

Installation Instructions



All-Fuel Chimney System
Built to Canadian Standards
6" - 8" Diameter

DURA PLUS HTC

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

NOTE:

Read through all of these instructions before beginning your installation. Failure to install as described in this instruction will void the manufacturer's warranty, and may have an effect on your homeowner's insurance and listing status. Keep these instructions for future reference.

Applications

DuraPlus HTC is an all-fuel chimney system for Canada, US, and elsewhere, for appliances that require a ULC-S629 or UL 103 HT chimney, including woodstoves; fireplaces; appliances using oil, gas, or coal.

Materials and Construction

Double-walled. Thermal Tech II insulation encased between inner and outer walls of .020" 430 stainless steel.

Listings

DuraPlus HTC is listed by Intertek and conforms to the ULC S629 and UL 103 standards.

Dear Customer, Installer, or End User:

We welcome any comments regarding matters pertaining to our DuraVent products.

We welcome any ideas, input or complaints and I'll make sure that someone responds directly back to you.

Send your emails to:

president@duravent.com

If you are searching for tech support or product information, please phone us at 800-835-4429.

Or email us at:

techsupport@duravent.com



DURAPLUS HTC CANADIAN CHIMNEY, 6" - 8" DIAMETER

For the most up-to-date installation instructions, see www.duravent.com

CONTENTS

Clearances, Permits, Applications, Equipment & Materials	4
Installation Notes, Chimney Height	5
Chimney Enclosure Requirements, Installation Types	6
Ceiling Supported	7
Offset Elbow Installation ..	14
Extended Roof Bracket Installation	15
Roof Supported Installations	17
Tee-Supported Installations	19
Zero-Clearance Fireplace Installations	24
Connection From Appliance To Chimney System	24
Chimney Maintenance	26
Warranty	28

DURAPLUS HTC

CLEARANCES

Always maintain at least a 2-inch (50 mm) clearance between DuraPlus HTC Chimney Pipe and any combustible materials. Never fill any required clearance space with insulation or any other materials. Combustible materials include, but are not limited to, lumber, plywood, sheetrock, plaster and lath, furniture, curtains, electrical wiring and building insulation. Keep single wall stovepipe at least 18 inches (450 mm) 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.

**DURAPLUS HTC
CHIMNEY APPLICATIONS**

DuraPlus HTC Chimney is a complete chimney system tested and listed by Intertek to ULC S629 Standard for 650°C Factory-Built Chimneys for use in Canada, and to HT requirements of UL 103 Factory-Built Chimneys for Residential Type and Building Heating Appliances in the United States. DuraPlus HTC Chimney is available in 6", 7" and 8" (150, 175, and 200 mm) diameters and can be used with wood stoves, fireplaces, fireboxes, furnaces, boilers, water heaters, stoves, ranges, or other residential-type appliances fueled by oil, gas, coal, or wood, that require a ULC S629 or UL 103HT chimney system. Do not use with forced draft or positive-pressure appliances. The DuraPlus HTC Chimney system may have a maximum of two (2) offsets (four elbows total).

EQUIPMENT & MATERIALS

- Hammer
- Drill
- Caulking Gun
- Plumb Bob/Laser Level
- Screwdrivers (Phillips & Standard)
- Tin Snips
- Saber or Keyhole Saw
- Level
- Dependable Ladder
- Tape Measure
- Proper Gloves and Shoes
- Eye Protection
- Materials You May Need:
 - 500°F (260°C) RTV Sealant
 - 8 Penny Nails
 - #8, 2-1/2" & 1-1/2" Wood Screws
 - Roofing Nails

Table 1 DuraPlus HTC Chimney Components	
6", 12", 18", 24", 36" & 48" Sections	CAS Ceiling Support
15°, 30°, 45° Elbows	Firestop Radiation Shield
Tee with Tee Cap	Elbow Strap
Square Ceiling Support Box	Roof Radiation Shield
Round Ceiling Support	Adjustable Roof Flashing
Trim collars for Round Ceiling Support	Flat Roof Flashing
Roof Support	Extended Roof Bracket
Trim collar for Roof Support	Storm Collar
Adjustable Tee Support Bracket	Chimney Cap
Adjustable Wall Strap	Finishing Collar
Wall Thimble	Transition Anchor Plate
Wall Thimble Extension	Base Plate
Reduced Clearance Support Box	Adjustable Tee Re-Support
Adjustable Extended Wall Strap	Attic Insulation Collar

INSTALLATION NOTES

Proper planning for your DuraPlus HTC Chimney installation will result in greater safety, efficiency, and convenience, as well as saving time and money. You must use only authorized DuraPlus HTC 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. **Table 1** lists the authorized DuraPlus HTC Chimney components. Keep electrical wiring and insulation away from all chimneys and stovepipes. If you have any questions, be sure to contact either your dealer or M&G DuraVent directly.

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 unless allowed by local code or specified by your appliance manufacturer. To calculate the chimney's outside diameter, add 4 inches (100 mm) to the inside diameter.

CHIMNEY HEIGHT

The National Building Code of Canada states: "1) A chimney flue shall extend not less than a) 900 mm (3 feet) above the highest point at which the chimney comes in contact with the roof, and b) 600 mm (2 feet) above the highest roof surface or structure within 3 m (10 feet) of the chimney." In the US, 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**) DuraPlus HTC chimney can be installed up to 40-feet (12.2 m) when using a Ceiling Support or single Tee Support. If using two Tee Supports, DuraPlus HTC chimney can be installed up to 80-feet (24.4

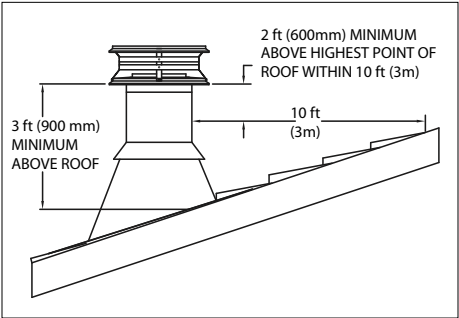


Figure 1

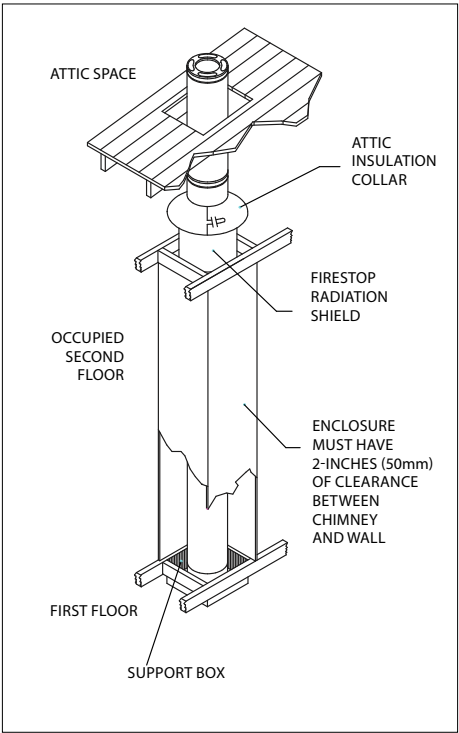


Figure 2

m). If using a Roof Support, a maximum of 30-feet (9.1 m) of chimney can be installed. 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 1-1/2

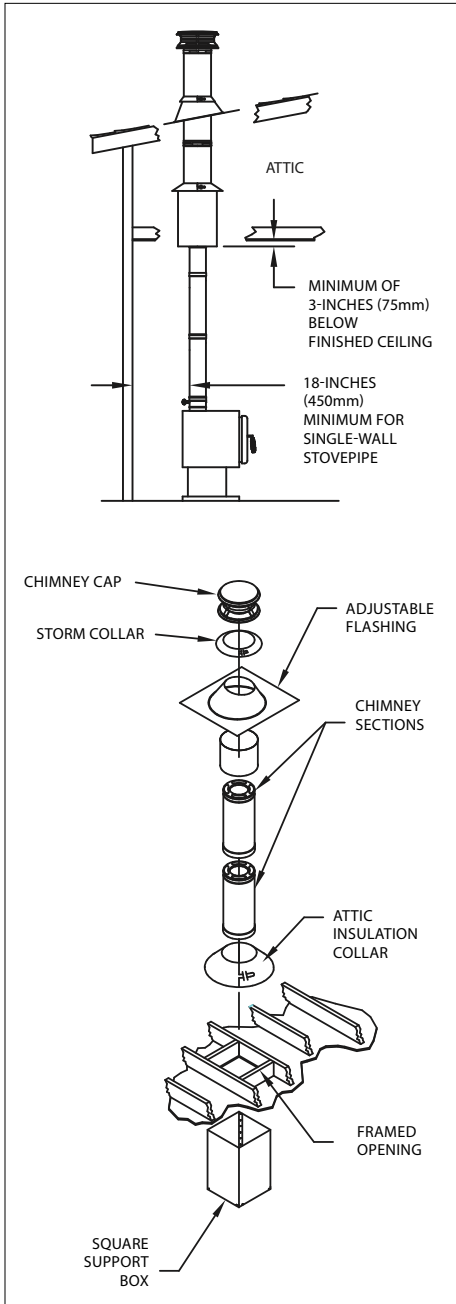


Figure 3

inches (38 mm) from each Chimney Section's height to calculate installed height.

