

# INSTALLATION INSTRUCTIONS

*For Superior's  
HC Series*

*Models  
HC-3320A  
HC-3820A  
And HC-4320A*

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

Do not alter or modify the fireplace or its components under any circumstances. Any modification or alteration of the fireplace system, including but not limited to the fireplace, chimney components and accessories, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation.

**PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.**



U.L. Report No. MH8988  
Warnock Hersey Report No. 3960

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## IMPORTANT! PLEASE READ AND UNDERSTAND THESE RULES TO FOLLOW FOR SAFETY.

1. Before starting your fireplace installation, read these installation instructions carefully to be sure you understand them completely and in their entirety. Failure to follow them could cause a fireplace malfunction resulting in serious injury and/or property damage.
2. Always check your local building codes. The installation must comply with all local, regional, state and national codes and regulations.

3. Superior's HC-3320A and HC-3820A must be installed with Model TF8 [8" (203 mm) inside diameter] Thru-Flow Chimney System only. Superior Model HC-4320A must be installed with either Superior Model TF8 [8" (203 mm) inside diameter] or Model TF10 [10" (250 mm) inside diameter] Thru-Flow Chimney Systems. These systems are intended for use as residential-type appliances. The chimney system must always vent to the outside of the building.

4. To ensure a safe fireplace system and to prevent the build-up of soot and creosote, inspect and clean the fireplace and chimney prior to use and periodically during the heating season.

5. Use solid wood fuel only. DO NOT use treated wood, artificial wax based logs, driftwood, woods containing binders, chemical chimney cleaners or flame colorants in your fireplace.

6. DO NOT use charcoal or coal under any circumstances.

7. NEVER use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this fireplace. Keep any flammable liquids a safe distance from the fireplace.

8. NEVER leave children unattended when there is a fire burning in the fireplace.

9. Always keep flue damper open when heat is present in the fireplace.

10. Before servicing, allow the fireplace to cool. Always shut off any electricity or gas to the fireplace while working on it. This will prevent any possible electrical shock or burns.

11. This fireplace is not intended to heat an entire home or be used as a primary heat source. It is designed to enhance homeowner comfort by providing supplemental heat to the room.

12. Always ensure an adequate supply of replacement combustion air from the outside of the house is accessible to the fire to support normal combustion. Fireplaces consume large volumes of air during the normal combustion process. In the event the home is tightly sealed with modern energy-efficient features, Superior's optional combustion air kit may not provide all the air required to support normal combustion. Superior is not responsible for any smoking or related problems that may result from the lack of adequate combustion air. It is the responsibility of the builder/contractor to ensure that adequate combustion air has been provided for the fireplace.

13. DO NOT use a fireplace insert or other products not specified by Superior herein for use with this fireplace. All gas log sets must be operated with the damper clamped open, including "vent free" log sets.

14. Superior Fireplace Company does not warrant "smoke free" operation nor is Superior responsible for inadequate system draft caused by mechanical systems, general construction conditions, inadequate chimney heights, adverse wind conditions and/or unusual environmental factors or conditions beyond our control.

15. Never, under any circumstances, install a fireplace, chimney component or any accessories supplied by Superior Fireplace Company that have visible or suspected physical damage as a result of handling or transportation. These items should be inspected by a Superior distributor or qualified factory representative to ensure safe condition. When in doubt, consult your Superior distributor.

## TOOLS AND BUILDING SUPPLIES NORMALLY REQUIRED

Tools Should Include:

- Phillips screwdriver
- Hammer
- Saw and/or sabersaw
- Level
- Measuring tape
- Plumb line
- Electric drill and bits
- Pliers
- Square

Building Supplies:

- Framing materials
- Wall-finishing materials
- Caulking materials (noncombustible)
- Fireplace surround
- Hearth extension materials (noncombustible)

## PRECAUTIONS

*Note: These fireplace systems are not difficult to install. However, in the interest of safety, it is recommended that the installer be a qualified or certified "tradesman" familiar with commonly accepted fireplace installation and safety techniques as well as prevailing local codes.*

The most important areas of concern dealing with the installation of factory-built fireplaces are clearances to combustible materials, proper assembly of component parts, height of the chimney system, the proper use of accessories supplied by Superior and the techniques employed in using finishing materials applied to the wall surrounding the fireplace, hearth extensions and wall shields. Each of these topics will be covered in thorough detail throughout this manual. Please give each your special attention as you progress with your installation.

**IMPORTANT: WHEN INSTALLING THESE FIREPLACE SYSTEMS IN CANADA, THE REQUIRED MINIMUM AIR SPACE TO COMBUSTIBLE MATERIALS FROM THE CHIMNEY IS 2" (51MM). THE CHIMNEY COLLAR ENCLOSURE KIT, MODEL CCEK, MUST BE INSTALLED PER THE WARNOCK HERSEY INC. LISTING. THIS IS NOT A U.L. LISTED INSTALLATION.**

**WHEN INSTALLING SUPERIOR'S TF8 SERIES CHIMNEY SYSTEM ON MODELS HC-4320A IN CANADA OR THE U.S., THE MINIMUM AIR SPACE TO COMBUSTIBLES FOR THE CHIMNEY SYSTEM IS 2" (51MM).**

## INTRODUCTION

### General Information

The HC-A Series are wood-burning appliances featuring a self-contained heat-circulating system. A steel bar grate is also included with all models to properly position the fire. An outside combustion air kit, Model CAK-4 or CAK-4LD, decorative glass doors and a forced air kit, Model FAK-1500 or FAK-3000, are available as optional equipment.

*Note: Illustrations shown reflect "typical" installations with nominal dimensions and are for design and framing reference only. Actual installations may vary due to individual design preferences. However, always maintain minimum clearances to combustible materials and do not violate any specific installation requirements.*

The HC-A Series have been tested and listed by Underwriters Laboratories, Inc. (File No. MH8988-6/90) to the U.L. 127 standard for U.S. installations and by Warnock Hersey Inc. (Report No. 3960) to the U.L.C. S610 standard for Canadian installations. This system is intended to be installed in residential homes and buildings of conventional construction, not in mobile homes.

These fireplace systems are designed for installation in accordance with the National Fire Protection Standard for chimneys, fireplaces and solid fuel-burning appliances; NFPA 211 and in accordance with codes such as the BOCA Basic/National Codes, the Standard Mechanical Code, Uniform Building Codes and the Canadian National Code.

