

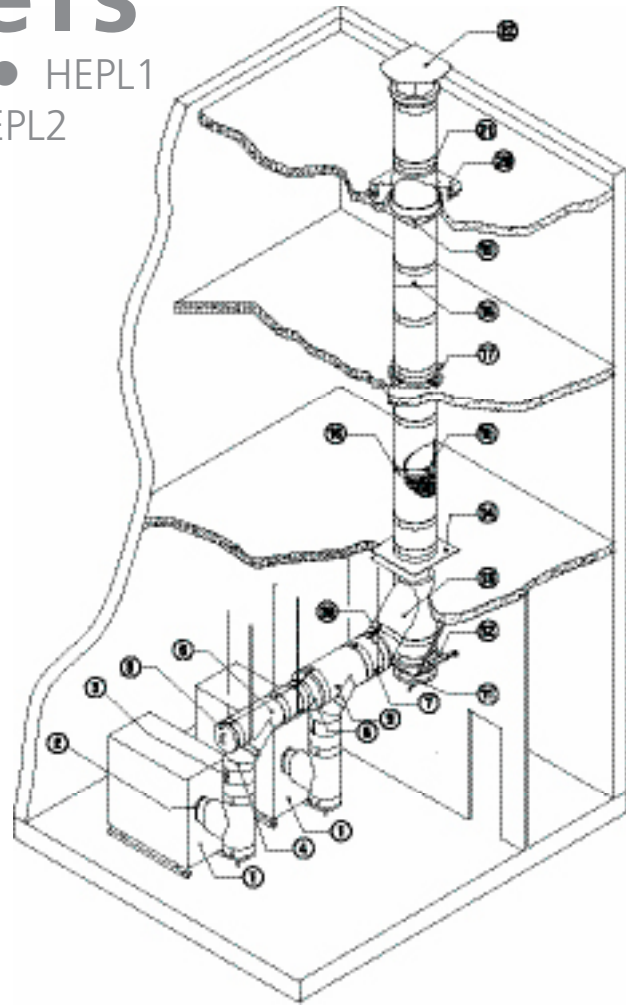
HIGH EFFICIENCY POSITIVE PRESSURE VENTING SYSTEMS FOR CONDENSING APPLIANCES, CATEGORIES II, III AND IV

Single & Double Wall Construction

Installation Instructions

Models

HEP • HEPLA • HEPL1
HEPL • HEPL2



This symbol shows that CHEMINÉE LINING.E inc. venting systems are listed in the US and certified for Canada under Underwriters Laboratories inc. file no. MH10081. Tests are made in accordance with UL1738 / ULC-S636-95 standards for Venting systems.

IMPORTANT: READ THESE INSTRUCTIONS CAREFULLY PRIOR TO INSTALL.

- EXAMINE ALL COMPONENTS FOR POSSIBLE SHIPPING DAMAGE PRIOR TO INSTALLATION.
- PROPER JOINT ASSEMBLY IS ESSENTIAL FOR A SAFE INSTALLATION. FOLLOW THESE INSTRUCTIONS EXACTLY AS WRITTEN. CHECK SEVERENESS OF JOINTS UPON COMPLETION OF ASSEMBLY.
- THIS VENTING SYSTEM MUST BE FREE TO EXPAND AND CONTRACT. THIS VENTING SYSTEM MUST BE SUPPORTED IN ACCORDANCE WITH THESE INSTRUCTIONS.
- CHECK FOR UNRESTRICTED VENT MOVEMENTS THROUGH WALLS, CEILINGS, AND ROOF PENETRATIONS.
- DIFFERENT MANUFACTURERS HAVE DIFFERENT JOINT SYSTEMS AND ADHESIVES. DO NOT MIX PIPE, FITTINGS, OR JOINING METHODS FROM DIFFERENT MANUFACTURERS.

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WARNING

Failure to follow these installation instructions could cause FIRE, CARBON MONOXIDE POISONING, and OR DEATH. If you are unsure of installation requirements, call the phone number listed on the front page of this manual.

General Notes:

Use only factory-supplied components. Failure to do so will void the certification and the warranty of this vent. In areas with continuous temperatures below -18°C (0°F) the use of an exterior vent system may result in operating problems such as poor draft and excessive condensation of combustion products. If you do install an exterior vent, we recommend that you install a double wall insulated system model HEPLA, HEPL, HEPL1 and HEPL2

Maintenance Notes:

Vent Cleaning: Other than for standard natural gas system applications where minimal maintenance is necessary. Keep your vent clean. Access should be provided for the inspection and cleaning of all sections of the vent. Have your system cleaned by a qualified vent system sweep. If you want to clean the vent yourself, clean with a nylon or metal system brush of the correct size. Do not use a brush that will scratch the stainless steel interior of the vent system

Suitable for positive pressure venting application with maximum 15" water column internal static pressure at 550°F.

General Information

UNDERWRITERS LABORATORIES LISTINGS:

CHEMINÉE LINING.E inc. venting models are listed by Underwriters Laboratories inc. (UL) under file MH10081 and tested in accordance with UL1738 Standard for Venting Systems for Gas-Burning Appliances, categories II, III and IV and the Canadian standard for type BH gas venting systems ULC-S636-95. Listings include the following vent product categories and diameters:

UL 1738

Model	Classification	Diameters
HEP • HEPLA • HEPL • HEPL1 • HEPL2	Gas-Burning Appliances 550°F	6" to 48" I.D.

CAN / ULC-S636-95

Model	Classification	Diameters
HEP • HEPLA • HEPL • HEPL1 • HEPL2	Type BH Gas Venting 550°F	6" to 48" I.D.

FEATURES

All models are part of the Industrial Positive Pressure products for industrial and commercial applications. They are pre-fabricated modular venting systems designed for quick assembly and using the same continuous laser welding stainless steel inner wall. Given that all parts have a male and a female end, each model part fit into one another, thus eliminating the need for all kinds of adapters. This unique method of coupling provides an incomparable flexibility in selecting models of venting system. Model HEP is a single wall construction, models HEPLA and HEPL are a double wall construction with 1" and 2" air space between walls. Models HEPL1 and HEPL2 are also a double wall construction, but with 1" and 2" of mineral fiber insulation. The high quality of stainless steel inner wall construction using a continuous laser welding method for the longitudinal joint provides a high strength-to-weight ratio and low friction losses.

APPLICATION

UL 1728

1. Venting Systems for Gas-Burning Appliances, Categories II, III, and IV (550°F Vent Listing) – Under this category, models HEP, HEPLA, HEPL, HEPL1 and HEPL2 have been determined suitable for venting flue gases at a temperature not exceeding 288°C (550°F) above ambient, under continuous operating conditions, from gas, liquid, oil or solid fuel fired appliances.

2. Positive Pressure Listing – These models are rated for use at a maximum of 15 inch water column internal pressure when used in a positive pressure application.

CAN / ULC-S636-95

3. Standard for Type BH Gas Venting Systems (550°F Chimney Listing) – Under this category, models HEP, HEPLA, HEPL, HEPL1 and HEPL2 have been determined suitable for venting flue gases at a temperature not exceeding 288°C (550°F) above ambient, under continuous operating conditions, from gas, liquid, oil or solid fuel fired appliances.

SURROUNDINGS/ENCLOSURES

1. All venting systems are not intended for use in one or two-family dwellings.

2. Where the venting system extends through any zone of a building outside the area in which the heating appliance connected to it is located, it shall be provided with an enclosure having a fire resistance rating equal to or greater than the fire rating of the floor, wall or roof assemblies through which it passes.

3. All venting systems may penetrate a combustible roof or wall using the Ventilated Roof Flashing assembly. For wall penetrations, the use of the Wall Firestop assembly is required. This is the only part intended for use with combustible construction. All other parts, such as Anchor Plate and Wall Support, Wall Guide and Floor Guide are for attachment to non-combustible construction.

4. Where, according to local code, all models may be placed adjacent to, in a corner or in an enclosure made of walls of combustible construction at the clearance specified on each vent section and in the individual listing; see "CLEARANCES". Contact local building or fire officials about restrictions and installation inspection in your area.

SYSTEM SIZING

Complete system sizing and capacity may be obtained from the "Chimney, Gas Vent, and Fireplace Systems" chapter of the ASHRAE Handbook or contact your CHEMINÉE LINING representative. In spite of any sizing guidelines, when sizing venting systems, it is most important that the appliance manufacturer's installation instructions be followed. Not following these instructions may result in inadequate vent system performance and/or a violation of the equipment manufacturer's installation requirements. Proper operation of the venting system and appliance is dependent on the use of all parts specified by the manufacturer for use in the particular installation. The performance of the system may be affected if the proper assembly of all required parts is not accomplished.

General Information

PART NUMBER

These instructions identify major models parts by part number.

Example no.1:

Number: **HEP 48L 12**

Model	Description	Inside Diameter
Single wall	48" Vent section length	12"

Example no.2:

Number: **HEPLA T45 24**

Model	Description	Inside Diameter
1" air insulation	45° Tee section	24"

Example no.3:

Number: **HEPL2 WS 36**

Model	Description	Inside Diameter
2" Mineral fiber* insulation	Wall Support Section	36"

CLEARANCES

The following table give the minimum clearances to combustible constructions when installing a venting system through a wall, floor, ceiling, joist or roof.

For unenclosed installation of models HEP/HEPLA/HEPL1 see Table A-1.1, for enclosed installation see table A-1.2.

For enclosed installation of models HEPL and HEPL2 see table A-2.

Table A 1.2 - Clearances of unenclosed installation for HEP/HEPLA/HEPL1

Inside Dia. (in)	HEP (in)		HEPLA (in)		HEPL1 (in)	
	Vertical	horizontal	Vertical	horizontal	Vertical	horizontal
3	-	-	1	1	1	1
4	-	-	1	1	1	1
5	-	-	1	1	1	1
6	1.5	3	1	1	1	1
8	2	3	1	1	1	1
10	2	3	1.5	2	1.5	2
12	3	4	1.5	2	1.5	2
14	3	4	1.5	2	1.5	2
16	4	5	2	3	2	3
18	4	5	2	3	2	3
20	4	5	2	3	2	3
22	5	6	3	4	3	4
24	5	6	3	4	3	4
26	6	6	3	5	3	5
28	6	6	3	5	3	5
30	7	6	3	5	3	5
32	7	7	3	6	3	6
34	8	7	4	6	4	6
36	8	7	4	6	4	6
38	8	7	4	7	4	7
40	9	8	4	7	4	7
42	9	8	4	7	4	7
44	9	9	4	8	4	8
46	10	9	5	8	5	8
48	10	9	5	8	5	8

Table A-1.2 - Clearances of unenclosed installation for HEPL/HEPL2

Inside Dia. (in)	HEPL (in)		HEPL2 (in)	
	Vertical	horizontal	Vertical	horizontal
6	0.5	1	0.5	1
8	1.5	1	1	1
10	1.5	1	1	1
12	2	1.5	1.5	1.5
14	2	1.5	1.5	1.5
16	3	3	2	2
18	3	3	2	2
20	4	3	2	2
22	4	4	3	3
24	4	4	3	3
26	5	4	4	3
28	5	4	4	3
30	6	5	4	3
32	6	5	5	4
34	7	6	5	5
36	7	6	5	5
38	8	6	6	5
40	8	7	6	5
42	8	7	7	5
44	9	8	7	5
46	9	8	7	6
48	9	8	7	6

Table A-2 - Clearance for enclosed installation for HEPL/HEPL2

Diameter	Enclosed Vertical		Enclosed Horizontal	
	HEPL	HEPL2	HEPL	HEPL2
6" to 16"	1"	1"	3"	2"
18" to 32"	1"	1"	---	---

WARNING
FOR ENCLOSED INSTALLATION, A VENTILATED FLASHING (VF) MUST BE USED (see Fig.E12a to Fig.E.13b)

General Information

OPENINGS

The following table serves to identify the minimum opening required when installing a venting system through a floor, ceiling, joist or roof made of combustible construction. For openings through a roof or wall, see all details in section D.

Table A-3.1 - Chimney models dimension for 1" and 2" insulated models

Inside Diameter	1" thk. insul. O.D	2" thk insul O.D
A	B	B
6	8	10
8	10	12
10	12	14
12	14	16
14	16	18
16	18	20
18	20	22
20	22	24
22	24	26
24	26	28
26	28	30
28	30	32
30	32	34
32	34	36
34	36	38
36	38	40
38	40	42
40	42	44
42	44	46
44	46	48
46	48	50
48	50	52

Opening Dimension

B= A + (2x Insulation thk.

C= B + (2x Clearance *)

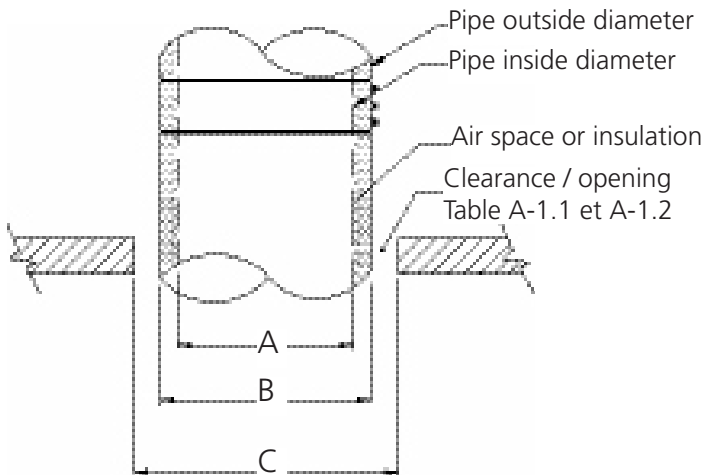
*See table A-1 and A-2 for clearance

Note: for opening through roof or wall see **section D** of this manuel.

Table A-3.2 - Minimum Openings for enclosed installation

Ins. Diameter	Vertical		Horizontal	
	HEPL	HEPL2	HEPL	HEPL2
A	C	C	C	C
6	8	8	12	10
8	10	10	14	12
10	12	12	16	14
12	14	14	18	16
14	16	16	20	18
16	18	18	22	20
18	20	20	24	22
20	22	22	26	24
22	24	24	28	26
24	26	26	30	28
26	28	28	32	30
28	30	30	34	32
30	32	32	36	34
32	34	34	38	36
34	36	36	40	38
36	38	38	42	40
38	40	40	44	42
40	42	42	46	44
42	44	44	48	46
44	46	46	50	48
46	48	48	52	50
48	50	50	54	52

Ex: Opening through combustible combuston



WARNING
DO NOT INSTALL ANY TYPE OF INSULATION IN THE REQUIRED CLEARANCE SPACES SURROUNDING THE VENT SYSTEM

General Information

PIPE AND FITTING JOINT ASSEMBLY

All components have a male and a female end. The installation orientation is indicated on the labeling of each pipe section with an arrow. The arrow indicates the direction of the flue. (See Fig. A-1) Clean all inner and outer surfaces of male and female ends with an appropriate organic solvent, such as acetone, Mek, or other commercial degreaser.

1. Before fitting the male and female ends in one another, a sealant is applied on the male end, at the gap between the inner band and the inner pipe. (See Fig. A-1 and A-3). Table A-4 for Sealant.
2. After joining the male and female ends together, a layer of sealant is applied inside the V-groove of the Assembly Band (AB) prior to its installation over the joint (See Fig. A-3). Table A-4 for Sealant.
3. The Assembly Band (AB)(Fig.A-2 and A-3) is installed and clamped in place with the 4 screws (supplied).
4. Insert the insulation strip around the inner joint assembly for insulated model HEPL1 and HEPL2.
5. The Finishing Band (FB) is then installed by slipping the edges of the band into the outer pipe edges and clamping it with the 3 screws (supplied).
6. Where the chimney passes outdoor, a exterior sealant (ES) is applied at the joint of the Finishing Band (FB) and the outer wall of the pipe for weather protection (see Fig.A-3) Table-A-4 for sealant.