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. There shall be at least 2 inches (50 mm) between the outer wall of the chimney and the enclosure (**Fig 2**).

Multi-Story: Except for installation in single- and two-family dwellings, factory-built chimneys which extend through any storey above that which the connected appliance is located are to have enclosures having a fire resistance rating equal to or greater than that of the floor or roof assemblies 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 22**).

INSTALLATION TYPES

There are four general types of DuraPlus HTC Chimney installations:

1. **Ceiling-supported**
2. **Roof-supported**
3. **Tee-supported (through-the-wall)**
4. **Zero-Clearance Fireplace**

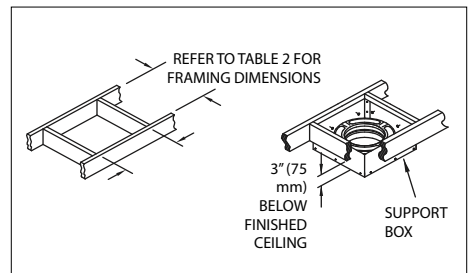


Figure 4

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

CEILING SUPPORTED

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: Use a laser level or 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 framing dimensions. Mark a cutting line around the center point to the dimension required in **Table 2**. 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**).

3. Install Support: For installation into a flat ceiling, you may use a Square Ceiling Support Box, a Round Ceiling Support Box, a Reduced Clearance Support Box, or the CAS Ceiling Support. **Note:** each of the Ceiling Supports act as a firestop at the ceiling level; an additional firestop is not needed at that level. Each Ceiling Support can support a maximum of 40-feet (12.2 m) of chimney. The CAS Ceiling Support is only used when installing the CAS system. Refer to the DuraPlus HTC CAS Installation Instructions for directions on how to install the remainder of the Combustion Air System. For the Square Ceiling Support Box, refer to the cathedral ceiling installation below. The bottom of the Round Ceiling Support must extend at least 3 inches (75 mm) below the finished ceiling. Level the Ceiling Support and secure it to the framing using at least three 8-penny nails per side (min. of 12 total). Alternatively, you may use 1-1/2" #8 wood screws (min. of 12 total), instead of nails. Next, secure the two-piece Trim Collar to the framing members using the (6) 1-1/4" long, round-head wood screws provided (**Fig 6**).

Table 2		
DuraPlus HTC Component	Framing Dimensions	
Square Ceiling Support Box	14-1/2"	370mm
Round Ceiling Support Box	14-1/4"	362mm
Reduced Clearance Support Box	12-1/4"	312mm
CAS Ceiling Support	14-1/2"	370mm
Wall Thimble	14-1/4"	362mm
CAS Wall Thimble	14-1/4"	362mm
Firestop Radiation Shield	14-1/2"	370mm
Reduced Clearance Firestop Radiation Shield	12-1/4"	312mm

Table 3			
DuraPlus HTC Support	Chimney Height Supported		
	6"	7"	8"
Square Ceiling Support Box	40-ft	40-ft	40-ft
Reduced Clearance Square Ceiling Support Box	40-ft	40-ft	40-ft
CAS Ceiling Support Box	40-ft	40-ft	40-ft
Round Ceiling Support	40-ft	40-ft	40-ft
Roof Support	30-ft	30-ft	30-ft
Tee Support	35-ft	30-ft	25-ft
Tee Re-Support	30-ft	25-ft	25-ft
Extended Wall Bracket	35-ft	30-ft	25-ft

For installation into a cathedral ceiling, you must use the Square Ceiling Support Box, Reduced Clearance Support Box, or the CAS Ceiling Support and the two-piece Trim. The bottom of the square portion of the Support Box must be a minimum of 3 inches (75 mm) lower than the finished ceiling at the lowest side of the penetration (**Fig 5 & 6**). Level the Support Box . Support Box Guide Rails are available for Cathedral Ceiling Support Boxes to help ensure the Support Box is level during installation. Before installing the Support Box, align the Guide Rails level onto the Support

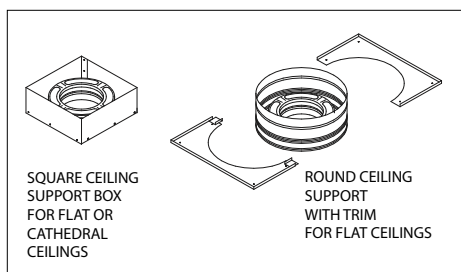


Figure 5

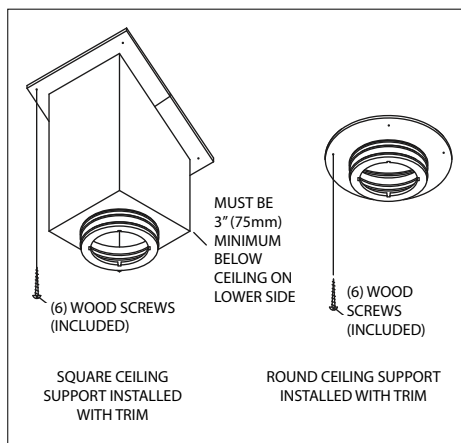


Figure 6

Box on opposite sides. Place the Guide Rails on the Support Box at the proper height so the bottom of the Support Box will be at the correct distance from the ceiling (**Fig 7A**). Secure the Guide Rails in place using 4 sheet metal screws. **IMPORTANT:** the Guide Rails are only used to help install the Support Box level and are not used to help support the weight of the chimney installation. Secure the Support Box to the framing using at least three (3) 8-penny nails per side (minimum of 12 nails total), or a minimum of (3) #8, 1-1/2" wood screws. Adjust the overlapping "U-shaped" Trim pieces so they cover the Support Box, and secure them to the framing

members using the (6) 1-1/4" long, round head wood screws provided (**see Fig 6**).

4. Frame Openings: Cut and frame additional openings in each ceiling or floor above the Support Box (**Fig 7**). Refer to **Table 2** for dimensions. These openings are to hold the Firestop Radiation Shield. Locate each opening by using a laser level or dropping a plumb bob to the four corners of the opening below. 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 (100 mm) larger than the chimney's outside diameter to provide at least a 2-inch (50 mm) clearance all around the chimney. The chimney must be centered within this opening and maintain the 2-inch (50 mm) clearance to combustibles.

6. Install Firestop Radiation Shield: A Firestop Radiation Shield is required in multistory installations at each floor penetration above the level at which 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., including where the chimney penetrates into the attic. **Figure 7** shows a typical 2-story installation with an attic. **Note:** a Firestop Radiation Shield is not installed where the chimney penetrates through the roof.

The Firestop Radiation Shield is in three parts: the Firestop Plate, the Radiation Shield, and the Collar (**Fig 8**). The plate portion of the Firestop Radiation Shield is installed on the underside of the ceiling/floor framing, with the vertical flanges installed upward into the framing. Use a minimum of either one 8 penny nail or one #8, 1-1/2" wood screws per corner. The cylindrical "tube" portion of the Firestop Radiation Shield is then installed from the floor above, around the chimney

