

earthcore®ECO-STEEL

Chimney Solutions

INSTALLATION AND MAINTENANCE INSTRUCTIONS

1700°F Air-Cooled and Insulated ECO-STEEL Chimney Size 13"

Listing No. MH60628
Tested to UL 103/ULC-S604

A MAJOR CAUSE OF CHIMNEY RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCE (AIR SPACES) TO COMBUSTIBLE MATERIAL*. MINIMUM CLEARANCE FOR 13" DIAMETER AIR-COOLED AND INSULATED ECO-STEEL CHIMNEY IS TWO (2) INCHES. IT IS OF UTMOST IMPORTANCE THAT THIS CHIMNEY IS INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

*Combustible material is defined as material made of , or surfaced with, wood, compressed paper, plant fibers, plastic, or other material that will ignite and burn, whether flame proofed or not , or plastered or not plastered.

The ECO-Steel Air-Cooled and Insulated Chimney is intended for use on Isokern fireplaces. Do not use with forced draft or positive-pressure appliances. The ECO-Steel Air-Cooled and Insulated chimney system is designed to extend a maximum of 60 feet vertically and with a maximum of two (2) offsets (four elbows total) of up to 30° from vertical. Contact Local Building or Fire Officials about restrictions and installation inspection in your area. These instructions must be followed in all details and failure to do so may result in a hazardous installation.

WARNING: If decorative shrouds are being used with ECO-Steel Chimney, Reference the ECO-Steel Addendum L2876.

OPERATIONAL PRECAUTIONS & MAINTENANCE:

ECO-Steel Air-Cooled and Insulated Chimney is not designed for use on products that operate at continuous temperatures in excess of 1000°F. "Keep these instructions for future use."

WARNING: Do not mix ECO-Steel Air-Cooled and Insulated Chimney components.

Creosote and Soot – Formation and Need for Removal:

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to create creosote. The creosote vapors condense in the relatively cool chimney flue of the slow burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, the creosote makes an extremely hot fire. The chimney should be inspected at least once every two (2) months during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of chimney fire.

Chimneys must be installed so that access is provided for inspection and cleaning.

Never fill any required clearance space with insulation or any other building materials surrounding the chimney.

Do not use a fireplace for food grilling. Grease from foods can collect in chimney causing fireplace to become a potential fire hazard.

Some chemical Chimney cleaners can be harmful to the chimney. These cause accelerated oxidation or corrosion. If chemical cleaners are used, they must be non-corrosive in nature. If a brush is used, it must be of proper size with plastic bristles. Have your chimney cleaned by a professional, certified chimney sweep.

If a flue fire occurs, close all possible air inlets, and call your Fire Department. Do not use the chimney again until it has been inspected by a Certified Chimney Sweep for possible damage.

Exterior metal parts, with exception of the top portion of the chimney cap, can be painted with a high temperature rust proof paint. Wash the metal surface with a vinegar and water solution to remove any residue before painting. Painting the chimney will help to increase chimney life.

Earthcore assumes no liability for structural damage or roof contamination as the result of creosote formation. It is the owner's responsibility to comply with inspection and cleaning requirements as described in these instructions, and those of the appliance manufacturer.

CHIMNEY DIAMETER:

Follow the fireplace manufacturer's manual to determine required chimney diameter and clearances between combustible materials and your fireplace. Never use a chimney with an inside diameter smaller than your firebox flue opening unless specifically allowed by the fireplace manufacturer.

CHIMNEY ENCLOSURE REQUIREMENTS:

Interior chimneys shall be enclosed where they extend through closets, storage areas, occupied spaces, or anywhere the surface of the chimney could be contacted by persons or combustible materials. The air space between the outer wall of the chimney and the enclosure shall not be less than 2 inches.

WARNING: Do not place any type of insulation or other materials in the required clearance spaces surrounding the chimney assembly.

Except for installation in one or two family dwellings, a factory built chimney that extends through any zone above that on which the connected appliance is located is to be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor or roof assemblies through which it passes.

In cold climates, chimneys mounted on an outside wall should be enclosed in a chase. Exterior chases reduce condensation, creosote formation and enhance draft.

Chimney components intended for exterior installation must be marked "**Suitable for Interior or Exterior Installation**".

INSTALLATION RECOMMENDATIONS:

Proper planning for your ECO-Steel Air-Cooled and Insulated Chimney installation will result in greater safety, efficiency and convenience. You must use only ECO-Steel Chimney parts and components to maintain a listed chimney system. Do not mix ECO-Steel Air-Cooled and ECO-Steel Insulated Chimney parts or try to match with other products or use improvised solutions.

Install your fireplace as described by the manufacturer's installation instructions and maintain all required clearances. Acceptance of the assembly is void if the installation instructions are not followed.

Connect only one fireplace per chimney. Follow the fireplace safety manual for maximum efficiency and safety. Do not over fire. Any damage to the fireplace or chimney can possibly void the warranty.

Do not burn driftwood, plastic, or chemically treated wood such as railroad ties. They are corrosive to your chimney system. Follow the fireplace manufacturer's instructions regarding fuel.