**FAILURE TO USE PARTS MANUFACTURED BY SUPERIOR FIREPLACE COMPANY, VARIATIONS IN TECHNIQUES AND CONSTRUCTION MATERIALS OR PRACTICES DESCRIBED IN THIS MANUAL MAY CREATE A FIRE HAZARD AND VOID SUPERIOR'S LIMITED WARRANTY.**

The HC-A systems consist of six basic "sub-systems":

1. The Fireplace
2. The Chimney and Termination
3. The Optional Glass Doors
4. The Optional Forced Air Kits
5. The Optional Combustion Air Kits
6. The Optional Chimney Collar Enclosure Kit (Canada Only) or Collar Duct Kit (US Only)

## CLEARANCE AND HEIGHT REQUIREMENTS

The fireplace may be placed on or near normal construction materials\*. The combustion air kit, firestop spacer and roof flashing (not chase flashing) may be placed directly on or against normal construction materials\*. The chimney requires a minimum 1" (25 mm) air space to combustibles (See **\*\*Note**). A combustible mantle may be installed 12" (305 mm) above the opening of the fireplace as per NFPA 211, Section 7-3.3.3. In Canada the minimum is 18" (457 mm) above the opening.

The fireplace and chimney system must be enclosed when installed in or passing through a living area where combustibles or people may come in contact with it. This is important to prevent possible personal injury or fire hazard.

For questions, please call your distributor or Superior Fireplace Company. Special restrictions apply to the front and facing of the fireplace and nearby walls (See pages 16, 17 and 18).

### \* Construction Materials:

- framing materials
- particle board
- millboard
- plywood
- flooring
- paneling
- dry wall
- etc.

**\*\*Note:** 2" (51 mm) when installing in Canada and 2" when installing TF8 chimney on Model HC-4320A fireplace.

## TYPICAL INSTALLATION

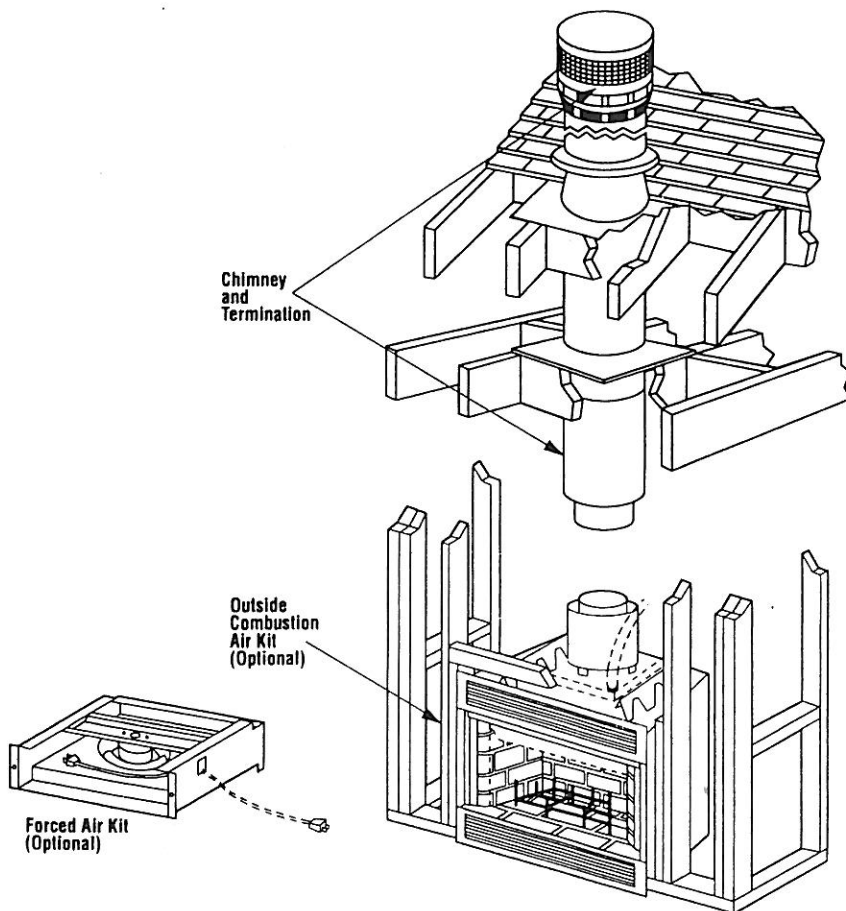


Figure 1

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE

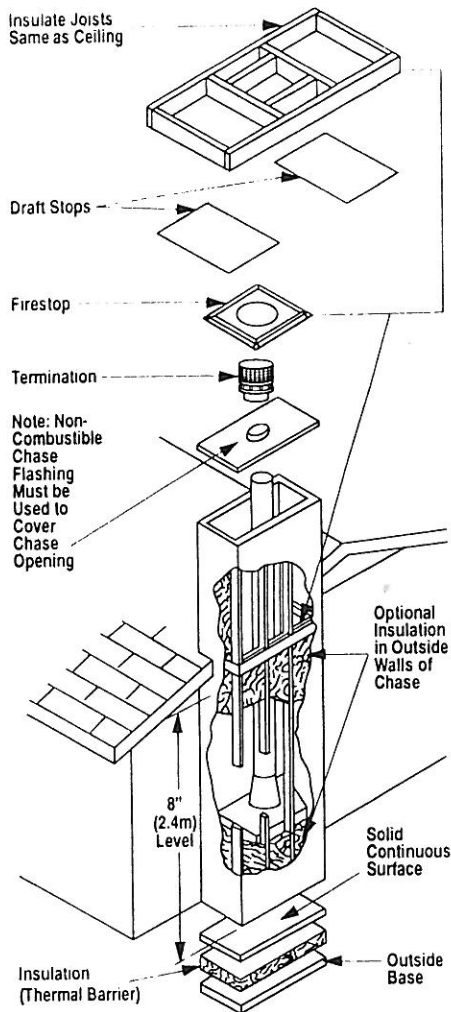


Figure 2

**WARNING: IF INSULATION IS USED, THE FIREPLACE MUST NOT BE PLACED DIRECTLY AGAINST IT. INSULATION OR VAPOR BARRIERS, IF USED, MUST FIRST BE COVERED WITH GYPSUM BOARD, PLYWOOD, PARTICLE BOARD, OTHER MATERIAL OR OTHER METHODS TO ASSURE INSULATION AND VAPOR BARRIERS REMAIN IN PLACE.**