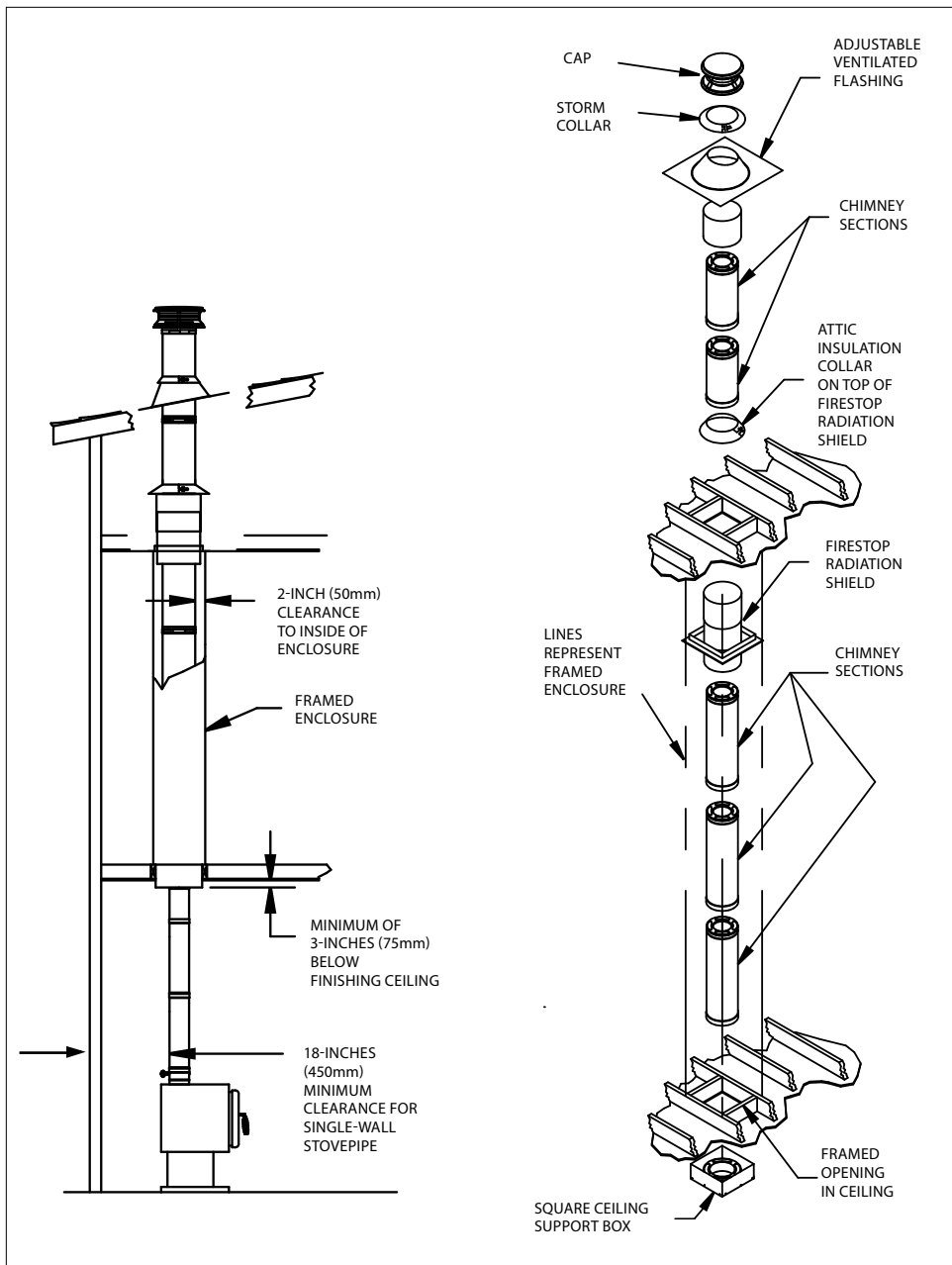


Figure 7

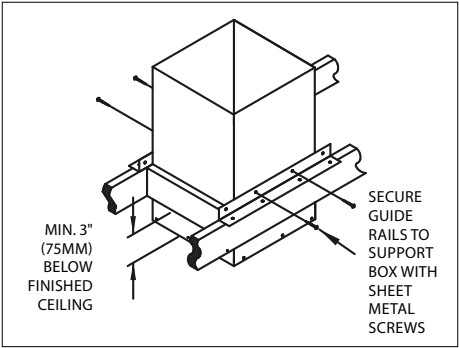


Figure 7A

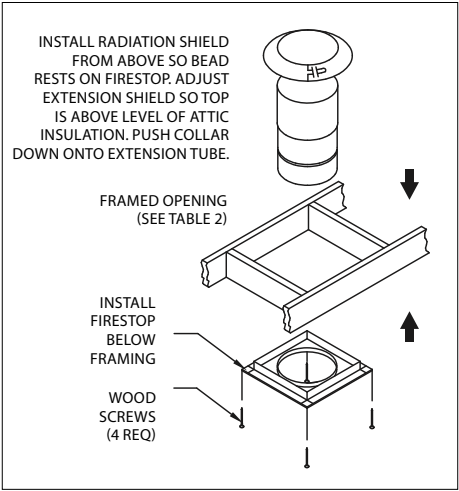


Figure 8

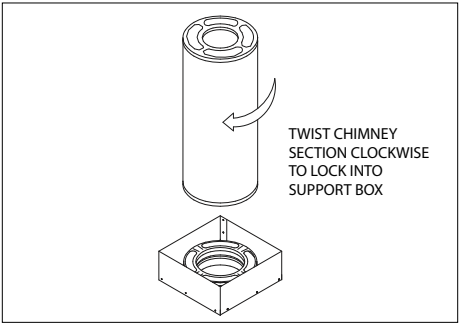


Figure 9

section, with the bead resting on the circular opening in the plate (**Fig 8**). Slide the Collar down on top of the Radiation Shield to complete the Firestop Radiation Shield installation.

For 6" diameter chimney, a Reduced Clearance Firestop Radiation Shield is available. This Firestop has the same dimensions as the Reduced Clearance Support Box, so it can fit between tight framing members. **Important:** the 2" minimum clearance to combustibles must still be maintained for the rest of the installation (other than the framing for the Reduced Clearance Support Box and Firestops), including the chase enclosure between the Support Box and the Firestop.

7. Assemble Chimney Sections: Lower the female end of the first Chimney Section in the Support Box (**Fig 9**). It will twist-lock clockwise onto the male end of the Support Box. Turn Pipe Sections firmly clockwise 1/8 of a turn to lock them together. Sheet metal screws are not required, but they may be used to reinforce the connection, if desired. Use only 1/2" (13 mm), or shorter, stainless steel sheet metal screws. Do not penetrate the inner liner of the chimney.

8. Install Attic Insulation Shield: In the attic space, one of the following methods must be used to prevent the chimney from contacting attic insulation:

1. Use the Ceiling Support Box with Collar
2. Use Firestop Radiation Shield with Collar
3. Fully enclose the chimney through the attic (maintain 2" minimum clearance).

DuraPlus HTC uses either a tall Cathedral Ceiling Support Box with an Attic Insulation Collar or a Firestop Radiation Shield with its own Collar to act as an attic insulation shield (**Fig 10**). If needed, the Attic Insulation Collar can be trimmed to fit between framing members, as long as it still covers the Support Box or Firestop Radiation Shield. The Support Box or the Firestop Radiation Shield must be

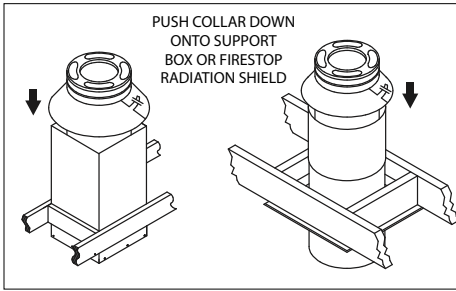


Figure 10

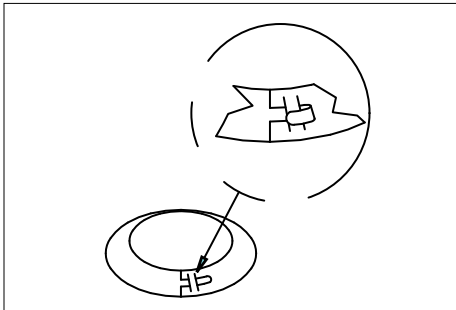


Figure 11

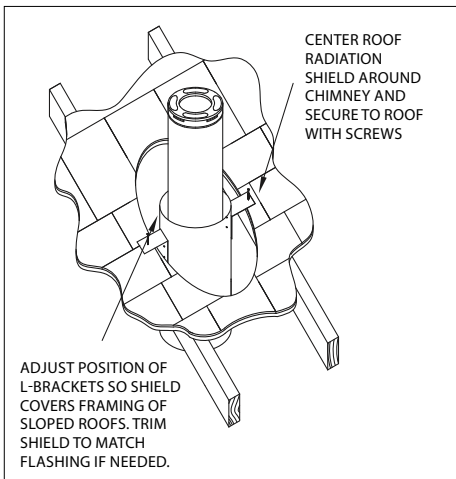


Figure 12

at least a minimum of 10 inches (250 mm) high, but must also extend above the level of the insulation. The Firestop Radiation Shield has a telescoping extension to reach higher if needed (maintain a minimum 1" overlap between the two shield sections). If a taller height is needed for the Cathedral Ceiling Support Box, a field-fabricated extension of the Box can be made of 26-gauge galvanized (or heavier) material. Install the attic shield as follows:

- a. Assemble Chimney Sections until at least 15 inches (375 mm) of chimney extends above the Firestop Radiation Shield or Cathedral Ceiling Support Box.
- b. Verify the height of the Firestop Radiation Shield or Cathedral Ceiling Support Box is at least 10 in (250 mm) above the attic framing and is above the insulation level. Adjust the Firestop Radiation Shield as needed, or add an extension to the Support Box.
- c. Secure the telescoping Firestop Radiation Shield in place with at least (2) sheet metal screws. Verify the telescoping shields overlap at least 1".
- d. Wrap the Attic Insulation Collar or Firestop Radiation Shield Collar around the chimney and fasten it loosely. Slide the Collar down to meet the Firestop Radiation Shield or Cathedral Ceiling Support Box. Slip the tab through the adjacent slot and fold it back to tighten and secure the Collar (**Fig 10 & 11**).

9. Install Roof Radiation Shield: The Roof Radiation Shield is **only** required when the chimney is enclosed in a chase within the attic space. It is not required when the chimney is unenclosed in the attic space. Center the Roof Radiation Shield in the opening cut in the roof. Line up the Shield so the L-Brackets are horizontal, and the Shield hangs vertically. For sloped roofs, adjust the position of the L-Brackets so the Radiation Shield covers the roof framing members. Verify the height of the Radiation Shield will

not interfere with the Roof Flashing. Secure Roof Radiation Shield to the roof using at (2) roofing nails or (2) #8, 1-1/2" wood screws as shown in **Figure 12**.

