

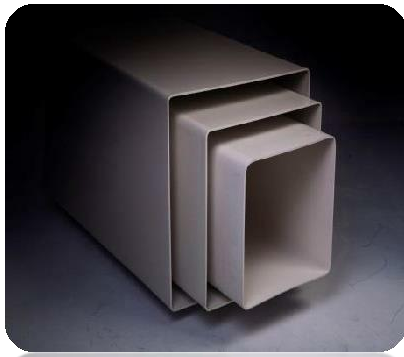


株) HYOJIN Engineering



FM PVC DUCT PRODUCT CATALOG

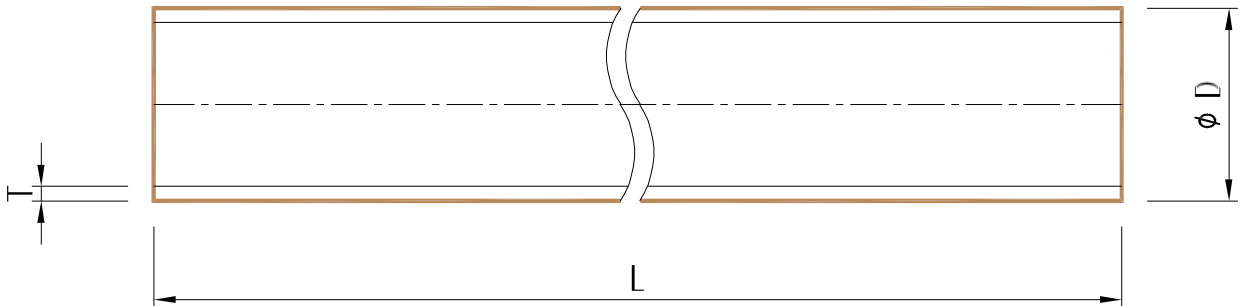
(FM PVC 4910 Material certification / FM PVC 4922 Product Certification)



GFPD GmbH
Global · Facility · Procurement · Distribution

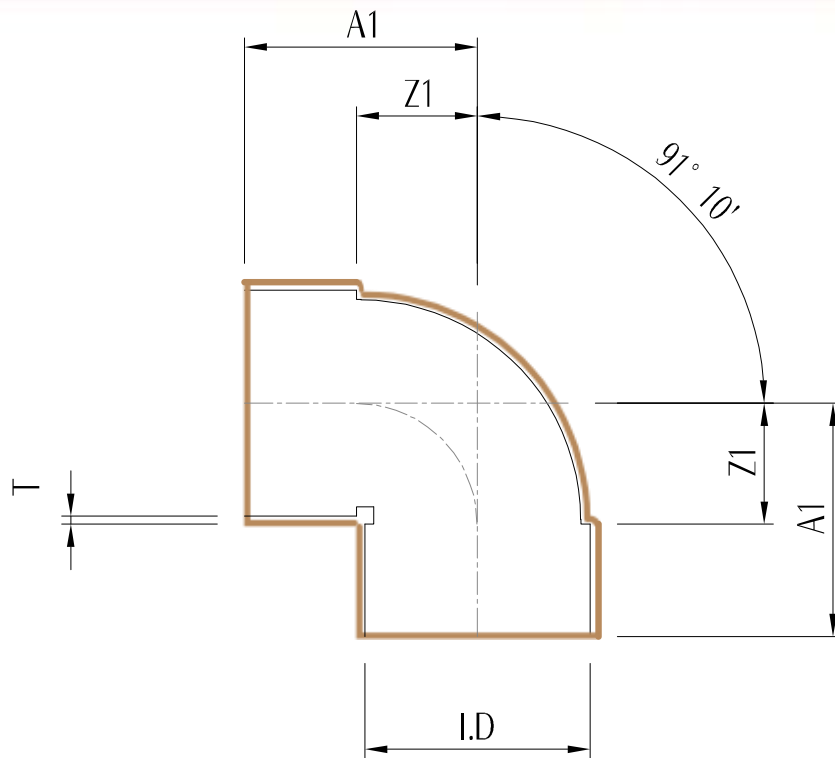
PIPE

HOOK UP PIPE



Nominal size	Ø D(O.D)		T		g/m	L	
	Standard	Allowable error	Thickness	Allowable error		Length	Allowable error
25A	32	±0.2	3.1	+0.4	0,461	4000	±10
30A	38	±0.2	3.1	+0.4	0,558		
40A	48	±0.2	3.6	+0.4	0,813		
50A	60	±0.2	4.1	+0.4	1,079		
65A	76	±0.3	4.1	+0.6	1,388		
75A	89	±0.3	5.5	+0.6	2,163		
100A	114	±0.4	6.0	+0.8	3,052		
125A	140	±0.5	6.0	+0.8	3,787		
150A	165	±0.5	6.0	+0.8	4,493		
200A	216	±0.7	6.0	+1.0	5,935		
250A	267	±0.9	6.0	+1.2	7,376		
300A	318	±1.0	6.0	+1.4	8,817	3000	

- Unit: mm , Allowable error : KS M3404 reference
- The length of the pipe is 4,000 mm. Other lengths shall be determined by agreement between the parties.

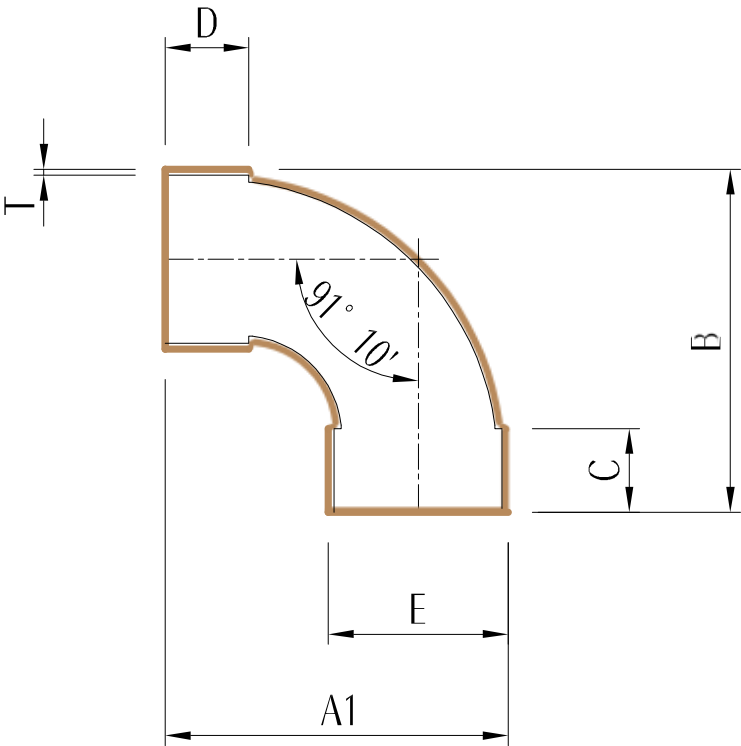


Nominal size	I.D (Ø)		A1 Length	Z1		T Thickness
	Standard	Allowable error		Length	Allowable error	
25A	32.5	±0.25	58.3	19.3	±0.2	4.5
30A	38.25	±0.25	65.0	22	±0.2	4
40A	48.3	±0.3	83.0	27	±0.2	4.5
50A	60.35	±0.3	70.5	33	±0.2	3.5
65A	76.4	±0.3	78.8	42	±0.2	3.5
75A	89.45	±0.3	93.3	48	±0.2	3.5
100A	114.55	±0.35	112	62	±0.2	4.5
125A	140.70	±0.4	140	75	±0.2	6.0
150A	165.85	±0.45	168	88	±0.2	6.0
200A	216.5	±0.7	237.5	118	±0.2	8.0
250A	267.5	±0.9	272.3	135.3	±0.2	10.0

- Unit: mm , Allowable error : KS M3410 application
- The allowable range of flow angle 91° 10' is ±30
- Thickness must be greater than the minimum dimension: KS M3410 applicable
- 300 size Miter Elbow Type

LONG ELBOWS 90°

HOOK UP FITTINGS

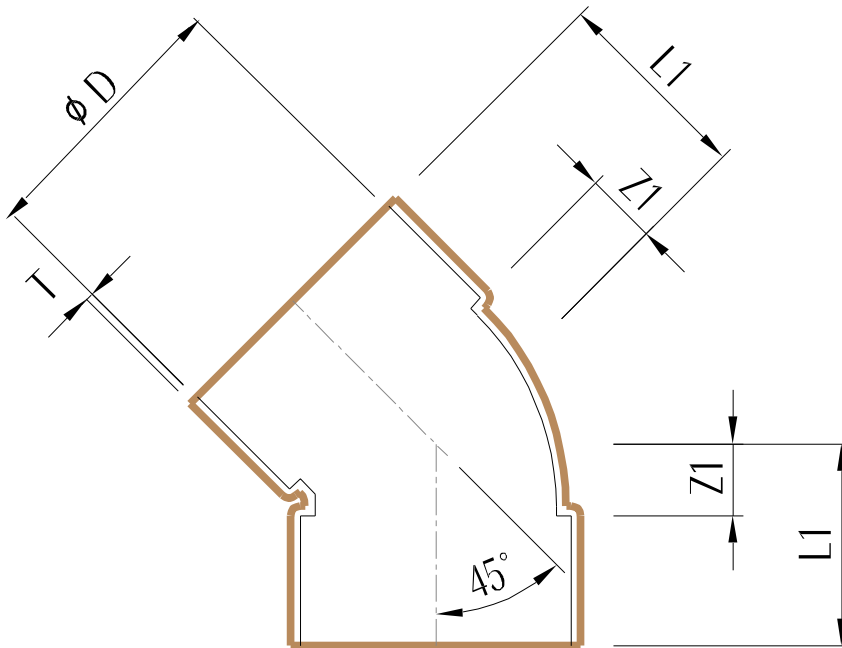


Nominal size	A1	B	C	D	Ø E (O.D)		T	I.D (Ø)	
	Length	Length	Length	Length	Standard	Allowable error	Thickness	Standard	Allowable error
100A	236	236	51	51	124.5	±0.2	5.0	114.55	±0.35
150A	335	335	80	80	178.0	±0.3	6.0	165.85	±0.45
200A	429	426	115	115	228.5	±0.7	7.0	216.5	±0.7

