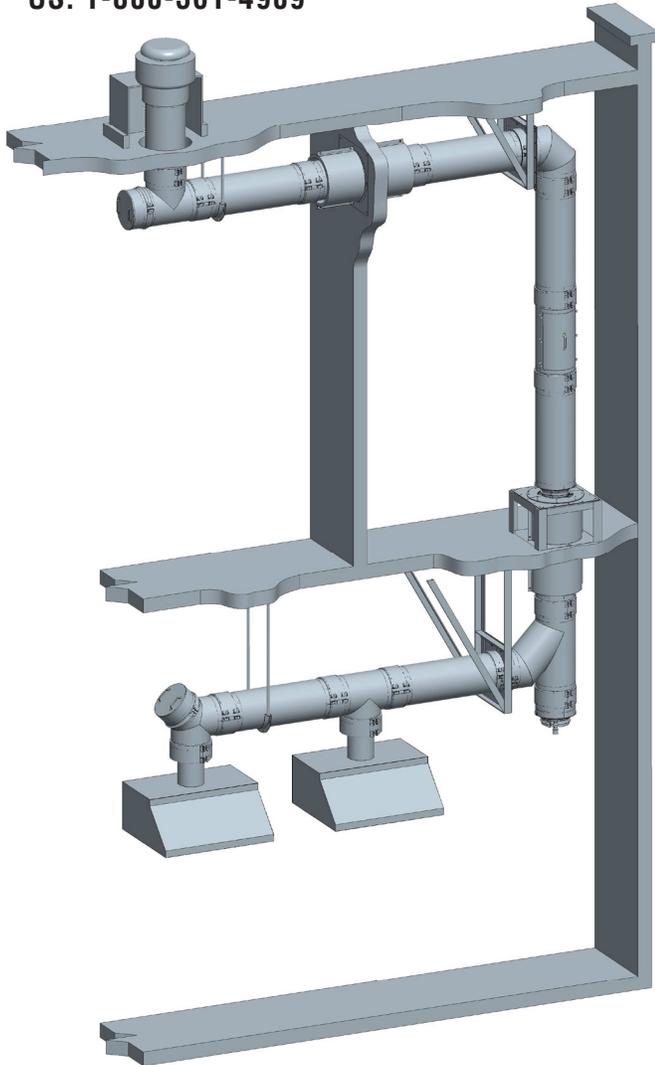




2125 MONTEREY ST.
 LAVAL, QC., CANADA • H7L 3t6
 Canada: 1-800-667-3387
 US: 1-800-361-4909



INSTALLATION AND MAINTENANCE INSTRUCTIONS

Factory-Built Security Grease Duct

Single wall and 3" fiber insulated.

MODELS CIX3Z / SCL

CIX3Z: INSULATED
 SCL: SINGLE WALL

This installation manual will enable you to obtain a safe, efficient and dependable installation of this grease duct system. Please read and understand these instructions before beginning your installation.

Do not alter or modify the components of this grease duct system under any circumstances. Any modification or alteration of the grease duct system or approved accessories, including but not limited to the appliance it is connected to, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

WARNINGS

FAILURE TO FOLLOW THESE INSTALLATION INSTRUCTIONS COULD CAUSE FIRE, CARBON MONOXIDE POISONING, OR DEATH. IF YOU ARE UNSURE OF INSTALLATION REQUIREMENTS, CALL THE PHONE NUMBER LISTED ON THE BACK OF THESE INSTRUCTIONS.

A MAJOR CAUSE OF GREASE DUCT RELATED FIRE IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS GREASE DUCT BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.



Listed to standards:
 UL-1978
 UL-2221
 CAN/ULC S662

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NOTE: Dimensions in these instructions are in American standard (feet and inches), with Metric (mm) in parenthesis except where stated otherwise.

!Warning!

Failure to follow these installation Instructions could cause FIRE, CARBON MONOXIDE, POISONING, OR DEATH. If you are unsure of Installation requirements, call Phone Number listed on the front of these instructions.

Caution-Risk of injury. Sheet metal parts may be sharp. Always wear gloves and appropriate eye, foot, and other protection when handling these products.

INTRODUCTION

Security™ model SCL and CIX3Z grease ducts are cylindrical, prefabricated modular venting system, incorporating flanged joints. Model SCL is a single wall system and model CIX3Z is a double wall construction incorporating 3” of fiber insulation. The circular cross section and high quality stainless steel inner flue provide a system with high strength-to-weight ratio and low friction losses compared to rectangular or square ducts.

SECTION A - CODE COMPLIANCE

LISTINGS

CIX3Z and SCL are "listed" per UL 1978 and CAN/ULC S662 by Underwriters Laboratories (UL File MH45179) for Grease Duct applications when installed in accordance with these instructions and National Fire Protection Association standard "NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."

CLASSIFICATIONS

MODEL CIX3Z is classified in accordance with UL 2221 (Tests of Fire Resistive Duct Enclosure Assemblies) as an alternate to a 2-Hr. fire resistive shaft enclosures with a minimum zero clearance to combustibles (sizes 5" to 36" diameters). Model CIX3Z has been evaluated in accordance with the requirements for duct enclosure Condition A.

APPLICATION

Security Grease Ducts are listed for continuous temperatures of 500°F and intermittent temperatures of up to 2000°F.

Security Grease Duct is ideally suited for use in commercial cooking installations for the removal of smoke and grease laden vapors (Type I or Type II kitchen exhaust hood). Grease duct system size and capacity information may be obtained from the "ASHRAE Handbook - Fundamentals" or from the "Air Pollution Engineering Manual" of the "US Environmental Protection Agency."

MIXING PARTS

Model SCL and CIX3Z may be intermixed within a system, assuming proper clearances are maintained for respective components. When penetrating a roof, Model CIX3Z duct sections and appropriate roof penetration components must be used. Do not use Model SCL to penetrate through a wall, floor or roof.

PRODUCT CERTIFICATION

Security Grease Ducts are tested and listed to UL 2221/ UL1978/ ULC-S662 by Underwriters Laboratories, Inc. Per these listings, product labeling is required. Below is an example of product certification labels.

 <p>GREASE DUCT PART, FOR RESTAURANT COOKING APPLIANCE LISTED IN ACCORDANCE WITH UL-1978 TEST STANDARD. GREASE DUCT FOR USE IN GREASE DUCT ASSEMBLIES CLASSIFIED IN ACCORDANCE WITH UL-2221. SEE UL FIRE RESISTANCE DIRECTORY NO. R37874.</p> <p>CONDUIT D'ÉVACUATION POUR HOTTE DE CUISNE COMMERCIALE LISTÉS SELON LES NORMES UL-1978 ET CLASSIFIÉS SELON LA NORME UL-2221. VOIR LE RÉPERTOIRE SUR RÉSISTANCE AU FEU DE UL NO. R37874.</p>		
MODEL	CIX3Z	MODÈLE
<p>GREASE DUCT, FOR USE IN GREASE DUCT ASSEMBLY NO. G-20 CLASSIFIED AS AN ALTERNATE TO 2 HR. FIRE RESISTIVE SHAFT ENCLOSURE WITH A MINIMUM ZERO CLEARANCE (AIR SPACE) TO COMBUSTIBLES.</p> <p>FLUE DIAMETER: Ø5" to Ø36" CLEARANCE TO COMBUSTIBLE = 0" (FOR ALL DIAMETERS)</p> <p>FOR GREASE DUCT SYSTEMS INSTALLED WITHOUT A CONTINUOUS FIRE-RATED ENCLOSURE, AN EVALUATED THROUGH-PENETRATION FIRES TOP ASSEMBLY SHALL BE USED.</p> <p>SEE THROUGH-PENETRATION FIRES TOP SYSTEM NO. C-AJ-7160 IN UNDERWRITERS LABORATORIES INC. FIRE RESISTANCE DIRECTORY FOR RATED INSTALLATIONS THAT REQUIRE PENETRATION OF RATED WALLS OR FLOOR/CEILING.</p> <p>CAUTION: RISK OF FIRE. DO NOT FULLY ENCLOSE WITH COMBUSTIBLE MATERIALS.</p> <p>INSTALLED AND USE ONLY IN ACCORDANCE WITH SECURITY CHIMNEYS INTERNATIONAL LTD GREASE DUCT INSTALLATION AND MAINTENANCE INSTRUCTIONS</p> <p>SUITABLE FOR EXTERIOR AND INTERIOR INSTALLATION</p>	<p style="text-align: center;">↑ UP HAUT ↓ FLOW DIRECTION ÉCOULEMENT</p>	<p>CONDUIT DE GRAISSE, POUR UTILISATION D'ASSEMBLAGE DE CONDUITS DE GRAISSE NO. G-20. CLASSÉ COMME ÉTANT UNE ALTERNATIVE À UN BOITIER RÉSISTANT AU FEU DURANT 2 HEURES INSTALLÉ AUTOUR DU CONDUIT AVEC UN DÉGAGEMENT MINIMALE DE ZÉRO POUCES AUX MATÉRIELS COMBUSTIBLES</p> <p>DIAMÈTRES DE LA PAROI INTÉRIEURE: Ø5" À Ø36" DÉGAGEMENT AUX MATÉRIELS COMBUSTIBLES = 0" (TOUS LES DIAMÈTRES)</p> <p>POUR LES CONDUITS INSTALLÉS SANS ENCEINTE AVEC RÉSISTANCE AU FEU, UN COUPE-FEU CERTIFIÉ DOIT ÊTRE UTILISÉ.</p> <p>VOIR SYSTÈME DE COUPE-FEU POUR PÉNÉTRATION. NO. C-AJ-7160 DANS LE RÉPERTOIRE DE RÉSISTANCE AU FEU DE UNDERWRITERS LABORATORIES INC. POUR LES INSTALLATIONS AYANT BESOIN DE PÉNÉTRER À TRAVERS UN MUR, PLANCHER OU PLAFOND AYANT UNE RÉSISTANCE AU FEU.</p> <p>ATTENTION: RISQUE DE FEU. NE PAS ENFERMER DANS UNE ENCEINTE COMBUSTIBLE.</p> <p>TOUJOURS SUIVRE ET INSTALLER SELON LE MANUEL D'INSTALLATION FOURNI PAR CHIMNÈES SÉCURITÉ INTERNATIONALE LTÉE.</p> <p>POUR INSTALLATION EXTÉRIEUR ET INTÉRIEUR</p>
 <p>SECURITY CHIMNEYS INTERNATIONAL LTD.  LAVAL, QC CANADA NP331 REV. 0</p>		

 <p>GREASE DUCT PART, FOR RESTAURANT COOKING APPLIANCE. CONDUIT D'ÉVACUATION POUR HOTTE DE CUISNE COMMERCIALE.</p>	
ACCESSORIES CIX3Z ACCESSOIRES	
<p>FOR USE IN GREASE DUCT ASSEMBLY NO. G-20 CLASSIFIED IN ACCORDANCE WITH UL 1978 & UL 2221 SEE UL FIRE RESISTANCE DIRECTORY NO. R37874</p> <p>SEE THROUGH-PENETRATION FIRES TOP SYSTEM NO. C-AJ-7160 IN UL FIRE RESISTANCE DIRECTORY</p> <p>INSTALLED AND USE ONLY IN ACCORDANCE WITH SECURITY CHIMNEYS INTERNATIONAL LTD GREASE DUCT INSTALLATION AND MAINTENANCE INSTRUCTIONS</p> <p>SUITABLE FOR EXTERIOR AND INTERIOR INSTALLATION</p>	<p>CONDUIT D'ÉVACUATION DE HOTTE DE CUISNE NO. G-20, SELON LES NORMES UL 1978 & UL 2221. VOIR LE RÉPERTOIRE SUR RÉSISTANCE AU FEU DE UL NO. R37874.</p> <p>VOIR SYSTÈME DE COUPE FEU POUR PÉNÉTRATION NO. C-AJ-7160 DANS LE RÉPERTOIRE DE RÉSISTANCE AU FEU DE UL.</p> <p>TOUJOURS SUIVRE ET INSTALLER SELON LE MANUEL D'INSTALLATION FOURNI PAR CHIMNÈES SÉCURITÉ INTERNATIONALE LTÉE.</p> <p>POUR INSTALLATION EXTÉRIEUR ET INTÉRIEUR</p>
 <p>SECURITY CHIMNEYS INTERNATIONAL LTD.  LAVAL, QC CANADA NP332 REV. 0</p>	

 <p>GREASE DUCT PART, FOR RESTAURANT COOKING APPLIANCE LISTED IN ACCORDANCE WITH UL-1978 TEST STANDARD</p> <p>CONDUIT D'ÉVACUATION POUR HOTTE DE CUISNE COMMERCIALE HOMOLOGUÉ SELON LES NORMES UL-1978</p>		
MODEL	SCL	MODÈLE
<p>FLUE DIAMETER: Ø5" to Ø36" MINIMUM CLEARANCE (AIR SPACE) TO COMBUSTIBLE MATERIALS AND BUILDING INSULATION = 18"</p> <p>CAUTION: DO NOT ENCLOSE WITH COMBUSTIBLE MATERIALS</p> <p>INSTALLED AND USE ONLY IN ACCORDANCE WITH SECURITY CHIMNEYS INTERNATIONAL LTD GREASE DUCT INSTALLATION AND MAINTENANCE INSTRUCTIONS</p> <p>SUITABLE FOR EXTERIOR AND INTERIOR INSTALLATION</p>	<p style="text-align: center;">↑ UP HAUT ↓ FLOW DIRECTION ÉCOULEMENT</p>	<p>DIAMÈTRES DE LA PAROI: Ø5" à Ø36" DÉGAGEMENT (ESPACE D'AIR) MINIMAL AUX MATIÈRES COMBUSTIBLES ET AUX ISOLANTS DE LA BATISSE = 18"</p> <p>ATTENTION: NE PAS ENFERMER DANS UNE ENCEINTE COMBUSTIBLE</p> <p>TOUJOURS SUIVRE ET INSTALLER SELON LE MANUEL D'INSTALLATION FOURNI PAR CHIMNÈES SÉCURITÉ INTERNATIONALE LTÉE.</p> <p>POUR INSTALLATION EXTÉRIÈRE ET INTÉRIÈRE</p>
 <p>SECURITY CHIMNEYS INTERNATIONAL LTD.  LAVAL, QC CANADA NP337 REV. 0</p>		

SECTION B - GENERAL INFORMATION

PART NUMBERS

These instructions identify major model parts by name and part number.

Example:

CIX 36" length with inside diameter 14" made of SS 316 inner flue and SS 304 outer casing.

CIX3Z- 14 L36 BC
Model Dia. Part Material

CIX 30° elbow with inside diameter 22" made of SS 304 inner flue and galvalume outer casing.

CIX3Z- 22 E30 CE
Model Dia. Part Material

SCL wall support for 8" diameter grease duct made of galvalume.

SCL 8 WS E
Model Dia. Part Material

Use only factory-supplied components. Failure to do so will void the certification and the warranty of the grease duct system.

EFFECTIVE LENGTH

The effective length is the length of the part when it is assembled.

		Effective length
L36	↔	36 1/16"
L24	↔	24 1/16"
L18	↔	17 9/16"
L12	↔	11 9/16"

CLEARANCE

Security Models CIX3Z and SCL are primarily intended to be used in a non-combustible surrounding. Only Model CIX3Z can be used for either combustible or non-combustible surroundings. When installed in an open room where enclosure is not required, the Security Grease Duct may be located at a minimum clearance to adjacent combustible walls in accordance with Table 1. The ducting may be located in corners formed by two combustible constructions (walls, floor, ceiling, supports, etc.)

Duct Model	Flue Diameter (in)	Combustible (in)	Non-Combustible (in)
CIX3Z	Ø5 to Ø36	0	0
SCL	Ø5 to Ø36	18	0

Dimensions are in inches

For no combustible construction, maintain clearance as required for installation access for inspection or per local code. In buildings more than one story in height and in one-story buildings where the roof-ceiling assembly is required to have a fire resistance rating, the duct must be enclosed in a continuous enclosure from the lowest fire-rated ceiling or floor above the hood, through any concealed spaces, to or through the roof to maintain the integrity of the fire separations required by the applicable building code provisions. If the building is less than 4 stories in height, the enclosure shall have a fire resistance rating of not less than 1 hour. If the building is 4 stories or more in height, the enclosure shall have a fire resistance rating not less than 2 hours.

NOTE: Model CIX3Z is equivalent to a 2-Hr fire rated grease duct enclosure system.

NOTE: Do not enclose with combustible materials.

In the case of a fire rated enclosure made of non-combustible or limited combustible construction, the minimum clearance with the Model SCL must be 6" or as required by local code.

OPENING THROUGH CONSTRUCTION

The following table serves to identify the minimum opening required when installing a grease duct through a floor, wall or roof made of noncombustible material or fire rated. See **table 2** and **figure 1**.

CIX3Z

Inside Diameter (A)	Roof / Floor (C)	Wall (C)
Ø5 to Ø36"	Inside Ø + 8"	Inside Ø + 8"

Dimensions are in inches

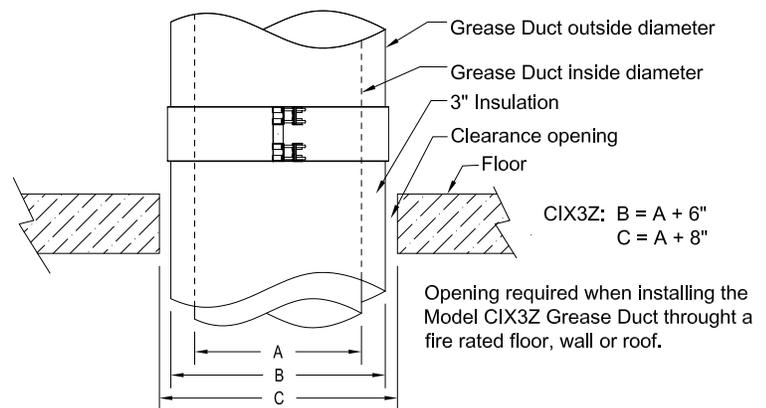


Figure 1 - Opening for Model CIX3Z

SLOPE

Nationally recognized codes require horizontal grease ducts to slope at a minimum of 1/4 unit vertical in 12 units of horizontal toward the hood or grease reservoir. In addition, where horizontal ducts exceed 75 feet in length, the slope shall not be less than one unit vertical in 12 units horizontal. This general rule for duct slope is prescribed for grease ducts that are not listed and/or evaluated by an accredited third body testing agency. For factory-built grease ducts that are listed to UL1978 and have been further tested and/or analyzed to provide equivalent or better flow characteristics as compared to field-installed grease ducts, reduced duct slope is permitted per the factory-built grease duct listing.

For Security factory-built grease ducts listed to UL1978, install at a duct slope not less than 1/16 unit vertical slope in 12 units of horizontal toward the hood or toward the grease reservoir. Where Security grease ducts listed to UL1978 exceed 75 feet in length, the slope shall not be less than 3/16 unit vertical slope in 12 units horizontal. This minimum slope is a result of tests and/or analysis performed by Underwriters Laboratories, where factory-built grease duct was compared to rectangular field-applied grease duct for performance of flow characteristics. Consult with AHJ for acceptance of this alternate method.

PRODUCT INSPECTION

Grease duct components are shipped on individually marked skids. Compare the labeled skids to the packing list to ensure all components of the grease duct system have been shipped. For missing components contact Security's Customer Service department at 800-667-3387 (Canada) or 800-361-4909 (USA).

FREIGHT DAMAGE

Each component should be checked for freight damage when it is unloaded at the site. For damaged components contact the shipping company as soon as possible to file a claim.

PROPER STORAGE

All grease duct components should be stored in a dry place until installed. Sealant shall be stored in location where it will not freeze.

PRODUCT WEIGHTS

The average weight of the duct, per foot of length, can be estimated using the following formula:

SCL: 0.40 x diameter in inches = lbs per foot
CIX3Z: 1.52 x diameter in inches = lbs per foot

Duct design should provide adequate support to ensure duct components are not overloaded.

