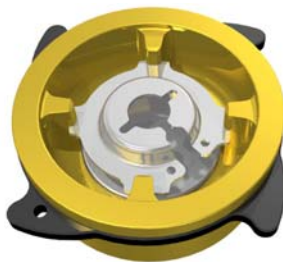


공급원 승인서 우성밸브



46, Noksansandan 335-ro, Gangseo-gu,
Busan, Korea

Tel. +82-51-831-125 Fax. +82-51-831-1201
www.pancheck.co.kr

목 차

1. 회사 소개
2. 사업자등록증/공장등록증명서
3. 신용평가서/납세증명서
4. 납품 실적
5. 인증서
6. 제품정보 및 카달로그

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6. 제품정보 및 카달로그

인사말...

당사는 1981 창업 후 1992년부터 약30년간 체크밸브만을 전문으로 개발,생산하여, 온 업체로서 국내외 산업,건축,조선등 다양한 분야에 많은 경험과 노하우를 가지고 있습니다.

당사의 고유 브랜드인 "판체크밸브" 는 원판을 뜻하는 DISC에서 따온 이름으로 발음과 표기가 용이하며, "모든, 널리"의 뜻을 가진 "PAN"으로 표기하여 범용화, 세계화의 의지를 나타내고 있습니다.

새로운 도전과 변신에 대한 고객과 여러분들의 변함없는 믿음과 격려에 진심으로 감사 드리며, 앞으로도 한결같이 신뢰와 존경을 받는기업으로 지속성장 발전해 나가겠습니다.



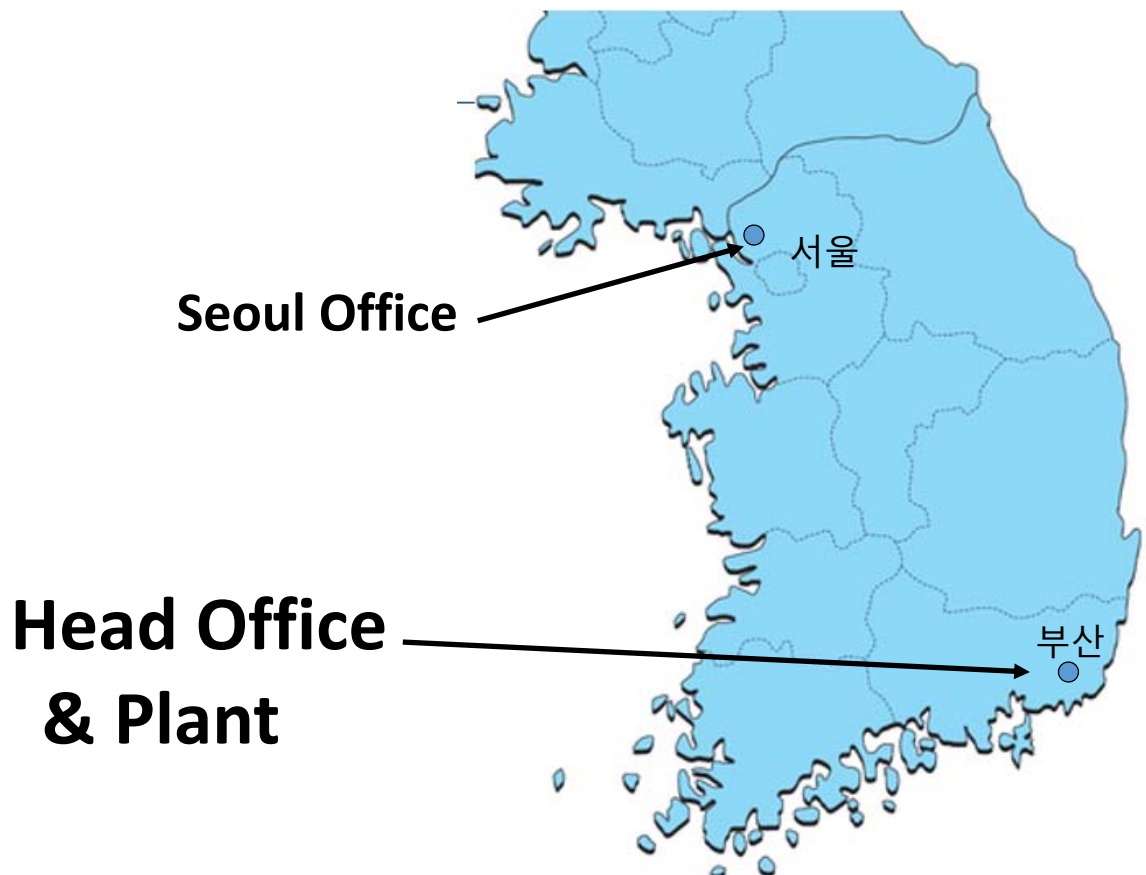
OH, CHAN SEA / C.E. O



회사 전경 및 위치



NAME	WOOSUNG VALVE CO.,LTD.
TEL.	82-51-831-1251
FAX.	82-51-831-1201
WEBSITE	www.pancheck.co.kr
E-MAIL	wsv@pancheck.co.kr



회사 연혁

1980's

1981. 4 창업(개인사업자) : 스팀트랩, 커플링 판매

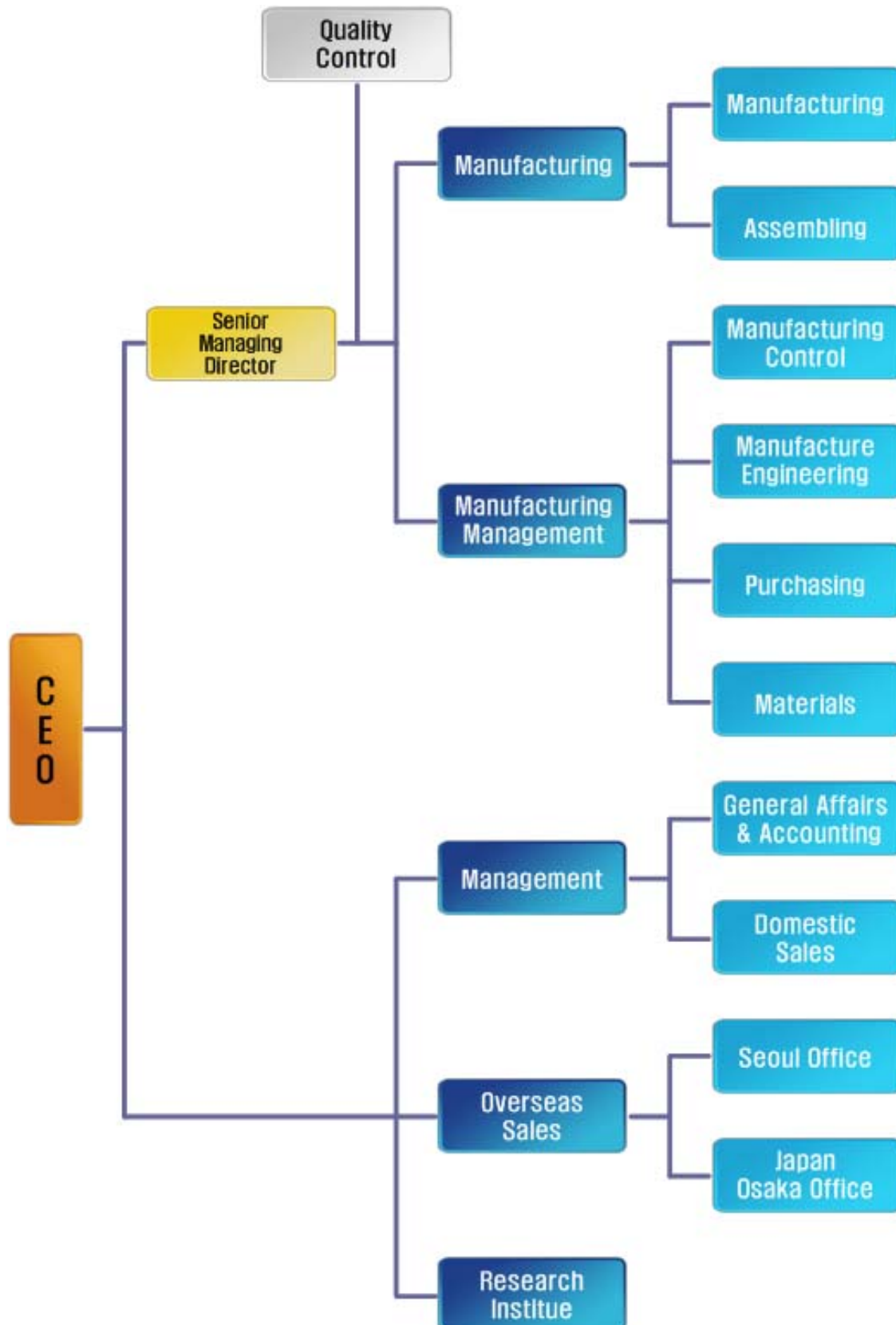
1990's

1992. 3 판 체크밸브 생산 시작 (PC, PA TYPE)

2000's

- 2001. 2 판 체크밸브 SWING PAN CHECK 생산
- 2004. 10 부산 녹산산업단지 공장 이전
- 2006. 2 상표등록 (등록 제04-0663823호) : 판체크밸브
- 2006. 10 법인전환
- 2008. 3 CE 인증 (2011, 2014, 2017 갱신)
- 2009. 1 부품. 소재 신뢰성 인증 : 지식경제부 기술 표준원
- 2010. 3 특허등록 (특허 제10-0890778호) : 조립식 체크밸브
- 2009. 9 ISO 9001:2008 인정 (2011, 2014 년 갱신)
- 2010. 8 안전인증서 획득 : 안전밸브 (한국산업안전공단)
- 2011. 4 사무동 증축 (4층, 565.35m²)
- 2011. 7 기업부설연구소 설립 (한국산업기술진흥협회 인정)
- 2012. 2 특허등록 (특허 제 10-1124532호) : 쿠션 체크밸브
- 2012. 11 위생안전기준 인증 (한국상하수도 협회)
공장 증축 (2층, 735.2m²)
- 2012. 12 선도기업 지정 (부산-2019 갱신)
- 2014. 6 수도용 적합인증서 (한국상하수도협회)
- 2014. 11 기술혁신형 중소기업 INNO-BIZ (중소기업청- 2017년 갱신)
- 2015. 1 강소기업 (고용노동부)
- 2015. 3 FIRE SAFETY CERT 인증
- 2015. 4 API 6D CERT 인증 (2018 갱신)
- 2015. 6 NIGC 업체 등록
- 2015. 7 특허등록 (특허 제 10-1535345호) : 스윙 체크밸브
- 2016. 11 밴더등록
Petronas /Malaysia, ICOFC /IRAN, NPC /IRAN ADNOC/ U.A.E
- 2017. 9 SIEMENS Approved Distribution Partner 지정
- 2018. 6 소재 부품 전문기업 지정 (산업통상자원부)

회사 조직도



장비 보유 현황

No.	Machine	Model	Maker
1	MCT	MYNX6520/50	DOOSAN
2	CNC	SKT 28	WIA
3	CNC	SKT 15	WIA
4	CNC	LYNX	DOOSAN
5	CNC	SKT100	WIA
6	LATHE	TIPL-5	SEIL
7	LATHE	TIPL-4	SEIL
8	MILLING M/C	HMTH-1100N	HWASHUN
9	RADIAL	PRD 1100	CHANGJO
10	UP-DRILLING	TDU 580	CHOKWANG
11	UP-DRILLING	JDU 580	CHOKWANG
12	UP-DRILLING	DBU 420	WOOCHANG
13	LAPPING M/C	DIA 1000	CLEANTECH
14	LAPPING M/C	DIA 600	KUMYOUNG
15	PILISHING M/C	DIA 600	YULSAN
16	TIG WELDER	WJ 500	YOOJIN
17	ARC WELDER	7.5 KW	GEOSUNG ELEC
18	SPOT WELDER	12.5 KVA	JINSUNG ELEC
19	SCREW COM	ASK35	KAESER
20	SCREW COM	AC-M10TAI	KYOUNGWON
21	500T HYDRAULIC PRESSURE	500T	PIA/KUMWOO
22	80T HYDRAULIC PRESSURE	80T	HANSAN
23	20T HYDRAULIC PRESSURE	20T	WOOSUNG

장비 보유 현황

No.	Machine	Model	Maker
24	AIR LEAKAGE TESTER	-	PIA
25	AIR LEAKAGE TESTER	-	INTECH
26	SAFETY VALVE TESTER	-	DAEHA
27	SAFETY VALVE (SR15) TESTER	-	CLEANTECH
28	3/2WAY VALVE TESTER	-	CLEANTECH
29	LEAK TESTER	-	CLEANTECH
30	ULTRASONIC CLEANSER	10KVA	HANSHIN
31	DOT MAKER	E7-P188	DEAJIN MARKING
32	DOT MAKER	E9-P122	DEAJIN MARKING
33	FORK LIFT	1.8 TON	DONGMYUNG HI
34	MARKING M/C	-	KUMYOUNG
35	EXHAUSTION	-	DONGIL
36	NONSLAM CHECK VALVE	-	CLEANTECH
37	HOIST	-	BANDO
38	MILLING M/C	-	DOOSAN
39	SET SCREW	AS20PFF	KYOUNGWON
40	DRY OVEN	UCH 50K	YOOCHANG
41	DUAL CHECK LAPPING M/C	-	CLEANTECH
42	LASER MARKING	JTY FIBE2	JTY SYSTEM
43	AIR LEAKAGE TESTER	-	PIA
44	CRYOGENIC TESTER	-	DEAHA
45	SAND BLASTER	-	WORLD BLASTER
46	MCT	MYNX5400/50	DOOSAN

국내 주요 고객 현황



GS E&C

POSCO E&C

DAELIM

HYUNDAI
ENGINEERING & CONSTRUCTION CO., LTD.

DAEWOO E&C

롯데건설
LOTTE ENGINEERING & CONSTRUCTION

SAMSUNG SAMSUNG ENGINEERING

SK E&C
EPC



KOMIPO
한국중부발전(주)

한국남동발전(주)
KOREA SOUTH-EAST POWER CO.

한국동서발전(주)
KOREA EAST-WEST POWER CO., LTD.

한국서부발전(주)
KOREA WESTERN POWER CO., LTD.

한국수력원자력

GJEC 군장에너지(주)

한국지역난방공사

Power Plant



DSME

HYUNDAI
HEAVY INDUSTRIES CO., LTD.

SAMSUNG
SAMSUNG HEAVY INDUSTRIES

stx
Heavy Industries

DOOSAN 두산엔진

Shipyard



KCC

한화테크윈

한화파워시스템

HYOSUNG

Hyundai Oilbank

HYUNDAI STEEL

SAMSUNG BIOLOGICS

LG Display

대성산업가스주식회사
DAESUNG INDUSTRIAL GASES CO., LTD.

General Plat



WILO

HYOSUNG GOODS SPRINGS PUMPS & WATER

Hanil

Pump



KAC 한국공항공사
KOREA AIRPORTS CORPORATION

Airport

해외 주요 고객 현황


سابك
sabik


مرافق
MARAFIQ


SWEC
The first IWPP in the Kingdom


PETRONAS


Petrofac


IHI


MITSUBISHI
HEAVY INDUSTRIES, LTD.


CHIYODA
CORPORATION


NIGC


econosto®


Eni


N.I.O.C.


شركة معادن للألمنيوم
Ma'aden Aluminium Company (MAC)


Hitz
Hitachi Zosen


P.O.G.C.


أدنوك
ADNOC

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5. 인증서
6. 제품정보 및 카달로그

사업자등록증

(법인사업자)

등록번호 : 606-81-99538

법인명(단체명) : 우성밸브 주식회사

대표자 : 오찬세

개업년월일 : 2006년 10월 01일 법인등록번호 : 180111-0569103

사업장소재지 : 부산광역시 강서구 녹산산단 335로 46 (송정동)

본점소재지 : 부산광역시 강서구 녹산산단 335로 46 (송정동)

사업의종류 : 업태 제조서비스 종목 밸브
기타엔지니어링

교부사유 : 재발급

전자세금계산서 전용메일 : wsvav @ naver. com

직통번호 : 070-4335-8345

사업자단위과세 적용사업자 여부: 여() 부()

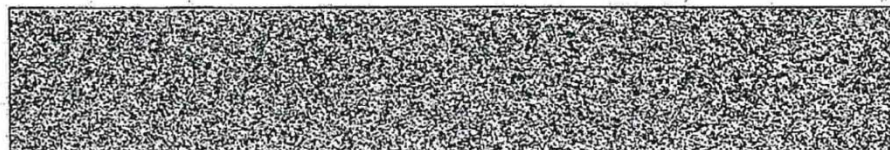
전자세금계산서 전용메일주소:

2012년 12월 27일

북부산세무서장



NTS  국세청



■ 산업집적활성화 및 공장설립에 관한 법률 시행규칙 [별지 제8호의2서식] <개정 2012.10.5>

공장설립은라인지원시스템(www.femis.go.kr)에서도 신청할 수 있습니다.

공장등록증명(신청)서

※ 바탕색이 어두운 난은 신청인이 적지 않으며, []에는 해당되는 곳에 √표를 합니다.

(앞쪽)

접수번호	접수일	처리기간	즉시			
신청인	회사명 우성밸브(주)	전화번호 051) 831-1251				
	대표자 성명 오찬세	생년월일(법인등록번호) 180111-0569103				
	대표자주소(법인소재지) 부산광역시 강서구 녹산산단335로 46 (송정동)					
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">공장소재지 도로명 : 부산광역시 강서구 녹산산단335로 46 (송정동) 지번 : 부산광역시 강서구 송정동 1629-1번지</td> <td style="width: 10%;">지목 공장용지</td> <td style="width: 30%;">보유구분 자가 [√] 임대 []</td> </tr> </table>			공장소재지 도로명 : 부산광역시 강서구 녹산산단335로 46 (송정동) 지번 : 부산광역시 강서구 송정동 1629-1번지	지목 공장용지	보유구분 자가 [√] 임대 []
공장소재지 도로명 : 부산광역시 강서구 녹산산단335로 46 (송정동) 지번 : 부산광역시 강서구 송정동 1629-1번지	지목 공장용지	보유구분 자가 [√] 임대 []				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">공장등록일 2007-04-03</td> <td style="width: 33%;">사업시작일 1981-04-06</td> <td style="width: 34%;">종업원수 남:17 여:6</td> </tr> </table>		공장등록일 2007-04-03	사업시작일 1981-04-06	종업원수 남:17 여:6	공장의 업종(분류번호) 탭, 밸브 및 유사장치 제조업 (29133)	
공장등록일 2007-04-03	사업시작일 1981-04-06	종업원수 남:17 여:6				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">공장부지면적 2,223.500 m²</td> <td style="width: 33%;">제조시설면적 1,475.500 m²</td> <td style="width: 34%;">부대시설면적 932.550 m²</td> </tr> </table>		공장부지면적 2,223.500 m ²	제조시설면적 1,475.500 m ²	부대시설면적 932.550 m ²		
공장부지면적 2,223.500 m ²	제조시설면적 1,475.500 m ²	부대시설면적 932.550 m ²				

등록 조건	유효기간 : - - - -	
등록변경 · 증설등 기재사항 변경내용(변경 날짜 및 내용)		공장관리번호 : 264402011234360

[증설승인] 등록일 : 2013-05-21

「산업집적활성화 및 공장설립에 관한 법률 시행규칙」 제12조의3에 따라 위와 같이 공장등록증명서를 신청합니다.

2019년 2월 21일

신청인

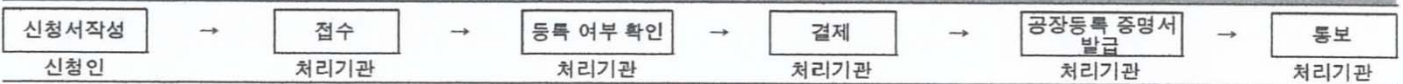
우성밸브(주) (서명 또는 인)

부산광역시 강서구청장

귀하

구비서류	없음	수수료
		1000 원

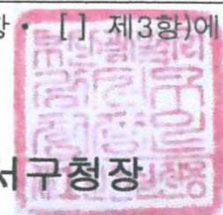
처리절차



「산업집적활성화 및 공장설립에 관한 법률」 제16조([] 제1항 · [] 제2항 · [] 제3항)에 따라 위와 같이 등록된 공장임을 증명합니다.