- Unit: mm
- Allowable error : KS M3410 application
- The allowable range of flow angle 91° 10' is ±30
- Thickness must be greater than the minimum dimension: KS M3410 applicable

ELBOWS 45°

HOOK UP FITTINGS

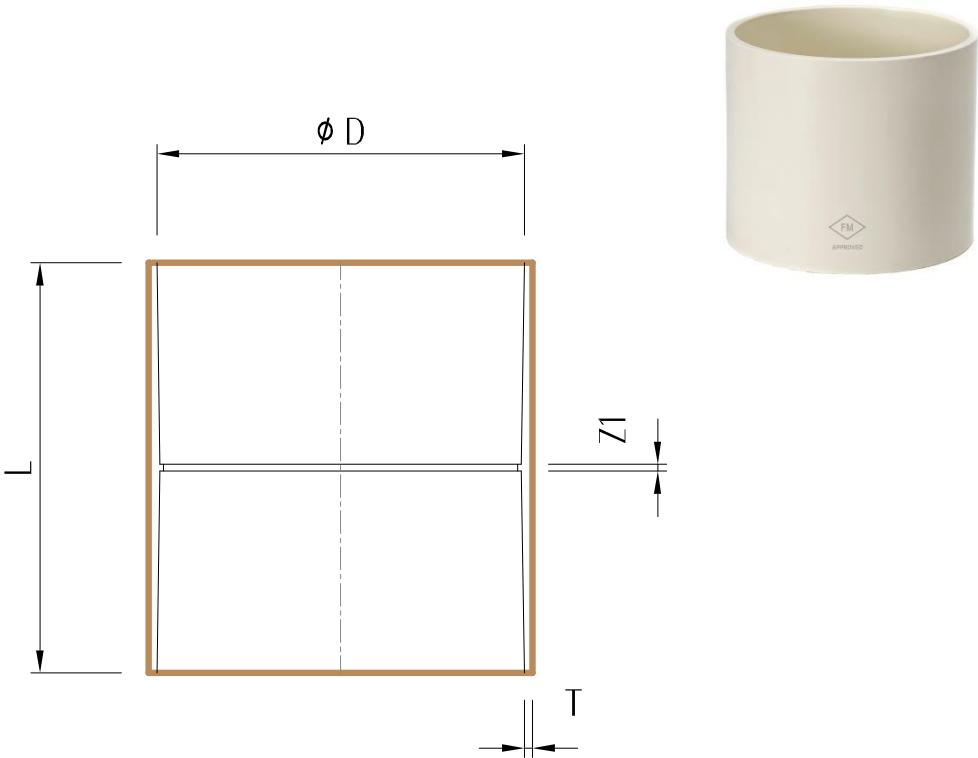


A	I.D (Ø)		L1	Z1		T
Nominal size	Standard	Allowable error	Length	Length	Allowable error	Thickness
50A	60.35	±0.3	54.5	18	±0.2	3.5
65A	76.4	±0.3	57	20.5	±0.2	3.5
75A	89.45	±0.3	65	24	±0.2	3.5
100A	114.55	±0.35	80	30	±0.2	4.5
125A	140.70	±0.4	103	38	±0.2	6.0
150A	165.85	±0.45	124	44	±0.2	6.0
200A	216.5	±0.7	172	58	±0.2	8.0
250A	267.5	±0.9	204	74	±0.2	10.0

- Unit: mm
- Allowable error : KS M3410 application
- 300 size Miter Elbow Type
- Thickness must be greater than the minimum dimension: KS M3410 applicable

SOCKET

HOOK UP FITTINGS

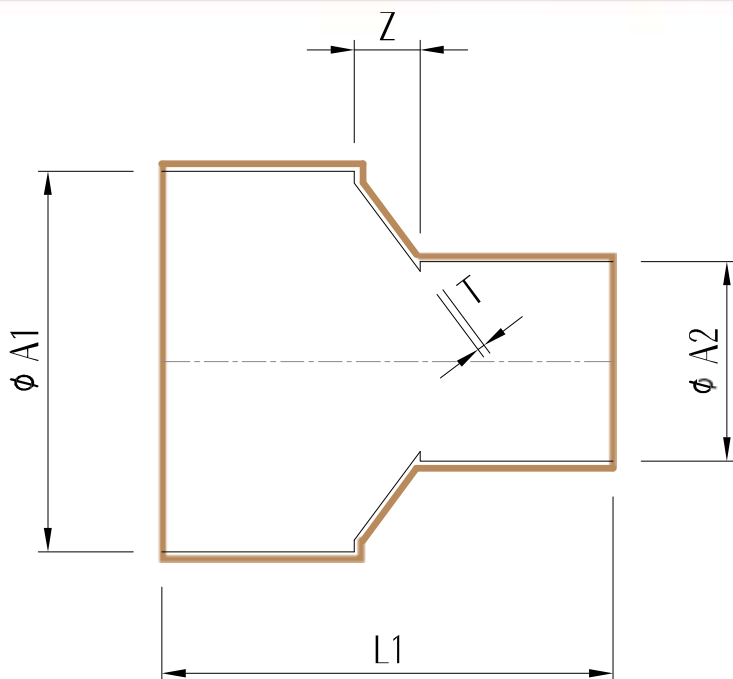


Nominal size	Ø D (I.D)		L Length	Z1		T Thickness
	Standard	Allowable error		Length	Allowable error	
25A	32.5	±0.25	84	2	±0.2	3.5
40A	48.3	±0.3	117	6	±0.2	4.0
50A	60.35	±0.3	73	3	±0.2	3.5
65A	76.4	±0.3	73	3	±0.2	4.0
75A	89.45	±0.3	84	4	±0.2	4.5
100A	114.55	±0.35	104	4	±0.2	4.5
125A	140.70	±0.4	134	4	±0.2	6.0
150A	165.85	±0.45	164	4	±0.2	6.0
200A	216.5	±0.7	213	4	±0.2	7.0
250A	267.5	±0.9	280	7	±0.2	8.0

- Unit: mm
- Allowable error : KS M3410 application
- Thickness must be greater than the minimum dimension: KS M3410 applicable

REDUCER

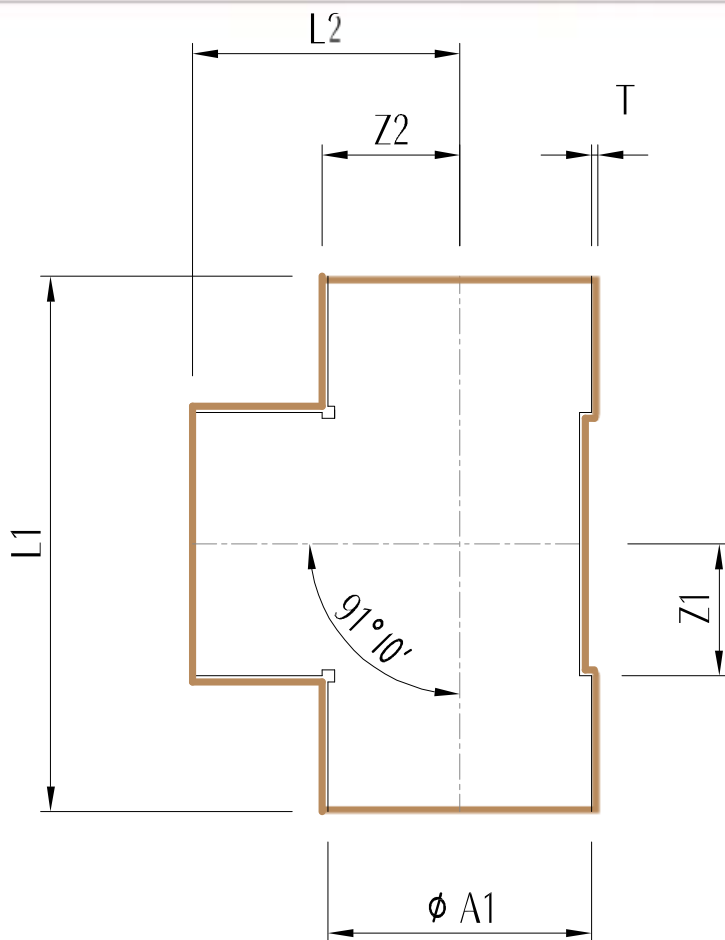
HOOK UP FITTINGS



Nominal size	Ø A1(ID)	Ø A2(ID)	L1	Z		T
	Standard	Standard	Length	Length	Allowable error	Thickness
50A*25A	60.35	32.5	135	26	±0.2	4.5
50A*30A	60.35	38.25	140	30	±0.2	5.0
65A*50A	76.40	60.35	80	18	±0.2	4.0
75A*50A	89.45	60.35	90	13	±0.2	3.5
75A*65A	89.45	76.40	100	23	±0.2	4.0
100A*50A	114.55	60.35	115	30	±0.2	5.0
100A*65A	114.55	76.40	115	30	±0.2	5.0
100A*75A	114.55	89.45	120	30	±0.2	5.0
125A*100A	140.70	114.55	148	35	±0.2	5.0
150A*100A	165.85	114.55	172	40	±0.2	6.0
150A*125A	165.85	140.70	185	40	±0.2	6.0
200A*150A	216.5	165.85	237	53	±0.2	7.0

