



## DURA/PLUS (SDP) INSTALLATION AND OPERATION INSTRUCTIONS



MH7399

**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.**

Read through all these instructions before beginning your installation. Failure to install the chimney as described in these instructions will void the manufacturer's warranty and may have an effect on your home-owner's insurance and UL listing status. Keep these instructions for future reference.

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## CLEARANCE

Allow at least a 2-inch clearance between **Dura/Plus Pipe** and any combustible materials.

Where the chimney passes through floors, joists, or ceilings, **Firestop Radiation Shields, Support Boxes, and Close Clearance Shields** may permit reduced clearances as established by these parts, or spacers built on to these parts. The clearance (air space) between the outer chimney wall, and the inside of the **Support Box, Firestop Radiation Shields, and Close Clearance Shields**, in the cases of 7 and 8-inch diameter chimney will be less than 2 inches. Both of these systems have been extensively tested and evaluated at these clearances. This reduced clearance is permissible at these internal locations only. All other areas require a 2-inch minimum clearance. 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.

## DURA/PLUS APPLICATIONS

Use **Dura/Plus** with wood stoves, fireplaces, furnaces, boilers, water heaters, stoves, ranges, or other residential-type appliances fueled by oil, gas, coal, or wood. Do not use with forced draft positive-pressure appliances. **Dura/Plus** systems are designed to extend vertically with a maximum of (2) offsets of 30° (offset and return). **Dura/Plus** is tested to UL Test Procedure 103HT, and listed under UL Re-examination Service Number MH7399.

## Tools You May Need

Hammer

Caulking Gun

Screwdriver

Saber or Keyhole Saw

Level

Plumb Bob

Tin Snips

Drill

## Materials You May Need

Non-hardening Waterproof Mastic      8 Penny Nails  
5/16 inch x 3 inch long Lag Screws      Roofing Nails  
3/4 inch Galvanized Electrical Conduit (where the chimney  
extends 4 feet or more above the roof)

## Safety Equipment

Dependable Ladder      Eye Protection  
Proper Gloves and Shoes

## INSTALLATION NOTES

Proper planning for your **Dura/Plus** installation will result in greater safety, efficiency, and convenience, as well as saving time and money. Use only authorized **Dura/Plus** (SDP) listed chimney parts. You must use 100% **Dura/Plus** listed parts to obtain a **Dura/Plus** listed system. Do not mix parts or try to match with other products, or use improvised solutions. Do not install damaged parts. Table 1 lists the authorized components, and their respective Underwriter's Laboratory Catalog Numbers. The UL Catalog Numbers will be referred to within the instructions, as an aid to assembly, however for ordering, use the stock numbers shown in the Chimney Products Catalog. Practice good workmanship. Sloppy work could jeopardize your chimney's safety. Keep electrical wiring and insulation away from all chimneys and stovepipes.

Table 1

### DURA/PLUS (SDP) PARTS WITH UL CATALOG NUMBERS

CAT #	PART	CAT#	PART
SDP-P	Chimney Sections	SDP-TS	Tee Support
SDP-T	Tee	SDP-IS	Insulation Shield
SDP-F	Flashing	SDP-FRS	Firestop Radiation Shield
SDP-TF	Flat Roof Flashing	SDP-SC	Storm Collar
SDP-S	Flat Ceiling Support Box	SDP-WS	Wall Strap
SDP-RS	Round Ceiling Support Box	SDP-ES	Elbow Strap
SDP-SB	Square Ceiling Support Box	SDP-RSA	Extended Roof Bracket
SDP-WT	Wall Thimble	SDP-AP	Anchor Plate
SDP-C	Chimney Cap		

## 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 the appliance flue gas outlet. To calculate the chimney's outside diameter, add 4 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." (Figure 1). Dura-Plus may be installed up

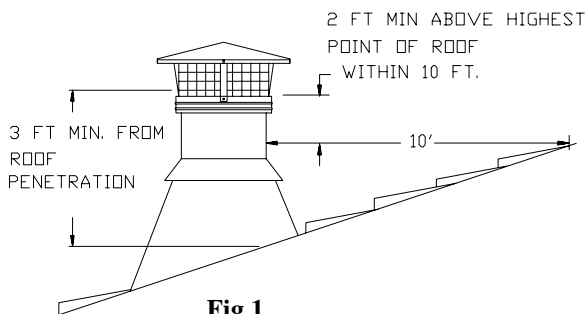


Fig 1 MINIMUM CHIMNEY HEIGHT

to 35 feet high.

If a chimney is installed higher than 35 feet, a supporting **Elbow Strap** must be placed every 8 feet. If the chimney extends more than 4 feet above the roof, an **Extended Roof Bracket** must be used. Subtract 1-1/2 inches from each **Chimney Section's** length to calculate installed length.

## CHIMNEY PLACEMENT

When deciding the location of your chimney, try to minimize the alteration and reframing of structural components of the building.

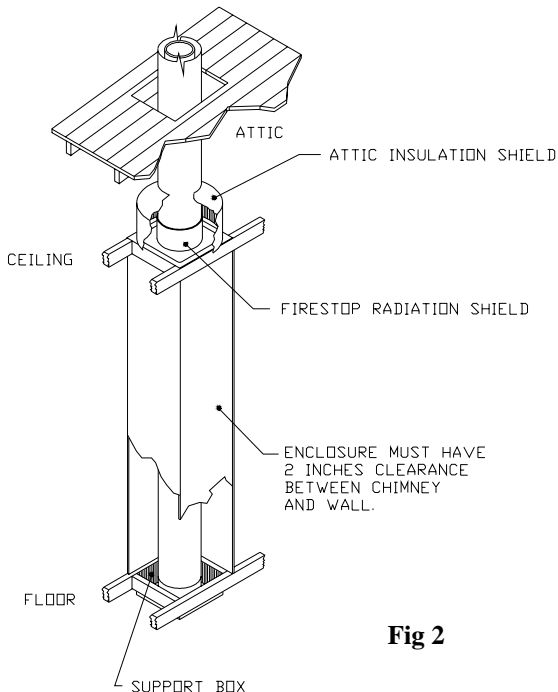


Fig 2

## CHIMNEY ENCLOSURE REQUIREMENTS

**Through Rooms:** Interior chimneys shall be enclosed where they extend through closets, storage areas, or habitable spaces where the surface of the chimney could be contacted by persons or combustible materials. The space between the chimney and the enclosure shall be at least 2 inches. (Figure 2).

**Multi-Story:** 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."

**Cold Climates:** In cold climates, chimneys mounted on an outside wall should be enclosed. Exterior chases reduce condensation and creosote formation, and enhance draft. Include an access door by the **Tee Cleanout Cap** for chimney cleaning. See the detailed drawing on page 18.

## STOVE RECOMMENDATIONS

Follow the stove manufacturer's instructions. The requirements stated below pertain to all stoves or other appliances installed with Dura-Plus chimney systems.

**Choice:** Choose a stove 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 stove and stovepipe as described in the stove manufacturer's instructions, maintaining all required clearances.

**Flues:** Connect only one solid fuel appliance per chimney. Oil-burning appliances are restricted to one appliance per chimney, as well.

**Operation:** Follow the stove manufacturer's instructions and safety manual for maximum efficiency and safety. Overfiring can damage the stove and stovepipe.

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

**Mobile Homes:** Please read the stove manufacturer's instructions and safety manual carefully. Not all stoves are listed for use in mobile homes.

