

Installation Instructions



All-Fuel Chimney System
10" to 24" diameter

DURATECH[®]

DuraVent[®]

A MAJOR CAUSE OF VENT RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF THE UTMOST IMPORTANCE THAT DURATECH BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

IMPORTANT:

Read through all of these instructions before beginning your installation. Failure to install this product as described in these instructions will void the manufacturer's warranty, may create a fire or other safety hazard, and may affect your homeowner's insurance and safety listing of your appliance.

Keep these instructions for future reference.

Dear Customer, Installer, or End User:

We welcome any comments, ideas, input or complaints regarding matters pertaining to our DuraVent products.



LISTED
MH7399

ALL FUEL CHIMNEY SYSTEM FOR 10" - 24" DIAMETER

CONTENTS

Clearances, Permits, Equipment Needed, Chimney Applications, Notes . . . 4
Chimney Diameter, Height & Placement, Enclosure Requirements. 5
Appliance Recommendations. 6
Ceiling Support 7
Elbow Offset Installation 12
Tee Supported Installations 14
Masonry Fireplace Installations 18
Chimney Maintenance 21
Typical Installations 23
Warranty. 24

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CLEARANCES

Always allow at least a 2-inch clearance between DuraTech Chimney Pipe and any combustible materials. Never fill any required clearance space with insulation or any other materials. Combustible materials include lumber, plywood, sheetrock, plaster and lath, furniture, curtains, electrical wiring and building insulation. Keep single wall stovepipe at least 18 inches away from combustible materials, unless a clearance reduction system that is acceptable to the authority having jurisdiction is used, or the appliance to be installed is listed and the instructions specify a different clearance.

PERMITS

Contact your local Building Official or Fire Official regarding permits, restrictions, and installation inspections in your area.

DURATECH CHIMNEY APPLICATIONS

DuraTech Chimney 1700°F (10"-24" diameter) is a complete chimney system tested and listed to UL Test Procedure 103, and ULC S604. In the United States, DuraTech Chimney can be used with wood fireplaces, furnaces, boilers, water heaters, ranges, or other residential-type appliances fueled by oil, gas, coal, or wood, that have been tested and listed for use with a UL103 chimney system. In Canada, DuraTech can be used with oil & gas fired appliances listed for use with a Type A Chimney, in accordance with ULC S604. DuraTech Chimney 1700°F is available in 10" through 24" diameters. Do not use with forced draft, positive-pressure appliances. The DuraTech Chimney system is designed to extend vertically with a maximum of one (1) offset (two elbows total) of up to 30° from

vertical. DuraTech Chimney is listed under UL Re-examination Service Number MH7399.

EQUIPMENT & MATERIALS

Drill / Driver
Hammer
Caulking Gun
Plumb Bob
Screwdrivers (Phillips & Standard)
Tin Snips
Saber or Keyhole Saw
Level
Dependable Ladder
Tape Measure
Proper Gloves and Shoes
Eye Protection
Materials You May Need:
Non-hardening Waterproof Sealant
8 Penny Nails
#8, 2-1/2" & 1-1/2" Wood Screws
Roofing Nails
600°F RTV Silicone Sealant

INSTALLATION NOTES

Proper planning for your DuraTech Chimney installation will result in greater safety, efficiency, and convenience, as well as saving time and money. You must use only authorized DuraTech Chimney parts to maintain a listed Chimney system (not including the connector pipe). Do not mix parts or try to match with other products, or use improvised solutions. Do not install damaged or modified parts. Each solid-fuel appliance must be vented with its own chimney. Table 1 lists the authorized DuraTech Chimney components. Practice good workmanship. Sloppy work could jeopardize your chimney's safety. Keep electrical wiring and insulation away from all chimneys and stovepipes. If you have any questions, be sure to contact either your dealer or DuraVent directly.

CHIMNEY DIAMETER

Follow the appliance manufacturer's instructions to determine chimney diameter and clearances between combustible materials and your heating appliance. Never choose a chimney with an inside diameter smaller than your appliance's outlet. If you are connecting to a masonry fireplace, refer to **Table 4**, for proper sizing. To calculate the chimney's outside diameter, add 2 inches to the inside diameter.

CHIMNEY HEIGHT

The National Fire Protection Association Standard #211 states: "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." (**Fig 1**) 10"-16" diameter DuraTech Chimney may be installed up to 40 feet high when using a Support Box, and up to 30 feet high when using a Tee Support. DuraTech in 18"-24" diameters is intended to be mounted directly to an appliance or masonry fireplace, and is limited in height by the allowable weight of the supporting surface, up to a maximum of 60-ft. If the chimney extends more than 4 feet above the roof, an Extended Roof Bracket must be used. Due to the overlap of the joints, subtract 3/4" from each Chimney Section's height to calculate installed height.

CHIMNEY PLACEMENT

When deciding the location of your chimney, try to avoid modifications to roof beams and other structural components of the building.

Table 1	
DuraTech Chimney Components	
12", 18", 24" & 36" SECTIONS	ROUND CEILING SUPPORT BOX
FIRESTOP RADIATION SHIELD	EXTENDED ROOF BRACKET
ELBOW ATTIC	TRIM COLLARS FOR ROUND SUPPORT BOXES
INSULATION SHIELD	ADJUSTABLE ROOF FLASHING
TEE WITH TEE CAP	WALL THIMBLE
ELBOW STRAP	CHASE TOP FLASHING
TEE SUPPORT	FINISHING COLLAR
BRACKET WALL STRAP	FLAT ROOF FLASHING
CHIMNEY CAP	ROOF RADIATION SHIELDS
ANCHOR PLATE	STORM COLLAR

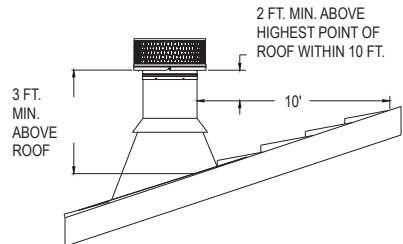


Figure 1

CHIMNEY ENCLOSURE REQUIREMENTS

Through Rooms: Interior chimneys shall be enclosed where they extend through closets, storage areas, occupied spaces, or anyplace where the surface of the chimney could be contacted by persons or combustible materials. The space between the outer wall of the chimney and the enclosure shall be at

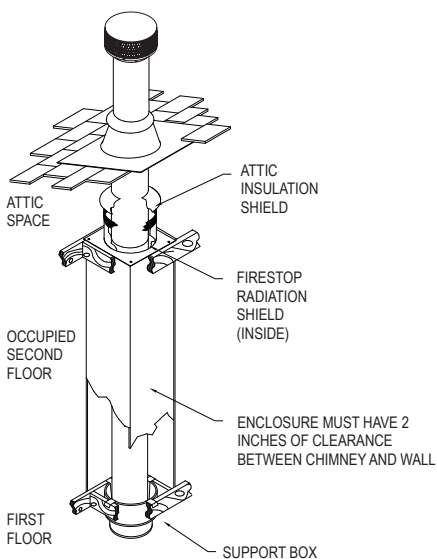


Figure 2

least 2 inches (**Fig 2**).

