Chapter 21 CHIMNEYS

MANUFACTURER/DISTRIBUTOR:

CHEMINEE LINING

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- 21.1 IPPL2 STAINLESS STEEL 304 CHEMINEE LINING INSIDE INSULATED 2" WITH MINERAL WOOL
- 21.2 EXHAUST THIMBLE 3MDC-20-C-450-29 type C



BOILER AND ENGINE EXHAUST

Industrial Positive Pressure Piping Systems



Our mission is to become the supplier of choice for gas venting products and solutions.



Company Profile

Cheminée Lining started out as a sales company that provided customers with quality products and installation. Our manufacturing arose from the certitude that we could supply superior products and services at a reasonable price.

With more than 15 years experience, our principles based on business integrity, first class customer service, reliable delivery and engineering services have established our reputation as a market leader for the supply of chimneys, grease duct and gas venting products.

Personnel

Cheminée Lining can count on qualified and highly professional employees. We are continually seeking to develop superior quality products at a competitive price.

Our engineering department will supply the answers you need – either for a project involving our standard line of products or a uniquely designed response to a specific requirement. We have developed specialized design systems for highly efficient results on sizing analysis and CAD design.

Our capabilities not only encompass the design and manufacturing of gas venting products, but also include full range engineering expertise to assist you in your projects, from specification to installation. Cheminée Lining sales personnel work in an environment that promotes entrepreneurship. Their experience in the field allows them to utilize their resources to provide our clients with the best technical and economical solutions.

Manufacturing

Cheminée Lining combines the craftsmanship of a seasoned labor force with state of the art fabrication, delivering the highest quality products in the industry.

Our stainless steel precision cut using state of the art equipment for quality, speed and accuracy resulting in reduced manufacturing lead times.

An innovative engineering staff ensures continuing research and design, so that Cheminée Lining can offer the latest in gas venting products.



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LISTING AND APPLICATIONS

LISTINGS

CHEMINEE LINING.E inc. venting systems models IPPL, IPPL2, IPPL2F and IPPL4f are listed by Underwriters Laboratories, inc. (UL) under file MH26661 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, IPPL2F AND IPPL4	F TEMPERATURE	SIZE
Building Heating Appliance Type Chi	mney 1000°F continuous	6'' to 48'' I.D.
1400°F Chimney (IPPL, IPPL2, IPPL2F et	t IPPL4F) 1400°F continuous	6'' to 48'' I.D.

CAN/ULC C-959

MODELS IPPL, IPPL2, IPPL2F AND IPPL4F	TEMPERATURE	SIZE
Building Heating Appliance Type Chimney	1000°F continuous	6'' to 48'' I.D.
1400°F Chimney (IPPL, IPPL2, IPPL2F et 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, 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.
- 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, 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	Cooking appliances ventilation hoods restaurant grease ducts pizza oven exhausts.	Low and high pressure steam boilers Diesel and turbine exhausts Building heating equipment	Industrial furnaces Processing equipment Kilns and ovens Diesel and turbine exhausts
Continuous operating			
temperature	500°F	1000°F	1400°F
IPPL, GDPL	Yes	Yes	Yes
IPPL2	Yes	Yes	N/A
IPPL2F, GDPL2F	N/A	Yes	Yes
IPPL4F, GDPL4F	Yes	Yes	N/A



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.



IPP, GDP: Single wall (see Chimney Breechings and Liners Catalogue)



IPPL, GDPL: Double wall with 2" air space



IPPL2: Double wall with 2" mineral fiber insul.



IPPL2F, GDPL2F: Double wall with 2" ceramic fiber insul.



IPPL4F, GDPL4F: Double wall with 4" ceramic fiber insul. • Incinerator

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.

This unique method for jointing components together is very efficient either in

Cheminée 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 Industrial Oven Exhaust
- Restaurant Grease Duct
- Coffee Roaster
- Air and Product containment
- Boiler Negative and Positive Pressure
- Unit Heater
- Heat Recovery

Models IPPL, IPPL2, IPPL2F 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.