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 insure the chimney remains vertical (use a level), and that at least a 2-inch (50 mm) 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 (25 mm) roofing nails. Do not nail the lower edge of the Flashing (**Fig 13**). 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 high-temperature (500°F/260°C), non-hardening waterproof sealant around the chimney at the point where the Storm Collar will meet the chimney just above the Flashing. (**Fig 13**). Slide the Storm Collar down over the chimney to the top of the Flashing. Tighten and seal the Storm Collar against the sealant. After installing sufficient Chimney Sections to meet the height requirement (**Fig 1**), attach the Chimney Cap onto the top of the chimney by holding the collar of the cap and twist locking it clockwise onto the chimney. Do not hold upper portion of the cap and twist, as this may damage the cap. 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 (1.2 m) above the roof, and another Extended Roof Bracket for every additional 4-feet (1.2 m) that the chimney extends above the roof penetration. (**Figures 16 & 17 in the Extended Roof Bracket section**). If you are located in heavy snow country, thought must be given to protecting the chimney from damage due to sliding snow and ice. In these cases, locating the chimney as close as possible to the ridge line is recommended. Important: A snow splitter offers no absolute guarantee against damage. The best defense against snow and ice damage is to locate the chimney out of harm's way, or to remove snow & ice as required before it can accumulate to a dangerous level.

12. Enclosures: Enclose chimneys where they pass through occupied spaces, including closets. Always maintain at least a 2 inch (50 mm) 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 8-feet (2.4 m) to maintain a minimum of 2 inches (50 mm) of air space between the chimney and combustible materials.

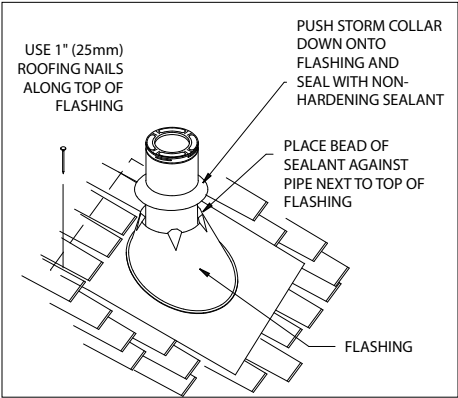


Figure 13

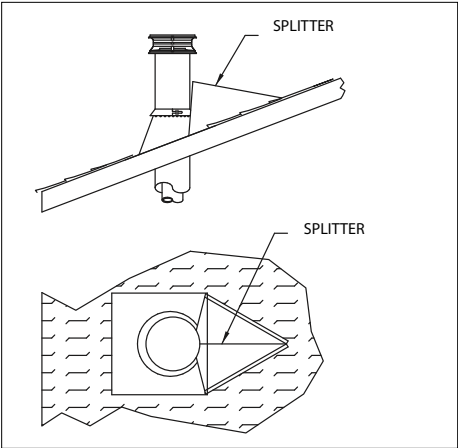


Figure 14

ELBOW OFFSET CHART

Size		6" Diameter		7" Diameter		8" Diameter	
ELBOW DEGREE	CHIMNEY LENGTH	OFFSET INCHES	RISE INCHES	OFFSET INCHES	RISE INCHES	OFFSET INCHES	RISE INCHES
15	0	1 ½	12	1 ¾	13 ½	1 ¾	13 ½
30	0	1 ¾	14 ¼	3 ¾	14 ¼	3 ¾	14 ¾
45	0	7 ⅝	19 ⅞	7 ⅝	19 ⅞	7 ⅝	19 ⅞
15	12	4 ¼	23 ½	4 ¼	20 ½	4 ¼	23 ½
30	12	9	24	9	24	9	24
45	12	16	28 ¼	16	28 ¼	16	28 ¼
15	24	7 ½	34	7 ¾	35 ½	6 ¾	35 ½
30	24	15	33 ¾	15	33 ¾	14 ¾	34 ¼
45	24	24 ½	36 ⅞	24 ½	36 ⅞	24 ½	36 ⅞
15	36	10 ½	45 ½	10 ¾	46 ¾	9 ½	47
30	36	21	44	21	43 ½	20 ½	44 ¾
45	36	33	45 ¼	33	45 ¼	33	45 ¼
15	48	13 ¾	55 ½	13 ½	57	12	57 ¼
30	48	26 ¼	53	26	52 ½	25 ½	53 ¾
45	48	41 ½	53 ¾	41 ½	53 ¾	41 ½	53 ¾

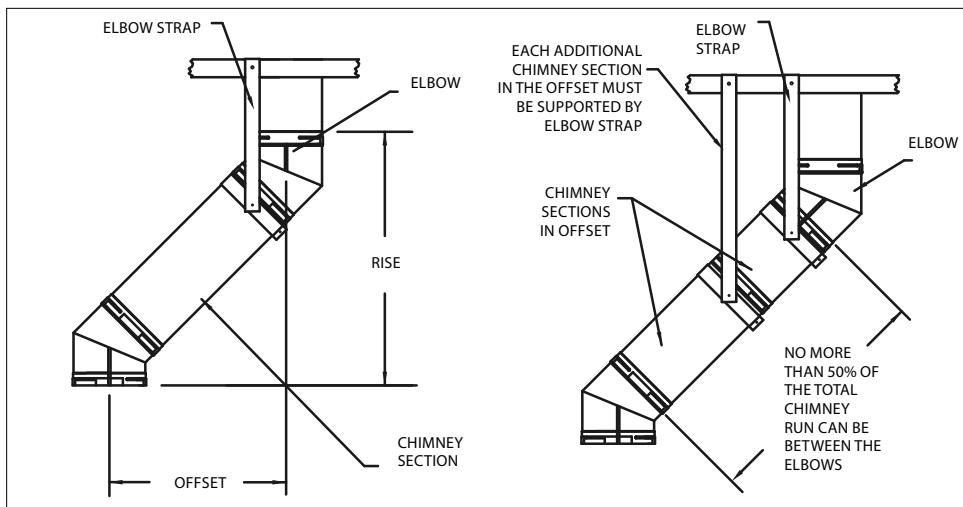


Figure 15

OFFSET ELBOW INSTALLATION

Elbows are manufactured in 15°, 30° and 45° angles measured from the vertical. A 45° Elbow is the largest that can be used in an offset in Canada. In the US, the largest elbow allowed in an offset is 30°. Elbows may not be combined to create an offset larger than 30° in the US or larger than 45° in Canada. 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, use no more than 2 pairs of Elbows (4 elbows total) in any one chimney system.

1. Attach Elbows: Attach Elbow to Chimney Section or other Elbow by twisting clockwise until they lock firmly. As an alternative to twist locking the elbow onto the pipe section, you may secure the Elbow in place using (3) 1/2" (13 mm) sheet metal screws. Attach one Elbow to the Chimney Section below, and align it for the offset. Refer to the Offset Chart to determine the required offset length and attach an appropriate length (or lengths) of Chimney Section(s) above the Elbow. The maximum length of chimney pipe between

the elbows is limited to no more than 50% of the overall chimney pipe of the system (e.g. if the total chimney pipe run is 20-ft, then no more than 10-ft may be between the elbows).

Important: For each chimney pipe section in the offset (between the elbows), there must be an Elbow Strap, Tee Support, or similar support method to support the weight of the pipe and to relieve stress on 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 (4) 8-penny nails or (4) #8, 1-1/2 screws. Do not add more Chimney Sections until the Elbows are supported. Be sure that the chimney remains vertical. If there is more than one Chimney Section between the Elbows, install an additional Elbow Strap for each chimney section in the offset (**Fig 15**).

EXTENDED ROOF

BRACKET INSTALLATION

If the chimney extends more than 4 feet (1.2 m) above the roofline, an Extended Roof Bracket must be installed every 4 feet (1.2 m) of chimney height above the roofline, leaving no more than 4 feet (1.2 m) of chimney extending above the last pipe bracket. The Extended Roof Bracket consists of the Pipe Band, the Adjustable Legs, and the Roof Brackets. **Note:** Extended Roof Support Brackets are not intended to provide protection against sliding snow & ice. These supports are intended to provide wind stabilization for any portion of chimney that protrudes more than 4-ft above the roof.

1. Mount Pipe Band: Slip the Pipe Band around the chimney and secure by tightening the nut and bolt. If the chimney is 7" or 8" in diameter, add in the corresponding band section so the Roof Bracket Band wraps completely around the chimney. If the chimney is 6" diameter, no additional band section is needed.

2. Attach the Legs: The Adjustable Legs of the assembly will adjust from 67" to 114" (1675 mm to 2850 mm). 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" (75 mm) of overlap between the top and bottom halves of the Adjustable Leg. To secure the legs in place, mount the Leg Clamp at the position where the two leg halves overlap and tighten the hardware provided. It is important to tighten the Leg Clamp sufficiently to prevent the two leg rods from moving.