Multi-Story: Consult local building code officials for requirements in your area. The National Fire Protection Association Standard #211 states: "Factory-built chimneys that pass through floors of buildings requiring the protection of vertical openings shall be enclosed with approved walls having a fire resistance rating of not less than one hour when such chimneys are located in a building less than 4 stories in height, and not less than 2 hours when such chimneys are located in a building more than 4 stories in height." In Canada, except in single-family and two-family dwellings, chimneys which extend through another story must have an enclosure with a fire resistance rating equal to or greater than that of the floor or roof assembly through which they pass.

Cold Climates: In cold climates, chimneys mounted on an outside wall should be enclosed in a chase. Exterior chases reduce

condensation and creosote formation, and enhance draft. Include an access door by the Tee Cap for chimney cleaning (**Refer to Fig 18**).

APPLIANCE RECOMMENDATIONS

Follow the appliance manufacturer's instructions. The requirements stated below pertain to all appliances installed with DuraTech Chimney systems.

Choice: Choose an appliance that is listed by a recognized testing laboratory, is appropriate for your needs, and is not larger than required.

Installation: Once the chimney system is in place, install the appliance and stovepipe (if applicable) as described in the appliance manufacturer's instructions. Be sure to maintain all required clearances.

Fues: Connect only one solid fuel appliance per chimney.

Operation: Follow the appliance manufacturer's instructions and safety manual for maximum efficiency and safety. Over-firing can damage the appliance, stovepipe and chimney, and can void your warranties.

Fuels: Do not burn driftwood, plastic, or chemically treated wood such as railroad ties. They are corrosive to your appliance and chimney system. Follow the appliance manufacturer's instructions and safety manual in regards to fuels. Not all appliances are equipped to burn coal. Coal with a low sulfur content will reduce the possibility of corrosion.

STEP-BY-STEP DIRECTIONS

There are three general types of DuraTech Chimney installations:

1. Ceiling-supported.
2. Tee-supported (through-the-wall)
3. Masonry Fireplace

Review the step-by-step directions before beginning your installation.

CEILING SUPPORT

Ceiling supported systems are available for diameters 10"-16".

1. Place Appliance: Position the appliance according to the manufacturer's instructions. The flue outlet collar should be placed between the rafters or joists above, if possible.

2. Frame Support Opening: Drop a plumb bob to the center of the appliance's flue outlet and mark this center point on the ceiling. Refer to Table 2 for specific framing and clearance dimensions. Mark appropriate cutting lines around the center point. Cut a square hole in the ceiling for the Support Box. Frame a level, square opening centered over the hole which you have cut. (*Figures 3 and 4*).

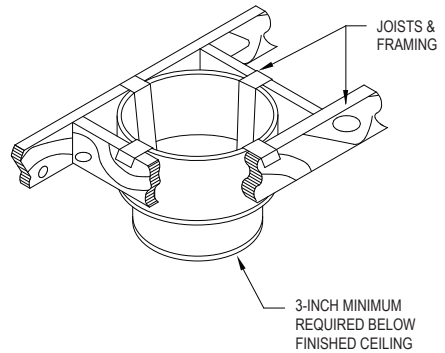
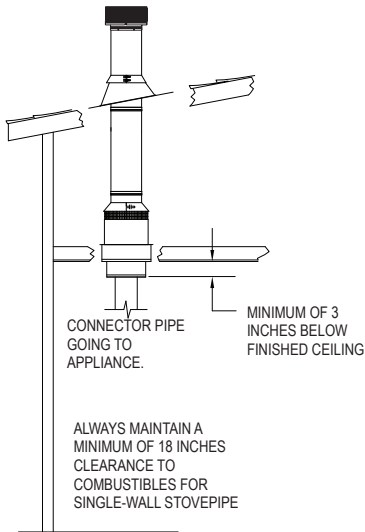


Figure 4

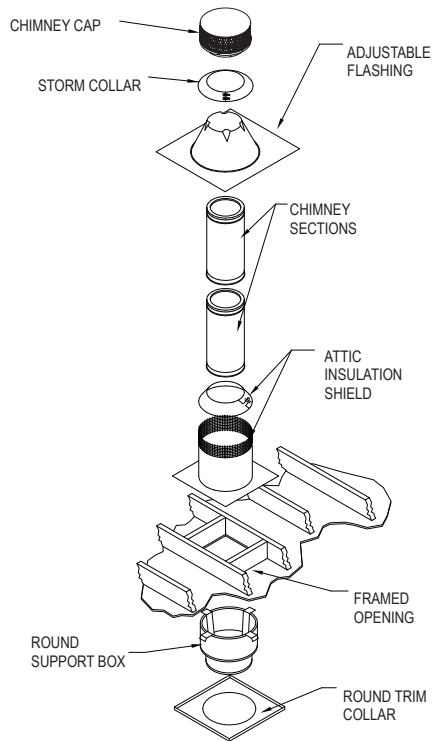
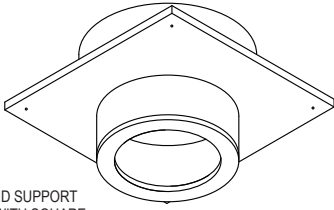
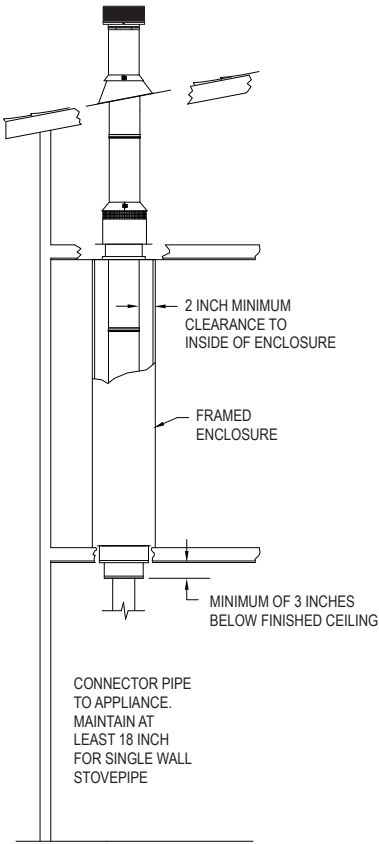


Figure 3



ROUND SUPPORT BOX WITH SQUARE TRIM COLLAR

Figure 5



3. Install Support: For installation into a flat ceiling, you need to use the Round Support Box. The Round Ceiling Support Box has the option of a square or round Trim Collar available (**Fig 5**). The Support Box must extend at least 3 inches below the finished ceiling. (Do not install beyond 4-1/2" below finished ceiling or the trim collar will not cover