2019년 2월 21일

부산광역시 강서구청장



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신용평가서

CREDIT RATING

우성밸브(주) | 606-81-99538 | 오찬세 | ECC201904019427

DNA PLUS

기업정보

기업체명	우성밸브(주) (WOOSUNG VALVE CO.,LTD.)			신용등급
사업자등록번호	606-81-99538	법인번호	180111-0569103	BB
본사주소	(46754) 부산광역시 강서구 녹산산단335로 46 (송정동)			
대표자	오찬세			
전화번호	051-831-1251			
산업분류	탭, 밸브 및 유사장치 제조업			현금흐름등급
설립일	2006년 09월 28일			A
재무결산일	2018년 12월 31일	보고서 최종수정일	2019년 04월 29일	
신용등급 유효기간	2019년 04월 29일~2020년 04월 28일			

신용등급이력

결산기준일	정기평가			하반기평가			Watch 등급
	평가일	신용등급	현금흐름등급	평가일	신용등급	현금흐름등급	
2018/12/31	2019/04/29	BB	A	-	-	-	정상 2019년 04월 21일 현재
2017/12/31	2018/05/23	BB	A	2018/09/05	BB	A	
2016/12/31	2017/12/20	BB+	A	2017/12/21	BB+	A	

주요 경영 현황

주요제품	경영정보		판매처(%)		주요 주주(%)	
체크밸브	종업원	36 명	한열사	12	오찬세	35.0
안전밸브	기업규모	소기업	월로펌프(주)	9	장위화	25.0
기타 밸브(상품) 등	기업형태	비외감	(주)문화지엔코	7	오민석	20.0
기타	자본금	100백만원	한화파워시스템	5	오우석	20.0
	주거래은행	부산은행 녹산중앙지점	삼성비케이	5		

주요 재무 현황

(단위:백만원)

결산기준일	총자산	부채총계	자본총계	매출액	영업이익	당기순이익
2018/12/31	8,420	2,850	5,570	7,204	522	471
2017/12/31	8,878	3,629	5,249	7,873	573	600
2016/12/31	7,056	2,307	4,749	6,053	534	649

(단위:%)

결산기준일	매출성장율	영업이익율	순이익율	유동비율	부채비율	차입의존도
2018/12/31	-8.5	7.3	6.5	280.7	51.2	18.0
2017/12/31	30.1	7.3	7.6	137.2	69.1	17.4
2016/12/31	3.1	8.8	10.7	216.5	48.6	19.2

납세증명서



문서확인번호 : 1583-7340-2606-4620

지방세 납세증명(신청)서 Local Tax Payment Certificate(Application)

(1/1)



발급번호 Issuance Number	019615	접수일시 Time and Date of receipt	2020-03-09 14:31:47	처리기간 Processing Period	즉시 Immediately
납세자 Taxpayer	성명(법인명) Name(Name of Corporation)	주민(법인, 외국인)등록번호 Resident(Corporation, Foreign)Registration Number			
	주소(영업소) Address(Business Office)	180111-0569103			
	전화번호(휴대전화) Phone number(Cellular phone number)	051-831-1251			
	우성밸브				
증명서의 사용 목적 Purpose of Certificate	<input type="checkbox"/> 대금수령 Receipt of payment	대금 지급자 Payer			
	<input type="checkbox"/> 해외이주 Emigration	이주번호 Emigration No.	해외이주 신고일 Date of the Report	년 월 일 yyyy mm dd	
	<input type="checkbox"/> 부동산 신탁등기 Registration for real estate trust	신탁 부동산의 표시 (소재지, 건물명칭 및 번호) Information of real estate trust (Location, Building name and number)			
	<input checked="" type="checkbox"/> 그 밖의 목적 Others	제출용			
증명서 신청부수 Copies of Certificate Needed					1 부 Copy(Copies)

「지방세징수법」 제5조 및 같은 법 시행령 제6조제1항에 따라 발급일 현재 징수유예등 또는 체납처분유예역을 제외하고는 다른 체납액이 없음을 증명하여 주시기 바랍니다.

I request to certify that I have no delinquent taxes except for the above-mentioned suspension of tax collection or suspension of disposition of delinquent tax as of the issued date of this certificate, in accordance with the provision of the Article 5 of Collection Act for Local Taxes and Article 6(1) of the Enforcement Decree of Collection Act for Local Taxes.

2020년(yyyy) 03월(mm) 09일(dd)
신청인(납세자) 우성밸브 (서명 또는 인)
Applicant(Taxpayer) (Signature or Stamp)

징수유예등 체납처분유예의 명세		Suspension of Tax Collection or Suspension of Disposition of Delinquent Tax				
유예종류 Type of taxes suspended	유예기간 Period of taxes suspended	과세연도 Tax Year	세 목 Tax items	납부기한 Due date for payment	지방세 Tax Amount	가산금 Penalties

- 해당 사항 없음(None) -

「지방세징수법」 제5조 및 같은 법 시행령 제6조제2항에 따라 발급일 현재 위의 징수유예등 또는 체납처분유예역을 제외하고는 다른 체납액이 없음을 증명합니다.

I hereby certify that I have no delinquent taxes except for the above-mentioned suspension of tax collection or suspension of disposition of delinquent tax as of the issued date of this certificate, in accordance with the provision of the Article 5 of Collection Act for Local Taxes and Article 6(2) of the Enforcement Decree of Collection Act for Local Taxes.

- 증명서 유효기간 : 2020년(yyyy) 04월(mm) 08일(dd)
Period of Validity
 - 유효기간을 정한 사유 : 지방세징수법 시행령 제 7조(납세증명서의 유효기간)
Reason for determining the validity date
- 부산광역시 감서구청장 () 03월(mm) 09일(dd)
The Chief of Gangseo District'

◆ 본 증명서는 인터넷으로 발급되었으며, 정부24(gov.kr)의 인터넷발급문서진위확인 메뉴를 통해 위·변조 여부를 확인할 수 있습니다. (발급일로부터 90일까지)

목 차

1. 회사 소개
2. 사업자등록증/공장등록증명서
3. 신용평가서/납세증명서
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6. 제품정보 및 카달로그

SUPPLY RECORD

WOOSUNG VALVE CO., LTD.

No.	Year	BUYER	END CUSTOMER or PROJECT NAME	SUPPLIES	QTY	SERVICE AREA	COUNTRY
1	Since 2009	Samsung Techwin	Samsung Techwin	Dual check & Pan check valve 25A(1")~300A(24") SS304	Over 300 PCS /Month	Turbo Compressor	WORLDWIDE
2	Since 2009	LOT Vacuum	SAMSUNG (Semiconductor)	Vacuum Check Valve Clamp Type NW40-40, 40-50, 65-65	Over 50 PCS/ month	Vacuum Pump	KOREA
3	Since 1997	Wilo Pump	Wilo Pump	Pan check valve 25A(1")~300A(12") SS304	Over 500 / Month	PUMP	WORLDWIDE
4	2018. 12	SBM OFFSHORE	KIKEH FPSO PROJECT	DUAL CHECK LUG 4" 2500LB LCC	2EA	OFFSHORE	MALAYSIA
5	2018. 12	DOOSAN HEAVY INDUSTRIES CO. (PK)	GOSUNG THERMAL POWER PLANT	DUAL CHECK 4" ~12" 150LB WCB	28EA	POWER PLANT	KOREA
6	2018. 12	DOOSAN HEAVY INDUSTRIES CO. / KC COTTRELL	SHINSEOCHEON PROJECT (KOMIPO)	SWING PAN CHECK 24" 150LB	4EA	POWER PLANT	KOREA
7	2018. 12	HUVIS WATER / KOMIPO	SHINGORI (SKR 5&6) PROJECT	DUAL CHECK 2"-6" 150LB ~ 600LB, WCB, CF8M	70EA	POWER PLANT	KOREA
8	2018. 12	HYUNDAI ENGINEERING	MELAKA PROJECT	DUAL CHECK 3"~8" 150LB WCB, A536 + RUBBER LINING	18EA	REFINERY	MALAYSIA
9	2018. 12	E-TECH / HYUNDAI OIL BANK	MX REVAMP & ORU PROJECT	DUAL CHECK 2" ~8" 300LB~600LB MONEL	3EA	OIL & GAS	KOREA
10	2018. 12	LOTTE E&C	LMAA 3 PROJECT	DUAL CHECK 3. 4" 150LB	28EA	CHEMICAL	KOREA
11	2018. 12	E-TECH E&C	HSVC(HYOSUNG VINA)1 PP4 PROJECT	DUAL CHECK 2" ~ 8" 150LB ~600LB	29EA	CHEMICAL	VIETNAM
12	2018. 10	WOOD GROUP	SOHADI FPSO PROJECT	DUAL CHECK 10" 600LB CF8M	2EA	OIL & GAS	MALAYSIA
13	2018. 10	EIED (POGC) / BUSHEHER PETROCHEMICAL COMPANY	GAS SWEETENING, SULPUR RECOVERY, C2 RECOVERY PIPELINE PROJECT	DUAL CHECK 20" 900LB RTJ CF8M	4EA	OIL & GAS	IRAN
14	2018. 03	DOOSAN HEAVY INDUSTRIES CO. (PK)	SHINSEOCHEON PROJECT (KOMIPO)	DUAL CHECK 6" ~ 24" 150LB WCB	16EA	POWER PLANT	KOREA
15	2018. 03	HUVIS WATER / HYUNDAI ENGINEERING	UZBEKISTAN GAS TO LIQUID PROJECT	DUAL CHECK 2"~10" 150LB	42EA	OIL & GAS	UZBEKISTAN
16	2017. 08	BUSHER PETROCHEMICAL COMPANY	GAS SWEETENING, SULPHUR RECOVERY PROJECT	DUAL CHECK 900LB 24" CF8M	4	OIL& GAS	KOREA
17	2017. 08	SCORE MALAYSIA	RAPID PROJECT	DUAL CHECK150LB/300LB/600LB WCB	13	OIL& GAS	MALAYSIA
18	2017. 08	DALIM (KOMIPO)	SHINSEOCHEON PROJECT	SWING CHECK 150LB A106 8", 10"	36	POWER PLANT	KOREA
19	2017. 07	DOOSAN HEAVY INDUSTRIES CO.	SHONGHAU PH2 PROJECT	DUAL CHECK 150LB 3" ~ 24"	12	POWER PLANT	VIETNAM
20	2017. 07	DOOSAN HEAVY INDUSTRIES CO.	VT4 THERMAL POWER PLANT	DUAL CHECK 150LB 3" ~ 24" WCB+RUBBER LINING	5	COAL FIRE POWER PLANT	VIETNAM
21	2017. 07	DOOSAN HEAVY INDUSTRIES CO.	FADHILI PROJECT	DUAL CHECK 150LB 3" ~ 6" CF3M	36	POWER PLANT	UAE
22	2017. 06	HYOSUNG	PP3 PJT	DUAL CHECK 600LB 2"-8" WCB	64	Petrochemical	KOREA
23	2017. 06	HYOSUNG	PP3 PJT	TILTING CHECK 150LB 16" WCB	5	STEEL	KOREA
24	2017. 06	E-TECH	HANWHA CHEMICAL YEOSU PLANT	DUAL CHECK 150LB CF8 /LCB / MONEL	10	CHEMICAL	KOREA
25	2017. 06	DAESUNG INDUSTRIAL GAS CO., LTD.	ULSAN KOREA ZINC PLANT	DUAL CHECK 20K 350A CF8 PTFE	4	GAS	KOREA
26	2017. 06	SK AIR GAS	M15 PH1 PROJECT	NOZZLE CHECK 10K 500A CF8 PTFE	4	GAS	KOREA
27	2017. 06	SK AIR GAS	M15 PH1 PROJECT	DUAL CHECK 10K 200A ~ 500A CF8 PTFE	35	GAS	KOREA
28	2017. 05	DOOSAN HEAVY INDUSTRIES CO.	GRATI PROJECT	DUAL CHECK 300LB 18" WCB BW END	3	POWER PLANT	UAE
29	2017. 05	DOOSAN HEAVY INDUSTRIES CO.	SHONGHAU PH1 PROJECT	DUAL CHECK 150LB 3" ~ 24"	12	POWER PLANT	VIETNAM
30	2017. 03	HYUNDAI STEEL	HYUNDAI STEEL / DANGJIN	NOZZLE CHECK 10K 350A SCPH2	4	STEEL	KOREA
31	2017. 03	KOREA DISTRICT HEATING CORP.	HWASUNG DONGTAN / YOUNGIN - BORA	NONSLAM CHECK WITH CYLINDER & WEIGHT 150LB/ 300LB 450A-750A	22	ENERGY PLANT	KOREA
32	2017. 01	HYUNDAI STEEL	HYUNDAI STEEL / DANGJIN	NOZZLE CHECK 10K 350A SCPH2	4	STEEL	KOREA
33	2016. 06	HYUNDAI STEEL	HYUNDAI STEEL / SEOSAN	NOZZLE CHECK JIS 10K / 16K 200A SCPH2	8	STEEL	KOREA
34	2016. 05	TEHRAN SUFA	PETRO PARS	NOZZLE CHECK 300LB 24" WCB	4	OIL& GAS	IRAN
35	2016. 02	HUVIS WATER	YOUNGNAM CCGP	DISCH CHECK VALVE 150LB CF8	20	POWER PLANT	KOREA
36	2016. 01	SK HYNIX	SKH-1 N2 PLANT	NOZZLE CHECK 10K 300A SCS13	2	GAS	KOREA
37	2018. 12	DAELIM INDUSTRIAL CO.	OMSK REFINERY PROJECT	NONSLAM NOZZLE CHECK 2" ~14" PN40	10EA	REFINERY	RUSSIA
38	2018. 11	JX NIPPON	JX NIPPON OIL & GAS PROJECT	NONSLAM NOZZLE CHECK 10" 900LB LCC	2EA	OIL & GAS	MALAYSIA
39	2018. 05	DAELIM INDUSTRIAL CO.	OMSK REFINERY PROJECT	NONSLAM NOZZLE CHECK 2" ~ 6" PN40~1500LB	2EA	REFINERY	RUSSIA
40	2018. 01	PETRONAS / CARMIN	DULANG B PIPING UPGRADE D.E, F PKG	SWING CHECK 10", 12" 900LB A890-4A	2EA	OIL & GAS	MALAYSIA
41	2017. 09	SK AIR GAS	SK HYNIX M14-2A PROJECT	DUAL CHECK 10K 350A SCS13 PTFE SEAT	2	GAS	KOREA
42	2017. 08	HANWHA TECHWIN	YUNNAN YUKUN STEEL #2-1	NOZZLE CHECK 300LB 6" CF8	2	STEEL	CHINA
43	2017. 08	GUNJANG ENERGY	GE4	NOZZLE CHECK JIS 20K 200A SCPH2	18	POWER PLANT	KOREA
44	2017. 07	SK AIR GAS	SK HYNIX CDA PROJECT	DUAL CHECK 140LB 4" CF8M	2	GAS	KOREA
45	2017. 07	SK AIR GAS	SK HYNIX M14-2A PROJECT	NOZZLE CHECK 150LB~300LB 350A, 450A CF8 / PTFE SEAT	4	GAS	KOREA
46	2017. 07	SK AIR GAS	SK HYNIX M14-2A PROJECT	DUAL CHECK 20K 350A SCS13	20	GAS	KOREA
47	2017. 07	CJ E&C	CJ MALAYSIA M3 PROJECT	SWING PAN CHECK 150LB 2" ~24" WCB / CF8	244	PLANT	MALAYSIA
48	2017. 06	SAMSUNG BIO LOGICS	SONGDO BIO LOGICS - N PROJECT	NOZZLE CHECK 10K 650A SCPH2	6	PETROCHEMICAL	KOREA
49	2017. 05	DAEWOO E&C	POCHEON MINJA PROJECT	SWING PAN CHECK 150LB 6" WCB	2	POWER PLANT	KOREA
50	2017. 05	CJ E&C	CJ MALAYSIA M3 PROJECT	SWING PAN CHECK 150LB 2" ~12" WCB	45	PLANT	MALAYSIA
51	2017. 04	KOREA SOUTH EAST POWER CO.	SOUTH EAST POWER CO- YEOSU	SWING PAN CHECK 10K 300A CF8	2	POWER PLANT	KOREA
52	2017. 04	SUN KOREA	IHI HEAVY INDUSTRIES -FPSO H5003	SWING PAN CHECK 5K 100A	7	FPSO	JAPAN
53	2017. 04	KMC	HYUNDAI HEAVY INDUSTRIES	SWING PAN CHECK 10K 200A CF8M	37	SHIP BUILDING	KOREA
54	2017. 03	JEONGWOO INDUSTRIAL	LAS PAILAS 2 PROJECT	SWING PAN CHECK 150LB / 300LB 3" ~4"	8	POWER PLANT	COSTA RICA
55	2017. 02	POGC	PETROCHEMICAL	DUAL CHECK 900LB 3" ALLOY 825	8	OIL & GAS	IRAN
56	2017. 02	ALIOGAZ KUKUH - TALISMAN ENERGY	KNDP-A PLATFORM PROJECT	NOZZLE CHECK 900LB 6" WCB	2	FPSO	MALAYSIA
57	2017. 02	JTS (KOMIPO)	JEJU THERMAL POWER PLANT (JEJU HRSG)	SWING PAN CHECK 300LB 24" CF8	4	POWER PLANT	KOREA
58	2017. 01	KEPCO- YEOSU	SOUTH EAST POWER CO- YEOSU	SWING PAN CHEK 10K 150A	2	POWER PLANT	KOREA
59	2016. 12	DAESUNG INDUSTRIAL GAS CO., LTD.	ULSAN KOREA ZINC PLANT	NOZZLE CHECK 300LB 8" CF8 / PTFE SEAT	2	STEEL	KOREA
60	2016. 12	ARMSTRONG KOREA	BASF PROJECT	DISC CHECK VALVE 150LB CF8 /CF8M/CF3M	148	Chemical	KOREA
61	2016. 09	GUNJANG ENERGY	SEAGULL PROJECT	NOZZLE CHECK 150LB 6" WCB /CF8	8	POWER PLANT	KOREA
62	2016. 08	ALIOGAZ KUKUH - PETRONAS	SELIGIA PROJECT	NOZZLE CHECK 300LB 18" WCB	2	FPSO	MALAYSIA
63	2016. 08	CHEVRON	FPSO PROJECT	SWING PAN CHEK 150LB 12" CF8M	1	FPSO	AUSTRALIA
64	2016. 07	Hanwha E&C (PK VALVE)	CA5 EXPANSION PROJECT	DUAL CHECK 150LB 2"~6" MONEL	4	Petrochemical	KOREA
65	2016. 07	HYOSUNG	PP3 PJT	DUAL CHECK 150LB~600LB 3"~ 16"	167	Petrochemical	KOREA
66	2016. 07	HANWHA CHEMICAL	YEONCHON	DUAL CHECK 150LB~300LB 2"~30"	3	Petrochemical	KOREA
67	2016. 07	DAEWOO E&C	YONGNAM CCGP	SWING PAN CHECK 150LB 4" WCB	2	POWER PLANT	KOREA
68	2016. 06	AIR PRODUCTS KOREA	TANGJUNG A3 EXPANSION PROJECT	DUAL CHECK 150LB 14" MONEL	4	GAS	KOREA
69	2016. 06	Samsung Engineering	PYOUNGTAEK	DUAL CHECK 150LB30"	1	Semiconductor	KOREA
70	2016. 06	K-WATER		DUAL CHECK 150LB 16"	7	Water Treatment	KOREA
71	2016. 06	Samsung Engineering	ASAN TANGJUNG	NOZZLE CHECK 20K 500A CF8	12	SEMICONDUCTOR	KOREA
72	2016. 06	E TECH E&C	P9 C PROJECT	DUAL CHECK 150LB 2"~6"	4	Petrochemical	KOREA
73	2016. 06	LG PETROCHEMICAL	YEONCHON OXY#5 GO2&GNS GAS PLANT	NOZZLE CHECK 150LB 4" CF8 / PTFE SEAT	3	GAS	KOREA
74	2016. 06	KOSPO	KOREA SOUTHERN POWER CO.	NOZZLE CHECK 14" 150LB CF8	3	POWER PLANT	KOREA
75	2016. 05	KUNO CORPORATION	IGAWA STEEL	TILTING CHECK 10K 50A~300A	168	STEEL	JAPAN
76	2016. 05	Samsung Engineering	K PROJECT (ASAN TANGJUNG)	DUAL CHECK 10K 300A SCPH2	18	Semiconductor	KOREA
77	2016. 05	KOMIPO	BORYOUNG	DUAL CHECK 10K 400A CF8	2	Power Plant	KOREA
78	2016. 05	E TECH E&C	SUNNY PJT	TILTING CHECK 150LB 2.5"~ 6"	8	Petrochemical	KOREA

SUPPLY RECORD

WOSUNG VALVE CO., LTD.

