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Pipe and Fitting for high-purity water and high-purity chemicals

Ultra Purify Water Piping System



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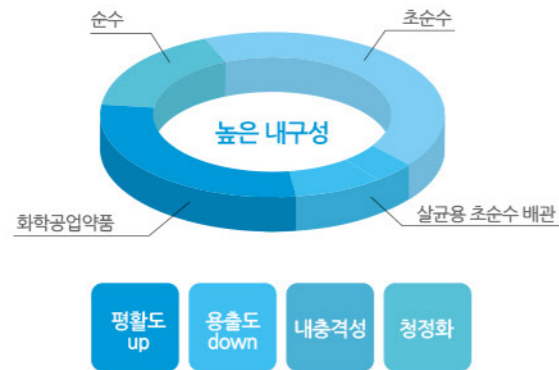
06	특징 / 용도	18	UNION BALL VALVE	60	90° ELBOW
07	품질	24	BALL VALVE (Flange)	61	45° ELBOW
08	성능 및 물성 TEST 결과	26	UNION DIAPHRAGM VALVE (Socket)	62	TEE
09	용출 규격 및 TEST 결과	30	DIAPHRAGM VALVE (Flange)	63	REDUCER TEE
10	VALVE & FITTING 용출 TEST 결과	34	BUTTERFLY VALVE	67	REDUCER
	VALVE & FITTING TOC TEST 결과	38	CHECK VALVE	69	SOCKET
11	PIPE 비교 내용 / 표면 조도 비교	44	SWING CHECK VALVE	70	FAUCET SOCKET
12	열간 내압 CREEP TEST	50	AUTOMATIC BALL VALVE (Flange)	71	MALE ADAPTER
	EPDM 용출 TEST 결과	52	AUTOMATIC DIAPHRAGM VALVE (Flange)	72	UNION
13	ASUNG CLEAN PVC VALVE & FITTING 공정	54	AUTOMATIC BUTTERFLY VALVE	74	T.S FLANGE
	ASUNG CLEAN PVC PIPE 공정	58	PIPE	75	BLIND FLANGE
14	시공 자료	59	CAP		

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특징

- 1) 중금속 용출이 극히 적고 충격에 강한 CLEAN PVC 원료를 사용하고 있습니다.
- 2) 제품의 표면조도 및 평활도가 높고 생균 증식의 원인이 되는 요철, 구멍 등이 극히 적습니다.
- 3) TOC 용출이 매우 적습니다.
- 4) 순수, 초순수 및 일반 약품에 대한 내구성 및 내화학성이 높습니다.
- 5) CLEAN PVC PIPE는 CLEAN ROOM에서 압출 생산되고 있습니다.
- 6) PIPE 절단은 무진 절단기를 사용하고, PIPE 끝 부분에 투명CAP을 씌우고 비닐포장을 한 후 2중 포장하여 비닐 포장이 찢어짐을 방지하도록 하였으며, VALVE & FITTING은 탈지 세정을 통해 OIL FREE 제품으로 출고되고 있습니다.



용도

* 순수 · 초순수 배관, 살균용 초순수 배관, 증온 살균 순수 배관 등

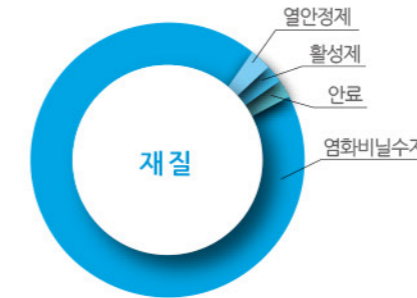
품질

* 재질

ASUNG CLEAN PVC PIPE & FITTING은 정선된 염화비닐수지를 주원료로 하며, 소량의 양질 열안정제, 활성제, 안료 등을 배합하여 성형 제조됩니다.

* 규격

ASUNG CLEAN PVC PIPE는 KS M 3401(경질염화비닐관)에 준하여 제조됩니다.



구분	시험항목	시험방법	비고
치수	평균 안 지름 두께	KS M 3401	산업자원부 기술표준원 우수품질 인증제품 평가항목
기본물성	인장강도 수압시험 편평시험 비카트 연화온도	KS M 3401	
용도적합성	내면조도 전기전도도 용출시험	KS B 0161 KS M 0100 KS M 3401 부속서#2	* ASUNG CLEAN PVC PIPE는 2005년 9월 6일 산업자원부 신제품(NeP) 인증 획득

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성능 및 물성 TEST 결과

※ TEST기관 : 한국화학융합시험연구원(KTR)

시험항목	성능	시험결과	비고
인장시험	15°C에 있어 인장강도 4.7KN/cm ² (480kgf/cm ²)이상	508.6kgf/cm ²	
수압시험	상온의 수압 2.45MPa(25kgf/cm ²)의 수압을 가하여 1분간 방치 후 누액 및 기타 결점이 없을 것	이상없음	
접합부 수압시험	상온의 수압 2.45MPa(25kgf/cm ²)으로 1분간 방치 후 누액이 없을 것	이상없음	
각종 충격시험	0°C 및 20°C에서 각 규격 높이에서 파괴되지 않을 것	이상없음	
편평시험	23°C에서 외경이 1/2가 될때까지 눌렀을 경우 갈라지거나, 금이 생기지 않을 것	이상없음	
연화온도시험	76°C 이상	82°C	
중금속 용출시험	상온에서 하기의 표로 정한다 (참고시험)	이상없음	
내면평활도	Rmax(JIS) 0.5μm이하	0.06μm	KS B 0161

용출 규격 및 TEST 결과

※ TEST기관 : 한국화학융합시험연구원(KTR)

항목	규격치	ASUNG CLEAN PIPE 시험결과
전 해 올	2μS/cm	1μS/cm
Pb 용출량	2PPb 이하	검출안됨
Ca 용출량	100PPb 이하	10.6PPb
Zn 용출량	20PPb 이하	14.3PPb
Sn 용출량	10PPb 이하	검출안됨
Na 용출량	50PPb 이하	0.15PPb
K 용출량	10PPb 이하	0.4PPb
Mg 용출량	5PPb 이하	1PPb
Mn 용출량	5PPb 이하	0.8PPb
Ba 용출량	5PPb 이하	검출안됨
Si 용출량	15PPb 이하	검출안됨
Fe 용출량	10PPb 이하	1PPb
Al 용출량	10PPb 이하	1PPb



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VALVE & FITTING 용출 TEST 결과

※ TEST기관 : 한국화학융합시험연구원(KTR)

TEST VALVE TYPE	15 DAY					30 DAY				
	Pb (PPb)	Ca (PPb)	Zn (PPb)	Cd (PPb)	Sn (PPb)	Pb (PPb)	Ca (PPb)	Zn (PPb)	Cd (PPb)	Sn (PPb)
UNION BALL VALVE	ND	32	20	ND	ND	ND	28	175	ND	ND
DIAPHRAGM VALVE	ND	58	14	ND	ND	ND	59	43	ND	ND

※REMARK

1] 밸브 SIZE : 25A

2] Seal Material of union ball valve : PTFE, Diaphragm Material of Diaphragm valve : EPDM+PTFE

3] ND = 검출안됨

VALVE & FITTING TOC TEST 결과

※ TEST기관 : 한국화학융합시험연구원(KTR)

TEST VALVE TYPE	Seal / Diaphragm Material TEST TYPE	TOC condition (ppm)		
		24시간 (20℃)	24시간 (40℃)	30일 (상온)
UNION BALL VALVE	EPDM	0.35	1.5	2.1
DIAPHRAGM VALVE	EPDM+PTFE	0.8	1.3	0.5



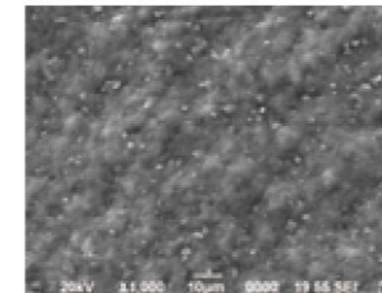
PIPE 비교 내용

※ TEST기관 : 한국화학융합시험연구원(KTR)

항목	일반 PVC PIPE 제품	CLEAN ASUNG 제품	CLEAN 외국 제품
표면조도	0.73 μ m(RA)	0.05 μ m(RA)	0.06 μ m(RA)
용해시험 (15일)	Pb	9PPb	검출안됨
	Ca	30,000PPb	10.6PPb
	Zn	10PPb	14.3PPb
	Sn	5PPb	검출안됨
전기전도도	30.0(μ s/cm)	1이하(μ s/cm)	1이하(μ s/cm)

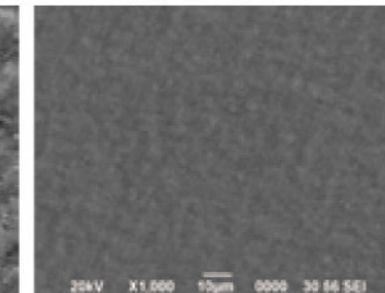
표면 조도 비교

일반 PVC 제품 (표면조도)



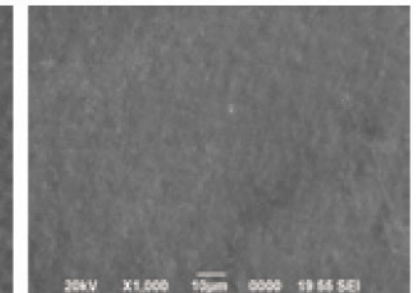
1,000배 확대하여 보았을 때 표면 사진
0.73 μ m(RA)

ASUNG 제품 (표면조도)



1,000배 확대하여 보았을 때 표면 사진
0.05 μ m(RA)

외국 제품 (표면조도)



1,000배 확대하여 보았을 때 표면 사진
0.06 μ m(RA)

※ TEST기관 : 한국화학융합시험연구원(KTR)

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열간 내압 CREEP TEST (외경 및 길이 변화)

※ TEST기관 : 한국화학융합시험연구원(KTR)

구분	단위	규격기준	시험결과	시험방법
열간 내압 CREEP	-	4kgf/cm ² 60℃ 240h	이상없음	KS M ISO 1167
측정조건	시간(h)		외경	길이
60℃, 0kgf/cm ²	0		114.9	635.5
60℃, 4kgf/cm ²	1		115.1	635.7
60℃, 4kgf/cm ²	3		115.1	635.7
60℃, 4kgf/cm ²	6		115.1	635.8
60℃, 4kgf/cm ²	9		115.1	635.8
60℃, 4kgf/cm ²	24	mm	115.2	635.8
60℃, 4kgf/cm ²	48		115.2	635.8
60℃, 4kgf/cm ²	72		115.2	635.8
60℃, 4kgf/cm ²	168		115.2	635.8
60℃, 4kgf/cm ²	240		115.2	635.8

◆ 측정위치는 양쪽의 마개로 부터 100mm 떨어진 곳을 기준으로 측정하였음
초기측정 값은 상온, 내압이 없는 상태에서 외경 114.6mm, 길이 634.5mm 임

EPDM 용출 TEST 결과

※ TEST기관 : 한국화학융합시험연구원(KTR)

항목	아성제품	외국제품	
40℃ x 24hour	Pb	검출안됨	검출안됨
	Ca	0.3PPb	0.35PPb
	Zn	검출안됨	0.25PPb
	Cd	검출안됨	검출안됨
	Sn	검출안됨	검출안됨

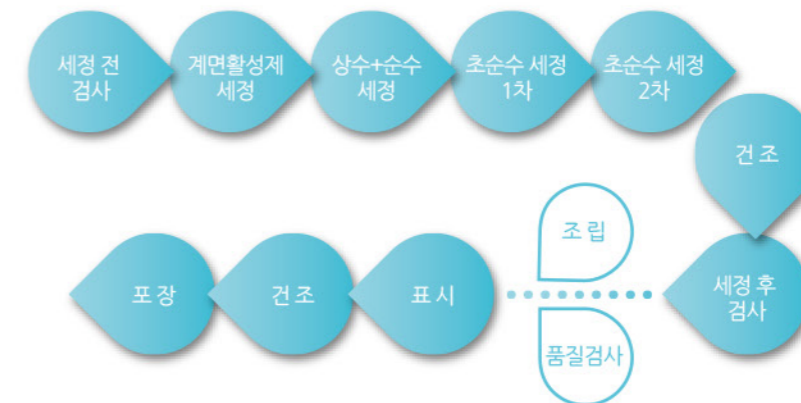
ASUNG CLEAN PVC VALVE & FITTING 공정

초순수 제조 장비 및 초순수 이송배관에 사용되는 CLEAN PVC PIPE & FITTING, VALVE는 금속품(OIL FREE)으로서 계면활성제, 순수, 초순수에 의한 세정, CLEAN ROOM에서 건조, 조립, 포장 등의 공정을 거쳐 출하되고 있습니다.

금유(OIL FREE) 처리 공정

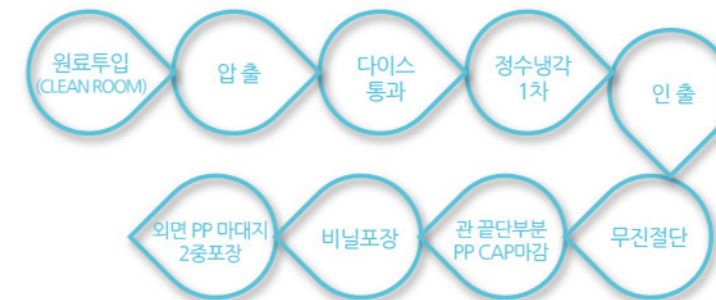
세정 전 검사

VALVE & FITTING 모두 외관검사, 치수검사, 내압검사 등의 합격품을 사용



ASUNG CLEAN PVC PIPE 공정

PIPE 생산 공정



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시공 자료

취급 및 보관

1. 취급

VALVE, PIPE & FITTING류는 플라스틱 제품으로 취급상 외부의 충격에 주의하시기 바랍니다.

