



INDUSTRIAL POSITIVE PRESSURE PIPING SYSTEMS

BOILER EXHAUST

TECHNICAL DATA AND PARTS SELECTION

Model IPPL, IPPLA, IPPL1, IPPL2, IPPL1F, IPPL2F and IPPL4F
Stainless Steel Double Wall Construction

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LISTING AND APPLICATIONS

LISTINGS

Cheminee Lining venting systems models IPPL, IPPLA, IPPL1, IPPL1F, IPPL2, IPPL2F and IPPL4F are listed by Underwriters Laboratories, inc. (UL) under file MH16456 and tested in accordance with UL 103 Standard for Factory-Built Chimneys for Residential Type and Building Heating Appliances and the Canadian Standard for 540°C (1000°F) and 760°C (1400°F) industrial Chimneys CAN/ULC-C959. These models are also suitable for use in positive pressure applications up to 60" water column. Listings include the following chimney product categories and diameters.



UL 103

MODELS IPPL, IPPL2, IPPLA, IPPL1F, IPPL2F AND IPPL4F	TEMPERATURE	SIZE
Building Heating Appliance Type Chimney	1000°F continuous	6" to 48" I.D.
1400°F Chimney (IPPL, IPPLA, IPPL1F, IPPL2F and IPPL4F)	1400°F continuous	6" to 48" I.D.

CAN/ULC C-959

MODELS IPPL, IPPL2, IPPLA, IPPL1F, IPPL2F AND IPPL4F	TEMPERATURE	SIZE
Building Heating Appliance Type Chimney	1000°F continuous	6" to 48" I.D.
1400°F Chimney (IPPL, IPPLA, IPPL1F, IPPL2F and IPPL4F)	1400°F continuous	6" to 48" I.D.

APPLICATIONS

1. Building Heating Appliance Chimney Listing (1000°F Chimney Listing) – under this category, models IPPL, IPPLA, IPPL1, IPPL1F, IPPL2, IPPL2F and IPPL4F, have been determined suitable for venting flue gases at a temperature not exceeding 540°C (1000°F) under continuous operating conditions, from gas, liquid, oil or solid fuel fired appliances.
2. Building Heating Appliance Chimneys are suitable for use with Building Heating Appliances and Low Heat Appliances as described in the Chimney Selection Chart of National Fire Protection Association (NFPA) Standard No. 211.
3. 1400°F Chimney Listing – under this category, models IPPL, IPPLA, IPPL1F, IPPL2F and IPPL4F, have been determined suitable for venting flue gases at a temperature not exceeding 760°C (1400°F) under continuous operating conditions. As such, they are suitable for use with ovens and furnaces as described in the Chimney Selection Chart of NFPA No. 211, in addition to other applications.

Other products and applications

CRITERIA	GREASE DUCT	BHA CHIMNEY	1400°F CHIMNEY
Application	<ul style="list-style-type: none"> • Cooking appliances • Ventilation hoods • Restaurant grease ducts • Pizza oven exhausts 	<ul style="list-style-type: none"> • Low and high pressure steam boilers • Diesel and turbine exhausts • Building heating equipment 	<ul style="list-style-type: none"> • Industrial furnaces • Processing equipment • Kilns and ovens • Diesel and turbine exhausts
Continuous operating temperature	500°F	1000°F	1400°F
IPPL, IPPLA	Yes	Yes	Yes
IPPL2, IPPL1	Yes	Yes	N/A
IPPL2F, IPPL1F	N/A	Yes	Yes
IPPL4F	N/A	Yes	Yes

DESIGN AND SPECIFICATION

DESIGN

All our double wall chimney systems are part of a large family of IPP (Industrial Positive Pressure) products for industrial and commercial applications. The components of each model are made using the same continuous laser welding stainless steel inner wall. Since all components have the same small and large ends, the parts of all models fit into one another, thus eliminating the need for all kinds of adapters and providing an incomparable flexibility in selecting models of flues and chimneys.



IPPLA, IPPL:
Double wall with 1” (IPPLA) or 2” (IPPL) air space



IPPL1, IPPL2: Double wall with 1” (IPPL1) or 2” (IPPL2) mineral fiber insul.



IPPL1F, IPPL2F: Double wall with 1” (IPPL1F) or 2” (IPPL2F) ceramic fiber insul.



IPPL4F: Double wall with 4” ceramic fiber insul.

This unique method for joining components together is very efficient either in horizontal or in vertical installations. Our simple jointing concept along with the wide variety of components and accessories allows for a quick and simple installation, thus permitting you to save both time and money.

Cheminee Lining is proud of their industrial positive pressure piping systems. Recognized for being high quality products, they are also the easiest to install on the market!

These chimney systems are designed for exhaust of combustion gases, under positive, negative or neutral pressure, emanating from a variety of appliances including but not limited to:

- Diesel Engine and Gas Turbine Exhaust
- Restaurant Grease Duct
- Incinerator
- Coffee Roaster
- Air and Product Containment
- Industrial Oven Exhaust
- Boiler Negative and Positive Pressure
- Unit Heater
- Heat Recovery

Models IPPL/A, IPPL1/2, IPPL1/2F and IPPL4F provide a wide variety of components and accessories, suitable for all kinds of site conditions, thus allowing for quick and simple installation. Each component is packed and shipped complete, with (1) one assembly band and (1) one finishing band for those having large ends. Sufficient tubes of appropriate sealant are also included in the shipment for completing the assembly.

SAMPLE SPECIFICATION (Boiler Exhaust)

The chimney and flue must meet ULC (Underwriters Laboratories of Canada) and UL-103 (Underwriters Laboratories Inc.) section 22A for positive pressure exhaust system up to 60” water column and carry the appropriate approval labels. The chimney shall be listed by UL as a “B.H.A.” (Building heating appliance) chimney for continuous operation up to 1000°F (540°C) maximum. For applications above 1000°F (540°C), the chimney shall be listed by UL as a “1400°F chimney” for continuous operation up to 1400°F (760°C) maximum.

The chimney and flue components must be of double wall construction and properly designed for positive pressure exhaust. The inner wall must be of 20 gauge (18 gauge – 42” to 48” diameter) 304 stainless steel, with continuous laser welding. The outer wall must be of 24 gauge (20 gauge – 42” to 48” diameter) 304 stainless steel. A high temperature insulation must be installed between walls. The jointing must be made using an assembly band, a finishing band and an appropriate sealing material, as supplied by the manufacturer. Quality required : Model IPPL2.

All components must be installed according to the manufacturer recommendations and must meet the NFPA and local safety code requirements.

MATERIALS

MODEL IPPL, IPPLA

Inner wall:	316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm) diameter)
Outer wall:	316L, 304 2B stainless steel, or galvalume (24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42" (1067mm) to 48" (1219mm) diameter)
Insulation:	IPPLA : 1" (25mm) air space IPPL : 2" (51mm) air space

MODEL IPPL1, IPPL2

Inner wall:	316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm) diameter)
Outer wall:	316L, 304 2B stainless steel, or galvalume (24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42" (1067mm) to 48" (1219mm) diameter)
Insulation:	IPPL1 : 1" (25mm) high temperature mineral fiber IPPL2 : 2" (51mm) high temperature mineral fiber

MODEL IPPL1F, IPPL2F

Inner wall:	316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm) diameter)
Outer wall:	316L, 304 2B stainless steel, or galvalume (24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42" (1067mm) to 48" (1219mm) diameter)
Insulation:	IPPL1F : 1" (25mm) high temperature ceramic fiber IPPL2F : 2" (51mm) high temperature ceramic fiber

MODEL IPPL4F

Inner wall:	316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm) diameter)
Outer wall:	316L, 304 2B stainless steel, or galvalume (24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42" (1067mm) to 48" (1219mm) diameter)
Insulation:	4" (102mm) high temperature ceramic fiber

SUPPORTS & ACCESSORIES

Galvanized steel, hot-galvanized steel, 316 L or 304 2B stainless steel

COMPONENTS	Internal Walls		External Walls		Materials	
	STANDARD	AVAILABLE	STANDARD	AVAILABLE	STANDARD	AVAILABLE
ANCHOR PLATE	2	1	2	1	3	1, 2 and 4
ASSEMBLY BAND	2	1	---	---	--	---
COLLARS, FLASHING	---	---	---	---	--	1 and 2
DRAIN SECTION	2	1	2	1	--	---
ELBOWS	2	1	2	1	--	---
EXHAUST CONE, MITER SECTION	2	1	2	1	--	---
EXPANSION JOINT	2	1	2	1	--	---
FAN ADAPTER	2	1	2	1	---	---
FINISHING BAND	---	---	2	1	--	---
FIRESTOP, WALL FIRESTOP	---	---	---	---	3	1 and 2
HANGER BRACKET	---	---	---	---	3	1, 2 and 4
INCREASER / REDUCER	2	1	2	1	---	---
INSULATED SLEEVE, INSULATED WALL FIRESTOP	---	---	---	---	3	1 and 2
LENGTH, ADJUSTABLE LENGTH, VARIABLE LENGTH	2	1	2	1	---	---
RADIANT FIRESTOP	---	---	---	---	3	1 and 2
RAIN CAP, RAINSEILD, CLOSURE SECTION	2	1	2	1	---	---
ROOF BAND, GUY WIRE BAND	---	--	---	--	2	1, 3 and 4
ROOF SUPPORT, GUIDING SPACER	---	--	---	--	3	1, 2 and 4
STARTING ADAPTER, DRAIN ADAPTER	2	1	---	--	3	1, 2 and 4
STARTING SLEEVE	2	1	---	--	3	1, 2 and 4
TEES	2	1	2	1	--	---
TEE CAPS	2	1	2	1	--	---
WALLS BAND, SUSPENSION BAND	---	---	---	---	3	1, 2 and 4
WALL / FLOOR GUIDES	--	---	---	---	3	--
WALL / HORIZONTAL SUPPORTS	2	1	2	1	3	1, 2 and 4

1: 316 L stainless steel 2: 304 2B stainless steel 3: Galvanized steel 4: Hot-galvanized steel

WEIGHTS AND CLEARANCES

IPPL • IPPLA • IPPL1 • IPPL1F • IPPL2 • IPPL2F • IPPL4F				LINEAR WEIGHT									
I.D.		AREA		IPPL		IPPLA		IPPL1 • IPPL1F		IPPL2 • IPPL2F		IPPL4F	
in	mm	in ²	1000mm ²	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m
6	152	28	18.2	5.7	8.5	5.3	7.8	6.5	9.6	8.8	13.1	14.6	21.8
8	203	50	32.4	7.2	10.8	6.8	10.2	8.4	12.5	11.1	16.5	17.7	26.3
10	254	79	50.7	8.8	13.0	8.4	12.5	10.3	15.3	13.4	19.9	20.7	30.8
12	302	113	73.0	10.3	15.3	9.9	14.8	12.2	18.1	15.6	23.3	23.8	35.4
14	356	154	99.3	11.8	17.5	11.5	17.1	14.0	20.9	17.9	26.7	26.8	39.9
16	406	201	129.7	13.3	19.8	13.0	19.4	15.9	23.7	20.2	30.1	29.9	44.4
18	457	254	164.2	14.8	22.0	14.6	21.7	17.8	26.5	22.5	33.4	32.9	49.0
20	508	314	202.7	16.3	24.3	16.1	24.0	19.7	29.4	24.7	36.8	35.9	53.5
22	559	380	245.2	17.8	26.5	17.7	26.3	21.6	32.2	27.0	40.2	39.0	58.0
24	610	452	291.9	19.3	28.7	19.2	28.6	23.5	35.0	29.3	43.6	42.0	62.5
26	660	531	342.5	20.8	31.0	20.8	30.9	25.4	37.8	31.6	47.0	45.1	67.1
28	711	616	397.3	22.3	33.2	22.3	33.2	27.3	40.6	33.9	50.4	48.1	71.6
30	762	707	456.0	23.8	35.5	23.9	35.5	29.2	43.4	36.1	53.8	51.6	76.1
32	813	804	518.9	25.4	37.7	25.4	37.8	31.1	46.3	38.4	57.2	54.2	80.7
34	864	908	585.8	26.9	40.0	27.0	40.1	33.0	49.1	40.7	60.5	57.3	85.2
36	914	1018	656.7	28.4	42.2	28.5	42.4	34.9	51.9	43.0	64.9	60.3	89.7
38	965	1134	731.7	29.9	44.5	30.1	44.8	36.8	54.7	45.2	67.3	63.3	94.3
40	1016	1257	810.7	31.4	46.7	31.6	47.1	38.7	57.5	47.5	70.7	66.3	98.8
42	1067	1385	893.8	46.2	68.7	46.5	69.2	53.5	79.7	63.1	93.9	83.3	124.0
44	1118	1521	981.0	48.3	71.9	48.7	72.5	56.0	83.4	66.0	98.2	87.0	129.4
46	1067	1662	1072.2	50.4	75.0	50.9	75.7	58.5	87.1	68.9	102.5	90.6	134.9
48	1219	1810	1167.5	52.5	78.2	53.0	78.9	61.0	90.8	71.7	106.8	94.3	140.3

Minimum clearance air space to combustible construction									
Inside Diameter									
IPPLA		IPPL	Clearance	IPPL1	IPPL2	IPPL1F		IPPL2F & IPPL4F	Clearance
1000°F	1400°F	1000°F to 1400°F		1000°F	1000°F	1000°F	1400°F	1000°F to 1400°F	
6"	6"	6-12"	4"	6"	6-12"	6"	6"	6-12"	1"
8-10"	8-10"	14"	5"	8-10"	14"	8-10"	-	14"	1.5"
12-16"	-	16-18"	6"	-	16-18"	-	-	16-18"	2"
18-20"	-	20-24"	7"	12-16"	-	12-16"	-	-	2.5"
22-24"	-	26-28"	8"	18"	20-22"	18"	8-10"	20-22"	3"
26-30"	-	30-34"	9"	20-26"	24-26"	20-26"	-	24-26"	4"
32-34"	-	36-38"	10"	28-32"	28-32"	28-32"	-	28-32"	5"
36-40"	-	40-48"	11"	34-38"	34-36"	34-38"	-	34-36"	6"
42-46"	-	-	12"	40-44"	38-40"	40-44"	-	38-40"	7"
48"	-	-	13"	46-48"	42-48"	46-48"	-	42-48"	8"

Minimum opening when installing a chimney through a floor or wall made of combustible construction.

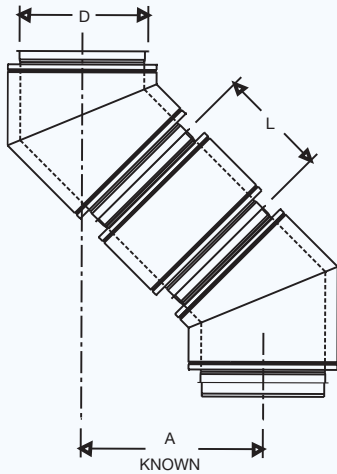
O.D. + 2 X (min. clearance air space) Ex. : IPPL2, B.H.A., I.D. = 8" ⇨ 12" + (2 X 1") = 14"

Minimum opening when installing a chimney through a floor or wall made of non combustible construction.

O.D. + 1" Ex. : IPPL2, B.H.A., O.D. = 12" ⇨ 12" + 1" = 13"

OFFSETS

OFFSET CALCULATIONS



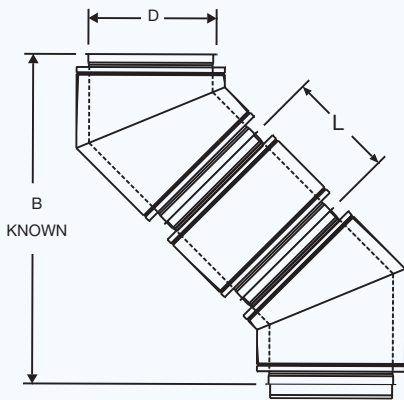
EFFECTIVE LENGTH CALCULATIONS

- OFFSET dimension is known
- Effective length is to be determined using equation 1, 2 or 3 depending on elbows used

1. $L(A) = 3.864(A) - 0.132D - 13''$	15° elbows
2. $L(A) = 2(A) - 0.268D - 13''$	30° elbows
3. $L(A) = 1.414(A) - 0.414D - 13''$	45° elbows

EXAMPLE: An 8" ID IPPL2 chimney with a known offset width of 44.75"(A) using 2-45° elbows.