No.	Year	BUYER	END CUSTOMER or PROJECT NAME	SUPPLIES	QTY	SERVICE AREA	COUNTRY
79	2016.05	CJ E&C	BOTSWANA PROJECT	DUAL CHECK 150LB 6" ~10"	21	Petrochemical	AFRICA
80	2016.05	TEHRAN SUFA	PETRO PARS	DUAL CHECK 5" 150LB CF8	8	OIL & GAS	IRAN
81	2016.04	AIR PRODUCTS KOREA	CHEONAN STECO PROJECT	DUAL CHECK 150LB 4"~ 12"	4	GAS	KOREA
82	2016.04	HUVIS WATER	YONGNAM CAPP	DUAL CHECK 150LB 4"	19	WATER TREATMENT	KOREA
83	2016.04	SK E&C	MIRAE INCHEON ENERGY	DUAL CHECK 150LB 8"	4	OIL & GAS	KOREA
84	2016.02	POSCO E&C	ULSAN 3 GORO	DUAL CHECK 20K 350A	2	STEEL	KOREA
85	2016.02	SAUDI BASIC INDUSTRIES	SABIC	DUAL CHECK 150LB 2" ~4" CF8	10	Petrochemical	SAUDI ARABIA
86	2015.12	HANWHA TECHWIN	KOREA MIDLAND POWER CO., LTD. (KOMIPO) - SEOUL COMBINED CYCLE POWER	NON SLAM NOZZLE CHECK 150~ 300LB 2"-8" CF8	12	POWER PLANT	KOREA
87	2015.12	HANWHA TECHWIN	HORMOZGAN STEEL	DUAL CHECK 300LB ~600LB 6"~12"	4	ENERGY PLANT	IRAN
88	2015.12	DOOSAN HEAVY INDUSTRIES CO.	KOREA MIDLAND POWER CO., LTD. (KOMIPO) - SEOUL COMBINED CYCLE POWER	DUAL CHECK 150LB 6"-8"	30	Power Plant	KOREA
89	2015.12	DOOSAN HEAVY INDUSTRIES CO.	HWASUNG DONGTAN POWER PLANT	DUAL CHECK 150LB 6"-8"	30	Power Plant	KOREA
90	2015.12	DAESUNG INDUSTRIAL GAS CO., LTD.	SKH-I PROJECT N2 PLANT PROJECT	NOZZLE CHECK JIS 10K 300A CF8 PTFE SEAT	2	GAS	KOREA
91	2015.12	SUN KOREA	IHI Heavy Industrial - FPSO	DUAL CHECK 150LB 2"-6" CF8M	58	OFF SHORE	MALAYSIA
92	2015.12	KOMIPO	BORYOUNG #1~ #8	DUAL CHECK 150LB 2.5" CF8	20	Power Plant	KOREA
93	2015.12	POSCO E&C	KWANGYANG 7 GL NEW PROJECT	NOZZLE CHECK 10K 200A	1	STEEL	KOREA
94	2015.12	HYUNDAI STEEL	HYUNDAI STEEL / SEOSAN	NOZZLE CHECK JIS 10K/ 16K 100A / 150A / 200A/ 250A / 300A SCPH2	18	STEEL	KOREA
95	2015.11	PEACH VALVE	GHANA OCTP PROJECT	TILTING CHECK 150LB 6"-8" WCB /CF3M	4	OFFSHORE	GHANA
96	2015.10	DOOSAN HEAVY INDUSTRIES CO.	VT4 THERMAL POWER PLANT	DUAL CHECK 150LB 2" ~12"	52	Power Plant	VIETNAM
97	2015.09	WP INTERNATIONAL CO., LTD.		TILTING CHECK 150LB 2"-8" WCB / CF8M	23	WATER TREATMENT	SINGAPORE
98	2015.08	E TECH E&C	SEYANG POLYMER ANSUNG PLANT	DUAL CHECK 150LB 2" ~4"	8	CHEMICAL	KOREA
99	2015.05	KVC CO., LTD.	WIKA MARTINDOK PROJECT	DUAL CHECK 900LB 2" ~12" WCB / FOOT VALVE 150LB 2" ~ 3" WCB/CF8M	14	OIL & GAS	INDONESIA
100	2015.05	ETECH E&C CO., LTD.	L PROJECT (SEYANG POLYMER)	DUAL CHECK 150LB 6" WCB	5	CHEMICAL	ANSUNG / KOREA
101	2015.05	Samsung Engineering	BOLIVIA YPFB AMMOINA/ UREA PROJECT	FOOT VALVE 150LB 20" CF8M	5	CHEMICAL	BOLIVIA
102	2015.04	Samsung Techwin	RABIGH 2 PROJECT	DUAL CHECK 300LB 8"/ 32"	7	Desalination	SAUDI ARABIA
103	2015.04	HYUNDAI STEEL	C3 SCARFING PROJECT	DUAL CHECK JIS 10K 80A ~600A FC200/ SCS13	47	WATER TREATMENT	KOREA
104	2015.04	HYUNDAI STEEL	COD / COG GAS	DUAL CHECK 150LB ~600LB 4" ~28" WCB	51	HYDROGEN GAS	KOREA
105	2015.04	ETECH E&C CO., LTD.	GE4 (SEAGULL) PROJECT- ADDITIONAL	TILTING CHECK 150LB ~600LB BW END 300LB 10" ~24"	11	ENERGY PLANT	KOREA
106	2015.04	LEYBEYKER CO., LTD.	LBPO PROJECT	TILTING CHECK 150LB 700A A536+ RUBBER LINING	2	SEA WATER	MALAYSIA
107	2015.03	POSCO E&C	KWANGYANG 7 GL NEW PROJECT	DUAL CHECK JIS 10K 80A ~700A FC200/ SCS13	31	ENERGY PLANT	KOREA
108	2015.02	FLOWONE	KARAH PROJECT	DUAL CHECK 150LB ~900LB 30" / 32" CF8M / WCB	4	Power Plant	INDONESIA
109	2015.01	HYORIM Industrial Co., Ltd.	SARULLA GEOTHERMAL POWER PROJECT	DUAL CHECK 150LB ~600LB 6" WCB / ALLOY 20	8	Power Plant	INDONESIA
110	2015.01	U.S. METAL		DUAL CHECK LUG TYPE 2500# 8- 12" WCB/CF8M	8	OIL & GAS	TEXAS U.S.A.
111	2015.01	POSCO E&C	NSRP PROJECT	DUAL CHECK 150LB 2" WCB / DUCTILE / MONEL	11	REFINERY	VIETNAM
112	2015.01	ECONOSTO MIDEAST CO., LTD.	EGYPTIAN REFINERY PROJECT	TILTING CHECK 150LB 2.5"- 6"	10	REFINERY	EGYPT
113	2015.01	DAELIM INDUSTRIAL CO., LTD.	PAGBILAO 420MW UNIT 3 COAL FIRED POWER PROJECT	DUAL CHECK 150LB 6" WCB	2	THERMAL POWER PLANT	PHILIPPINE
114	2014.12	ETECH E&C CO., LTD.	GE4 (SEAGULL) PROJECT	TILTING CHECK 150LB ~600LB FLANGE TYPE / BW END TYPE 4" ~66" WCB /WCC	51	ENERGY PLANT	KOREA
115	2014.12	DOOSAN HEAVY INDUSTRIES CO.	SOUTH HELWAN PROJECT	DUAL CHECK 150LB 6" CF8	12	POWER PLANT	EGYPT
116	2014.11	DOOSAN HEAVY INDUSTRIES CO.	LUBE OIL YEOSU #1 STG PROJECT	DUAL CHECK 150# 10" WCB	6	Power Plant	KOREA
117	2014.11	POSCO E&C	POSCO KWANGYANG -YEONJU #1~#2	DUAL CHECK JIS 20K 4" ~8" CF8	48	STEEL	KOREA
118	2014.11	DOOSAN HEAVY INDUSTRIES CO.	SHIN BORYEONG HEAT POWER PLANT #1, 2	DUAL CHECK 3"- 12" ANSI 150LB CF8	20	POWER PLANT	KOREA
119	2014.11	OAKWELL DISTRIBUTIONS PTE LTD.	BKT WELLHEAD PLATFORM PROJECT	DUAL CHECK 1500LB~ 2500LB 2"- 8" CF3M	12	OFFSHORE	VIETNAM
120	2014.10	DCV-JAPAN	TOSHIBA SEMICONDUCTOR CO.	DUAL CHECK JIS 10K 80A~125A A890-5A	22	PLANT	JAPAN
121	2014.10	DOOSAN HEAVY INDUSTRIES CO.	LUBE OIL YEOSU #1 STG PROJECT	DUAL CHECK 300LB 3" WCB	32	POWER PLANT	KOREA
122	2014.09	DOOSAN HEAVY INDUSTRIES CO.	DANGJIN DESULFURIZATION PROJECT	Swing Pan Check 150# 4" CF3M	7	Power Plant	KOREA
123	2014.09	DOOSAN HEAVY INDUSTRIES CO.	BARAKA PROJECT	SWING PAN CHECK 150LB 3" CF3M	42	POWER PLANT	UAE
124	2014.09	SSV CORP.	CENDOR PROJECT (MMHE)	SWING PAN CHECK 150LB 20" C95800	2	OFF SHORE	MALAYSIA
125	2014.08	DOOSAN HEAVY INDUSTRIES CO.	MA' ADEN AMONIA PHOSTATE	SWING PAN CHECK 150LB 3" - CLEANING	48	Chemical	SAUDI ARABIA
126	2014.07	DCV-JAPAN	ASHAI KASEI FIBERS CORPORATION	SWING PAN CHEK JIS 10K ~30K 200A-300A	10	Chemical	JAPAN
127	2014.07	GS E&C	KEMYA ELASTOMERS PJT	DUAL CHECK 150LB~ 300LB 2"- 8" CF3M	10	Chemical	SAUDI ARABIA
128	2014.06	STX Heavy Industrial Co.	Iraq MOE Project	Pan Check JIS 10K 50A	55	POWER PLANT	IRAQ
129	2014.06	DOOSAN HEAVY INDUSTRIES CO.	SinBoryeong Heat Power Plant #1, 2	Swing Pan Check 150# 3" ~10"	36	POWER PLANT	KOREA
130	2014.06	DAELIM INDUSTRIAL CO., LTD.	SADARA ISOCYANATES PLANT	Foot Valve 150# 400A CF8	7	Chemical	SAUDI ARABIA
131	2014.06	ETECH E&C CO., LTD.	EC PROJECT	SWING PAN CHECK #150 25A~40A / CF8	7	Power Plant	KOREA
132	2014.05	HLC VALVE	KOC PROJECT (OEM : HLC)	Dual check valve ANSI 600# Lug Type 2", 30" Material LCC, 13CR	6	Power Plant	Kuwait
133	2014.04	SSV CORP.	ECONOSTO (UAE) (OEM : ECON)	SWING PAN CHECK 150LB 4" WCB	6	OIL & GAS	UAE
134	2014.04	KOBE STEEL LTD.	LLDPE DTA AT JAMNAGAR PROJECT	DUAL CHECK 150# 2" CF8	13	Power Plant	INDIA
135	2014.04	STX Heavy Inderstrial Co.	Samcheok Green Power Denitrification System #1, 2	PAN CHECK 150# 3" ~14"	13	POWER PLANT	KOREA
136	2014.03	PT. REKAASA	PUSRI-HIB PJT	FOOT VALVE 150# 100A CF8	8	FERTILIZER PLANT	INDONESIA
137	2014.03	DONGSAN VALVE	LG CHEM.	Swing Pan Check #150 25A~40A /	5	Chemical	KOREA
138	2014.03	SPX FLOW TECHNOLOGY	PETRONAS CARIGALI PROJECT	DUAL CHECK 300LB 3" WCB	4	OIL & GAS	MALAYSIA
139	2014.02	Samsung Techwin	India IREP Project	Dual Check 150LB 2" SS304	12	OIL & GAS	INDIA
140	2014.02	SS VALVE CO., LTD	AMONIA - UREA II PROJECT	TILTING CHECK VALVE ANSI 150# 12"	2	OIL & GAS	MALAYSIA
141	2014.02	DCV-JAPAN	Hitachi Zosen Talin Power Plant Desalination Project	Swing Pan check valve 150LB 2", 8", 10" A890-6A	4	Disalination Plant	JAPAN
142	2014.01	SK E&C	GUNJANG ENERGY 3 PROJECT	Swing Pan check valve ANSI 150# 3"-8" SS304	12	POWER PLANT	KOREA
143	2013.11	Siemens & Hyosung	Dongdochun Thermal Power generation Plant	Dual Check ANSI 150# 2", 3", 6" SS304	8	Power Plant	KOREA
144	2013.09	DOOSAN HEAVY INDUSTRIES CO.	Kudgi # 3 Power Plant	Swing Pan check valve 250A(10") SS304	27	POWER PLANT	INDIA
145	2013.08	POSCO E&C	Gwangyang Donghoan Desalination Plant Project	Dual Check valve JIS 10K 50A, 250A, 300A, JIS 20K 250A	15	Water treatment	KOREA
146	2013.08	DOOSAN HEAVY INDUSTRIES CO.	Saudi Electricity Co. Babigh Power Plant NO2	Pan check valve ANSI 150 80A(1")~400A(8") SS304	33	Power Plant	SAUDI ARABIA
147	2013.07	DCV-JAPAN	TOSHIBA SEMICONDUCTOR CO.	DUAL CHECK JIS 10K 125A A890-5A	2	PLANT	JAPAN
148	2013.07	Modentic korea	CJ E&C CJ M Project	Pancheck valve JIS 10K 300A, 250A SS304	7	Chemical	MALAYSIA

SUPPLY RECORD

WOSUNG VALVE CO., LTD.

No.	Year	BUYER	END CUSTOMER or PROJECT NAME	SUPPLIES	QTY	SERVICE AREA	COUNTRY
149	2013.07	KOREA HYDRO & UNCLER POWER CO.	Shin-ULJIN nuclear power plant unit 1& 2	Pancheck ANSI 150# 40A, 65A SS304 Seat PTFE	7	Power Plant	KOREA
150	2013.07	Samsung C&T	Samsung C&T Pusan industrial park	Swing pancheck 150LB 700A SS304	1	Construction	KOREA
151	2013.07	Modentic korea	CJ E&C CJ BIO America	Pancheck & Nozzle check 150LB 150A, 400A, 500A	3	Chemical	USA
152	2013.07	Modentic korea	CJ E&C CJ Malaysia	Swing pancheck 150# 50A~200A Material SS304	181	Chemical	MALAYSIA
153	2013.06	STX Heavy Industrial Co.	ND Power Station	Pan check valve JIS 10K 65A SS304	4	Power Plant	KOREA
154	2013.06	Ulvackorea	Ulvackorea	Pancheck NPT 10A, 20A SS304	182	Semiconductor	KOREA
155	2013.05	Hanwha E&C	Orange Project (Polysilicon)	Oil free Pan check valve 15A(1/2")~25A(1") ANSI 150 Material SS304, 316L	392	Chemical	KOREA
156	2013.03	DCV-JAPAN	IHI Heavy Industrial	Pan check valve JIS 10K 20A(3/4")~80A(3") Hastelloy-C	44	Chemical	JAPAN
157	2013.03	YU HAN ENGINEERING	JEJU TOPYUNG BIOMASS POWERPLANT PJT	Dual Check JIS 10K 400A A536	8	Power Plant	KOREA
158	2013.03	SSV	Petrofac	Swing Pan check valve 150LB 500A(20") Material WCB	2	OIL& GAS	MALAYSIA
159	2013.02	DOOSAN HEAVY INDUSTRIES CO.	Saudi Electricity Co. Babigh Power Plant NO2	Pan check valve ANSI 150 25A(1")~200A(8") SS304	130	POWER PLANT	SAUDI ARABIA
160	2013.02	Samsung Engineering	RU CRYOGENMASH IJORA Project	Swing Pan Check ANSI 150-300# 1"- 4" SS304	11	Power Plant	RUSSIA
161	2012.11	CJ E&C	CJ Bio America Project	Dual check valve 150~300LB 200A(8")~400A(16") SS304 WCB	73	Chemical	USA
162	2012.09	Samsung Techwin	Aramco Shyba Project	Dual Check 150LB 40A(1 1/2"), 50A(2") Material SS304	51	Petrochemical	SAUDI ARABIA
163	2012.08	STX Heavy Industrial Co.	Iraq MOE Diesel Plant	Pan check valve JIS10K 80A Material WCB	70	Power Plant	IRAQ
164	2012.05	Econosto Malaysia Pte Ltd.	Petronas Gas Berhad	Nozzle check valve 900A 150# C95800	2	OFF SHORE	MALAYSIA
165	2012.02	TOYO Engineering	BPA3 Project	Dual Check Valve LUG TYPE 600LB 6" SS304	1	Chemical	KOREA
166	2011.12	CJ E&C	CJ Bio China Project	Foot valve 50A(2")~350A(14") SS304, WCB	98	Chemical	CHINA
167	2011.10	KCC E&C	KCC Paint Ulsan Project	Oil free Pan check valve JIS 10K~40K 40A(1 1/2")~80A(3") Material SS304	177	Chemical	KOREA
168	2011.10	K-Water	K-Water	Dual check valve 150~300# 125A(5") SS304	4	Water treatment	KOREA
169	2011.07	Econosto Malaysia Pte Ltd.	CETCO WELL CLEAN UP PACKAGE (OEM :ECON)	Nozzle check valve 150LB 700A(28") C95800	4	OFF SHORE	MALAYSIA
170	2011.05	Econosto Malaysia Pte Ltd.	PETRONAS PROJECT (OEM : ECON)	Swing Pan check valve 150LB~2500LB 2" ~ 12" A890-4A	12	OIL& GAS	MALAYSIA
171	2011.04	HYOSUNG Good Springs	Seawater Desalination Project Group by Korea Government	Dual check valve 150LB 50A(2"), 150A(6") Material SS316L,Duplex	16	Desalination	KOREA
172	2010.06	HJ VALVE	Valitalia (OEM : VITAS)	Tilting Check Valve ANSI 150# 4"/ 300# 24"	21	Water treatment	NETHERLAN D
173	2010.02	DOOSAN HEAVY INDUSTRIES CO.	SHUS2 IWPP PROJECT	Foot valve 100A(4") ANSI 150 Duplex	12	Disalination Plant	UAE
174	2009.12	Samsung	Cryonorm Expander Project SAMSUNG	Dual Check 150LB 50A~700A, CF8	6	OIL& GAS	KOREA
175	2009.12	HJ VALVE	Valitalia (OEM : VITAS)	Tilting Check Valve ANSI 600# 2"- 24" BW END	31	Water treatment	ITALY
176	2009.11	Samsung / LINDE KOREA	EXXON MOBIL PJT	Dual Check valve 150LB 14", 48" WCB ICF8M	2	OIL& GAS	IRAQ
177	2009.06	DOOSAN HEAVY INDUSTRIES CO.	Samrangjin Power Station	Pan check valve 150# 125A, 250A, 400A SS304	13	Power Plant	KOREA
178	2009.04	DOOSAN HEAVY INDUSTRIES CO.	Shwaikh ro Desalination Plant with Recarbonation System	Dual check valve 150# 12" A536	9	Desalination	Kuwait
179	2008.07	DOOSAN HEAVY INDUSTRIES CO.	Shuaibah IWPP Expansion PJT	DUAL CHECK 500A(20") ANSI 150# C95800	2	Disalination Plant	SAUDI ARABIA
180	2008.04	POSCO E&C	POSCO IRAN TAVAZON PROJECT	DUAL CHECK 8"~ 20" ANSI 150# WCB	48	OIL& GAS	IRAN

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주요 인증서



American Petroleum Institute



Certificate of Authority to use the Official API Monogram
License Number: 6D-1562 ORIGINAL

The American Petroleum Institute hereby grants to

WOOSUNG VALVE CO., LTD.
#46 (Songjeong-Dong) Noksan Sandan 335 Ro, Gangseo-Gu Busan South Korea

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API-6D and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **6D-1562**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Check Valves


QMS Exclusions: Servicing; Customer Property

Effective Date: **APRIL 21, 2018**
Expiration Date: **APRIL 21, 2021**

To verify the authenticity of this license, go to www.api.org/compositelist.



Executive Vice President



G-CERTI Certificate

G-CERTI hereby certifies that

WOOSUNG VALVE CO., LTD.

46, Noksansandan 335-ro, Gangseo-gu, Busan, Korea.


has been audited and certified as meeting the requirements of Scope of registration




ISO 9001:2015 Quality Management Systems

DESIGN, DEVELOPMENT AND MANUFACTURE OF INDUSTRIAL VALVE

Certificate No : GKC - 0647 - QC
Initial Date : 18 Feb. 2018 Issue Date : 07 Jan. 2019
Expiry Date : 17 Feb. 2022 Code : 18
LIC : MSCB-113-6831


Signé pour and on behalf of GCERTI
President I.K. Cho



• API 6D Certificate

• ISO 9001 Certificate



G-CERTI Certificate

G-CERTI hereby certifies that

WOOSUNG VALVE CO., LTD.

46, Noksansandan 335-ro, Gangseo-gu, Busan, Korea.

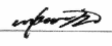
has been audited and certified as meeting the requirements of Scope of registration




ISO 14001:2015 Environmental Management Systems

DESIGN, DEVELOPMENT AND MANUFACTURE OF INDUSTRIAL VALVE

Certificate No : GKC - 0647 - EC
Initial Date : 18 Feb. 2016 Issue Date : 07 Jan. 2019
Expiry Date : 17 Feb. 2022 Code : 18
UIC : MSCB-113-7147

Signé pour and on behalf of GCERTI
President I.K. Cho





Bureau Veritas SA is a Notified Body under the number 0062

ATTESTATION D'APPROBATION DE SYSTÈME DE QUALITÉ
CERTIFICATE OF QUALITY SYSTEM APPROVAL
N° CE-0062-PED-H-WSC 001-17-KOR

Bureau Veritas SA, agissant dans le cadre de sa notification (numéro d'organisme notifié 0062), atteste que le système de qualité appliqué par le fabricant pour la conception, la fabrication, l'inspection des produits finis et les essais des équipements sous pression identifiés ci-après, a été examiné selon les prescriptions du module H de l'annexe III de la directive "Équipements sous pression" N° 2014/68/UE et est conforme aux dispositions correspondantes de la directive.