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MATERIALS

MODEL IPPL

Inner wall: 316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm)

Outer wall: 301,316L, 304 2B stainless steel, 430 or galvalume(24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42"

(1067mm) to 48" (1219mm) diameter)

2" (51mm) air space Insulation:

MODEL 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: 301,316L, 304 2B stainless steel, 430 or galvalume(24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga - 42"

(1067mm) to 48" (1219mm) diameter)

Insulation: 2" (51mm) high temperature mineral fiber

MODEL IPPL2F

316L or 304 2B stainless steel (20 ga - 6" (152mm) to 40" (1016mm) diameter; 18 ga - 42" (1067mm) to 48" (1219mm)

diameter)

Outer wall: 301,316L, 304 2B stainless steel, 430 or gall

(1067mm) to 48" (1219mm) diameter)

Insulation: 2" (51mm) high temperature ceramic fiber

SHOP DRAWING

This review is solely for the verification of general MODEL IPPL4F design quality and does not alleviate the responsibility

Inner wall: 316L or 304 2B stainless steel (20 ga - 6" (152 mm) to #9h'é le branche la lor for this lifting that all specification, 1219 mm) diameter) olameter)
Space and installation requirements are met.
Outer wall: 301,316L, 304 2B stainless steel, 430 or gall valume (24 ga - 6" (152mm) to 40" (1016mm) diameter; 20 ga

42"

(1067mm) to 48" (1219mm) diameter) M.M. Reviewed By: Reviewed Insulation: 4" (51mm) high temperature ceramic fiber

Reviewed as noted Date: 8 July 2016 Resubmit

CHIARELLI ENGINEERING LTD.

SUPPORTS & ACCESSORI

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

COMPONENTS	Inter	nal walls	exterr	nal walls	mate	rials
COMPONENTS	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, RAINSHEILD, CLOSURE SECTION	2	1	2	1		
ROOF BAND, GUYWIRE 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



WEIGTHS AND CLEARANCES

IPPL •	IPPL2 ● I	PPL2F ●	IPPL4F				LINEAR	WEIGHT			
I,	I.D. AREA			IPPL IPPL2			IPPL2F IPPL4F		L4F		
in	mm	in ²	1000mm ²	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	8.8	13.1	8.8	13.1	14.6	21.8
8	203	50	32.4	7.2	10.8	11.1	16.5	11.1	16.5	17.7	26.3
10	254	79	50.7	8.8	13.0	13.4	19.9	13.4	19.9	20.7	30.8
12	302	113	73.0	10.3	15.3	15.6	23.3	15.6	23.3	23.8	35.4
14	356	154	99.3	11.8	17.5	17.9	26.7	17.9	26.7	26.8	39.9
16	406	201	129.7	13.3	19.8	20.2	30.1	20.2	30.1	29.9	44.4
18	457	254	164.2	14.8	22.0	22.5	33.4	22.5	33.4	32.9	49.0
20	508	314	202.7	16.3	24.3	24.7	36.8	24.7	36.8	35.9	53.5
22	559	380	245.2	17.8	26.5	27.0	40.2	27.0	40.2	39.0	58.0
24	610	452	291.9	19.3	28.7	29.3	43.6	29.3	43.6	42.0	62.5
26	660	531	342.5	20.8	31.0	31.6	47.0	31.6	47.0	45.1	67.1
28	711	616	397.3	22.3	33.2	33.9	50.4	33.9	50.4	48.1	71.6
30	762	707	456.0	23.8	35.5	36.1	53.8	36.1	53.8	51.6	76.1
32	813	804	518.9	25.4	37.7	38.4	57.2	38.4	57.2	54.2	80.7
34	864	908	585.8	26.9	40.0	40.7	60.5	40.7	60.5	57.3	85.2
36	914	1018	656.7	28.4	42.2	43.0	64.9	43.0	64.9	60.3	89.7
38	965	1134	731.7	29.9	44.5	45.2	67.3	45.2	67.3	63.3	94.3
40	1016	1257	810.7	31.4	46.7	47.5	70.7	47.5	70.7	66.3	98.8
42	1067	1385	893.8	46.2	68.7	63.1	93.9	63.1	93.9	83.3	124.0
44	1118	1521	981.0	48.3	71.9	66.0	98.2	66.0	98.2	87.0	129.4
46	1067	1662	1072.2	50.4	75.0	68.9	102.5	68.9	102.5	90.6	134.9
48	1219	1810	1167.5	52.5	78.2	71.7	106.8	71.7	106.8	94.3	140.3

Minimum clearance air space to combustible construction									
	Model IPPI	L				Mode	el IPPL2	Model & IPI	
Inside d	iameter	ı	rance to 1400°F)	Inside di	ameter	Clear (100		Clear (1000°F to	
in	mm	in	mm	in	mm	in	mm	in	mm
6'' to 12''	152-305	4''	102	6'' to 12''	152-305	1''	25	1''	25
14''	355	5''	127	14''	355	1.5''	38	1.5''	38
16'' to 18''	406-457	6''	152	16'' to 18''	406-457	2''	51	2''	51
20'' to 24''	508-610	7''	178	20'' to 22''	508-610	3''	76	3''	76
30'' to 34''	762-864	9''	229	28'' to 32''	762-864	5''	127	5''	127
36'' to 38''	914-965	10''	254	34'' to 36''	864-914	6''	152	6''	152
40'' to 48''	1016-1219	11''	279	38'' to 40''	965-1016	7''	178	7''	178
				42'' to 48''	1067-1219	8''	203	8''	203