## STEP-BY-STEP DIRECTIONS

There are five general types of Dura-Plus installations:

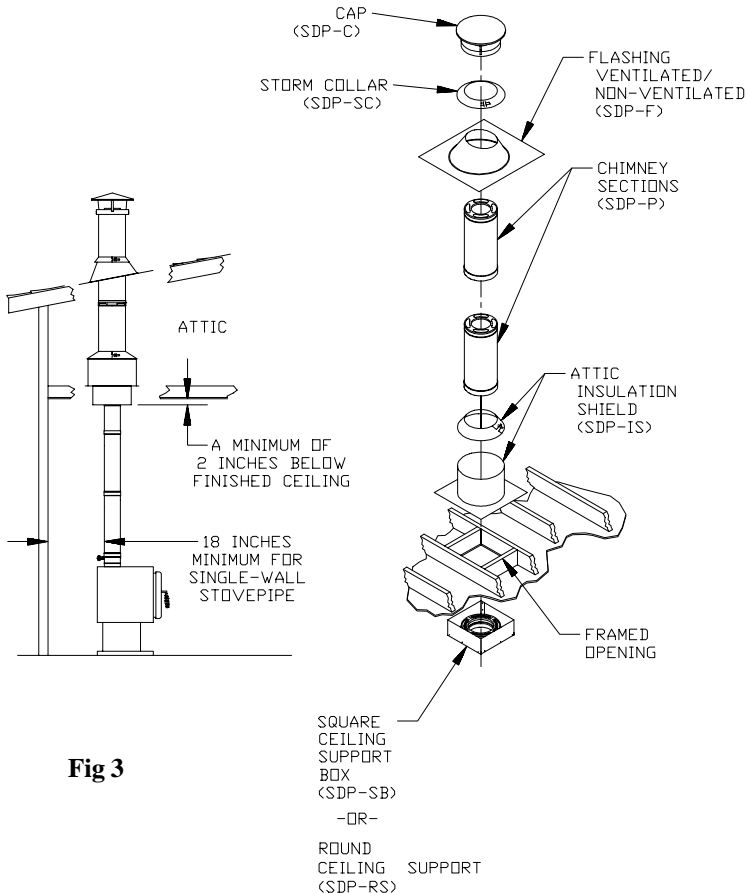
1. Ceiling-supported
2. Roof-supported
3. Tee-supported (through the wall)
4. Masonry Fireplace
5. Zero-Clearance Fireplace

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

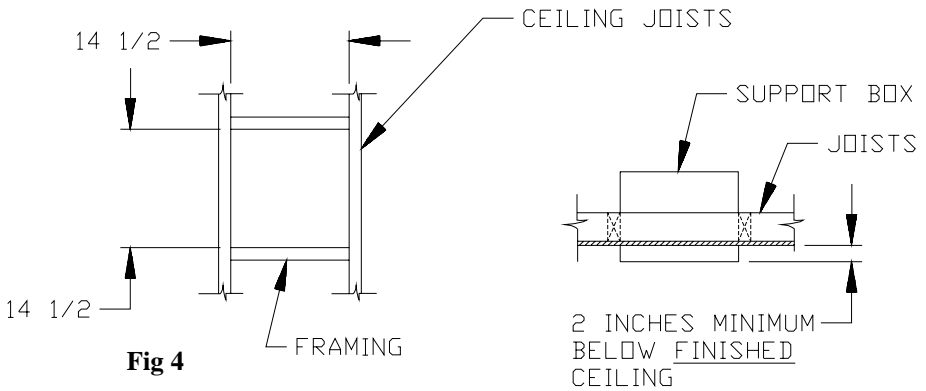
### CEILING SUPPORTED

**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:** 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



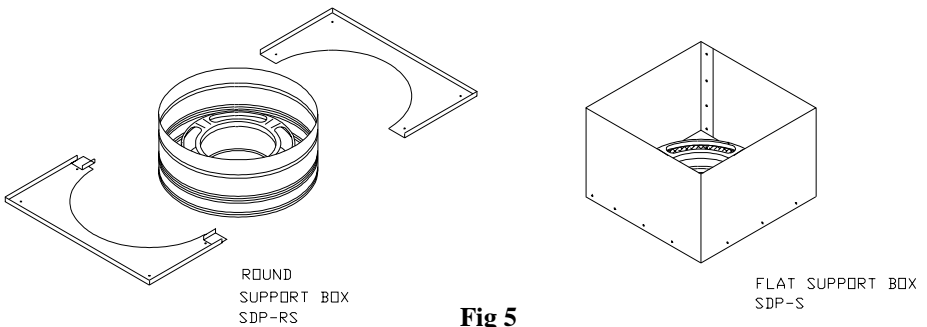
**Fig 3**



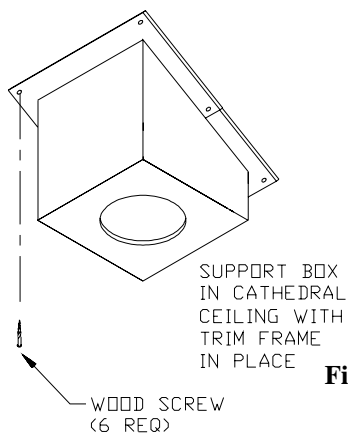
**Fig 4**

for specific framing and clearance dimensions. Mark appropriate cutting lines around the center point. Cut a square hole in the ceiling for a **Square Support Box**, or a round hole for a **Round Support Box**. Frame a level, square opening centered over the hole which you have cut. (Figures 3 and 4).

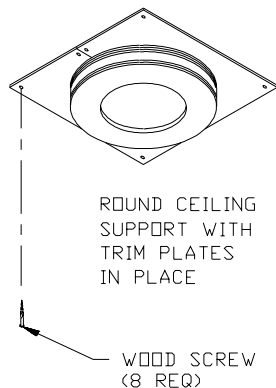
**3. Install Support:** Slip the **Support Box**, (Figure 5), into the framed opening. It must extend at least 2 inches below the finished ceiling. Level the **Square Support Box** and nail it to the framing using at least two 8-penny nails per side. The two **Trim Frames** are positioned as shown, and screwed through the ceiling and into the framing members with (6) 1-1/4 inch long round-head wood screws. (Figure 6). The bottom of the **Round Support** must also be at least 2 inches below the finished ceiling. Trim for the **Support Boxes** is “U-shaped”. The trim pieces are adjusted to accommodate the **Square Support Box**, and screwed into the framing, using



**Fig 5**



**Fig 6**



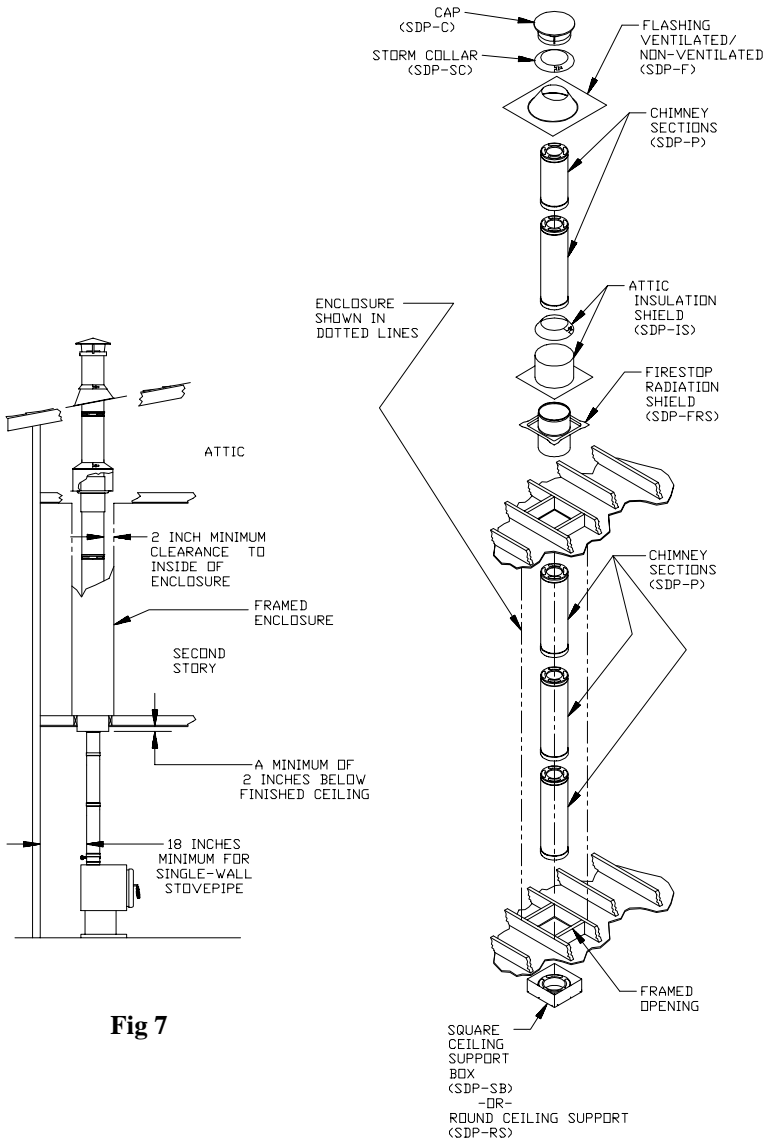
**TABLE 2-FRAMING FOR SQUARE SUPPORT BOXES, ROUND SUPPORT BOXES AND WALL THIMBLES**