THERMAL EXPANSION CALCULATIONS

Thermal expansion under normal operating temperatures can fatigue welds causing leakage. It is necessary to calculate the thermal expansion between fixed points. Thermal expansion can be determined by using the following formula:

$$\left[\frac{\text{Length (ft)}}{100} \right] \times \left[\frac{\text{Temperature Rise degrees F}}{100} \right]$$
Example: $\left[\frac{50'}{100} \right] \times \left[\frac{75^\circ\text{F}}{100} \right] = 0.375''$ Expansion

If the computed expansion between fixed points is greater than 0.375", Security recommends an Adjustable Length be installed.

SUPPORT METHODS AND HEIGHT LIMITS

- Several support and guiding methods are used to anchor a grease duct against upward, downward and angular displacement.
- These supports and guides used with thermal expansion devices, prevent bending stresses on the grease duct elbows and joints.
- Supports and guiding methods and installation are described in **SECTION E-SUPPORTS**. Certain limitations apply for proper installation of supports and guides. See **Tables 3, 4 and 5**.
- It is recommended to apply an exterior grade high heat paint to any plate supports, full/half angle rings, wall supports/guides, aluminized outer walls & roof/wall flashing components, exposed outdoors to ensure maximum corrosion protection against the elements. (Ex: Rustoleum V200 series High Heat Industrial Aerosol)

NOTE: All the weight of the section is supported by the inner flue. Never support any Model CIX3Z pipe from the outer casing.

Parts	Ø (in)	SCL	CIX3Z
		Height (ft)	Height (ft)
Anchor Plate	Ø5 to Ø22	264	70
	Ø24 to Ø36	161	42
Anchor plate with length	Ø5 to Ø22	281	74
	Ø24 to Ø36	172	45
Base supported Tee	Ø5 to Ø22	102	27
	Ø24 to Ø36	63	16
Wall support	Ø5 to Ø22	105	28
	Ø24 to Ø36	64	17

WARNING: Do not attached any supports to combustible constructions.

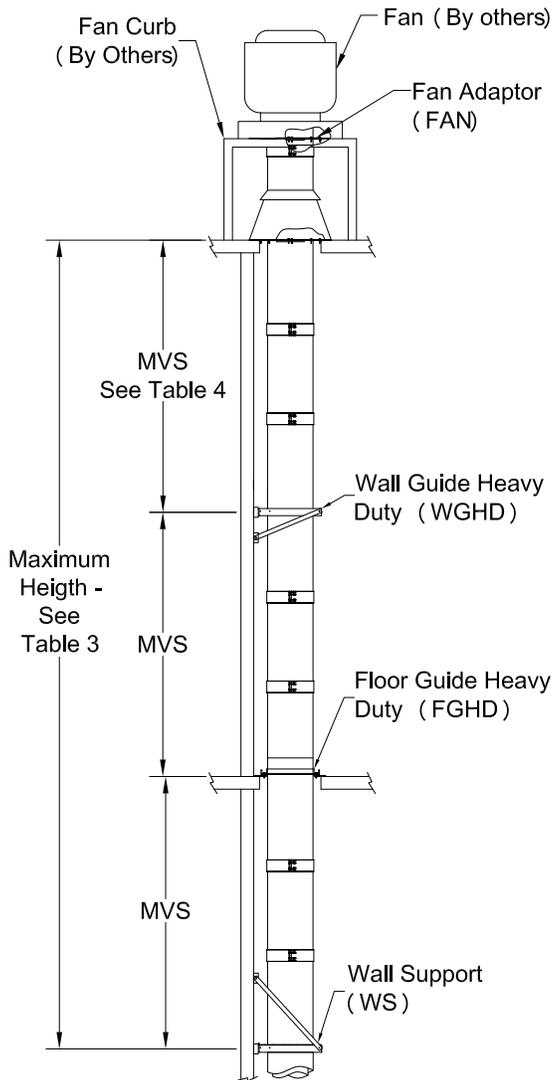
Dimensions are in inches (diameter) and feet (distance)

Product	Ø (in)	MVS* (ft)	H** (ft)
Any Guides or Supports	Ø5 to Ø12	12	8
	Ø14 to Ø22	10	8
	Ø24 to Ø36	8	8

* **MVS** = Maximum Vertical Spacing between two guides or support and guide in a vertical position.
 ** **H** = Maximum Freestanding Height above the roof. This limited height is due to wind loads.

Product	Ø (in)	Distance (ft)	
		SCL	CIX3Z
Half Angle Ring (HAR) / Full Angle Ring (FAR) / Anchor Support (AP) / Anchor plate with Length (APL)	Ø5 to Ø12	12	12
	Ø14 to Ø24	10	10
	Ø26 to Ø36	8	8

NOTE: The Half Angle Ring (HAR) and Full Angle Ring (FAR) used in horizontal installation must be installed with threaded rods having a minimum of Ø1/2" or with structural steel provided by others.



MVS: Maximum Vertical Spacing Between two Guides or a Support and a Guide. See Table 4 for dimensions.

NOTE: When the Maximum height from Table 4 is exceeded, re-support using another support.

Figure 2 - Maximum Grease Duct Supported Height

GREASE DUCT GUYING AND BRACING

1. Proper guying and bracing is essential for part of the grease duct that extends above the roof or parapet wall. The grease duct at this point is subject to wind conditions and needs special attention for proper stabilization. See **figure 3**.
2. If the grease duct above the roof does not exceed dimension H, no special guying or bracing is required. However, to protect the flashing from lateral movement, a guide must be installed at the roof level. See **figure 4**.
3. For grease duct height above the roof that needs guying or bracing, a support, a small length and a expansion length must be installed near the roof level to absorb the thermal expansion and minimise this effect on the guy wires or brace.
4. When using guy wire, the cable must be slightly slack or loose to allow thermal expansion.
5. When using rigid bracing, the maximum vertical height between supports must be reduced to 5' to compensate thermal expansion.

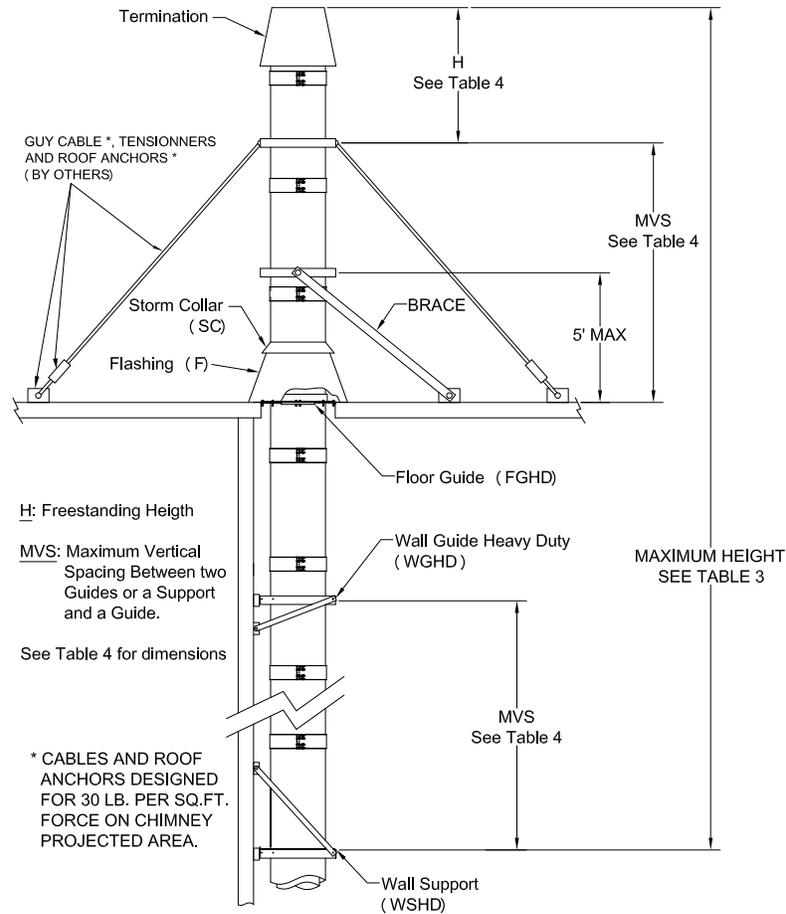
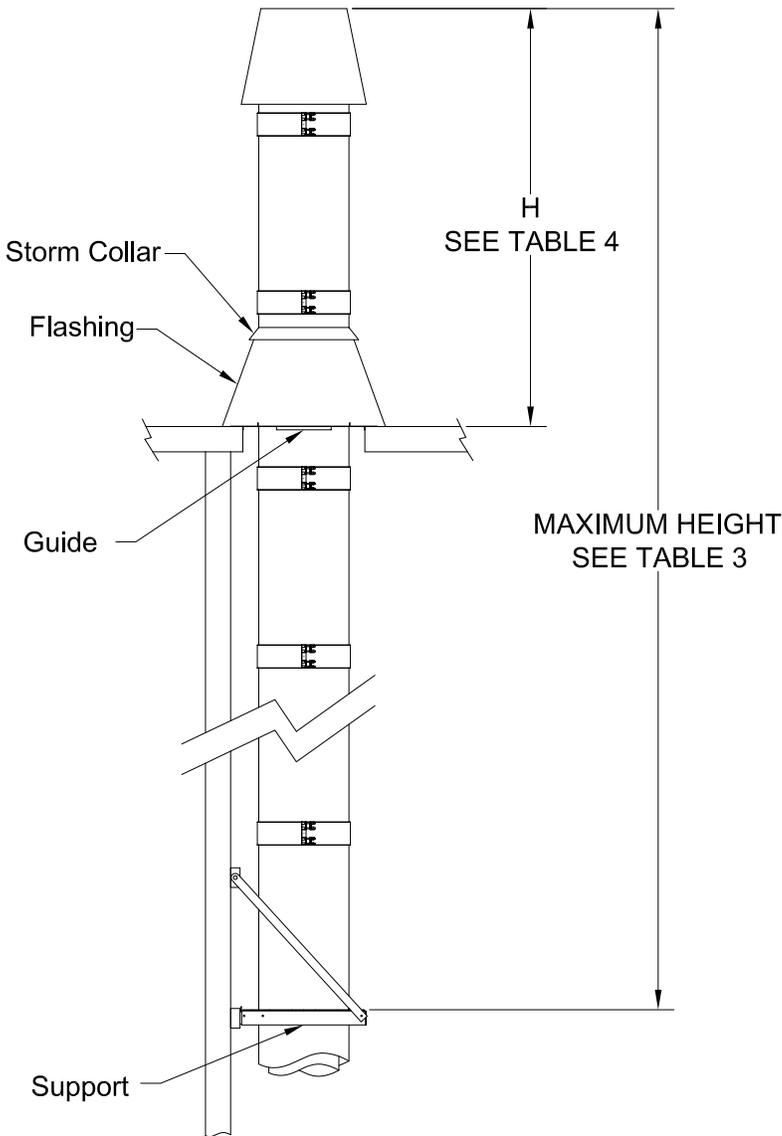


Figure 3 - Grease Duct Height with rigid bracing or guying option



* If Dimension "H" exceeds the value in the table 4, use bracing or cable guying to stabilize chimney section above the roof. See Figure 3

Figure 4 - Maximum freestanding Grease Duct Height

EXTERIOR CORROSION PROTECTION:

It is recommended to apply an exterior grade high heat paint to any plate supports, full/half angle rings, wall supports/guides, aluminized outer walls & roof/wall flashing components, exposed outdoors to ensure maximum corrosion protection against the elements.
(Ex. Rustoleum V200 series High Heat Industrial Aerosol)

SEISMIC REQUIREMENTS

In certain areas of the country, local codes contain requirements to address seismic risks. Seismic requirements for chimneys and grease ducts usually include specifications for additional "sway bars" / bracing, or similar devices in order to help stabilize the system in the event of an earthquake.

Specific guidelines (including spacing, location, size and method of attachment of bracing / sway bars or other devices) for addressing seismic requirements vary depending upon the adopted code, seismic zone, duct size, location in building, etc. and are not within the scope of these installation instructions.

Consult with a design professional in order to determine compliance options for these potentially complex requirements when this product is to be installed in a building where these additional requirements apply.

The support methods described in these instructions have been proven adequate (via UL certification) for locations where there are no additional seismic zone requirements. In order to address additional seismic requirements they may be further supplemented with a variety of generic sway bars or braces that attach to or around the outer wall of the grease duct system. Full Angle Rings (**FAR**) and Half Angle Rings (**HAR**) may be included as components of such supplemental bracing.

SECTION C - PIPE & FITTING JOINT ASSEMBLY

The ends of each inner pipe are made of flanges. All the joints between sections are flange-to-flange of the inner pipe. Grease ducts are to be grease tight per NFPA 96.

CAUTION: SHARP SHEET METAL, RISK OF CUTS WITH SLEEVES AND SECTIONS.

SPECIAL FEATURE

All sections have an unattached alignment sleeve (See figure 5).

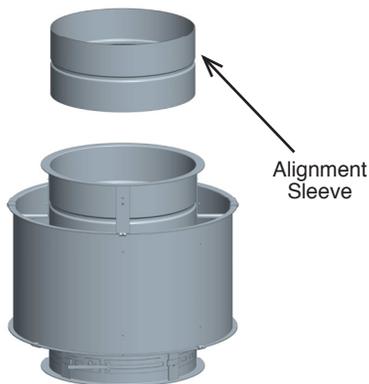


Figure 5-Feature of the alignment part

The alignment sleeve facilitates alignment of adjacent sections and provides a backing for the sealant applied to flange face keeping it in the intended location. It may either be placed on the outlet end section or in the downstream section. It is not a required part, which means that it might not be used at all.



Figure 6-Joint Assembly Step 1

JOINT ASSEMBLY

STEP 1

Fill the channel of the inner V-Band (BSI) with **S-650** sealant and install below flange of first pipe section.

NOTE: Sealant is supplied by Security and individual tubes are marked **S-650**. See **TABLE 2** for number of tubes per joint.

CAUTION: THE USE OF ANY OTHER SEALANT IS NOT RECOMMENDED, MAY VOID CERTIFICATION AND MAY IMPAIR THE SEALING EFFECTIVENESS.

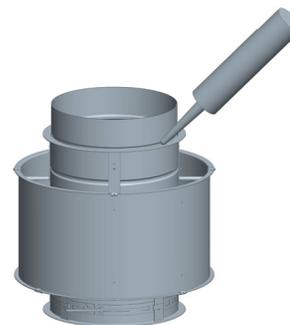


Figure -Joint Assembly Step 2

STEP 2

Apply a continuous bead of **S-650** sealant 1/4" wide to one of the flanges to be joined.

STEP 3

Join the two flanged ends of the duct section together and rotate slightly to ensure complete coverage of sealant on flanges.

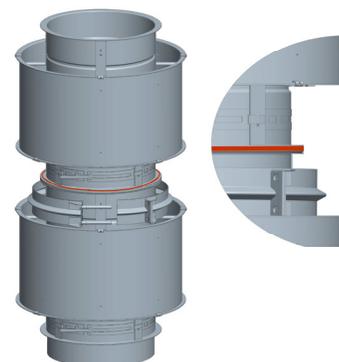


Figure 8-Joint Assembly Step 3

STEP 4

Install the V-Band around the flanges making sure the flanges are located within the V-Clamp.

NOTE: Do not locate V-Band hardware at the bottom side of horizontal duct joints.

NOTE: Light tapping with a hammer all around the band while tightening bolts helps align and pull flanges together.

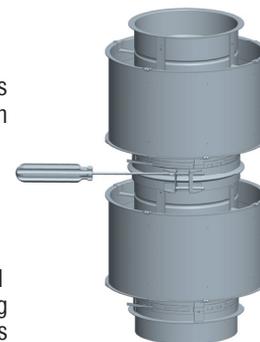


Figure 9-Joint Assembly Step 4

STEP 5

Install the supplied insulation strips between the sections to ensure that all air gaps are filled. Be sure that insulation is tightly packed and completely fills the void between flue and closure band when assembled.

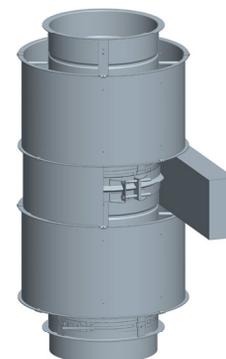


Figure 10-Joint Assembly Step 5

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

STEP 6

Secure the Outer Casing with the Outer Band (BSE). Joint installation is now complete.

NOTE: Seal the BSE band with S-375 sealant if exposed to weather.

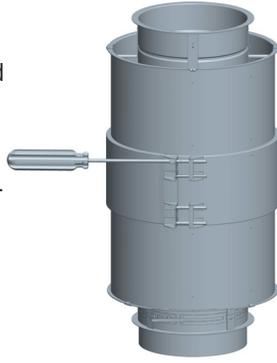


Figure 11-Joint Assembly Step 6

TABLE 6 - Expected number of Tubes of S-650 per Joint Assembly or of S-375 for exterior weathering

Inner Duct Diameter	Number of tube per Joint
5	1/5
6	1/5
7	1/5
8	1/5
9	1/5
10	1/5
11	1/4
12	1/4
13	1/4
14	1/4
16	1/4
18	1/3
20	1/3
22	1/3
24	1/2
26	1/2
28	1/2
30	2/3
32	2/3
34	2/3
36	2/3

SECTION D-COMPONENTS

STRAIGHT SECTIONS

HORIZONTAL DRAIN LENGTH (HDL)

1. Horizontal Drain length is equipped with a 1" (25) NPT nipple, which is attached to the inner flue and extends through the outer casing to provide a path to drain grease, condensate or wash water from the duct. See **Figure 12**.
2. A dam is attached to the inside of the inner flue adjacent to the nipple to channel the effluent to the drain.
3. The duct drain is intended for use at the end of a horizontal run where access and drainage is needed (See **Figure 13**).
4. The drain coupling must be connected to a grease trap or approved container (supplied by others).

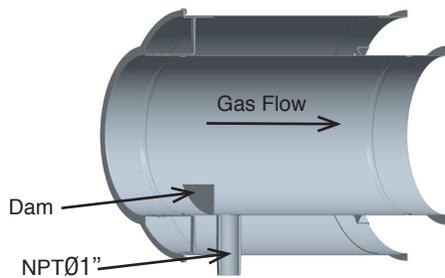


Figure 12 - Horizontal Drain Length

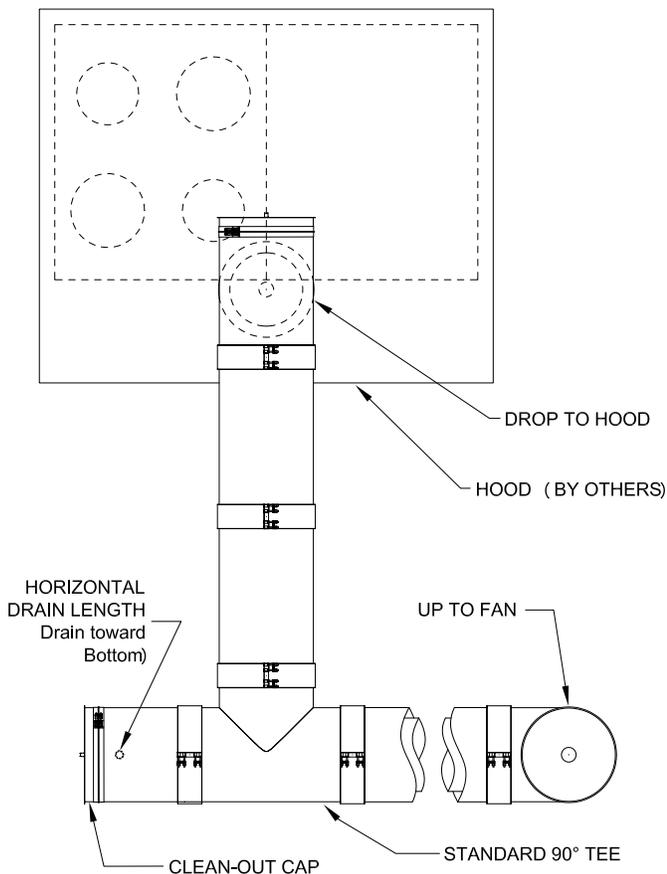


Figure 13 - Horizontal Drain Length typical location

NOZZLE LENGTH (NL)

The nozzle section is used when the duct is required to be equipped with a fire suppression system or washdown is desired.