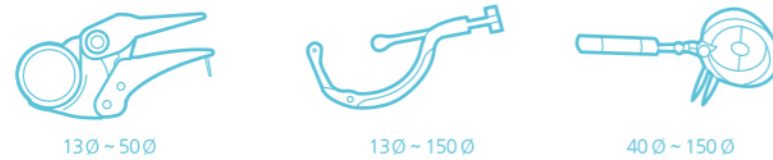
2. 보관

- PIPE & FITTING류는 옥내에서 보관을 해야 합니다. 부득이한 경우에는 차광 막 등으로 덮어서 직사광선을 피하거나 그늘진 곳에 보관을 해야만 플라스틱제품의 외관 손상을 방지할 수 있습니다.
- PIPE를 장기간 보관할 경우에 가장 이상적인 방법으로는 선반에 보관을 하는 것이 가장 좋으며 부득이한 경우 평평한 지면에 일정한 간격으로 침목을 바닥에 깔고 그 위에 PIPE를 적재 합니다. 이때 적재 높이는 PIPE의 변형을 고려하여 최대 4단까지만 적재 합니다.
- 모든 제품은 최대한 포장상태가 손상이 되지 않는 상태로 보관을 권장해 드립니다.

접착 접합 방법 및 절차

1. PIPE 절단

PIPE는 전용 절단기를 이용하여 절단을 합니다. 이때 절단면이 직각이 되도록 절단을 합니다.



2. PIPE 절단 내외면 면취작업 (모따기)

PIPE 삽입 끝단의 외면은 45°이상 면취작업을 실시합니다. 면취작업을 실시하는 목적은 접착제가 흘러내렸을 때, 면취부위에 접착제가 고여 흘러내림을 방지하기 위함입니다.
(100A 이상은 약 8mm, 50A 이상은 약 5mm, 50A 미만은 약 3mm)

※ 주의사항

면취 도구는 PIPE끝 아래에서 사용하여야 합니다. (조각이 PIPE내부로 유입되는 것을 방지하기 위함)
외면 면취는 삽입을 용이하게 하고, 접착제가 밀려나오는 것을 방지하기 때문에 필수 작업사항입니다.

3. PIPE & FITTING 접합부분 이물질 제거

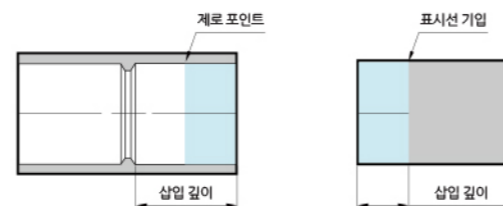
본드접합 작업을 시공하기 전에 PIPE 외면과 FITTING 내부의 접착제가 도포될 부분을 마른 헝겊이나 또는 유사한 도구를 이용하여 이물질을 깨끗이 제거합니다.

4. PIPE & FITTING 작업전 삽입 확인

접착제를 도포 하기 전에 PIPE와 FITTING을 삽입하여 제로포인트를 확인하고 삽입 깊이의 1/3 ~ 2/3에서 멈추어 물리는지 재확인 합니다.

5. 표시 기입

배관 삽입 전에 FITTING의 삽입 깊이를 측정해서 PIPE에 표시한 후, 삽입이 정상적으로 되었는지 확인 합니다.



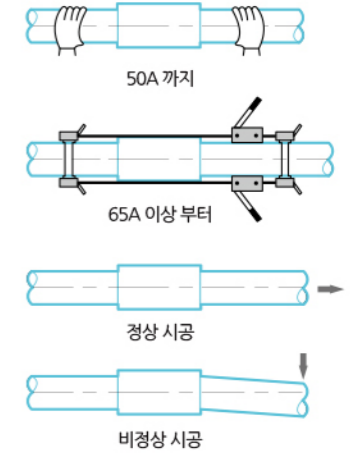
* 제로포인트 (삽입 시 PIPE가 FITTING에 물리는 지점)

6. 삽입 치공구 설치

대구경 배관 작업 시 PIPE와 FITTING에 삽입 치공구(레버 블럭과 와이어)를 설치하여 작업을 합니다. 삽입 후에 PIPE가 빠지는 것을 방지하기 위해 반드시 고정, 유지 시킵니다. 65A 이상은 삽입기(장선기)를 사용하여 작업을 합니다.

※ 주의사항

- 표시선까지 삽입되어 있는지 확인합니다, 망치 등을 사용하여 삽입하는 방법은 절대로 하지 말아야 합니다.



7. 접착제 도포 작업

FITTING 내부와 PIPE 외면 표시선까지 접착제를 최단시간에 도포를 합니다. 이때 FITTING 내부는 약간 적게, PIPE 외면은 좀 더 많게 도포를 합니다.



※ 주의사항

- 접착제 잔량이 FITTING 내부로 들어 가지 않도록 주의 바랍니다.
- 비틀리지 않도록 똑바로 삽입하여야 하며, FITTING 삽입구의 TAPER에 의해 PIPE가 밀려 나올 수 있으므로 여름에는 1분, 겨울에는 2분 이상을 접착한 상태로 고정, 유지하여야 하며 삽입 깊이 표시선으로 PIPE 노출 유무를 체크하여야 합니다.

8. PIPE 삽입방법

- 1) 바이스에 고정된 PIPE에 대해서 1차 접착제 도포
- 2) PIPE에 FITTING류를 제로포인트까지 360°회전을 시키며 삽입
- 3) 삽입된 FITTING류를 신속히 빼내고 2차 접착제를 도포
- 4) 삽입 깊이 표시선까지 FITTING류를 삽입



접착제 1차 도포 후 360도 회전하면서 서서히 제로포인트 (Zero Point)까지 삽입 후 신속히 뺐는 작업



접착제 2차 도포 후 신속히 삽입

9. 양생 및 환기

배관 작업을 완료한 PIPE와 FITTING은 충분한 양생 시간을 주어야 하며 절대로 접착제가 완벽히 굳어지기 전에 수압 테스트를 하여서는 안됩니다. 아울러 접착제가 굳기 전에 배관을 움직이지 말아 주십시오. 또한 접착제의 내 휘발성물질이 방출 되므로 적당한 환기가 필요로 합니다.

* 배관 마감 후 환기가 이루어지지 않은 상태로 방치 시 배관 내부에 문제가 발생할 수도 있습니다.

▲ 배관유지시간, 이동가능시간, 양생시간

작업 온도	5~15℃			15~35℃		
	SIZE	15~75(80)	100~200	250~300	15~75(80)	100~200
배관 유지시간	2분	3분	4분	1분	1분	2분
이동 가능시간	60분	90분	120분	30분	45분	60분
양생 시간	24시간	48시간	48시간	12시간	24시간	24시간

▲ 각 SIZE별 본드 도포량

SIZE	도포량	SIZE	도포량
15A	0.6	65A	4.8
20A	1.2	80A	6.3
25A	1.5	100A	10
30A	1.8	125A	15
40A	2.6	150A	22
50A	3.7	200A	30

ASUNG CLEAN FLOW™

Valves System



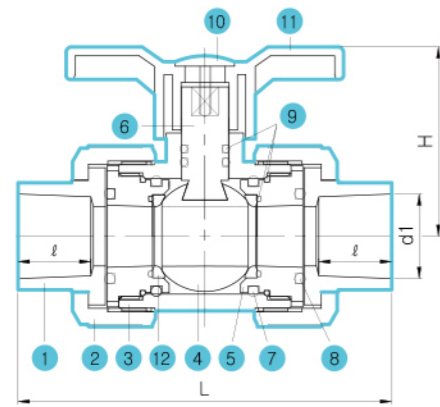
Pipe and Fitting for high-purity water and high-purity chemicals

첨단산업 발달로 인한 최첨단 IT 및 BIO 산업에서 고품질인 초순수가 요구되면서 품질의 향상과 안전성을 위한 양질의 물이 필수가 되었습니다. 이를 위해 중금속 이온의 용출이 극히 적고, 내면의 평활도가 높은 파이프 연구개발을 지속한 결과 CLEAN PVC 생산에 성공하여 산업자원부로부터 신제품(Nep)인증을 획득하였으며, 국내 반도체, LCD, PDP 제조업체 및 정밀 초순수를 필요로 하는 회사에 공급하게 되었습니다. 앞으로도 ASUNG CLEAN FLOW TECH의 PIPE, FITTING, VALVE 시스템의 초순수 공급 라인을 위한 연구 개발은 계속 될 것입니다.

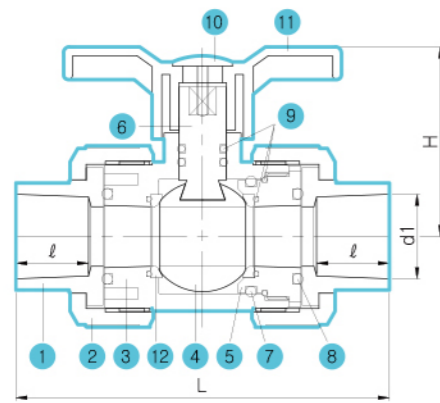
ASUNG CLEAN FLOW™

Thermo Plastic Valves

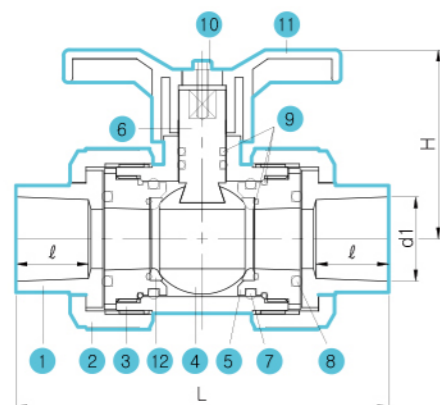
UNION BALL VALVE (Socket)



A-TYPE 15A~50A



B-TYPE 15A~50A



65A~100A



NO.	PARTS	MATERIALS
1	BODY CAP	CLEAN PVC
2	GLAND CAP	CLEAN PVC
3	BODY	CLEAN PVC
4	BALL	CLEAN PVC
5	CARRIER	CLEAN PVC
6	STEM	CLEAN PVC
7	SIDE O-RING	EPDM, FPM, FPM-F
8	FACE O-RING	EPDM, FPM, FPM-F
9	O-RING	EPDM, FPM, FPM-F
10	HANDEL BOLT	SS41 (ABS COATED) EPDM : BLUE COLOR FPM, FPM-F : IVORY COLOR
11	HANDLE	PP
12	NIP SEAL	PTFE

DIMENSION

unit:mm

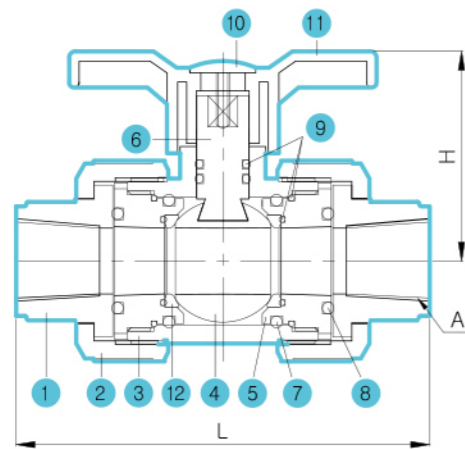
Parts	d1	L	ℓ	H
A - TYPE				
15A	22.40	115.0	22.5	56.0
20A	26.45	129.0	24.0	64.0
25A	32.55	157.0	32.0	72.0
30A	38.60	160.0	30.0	79.0
40A	48.70	192.0	35.5	92.0
50A	60.80	219.0	41.0	95.0
B - TYPE				
15A	22.40	117.0	22.5	56.0
20A	26.45	129.0	24.0	65.5
25A	32.55	157.0	32.0	73.0
30A	38.60	160.5	30.0	80.5
40A	48.70	186.5	35.5	91.0
50A	60.80	214.5	41.0	102.0
65A	76.6	244.0	44.5	116.5
80A	89.6	302.0	54.5	135.0
100A	114.7	367.0	67.0	172.0

* A-TYPE과 B-TYPE은 호환불가

ASUNG CLEAN FLOW™

Thermo Plastic Valves

UNION BALL VALVE (Thread)



NO.	PARTS	MATERIALS
1	BODY CAP	CLEAN PVC
2	GLAND CAP	CLEAN PVC
3	BODY	CLEAN PVC
4	BALL	CLEAN PVC
5	CARRIER	CLEAN PVC
6	STEM	CLEAN PVC
7	SIDE O-RING	EPDM, FPM, FPM-F
8	FACE O-RING	EPDM, FPM, FPM-F
9	O-RING	EPDM, FPM, FPM-F
10	HANDEL BOLT	SS41 (ABS COATED) EPDM : BLUE COLOR FPM, FPM-F : IVORY COLOR
11	HANDLE	PP
12	NIP SEAL	PTFE

DIMENSION

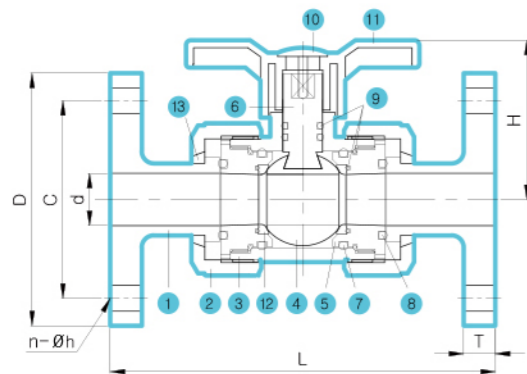
unit:mm

Size	Parts	L	A	H
15A		103	Rc ½"	56
20A		116	Rc ¾"	64
25A		135	Rc 1"	72
30A		147	Rc 1-¼"	79
40A		172	Rc 1-½"	92
50A		196	Rc 2"	95