Table A-4. Sealant Usage

Interior Installation				
Sealant Application	Supplier	Model	Color	Max. Temp.
Inner Joints	Adchem	X-Trasil H.T. 4706_3	red	500°F
alternate	GE	RTV-106	red	500°F
alternate	Dow Corning	RTV-736	red	500°F
Outer Joints	n/a	n/a	n/a	n/a
Exterior Installation				
Sealant Application	Supplier	Model	Color	Max. Temp.
Inner Joints	Adchem	X-Trasil H.T. 4706_3	red	500°F
alternate	GE	RTV-106	red	500°F
alternate	Dow Corning	RTV-736	red	500°F
Outer Joints	Adchem	Adsil 4809	Gray	375°F

Fig. A-2 - Joint components

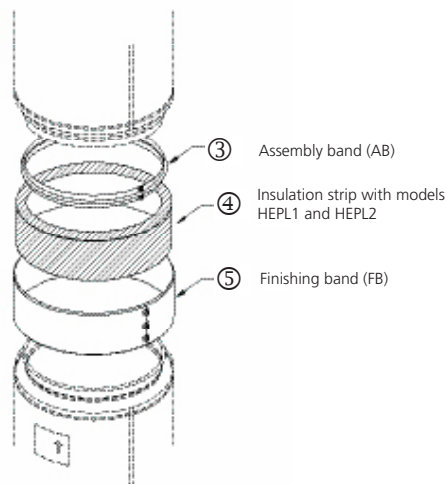
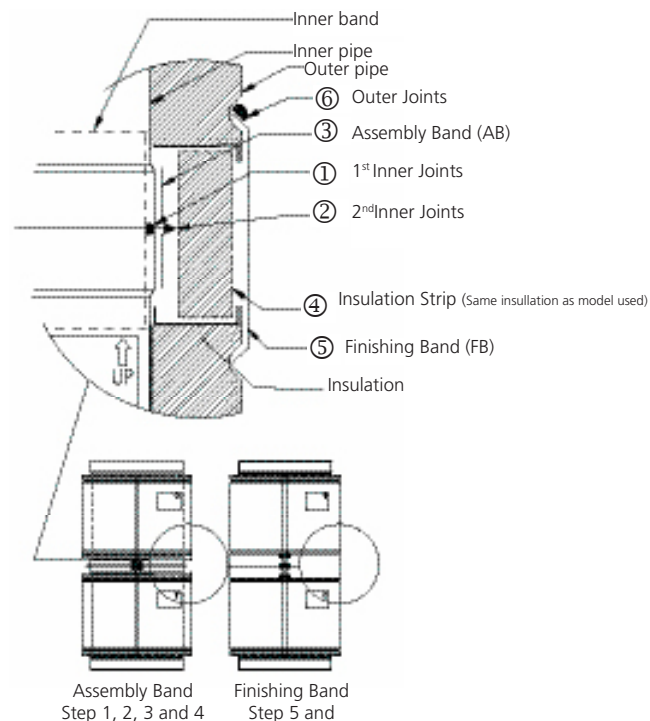


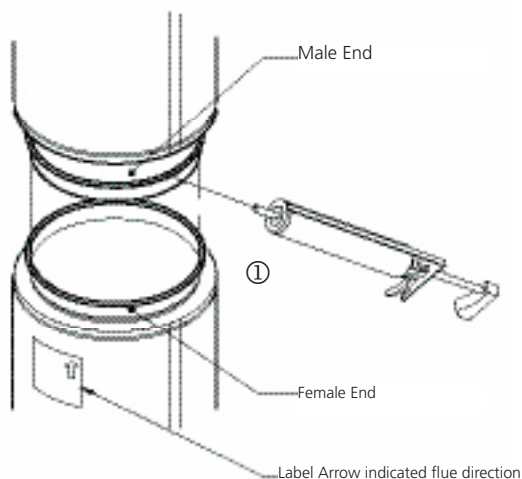
Fig. A-3 - Assembled joint



CAUTIONS

- A. THE FINISHING BANDS (FB) ARE DESIGNED TO SLIDE IN THEIR MATING GROOVES. DO NOT ATTACH BY SCREWS INTO THE OUTER CASING. THE SCREWS SUPPLIED ARE THE ONLY ONES NEEDED FOR PROPER ASSEMBLY.
- B. DO NOT ALLOW SCREWS TO PENETRATE THE INNER PIPE. THIS CAN CAUSE CORROSION, GAS LEAKAGE OR EXPANSION FAILURE.
- C. NEVER USE SCREWS THROUGH THE OUTER JACKET OF A VARIABLE (VL) AND AN AJUSTABLE (AL) LENGTH OR BE LOWS EXPANSION JOINT (EJ).
- D. OBSERVE ADEQUATE SAFETY MESURES WHEN USING A DEGREASER.

Fig. A-1 - Flue Direction



General Information

SUPPORT METHODS AND HEIGHT LIMITS

1. Several support and guiding methods are used to anchor a vent against upward, downward and angular displacement.

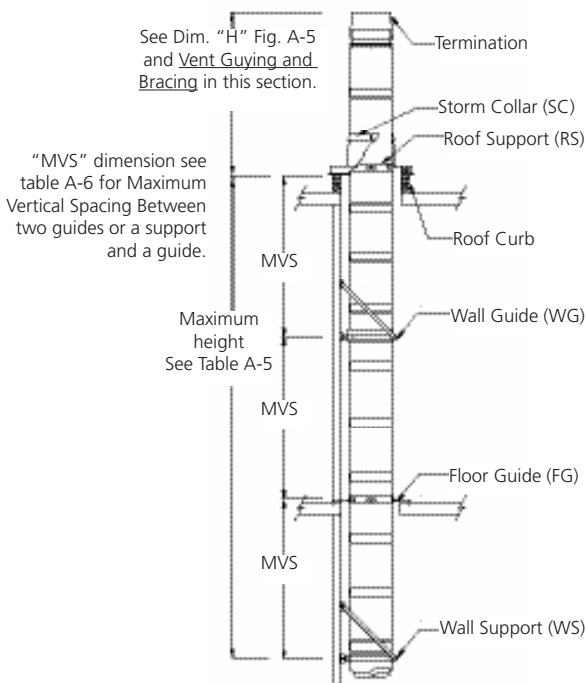
2. These supports and guides used with thermal expansion devices prevent bending stresses on the vent system elbows and joints.

3. Supports and guiding installation methods are described in Section C. Certain limitations apply for proper installation of supports and guides. See Table A-5 and A-6.

Table A-5 - Maximum Vent Heights and Support Method

Support method	Code	Material			
		HEP	HEPL/HEPLA	HEPL1	HEPL2
Wall Support Assembly	WS				
Size 6" thru 12"		70'	70'	62'	55'
Size 14" thru 24"		45'	45'	40'	35'
Size 26" thru 36"		35'	35'	32'	30'
Size 38" thru 48"		30'	30'	26'	23'
Anchor Plate Assembly	AP				
Size 6" thru 48"		50'	50'	40'	30'
Tee Section	T				
Size 6" thru 24"		26'	26'	23'	20'
Size 26" thru 48"		20'	20'	17'	15'
Roof Support	RS				
Size 6" thru 48"		12'	12'	10'	8'
Suspension Band	SB				
Size 6" thru 48"		16'	16'	16'	10'

Fig. A-4 - Maximum vent height and support



Note: When max. height from table A-5 exceeded, resupport using another support.

SUPPORT AND GUIDE SPACING

Table A-6 - Maximum spacing between two guides or a support and a guide for all models

Inside Diameter (in)	HEP/HEPLA HEPL/HEPL1		HEPL2	
	MVS*	H**	MVS*	H**
6	11'-0"	10"-0"	10'-0"	10'-0"
8	11'-4"	10"-0"	10'-4"	10'-0"
10	11'-8"	10"-0"	10'-8"	10'-0"
12	12'-0"	10"-0"	11'-0"	10'-0"
14	12'-4"	10"-0"	11'-4"	10'-0"
16	12'-8"	10"-0"	11'-8"	10'-0"
18	13'-0"	10"-0"	12'-0"	10'-0"
20	13'-4"	10"-0"	12'-4"	10'-0"
22	13'-8"	10"-0"	12'-8"	10'-0"
24	14'-0"	10"-0"	13'-0"	10'-0"
26	14'-4"	10"-0"	13'-4"	10"-0"
28	14'-8"	10"-0"	13'-8"	10"-0"
30	15'-0"	10"-0"	14'-0"	10"-0"
32	15'-4"	10"-0"	14'-4"	10"-0"
34	15'-8"	10"-0"	14'-8"	10"-0"
36	16'-0"	10"-0"	15'-0"	10"-0"
38	15'-0"	10"-0"	14'-0"	10"-0"
40	14'-8"	10"-0"	13'-8"	10"-0"
42	14'-0"	10"-0"	13'-0"	10"-0"
44	13'-0"	10"-0"	12'-0"	10"-0"
46	12'-4"	10"-0"	11'-4"	10"-0"
48	11'-8"	10"-0"	10'-8"	10"-0"

* MVS = Maximum Vertical Spacing between two guides or a support and a guide in a vertical position.

** H = Maximum free standing Height above the roof.

MHS = Maximum Horizontal Spacing between two guides or a support and a guide is 10 Feet. Exception for Hanger Bracket assembly (HB) where max. spacing is 5 feet.

PIPE WEIGHT

Pipe weight is given in pounds per foot of pipe for each diameter. It is important to know the weight of the system section for vent support or guiding. Pipe weight (Table A-7) along with maximum vent system height (Table A-5) are necessary to calculate the proper anchor strength needed with Wall Supports (WS), Anchor Plate (AP) supports, Wall Guides (WG), Wall Bands (WB) and Suspension Bands (SB).

Table A-7 - Pipe weight in lb/ft

Inside diameter	Model				
	HEP	HEPLA	HEPL1	HEPL	HEPL2
6	2.2	4.5	5.8	5.1	8.0
8	2.9	5.8	7.4	6.3	10.0
10	3.6	7.1	9.1	7.6	12.0
12	4.3	8.4	10.8	8.9	14.1
14	5.1	9.7	12.4	10.2	16.1
16	5.8	11.0	14.1	11.5	18.1
18	6.5	12.3	15.7	12.8	20.2
20	7.2	13.6	17.4	14.1	22.2
22	7.9	14.9	19.1	15.4	24.2
24	8.7	16.2	20.7	16.7	26.3
26	9.4	17.5	22.4	18.0	28.3
28	10.1	18.8	24.1	19.3	30.3
30	10.8	20.1	25.7	20.6	32.4
32	11.5	21.4	27.4	21.9	34.4
34	12.3	22.7	29.1	23.2	36.4
36	13.0	24.0	30.7	24.5	38.5
38	13.7	25.3	32.4	25.8	40.5
40	14.4	26.6	34.1	27.1	42.3
42	15.2	34.1	42.0	35.0	51.1
44	15.9	35.7	44.0	36.6	53.5
46	16.6	37.3	45.9	38.2	55.8
48	17.3	38.9	47.9	39.8	58.1

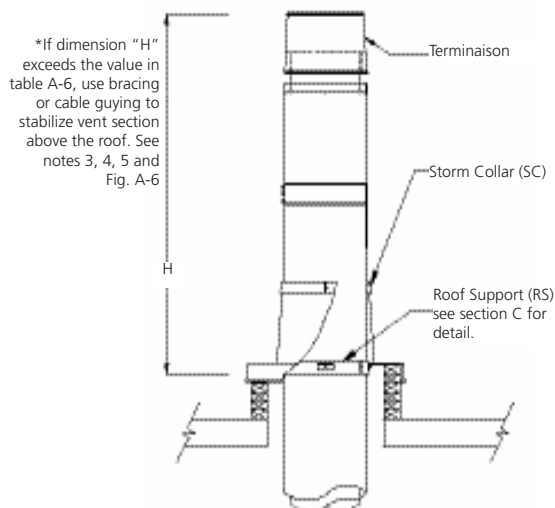
VENT GUYING AND SPACING

1. Proper guying and bracing is essential for part of the Vent system that extends above the roof or a parapet wall. The vent at this point is subject to wind conditions and needs special attention for proper stabilization.

2. For low freestanding installations the system needs no special guying or bracing if overall height between the roof support and the top of the vent is no greater than 10 feet. See Fig. A-5 for detail

Note: In general, no additional support is needed below the roof provided that the overall height of the chimney up to the roof support does not exceed the maximum height Described in Table A-5. See Fig.A-4.

Fig. A-5 - Maximum freestanding Vent height

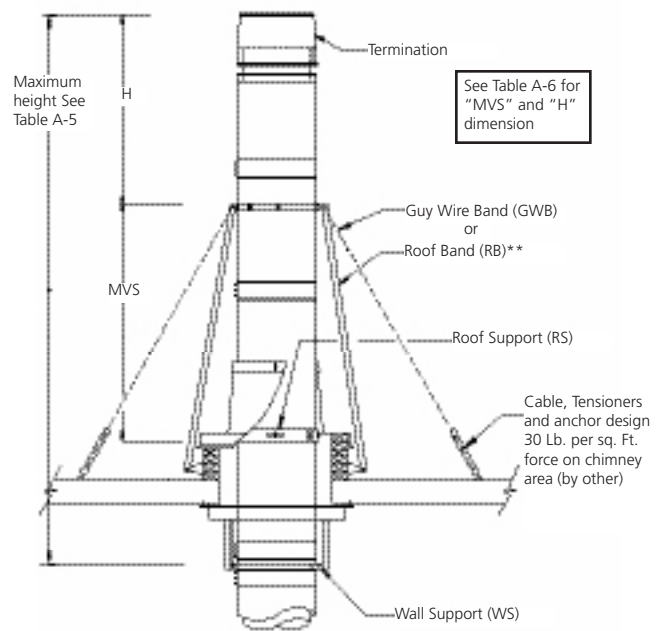


3. For above the roof installations where freestanding height limits are exceeded, cables or bracing are needed to resist heavy wind conditions and effects and prevent structural damage. Rigid bracing can be used where chimney height above roof is relatively low.

4. Roof Band assembly (RB) model part is used for rigid bracing in above the roof installations. Guy Wire Band (GWB) model can also be used as an option, instead of the roof band assembly.

5. In addition to the roof support where freestanding height is exceeded, the vent needs to be secured below the roof with a support to protect the roof flashing against additional loads caused by wind on the exposed vent system.(See Fig. A-6).