The nozzle section allows a spray head or nipple to be attached to the duct through a 1" (25) NPT coupling attached to the inner flue.

When the Grease Duct section is in a vertical orientation, the nozzle may be located at the most convenient place. See **Figure 14**.

NOTE: Local authorities should always be consulted regarding the need for fire protection or washdown systems be installed so that the coupling is at or above the horizontal centerline of the chimney.

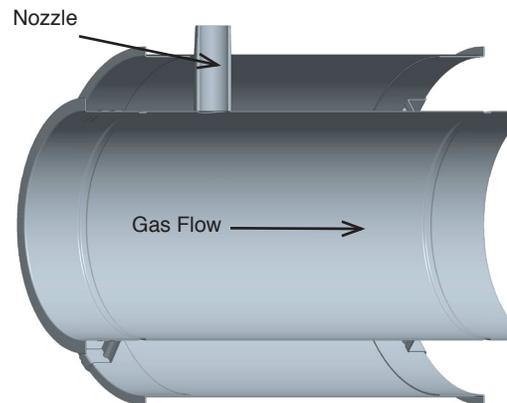


Figure 14 - Nozzle Section

ODD LENGTH AND EXPANSION JOINT

Two parts can make up odd lengths of duct. This is the Adjustable Length (**LA**) and the Variable Length (**VL**).

Only the Adjustable Length (**LA**) can be used as an expansion joint.

See **Figure 74** in SUPPORT section for typical installation of **LA** and **LV**.

ADJUSTABLE LENGTH (LA) - EXPANSION JOINT

The **LA** has two functions. It is used to compensate for thermal expansion and make up odd lengths of duct.

It is shipped with graphite band assembly preassembled on the sliding inner pipe. See **Figure 15**.

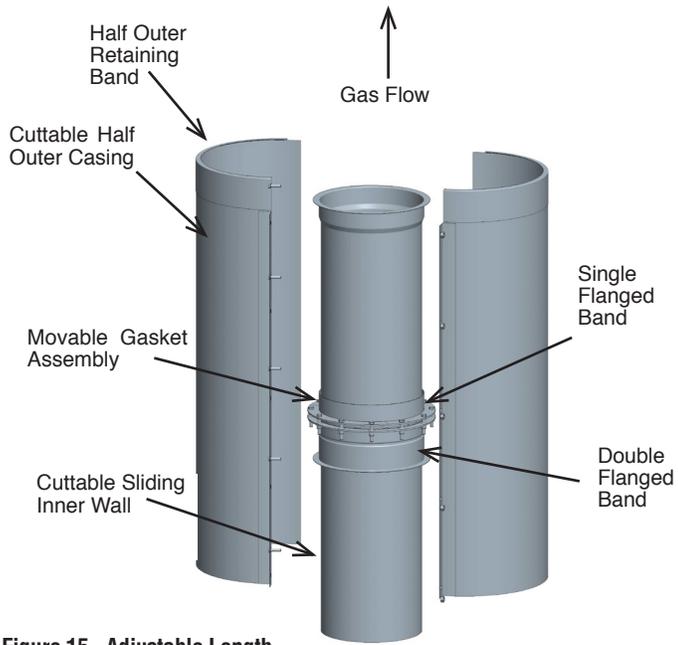


Figure 15 - Adjustable Length

The whole LA assembly includes:
See **Figure 16** for details

- A sliding inner wall that fits closely inside a standard pipe section and it is flanged on one side.
- An adjustable gasket assembly, composed of;
 - two containing rings;
 - one compression band (metal Tie Wraps)
 - a graphite packing gasket
 - one double flanged band
 - one other single flanged band

CIX3Z

- Insulation band (CIX3Z only)
- two half outer casing

There is also a supplied tool with this assembly. This tool works as a spacer when tighten the bolts of the containing rings on the graphite gasket. See **Figure20**.

NOTE: Do not remove this adjustable gasket assembly from the inner pipe. See **Figure 16**.

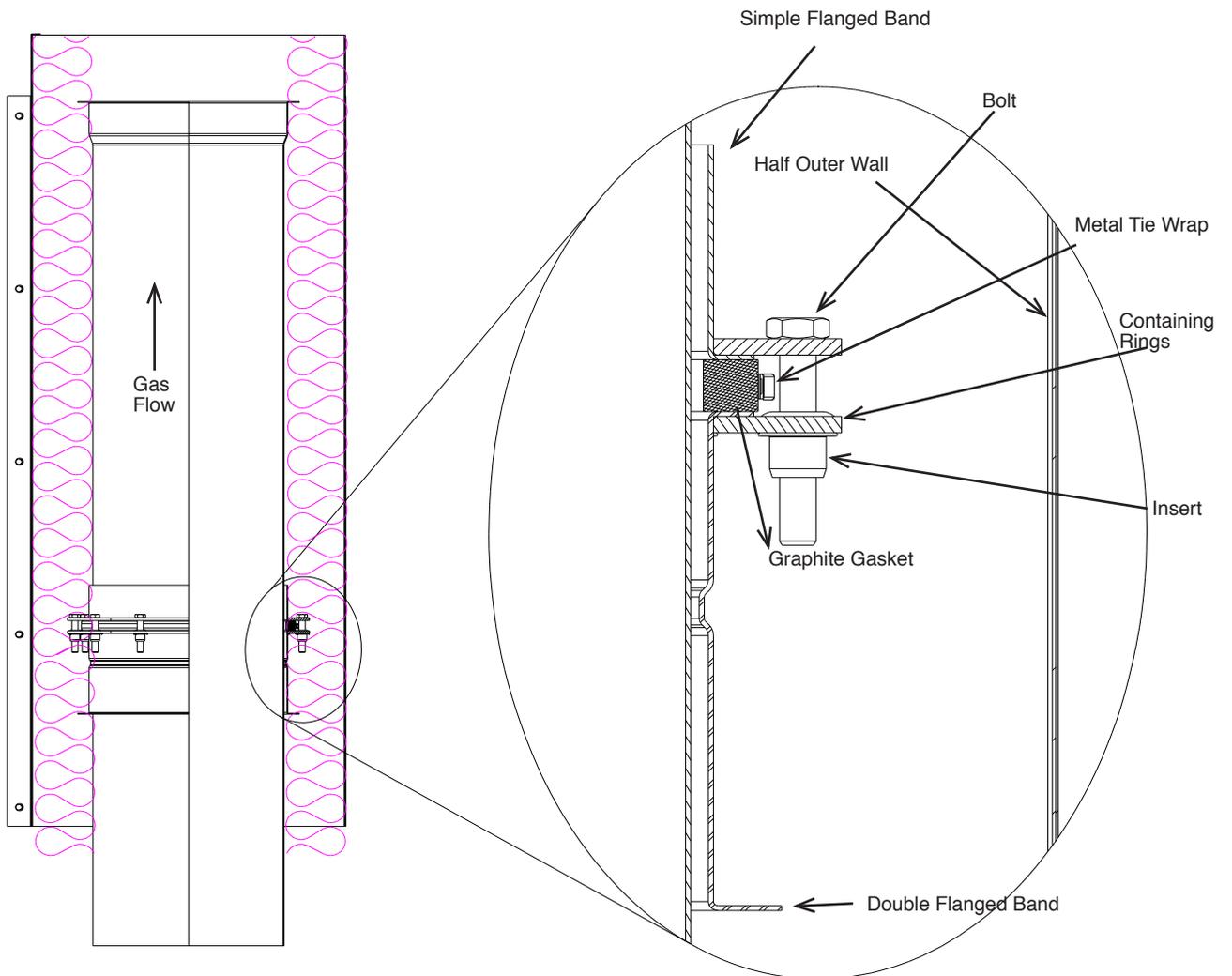


Figure 16 - Detail of Adjustable Length

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

The length adjustment from Flange to Flange is from **7 1/4" to 28 3/8"**. For proper installation, the adjustable length must have adequate overlap and sufficient allowance for thermal expansion.

If the length of the inner wall or the outer casing is too long, it can be cut. However, keep in mind that the minimum overlap for the sliding inner wall into the inlet end section is **8"** and the minimum overlap for the outer casing is **1"** with the downstream section outer wall (See **Figure 17**).

NOTE: Installation of an **LA** joint to fittings, such as elbow and tees, is not recommended. However, if its joint must be joined to one of these fittings, the unflanged end of the tube should always point downward or towards downward slope.

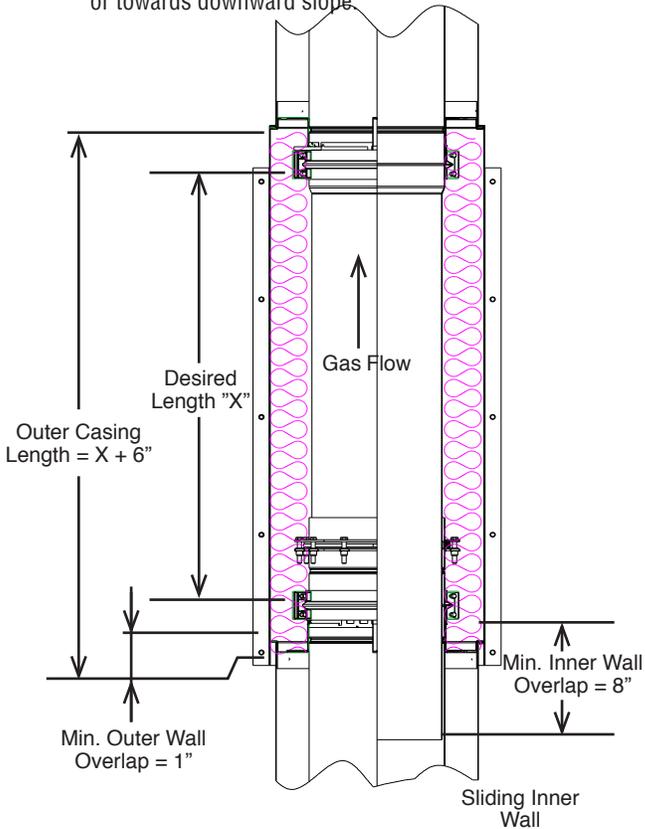


Figure 17 - Detail of Overlap of the Adjustable Length

The expansion length must be added to the minimum length of the LA so it may compensate for abnormal and normal operating conditions.

The amount of expansion is calculated as follows:

$$\text{Expansion} = \text{Length (feet)} / 100 \times \text{Temperature rise (°F)} / 100$$

$$\text{Minimum Length} = \text{Expansion} + 7 \frac{1}{4}''$$

NOTE: It is recommended that the temperature used in the above formula be at least 300°F higher than the expected normal operating temperature.

NOTE: Adjustable Length cannot be used to correct misalignment or to compensate for lateral movement or vibration. It is recommended that the duct on both side of the LA joint is supported or guided to ensure that it will not bind during operation. See Variable and Adjustable Support section for typical applications.

INSTALLATION STEPS FOR THE ADJUSTABLE LENGTH

1. Place the sliding inner liner section (with the graphite band assembly on it) into a standard section of CIX3Z or SCL.

NOTE: If the inner flue is too long, it may be cut to length while respecting the minimum overlap of **8"** into the inlet end section duct plus the expansion.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

2. Secure the double flanged part of gasket collar assembly to the inlet end section with the inner V-band (BSI). See **Figure 18**.

NOTE: See **JOINT ASSEMBLY** section for assembly of the V-Band

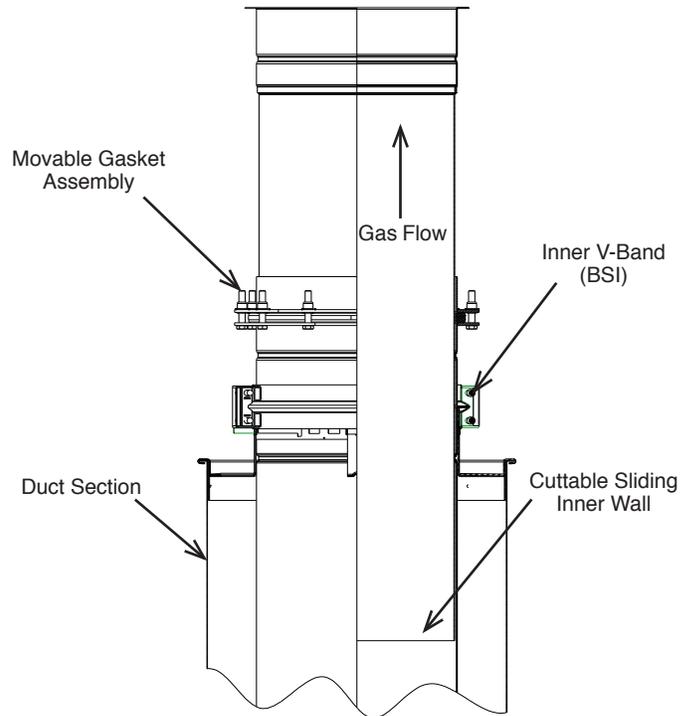


Figure 18 - Installation of Adjustable Length Steps 1 & 2

3. Extend the sliding inner liner to its correct length (up to the outlet end section) and secure it with the V-Band (See **JOINT ASSEMBLY** section).

4. Strongly tighten the metal tie wrap so that the graphite packing is firmly compressed against the inner flue. See **Figure 19**.

NOTE: On horizontal run, make sure that the joint of the graphite packing gasket is on the top side of the section.

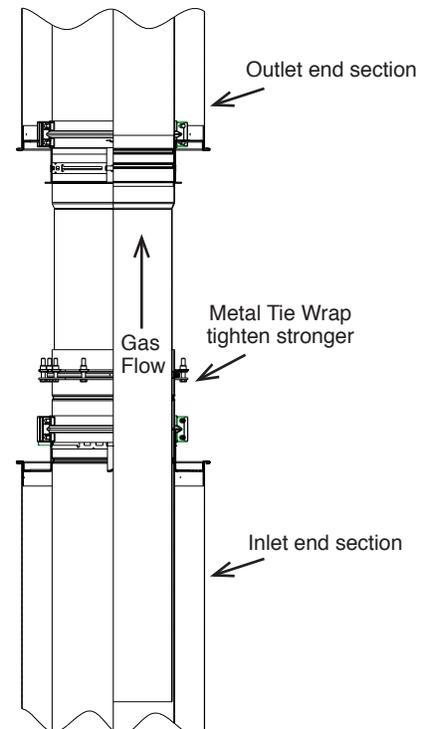


Figure 19 - Installation of Adjustable Length Steps 3 & 4

5. Tighten all the bolts of the containing ring. For each bolt, use the supplied tool as a guide between the two containing rings. See **Figure 20**.

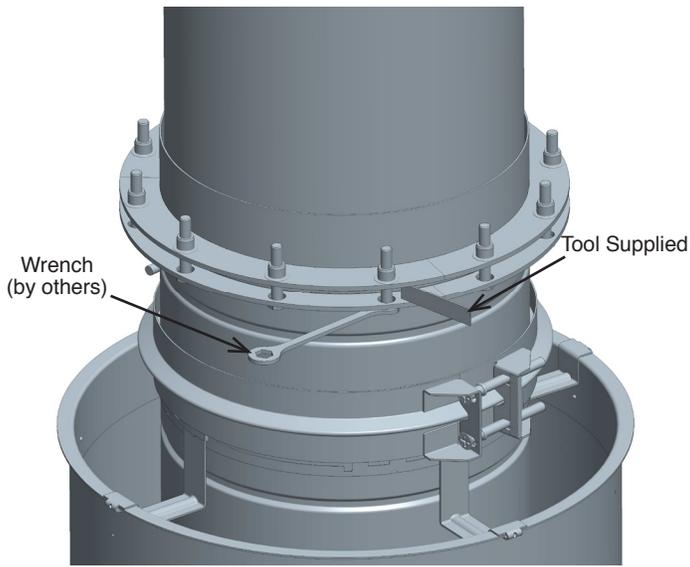


Figure 20 - Step 5 of the Adjustable Length

6. Install the outer pipe casing insulation (and insulation strip if Model CIX3Z) so the side with the bracket goes on the upstream section. See **Figure 21**.

NOTE: The outer wall must fit loosely and slide freely when the duct expands or contracts.

NOTE: If the outer casing is too long, it may be cut to length by respecting the minimum overlap of 1" with the outer wall of the inlet end section.

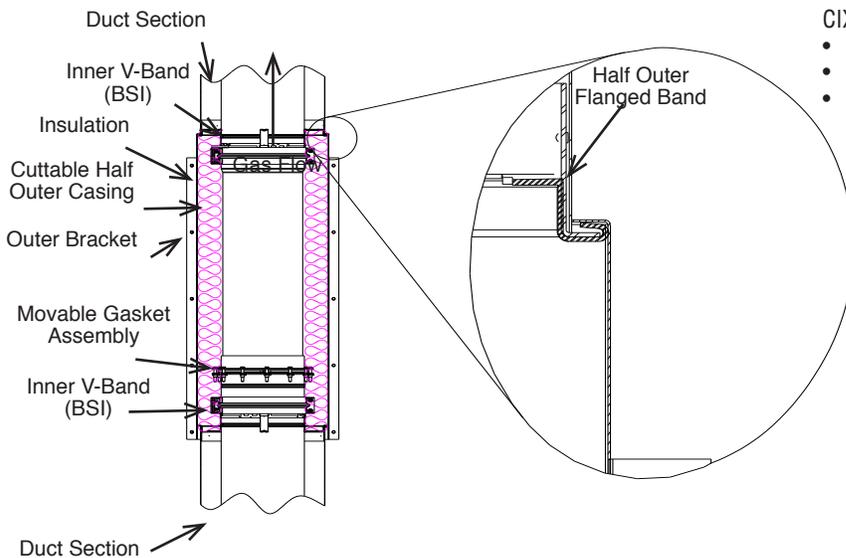


Figure 21 - Installation of Adjustable Length Step 6

VARIABLE LENGTH (LV)

The Variable Length (LV) has one major function. It makes up odd lengths of duct. It must not be used for expansion compensation.

It is shipped with a flanged retaining band assembly on the inner sliding wall. See **Figure 22**.

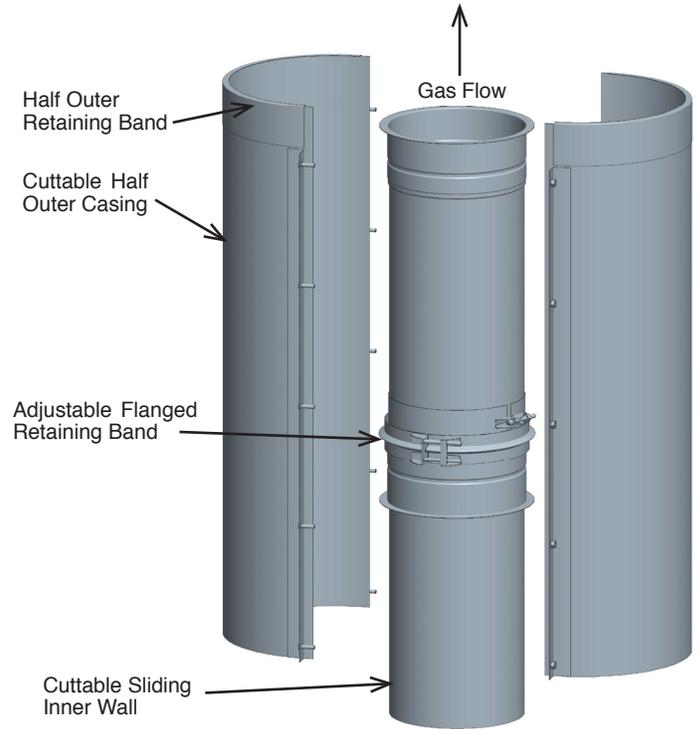


Figure 22 - Variable Length

The whole LV assembly includes:

- A sliding inner wall that fit closely inside a standard pipe section and it is flanged on one side.
- An adjustable flanged retaining band, composed of;
 - Double flanged sleeve
 - Retaining flanged collar
 - An inner V-Band (BSI)

CIX3Z Only

- Insulation band
- Split outer casing
- Inner flue sealant S-650

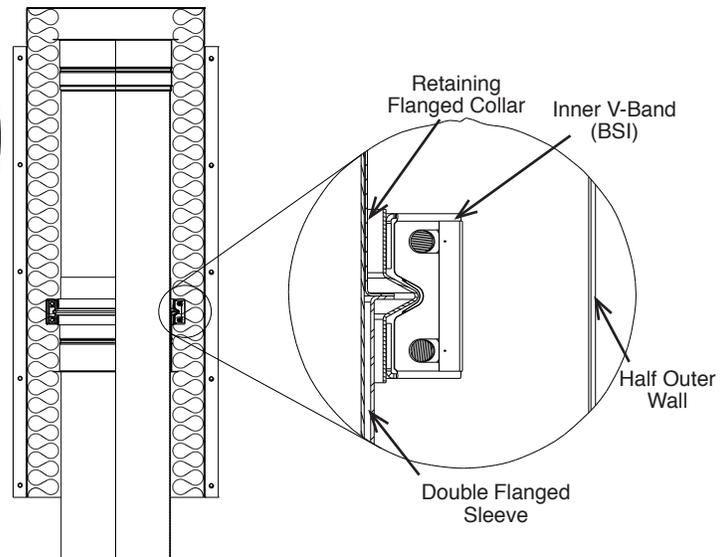


Figure 23 - Detail of Variable Length

Flange to flange length adjustment can range from 7"x 28 1/2"

NOTE: If the flue is too long to fit into the adjacent section of duct without interfering with the flow path, it should be trimmed to desired flange to flange length plus an overlap of 4" with the inner wall of the inlet end duct section. The minimum overlap for the outer casing is 1" with the inlet end section outer wall. See **Figure 24**. w

NOTE: If an LV joint must be joined to one of these fittings, the unflanged end of the tube should always point downward or towards downward slope.