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

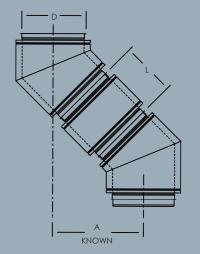
O.D. + 2 X (min. clearance air space) Ex.: IPPL2, B.H.A., I.D. = 8" ⇒ 12" + (2 X 1") = 14"

Minimum opening when installing a chimney through a floor or wall made of non combustible construction. O.D. + 1" \Rightarrow 12" + 1" = 13"

section C • rechnical Data

OFFSETS

OFFSET CALCULATIONS



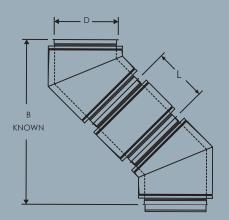
EFFECTIVE LENGTH CALCULATIONS

- 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

- HEIGTH dimesnion 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

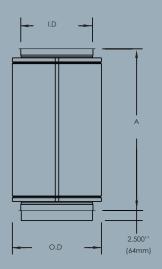
Where L = Pipe length in feet

D = Pipe diameter in inches



IF.	PPL • IPF	L2 • IPPL	.2F
	D.		.D.
in	mm	in	mm
6	152	10	254
8	203	12	305
10	254	14	356
12	305	16	406
14	356	18	457
16	406	20	508
18	457	22	559
20	508	24	610
22	559	26	660
24	610	28	711
26	660	30	762
28	711	32	813
30	762	34	864
32	813	36	914
34	864	38	965
36	914	40	1016
38	965	42	1067
40	1016	44	1118
42	1067	46	1168
44	1118	48	1219
46	1168	50	1270
48	1219	52	1321

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



LENICTUS	EFFECTIVE LENGTHS "A"				
LENGTHS	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			

INSTALLATION GUIDE

Guide to Component Parts

MATERIALS	CODE	PAGE
ADJUSTMENT / EXPANSION		
Adjustable Length	AL	10
Expansion Joint	EJ	10
Increaser	1	19
Reducer	R	19
Variable Length	VL	10
COMPONENT		
Drain Section	DS	10
Drain -Tee Cap	DC	20
Tee Cap	TC	20
CONNECTING THE FLUE		
Drain Starting Adapter	SAD	21
Starting Adapter	SA	21
Starting Sleeve	SS	21
CONNECTION / OFFSET		
5° Elbow	E5	14
15° Elbow	E15	15
30° Elbow	E30	16
45° Elbow	E45	17
90° Elbow	2 x E45	18
90° Short Radius Elbow	E90	18
45° Tee	T45	12
90° Tee	T90	13
FIRE PROTECTION		
Firestop	FS	25
Insulated Sleeve	IS	26
Insulated Wall Firestop	IFS	27
Radiant Firestop	RFS	25
Wall Firestop	WFS	25
JOINTING		
Assembly Band	AB	20
Finishing Band	FB	20

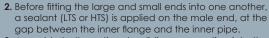
MATERIALS	CODE	PAGE
LENGTH		
12" Length	12L	9
24" Length	24L	9
36" Length	36L	9
48" Length	48L	9
RELIEF VALVE	RV	34
SEALING AT ROOF		
Adjustable Flashing	AF	29
Flashing for Flat Roof	F	32
Ventilated Flashing	VF	33
SIDE STABILITY		
Guy Wire Band	GWB	28
Roof Band	RB	28
Wall Band	WB	28
SUPPORT / GUIDE		
Anchor Plate	AP	23
Floor Guide	FG	23
Guiding Spacer	GS	25
Hanger Bracket	HB	21
Horizontal Support	HS	22
Roof Support	RS	23
Suspension Band	SB	28
Wall Guide	WG	24
Wall Support	WS	22
TERMINATIONS		
Closure Section	CS	30
Exhaust Cone	EC	31
Fan Adapter	FA	29
Miter Section	MS	30
Rain Cap	RC	30
Rainshield	RSH	30

PIPE AND FITTING JOINT ASSEMBLY, STEP BY STEP





 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.



- 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 it's installation over the joint.
- **4.** The Assembly Band (ÅB) 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 and IPPL4F.
- **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).