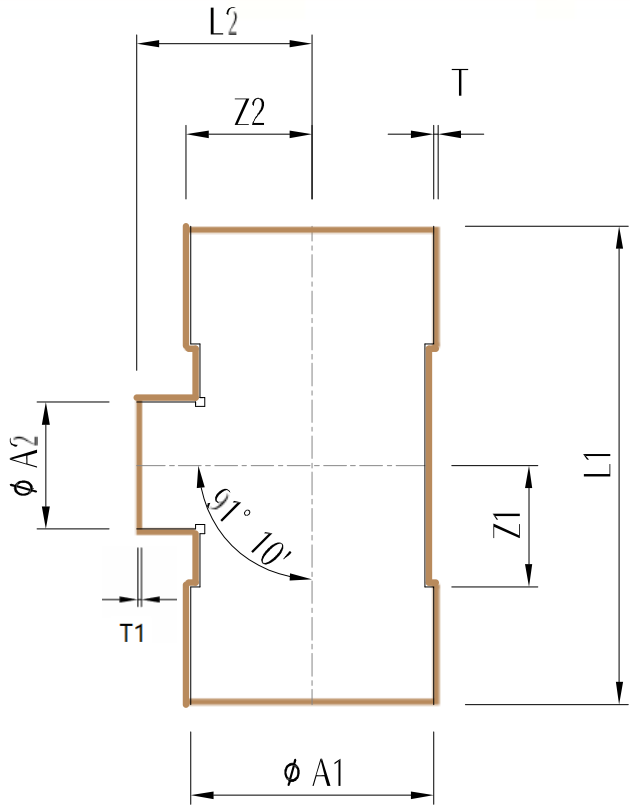
*custom order

- Unit: mm
- Allowable error : KS M3410 application
- Thickness must be greater than the minimum dimension: KS M3410 applicable



Nominal size	Ø A1(I.D)	L1	L2	Z1		Z2		T
	Standard	Length	Length	Length	Allowable error	Length	Allowable error	Thickness
50A	60.35	140	75	34	±0.2	34	±0.2	4.0
65A	76.4	155	77	42	±0.2	42	±0.2	4.0
75A	89.45	177	88	48	±0.2	49	±0.2	5.0
100A	114.55	225	112	62	±0.2	62	±0.2	5.0
125A	140.70	281	140	75	±0.2	77	±0.2	6.0
150A	165.85	340	169	89	±0.2	89	±0.2	6.0
200A	216.5	473	235	120	±0.2	117	±0.2	8.0
250A	267.5	544	281	141	±0.2	143	±0.2	9.0

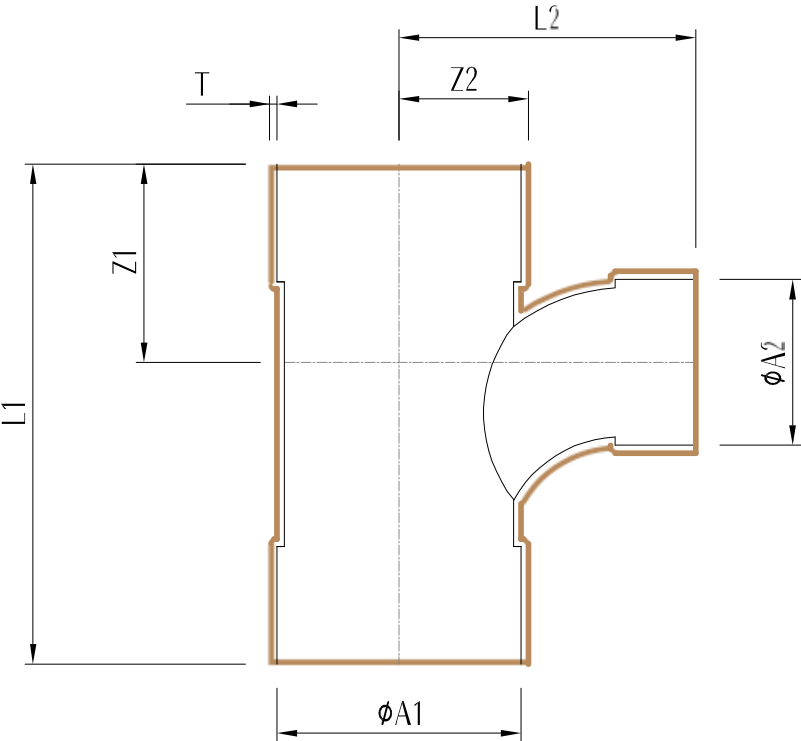
- Unit: mm
- Allowable error : KS M3410 application
- Thickness must be greater than the minimum dimension: KS M3410 applicable



Nominal size	Ø A1(ID)	Ø A2(ID)	L1	L2	Z1		Z2 (O.D)		T	T1
	Standard	Standard	Length	Length	Length	Allowable error	Length	Allowable error	Thickness	Thickness
75A*50A	89.45	60.35	149	73	34	±0.2	48	±0.2	4.0	3.5
100A*50A	114.55	60.35	169	87	34	±0.2	62	±0.2	5.0	4.0
100A*75A	114.55	89.45	197	102	48	±0.2	62	±0.2	5.0	4.0
125A*100A	140.70	114.55	252	130	61	±0.2	77	±0.2	5.0	5.0
150A*100A	165.85	114.55	338	162	61	±0.2	88	±0.2	6.0	6.0

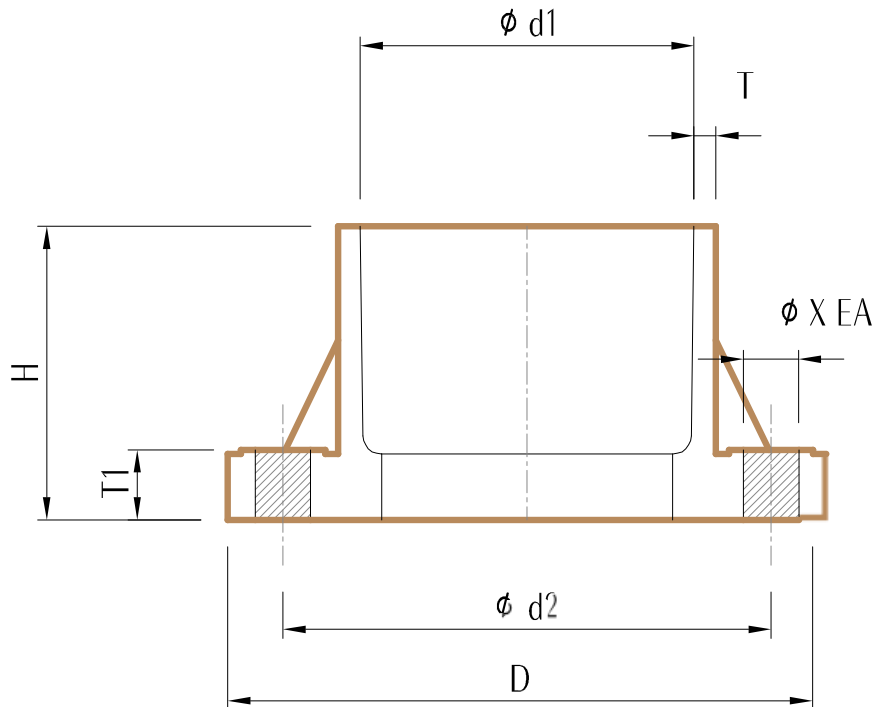
*custom order

- Unit: mm , Allowable error : KS M3410 application
- For sizes other than the above, please inquire in advance (made to order)
- Thickness must be greater than the minimum dimension: KS M3410 applicable