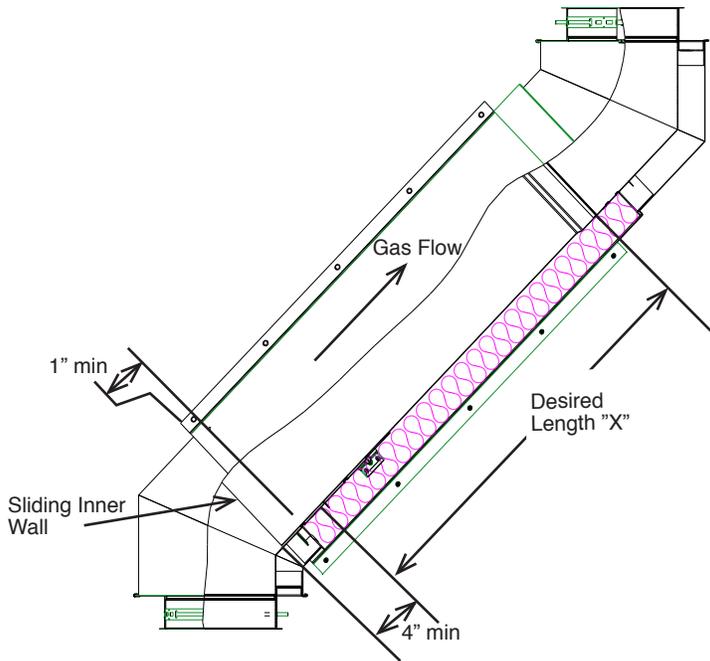


Figure 24 - Overlap Details for Variable Length

INSTALLATION STEPS FOR THE VARIABLE LENGTH (LV)

1. Measure the distance X required for the variable length. See **Figure 25**.

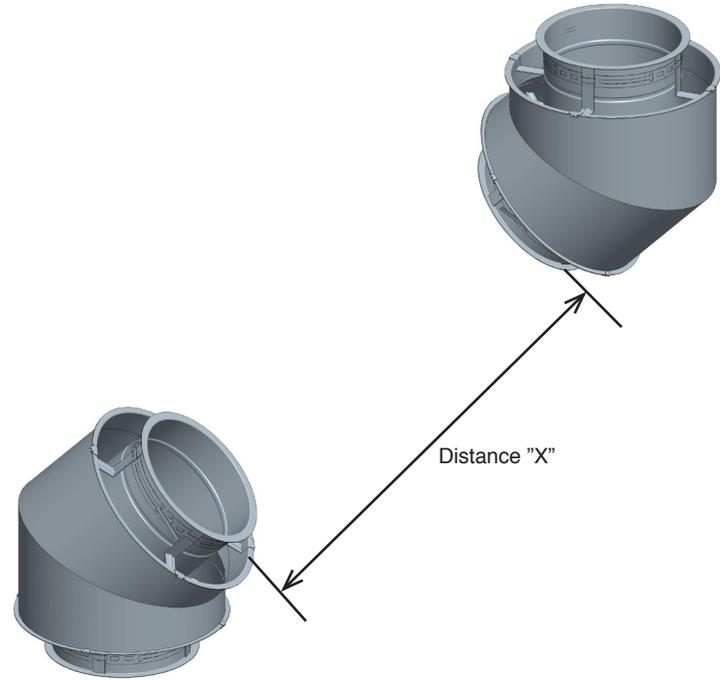


Figure 25 - Step 1 for Installation of Variable Length

2. Cut the inner wall at the dimension X found at the first Step plus 4". See **Figure 26a**.
3. Cut the split outer casing at dimension X plus 1". See **Figure 26b**.
4. Then cut the insulation band at dimension X + 6" (CIX3Z only). See **Figure 26c**.

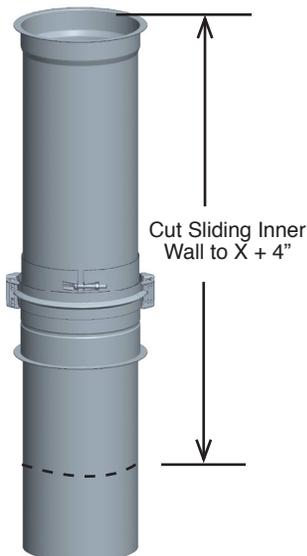


Figure 26a - Step 2 - Cut of the Sliding Inner Wall

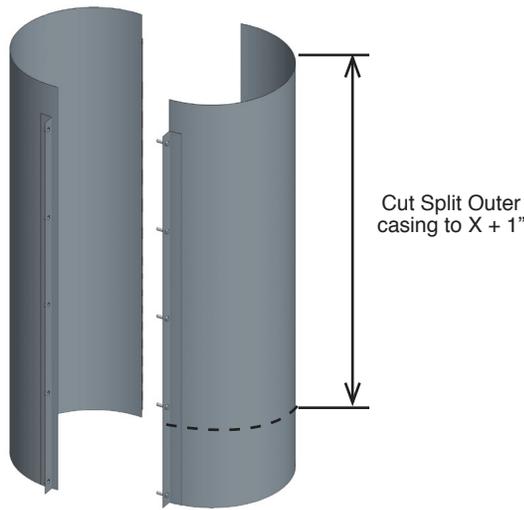


Figure 26b - Step 3 - Cut of the Outer Casing

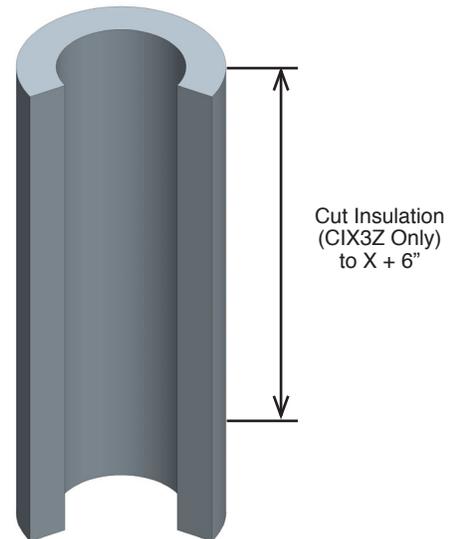


Figure 26c - Step 4 - Cut of the Insulation

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

5. Install the interior assembly between the two parts. Place the adjustable flanged band assembly toward the downstream section.
6. Assemble the outlet end sliding inner wall to the outlet end section as a regular section (See **JOINT ASSEMBLY** section). See **Figure 27**.

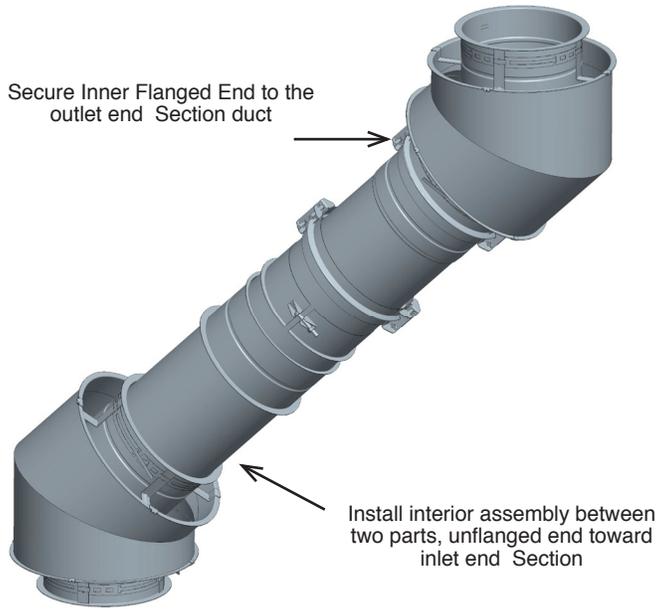


Figure 27 - Step 5-6 - Install the inner LV and secure the outlet end Flange

7. Before assemble the double flanged sleeve to the inlet end section, add a thin coat of sealant about 1" wide a thin coat of sealant at the unflanged end of the LV joint where the joint slides into the mating duct section. Press sealant into any gap between the LV and the mating joint section.
8. Assemble the inlet end flange assembly with the inlet end section flange as a regular length installation (See **JOINT ASSEMBLY** section).
9. Apply thin layer of sealant inside the retaining collar, and also a continuous bead of sealant at the collar overlap seam. See **Figure 28**.

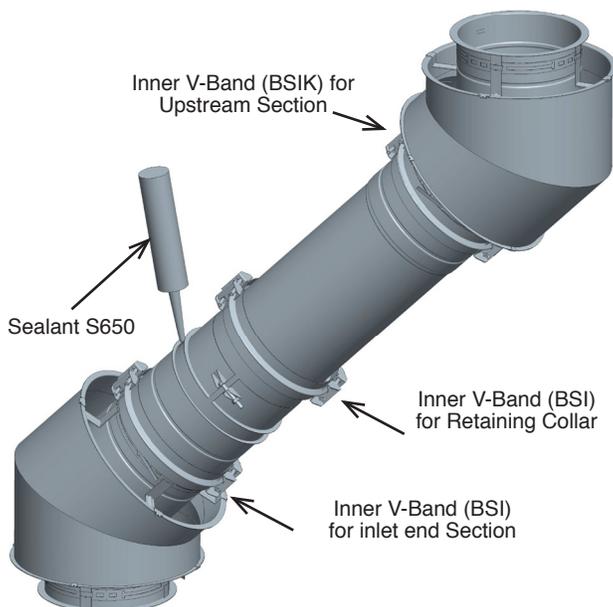


Figure 28 - Step 7-9 - Secure the Double Flanged Sleeve and seal the Retaining Flange Collar

10. Slide down the retaining band on the double flanged sleeve to mate their flanges and tighten the retaining collar.
11. Then install the other V-band (BSI) over these flanges (like regular section joint assembly). See **Figure 29**.

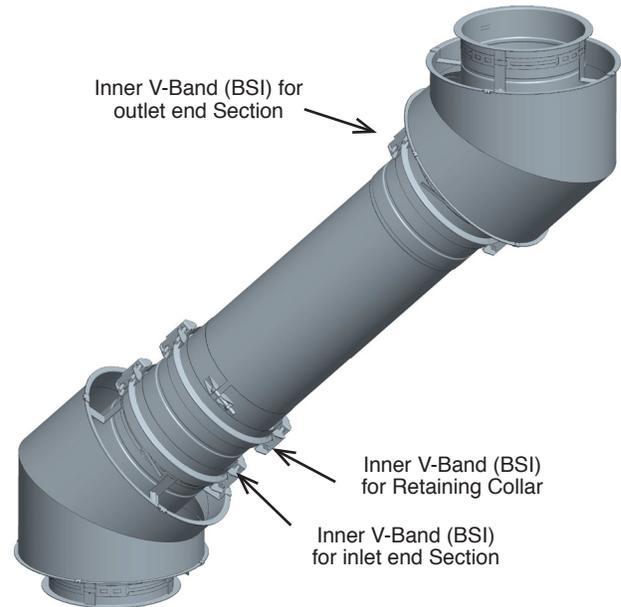


Figure 29 - Step 10-11 - Secure the Retaining Flanged Band

12. Install the insulation over the inner wall (CIX3Z only). See **Figure 30**.

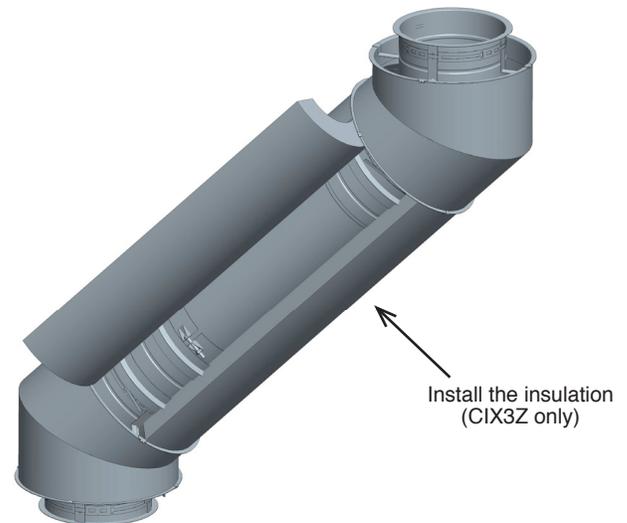


Figure 30 - Step 12 - Install Insulation for LV

13. Install the split outer casing that covers from the outer wall of the inlet end section to the outer wall of the outlet end section. See **Figure 31**.

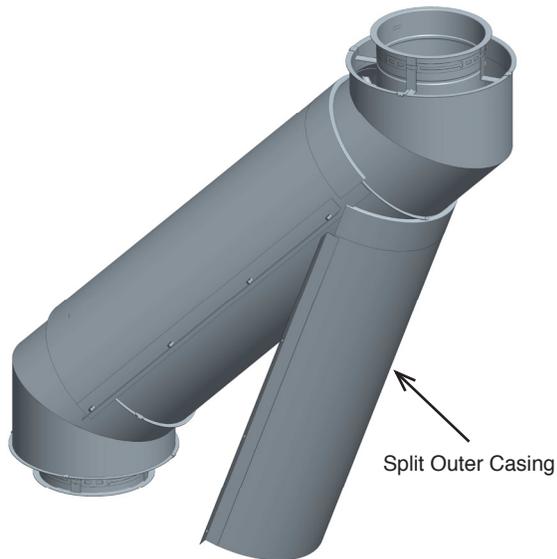


Figure 31 - Step 13 - Install of Split Outer Casing

TEES

90° TEE (T90) AND GREASE TEE WITH DAM (T90D#)

The 90° Tee is generally used to connect horizontal connectors into a vertical section as well as a drain or inspection fittings.

To comply with the NFPA 96 requirements, the **T90D#** is comprised of a **T90** equipped with a 1 1/2" wide circular "donut" welded in place (serve as a dam) at any access port and must be closed with a Tee Cap (TC) or a No Tool Tee Cap (NTTC). The location of the access port in the Tee is dependent on the orientation of the tee in the final installation. Access port location is coded as shown in **Figure 32a** and **Figure 32b** for the two options.

NOTE: For the maximum height of grease duct above a based supported Tee, see Table 4 in the SUPPORT METHODS AND HEIGHT LIMITS section.

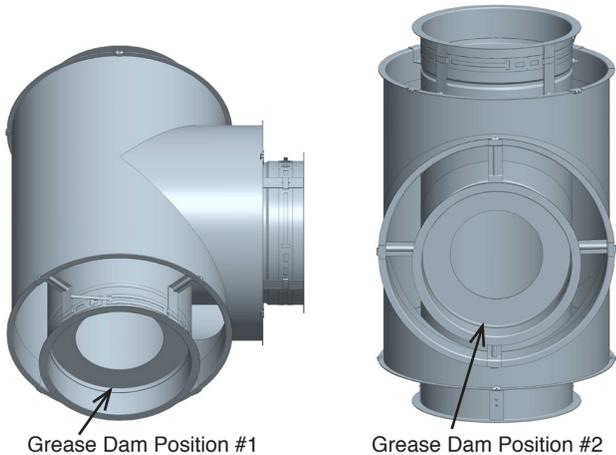


Figure 32a - Grease Dam Position #1 Figure 32b - Grease Dam Position #2

TEE PRECAUTION

1. Use an adjustable length in all horizontal breechings or laterals.
2. If more than 1/4" of thermal expansion is expected between the tee and the next fixed support point;
 - a. The tee should be protected from bending moments by use of an Adjustable Length (See the section on the Adjustable Length)
 - b. And the use of two axis support as in **Figure 75 and 76** in TEE SUPPORT section is recommended.
3. Provide access for easy removal of Tee Caps.

Y-Tee (TY)

1. The Tee Y (TY) is very useful where the grease duct must be accessed for clean-out and inspection purposes. See **Figure 33**.
2. It can be used in place of the Tee 90 (T90) and provides excellent access clearance for clean-outs.
3. Clean-outs must be located at all direction changes in the grease ductwork.
4. Installation is the same as standard tee.

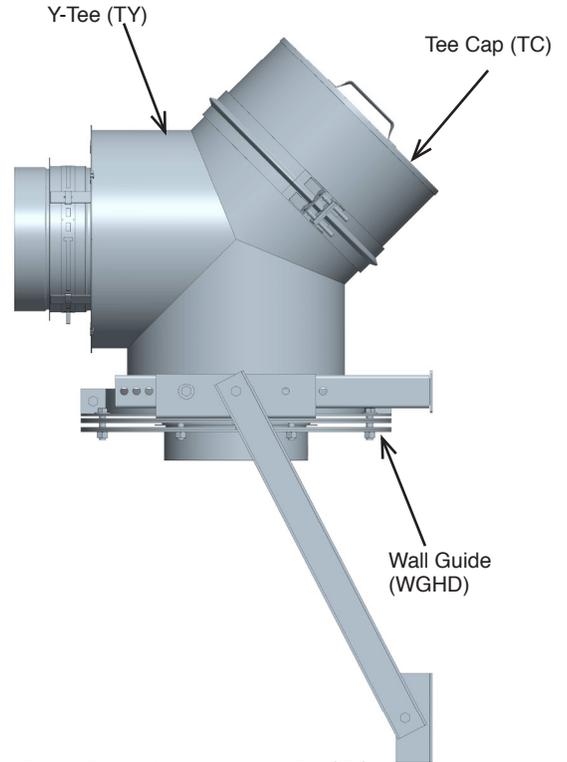


Figure 33 - Installation of a Y-Tee (TY)

45° TEE (T45) AND DOUBLE 45° TEE (TD45)

See **Figure 34** for the Tee 45° Tee and the **Figure 35** for the tee with two entrances to trunk (the Double 45° Tee). Isolate these tees from the effects of thermal expansion.