3. Install Roof Brackets: Mount the two Roof Brackets where each of the Adjustable Legs meets the roof, using (6) 1" (25 mm) roofing nails per bracket. Seal the nail heads carefully with a non-hardening, waterproof

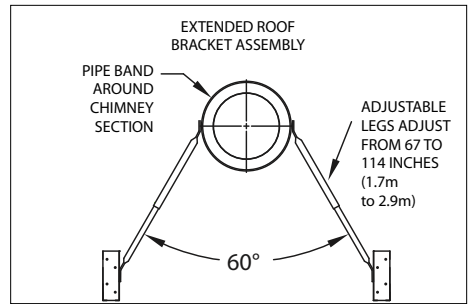


Figure 16

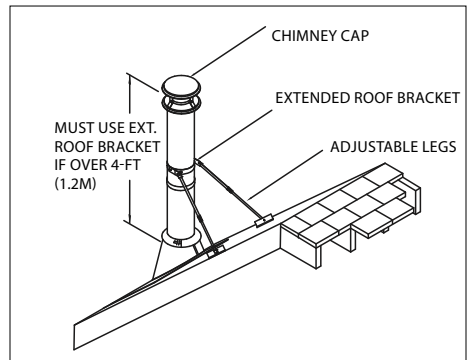


Figure 17

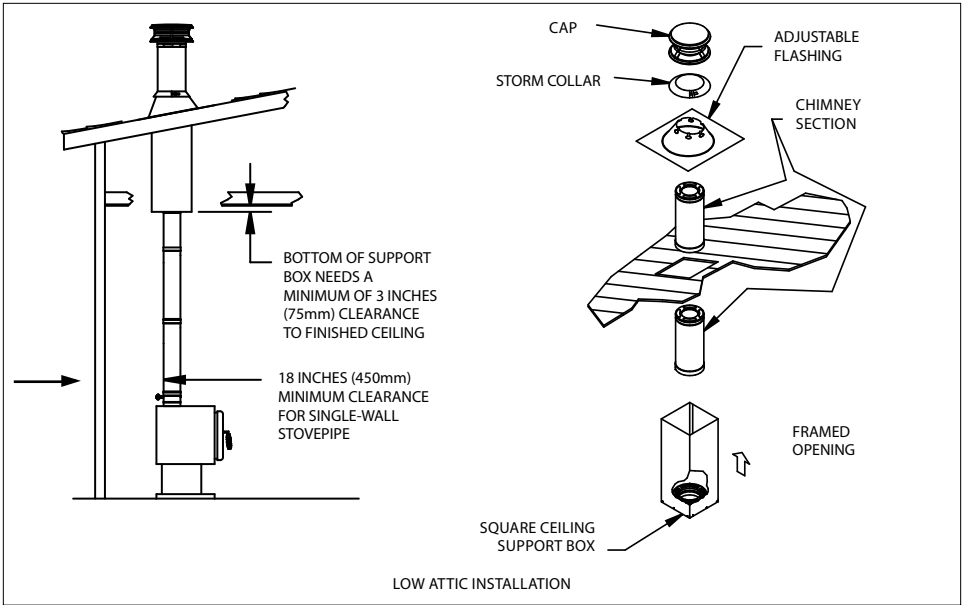


Figure 18

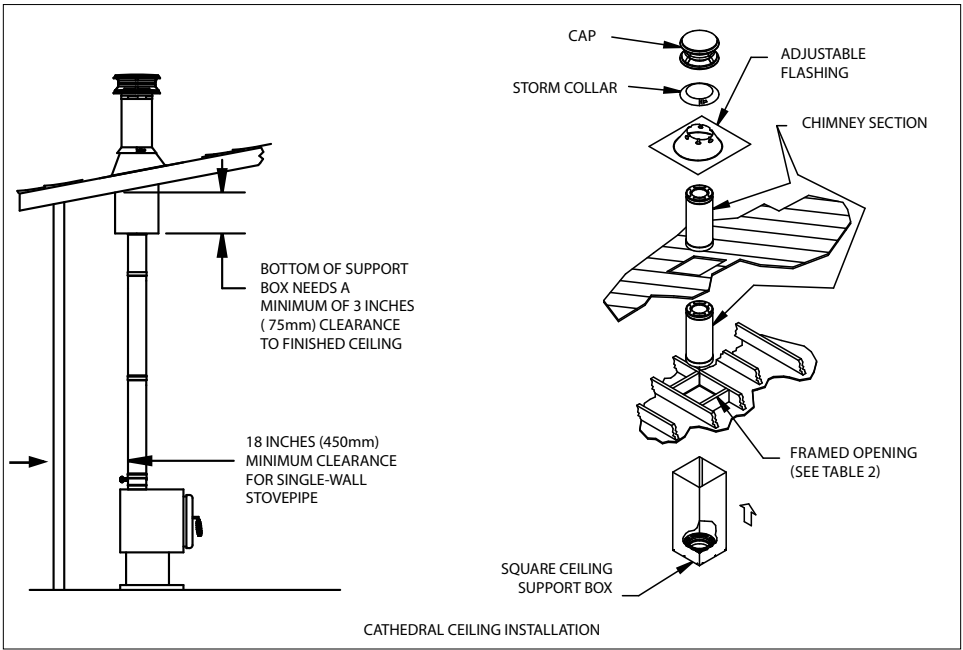


Figure 19

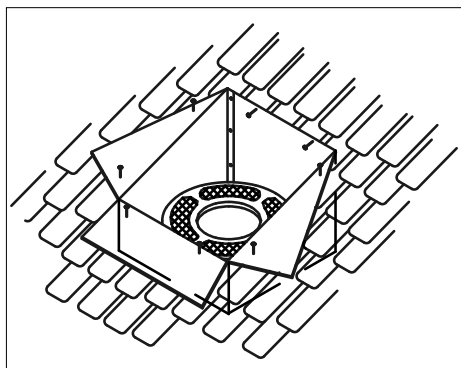


Figure 20

sealant. Attach the bottom end of the Adjustable Legs to the Roof Brackets using the nuts & bolts provided.

ROOF SUPPORTED INSTALLATIONS

There are two types of Roof Supported Installations: (1) Using a Square Ceiling Support Box, a Reduced Clearance Support Box, or the CAS Ceiling Support, and (2) Using a Roof Support.

(1) Square Ceiling Support Box

installations: The Ceiling Support Box can support a maximum of 40-feet (12.2 m) of DuraPlus HTC chimney. Be sure that the bottom of the Support Box extends at least 3" (75 mm) below the low side of the finished ceiling (**Fig 18 & 19**). The Support Box must remain level, and the top edge of the box must cover the edge of the roof's decking material. Mobile home chimney installations are roof supported. Do not seal openings in flashing.

1. Place Appliance: Place the appliance in its proper location, referring to the manufacturer's instructions as to allowable distances from combustibles, etc.

2. Cut Openings: Cut a roof opening in your desired location, just as in a Ceiling-Supported Installation (**Steps 1 through 5**). If a separate ceiling and roof exists, as shown

in **Figure 18** (Low Attic), first cut and frame a ceiling opening as described in Ceiling-Supported Installations (**Step 2**). Refer to **Table 2** for framing dimensions. If it is desired to install through a cathedral ceiling (**Fig 19**), then the hole is cut in the roof.

3. Install Support Box: Slip the Support Box into the framed opening so the square bottom projects at least 3 inches (75 mm) below the finished ceiling and rafters, and extends above the ceiling to framing or decking materials that it can be nailed to. Level the Support Box, and slit the corners to the roofline where they extend beyond it. Bend the flaps (created by the slitting) flush with the roof, and nail the Support Box to the roof or framing with at least three (2) 8-penny nails, or (2) 1-1/2", #8 screws, per side (**Fig 20**). Be sure to keep the bottom of the Support Box level. To help keep the Support Box level during installation, optional Support Box Guide Rails are available. Place the Guide Rails on the Support Box at the proper height so the bottom of the Support Box will be at the correct distance from the ceiling (**Fig 7A**). Secure the Guide Rails in place using 4 sheet metal screws.

IMPORTANT: the Guide Rails are only used to help install the Support Box level and are not used to help support the weight of the chimney installation. Screw the trim sections into the ceiling (**Fig 6**).

4. Complete Installation: Refer to **Steps 7, 9 & 10** in the Ceiling Supported Installation section to complete the Roof Supported installation.

(2) For Roof Support installations: A Roof Support is also used in installations where there is a cathedral ceiling, and a Square Ceiling Support is not desired. The Roof Support allows the DuraPlus HTC chimney to come down into the room below the level of the ceiling (**Fig 21**). The Roof Support can support a maximum of 30 feet (9.1 m) of DuraPlus HTC Chimney total, and maximum of 20 feet (6.1 m) below the support.

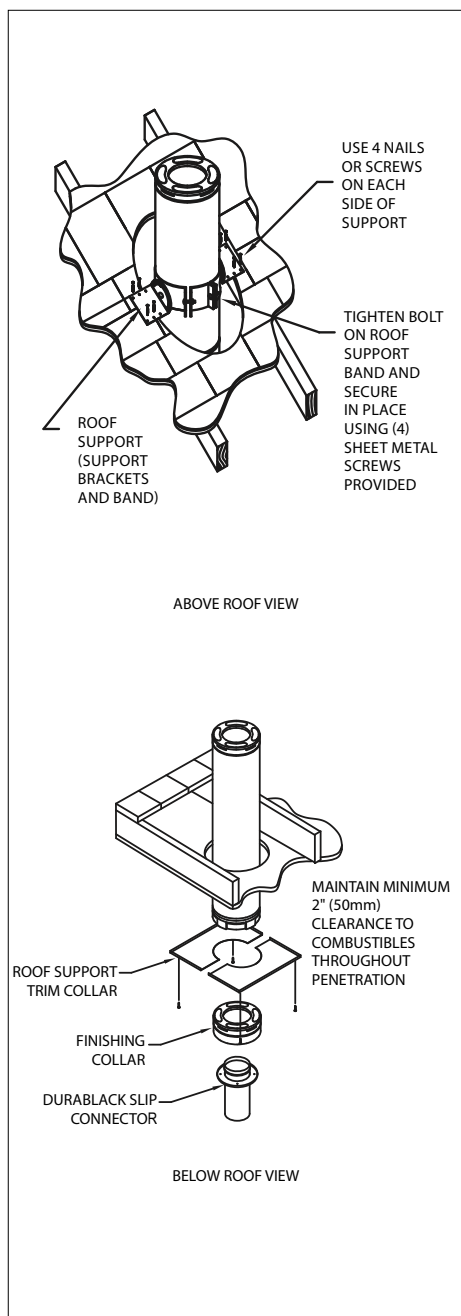


Figure 21

Note: You may not have an offset below the Roof Support with DuraPlus HTC Chimney (you may still have an offset with the connector pipe).