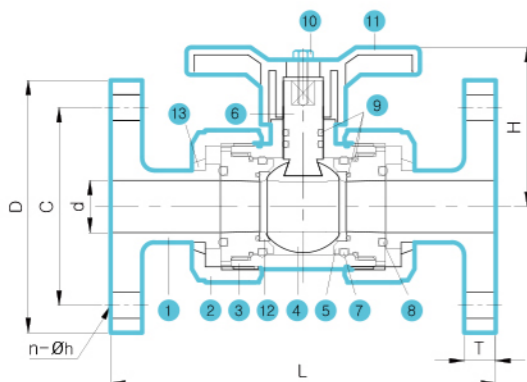
ASUNG CLEAN FLOW™

Thermo Plastic Valves

UNION BALL VALVE (Flange)



15A~50A



65A~100A

NO.	PARTS	MATERIALS
1	BODY CAP	CLEAN PVC
2	GLAND CAP	CLEAN PVC
3	BODY	CLEAN PVC
4	BALL	CLEAN PVC
5	CARRIER	CLEAN PVC
6	STEM	CLEAN PVC
7	SIDE O-RING	EPDM, FPM, FPM-F
8	FACE O-RING	EPDM, FPM, FPM-F
9	O-RING	EPDM, FPM, FPM-F
10	HANDEL BOLT	SS41 (ABS COATED) EPDM : BLUE COLOR FPM, FPM-F : IVORY COLOR
11	HANDLE	PP
12	NIP SEAL	PTFE
13	TAPER RING	PVC

DIMENSION

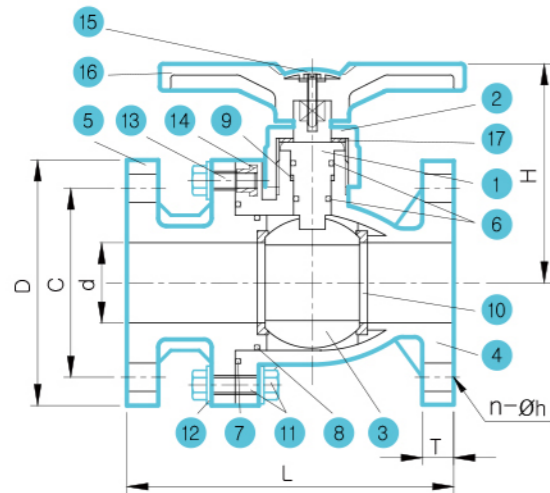
unit:mm

Size	Parts	d	L	T	JIS 10K			H
					D	C	n-Øh	
15A		15	143	14	95	70	4-15	55
20A		20	169	15	100	75	4-15	62
25A		25	184	16	125	90	4-19	72
30A		32	190	18	135	100	4-19	79
40A		40	208	17	140	105	4-19	90
50A		52	232	17	155	120	4-19	92
65A		65	262	20	175	140	4-19	115
80A		78	306	20	180	150	8-19	134
100A		100	373	22	210	175	8-19	169

ASUNG CLEAN FLOW™

Thermo Plastic Valves

BALL VALVE (Flange)



NO.	PARTS	MATERIALS
1	STEM	CLEAN PVC
2	GLAND CAP	CLEAN PVC
3	BALL	CLEAN PVC
4	BODY	CLEAN PVC
5	FLANGE	CLEAN PVC
6	STEM O-RING	EPDM, FPM
7	FACE O-RING	EPDM, FPM
8	SIDE O-RING	EPDM, FPM
9	STEM RING	PP, PTFE
10	NIP SEAL	PTFE
11	BOLT & NUT	SUS 304
12	WASHER	SUS 304
13	STUD BOLT	SUS 304
14	INSERTED NUT	BC
15	HANDEL CAP BOLT	SS41 (ABS COATED) EPDM : BLUE COLOR FPM : IVORY COLOR
16	HANDLE	PP
17	STEM WASHER	PP

DIMENSION

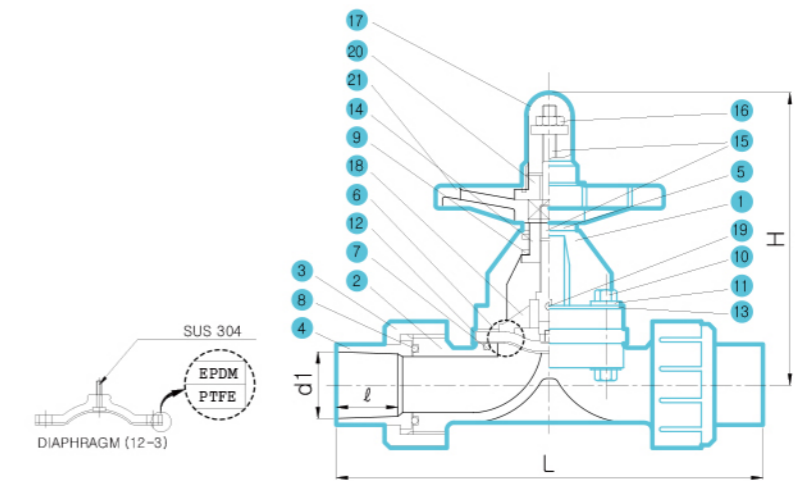
unit:mm

Parts Size	d	L	T	JIS 10K			H
				D	C	n-Øh	
15A	16	148	15	95	70	4-15	84
20A	20	152	15	100	75	4-15	81
25A	25	172	17	125	90	4-19	92
30A	32	176	16	135	100	4-19	117
40A	41	193	19	140	105	4-19	121
50A	51	214	19	155	120	4-19	130
65A	66	262	21	175	140	4-19	184
80A	77	270	21	185	150	8-19	182
100A	102	301	23	210	175	8-19	194
125A	130	366	27	250	210	8-23	230
150A	144	364	25	280	240	8-23	229

ASUNG CLEAN FLOW™

Thermo Plastic Valves

UNION DIAPHRAGM VALVE (Socket)



NO.	PARTS	MATERIALS	NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC	11	WASHER	SUS 304
2	BODY	CLEAN PVC	12	DIAPHRAGM COVER PLATE	SUS 304
3	GLAND CAP	CLEAN PVC	13	SUS PLATE	SUS 304 N/A
4	BODY CAP	CLEAN PVC	14	SLEEVE	BC
5	THRUST WASHER	CLEAN PVC	15	STEM+STUD BOLT UNIT	BC+SS41 (PLATING : Zn)
6-1	DIAPHRAGM	EPDM, FPM	16	STOPPER NUTS	SS41 (PLATING : Zn)
6-2		EPDM + PTFE	17	GAUGE CAP	ACRYL
7	BONNET O-RING	EPDM, FPM N/A	18	COMPRESSOR	AL
8	FACE O-RING	EPDM, FPM	19	PIN	SCM
9	PTFE RING	PTFE N/A	20	LOCK NUT	PP
10	BOLT & NUT	SUS 304	21	HAND WHEEL	PP

DIMENSION

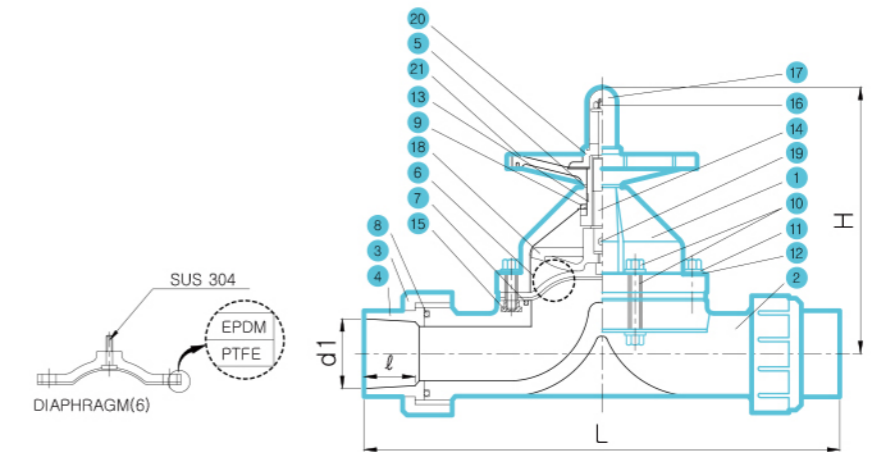
Parts	d1	L	l	H	unit:mm
15A	22.40	153	22.5	138	
20A	26.45	170	24.0	140	
25A	32.55	203	32.0	144	



ASUNG CLEAN FLOW™

Thermo Plastic Valves

UNION DIAPHRAGM VALVE (Socket)



NO.	PARTS	MATERIALS	NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC	11	WASHER	SUS 304
2	BODY	CLEAN PVC	12	SUS PLATE	SUS 304 N/A
3	GLAND CAP	CLEAN PVC	13	SLEEVE	BC
4	BODY CAP	CLEAN PVC	14	STEM	BC
5	THRUST WASHER	CLEAN PVC	15	INSERTED NUT	BC
6-1	DIAPHRAGM	EPDM, FPM	16	STOPPER NUTS	SS41 (PLATING : Zn)
6-2		EPDM + PTFE	17	GAUGE CAP	ACRYL
7	BONNET O-RING	EPDM, FPM N/A	18	COMPRESSOR	AL
8	FACE O-RING	EPDM, FPM	19	PIN	SCM
9	PTFE RING	PTFE N/A	20	LOCK NUT	PP
10	BOLT & NUT	SUS 304	21	HAND WHEEL	PP

DIMENSION

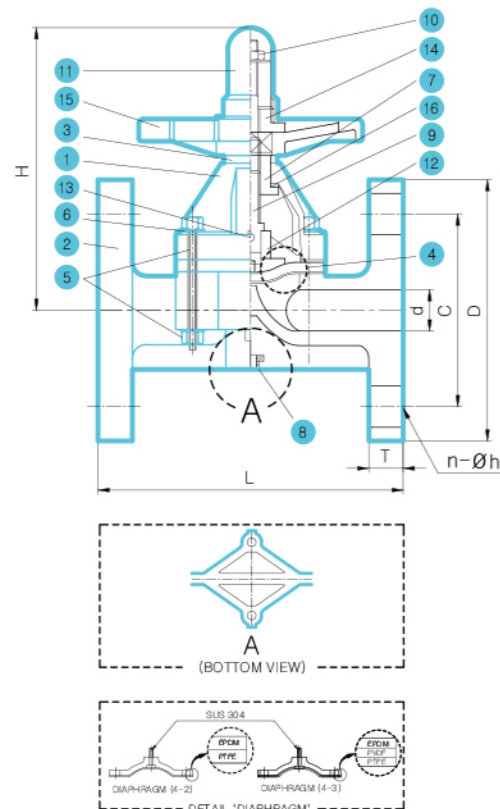
Parts	d1	L	l	H	unit:mm
40A	48.70	289	35.5	208	
50A	60.80	330	41.0	230	



ASUNG CLEAN FLOW™

Thermo Plastic Valves

DIAPHRAGM VALVE (Flange)



NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC
2	BODY	CLEAN PVC
3	THRUST WASHER	CLEAN PVC
4-1	DAIPHGRAM	EPDM, FPM
4-2		EPDM + PTFE
4-3		EPDM + PVDF + PTFE
5	BOLT & NUT	SUS 304
6	WASHER	SUS 304
7	SLEEVE	BC
8	INSERTED NUT	BC
9	STEM+STUD BOLT UNIT	BC + SS41 (PLATING : Zn)
10	STOPPER NUTS	SS41 (PLATING : Zn)
11	GAUGE CAP	ACRYL
12	COMPRESSOR	AL
13	PIN	SCM
14	LOCK NUT	PP
15	HAND WHEEL	PP
16	PTFE RING	PTFE N/A

DIMENSION

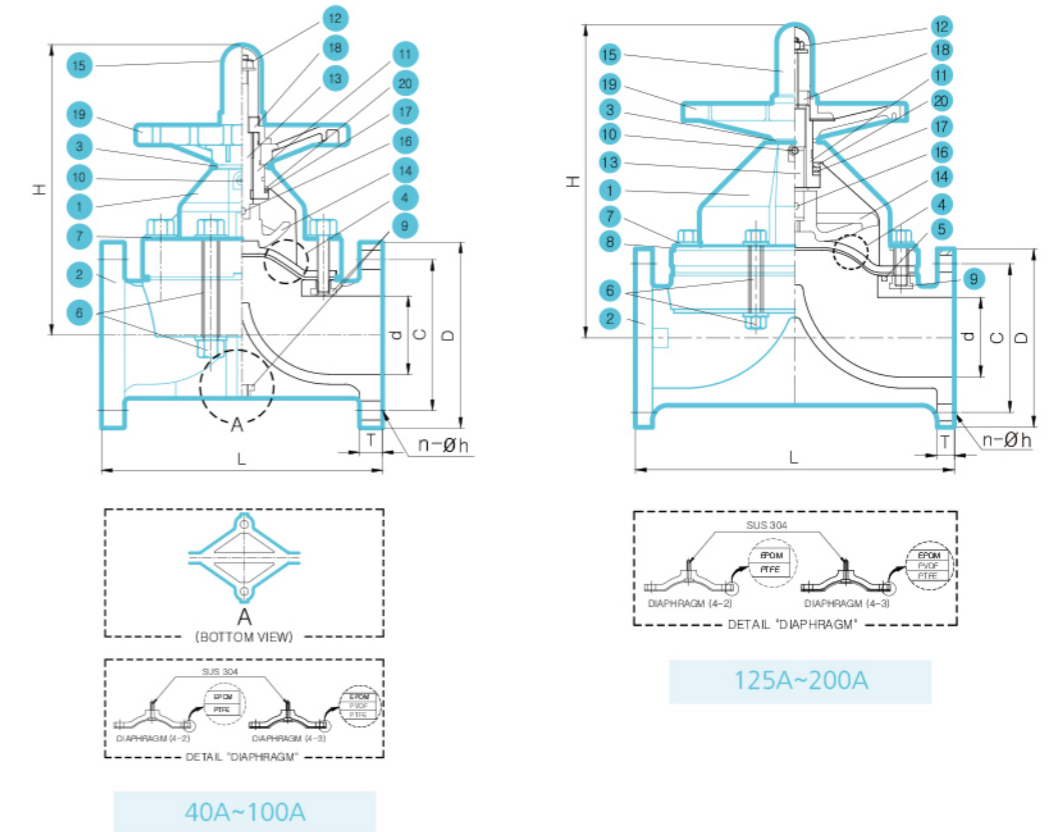
Parts	d	L	T	JIS 10K			H
				D	C	n-Øh	
15A	16	113	14	95	70	4-15	131
20A	20	122	15	100	75	4-15	131
25A	25	135	16	125	90	4-19	142
30A	32	145	16	135	100	4-19	150

unit:mm

ASUNG CLEAN FLOW™

Thermo Plastic Valves

DIAPHRAGM VALVE (Flange)