Figure 34 - 45° Tee (T45)

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

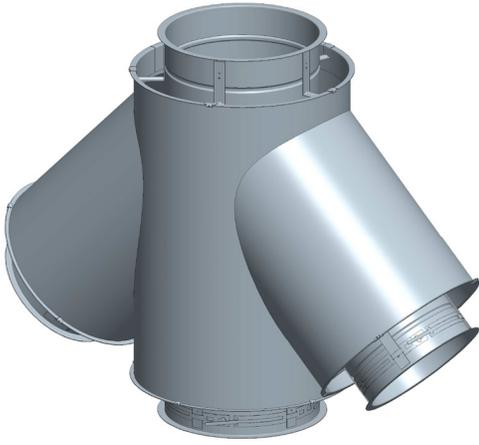


Figure 35 - Double 45° Tee (DT45)

LATERAL TEE (BT)

The Lateral Tee (BT) is a 45° Tee with a 45° Elbow integrated in it. The installation details are the same as a 90° Tee. See **Figure 36**

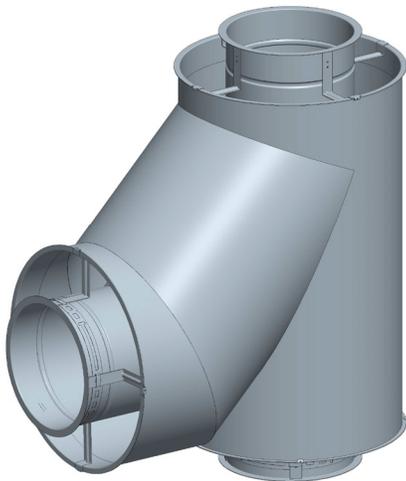


Figure 36 Lateral Tee (BT)

90° TEE WITH NOZZLE (T90N)

Like the Nozzle Length (NL), the 90° Tee with Nozzle **T90N** is used when the duct is required to be equipped with a fire suppression system or wash down is desired.

The **T90N** section allows a spray head or nipple to be attached to the duct through a 1" (25) NPT coupling attached to the inner flue.

When the grease Duct section is in a vertical orientation, the nozzle may be located at the most convenient place. See **Figure 37**.

NOTE: Local authorities should always be consulted regarding the need for fire protection or wash down systems be installed so that the Nozzle is at or above the horizontal centerline of the grease duct.

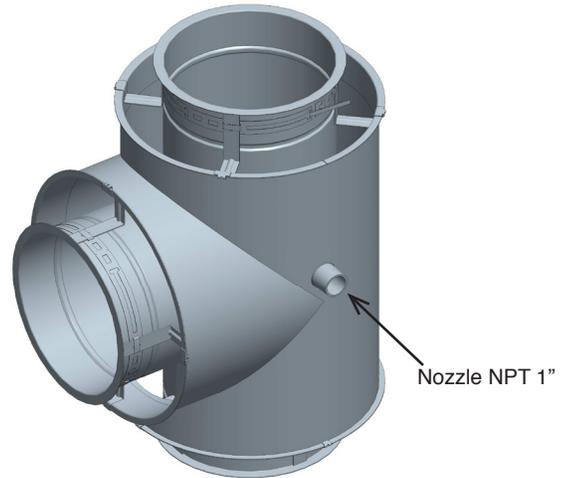


Figure 37 - 90° Tee with Nozzle (T90N)

ACCESS FOR CLEANING OR INSPECTION

Grease Duct installations require provisions for cleaning the interior of the duct. NFPA 96 clean-out requirements are as follows:

1. A clean-out must be provided at each change of direction except where the entire length of the duct can be inspected and cleaned from either the hood or the discharge end.
2. On horizontal duct runs, at least one (1) 20" (508) diameter opening must be provided. Where the duct is smaller than 20" (610) diameter, openings large enough to permit cleaning must be provided at intervals of not more than 12' (3.66m).
3. Openings may be at the side or the top of the duct whichever is more accessible. When the opening is on the side of the duct, the lower edge of the opening must be at least 1-1/2" (38) above the bottom of the duct. For Model CIX3Z Grease Duct, this is accomplished by the use of the 90° Tee with the dam option (**T90D#**) with a Tee Cap (**TC**) or a No Tool Tee Cap (**NTTC**).
4. On vertical ducts where personnel entry is possible, access must be from the top of the riser. Where personnel entry is not possible, access for cleaning shall be provided on each floor.

NOTE: ACCESS REQUIREMENTS ARE SUBJECT TO CHANGE IN ACCORDANCE WITH LOCAL CODE. LOCAL AUTHORITIES SHOULD BE CONSULTED FOR EXACT REQUIREMENTS.

TEE CAP (TC)

The Tee Cap provides access for cleaning and inspection into the grease duct. Usually on horizontal runs, the Tee Cap is used to close the unused port of any Tee and for cleanout or access purposes only. When using clean-outs, always seal the connection to prevent leaks and assure that the grease duct functions as intended.

The part list includes;

- 1x Cap with one Handle
- 1x smaller V-Band (**BSI**)

The next Items are for the Model CIX3Z only

- 1x Outer Casing
- 3x Insulation Round Pads
- 3x Insulation Bands
- 1x smaller V-Band (**BSI**)

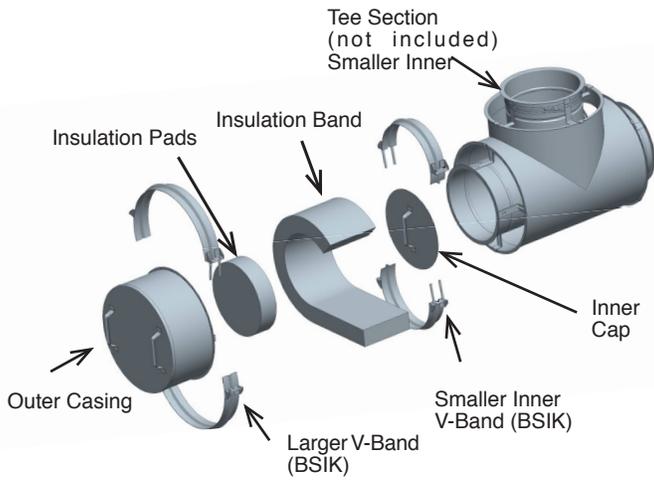


Figure 38: Tee Cap (TC)

INSTALLATION PROCEDURES

- 1- Apply sealant to duct flue flange and on the Inner Cap (disc with one handle), about a 3/8" bead all around the cap.
- 2- Use the inner V-Band (BSI) to secure the No-Tool Cap Kit to the flange of the 90° Tee (T90, not included) as specified in the **JOINT ASSEMBLY** section

NOTE: Be sure the handle of the NT-Cap faces outward as shown. See **Figure 39a**

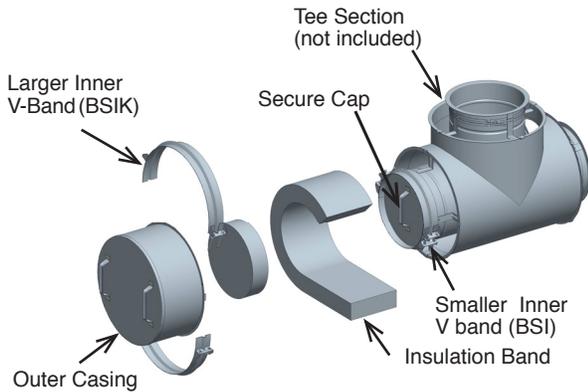


Figure 39a: Step 1-3 for the installation of the TC

The next steps are for Model CIX3Z only.

- 3- Install the insulation band inside the outer casing. Make sure that it is well placed against the inner side of the casing.

NOTE: Do not cut the extra height of the insulations. The insulation bands has to be higher than the outer casing wall, so it can insulate up to the spacers between both walls of the Tee Section.

- 4-Then add the insulation pads at the bottom of the casing, in the middle of the insulation wrap. See **Figure 39b**.

NOTE: *The assembly has been cut in half for a better view of the components.

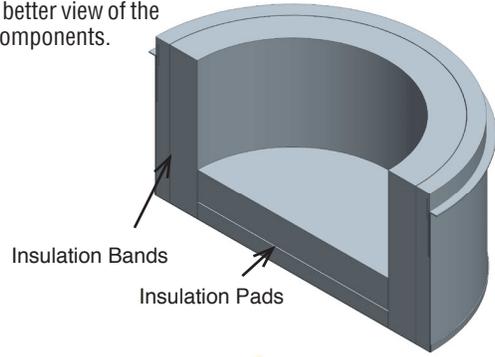


Figure 39b: Tee Cap Step 4-5

- 5- Mate the flange of the outer casing with the flange of the out wall of the Tee section.
For a good installation, make sure that the insulation discs go inside the smaller BSIK and the insulation band goes up to the spacers of the T90 for a well.
- 6- Secure with the bigger V-band (BSI) by tightening the retaining screw. See **Figure 41**

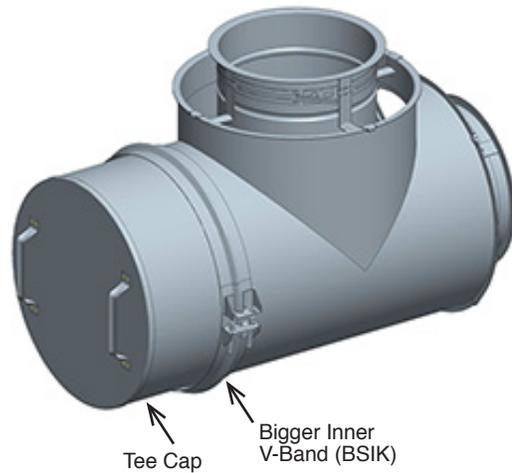


Figure 40: Tee Cap insulated casing Step 6-7

DRAIN TEE CAP (DTC)

The Drain Cap (DTC) is used as a drain for the base of vertical installation and must be connected to a suitable disposable point. It can also be used as an access for cleanouts or access purpose. (See **Figure 41**) Same installation as a Tee Cap (TC).

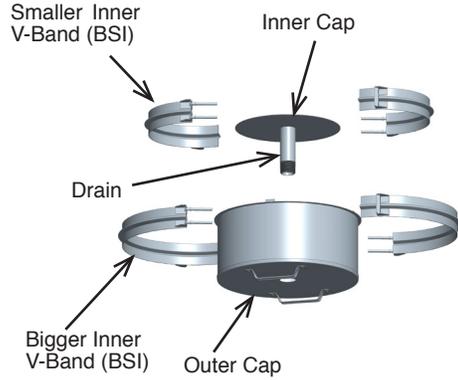


Figure 41: Drain Tee Cap (NTTC)

NO TOOL ACCESS TEE CAP (NTTC)

The No-Tool Access Tee Cap (NTTC) provides no tool access for inspection and cleaning of the grease duct (See **Figure 42**).

NOTE: Use only on horizontal duct runs.

This part list includes:

- 1 x No Tool Cap Kit, composed of;
- 1 x No-Tool Cap
- 1 x No-Tool Dam (with 6x to 20x rivnuts, based on pipe diameters)
- 6x to 20x Wing Nuts (based on pipe diameter)
- 1 x V-Band (BSI)
- 1 x AES Wool Gasket

The next items are for the Model CIX3Z only

- 1 x No-Tool Outer Casing with 4 to 8 latches (based on pipe diameters)
- 3 x Insulation Round Pad
- 1 x Insulation Band

The No-Tool Cap kit is factory installed to the No-Tool Dam with the use of several wing nuts and Inserts

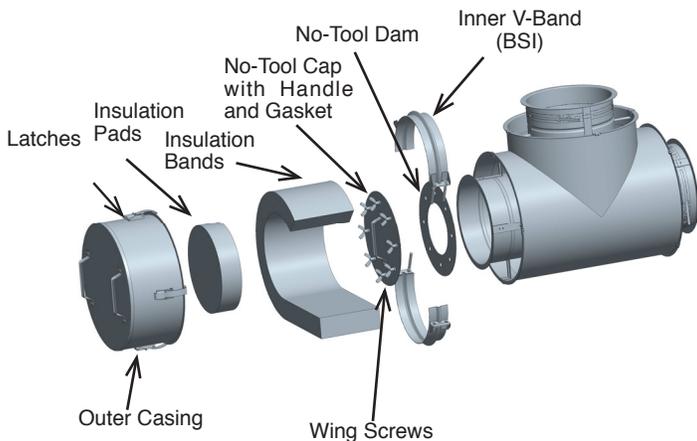


Figure 42- No Tool Tee Cap (NTTC)

INSTALLATION PROCEDURE

- 1- Apply sealant to duct flue flange and the No-Tool Cap Kit, about a 3/8" bead all around the Kit.
- 2- Use the inner V-Band (BSI) to secure the No-Tool Cap Kit to the flange of the 90° Tee (T90, not included) as specified in the JOINT ASSEMBLY section. See **Figure 43**.

NOTE: Be sure the handle of the NT-Cap faces outward as shown

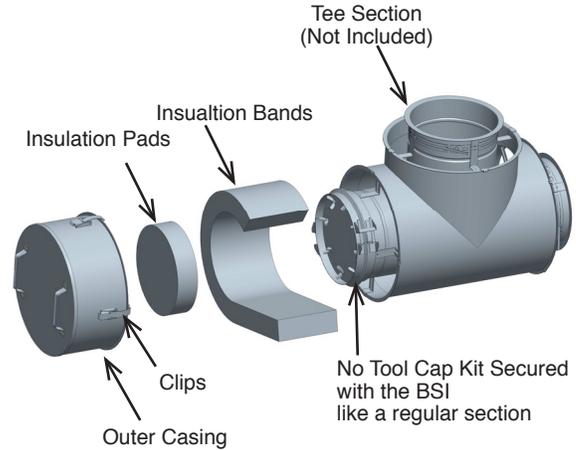


Figure 43- Step 1 & 2 for the No-Tool Tee Cap Installation

The next steps are for Model CIX3Z only.

- 3- Install the insulation Bands inside the outer casing. Make sure that it is well placed against the inner side of the wall of the casing.

NOTE: Do not cut the extra height of the insulations. The insulation bands has to be higher than the outer casing wall, so it can insulate up to the spacers between both walls of the Tee Section.

- 4- Then add the insulation Pads at the bottom of the casing, in the middle of the insulation wrap. See **Figure 44**.

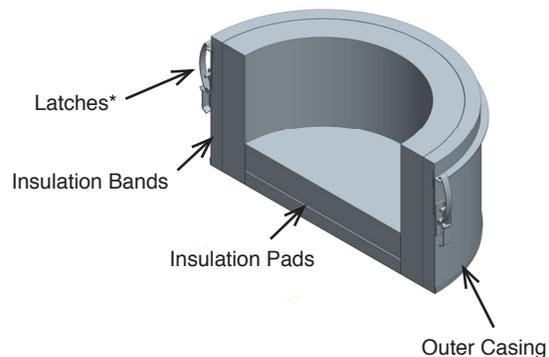


Figure 44- No-Tool Tee Cap Installation Step 3-4

5- Mate the flange of the outer casing with the flange of the out wall of the Tee section.

Make sure that the insulation discs go inside the smaller **BSI** and the insulation band goes up to the spacers of the **T90** for a well .

6- Clip the latches* to the flange of the outer wall of the **T90** section. See **Figure 45a**

* The latches are self locking. The **Figure 45b** shows how to unlock a clip.

NOTE: The **NTTC** on a tee section should be positioned/oriented horizontally or upward to avoid the possibility of it collecting any grease

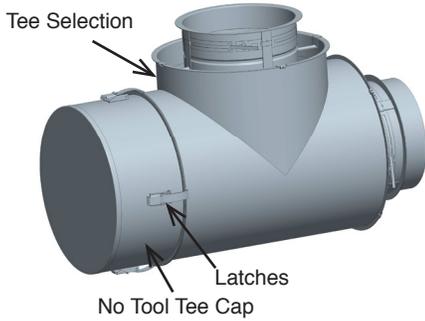


Figure 45a- Step 5-6 for the Installation of the NTTC

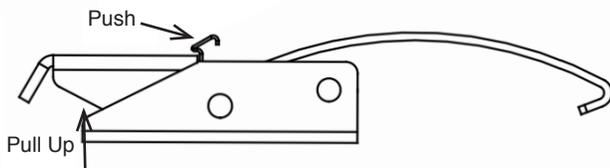


Figure 45b- Detail to Unlock a Latches

DRAIN BUCKET (DB)

The Drain Bucket consists of a 8 1/2" long duct section with an installed cap. It is intended for use as a drain point and access at the base of the duct riser. The drain nipple must be attached to a grease trap or approved container (supplied by others).

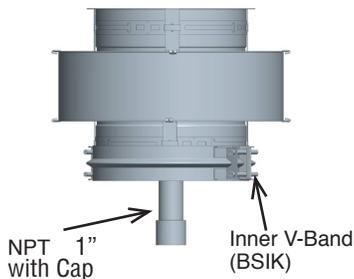


Figure 50: Drain Bucket (DB)

NO TOOL INLINE ACCESS DOOR (ADL24 OR ADL36)

The No Tool Inline Access Door is offered as an alternative to the TC to allow for complete access for inspection and cleaning without the use of tools. Can be installed on vertical or horizontal runs. When installed on horizontal runs, the opening must be above the centerline of the duct. The **ADL24** and **ADL36** comply with requirements of NFPA96 and the International Mechanical Code for accessibility. The No-Tool Access Door is all factory assembled. See **Figure 46**

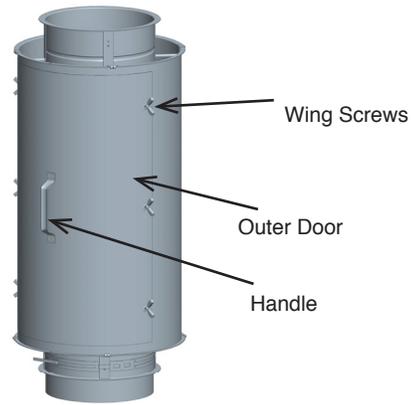


Figure 46: No Tool Inline Access Door ADL24 or ADL36

REMOVAL FOR INSPECTION

NOTE: For the **Model SCL**, go to step 4

- 1- Unscrew the 6 or 10 wing screws (based on pipe diameters) with your hands and set them in a safe place during the inspection.
- 2- Remove the outer door from the outer wall of the duct and set it in a safe place during the inspection.
- 3- Remove the insulation pad and set it in a safe place during the inspection. See **Figure 47**.

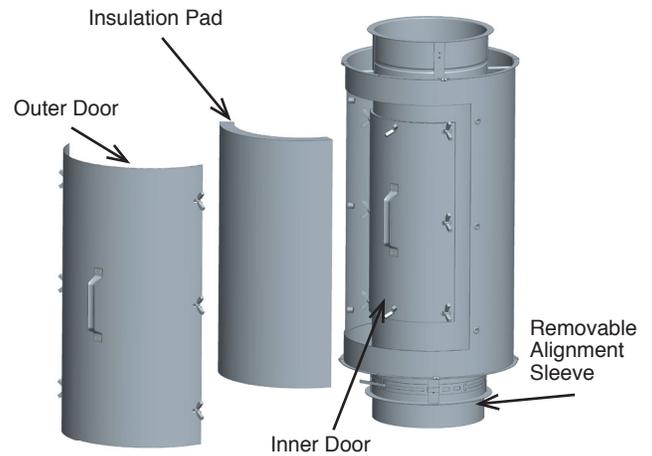


Figure 47: Step 1-3 of Removal for Inspection for the ADL

- 4- Unscrew the 8 or 12 wing screws (based on pipe diameters) and set them in a safe place.
- 5- Remove the Inner cover and set it in a safe place. See **Figure 48**

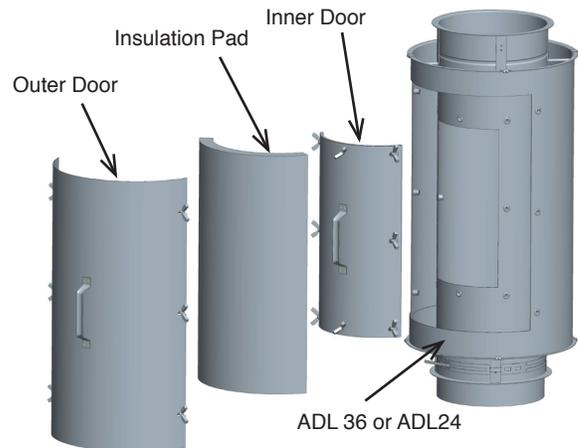


Figure 48: Step 4-5 of Removal for Inspection for the ADL

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

- 6- Inspect the ceramic gasket (white) and the silicone gasket (gray) attached on the inside of the Inner door for any damage (see figure 49). If any damages, you must replace one or both gaskets. See **Figure 49**

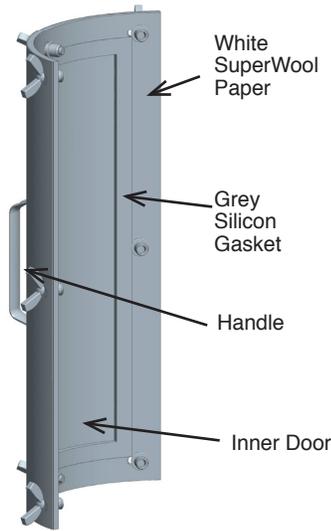


Figure 49: Step 6 of Removal for Inspection for the ADL
REPLACEMENT OF THE ACCESS DOOR:

- 1- Replace the Inner door on the duct over the access hole.
- 2- To make sure the door is properly aligned and sealed, install only the top and lower central wing screw and tighten both.
- 3- Make sure that the doors are well aligned with all the rivnuts.
- 4- Reinstall the other 8 to 12 wing screws (based on pipe diameters) left and tighten adequately.
- 5- (CIX3Z Model Only) Replace the insulation pillows over the inner door.
- 6- Replace the outer door.
- 7- reinstall the 6 to 10 (based on pipe diameters) wing screws and tighten them with your hands.