ISOKERN FIREPLACE INSTALLATION:

Place Fireplace: Position according to the fireplace manufacturer's installation instructions. The flue outlet should be placed between the rafters or joists above, if possible.

Determine Chimney Size: Follow the fireplace manufacturer's instructions for chimney size.

Mount Anchor Plate: Chimneys for Isokern fireplaces with ECO-Steel begin with an Anchor Plate or Anchor Plate with Damper.

It is important that the surface of the Isokern chimney has a level surface on which to attach the Anchor Plate. If the top of the Isokern does not have a level surface, then it will need to be modified accordingly. Center the Isowool blanket over Isokern Top Plate hole and trace outline of hole with a pen or marker. Cut a hole in the blanket to match the hole in the Isokern top plate. Center the Isowool blanket over the Isokern Top Plate flue opening, then center anchor plate over the Isowool blanket. If a Damper is used, make sure nothing interferes with the damper plate movement. Secure the Anchor Plate with four (4) masonry anchors. See **FIG.1**. If the Anchor Plate with Damper is installed the damper should swing freely. When the chain is pulled down, the damper should close (horizontal position). When the chain is released (no weight on the chain), the damper should swing open (vertical position). To install lintel hook (1), place the damper plate in the closed (horizontal) position. Determine and mark the position of the lintel hook (1). The lintel hook (1) should be mounted to the masonry pumice and mounted in a position so as to provide a small amount of tension in the spring attached to the chain. See **FIG. 1**. The tension is needed to prevent the damper plate from rattling when closed. Mount the lintel hook to masonry pumice with the screws provided. It is recommended not to mount the lintel hooks to the fire brick because the chain and spring will be visible when not in operation. Determine and mark the position of the lintel hook (2). The lintel hook (2) should be mounted to the masonry pumice and mounted in a position so as to provide slack in the chain. With no tension to the chain, the damper will remain open for operation, but removed from direct path and out of site during operation. See **FIG. 1**. Do not obstruct openings in the anchor plate.

Warning: Do not locate Anchor Plate with Damper in a location inaccessible for inspection, cleaning and servicing after installation.

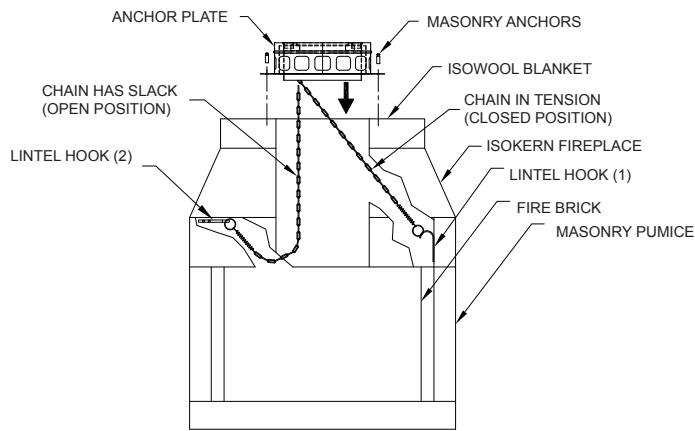


FIG. 1

Attach Chimney: Attach the first section of chimney on the Anchor Plate. The joint assembly is a male to female slip fit and held together with button lock tabs. See FIG. 2. Maintain a 2 inch clearance to combustibles. Do not fill the clearance space with any materials. If an offset is required, refer to Elbow Offset Installation Section.

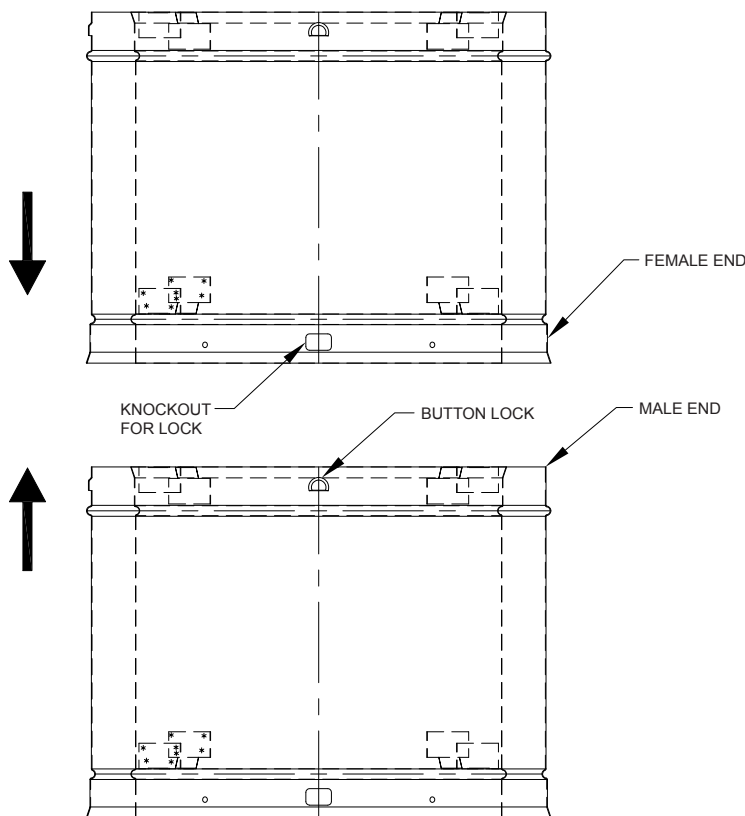


FIG. 2

Frame Openings: From the ceiling, drop a plumb bob to the center of the fireplace's flue outlet and mark the center point on the ceiling. Refer to TABLE 1 for the framing dimensions.