NO.	PARTS	MATERIALS	NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC	11	SLEEVE	15A~100A : BC 125A~200A : FC(PALTING:Zn)
2	BODY	CLEAN PVC	12	STOPPER NUTS	SS41 (PALTING : Zn)
3	THRUST WASHER	CLEAN PVC	13-1	STEM+STUD BOLTUNIT	BC + SS41 (PALTING : Zn)
4-1	DAIPHAGM	EPDM, FPM	13-2	STEM	S45C (PALTING : Zn)
4-2		EPDM + PTFE	14	COMPERSOR	15A~100A : AL 125A~200A : FCD
4-3		EPDM + PVDF + PTFE	15	GAUGE CAP	ACRYL
5	BONNET O-RING	EPDM, FPM N/A	16	PIN	SCM
6	BOLT & NUT	SUS 304	17	THRUST BEARING	15A~80A : N/A 100A~200A : STANDARDIZE
7	WASHER	SUS 304	18	LOOK NUT	PP
8	SUS PLATE	SUS 304 N/A	19	HAND WHEEL	PP
9	INSERTED NUT	BC	20	PTFE RING	PTFE N/A
10	GREASE NIPPLE	15A~50A : N/A 65A~200A : BC			

DIMENSION

unit:mm

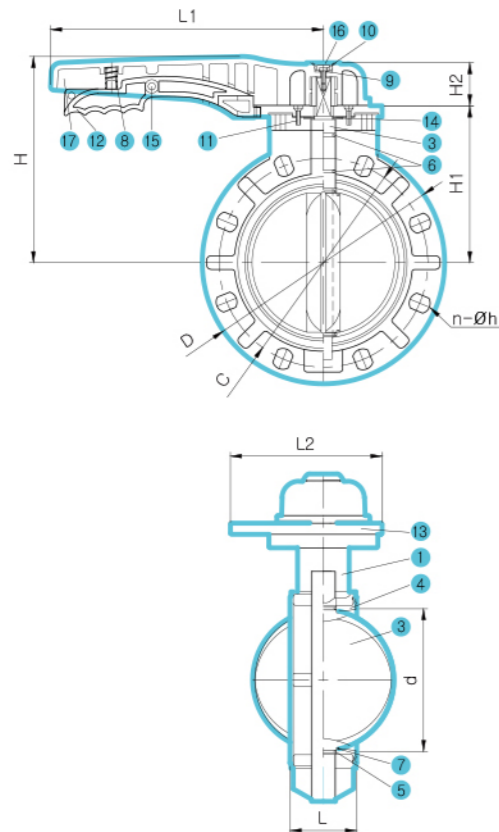
Parts Size	d	L	T	JIS 10K			H
				D	C	n-Øh	
40A	40	184	17	140	105	4-19	210
50A	52	215	22	155	120	4-19	232
65A	67	254	22	175	140	4-19	265
80A	79	283	23	185	150	8-19	307
100A	101	345	24	210	175	8-19	374
125A	125	415	28	250	210	8-23	427
150A	145	483	29	280	240	8-23	469
200A	193	572	34	330	290	12-23	620



ASUNG CLEAN FLOW™

Thermo Plastic Valves

BUTTERFLY VALVE (Lever Type)



NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC
2	DISC	CLEAN PVC
3	STEM	SUS 410 SCM4 (CLEAN PVC COATED)
4	SEAT	EPDM, FPM
5	DISC SIDE O-RING	EPDM, FPM
6	STEM O-RING	EPDM, FPM
7	DISC FACE O-RING	EPDM, FPM
8	SPRING	SUS 304
9	WASHER	SUS 304
10	BOLT	SUS 304
11	SCREW	SUS 304
12	LEVER	PPG
13	GEAR PLATE	PPG
14	STEM SUPPORT	PPG
15	SET PIN	PP
16	HANDLE CAP	PP
17	HANDLE	PP (BS INSERT)

DIMENSION

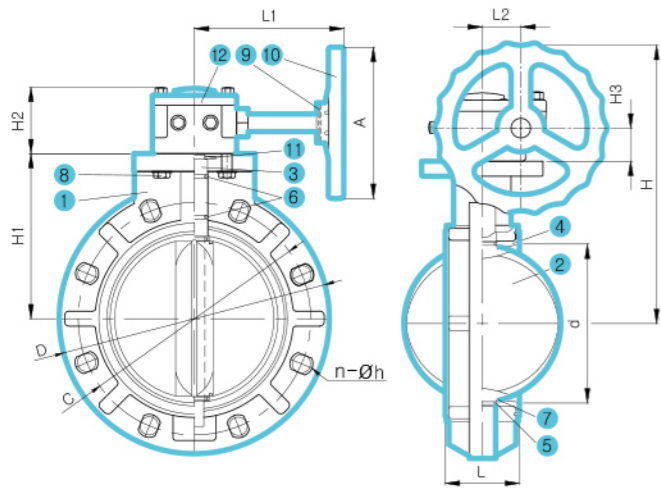
unit:mm

Parts Size	d	L	L1	L2	D	JIS 10K		H	H1	H2
						C	n-Øh			
40A	49	39	220	111	150	105	4-19	142	102	35
50A	59	42	220	111	165	120	4-19	145	105	35
65A	72	46	220	111	185	140	4-19	157	117	35
80A	72	44	250	111	200	150	8-19	164	123	35
100A	101	56	250	111	229	175	8-19	185	145	35
125A	129	66	323	158	254	210	8-23	229	171	51
150A	150	73	323	158	286	240	8-23	244	186	51
200A	209	94	323	158	343	290	12-23	279	221	51

ASUNG CLEAN FLOW™

Thermo Plastic Valves

BUTTERFLY VALVE (Gear Type)



NO.	PARTS	MATERIALS
1	BONNET	CLEAN PVC
2	DISC	CLEAN PVC
3	STEM	SUS 410 SCM4 (CLEAN PVC COATED)
4	SEAT	EPDM, FPM
5	DISC SIDE O-RING	EPDM, FPM
6	STEM O-RING	EPDM, FPM
7	DISC FACE O-RING	EPDM, FPM
8	BOLT	SUS 304
9	SET PIN	SCM
10	HAND WHEEL	PP (S45C INSERTED)
11	STEM SUPPORT	PPG
12	GEAR BOX	ABS + S45C

DIMENSION

unit:mm

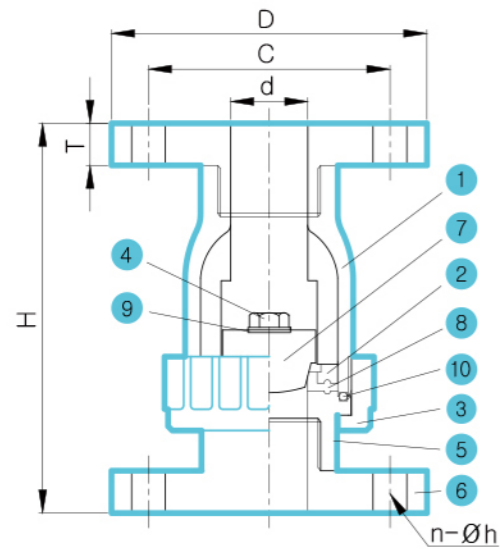
Parts Size	A	d	L	L1	L2	D	JIS 10K		H	H1	H2	H3
							C	n-Øh				
40A	110	49	39	104	26.5	150	105	4-19	180	96	71	29
50A	110	59	42	104	26.5	165	120	4-19	181	97	71	29
65A	110	72	46	104	26.5	185	140	4-19	192	108	71	29
80A	110	79	44	104	26.5	200	150	8-19	199	115	71	29
100A	151	101	56	119	37.0	229	175	8-19	247	137	85	35
125A	151	129	66	119	37.0	254	210	8-23	271	161	85	35
150A	151	151	73	119	37.0	286	240	8-23	286	176	85	35
200A	196	209	94	174	45.5	343	290	12-23	351	214	86	39

* 200A 이상 SIZE는 문의 하시기 바랍니다.

ASUNG CLEAN FLOW™

Thermo Plastic Valves

CHECK VALVE (Flange)



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	STOP RING	CLEAN PVC
3	GLAND CAP	CLEAN PVC
4	BOLT	CLEAN PVC
5	BODY CAP	CLEAN PVC
6	FLANGE	CLEAN PVC
7	DISC	S45C (CLEAN PVC COATED)
8	SEAT	EPDM, FPM
9	BOLT O-RING	EPDM, FPM
10	FACE O-RING	EPDM, FPM N/A

DIMENSION

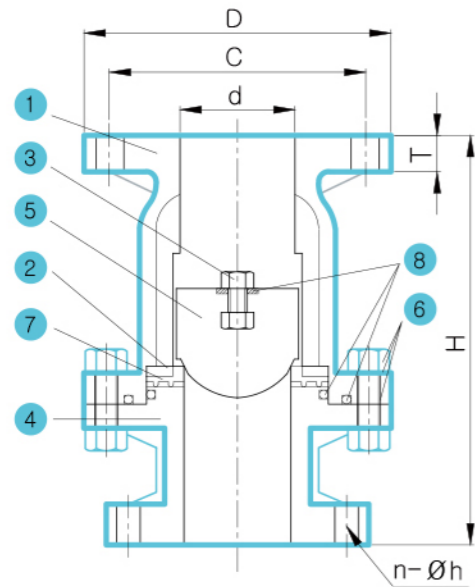
unit:mm

Size	Parts	d	T	H	JIS 10K		
					D	C	n-Øh
15A		14	14	111	95	70	4-15
20A		18	15	132	100	75	4-15
25A		24	16	169	125	90	4-19
40A		37	16	178	140	105	4-19
50A		47	21	225	155	120	4-19

ASUNG CLEAN FLOW™

Thermo Plastic Valves

CHECK VALVE (Flange)



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	STOP RING	CLEAN PVC
3	BOLT	CLEAN PVC
4	FLANGE	CLEAN PVC
5	DISC	S45C (CLEAN PVC COATED)
6	BOLT & NUT & WASHER	SUS 304
7	SEAT	EPDM, FPM
8	O-RING	EPDM, FPM

DIMENSION

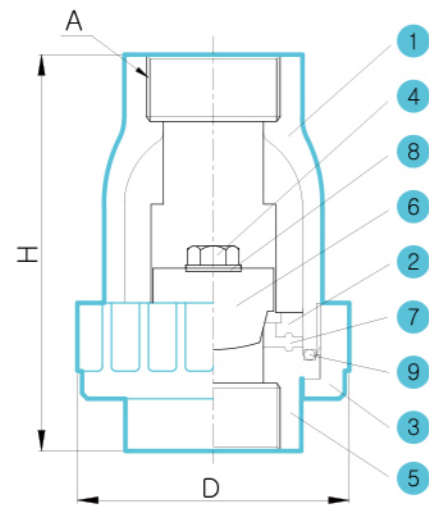
unit:mm

Size	Parts	d	T	H	JIS 10K		
					D	C	n-Øh
65A		66	20	227	175	140	4-19
80A		76	21	243	185	150	8-19
100A		105	23	298	210	175	8-19
125A		130	22	331	250	210	8-23
150A		150	25	394	280	240	8-23
200A		202	29	446	330	290	12-23

ASUNG CLEAN FLOW™

Thermo Plastic Valves

CHECK VALVE (Thread)



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	STOP RING	CLEAN PVC
3	GLAND CAP	CLEAN PVC
4	BOLT	CLEAN PVC
5	END CONNECTER 1	CLEAN PVC
6	DISC	S45C (CLEAN PVC COATED)
7	SEAT	EPDM, FPM
8	BOLT O-RING	EPDM, FPM
9	FACE O-RING	EPDM, FPM N/A