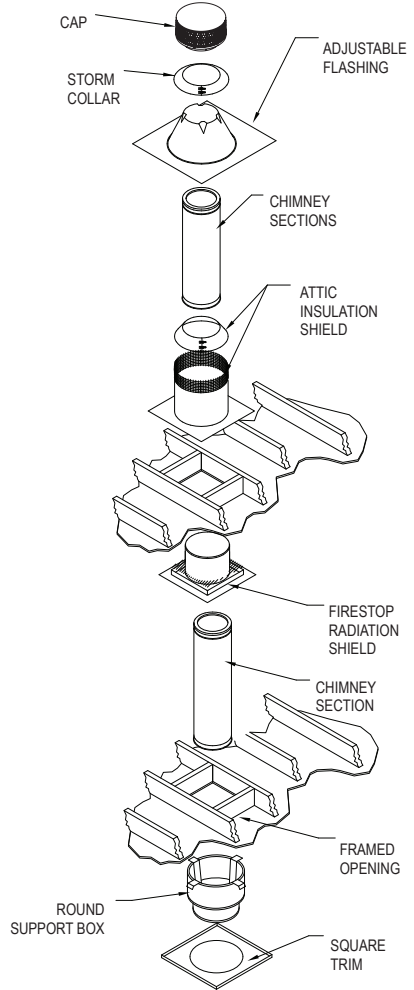


Figure 6

Table 2

**Inside Square Framing Dimensions
(X" x X")**

Chimney Diameter	10"	12"	14"	16"	18"	20"	22"	24"
CEILING SUPPORT BOX	16 1/4"	18 1/4"	20 1/4"	22-1/4"	na	na	na	na
WALL THIMBLE	16"	18"	20"	22"	na	na	na	na
FIRESTOP RADIATION SHIELD	16"	18"	20"	22"	24 1/4"	26 1/4"	28 1/4"	30 1/4"
ATTIC INSULATION SHIELD	16 1/4"	18 1/4"	20 1/4"	22 1/4"	24 1/4"	26 1/4"	28 1/4"	30 1/4"

properly). Level the Support Box and secure it to the framing using at least three 8-penny nails per side (min. of 12 total). Wrap the straps of the Support Box around the framing members (**Fig 4**), and secure with (2) 8-penny nails per side (eight nails total). Alternatively, you may use 1-1/2" #8 wood screws (min. of 12 total for the Support Box, and 8 total for the straps), instead of nails. Next, secure the round or square Trim Collar to the ceiling/framing members using (4) 1" long, round-head wood screws.

4. Frame Openings: Frame openings in each ceiling or floor above the Support Box (**Fig 6**). These openings are to hold the Firestop Radiation Shield and Attic Insulation Shield. Locate each opening by dropping a plumb bob to the four corners of the opening below. Maintain the minimum clearances and dimensions as specified in **Table 2**. If Elbows must be used to avoid an obstruction, refer to the Offset Elbow Installation section.

5. Cut Roof Opening: Cut an opening in the roof directly above the opening below, and at least 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 within this

opening and maintain the 2-inch clearance to combustibles.

6. Install Firestop Radiation Shield: A Firestop Radiation Shield is required in multistory installations at each floor penetration above that where the Support Box is located. Example: in a multistory home where the appliance is on the ground floor (Support Box is in the 1st floor ceiling), you would need a Firestop Radiation Shield at the 2nd floor ceiling, and at the 3rd floor ceiling, etc.,

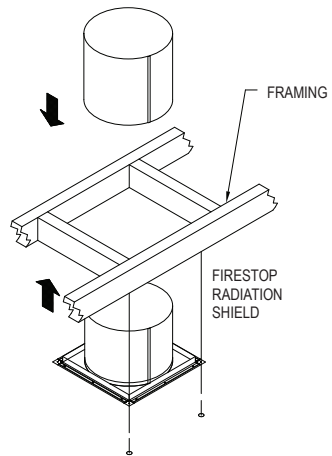


Figure 7

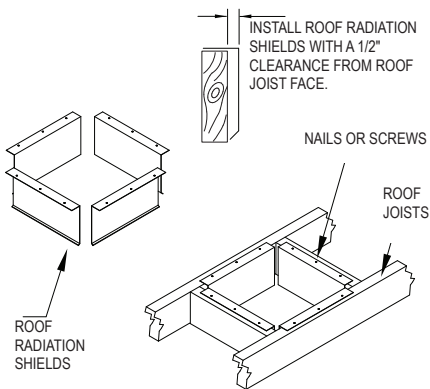


Figure 8

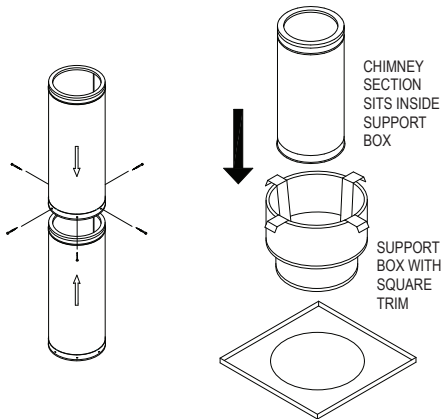


Figure 9

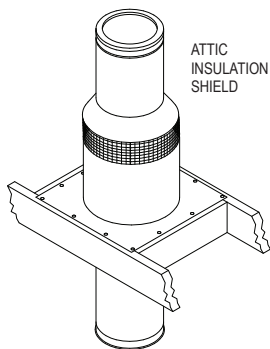


Figure 10

including where the chimney penetrates into the attic. **Figure 6** shows a typical 2-story installation with an attic.

Note: a Firestop Radiation Shield is not installed where the chimney penetrates through the roof. Instead, you will need to install Roof Radiation Shields (required for 18"-24" diameters only - see **Step 7**) around the roof joist members. The Firestop Radiation Shield is installed on the underside of the ceiling/floor framing, with the cylindrical "tube" portion of the shield pointing upward (**Fig 7**). Use a minimum of either (1) 8 penny nail or (1) 1-1/4" wood screws per corner. Refer to Table 2 for framing requirements.

7. Install Roof Radiation Shields: Roof Radiation Shields are required for 18"-24" diameter chimney installations. Roof Radiation Shields provide protection for roof framing members.

Note: Combustible materials will still need to be a minimum of 2" away from the chimney. Roof Radiation Shields must be installed with their face 1/2" off of the roof framing joists (**Fig 8**). Depending upon the pitch of your roof, trim the Roof Radiation Shields with tin snips so they provide complete coverage of the roof framing exposed to the chimney. Secure the Roof Radiation Shields to the top of the framing members using at least (3) nails or screws for each shield (**Fig 8**).

8. Assemble Chimney Sections: Lower the female end of the first Chimney Section in the Support Box (**Fig 9**). Sheet metal screws are not required between the first Chimney Section and the Support Box. For each additional Chimney Section use the (6) Sheet metal screws provided to make a secure connection between the chimney sections (**Fig 9**). Do not penetrate the inner liner of the chimney.

9. Install Attic Insulation Shield: Install the Attic Insulation Shield where the chimney passes into an attic. It's purpose is to prevent debris and building insulation from getting too close to the chimney (**Fig 10**). An installed Attic Insulation Shield is 15 inches high. In attic areas where this shield cannot fit, you must enclose the attic portion of the chimney in a framed enclosure. If the chimney is fully enclosed through the attic, an Attic Insulation Shield is not required. Where the chimney passes into the attic, install the Attic Insulation Shield as follows:

- a. If the Firestop Radiation Shield extends above the attic floor, no modifications are necessary. The Firestop Radiation Shield will fit inside the Attic Insulation Shield.
- b. Assemble Chimney Sections until at least 18 inches of chimney extends above the Firestop Radiation Shield.
- c. Slip the Attic Insulation Shield over the Chimney and Firestop Radiation Shield until the base sits squarely on the framed opening (**Fig 6 & 10**).
- d. Secure the Attic Insulation Shield to the top of the framed opening using at least (3) 8-penny nails or (3) #8, 1-1/2" wood screws per side (**Fig 10**).
- e. Wrap the Collar of the Attic Insulation Shield around the chimney and fasten it loosely. Slide the Collar down to meet the Attic Insulation Shield. Tighten the bolts to secure the Collar in place (**Fig 11**).