3. $L(A) = 1.414(A) - 0.414D - 13''$
 $L(A) = 1.414(44.75'') - 0.414(8'') - 13''$
 $L(A) = 47''$ in effective length choose a 48" length (48L)



EFFECTIVE LENGTH CALCULATIONS

- HEIGHT dimension is known
- Effective length is to be determined using equation 4, 5 or 6 depending on elbows used

4. $L(B) = 1.035(B) - 0.268D - 26.459''$	15° elbows
5. $L(B) = 1.155(B) - 0.577D - 28.011''$	30° elbows
6. $L(B) = 1.414(B) - D - 31.385''$	45° elbows

EXAMPLE: A 10" ID chimney with a known offset height of 55"(B) using 2- 45° elbows

6. $L(B) = 1.414(B) - D - 31.385''$
 $L(B) = 1.414(55'') - 10'' - 31.385''$
 $L(B) = 36.385''$ in effective length choose a 24" length (24L) + adjustable length (AL)

Refer to the elbows specific table for minimum offsets and heights of two matched elbows. For special conditions, we can manufacture one piece offset.

LENGTHS

STRAIGHT LENGTHS • 48L • 36L • 24L • 12L

Available in 22 diameters from 6 to 48" (152 to 1219mm).
 Standard lengths: 48" (1219mm), 36" (914mm), 24" (610mm) and 12" (305mm).

Includes:

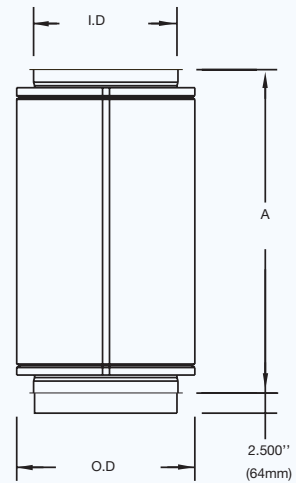
- 1 Assembly band (AB)
- 1 Finishing band (FB)

$K = 0.30 L/D$

Where L = Pipe length in feet
 D = Pipe diameter in inches



IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
I.D.		O.D.		I.D.		O.D.		I.D.		O.D.	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	10	254	6	152	14	356	6	152	8	203
7	178	11	279	7	178	15	381	7	178	9	229
8	203	12	305	8	203	16	406	8	203	10	254
9	229	13	330	9	229	17	432	9	229	11	279
10	254	14	356	10	254	18	457	10	254	12	305
12	305	16	406	12	305	20	508	12	305	14	356
14	356	18	457	14	356	22	559	14	356	16	406
16	406	20	508	16	406	24	610	16	406	18	457
18	457	22	559	18	457	26	660	18	457	20	508
20	508	24	610	20	508	28	711	20	508	22	559
22	559	26	660	22	559	30	762	22	559	24	610
24	610	28	711	24	610	32	813	24	610	26	660
26	660	30	762	26	660	34	864	26	660	28	711
28	711	32	813	28	711	36	914	28	711	30	762
30	762	34	864	30	762	38	965	30	762	32	813
32	813	36	914	32	813	40	1016	32	813	34	864
34	864	38	965	34	864	42	1067	34	864	36	914
36	914	40	1016	36	914	44	1118	36	914	38	965
38	965	42	1067	38	965	46	1168	38	965	40	1016
40	1016	44	1118	40	1016	48	1219	40	1016	42	1067
42	1067	46	1168	42	1067	50	1270	42	1067	44	1118
44	1118	48	1219	44	1118	52	1321	44	1118	46	1168
46	1168	50	1270	46	1168	54	1372	46	1168	48	1219
48	1219	52	1321	48	1219	56	1422	48	1219	50	1270



LENGTHS	EFFECTIVE LENGTHS 'A'	
	in	mm
12" (305 mm)	11.000	279
24" (610 mm)	23.000	584
36" (914 mm)	35.000	889
48" (1219 mm)	47.000	1194

LENGTHS

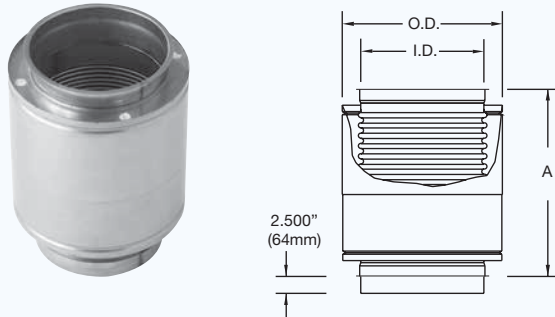
EXPANSION JOINT • EJ

Used to compensate for linear expansion between two fixed points on engine exhaust or other high pressure applications

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = Same as pipe length



I.D.		A	
in	mm	in	mm
6.000 to 16.000	152 to 406	19.000	483
18.000 to 26.000	457 to 660	25.000	635
28.000 to 36.000	711 to 914	26.000	660
38.000 to 48.000	965 to 1219	30.000	762

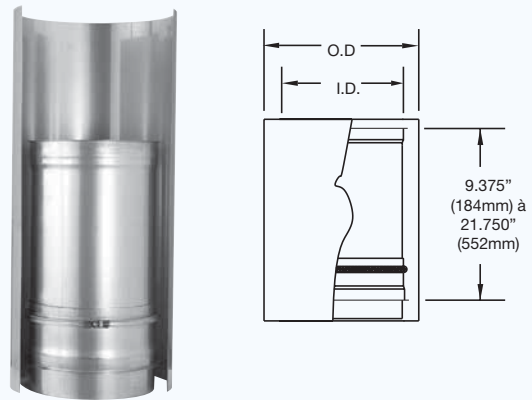
VARIABLE LENGTH • VL

Used to absorb linear expansion between two fixed points on low pressure applications.

Includes:

- 1 Assembly band (AB)
- 1 Outer wall 36" (914mm) long
- 1 Strip of insulation (not included on air-spaced systems)

K = Same as pipe length



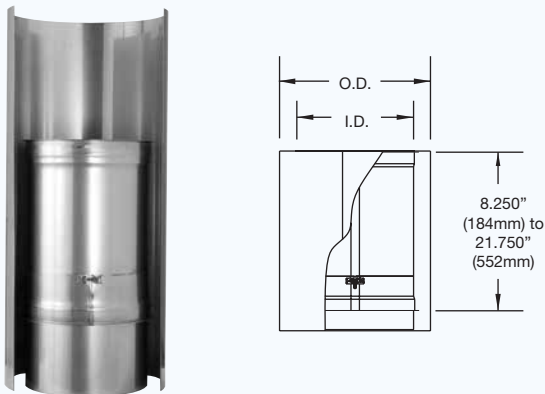
ADJUSTABLE LENGTH • AL

Used to complete on site installation precisely. It is not designed to compensate for linear expansion nor to support the vertical load of the chimney.

Includes:

- 1 Assembly band (AB)
- 1 Outer wall 36" (914mm) long
- 1 Strip of insulation (not included on air-spaced systems)

K = Same as pipe length



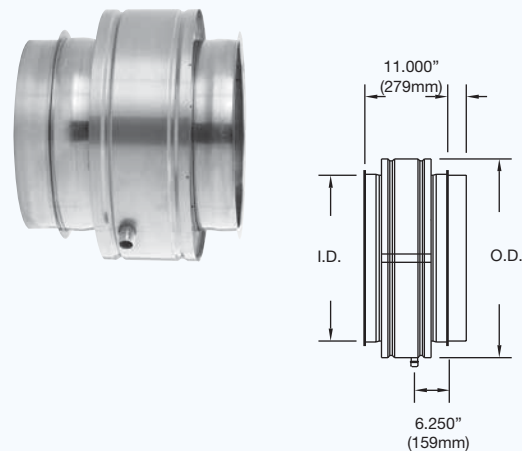
DRAIN SECTION • DS

Used to collect rainwater or condensation water from inside vertical or horizontal flue. To be connected to a drain of 3/4"ø (19mm) - NPT.

Includes:

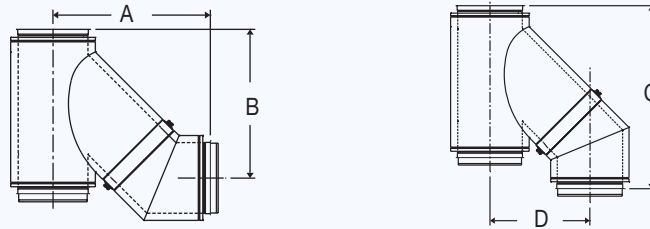
- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = Same as pipe length



TEES

45° TEE and 45° ELBOW ASSEMBLY



I.D.	IPPL, IPPL2, IPPL2F					IPPL4F					IPPLA, IPPL1, IPPL1F				
	O.D.	A	B	C	D	O.D.	A	B	C	D	O.D.	A	B	C	D
6	10	26.471	27.471	35.213	18.728	14	31.006	32.006	40.749	22.263	8	22.496	23.996	30.238	16.253
8	12	28.885	29.885	38.042	20.728	16	33.42	34.42	43.577	24.263	10	24.91	26.41	33.067	18.253
10	14	31.299	32.299	40.87	22.728	18	35.835	36.835	46.406	26.263	12	27.324	28.824	35.895	20.253
12	16	33.713	34.713	43.698	24.728	20	38.249	39.249	49.234	28.263	14	29.738	31.238	38.724	22.253
14	18	36.127	37.127	46.527	26.728	22	40.663	41.663	52.062	30.263	16	32.153	33.653	41.552	24.253
16	20	38.542	39.542	49.355	28.728	24	43.077	44.077	54.891	32.263	18	34.567	36.067	44.38	26.253
18	22	40.956	41.956	52.184	30.728	26	45.491	46.491	57.719	34.263	20	36.981	38.481	47.209	28.253
20	24	43.37	44.37	55.012	32.728	28	47.906	48.906	60.548	36.263	22	39.395	40.895	50.037	30.253
22	26	45.784	46.784	57.841	34.728	30	50.32	51.32	63.376	38.263	24	41.809	43.309	52.866	32.253
24	28	48.198	49.198	60.669	36.728	32	52.734	53.734	66.205	40.263	26	44.224	45.724	55.694	34.253
26	30	50.613	51.613	63.497	38.728	34	55.148	56.148	69.033	42.263	28	46.638	48.138	58.523	36.253
28	32	53.027	54.027	66.326	40.728	36	57.562	58.562	71.861	44.263	30	49.052	50.552	61.351	38.253
30	34	55.441	56.441	69.154	42.728	38	59.977	60.977	74.69	46.263	32	51.466	52.966	64.179	40.253
32	36	57.855	58.855	71.983	44.728	40	62.391	63.391	77.518	48.263	34	53.88	55.38	67.008	42.253
34	38	60.27	61.27	74.811	46.728	42	64.805	65.805	80.347	50.263	36	56.295	57.795	69.836	44.253
36	40	62.684	63.684	77.64	48.728	44	67.219	68.219	83.175	52.263	38	58.709	60.209	72.665	46.253
38	42	65.098	66.098	80.468	50.728	46	69.634	70.634	86.004	54.263	40	61.123	62.623	75.493	48.253
40	44	67.512	68.512	83.296	52.728	48	72.048	73.048	88.832	56.263	42	63.537	65.037	78.322	50.253
42	46	69.926	70.926	86.125	54.728	50	74.462	75.462	91.66	58.263	44	65.952	67.452	81.15	52.253
44	48	72.341	73.341	88.953	56.728	52	76.876	77.876	94.489	60.263	46	68.366	69.866	83.978	54.253
46	50	74.755	75.755	91.782	58.728	54	79.29	80.29	97.317	62.263	48	70.78	72.28	86.807	56.253
48	52	77.169	78.169	94.61	60.728	56	81.705	82.705	100.146	64.263	50	73.194	74.694	89.635	58.253

TEES

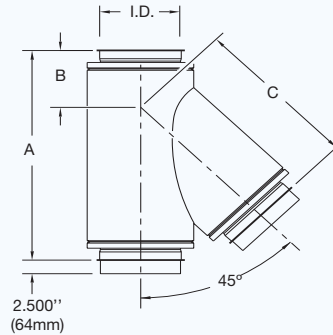
45° TEE • T45

For connection of vertical and horizontal lengths at a 45° angle. It provides low resistance to facilitate gas discharge. A tee cap (TC) or drain-tee cap (DC) may be used to block one of the cleaning or drainage openings.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.4



I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	27.485	698	8.743	222	19.243	489	32.485	825	9.743	247	22.743	578	24.485	622	7.743	197	16.743	425
8	203	30.314	770	9.157	233	21.657	550	35.314	897	10.157	258	25.157	639	27.314	694	8.157	207	19.157	487
10	254	33.142	842	9.571	243	24.071	611	38.142	969	10.571	269	27.571	700	30.142	766	8.571	218	21.571	548
12	305	35.971	914	9.985	254	26.485	673	40.971	1041	10.985	279	30.485	774	32.971	837	8.985	228	23.985	609
14	356	38.799	985	10.399	264	28.899	734	43.799	1112	11.399	290	32.899	836	35.799	909	9.399	239	26.399	671
16	406	41.627	1057	10.814	275	31.314	795	46.627	1184	11.814	300	35.314	897	38.627	981	9.814	249	28.814	732
18	457	44.456	1129	11.228	285	33.728	857	49.456	1256	12.228	311	37.728	958	41.456	1053	10.228	260	31.228	793
20	508	47.284	1201	11.642	296	36.142	918	52.284	1328	12.642	321	40.142	1020	44.284	1125	10.642	270	33.642	855
22	559	50.113	1273	12.056	306	38.556	979	55.113	1400	13.056	332	42.556	1081	47.113	1197	11.056	281	36.056	916
24	610	52.941	1345	12.471	317	40.971	1041	57.941	1472	13.471	342	44.971	1142	49.941	1269	11.471	291	38.471	977
26	660	55.77	1417	12.885	327	43.385	1102	60.77	1544	13.885	353	47.385	1204	52.77	1340	11.885	302	40.885	1038
28	711	58.598	1488	13.299	338	45.799	1163	63.598	1615	14.299	363	49.799	1265	55.598	1412	12.299	312	43.299	1100
30	762	61.426	1560	13.713	348	48.213	1225	66.426	1687	14.713	374	52.213	1326	58.426	1484	12.713	323	45.713	1161
32	813	64.255	1632	14.127	359	50.627	1286	69.255	1759	15.127	384	54.627	1388	61.255	1556	13.127	333	48.127	1222
34	864	67.083	1704	14.542	369	53.042	1347	72.083	1831	15.542	395	57.042	1449	64.083	1628	13.542	344	50.542	1284
36	914	69.912	1776	14.956	380	55.456	1409	74.912	1903	15.956	405	59.456	1510	66.912	1700	13.956	354	52.956	1345
38	965	72.74	1848	15.37	390	57.87	1470	77.74	1975	16.37	416	61.87	1571	69.74	1771	14.37	365	55.37	1406
40	1016	75.569	1919	15.784	401	60.284	1531	80.569	2046	16.784	426	64.284	1633	72.569	1843	14.784	376	57.784	1468
42	1067	78.397	1991	16.198	411	62.698	1593	83.397	2118	17.198	437	66.698	1694	75.397	1915	15.198	386	60.198	1529
44	1118	81.225	2063	16.613	422	65.113	1654	86.225	2190	17.613	447	69.113	1755	78.225	1987	15.613	397	62.613	1590
46	1168	84.054	2135	17.027	432	67.527	1715	89.054	2262	18.027	458	71.527	1817	81.054	2059	16.027	407	65.027	1652
48	1219	86.882	2207	17.441	443	69.941	1777	91.882	2334	18.441	468	73.941	1878	83.882	2131	16.441	418	67.441	1713