Bureau Veritas SA, acting within the scope of its notification (notified body number 0062), attests that the quality system operated by the manufacturer for design, manufacture, final product inspection and testing of the pressure equipment identified hereunder has been examined against the provisions of Annex III, module H, of the Pressure Equipment Directive n° 2014/68/EU, and found to satisfy the provisions of the directive which apply to it.

Fabricant (Nom) / Manufacturer (Name):	Woosung Valve Co., Ltd.
Adresse / Address:	46 Noksansandan 335-ro, Gangseo-gu, Busan, Korea
Marque commerciale / Trading Name - Mark:	WSC
Description des équipements / Equipment description:	Casting check valve
Identification des équipements concernés (ou liste au verso ou en annexe le cas échéant) : identification of equipment concerned (or list on the back or attached where necessary)	Refer to list of the concerned equipment.

Cette attestation est valable jusqu'au (jj/mm/aaaa) : 24/11/2020
This certificate will expire on (dd/mm/yyyy)

Le maintien de l'approbation est soumis à la réalisation par l'entité Bureau Veritas locale ayant signé le contrat avec le fabricant des audits, visites, essais et vérifications conformément aux termes de ce contrat.
The approval is conditional upon the performance audits, visits, tests and verifications to be carried out by the local Bureau Veritas entity that entered into a contract with the manufacturer, pursuant to the provisions of such contract.

Cette attestation est présentée telle et le fabricant supportera seul les conséquences de son utilisation, si les assurances - couvertes par le fabricant lors de la demande d'intervention - en matière de l'application de son système qualité approuvé et de l'inspection et d'essai des produits finis ne sont pas respectées, et de manière générale, si le fabricant ne respecte pas l'une ou l'autre des obligations mises à sa charge par la directive n° 2014/68/UE du 15 mai 2014 telle que transposée dans la(s) loi(s) nationale(s) applicable(s).
This certificate shall be issued as the valid and the manufacturer shall alone bear any consequences derived from its use, where the manufacturer fails to comply with the undertakings set out in the agreement in respect of all requirements of the approved quality system and of inspection and tests on the final product, and generally where the manufacturer fails to continue to comply with any of the obligations under directive n° 2014/68/EU of 15 May 2014 as transposed in the applicable law(s).

État à / Made at	Le (jj/mm/aaaa) / On (dd/mm/yyyy)	Approuvé et Enregistré en / Approved and Registered in	Signé par / Signed by	Signature autorisée par Organisme Notifié 0062 / Signature Authorized by Notified Body No 0062
Seoul	25/11/2017	France	KWANGHO KIM	

Code d'enregistrement / Registration Code: 2017/002228/CE-0062-PED

Le présent document est soumis aux Conditions Générales de Service jointes à la demande d'intervention signée par le demandeur.
The present document is not to be reproduced, copied or the manufacturer's responsibility for the accuracy of the certified attestation lies between the local Bureau Veritas entity and the manufacturer.

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Newtime - 52 Boulevard du Parc - Ile de la Jatte, 92200 Neuilly sur Seine

File n°: 5.01.1053
Page 1 of 2

Chr :

• ISO 14001 Certificate

• BV Certificate

인 증 서 및 특 허 현 황

No.	Certificate or Patent	License No.	Authority	Expiration Date
1	API 6D	6D-1562	American Petroleum Institute	21-Apr-21
2	ISO 9001	GKC-0647-QC	Korea Industrial Technology Standards Certification Authority	17-Feb-22
3	ISO 14001	GKC-0647-EC	Korea Industrial Technology Standards Certification Authority	17-Feb-22
4	Quality System	CE-PED-H-WSC001-14-K OR	Bureau Veritas	24-Nov-22
5	Fire Safety	FTC-WS-20131227-CK001 ~21	Velosi International Korea	N/A
6	Enterprise Institute	2011310348	Korea Institute For Advancement of Technology	N/A
7	Safety Certificate	2012-BL-0010 / 0235	Korea Occupational Safety and Health Agency	N/A
8	Certificate for Water	KWWA-CP-2014-146~148	Korean Water and Wastewater Association	N/A
9	Sanitary Safety Standards Certificate	KCW-2012-0609~0610	Korean Water and Wastewater Association	N/A
10	Patent Of Check Valve	10-0890778/10-1031803/ 10-1031803/10-1535345	Korean Intellectual Property Office	N/A
11	Registration of Design	0333724 / 0354886	Korean Intellectual Property Office	N/A
12	Certificate of Utility Model Registration	20-0448982 / 20-0449160	Korean Intellectual Property Office	N/A
13	Certificate of Trademark Registration	40-0663823 / 40-1114044	Korean Intellectual Property Office	N/A
14	Certificate of Inno-Biz	-	Ministry of SMEs and Startups	30-Nov-20
15	Partner Certificate	-	Siemens	N/A

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WOOSUNG VALVE

WOOSUNG VALVE CO., LTD.

Your Check Valve Solution

since 1981

WOOSUNG VALVE Co., Ltd. is a specialized Manufacturer for all kinds of CHECK VALVE which is based in Rep. of KOREA since 1981.

WSC can provide Service Problem Diagnosis, Root Cause Analysis and Resolution for check valves according to Customer's Job Applications.

WSC can help your provide a Faster, more coordinated Customer Support Solutions.



NONSLAM CHECK VALVE

- w/Hydraulic Cylinder & Weight
- Size : 12" ~ 80"
- Rating : 150 LB ~ 600 LB
- End : WAFER, FLANGE, BW
- Mat'l : A126, A351, B148, A536, WCB, WC6, CF8, CF8M, CF3, C95800, 65-45-12

NON SLAM NOZZLE CHECK VALVE

- Size : 2" ~ 60"
- Rating : 150 LB ~ 2,500 LB
- End : WAFER, FLANGE, BW, LUG
- Mat'l : A126, A536, A395, B148, BC6, WCB, WC6, CF8, CF8M, CF8C, CN7M, CD4MCU, 4A, 5A, 6A



SWING CHECK VALVE

- Size : 2" ~ 42"
- Rating : 150 LB ~ 2,500 LB
- End : FLANGE, BW
- Mat'l : BC6, WCB, WC6, CF8, CF8M, CF8C, CN7M, CD4MCU, 4A, 5A, 6A



DUAL PLATE CHECK VALVE

- Size : 2" ~ 102"
- Rating : 125 LB ~ 2,500 LB
- End : WAFER, LUG, FLANGE, BW, HUB
- Mat'l : A126, A536, A395, B148, BC6, WCB, WC6, CF8, CF8M, CF8C, CN7M, CD4MCU, 4A, 5A, 6A



NON-SLAM FOOT VALVE

- Size : 4" ~ 40"
- Rating : 150 LB
- End : FLANGE
- Mat'l : A126, A351, A395, B148, WCB, CF8, CF8M, CF3M, 4A, 5A, 6A, C95800



TILTING CHECK VALVE

- Size : 2" ~ 102"
- Rating : 125 LB ~ 2,500 LB
- End : WAFER, LUG, FLANGE
- Mat'l : A126, A536, A395, B148, BC6, WCB, WC6, CF8, CF8M, CF8C, CN7M, CD4MCU, 4A, 5A, 6A



SINGLE PLATE SWING CHECK VALVE

- Size : 2" ~ 40"
- Rating : 125 LB ~ 150 LB
- End : FLANGE, LUG
- Mat'l : BC6, B148, WCB, CF8, CF8M



www.pancheck.co.kr

High Quality CHECK VALVE

PANCHECK VALVE

(Spring Loaded Disc Check Valve - Wafer Type)

Since 1981, WOOSUNG VALVE Co., Ltd. has producing all kinds of CHECK VALVES as a specialized manufacturer of check valve by brand name of 'PANCHECK' which means all kinds of check valve.

We have a flexible production system to meet the requirements of customers for the special application or small quantity in the industrial fields.

FEATURES of PANCHECK VALVE

- No Water Hammering Effect
- Thin, Small and Light Structure
- Malfunction Free
- Air Tight Precision
- Either Horizontal or Vertical Installation
- No external Leakage
- Free Alteration of Opening Pressure



WOOSUNG CHECK VALVES

 우성밸브 주식회사

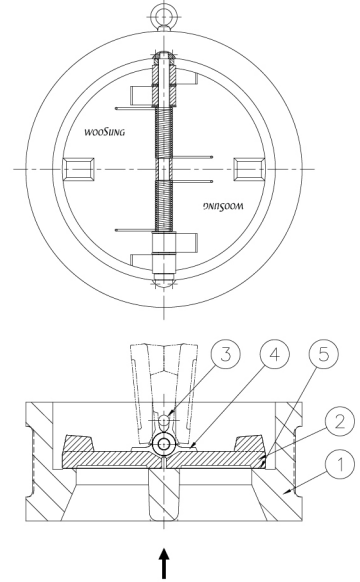
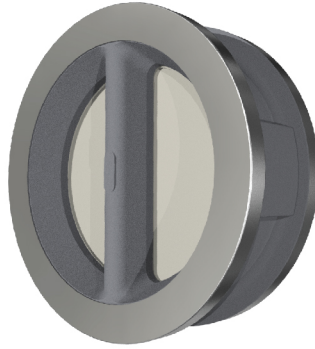
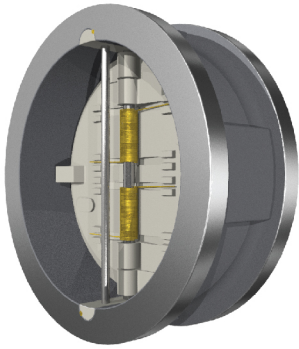
PANCHECK

상표등록 제 40-0663823호



DUAL PLATE CHECK VALVE

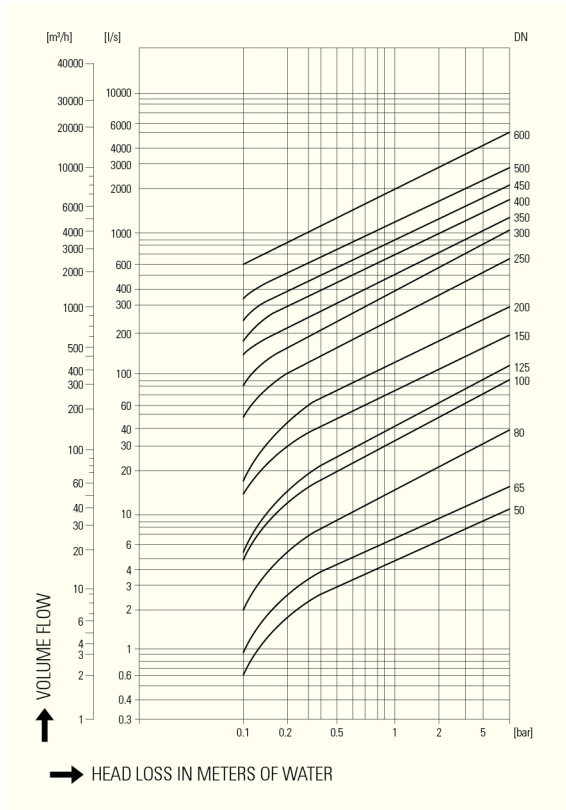
Model No. DD



주의사항

수평배관일 경우 Eye bolt가 기울지 않고 수직상향하도록 설치하십시오.
유체흐름 방향과 밸브 몸통의 화살표 방향이 일치되게 배관하십시오.
펌프, 밴드 혹은 엘보우에 연결할 때는 배관 구경의 5배 이상 띄우십시오.

수두손실선도



사양

구 경	2"(50A) ~ 60"(1500A)	
유 체	Oil, Water, Air, Steam, Sea Water..etc.	
사 용 압 력	JIS 10K, JIS 20K, Class 150 ~ 2500, AWWA C207..etc.	
배 관 연 결	Wafer, Lug, Double Flange, Buttwelding, Hub	
재 질	① Body	Cast Iron, Stainless Steel, Duplex, NI_AL_Bronze..etc.
	② Disc	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	③ Pin	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	④ Spring	Stainless Steel, Inconel..etc.
	⑤ Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay.. etc.

유량특성

유량성능

Size		Kv	Cv
in	mm		
2	50	54	62
2 ½	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

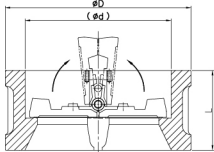
Disc Full Open을 위하여 요구되는 최소유량

Size		Critical velocity (m/s)	Critical Flow rate (m³/hr)
in	mm		
2	50	1.5	11
2 ½	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

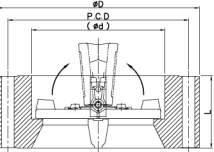
Size in.(mm)	Rating	Facing	면 간 W/L/F	내 경	외 경			PCD	Hole No.	중 량 (KG)		
					W	L	F			W	L	F
2"(50)	150	RF	60	57	105	150	-	120.6	4	3	11	-
	300	RF	60	57	111	165	-	127	8	4	11	-
	600	RF/RJ	60	57	111	165	-	127	8	5	12	-
	900	RF/RJ	70	57	143	215	-	165.1	8	8	17	-
	1500	RF/RJ	70	57	143	215	-	165.1	8	13	22	-
	2500	RF/RJ	70	57	146	235	-	171.4	8	14	29	-
2½"(65)	150	RF	67	73	124	180	-	139.7	4	4	13	-
	300	RF	67	73	130	190	-	149.3	8	4	14	-
	600	RF/RJ	67	73	130	190	-	149.3	8	4	20	-
	900	RF/RJ	83	73	165	245	-	190.5	8	7	24	-
	1500	RF/RJ	83	73	165	245	-	190.5	8	8	30	-
	2500	RF/RJ	83	73	165	245	-	190.5	8	8	30	-
3"(80)	150	RF	73	87	137	190	-	152.4	4	6	13	-
	300	RF	73	87	149	210	-	168.3	8	8	23	-
	600	RF/RJ	73	87	149	210	-	168.3	8	9	23	-
	900	RF/RJ	83	87	168	240	-	190.5	8	13	30	-
	1500	RF/RJ	83	87	175	265	-	203.2	8	24	35	-
	2500	RF/RJ	86	87	197	305	-	228.6	8	27	40	-
4"(100)	150	RF	73	113	175	230	-	190.5	8	9	26	-
	300	RF	73	113	181	255	-	200	8	12	49	-
	600	RF/RJ	79	113	194	275	-	215.9	8	15	55	-
	900	RF/RJ	102	113	206	290	-	235	8	37	61	-
	1500	RF/RJ	102	113	210	310	-	241.3	8	40	70	-
	2500	RF/RJ	105	113	235	355	-	273	8	40	82	-
5"(125)	150	RF	86	141	197	255	-	215.9	8			
	300	RF	86	141	216	280	-	235	8			
	600	RF/RJ	105	141	241	330	-	266.7	8			
	900	RF/RJ	Maker Std.	141	248	350	-	279.4	8			
	1500	RF/RJ	Maker Std.	141	254	375	-	292.1	8			
	2500	RF/RJ	Maker Std.	141	279	420	-	323.8	8			
6"(150)	150	RF	98	166	222	280	-	241.3	8	18	42	-
	300	RF	98	166	251	320	-	269.9	12	29	55	-
	600	RF/RJ	136	166	267	355	-	292.1	12	40	98	-
	900	RF/RJ	159	166	289	380	-	317.5	12	55	131	-
	1500	RF/RJ	159	166	283	395	-	317.5	12	70	135	-
	2500	RF/RJ	159	166	317	485	-	368.3	8	90	197	-
8"(200)	150	RF	127	207	279	345	345	298.5	8	33	60	51
	300	RF	127/152	207	308	380	-	330.2	12	42	98	96
	600	RF/RJ	165/219	207	321	420	-	349.2	12	68	134	146
	900	RF/RJ	206/254	207	359	470	-	393.7	12	132	200	219
	1500	RF/RJ	206/340	207	352	485	-	393.7	12	133	212	328
	2500	RF/RJ	206/489	207	387	550	-	438.2	12	146	300	515
10"(250)	150	RF	146	260	340	405	405	362	12	60	88	85
	300	RF	146/178	260	362	445	-	387.4	16	65	148	123
	600	RF/RJ	213/244	260	400	510	-	431.8	16	140	245	235
	900	RF/RJ	241/267	260	435	545	-	469.9	16	201	350	310
	1500	RF/RJ	248/387	260	435	585	-	482.6	12	210	380	585
	2500	RF/RJ	254/622	260	476	675	-	539.8	12	225	512	1300
12"(300)	150	RF	181	300	410	485	485	431.8	12	92	180	130
	300	RF	181	300	422	520	520	450.8	16	105	205	155
	600	RF/RJ	229	300	457	560	560	489	20	179	330	250
	900	RF/RJ	292	300	498	610	610	533.4	20	379	529	349
	1500	RF/RJ	305/435	300	521	675	675	571.5	16	384	752	891
	2500	RF/RJ	305/686	300	549	760	760	619.1	12	410	880	1815
14"(350)	150	RF	184	339	451	535	535	476.3	12	107	223	148
	300	RF	222	339	486	585	585	514.4	20	160	312	210
	600	RF/RJ	273	339	492	605	605	527	20	227	442	389
	900	RF/RJ	356	339	541	640	640	558.8	20	450	795	480
	1500	RF/RJ	356/476	339	578	750	750	635	16	550	923	1180
	2500	RF/RJ	356/476	339	578	750	750	635	16	550	923	1180
16"(400)	150	RF	191	387	514	595	595	539.8	16	149	284	161
	300	RF	232	387	540	650	650	571.5	20	208	512	285
	600	RF/RJ	305	387	565	685	685	603.2	20	354	680	447
	900	RF/RJ	384	387	575	705	705	616	20	550	850	550
	1500	RF/RJ	384/537	387	641	825	825	704.8	16	635	1274	1565
	2500	RF/RJ	384/537	387	641	825	825	704.8	16	635	1274	1565
18"(450)	150	RF	203	438	549	635	635	577.9	16	171	290	205
	300	RF	264	438	597	710	710	628.6	24	301	538	388
	600	RF/RJ	362	438	613	745	745	654	20	474	857	560
	900	RF/RJ	451	438	638	785	785	685.8	20	770	1350	850
	1500	RF/RJ	468/565	438	705	915	915	774.7	16	1062	1760	2075
	2500	RF/RJ	468/565	438	705	915	915	774.7	16	1062	1760	2075
20"(500)	150	RF	219	487	606	700	700	635	20	205	313	282
	300	RF	292	487	654	775	775	685.8	24	381	770	499
	600	RF/RJ	368	487	683	815	815	723.9	24	640	1033	776
	900	RF/RJ	451	487	699	855	855	749.3	20	884	2050	1780
	1500	RF/RJ	533/629	487	755	985	985	831.8	16	1478	2396	2644
	2500	RF/RJ	533/629	487	755	985	985	831.8	16	1478	2396	2644
24"(600)	150	RF	222	579	718	815	815	749.3	20	315	800	410
	300	RF	318	579	775	915	915	812.8	24	605	1166	760
	600	RF/RJ	438	579	791	940	940	838.2	24	964	1488	1154
	900	RF/RJ	495	579	838	1040	1040	901.7	20	1500	2300	1890
	1500	RF/RJ	559/733	579	901	1170	1170	990.6	16	3010	3528	4270
	2500	RF/RJ	559/733	579	901	1170	1170	990.6	16	3010	3528	4270



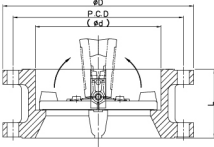
DUAL PLATE CHECK VALVE



Wafer (W)



Lug (L)



Flange (F)

W:Wafer L:Lug F:Flange

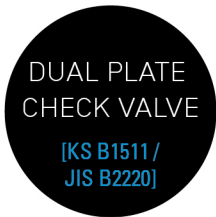
※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.



Size in.(mm)	Rating	Facing	면 간	내 경	외 경			PCD	Hole No.	중 량 (KG)		
					W	L	F			W	L	F
26"(650)	150	RF	279	629	775	870	870	806.4	24	452	987	895
	300	RF/RJ	356	629	834	971	971	876.3	28	710	1649	1354
	600	RF/RJ	457	629	866	1015	1015	914.4	28	918	1890	1422
	900	RF/RJ	533	629	883	1085	1085	952.5	20	1255	2355	2148
28"(700)	150	RF	279	680	832	983	983	863.6	28	584	1254	1080
	300	RF/RJ	381	680	898	1090	1090	939.8	28	775	1540	1260
	600	RF/RJ	483	680	913	1129	1129	965.2	28	925	2022	1610
	900	RF/RJ	572	680	945	1231	1231	1022.4	20	1320	3176	2589
30"(750)	150	RF	305	735	882	983	983	914.4	28	662	1276	1123
	300	RF/RJ	368	735	952	1090	1090	997	28	920	2033	1422
	600	RF/RJ	505	735	972	1129	1129	1022.4	28	1679	3250	1685
	900	RF	635	735	1010	1231	1231	1085.9	20	2328	4055	3265
32"(800)	150	RF	356	784	939	1059	1059	950	28	857	1394	1095
	300	RF/RJ	406	784	1005	1148	1148	1054.1	28	1228	2460	1481
	600	RF/RJ	533	784	1021	1192	1192	1079.5	28	1640	4255	2130
	900	RF/RJ	660	784	1072	1312	1312	1155.7	20	2101	4498	3652
36"(900)	150	RF	368	865	1047	1166	1166	1085.8	32	956	1511	1142
	300	RF/RJ	483	865	1118	1269	1269	1168.4	32	1267	2890	2139
	600	RF/RJ	635	865	1129	1312	1312	1193.8	28	2761	4720	2863
	900	RF/RJ	718	865	1199	1460	1460	1289.1	20	3542	6434	-
40"(1000)	150	RF	432	987	1161	1290	1290	1200.2	36	1385	1571	1590
	300	RF	546	987	1113	1240	1240	1155.7	32	2087	2760	2730
	600	RF	660	987	1154	1320	1320	1212.9	32	3578	-	-
	900	RF	762	987	1251	1510	1510	1339.9	21	4570	-	-
48"(1200)	150	RF	524	1193	1383	1510	1510	1422.4	44	2177	4255	2885
	300	RF	629	1193	1324	1465	1465	1371.6	32	2950	6487	5210
60"(1500)	150	RF	660	1422	1715	1855	1855	1759	52	4350	8756	-
	300	RF	838	1422	1644	1810	1810	1701.8	32	5315	11540	-

W:Wafer L:Lug F:Flange

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.