**WARNING: DO NOT PACK OR FILL REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIAL. NO MATERIAL IS ALLOWED IN THESE AREAS.**

*Note: Do not insulate the chase cavity with blown or fill-type insulation materials.*

*Note: Local codes may not require firestopping at the ceiling levels for outside chase installation; however, it is recommended for safety and the reduction of heat loss.*

## CHIMNEY SYSTEM

Superior fireplace Model HC-3320A and Model HC-3820A are designed and code-listed for use with Superior's TF8 Thru-Flow Chimney System. Model HC-4320A is designed and code-listed for use with Superior's TF8 and TF10 Thru-Flow Chimney Systems. Always use Superior's Thru-Flow chimney components with these fireplaces. Do not modify or alter these components as this may cause a potential serious hazard and void Superior's Limited Warranty.

## CHIMNEY HEIGHT

The total height of your HC-A fireplace system from the surface the fireplace rests on to the chimney top must not exceed 80' (24.38 m) and must also meet minimum height requirements. Refer to the minimum system height chart.

Minimum System Height

Opening Width	33"/38" (TF8)	43" (TF8)	43" (TF10)
Vertical Installation	12' 0" (3.67 m)	16' 8" (5.98 m)	15' 0" (4.57 m)
One Offset	12' 0" (3.67 m)	16' 8" (5.98 m)	15' 0" (4.57 m)
Two Offsets	25' 0" (7.62 m)	25' 0" (7.62 m)	25' 0" (7.62 m)

## CHASE ENCLOSURE

A chase is a vertical box-like structure constructed to surround the fireplace and chimney. Refer to Figure 2 for a typical chase configuration. As with all chimney installations, avoid overhead obstructions such as trees, power lines, etc. A chase should be constructed and insulated just like any outside wall. In a cold climate, we recommend the base of the chase should also be insulated between the solid continuous floor beneath the fireplace and the chase bottom. The value and amount of chase insulation in a cold climate installation (if used) is optional and not required for safety.

## ASSEMBLY OUTLINE Before You Start

Check your inventory list to be sure you have all the necessary parts supplied in good usable condition. Check also for any concealed damage.

The flue damper handle extends down from the inside top of the fireplace. Pull forward to open. The lintel extension is attached to the damper handle and will be visible if the damper is open. Push the damper handle back and up to close until you hear the damper lock closed. If the damper is not locked, it will fall open and the lintel extension will be visible again. (Figure 3)

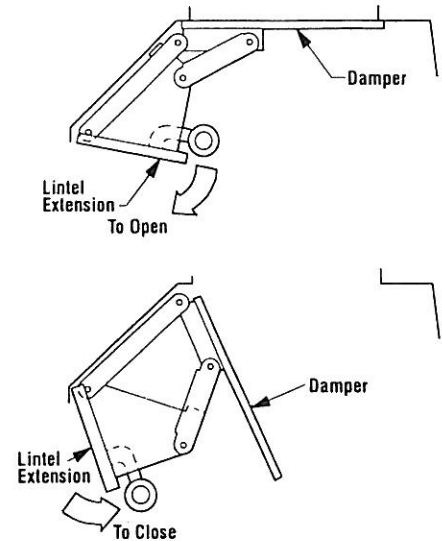


Figure 3

## LOCATION OF FIREPLACE

Carefully select the proper location for heat circulation, aesthetics, chimney obstructions and clearance to side wall(s). With proper pre-planning, a slight adjustment of a few inches can save considerable time and expense later during construction and assembly.

Carefully consider the position of the fireplace opening with respect to the location of adjacent or nearby stairwells, bath or kitchen exhaust fans and/or return air registers for forced air furnaces/air conditioners that could cause a smoking fireplace condition if the house is tightly insulated.

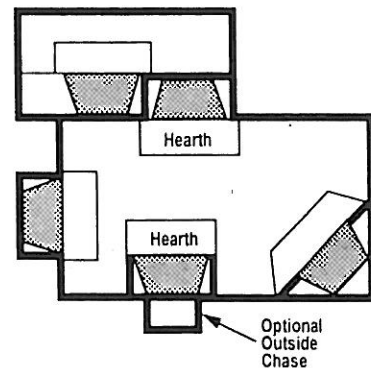


Figure 4

If there is a continuous perpendicular side wall closer than 15" (381 mm) for the HC-3320A or HC-3820A and 18" (457 mm) for the HC-4320A from the nearest side of the fireplace opening, it must be protected with a wall shield constructed of 40" x 40" x 1/2" (1016 mm x 1016 mm x 13 mm) millboard or a durable noncombustible material with equal or greater insulating value (see page 18). A continuous perpendicular side wall cannot be closer than 8" (203 mm) from the fireplace opening under any circumstances, even if protected.

## ASSEMBLY STEPS

**Note:** The following steps represent the normal sequence of installation. However, each installation is unique and might require a different sequence.

1. Position firebox prior to framing or into prepared framing.
2. Install the chimney collar enclosure kit (Canada only).
3. Install the chimney system.
4. Install optional outside combustion air kit.
5. Field wire main power supply to fireplace for optional fan kit. (Electrical connections should only be performed by an experienced, licensed/certified tradesman.)
6. Plumb gas line if a decorative gas appliance will be used. (Gas connections should only be performed by an experienced, licensed/certified tradesman.)
7. Complete finish wall material, surround and hearth extension to your individual taste.
8. Assemble and attach optional glass door assembly.

Study the three-dimensional illustration of a typical installation in *Figure 1* to get a general idea of each element of your fireplace system.

## INSTALLING THE FIREPLACE

The fireplace may be installed directly on a combustible floor or raised on a platform of an appropriate height. Do not place fireplace on carpeting, vinyl or other soft floor coverings. It may, however, be placed on flat wood, plywood, particle board or other hard surfaces. Be sure fireplace rests on a solid continuous floor or platform with appropriate framing for support and so that no cold air can enter the room from under the fireplace.

The fireplace may be positioned and then the framing built around it, or the framing may be constructed and the fireplace positioned into the opening.