ELBOWS

ELBOWS (E3, E15, E30, E45, E90)

Elbows are used for changes in direction in horizontal or vertical portions of a grease duct system. All elbows feature the standard joint assembly as described in JOINT ASSEMBLY section. Elbows are used in combination to make different angles ranging from 3° to 90° in horizontal and vertical segments of the grease duct system.

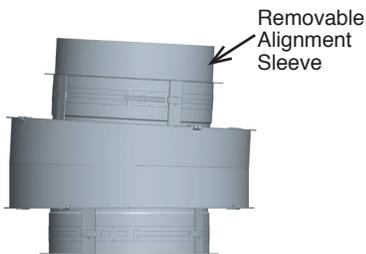


Figure 51a: 3° Elbow

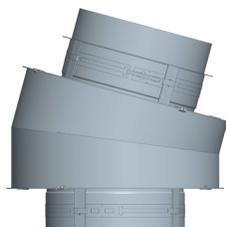


Figure 51b: 15° Elbow

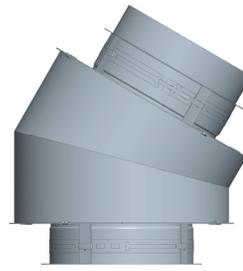


Figure 51c: 30° Elbow

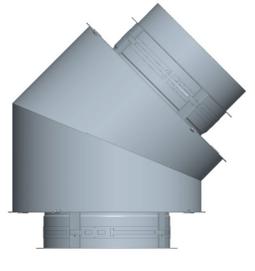


Figure 51d: 45° Elbow

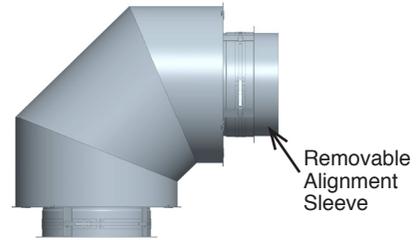


Figure 51e: 90° Elbow

Elbows are not designed to take bending loads and must be structurally supported. Structural parts such as posts or beams may also be needed to hold chimney supports in position. See **ELBOW SUPPORT** section.

OFFSETS

- 1- Sloped or horizontal offsets in the vertical portion of a grease duct above the breeching should be avoided except where absolutely necessary.
- 2- Sloped offsets require more expansion joints and secure bracing above and below elbows
- 3- The length of the offset is determined by strength considerations. The maximum dimension between supports is given in **Table 6**, and is applicable to all horizontal and sloped orientations
- 4- The minimum offset is accomplished with two elbows directly connected to each other (see **Figure 52** and **Table 7**).
- 5- With frequent re-support, there is no structural or operating limit to the length of horizontal or sloped portions of Model CIX3Z or SCL, providing the system meets the capacity, pressure drop of available equipment.
- 6- The carrying capacity of supports and their structural attachments must take into account the weight of the offset plus whatever vertical grease duct is carried by that support.
- 7- Height limits for supports are tabulated in SUPPORT METHODS AND HEIGHT LIMITS of these instructions (See **Figure 53**)
- 8- The ends of any sloped or horizontal offset must be anchored to prevent overstressing elbows and to assure proper operation of expansion joints.
- 9- The vertical sections of grease duct above the offset must also be supported or anchored and guided where necessary.
- 10- Models SCL and CIX3Z Heavy Duty Floor Guide (**FGHD**), Heavy Duty Wall Support (**WSHD**) and Heavy Duty Wall Guide (**WGHD**) may be used in a variety of ways for offset support to achieve the structural stability of the grease duct system. Preferred methods of using Model CIX3Z and SCL supports are shown in SUPPORTS section.
- 11- Re-supports such as those shown in **Figure 31** must be securely anchored to walls, posts, or locally fabricated rigid framework. This framework must be designed to assure stability of attached model CIX supports, such as Anchor Plate (**AP**) supports and Heavy Duty Wall Supports (**WSHD**).
- 12- Supports suspended by threaded rods or from small size angles or straps are usually not satisfactory to resist bending moments due to offsets.



Figure 52: Minimum

Diameter Ø (in.)	3°	15°	30°	45°	90°
5	7/16	2 9/16	5 3/4	9 5/16	22 7/16
6	7/16	2 5/8	5 7/8	9 9/16	23 7/16
7	7/16	2 11/16	6	9 7/8	24 7/16
8	7/16	2 11/16	6 1/16	10 3/16	25 7/16
9	7/16	2 3/4	6 5/16	10 7/16	26 7/16
10	1/2	2 3/4	6 7/16	10 3/4	27 7/16
11	1/2	2 13/16	6 9/16	11 1/16	28 7/16
12	1/2	2 13/16	6 11/16	11 5/16	29 7/16
13	1/2	2 7/8	6 7/8	11 5/8	30 7/16
14	1/2	2 7/8	6 15/16	11 15/16	31 7/16
16	1/2	2 1/2	7 1/4	12 1/2	33 7/16
18	1/2	3 1/16	7 1/2	13 1/8	35 7/16
20	1/2	3 1/8	7 3/4	13 11/16	37 7/16
22	1/2	3 3/16	8 1/16	14 1/4	39 7/16
24	1/2	3 1/4	8 5/16	14 7/8	41 7/16
26	1/2	3 5/16	8 9/16	15 7/16	43 7/16
28	1/2	3 3/8	8 13/16	16	45 7/16
30	1/2	3 7/16	9 1/8	16 5/8	47 7/16
32	1/2	3 1/2	9 3/8	17 3/16	49 7/16
34	1/2	3 9/16	9 5/8	17 3/4	51 7/16
36	1/2	3 11/16	9 7/8	18 3/8	53 7/16

Dimensions are in inches

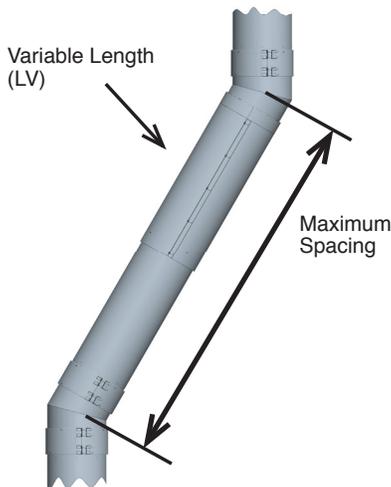


Figure 53: Maximum Spacing between supports for Offset

ADAPTERS

TAPERED INCREASER (TINØ)

The Tapered Increaser Adapter is used for a diameter change in duct system. Uses when there is a sufficient length for duct run available for the size change. The **TINØ** is used uses 2" of length per 1" increment diameter change. The **TINØ** is considered to have the same load strength as a straight duct. See Figure 54.



Figure 54: Tapered Increaser Adapter (TINØ)

ECCENTRIC TAPERED INCREASER (ETINØ)

The Eccentric Tapered Increaser Adapter is similar as the Tapered Increaser Adapter except the smaller diameter is offset from the larger diameter. When installed horizontally, the **ETINØ** keep a flat slope unlike the **TINØ**. See Figure 55.



Figure 55: ECCENTRIC TAPERED INCREASER (ETINØ)

Hood Connection

ROUND HOOD CONNECTION

Many hood manufacturers have the capability to build the exhaust hood with a round flanged collar, which matches the flange on the duct. Others can install a round flanged collar supplied to them or can provide a hood without a collar for the outlet hole to be field cut. These alternatives are permissible to avoid the necessity of providing a square to round adapter.

ROUND FLANGED HOOD ADAPTER

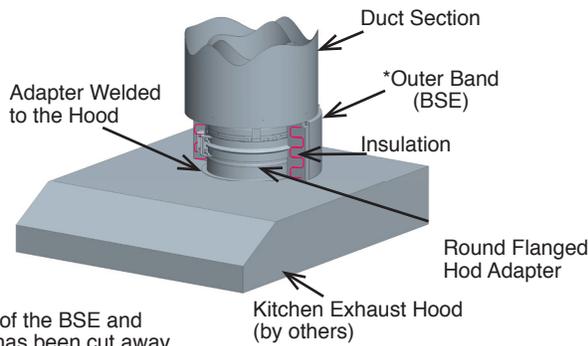
The Round Flanged Hood Adapter is used to connect the first duct section to hood. The adapter is to be welded to the hood connection (See **Figure 56a**). This adaptor is provided with

- One Inner V-Band (**BSI**)
- One Outer Band (**BSE**)
- 6" wide Insulation bands (Model CIX3Z only)

See **Figure 56b** for an example of installation.



Figure 56a: Round Flanged Hood Adapter (RFHA)



* A portion of the BSE and Insulation has been cut away for a better view of the assembly

Figure 56b: Round Flanged Hood Adapter Installed



Figure 57: Square To Round Adapter (STR)

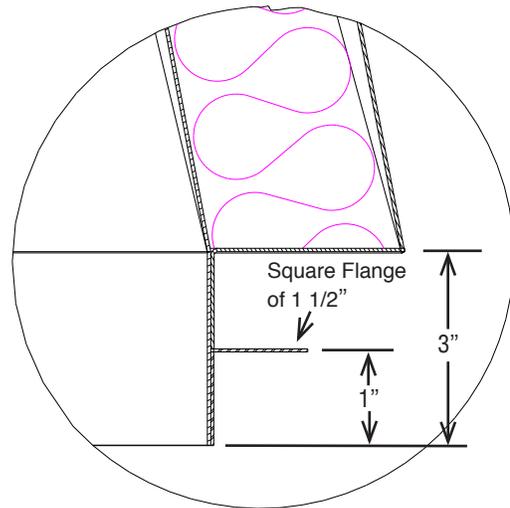


Figure 58a: Option 1 for the STR and ESTR

SQUARE HOOD CONNECTION

When a kitchen exhaust hood is equipped with a square or rectangular collar, a Square To Round adapter is needed to connect the round duct to the hood. The Square to Round is connected to hood collar by means of a lap weld

SQUARE TO ROUND ADAPTER (STR)

The Square To Round is used to connect a hood equipped with a square or rectangular collar to a round duct (**See Figure 57**). Two different options for connection may be used for the square end fitting:

Option 1: A flange at 1" from the square end. The outside dimensions of the square end of the **STR** are slightly smaller than the hood collar. It will fit inside the collar (making an overlap of 1") and the flange of the **STR** will sit on hood. It will be connected by means of lap weld. See **Figure 58a**.

Option 2: A Flange at the square end to be used for a bolted or welded connection in accordance with NFPA 96. See **Figure 58b**.

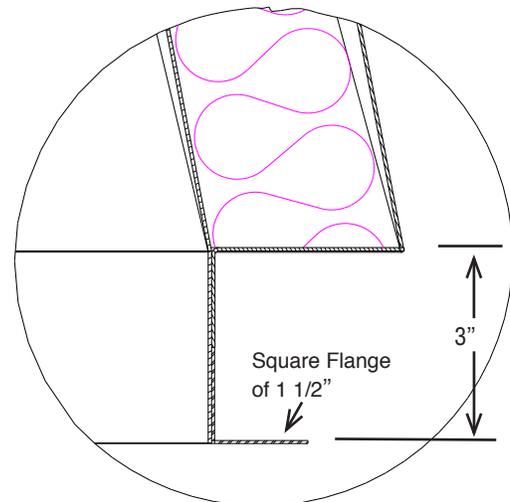


Figure 58b: Option 2 for the STR and ESTR

ECCENTRIC SQUARE TO ROUND ADAPTER (ESTR)

ESTR is similar to a **STR** except the round collar is offset from center of the square collar. See **Figure 59**.



Figure 59: Eccentric Square To Round (ESTR)

When ordering a square to round adaptor for connection to kitchen exhaust hoods, the following information must be specified:

- 1- The exact size of the square or rectangular end.
- 2- Options for the square end (See **Figure 58a** and **Figure 58b**)
- 3- Any flanging requirements (typically flange is 1-1/2" wide)
- 4- Diameter of the round end (i.e. size of Security Grease Duct series)
- 5- Overall length - 20" standard.

NOTE: Custom requirements (flange thickness, bolt pattern, custom length, unusual square dimensions, etc) will be analysed by our engineering department

DUCT TRANSITION (FOR MODEL CIX3Z ONLY)

As a general rule, Model CIX3Z grease duct systems are intended to be installed as complete systems without the use of other manufactured or generic components. However, Security Chimneys recognizes that in some instances due to space limitations at certain locations within a system the need to transition from Model CIX3Z to rectangular welded duct and back to CIX3Z may exist. See **Figure 60** and **Figure 61** for typical installations.

The square to round adapter is very useful for interconnecting round grease duct to rectangular welded duct where necessary due to space limitations or for breaching larger rectangular ducts used as a central shaft. In such cases, it is permissible to interconnect or transition parts from Security Chimneys Model CIX3Z grease duct to a code compliant, rectangular welded steel duct system (by others) and back again. When such situations occur, Security Chimneys will fabricate and supply a fully welded round to rectangular transition that is code compliant single wall grease duct (fabricated of a minimum 0.043" thick stainless steel) that is specifically designed to provide proper drain slope for the transition (like an Eccentric Square to Round would allowed doing). These transitions provide direct connection to series CIX3Z duct at the round end and allow for a field welded connection to code complaint welded steel grease duct at the rectangular end.

To comply with national codes, these transitions are to be fully enclosed in same manner as the welded grease duct that it is connected to. Such enclosure systems may be either a field applied wrap system or a separate fire protective shaft enclosure with an appropriate fire resistance rating. When installed with Model CIX3Z, the fire rated enclosure system must extend up to the adjacent CIX3Z duct section. The transition to flexible wrap enclosure is approved by Underwriters Laboratories provided the enclosure material is UL Classified per ASTM E2336, classified for use as a grease duct assembly per UL CAT. HNKT (See Batts and Blankets CAT. HNMf) or Intertek Design No. FRD 120-01 and is equal or greater than the fire rating of Model CIX3Z

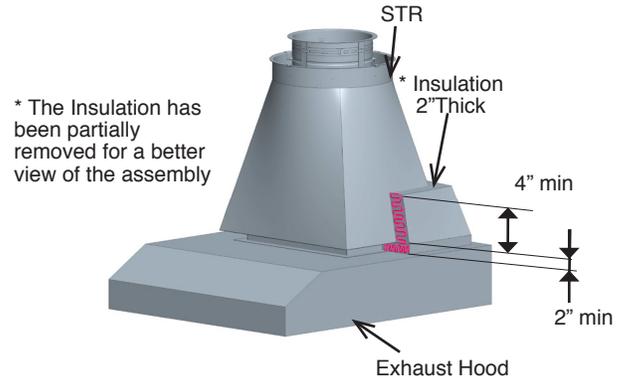


Figure 60- STR Transition from Exhaust Hood to CIX3Z Grease Duct

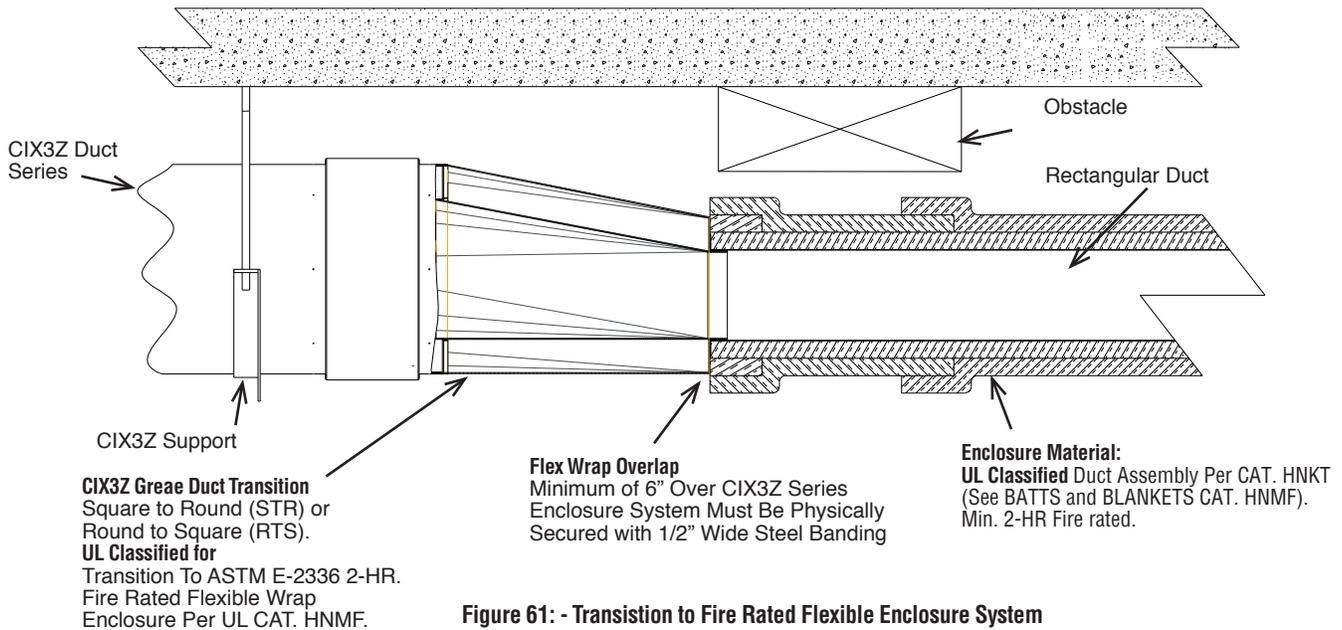


Figure 61: - Transition to Fire Rated Flexible Enclosure System

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

SUPPORTS

PLATE AND WALL SUPPORT

ANCHOR PLATE (AP)

Anchor Supports are designed to provide support to vertical sections and provide fixed-point support for horizontal sections. See **Figure 62**

NOTE: Rings installed at 90° to plates.

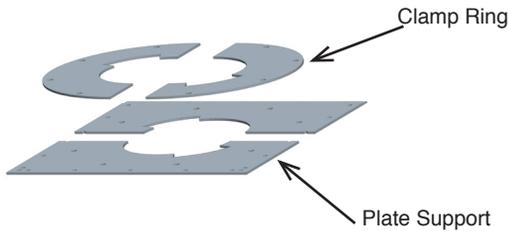


Figure 62: - Anchor Plate

The Plate Support must be attached to the building structure or supported with rigid structural members. See **Table 4** for maximum supported height.

A Plate Support is to be attached only to non-combustible construction such as block, concrete or steel with clearance that is adequate for installation and access.

For maximum support, the entire perimeter of the Plate Support must be attached to structural framing. Structural members are supplied by the installer.

WARNING: RISK OF FIRE - DO NOT ATTACH THE PLATE SUPPORT TO COMBUSTIBLE CONSTRUCTION

For maximum support, the entire perimeter of the Plate Support must be attached to structural framing. Structural members are supplied by the installer.