TEES

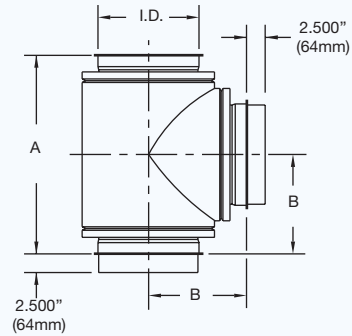
90° TEE • T90

For connection of vertical and horizontal lengths. May be used for the installation of a draft regulator at the point of connection between the flue and the appliance. A tee cap (TC) or drain-tee cap (DC) may be used to block one of the cleaning or drainage openings.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 1.25



I.D.	IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
	A		B		A		B		A		B	
	in	in	mm	mm	in	in	mm	mm	in	in	mm	mm
6	19.000	9.500	483	241	23.000	11.500	584	292	17.000	8.500	432	216
8	21.000	10.500	533	267	25.000	12.500	635	318	19.000	9.500	483	241
10	23.000	11.500	584	292	27.000	13.500	686	343	21.000	10.500	533	267
12	25.000	12.500	635	318	29.000	14.500	737	368	23.000	11.500	584	292
14	27.000	13.500	686	343	31.000	15.500	787	394	25.000	12.500	635	318
16	29.000	14.500	737	368	33.000	16.500	838	419	27.000	13.500	686	343
18	31.000	15.500	787	394	35.000	17.500	889	445	29.000	14.500	737	368
20	33.000	16.500	838	419	37.000	18.500	940	470	31.000	15.500	787	394
22	35.000	17.500	889	445	39.000	19.500	991	495	33.000	16.500	838	419
24	37.000	18.500	940	470	41.000	20.500	1041	521	35.000	17.500	889	445
26	39.000	19.500	991	495	43.000	21.500	1092	546	37.000	18.500	940	470
28	41.000	20.500	1041	521	45.000	22.500	1143	572	39.000	19.500	991	495
30	43.000	21.500	1092	546	47.000	23.500	1194	597	41.000	20.500	1041	521
32	45.000	22.500	1143	572	49.000	24.500	1245	622	43.000	21.500	1092	546
34	47.000	23.500	1194	597	51.000	25.500	1295	648	45.000	22.500	1143	572
36	49.000	24.500	1245	622	53.000	26.500	1346	673	47.000	23.500	1194	597
38	51.000	25.500	1295	648	55.000	27.500	1397	699	49.000	24.500	1245	622
40	53.000	26.500	1346	673	57.000	28.500	1448	724	51.000	25.500	1295	648
42	55.000	27.500	1397	699	59.000	29.500	1499	749	53.000	26.500	1346	673
44	57.000	28.500	1448	724	61.000	30.500	1549	775	55.000	27.500	1397	699
46	59.000	29.500	1499	749	63.000	31.500	1600	800	57.000	28.500	1448	724
48	61.000	30.500	1549	775	65.000	32.500	1651	826	59.000	29.500	1499	749

ELBOWS

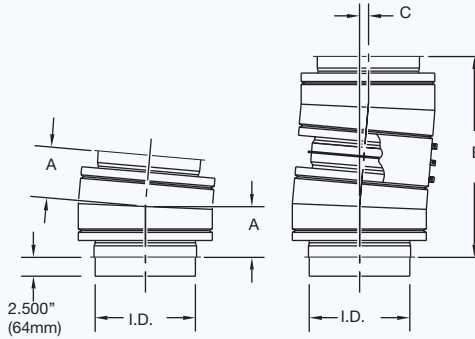
5° ELBOW • E5

Used to offset the flue or chimney by 5°. May be used to slope a flue to facilitate condensation water run-off.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.04



I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	6.631	168	26.473	672	1.156	29	7.631	194	30.466	774	1.33	34	5.131	130	20.485	520	0.894	23
8	203	6.675	170	26.648	677	1.163	30	7.675	195	30.64	778	1.338	34	5.175	131	20.659	525	0.902	23
10	254	6.718	171	26.822	681	1.171	30	7.718	196	30.814	783	1.345	34	5.218	133	20.834	529	0.91	23
12	305	6.762	172	26.996	686	1.179	30	7.762	197	30.989	787	1.353	34	5.262	134	21.008	534	0.917	23
14	356	6.806	173	27.171	690	1.186	30	7.806	198	31.163	792	1.361	35	5.306	135	21.182	538	0.925	23
16	406	6.849	174	27.345	695	1.194	30	7.849	199	31.337	796	1.368	35	5.349	136	21.356	542	0.932	24
18	457	6.893	175	27.519	699	1.202	31	7.893	200	31.512	800	1.376	35	5.393	137	21.531	547	0.94	24
20	508	6.937	176	27.694	703	1.209	31	7.937	202	31.686	805	1.383	35	5.437	138	21.705	551	0.948	24
22	559	6.98	177	27.868	708	1.217	31	7.98	203	31.86	809	1.391	35	5.48	139	21.879	556	0.955	24
24	610	7.024	178	28.042	712	1.224	31	8.024	204	32.035	814	1.399	36	5.524	140	22.054	560	0.963	24
26	660	7.068	180	28.217	717	1.232	31	8.068	205	32.209	818	1.406	36	5.568	141	22.228	565	0.97	25
28	711	7.111	181	28.391	721	1.24	31	8.111	206	32.383	823	1.414	36	5.611	143	22.402	569	0.978	25
30	762	7.155	182	28.565	726	1.247	32	8.155	207	32.558	827	1.421	36	5.655	144	22.577	573	0.986	25
32	813	7.199	183	28.74	730	1.255	32	8.199	208	32.732	831	1.429	36	5.699	145	22.751	578	0.993	25
34	864	7.242	184	28.914	734	1.262	32	8.242	209	32.906	836	1.437	36	5.742	146	22.925	582	1.001	25
36	914	7.286	185	29.088	739	1.27	32	8.286	210	33.081	840	1.444	37	5.786	147	23.1	587	1.009	26
38	965	7.33	186	29.262	743	1.278	32	8.33	212	33.255	845	1.452	37	5.83	148	23.274	591	1.016	26
40	1016	7.373	187	29.437	748	1.285	33	8.373	213	33.429	849	1.46	37	5.873	149	23.448	596	1.024	26
42	1067	7.417	188	29.611	752	1.293	33	8.417	214	33.603	854	1.467	37	5.917	150	23.622	600	1.031	26
44	1118	7.461	189	29.785	757	1.3	33	8.461	215	33.778	858	1.475	37	5.961	151	23.797	604	1.039	26
46	1168	7.504	191	29.96	761	1.308	33	8.504	216	33.952	862	1.482	38	6.004	153	23.971	609	1.047	27
48	1219	7.548	192	30.134	765	1.316	33	8.548	217	34.126	867	1.49	38	6.048	154	24.145	613	1.054	27

ELBOWS

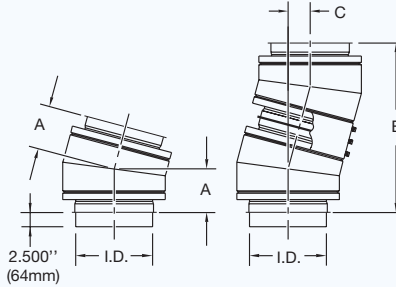
15° ELBOW • E15

Used to offset the flue or chimney by 15°.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.06



I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	6.895	175	27.11	689	3.569	91	7.895	201	31.042	788	4.087	104	5.395	137	21.212	539	2.793	71
8	203	7.027	178	27.628	702	3.637	92	8.027	204	31.559	802	4.155	106	5.527	140	21.73	552	2.861	73
10	254	7.158	182	28.145	715	3.705	94	8.158	207	32.077	815	4.223	107	5.658	144	22.247	565	2.929	74
12	305	7.29	185	28.663	728	3.774	96	8.29	211	32.595	828	4.291	109	5.79	147	22.765	578	2.997	76
14	356	7.422	189	29.181	741	3.842	98	8.422	214	33.112	841	4.359	111	5.922	150	23.283	591	3.065	78
16	406	7.553	192	29.698	754	3.91	99	8.553	217	33.63	854	4.427	112	6.053	154	23.8	605	3.133	80
18	457	7.685	195	30.216	767	3.978	101	8.685	221	34.148	867	4.496	114	6.185	157	24.318	618	3.202	81
20	508	7.817	199	30.733	781	4.046	103	8.817	224	34.665	880	4.564	116	6.317	160	24.836	631	3.27	83
22	559	7.948	202	31.251	794	4.114	105	8.948	227	35.183	894	4.632	118	6.448	164	25.353	644	3.338	85
24	610	8.08	205	31.769	807	4.182	106	9.08	231	35.701	907	4.7	119	6.58	167	25.871	657	3.406	87
26	660	8.211	209	32.286	820	4.251	108	9.211	234	36.218	920	4.768	121	6.711	170	26.389	670	3.474	88
28	711	8.343	212	32.804	833	4.319	110	9.343	237	36.736	933	4.836	123	6.843	174	26.906	683	3.542	90
30	762	8.475	215	33.322	846	4.387	111	9.475	241	37.253	946	4.905	125	6.975	177	27.424	697	3.61	92
32	813	8.606	219	33.839	860	4.455	113	9.606	244	37.771	959	4.973	126	7.106	181	27.941	710	3.679	93
34	864	8.738	222	34.357	873	4.523	115	9.738	247	38.289	973	5.041	128	7.238	184	28.459	723	3.747	95
36	914	8.87	225	34.875	886	4.591	117	9.87	251	38.806	986	5.109	130	7.37	187	28.977	736	3.815	97
38	965	9.001	229	35.392	899	4.659	118	10.001	254	39.324	999	5.177	131	7.501	191	29.494	749	3.883	99
40	1016	9.133	232	35.91	912	4.728	120	10.133	257	39.842	1012	5.245	133	7.633	194	30.012	762	3.951	100
42	1067	9.265	235	36.427	925	4.796	122	10.265	261	40.359	1025	5.313	135	7.765	197	30.53	775	4.019	102
44	1118	9.396	239	36.945	938	4.864	124	10.396	264	40.877	1038	5.382	137	7.896	201	31.047	789	4.087	104
46	1168	9.528	242	37.463	952	4.932	125	10.528	267	41.395	1051	5.45	138	8.028	204	31.565	802	4.156	106
48	1219	9.66	245	37.98	965	5	127	10.66	271	41.912	1065	5.518	140	8.16	207	32.083	815	4.224	107

ELBOWS

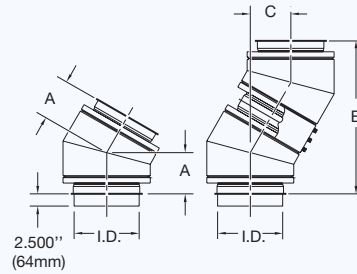
30° ELBOW • E30

Used to offset the flue or chimney by 30°.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.12



I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	7.304	186	27.258	692	7.304	186	8.304	211	30.99	787	8.304	211	5.804	147	21.66	550	5.804	147
8	203	7.572	192	28.258	718	7.572	192	8.572	218	31.99	813	8.572	218	6.072	154	22.66	576	6.072	154
10	254	7.84	199	29.258	743	7.84	199	8.84	225	32.99	838	8.84	225	6.34	161	23.66	601	6.34	161
12	305	8.108	206	30.258	769	8.108	206	9.108	231	33.99	863	9.108	231	6.608	168	24.66	626	6.608	168
14	356	8.376	213	31.258	794	8.376	213	9.376	238	34.99	889	9.376	238	6.876	175	25.66	652	6.876	175
16	406	8.644	220	32.258	819	8.644	220	9.644	245	35.99	914	9.644	245	7.144	181	26.66	677	7.144	181
18	457	8.912	226	33.258	845	8.912	226	9.912	252	36.99	940	9.912	252	7.412	188	27.66	703	7.412	188
20	508	9.179	233	34.258	870	9.179	233	10.179	259	37.99	965	10.179	259	7.679	195	28.66	728	7.679	195
22	559	9.447	240	35.258	896	9.447	240	10.447	265	38.99	990	10.447	265	7.947	202	29.66	753	7.947	202
24	610	9.715	247	36.258	921	9.715	247	10.715	272	39.99	1016	10.715	272	8.215	209	30.66	779	8.215	209
26	660	9.983	254	37.258	946	9.983	254	10.983	279	40.99	1041	10.983	279	8.483	215	31.66	804	8.483	215
28	711	10.251	260	38.258	972	10.251	260	11.251	286	41.99	1067	11.251	286	8.751	222	32.66	830	8.751	222
30	762	10.519	267	39.258	997	10.519	267	11.519	293	42.99	1092	11.519	293	9.019	229	33.66	855	9.019	229
32	813	10.787	274	40.258	1023	10.787	274	11.787	299	43.99	1117	11.787	299	9.287	236	34.66	880	9.287	236
34	864	11.055	281	41.258	1048	11.055	281	12.055	306	44.99	1143	12.055	306	9.555	243	35.66	906	9.555	243
36	914	11.323	288	42.258	1073	11.323	288	12.323	313	45.99	1168	12.323	313	9.823	250	36.66	931	9.823	250
38	965	11.591	294	43.258	1099	11.591	294	12.591	320	46.99	1194	12.591	320	10.091	256	37.66	957	10.091	256
40	1016	11.859	301	44.258	1124	11.859	301	12.859	327	47.99	1219	12.859	327	10.359	263	38.66	982	10.359	263
42	1067	12.127	308	45.258	1150	12.127	308	13.127	333	48.99	1244	13.127	333	10.627	270	39.66	1007	10.627	270
44	1118	12.395	315	46.258	1175	12.395	315	13.395	340	49.99	1270	13.395	340	10.895	277	40.66	1033	10.895	277
46	1168	12.663	322	47.258	1200	12.663	322	13.663	347	50.99	1295	13.663	347	11.163	284	41.66	1058	11.163	284
48	1219	12.931	328	48.258	1226	12.931	328	13.931	354	51.99	1321	13.931	354	11.431	290	42.66	1084	11.431	290

ELBOWS

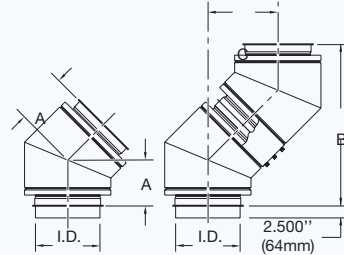
45° ELBOW • E45

Used to offset the flue or chimney by 45°.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.15