1. Cut and frame opening to provide a minimum 2" (50 mm) clearance on all sides of the chimney pipe.

2. If the chimney is 7" or 8" in diameter, add in the corresponding band section so the Roof Support Band wraps completely around the chimney (**Fig 21**). If the chimney is 6" diameter, no additional band section is needed. Bolt on the Roof Support Brackets to the Roof Support Band using the supplied hardware. Attach the Roof Support Brackets to roof using (4) 8 penny nails or (4) #8, 1-1/2" screws per side (**Fig 21**).

3. Determine how much DuraPlus HTC Chimney will be extending into the room (minimum of 3" (75 mm) below the finished ceiling). Be sure to maintain the proper clearance to combustibles (walls and ceilings) for the connector pipe. Once you have identified the proper height for your installation, attach the of the Roof Support Band to the Chimney Section by tightening the clamping Bolt, and secure it by using (4) supplied sheet metal screws through the Band and into the outer wall of the chimney.

4. Attach desired length of Chimney Sections above and below the roof level (max. of 30-ft. (9.1 m) total, max. of 20-ft. (6.1 m) below the support). **Important: for chimney sections below the roof support, you must use at least (3) sheet metal screws per joint.** To transition to the connector pipe, attach the Finishing Collar by twist locking it to the bottom section of DuraPlus HTC Chimney.

5. Slide the two halves of the Trim Collar over the DuraPlus HTC Chimney and attach the Trim Collar to the ceiling using (6) 1-1/4" screws provided (**Fig 21**).

6. Refer to **Steps 10 & 11** in the Ceiling Supported Installation section to complete the Roof Supported installation.

TEE-SUPPORTED INSTALLATIONS

Tee-Supported installations are used when passing through a wall to an outside chimney. The Tee Support can hold a maximum of 25 feet (7.6mm) of DuraPlus HTC Chimney. Additional Tee Supports, Wall Re-Supports, or Wall Re-Supports can be used to help support taller chimneys. Each may hold an additional 25-ft (7.6 m) of chimney pipe. The Tee Support and Wall Straps are adjustable, allowing from 2" - 6" (50 mm - 150 mm) of clearance between the chimney and the wall, as needed to fit your installation. There are two options when installing a Tee-Supported installation: the Tee Support above the Tee, or the Tee Support below the Tee. The required parts and general configuration are as shown in **Figures 22, 23, 24 and 25**.

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 stove pipe until you have the desired configuration (refer to the appliance manufacturer's installation instructions for restrictions on stove pipe). Cut and frame a square opening in the inner and outer walls at this location. Refer to **Table 2** for framing dimensions.

3. Install Back Portion of Wall Thimble:

The Wall Thimble is a two piece unit which includes the black-painted inside portion, and the unpainted outside portion (**Fig 23 & 24**). If installing the CAS Wall Thimble, refer to the DuraPlus HTC CAS Installation Instructions for specifics on installation of that system. On the outside wall, install the back portion of the Wall Thimble. Center the back portion of the Wall Thimble (with cylindrical shield inside wall) in the framed opening of the outside wall. Attach the