Size in.(mm)	Rating	Facing	면 간	내 경	외 경			PCD	Hole No.	중 량 (KG)		
					W	L	F			W	L	F
2"(50)	10K	RF/FF	54	57	101	-	-	120	4	2.5	-	-
	20K	RF/FF	60	57	101	-	-	120	8	2.5	-	-
2 1/2"(65)	10K	RF/FF	54	73	121	-	-	140	4	4	-	-
	20K	RF/FF	67	73	121	-	-	140	8	5	-	-
3"(80)	10K	RF/FF	57	87	131	-	-	150	8	6.5	-	-
	20K	RF/FF	73	87	137	-	-	160	8	6.5	-	-
4"(100)	10K	RF/FF	64	113	156	-	-	175	8	8.1	-	-
	20K	RF/FF	73	113	162	-	-	185	8	8.1	-	-
5"(125)	10K	RF/FF	70	141	187	-	-	210	8	13	-	-
	20K	RF/FF	86	141	200	-	-	225	8	14	-	-
6"(150)	10K	RF/FF	76	166	217	-	-	240	8	16	-	-
	20K	RF/FF	98	166	235	-	-	260	12	16.2	-	-
8"(200)	10K	RF/FF	95	207	267	-	-	290	12	29	-	-
	20K	RF/FF	127	207	279	-	-	305	12	29.2	-	-
10"(250)	10K	RF/FF	108	260	330	-	-	355	12	48.5	-	-
	20K	RF/FF	146	260	353	-	-	380	12	49	-	-
12"(300)	10K	RF/FF	143	300	375	-	-	400	16	91	-	-
	20K	RF/FF	181	300	403	-	-	430	16	92	-	-
14"(350)	10K	RF/FF	184	339	420	-	-	445	16	96	-	-
	20K	RF/FF	222	339	447	-	-	480	16	100	-	-
16"(400)	10K	RF/FF	191	387	483	-	-	510	16	125	-	-
	20K	RF/FF	232	387	507	-	-	540	16	127	-	-
18"(450)	10K	RF/FF	203	438	538	-	-	565	20	132	-	-
	20K	RF/FF	264	438	572	-	-	605	20	134	-	-
20"(500)	10K	RF/FF	213	487	593	-	-	620	20	185	-	-
	20K	RF/FF	292	487	627	-	-	660	20	188	-	-
24"(600)	10K	RF/FF	222	579	697	-	-	730	24	285	-	-
	20K	RF/FF	318	579	731	-	-	770	24	289	-	-
28"(700)	10K	RF/FF	321	680	807	-	-	840	24	442	-	-
	20K	RF/FF	381	680	852	-	-	900	24	447	-	-
30"(750)	10K	RF/FF	305	735	867	-	-	900	24	576	-	-
	20K	RF/FF	368	735	914	-	-	970	24	579	-	-
32"(800)	10K	RF/FF	356	784	917	-	-	950	28	640	-	-
	20K	RF/FF	406	784	974	-	-	1030	24	647	-	-
36"(900)	10K	RF/FF	368	865	1017	-	-	1050	28	1319	-	-
	20K	RF/FF	483	865	1084	-	-	1140	28	1325	-	-

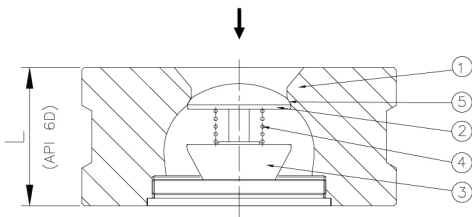
W:Wafer L:Lug F:Flange

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

NON-SLAM NOZZLE CHECK (Wafer Type)

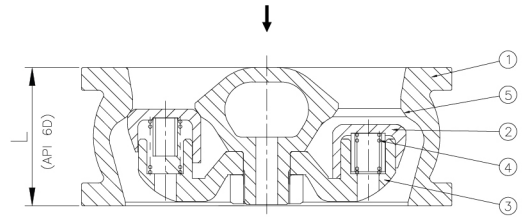
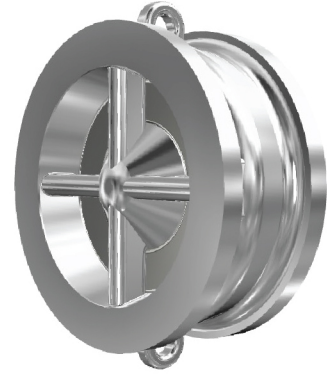
Model No. CNZ (Wafer)

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



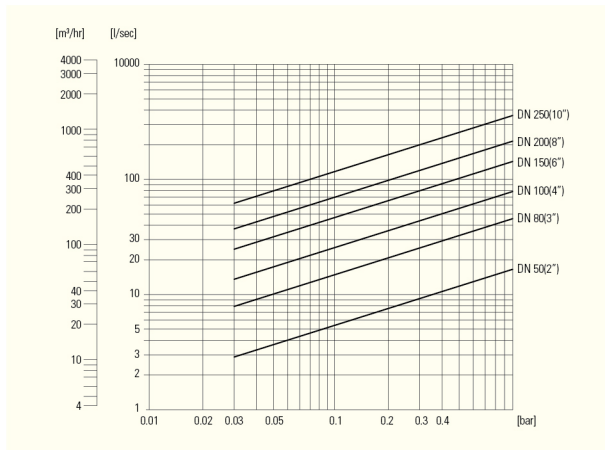
Model No. PCN (Wafer)

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

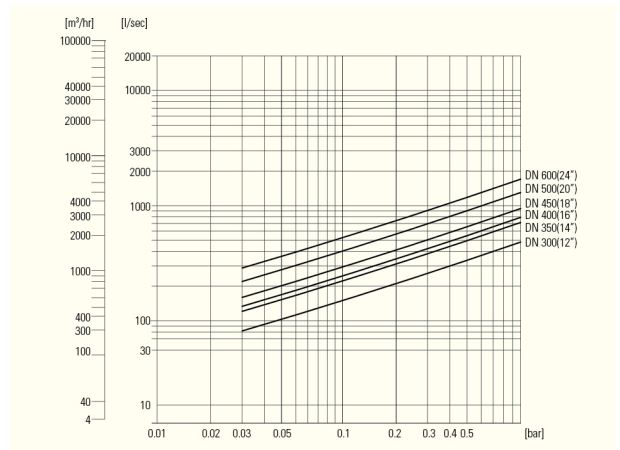


NON-SLAM
NOZZLE CHECK VALVE

수두손실선도



수두손실선도



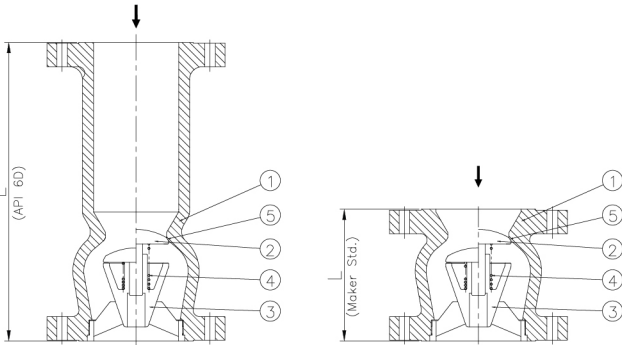
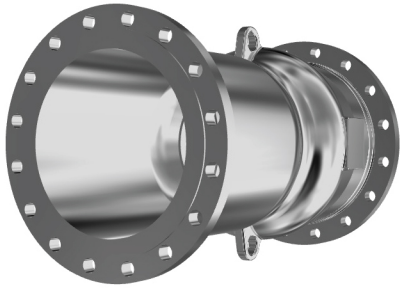
사양

구 경	1"(25A) ~ 60"(1500A)	
유 체	Oil&Gas, Water, Air, Steam, Sea Water..etc.	
사 용 압 력	Class 150 ~ 2500	
배 관 연 결	Wafer, Lug, Double Flange	
재 질	① Body	Carbon Steel, Stainless Steel, Duplex, NI_AL_Bronze..etc.
	② Disc	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	③ Pin	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	④ Spring	Stainless Steel, Inconel..etc.
	⑤ Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay..etc.

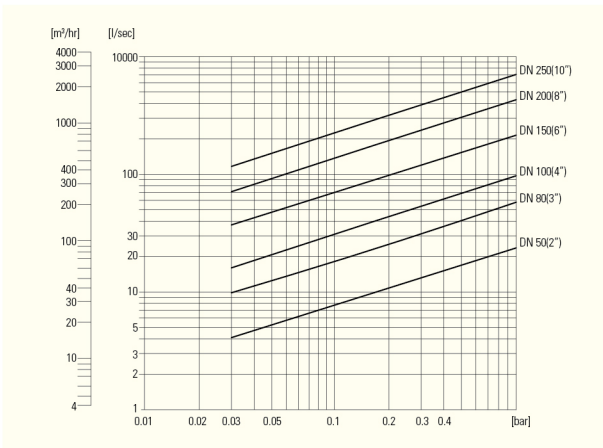
NON-SLAM NOZZLE CHECK VALVE

Model No. SNF (Single Seat Nozzle)

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

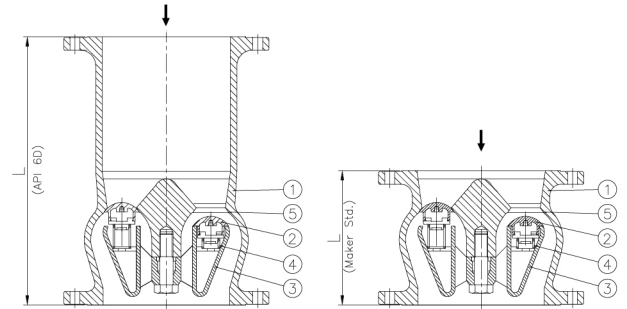
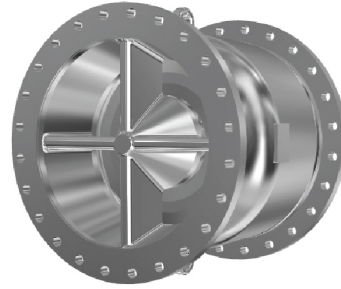


수두손실선도

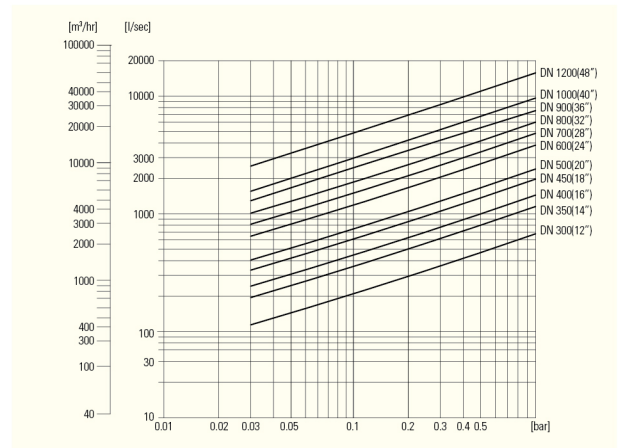


Model No. DNF (Double Seat Nozzle)

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



수두손실선도



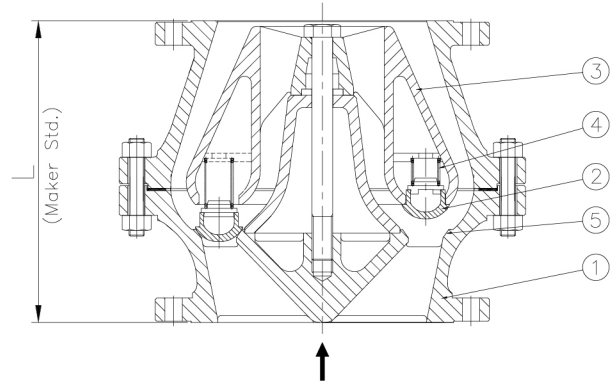
사양

구경	1"(25A) ~ 60"(1500A)	
유체	Oil&Gas, Water, Air, Steam, Sea Water..etc.	
사용압력	Class 150 ~ 2500	
배관연결	Double Flange, Buttwelding, Hub	
재질	① Body	Carbon Steel, Stainless Steel, Duplex, NI_AL_Bronze..etc.
	② Disc	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	③ Pin	Stainless Steel, Duplex, NI_AL_Bronze..etc.
	④ Spring	Stainless Steel, Inconel..etc.
	⑤ Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay..etc.

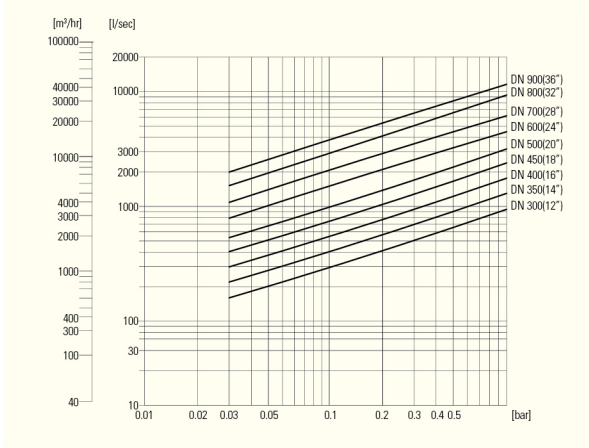
NON-SLAM NOZZLE CHECK VALVE

Model No. WNF

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



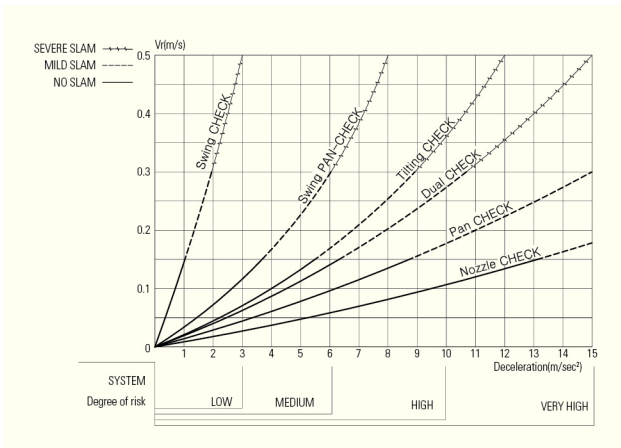
수두손실선도



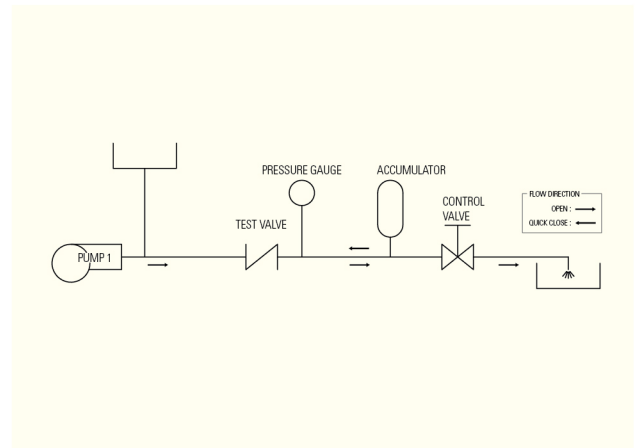
사양

구 경	12"(300A) ~ 60"(1500A)
유 체	Oil, Water, Air, Steam, Sea Water..etc.
사 용 압 력	Class 150 ~ 300
배 관 연 결	Double Flange
재 질	① Body Cast Iron, Stainless Steel, Duplex, NI_AL_Bronze..etc.
	② Disc Stainless Steel, Duplex, NI_AL_Bronze..etc.
	③ Guide Stainless Steel, Duplex, NI_AL_Bronze..etc.
	④ Spring Stainless Steel, Inconel..etc.
	⑤ Seat Rubber, PTFE, Stainless Steel, Stellite Overlay..etc.

체크밸브 동적 특성 비교표

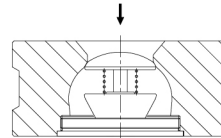


테스트용 회로도

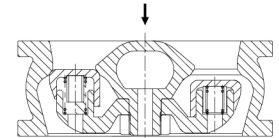


NON-SLAM NOZZLE CHECK VALVE

Type	Description
CNZ	Single seat Nozzle (Wafer)
PCN	Double seat Nozzle (Wafer)
DNF	Double seat Nozzle (Flanged)
SNF	Single seat Nozzle (Flanged)
WNF	2 Body Nozzle (Flanged)

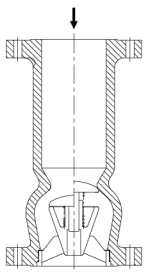


CNZ

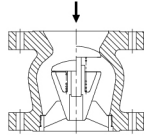


PCN

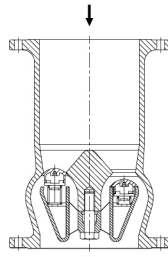
NPS	DN	Type	Face to Face Standard	Class 150		Class 300		Class 600		Class 900		Class 1500		Class 2500	
				L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)
1	25	SNF	API 6D	-	-	-	-	-	-	-	-	-	-	-	-
			Maker Std.	100	4	100	4	100	5	150	9	150	16	160	28
		CNZ	Maker Std. (wafer)	35.5	0.7	35.5	0.8	35.5	1	-	-	-	-	-	-
1 1/4	32	SNF	API 6D	-	-	-	-	-	-	-	-	-	-	-	-
			Maker Std.	100	5	100	5	100	9	150	11	150	20	180	35
		CNZ	Maker Std. (wafer)	40	0.9	40	1	40	1.2	-	-	-	-	-	-
1 1/2	40	SNF	API 6D	-	-	-	-	-	-	-	-	-	-	-	-
			Maker Std.	120	7	120	7	120	11	170	13	170	23	210	40
		CNZ	Maker Std. (wafer)	45	1.3	45	1.6	45	2	-	-	-	-	-	-
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
		CNZ	API 6D (wafer)	60	2.5	60	3	60	4	70	6	70	8	70	10
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
		CNZ	API 6D (wafer)	67	4	67	5	67	6	83	8	83	10	83	13
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
		CNZ	API 6D (wafer)	73	5	73	7	73	8	83	11	83	18	86	23
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
		CNZ	API 6D (wafer)	73	7	73	10	79	12	102	28	102	30	105	35
5	125	SNF	API 6D	-	-	-	-	-	-	-	-	-	-	-	-
			Maker Std.	210	31	210	31	210	55	230	85	310	140	370	225
		CNZ	Maker Std. (wafer)	86	9	86	18	105	27	-	-	-	-	-	-
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
		CNZ	API 6D (wafer)	98	20	98	30	137	38	159	53	159	68	159	92
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
		CNZ	API 6D (wafer)	127	31	127	40	165	71	206	130	206	138	206	142
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
		CNZ	API 6D (wafer)	146	62	146	68	213	145	241	205	248	212	254	230
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	440	390	440	650	580	1286
		WNF	Special	438	305	438	382	-	-	-	-	-	-	-	-
		PCN	API 6D (wafer)	181	95	181	110	229	180	292	385	305	391	-	-
14	350	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	-	-
		WNF	Special	475	432	475	581	-	-	-	-	-	-	-	-
		PCN	API 6D (wafer)	184	110	222	168	273	230	356	467	356	580	-	-
16	400	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	-	-	-	-	-	-	-	-
18	450	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	-	-	-	-	-	-	-	-
20	500	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	-	-	-	-	-	-	-	-
24	600	PCN	API 6D (wafer)	219	228	292	392	368	375	451	892	533	1587	-	-
			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	-	-	-	-	-	-	-	-
26	650	PCN	API 6D (wafer)	222	336	318	635	438	998	495	1626	559	3120	-	-
			DNF	API 6D	1295	-	1346	-	1448	-	-	-	-	-	-
		Maker Std.	685	-	-	-	-	-	-	-	-	-	-	-	-
		WNF	Special	-	-	-	-	-	-	-	-	-	-	-	-
28	700	PCN	API 6D (wafer)	356	598	356	732	457	951	533	1360	-	-	-	-
			DNF	API 6D	1448	1996	1499	2860	1600	4212	-	-	-	-	-
		Maker Std.	800	1330	800	1800	870	2450	860	2890	-	-	-	-	
		WNF	Special	945	-	945	-	-	-	-	-	-	-	-	-
28	700	PCN	API 6D (wafer)	381	615	381	782	483	945	572	1380	-	-	-	-