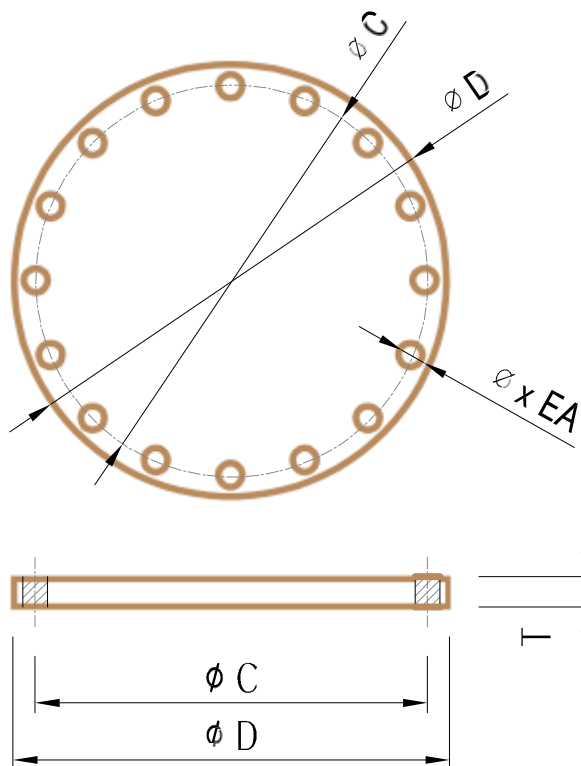
Nominal size	$\varnothing$ A1(ID)	$\varnothing$ A2(ID)	L1	L2	Z1		Z2		T
	Standard	Standard	Length	Length	Length	Allowable error	Length	Allowable error	Thickness
Ⓢ150*100	166.0	114.5	340.5	202	132.5	±0.2	90	±0.2	5.6
Ⓢ200*150	216.5	166.0	443	239	197.5	±0.2	116	±0.2	7.0

- Unit: mm , Allowable error : KS M3410 application
- For sizes other than the above, please inquire in advance (made to order)



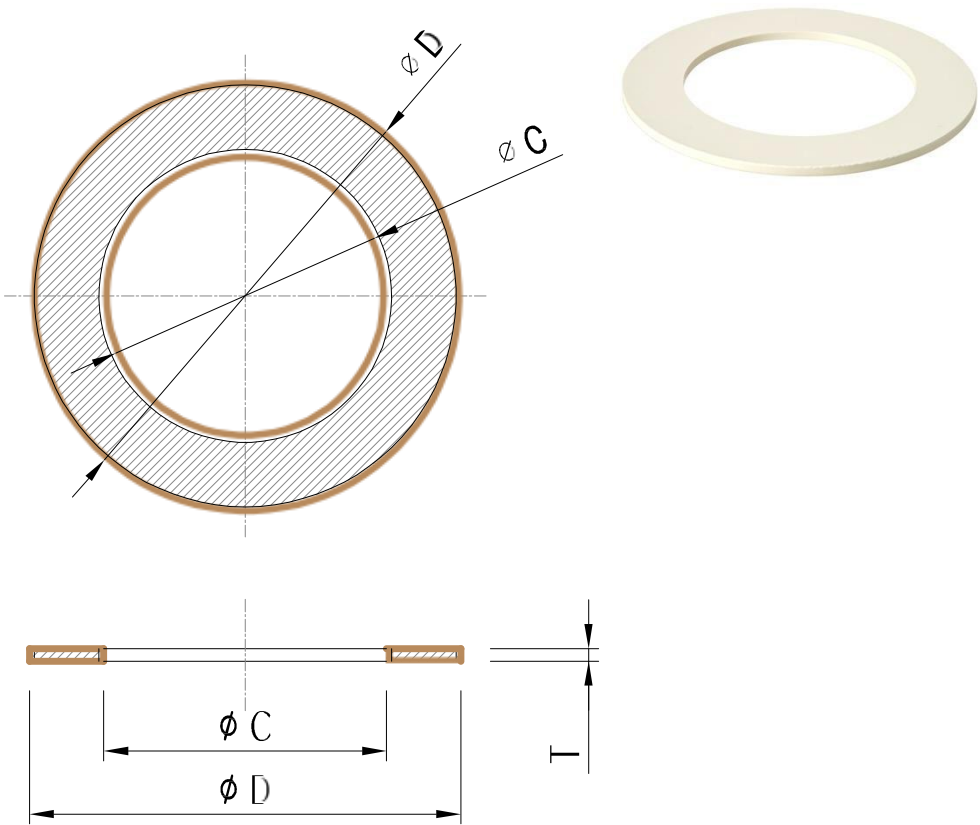
Nominal size	$\phi d1$ (I.D)		$\phi d2$	D	H		T1		$\phi \times EA$	T
	Standard	Allowable error	Standard	Length	Length	Allowable error	Thickness	Allowable error		
40A	48.3	± 0.3	95	141	60	± 5	20.0	± 1.5	19 X 4	5.5
50A	60.35	± 0.3	120	157	71	± 5	20.0	± 1.5	19 X 4	7.0
75A	89.45	± 0.3	150	185	79	± 5	20.0	± 1.5	19 X 8	7.5
100A	114.55	± 0.35	175	208	100	± 5	22.0	± 1.5	19 X 8	8.0
125A	140.70	± 0.4	210	247	110	± 5	24.0	± 1.5	23 X 8	8.5
150A	165.85	± 0.45	240	277	160	± 5	28.0	± 1.5	23 X 8	10.0
200A	217.3	± 0.70	290	328	147	± 5	28.0	± 1.5	23 X 12	12.0
250A	269.5	± 0.90	355	400	160	± 5	28.0	± 1.5	23 X 12	12.5
300A	319.5	± 1.0	399	444	160	± 5	30.0	± 1.5	23 X 12	14.0

- Unit: mm , Allowable error : KS M3410 application
- 10k standard Thickness (T) has no KS standard: produced according to the supplier (Hyojin)'s own standards.
- Thickness tolerance ± 0.5 (our production standard)



Nominal size	ϕD	ϕC	$\phi \times EA$	T	
	Standard	Standard		Thickness	Allowable error
50A	155	120	19 X 4	16	+1.9
100A	210	175	19 X 8	18	+1.9
125A	250	210	23 X 8	20	+1.9
150A	280	240	23 X 8	22	+1.9
200A	330	290	23 X 12	22	+1.9
250A	400	355	23 X 12	24	+1.9

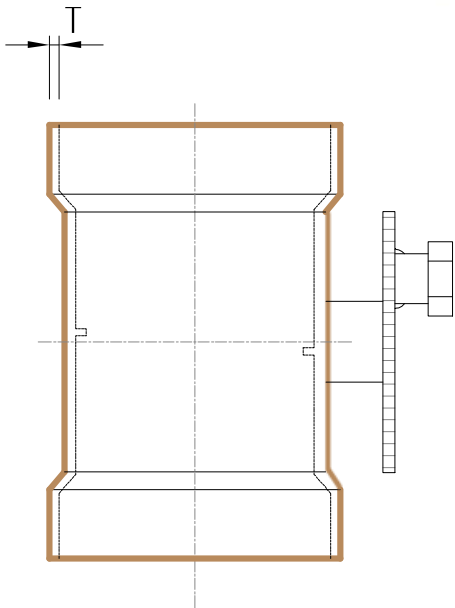
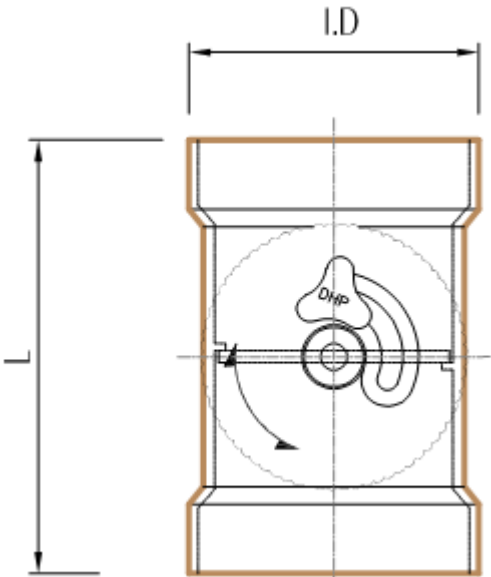
- Unit: mm
- Allowable error : KS M3410 application



Nominal size	Ø C		Ø D		T
	Standard	Allowable error	Length	Allowable error	Thickness
50A	60.5	±0.3	120.8	±0.20	5
65A	76.4	±0.3	137.0	±0.30	5
75A	89.45	±0.3	150.0	±0.30	5
100A	114.55	±0.35	175.0	±0.40	5
125A	140.70	±0.4	200.0	±0.50	5
150A	165.85	±0.45	226.0	±0.50	5
200A	216.5	±0.70	277.0	±0.70	5
250A	267.5	±0.90	328.0	±0.90	5
300A	319.15	±1.00	380.0	±1.00	5

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

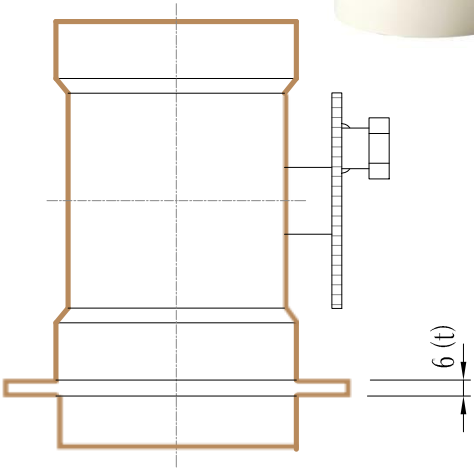
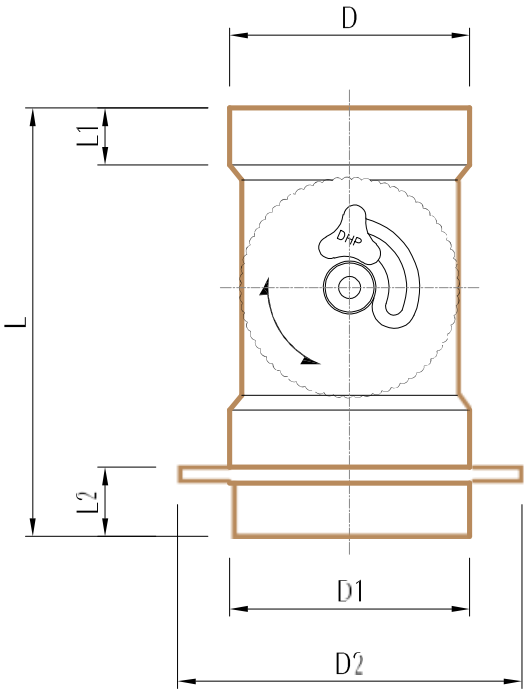
SOCKET TYPE