DIMENSION

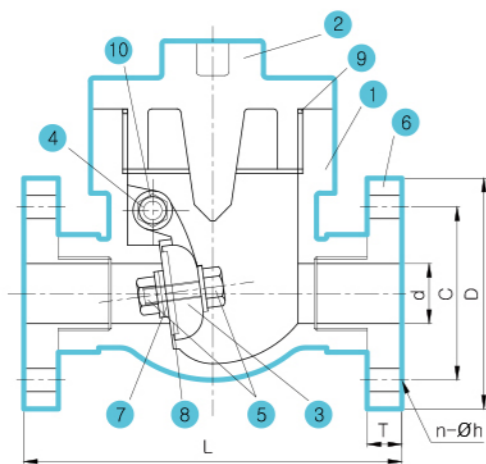
unit:mm

Size	Parts	H	D	A
15A		83	49	Rc ½"
20A		101	62	Rc ¾"
25A		137	81	Rc 1"
40A		144	98	Rc 1-½"
50A		182	120	Rc 2"

ASUNG CLEAN FLOW™

Thermo Plastic Valves

SWING CHECK VALVE (Flange)

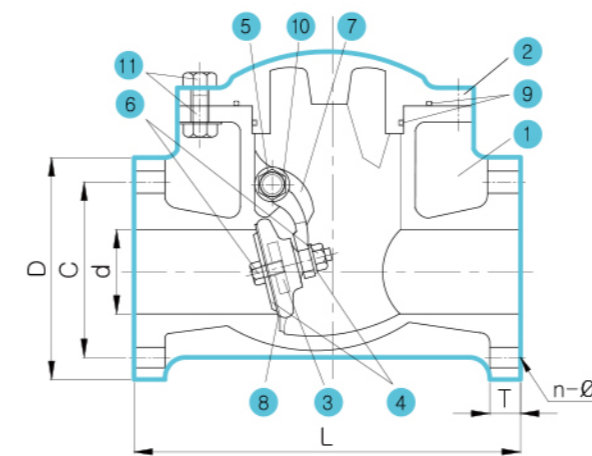


NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	BONNET	CLEAN PVC
3	DISC & SWING ARM	CLEAN PVC
4	SHAFT & BOLT	CLEAN PVC
5	HOLDER BOLT & NUT	CLEAN PVC
6	FLANGE	CLEAN PVC
7	BOLT O-RING	EPDM, FPM
8	SEAT	EPDM, FPM
9	BONNET O-RING	EPDM, FPM
10	O-RING	EPDM, FPM

DIMENSION

unit:mm

Parts Size	d	L	T	JIS 10K		
				D	C	n-Øh
20A	20	140	15	100	75	4-15
25A	24	161	15	125	90	4-19



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	BONNET	CLEAN PVC
3	DISC	CLEAN PVC
4	SEAT SUPPORT	CLEAN PVC
5	SHAFT & BOLT	CLEAN PVC
6	HOLDER BOLT & NUT	CLEAN PVC
7	SWING ARM	CLEAN PVC
8	SEAT	EPDM, FPM
9	BONNET O-RING	EPDM, FPM
10	O-RING	EPDM, FPM
11	BOLT & NUT	SUS 304

DIMENSION

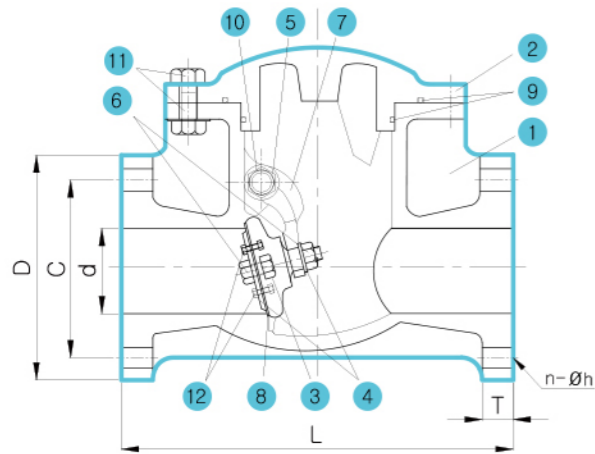
unit:mm

Parts Size	d	L	T	JIS 10K		
				D	C	n-Øh
40A	40	184	18	140	105	4-19
50A	51	201	21	155	120	4-19
65A	67	243	23	175	140	4-19
80A	77	260	24	180	150	8-19
100A	100	303	25	210	175	8-19

ASUNG CLEAN FLOW™

Thermo Plastic Valves

SWING CHECK VALVE (Flange)



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	BONNET	CLEAN PVC
3	DISC	CLEAN PVC (SS41 INSERT NUT)
4	SEAT SUPPORT	CLEAN PVC
5	SHAFT & BOLT	CLEAN PVC
6	HOLDER BOLT & NUT	CLEAN PVC
7	SWING ARM	CLEAN PVC
8	SEAT	EPDM, FPM
9	BONNET O-RING	EPDM, FPM
10	O-RING	EPDM, FPM
11	BOLT & NUT	SUS 304
12	BOLT	SS41 (CLEAN PVC COATED)

DIMENSION

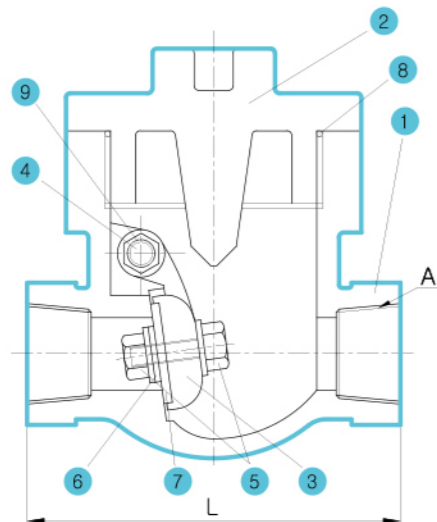
unit:mm

Parts Size	d	L	T	JIS 10K		
				D	C	n-Øh
125A	126	357	28	250	210	8-23
150A	153	408	28	280	240	8-23
200A	204	507	34	330	290	12-23

ASUNG CLEAN FLOW™

Thermo Plastic Valves

SWING CHECK VALVE (Thread)



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	BONNET	CLEAN PVC
3	DISC & SWING ARM	CLEAN PVC
4	SHAFT & BOLT	CLEAN PVC
5	HOLDER BOLT & NUT	CLEAN PVC
6	BOLT O-RING	EPDM, FPM
7	SEAT	EPDM, FPM
8	BONNET O-RING	EPDM, FPM
9	O-RING	EPDM, FPM

DIMENSION

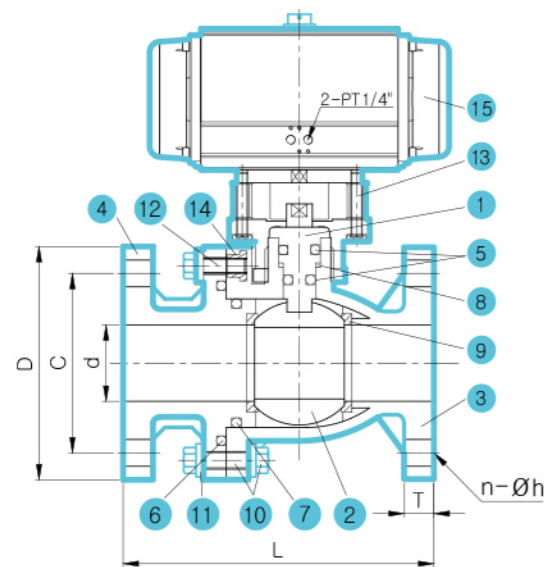
unit:mm

Parts	L	A
20A	112	Rc 3/4"
25A	130	Rc 1"

ASUNG CLEAN FLOW™

Thermo Plastic Valves

AUTOMATIC BALL VALVE (Flange)



NO.	PARTS	MATERIALS
1	STEM	CLEAN PVC
2	BALL	CLEAN PVC
3	BODY	CLEAN PVC
4	FLANGE	CLEAN PVC
5	STEM O-RING	EPDM, FPM
6	BODY O-RING	EPDM, FPM
7	FLANGE SIDE O-RING	EPDM, FPM
8	STEM RING	PTFE
9	NIP SEAL	PTFE
10	BOLT & NUT	SUS 304
11	WASHER	SUS 304
12	STUD BOLT	SUS 304
13	WRENCH BOLT	SUS 304
14	INSERTED NUT	BC
15	ACTUATOR	ALUMINUM

■ Operating fluid
 = Compressed dry air
 ■ Operating pressure
 = 5Bar~7Bar

DIMENSION

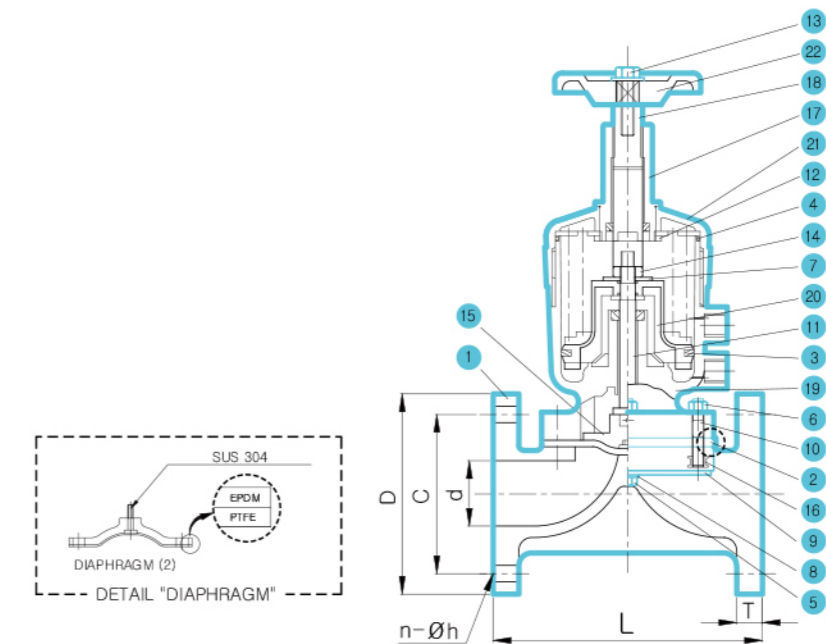
unit:mm

Parts Size	d	L	T	JIS 10K		
				D	C	n-Øh
15A	16	148	15	95	70	4-15
20A	20	152	15	100	75	4-15
25A	25	172	17	125	90	4-19
30A	32	176	16	135	100	4-19
40A	41	193	19	140	105	4-19
50A	51	214	19	155	120	4-19
65A	66	262	21	175	140	4-19
80A	77	270	21	185	150	8-19
100A	102	301	23	210	175	8-19
125A	130	366	27	250	210	8-23
150A	144	364	25	280	240	8-23

ASUNG CLEAN FLOW™

Thermo Plastic Valves

AUTOMATIC DIAPHRAGM VALVE (Flange)



NO.	PARTS	MATERIALS	NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC	12	GAUGE CAP NUT	SS41 (NI. COATED)
2	DIAPHRAGM	EPDM, FPM, PTFE	13	GAUGE BOLT	SS41 (PP. COATED)
3	PISTON RING	NBR	14	PISTON NUT	SS41 (GALVANIZED)
4	PISTON O-RING	NBR	15	COMPRESSOR	15A-50A : AL 65A-100A : FC
5	BOLT	SUS 304	16	INSERT NUT	BC
6	NUT	SUS 304	17	GAUGE CAP	BC
7	PISTON STOPPER WASHER	SUS 304	18	GAUGE STEM	BC
8	WASHER	SUS 304	19	CYLINDER	PPG
9	SUS PLATE	SUS 304	20	PISTON	PPG
10	STUD BOLT	SUS 304	21	CYLINDER COVER	PPG
11	STEM	SS41 (NI. COATED)	22	GAUGE WHEEL	PP

DIMENSION

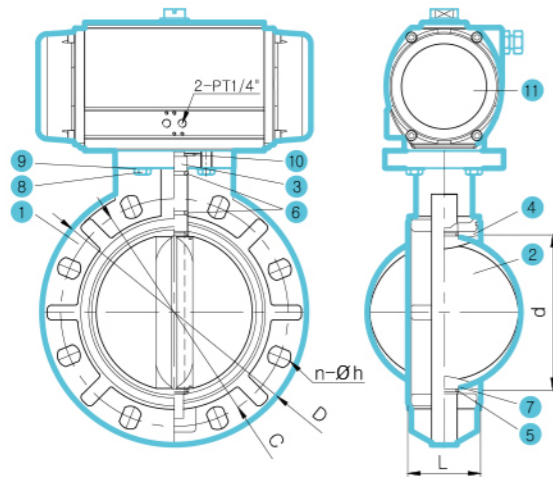
unit:mm

Size	Parts	d	L	T	JIS 10K		
					D	C	n-Øh
15A		16	113	14	95	70	4-15
20A		20	122	15	100	75	4-15
25A		25	135	16	125	90	4-19
30A		32	145	16	135	100	4-19
40A		40	184	17	140	105	4-15
50A		52	215	22	155	120	4-15
65A		67	254	22	175	140	4-19
80A		79	283	23	185	150	8-19
100A		101	345	24	210	175	8-19

ASUNG CLEAN FLOW™

Thermo Plastic Valves

AUTOMATIC BUTTERFLY VALVE



NO.	PARTS	MATERIALS
1	BODY	CLEAN PVC
2	DISC	CLEAN PVC
3	STEM	SUS 410 SCM4 (CLEAN PVC COATED)
4	SEAT	EPDM, FPM
5	DISC SIDE O-RING	EPDM, FPM
6	STEM O-RING	EPDM, FPM
7	DISC FACE O-RING	EPDM, FPM
8	BOLT	SUS 304
9	WASHER	SUS 304
10	STEM SUPPORT	PPG
11	ACTUATOR	ALUMINUM