Fig. A-6 Vent height with rigid bracing or guying option



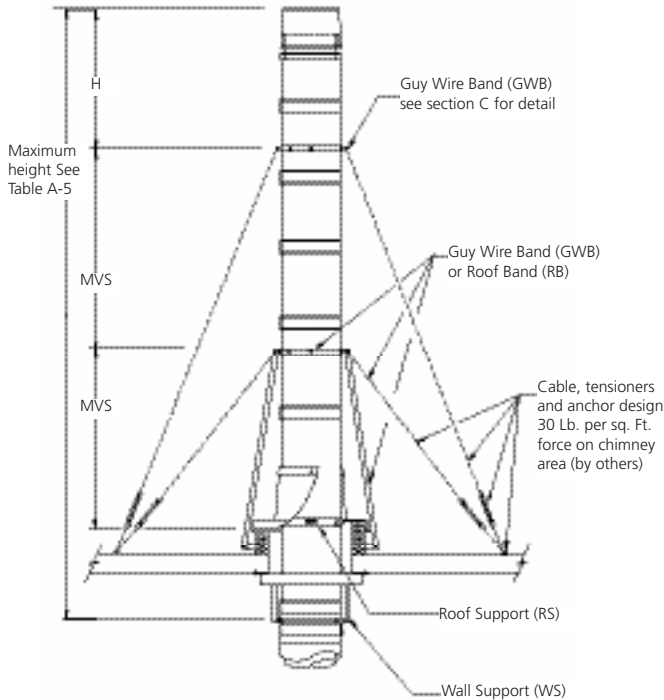
** See

Note: Max. height over the roof for single guying or roof band is MVS + H. For greater heights see Fig. A-7.

General Information

6. Greater height above the roof can be allowed by stabilizing the exposed vent with additional guying cables as seen in Fig.-A-7.

Fig. A-7 - Maximum vent height with multi-level guying



Note: Max. height over the roof is $(2 \times MVS) + H$. For greater height use of welded joints is necessary.

TERMINAISON HEIGHT

Vent systems shall terminate above the roof level in accordance with the following requirements:

1. Five feet above the roof level or any adjacent flat roof, wall parapet or air intakes, and/or in accordance with the following NFPA 211 requirements.
2. Where chimney terminates at less than 10 feet from any adjacent ridge, wall or parapet, the chimney shall terminate at minimum 3 feet above the ridge, wall or parapet.
3. Where chimney terminates at more than 10 feet from ridge, wall or parapet, a minimum height of 2 feet shall be required above the ridge wall or parapet.

Vent systems that exits the structure through a sidewall or the like shall terminate in accordance with the following requirements:

1. Located above the snow line in geographical areas where snow accumulates.
2. Not located in traffic areas, such as walkways, unless the venting system is at least 7 feet (2.13m) above the ground.

The installation of the venting system relative to appliances that incorporate combustion air inlet systems shall have a venting system that terminates:

1. 6 feet (1.8 m) or more from the combustion air intake of any appliance
2. More than 3 feet (0.91 m) from any other building opening, gas utility meter, service regulator, and the like
3. Less distance if specified in the appliance's instructions.

The venting system shall not be routed into, through, or within any other vent such as an existing masonry or factory built chimney flue. (Exception: A masonry chimney flue may be used to route the venting system if no other appliance is vented into the same masonry chimney flue and the installation instructions specify such restrictions.)

Contact Local Building or Fire Officials About Restrictions and Installation Inspection in Your Area.

MULTI-BOILER EXHAUST NOT RECOMMENDED

A common exhaust system for multiple boiler installation is generally not recommended. Check with your boiler manufacturer prior to common exhaust system design, because exhaust gas from operating units tends to flow to stand-by units where condensation may form.

WATER IN BOILER AT START-UP MAY CAUSE DAMAGE. IN GENERAL, A SEPARATE EXHAUST SYSTEM SHOULD BE PROVIDED FOR EACH BOILER.

Tees, Elbows, Increasers

90° TEE (T90)

1. Generally used to connect the horizontal length from an appliance to the vertical length in boiler exhaust systems.

2. The 90° Tee (T90) will support up to 20 to 30 feet of vertical chimney height when it is supported from below.

3. The assembly includes a Finishing Band (FB); Assembly Band (AB) and insulation strip (where applicable). Joint assembly for the tee, elbow, Tee Cap (TC) and connection to the pipe sections is done in the same manner as described in Section A, Piping and Fitting Assembly.

4. A Tee Cap (TC) or Drain-Tee Cap (DC) may be used to block one of the openings for purposes of cleaning, inspection or drainage.

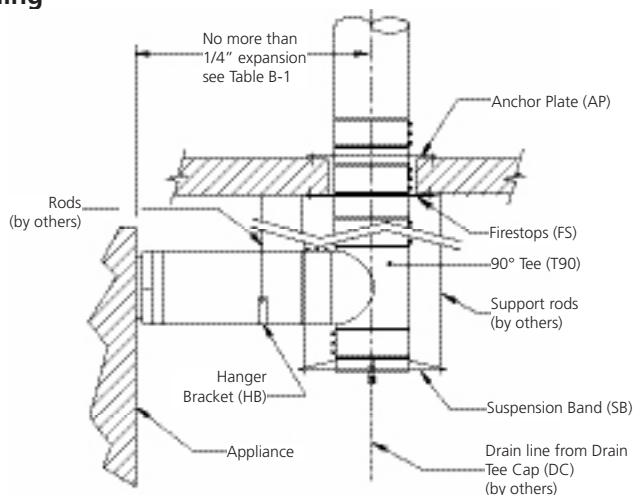
5. When used for drainage purposes, the Drain-Tee Cap (DC) is installed at the base of the tee and is piped to a suitable drain (3/4" diameter) and serves to collect rain or condensation water. (See Fig.B-5)

90° TEE SUPPORT

When designing a boiler exhaust system, special care must be observed in supporting Tees and Elbows. Following are design guidelines for this purpose.

1. Provide access for easy removal of tee cap.
2. Never use the system outer casing for support.

Fig. B-1 - Single axis 90° Tee (T90) support from roof and ceiling



45° TEE (T45)

1. The use of this part will require an additional 45° Elbow (E45) to provide the low resistance 90° flow direction change. (See Fig.B-2)

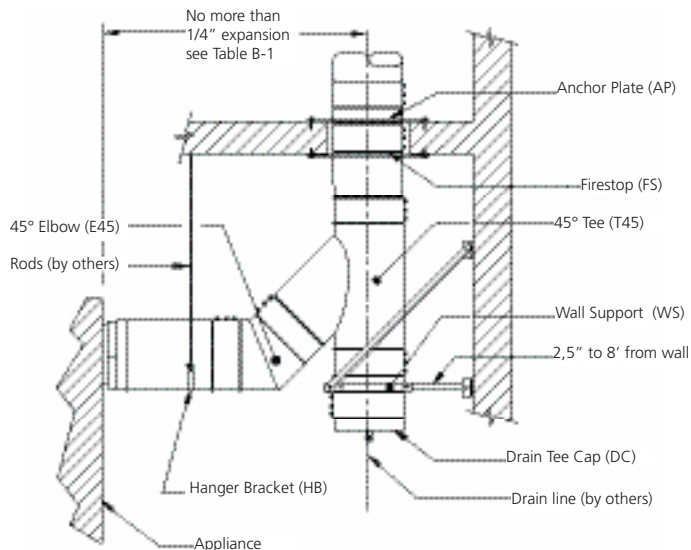
2. The 45° Tee (T45) is also used for multiple appliance exhaust in manifold breaching. It allows lower friction losses those resulting in smaller manifold diameter. See Fig.B-7.

3. Like the 90° Tee (T90), a Tee Cap (TC) or Drain-Tee Cap (DC) may be used to block one of the openings for purposes of cleaning, inspection or drainage. See Fig B-4 and B-5 for tee caps installation.

4. The 45° Tee (T45) will support up to 20 to 30 feet of vertical vent height when it is supported from below. The assembly includes a Finishing Band (FB), Assembly Band (AB) and insulation strip (where applicable).

5. Joint assembly for the tee, elbow, tee cap and connection to the pipe sections is done in the same manner as described in Section A Piping and Fitting Assembly.

Fig. B-2 - Single axis 45° Tee (T45) support from interior Wall



45° TEE SUPPORT

1. Provide access for easy removal of tee cap
2. Never use the system outer casing for support.

WYE 90° (W90)

Used for inspection or pipe cleaning, the Wye 90° (W90) is normally used in grease duct application. (See grease duct installation instruction manual).

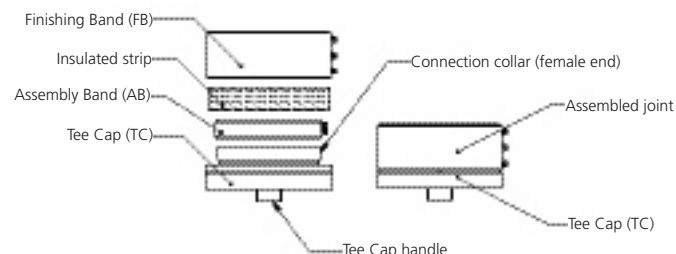
TEE CAP (TC)

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

2. The assembly includes a Finishing Band (FB), Assembly Band (AB) and insulation strips (where applicable).

3. Joint assembly between the Tee Cap (TC) and the Tee is done in the same manner as described in Section A Piping and Fitting Assembly.

Fig. B-4 - Tee Cap (TC)

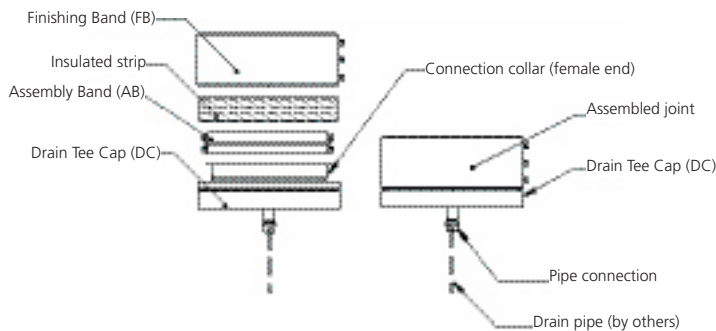


Tees, Elbows, Increasesers

DRAIN-TEE CAP

1. Used to block the lower vertical opening of a tee. It serves to collect rainwater that may enter the vent system or water caused by condensation.
2. Removable, it facilitates access for inspection and maintenance of the vent.
3. To be connected to a drain of 3/4" diameter-NPT. It is connected to the tee with the joint assembly.
4. Joint assembly between the Drain-Tee Cap (DC) and the tee is done in the same manner as described in Section A Piping and Fitting Assembly.

Fig. B-5 - Drain-Tee Cap (DC)



INCREASER (I)

1. Used to increase the diameter of the system.
2. The Increaser (I) can be connected directly to a 45° Tee (T45). (See Fig.B-6b) and can be used in a multiple appliance manifold. (See Fig.B-7).
3. The Increaser (I) includes a transition section tapered at a 14° angle, which provides a lower friction loss coefficient. (See Fig.B-6a Detail B)
4. Larger diameter Increasers (I) are available on order or as specified. The angle of the Increaser (I) is standard but the length of the fitting varies depending on the diameter to be increased.
5. Joint assembly between the Increaser (I) and the vent is done in the same manner as described in Section A Piping and Fitting Assembly.

Fig. B-6a - 2" diameter Increaser (I)

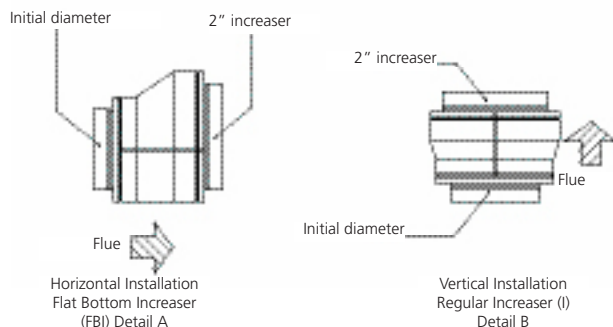
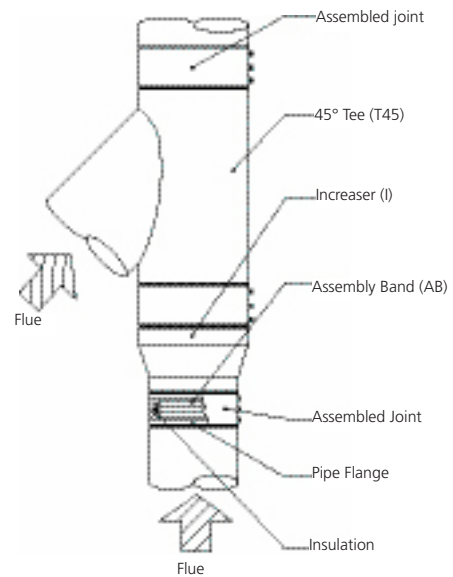


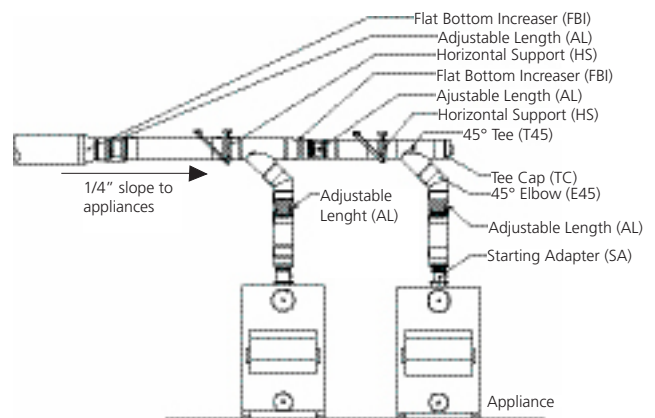
Fig. B-6b - Increaser (I) with 45° Tee (T45)



REDUCER (R)

1. Used to reduce the diameter of the vent. It is used mainly at the inlet of the vent system.
2. Specify the diameter of the inlet and outlet of the fitting. It is connected to the vent in the same manner as for Increaser (I) model except that the ends are inverted.
3. Joint assembly between the Reducer (R) and the vent system is done in the same manner as described in Section A Piping and Fitting Assembly.

Fig. B-7 - Manifold using 45° Tee (T45) and Increaser (I)



ELBOWS

1. Elbows are used for changes in direction in horizontal or vertical portions of a vent system.
2. All elbows feature the standard joint assembly as described in Section A Piping and Fitting Assembly.
3. Elbows are used in combination to make up different angles ranging from 5° to 90° in horizontal and vertical breechings of the vent system.

Tees, Elbows, Increasers

4. When elbows are used for offsets in the main vertical portion of the vent, caution should be exercised to prevent excessive bending forces and/or design problems. (See OFFSETS in this Section for details)

5° ELBOW (E5)

1. Used for offset or deviation of the horizontal part of the vent system by 5°.
2. May be used to slope a vent to facilitate the run-off of condensation water from the vent system. (See Fig.B-7b)

Fig. B-7a - 5° Offset using 2 x 5° Elbows (E5)

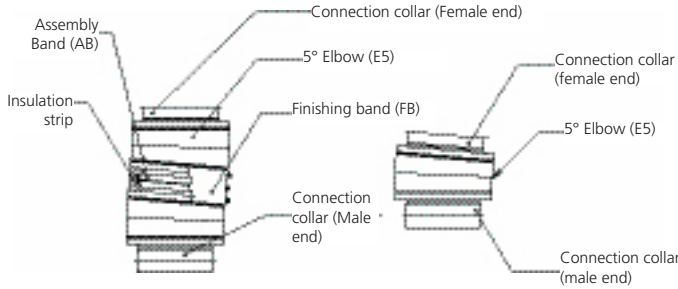
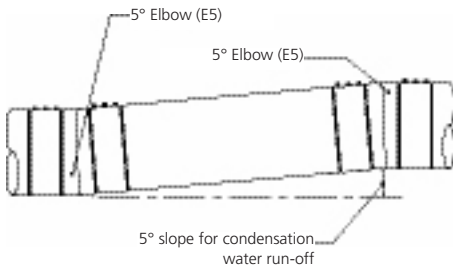


Fig. B-7b - 5° Horizontal slope for condensation water run-off using 5° Elbows (E5)



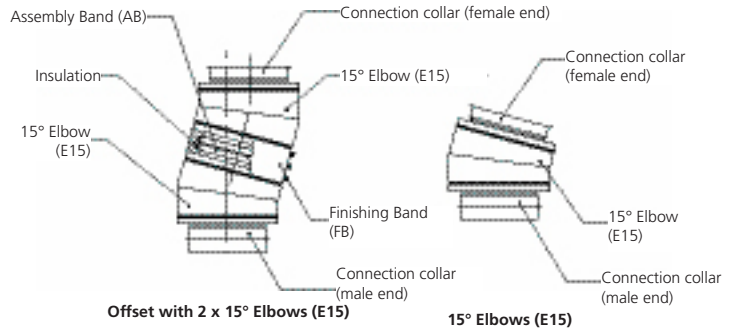
Any horizontally installed portion of a venting system shall have a slope (upwards for Category II, III or IV appliances or downwards for Category III or IV appliances) not less than 1/4 inch (6.4mm) every 12 inches (305mm) to prevent collection of condensate at any location in the assembly.