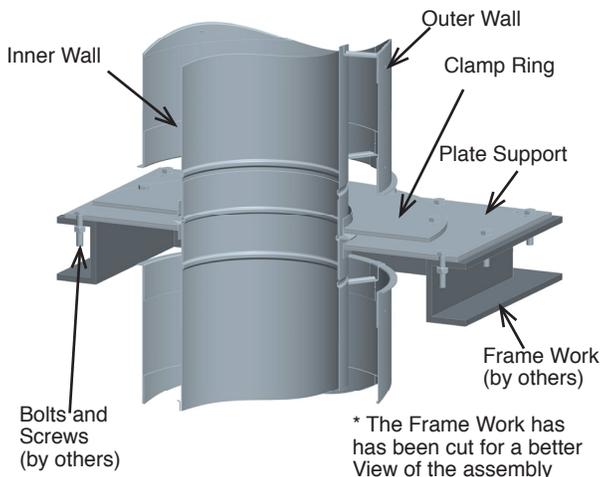


Figure 63a- STR Transition from Exhaust Hood to CIX3Z Grease Duct

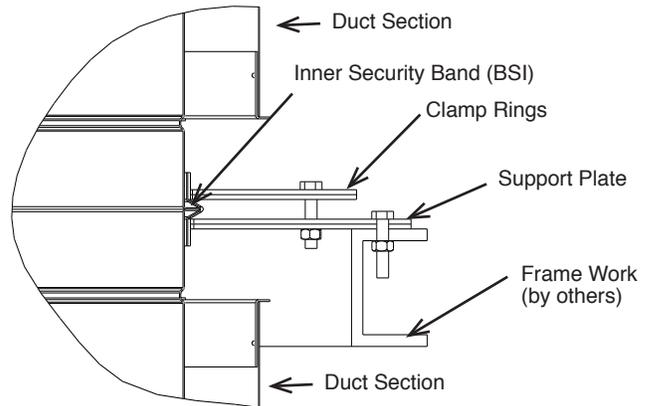


Figure 63b - Detail of Anchor Plate on Framing

Supported duct sections subject to thermal expansion or in a vertical position must be braced with diagonal members or gussets to prevent deflection of the supported joint as shown in **Figure 64**. "X" is a minimum of 30°.

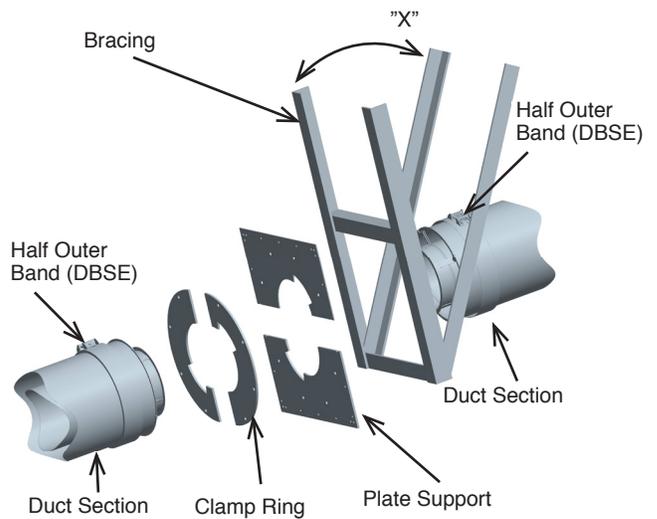


Figure 64- Anchor Plate Horizontal Bracing

Plate Supports are usually located adjacent to fittings, such as tees or elbows, to protect fitting from expansion stresses. **Table 8** shows Plate Support, bracing and framework requirements for duct size ranges.

NOTE: If bracing is used, minimum "X" angle is 30°. If there is no bracing, the framework must be attached to structural members to provide equivalent rigidity.

TABLE 8 - Minimum Acceptable Size for Framework and Bracing for Model SCL and CIX3Z			
Duct Diameter \varnothing (in)	Plate thickness (in)	Bracing (in)	Framework (in)
$\varnothing 5 @ \varnothing 22$	3/16	2 x 2 x 3/16 Channel or equivalent	2 x 2 x 1/4 Channel or equivalent
$\varnothing 24 @ \varnothing 36$	1/4	3 x 3 x 1/4 Channel or equivalent	3 x 3 x 1/4 Channel or equivalent

Dimensions are in inches

ANCHOR PLATE WITH LENGTH (APL)

The **APL** support has the same use as the **AP**, but is easier to assemble (See **Figure 65**). Refer to the **AP** for all warnings/details, except for the installation of the part itself.

For the Model **CIX3Z**, no outer wall is supplied. It is the Outer Band (**BSE**) that serves as the outer wall.

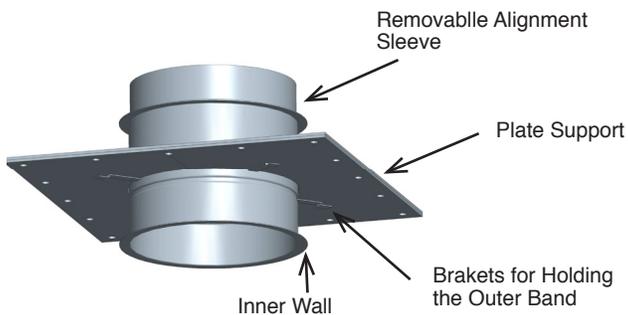


Figure 65- Anchor Plate with Length (APL)

For the **Model SCL**, it is assembled exactly like flange-to-flange assembly with the V-Band (**BSI**) (See **JOINT ASSEMBLY** Section)

For the **Model CIX3Z**, the part doesn't have any outer wall, but Outer Band (**BSE**) is provided to secure the insulation on the part. See **Figure 66** and **Figure 67**

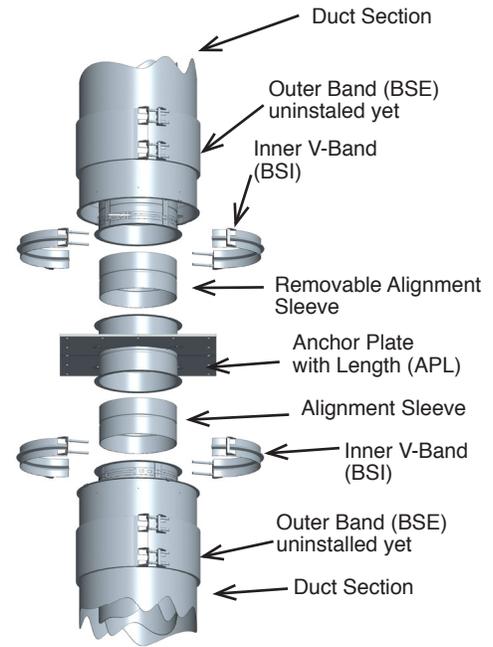
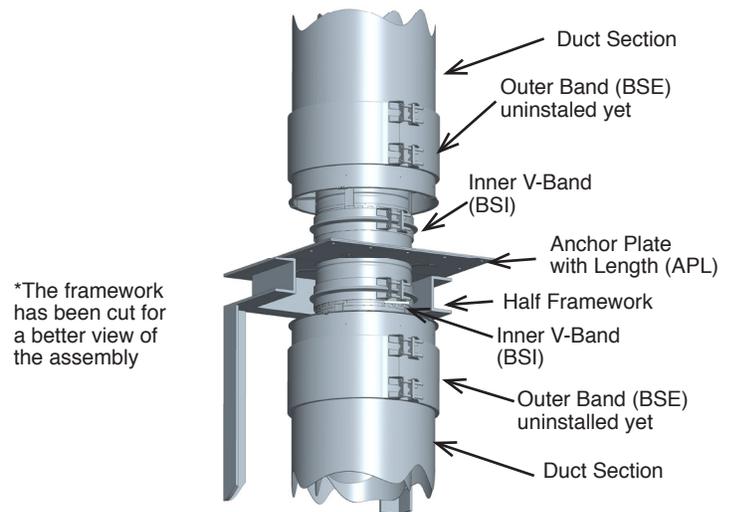


Figure 66- Step 1 of installation of APL



*The framework has been cut for a better view of the assembly

Figure 67- Step 2 of installation of APL

For vertical installation, small brackets must be on the bottom side when the bottom Outer Band will be installed, these Brackets will hold the Casing Band (**BSE**) right to the support plates. See **Figure 68**.

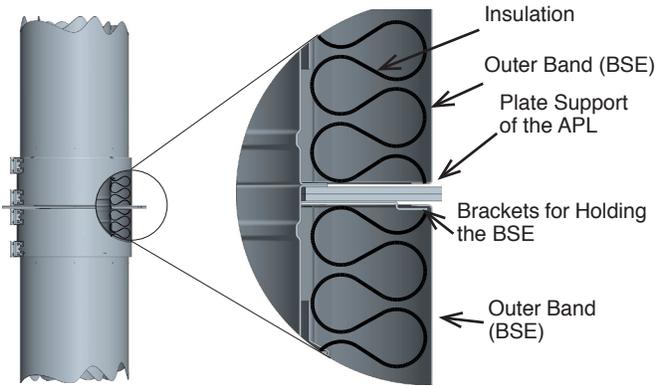


Figure 68- Step 3 of installation of APL

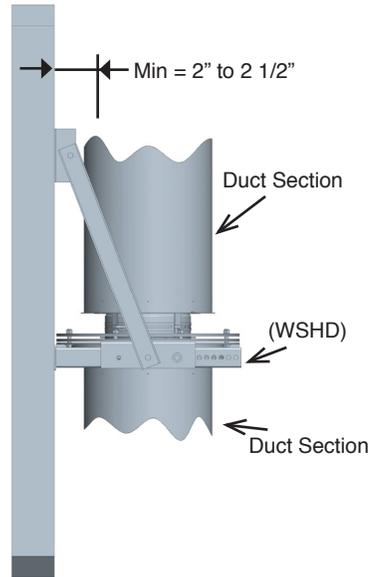


Figure 69a- WSHD Minimum Adjustment

HEAVY DUTY WALL SUPPORT (WSHD)

When attached to a non-combustible wall with brackets and struts, a Heavy Duty Wall Support makes up a fixed-point (See **Figure 69a**). The clamp rings are installed with the splits 90° apart so that they support each other. The notches in the clamp rings are aligned with the draw screws of the flange band. The Heavy Duty Wall Support Assembly is bolted together with provided hardware. It is made with adjustable struts, which allows a variable clearance from the non-combustible wall to the grease duct outer casing.

The minimum clearance varies with the size of the wall support, but is between 2 and 2 1/2" (based on the angle shape of the Full Angle Ring (FAR). See **Figure 69b**

The maximum clearance for all sizes is around 10". See **Figure 69c**

WARNING: Do not attach Wall Support to combustible construction.

NOTE: Wrap duct joint with insulation before attaching half closure band.

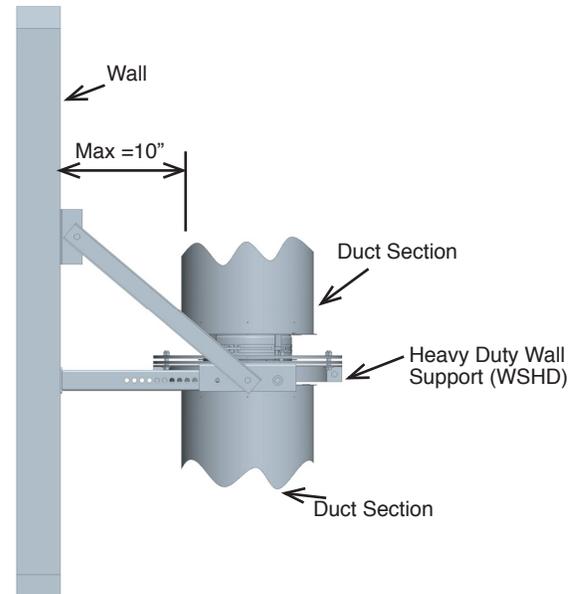


Figure 69c- HDWS Maximum Adjustment

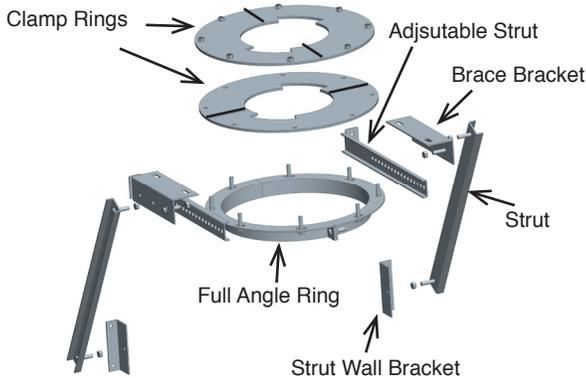


Figure 69a- Wall Support (WSHD)

HEAVY DUTY WALLGUIDE (WGHD)

The Heavy Duty Wall Guide is designed to complement the Heavy Duty Wall Support (See **Figure 70**). It is used as a lateral guide to prevent the duct from flexing due to lateral loading. The proper location for a **WGHD** is immediately below the outer closure band near the duct joint. The outer band must be able to move away from the Heavy Duty Wall Guide when thermal expansion occurs. The Heavy Duty Wall Guide is bolted together with hardware provided to form a rigid assembly.

NOTE: Seal joint with S-375 sealant above and below support if exposed to weather.

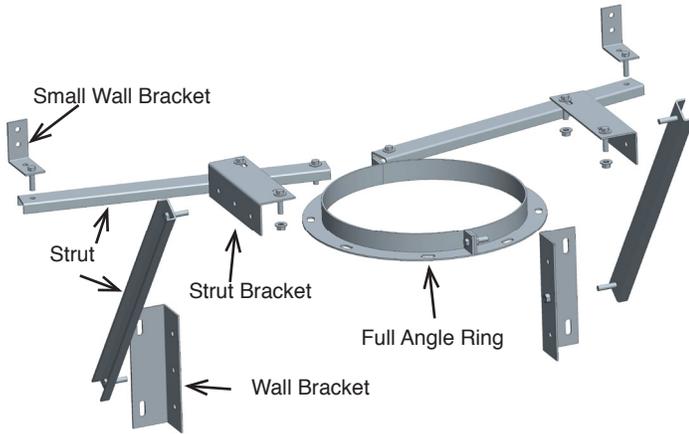


Figure 70- (WGHD) Minimum Adjustment

HEAVY DUTY FLOOR GUIDE (FGHD)

A Heavy Duty Floor Guide is similar in function to a Heavy Duty Wall Guide or Full Angle Ring, but is modified specifically for use at floor penetrations. The angle brackets and straps hold the **FGHD** centered in floor penetration. Maximum floor opening "X" is Duct I.D. + 10" (254). See **Figure 71**.

Warning : Do not attach the Heavy Duty Floor Guide to combustible construction.

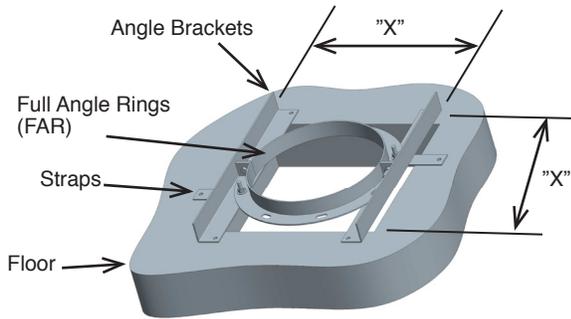


Figure 71- Heavy Duty Floor Guide (FGHD)



Figure 72- Full Angle Ring (FAR)

HALF ANGLE RING (HAR)

A Half Angle Ring is used as a saddle in horizontal or sloped runs.



Figure 73- Half Angle Ring (HAR)

FULL ANGLE RING (FAR)

A Full Angle Ring is used as a guide to prevent the duct from flexing due to lateral loading. The angle ring is split for ease of installation. It is 1/8" larger inside diameter than the outside diameter of the duct to allow movement of the duct inside the ring.

SECTION E-LOCATION OF SUPPORTS

Supports can be used in different combinations to secure grease duct in place. See **Figure 2, 3, and 4** for typical support and guide locations.

ADJUSTABLE AND VARIABLE LENGTH SUPPORT

To prevent the **LV** or **LA** form sagging, it is recommended that the duct section adjacent to a **LV** or **LA** is supported or guided. See **Figure 74** for typical support locations for Adjustable and Variable Length. When necessary, properly guide an adjustable length by installing a Heavy Duty Wall Guide (**WGHD**) or any supports immediately below duct join on adjacent section.

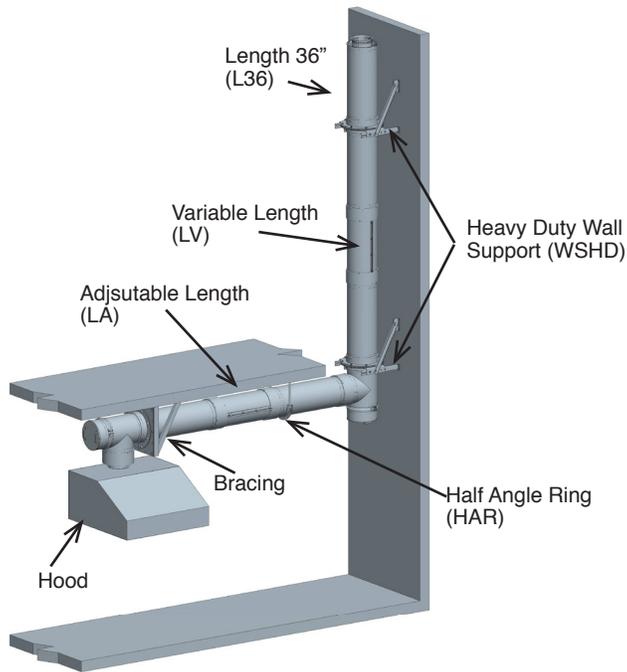


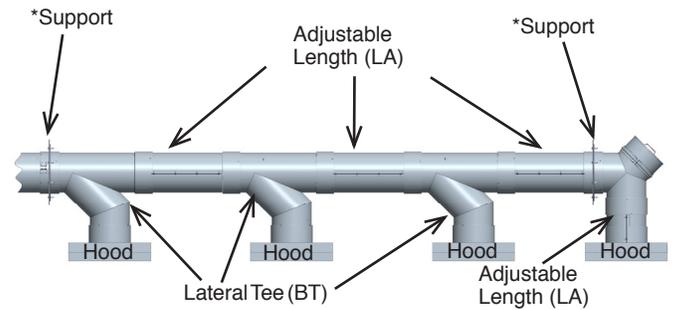
Figure 74- Typical Installation locations for the Variable and Adjustable Lengths

NOTE: Both **LA** and **LV** overlapping joints are not intended to support any weight in the vertical position. The inlet and outlet ends must each be supported.

TEE SUPPORT

The Tees must be supported properly to protect them from bending. It can be done by means of Anchor Plate (**AP**), Anchor Plate with Length (**APL**) or Heavy Duty Wall Support (**WSHD**)

When that multiple tees (**90° Tees**, **45° Tees** or **Lateral Tees**) are used to Connect multiple hoods, it is important to make provisions for expansion of the manifold. Adjustable length should be installed between Tees. See **Figure 75**.



*Framework and Bracing are not shown in this image

Figure 75- Support for Multiple Tees

When a tee is used at the base of the riser, the preferred location for support is above the Tee, thus suspending the Tee. See **Figure 76**

An Heavy Duty Wall Support (**WSHD**), an Anchor Plate (**AP**) or an Anchor Plate with length (**APL**) can be used to support the TEE.

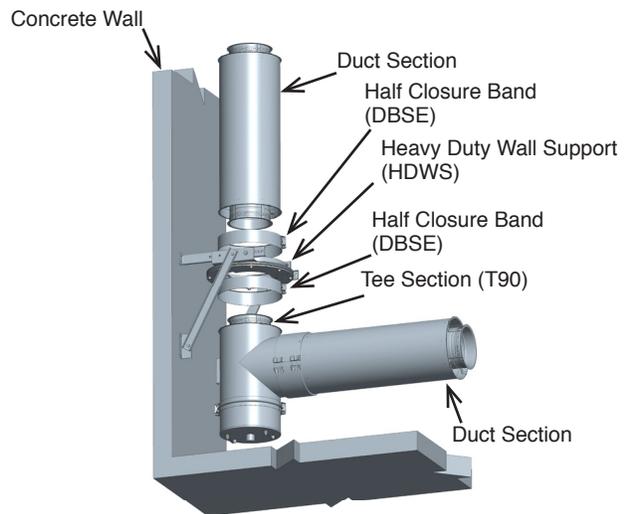


Figure 76- Suspended Tee Support

NOTE: In the case of an **AP**, Flange joint of duct and Tee are to be secured in place between the Clamp Rings. If it is not possible to suspend the Tee, it may be supported with a base (a structural steel stand).