Nominal size	I.D (Ø)	L	T
	Standard	Length	Thickness
50A	60.35	160	4.0
75A	89.45	160	4.0
100A	114.55	230	6.0
125A	140.7	250	6.0
150A	165.85	270	6.0
200A	216.5	330	6.5
250A	267.5	315	6.0

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

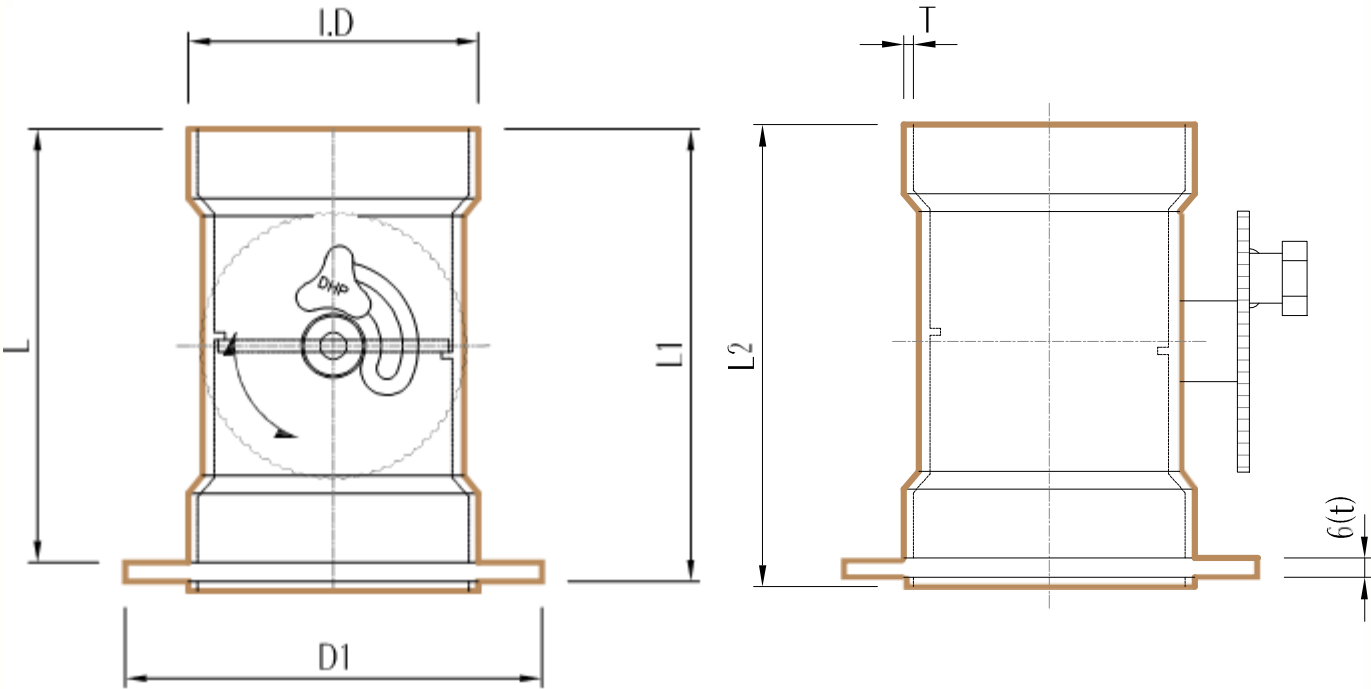
ROOF TYPE



Nominal size	Ø D(O.D)		D1	D2	L	L1	L2
	Standard	Allowable error	Standard	Standard	Length	Length	Length
100	114.55	±0.4	114	169	230	48	56
125	140.7	±0.5	140	202	250	55	62
150	165.85	±0.5	165	227	270	60	67
200	216.5	±0.7	216	278	330	68	806

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

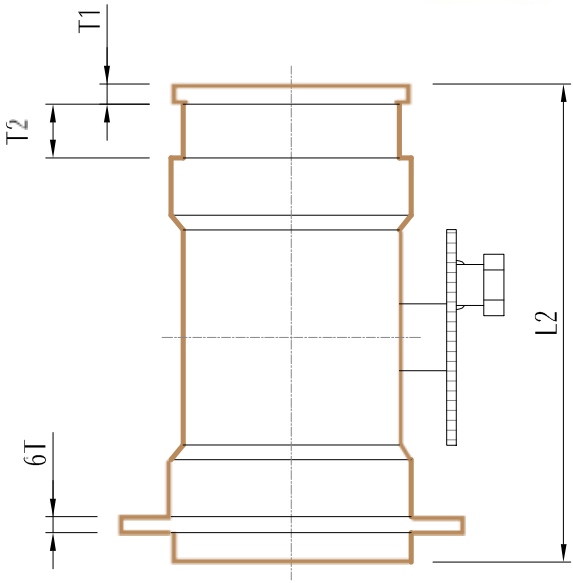
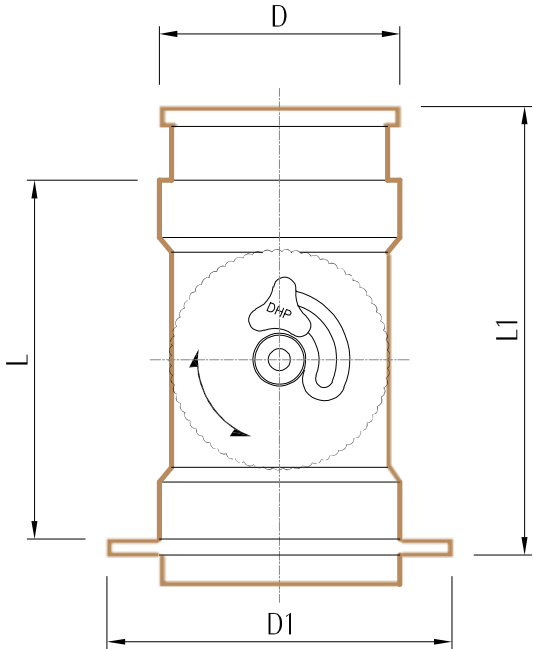
DUCT TYPE



Nominal size	I.D (Ø)		D1	L	L1	L2	T
	Standard	Allowable error	Standard	Length	Length	Length	Thickness
100A	114.55	±0.35	176	175	181	190	6.0
125A	140.7	±0.5	202	189	195	204	6.0
150A	165.85	±0.5	227.5	203	209	220	6.0
200A	216.5	±0.7	279	251	257	267	6.0
250A	267.5	±0.7	330	280	286	300	6.0

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

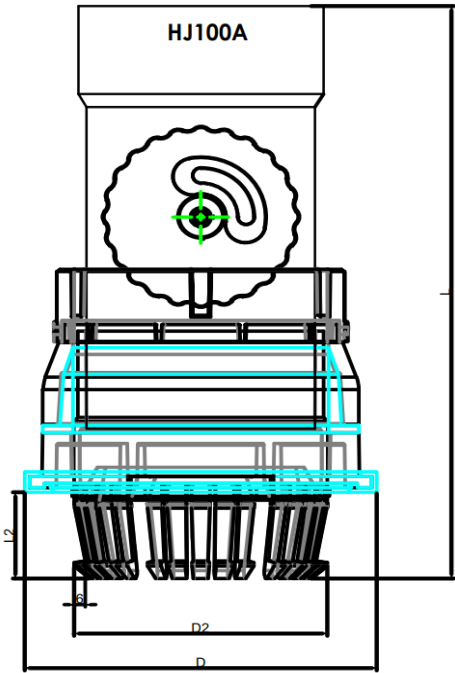
MF FLANGE TYPE



Nominal size	D	D1	L	L1	L2	T1	T2
	Standard	Standard	Length	Length	Length	Length	Length
100A	130	176	177.5	211.5	221.5	12	16.0
150A	180	228	207	241.0	251.0	12	16.0
200A	240	279	254	288.5	298.0	12	16.0