I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	7.743	197	26.435	671	10.95	278	8.743	222	29.849	758	12.364	314	6.243	159	21.314	541	8.828	224
8	203	8.157	207	27.849	707	11.536	293	9.157	233	31.263	794	12.95	329	6.657	169	22.728	577	9.414	239
10	254	8.571	218	29.263	743	12.121	308	9.571	243	32.678	830	13.536	344	7.071	180	24.142	613	10	254
12	305	8.985	228	30.678	779	12.707	323	9.985	254	34.092	866	14.121	359	7.485	190	25.556	649	10.586	269
14	356	9.399	239	32.092	815	13.293	338	10.399	264	35.506	902	14.707	374	7.899	201	26.971	685	11.172	284
16	406	9.814	249	33.506	851	13.879	353	10.814	275	36.92	938	15.293	388	8.314	211	28.385	721	11.757	299
18	457	10.228	260	34.92	887	14.464	367	11.228	285	38.335	974	15.879	403	8.728	222	29.799	757	12.343	314
20	508	10.642	270	36.335	923	15.05	382	11.642	296	39.749	1010	16.464	418	9.142	232	31.213	793	12.929	328
22	559	11.056	281	37.749	959	15.636	397	12.056	306	41.163	1046	17.05	433	9.556	243	32.627	829	13.515	343
24	610	11.471	291	39.163	995	16.222	412	12.471	317	42.577	1081	17.636	448	9.971	253	34.042	865	14.101	358
26	660	11.885	302	40.577	1031	16.808	427	12.885	327	43.991	1117	18.222	463	10.385	264	35.456	901	14.686	373
28	711	12.299	312	41.991	1067	17.393	442	13.299	338	45.406	1153	18.808	478	10.799	274	36.87	936	15.272	388
30	762	12.713	323	43.406	1103	17.979	457	13.713	348	46.82	1189	19.393	493	11.213	285	38.284	972	15.858	403
32	813	13.127	333	44.82	1138	18.565	472	14.127	359	48.234	1225	19.979	507	11.627	295	39.698	1008	16.444	418
34	864	13.542	344	46.234	1174	19.151	486	14.542	369	49.648	1261	20.565	522	12.042	306	41.113	1044	17.029	433
36	914	13.956	354	47.648	1210	19.737	501	14.956	380	51.062	1297	21.151	537	12.456	316	42.527	1080	17.615	447
38	965	14.37	365	49.062	1246	20.322	516	15.37	390	52.477	1333	21.737	552	12.87	327	43.941	1116	18.201	462
40	1016	14.784	376	50.477	1282	20.908	531	15.784	401	53.891	1369	22.322	567	13.284	337	45.355	1152	18.787	477
42	1067	15.198	386	51.891	1318	21.494	546	16.198	411	55.305	1405	22.908	582	13.698	348	46.77	1188	19.373	492
44	1118	15.613	397	53.305	1354	22.08	561	16.613	422	56.719	1441	23.494	597	14.113	358	48.184	1224	19.958	507
46	1168	16.027	407	54.719	1390	22.665	576	17.027	432	58.134	1477	24.08	612	14.527	369	49.598	1260	20.544	522
48	1219	16.441	418	56.134	1426	23.251	591	17.441	443	59.548	1513	24.665	627	14.941	380	51.012	1296	21.13	537

ELBOWS

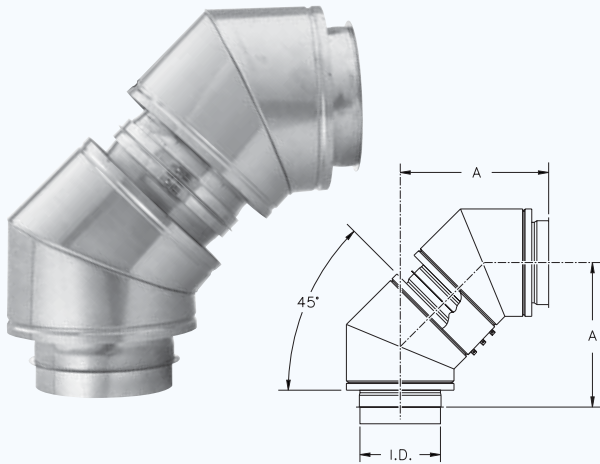
90° ELBOW • 2 x E45

Used to change orientation of flue or chimney by 90°.

Includes:

- 2 45° Elbows (E45)
- 2 Assembly bands (AB)
- 2 Finishing bands (FB)

K = 0.3



I.D.		IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, IPPL1, IPPL1F	
		A		A		A	
in	mm	in	mm	in	mm	in	mm
6	152	18.692	475	21.107	536	15.071	383
8	203	19.692	500	22.107	562	16.071	408
10	254	20.692	526	23.107	587	17.071	434
12	305	21.692	551	24.107	612	18.071	459
14	356	22.692	576	25.107	638	19.071	484
16	406	23.692	602	26.107	663	20.071	510
18	457	24.692	627	27.107	689	21.071	535
20	508	25.692	653	28.107	714	22.071	561
22	559	26.692	678	29.107	739	23.071	586
24	610	27.692	703	30.107	765	24.071	611
26	660	28.692	729	31.107	790	25.071	637
28	711	29.692	754	32.107	816	26.071	662
30	762	30.692	780	33.107	841	27.071	688
32	813	31.692	805	34.107	866	28.071	713
34	864	32.692	830	35.107	892	29.071	738
36	914	33.692	856	36.107	917	30.071	764
38	965	34.692	881	37.107	943	31.071	789
40	1016	35.692	907	38.107	968	32.071	815
42	1067	36.692	932	39.107	993	33.071	840
44	1118	37.692	957	40.107	1019	34.071	865
46	1168	38.692	983	41.107	1044	35.071	891
48	1219	39.692	1008	42.107	1070	36.071	916

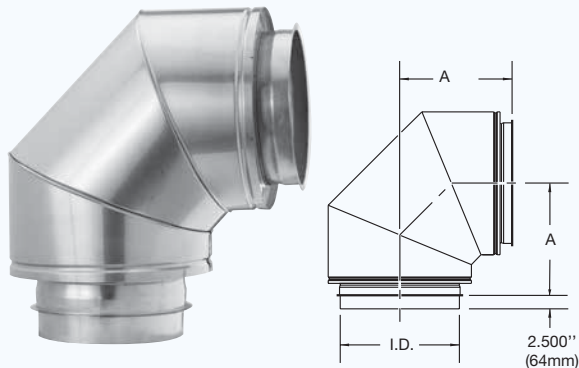
90° SHORT RADIUS ELBOW • E90

Used to change orientation of flue or chimney by 90°.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

K = 0.3



I.D.		IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, IPPL1, IPPL1F	
		A		A		A	
in	mm	in	mm	in	mm	in	mm
6	152	12.328	313	14.743	374	10.121	257
8	203	13.328	339	15.743	400	11.121	282
10	254	14.328	364	16.743	425	12.121	308
12	305	15.328	389	17.743	451	13.121	333
14	356	16.328	415	18.743	476	14.121	359
16	406	17.328	440	19.743	501	15.121	384
18	457	18.328	466	20.743	527	16.121	409
20	508	19.328	491	21.743	552	17.121	435
22	559	20.328	516	22.743	578	18.121	460
24	610	21.328	542	23.743	603	19.121	486
26	660	22.328	567	24.743	628	20.121	511
28	711	23.328	593	25.743	654	21.121	536
30	762	24.328	618	26.743	679	22.121	562
32	813	25.328	643	27.743	705	23.121	587
34	864	26.328	669	28.743	730	24.121	613
36	914	27.328	694	29.743	755	25.121	638
38	965	28.328	720	30.743	781	26.121	663
40	1016	29.328	745	31.743	806	27.121	689
42	1067	30.328	770	32.743	832	28.121	714
44	1118	31.328	796	33.743	857	29.121	740
46	1168	32.328	821	34.743	882	30.121	765
48	1219	33.328	847	35.743	908	31.121	790

FITTINGS

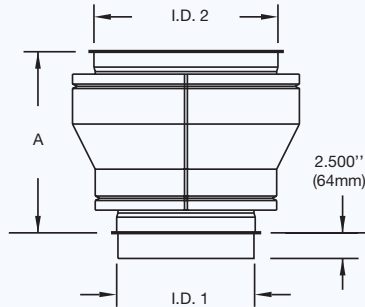
INCREASER • I

Used to increase the diameter of the flue or chimney. Specify the diameter of the inlet and outlet of the fitting.

Includes:

- 1 Assembly band (I.D. 2) (AB)
- 1 Finishing band (O.D. 2) (FB)

$$K = 0.5 \left(1 - \left(\frac{I.D.1}{I.D.2} \right)^2 \right)^2$$



Difference between I.D. 2 - I.D. 1	All Products	
	Dim. A	
	in	mm
2	14.5	368
4	18.5	470
6	22.5	572
8	26.5	673
10	30.5	775

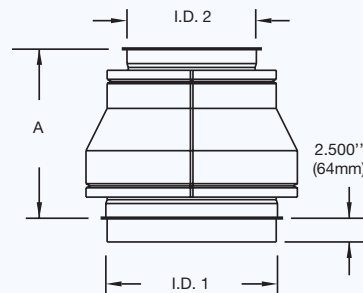
REDUCER • R

Used to reduce the diameter of the flue. Specify the diameter of the inlet and outlet of the fitting.

Includes:

- 1 Assembly band (I.D. 2) (AB)
- 1 Finishing band (O.D. 2) (FB)

$$K = 0.5 \left(1 - \left(\frac{I.D.1}{I.D.2} \right)^2 \right)^2$$



Difference between I.D. 2 - I.D. 1	All Products	
	Dim. A	
	in	mm
2	14.5	368
4	18.5	470
6	22.5	572
8	26.5	673
10	30.5	775

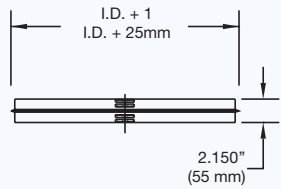
FITTINGS

ASSEMBLY BAND • AB

Used to assemble the inner walls of two components. Ensures sealing and rigidity of the system. To be used with a Low (LTS) or a High Temperature Sealant (HTS) (see assembly details).

Includes:

- 2 Hexagonal screws
- 2 Square nuts

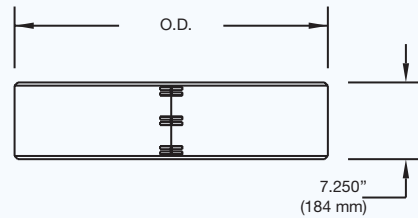


FINISHING BAND • FB

Used to assemble the outer walls of two components. Ensures sealing and rigidity of double wall systems. To be used with an Exterior Sealant (ES) on outside exposed parts.

Includes:

- 3 Hexagonal screws
- 3 Square nuts
- 1 Insulation strip (not included on air-spaced systems)

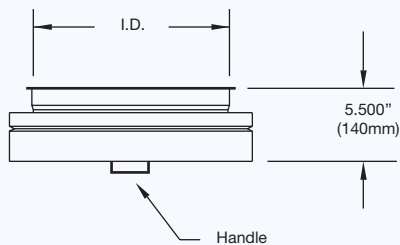


TEE CAP • TC

Used to block one of the openings of horizontal or vertical tee. Removable, it facilitates access for inspection and maintenance of the chimney.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (AB)

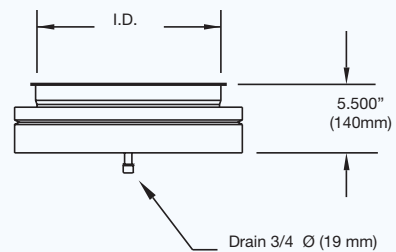


DRAIN-TEE CAP • DC

Used to cover one of the vertical openings of tee. For collection of rainwater or condensation water. Removable, it facilitates access for inspection and maintenance of the chimney. To be connected to a drain of 3/4ø (19mm) - NPT.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)



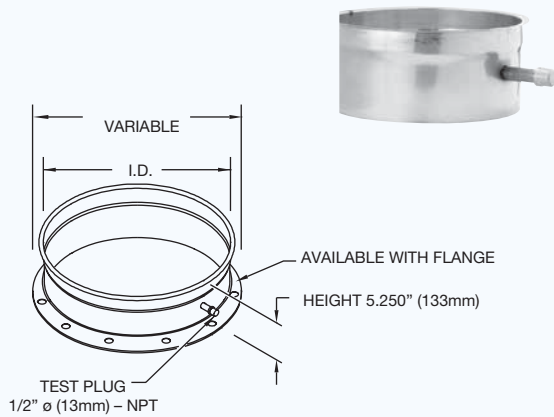
SUPPORTS AND ADAPTERS

STARTING ADAPTER • SA

Used to connect the flue to the appliance. It allows for sampling of the gases by means of a test plug.
Available with ANSI 150 lb flange.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band 8" (203mm) (FB)
- 1 2" wide flange
- 1 Insulation strip (not included on air-spaced systems)

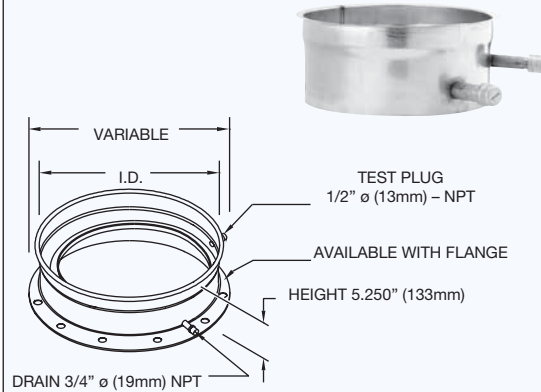


STARTING ADAPTER-DRAIN • SAD

Used to connect the flue to the appliance. It allows for sampling of the gases by means of a test plug, and collection of condensation water by means of a drain and an elliptical collar.
To be connected to a 1/2"ø (13mm) - 3/4"ø (19mm) - NPT drain.
Available with ANSI 150 lb flange.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band 8" (203mm) (FB)
- 1 2" wide flange
- 1 Insulation strip (not included on air-spaced systems)

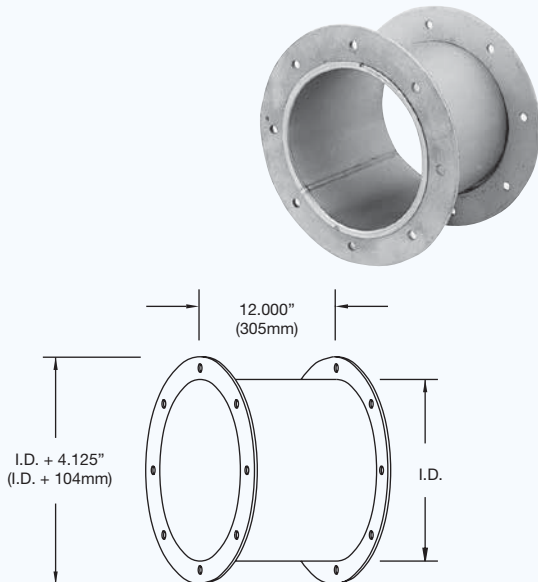


STARTING SLEEVE • SS

Used to connect the flue to the appliance. Removable, it facilitates access to the appliance for inspection and cleaning. To be used with 3/8"ø (19mm) nuts and bolts (not included).
Available with ANSI 150 lb flanges.

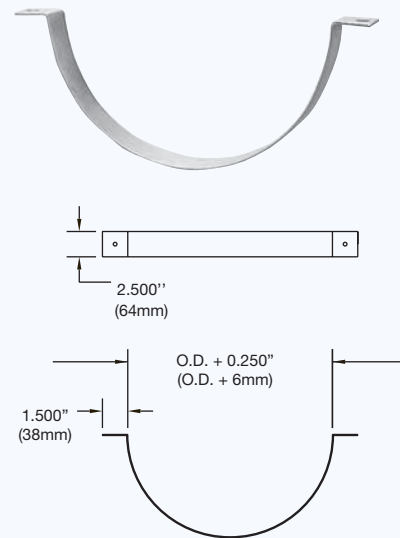
Includes:

- 2 2" Wide flanges



HANGER BRACKET • HB

Used to support the flue in horizontal runs. To be installed by means of 3/8"ø (19mm) threaded rods (not included). Generally installed every 5'-0" (1525mm).