10. Attach Flashing: In new construction, assemble the Chimney Sections to a point above the roof, then slip the Flashing over the chimney. On an existing roof, center and install the Flashing before extending the chimney above the roof. Allow space to permit sliding the next Chimney Section up through the Flashing. Always ensure the chimney

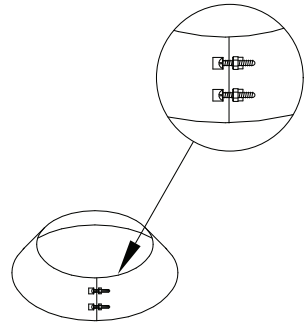


Figure 11

remains vertical (use a level), and that at least a 2-inch clearance to combustible materials is maintained all around. Install the upper edge of the Flashing under the roofing. Nail to the roof along the upper edge and down each side with 1-inch roofing nails. Do not nail the lower edge of the Flashing (**Fig 12**). Be sure to follow local building practices, as needed. Seal all nail heads with a non-hardening waterproof sealant. On flat or tarred and graveled roofs, nail and seal the Flat Roof Flashing to the roof on all sides with roofing compound. Do not put screws through the Flashing into the Chimney Pipe.

11. Finish Top: Apply a non-hardening waterproof sealant around the chimney at the point where the Storm Collar will meet the chimney just above the Flashing, and also along the vertical seam of the chimney pipe, where it is exposed to the weather (**Figures 12 and 13**). Slide the Storm Collar down over the chimney to the top of the Flashing. Tighten the bolts of the Storm Collar and seal the Storm Collar against the sealant. After installing sufficient Chimney Sections to meet the height requirement as shown in **Figure 1**, attach the Chimney Cap onto the top of

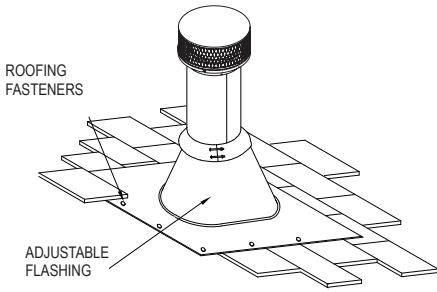


Figure 12

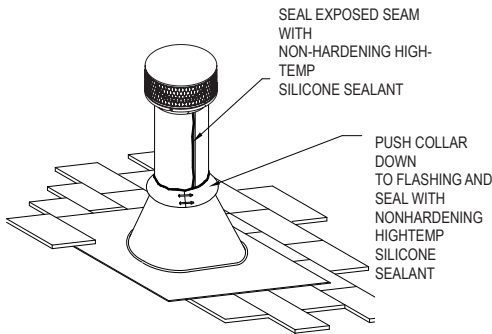


Figure 13

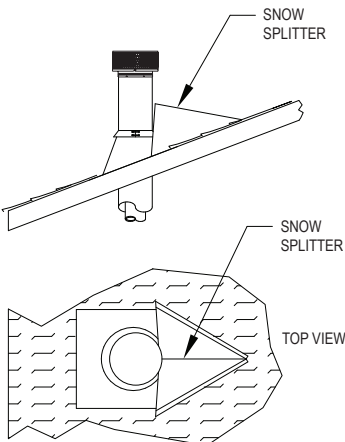


Figure 14

the chimney by setting the female end of the Cap onto the male end of the last chimney section. Secure the Cap by using (6) sheet metal screws provided. Do not push down from the top portion of the cap as this may damage the cap. Push from the lower section of the Cap if needed. The Chimney Cap can be removed for chimney cleaning as described in the Chimney Maintenance section of the instructions. Use an Extended Roof Bracket if the chimney extends more than 4 feet above the roof (**Figures 16 & 17 in the Extended Roof Bracket section**).

If you are located in heavy snow country, a “snow splitter” should be used to protect the chimney by routing snow around the pipe. DuraVent offers a Snow Splitter or one can be fabricated locally from heavy gauge sheet metal (**Fig 14**).

12. Enclosures: Enclose chimneys where they pass through occupied spaces, including closets. Always maintain at least a 2 inch clearance between the chimney and any combustible materials. Interior enclosures may be constructed with standard framing and sheathed with sheetrock or plywood. Use Wall Straps at least every 4 feet to maintain a minimum of 2 inches of air space between the chimney and combustible materials.

OFFSET ELBOW INSTALLATION

DuraTech allows for the use of one pair of 30° Elbows (measured from the vertical) for chimney sizes 10” - 24”. A 30° Elbow is the largest that can be used in an offset from vertical. A 30° Elbow may not be combined with another elbow to make a steeper offset (e.g. two 30° Elbows are not allowed to be put together to form a 60° elbow from vertical). Avoid Elbows if possible, since a totally vertical chimney is more efficient. When Elbows

are necessary to avoid obstructions such as rafters, ridgepoles, or joists, you are only allowed to use 1 pair of Elbows in any one chimney system.

1. Attach Elbows: Attach Elbow to Chimney Section or other Elbow by mating the male and female ends with each other and using the (6) sheet metal screws provided. Attach one Elbow to the Chimney Section below, and align it for the offset. Refer to **Table 3** to determine the required offset length and attach an appropriate length (or lengths) of Chimney Section(s) above the Elbow. For each Chimney Section in the offset, an Elbow Strap must be used to support the weight of that pipe section. No more than half of the total chimney run can be between the elbows (inclined); this is to ensure the chimney drafts properly (e.g. if the total chimney run is 20-ft, no more than 10-ft is allowed to be between the elbows). Attach the second Elbow above the Chimney Section to complete the offset (**Fig 15**).

2. Secure Offset: Place the Elbow Strap's band around the angled portion of the top Elbow, then tighten the nut and bolt until the clamp is firm. Wrap the Elbow Strap end over an adjacent joist or rafter and secure it with at least two 8-penny nails or #8, 1-1/2" screws. Do not add more Chimney Sections until the Elbows are supported. Be sure that the chimney remains vertical (**Fig 15**).

EXTENDED ROOF BRACKET INSTALLATION

If the chimney extends more than 4 feet above the roofline, an Extended Roof Bracket must be installed at every 4-foot increment of chimney height above the roofline, leaving no more than 4 feet of chimney extending above the last pipe bracket.