Frame Opening Dimensions	
Flue Diameter	Framing Dimensions
12.5" ID	19.5" X 19.5"

TABLE 1

Mark appropriate cutting lines around the center point. Cut a square hole in the ceiling. Frame a level, square opening centered over the hole that you have cut. Frame openings at each floor level above the fireplace. See FIG. 3. These openings are to hold the Firestop and Attic Insulation Shield. Locate each opening by dropping a plumb bob to the four corners of the opening below. Maintain the 2 inch airspace to combustibles. See FIG. 4.

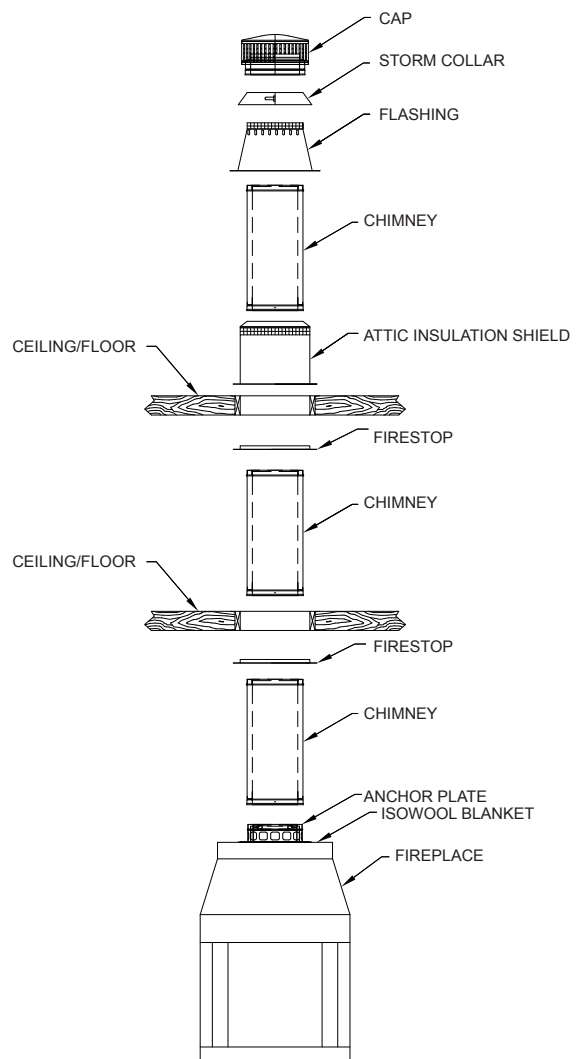
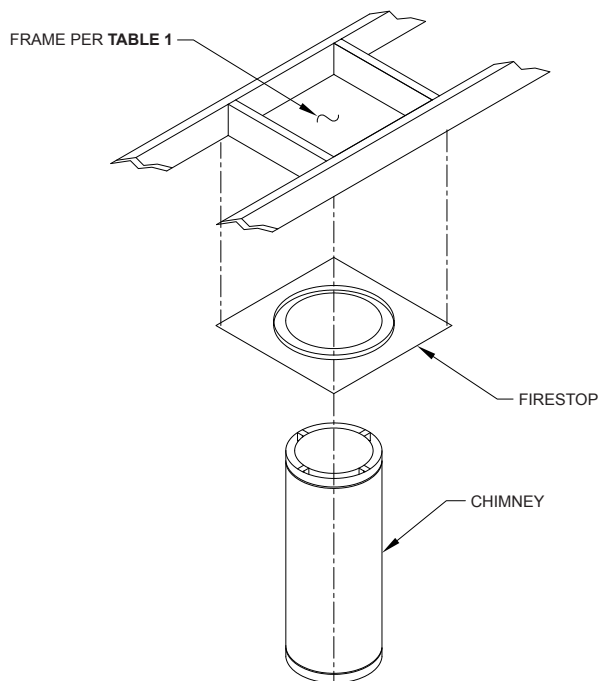


FIG. 3



NOTE: Firestop may appear different than shown.

FIG. 4

Cut Roof Opening: If penetrating through the roof, determine and cut an opening in the roof directly above the opening below. The cut opening must be 4 inches larger than the chimney's outside diameter to provide at least a 2 inch clearance all around the chimney. The chimney must be centered in this opening.

