inquiry text
Y3	Super Torque Spring
Y4	Low Torque Spring

Valve Type

Valve Body Material

- INCHES : For ANSI, AWWA & API Standars
- MILIMETERS : For KS, JIS Standars

Ansi/Jis Pressure

FIG	PRESSURE RATINGS
015	ANSI 150
030	ANSI 300
060	ANSI 600
090	ANSI 900
150	ANSI1500
K05	JIS, KS5K
K10	JIS, KS10K
K20	JIS, KS20K
K40	JIS, KS40K

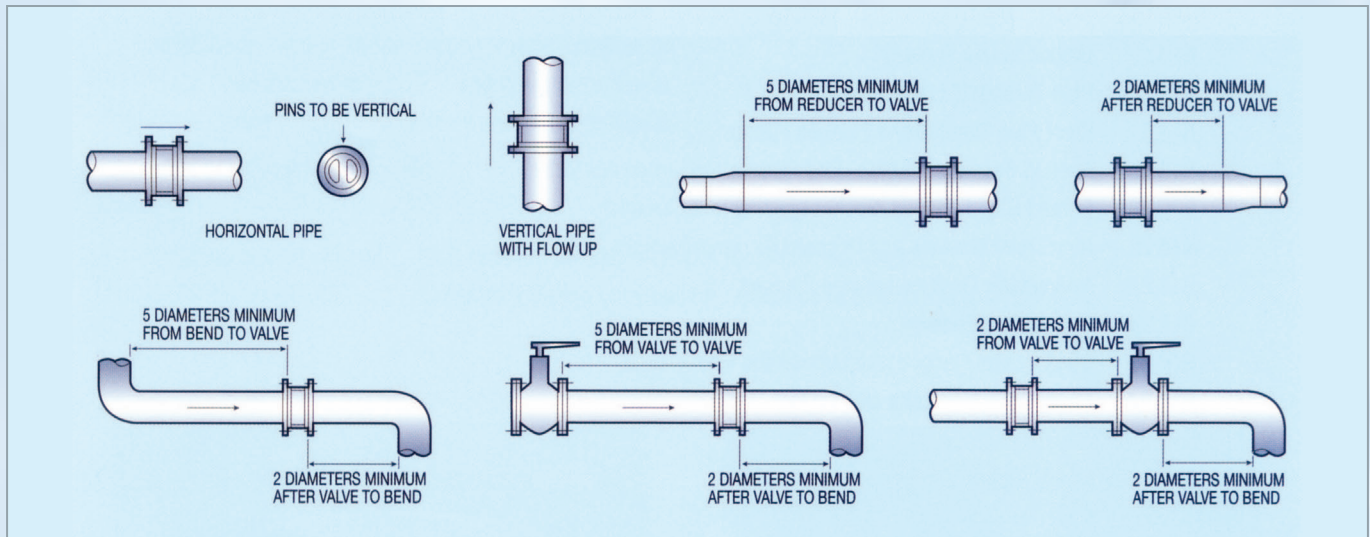
End Connection

FIG	CONNECTION
Y1	Raised Face 125-250 AARH
Y2	Stock Finish 250-500AARH
Y3	Ring Type Joint
Y4	Flat Face
Y5	Clamped End
Y6	To be Specified

Special Features

FIG	STANDARD
Y1	ANSI B16.47 Serise B
Y2	AWWA C207 Class D
Y3	AWWA C207 Class E
Y4	JIS 2210, KSB 1511

Best Practice Valve Installation



Valve Location And Orientation In Piping

Check valve should be installed if possible a minimum of 5 diameters from other line elements. i. e. fittings, pumps, valves, ect

Horizontal lines

Valve installed in horizontal lines must be bolted in place with the hinge post the vertical position. i. e. in such a manner that the hinge pin retainers are at the top and bottom of installed valve, perpendicular to the flow.