Means shall be provided for draining the condensate. Due to ice build up and blockage, it is required that the proper sloping be employed when the vent is installed in a horizontal installation. Refer to the appliance manufacturer's installation instructions for further details regarding the installation of the condensate drain fittings.

15° ELBOW (E15)

Used for offset or deviation of the vent by 15°.

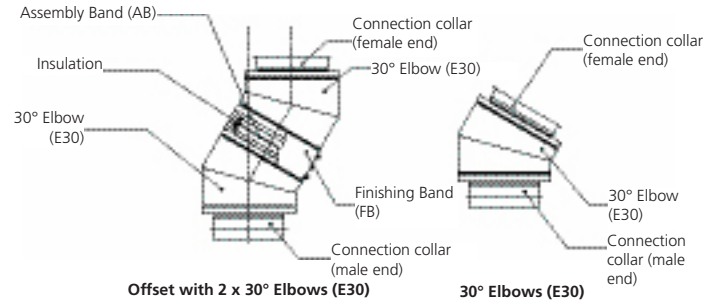
Fig. B-7c - 15° Elbow (E15)



30° ELBOW (E30)

Used for deviation of the vent by 30°.

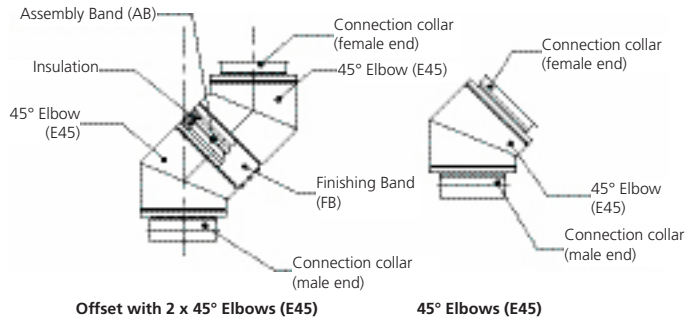
Fig. B-7d - 30° Elbow (E30)



45° ELBOW (E45)

Used for deviation of the vent by 45°. Can also from a 90° Elbow by using two Elbow. (See fig. B-7f)

Fig. B-7e - 45° Elbow (E45)

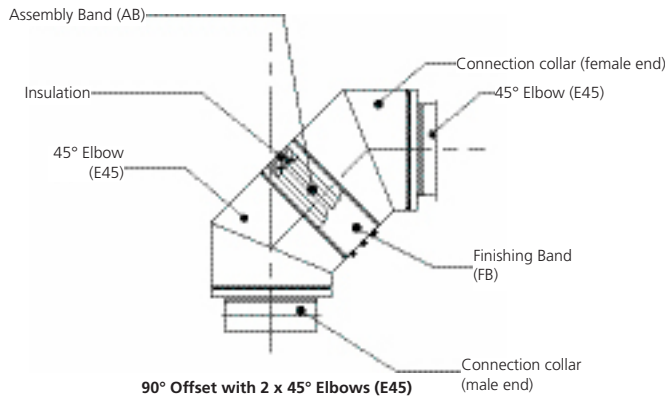


Tees, Elbows, Increasesers

90° ELBOW (E90)

Used for deviation of the vent by 90°

Fig. B-7f - 90° ELbow 2 x (E45) or also 1 piece 90° Elbow (E90)



OFFSETS

1. Except where absolutely necessary, sloped or horizontal offsets in the vertical portion of a system above the breeching should be avoided.

2. Because elbows (and fittings) can only take limited forces due to any bending moments, special care should be exercised in designing the bracing for elbows.

3. Structural parts such as posts or beams may also be needed to hold vent supports in position.

4. Vent system for combination fuel heating appliances that are capable of burning solid fuel or are convertible to solid fuel are limited to the same 30° slope even if the current choice of fuel is gas or oil.

5. The length of offset, if one is necessary, is determined by strength considerations. The maximum dimension between supports, given as the "MHS" dimension in Section A of these instructions, is applicable to all horizontal and sloped orientations. (See Fig.B-8)

6. With frequent resupport, there is no structural or operating limit to the length of horizontal or sloped portions of a vent, providing the system meets the capacity, pressure drop of available equipment.

7. The carrying capacity of supports and their structural attachments must take into account the weight of the offset plus whatever vertical pipe is carried by that support.

8. Height limits for supports are tabulated in Section A of these instructions.

9. The ends of any sloped or horizontal offset must be anchored to prevent overstressing elbows.

10. The vertical sections of system above the offset must also be supported or anchored and guided where necessary.

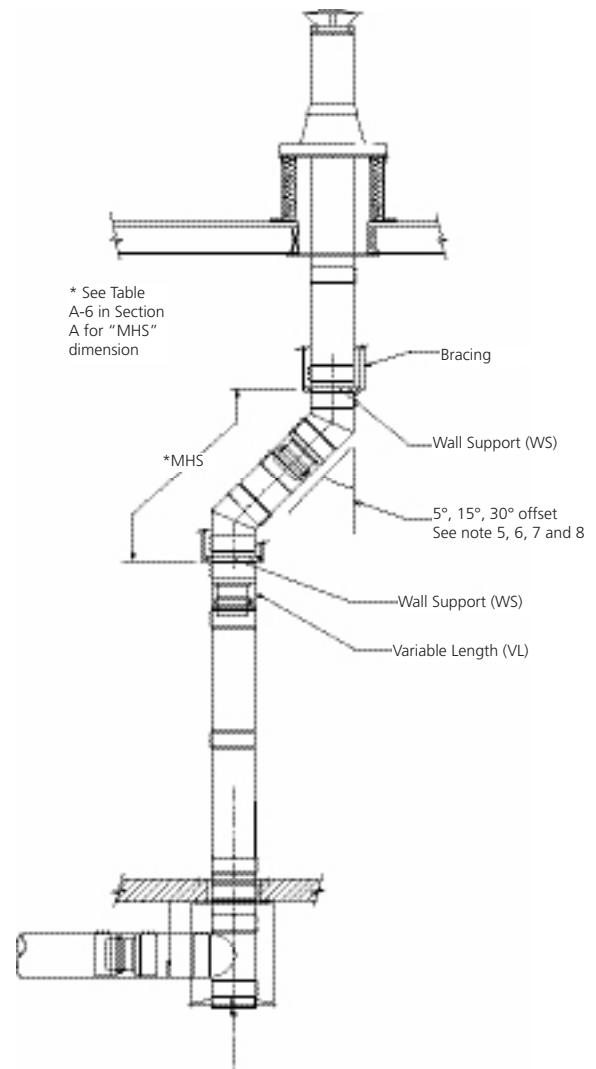
11. Roof Support (RS), Wall Support (WS), Wall Guide (WG) may be used in a variety of ways for offset support to achieve the structural stability of the vent system. Preferred methods of using supports are shown in Section C.

12. Resupports such as those shown in Fig.B-8 must be securely anchored to walls, posts, or locally fabricated rigid

framework. This framework must be designed to assure stability of attached supports, such as Anchor Plate (AP) supports and Wall Supports (WS).

13. Supports suspended by threaded rods or from small size angles or straps are usually not satisfactory to resist bending moments due to offsets.

Fig. B-8 - Maximum horizontal offset



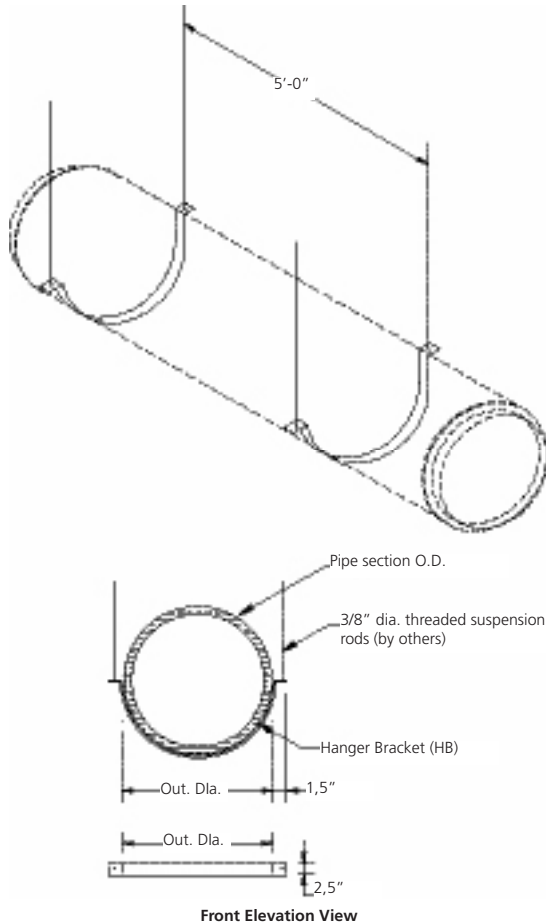
SPECIAL PARTS

Available when specified are special parts or components used in vent systems that can be factory-built to accommodate field situations where standard parts cannot be used.

HANGER BRACKET ASSEMBLY (HB)

Used to support the flue in horizontal runs. To be installed by means of 3/8" diameter threaded suspension rods (by others). Generally installed every 5'-0" of chimney section. (See Fig. C-1.)

Fig. C-1 - Hanger Bracket Support Assembly (HB)



6. The diagonal braces may be attached to the wall either above or below the supporting plate.

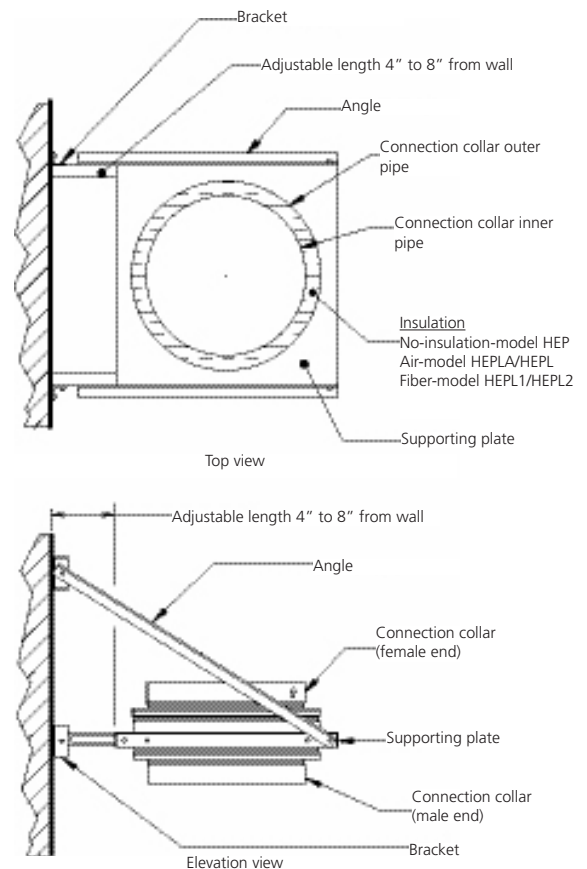
7. The Wall Support (WS) is the maximum strength support for vertical models. It is used to maintain joint alignment.

8. The support may be required to support both upstream and downstream parts of a tee, which will be protected from excessive bending stresses.

9. The wall support method is intended only for attachment to NON-COMBUSTIBLE surroundings such as steel structure, concrete blocks or other masonry, with clearances adequate for access and assembly. Heat conduction can be reduced by means of spacers. Wall Support (WS) is not suitable for attachment to wood or combustible wall structures. Wall Support must be secured to the building with rigid structural framework

Height Limit: See Section A Table A-5 for maximum height of Wall Support (WS)

Fig. C-2 - Wall Support assembly (WS)



Note: For connection of the Wall Support (WS), Horizontal Support (HS) and Anchor Plate (AP) support to the Vent system, see typical Installation detail (Fig. C-2a) on next page.

WALL SUPPORT ASSEMBLY (WS)

1. The Wall Support (WS) Assembly consists of a 12" vent (11" effective length) section, continuous laser welding to a square support plate.

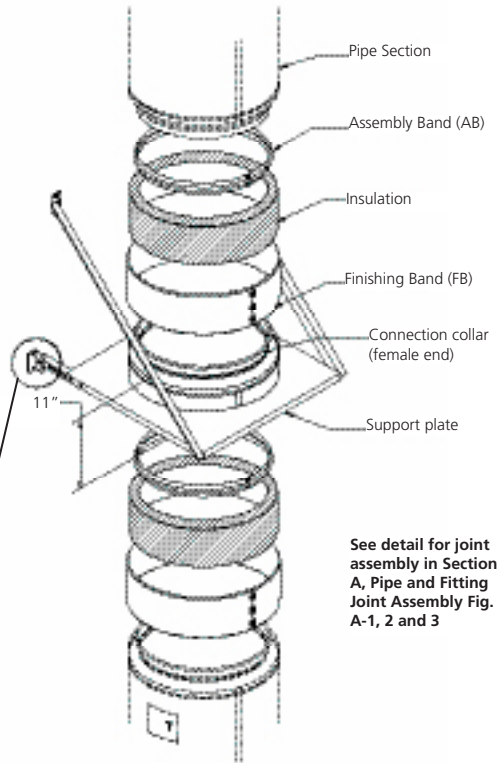
2. The vent section, which extends both above and under the support plate is used as connection collars for quick and easy joint assembly.

3. The assembly is supplied with mounting brackets and angle struts for diagonal bracing (See Fig. C-2), Assembly Band (AB) and Finishing Band (FB).

4. The vent sections are joined to the Wall Support (WS) in the same manner as described in Section A Pipe and Fitting Joint Assembly. Fig. A-1, 2 and 3. Also See Fig. C-2a in this Section.

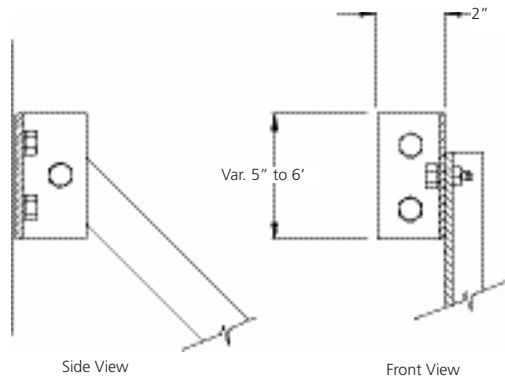
5. Used to support the vent in vertical runs, it maintains the system at an adjustable distance between 2.5" and 10" from the wall.