SQUARE SUPPORT BOXES			
CHIMNEY INSIDE DIAMETER	6 INCHES	7 INCHES	8 INCHES
FRAMED OPENING INSIDE DIMENSIONS	14-1/2 X 14-1/2	14-1/2 X 14-1/2	14-1/2 X 14-1/2
ROUND SUPPORT BOXES			
CHIMNEY INSIDE DIAMETER	6 INCHES	7 INCHES	8 INCHES
FRAMED OPENING INSIDE DIMENSIONS	14-1/2 X 14-1/2	14-1/2 X 14-1/2	14-1/2 X 14-1/2
WALL THIMBLES			
CHIMNEY INSIDE DIAMETER	6 INCHES	7 INCHES	8 INCHES
FRAMED OPENING INSIDE DIMENSIONS	14-1/2 X 14-1/2	14-1/2 X 14-1/2	14-1/2 X 14-1/2
FIRESTOP RADIATION SHIELDS			
CHIMNEY INSIDE DIAMETER	6 INCHES	7 INCHES	8 INCHES
FRAMED OPENING INSIDE DIMENSIONS	14-1/2 X 14-1/2	14-1/2 X 14-1/2	14-1/2 X 14-1/2

wood screws. A completed **Square Support Box** installed in a cathedral ceiling with the “U-shaped” trim is also shown in Figure 6. Trim kits are available in brass, antique brass, and chrome, to enhance the appearance of the various **Support Boxes** and **Trim Frames**. Where the chimney passes through additional floors and ceilings, install **Firestop Radiation Shields**. Where the chimney passes through an attic, **Firestop Radiation Shields** and **Insulation Shields** must be installed.

**4. Frame Openings:** Frame openings in each ceiling or floor above the **Support Box**. (Figure 7). These openings are to hold the **Firestop Radiation Shields** and **Attic Insulation Shields**. Locate each





**Fig 7**

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

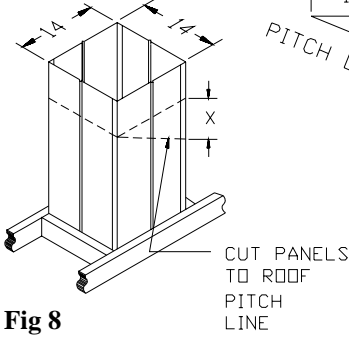


Fig 8

provide at least a 2-inch clearance all around the chimney. If the installation is located between rafters that are 16 inches on center, **Close Clearance Shields** (a sheet metal product fabricated by Simpson Dura-Vent), may be used to avoid structural reframing. (Figure 8). The 2-inch minimum clearance to combustibles is not required when the chimney passes through **Close Clearance Shields**. When using **Close Clearance Shields**, **Ventilated Flashing** must be installed. Refer to Figure 10, which

pictures both **Ventilated** and **Non-ventilated Flashing**.

**6. Install Firestop Radiation Shield:** One of two possible situations exist for installing the Firestop Radiation Shield. One is a two-story dwelling where the chimney passes through a **Firestop Radiation Shield**, a ceiling, and into an attic. The other is a multi-story building where the chimney passes through a **Firestop Radiation Shield**, through a ceiling, into another story, and then into an attic. Each of these require a different configuration of the **Firestop Radiation Shield**. Figure 7 illustrates the two-story building. In the case of the two-story installation, the base of the **Firestop Radiation Shield** is nailed

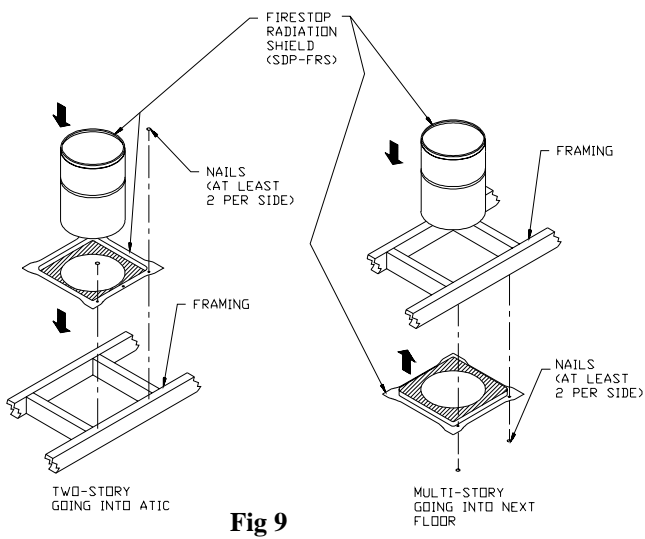
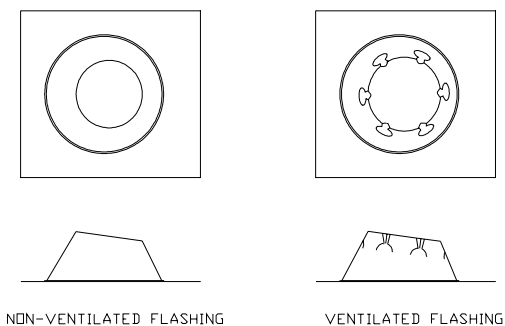


Fig 9

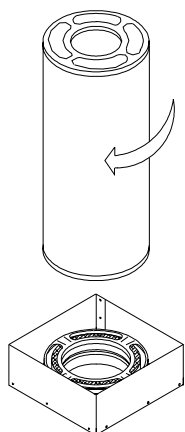
to the top of the framing, with the pan (the depressed portion of the base), facing downwards. For the multi-story installation, the base is nailed to the bottom of the framing with the pan facing upwards. The cylindrical component of the **Firestop Radiation Shield** is then slipped down through the base from the top until it rest



**Fig 10**

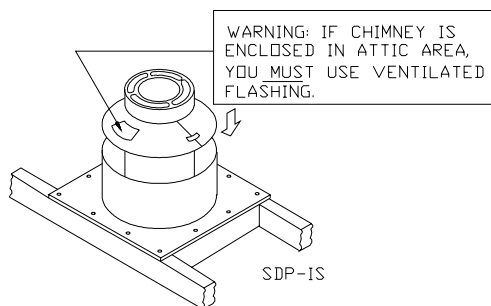
DURA-PLUS

CHIMNEY SECTION  
SDP-P



**Fig 11**

SUPPORT BOX  
SDP-S  
SDP-RS  
SDP-SB



**Fig 12**

on the bead. (Figure 9). Refer to Table 2 for the framing requirements.

**7. Assemble Chimney Sections:** Lower and seat the female end of the first **Chimney Section** in the **Support Box**. (Figure 11). It will twist-lock onto the male end of a **Low Profile Starter Section**, which is a component of the **Support Box**. Turn **Pipe Sections** clockwise, firmly to lock them together. Sheet metal screws may be used to reinforce the connection, however they are not normally required. Screws are only acceptable in the outer liner.