Install Firestop: A Firestop is required on each floor/ceiling level in multistory installations. Building Codes require a Firestop at every floor/ceiling level including where the chimney penetrates the attic. **FIG. 3** shows a typical 2 story installation with an attic. A Firestop is not installed where the chimney penetrates through the roof.

Angle Support and Support Band: Install an Angle Support if total chimney height is greater than 50 feet, or if the fireplace manufacturer requires it. If additional support is needed, install one or more Angle Supports which will support 30 feet of chimney **FIG. 5**. Slide the Angle Support around the chimney and align over framed opening. Secure to casing with (4) sheet metal screws and assemble brackets per **FIG. 6**. Nail the brackets to the framing using a minimum of (2) nails or screws per bracket. A Support Band may be required by some fireplace manufacturers to keep the chimney vertical and help maintain clearances to combustibles within a chase. Clamp the Support Band to the pipe using the nut and bolt provided and secure legs to nearby framing using plumbers strap or guy wires. See **FIG 7**. The Support Band does not support the weight of the chimney, it is only used to keep the chimney centered within a chase.

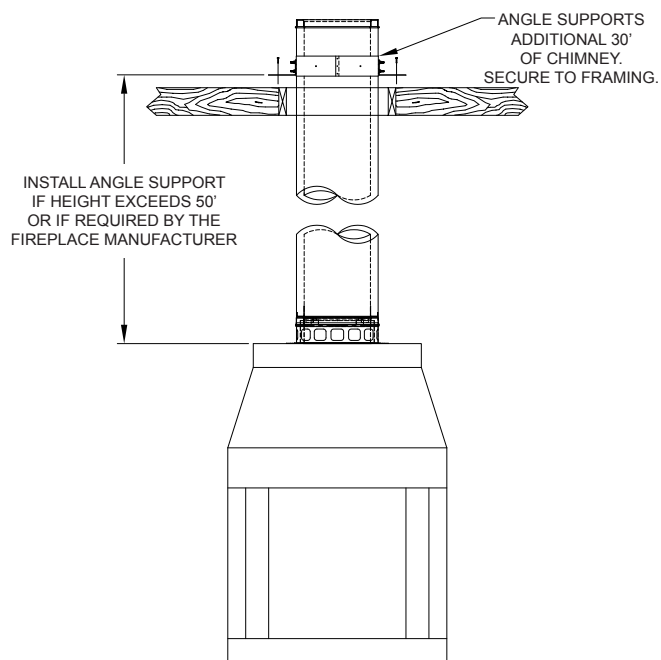


FIG. 5

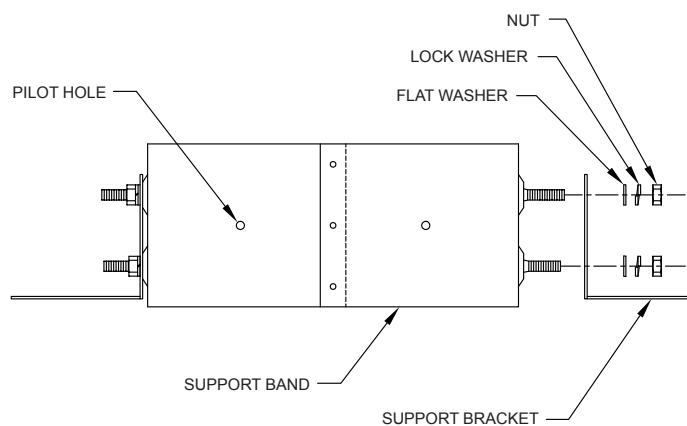


FIG. 6

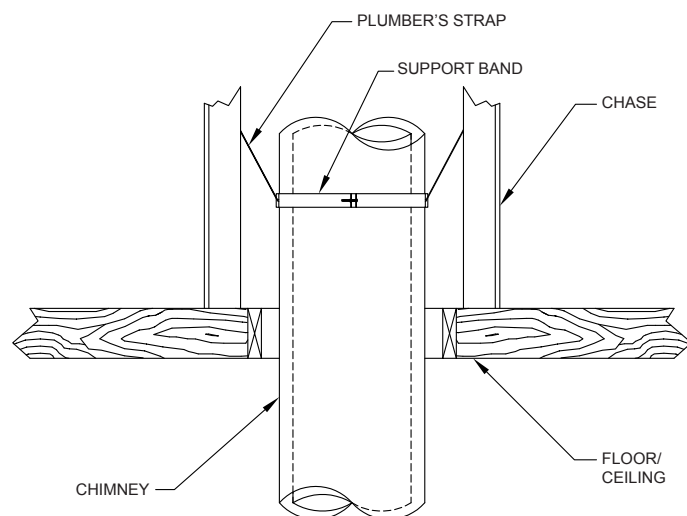


FIG. 7

Attic Insulation Shield: The Attic Insulation Shield must be installed where the chimney passes into an attic. Its purpose is to maintain clearances from loose packed or blown insulation from the chimney. If an Attic Shield is not used the chimney needs to be enclosed within a framed enclosure. Always maintain a 2" air-space clearance to combustibles. Install the shield as follows:

- Remove any insulation or debris from attic floor around the framed opening.
- Assemble chimney sections above the Firestop to a height that extends beyond the height of the attic insulation shield.
- Slip the Attic Insulation Shield over the chimney until the base sits squarely on the framed opening.
- Secure the Attic Insulation Shield to the top of the framed opening using nails or screws. See FIG. 8.