SUPPORTS

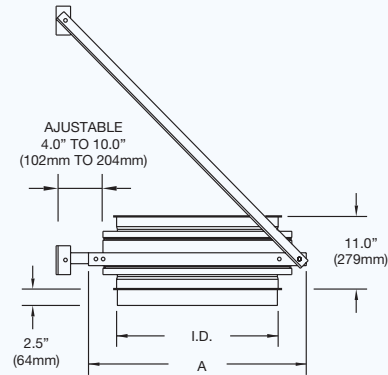
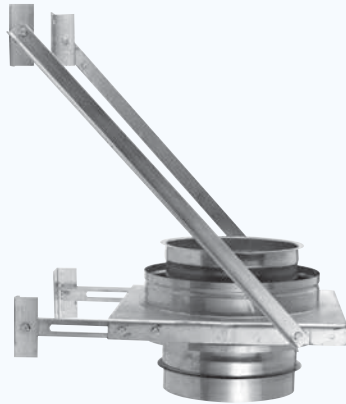
WALL SUPPORT • WS

Used to support the chimney in vertical runs. It keeps the chimney at an adjustable distance between 4" (102mm) and 10" (254mm) from the wall. The oblique braces may be attached to the wall either above or below the supporting surface.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)
- 2 Adjustable angles
- 2 Braces
- 4 Wall brackets

K = Same as pipe length



I.D.		IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, IPPL1, IPPL1F	
		A		A		A	
in	mm	in	mm	in	mm	in	mm
6	152	14	356	18	457	12	305
8	203	16	406	20	508	14	356
10	254	18	457	22	559	16	406
12	305	20	508	24	610	18	457
14	356	22	559	26	660	20	508
16	406	24	610	28	711	22	559
18	457	26	660	30	762	24	610
20	508	28	711	32	813	26	660
22	559	30	762	34	864	28	711
24	610	32	813	36	914	30	762
26	660	34	864	38	965	32	813
28	711	36	914	40	1016	34	864
30	762	38	965	42	1067	36	914
32	813	40	1016	44	1118	38	965
34	864	42	1067	46	1168	40	1016
36	914	44	1118	48	1219	42	1067
38	965	46	1168	50	1270	44	1118
40	1016	48	1219	52	1321	46	1168
42	1067	50	1270	54	1372	48	1219
44	1118	52	1321	56	1422	50	1270
46	1168	54	1372	58	1473	52	1321
48	1219	56	1422	60	1524	54	1372

SUPPORTS

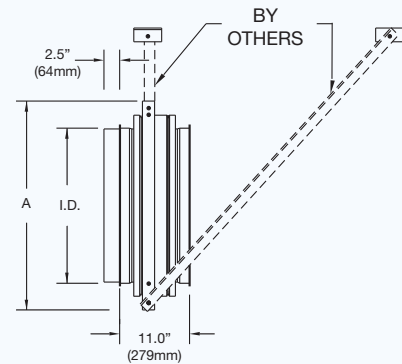
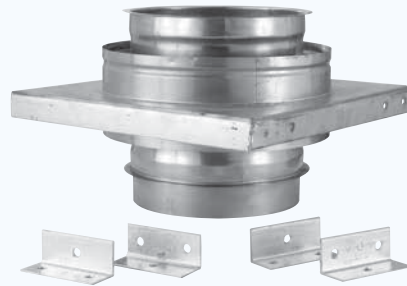
HORIZONTAL SUPPORT • HS

Used to support the flue in horizontal runs. It keeps the flue at an adjustable distance from the ceiling. The oblique braces (not included) may be attached to the ceiling either ahead of or behind the supporting surface.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)
- 4 Wall brackets

K = Same as pipe length



I.D.		IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, IPPL1, IPPL1F	
		A		A		A	
in	mm	in	mm	in	mm	in	mm
6	152	14	356	18	457	12	305
8	203	16	406	20	508	14	356
10	254	18	457	22	559	16	406
12	305	20	508	24	610	18	457
14	356	22	559	26	660	20	508
16	406	24	610	28	711	22	559
18	457	26	660	30	762	24	610
20	508	28	711	32	813	26	660
22	559	30	762	34	864	28	711
24	610	32	813	36	914	30	762
26	660	34	864	38	965	32	813
28	711	36	914	40	1016	34	864
30	762	38	965	42	1067	36	914
32	813	40	1016	44	1118	38	965
34	864	42	1067	46	1168	40	1016
36	914	44	1118	48	1219	42	1067
38	965	46	1168	50	1270	44	1118
40	1016	48	1219	52	1321	46	1168
42	1067	50	1270	54	1372	48	1219
44	1118	52	1321	56	1422	50	1270
46	1168	54	1372	58	1473	52	1321
48	1219	56	1422	60	1524	54	1372

SUPPORT AND GUIDES

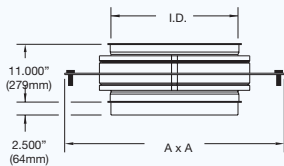
ANCHOR PLATE • AP

Used to support the chimney in vertical runs. It is attached to the floor by means of anchors (not included). It is designed to be supported on four (4) sides. Structural angles may be used to support sides that are unsupported.

Includes:

- 1 Assembly band (AB)
- 1 Finishing band (FB)

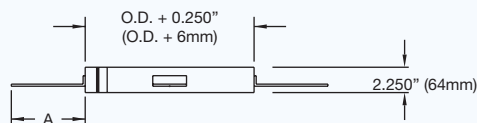
K = Same as pipe length



IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
I.D.		A		I.D.		A		I.D.		A	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	22.0	559	6	152	26.0	660	6	152	20.0	508
8	203	24.0	610	8	203	28.0	711	8	203	22.0	559
10	254	26.0	660	10	254	30.0	764	10	254	24.0	610
12	305	28.0	711	12	305	32.0	813	12	305	26.0	660
14	356	30.0	762	14	356	34.0	864	14	356	28.0	711
16	406	32.0	813	16	406	36.0	914	16	406	30.0	762
18	457	34.0	864	18	457	38.0	965	18	457	32.0	813
20	508	36.0	914	20	508	40.0	1016	20	508	34.0	864
22	559	38.0	965	22	559	42.0	1068	22	559	36.0	914
24	610	40.0	1016	24	610	44.0	1118	24	610	38.0	965
26	660	42.0	1068	26	660	46.0	1168	26	660	40.0	1016
28	711	44.0	1118	28	711	48.0	1219	28	711	42.00	1067
30	762	46.0	1168	30	762	50.0	1270	30	762	44.0	1118
32	813	48.0	1219	32	813	52.0	1321	32	813	46.0	1168
34	864	50.0	1270	34	864	54.0	1372	34	864	48.0	1219
36	914	52.0	1321	36	914	56.0	1422	36	914	50.0	1270
38	965	54.0	1372	38	965	58.0	1473	38	965	52.0	1321
40	1016	56.0	1422	40	1016	60.0	1524	40	1016	54.0	1372
42	1067	58.0	1473	42	1067	62.0	1575	42	1067	56.0	1422
44	1118	60.0	1524	44	1118	64.0	1626	44	1118	58.0	1473
46	1168	62.0	1575	46	1168	66.0	1676	46	1168	60.0	1524
48	1219	64.0	1626	48	1219	68.0	1727	48	1219	62.0	1575

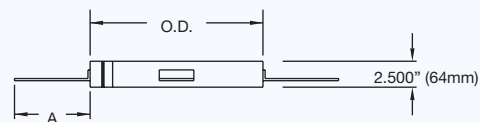
FLOOR GUIDE • FG

Used as a guide at floor penetrations. It is attached to the floor by means of four (4) angles. It keeps a minimum distance between the chimney and combustible floor materials.



ROOF SUPPORT • RS

Used to support and guide the portion of the chimney which extends to the roof. It is attached to the roof curb by means of four (4) angles. It keeps a minimum distance between the chimney and combustible materials at the roof.



IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, IPPL1, IPPL1F		Dim. A	
I.D.		I.D.		I.D.		Dim. A	
in	mm	in	mm	in	mm	in	mm
6 to 14	152 to 356	6 to 10	152 to 254	6 to 16	152 to 408	5.25	133
16 to 22	406 to 559	12 to 18	279 to 457	18 to 24	457 to 610	7.25	184
24 to 32	610 to 813	20 to 28	508 to 711	26 to 34	660 to 864	9.25	235
34 to 42	864 to 1067	30 to 38	762 to 965	36 to 44	914 to 1118	11.25	286
44 to 48	1118 to 1219	40 to 48	1016 to 1219	46 to 48	1168 to 1219	13.25	337

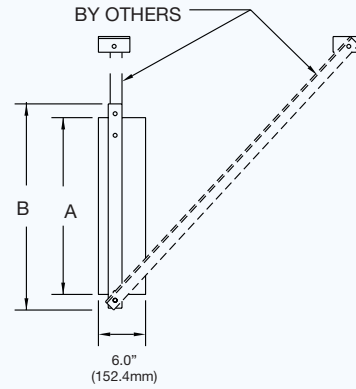
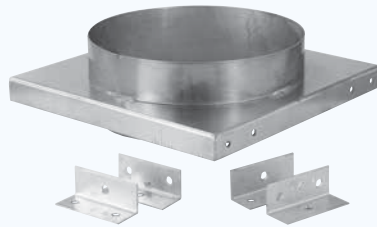
GUIDES

WALL GUIDE • WG

Used as a guide and to allow for expansion of the flue or chimney. It may be used either horizontally or vertically. The oblique braces (not included) may be attached above or below the guide plate.

Includes:

4 Wall brackets (angles not included)

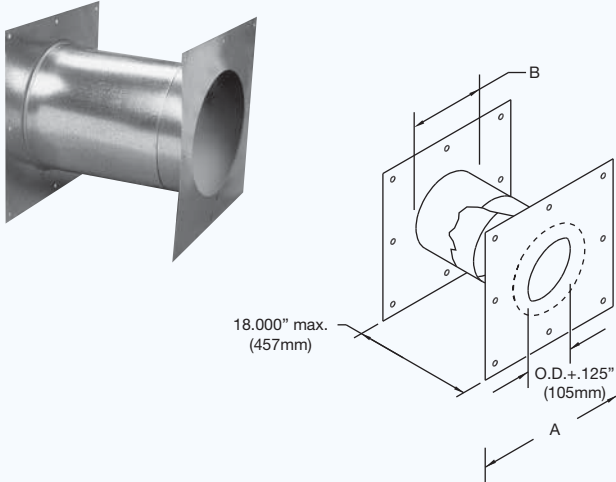


I.D.		IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
		A		B		A		B		A		B	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	10.25	260	14	356	14.25	362	18	457	8.25	210	12	305
8	203	12.25	311	16	406	16.25	413	20	508	10.25	260	14	356
10	254	14.25	362	18	457	18.25	464	22	559	12.25	311	16	406
12	305	16.25	413	20	508	20.25	514	24	610	14.25	362	18	457
14	356	18.25	464	22	559	22.25	565	26	660	16.25	413	20	508
16	406	20.25	514	24	610	24.25	616	28	711	18.25	464	22	559
18	457	22.25	565	26	660	26.25	667	30	762	20.25	514	24	610
20	508	24.25	616	28	711	28.25	718	32	813	22.25	565	26	660
22	559	26.25	667	30	762	30.25	768	34	864	24.25	616	28	711
24	610	28.25	718	32	813	32.25	819	36	914	26.25	667	30	762
26	660	30.25	768	34	864	34.25	870	38	965	28.25	718	32	813
28	711	32.25	819	36	914	36.25	921	40	1016	30.25	768	34	864
30	762	34.25	870	38	965	38.25	972	42	1067	32.25	819	36	914
32	813	36.25	921	40	1016	40.25	1022	44	1118	34.25	870	38	965
34	864	38.25	972	42	1067	42.25	1073	46	1168	36.25	921	40	1016
36	914	40.25	1022	44	1118	44.25	1124	48	1219	38.25	972	42	1067
38	965	42.25	1073	46	1168	46.25	1175	50	1270	40.25	1022	44	1118
40	1016	44.25	1124	48	1219	48.25	1226	52	1321	42.25	1073	46	1168
42	1067	46.25	1175	50	1270	50.25	1276	54	1372	44.25	1124	48	1219
44	1118	48.25	1226	52	1321	52.25	1327	56	1422	46.25	1175	50	1270
46	1168	50.25	1276	54	1372	54.25	1378	58	1473	48.25	1226	52	1321
48	1219	52.25	1327	56	1422	56.25	1429	60	1524	50.25	1276	54	1372

FIRESTOPS AND GUIDES

WALL FIRESTOP • WFS

Used to keep a minimum clearance from combustible materials where the flue passes through a wall.

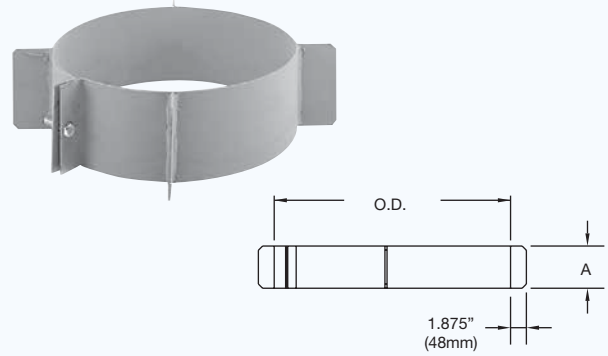


$$A = O.D. + 2 * \text{Clearance} + 8$$

$$B = O.D. + * \text{Clearance}$$

GUIDING SPACER • GS

Used to guide the flue or the chimney against the inner wall of the sleeves it passes through. It holds the chimney at a distance of 2" (51mm) from the wall firestop (WFS), insulated wall firestop (IFS) or an insulated sleeve (IS).



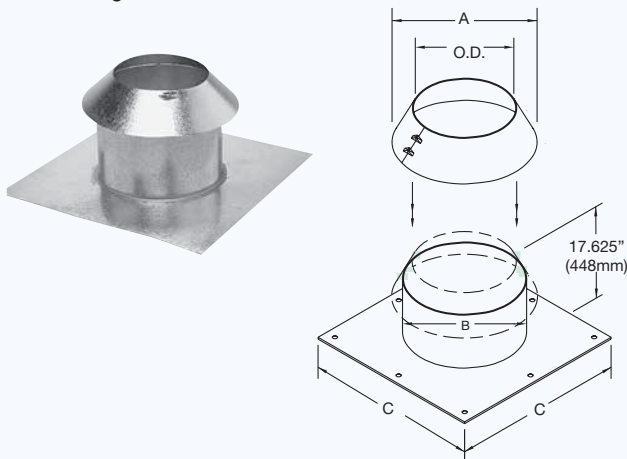
IPPLA, IPPL1, IPPL1F		IPPL, IPPL2, IPPL2F		IPPL4F		A	
I.D.		I.D.		I.D.			
in	mm	in	mm	in	mm	in	mm
6 to 18	152 to 457	6 to 16	152 to 406	6 to 12	152 to 305	4	102
20 to 38	508 to 965	18 to 36	457 to 914	14 to 32	356 to 813	6	152
40 to 48	1016 to 1219	38 to 48	965 to 1219	34 to 48	864 to 1219	8	203

RADIANT FIRESTOP • RFS

Used to protect combustible materials where a chimney passes through an attic. It ensures a minimum distance from combustible materials.

Includes:

- 1 Protecting collar



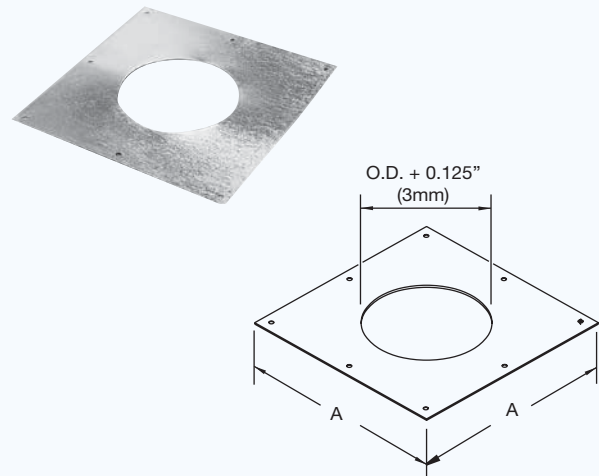
$$A = O.D. + 2 * \text{Clearance} + 4$$

$$B = O.D. + 2 * \text{Clearance}$$

$$C = O.D. + 2 * \text{Clearance} + 12$$

FIRESTOP • FS

Used to keep space between any combustible material of a wall, floor or roof, where a flue or chimney penetrates.



$$A = O.D. + 2 * \text{Clearance} + 8$$

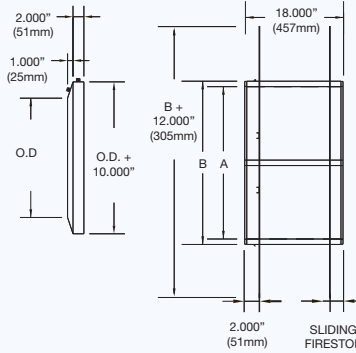
FIRESTOPS

INSULATED WALL FIRESTOP • IFS

Used to protect combustible materials where a flue or chimney passes through a wall. It ensures a minimum space of 2" (51mm) from combustible materials, in addition to reducing excessive heat by means of its double wall and 2" (51mm) high temperature insulation.