- Operating fluid
= Compressed dry air
- Operating pressure
= 5Bar~7Bar

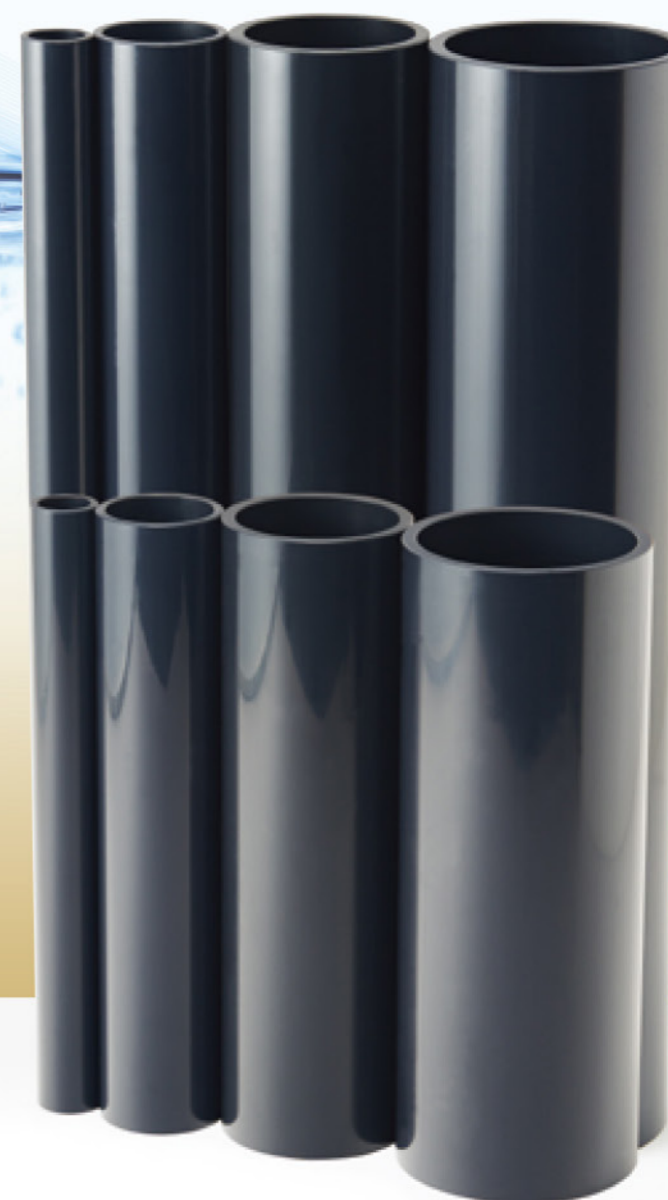
DIMENSION

unit:mm

Parts Size	d	L	D	JIS 10K	
				C	n-Øh
40A	49	39	150	105	4-19
50A	59	42	165	120	4-19
65A	72	46	185	140	4-19
80A	79	44	200	150	8-19
100A	101	56	229	175	8-19
125A	129	66	254	210	8-23
150A	151	73	286	240	8-23
200A	209	94	343	290	12-23

ASUNG CLEAN FLOW™

Pipe, Fitting System



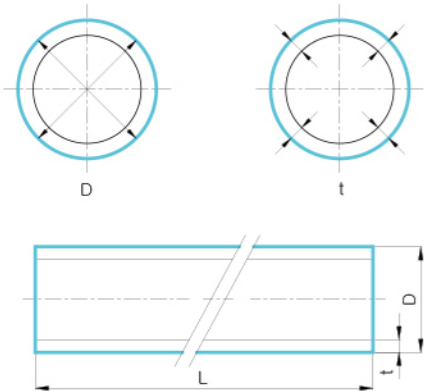
Pipe and Fitting for high-purity water and high-purity chemicals

첨단산업 발달로 인한 최첨단 IT 및 BIO 산업에서 고품질인 초순수가 요구되면서 품질의 향상과 안전성을 위한 양질의 물이 필수가 되었습니다. 이를 위해 중금속 이온의 용출이 극히 적고, 내면의 평활도가 높은 파이프 연구개발을 지속한 결과 CLEAN PVC 생산에 성공하여 산업자원부로부터 신제품(Nep)인증을 획득하였으며, 국내 반도체, LCD, PDP 제조업체 및 정밀 초순수를 필요로 하는 회사에 공급하게 되었습니다. 앞으로도 ASUNG CLEAN FLOW TECH의 PIPE, FITTING, VALVE 시스템의 초순수 공급 라인을 위한 연구 개발은 계속 될 것입니다.

ASUNG CLEAN FLOW™

Thermo Plastic Valves

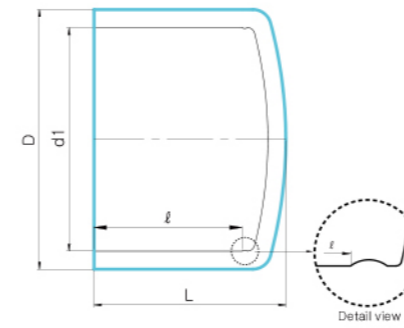
PIPE



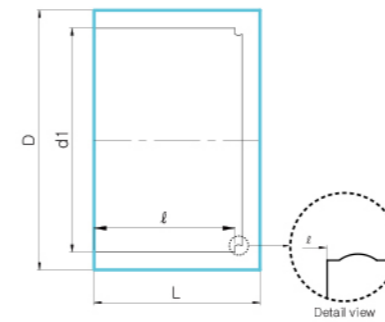
DIMENSION

					unit:mm
Size	Parts	D	t	L	
15A		22	3.0		
20A		26	3.0		
25A		32	3.5		
30A		38	3.5		
40A		48	4.0		
50A		60	4.5		
65A		76	5.2	4,000	
80A		89	5.9		
100A		114	7.1		
125A		140	8.3		
150A		165	9.6		
200A		216	11.0		
250A		267	13.4		

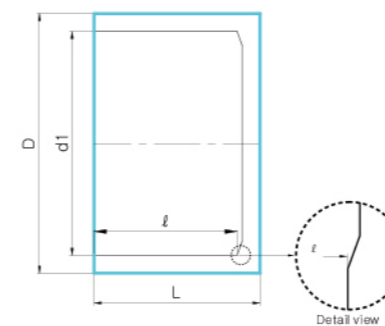
CAP



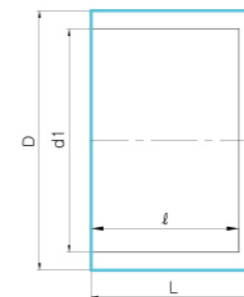
15A~65A



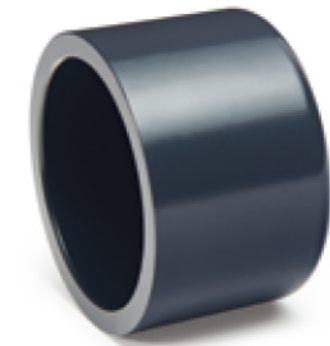
80A



100A



125A~200A



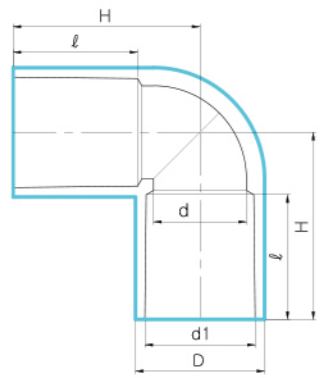
DIMENSION

					unit:mm
Size	Parts	D	d1	ℓ	L
15A		30.0	22.40	23.5	31.5
20A		33.0	26.45	27.0	35.5
25A		40.0	32.55	30.0	39.0
30A		46.0	38.60	33.5	43.0
40A		60.0	48.70	36.5	49.0
50A		73.5	60.80	40.0	54.0
65A		89.0	76.60	45.5	62.0
80A		107.5	89.60	48.0	66.0
100A		132.0	114.70	57.0	69.0
125A		162.5	140.85	88.5	109.0
150A		190.5	166.00	99.0	124.0
200A		244.5	216.90	126.0	150.0

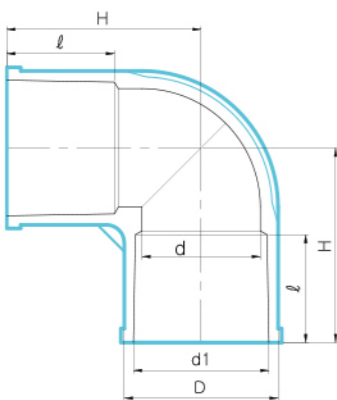
ASUNG CLEAN FLOW™

Thermo Plastic Valves

90° ELBOW



15A~50A



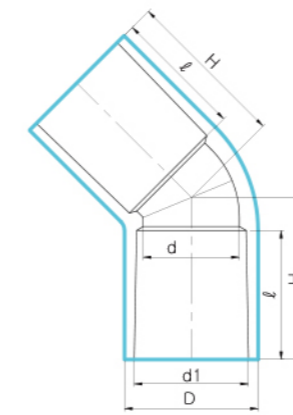
65A~250A

DIMENSION

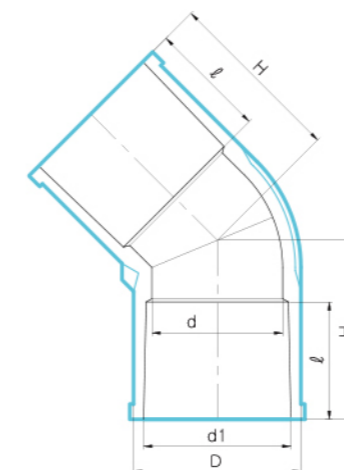
Size	Parts	D	d1	d	l	H
15A		29.0	22.40	16	30.5	44.0
20A		33.0	26.45	20	35.5	51.0
25A		40.0	32.55	26	40.5	59.0
30A		46.0	38.60	32	44.5	66.0
40A		57.0	48.70	40	55.5	82.5
50A		70.0	60.80	52	64.0	97.5
65A		87.0	76.60	67	62.0	109.5
80A		103.5	89.60	79	64.5	120.0
100A		131.0	114.70	100	84.5	154.5
125A		159.0	140.85	125	105.0	186.0
150A		187.0	166.00	146	132.5	228.0
200A		243.5	216.90	196	147.5	338.0
250A		299.0	268.10	242	177.0	424.0

unit:mm

45° ELBOW



15A~50A



65A~250A

DIMENSION

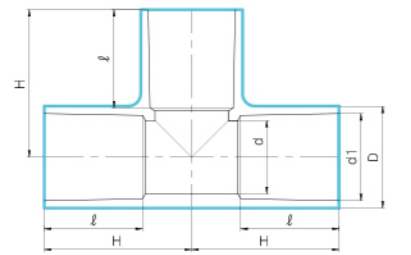
Size	Parts	D	d1	d	l	H
15A		29.0	22.40	16	30.5	38
20A		33.0	26.45	21	35.5	44
25A		40.0	32.55	25	40.5	51
30A		46.0	38.60	32	44.5	66
40A		57.0	48.70	40	55.5	69
50A		70.0	60.80	51	63.5	81
65A		87.5	76.60	65	61.5	93
80A		103.5	89.60	79	64.5	98
100A		130.5	114.70	100	84.5	123
125A		159.0	140.85	125	105.0	149
150A		187.5	166.00	146	132.0	184
200A		243.0	219.90	196	147.0	205
250A		299.0	268.10	242	177.0	254

unit:mm

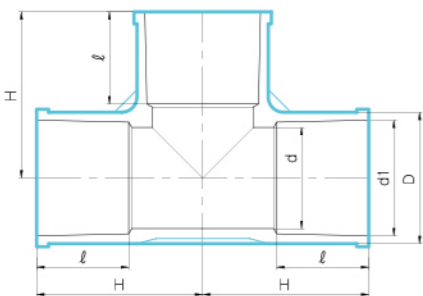
ASUNG CLEAN FLOW™

Thermo Plastic Valves

TEE



15A~50A

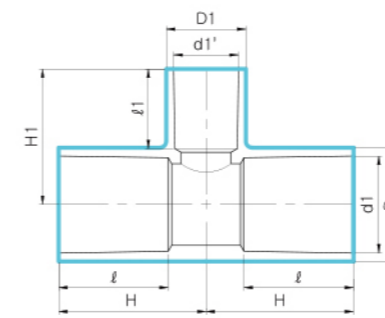


65A~250A

DIMENSION

		unit:mm					
Size	Parts	D	d1	d	ℓ	H	
15A		29.0	22.40	16	30.5	44.0	
20A		33.0	26.45	21	35.5	51.0	
25A		40.0	32.55	26	40.5	59.0	
30A		46.0	38.60	31	44.5	66.0	
40A		57.0	48.70	40	55.5	82.5	
50A		70.0	60.80	52	63.5	97.5	
65A		87.0	76.60	68	61.5	110.0	
80A		103.0	89.60	79	64.5	120.0	
100A		130.5	114.70	100	84.0	155.0	
125A		159.0	140.85	125	105.0	187.0	
150A		188.0	166.00	146	133.0	230.0	
200A		243.0	216.90	196	147.0	267.0	
250A		299.0	268.10	242	176.0	325.0	