Fig. C-2a - Typical joint for Wall (WS), Horizontal (HS) and Anchor Plate support(AP)



Note: Minimum clearance between chimney and combustibles is 2.5" when installed with wall brackets only. Do not attach the supporting plate directly to combustible materials. Always use wall brackets. For more than 2.5" clearance, use wall brackets and adjustable angles.

Fig. C-2b - Wall Bracket Detail



HORIZONTAL SUPPORT (HS)

1. The Horizontal Support assembly (HS) consists of a 12" vent (11" effective length) section, continuous laser welding to a square support plate.

2. The vent system section, which extends both ahead and behind the support plate, is used as connection collars for quick and easy joint assembly.

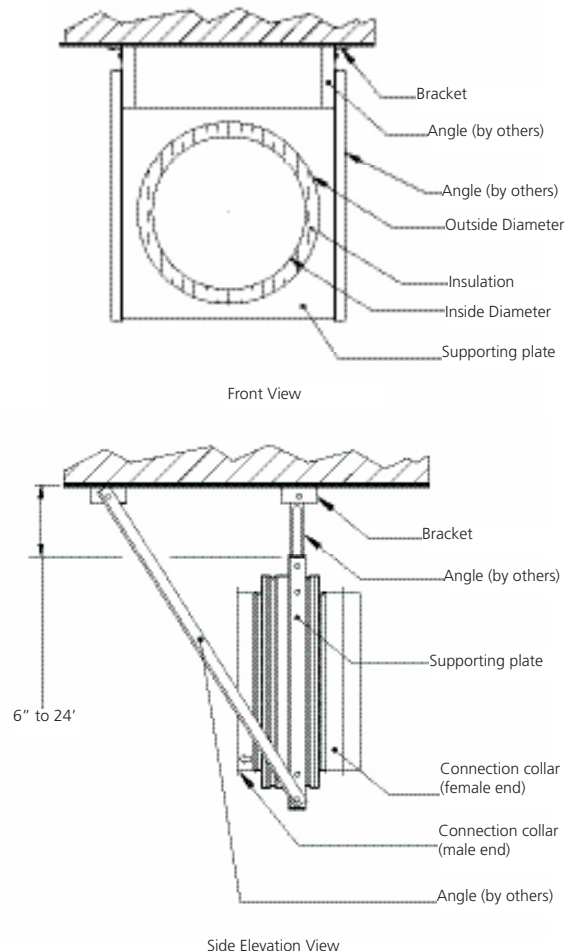
3. The assembly is supplied with mounting brackets, an Assembly (AB) and Finishing Band (FB). See Fig.C-3.

4. The system sections are joined to the Horizontal Support (HS) in the same manner as described in Section A Pipe and Fitting Joint Assembly. Fig. A-1, 2 and 3. Also See Fig.C-2a in this Section.

5. Used to support the vent in horizontal runs. It holds the vent system at an adjustable distance from the ceiling. The diagonal braces may be attached to the ceiling either ahead or behind the supporting surface. See Fig. C-3.

6. The horizontal support must be secured to the building with a rigid structure. Under no circumstance should a horizontal support be secured with threaded suspension rods, since this will not prevent pipe sway.

Fig. C-3 - Horizontal Support Assembly (HS)



ANCHOR PLATE ASSEMBLY (AP)

1. The anchor plate assembly consists basically of a 12" vent (11" effective length) section that is welded to a steel plate.

2. The vent system section that extends both above and under the plate is used as connection collars for quick and easy joint assembly to the pipe sections.

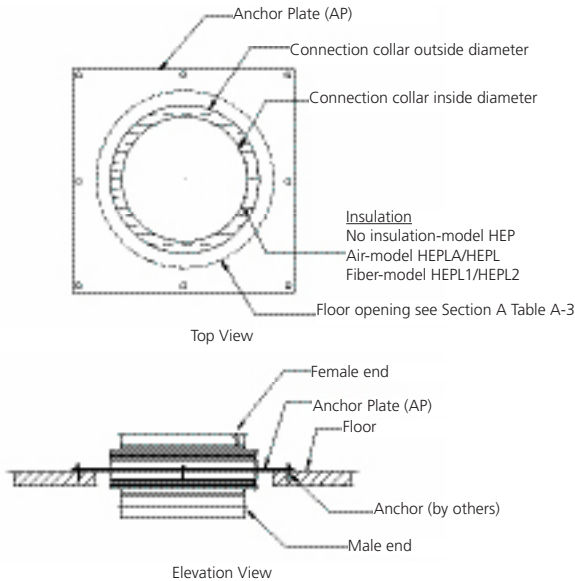
3. It is supplied with both an Assembly Band (AB) and Finishing Band (FB).

4. Used to support the system in vertical runs. It is attached to the floor by means of anchors (by others) See Fig.C-4.

5. Pipe sections are then attached to the support collars in the same manner as described in Section A Pipe and Fitting joint assembly

Height Limits: See Section A Table 5 for maximum support height of Anchor Plate (AP).

Fig. C-4 - Anchor Plate Assembly (AP)

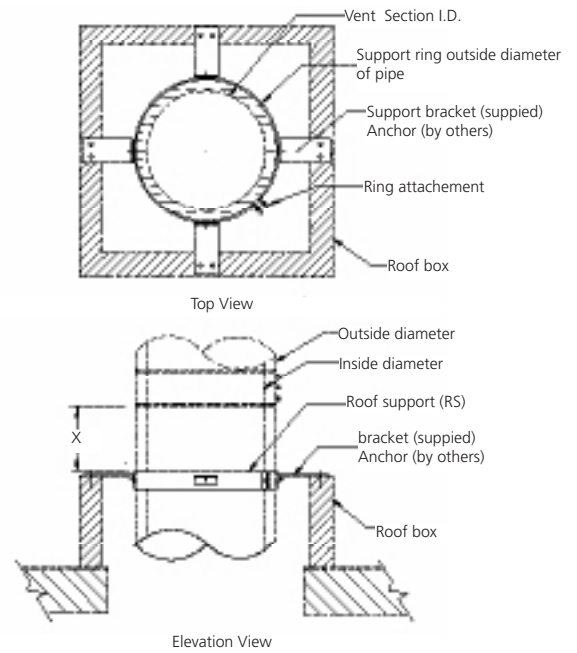


ROOF SUPPORT (RS)

Used to support and guide the portion of the vent which extends to the roof. It is attached to the roof box by means of four angles (See Fig.C-5). It maintains a minimum distance between the vent system and combustible materials at the roof.

Height Limits: See Section D Roof and Wall Penetration for complete Roof Support (RS) assembly details and use.

Fig. C-5 - Roof Support (RS)

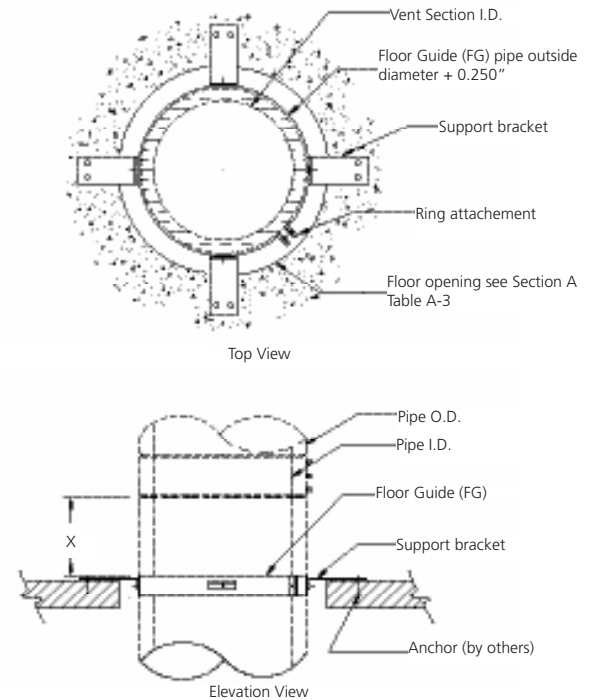


Keep joint away from support X = 6" Min. above and under

FLOOR GUIDE ASSEMBLY (FG)

Used as a guide at a floor penetration. It is attached to the floor by means of 4 angle brackets. It maintains a minimum distance between the vent system and combustible floor material.

Fig. C-6 - Floor Guide assembly (FG)



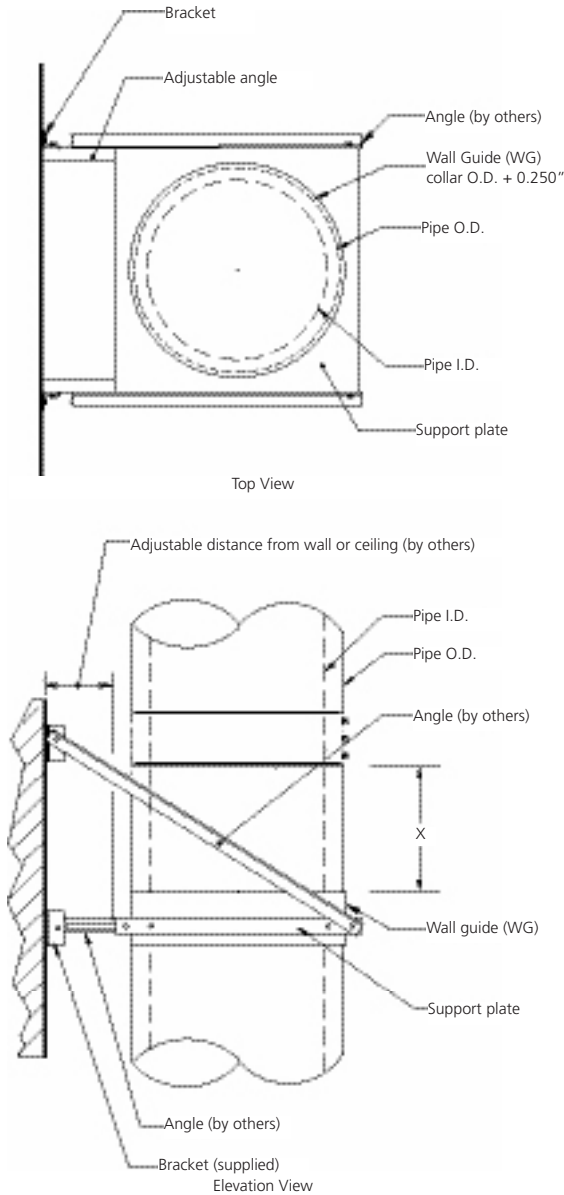
Keep joint away from support X = 6" Min. above and under

Structural Support and guiding

WALL AND CEILING GUIDE ASSEMBLY (WG)

Used to guide and allow the expansion of the vent. It holds the flue or vent system at an adjustable distance from ceiling or wall. The diagonal braces may be attached above or below the guide plate. The ring is 1/4 " larger than the outside diameter of the system pipe to allow for sliding. (See Fig.C-7)

Fig. C-7 - Wall and Ceiling Guide Assembly (WG)



Keep joint away from support X = 6" Min. above and under

WALL BAND ASSEMBLY (WB)

Stabilization of the vent along a vertical wall is obtained by the use of the Wall Band (WB) assembly. For maximum recommended distance between a Wall Band (WB) and another guide or support, see Table-A-6 "MVS".

Fig. C-8a - Wall Band Assembly (WB)

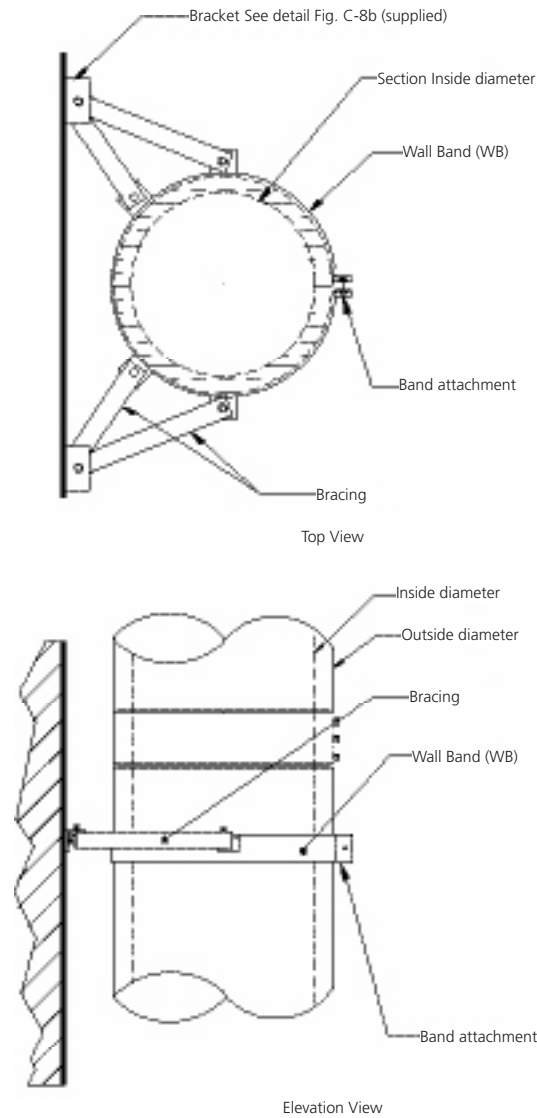
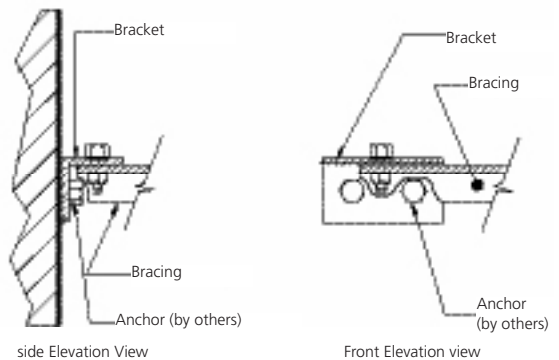


Fig. C-8b - Bracket Detail

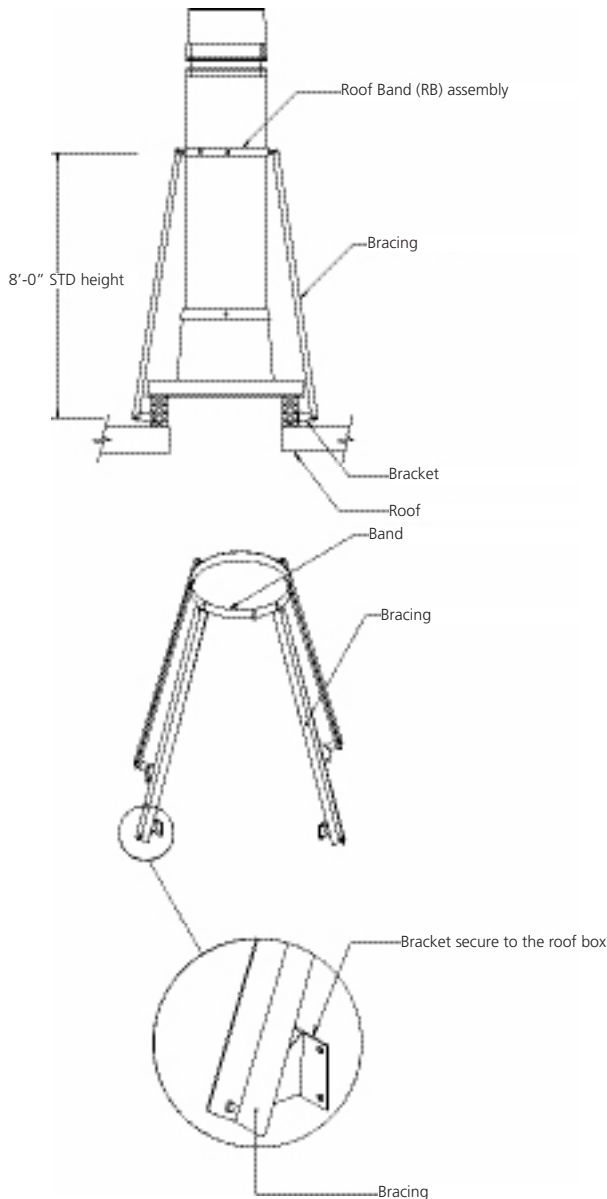


ROOF BAND (RB)

Used to stabilize the vent laterally where it extends rises more than 10'-0" beyond the roof or for places exposed to strong winds. It is attached to the vent system and the roof box, and does not require anchoring to the roof.