Includes:

- 1 Finishing collar
- 1 Firestop



I.D.		IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
		Dim. A		Dim. B		Dim. A		Dim. B		Dim. A		Dim. B	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	14	356	18	457	18	457	22	559	12	305	16	406
8	203	16	406	20	508	20	508	24	610	14	356	18	457
10	254	18	457	22	559	22	559	26	660	16	406	20	508
12	305	20	508	24	610	24	610	28	711	18	457	22	559
14	356	22	559	26	660	26	660	30	762	20	508	24	610
16	406	24	610	28	711	28	711	32	813	22	559	26	660
18	457	26	660	30	762	30	762	34	864	24	610	28	711
20	508	28	711	32	813	32	813	36	914	26	660	30	762
22	559	30	762	34	864	34	864	38	965	28	711	32	813
24	610	32	813	36	914	36	914	40	1016	30	762	34	864
26	660	34	864	38	965	38	965	42	1067	32	813	36	914
28	711	36	914	40	1016	40	1016	44	1118	34	864	38	965
30	762	38	965	42	1067	42	1067	46	1168	36	914	40	1016
32	813	40	1016	44	1118	44	1118	48	1219	38	965	42	1067
34	864	42	1067	46	1168	46	1168	50	1270	40	1016	44	1118
36	914	44	1118	48	1219	48	1219	52	1321	42	1067	46	1168
38	965	46	1168	50	1270	50	1270	54	1372	44	1118	48	1219
40	1016	48	1219	52	1321	52	1321	56	1422	46	1168	50	1270
42	1067	50	1270	54	1372	54	1372	58	1473	48	1219	52	1321
44	1118	52	1321	56	1422	56	1422	60	1524	50	1270	54	1372
46	1168	54	1372	58	1473	58	1473	62	1575	52	1321	56	1422
48	1219	56	1422	60	1524	60	1524	64	1626	54	1372	58	1473

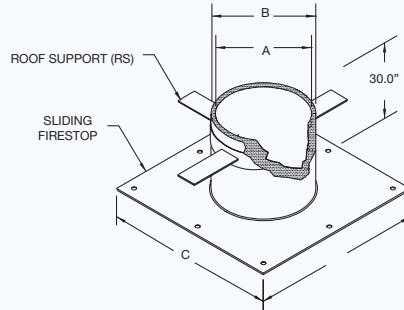
FIRESTOPS

INSULATED SLEEVE • IS

Used to protect combustible materials where a flue or chimney passes through a wall or floor. It ensures a minimum space of 2" (51mm) from combustible materials, in addition to reducing excessive heat by means of its double wall and 2" (51mm) high temperature insulation.

Includes:

- 1 Firestop
- 1 Roof support

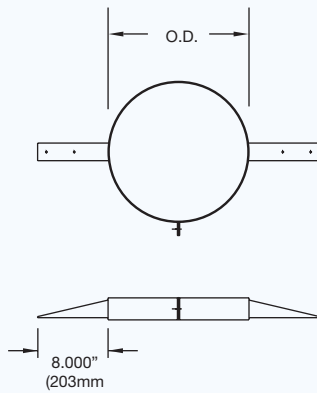


I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
Dim. A		Dim. B		Dim. C		Dim. A		Dim. B		Dim. C		Dim. A		Dim. B		Dim. C			
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	14	356	18	457	30	762	18	457	22	559	34	864	12	305	16	406	28	711
8	203	16	406	20	508	32	813	20	508	24	610	36	914	14	356	18	457	30	762
10	254	18	457	22	559	34	864	22	559	26	660	38	965	16	406	20	508	32	813
12	305	20	508	24	610	36	914	24	610	28	711	40	1016	18	457	22	559	34	864
14	356	22	559	26	660	38	965	26	660	30	762	42	1067	20	508	24	610	36	914
16	406	24	610	28	711	40	1016	28	711	32	813	44	1118	22	559	26	660	38	965
18	457	26	660	30	762	42	1067	30	762	34	864	46	1168	24	610	28	711	40	1016
20	508	28	711	32	813	44	1118	32	813	36	914	48	1219	26	660	30	762	42	1067
22	559	30	762	34	864	46	1168	34	864	38	965	50	1270	28	711	32	813	44	1118
24	610	32	813	36	914	48	1219	36	914	40	1016	52	1321	30	762	34	864	46	1168
26	660	34	864	38	965	50	1270	38	965	42	1067	54	1372	32	813	36	914	48	1219
28	711	36	914	40	1016	52	1321	40	1016	44	1118	56	1422	34	864	38	965	50	1270
30	762	38	965	42	1067	54	1372	42	1067	46	1168	58	1473	36	914	40	1016	52	1321
32	813	40	1016	44	1118	56	1422	44	1118	48	1219	60	1524	38	965	42	1067	54	1372
34	864	42	1067	46	1168	58	1473	46	1168	50	1270	62	1575	40	1016	44	1118	56	1422
36	914	44	1118	48	1219	60	1524	48	1219	52	1321	64	1626	42	1067	46	1168	58	1473
38	965	46	1168	50	1270	62	1575	50	1270	54	1372	66	1676	44	1118	48	1219	60	1524
40	1016	48	1219	52	1321	64	1626	52	1321	56	1422	68	1727	46	1168	50	1270	62	1575
42	1067	50	1270	54	1372	66	1676	54	1372	58	1473	70	1778	48	1219	52	1321	64	1626
44	1118	52	1321	56	1422	68	1727	56	1422	60	1524	72	1829	50	1270	54	1372	66	1676
46	1168	54	1372	58	1473	70	1778	58	1473	62	1575	74	1880	52	1321	56	1422	68	1727
48	1219	56	1422	60	1524	72	1829	60	1524	64	1626	76	1930	54	1372	58	1473	70	1778

BANDS

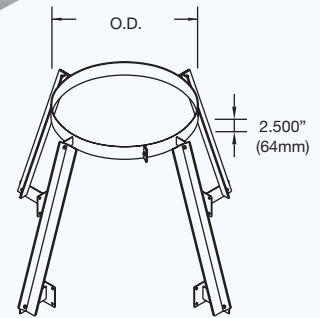
SUSPENSION BAND • SB

Used to stabilize and support a flue or chimney in vertical runs. It avoids the transfer of the flue weight to the appliance. To be used with threaded rods (not included)



ROOF BAND • RB

Used to stabilize a chimney laterally where it extends more than 10'-0" (3048mm) above the roof or for locations exposed to strong winds. It is attached to the chimney and the roof curb and does not require anchoring to the roof.

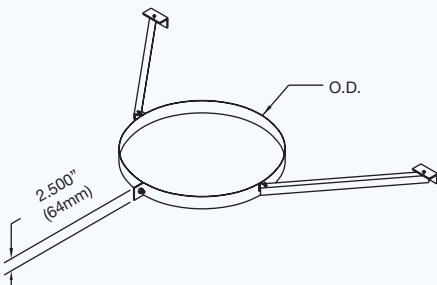
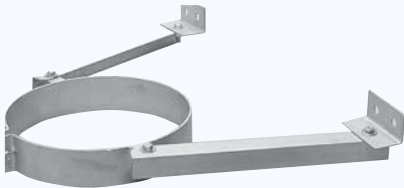


WALL BAND • WB

Used to stabilize the chimney along a vertical wall. The maximum recommended spacing between wall bands is 10'-0" (3048mm).

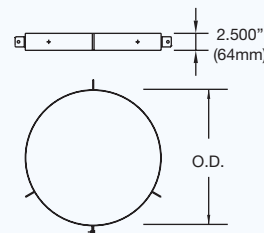
Includes:

- 1 Wall bracket
- 1 Stabilizing angle



GUY WIRE BAND • GWB

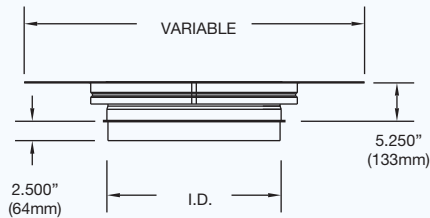
Used to stabilize a chimney laterally where it extends more than 10'-0" (3048mm) above the roof or for locations exposed to strong winds. It is attached to the chimney and is designed to receive 3 guy wires 120° apart (not included). It may be manufactured to receive 4 guy wires 90° apart.



BAND, COLLARS AND FLASHING

FAN ADAPTER • FA

Installed at the chimney termination. Used to connect the chimney to an induced draft fan.

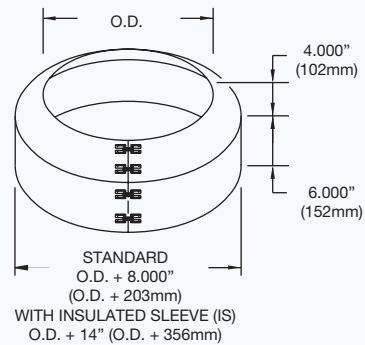


VENTILATED COLLAR • VC • SVC

Used to seal the space between the chimney and flashing. The ventilated collar must be sealed to the chimney with appropriate sealant. It is supplied with ventilated flashing.

Includes:

1 Socket head cap screw

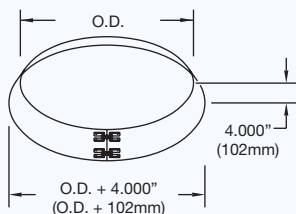
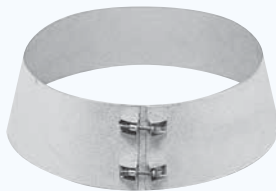


STORM COLLAR • SC

Used to seal the space between the chimney and flashing. The storm collar must be sealed to the chimney with appropriate sealant. It is supplied with flashing for flat roofs of adjustable flashing.

Includes:

1 Socket head cap screw

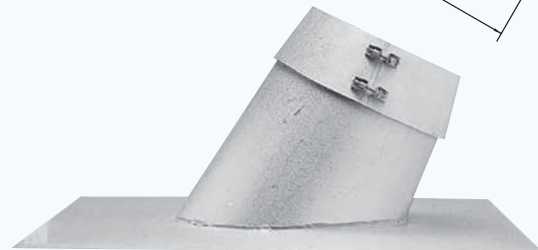
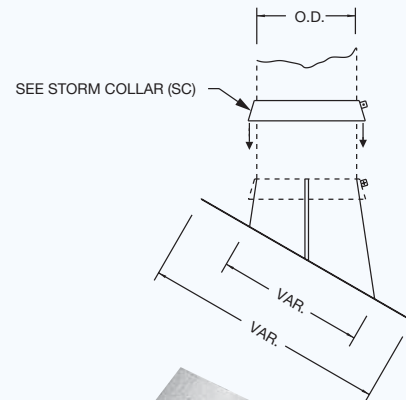


ADJUSTABLE FLASHING • AF

Used to seal the space between the chimney and the roof. Specify the roof slope when ordering.

Includes:

1 Storm collar (SC)



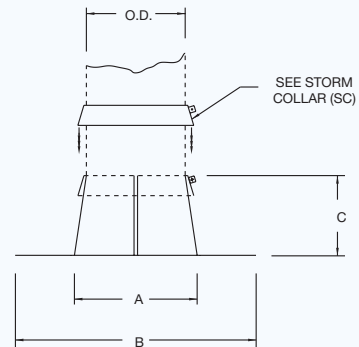
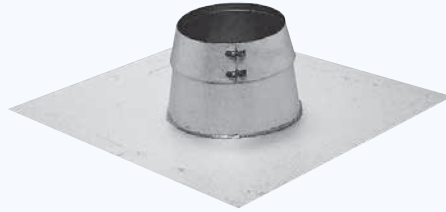
FLASHINGS

FLAT FLASHING • F

Used to seal the space between the chimney and the roof.

Includes:

- 1 Storm collar (SC)



All Products			
$B = O.D. + 2 * Clearance + 16$			
C	I.D.	in	mm
	6 to 16	12	305
18 to 48	16	406	

I.D.		IPPL, IPPL2, IPPL2F		IPPL4F		IPPLA, 1, 1F	
in	mm	in	mm	in	mm	in	mm
6	152	14	356	18	457	12	305
8	203	16	406	20	508	14	356
10	254	18	457	22	559	16	406
12	305	20	508	24	610	18	457
14	356	22	559	26	660	20	508
16	406	24	610	28	711	22	559
18	457	26	660	30	762	24	610
20	508	28	711	32	813	26	660
22	559	30	762	34	864	28	711
24	610	32	813	36	914	30	762
26	660	34	864	38	965	32	813
28	711	36	914	40	1016	34	864
30	762	38	965	42	1067	36	914
32	813	40	1016	44	1118	38	965
34	864	42	1067	46	1168	40	1016
36	914	44	1118	48	1219	42	1067
38	965	46	1168	50	1270	44	1118
40	1016	48	1219	52	1321	46	1168
42	1067	50	1270	54	1372	48	1219
44	1118	52	1321	56	1422	50	1270
46	1168	54	1372	58	1473	52	1321
48	1219	56	1422	60	1524	54	1372

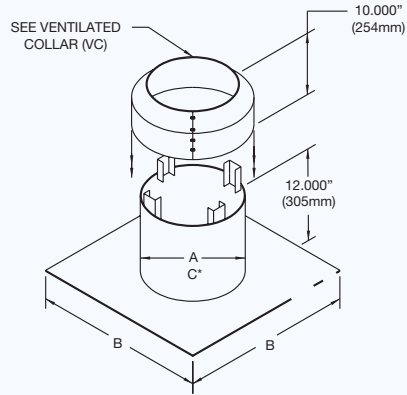
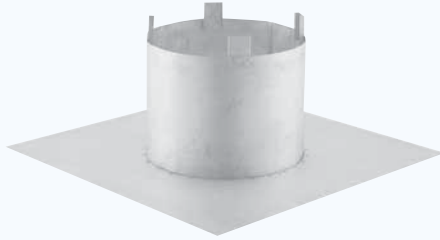
FLASHINGS

VENTILATED FLASHING • VF

Used to seal and ventilate the space between the chimney and the roof. It reduces the temperature around the roof opening and it prevents excessive accumulation of heat near combustible materials. If an insulated sleeve is used, a sleeve ventilated flashing (SVF) is to be used.