Table 3			
Elbow Offset Chart			
ELBOW ANGLE FROM VERTICAL	CHIMNEY LENGTH BETWEEN ELBOWS	OFFSET INCHES	RISE INCHES
30 °	0"	6 5/8"	25 1/2"
30 °	12"	12 7/16"	35 1/2"
30 °	18"	15 7/16"	40 3/4"
30 °	24"	18 7/16"	45 15/16"
30 °	36"	24 1/2"	56 1/4"

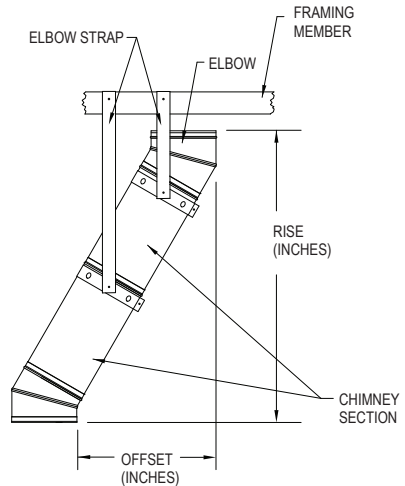


Figure 15

EXTENDED ROOF BRACKET ASSEMBLY

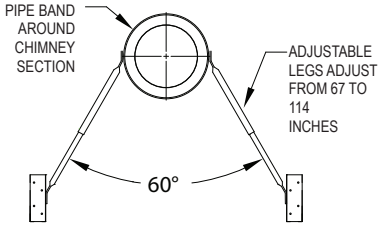


Figure 16

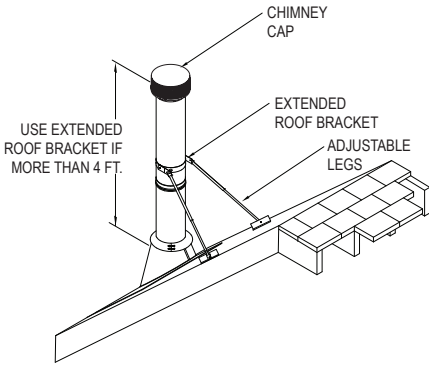


Figure 17

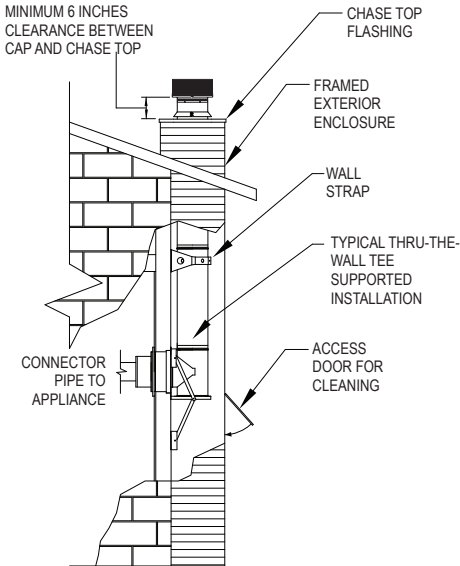


Figure 18

The Extended Roof Bracket consists of the Pipe Band, the Adjustable Legs, and the Roof Brackets.

1. Mount Pipe Band: Slip the Pipe Band around the chimney and secure by tightening the nut and bolt.

2. Attach the Legs: The Adjustable Legs of the assembly will adjust from 67" to 114". Secure one end of the Legs to the Pipe Band using the nuts and bolts included (1 per Leg). Position the Adjustable Legs so they form approximately a 60° angle with the chimney, and with each other (**Figures 16 and 17**). Be sure that there is at least 3" of overlap between the top and bottom halves of the Adjustable Leg to ensure a secure fit. In order to secure Legs in proper position, there is a hole provided in the outer leg where the outer and inner halves overlap. Use a 1/4" drill bit to drill through the inner leg at that location. Use the nut & bolt provided to pin the Adjustable Legs in position.

3. Install Roof Brackets: Mount the two Roof Brackets where each of the Adjustable Legs meets the roof, using 4 roofing nails per bracket. Seal the nail heads carefully with a non-hardening, waterproof sealant. Attach the bottom end of the Adjustable Legs to the Roof Brackets using the nuts & bolts provided.

TEE-SUPPORTED INSTALLATIONS

Tee-Supported installations are used when passing through a wall to an outside chimney. Tee-Supported installations are available for DuraTech chimney 10" through 16" diameters. The Tee Support can hold a maximum of 30 feet of DuraTech Chimney. The required parts and general configuration are as shown in **Figures 18 and 19**.

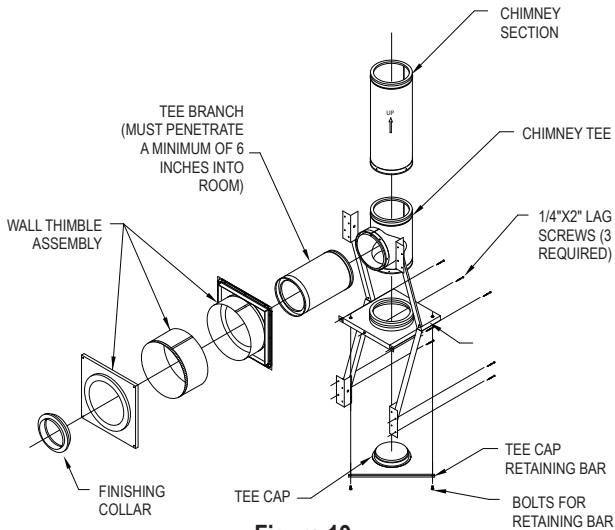


Figure 19

1. Place Appliance: Position the appliance according to the manufacturer’s instructions. It is a good idea to try to position the appliance so it will allow the chimney to line up centered between studs.

2. Locate, Cut & Frame Opening: Determine the location where the chimney will pass through the wall. The chimney should pass through the wall, centered between two studs. The height of the penetration can be determined by positioning sections of connector pipe until you have the desired configuration (refer to the appliance manufacturer’s installation instructions for restrictions on connector pipe). Cut and frame an opening in the inner and outer walls at this location. Refer to **Table 2** for the appropriate framing dimensions.

3. Install Wall Thimble: The Wall Thimble is a three piece unit which includes the cover plate, sleeve extension, and the back portion with

shield. On the outside wall, install the back portion of the Wall Thimble. Center the back portion of the Wall Thimble (with shield inside wall) in the framed opening of the outside wall. Be sure to seal the flange of the Wall Thimble around the wall by using a non-hardening waterproof sealant. Attach the back portion of the Wall Thimble to the outside wall using at least (4) 8-penny nails or (4) 1-1/2” wood screws (**Fig 20**). Depending on the thickness of your wall, you will need to adjust the shield extension to insure that you have a continuous shield throughout the wall penetration. Adjustments can be made by sliding the extension in or out of the back portion of the shield. Verify that the shield extension reaches the front cover plate when the cover plate is in position. Do not install cover plate at this time. When the shield extension is in position, secure it to the back portion of the shield using (4) sheet metal screws (**Fig 20**).