Height Limits: See Section A for maximum height of system using suspension band (SB) support.

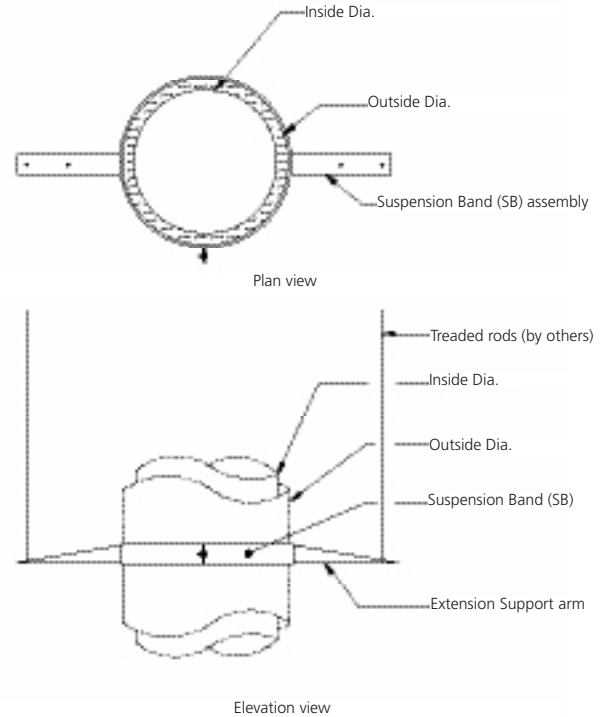
Fig. C-9 - Roof Band Assembly



SUSPENSION BAND (SB)

Used to stabilize and support a flue or a vent in vertical runs. It avoids the transfer of the flue weight to the appliance. To be used with threaded rods (By others).

Fig. C-10 - Suspension Band (SB)



Height Limits: See Table A-5 for maximum height of system using Suspension Band (SB) support.

Structural Support and guiding

GUY WIRE BAND (GWB)

Used to stabilize a vent laterally where it extends more than 10'-0" beyond the roof or for places exposed to strong winds. It is attached to the vent system and is designed to receive 3 guy cables 120° apart. It may be manufactured to receive 4 guy cables 90° apart. See Fig.C-11b.

Height Limits: See Section A Vent Guying and Bracing for maximum height Guy Wire Band (GWB) assembly.

Fig. C-11a - Guy Wire Band (GWB) Typical installation

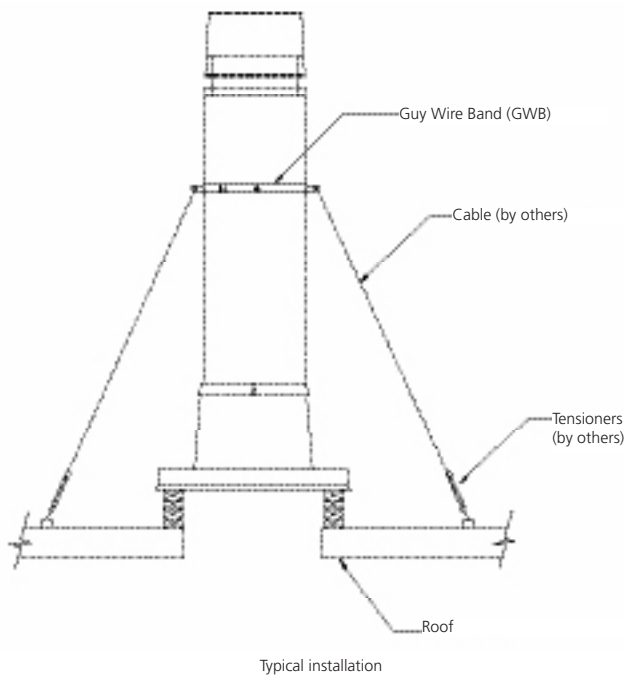
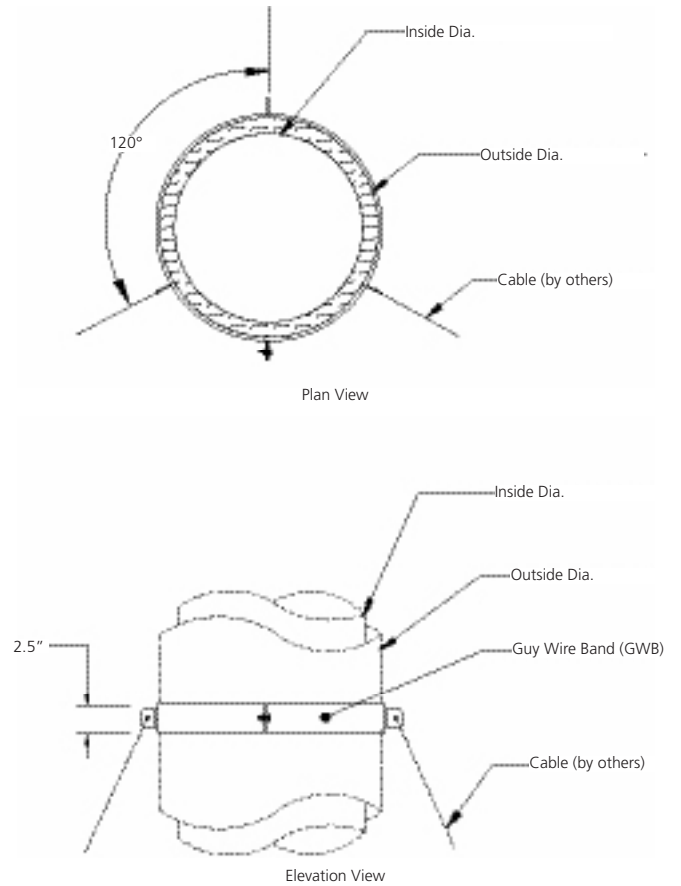


Fig. C-11b - Guy Wire Band (GWB) Detail

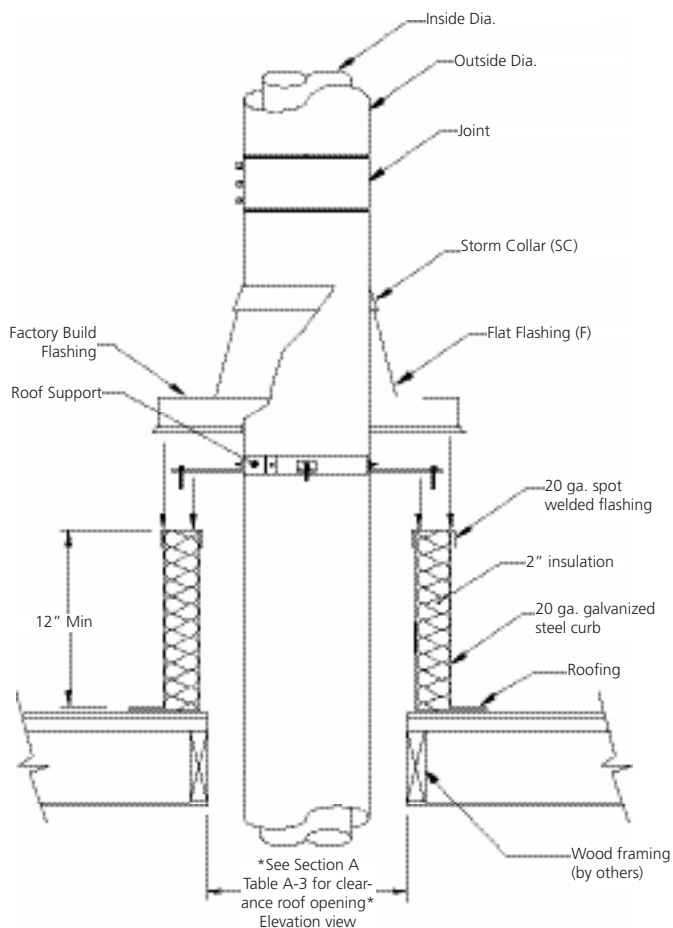


Roof and Wall Penetration

FLAT FLASHING ASSEMBLY (F)

The Flat Flashing assembly (F) is primarily used for boiler or low temperature exhaust where a vent section passes through a roof made of combustible material. It is designed to be installed on a flat roof curb of a minimum height of 12" (See Fig. D-1). For some areas, greater heights may be needed according to local code requirements. The roof framing dimension must provide sufficient opening to comply with the minimum clearance from combustibles. (See Section A for minimum clearance) The Roof Support (RS) is secured to the top of the roof curb using two 1/4" x 2 1/2" inch lag bolts in each support bracket. (See Section C for detail of Roof Support (RS)). The Flat Flashing (F) is then lowered on to the curb and the Storm Collar (SC) secured to the vent system section with the screws supplied. A Ventilated Flashing (VF) option is also available where air circulation between the system and the roof structure is wanted. The Ventilated Flashing (VF) option may serve as a ventilation outlet in small boiler rooms with gravity air supply.

Fig. D-1 - Flat Flashing Roof Assembly (F)



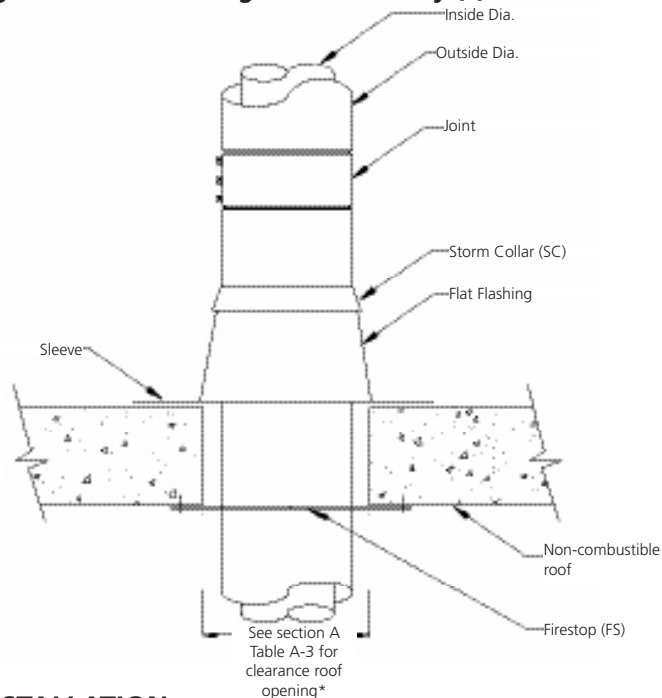
* Note: 1. May be used in non-combustible roof application, See Section A Table-A-3 for roof openings.

2. Framing of roof openings for combustible roof applications must meet specified clearances in Section A Table A-3. Proper framing is the responsibility of the installing contractor.

FLAT FLASHING (F) WITHOUT ROOF CURB

The Flat Flashing (F) assembly is primarily used for low temperature exhaust where a vent section passes through a roof made of non-combustible material.

Fig. D-2 - Flat Flashing Roof Assembly (F)



INSTALLATION

1. Install roof curb over the roof opening.
2. Secure the Vent Section to the roof curb with the Roof Support (RS).
3. Install the Flashing (F) over the roof curb.
4. Install the Storm Collar (SC) by securing it to the pipe section

WALL PENETRATION

1. Where a vent system section passes through a wall, the combustible material in the wall need to be protected from radiation heat from the system.
2. Table-D-1 shows the different parts that provide sufficient clearance between the vent and the combustibles in the wall.
3. Table-D-1 also shows required clearance between the vent system and the combustibles as well as the wall opening needed for each system model.

Table D-1 - Wall Penetrations

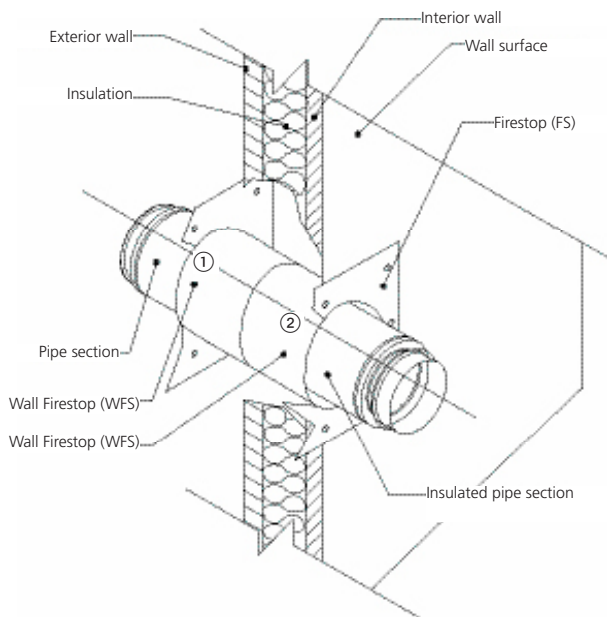
Model	Wall Penetration part Firestop Type	Max. wall Thickness	Wall opening	Clearance	See Detail
HEPLA, HEPL, L1, L2	Non-insulated (WFS)	18"	Table A-3	Table A-2	Fig. D-3, 4, 5

**Note: 1. Finishing collar is used only for exterior wall application
2: Clearances are calculated from I.D. to the combustibles.**

WALL FIRESTOP (WFS)

The Wall Firestop assembly (WFS) is primarily used for wall penetration allowing a section to pass through a wall made of combustible material. It is used to maintain a minimum clearance between the combustible wall material and the Vent section passing through the wall.

Fig. D-3 - Wall Firestop assembly



Do not install insulation in the opening between the pipe outside wall and the firestop inner wall, allow for free air circulation at all times.

Fig. D-4 - Wall Firestop (WFS) assembly

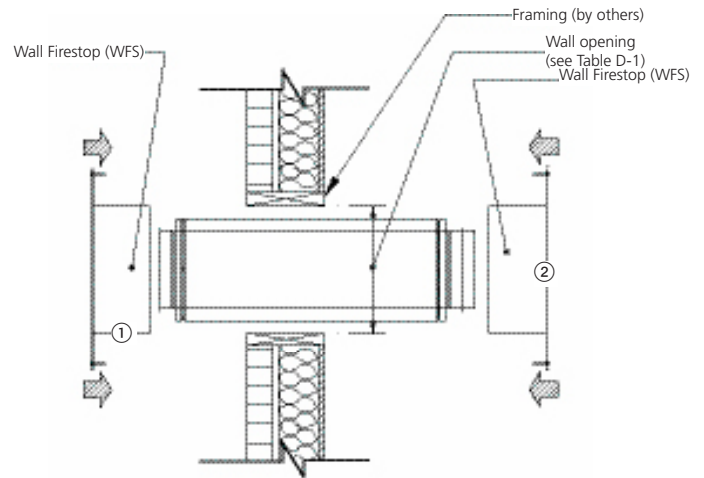
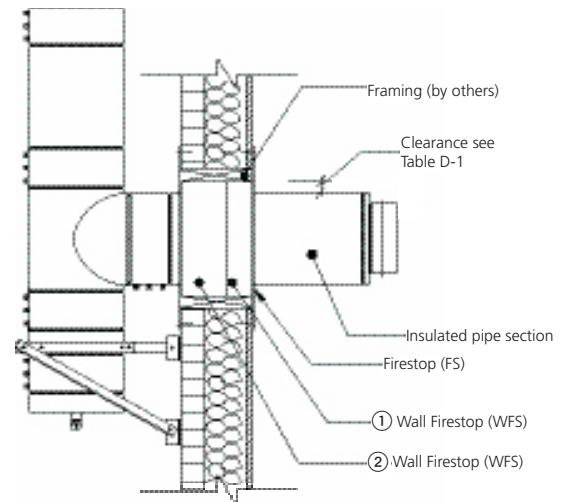


Fig. D-5 - Wall Firestop (WFS) assembly



Do not install insulation in the opening between the pipe outside wall and the firestop inner wall, allow for free air circulation at all times.