REDUCER TEE



20Ax15A~50Ax40A

DIMENSION

		unit:mm							
Size	Parts	D	d1	ℓ	D1	d1'	ℓ1	H	H1
20A x 15A		33.0	26.45	35.5	29.0	22.40	30.5	51	45
25A x 15A		40.0	32.55	40.5	29.0	22.40	30.5	54	49
25A x 20A		40.0	32.55	40.5	33.0	26.45	35.5	59	53
30A x 15A		46.0	38.60	44.5	29.0	22.40	30.5	66	51
30A x 20A		46.0	38.60	44.5	33.0	26.45	35.0	66	56
30A x 25A		46.0	38.60	44.5	40.0	32.55	40.5	66	61
40A x 15A		57.0	48.70	55.5	29.0	22.40	30.5	74	57
40A x 20A		57.0	48.70	55.5	33.0	26.45	35.5	74	62
40A x 25A		57.0	48.70	55.5	40.0	32.55	40.5	74	68
40A x 30A		57.0	48.70	55.5	46.0	38.60	44.5	83	71
50A x 15A		70.0	60.80	63.5	29.0	22.40	30.5	83	63
50A x 20A		70.0	60.80	63.5	33.0	26.45	35.5	83	68
50A x 25A		70.0	60.80	63.5	40.0	32.55	40.5	83	74
50A x 30A		70.0	60.80	63.5	46.0	38.60	44.5	91	77
50A x 40A		70.0	60.80	63.5	57.0	48.70	55.5	91	89

ASUNG CLEAN FLOW™

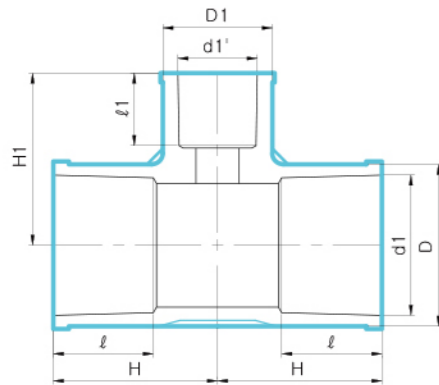
Thermo Plastic Valves

REDUCER TEE



DIMENSION

unit:mm

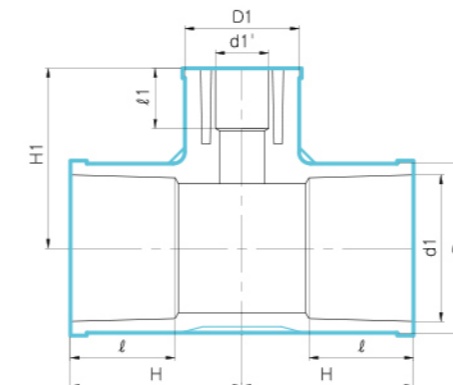


65A x 50A ~ 250A x 200A

Parts Size	D	d1	ℓ	D1	d1'	ℓ1	H	H1
65A x 50A	87.0	76.60	61.5	70.0	60.80	63.5	110	104
80A x 40A	103.0	89.60	64.5	57.5	48.70	55.5	100	102
80A x 50A	103.5	89.60	64.5	70.5	60.80	63.5	105	110
80A x 65A	103.5	89.60	64.5	87.0	76.60	61.5	120	117
100A x 50A	130.5	114.70	84.5	70.5	60.80	63.5	125	122
100A x 80A	130.5	114.70	84.5	103.5	89.60	64.5	140	131
125A x 100A	159.0	140.85	104.5	130.5	114.70	84.5	173	166
150A x 80A	187.0	166.00	132.0	103.5	89.60	64.5	194	157
150A x 100A	188.0	166.00	132.0	130.5	114.70	84.5	208	182
150A x 125A	187.0	166.00	132.0	159.0	140.85	104.5	217	201
200A x 100A	243.0	216.90	147.0	130.5	114.70	84.5	218	200
200A x 125A	243.0	216.90	147.0	159.0	140.85	104.5	230	225
200A x 150A	243.0	216.90	147.0	187.0	166.00	132.0	245	257
250A x 65A	299.0	268.10	177.0	103.5	76.60	61.5	240	220
250A x 80A	299.0	268.10	177.0	103.5	89.60	64.5	240	220
250A x 200A	299.0	268.10	177.0	243.0	216.90	147.0	300	295

DIMENSION

unit:mm



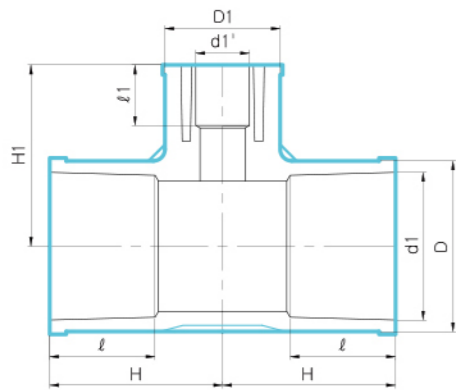
65A x 15A ~ 125A x 80A

Parts Size	D	d1	ℓ	D1	d1'	ℓ1	H	H1
65A x 15A	87.0	76.60	61.5	70.0	22.40	30.0	110	104
65A x 20A	87.0	76.60	61.5	70.0	22.45	35.0	110	104
65A x 25A	87.0	76.60	61.5	70.0	32.55	40.5	110	104
65A x 30A	87.0	76.60	61.5	70.0	38.60	44.0	110	104
65A x 40A	87.0	76.60	61.5	87.0	48.70	55.5	110	110
80A x 15A	103.0	89.60	64.5	57.0	22.40	30.0	100	102
80A x 20A	103.0	89.60	64.5	57.0	22.45	35.5	100	102
80A x 25A	103.0	89.60	64.5	70.0	32.55	40.5	105	110
80A x 30A	103.0	89.60	64.5	70.5	38.60	44.5	105	110
100A x 15A	130.5	114.70	84.5	70.5	22.40	30.0	125	122
100A x 20A	130.5	114.70	84.5	70.5	26.45	35.0	125	122
100A x 25A	130.5	114.70	84.5	70.5	32.55	40.5	125	122
100A x 30A	130.5	114.70	84.5	70.5	38.60	44.5	125	122
100A x 40A	130.5	114.70	84.5	103.5	48.70	55.5	140	131
100A x 65A	130.5	114.70	84.5	130.5	76.60	61.5	155	155
125A x 15A	159.0	140.85	104.5	130.5	22.40	30.5	173	166
125A x 20A	159.0	140.85	104.5	130.5	22.45	35.0	173	166
125A x 25A	159.0	140.85	104.5	130.5	32.55	40.5	173	166
125A x 30A	159.0	140.85	104.5	130.5	38.60	44.5	173	166
125A x 40A	159.0	140.85	104.5	130.5	48.70	55.5	173	166
125A x 50A	159.0	140.85	104.5	130.5	60.80	63.5	173	166
125A x 65A	159.0	140.85	104.5	130.5	76.60	61.5	173	166
125A x 80A	159.0	140.85	104.5	159.0	89.60	64.5	187	187

ASUNG CLEAN FLOW™

Thermo Plastic Valves

REDUCER TEE



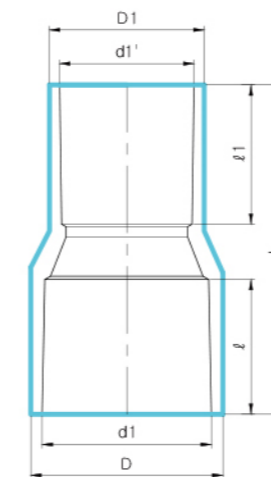
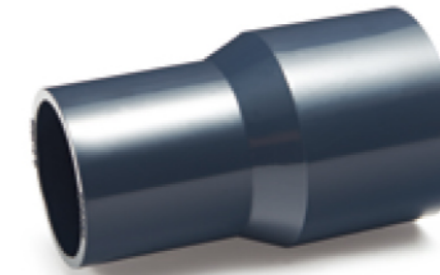
150A x 15A ~ 250A x 150A

DIMENSION

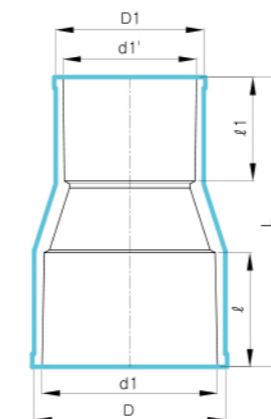
unit:mm

Size	Parts	D	d1	ℓ	D1	d1'	ℓ1	H	H1
150A x 15A		187.0	166.00	132.0	103.0	22.40	30.5	195	158
150A x 20A		187.0	166.00	132.0	103.0	26.45	35.5	195	158
150A x 25A		187.0	166.00	132.0	103.0	32.55	40.5	195	158
150A x 30A		187.0	166.00	132.0	103.0	38.60	44.5	195	158
150A x 40A		187.0	166.00	132.0	103.0	48.70	55.5	195	158
150A x 50A		187.0	166.00	132.0	103.0	60.80	62.5	195	158
150A x 65A		187.0	166.00	132.0	130.5	76.60	61.5	207	181
200A x 15A		243	216.90	147	130.5	22.40	30.5	218	200
200A x 20A		243	216.90	147	130.5	26.45	35.5	218	200
200A x 25A		243	216.90	147	130.5	32.55	40.5	218	200
200A x 30A		243	216.90	147	130.5	38.60	44.5	218	200
200A x 40A		243	216.90	147	130.5	48.70	55.5	218	200
200A x 50A		243	216.90	147	130.5	60.80	63.5	218	200
200A x 65A		243	216.90	147	130.5	76.60	61.5	218	200
200A x 80A		243	216.90	147	130.5	89.60	64.5	218	200
250A x 15A		243	216.90	177	103.5	22.40	30.5	240	220
250A x 20A		243	216.90	177	103.5	26.45	35.5	240	220
250A x 25A		243	216.90	177	103.5	32.55	40.5	240	220
250A x 30A		243	216.90	177	103.5	38.60	44.5	240	220
250A x 40A		243	216.90	177	103.5	48.70	55.5	240	220
250A x 50A		243	216.90	177	103.5	60.80	63.5	240	220
250A x 100A		299	268.10	177	243.0	114.70	84.5	300	295
250A x 125A		299	268.10	177	243.0	140.85	104.5	300	295
250A x 150A		299	268.10	177	243.0	166.00	132.0	300	295

REDUCER



20A x 15A ~ 150A x 125A



200A x 150A ~ 250A x 200A

DIMENSION

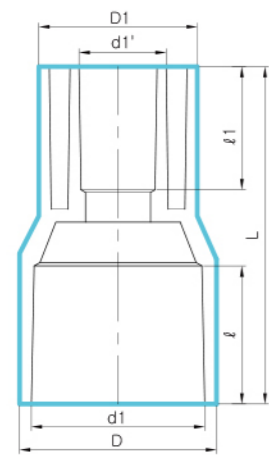
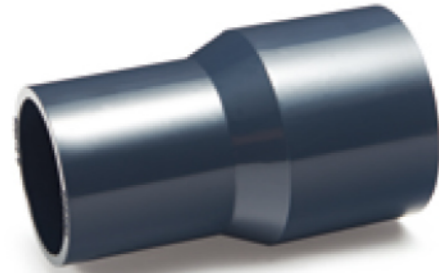
unit:mm

Size	Parts	D	d1	ℓ	D1	d1'	ℓ1	L
20A x 15A		33.0	26.45	35.0	29.0	22.40	30.5	71.0
25A x 15A		40.0	32.55	40.0	29.0	22.40	30.5	85.0
25A x 20A		40.0	32.55	40.5	33.0	26.45	35.5	84.0
30A x 15A		46.0	38.60	44.5	33.0	22.40	30.5	93.0
30A x 20A		46.0	38.60	44.5	33.0	26.45	35.5	93.0
30A x 25A		46.0	38.60	44.5	40.0	32.55	40.5	93.0
40A x 15A		57.0	48.70	55.5	29.0	22.40	30.5	113.0
40A x 20A		57.0	48.70	55.5	33.0	26.45	35.5	113.0
40A x 25A		57.0	48.70	55.5	40.0	32.55	40.5	114.0
40A x 30A		57.0	48.70	55.5	46.0	38.60	44.5	114.0
50A x 15A		70.0	60.80	63.5	40.0	22.40	30.5	140.0
50A x 20A		70.0	60.80	63.5	40.0	26.45	35.5	140.0
50A x 25A		70.0	60.80	63.5	40.0	32.55	40.5	140.0
50A x 30A		70.0	60.80	63.5	46.0	38.60	44.5	136.0
50A x 40A		70.0	60.80	63.5	57.0	48.70	55.5	136.0
65A x 40A		87.0	76.60	61.5	70.0	48.70	55.0	149.0
65A x 50A		87.0	76.60	61.5	70.0	60.80	63.5	149.0
80A x 40A		103.0	89.60	64.5	70.0	48.70	55.0	164.0
80A x 50A		103.0	89.60	64.5	70.0	60.80	63.5	165.0
80A x 65A		103.0	89.60	64.5	87.0	76.60	61.5	159.0
100A x 40A		130.5	114.70	85.0	70.0	48.70	55.5	200.0
100A x 50A		130.5	114.70	85.0	70.0	60.80	63.5	200.0
100A x 65A		130.5	114.70	85.0	103.0	76.60	58.0	186.5
100A x 80A		130.5	114.70	85.0	103.0	89.10	64.5	190.0
125A x 80A		159.0	140.85	105.0	103.0	89.60	64.5	229.0
125A x 100A		159.0	140.85	105.0	130.5	114.70	85.0	229.0
150A x 80A		188.0	166.00	133.0	130.5	89.60	64.5	229.0
150A x 100A		188.0	166.00	133.0	130.5	114.70	85.0	229.0
150A x 125A		188.0	166.00	133.0	159.0	140.85	105.0	271.5
200A x 150A		243.0	216.90	147.0	188.0	166.00	133.0	367.0
250A x 200A		298.0	268.10	176.0	243.0	216.90	147.0	399.0