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

BUCKLE TYPE



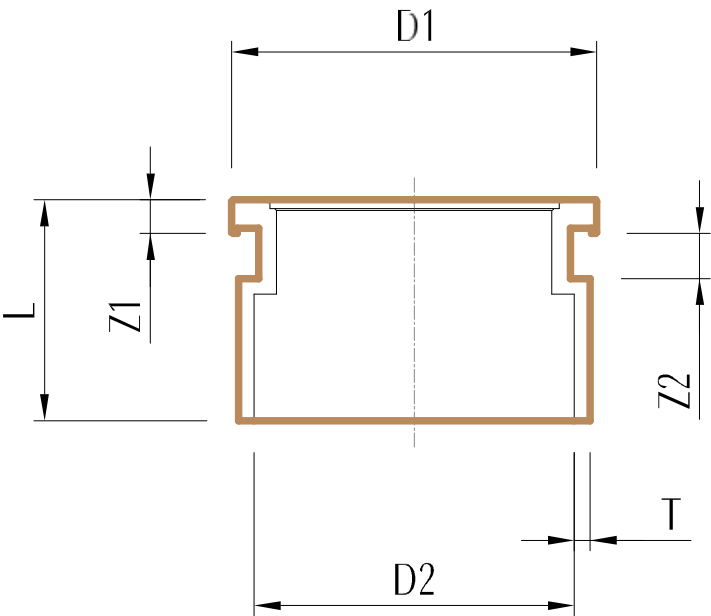
Nominal size	D	D2	L	L2	T
	Standard	Standard	Length	Length	Length
100A	176	127	315	45	6.0
150A	226	177	352	45	6.0

- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

FLANGE SOCKET

HOOK UP FITTINGS

FM PVC TYPE

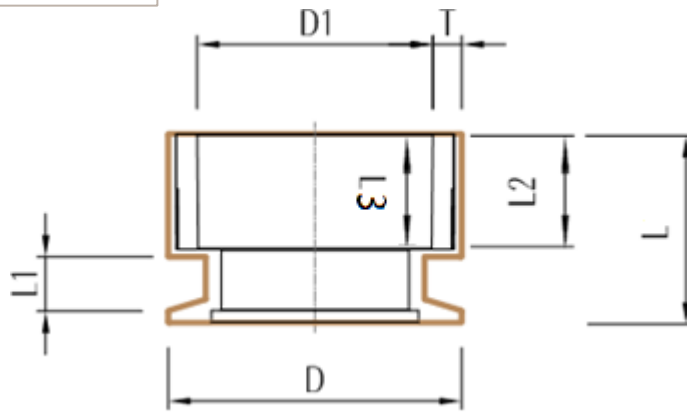


Nominal size	D1	D2		L	Z1	Z2	T
	Standard	Standard	Allowable error	Length	Length	Length	Thickness
50A	75	60.35	±0.3	54	6.0	11	8.0
100A	130	114.55	±0.35	78.5	12	16	5.5
150A	180	165.85	±0.45	88	12	16	5.5

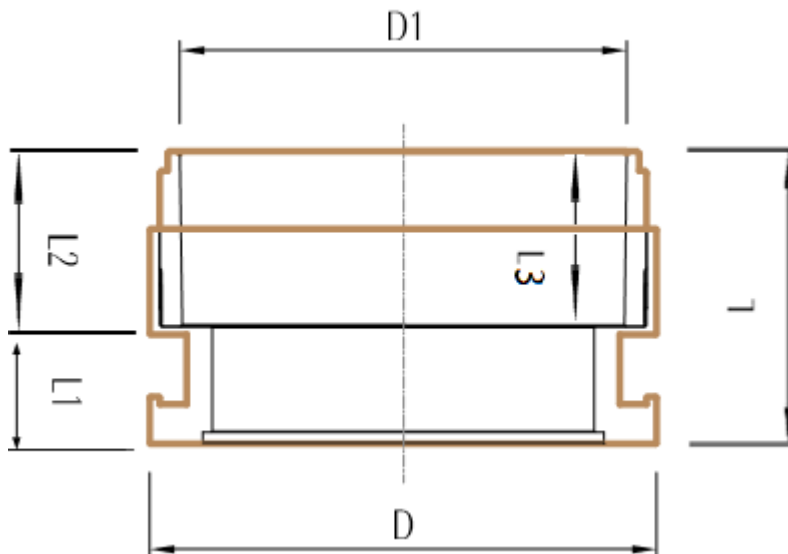
- Unit: mm
- Allowable error : KS M3410 application
- Thickness tolerance ± 0.5 (our production standard)

FLANGE SOCKET HOOK UP FITTINGS

SUS FLANGE TYPE (NEW)



40A ~ 50A SUS FLANGE TYP

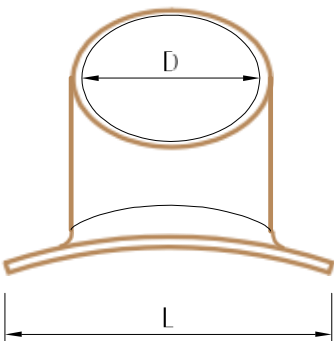
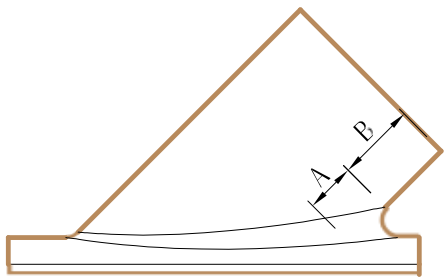
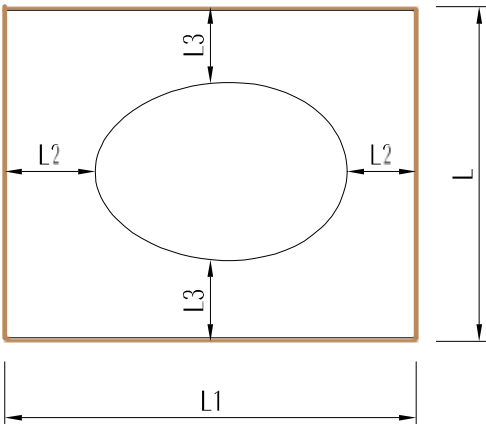
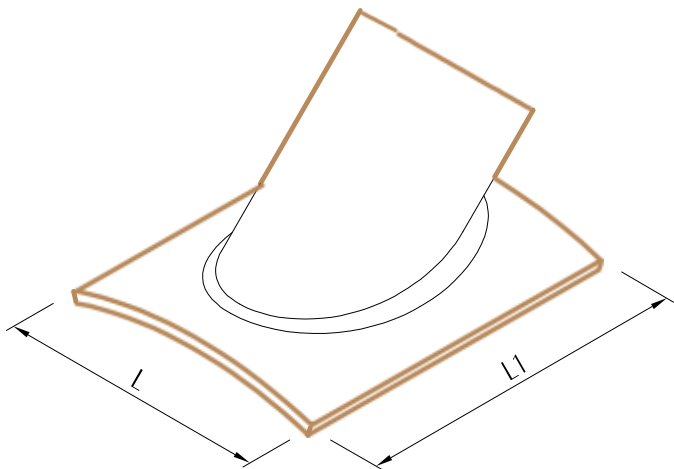


100A ~ 300A SUS FLANGE TYP

Nominal size	D	D1	L	L1	L2	L3	T
	Standard	Length	Length	Length	Length	Length	Thickness
40A*50A	55	60.30	55	29	25.05	30.5	9.5
50A	75	60.30	55	29	25.5	31	9.5
100A	130	114.50	78	42.8	35	45.3	5.5
125A	155	140.5	87.5	42.3	45.5	55	6.0
150A	180	165	87.5	42.3	45.5	55	6.0
200A	240	230	113	43	69	80	6.5
250A	360	268	170	44.5	125.5	135	9.0
300A	360	318	183.5	44	139.5	142	12.5

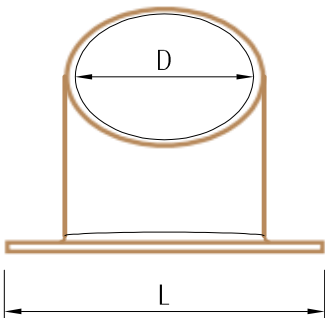
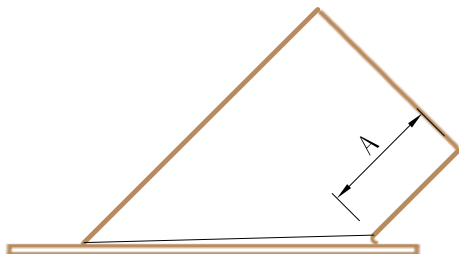
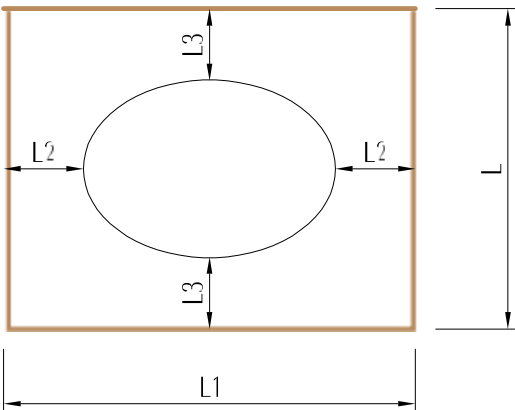
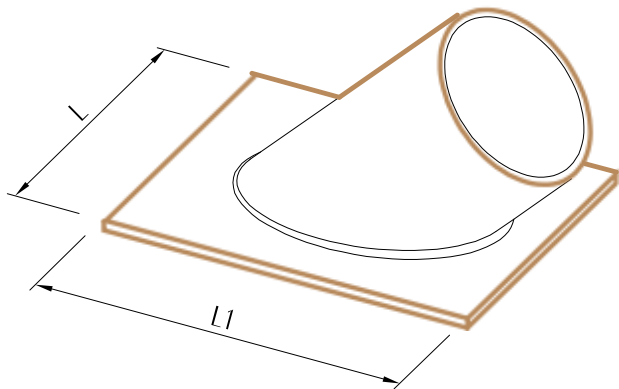
- Unit: mm
- Thickness tolerance ± 0.5 (our production standard)