**8. Install Attic Insulation Shield:** Install the **Attic Insulation Shield** where the chimney passes into an attic. It's purpose is to prevent debris and insulation from getting too close to the chimney. (Figure 12). An installed **Attic Insulation Shield** is 14 inches high. In attic areas where this shield won't fit, a **Square Support Box**, (which is available in heights up to 36 inches), can be used instead of an **Attic Insulation Shield**, provided it reaches through the roof, as in a **Roof Supported Installation**. Refer to page 18 for details of fitting the **Support Box** to the roof. If the chimney is fully en-

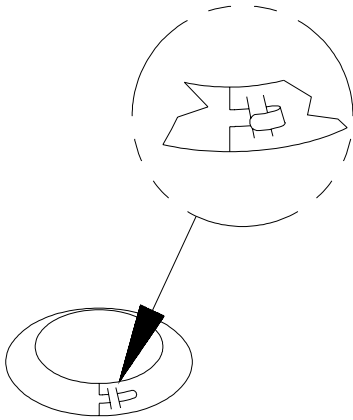


Fig 13

closed through the attic, an **Insulation Shield** is not required, however, again, **Ventilated Flashing** must be used. 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 **Insulation Shield** over the

**Chimney and Firestop Radiation Shield** until the base sits squarely on the framed opening. (Figure 7).

d. Nail the **Insulation Shield** to the top of the framed opening with at least two 8-penny nails per side. (Figure 12).

e. Wrap the **Collar** around the chimney and fasten it loosely. Slide the **Collar** down to meet the **Insulation Shield**. Slip the tab through the adjacent slot and fold it back to tighten the **Collar**. (Figure 13).

**9. 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, and that at least a 2-inch clearance to combustible materials

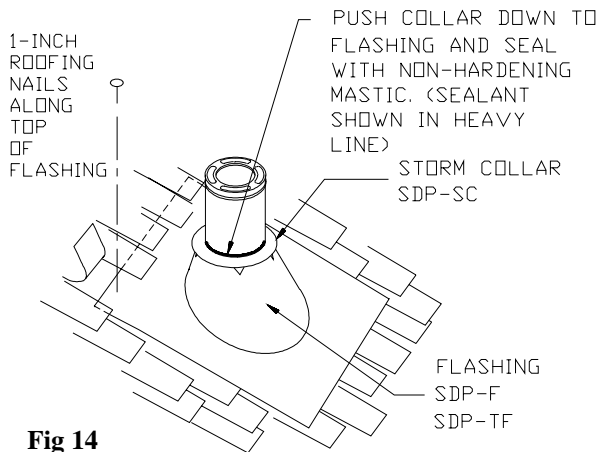
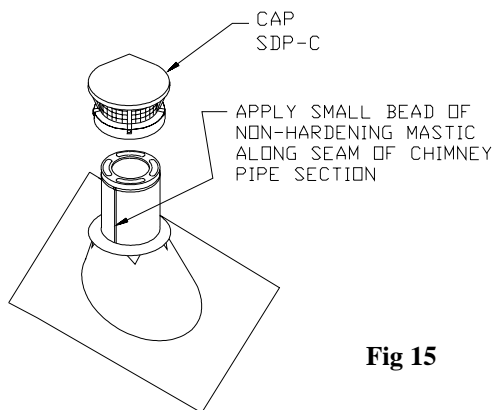
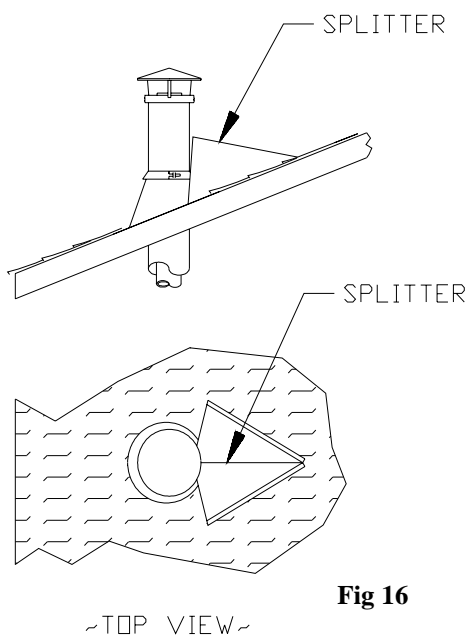


Fig 14



**Fig 15**



**Fig 16**

is maintained all around. Install the upper edge of the **Flashing** under the roofing. Nail to the roof along the upper edge and to 4 inches below the upper edge on each side with 1-inch roofing nails. Do not nail the lower edge of the **Flashing**, or the lower half of the sides. (Figure 14). Seal all nail heads with a non-hardening waterproof mastic sealant. On flat or tarred and graveled roofs, nail and seal the **Flat Roof Flashing** to the roof on all sides with roofing compound. If the chimney in the attic area is enclosed, **Ventilated Flashing** must be used. **Ventilated Flashing** may be identified by the indented ribs around the circumference of the top opening. Do not put screws through the **Flashing** into the **Chimney Pipe**.

**10. Finish Top:** Apply a non-hardening waterproof mastic (sealant) around the chimney at the point where the **Storm Collar** will meet the chimney above the **Flashing**, and also along the vertical seam of the chimney pipe, which is exposed to the weather. (Figures 14 and 15). Slide the **Storm Collar** down over the chimney to the

top of the **Flashing**. Tighten and seal the **Storm Collar** against the mastic (sealant). After installing sufficient **Chimney Sections** to meet the height requirement, (Figure 1), snap the **Chimney Cap** onto the top of the chimney. 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 17, and 18 in the **Extended Roof**

**Bracket** section . If you are located in heavy snow country, a "splitter" should be fabricated from heavy gauge sheet metal, and installed. (Figure 16). This will route the snow around the chimney, and protect it. This item is not furnished by Simpson Dura-Vent.

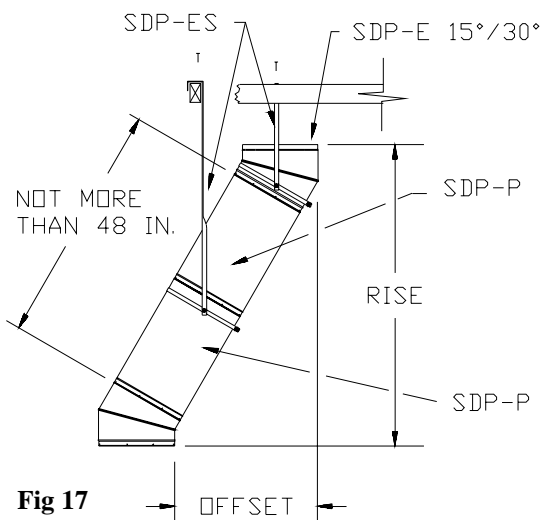
**11. Enclosures:** Enclose chimneys where they pass through occupied spaces, including closets. Always maintain at least a 2 inch clearance between the chimney and any combustible surface. Interior enclosures may be constructed with standard framing and sheathed with sheetrock or plywood. Use **Wall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

### OFFSET ELBOW INSTALLATION

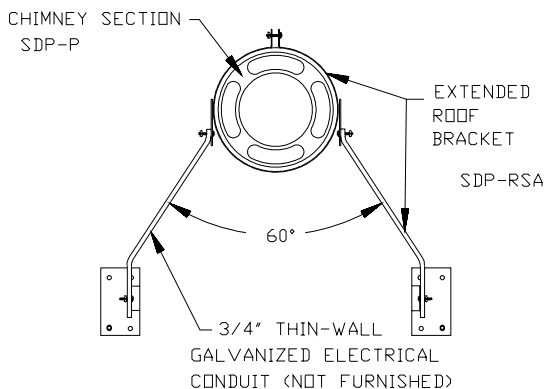
**Elbows** are manufactured in 15° and 30° angles measured from the vertical. A 30° **Elbow** is the largest that can be used in an offset. A 30° **Elbow** may not be combined with a 15° **Elbow** to make a 45° offset for example. Avoid **Elbows** if possible, since a totally vertical chimney is more efficient. When **Elbows** are necessary to avoid obstructions such as rafters, ridgepoles, or joists, use no more than 2 pairs of **Elbows** in any one chimney system.