Vertical lines

In the upward position, no special attention needs to be given to the hinge position. The only exception being when mounted directly downstream of an elbow. In this case the hinge post should be mounted perpendicular to the outermost portion of an elbow.

Precautions

- Do not install HS VALVE dual plate check valves directly against another valve where by the check discharges downstream directly into the valve.
- Do not install the valve whereby it directly discharges downstream into tee or elbow fittings.
- HS VALVE dual plate check valves should not be used in severe pulsating services such as reciprocating compressor discharges.
- It is recommended that the check valves be installed a minimum of 3 diameters downstream of a pump or compressor

Maintenance

- HS VALVE dual plate check valves are permanently lubricated and normally require no routine maintenance.

Reconditioning

- Prior to disassembly, valve must be firstly isolated from system pressure and flow.
- Before attempting the shaft extraction, be sure to pressure a hand over the disc spring. Failure to do this may "Launching" itself unexpectedly once the shaft is pulled free of it.
- Use new replacement parts, as required and a liberal amount of general purpose grease on seals and machined mating surfaces. Reinsert the disc into the body cavity with the shaft holes inline with top and bottom shaft port. Slide the shaft into the body through the shaft opening on the side of the valve. Continue sliding the shaft through the disc, spring and remaining shaft port the opposite side of the body.

Note HS VALVE check valves are not piggable. ► Indicates direction of flow.

Hydrostatic Test Pressure (Ansi B16.34)

CLASS DISCRIPTION METRIAL	150LB					300LB				
	CWP	SHELL		SEAT		CWP	SHELL		SEAT	
	psi	psi	kgf/cm2	psi	kgf/cm2	psi	psi	kgf/cm2	psi	kgf/cm2
A216-WCB A350-LF2	285	452.5	32	313.5	21.1	740	1135	80	814	58
A351-CF3, CF3M, CF8, CF8M	275	437.5	31	302.5	21.3	720	1105	77	792	58

CLASS DISCRIPTION METRIAL	600LB					900LB				
	CWP	SHELL		SEAT		CWP	SHELL		SEAT	
	psi	psi	kgf/cm2	psi	kgf/cm2	psi	psi	kgf/cm2	psi	kgf/cm2
A216-WCB A350-LF2	1480	2245	158	1628	115	2220	3355	236	2442	172
A351-CF3, CF3M, CF8, CF8M	1440	2185	154	1584	112	2160	3265	230	2376	168

※ In case of gas closure test at gage pressure not less than 80psi(5.7kgf/cm2)

Valve Size : NPS

12 and Smaller
4 and Smaller

Pressure Class

400 and lower
ALL

Api 6D

1 Valve Pressure Class	2		3
	Minimum Test Pressure, psig(kgf/cm2)		
	Shell Hydrostatic		Seat Hydrostatic
150	425(30.3)		300(21.1)
300	1100(77.4)		800(56.3)
400	1450(102)		1060(74.6)
600	2175(153.0)		1600(112.5)
900	3250(228.6)		2400(168.8)
1500	5400(379.8)		4000(281.3)
2500	900(633.0)		6600(464.2)

The test pressure listed are NOT valve prerating pressure rating

Duration Of Required Test Pressure

Shell Test		Valve Closure Test	
Valve size, NPS	Test Time, Sec	Valve size, NPS	Test Time, Sec
2 and Smaller	15	2 and Smaller	15
2.5~8	60	2.5~8	30
10 and Larger	180	10~80	60
		10 and Larger	120

※ ANSI B16.34

1	2	3
Valve size, NPS	Shell test duration minutes	Seat test duration minutes
2 thru 4 (50 thru 100)	2	2
6 thru 10 (150 thru 200)	5	5
12 thru 18 (300 thru 450)	15	5
20 and large (500 and large)	30	5

※ API 6D

화성은 안전만을 연구합니다



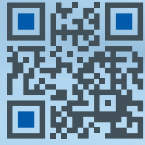
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