ROUND_TYPE



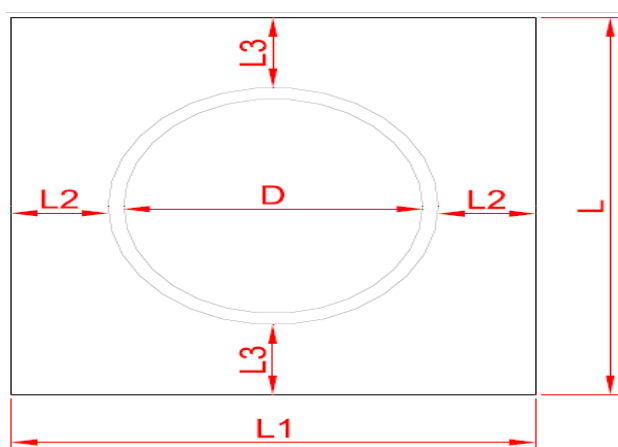
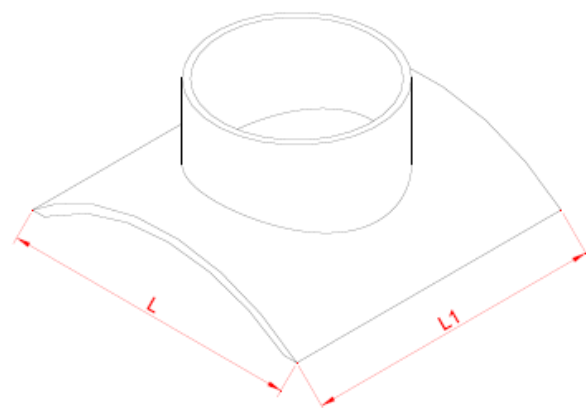
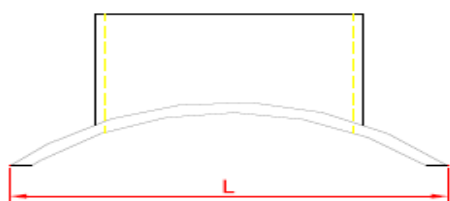
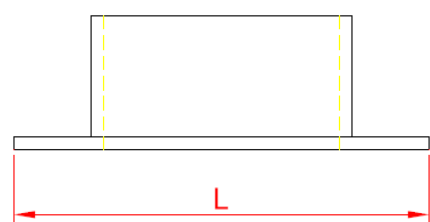
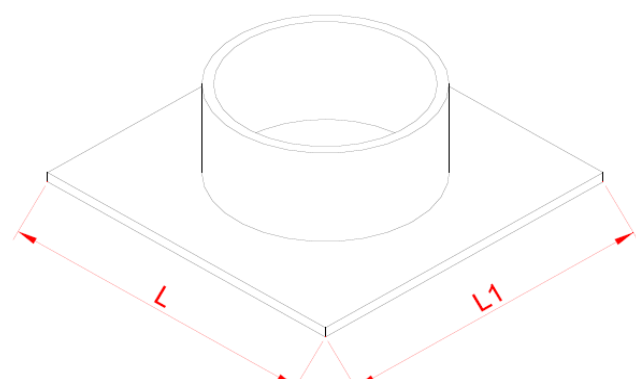
ROUND TYPE							
Nominal size	L	L1	L2	L3	A	B	Ø D(I.D)
	Standard	Standard	Standard	Length	Length	Length	Standard
100	184	231	37.5	41	37.5	80	114.5
150	235	323	49.0	41	41.0	110	166.0
200	303	425	52.5	51.5	65.0	135	216.5
250	324	498	56.0	43.5	86.0	165	267.5
- Unit: mm - Thickness tolerance ± 0.5 (our production standard)							

FLAT_TYPE



FLAT TYPE						
Nominal size	L	L1	L2	L3	A	Ø D(I.D)
	Standard	Standard	Standard	Length	Length	Standard
100	184	251	37.5	41	80	114.5
150	235	323	49.0	41	107	166.0
200	312	425	52.5	56	135	216.5
250	367	478	52.5	56	165	267.5
- Unit: mm - Thickness tolerance ± 0.5 (our production standard)						

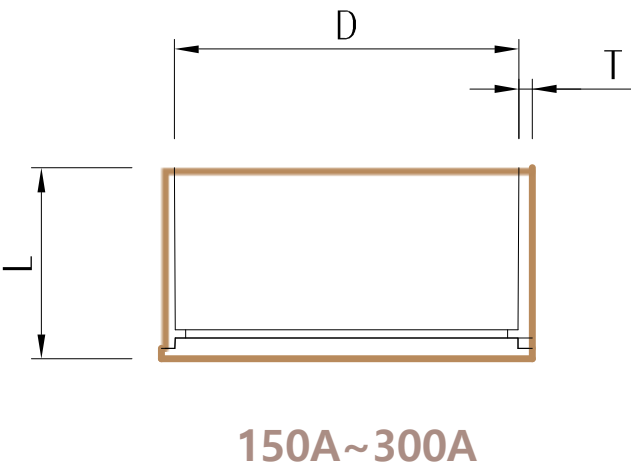
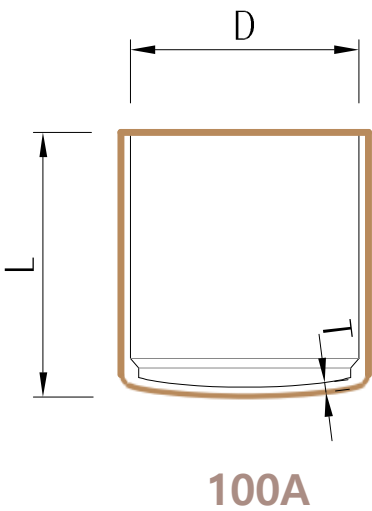
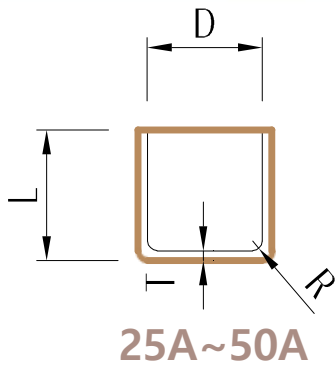
FLAT & ROUND TYPE



FLAT TYPE

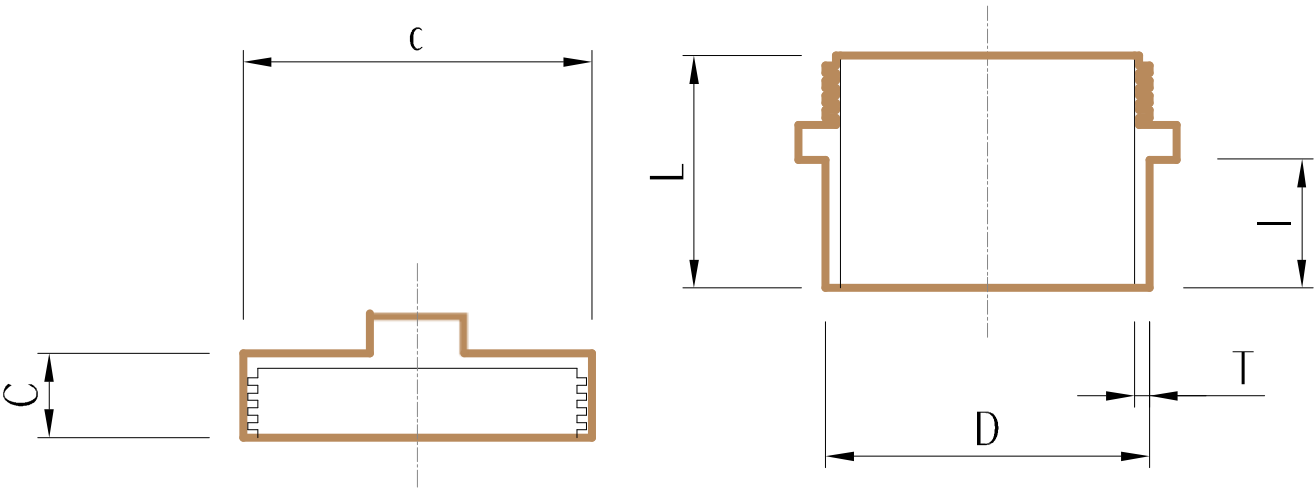
Nominal size	L	L1	L2	L3	I.D (Ø)		T
	Standard	Standard	Standard	Length	Length	Allowable error	Standard
50A	147	147	40	40	60.35	±0.3	4.0
75A	177	177	45.5	45.5	89.45	±0.3	4.0
100A	205	205	38.5	38.5	114.55	±0.35	6.0
125A	250	250	45	45	140.70	±0.4	5.5
150A	280	280	57.5	57.5	165.85	±0.45	6.0
200A	335	335	57	57	216.5	±0.7	7.0
250A	386	386	56.5	56.5	267.5	±0.9	9.0