Includes:

- 1 Ventilated collar (VC)



All Products
B = O.D. + 2*Clearance + 16

I.D.		IPPL, IPPL2, IPPL2F				IPPL4F				IPPLA, IPPL1, IPPL1F			
		Dim. A		Dim. C		Dim. A		Dim. C		Dim. A		Dim. C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	14	356	20	508	18	457	24	610	12	305	18	457
8	203	16	406	22	559	20	508	26	660	14	356	20	508
10	254	18	457	24	610	22	559	28	711	16	406	22	559
12	305	20	508	26	660	24	610	30	762	18	457	24	610
14	356	22	559	28	711	26	660	32	813	20	508	26	660
16	406	24	610	30	762	28	711	34	864	22	559	28	711
18	457	26	660	32	813	30	762	36	914	24	610	30	762
20	508	28	711	34	864	32	813	38	965	26	660	32	813
22	559	30	762	36	914	34	864	40	1016	28	711	34	864
24	610	32	813	38	965	36	914	42	1067	30	762	36	914
26	660	34	864	40	1016	38	965	44	1118	32	813	38	965
28	711	36	914	42	1067	40	1016	46	1168	34	864	40	1016
30	762	38	965	44	1118	42	1067	48	1219	36	914	42	1067
32	813	40	1016	46	1168	44	1118	50	1270	38	965	44	1118
34	864	42	1067	48	1219	46	1168	52	1321	40	1016	46	1168
36	914	44	1118	50	1270	48	1219	54	1372	42	1067	48	1219
38	965	46	1168	52	1321	50	1270	56	1422	44	1118	50	1270
40	1016	48	1219	54	1372	52	1321	58	1473	46	1168	52	1321
42	1067	50	1270	56	1422	54	1372	60	1524	48	1219	54	1372
44	1118	52	1321	58	1473	56	1422	62	1575	50	1270	56	1422
46	1168	54	1372	60	1524	58	1473	64	1626	52	1321	58	1473
48	1219	56	1422	62	1575	60	1524	66	1676	54	1372	60	1524

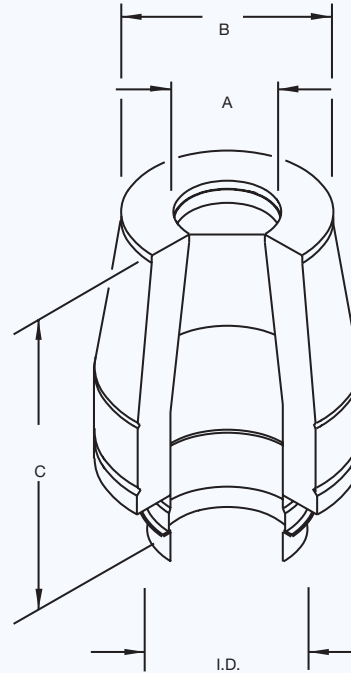
* with insulated sleeve (15)

TERMINATIONS

EXHAUST CONE • EC

Installed at the top of the chimney. It improves the draft and increases the speed of exhaust gases by 50%. Installation of a drain-tee cap (DC) or a drain section (DS) at the base of the chimney is required for use of an exhaust cone.

K = 1.25



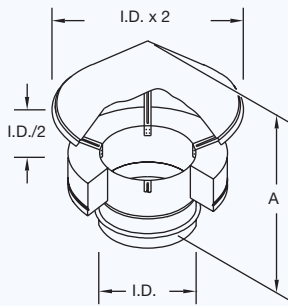
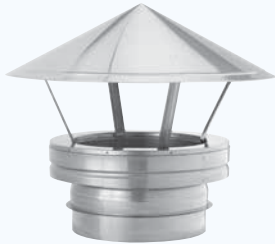
I.D.		IPPL, IPPL2, IPPL2F						IPPL4F						IPPLA, IPPL1, IPPL1F					
		A		B		C		A		B		C		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
6	152	5	127	9	229	17.25	438	5	127	13	330	17.25	438	5	127	7	178	17.25	438
8	203	7	178	11	279	17.25	438	7	178	15	381	17.25	438	7	178	9	229	17.25	438
10	254	8	203	12	305	17.25	438	8	203	16	406	17.25	438	8	203	10	254	17.25	438
12	305	10	254	14	356	17.25	438	10	254	18	457	17.25	438	10	254	12	305	17.25	438
14	356	12	305	16	406	23.25	591	12	305	20	508	23.25	591	12	305	14	356	23.25	591
16	406	14	356	18	457	23.25	591	14	356	22	559	23.25	591	14	356	16	406	23.25	591
18	457	16	406	20	508	23.25	591	16	406	24	610	23.25	591	16	406	18	457	23.25	591
20	508	16	406	20	508	23.25	591	16	406	24	610	23.25	591	16	406	18	457	23.25	591
22	559	18	457	22	559	23.25	591	18	457	26	660	23.25	591	18	457	20	508	23.25	591
24	610	20	508	24	610	23.25	591	20	508	28	711	23.25	591	20	508	22	559	23.25	591
26	660	22	559	26	660	29.25	743	22	559	30	762	29.25	743	22	559	24	610	29.25	743
28	711	24	610	28	711	29.25	743	24	610	32	813	29.25	743	24	610	26	660	29.25	743
30	762	24	610	28	711	29.25	743	24	610	32	813	29.25	743	24	610	26	660	29.25	743
32	813	26	660	30	762	35.25	895	26	660	34	864	35.25	895	26	660	28	711	35.25	895
34	864	28	711	32	813	35.25	895	28	711	36	914	35.25	895	28	711	30	762	35.25	895
36	914	30	762	34	864	35.25	895	30	762	38	965	35.25	895	30	762	32	813	35.25	895
38	965	30	762	34	864	41.25	1048	30	762	38	965	41.25	1048	30	762	32	813	41.25	1048
40	1016	32	813	36	914	41.25	1048	32	813	40	1016	41.25	1048	32	813	34	864	41.25	1048
42	1067	34	864	38	965	41.25	1048	34	864	42	1067	41.25	1048	34	864	36	914	41.25	1048
44	1118	36	914	40	1016	41.25	1048	36	914	44	1118	41.25	1048	36	914	38	965	41.25	1048
46	1168	38	965	42	1067	41.25	1048	38	965	46	1168	41.25	1048	38	965	40	1016	41.25	1048
48	1219	40	1016	44	1118	41.25	1048	40	1016	48	1219	41.25	1048	40	1016	42	1067	41.25	1048

TERMINATIONS

RAIN CAP • RC

Installed at the top of the chimney. It prevents entry of rain.

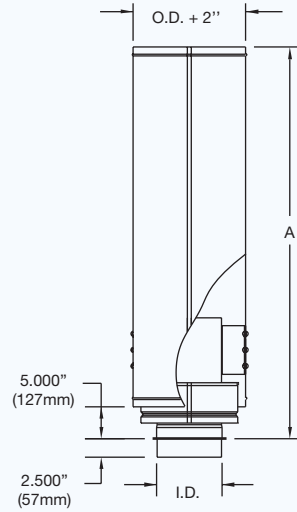
K = 0.5



IPPL • IPPL2 IPPL2F • IPPL4F			
I.D.		A	
in	mm	in	mm
6	152	12.500	318
8	203	13.500	343
10	254	15.500	394
12	305	17.500	445
14	356	19.500	495
16	406	21.500	546
18	457	23.500	597
20	508	25.500	648
22	559	27.500	699
24	610	29.500	749

RAINSHIELD • RSH

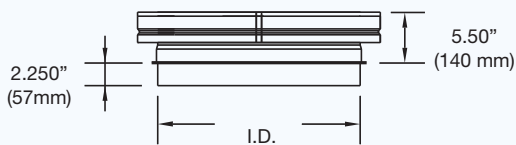
Installed at the top of the chimney. It prevents rain penetration when the chimney is installed at a location subject to high wind conditions. Installation of a drain-tee cap (DC) or drain section (DS) at the base of the chimney is required for use of a rainshield. Available from 6" (152mm) to 16" (406mm) diameter.



I.D.	A
in	in
6	43.500
8	49.500
10	55.500
12	61.500
14	67.500
16	74.500

I.D.	A
mm	mm
152	1105
203	1257
254	1410
305	1592
356	1715
406	1892

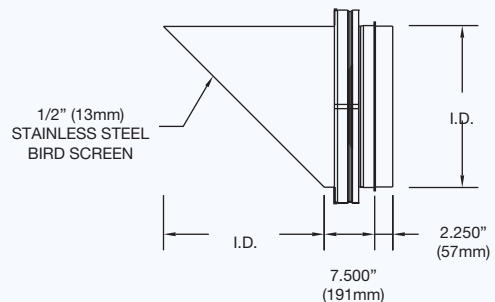
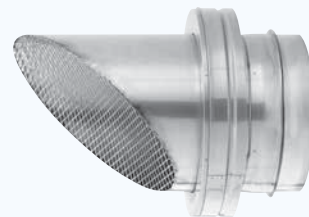
CLOSURE SECTION • CS



MITER SECTION • MS

Installed at the end of the chimney in horizontal exhaust applications. To be used with engine exhaust. Diameter range from 6" (152mm) to 16" (406mm). Material thickness is the same as the chimney section it is used with.

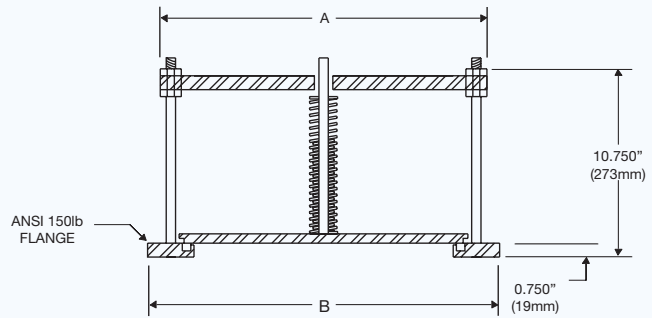
K = 1.25



ACCESSORY

RELIEF VALVE • RV

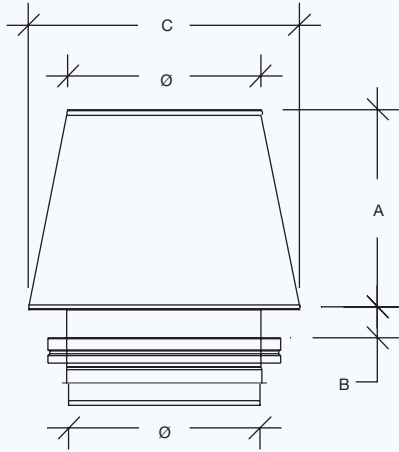
Relief valves are for utilization in reciprocating engine exhaust systems to minimize damage caused by engine backfire. They are commonly used to protect exhaust systems where factory-insulated engine exhaust silencers, catalytic converters and/or waste heat recovery units are used. Relief valves are set to open at exhaust pressure exceeding approximately one (1) PSIG (27.7" of water column). An optional additional tension spring is available to increase opening pressure to approximately 48.5" W.C. or greater. Relief valves are recommended in accordance with NFPA 37.



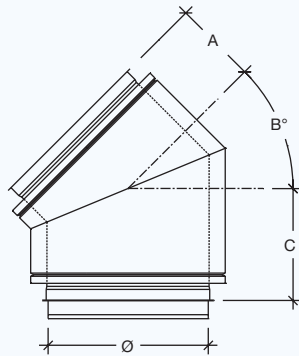
I.D.		A		B		# of springs
in	mm	in	mm	in	mm	
6	152	9.625	244	11.000	279	1
8	203	12.250	311	13.500	343	1
10	254	14.000	356	16.000	406	1
12	305	16.750	425	19.000	483	2
14	356	18.250	464	21.000	533	2
16	406	20.250	514	23.500	597	3
18	457	22.250	565	25.000	635	3
20	508	24.250	616	27.500	699	4
22	559	26.250	667	29.000	737	4
24	610	28.500	724	32.000	813	4

SPECIAL PARTS

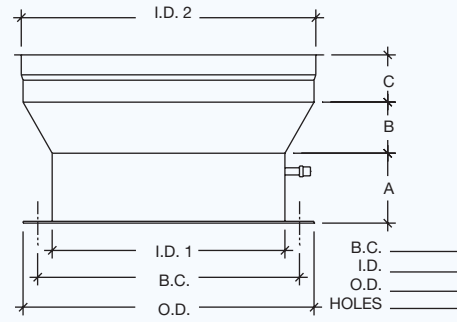
Several special parts are available upon request.
See some examples below.



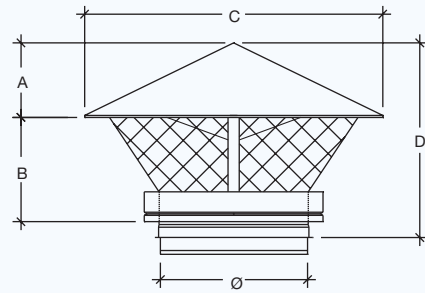
Finishing Cone



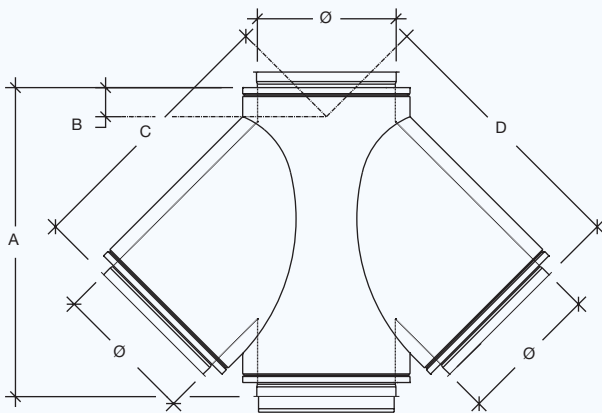
Special Elbow



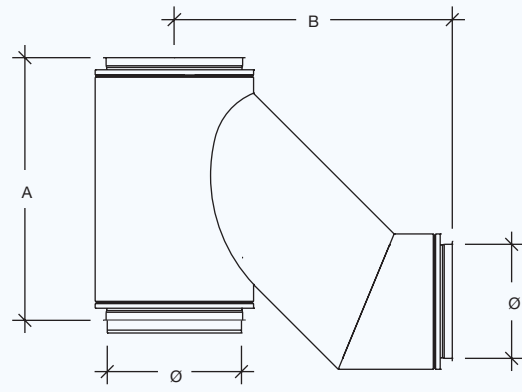
Special Starting Adapter



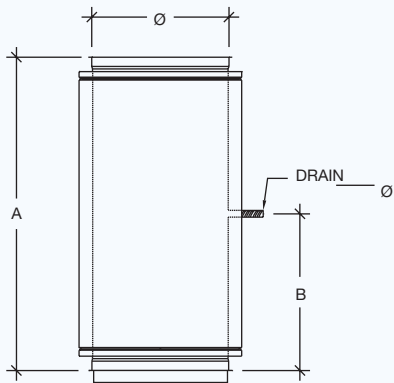
Special Rain Cap with Bird Screen



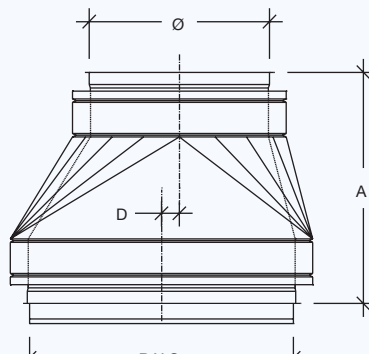
Double 45° Tee



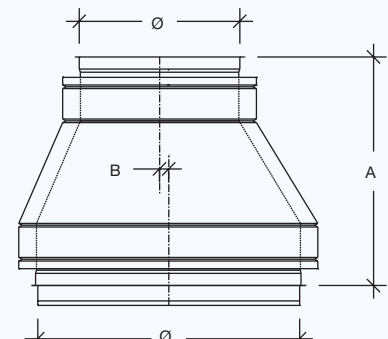
Combination Tee and Elbow



Test and Monitoring Port at any location



Rectangular to Round Transition



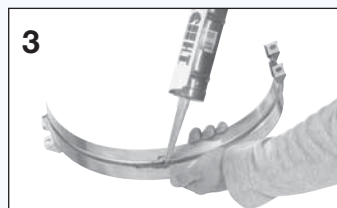
Eccentric Round to Round Transition

INSTALLATION GUIDE

Guide to Component Parts

MATERIALS	CODE	PAGE	MATERIALS	CODE	PAGE
ADJUSTMENT / EXPANSION			LENGTH		
Adjustable Length	AL	10	12" Length	12L	9
Expansion Joint	EJ	10	24" Length	24L	9
Increaser	I	19	36" Length	36L	9
Reducer	R	19	48" Length	48L	9
Variable Length	VL	10	RELIEF VALVE		
COMPONENT			SEALING AT ROOF		
Drain Section	DS	10	Adjustable Flashing	AF	30
Drain -Tee Cap	DC	20	Flashing for Flat Roof	F	31
Tee Cap	TC	20	Ventilated Flashing	VF	32
CONNECTING THE FLUE			SIDE STABILITY		
Drain Starting Adapter	SAD	21	Guy Wire Band	GWB	29
Starting Adapter	SA	21	Roof Band	RB	29
Starting Sleeve	SS	21	Wall Band	WB	29
CONNECTION / OFFSET			SUPPORT / GUIDE		
5° Elbow	E5	14	Anchor Plate	AP	24
15° Elbow	E15	15	Floor Guide	FG	24
30° Elbow	E30	16	Guiding Spacer	GS	26
45° Elbow	E45	17	Hanger Bracket	HB	21
90° Elbow	2 x E45	18	Horizontal Support	HS	23
90° Short Radius Elbow	E90	18	Roof Support	RS	24
45° Tee	T45	12	Suspension Band	SB	29
90° Tee	T90	13	Wall Guide	WG	25
FIRE PROTECTION			TERMINATIONS		
Firestop	FS	26	Closure Section	CS	34
Insulated Sleeve	IS	28	Exhaust Cone	EC	33
Insulated Wall Firestop	IFS	27	Fan Adapter	FA	30
Radiant Firestop	RFS	26	Miter Section	MS	34
Wall Firestop	WFS	26	Rain Cap	RC	34
JOINTING			Rainshield		
Assembly Band	AB	20		RSH	34
Finishing Band	FB	20			

PIPE AND FITTING JOINT ASSEMBLY, STEP BY STEP



1. All components have a male and a female end. The orientation is indicated on the labelling of each section with an arrow. The arrow indicates the direction of the flue gas flow.
2. Before fitting the large and small ends into one another, a sealant (LTS or HTS) is applied on the male end, at the gap between the inner flange and the inner pipe.
3. Assemble both sections by sliding one section into the other until the flanges meet. A layer of sealant is applied inside the V-Groove of the Assembly Band (AB) prior to its installation over the joint.
4. The Assembly Band (AB) is installed and clamped in place with 4 nuts and bolts (supplied).
5. Insert the insulation strip around the inner joint assembly of insulated models IPPL2, IPPL2F, IPPL4F, IPPL1, IPPL1F.
6. The Finishing Band (FB) is installed by slipping the edges of the band into the outer pipe edges and clamping them with 3 nuts and bolts (supplied).