4. Install Tee Support: Install the Tee Support on the outside wall. Position Tee

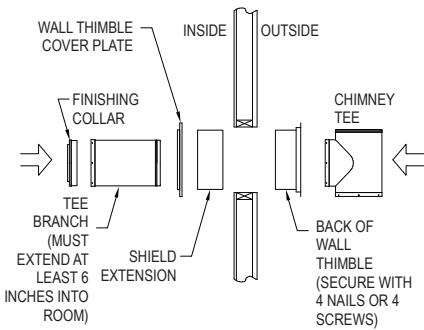


Figure 20

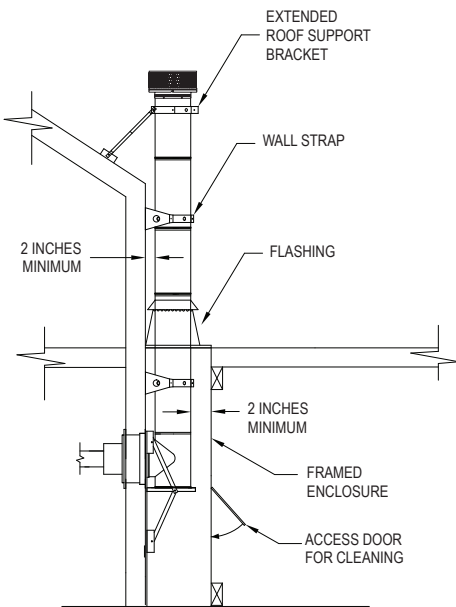


Figure 21

Support so that the chimney Tee will be centered inside the Wall Thimble (**Figs 19 & 20**). Important: Verify that Tee Support is level, then secure Tee Support to outside wall using (3) 1/4" x 2" long lag screws for the support base, and (8) #8, 2-1/2" wood screws for the brackets (2 screws per bracket). Be sure to keep the Tee Support level.

5. Install Chimney Tee and Branch:

Attach the Chimney Branch to the Tee. The Chimney Branch is 12" or 18" Chimney Section (depending on your wall thickness) positioned horizontally used to pass through the wall.

Important: The Chimney section used to penetrate through the wall must extend at least 6" into the room. Secure the Chimney Branch to the Tee by using the (6) sheet metal screws provided. It is very important that a good connection is made between the Branch and the Tee. (**Fig 20 & 21**) Install the Tee Cap in the bottom of the Tee, on the underside of the Tee Support Bracket. Be sure that the Tee Cap is securely inserted into the bottom of the chimney pipe. Secure the Tee Cap in place by attaching the Tee Cap Retainer Bar using the two (2) bolts included (**Fig 19**).

6. Install Cover Plate and Finishing Collar:

After the Chimney Branch is secured in place (penetrating at least 6" into the room), slide the Cover Plate over the Branch and attach it to the framing using (4) 1-1/4" long, round head wood screws. Be sure that the Branch is centered in the opening of the Cover Plate. Twist lock the Finishing Collar on to the female end of the Chimney Branch by twisting clockwise.

7. Complete Chimney: Attach the Chimney Sections as in **Step 8** in the Ceiling Supported Installation section. Secure the chimney to

the wall with Wall Straps at 4-foot intervals to maintain at least 2 inches of clearance to combustible materials. Slip the Wall Straps around the chimney, tighten the bolts, and fasten the Wall Straps to the wall with (4) #8, 2-1/2" long wood screws. Once the chimney is at the minimum height specified in **Figure 1**, attach the Chimney Cap onto the top of the chimney by holding it by the collar and slipping the female end of the Cap onto the male end of the Chimney Pipe. Secure the Cap in place by using the (6) sheet metal screws provided. If the chimney penetrates an overhang, frame for at least 2 inches of clearance, and install Roof Radiation Shields (required for 18"-24" diameter chimney only), Flashing and Storm Collar as described in **Steps 7, 10 & 11** for Ceiling Supported Installations. Another option is to cut away the overhang for a 2-inch clearance (**Fig 22**). If the chimney extends more than 4 feet above the top Wall Strap or Flashing, use an Extended Roof Support Bracket.

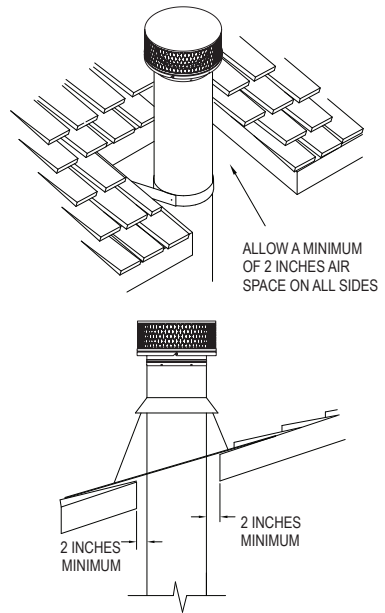


Figure 22

8. Install Chase Top Flashing: It is recommended that a Tee Supported Chimney be enclosed in a chase. If a chase enclosure has been constructed, you can either use a standard flat-roof flashing, or you can use a Chase Top Flashing. Using a Chase Top Flashing allows for a lower profile for the chimney. The Chase Top Flashing has an opening in the center that has a 3" larger diameter than the outer diameter of the DuraTech Chimney. If the Chase Top Flashing can fit over your chase enclosure as required (**Fig 23**) then install as directed, or trim as needed. However, if the Chase Top Flashing is smaller than your chase enclosure, the you will need to provide a galvanized sheet capable of covering your chase and overhanging the each side by 1/4-1/2 inch. Attach the Chase Top

Flashing to the galvanized sheet using sheet metal screws and non-hardening waterproof sealant. Use the Chase Top Flashing Spacers to allow the proper air-gap clearances on the galvanized sheet. The Chase Top Flashing Spacers are available to insure that the proper air-gap is maintained. **Figure 23** displays in some detail, how these air gaps are established using the Spacers and Chase Top Flashing. Secure the Chase Top Flashing to the chase using a sufficient number of #8, 1-1/2" wood screws, being careful to insure the air gap is maintained between the flashing and the chase. Seal the screw heads with non-hardening sealant. Install the Storm Collar directly down on top of the collar of the Chase Top Flashing.