Usually, no special floor support is needed for the fireplace. However, to be certain:

1. Estimate the total weight of the fireplace system and surround materials such as brick, stone, etc., to be installed. Shipping weights for the fireplace and chimney may be found in the Suggested List Prices.
2. Measure the square footage of the floor space to be occupied by the system, surrounds and hearth extensions.
3. Note the floor construction, i.e., 2 x 6's, 2 x 8's or 2 x 10's (51 x 152 mm, 51 x 203 mm or 51 x 250 mm), single or double joists, type and thickness of floor boards.
4. Use this information and consult your local building code to determine if you need additional support.

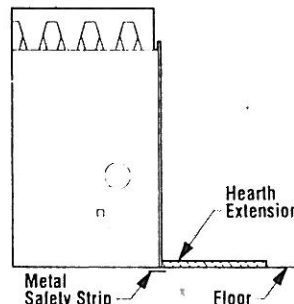
**CAUTION: DO NOT BLOCK THE HEAT-CIRCULATING AIR INLETS AND OUTLETS. DOING SO MAY RESULT IN A POTENTIAL FIRE HAZARD.**

If you plan to raise the fireplace and hearth extension, build the platform assembly, then position fireplace and hearth extension on top. Secure the platform to the floor to prevent possible shifting.

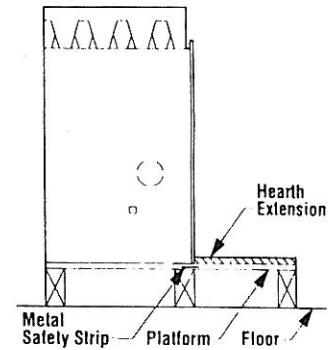
### To Install:

**Step 1.** Slide the fireplace into prepared framing or position fireplace in its final position and frame later.

**Step 2.** Insert the metal safety strips, packaged with the fireplace, beneath the fireplace as illustrated (*Figures 6 and 7*). The safety strips should overlap for continual coverage of the floor.



**Figure 5**



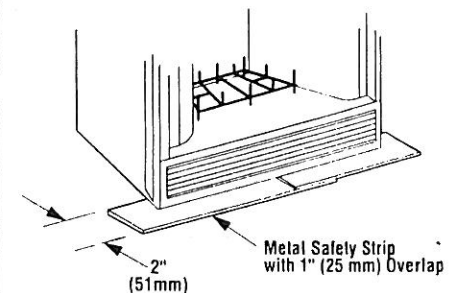
**Figure 6**

**Note:** Safety strips are not required when fireplace rests on a noncombustible surface.

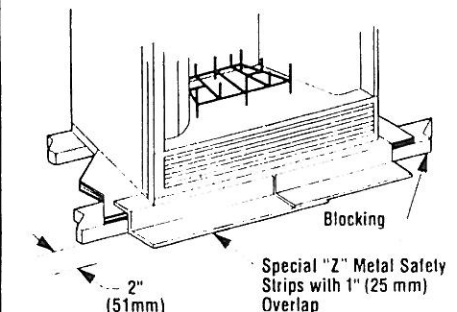
**Note:** Install the hearth extension only as illustrated.

The safety strips should extend from front and sides of the fireplace 2" (51 mm). In the event a wooden support is used to elevate the fireplace above the floor, a "Z" type safety strip should be fabricated and used to protect the front surface of the wood support as well as the floor beneath the hearth extension (*Figures 8 and 9*). The safety strips should be tacked down to prevent possible movement.