INSTALLATION FOR EXTERIOR WALL

1. From Table-D-1 (in this section) determine the wall opening for the system model to be installed.
2. From the interior wall side, put the Wall Firestop (1) in place before passing the pipe section in the opening (see Fig. D-9 and D-10)
3. From the exterior wall side, slide the Wall Firestop (2) (WFS) in the opening and secure to the exterior wall with anchors (by installer).
4. From interior wall side, secure Wall Firestop (1) to inside wall with anchors (by installer).

INSTALLATION FOR INTERIOR WALL

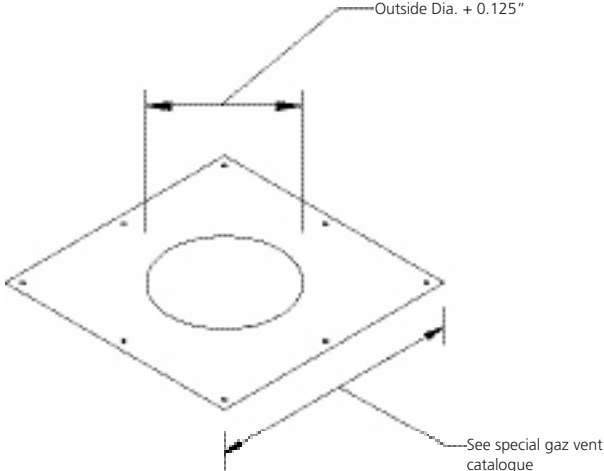
1. From Table-D-1 (in this section) determine the wall opening for the vent model to be installed.
2. Repeat steps 2, 3 and 4 as described in exterior wall installation.

Roof and Wall Penetration

FIRESTOP (FS)

Used to maintain a minimum space between any combustible material of a wall, floor or roof, where a vent system passes through.

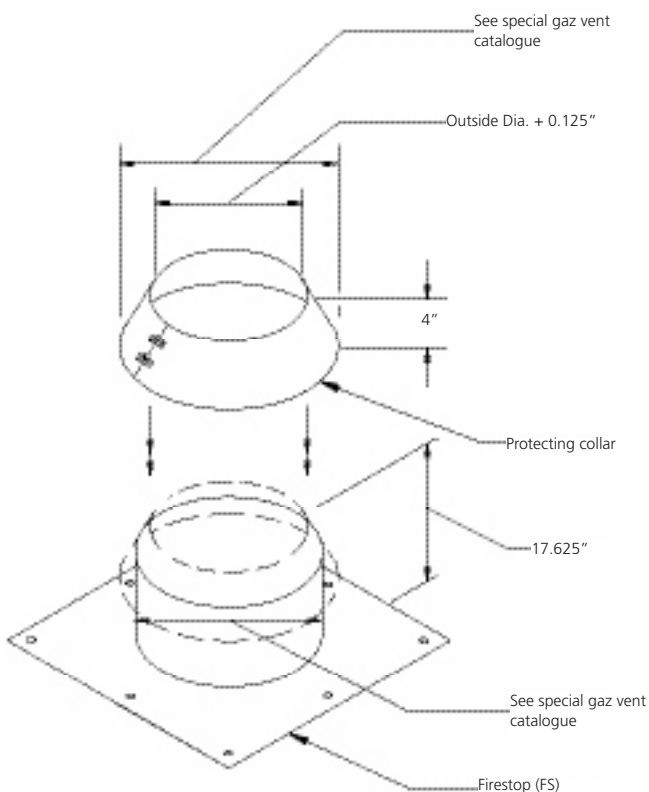
Fig. D-6 - Firestop (FS) Detail



RADIANT FIRESTOP (RFS)

Used to protect combustible materials where a system passes through a floor, ceiling or attic. It ensures a minimum distance from combustible materials.

Fig. D-7 - Radiant Firestop (RFS) Detail

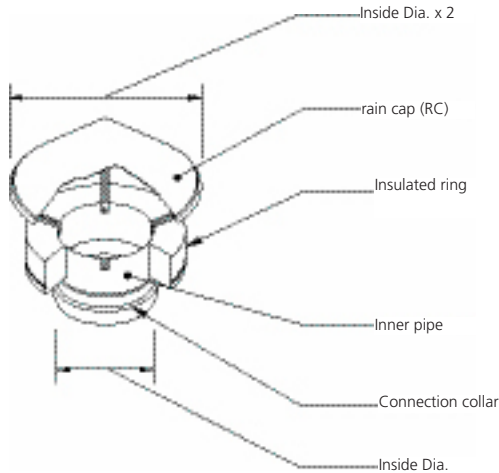


Terminations, Starting Adapters

RAIN CAP (RC)

Installed at the top of the vent, it prevents entry of rain into the vent system. (See Fig.E-11 for assembly)

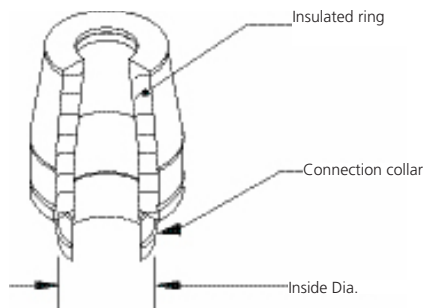
Fig. E-1 - Rain Cap (RC) Detail



EXHAUST CONE (EC)

Installed at the top the system, it improves the draft and increases the speed of escaping gases by 50%. Installation of a Drain-Tee Cap (DC) at the base of the vent is required to collect rainwater. For installation details Exhaust Cone (EC) (See Fig.E-11).

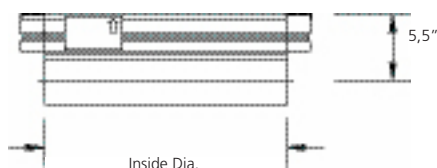
Fig. E-2 - Exhaust cone Detail



CLOSURE SECTION (SC)

Installed at the vent system extremity. It protects the system against water infiltration in the insulation between the inner and outer wall of the system. The use of Drain Section (DS) or Drain Tee Cap (DC) is necessary with this piece to collect any excess rain that may penetrate the vent.

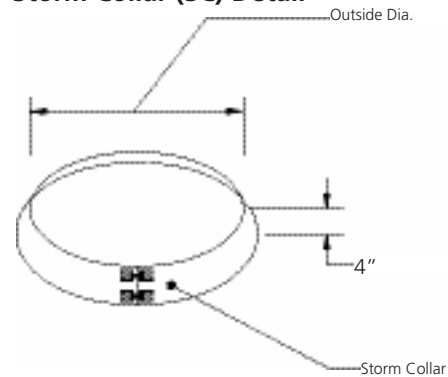
Fig. E-3 - Closure Section Detail



STORM COLLAR (SC)

Used for sealing the opening between the vent and flashing. The Storm Collar (SC) must be sealed to the vent system with silicone putty. It is supplied with the Flat Flashing (F) roof assembly or Adjustable Flashing (AF) roof assembly.

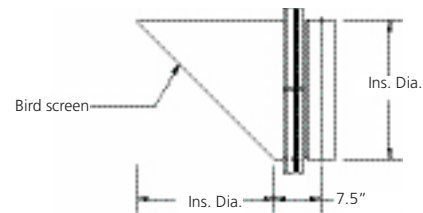
Fig. E-4 - Storm Collar (SC) Detail



MITER SECTION (MS)

Installed at the system extremity in horizontal exhaust application. To be used with boiler exhaust. Diameter range from 6" to 16 ". Material thickness is the same as the vent section it is used with.

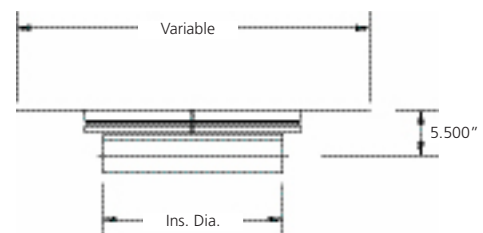
Fig. E-5 - Miter Section (MS) Detail



FAN ADAPTER (FA)

Installed at the vent extremity. It is used to connect the system to an up- blast or sidewall type exhaust fan.

Fig. E-6 - Fan Adapter (FA) detail



Terminations, Starting Adapters

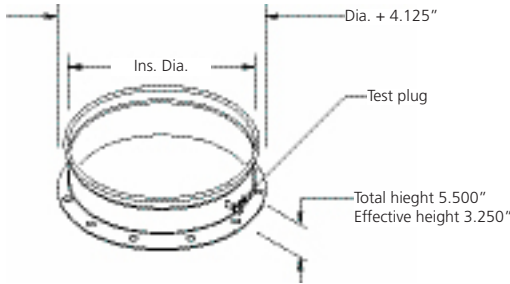
TERMINATIONS USE AND APPLICATION

Termination	Model	Temperature from 0°F to less than 550°F continuous or boiler applications
Rain Cap	HEP, HEPLA, HEPL, HEPL1, HEPL2	6" to 48" diameter
Exhaust Cone	HEP, HEPLA, HEPL, HEPL1, HEPL2	6" to 48" diameter
Rainshield	HEP, HEPLA, HEPL, HEPL1, HEPL2	6" to 16" diameter
Miter Section	HEP, HEPLA, HEPL, HEPL1, HEPL2	6" to 16" diameter

STARTING ADAPTER (SA)

1. Used to connect the flue to the appliance. It allows flue gases analysis by means of the verification plug.
2. See Fig.E-9 and E-10 for assembly.

Fig. E-7 - Starting Adapter (SA) Detail



STARTING ADAPTER-DRAIN (SAD)

1. Used to connect the system to the appliance.
2. It allows vent gases analysis by means of the verification plug.
3. Also used for collection of condensation water by means of a 3/4" diameter drain connection.
4. Its elliptical collar construction also provides for improved condensation water drainage.
5. See Fig.E-10 and E-10a for assembly.
6. Flange is optional. Refer to boiler instructions or outlet connection detail.

Fig. E-8 - Starting Adapter-Drain detail (SAD)

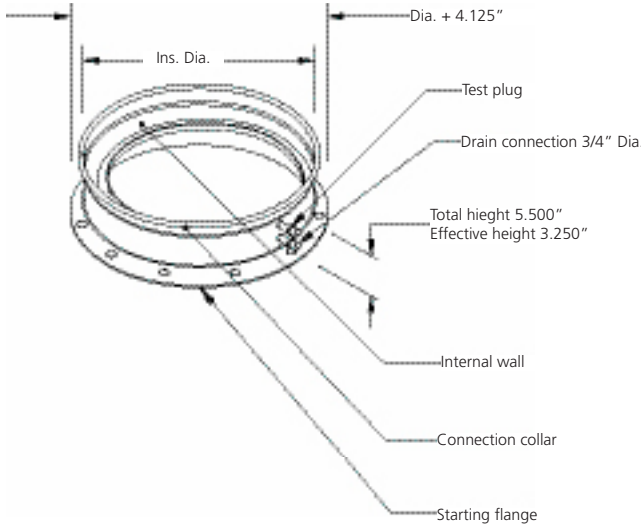


Fig. E-9 - Typical installation for starting Adapter (SA) and Starting Adapter-Drain (SAD)

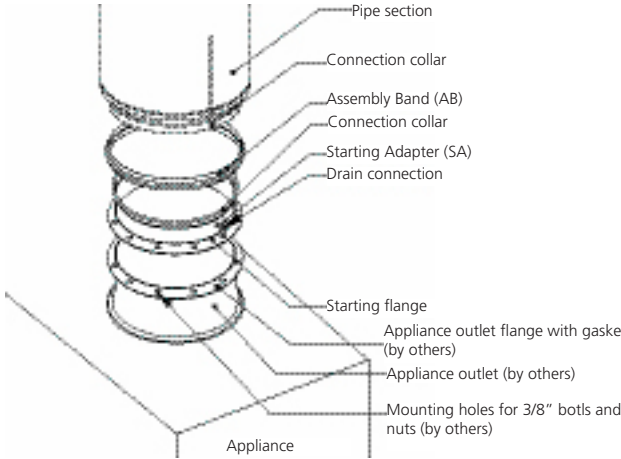


Fig. E-10 - Typical finished assembly for starting Adapter (SA) and Starting Adapter-Drain (SAD)

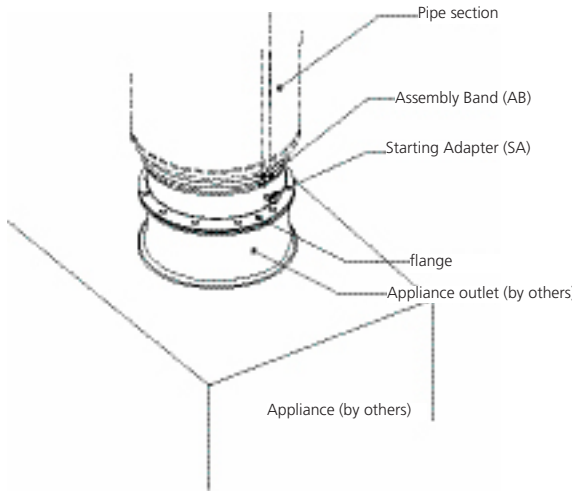


Fig. E-11a - Typical installation for Rain Cap (RC) and Exhaust Cone (EC)

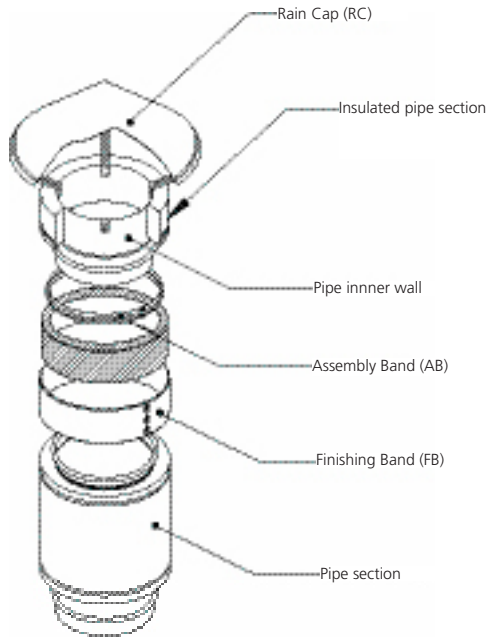
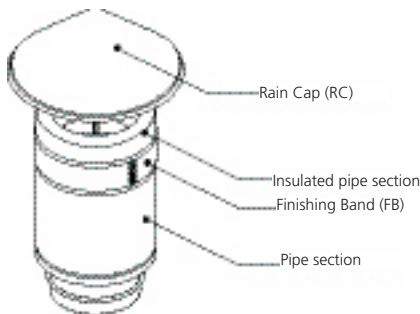


Fig. E-11b - Finished assembly for Rain Cap (RC) and Exhaust Cone (EC)



ENCLOSED INSTALLATION TERMINATIONS

For enclosed installations, use only model HEPL (Fig. E-12a and Fig. E-13a) and model HEPL2. (Fig. E-12b and Fig. E-13b)

Fig. E-12a - Roof termination for enclosed installation with model HEPL.