**1. Attach Elbows:** Attach Elbows to Chimney Sections or other Elbows by twisting clockwise until they lock firmly. Attach one **Elbow** to the **Chimney**

TABLE 3-ELBOW OFFSET TABLE							
SIZE		6-INCH DIAMETER		7-INCH DIAMETER		8-INCH DIAMETER	
ELBOWS (DEGREES)	CHIMNEY LENGTH	OFFSET INCHES	RISE INCHES	OFFSET INCHES	RISE INCHES	OFFSET INCHES	RISE INCHES
15	0	1-1/2	12	1-1/2	13-1/2	1-3/4	13-1/2
30	0	3-3/4	14-1/4	3-3/4	14-1/4	3-3/4	14-3/4
15	12	4-1/4	23-1/2	4-1/4	23-1/2	4-1/4	23-1/4
30	12	9	24	9	24	9	24
15	24	7-1/2	34	7-3/4	35-1/2	6-3/4	35-1/2
30	24	15	33-3/4	15	33-1/4	14-3/4	34-1/4
15	36	10-1/2	45-1/2	10-3/4	46-3/4	9-1/2	47
30	36	21	44	21	43-1/2	20-1/2	44-3/4
15	24+24	13-1/4	55-1/2	13-1/2	57	12	57-1/4
30	24+24	26-1/4	53	26	52-1/2	25-1/2	53-3/4



**Fig 17**



**Fig 18**

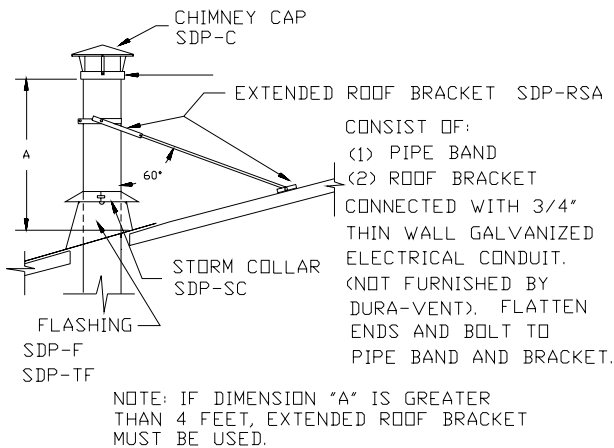
**Section** below, and align it for the offset. Refer to Table 3 to determine the required offset length and attach an appropriate length (or lengths) of **Chimney Section(s)** above the **Elbow**. Do not exceed the maximum lengths between the **Elbows** specified in Table 3. Attach the second **Elbow** above the **Chimney Section** to complete the offset. (Figure 17). **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. Do not add more **Chimney Sections** until the **Elbows** are supported. Be sure that the chimney remains vertical. If the total length of the **Chimney Sections** between the two **El-**

**bows** exceeds 3 feet, install a second **Elbow Strap** around the center of the **Chimney Section(s)**.

### 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 height above the roofline, leaving no more than 4 feet extending above the last pipe band.

**1. Mount Pipe Band:** Slip the **Pipe Band** around the chimney and secure



**Fig 19**

by tightening the nut and bolt.

**2. Install Roof Brackets:** Measure from the **Pipe Band** to the points where the conduit will meet the roof, and form approximately a 60° angle with the chimney, and with each other. (Figures 18 and 19). Cut 2 pieces of 3/4 inch thin wall galvanized steel electrical

conduit, (or rigid galvanized tubing) to these lengths. The conduit is not furnished by Simpson Dura-Vent, and must be locally procured. Mount the two **Roof Brackets** where the conduit meets the roof, using 6 roofing nails per bracket. Seal the nail heads carefully with a non-hardening, waterproof mastic sealant.

**3. Attach Conduit:** Flatten 1 inch and drill a 1/4-inch hole at each end of both pieces of conduit. Bolt each conduit to the **Pipe Band** and **Roof Brackets** with the nuts and bolts provided.

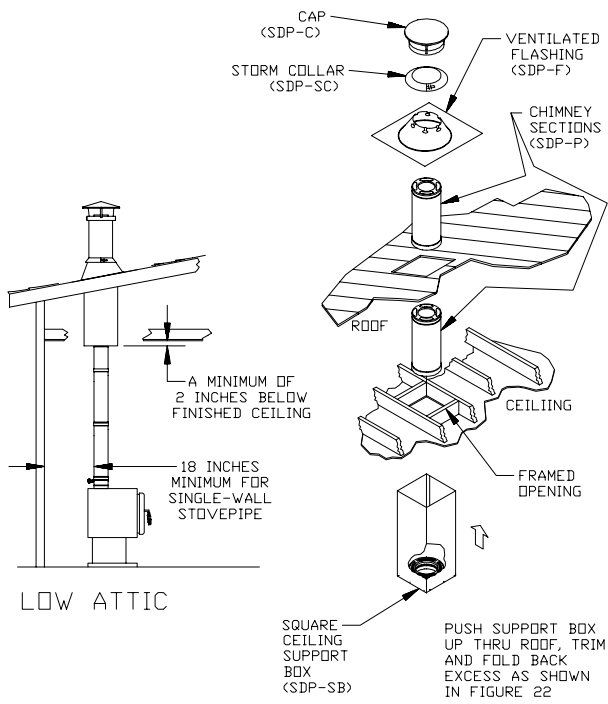
## ROOF SUPPORTED INSTALLATIONS

Use only where a leveled **Square Support Box** will extend at least 2 inches below the ceiling (on the low side), while the top edge at least covers the edge of the roof's decking material. **Square Support Boxes** are available in 11 inch, 24 inch, and 36 inch heights. Mobile home chimney installations are roof supported, and use **Ventilated Flashings**. Do not seal openings.

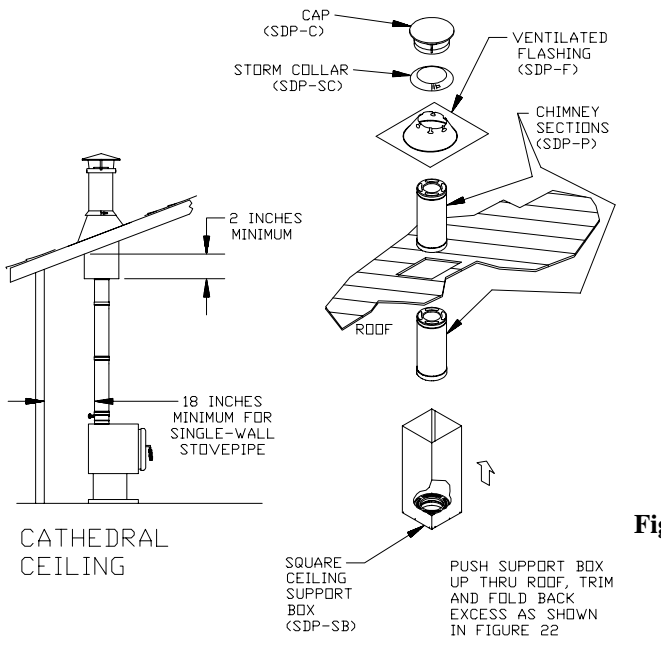
**1. Place Appliance:** Place the appliance in its proper location, referring to the manufacturer's instructions as to allowable distances from combustibles, etc.