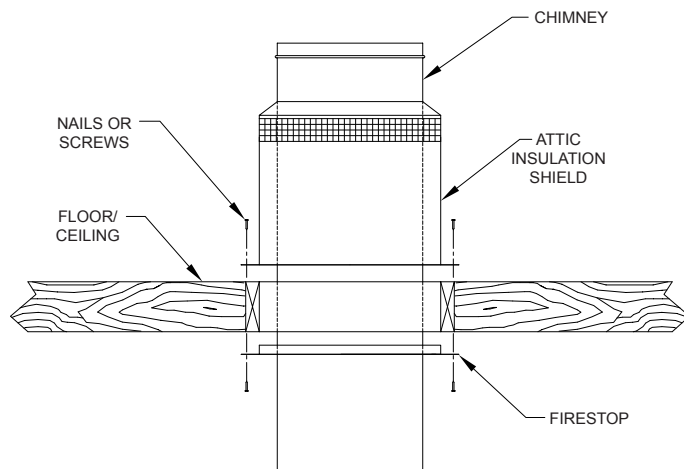


FIG. 8

13ACECOCC Termination: NFPA 211, "Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances", states that chimneys shall extend at least three feet above the highest point where it passes through the roof of a building, and at least two feet higher than any portion of a building within ten feet. See FIG. 9. & FIG. 12.

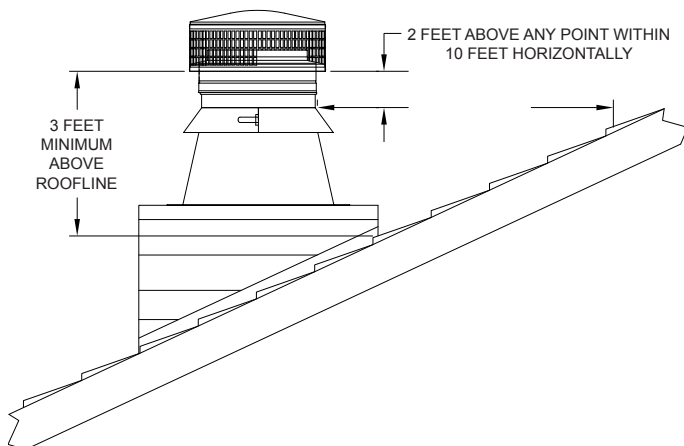


FIG. 9

For chase enclosures, install the chase top cover (supplied by others) to the chase enclosure. Cut a hole in the chase top cover the same diameter as the base of the cone on the flashing. Attach the Flashing to the top of the chase cover, sealing with a non-hardening waterproof sealant. Secure in place with screws or rivets. See FIG. 10.

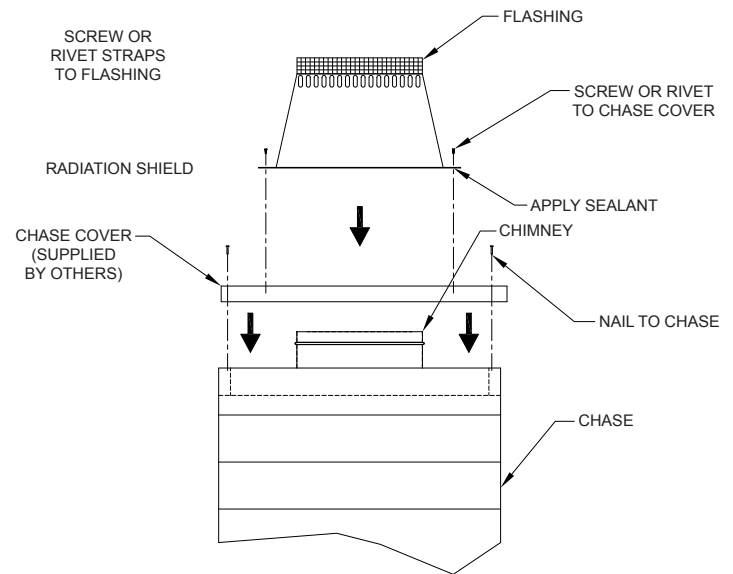


FIG. 10

Attach the storm collar around the chimney above the screen of the flashing. Secure in place with the locking tab and button. Seal around the storm collar with a non-hardening waterproof sealant. Attach the Termination Cap to the chimney by sliding the male to female joint connection together and secure in place with (4) sheet metal screws provided. See FIG. 11.