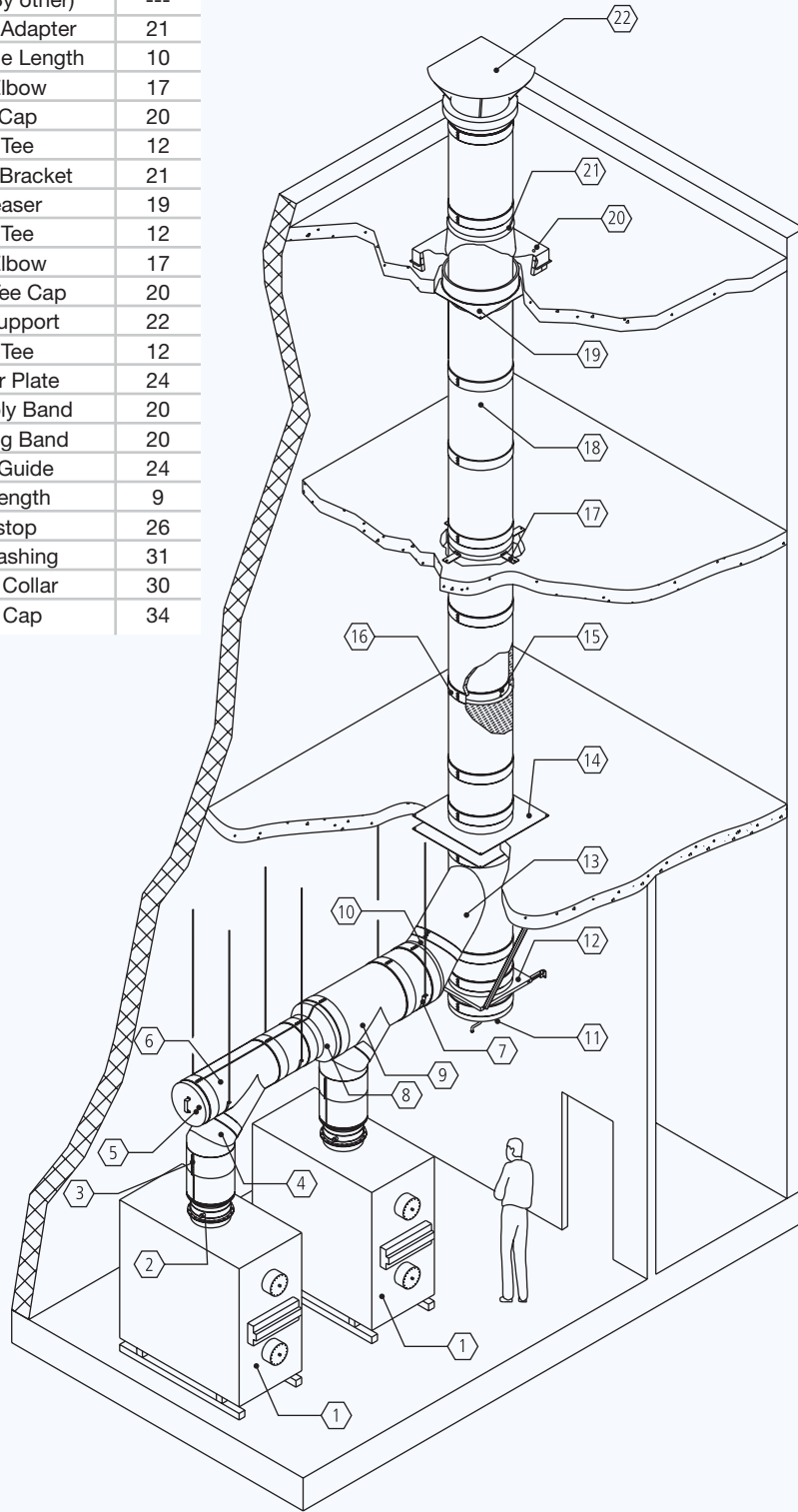
- LTS:** Low Temperature Sealant.
600°F maximum flue gas temperature
- HTS:** High Temperature Sealant.
Up to 2000°F flue gas temperature
- ES:** Exterior Sealant.
Outer sealant weather proof

7. FOR OUTDOOR INSTALLATION AND BAD WEATHER PROTECTION, AN EXTERIOR SEALANT (ES) IS APPLIED AT THE JOINT BETWEEN THE FINISHING BAND (FB) AND THE OUTER WALL OF THE CHIMNEY.

SAMPLE DRAWINGS

Boiler Exhaust

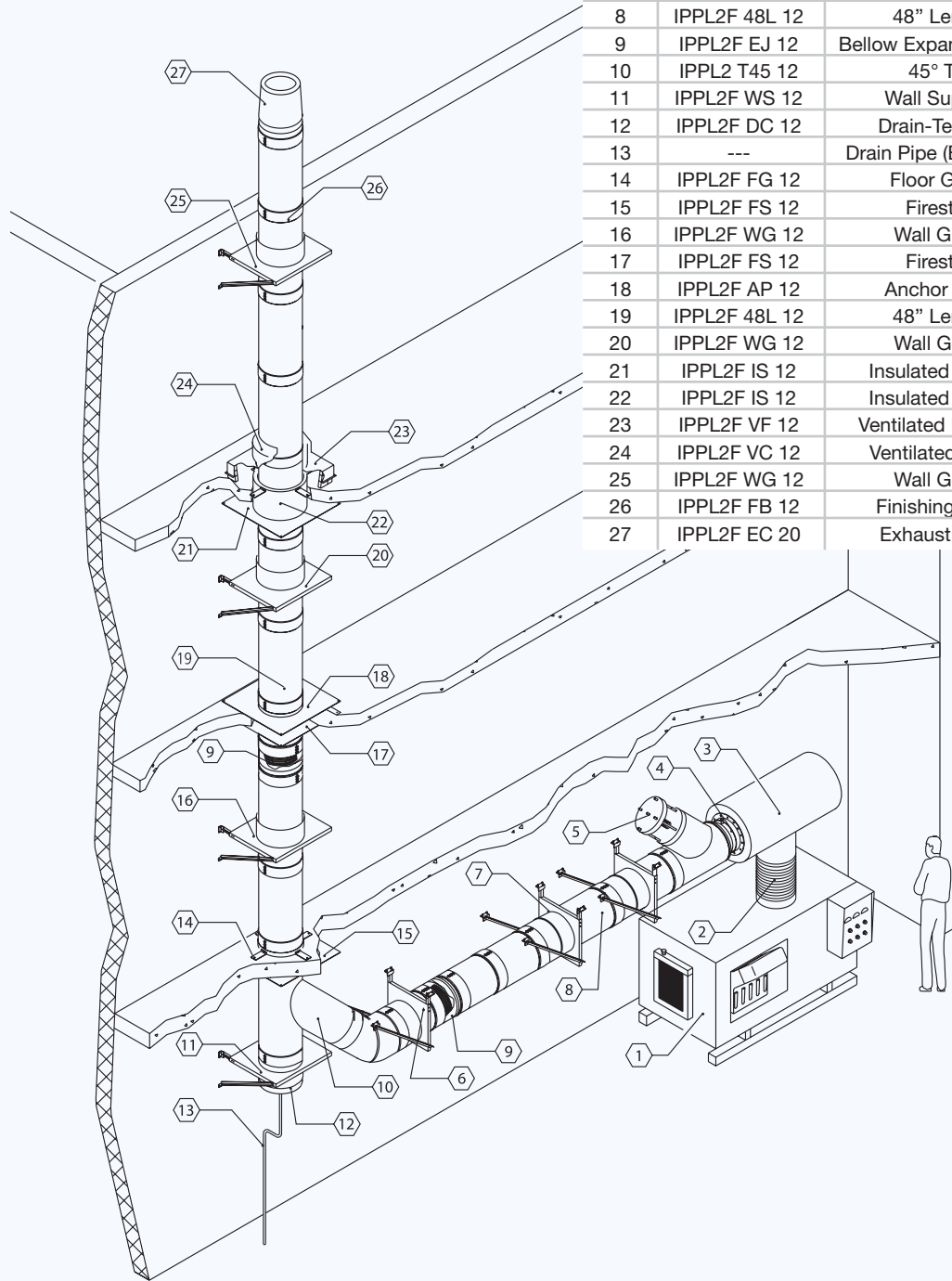
No.	Part No.	Description	Page
1	---	Boiler (By other)	---
2	IPPLA SA 16	Starting Adapter	21
3	IPPLA AL 16	Adjustable Length	10
4	IPPLA E45 16	45° Elbow	17
5	IPPLA TC 16	Tee Cap	20
6	IPPLA T45 16	45° Tee	12
7	IPPLA HB 16	Hanger Bracket	21
8	IPPLA I 16	Increaser	19
9	IPPLA T45 20	45° Tee	12
10	IPPLA E45 20	45° Elbow	17
11	IPPLA DC 20	Drain-Tee Cap	20
12	IPPLA WS 20	Wall Support	22
13	IPPLA T45	45° Tee	12
14	IPPLA AP 20	Anchor Plate	24
15	IPPLA AB	Assembly Band	20
16	IPPLA FB 20	Finishing Band	20
17	IPPLA FG 20	Floor Guide	24
18	IPPLA 48L 20	48" Length	9
19	IPPLA FS 20	Firestop	26
20	IPPLA F 20	Flat Flashing	31
21	IPPLA SC 20	Storm Collar	30
22	IPPLA RC 20	Rain Cap	34



SAMPLE DRAWINGS

Engine Exhaust

No.	Part No.	Description	Page
1	---	Engine (By other)	---
2	---	Adapter (By others)	---
3	---	Muffler (By others)	---
4	IPPL2F SA 12	Starting Adapter	21
5	IPPL2F RV 12	Relief Valve	25
6	IPPL2F HS 12	Horizontal Support	23
7	IPPL2F WG 12	Wall Guide	25
8	IPPL2F 48L 12	48" Length	9
9	IPPL2F EJ 12	Bellow Expansion Joint	10
10	IPPL2 T45 12	45° Tee	12
11	IPPL2F WS 12	Wall Support	22
12	IPPL2F DC 12	Drain-Tee Cap	20
13	---	Drain Pipe (By others)	---
14	IPPL2F FG 12	Floor Guide	24
15	IPPL2F FS 12	Firestop	26
16	IPPL2F WG 12	Wall Guide	25
17	IPPL2F FS 12	Firestop	26
18	IPPL2F AP 12	Anchor Plate	24
19	IPPL2F 48L 12	48" Length	9
20	IPPL2F WG 12	Wall Guide	25
21	IPPL2F IS 12	Insulated Sleeve	28
22	IPPL2F IS 12	Insulated Sleeve	28
23	IPPL2F VF 12	Ventilated Flashing	32
24	IPPL2F VC 12	Ventilated Collar	30
25	IPPL2F WG 12	Wall Guide	25
26	IPPL2F FB 12	Finishing Band	20
27	IPPL2F EC 20	Exhaust Cone	33





1-YEAR STANDARD WARRANTY

Models IPPL, IPPL2, IPPL2F, IPPL4F

IPPLA, IPPL1, and IPPL1F

All components of our models IPPL, IPPL2, IPPL2F and IPPL4F chimney system have been inspected in our workshop in accordance with our quality standards. Cheminee Lining warrants the chimney/exhaust system and components against defects in material and workmanship for a period of (1) one year from date of delivery to the purchaser. During this period, any system or component supplied by Cheminee Lining failing to perform its intended function of exhausting, without adverse leakage, combustion by-products from engine or heating appliance will be repaired or replaced at the manufacturer option.

This warranty is limited to repair or replacement of any component which has been proven defective by a factory-authorized inspector by Cheminee Lining. This warranty does not cover any labor cost or freight charge for removal or replacement of the defective product, nor does this warranty cover any system component not furnished by Cheminee Lining and installed as part of the system. The warranty on any repaired or replacement component shall be for a duration no longer than the remaining or unexpired term of the original warranty.

This standard warranty is subject to the following conditions:

- a) Generally accepted engineering practices have been followed to determine that sizing and material specifications are suitable for the application and environment involved.
- b) The undamaged components have been correctly installed in accordance with the installation instructions published by Cheminee Lining at the time of shipment.

The standard warranty is extended to a **15-YEAR LIMITED WARRANTY** provided the following conditions are satisfied:

- a) The chimney must have been connected to an appliance listed by a testing authority recognized by the federal government. Also, this warranty is void if the appliance was not installed, used and maintained according to the manufacturer instructions.
- b) The chimney system must have been designed and sized by the engineering department of Cheminee Lining. All design and operating parameters provided to Cheminee Lining must meet the standards of Cheminee Lining and must be accurately representative of the operating conditions.
- c) The undamaged components must have been correctly installed, used and maintained in accordance with the instructions published by Cheminee Lining at the time of shipment.
- d) Air used in combustion must be free from any solvent or refrigerant vapor and from any halogenated compound which might generate acid condensate within the flue or chimney.
- e) Cheminee Lining has supplied the entire chimney or exhaust system from the appliance outlet to the stack termination.
- f) Prior to start-up and thereafter, exposed galvanized and aluminized steel surfaces are at all times protected with a minimum of one base coat primer and one finish coat of heat and corrosion resistant paint.

In no event shall Cheminee Lining be liable for any incidental or consequential damages of any kind or for any damage resulting in whole or in part from misuse, improper installation, removal and/or reuse of components or inadequate maintenance of the system or any component part thereof. In no event shall Cheminee Lining be liable for any cost of installation, removal and reinstallation. Cheminee Lining assumes no liability in case of fire, chimney fire, lightning or act of God. This warranty is in lieu of all other express warranties or guarantees of any kind. All implied warranties, including merchantability and fitness, are limited to the duration of the express warranty contained herein. Cheminee Lining neither assumes nor authorizes any other person to assume on its behalf any other liability in connection with products sold. No agent is authorized to make any modification to this warranty or additional warranties, even if in writing, binding Cheminee Lining.

The purchaser or complainant must send all claims under this warranty in writing to Cheminee Lining Customer Service Department.

Warranty



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