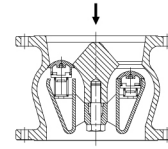
SNF (API 6D)



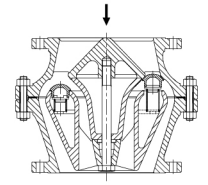
SNF (Maker Std)



DNF (API 6D)



DNF (Maker Std)



WNF (Special)

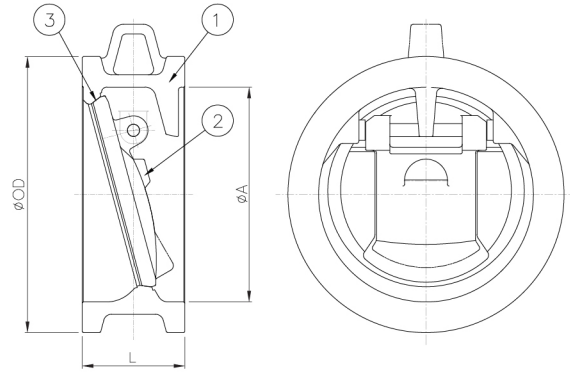
NPS	DN	Type	Face to Face Standard	Class 150		Class 300		Class 600		Class 900		Class 1500		Class 2500		
				L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	L(mm)	W(kg)	
30	750	DNF	API 6D	1524	2353	1594	3523	1651	4784							
			Maker Std.	855	1590	855	2150	1130	930	1232	925					
		WNF	Special	-	-	-	-	-	-	-	-					
		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	-	-	-	-	-					

NON-SLAM NOZZLE CHECK VALVE

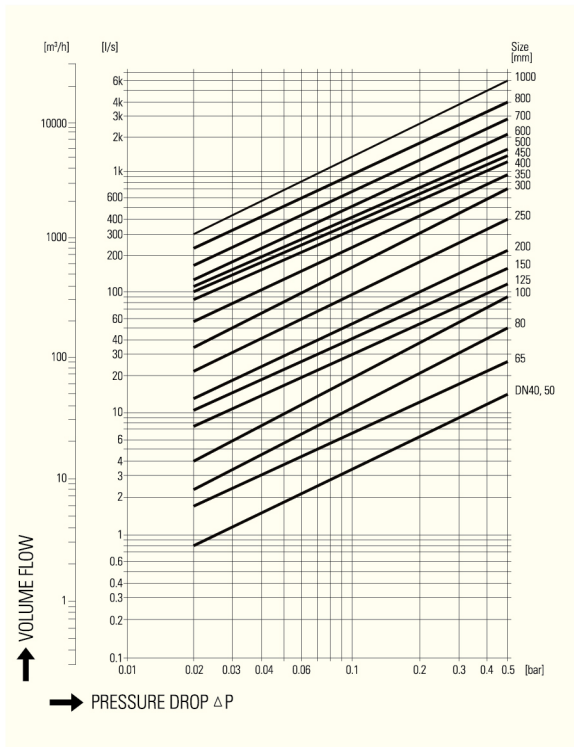
TILTING CHECK VALVE

Model No. TLP / TLC

2"(50A) ~ 66"(1650A)



수두손실선도



사양

구 경	2"(50A) ~ 66"(1650A)	
유 체	Oil, Water, Air, Sea Water..etc.	
사 용 압 력	JIS10K~20K, Class 150 ~ 300, AWWA C207..etc.	
배 관 연 결	Wafer, Flanged..etc.	
재 질	① Body	Stainless Steel, Carbon Steel, Duplex, NI_AL_Bronze..etc.
	② Disc	Stainless Steel, Carbon Steel, Duplex, NI_AL_Bronze..etc.
	③ Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay..etc.

치수

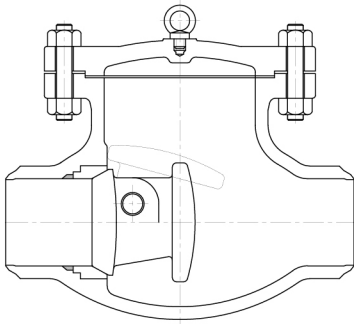
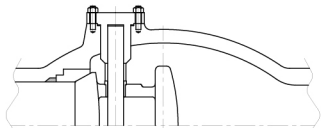
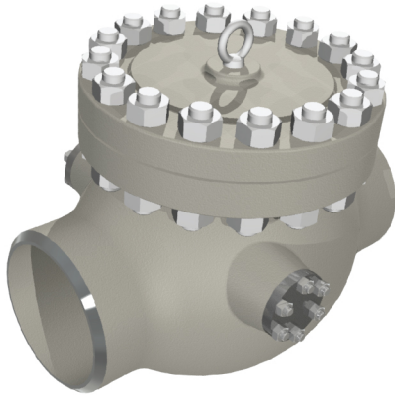
Size mm (Inch)	ØA	JIS 10K		Class 150	
		OD	L	OD	L
50 (2")	60	101	60	105	60
65 (2 1/2")	67	121	67	124	67
80 (3")	80	131	73	137	73
100 (4")	100	156	73	175	73
125 (5")	125	187	86	197	86
150 (6")	150	217	98	222	98
200 (8")	200	267	127	279	127
250 (10")	250	330	146	340	146
300 (12")	300	375	181	410	181
350 (14")	350	420	184	451	184
400 (16")	400	483	191	514	191
450 (18")	450	538	203	549	203
500 (20")	487	593	219	606	219
600 (24")	596	697	222	718	222
700 (28")	684	807	321	832	321

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

TILTING CHECK VALVE

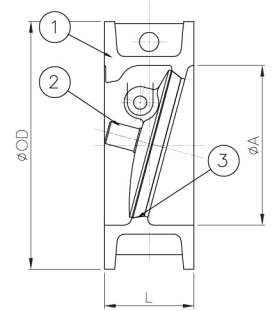
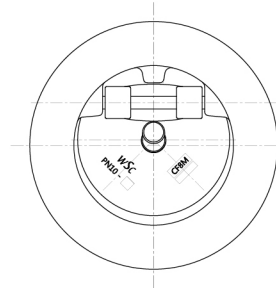
Model No. TLB

2"(50A) ~ 60"(1500A)



Model No. LTP

4"(100A) ~ 10"(250A)



사양

구 경	2"(50A) ~ 60"(1500A)
유 체	Oil, Water, Air, Sea Water..etc.
사 용 압 력	ASME Class 600~4500
배 관 연 결	Butt Welding
재 질	Stainless Steel, Carbon Steel, Duplex, NI_AL_Bronze..etc.

Type	Description
TLP	Tilting Plug Type (Wafer)
TLC	Tilting Cover Type (Wafer)
TLB	Tilting Butt Welding Type (Butt Welding)
LTP	Weight Lightening Tilting Plug Type (Wafer)

사양

구 경	4"(100A) ~ 10"(250A)	
유 체	Water, Sea Water..etc.	
사 용 압 력	PN10	
배 관 연 결	Wafer	
재 질	① Body	Stainless Steel, WCB..etc.
	② Disc	Stainless Steel, WCB..etc.
	③ Seat	Metal

치수

Size mm (Inch)	ØA	JIS 10K		중 량 (kg)
		OD	L	
80 (3")	72	142	64	3
100 (4")	90	162	64	4
125 (5")	112	194	70	6
150 (6")	135	219	76	10
200 (8")	180	273	89	17
250 (10")	225	329	114	24

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

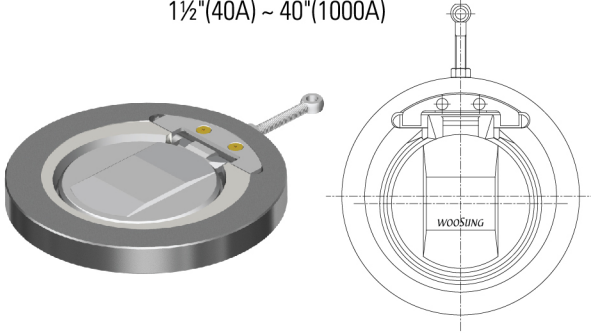
SWING PAN CHECK VALVE



(Wafer Type)

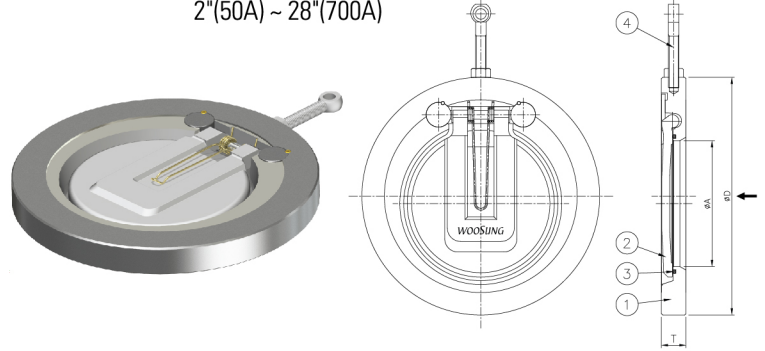
Model No. SP

1½"(40A) ~ 40"(1000A)

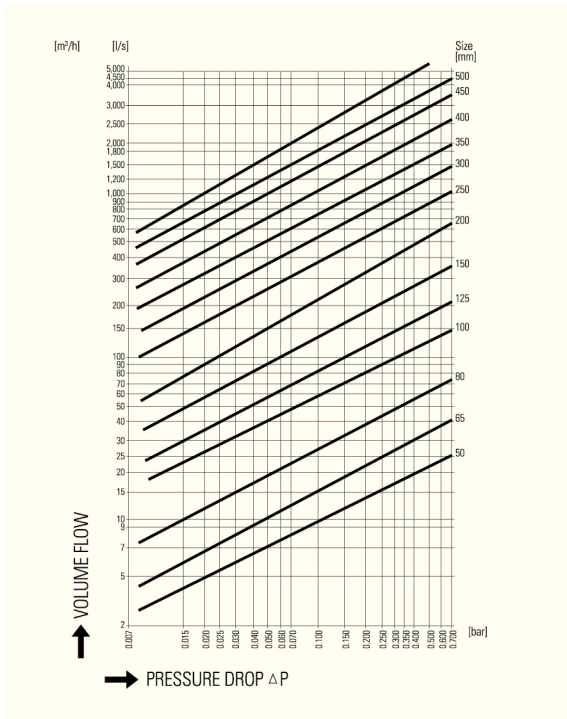


Model No. SPS

2"(50A) ~ 28"(700A)



수두손실선도



사양

Model	SP	SPS
구 경	1 ½"(40A) ~ 40"(1000A)	2"(50A) ~ 28"(700A)
사 용 압 력	JIS 10K	Class 150 (PN20)
시 험 압 력	15bar	29bar
배 관 연 결	Wafer	
재 질	① Body	Stainless Steel, Carbon Steel, NI_AL_Bronze..etc.
	② Disc	Stainless Steel, Carbon Steel, NI_AL_Bronze..etc.
	③ O-Ring	NBR / EPDM / VITON
	④ Bolt	Stainless Steel
Soft Seal	EPDM(E)	-10°C ~ +130°C
	VITON(V)	-20°C ~ +150°C

치수

Size mm (Inch)	ØA mm	SP			SPS		
		JIS 10K		중량 (kg)	Class 150 (PN20)		중량 (kg)
		ØD (mm)	T (mm)		ØD (mm)	T (mm)	
40 (1 ½")	22	89	18	1.1	-	-	-
50 (2")	31	104	18	1.2	104	19	1.3
65 (2 ½")	44	124	19	1.6	124	19	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	450	45	40
400 (16")	310	486	48	55	514	51	60
450 (18")	347	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	810	89	185	832	90	216
800 (32")	610	920	102	333	-	-	-
900 (36")	700	1020	127	462	-	-	-
1000 (40")	795	1124	146	685	-	-	-

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

용도

Air, Oil, Water..etc.

특징

Swing Pan Check Valve는 구조적으로 매우 단순하고 극히 얇으며 가볍습니다.

주의사항

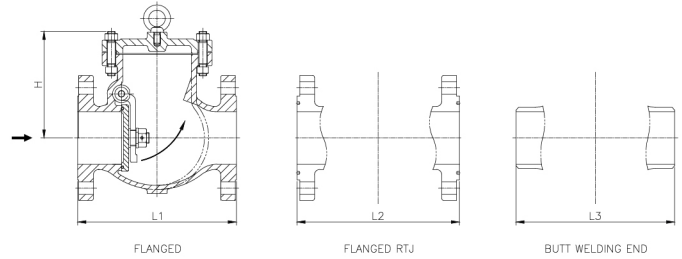
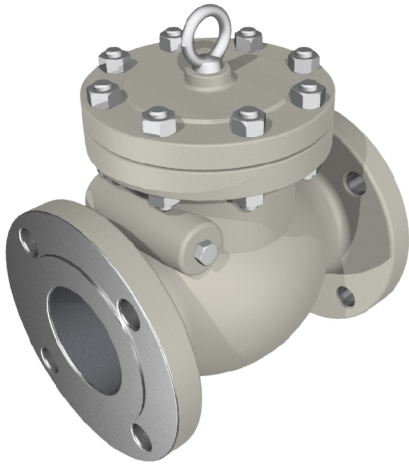
- 1) 수평배관 할 때 Eye Bolt가 위에 오도록 설치하십시오.
- 2) 펌프나 밴드 혹은 엘보우에 연결할 때는 배관 구경의 5배 이상 띄우십시오.

SWING CHECK VALVE

(Inside Hinge Pin & Bolted Cover Type)

Model No. SWB / SWF

2"(50A) ~ 28"(700A)



사양

구 경	2"(50A) ~ 28"(700A)	
유 체	Oil, Water, Gas, Air, Sea Water, Steam..etc.	
사 용 압 력	Class 150~1500	
배 관 연 결	Flanged, Flanged RTJ, Butt Welding..etc.	
재 질	① Body	Stainless Steel, Carbon Steel..etc.
	② Cover	Stainless Steel, Carbon Steel..etc.
	③ Disc	Stainless Steel, Alloy Steel..etc.
	④ Seat	Forged Carbon Steel..etc.
	⑤ Hinge	Stainless Steel(R-BAR)..etc.

치수

Size mm (Inch)	Rating	Flanged L1(mm)	Flanged RTJ L2(mm)	Butt Welding L3(mm)	H (mm)	중 량 (kg)
50 (2")	150	203	-	203	155	15
	300	267	283	267	175	19
	600	299	295	299	190	35
	900	368	371	368	321	70
	1500	368	371	368	333	123
65 (2½")	150	216	-	216	170	22
	300	292	208	292	190	30
	600	330	333	330	210	54
	900	381	384	381	333	110
	1500	419	422	419	349	155
80 (3")	150	241	-	241	185	27
	300	318	333	318	205	35
	600	356	359	356	235	64
	900	419	422	419	349	160
	1500	470	473	470	389	180
100 (4")	150	292	-	292	200	41
	300	356	371	356	220	54
	600	432	435	432	300	104
	900	457	460	457	423	214
	1500	546	549	546	419	340
150 (6")	150	356	-	356	255	80
	300	444	460	444	326	128
	600	559	562	559	400	204
	900	610	613	610	479	380
	1500	705	711	705	587	627
200 (8")	150	495	-	495	305	142
	300	533	549	533	368	210
	600	660	664	660	430	360
	900	737	740	737	565	624
	1500	832	841	832	680	2100

Size mm (Inch)	Rating	Flanged L1(mm)	Flanged RTJ L2(mm)	Butt Welding L3(mm)	H (mm)	중 량 (kg)	
250 (10")	150	622	-	622	345	177	
	300	622	638	622	473	268	
	600	787	791	787	525	620	
	900	838	841	838	721	1150	
	1500	991	1000	991	750	3200	
300 (12")	150	698	-	698	380	290	
	300	711	727	711	530	415	
	600	838	841	838	615	805	
	900	965	968	965	781	1450	
	1500	1130	1146	1130	1008	4400	
350 (14")	150	787	-	787	460	391	
	300	838	854	838	580	682	
	600	889	892	889	700	1046	
	900	1029	1038	1029	807	1750	
	1500	1257	1276	1257	1035	5400	
400 (16")	150	864	-	864	545	461	
	300	864	880	864	695	747	
	600	991	994	991	812	1350	
	900	1130	1140	1130	838	2420	
	450 (18")	150	978	-	978	650	640
300		978	994	978	797	1250	
600		1092	1095	1092	960	2020	
500 (20")		150	1016	-	1016	670	780
		300	1016	1035	1016	876	1500
	600	1194	1200	1194	1029	2390	
600 (24")	150	1295	-	1295	900	1490	
	300	1346	1368	1346	1007	2230	
	600	1397	1407	1397	1202	3500	
700 (28")	150	1448	-	1448	1016	2050	
	300	1499	1524	1499	1149	2950	

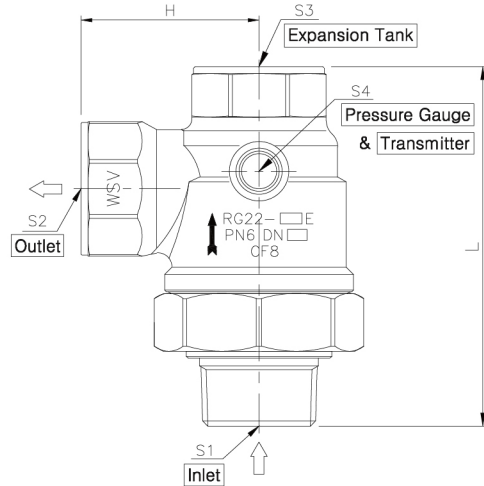
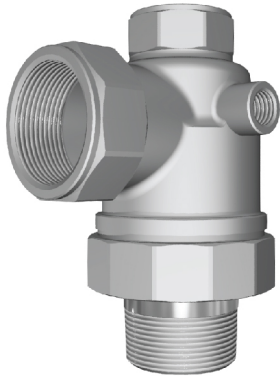
※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

5-WAY UNION CHECK VALVE

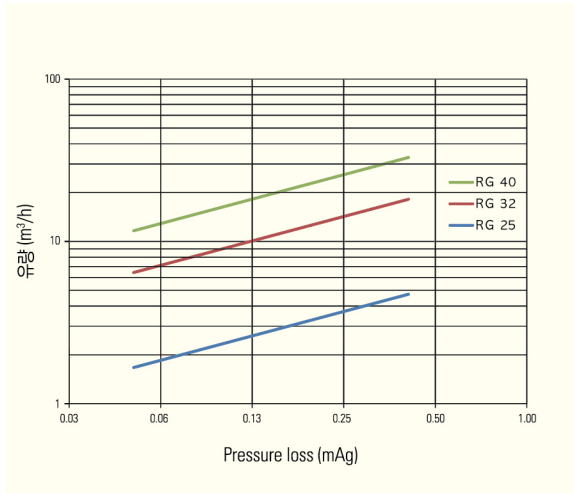


Model No. RG

1"(25A) ~ 1½"(40A)



수두손실선도



사양

구 경	1"(25A)~1 ½"(40A)	
배 관 연 결	나사식(Screwed)	
사 용 압 력	10bar	
시험압력	Shell	15bar
	Seat	11bar
재 질	Body	Stainless Steel
	Nipple	Stainless Steel
	Union Nut	Stainless Steel
	Valve Unit	POM
	Seat	NBR / EPDM / VITON
	Spring	Stainless Steel
사용온도	80°C	

치수

구경		치수					
mm	Inch	L	H	S1	S2	S3	S4
25	1"	103	51	R 1"	Rc 1"	Rc 1"	G ¼"
32	1 ¼"	129	60	R 1 ¼"	Rc 1 ¼"	Rc 1"	G ¼"
40	1 ½"	138	69	R 1 ½"	Rc 1 ½"	Rc 1"	G ¼"

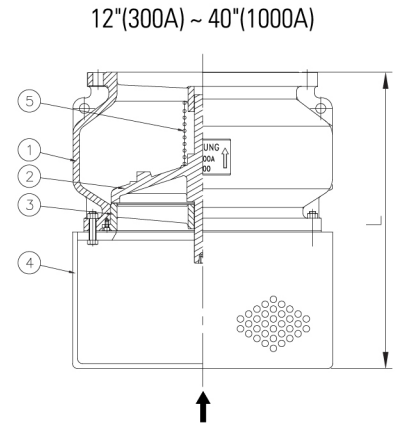
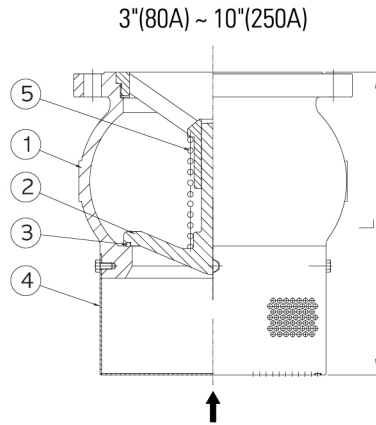
용도