**Note:** The "Z" type safety strip is not supplied by Superior.



**Figure 7**



**Figure 8**

# FIREPLACE SPECIFICATIONS

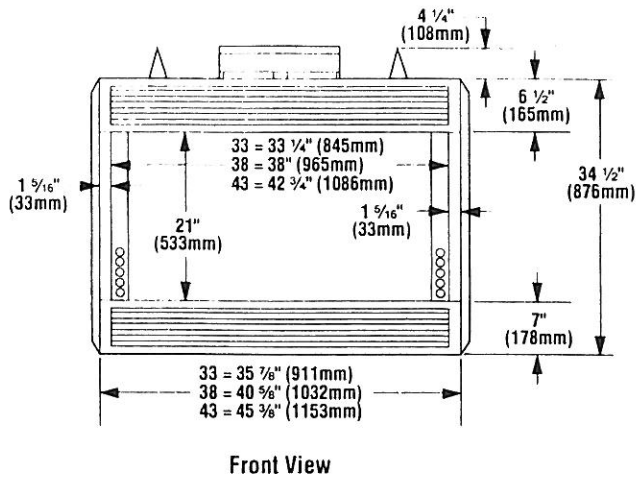


Figure 9

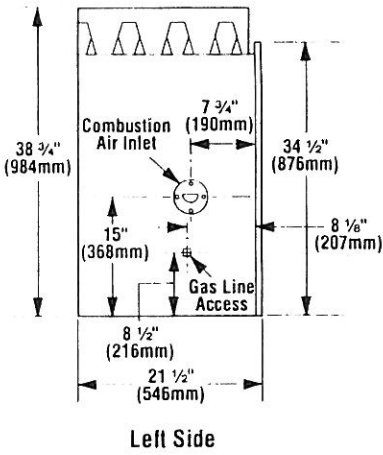


Figure 10

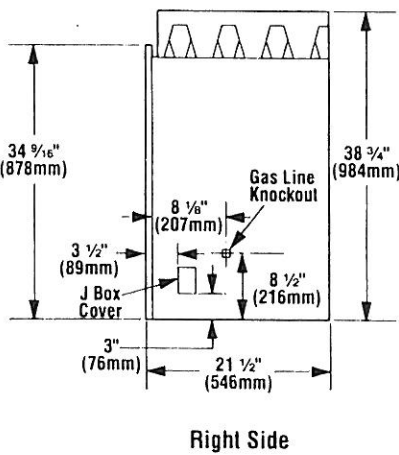


Figure 11

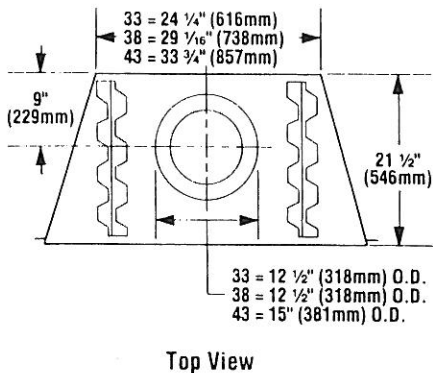


Figure 12

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE

# FRAMING SPECIFICATIONS

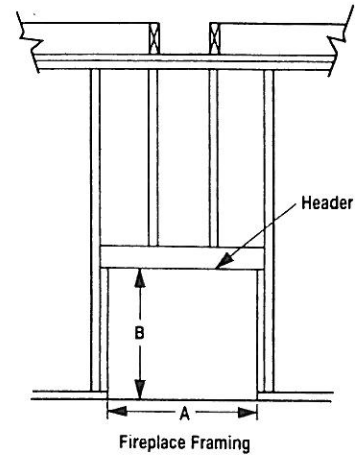


Figure 13

## Fireplace Framing Dimensions

	Fireplace Opening Width		
	33"	38"	43"
A	36" (914 mm)	40 3/4" (1035 mm)	45 1/2" (1156 mm)
B	39" (991 mm)	39" (991 mm)	39" (991 mm)
C	24 1/4" (616 mm)	29 1/16" (738 mm)	33 3/4" (857 mm)
D	12 1/2" (318 mm)	14 1/2" (368 mm)	17" (432 mm)
E	68" (1727 mm)	72" (1829 mm)	77" (1956 mm)
F	33 7/8" (861 mm)	35 7/8" (911 mm)	38 5/8" (975 mm)
G	21 3/8" (543 mm)	21 3/8" (543 mm)	21 3/8" (543 mm)
H*	4" (102 mm)	4" (102 mm)	4" (102 mm)
J	9 3/4" (248 mm)	9 3/4" (248 mm)	9 3/4" (248 mm)
K	48" (1219 mm)	51" (1295 mm)	55" (1397 mm)

\* Combustion air kit CAK 4 (without adapter)

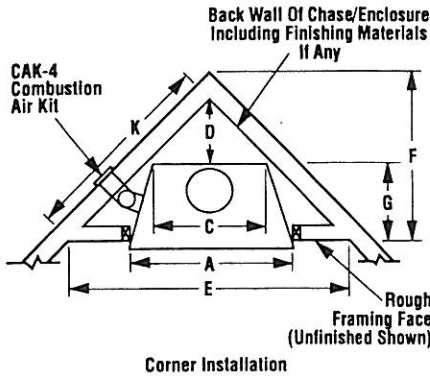


Figure 14

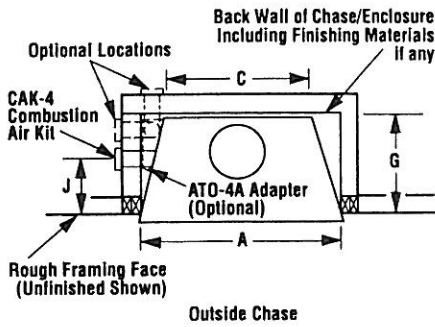


Figure 15

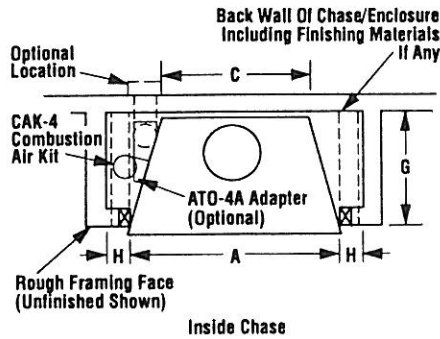


Figure 16

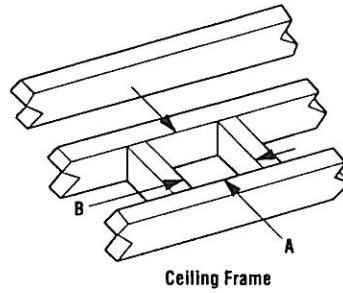


Figure 17

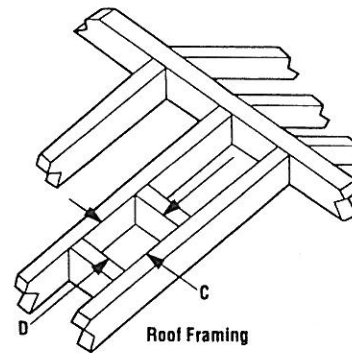


Figure 18

Framing Dimensions for Ceiling

Flue Type	Ceiling Opening	
	A	B
TF8, Vertical	14 1/2" (368 mm)	14 1/2" (368 mm)
TF8, Vertical at 2"	16 1/2" (419 mm)	16 1/2" (419 mm)
TF10, Vertical	17" (432 mm)	17" (432 mm)
TF10, Vertical at 2"	19" (438 mm)	19" (438 mm)
TF8 Offset 30°	14 1/2" (368 mm)	25" (635 mm)
TF8 Offset 30° at 2"	16 1/2" (419 mm)	27" (686 mm)
TF10 Offset 30°	17" (432 mm)	26" (660 mm)
TF10 Offset 30° at 2"	19" (438 mm)	28" (711 mm)

Framing Dimensions for Roof

Pitch	TF8 at 1"		TF8 at 2"		TF10 at 1"		TF10 at 2"	
	C	D*	C	D*	C	D*	C	D*
0/12	14 1/2" (368 mm)	14 1/2" (368 mm)	16 1/2" (419 mm)	16 1/2" (419 mm)	17" (432 mm)	17" (432 mm)	19" (483 mm)	19" (483 mm)
6/12	14 1/2" (386 mm)	17" (432 mm)	16 1/2" (419 mm)	19" (483 mm)	17" (432 mm)	19" (483 mm)	19" (483 mm)	21" (533 mm)
12/12	14 1/2" (368 mm)	21 1/2" (546 mm)	16 1/2" (419 mm)	23 1/2" (579 mm)	17" (432 mm)	24" (619 mm)	19" (483 mm)	26" (660 mm)

\*Perpendicular to roof ridge

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

**Step 3.** Refer to fireplace drawings and specifications on pages 6 and 7 for framing dimensions and details. Framing header may be positioned directly on the fireplace top spacers.