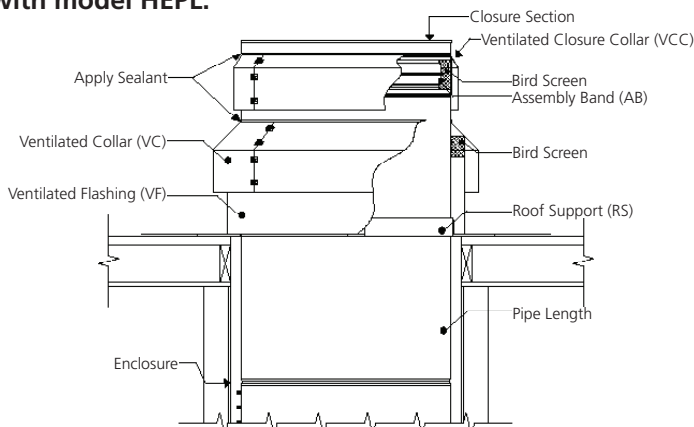


Fig. E-12b - Roof termination for enclosed installation with model HEPL2.

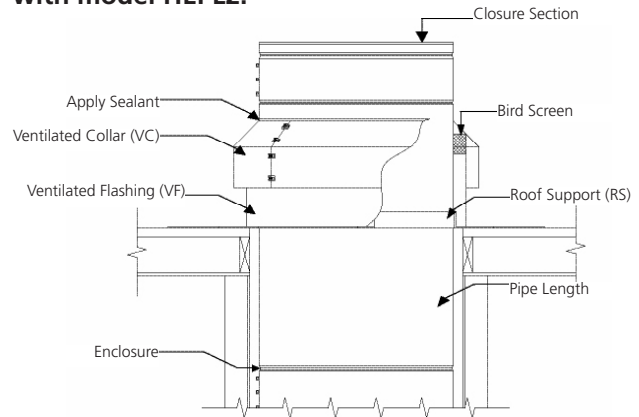


Fig. E-13a - Wall termination for enclosed installation with model HEPL

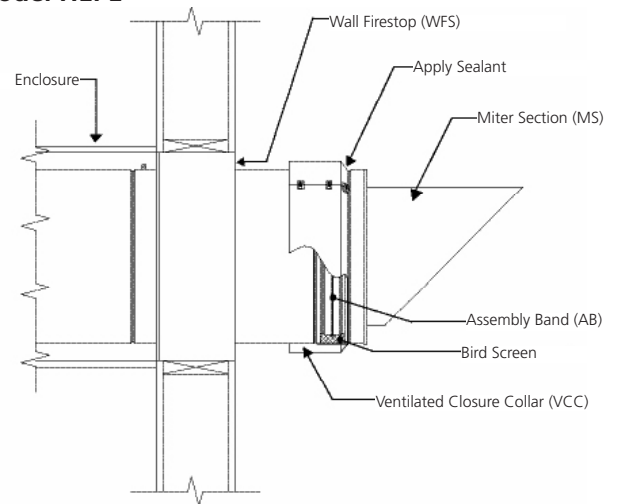
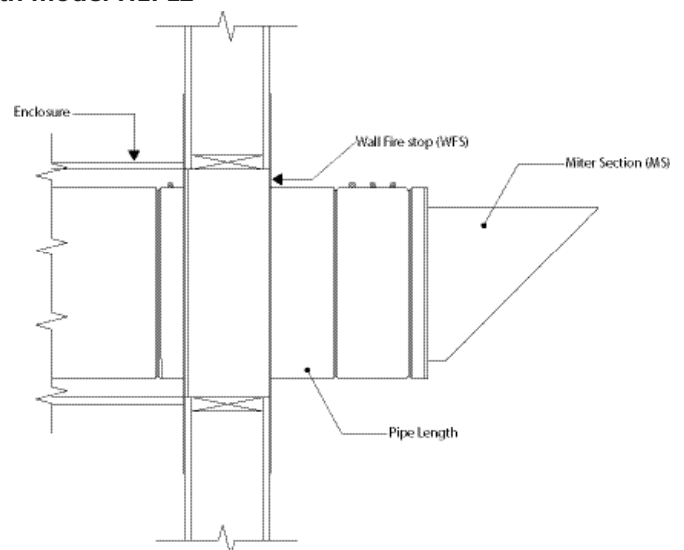


Fig. E-13b - Wall termination for enclosed installation with model HEPL2

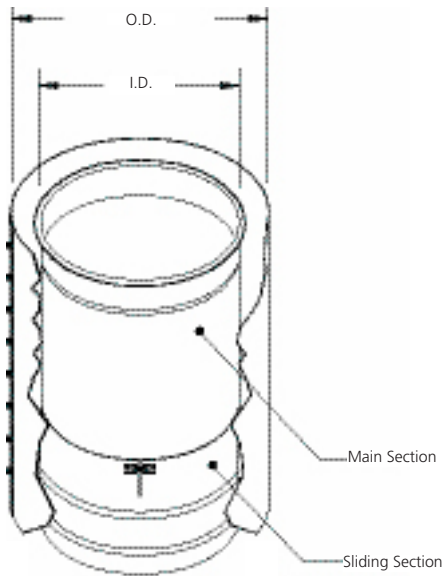


ADJUSTABLE LENGTH (AL)

1. Used in straight runs, the Adjustable Length (AL) serves two major functions:

- a) To make up for odd lengths of pipe in short runs
- b) To provide for joint sealing.

Fig. F-1 - Adjustable Length (AL) Detail



2. This part is designed to be adjustable to any needed exact length. It's internal joint must be sealed by working sealant under the seal section, as well as at the joint between the male and the female ends to be closed with the Assembly Band (AB).

3. The adjustable length includes a main section and an outer sliding section that can be secured in the desired length position. Cutting the main section may be required for proper fitting.

4. The sliding section is designed to fit outside the standard main section.

5. Once the final length of the section is set, it is secured using a single clamp and screw. This seal section will prevent the inner section from slipping after the assembly.

6. The sliding outer jacket is of the same thickness as that used on piping outer casings.

7. It is placed around the assembled liner and finishes the appearance of the Adjustable Length (AL).

8. For detailed methods of installation see instructions contained elsewhere in this section.



**SPECIAL GAS VENT CATEGORY II, III, IV
SPECIAL GAS VENT TYPE BH
CLASS I / CLASS II
MAX 550°F / 288° C**
SUITABLE FOR EXTERIOR
INSTALLATION

MODELS HEPLA HEPL1 HEPL HEPL2

WARNING / AVERTISSEMENT

"RISK OF CARBON MONOXIDE (CO) POISONING AND RISK OF FIRE IF IMPROPERLY INSTALLED. FOLLOW ALL CAUTIONS, WARNINGS AND INSTRUCTIONS REGARDING INSTALLATION OF THIS VENT PIPE SYSTEM."
"RISQUE D'EMPOISONNEMENT AU MONOXYDE DE CARBONE (CO) SI MAL INSTALLÉ. LIRE ATTENTIVEMENT LES INSTRUCTIONS D'INSTALLATION FOURNIES AVEC CE PRODUIT."

Position	Model	DIAMETERS FOR EACH MINIMUM AIR SPACE CLEARANCE TO COMBUSTIBLE MATERIALS DIAMÈTRES POUR CHAQUE DÉGAGEMENT MINIMUM AUX MATÉRIAUX COMBUSTIBLES										
		0.5"	1"	1.5"	2"	3"	4"	5"	6"	7"	8"	9"
Unenclosed Vertical	HEPLA/HEPL1		3 to 8	10 to 14	16 to 20	22 to 32	34 to 44	46 to 48				
	HEPL	6		8 to 10	12 to 14	16 to 18	20 to 24	26 to 28	30 to 32	34 to 36	38 to 42	44 to 48
	HEPL2	6	8 to 10	12 to 14	16 to 20	22 to 24	26 to 30	32 to 36	38 to 40	42 to 48		
Unenclosed Horizontal	HEPLA/HEPL1		3 to 8		10 to 14	16 to 20	22 to 24	26 to 30	32 to 36	38 to 42	44 to 48	
	HEPL		6 to 10	12 to 14		16 to 20	22 to 28	30 to 32	34 to 38	40 to 42	44 to 48	
	HEPL2		6 to 10	12 to 14	16 to 20	22 to 30	32	34 to 44	46 to 48			



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CAUTION: SEAL ALL JOINTS WITH X-TRASIL H.T 4706_3 RED SEALANT ALTERNATES: GE RTV 106 RED OR DOW CORNING 736.
RATED FOR USE AT MAXIMUM 15 INCH WATER COLUMN INTERNAL PRESSURE WHEN USED IN POSITIVE PRESSURE APPLICATIONS.



**SPECIAL GAS VENT
CATEGORY II, III, IV
SPECIAL GAS VENT
TYPE BH
CLASS I / CLASS II
MAX 550°F / 288° C**

SUITABLE FOR EXTERIOR
INSTALLATION

MODELS HEPL HEPL2

WARNING / AVERTISSEMENT

"RISK OF CARBON MONOXIDE (CO) POISONING AND RISK OF FIRE IF IMPROPERLY INSTALLED. FOLLOW ALL CAUTIONS, WARNINGS AND INSTRUCTIONS REGARDING INSTALLATION OF THIS VENT PIPE SYSTEM"
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RATED FOR USE AT MAXIMUM 15 INCH WATER COLUMN INTERNAL PRESSURE WHEN USED IN POSITIVE PRESSURE APPLICATIONS.

Diameter	Enclosed vertical		Enclosed horizontal	
	HEPL	HEPL2	HEPL	HEPL2
6" to 16"	1"	1"	3"	2"
18" to 32"	1"	1"	---	---

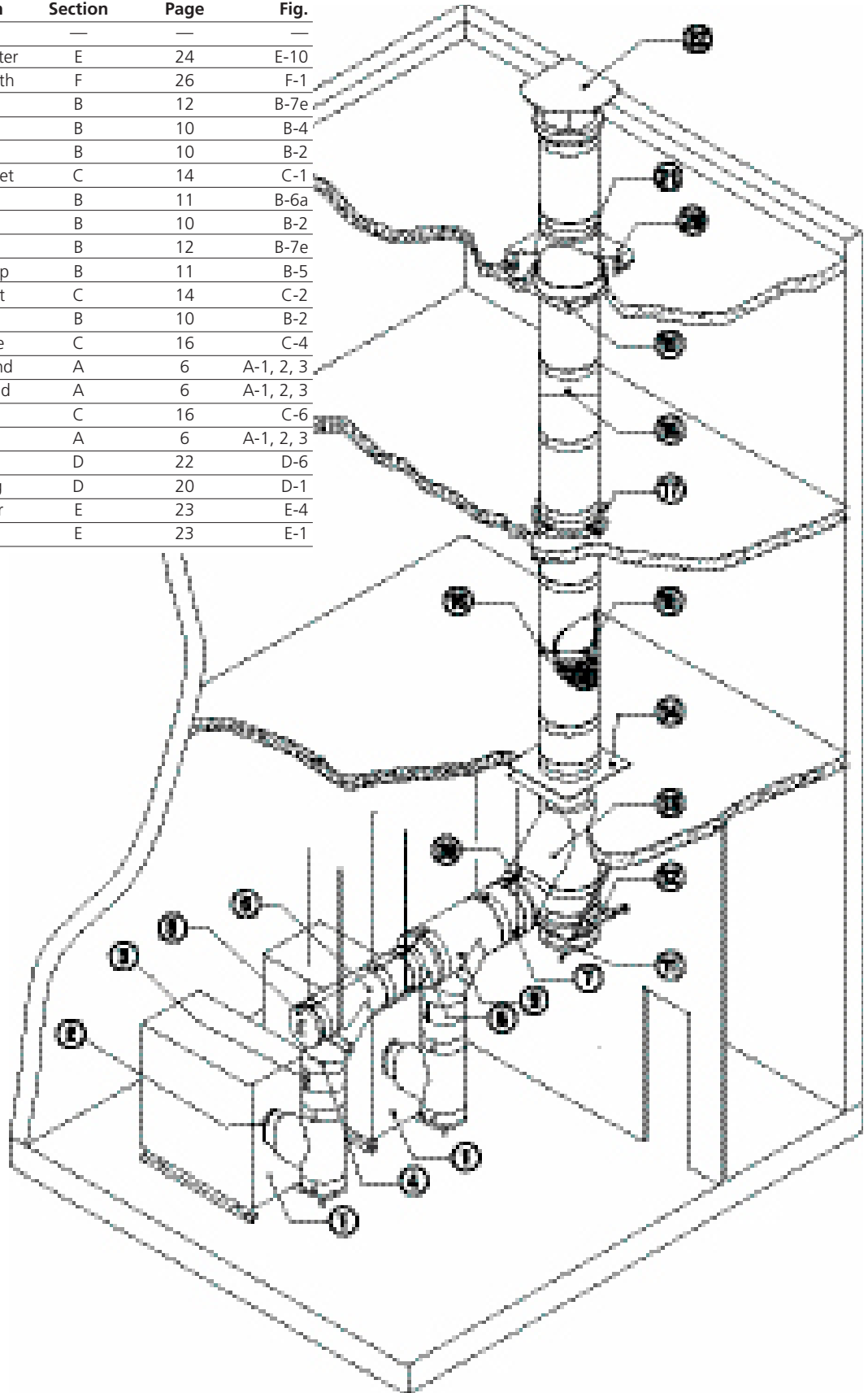
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No.	Part no.	Description	Section	Page	Fig.
1	—	Appliance	—	—	—
2	HEPL2 SA 16	Starting Adapter	E	24	E-10
3	HEPL2 VL 16	Variable Length	F	26	F-1
4	HEPL2 E45 16	45° Elbow	B	12	B-7e
5	HEPL2 TC 16	Tee-Cap	B	10	B-4
6	HEPL2 T45 16	45° Tee	B	10	B-2
7	HEPL2 HB 16	Hanger Bracket	C	14	C-1
8	HEPL2 I 16	Increaser	B	11	B-6a
9	HEPL2 T45 20	45° Tee	B	10	B-2
10	HEPL2 E45 20	45° Elbow	B	12	B-7e
11	HEPL2 DC 20	Drain-Tee Cap	B	11	B-5
12	HEPL2 WS 20	Wall Support	C	14	C-2
13	HEPL2 T45 20	45° Tee	B	10	B-2
14	HEPL2 AP 12	Anchor Plate	C	16	C-4
15	HEPL2 AB 20	Assembly Band	A	6	A-1, 2, 3
16	HEPL2 FB 20	Finishing Band	A	6	A-1, 2, 3
17	HEPL2 FG 20	Floor Guide	C	16	C-6
18	HEPL2 48L 20	48" Length	A	6	A-1, 2, 3
19	HEPL2 FS 20	Firestop	D	22	D-6
20	HEPL2 F 20	Flat Flashing	D	20	D-1
21	HEPL2 SC 20	Storm Collar	E	23	E-4
22	HEPL2 RC 20	Rain Cap	E	23	E-1



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