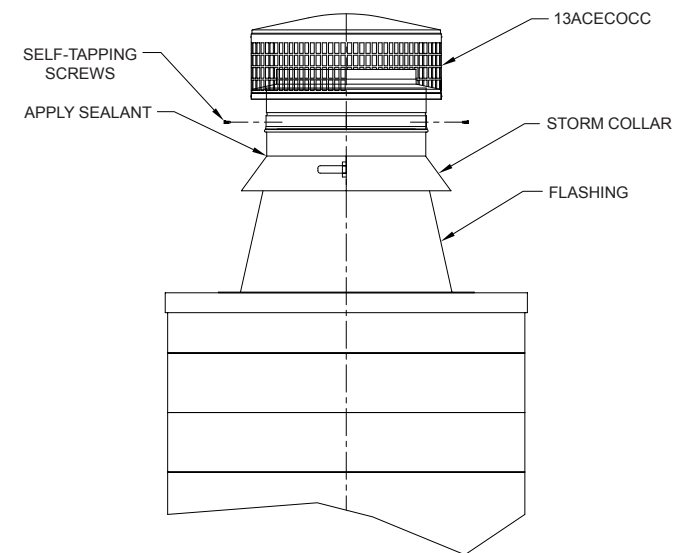


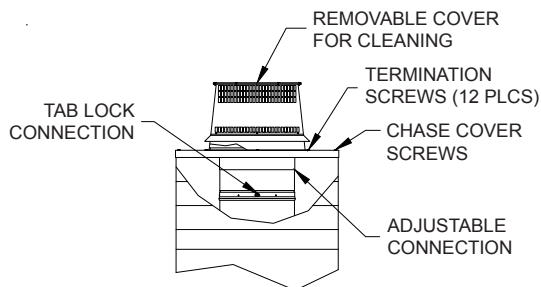
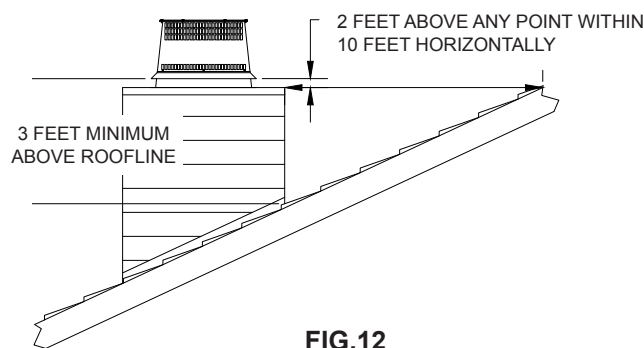
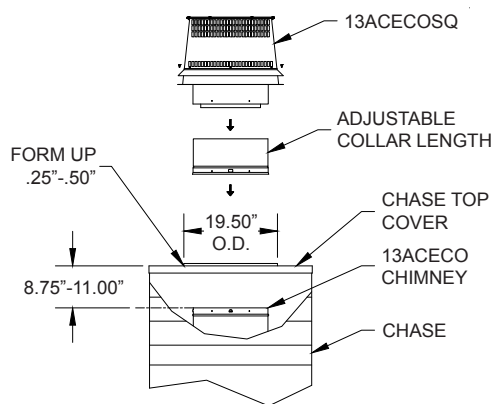
FIG. 11

13ACECOSQ TERMINATION:

Prepare the chase top cover by cutting and forming a 19.50" diameter hole with a .25"-.50" lip centered over the chimney where it exits the chase. The chimney must be 8.75" to 11.00" below the top of the chase top cover. The collar of the 13ACECOSQ will adjust 2.25". See **FIG. 13**.

To attach the termination to the chase, line up the knockout of the adjustable termination collar and the buttons of the chimney and push together to lock. Attach the chase top cover to the chase using screws or nails. Attach the 13ACECOSQ to the adjustable collar by inserting the termination flue and casing through the hole of the chase top cover aligning it over the collar and sliding together. Secure the 13ACECOSQ termination to the chase top cover with sheet metal screws in 12 places at the holes provided in the termination outer cover. Seal screws with sealant (by others) after assembly. See **FIG. 14**.

The 13ACECOSQ termination has a removable cover for cleaning. The chimney should be inspected at least once every two months during the heating season to determine if creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of chimney fire.



Elbow Installation: 15° and 30° elbows are provided to allow chimneys to avoid framing members or roof peaks. A maximum of 30° from vertical is allowed and a total of four 30° elbows (**FIG. 15**) for each chimney installation. A 2" clearance to combustibles must be maintained. A "listed and approved" mechanical fan may be used for drafting issues. Check with mechanical fan company for viability of performance.

Attach the elbow to the chimney pipe, support or other part. Using the offset chart, add chimney sections between elbows, as shown in **FIG. 16** and **TABLE 2**. A Support Band or plumbers strap is required for every 4 foot interval between elbows to support the load as shown in **FIG. 15**. Attach the upper elbow to bring the chimney back to vertical. The elbows may be installed back to back as shown in **FIG. 15A**.