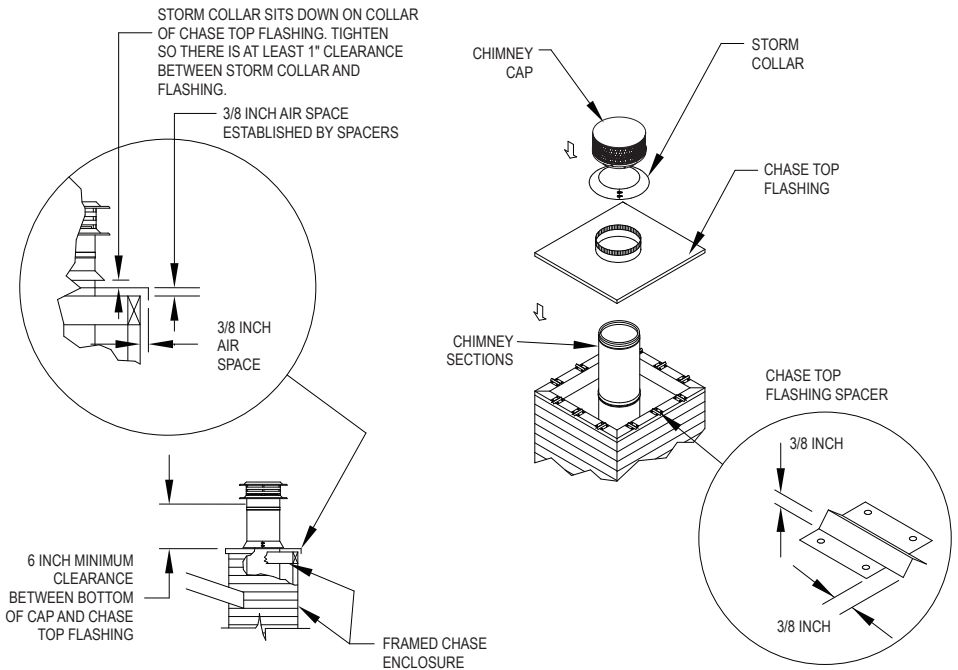


Figure 23

MASONRY FIREPLACE INSTALLATIONS

- 1. Determine Chimney Size:** Use **Table 4** to determine the correct diameter chimney for your fireplace.
- 2. Mount Anchor Plate:** Chimneys for masonry fireplaces begin with an Anchor Plate or Anchor Plate with Damper. Warning: Anchor Plate with Damper is not allowed in chimneys serving stoker-fired, liquid or gas burning appliances. Caution: Do not install Anchor Plate with Damper on Factory-built fireplaces. Important: be sure the surface of the masonry chimney has a level surface on which to attach the Anchor Plate or Anchor Plate. If the top of the masonry does not have a level surface, then you will need to modify the masonry accordingly. Center the Anchor Plate over

the masonry flue opening. If a Damper is used, make sure nothing interferes with the damper plate movement. Seal the Anchor Plate in place with a high temperature sealant. Secure Anchor Plate with (4) 2" x 1/4" masonry anchors (**Fig. 24**).

3a. Damper Plate: The Damper Plate should swing freely once the Anchor Plate is installed. When the chain is pulled down, the damper plate should close (horizontal position). When the chain is released (no weight on the chain), the damper should swing open (vertical position).

3b. Lintel Hook: With the damper plate in the closed (horizontal) position, determine and mark the location for the Lintel Hook. The Lintel Hook should be mounted in a position so as to provide a small amount of tension in the spring attached to the chain (**Fig. 25**). The

tension is needed to prevent the damper plate from rattling when closed. Mount the Lintel Hook to the masonry with the screws provided.

4. Attach Chimney: Attach the first Chimney Section onto the Anchor Plate by using the sheet metal screws provided.

5. Finish Chimney: Install the rest of the chimney as directed in the Ceiling Supported Installation section, **Steps 4 through 11**. Refer to **Figure 1** and **Table 4** for chimney height requirements. Always maintain at least 2 inches of clearance to combustible materials, and enclose the chimney where it passes through occupied areas. The 2-inch clearance is an air space; do not fill that clearance space with any materials. Use a Wall Strap for every four (4) feet of chimney height.

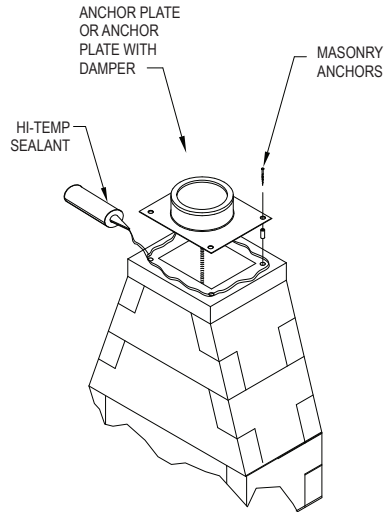


Figure 24

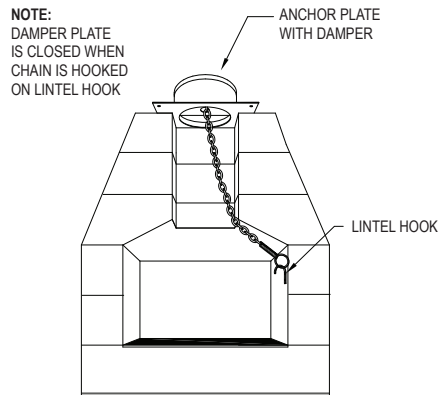
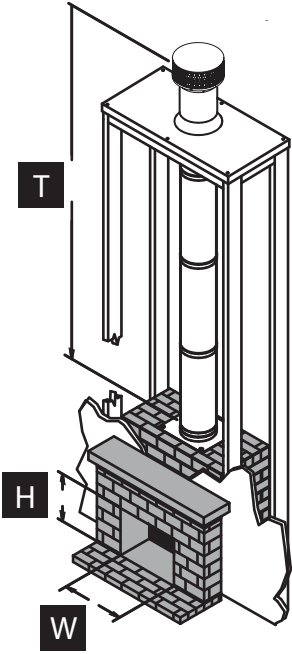
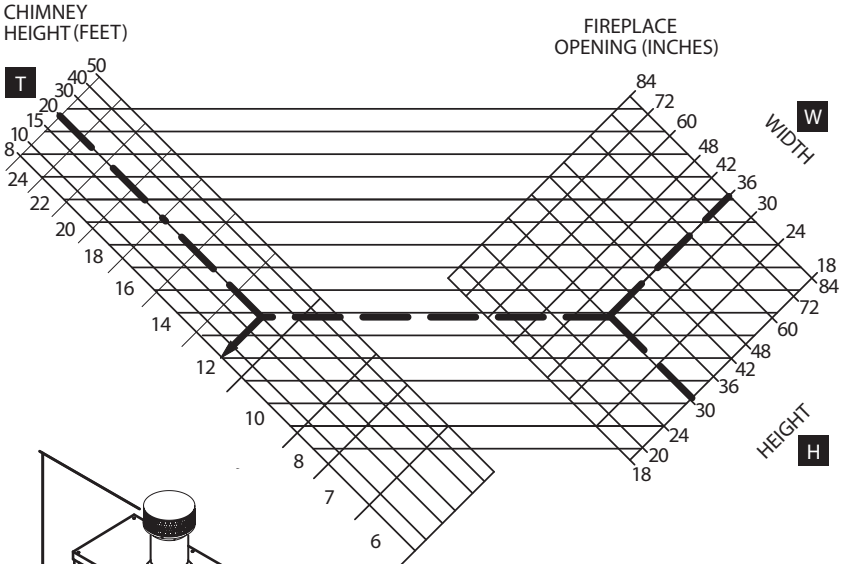


Figure 25

Table 4

Chimney Sizing Chart for Fireplace Installations



Dotted line represents sample problem.
 Example shows fireplace opening as 36" wide
 and 30" high, and the chimney height as 20'.
 The correct flue size for the sample problem is
 12" diameter pipe.

CHIMNEY MAINTENANCE

1. Creosote and Soot: When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to produce creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

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

3. When to Clean: The chimney should be inspected at least once every month during the heating season to determine if creosote or soot has built up. Check spark arrestor screens at least every 2 to 4 weeks. If creosote or soot has accumulated, it should be cleaned to reduce the risk of chimney fire.