**2. Cut Openings:** Cut a roof opening directly above the appliances' flue outlet collar, just as in a Ceiling-Supported Installation (Steps 1 thru 5). If a separate ceiling and roof exists, as shown in Figure 20, (Low Attic), first cut and frame a ceiling opening as described in Ceiling-Supported Installations (Step 2). Refer to Table 2 for clearance and framing specifications. If it is

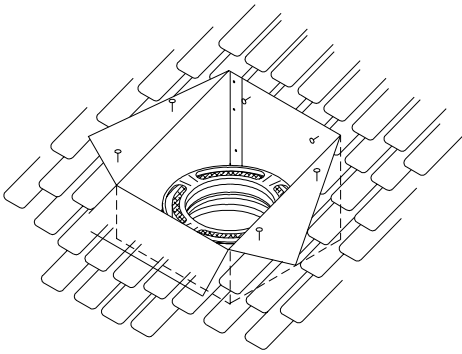




**Fig 20**



**Fig 21**



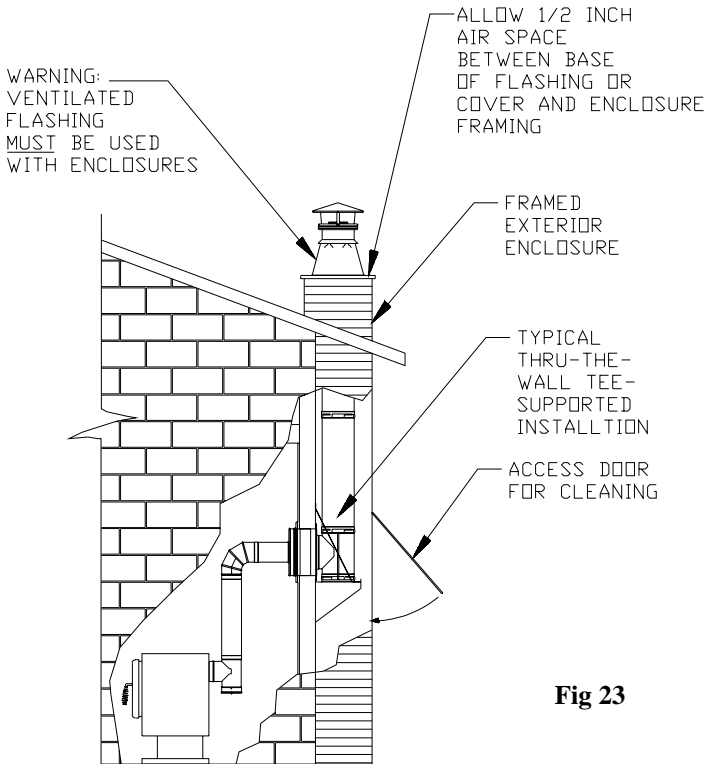
SUPPORT BOX  
SDP-SB

**Fig 22**

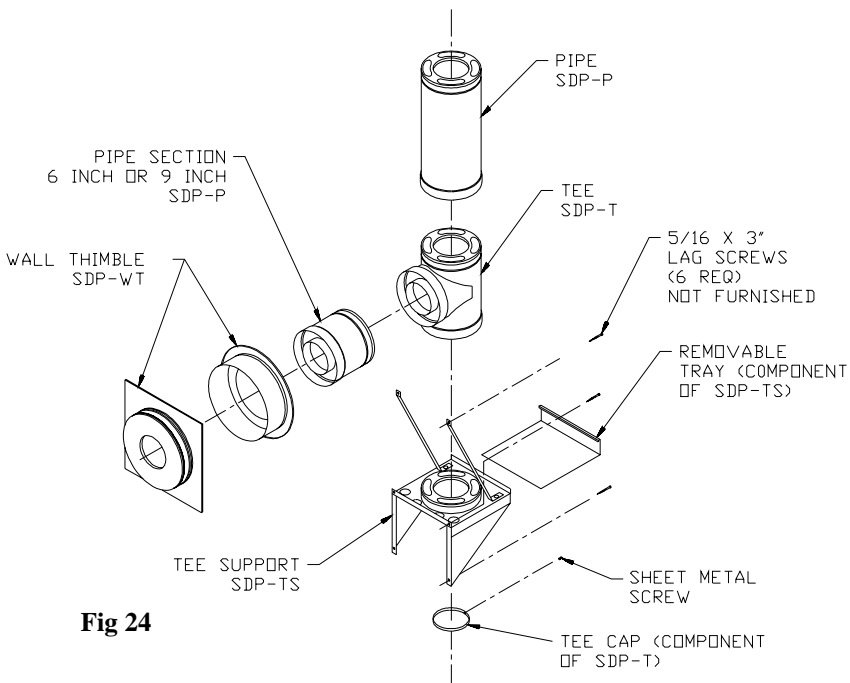
with the roof, and nail the Support Box to the roof or framing with at least two 8-penny nails per side. (Figure 22). Screw the trim sections into the ceiling. (Figure 6).

desired to install through a cathedral ceiling (Figure 21), then the hole is cut in the roof.

**3. Install Support Box:** Slip the **Square Support Box** into the framed opening so it projects at least 2 inches 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 two 8-penny nails per side. (Figure 22). Screw the trim sections into the ceiling. (Figure 6).



**Fig 23**



**Fig 24**

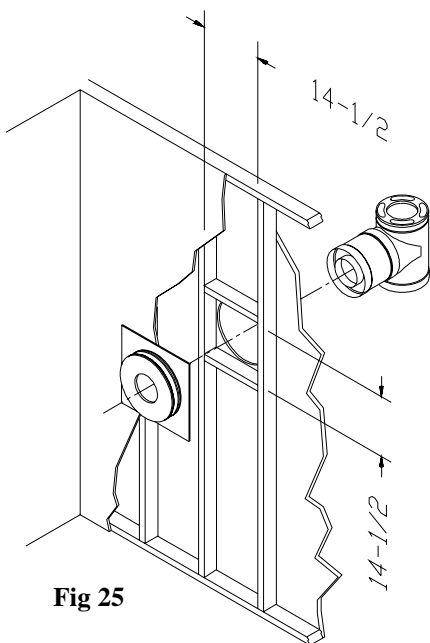
**4. Complete Installation:** Refer to Steps 8, and 9, in the Ceiling Supported Installation section, to complete the Roof-Supported installation.

**TEE-SUPPORTED INSTALLATIONS**

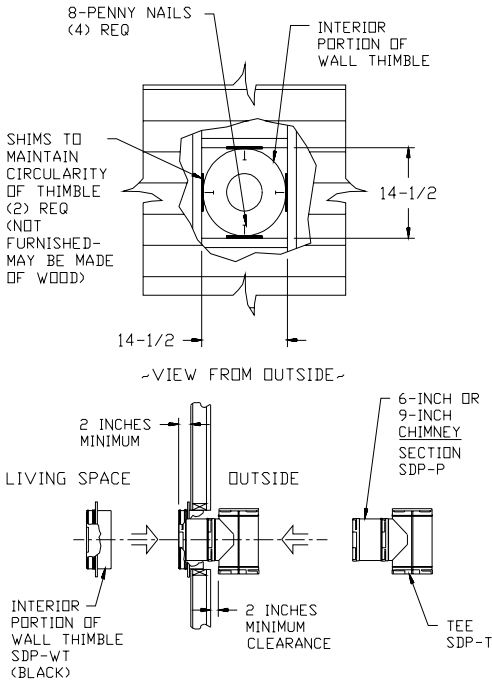
Tee-Supported installations are used when passing through a wall to an outside chimney. The required parts and general configuration are as shown in Figures 23, and 24.