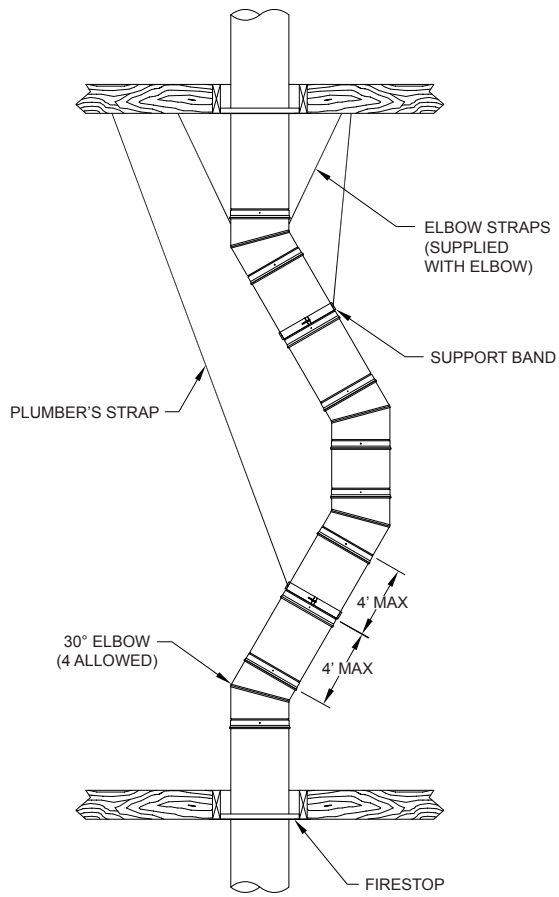


FIG. 15

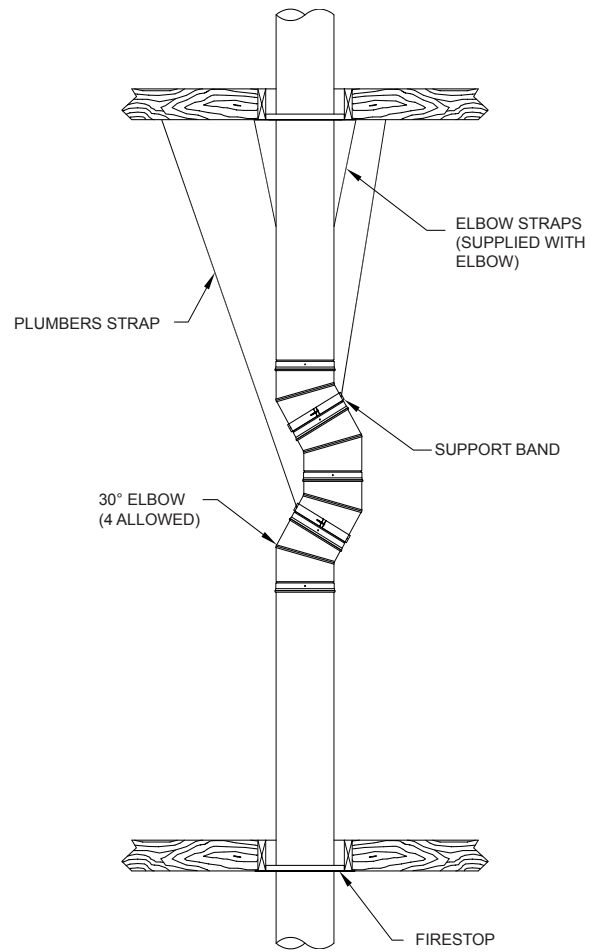


FIG. 15A

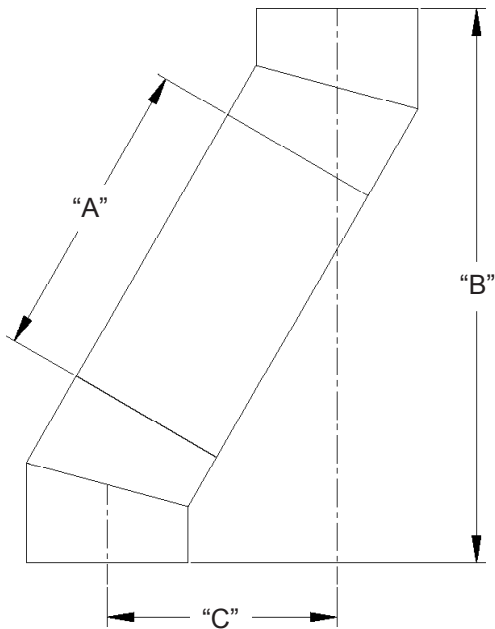


FIG. 16

13" DIAMETER ELBOW OFFSET TABLE				
A	15° Angle		30° Angle	
Length	B	C	B	C
0	23-1/8"	2-7/8"	22"	5-1/2"
6"	27-1/4"	4"	25-3/4"	7-5/8"
12"	33"	5-1/2"	31"	10-5/8"
18"	38-7/8"	7"	36"	13-5/8"
36"	56-1/4"	11-3/4"	51-3/4"	22-5/8"
48"	67-7/8"	14-7/8"	62"	28-5/8"
60"	77-1/8"	17-3/4"	74-3/8"	35-1/4"
72"	88-3/4"	20-7/8"	84-3/4"	41-1/4"
84"	100-3/8"	23-7/8"	95-1/8"	47-1/4"
96"	111-7/8"	27"	105-1/2"	53-1/4"