**IMPORTANT: UNDER NO CIRCUMSTANCES CAN THE FIREPLACE TOP SPACERS BE REMOVED OR MODIFIED, NOR MAY YOU NOTCH THE HEADER TO FIT AROUND OR BE INSTALLED LOWER THAN THE TOP SPACERS. THE HEADER MAY BE IN DIRECT CONTACT WITH THE TOP SPACERS BUT MAY NOT BE SUPPORTED BY IT.**

**Step 4.** Fireplace may be anchored to the floor. Bend down four (4) anchor tabs located at the base of the fireplace and secure to the floor by nailing with 8d nails (Figure 10).

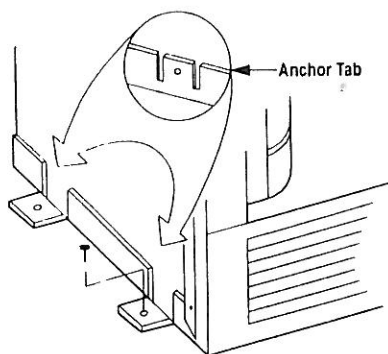


Figure 19

**Step 5.** Fireplace should be secured to side framing members using nailing flanges. Use 8d nails (Figure 11).

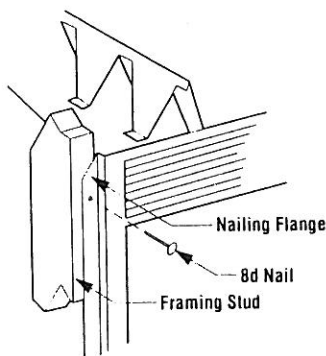


Figure 20

**Note:** The nailing flange and the area directly behind the nailing flange is exempt from the clearances described on the fireplace clearance label.

**\*Note:** Use Models 8FS-2, 8FS30-2, 10FS-2 or 10FS30-2 to maintain 2" (51 mm) clearance. Models 8FS-2 and 8FS30-2 must be used when installing TF8 chimney on HC-4320A.

**\*\*Note:** 2" (51 mm) when installing in Canada and when installing TF8 chimney on Model HC-4320A fireplace.

### For Canadian Installations, Proceed with Steps 6 through 9.

**Note:** W.H.I. listed only. This is not a U.L. listed installation.

**Step 6.** Attach the chimney collar enclosure kit, Model CCEK, around chimney collar with the screws provided (Figure 12).

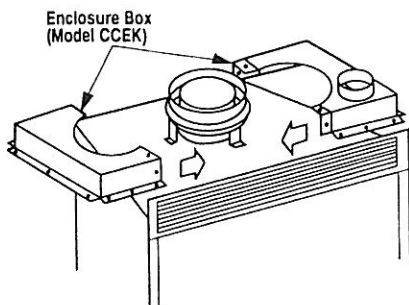


Figure 21

**Step 7.** Connect the 4" (102 mm) Class 0 air duct provided to the collar on the chimney collar enclosure with the screws provided in the hardware kit.

**Step 8.** Route the Class 0 air duct out the back wall or side wall, up through the ceiling or floor joists to an outside wall. The duct should be located above snow level.

**Note:** If the fireplace is installed against an inside wall, the Class 0 air duct may be routed up through the attic space to terminate at the outside wall. Ensure nothing blocks the hood opening. This inlet must be a minimum of 3' (1 m) below the chimney top.

**Step 9.** Cut or frame hole through the outside wall for the installation of the duct inlet hood. A 4 1/2" (114 mm) diameter hole is sufficient. Feed the loose end of the flexible duct through the hole cut for the inlet hood and attach to collar on inlet hood using two (2) screws. Insert hood into opening. Secure in place with nails driven through holes in hood flange. Seal with non-combustible waterproof silicon type caulking. If additional duct is needed, use Class 0 metallic duct.

### INSTALLING THE CHIMNEY SYSTEM

**Step 1.** Check the flue damper for proper operation. When the damper is in the fully open position, the damper handle will be forward and the lintel extension will be visible. When the damper is fully closed, the damper lever is moved all the way back and the lintel extension is no longer visible.

**Step 2.** Using standard construction framing techniques, construct opening for chimney route up through the ceiling(s) and roof or through an outside chase. Framing must maintain adequate minimum air space clearance at all times.

**CAUTION: ALLOW MINIMUM 1" (25 MM) CHIMNEY AIR SPACE TO COMBUSTIBLE FRAMING MEMBERS THROUGHOUT VERTICAL OR OFFSET CHIMNEY INSTALLATION (SEE \*\*NOTE).**

**A minimum 1" (25 mm) air space must be reserved for all materials extending for any continuous length surrounding the chimney (See \*\*Note).**

Reference Figures 17 and 18 and charts for Ceiling and Roof on page 7, which specify minimum ceiling and roof dimensions.

In new construction, to determine chimney center line, use plumb line from roof or ceiling above fireplace to center of flue collar on fireplace.

For remodeling, plumb to center of flue collar from ceiling above, drive nail through ceiling from below to mark position, then mark and cut to passage from above ceiling (around nail) (Figure 22). Then plumb from ceiling or roof level directly above hole which has just been completed.

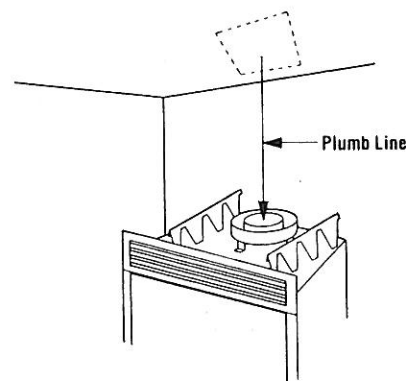


Figure 22

**Note:** If desired the optional collar duct kits, Models TF8-CDK and TF10-CDK, should be installed after the chimney has been attached to the flue collar.

**Step 3.** Use flat firestop spacer, Model 8FS for TF8 system and Model 10FS for TF10 system, if chimney penetrates ceiling vertically (See \*Note). If chimney penetrates ceiling at 30° angle (offset chimney), use 30° firestop spacer, Model 8FS30 for TF8 and Model 10FS30 for TF10 system (See \*Note).



Position appropriate firestop spacer at ceiling and nail temporarily with two (2) 8d nails. Use one (1) nail on opposite side to hold firestop spacer in position. After chimney sections have been assembled through the firestop spacer and after any necessary adjustments have been made, nail permanently, using at least two (2) more 8d nails. Firestop spacers must be secured by at least four (4) 8d nails when completely installed.