**1. Place Appliance:** Position the appliance according to the manufacturer’s instructions.

**2. Cut and Frame Opening:** Cut 14-1/4 inch diameter holes in the inner



**Fig 25**



**Fig 26**

the **Tee** to a 9-inch or 12-inch **Chimney Section** by twisting until it is firmly locked. If the wall is less than 6 inches thick, use a 9-inch Chimney Section; if the wall is between 6 and 9 inches thick, use a 12-inch Chimney Section. From outside the building, insert the **Chimney Section** into the hole until the vertical part of the Tee is 2 inches away from the outside of the wall, and the black portion of the **Wall Thimble** and the **Chimney Section** protrude into the room at least 2 inches. Remove the Tee and **Chimney Section** from the wall, and nail the **Wall Thimble's** black section to the studs with four 1-inch roofing nails. If the **Wall Thimble** is going through a concrete wall, and no framing members are available to nail the black portion of the **Wall Thimble** to, use masonry anchors to attach it. If a Tee-Supported installation is being installed in a garage, it must be enclosed. (Figure 27).

**4. Seal Outside:** From the outside, insert the galvanized section of the **Wall Thimble** through the wall and into the black section. If it does not reach the black section, an extension tube can be locally made from .018 thick galvanized steel. Seal the flange of the galvanized portion of the **Wall Thimble** to the outside wall, using non-hardening waterproof mastic sealant,

and outer walls. The center of these holes should be aligned with the center of the stove's flue outlet collar. For new construction, prior to sheetrock or other covering of the wall studs is applied, frame a square opening between the studs, as specified in Table 2.

(Figure 25). Should it be necessary to go through concrete, masonry, or cinder-block, a 14-1/4 inch diameter hole must be cut through the wall.

**3. Install Wall Thimble:** Insert the black section of the **Wall Thimble** into the opening in the wall from inside the room, and align the nail holes with the studs. (Figure 26). Do not nail the black thimble section at this time. Attach

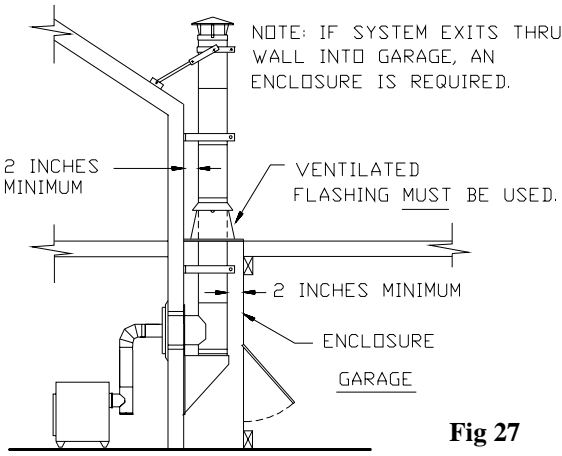


Fig 27

and fasten it to the wall with screws. From the outside, slip the **Chimney Section**, which is attached to the Tee, into the Thimble. **NEVER INSTALL SINGLE WALL STOVEPIPE THROUGH THE WALL THIMBLE!**

**5. Install Tee Support:** Remove the two screws from the **Tee Cleanout Cap**, and detach it from the Tee. Attach the **Tee Support Straps** to the

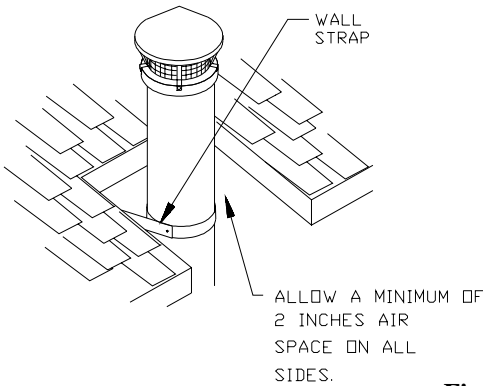
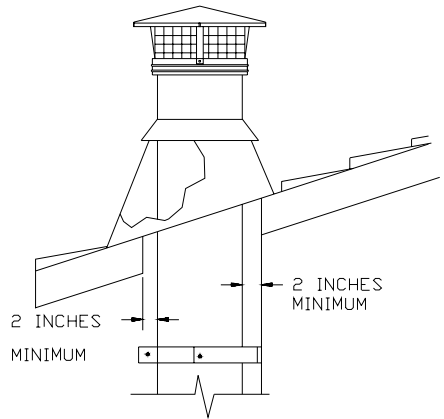
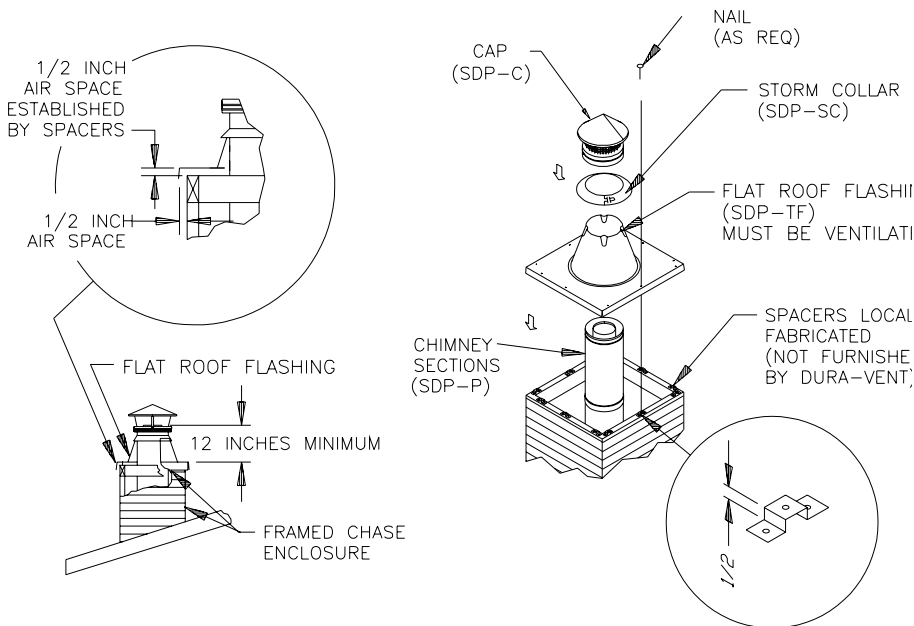


Fig 28



base with the nuts and bolts provided. Use (2) 5/16 inch, 3-inch long lag screws to attach the straps to the wall. Replace the **Tee Cleanout Cap** and screws, once the Tee is installed.

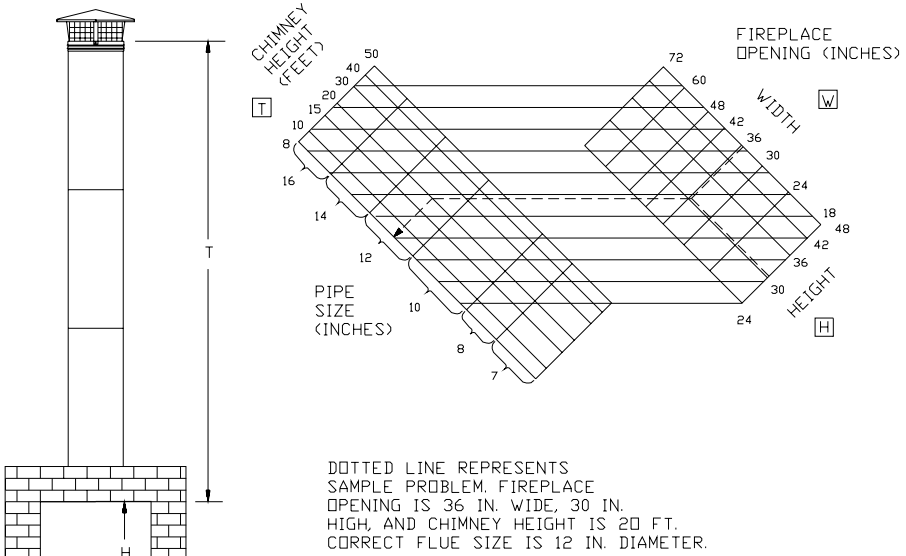
**6. Complete Chimney:** Attach the **Chimney Sections** as in Step 7 in the Ceiling Supported Installation section. Secure the chimney to the wall with **Wall Straps** at 4-foot intervals to maintain at least 2 inches of clearance to combustible materials. Slip the **Wall Straps** around the chimney, tighten the bolts, and fasten the **Wall Straps** to the wall with (2) 5/16-inch, 3-inch long



**Fig 29**

lag screws. Snap the **Chimney Cap** into the top of the chimney, once it is at the height specified in Figure 1. If the chimney penetrates an overhang, frame for at least 2 inches of clearance, and install a **Flashing** and **Storm Collar** as described in Steps 8, 9 and 10 for Ceiling Supported Installations. Another option is to cut away the overhang for a 2-inch clearance. (Figure 28). If the chimney extends more than 4 feet above the top **Wall Band**, or **Flashing**, use an **Extended Roof Support**.