4. How to Clean: Have your chimney cleaned by a professional chimney sweep if you have doubts about your ability to clean it. Use a plastic, wood, or steel brush. Do not use a brush that will scratch the stainless steel liner of your chimney. Scrub the spark arrestor with a wire brush. To remove the Spark Arrestor Assembly for cleaning, loosen the three bolts that attach it without fully removing them, then twist the spark arrestor assembly counter-clockwise while lifting upwards. To reinstall (**Fig. 26**), lower the spark arrestor assembly onto the three loosened bolts (without aligning the slots and bolts), then twist the spark arrestor assembly clockwise until the slots drop onto the bolts. Ensure that the bolts

are fully engaged in the slots, then tighten the bolts to secure the spark arrestor assembly. The Tee Cleanout Cap can be removed once the retaining bar has been unbolted. Remember to replace the Tee Cap and retaining bar when you are finished cleaning the chimney.

5. Coal: To reduce corrosion in chimneys where coal is burned, clean the chimney thoroughly within 48 hours of shutting down the appliance for the season.

6. Chemical Cleaners: Use chemical cleaners only as a last resort, and use only those which the manufacturer specifically warrants as being noncorrosive to the chimney. DuraVent will assume no liability for damage resulting from the use of chemical cleaners.

7. In Case of Fire: If a flue fire occurs, close all appliance air inlets, and call your Fire Department. Do not use the chimney again, until it has been inspected for possible damage.

8. Painting: As an option, you can coat all exterior metal parts, with the exception of the Chimney Cap, with high temperature, rust proof paint. Wash the metal with a vinegar and water solution before painting. Painting the chimney will help to increase chimney life.

9. Creosote Formation: DuraVent 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.

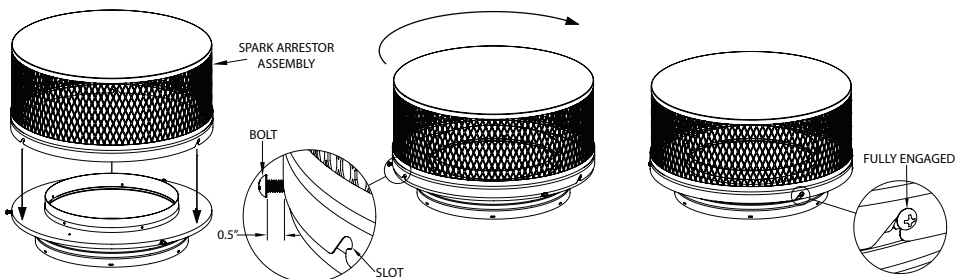
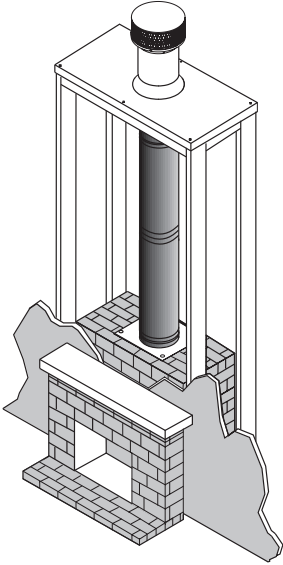
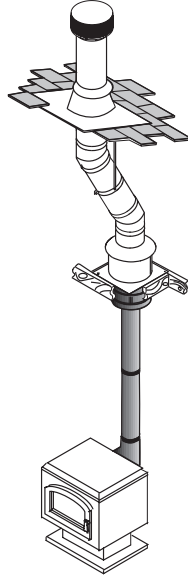


Figure 26

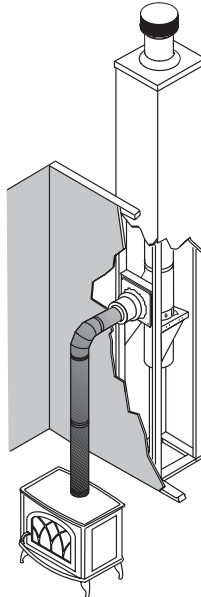
TYPICAL INSTALLATIONS



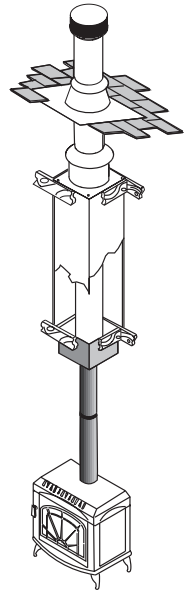
Fireplace



Attic Offset



Through-the-Wall



Two Story

DURAVENT LIMITED LIFETIME WARRANTY

M&G DuraVent, Inc. ("DuraVent") provides this limited lifetime warranty for all of its products with the exception of Ventinox® (lifetime), and PolyPro® (ten years). Subject to the limitations set forth below, DuraVent warrants that its products will be free from defects in material or manufacturing, if properly installed, maintained and used. DuraVent products are fully warranted if installed only by a professional installer. This Warranty is transferable from the original homeowner to the buyer of the home. This warranty does not cover normal wear and tear, smoke damage or damage caused by chimney fires, acts of God, or any product that was: (1) purchased other than from an authorized DuraVent dealer, retailer or distributor; (2) modified or altered; (3) improperly serviced, inspected or cleaned; or (4) subject to negligence or any use not in accordance with the installation instructions included with the product as determined by DuraVent.

This limited lifetime warranty applies only to parts manufactured by DuraVent.

DuraVent provides the following warranties for its products: One Hundred Percent (100%) MSRP 15 years from the date of purchase, and Fifty Percent (50%) thereafter, except for the following limitations on: all Termination Caps and DuraBlack® are warranted at One Hundred Percent (100%) for five years.

All warranty obligations of DuraVent shall be limited to repair or replacement of the defective product pursuant to the terms and conditions applicable to each product line. These remedies shall constitute DuraVent's sole obligation and sole remedy under this warranty. This warranty provides no cash surrender value. The terms and conditions of this warranty may not be modified, altered or waived by any action, inaction or representation, whether oral or in writing, except upon the express, written authority of an executive officer of DuraVent.

Corn, bio-fuels, driftwood or other wood containing salt, preservative-treated lumber, plastic and household trash or garbage, or wood pellets containing such materials must not be burned in the appliance or fireplace. In case of a chimney fire, the chimney must be inspected and approved by a certified Chimney Sweep before reuse. After each annual inspection, maintenance, and cleaning, the certified Chimney Sweep must fill out and date the appropriate section of the warranty card provided with the chimney liner.

LIMITATIONS ON INTERNET SALES: Notwithstanding any other terms or conditions of this Limited Lifetime Warranty, DuraVent provides no warranty for the following specific products if such products are not installed by a qualified professional installer: DuraTech®, DuraPlus HTC®, DuraTech® Premium, DuraChimney® II, PelletVent Pro®, DirectVent Pro®, FasNSeal®, FasNSeal® W2, FasNSeal® Flex, and PolyPro®, and DuraVent's relining products including DuraLiner®, DuraFlex® (SW, Pro, 316, 304), and Ventinox®. For purposes of this warranty, a trained professional installer is defined as one of the following: licensed contractors with prior chimney installation experience, CSIA Certified Chimney Sweeps, NFI Certified Specialists, or WETT Certified Professionals.

DuraVent must be notified and given the opportunity to inspect defective product prior to replacement under the terms of this limited lifetime warranty. All warranty claims must be submitted with proof of purchase. Labor and installation costs are not covered under this warranty. To obtain warranty service contact.

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For the most up-to-date installation instructions, see

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Manufactured in Vacaville CA and Albany NY

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