- Unit: mm
- Base plate: 6T
- Thickness tolerance ± 0.5 (our production standard)



Nominal size	Ø D(ID)	L		T
	Standard	Length	Allowable error	Thickness
25A	32.5	44.5	+5.0	4.0
30A	38.25		+5.0	2.5
50A	60.35	69.0	+5.0	5.0
75A	89.45	82.0	+5.0	7.0
100A	114.55	101.0	+5.0	8.0
125A	140.70	70.0	+5.0	5.0
150A	165.85	86.0	+5.0	6.0
200A	216.5	112.0	+5.0	8.0
250A	267.5	149.0	+5.0	8.0
300A	*custom order			

- Unit: mm
- Allowable error : KS M3410 application R should be 1mm or more
- Thickness tolerance ± 0.5 (our production standard)

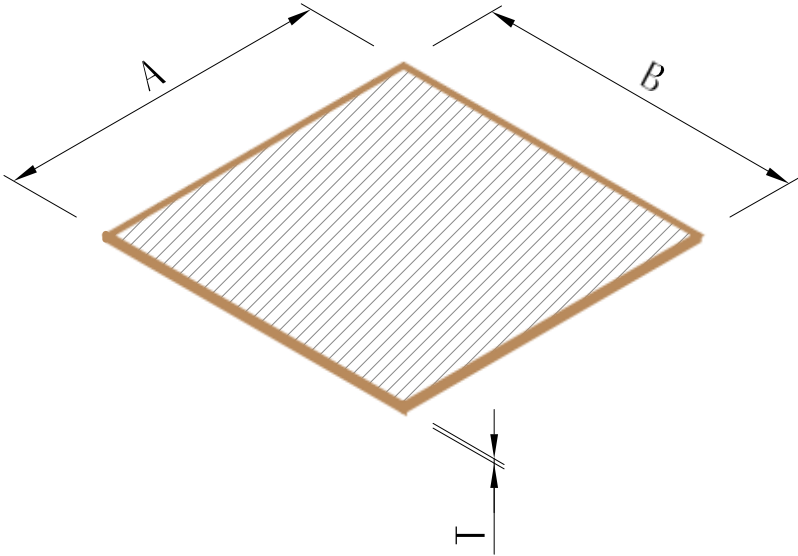


Nominal size	D		d		C	T	L		I
	Standard	Allowable error	Length	Allowable error	Length	Thickness	Length	Allowable error	Length
50	60	±0.4	69.5	±0.5	17.5	3.0	46	±2.0	25.0
100	114	±0.6	124.0	±0.7	26.0	4.0	87	±2.0	51.0

• Unit: mm

END. PLATE

HOOK UP FITTINGS



Nominal size	A	B	T
	Length	Length	Thickness
100X100	100	100	5.0
150X150	150	150	5.0
200X200	200	200	5.0
300X300	300	300	5.0

• Unit: mm

1. 강도/ 침지/ 비카트연화온도 TEST(Strength/Immersion/Vicat Softening Temperature Test)

BEYOND ASIAN HUB, TOWARD GLOBAL WORLD



TEST REPORT

우 13810 경기도 과천시 교육원로 98(중앙동)

TEL (031)8059-0171 FAX (031)8059-0172

성적서번호 : TAK-2019-076260

접 수 일 자 : 2019년 05월 10일

대 표 자 : 이일환

시험완료일자 : 2019년 05월 28일

업 체 명 : (주)효진엔지니어링

주 소 : 경기도 화성시 정남면 제기길 18

시 료 명 : FM PVC(6T)

시 험 결 과

시험항목	단위	시료구분	결과치	시험방법
인장강도	MPa	-	37.6	KS M ISO 527-2 : 2013(**)
비카트연화온도	℃	-	83	KS M ISO 306 : 2015(B50 법)
침지 시험(40 % 수산화나트륨 용액)	mg/cm ²	-	0.1	의뢰자제공시험방법(*)
침지 시험(35 % 염산 용액)	mg/cm ²	-	0.1	의뢰자제공시험방법(*)
침지 시험(10 % 염화나트륨 용액)	mg/cm ²	-	0.1	의뢰자제공시험방법(*)
침지 시험(40 % 질산 용액)	mg/cm ²	-	0.1	의뢰자제공시험방법(*)
침지 시험(30 % 황산 용액)	mg/cm ²	-	-0.1	의뢰자제공시험방법(*)

* KS M 3404 : 2016 준용, 침지((23 ± 2) ℃, 5 h)후 단위 면적당 질량 변화

** 시험편 : 1B형, 시험속도 : 10 mm/min

- 용 도 : 품질관리용

- 비 고 : 1. 이 성적서는 의뢰자가 제시한 시료 및 시료명으로 시험한 결과로서 전체 제품에 대한 품질을 보증하지 않으며, 성적서의 진위확인용 홈페이지(www.ktr.or.kr) 또는 QR code로 확인 가능합니다.
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3. 이 성적서는 원본(재발행 포함)만 유효하며, 사본 및 전자 인쇄본/파일본은 결과치 참고용입니다.

Jung Yu Seok

작성자 : 정유석

Tel : 02-2092-3704

You Seok

기술책임자 : 유석

Tel : 1577-0091(ARS ①-④)

2019년 05월 28일

KTR 한국화학융합시험연구원



위변조 확인용 QR code

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TEST REPORT

우 13810 경기도 과천시 교육원로 98 (중앙동)

TEL (02)2164-0011

FAX (02)2634-1008

성적서번호 : TAK-025651

접수 일자 : 2015년 12월 14일

대표자: 서익환

시험완료일자 : 2015년 12월 22일

업 체 명 : (주)효전엔지니어링

주 소: 경기도 화성시 정남면 제기길 18

시 료 영: EM PVC DUCT

시험결과

시험항목	단위	시료구분	결과치	시험방법
20 mm 수직연소시험 : V-0, V-1 or V-2	-	-	V-0	UL 94 : 1996(*)

* 전처리: $(23 \pm 2)^\circ\text{C} \times (50 \pm 5) \% \text{R.H.} \times 48 \text{ h}$, 두께: 6.6 mm

- 용도 : 품질관리용

- 비 고 : 1. 이 성적서는 의뢰자가 제시한 시료 및 시료명으로 시행한 결과로서 전체 제품에 대한 품질을 보증하지 않으며, 성적서의 진위확인인 홈페이지(www.kkr.or.kr) 또는 QR code로 확인 가능합니다.
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3. 이 성적서는 원본은 물론인 유효하며, 사본 및 전자 인쇄본/제1인본은 결과치 참고용입니다.

Гангусев

작성자 : 정유석
E-mail : ysl064@ktr.or.kr

You Soul

기술책임자 : 유석
Tel : 1577-0011 (ARS ①-④)

2015년 12월 22일

KTR

한국화학융합시험연구원장



위변조 확인용 QR code

Page : 1 of 1

전자문서본은 시험결과에 대한 참고용입니다.

전자문서본(Electronic Copy)

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KOREA TESTING & RESEARCH INSTITUTE

KTR-CP-T00-F01-021063

A4(210 X 297)

1. FM 인증서 (certificate) – 4910

Specification Tested

Certificate of Compliance

This certificate is issued for the following:

HYOJIN FMCP1017 (PVC, Ivory) for use in Cleanrooms

Prepared for:

Hyojin Engineering Co. Ltd.
359-1 Jegi-ri Jeongnam-myeon
Hwaseong-city, Gyeonggi-do
South Korea

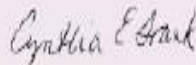
FM Approvals Class: 4910

Project Identification: 0003049615

Specification Test Listing Granted: 7/3/2013

To verify the availability of the Specification Tested product, please refer to www.approvalguide.com

Said Listing is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.



Cynthia E. Frank
Assistant Vice President, Group Manager
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062



Member of the FM Global Group

3. FM 인증서 - (Certificate) 4922
[300A]



Certificate of Compliance

This certificate is issued for the following:

HYOJIN PHM22-300/5 and PHL22-300/6 PVC Ducts for use in Cleanrooms

Prepared for:

Hyojin Engineering Co. Ltd.
359-1 Jegi-ri,
Jeongnam-myeon,
Hwaseong-city, Gyeonggi-do, South Korea

FM Approvals Class: 4922

Approval Identification: 3046098

Approval Granted: 4/26/2013

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

A handwritten signature in black ink that reads 'Cynthia E. Frank'.

Cynthia E. Frank
Group Manager, Assistant Vice President
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062



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3. FM 인증서- Certificate 4922 (300A)



Certificate of Compliance

This certificate is issued for the following:

HYOJIN PHM22-300/5 and PHL22-300/6 PVC Ducts for use in Cleanrooms

Prepared for:

Hyojin Engineering Co. Ltd.
359-1 Jegi-ri,
Jeongnam-myeon,
Hwaseong-city, Gyeonggi-do, South Korea

FM Approvals Class: 4922

Approval Identification: 3046098

Approval Granted: 4/26/2013

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

A handwritten signature in dark ink that reads 'Cynthia E. Frank'.

Cynthia E. Frank
Group Manager, Assistant Vice President
FM Approvals
1151 Boston-Providence Turnpike
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