**7. Install Chase Cover.** If a chase enclosure has been constructed, installing the chase cover requires some special considerations, in that a 1/2-inch air gap must be established between the cover, and the framed chase top. In addition, a 1/2-inch air gap should exist between the hole in the cover, and the **Chimney Pipe Sections**. Figure 29 displays in some detail, how these air gaps are established with locally fabricated spacers and covers. These are not furnished by Simpson Dura-Vent, but may be made from 28 gage or heavier sheet metal. Should the installer elect to use **Flat Roof Flashing**, (which is a stock item), the air spaces are still required. When installing the **Storm**

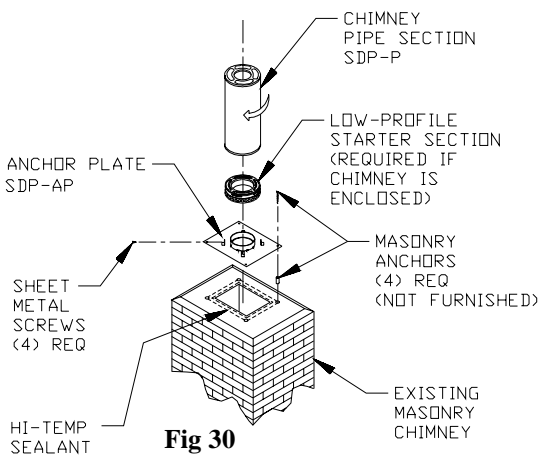


**Table 4**

**Collar**, do not push it down all the way to the cover, but allow an air space for flow between the **Chimney Pipe** and the hole in the cover.

**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. Center the Anchor Plate on a brick or concrete base over the masonry flue opening. Seal the Anchor Plate with a high-temperature mastic, and secure with (4) 1/4-inch masonry anchors. (Figure 30). Be sure it is level. The Anchor Plate is available in two styles. One contains the perforated Starter Section, which is used in



**Fig 30**

Anchor Plate. Center the Anchor Plate on a brick or concrete base over the masonry flue opening. Seal the Anchor Plate with a high-temperature mastic, and secure with (4) 1/4-inch masonry anchors. (Figure 30). Be sure it is level. The Anchor Plate is available in two styles. One contains the perforated Starter Section, which is used in

the event the chimney is to be enclosed. The other is a flat plate, to be used in cases when the chimney is not enclosed.

**3. Attach Chimney:** Place the first Chimney Section over the flange on the Anchor Plate with the arrows pointing up. Drill 1/8-inch diameter holes through the outer sleeve of the Chimney Section which match the location of the corresponding holes in the Anchor Plate. Secure the Chimney Section to the Anchor Plate with #8 self-tapping sheet metal screws.

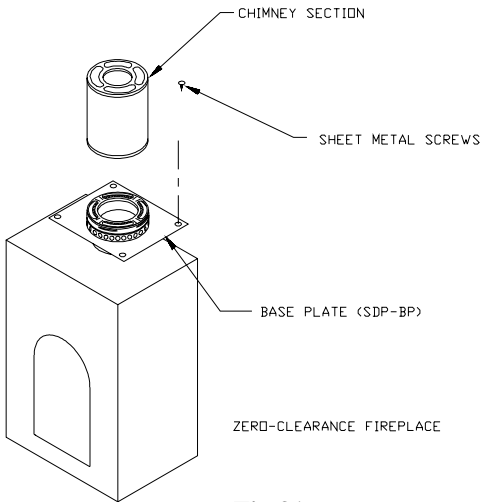


Fig 31

**4. Finish Chimney:** Install the rest as directed in the Ceiling Supported Installation section, Steps 4 through 10. 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. Use a Wall Strap for every four feet of chimney height.

## ZERO-CLEARANCE FIREPLACE INSTALLATIONS

**1. Manufacturer's Instructions:** Carefully read and comply with

the manufacturer's installation instructions for your fireplace.

**2. Base Plate:** Attach a **Base Plate** to the fireplace top with sheet metal screws. (Figure 31). A high temperature sealant may be used if desired.

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

**4. Completion:** Install the remainder as instructed for a standard Ceiling-Supported installation, (less the **Support Box**). Always maintain at least 2 inches of clearance to combustibles, and enclose the chimney where it passes through occupied areas.

## CONNECTION FROM APPLIANCE TO CHIMNEY SYSTEM

**1. Single Wall Stovepipe:** Simpson Dura-Vent's "Dura-Black" stovepipe is recommended, if single wall stovepipe is desired. The connection to the ceiling



support box, or wall thimble is made with a Dura-Black **Slip Connector** (Part# 1670, 1770, or 1870, for 6-inch, 7-inch, or 8-inch pipe, respectively). The beaded end of the slip connector slips into the hole in the ceiling support or wall thimble. Align the tabs on the slip connector with the notches in the face of the support or wall thimble, push the connector in, and twist to lock it in. Further instructions for assembling the Dura-Black pipe are contained in their shipping cartons. Remember, the minimum clearance to combustibles for single wall stovepipe is 18 inches.

**2. Close Clearance Connector Pipe (DVL):** Simpson Dura-Vent manufactures a close clearance connector pipe, also referred to as “DVL”, which may be positioned within 6 inches to a combustible wall, and within 8 inches to a combustible ceiling, provided the appliance installation instructions permit this distance. In order to join this type of connector to the ceiling support, or wall thimble, a **Close Clearance Adaptor** (Part #8674, 8774, or 8874, for 6-inch, 7-inch, or 8-inch pipe, respectively), is required. The adaptor slips into the hole in the ceiling support, or wall thimble. Align the tabs on the adaptor with the slots cut into the face of the ceiling support, or wall thimble, push in, and twist to lock it in place. Detailed instructions for assembling the remainder of the close clearance system are included in the shipping cartons.

## 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 every 2 to 4 weeks. If creosote or soot has accumulated, it should be removed 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, unscrew the four screws that attach the cap's support legs to the cap base. The **Tee Cleanout Cap** can be removed once the screws are unscrewed. Remember to replace the 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 non-corrosive to the chimney liner. Simpson Dura-Vent 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 draft openings, and call your Fire Department. Do not use the chimney again, until it has been inspected for possible damage.

**8. Painting:** To increase chimney life, 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.

**9. Creosote Formation:** Simpson Dura-Vent 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.

**10. Warranty:** Simpson Dura-Vent warrants Dura/Plus components for a period of 25 years from the date of installation. The warranty includes all components except chimney tops, which are warranted for 5 years. For specific details, refer to the printed warranty included in the Chimney Product Catalog. Dura-Vent, Dura/Plus, and Dura-Black are the registered trademarks of Simpson Dura-Vent Corporation.

**(Notes)**

Other products made by  
Simpson Dura-Vent:

**DuraTech** Chimney

**Direct Vent GS** Direct Vent System

**Dura-Vent** Gas Vent (B-Vent)

**Dura-Black** Single Wall Stovepipe

**DVL Close** Clearance Connector Pipe

**Dura/Liner** Masonry Chimney Reliner

**Dura-Flex** Masonry Reliner for Gas Appliances

**Dura/Connect & Dura/Connect II** Single and Double  
wall Flexible Connectors for B-Vent Appliances



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