**Note:** If there is a room above ceiling level, firestop spacer must be installed on the bottom side of the ceiling. If an attic is above ceiling level, firestop spacer must be installed on top side of ceiling joist (Figures 23 and 24).

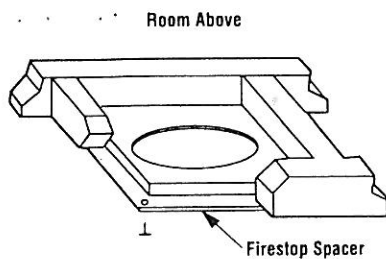


Figure 23

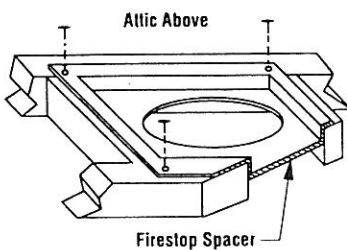


Figure 24

### For Canada Only

When installing the chimney system through an open attic space, the attic shield assembly firestop spacer must be used (Figure 25). This installation procedure is Warnock Hersey Inc. listed only for use in Canada.

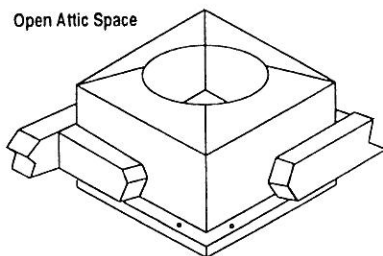


Figure 25

**\*\*Note:** 2" (51 mm) when installing in Canada and 2" when installing TF8 chimney on Model HC-4320A fireplace.

**Step 4. Note:** Chimney sections are constructed with a unique locking tab design which ensures an immediate, tight assembly between sections. Plan your chimney requirements carefully before assembly as chimney is difficult to disassemble after installation. If disassembled, the tabs might become damaged. Be certain tabs are properly formed to ensure locking tabs engage properly.

The TF8 and TF10 chimney systems are two-piece chimneys, which snap together from the fireplace up. Start with the inner flue section. With the lanced end up, snap-lock it in to the matching collar on top of the fireplace. At all subsequent joints, the upper flue section fits into the preceding flue section. Each piece snaps together by means of locking tabs (9 locking tabs per joint). Check each piece by pulling up slightly from the top to ensure proper engagement before installing succeeding sections. If the flue has been installed correctly, it will not separate when you test it. Also, the inner flue joint where each section is joined should be tight and flat without gaps (Figure 26).

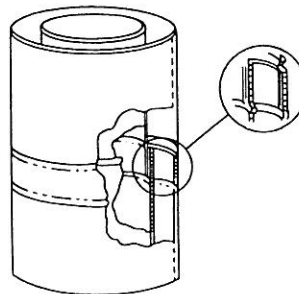


Figure 26

Outer pipe section installs in just the opposite way; the lanced end goes down and each new section goes OVER the outside of the previous section installed (Figure 27).

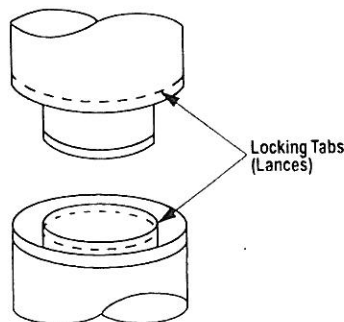


Figure 27

**Note:** Assemble one component of chimney at a time (inner section first, then outer section last) before proceeding with the next complete section.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE

Continue to assemble the chimney up through framed opening. Assemble just enough to penetrate the roof flashing openings (Figure 28). Always maintain 1" (25 mm) minimum air space to combustible materials and always check each chimney joint (inner and outer) to ensure proper engagement (See **\*\*Note**). Check vertical alignment of chimney so that it projects from the roof in true vertical position.

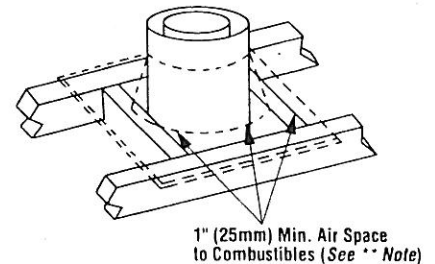


Figure 28

Superior chimney sections should not be screwed together and it is not required for additional reinforcement.

**Step 5.** The height of vertical chimney pipe supported only by the fireplace must not exceed 30' (9.1 m). Chimney heights above 30' (9.1 m) must be supported by a Model TF8-S4 or TF10-S4 stabilizer installed at 30' (9.1 m) intervals.

**Note:** The Model TF8-S4 and Model TF10-S4 add 3" (76 mm) net effective height to the total chimney system.

Install the Model TF8-S4 or TF10-S4 stabilizer by fitting inner section into inner section of preceding flue pipe and locking outer stabilizer section into place over the outer chimney pipe. Position stabilizer in framed opening retaining proper clearance. Nail straps securely (under tension in "shear") on framing using 8d nails. Attach next chimney section directly to stabilizer using same techniques as described in Step 4.

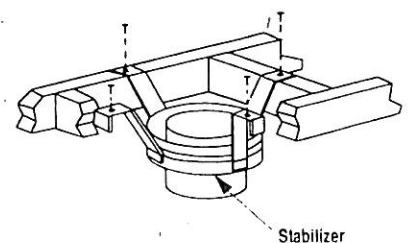


Figure 29

**Note:** Do not apply excessive pressure to any chimney sections installed following the stabilizer. Ensure each chimney section is securely attached by testing as noted in Step 4.

**Step 6.** Select proper Superior roof flashing based on pitch of roof. Use the chart below for selection:

Roof Pitch	TF8	TF10
Flat to 6/12	8-F6	10-F6
6/12 to 12/12	8-F12	10-F12

Next, slide roof flashing over extended chimney section that previously has been installed above the roof opening in Step 4. Slide flashing all the way down until the flashing base rests flat on the roof. Again, check the vertical position of the chimney and the 1" (25 mm) minimum air space to combustibles (See **\*\*Note**).