When a base is necessary, access to the Drain Bucket or the Drain Tee Cap (**DTC**) may be hindered. A **DB** or a **DTC** should be used under the Tee to allow access for cleaning and inspection into the grease duct.

ELBOW SUPPORT

Elbows are to be supported on one end with either an Anchor Plate (**AP**), an Anchor Plate with Length (**APL**), or a Heavy Duty Wall Support (**WSHD**). See **Figure 77** for an example with an **AP** and **Figure 78** for an example with a (**WSHD**).

SECTION F-FLOOR, ROOF AND WALL PENETRATION

WARNING: Only MODEL CIX3Z can go through floor, roof or wall.

FLOOR AND WALL PENETRATION

THROUGH PENETRATION FIRESTOP KIT (TPFK)

Fire Resistance Rating: 2 Hour (F & T)

Whenever the CIX3Z grease duct passes through a fire rated wall or floor, a **TPFK** must be used to retain the fire rating.

NOTE:- For Floor Penetration, use one **TPFK**. See **Figure 81** and **Figure 79**.
 - For Wall Penetration, use two **TPFK**'s. See **Figure 83** and **Figure 80**.

One Kit contents:

- 2 x Split Closure band
- 2 x Half Cover Plate
- 1 x 12" tall Fiber Insulation Strip (6 pcf)
- 1 x 3½" tall Fiber Insulation Strip (6 pcf)

NOTE: Must use sealant **S-TPFS** (SpecSeal Triple S Intumescent Firestop Sealant - SSS100), but not included in the kit. The **Table 9** refers to the expected number of tube of S-TPFS for each models:

TABLE 9 - Expected number of S-TPFS per Hole Through a 2hr Fire Rated Wall or Floor	
Inner Duct Diameter	Number of tube per Hole
5	2 1/4
6	2 1/2
7	2 3/4
8	2 3/4
9	3
10	3 1/4
11	3 1/4
12	3 1/2
13	3 3/4
14	3 3/4
16	4 1/4
18	4 1/2
20	5
22	5 1/4
24	5 1/2
26	6
28	6 1/4
30	6 3/4
32	7
34	7 1/4
36	7 3/4

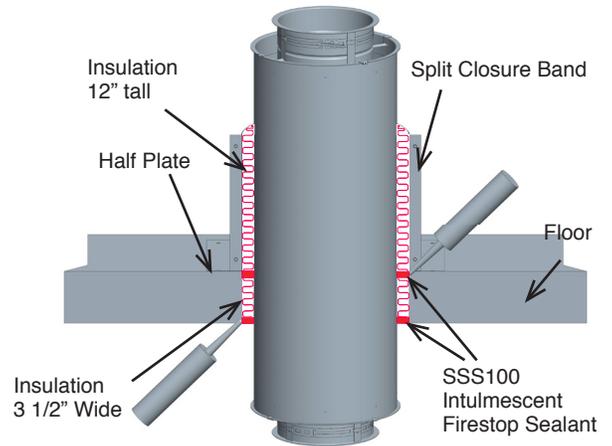


Figure 81- Through Penetration Firestop FLOOR Penetration

INSTALLATION PROCEDURE

1. Cut a circular hole into the fire rated floor or wall that is 2" greater in diameter than the OD of the duct.
2. Center the grease duct within the hole and support to maintain position.
3. Tightly pack the 1" gap between the outer wall of the duct and the hole with the 3½" wide 6 pcf fiber insulation strip provided. This insulation must encircle the outer wall of the duct and fill the gap to within ½" of both surfaces.
4. Apply a minimum ½" depth of **S-TPFS** (SSS100 from SpecSeal), flush with both surfaces of the wall. See **Figure 81**.
5. Install the two piece rectangular Cover Plate. The two piece rectangular Cover Plate is designed to fit over the firestop sealant and around the outer wall of the duct. There will be a nominal ¼" gap around the pipe and the two parts of the plate must overlap each other for a minimum of 1". Secure in place with appropriate hardware (by others).
6. Wrap a 12" wide strip of the fiber insulation around the grease duct. The insulation must butt up to the cover plate and outer wall of the duct. See **Figure 82**.

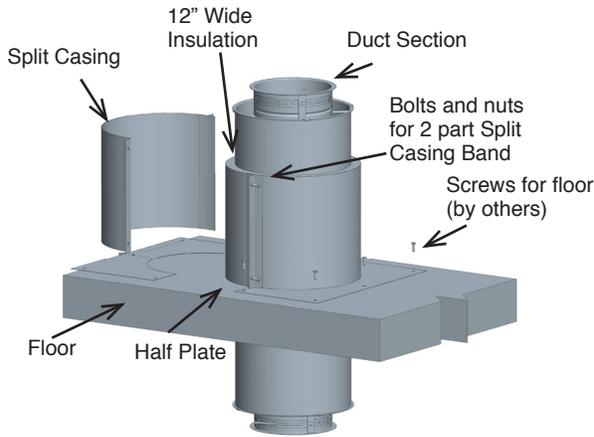


Figure 82- Step 1-2-3-4-5-6 of TPFK

7. Secure the insulation in place with the two part split closure band using the hardware provided.

Note that cover plates, wrap insulation and split closure bands are installed on the top surface of a floor penetration and on both surfaces of a wall penetration. See Figure 83 for the penetration through a wall.

CAUTION: Do not use the Adjustable Length with the Through Penetration Firestop.

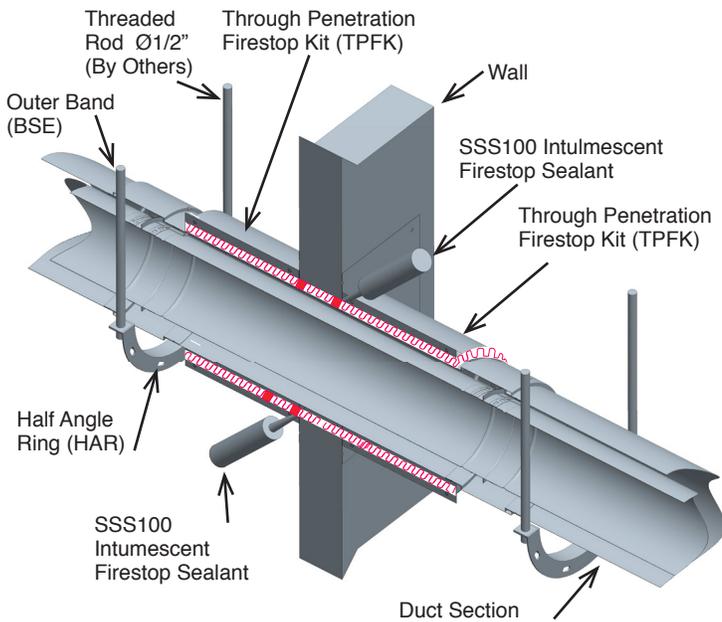


Figure 83- TPFK Assembled Through a Wall

ROOF PENETRATION

Storm Collar (SC)

The Storm Collar (**SC**) is used above the flashing for complete weatherization above the roof. It has to be sealed with the outer joint sealant (not included). See **Figure 84**.

Flashing (F)

The roof Flashing (F) is used in conjunction with Storm Collar (SC) for weatherization on a flat roof. See **Figure 85**.

ADJUSTABLE FLASHING (F30)

The Adjustable Flashing (F30) is used in conjunction with Storm Collar (SC) for weatherization on a roof with a pitch 5° to 30°. See **Figure 86**.



Figure 84 - Storm Collar

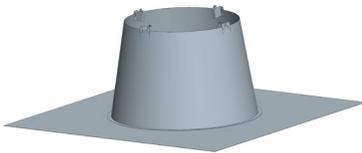


Figure 85 - Flashing

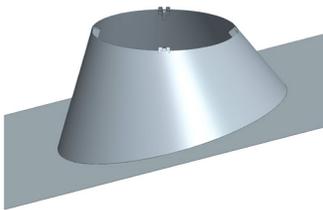


Figure 86 - Adjustable Flashing

NOTE : Both Flashings are intended for installation on non-combustibles roofs only.

NOTE : The flashings are non-ventilated and does not provide for any reduced clearance to combustible.

INSTALLATION PROCEDURE FOR FLASHINGS

1. Cut opening to dimensions specified in **Table 2**. See **Figure 87a** for flat roof and **Figure 87b** for a sloped roof.

NOTE: Reinforced the edges of the hole as appropriate for the expected lead bearing requirements.

2. Slide **MODEL CIX3Z** through the hole.

3. For lateral stability, supports or guides must be used. The Heavy Duty Floor Guide (**WSHD**) must be installed on top of the roof. Any supports (**AP**, **APL** or **WSHD**) or a Full Angle Ring must be installed below.

NOTE: Flashing is not intended to take any side load or wind loads

4. Install flashing over the grease duct and the guide/support and screw it.

5. The Storm Collar (**SC**) is placed around the grease duct and sealed to the casing with outer joint sealant **S-350**.

The storm collar should not quite rest on the flashing when the grease duct is cold (a 1/4" gap between the collar and the top of the flashing).

NOTE: Maintain adequate spacing for expansion from the floor and the outer band (**BSE**) that is under the floor.

NOTE: If the maximum freestanding duct height above the Anchor Plate (**AP**), Anchor plate with length (**APL**) or Full Angle Ring (**FAR**) exceeds that shown in the Table 3 and Table 4, guying is required.

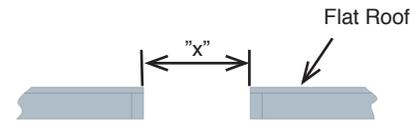


Figure 87a - Minimum Opening for flat roof

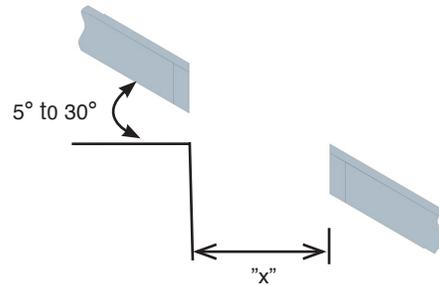


Figure 87b - Minimum Opening for sloped roof

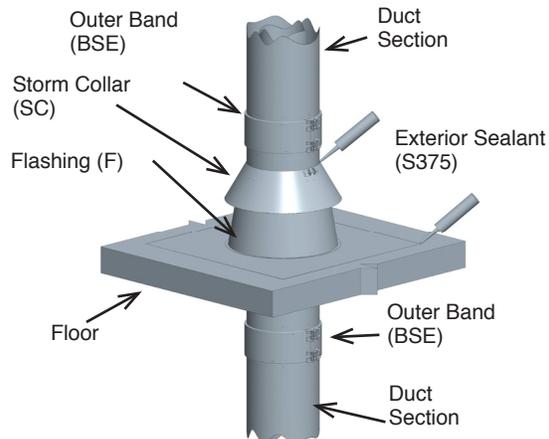


Figure 88a - Installation of Flashing- View Top of the Roof

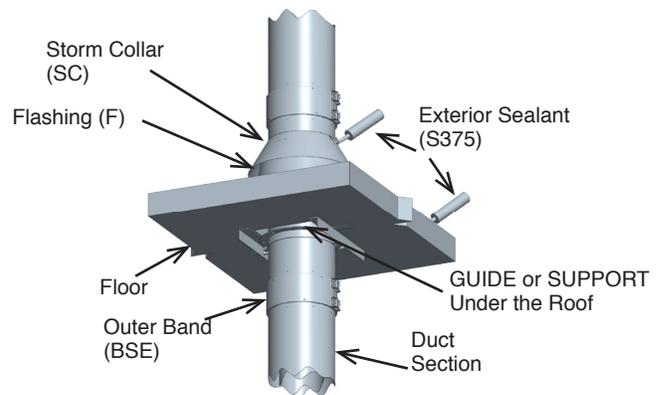


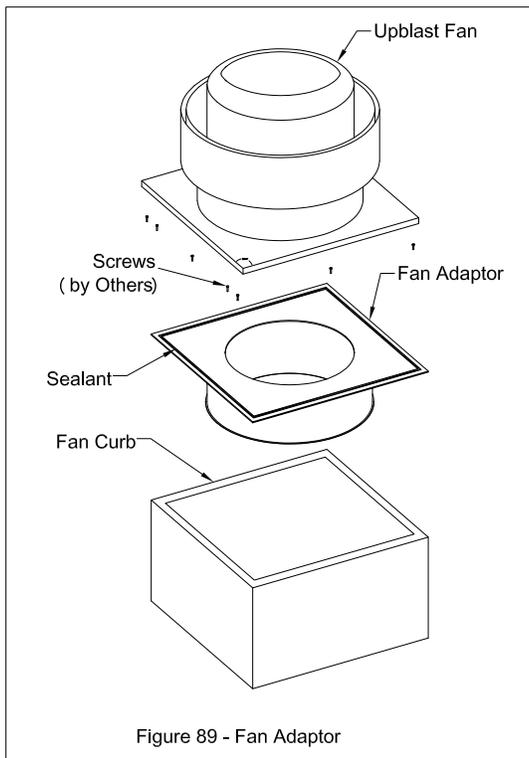
Figure 88b - Installation of Flashing- View under the Roof

SECTION G-TERMINATION

FAN ADAPTER (FAN)

1. The fan adaptor is designed to connect to an upblast fan (supplied by others) mounted on a roof curb (supplied by others).
2. When connected to an upblast fan, the plate mounts on top of the fan curb which supports the fan housing. See Figure 89.
3. The plate may be positioned off center within the curb provided that minimum clearance to combustibles is maintained.
4. In the event that the plate is positioned off center, trim off excess plate material to allow fan placement.
5. Secure the plate to the curb a minimum of three (3) places per side with minimum #8 x 1-1/4" wood screws. You will have to drill holes in the plate.
6. The fan housing is set on top of the plate and sealed using S-650 sealant or an approved gasket supplied by the fan manufacturer.
7. Specify the grease duct diameter and outside curb dimensions when ordering the fan adaptor plate.
8. The fan adaptor plate can be used as a vertical support. The maximum height of grease duct supported by the fan adaptor plate is 10' for all diameters.

WARNING: DO NOT EXCEED THE MAXIMUM LOAD LIMIT OF THE ROOF CURB OR THE ROOF.



SECTION H-MAINTENANCE

1. Grease duct is required by NFPA 96 and many local building codes to be inspected and cleaned if necessary at specific intervals.
2. Security Grease Duct must be inspected and cleaned in accordance with local requirements. It requires no additional internal maintenance.
3. Security Chimneys International recommends that grease containers connected to drainage points be emptied and washed out daily or more often, if necessary. If needed, the drain nipples should be checked and cleaned whenever the containers are emptied.
4. Where the duct is installed outside the building, the Galvalum steel outer casing must be primed and painted. The paint surface should be maintained regularly to prevent possible deterioration of the casing surface. The use of stainless steel outer casing negates the need for painting.

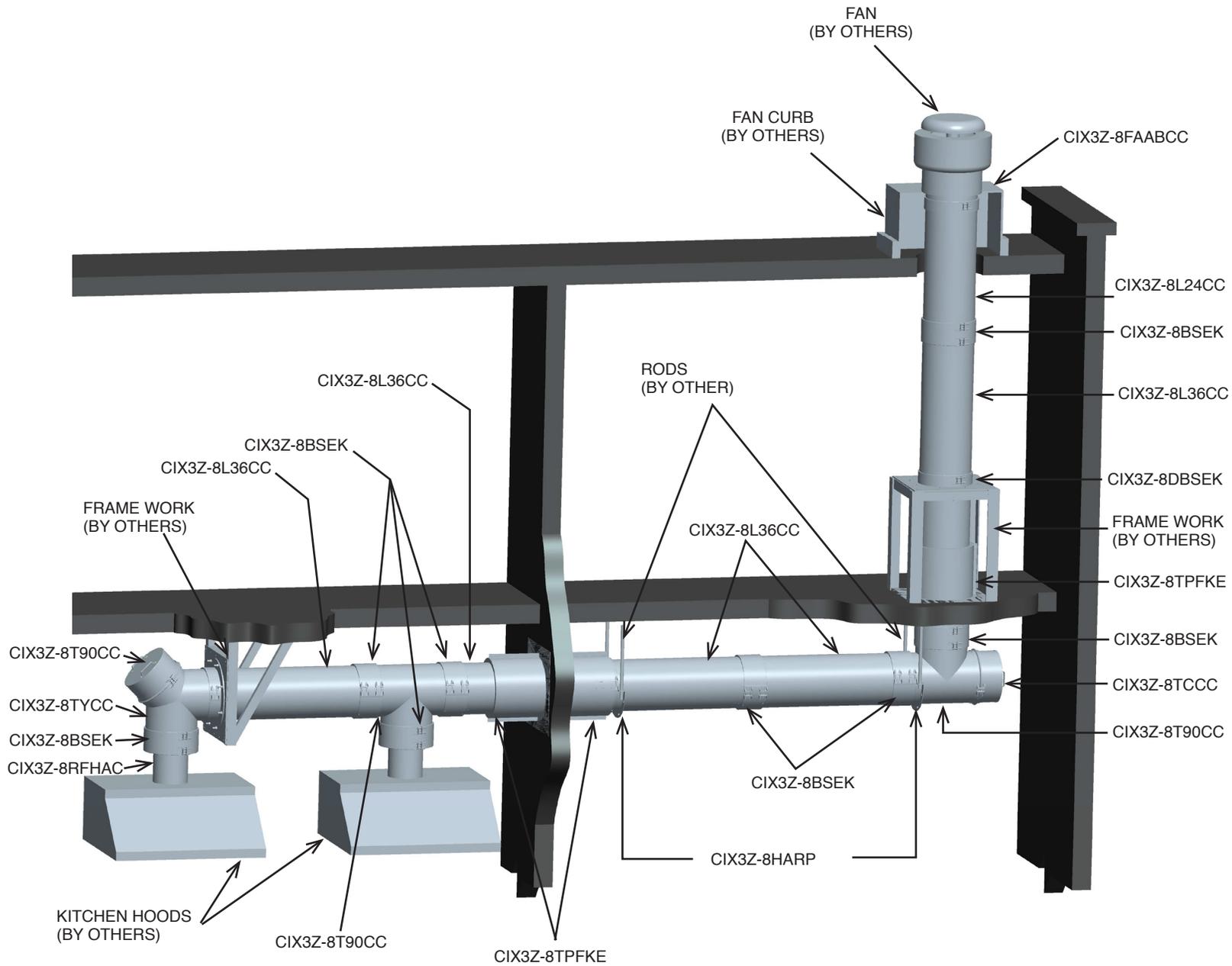
SECTION I-WOOD OVEN

Creosote and soot - Formation and need removal

When wood is burned slowly, it produces tar and organic vapors which combines with expelled moisture to form creosote, the creosote vapors condense in the relative cool grease duct of a slow burning fire. As results, creosote residue accumulates on the duct. If ignited, this creosote and grease-laden vapor make an extremely hot fire. For this reason the duct should be inspected monthly to determine if creosote or soot has accumulated, it should be removed to reduce risk of fire.

A licensed or qualified grease duct cleaner should be contacted to clean the duct. Contact local building or fire officials about restrictions and installation inspection in your area. Adequate clearance is required around cleanouts to assure accessibility for removal of caps and products accumulated within the grease duct.

SECTION J- GREASE DUCT SAMPLE DRAWINGS



WARRANTY

These products have a limited warranty. Please read the warranty to be familiar with its coverage.

Retain this manual. File it with your other documents for future reference.

PRODUCT REFERENCE INFORMATION

Please contact Security Chimneys International for the phone number of your nearest Security Chimneys International dealer who will answer your questions or address your concerns.

Normally, all parts should be ordered through your Security Chimneys International distributor or dealer. Parts will be shipped at prevailing prices at time of order.

When ordering repair parts, always give the following information:

1. The model number of the chimney system.
2. The part number.
3. The description of the part.
4. The quantity required.
5. The installation date of the chimney system.

If you encounter any problems or have any questions concerning the installation or application of this system, please contact our dealer.

Security Chimneys International Limited reserves the right to make changes at any time, without notice, in design, materials, specifications, prices. Consult your local distributor for chimney system code information.