- 인버터 소형 펌프 시스템
- 부스터 펌프 시스템
- 전자제어 펌프 라인

FOOT VALVE

Model No. NSF

3"(80A) ~ 40"(1000A)



사양

구 경	3"(80A) ~ 40"(1000A)	
배 관 연 결	FLANGED	
사 용 압 력	10K	Class 150
시험압력	Shell	15bar / 29bar
	Seat	11bar / 21bar
재 질	① Body	Carbon Steel, Stainless Steel, Bronze..etc.
	② Disc	Carbon Steel, Stainless Steel, Bronze..etc.
	③ Seat	Rubber, PTFE, Stainless Steel, Stellite Overlay..etc.
	④ Screen	Stainless Steel, Bronze
	⑤ Spring	Stainless Steel, Inconel

치수

Size mm (Inch)	JIS 10K		Class 150	
	L (mm)	중량 (kg)	L (mm)	중량 (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

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

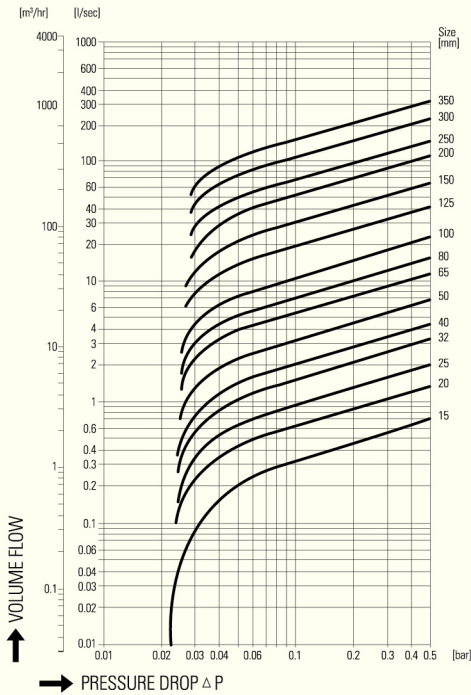
PAN CHECK VALVE



PAN CHECK VALVE 특징

- 1) 워터해머 현상이 없습니다.
역류가 일어나기 전에 짧은 리프트와 Axial Spring의 힘으로 먼저 닫히므로 워터해머가 일어나지 않습니다.
- 2) 얇고 작고 가볍습니다.
기존 스윙체크에 비하여 매우 가볍고 취급하기 쉽습니다.
- 3) 수평, 수직 상하방향 모두 배관할 수 있습니다.
스프링 압축구조이므로 스프링 강도를 높이면 수직하향 배관라인에도 설치할 수 있습니다.
- 4) 개방압력의 자유선택
소비자의 요구시 개방압력의 변경이 가능합니다.(OPTION)

수두손실선도(별표1)



주의사항

- 1) 고온, 고압이나 특수유체용은 당사와 상의바랍니다.
- 2) 왕복동 콤프레사, 에어·드라이어 및 부스타 펌프장치 등 잦은 개폐 조건에 사용할 때는 당사와 상의바랍니다.
- 3) 200°C 이상의 고온에서는 인코넬 등의 특수재질 스프링사용을 권장합니다.
(Option)
- 4) 각종 공업 규격에서 Metal touch 체크밸브의 경우 미량의 누설이 허용되고 있습니다.
- 5) 엄격한 누설관리가 요구될 때는 당사와 상의하시기 바라며 당사의 누설규정이 필요할 때는 연락바랍니다.
- 6) 스케일이나 물때가 많이 끼이는 곳에는 스테인레스스틸 제품을 추천합니다.

면간거리와 중량비교

Size		50	65	80	100	125	150	200	250
중량 (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	-
면간거리 (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	-

체결볼트 치수(JIS 10K 후랜지기준)

Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250
	inch	½	¾	1	1 ¼	1 ½	2	2 ½	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

PAN CHECK VALVE 개괄표

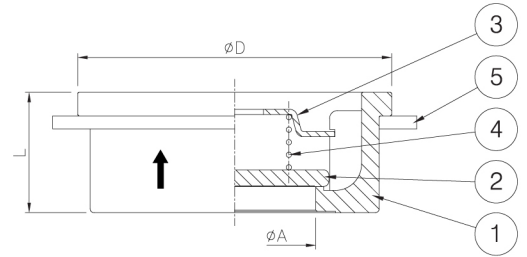
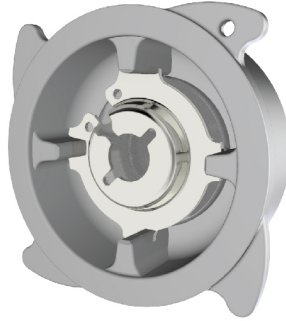
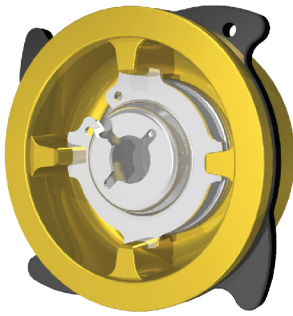
Model	구경 mm	최대사용 압력	본체재질	내부부속재질	접속	접속시트
PC	15-80	16	황동단조	스테인레스스틸	W	Metal to Metal
	100	16	청동주조	스테인레스스틸	W	Metal to Metal
	15-100	40	스테인레스스틸	스테인레스스틸	W	Metal to Metal
PA	25-80	10	스테인레스스틸	스테인레스스틸	W	Rubber to Metal
	25-80	10	황동단조	스테인레스스틸	W	Rubber to Metal
	25-80	16	황동단조	스테인레스스틸	W	Metal to Metal
	25-80	40	스테인레스스틸	스테인레스스틸	W	Metal to Metal
	100	10	스테인레스스틸	스테인레스스틸	W	Rubber to Metal
	100	10	청동주조	스테인레스스틸	W	Rubber to Metal
	100	16	청동주조	스테인레스스틸	W	Metal to Metal
	100	40	스테인레스스틸	스테인레스스틸	W	Metal to Metal
	25-350	10	스테인레스스틸	스테인레스스틸	W	Rubber to Metal
	125-250	10	닥타일	스테인레스스틸	W	Rubber to Metal
	25-200	40	스테인레스스틸	스테인레스스틸	W	Metal to Metal
	250-350	10-20	스테인레스스틸	스테인레스스틸	W	Metal to Metal
ANA	15-100	150-300 Class	스테인레스스틸	스테인레스스틸	W	Metal to Metal
CV	15-50	10 Bar	황동단조	스테인레스스틸	S	Metal to Metal
PCS	8-50	20 Bar	스테인레스스틸	스테인레스스틸	S	Metal to Metal
UCV	15-50	10 Bar	황동단조	POM	S	Rubber to Metal
PAS	25-50	20 Bar	스테인레스스틸	스테인레스스틸	S	Metal to Metal
BU	08-20	20 Bar	스테인레스스틸	스테인레스스틸	S	Rubber to Metal
KAI	08-25	20 Bar	스테인레스스틸	스테인레스스틸	S	Rubber to Metal

W : Wafer S : Screw

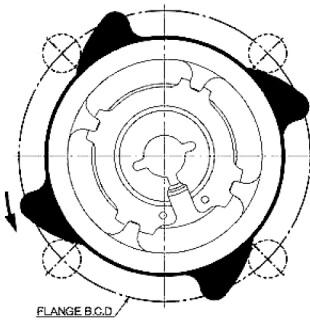
PAN CHECK VALVE

Model No. PC

½"(15A) ~ 4"(100A)



CENTER RUBBER 사용법



Bolt와 Center Rubber 4곳이 모두 접촉되도록 Pan Check Valve를 돌리면서 맞추면 배관 Pipe의 정중앙에 위치시킬 수 있습니다.

주의사항

본 PC TYPE은 액체용(비압축성 유체)에만 사용하십시오.

용도

- 액체, 기름
- 체크밸브, 진공브레이커, 후드밸브
- 산업용, 주택, 선박

사양

모델		PC12	PC22
시 트		Metal	Metal
구 경		½"(15A) ~ 4"(100A)	½"(15A) ~ 4"(100A)
최고사용압력		16bar	40bar
시험압력	Shell	24bar	60bar
	Seat	18bar	44bar
배관연결		Flange 끼움식 (Wafer)	
재질	① Body	Forged Brass (100A:Bronze)	Stainless Steel
	② Disc	Stainless Steel	
		Solid Teflon(통테프론) (-40°C~+180°C, 사용압력 7bar)	
	③ Spring Seat	Stainless Steel	
	④ Spring	Stainless Steel, Inconel	
⑤ Center Rubber	NBR	Stainless Steel	
유로저항		수두손실선도 참조(별표1)	

치수

Size mm(Inch)	D mm	L mm	A mm	중량 (kg)
15 (½)	40	16	15	0.09
20 (¾)	50	19	20	0.12
25 (1)	61	22	25	0.3
32 (1¼)	73.5	28	32	0.5
40 (1½)	87	32	39	0.7
50 (2)	102	40	49	1.14
65 (2½)	120	46	63	1.83
80 (3)	132.5	50	75	2.45
100 (4)	158	60	93	3.97

개방압력 (bar)

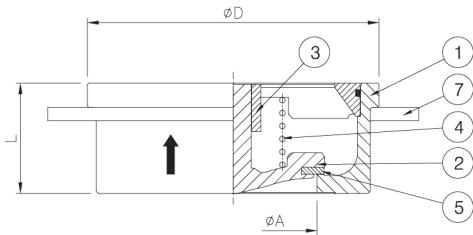
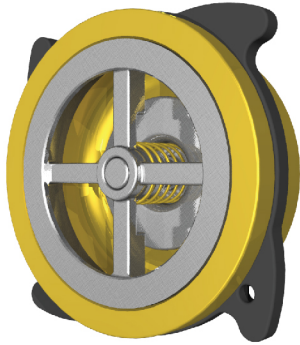
스프링 있을 때			없을 때
↑	→	↓	↑
0.053	0.050	0.045	0.004
0.053	0.050	0.045	0.004
0.054	0.050	0.044	0.005
0.053	0.050	0.045	0.004
0.054	0.050	0.044	0.005
0.055	0.050	0.043	0.006
0.055	0.051	0.043	0.006
0.056	0.051	0.042	0.007
0.057	0.051	0.041	0.008

- L : Din 3202, Sheet3, Series K4 기준입니다.
 ※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

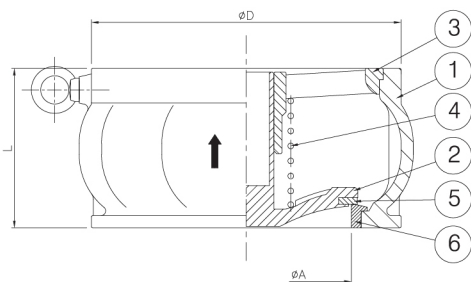
PAN CHECK VALVE

Model No. PA12 / PA32

1"(25A) ~ 4"(100A)



5"(125A) ~ 10"(250A)



사양

모델	PA12		PA32	
시 트	Metal	Rubber	Metal	Rubber
구 경	1"(25A) ~ 4"(100A)		5"(125A) ~ 10"(250A)	
최고사용압력	16bar	10bar	10bar	
시험압력	Shell	24bar	15bar	15bar
	Seat	18bar	11bar	11bar
배관연결	Flange 끼움식 (Wafer)			
재질	① Body	Forged Brass (100A:Bronze)		Ductile Cast Iron
	② Cone Disc	Stainless Steel		
	③ Guide	Stainless Steel		
	④ Spring	Stainless Steel, Inconel		
	⑤ Disc Rubber	EPDM -10°C ~ +130°C VITON -20°C ~ +150°C PTFE -40°C ~ +180°C		
	⑥ Valve Seat	-		Bronze Ring
	⑦ Cener Rubber	NBR(25A-80A)		-
유로저항	수두손실선도 참조(별표1)			

치수

Size mm(Inch)	D mm	L mm	A mm	중량 (kg)
25 (1)	61	22	25	0.35
32 (1¼)	72.5	28	32	0.55
40 (1½)	87	32	39	0.8
50 (2)	102	40	49	1.1
65 (2½)	120	46	63	1.6
80 (3)	132.5	50	76	2.3
100 (4)	158	60	94	3.8
125 (5)	187	90	120	9
150 (6)	217	106	140	13.5
200 (8)	267	140	184	28.3
250 (10)	330	170	223	44

개방압력

(bar)

스프링 있을 때			없을 때
↑	→	↓	↑
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 : Din 3202, Sheet3, Series K4 기준입니다.

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

용도

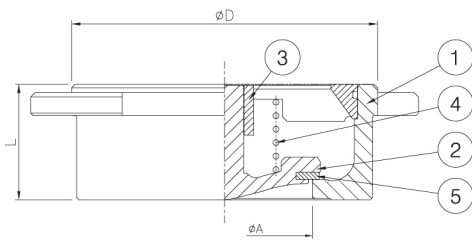
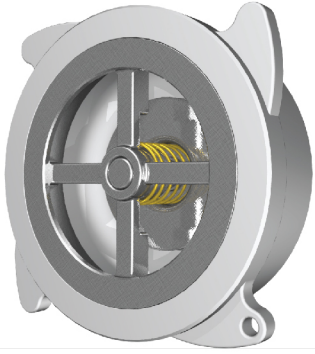
- 액체, 기름, 기체
- 체크밸브, 진공브레이커, 후드밸브, 부스타펀프
- 산업용, 주택, 선박

PAN CHECK VALVE

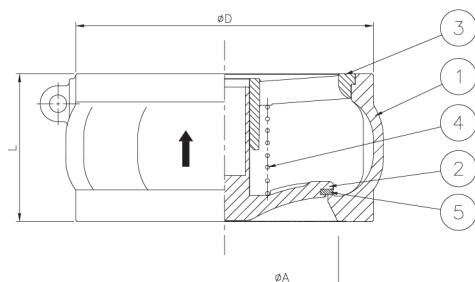
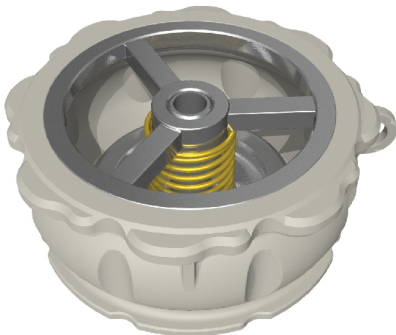


Model No. PA22

1"(25A) ~ 3"(80A)



4"(100A) ~ 14"(350A)



사양

시 트	Metal			Rubber
구 경	1"(25A) ~ 8"(200A)	10"(250A) ~ 14"(350A)		4"(100A) ~ 14"(350A)
최고사용압력	40bar	20bar		10bar
시험압력	Shell	60bar	30bar	15bar
	Seat	44bar	22bar	11bar
압력과 온도	40bar	34bar	32bar	Disc Rubber
	120°C	200°C	300°C	
배관연결	Flange 끼움식 (Wafer)			
재질	① Body	Stainless Steel		
	② Cone Disc	Stainless Steel		
	③ Guide	Stainless Steel		
	④ Spring	Stainless Steel, Inconel		
	⑤ Disc Rubber	EPDM -10°C ~ +130°C VITON -20°C ~ +150°C PTFE -40°C ~ +180°C		
유로저항	수두손실선도 참조(별표1)			

※ 20Bar의 Rubber Touch 제품은 별도 문의 바랍니다. (PAG형)

치수

Size mm(Inch)	D mm	L mm	A mm	중량 (kg)
25 (1)	61	22	25	0.35
32 (1¼)	72	28	32	0.55
40 (1½)	87	32	39	0.8
50 (2)	101	40	49	1.1
65 (2½)	120	46	63	1.6
80 (3)	133	50	76	2.3
100 (4)	158	60	94	3.8
125 (5)	186	90	120	9
150 (6)	216	106	140	13.5
200 (8)	267	140	184	28.3
250 (10)	330	170	223	44
300 (12)	403	192	251	75
350 (14)	447	222	293	94

- L : Din 3202, Sheet3, Series K4 기준입니다.
※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

개방압력

스프링 있을 때				없을 때
↑	→	↓	↑	
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	

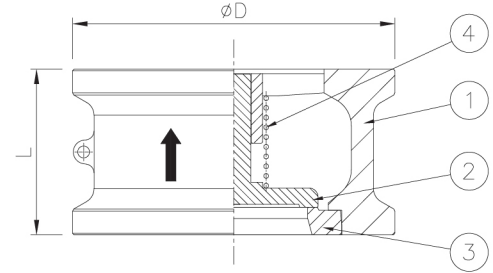
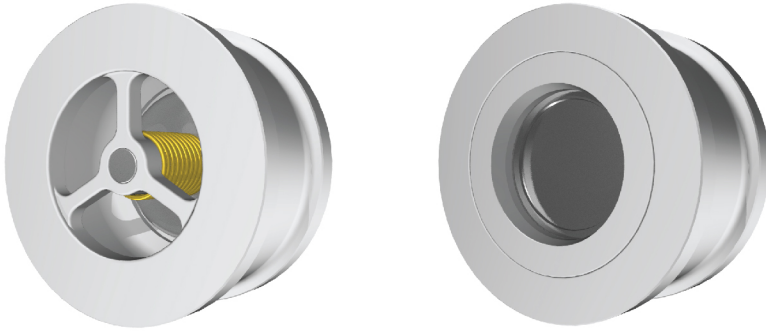
용도

- 액체, 기름, 기체, 증기
- 체크밸브, 진공브레이커, 후드밸브, 부스타펌프
- 산업용, 주택, 선박

PAN CHECK VALVE

Model No. ANA

1/2"(15A) ~ 4"(100A)



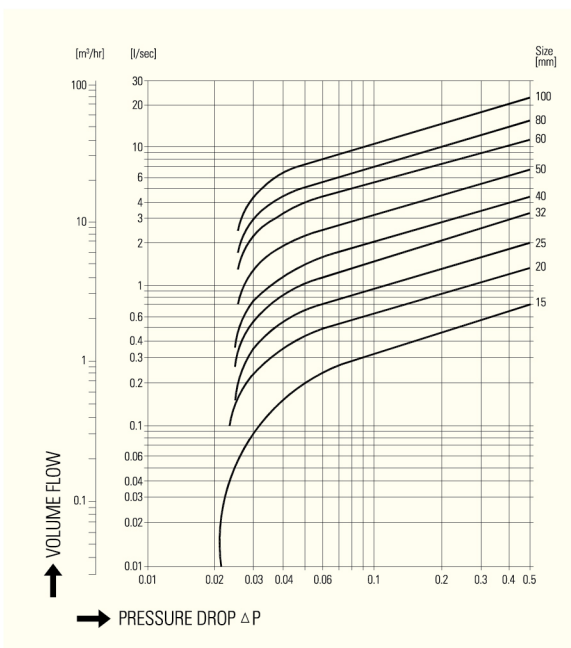
사양

시 트	Metal			
구 경	1/2"(15A) ~ 4"(100A)			
최고사용압력	Class 150 (PN20)	Class 300 (PN50)	Class 600 (PN100)	
시험압력	Body	29bar	76bar	147bar
	Disc seat	21bar	55bar	109bar
압력과 온도	ASME B16.34 Pressure and Temperature Reference			
배관연결	Flange 끼움식 (Wafer)			
재질	① Body	Stainless Steel		
	② Cone Disc	Stainless Steel		
	③ Guide	Stainless Steel		
	④ Spring	Stainless Steel, Inconel, etc.		

치수

Size mm (Inch)	Class (PN)	D (mm)	L (mm)	W.t (kg)
15 (1/2)	150 (20)	48	25	0.2
	300 (50)	53	25	0.25
	600 (100)	53	25	0.3
20 (3/4)	150 (20)	57	31.5	0.37
	300 (50)	65	31.5	0.46
	600 (100)	65	31.5	0.55
25 (1)	150 (21)	65	35.5	0.47
	300 (51)	70	35.5	0.54
	600 (101)	70	35.5	0.65
32 (1-1/4)	150 (21)	76	40	0.7
	300 (51)	80	40	0.77
	600 (101)	80	40	0.92
40 (1-1/2)	150 (22)	85.5	45	1
	300 (52)	92	45	1.2
	600 (102)	92	45	1.44
50 (2)	150 (22)	104	60 (56)	1.8
	300 (52)	109	60 (56)	2
	600 (102)	109	60 (56)	2.4
65 (2-1/2)	150 (23)	123.5	67 (63)	2.7
	300 (53)	127.5	67 (63)	2.9
	600 (103)	127.5	67 (63)	3.48
80 (3)	150 (23)	136.5	73 (71)	3.7
	300 (53)	146	73 (71)	4.3
	600 (103)	146	73 (71)	5.16
100 (4)	150 (24)	174.5	73 (80)	6.8
	300 (54)	178	73 (80)	7.1
	600 (104)	191	73 (80)	8.52

수두손실선도



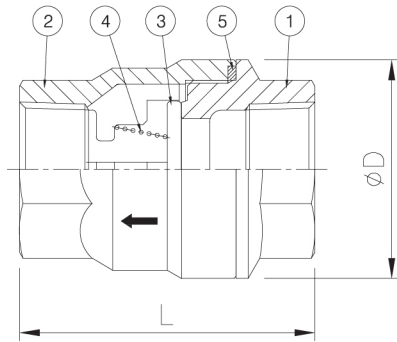
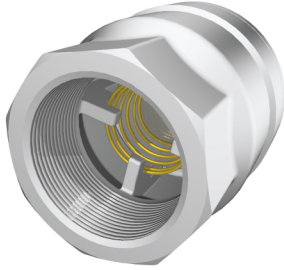
- L(면간거리) : The ASME B16.10 기준이며 () 내 치수는 Din 3202, Sheet 3, Series K5 기준입니다.