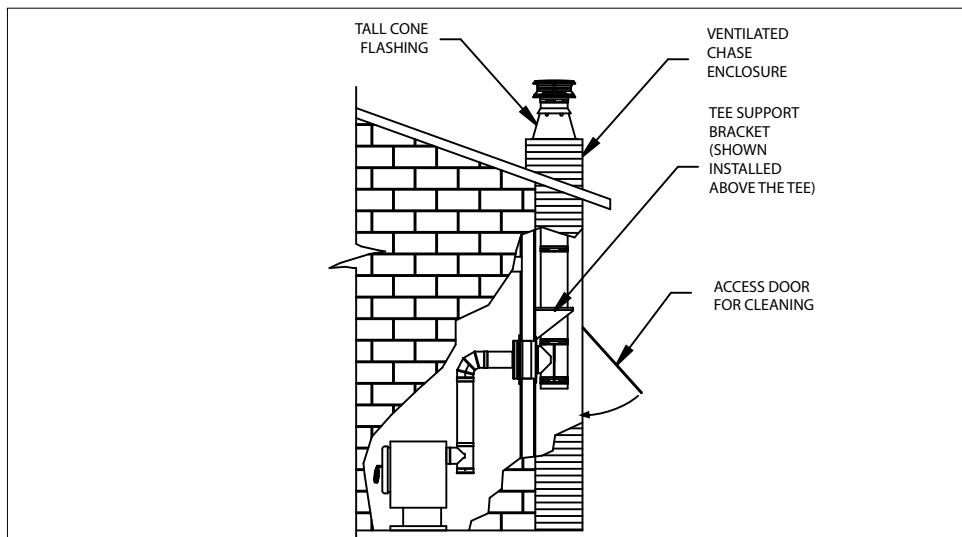


Figure 22

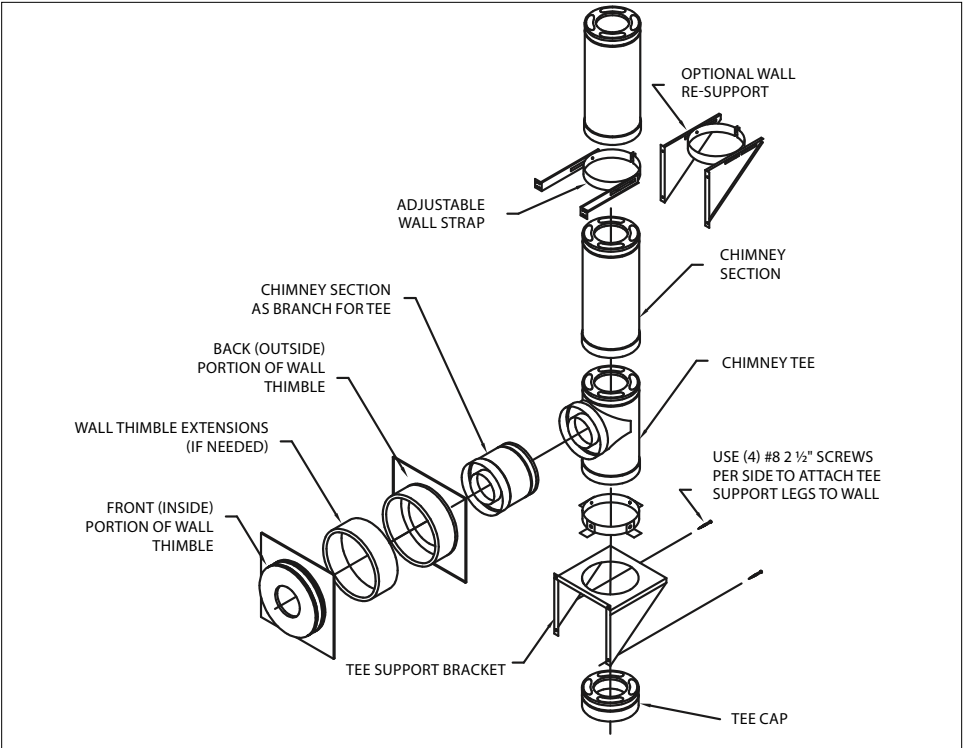


Figure 23

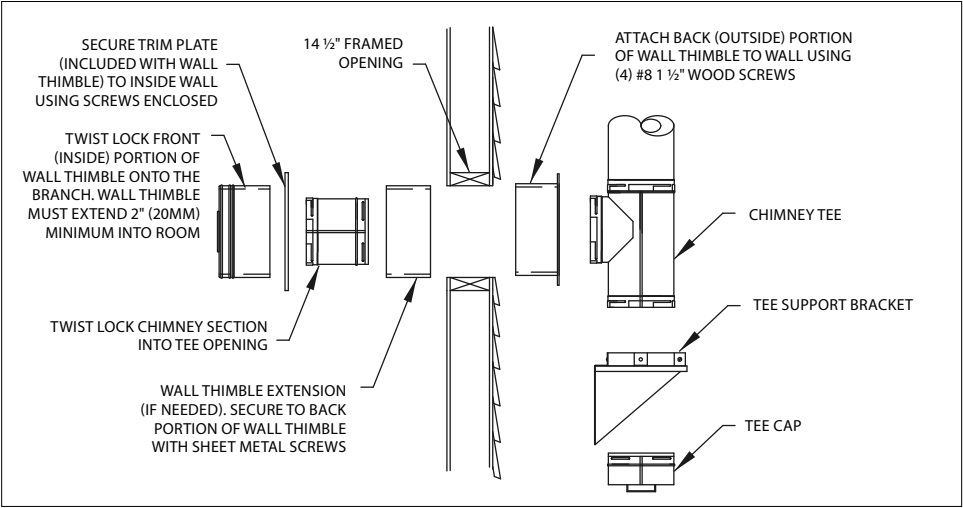


Figure 24

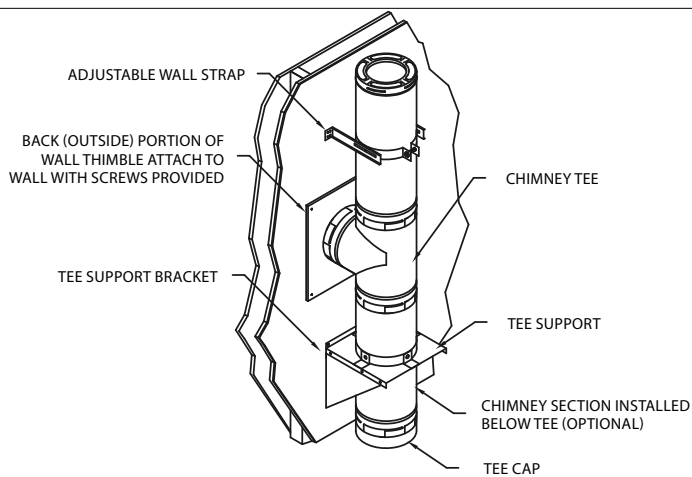


Figure 25

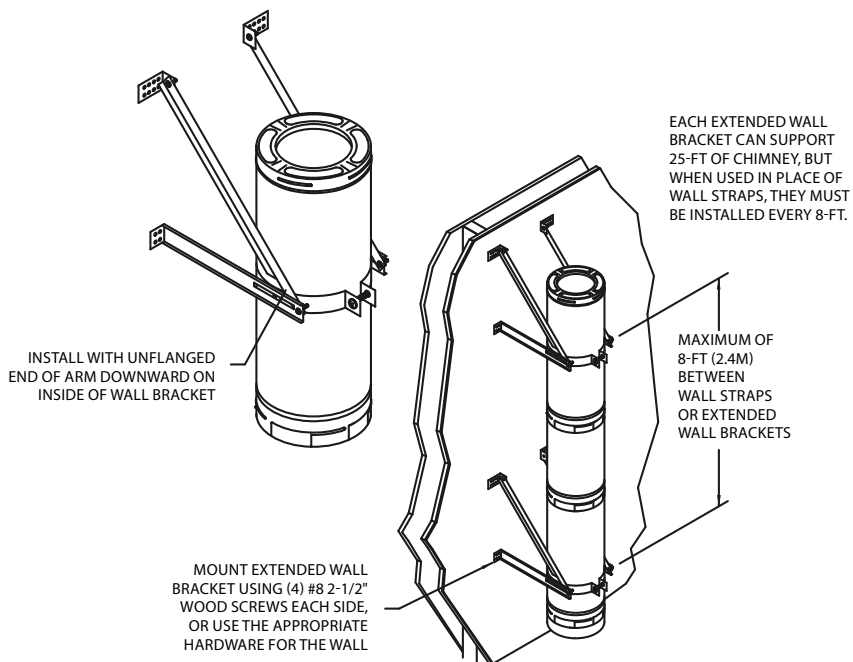


Figure 26

back portion of the Wall Thimble to the outside wall using (4) 8-penny nails or (4) #8, 1-1/2" wood screws in the holes provided (**Fig 24**). Seal the flange of the Wall Thimble around the wall by using a non-hardening waterproof sealant. If your wall is more than 11-inches (275 mm) thick, you will need to purchase a Wall Thimble Extension, allowing installation in a wall up to 18-inches (450 mm) thick. Install the Extension by sliding the two tubes over shields of the back portion of the Wall Thimble. Do not install the front portion of the Wall Thimble at this time, but when it is installed, it will need to extend into the room at least 2" (50 mm). Make sure that when the Wall Thimble is fully installed, that the Extension (if used) will overlap both the front and back portions by at least 1" (25 mm). If the Extension is not used, then the front portion must overlap the back portion by at least 1" (25 mm). Secure the Wall Thimble Extension to the back portion of the Wall Thimble with (2) 5/8" sheet metal screws (**Fig 24**).

4. Install Tee Support: Install the Tee Support on the outside wall. Position Tee Support so that the Tee will be centered inside the Wall Thimble (**Figs 23, 24, & 25**). The Tee Support may be installed either above the Tee or below the Tee, but the Tee Support must be a maximum of one (1) chimney section away from the Tee (**Fig 25**). Important: Verify that Tee Support is level, and secure the leg brackets of the Tee Support to the wall using (4) #8, 2-1/2" screws for each side. Slide support base over leg brackets to adjust for desired clearance to wall (will adjust to allow 2" to 6" (50 mm to 150 mm) clearance to combustibles from pipe), and secure by tightening bolts. Each Tee Support can hold up to 25-ft of chimney. If additional support is needed, another Tee Support can be installed or you may install a Tee Re-Support.

The Tee Re-Support can hold up to 25 additional feet of chimney and adjusts to

provide 2"-6" (50-150 mm) clearance from combustibles. To install the Tee Re-Support, mount the two triangular side brackets in position using (4) #8 2-1/2" screws for each bracket. Mount the band around the chimney pipe. If the chimney is 7" or 8" in diameter, add in the corresponding band section so the band of the Tee Re-Support wraps completely around the chimney. If the chimney is 6" diameter, no additional band section is needed. Slide the supporting bolts of the Band through the slots of the Tee Re-Support and adjust to provide the clearance needed (**Fig 23**).

If additional clearance from the wall is necessary, an Extended Wall Bracket can be used. An Extended Wall Bracket acts as a support to the chimney and can hold up to 25-ft of chimney. Additional Extended Wall Brackets can be used for additional support if necessary. Mount the lower, long side brackets to the wall using (4) #8, 2-1/2" screws for each side. Mount the top, short brackets to the wall also using (4) #8, 2-1/2" screws for each side. Attach the supporting arms of the Extended Wall Bracket using the hardware provided. The unflanged end of the arms faces downward (**see Fig 26**). Slide the supporting bolts of the Band through the slots of the Extended Wall Bracket and adjust to provide the clearance needed.

5. Install Tee and Cleanout Chimney Section: The Tee can be mounted directly to the Tee Support or it be twist locked onto a desired length of Chimney to be used as the cleanout section. Use only one chimney section (any length) to attach to bottom of the Tee. Tighten support band around the Tee or Chimney section, as appropriate, at the proper height to insure that Tee is centered through Wall Thimble (**Fig 24**). Use the 1/2" (13 mm) sheet metal screws provided to insure a tight connection between support band and chimney section. Connect support band to support base using the 1/2" (13 mm) sheet metal screws provided (**Fig 25**). Twist

Wall Thickness Chart	
BRANCH LENGTH	WALL THICKNESS
(1) 6" SECTION	UP TO 5" THICK
(2) 6" SECTIONS	FROM 5 ½" - 9 ½"
(1) 12" SECTION	FROM 7" TO 11"
(1) 6" & (1) 12" SECTION	FROM 11 ½" - 15 ½"
(1) 18" SECTIONS	FROM 13" - 17"
(2) 12" SECTIONS	FROM 16" - 18"
(1) 24" SECTION	FROM 17 ½" - 18"

lock Tee Cap into bottom of either the Tee or Chimney Cleanout section.

6. Install Branch onto Tee: From inside the home, attach a section of chimney to be used as the branch for the Tee. Depending on your wall thickness, you can use from a 6" section up to a 24" section (*see Wall Thickness Chart*). The Branch must be installed so that it will be connected to the front-portion of the Wall Thimble when it is installed, and the Wall Thimble must extend at least 2" (50 mm) into the room (**Fig 24**). The front portion of the Wall Thimble must overlap the back portion by at least 1" (25 mm). If your wall is over 11" (275 mm) thick, then you must use an Wall Thimble Extension which will allow the Wall Thimble to be installed in walls up to 18" (450 mm) thick. The Wall Thimble Extension must overlap both the front and back portions of the Wall Thimble by at least 1" (25 mm). Secure Wall Thimble Extension in place by using (2) 1/2" (13 mm) sheet metal screws to secure it to the back portion of the Wall Thimble (**Fig 24**). Use high-temperature sealant (500°F/260°C) to seal between the Wall Thimble and the Chimney on the outer wall.

7. Install front portion of the Wall Thimble: Slide the Wall Thimble Cover over the front portion of the Wall Thimble, and then install the front portion of the Wall Thimble over the back portion of the Wall Thimble or Wall Thimble Extension. The front portion of the

Wall Thimble must be at least 2" (50 mm) into the room and the starter section within the front portion must twist locked into the female end of the Branch (**Fig 24**). The front portion of the Wall Thimble must also overlap the back portion of the Wall Thimble (or the Wall Thimble Extension) by at least 1" (25 mm). Using the (4) screws supplied, secure the Wall Thimble Cover to the inside wall.