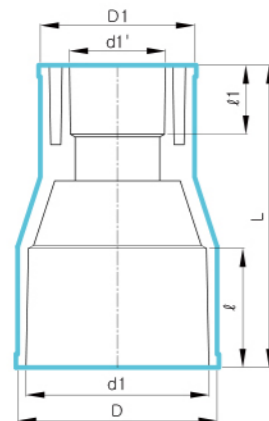
ASUNG CLEAN FLOW™

Thermo Plastic Valves

REDUCER



65A x 15A ~ 150A x 65A

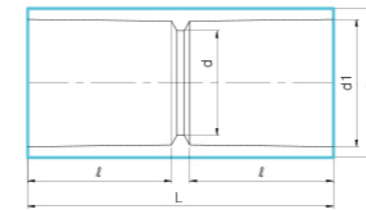
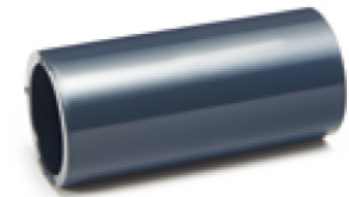


200A x 80A ~ 250A x 150A

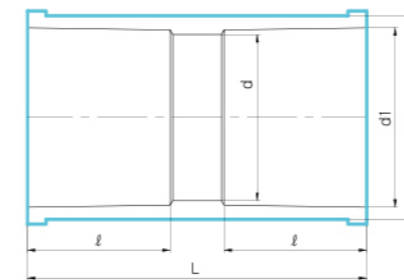
DIMENSION

		unit:mm						
Size	Parts	D	d1	ℓ	D1	d1'	ℓ1	L
65A x 15A		87.0	76.60	61.5	70.0	22.40	30.0	149.0
65A x 20A		87.0	76.60	61.5	70.0	26.45	35.0	149.0
65A x 25A		87.0	76.60	61.5	70.0	32.55	40.0	149.0
65A x 30A		87.0	76.60	61.5	70.0	38.60	44.0	149.0
80A x 15A		103.5	89.60	64.5	70.0	22.40	30.0	165.0
80A x 20A		103.5	89.60	64.5	70.0	26.45	35.0	165.0
80A x 25A		103.5	89.60	64.5	70.0	32.55	40.0	165.0
80A x 30A		103.5	89.60	64.5	70.0	38.60	44.0	165.0
100A x 15A		130.5	114.70	85.0	70.0	22.40	30.0	200.0
100A x 20A		130.5	114.70	85.0	70.0	26.45	35.0	200.0
100A x 25A		130.5	114.70	85.0	70.0	32.55	40.0	200.0
100A x 30A		130.5	114.70	85.0	70.0	38.60	44.5	200.0
125A x 15A		159.0	140.85	105.0	103.5	22.40	30.0	229.0
125A x 20A		159.0	140.85	105.0	103.5	26.45	35.0	229.0
125A x 25A		159.0	140.85	105.0	103.5	32.55	40.5	229.0
125A x 30A		159.0	140.85	105.0	103.5	38.60	44.5	229.0
125A x 40A		159.0	140.85	105.0	103.5	48.70	55.5	229.0
125A x 50A		159.0	140.85	105.0	103.5	60.80	63.5	229.0
125A x 65A		159.0	140.85	105.0	103.5	76.60	61.5	229.0
150A x 15A		188.0	166.00	132.0	103.5	22.40	30.5	295.0
150A x 20A		188.0	166.00	132.0	103.5	26.45	35.5	295.0
150A x 25A		188.0	166.00	132.0	103.5	32.55	40.5	295.0
150A x 30A		188.0	166.00	132.0	103.5	38.60	44.5	295.0
150A x 40A		188.0	166.00	132.0	103.5	48.70	55.5	295.0
150A x 50A		188.0	166.00	132.0	130.5	60.80	63.5	295.0
150A x 65A		188.0	166.00	132.0	130.5	76.60	61.5	295.0
200A x 80A		243.0	216.90	147.0	188.0	89.60	64.5	368.0
200A x 100A		243.0	216.90	147.0	188.0	114.70	84.5	368.0
200A x 125A		243.0	216.90	147.0	188.0	140.85	104.5	368.0
250A x 80A		299.0	268.10	176.0	243.0	89.60	64.5	399.0
250A x 100A		299.0	268.10	176.0	243.0	114.70	84.5	399.0
250A x 125A		299.0	268.10	176.0	243.0	140.85	104.5	399.0
250A x 150A		299.0	268.10	176.0	243.0	166.00	132.0	399.0

SOCKET



15A~50A



65A~250A

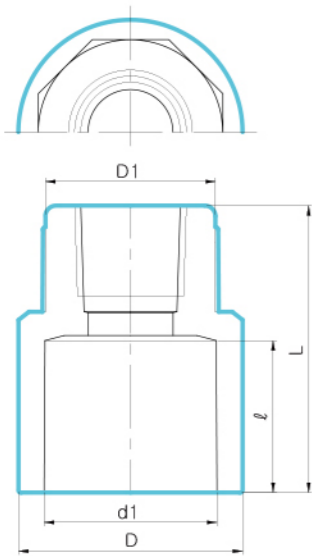
DIMENSION

		unit:mm				
Size	Parts	D	d1	d	ℓ	L
15A		29.0	22.40	16	30.5	67
20A		33.0	26.45	20	35.5	77
25A		40.0	32.55	25	40.5	87
30A		46.0	38.60	31	44.5	95
40A		57.0	48.70	40	55.5	117
50A		70.0	60.80	51	64.0	137
65A		87.0	76.60	65	61.5	145
80A		103.5	89.60	77	64.5	155
100A		130.5	114.70	100	84.5	200
125A		158.5	140.85	125	105.0	239
150A		187.5	166.00	146	132.5	300
200A		242.5	216.90	196	146.5	308
250A		298.5	268.10	242	177.0	384

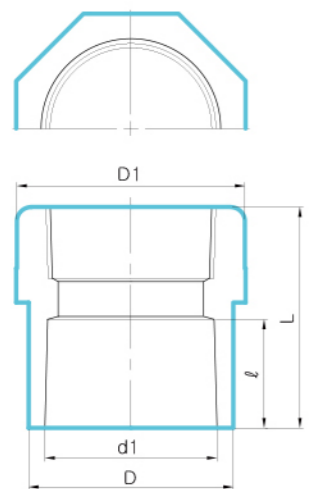
ASUNG CLEAN FLOW™

Thermo Plastic Valves

FAUCET SOCKET



25A~1/2"



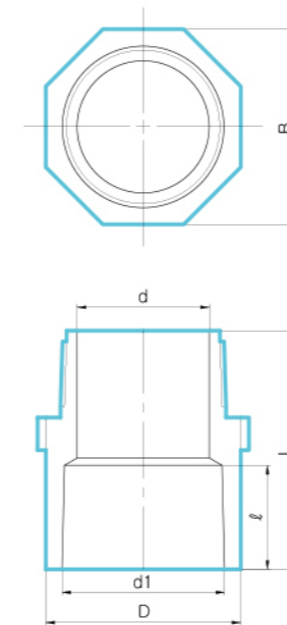
15A x 3/8"~25A x 1"



DIMENSION

		unit:mm				
Size	Parts	D	d1	ℓ	L	D1
15A x 3/8"		29.5	22.40	22.5	44.0	33.5
15A x 1/2"		29.5	22.40	22.5	44.0	33.5
20A x 1/2"		34.5	26.45	25.5	53.0	40.0
20A x 3/4"		34.5	26.45	25.5	53.0	40.0
25A x 1/2"		43.0	32.55	28.5	57.5	33.5
25A x 1"		43.0	32.55	28.5	60.5	48.0

MALE ADAPTER



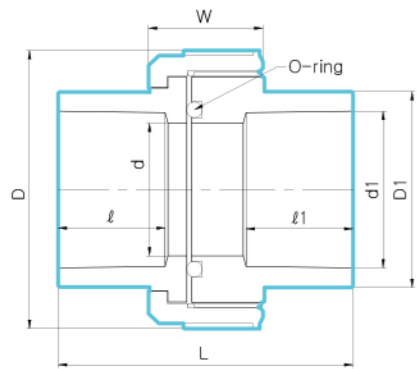
DIMENSION

		unit:mm					
Size	Parts	D	d1	d	ℓ	L	B
15A x 1/2"		29.0	22.40	13	22.5	46.5	29
20A x 3/4"		36.0	26.45	18	25.5	53.5	36
25A x 1"		42.5	32.55	24	29.0	59.0	43
30A x 1-1/4"		46.0	38.60	31	32.5	66.5	46
40A x 1-1/2"		57.0	48.70	38	37.5	74.0	60
50A x 2"		70.0	60.80	48	44.0	87.0	73

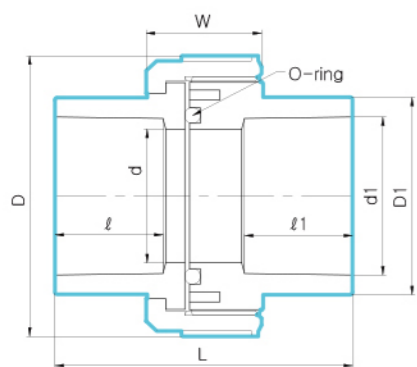
ASUNG CLEAN FLOW™

Thermo Plastic Valves

UNION (Socket)



15A~50A



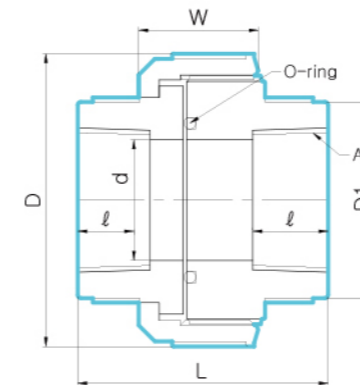
65A~100A

DIMENSION

		unit:mm							
Parts Size	D	D1	d1	d	ℓ	ℓ1	W	L	
A - TYPE	15A	49.0	30.5	22.40	15	22.5	23.0	27.0	60.0
	20A	60.0	36.5	26.45	20	24.0	26.0	28.0	69.5
	25A	70.5	46.0	32.55	25	32.0	29.0	33.5	85.5
	30A	81.0	55.0	38.60	30	30.0	32.5	34.5	84.5
	40A	97.5	65.0	48.70	40	35.5	35.5	40.0	102.0
50A	107.0	75.0	60.80	51	41.0	39.0	45.0	114.5	
B - TYPE	15A	50.5	30.5	22.40	15	22.5	23.0	27.0	60.0
	20A	60.0	36.5	26.45	20	24.0	26.0	28.0	69.5
	25A	70.5	46.0	32.55	25	32.0	29.0	33.5	85.5
	30A	81.0	55.0	38.60	30	30.0	32.5	34.5	84.5
	40A	97.5	65.0	48.70	40	35.5	35.5	40.0	101.5
	50A	113.5	75.0	60.80	51	41.0	39.0	45.0	114.0
	100A	210.5	134.0	114.70	100	67.0	67.0	83	167.0

* A-TYPE과 B-TYPE은 호환불가

UNION (Thread)



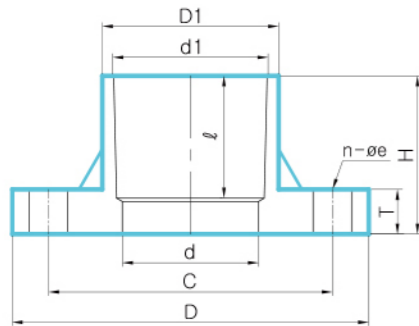
DIMENSION

		unit:mm							
Parts Size	D	D1	A	d	ℓ	W	L		
15A	49	30	Rc 1/2"	15	14.0	25.0	49.0		
20A	60	36	Rc 3/4"	20	16.0	28.0	56.5		
25A	70	46	Rc 1"	25	20.0	34.0	66.0		
30A	81	55	Rc 1-1/4"	31	21.5	34.5	71.0		
40A	97	65	Rc 1-1/2"	40	24.0	40.0	83.0		
50A	107	75	Rc 2"	51	28.5	44.0	93.5		

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Thermo Plastic Valves

T.S FLANGE

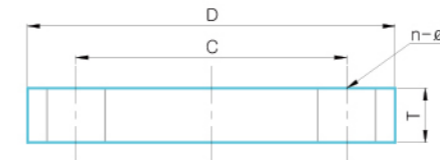


DIMENSION

unit:mm

Parts Size	SOCKET DIMENSIONS					FLANGE MIDENSIONS			
	D	d1	d	l	H	D	C	T	n-øe
15A	32.0	22.40	18	31.0	46	95	70	14	4-15
20A	35.0	26.45	21	35.0	46	100	75	15	4-15
25A	42.5	32.55	25	41.0	46	125	90	15	4-19
30A	53.5	38.60	31	45.0	50	135	100	16	4-19
40A	61.0	48.70	41	56.0	60	140	105	16	4-19
50A	75.0	60.80	51	63.0	70	155	120	20	4-19
65A	87.5	76.60	68	61.0	77	175	140	22	4-19
80A	103.0	89.60	78	63.5	81	185	150	22	8-19
100A	131.0	114.70	102	85.0	100	210	175	22	8-19
125A	160.0	140.85	127	105.0	120	250	210	25	8-23
150A	189.5	166.00	148	132.0	151	280	240	27	8-23
200A	242.0	216.90	196	146.0	158	330	290	29	12-23
250A	295.0	268.10	244	174.0	187	400	355	29	12-25

BLIND FLANGE



DIMENSION

unit:mm

Parts Size	D	C	T	n-øe
	15A	95	70	14
20A	100	75	15	4-15
25A	125	90	15	4-19
30A	135	100	16	4-19
40A	140	105	16	4-19
50A	155	120	17	4-19
65A	175	140	19	4-19
80A	185	150	19	8-19
100A	210	175	19	8-19
125A	250	210	21	8-23
150A	280	240	22	8-23
200A	330	290	28	12-23
250A	400	355	30	12-25