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

PAN CHECK VALVE

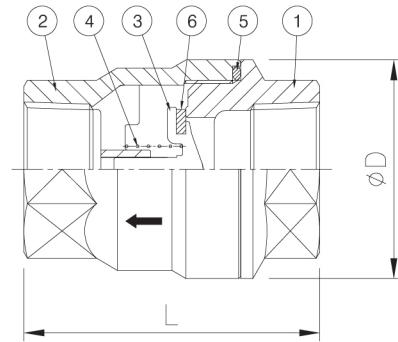
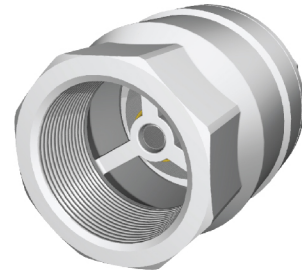
Model No. PCS

¼"(8A) ~ 2"(50A)



Model No. PAS

1"(25A) ~ 2"(50A)



사양

시	트	Metal
구	경	¼"(8A) ~ 2"(50A)
최고사용압력		20bar
시	험 압	력 30bar
배	관 연	결 나사식(Screwed)
재질	① Body	Stainless Steel
	② Cap	Stainless Steel
	③ Disc	Stainless Steel
		Solid Teflon (통테프론) (-40°C~+180°C, Pressure 7bar)
	④ Spring	Stainless Steel
⑤ O-Ring	NBR	

치수

Size mm (Inch)	D (mm)	L (mm)	중량 (kg)
8 (¼), 10(⅜)	27	42	0.13
15 (½)	35	48	0.18
20 (¾)	43	61	0.3
25 (1)	54	73	0.6
32 (1¼)	62	81	0.8
40 (1½)	75	87	1.2
50 (2)	90	100	1.8

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

사양

시	트	Metal Touch	Rubber Touch
구	경	1"(25A) ~ 2"(50A)	
최고사용압력		20bar	10bar
시	험 압	력 30bar	15bar
배	관 연	결 나사식(Screwed)	
재질	① Body	Stainless Steel	
	② Cap	Stainless Steel	
	③ Disc	Stainless Steel	
	④ Spring	Stainless Steel	
	⑤ O-Ring	NBR	
	⑥ Disc Rubber	EPDM (-10°C ~ +130°C)	
VITON (-20°C ~ +150°C)			

치수

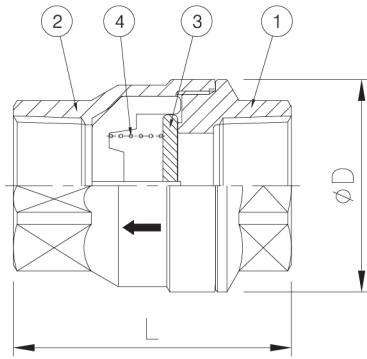
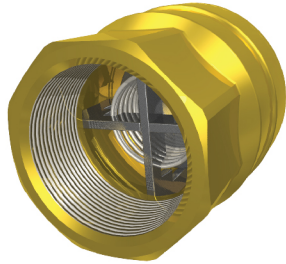
Size mm (Inch)	D (mm)	L (mm)	중량 (kg)
25 (1)	54	73	0.6
32 (1¼)	62	81	0.8
40 (1½)	75	87	1.2
50 (2)	90	100	1.8

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

PAN CHECK VALVE

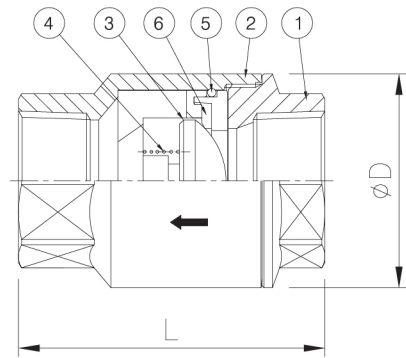
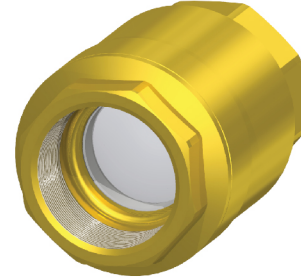
Model No. CV

½"(15A) ~ 2"(50A)



Model No. UCV

½"(15A) ~ 2"(50A)



사양

시	트	Metal
구	경	½"(15A) ~ 2"(50A)
최고사용압력		10bar
시	험 압력	15bar
배	관 연결	나사식(Screwed)
재질	① Body	Forged Brass
	② Cap	Forged Brass
	③ Disc	Stainless Steel
		Solid Teflon (-40°C~+180°C, Pressure 7bar)
④ Spring	Stainless Steel	

치수

Size mm (Inch)	D (mm)	L (mm)	중량 (kg)
15 (½)	33	48	0.15
20 (¾)	41	58	0.26
25 (1)	50.4	66	0.49
32 (1¼)	58	74.5	0.65
40 (1½)	71	84.5	0.88
50 (2)	88	95.5	1.2

개방압력
0.05bar

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

사양

시	트	Rubber Touch
구	경	½"(15A) ~ 2"(50A)
최고사용압력		10bar
시	험 압력	15bar
배	관 연결	나사식(Screwed)
재질	① Body	Forged Brass
	② Cap	Forged Brass
	③ Valve Unit	POM
	④ Spring	Stainless Steel
	⑤ O-Ring	NBR
	⑥ Disc Rubber	EPDM
Max. Temp		Max, 80°C

치수

Size mm (Inch)	D (mm)	L (mm)	중량 (kg)
15 (½)	31.6	51	0.11
20 (¾)	40	58	0.25
25 (1)	51.7	69	0.4
32 (1¼)	60	80	0.6
40 (1½)	75	93	1.1
50 (2)	94	102	1.5

개방압력
0.05bar

특징

내부 부속 소재가 가벼운 엔지니어링 플라스틱이므로 유체압력이 미압인 경우에도 사용하기 적합하여 소음이 없습니다.

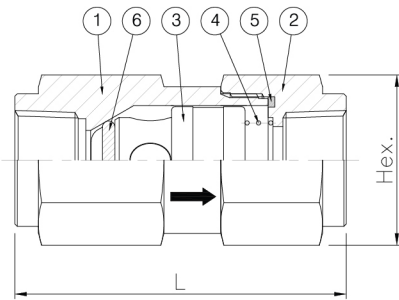
※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

PAN CHECK VALVE



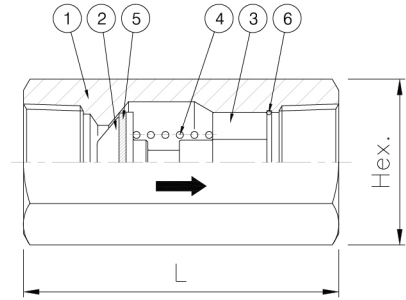
Model No. BU

1/4"(8A) ~ 3/4"(20A)



MODEL NO. KAI

1/4"(8A) ~ 1"(25A)



사양

재 질	Stainless Steel
최고사용압력	Rubber : 20bar
시 험 압 력	30bar
부 품 명	①Body ②Cap ③Poppet ④Spring ⑤O-Ring ⑥Seat O-Ring

치수

Size mm (Inch)	Hex. (mm)	L (mm)	중량 (kg)
8 (¼)	22	57	0.13
10 (⅜)	22	57	0.13
15 (½)	32	70	0.31
20 (¾)	38	82	0.48

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

개방압력

0.1bar (수평배관기준)

사양

재 질	Stainless Steel / C3604
최고사용압력	20bar
시 험 압 력	30bar
부 품 명	①Body ②Disc ③Guide ④Spring ⑤Seat O-Ring ⑥Stop Ring

치수

Size mm (Inch)	Hex. (mm)	L (mm)	중량 (kg)
8 (¼)	16	41.6	0.06
10 (⅜)	22	52	0.15
15 (½)	27	62	0.25
20 (¾)	36	73	0.55
25 (1)	41	90	0.84

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

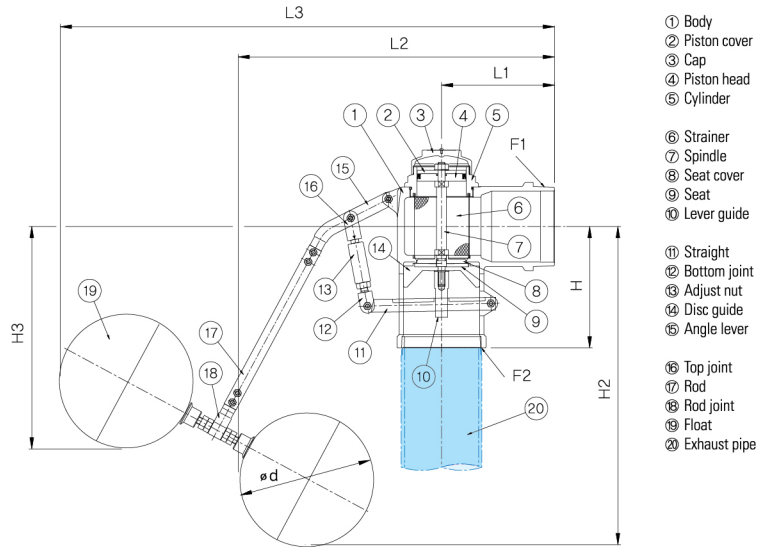
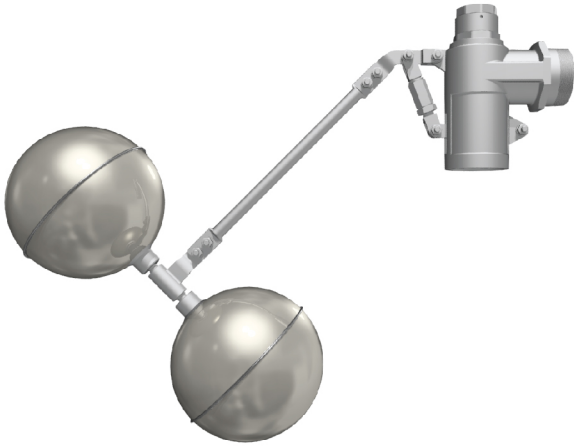
개방압력

0.1bar (수평배관기준)

BALL FLOAT VALVE

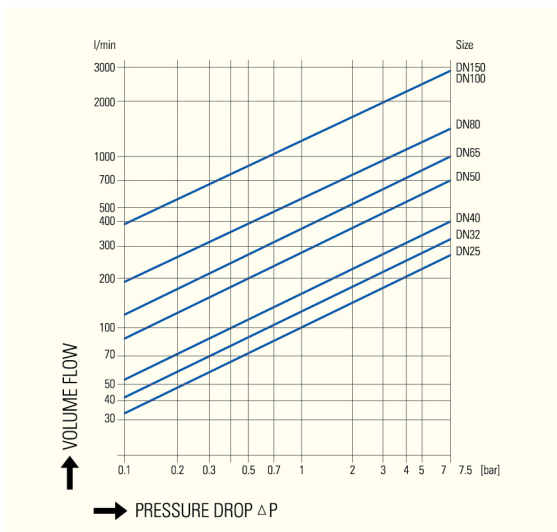
Model No. LF

½"(15A) ~ 6"(150A)



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

수두손실선도



치수

Size mm (Inch)	25 (1")	32 (1¼")	40 (1½")	50 (2")	65 (2½")	80 (3")	100 (4")	150 (6")
Ød (mm)	120	120	120	160	160	190	190	190
F1, F2	PF1", PF¼"	PT¼", PF¼"	PT1, ½", PF1, ½"	PT2", PF2"	PF2, ½"	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 (1,½")는 개별종입니다.
 ※ "F1" 부분에서 Flange Type은 Option입니다.

사양

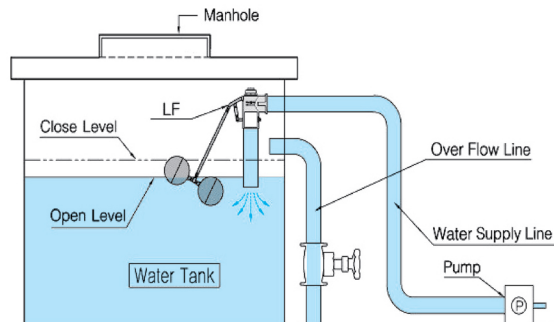
구경	½"(15A) ~ 6"(150A)	
최고사용압력	7bar	
수압시험	Body	11bar
	Disc seat	8bar
최고사용온도	60°C	
배관연결	Screwed end	
재질	1-8, 10-19	Stainless steel
	9	Rubber (EPDM, Viton)

특징 물탱크에 급수하는 밸브로서 후로트의 부력에 의하여 자동적으로 수위를 조절하는 밸브를 볼탭 (Ball Tap)이라 합니다.

당사의 후로트밸브는 이 볼탭의 한 종류로서 다음과 같은 특징을 갖고 있습니다.

- 스테인레스 강으로 제작되어 부식에 강합니다.
- 웨이트 밸런스식으로 떨림이 없습니다.
- 테프론코팅의 효과 : Cylinder 내부는 테프론 코팅 처리되어 매우 부드럽게 작동하며 오랜 수명을 보장합니다.

배관도



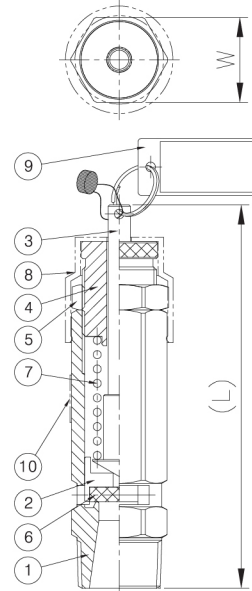
- 내부에 Strainer가 있습니다.
- 토출 파이프 장착 가능
- 튼튼한 구조입니다.(수압이 강한 곳에서 장시간 사용하더라도 고장이 없으며, 수출을 통하여 성능 또한 검증되었습니다.)

SAFETY VALVE



Model No. SA

½"(15A), ¾"(20A), 1"(25A)



사양

최고사용압력	1 Mpa	
설 정 압 력	1 Mpa 이내 설정	
분출정지 압력	설정압력의 10% 이내	
리프트 형식	양정식	
재질	① Body	Brass bar
	② Disc	Brass bar
	③ Stem	SM45C
	④ Guide	SM45C
	⑤ Lock Nut	SM45C
	⑥ Seat	Rubber
	⑦ Spring	PW-2 / SWOSC
	⑧ Cap	PE
	⑨ Tag	AL
	⑩ Label	
사용온도	-20°C ~ +80°C	

- 승인형식에 의하여 1Mpa 이상 ~ 3Mpa 이하 제품은 별도 수주 생산합니다.

치수

Size mm (Inch)	H (open) (mm)	L (mm)	중량 (kg)
15 (½)	22	80	0.16
20 (¾)	27	121	0.37
25 (1)	34	124	0.60

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

특징

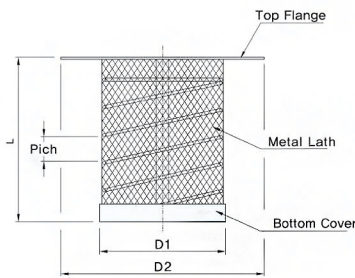
- KS B 6216 "증기용 및 가스용 안전밸브" 규격에 준하여 설계, 제작되었습니다.
 - 에어 압력방출용 양정식 안전밸브입니다.
 - 설정압력을 다양하게 맞출 수 있습니다. (스프링 조절)
 - 한국산업안전보건공단에 인증을 필한 제품입니다.
- (인증번호: GLI1 10-AV2BL-0235, GLI3 12-AV2BL-0010)



STRAINER

Model No. SCW-F

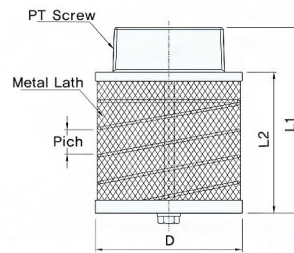
1 1/2"(40A) ~ 10"(250A)
Flange type



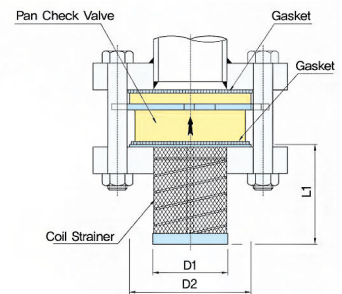
< SCW-F >

Model No. SCW-S

1 1/2"(40A) ~ 2"(50A)
Screwed type



< SCW-S >



< SCW-F Assembled shapes >

사양

모 델	SCW-F	SCW-S
구 경	1 1/2"(40A) ~ 10"(250A)	1 1/2"(40A) ~ 2"(50A)
연 결	JIS 10K 후렌지	Screwed End
재 질	Stainless Steel	Stainless Steel

치수 (SCW-S)

Size (mm)	L1	L2 (mm)	D (mm)	중량 (kg)
40	86	65	65	0.29
50	100	76	79	0.45

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

치수 (SCW-F)

Size (mm)	L	D1 (mm)	D2 (mm)	중량 (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

※ 위 치수는 제품의 개선을 위하여 변경될 수 있습니다.

특징

- 스텐레스 스프링 강으로 만든 Coil Spring 형상의 제품으로 매우 튼튼하고 미려합니다.
- 여과부 통과 면적은 호칭구경면적의 4-5배로 흡입저항이 없습니다.
- Pan Check Valve 와 조립하여 가볍고 신뢰성이 높은 Foot Valve를 만들 수 있습니다.
- 매우 촘촘한 Wire Mesh를 씌움으로써 미세한 Mesh도 가능합니다.

사용유체와 재질

유체명	재 질	밸브재료				시트재질		
		청동	주철	스테인레스	Pearl	NBR	VITON	EPDM
물	Water	◎	○	◎	○	◎	○	◎
온수(80℃)	Hot Water	◎	○	◎	○	◎	◎	◎
바닷물	Sea Water	○	△	○	△	◎	◎	◎
알콜류	Alcohol	◎	○	◎	○	△	△	◎
에테르	Ether	○	○	◎	○	X	X	X
아세톤	Acetone	◎	◎	◎	◎	X	X	△
벤젠	Benzene	○	○	◎	○	X	△	X
황산(진한, 묽은)	Sulfuric acid	X	X	X	X	X	○	△
질산(진한, 묽은)	Nitric acid	X	X	○	X	X	○	X
염산(진한, 묽은)	Hydrochloric acid	X	X	X	X	X	○	○
진한 빙초산	Acetic acid	X	X	X	X	X	X	X
100%진한 빙초산	Acetic acid 100%	△	X	◎	X	△	○	△
개미산	Formic acid	X	X	○	X	X	△	X
진한 가성카리	Potassium carbonate (Strong)	△	△	○	△	◎	-	-
묽은 가성카리	Potassium carbonate (Weak)	△	△	○	△	◎	◎	◎
가성소다	Caustic soda	△	△	○	△	△	△	X
휘발유	Gasoline	◎	○	◎	◎	X	○	X
경유	Light oil (Diesel)	○	◎	◎	◎	○	◎	X
중유	Heavy oil	○	◎	◎	◎	○	◎	X
윤활유	Lubricating oil	○	◎	◎	◎	○	◎	X
산소가스	Oxygen gas	◎	◎	◎	◎	△	◎	◎
수소가스	Hydrogen gas	◎	◎	◎	◎	◎	◎	◎
질소가스	Nitrogen gas	◎	◎	◎	◎	◎	◎	◎
아황산가스(건)	Sulphite gas (Dry)	○	○	○	○	△	○	○
일산화탄소(건)	Carbon monoxide (Dry)	△	◎	◎	◎	◎	◎	△
이산화탄소(건)	Carbon dioxide (Dry)	○	◎	◎	◎	○	◎	◎
암모니아	Ammonia	X	○	○	○	△	X	-
염소(건)	Chlorine (Dry)	○	○	○	○	△	○	X
염소(습)	Chlorine (Wet)	X	X	X	X	△	○	△

◎ : 아주 좋음 ○ : 좋음 △ : 보통 X : 부적합 - : 데이터없음

모델 선정에 필요한 사용조건

- | | | |
|--------|--------------|---------------|
| ① 사이즈 | ⑥ 유 량 | ⑪ 납 기 |
| ② 사용압력 | ⑦ 작동횟수 | ⑫ 흐름방향 |
| ③ 개방압력 | ⑧ 누설허용량 | ⑬ 설치할 곳의 여유공간 |
| ④ 유체종류 | ⑨ 사용장소(적용기계) | ⑭ 배관 다이어그램 |
| ⑤ 온 도 | ⑩ 수 량 | ⑮ 기타 희망사항 |

유량과 배관구경(물기준)

Size (mm)	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"
유량(m³/hr)	2.4	5	9	14	20	32	50	70	120	210	330	520	690	900	1100	1440	2100	2340	2770	3120