8. Complete Chimney: Attach the Chimney Sections as in **Step 7** in the Ceiling Supported Installation section. Wall Straps (or Extended Wall Brackets, where appropriate) must be attached to the chimney at least every 8-feet (2.4 m), and maintain at least 2" (50 mm) clearance to combustibles. The Wall Straps are adjustable to allow from 2" - 6" (50 mm - 150 mm) clearance to combustibles from the chimney. Mount the side brackets of the Wall Strap onto the wall at the necessary location using the (4) #8 1-1/2" wood screws (or appropriate fastener for the surface). Mount the band around the chimney pipe. If the chimney is 7" or 8" in diameter, add in the corresponding band section so the band of the Wall Strap wraps completely around the chimney. If the chimney is 6" diameter, no additional band section is needed. Slide the supporting bolts of the Band through the slots of the Wall Strap bracket and adjust to provide the clearance needed (**Figures 23, 25**). Slip the Wall Straps around the chimney, tighten the bolts, adjust the clearance, and fasten the Wall Straps to the wall with (4) #8, 1-1/2" long wood screws.

Once the chimney is at least 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 twist locking it clockwise onto the Chimney Pipe. If the chimney penetrates an overhang, frame for at least 2 inches (50 mm) of clearance, and install Flashing and Storm Collar as described in **Steps 9 & 10** for Ceiling Supported Installations. If the chimney extends more

than 4 feet (1.2 m) above the top Wall Strap or Flashing, use an Extended Roof Support Bracket.

9. 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 use a field-fabricated flat chase top flashing. **Important:** The chase must be ventilated. If you use a field-fabricated chase top flashing, you must use spacers to provide ventilation at the top of the chase (**Fig 27**). Use spacers to allow the proper air-gap clearances between the chase top flashing and the chase. **Figure 27** displays in some detail, how these air gaps are established using the spacers for the chase top flashing. Secure the 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 down onto the flashing and seal with non-hardening high temperature sealant.

ZERO-CLEARANCE FIREPLACE INSTALLATIONS

1. Manufacturer's Instructions: Carefully read and comply with the manufacturer's installation instructions for your fireplace. Be sure that DuraPlus HTC is approved for use with your fireplace.

2. Base Plate: Attach an Base Plate to the fireplace top with (4) 5/8" (16 mm) sheet metal screws (**Fig 28**). Check with the appliance manufacture about the use of high temperature sealants.

3. Chimney Sections: Attach a Chimney Section to the Base Plate by twist-locking clockwise.

4. Completion: Install the remainder of the chimney as instructed for a standard Ceiling-Supported installation, (using a Firestop Radiation Shield in the 1st floor ceiling instead of the Support Box). Always maintain

at least 2-inches (50 mm) of clearance to combustibles, and enclose the chimney where it passes through occupied areas.

CONNECTION FROM APPLIANCE TO CHIMNEY SYSTEM

Connecting the appliance to the chimney system can be done using an appropriate Stovepipe system. M&G DuraVent offers two models of stovepipe: single wall DuraBlack and our double wall DVL pipe.

DuraBlack is available in black painted cold-rolled steel, or unpainted stainless steel. DuraBlack requires at least 18" clearance to combustibles, walls, or ceilings. DuraBlack connects to the Support Box or Wall Thimble using the Slip Connector or the Chimney Adapter. The Slip Connector provides for a height adjustment and slips into the allowed opening in the Support Box. If a Trim Collar is provided with the Slip Connector, it can be attached directly to the underside of the Support Box or Finishing Collar using the sheet metal screws provided.

DVL is a stainless steel double wall connector pipe that is UL listed for reduced clearance to combustibles: 6" to walls, 8" to ceilings. DVL connects to the chimney system using the DVL Chimney Adapter. The Chimney Adapter slides into the allowed opening in the Support Box and is secured in place by attaching the Trim Collar with the sheet metal screws provided.

For additional information on either DuraBlack or DVL, please refer to the installation instructions found in the shipping cartons of these connector pipe systems, or look on our website: www.duravent.com.

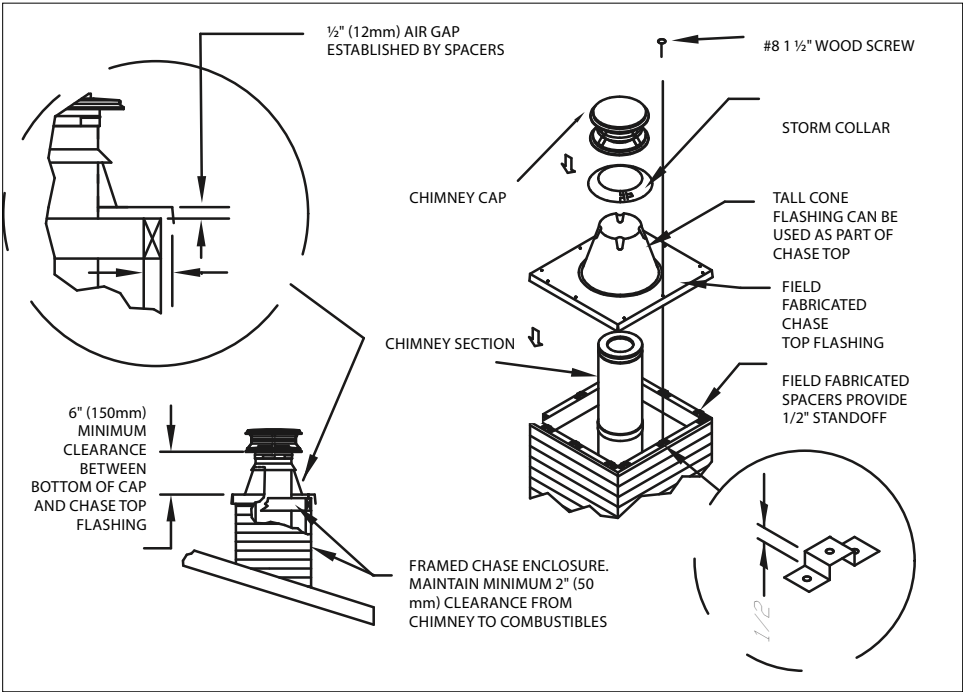


Figure 27

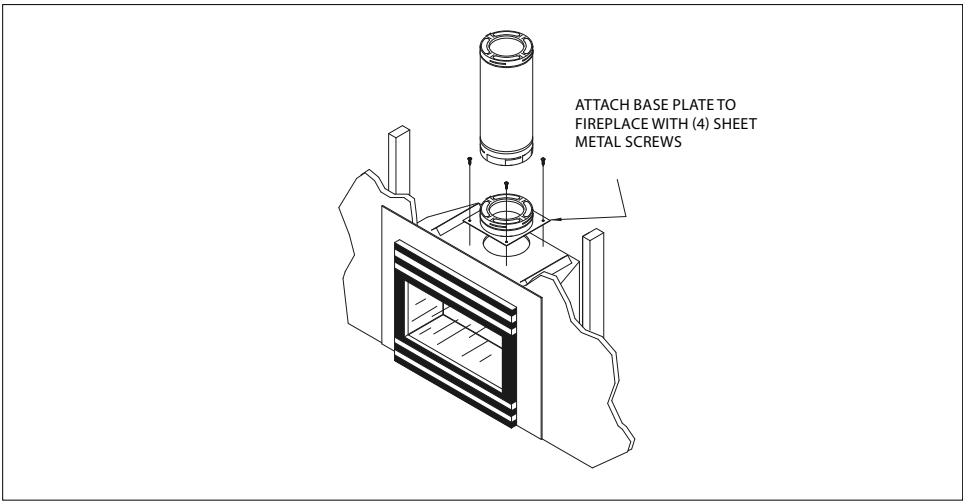


Figure 28

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 or replaced 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 Chimney Cap for cleaning, either twist counterclockwise to remove the entire cap, or unscrew the four (4) screws that attach the cap's support legs to the cap base. The Tee Cap can be removed by turning counterclockwise. Be sure to replace Tee Cap 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 stove 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 liner. M&G 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: M&G DuraVent assumes no liability for any 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.

10. Burning: Be careful that the fires you build are the proper size for your appliance. Never overfire your appliance as this can cause serious damage to the appliance and the chimney. Use only seasoned dry wood or other listed fuels. Never use fuel materials that can be corrosive to the appliance or chimney (example: driftwood or chemically treated wood, etc.)

M&G 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. Installation instructions are available online at www.duravent.com under Support/Literature and through our Customer Service Department 800-835-4429 or customerservice@duravent.com. 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®, DuraChimney® II, PelletVent Pro®, DirectVent Pro®, FasNSeal®, FasNSeal® W2, FasNSeal® Flex, and PolyPro®, and M&G 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: DuraVent Warranty Service, 877 Cotting Ct., Vacaville CA 95688, or call 800-835-4429.

WHERE LAWFUL, DURAVENT DISCLAIMS ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL DURAVENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SPECIAL DAMAGES OR DIRECT OR INDIRECT LOSS OF ANY KIND, INCLUDING BUT NOT LIMITED TO PROPERTY DAMAGE AND PERSONAL INJURY. DURAVENT'S ENTIRE LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

For the most up-to-date installation instructions, see
www.duravent.com

Manufactured in Vacaville CA and Albany NY

DuraVent

Member of  M&G Group

Customer Service Support 800-835-4429 707-446-4740 FAX www.duravent.com

DuraPlus HTC is a registered trademark of the M&G DuraVent, Inc.

All rights reserved. Made in the USA. M&G DuraVent is a member of M&G Group. ©2012

L170 9/2012