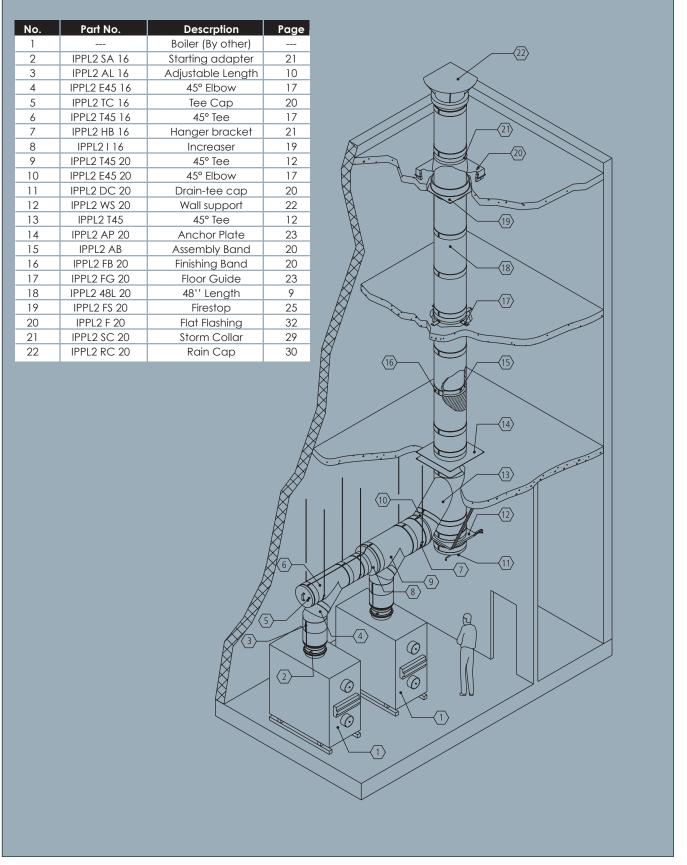
- LTS: Low Temperature Sealant. 600°F maximum flue gas temperature
- HTS: High Temperature Sealant.
 Up to 2000°F flue gas
 temperature
- **ES:** Exterior Sealant.

 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

Sample Drawings



ENGINE EXHAUST

Sample Drawings No. Part No. Descrption Page Boiler (By other) 2 Adapter (By others) 3 Muffler (By others) IPPL2F SA 12 Starting adapter 21 4 5 IPPL2F RV 12 Relief Valve 24 IPPL2F HS 12 Horizontal Support 22 6 IPPL2F WG 12 Wall Guide 22 8 48'' Length IPPL2F 48L 12 9 9 IPPL2F EJ 12 Bellow Expansion Joint 17 10 IPPL2 T45 12 45° Tee 17 11 IPPL2F WS 12 Wall Support 22 12 IPPL2F DC 12 Drain-tee cap 20 13 Drain pipe (By others) IPPL2F FG 12 14 Floor Guide 23 (26) Firestop 15 IPPL2F FS 12 25 16 IPPL2F WG 12 Wall Guide 22 25 17 IPPL2F FS 12 Firestop 18 IPPL2F AP 12 Anchor Plate 23 19 IPPL2F 48L 12 48'' Length 9 20 IPPL2F WG 12 Wall Guide 22 21 IPPL2F IS 12 Insulated sleeve 25 (24) 22 IPPL2F IS 12 Insulated sleeve 25 23 IPPL2F VF 12 Ventilated Flashing 33 IPPL2F VC 12 Ventilated Collar 29 24 25 IPPL2F WG 12 Wall Guide 22 26 IPPL2F FB 12 Finishing Band 20 27 IPPL2F EC 20 Exhaust cone 31 (16)

Warranty

1-YEAR STANDARD WARRANTY

Models IPPL, IPPL2, IPPL2F and IPPL4F

All components of our models IPPL, IPPL2, IPPL2F and IPPL4F chimney system have been inspected in our workshop in accordance with our quality standards. Cheminée Lining.e inc. 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 Cheminée Lining.e inc. 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 Cheminée Lining.e inc. This warranty does not cover any labour cost or freight charge for removal or replacement of the defective product, nor does this warranty cover any system component not furnished by Cheminée Lining.e inc. 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 Cheminée Lining, e inc. 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 Cheminée Lining.e inc. All design and operating parameters provided to Cheminée Lining.e inc. must meet the standards of Cheminée Lining.e inc. 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 Cheminée Lining.e inc. 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) Cheminée Lining.e inc. 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 Cheminée Lining.e inc. 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 Cheminée Lining.e inc. be liable for any cost of installation, removal and reinstallation. Cheminée Lining.e inc. 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. Cheminée Lining.e inc. 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 Cheminée Lining.e inc.

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