TABLE 2

WARRANTY

Limited Lifetime Warranty

The Earthcore ECO-Steel factory built chimney (Air-Cooled or Insulated), when installed according to manufacturer's instructions, as prescribed by Underwriters Laboratories Standard 103, and when properly and regularly cleaned and maintained as set forth below, are warranted by Earthcore under normal, residential or commercial use against defects in material or workmanship of the product for parts only as long as the original consumer owns the chimney system. During the first ten years of the warranty, Earthcore will provide replacement chimney lengths at no charge. During the balance of the warranty, Earthcore will provide replacement chimney lengths at 50% of the current retail price in effect at the time of the warranty claim. The defective part(s) must be returned with all transportation charges prepaid by the owner to the Customer Service Department, C/O Earthcore 6899 Phillips Industrial Blvd., Jacksonville, FL. 32256. Earthcore will in turn, ship the replacement the repaired or replacement part to the owner, freight collect, with the owner to be responsible for all freight charges. The warranty does not cover any labor or other service charges incurred by the owner, or any parts not manufactured by Earthcore.

It is the OWNER'S RESPONSIBILITY to establish:

1. The date of the original installation of the product;
2. The name of the original purchaser;
3. The name of the installer;
4. That the product was installed according to manufacturer's instructions; and
5. That the product was properly cleaned and serviced once each year by a licensed chimney sweep.

DISCLAIMERS AND EXCLUSIONS

The following shall be applicable to those products of Earthcore described above:

1. The warranty described herein above shall be IN LIEU of any other warranty, express or implied. Except as set out herein above, there are NO other warranties and any statutory or implied warranty of MERCHANTABILITY or fitness for a particular purpose is EXCLUDED from this transaction and shall not apply.
2. The sole and exclusive remedy against Earthcore shall be for the repair or replacement of defective parts as provided herein above. NO OTHER REMEDY. (Including, but not limited to, incidental or consequential loss) shall be available. The sole purpose of the stipulated exclusive remedy provided for herein, shall be the repair and replacement of defective parts in the manner provided herein above. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as Earthcore is willing and able to repair or replace defective parts in the prescribed manner.
3. The owner shall not be required to deliver a defective part to Earthcore, if:

(a) The part was destroyed as a result of its defect or any defect in any part covered in this warranty; and
(b) Earthcore is reasonably satisfied that the part was defective at the time of sale.

If both of these conditions are met to Earthcore's satisfaction, it will replace the part in the same manner provided herein as if the purchaser had delivered it to Earthcore.
4. The owner acknowledges that no oral statements purporting to be warranties, representations, or guarantees of any kind about any product of Earthcore have been made to owner by Earthcore by the original purchaser, if different from the owner, or by its dealer which in any way expands, alters or modifies the terms of the warranty set out herein. Any such statements do not constitute warranties, shall not be relied on by the owner, and are not part of the contract of sale. This writing constitutes a complete and exclusive statement of the terms of any warranty, expressed or implied, of Earthcore.
5. There is NO WARRANTY for any defective part of an Earthcore product which has been removed from its original installation site or which, in the judgment of Earthcore, arises from misuse, mishandling, neglect, chimney fire, flood, lighting, corrosive atmosphere, improper installation of the product, improper servicing of the product, unauthorized modification of the product, improper fuel supply to the product, or failure to the installer to properly install or service the product as set out in the installation instructions.

ECO-Steel COMPONENT LIST With Part Numbers



13ACECOAPD & 13INECOAPD
Anchor Plate
w/In-Line Damper



13ACECOAP & 13INECOAP
Anchor Plate



13ACECOWB
Wall Band



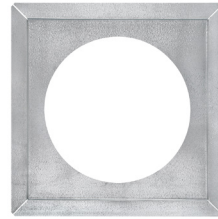
13ACECOCC
Chimney Cap



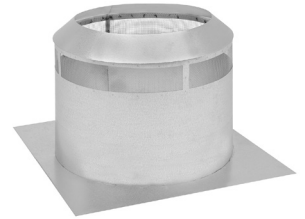
13ACECO30OS & 13INECO30OS
30 Degree Elbow



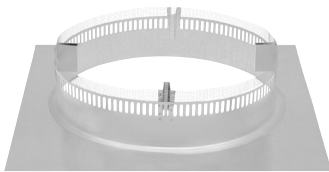
13ACECO15OS & 13INECO15OS
15 Degree Elbow



13ACECOFS
Firestop Assembly



13ACECOIS
Insulation Shield



13ACECOFC
Chase Top Flashing



13ACECOFT
Tall Cone Flashing



13ACECOSC
Storm Collar



13ACECO6 & 13INECO6
6" Pipe



13ACECO12 & 13INECO12
12" Pipe



13ACECO18 & 13INECO18
18" Pipe



13ACECO36 & 13INECO36
36" Pipe



13ACECO48 & 13INECO48
48" Pipe

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