**Step 7.** Secure flashing by nailing along the perimeter into roof using 8d nails. If shingled roof, slide upper end and sides of roof flashing under shingles (trim if necessary), seal the top and both sides of the flashing to the roof with roof caulking. Cover nail heads with roof caulking (Figure 30).

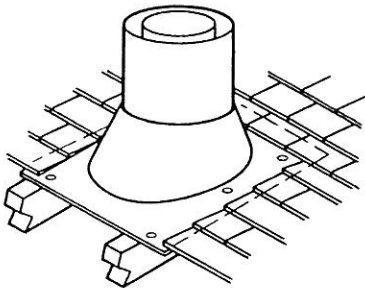


Figure 30

**Step 8.** The standard Superior roof flashing assemblies include a storm collar. Slide storm collar over outer chimney, align with top surface of flashing, insert tab in slot, pull tight and bend tab back over slot. Seal storm collar to outer chimney with roof caulking or mastic around entire circumference of pipe. Also add extra roof caulking where storm collar meets flashing and to the tab/slot area to seal completely against water penetration (Figure 31). Check all joints very carefully to ensure no water intrusion can take place.

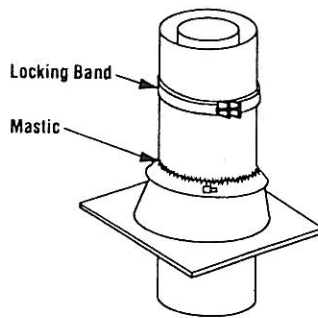


Figure 31

**Step 9.** Superior locking bands, Model LB, may be required if the chimney extends too high above the roof flashing. As a general rule, if the chimney extends more than 6' (1.8 m) above the roof flashing, the use of locking bands is advisable to strengthen the chimney assembly. Align the locking band at the chimney joint. Locking bands wrap around pipe joints equally covering the joints of both pipe sections. Use nut provided and TIGHTEN snugly. Do not over-tighten as this might damage chimney section (Figure 32).

**Note:** If chimney extends more than 8' (2.4 m) above roof surface, guy wires are also recommended. Use three (3) guy wires, attach to locking band assembly, extend and secure to roof in a triangular pattern (Figure 33). Guy wires are not supplied by Superior.

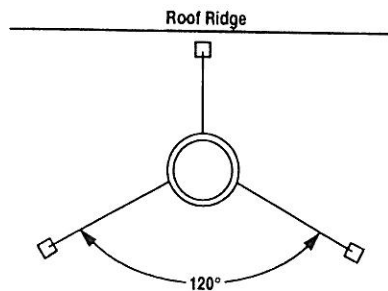


Figure 32

#### Step 10. Using a CTD Round Termination:

Hold CTD over top of last chimney section (Figure 34). Center inner slip section in inner flue pipe and slip down. Center outer locking section over outer flue pipe. Push down until locking tabs are firmly engaged. Pull up slightly on CTD to ensure locking joint has firmly engaged.

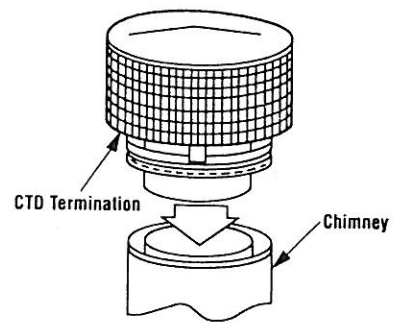


Figure 33

**Note:** Special galvanized over-dipped CTD terminations (P/N 031101 for 8" and P/N 031102 for 10") and CTD terminations (P/N 031111 for 8" and P/N 031112 for 10") are available for installations susceptible to corrosive environments. Contact your distributor or Superior Customer Service for pricing and availability.

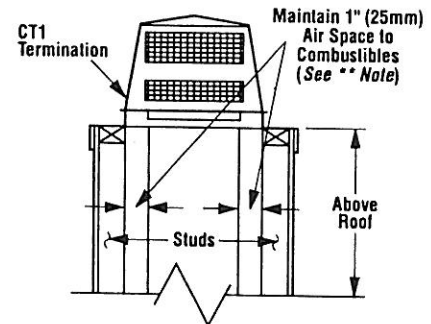


Figure 34

#### Using a CT1 Chase Termination

Refer to specific installation instructions included with CT1 chase termination for clearance statements and installation details.

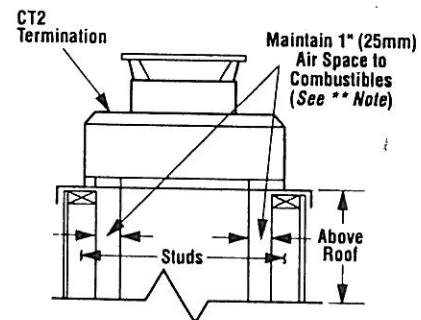


Figure 35

#### Using a CT2 Chase Termination

Refer to specific installation instructions included with the CT2 chase termination for clearance statements and installation details.

**\*\*Note:** 2" (51 mm) when installing in Canada and 2" when installing TF8 chimney on Model HC-4320A fireplace.

## Using a CTD Chase Termination

Refer to specific installation instructions included with the CTD chase termination for clearance statements and installation details.

**Note:** It is recommended that all exterior exposed metal fireplace components; such as terminations, flashings, storm collars and flue be painted with a premium-quality, high-temperature, rust-preventative paint designed for metal. This is especially important when installations are made in abnormally adverse or corrosive environments; such as near lakes, oceans or in areas with consistently high-humidity conditions. Consult the paint manufacturers instructions for proper preparation and application.

For Canadian installations, all chimney installed outside the building must be galvalume (outer sections only), effective January 1, 1992. The appropriate model designations (with a "C" suffix) are located in the back of this manual.

## TEN-FOOT RULE SUMMARY

The minimum chimney height above the roof and/or adjacent walls and buildings is specified by all major building codes.

If the horizontal distance from the peak of the roof is less than 10' (3 m), the top of the chimney must be at least 2' (610 mm) above the peak of the roof.

If the horizontal distance from the chimney edge to the peak of the roof is more than 10' (3 m) a chimney height reference point is established on the roof surface 10' (3 m), horizontally from the chimney edge. The top of the chimney must be at least 2' (610 mm) above this reference point. In all cases, the chimney cannot be less than 3' (914 mm) above the roof at the edge of the chimney.

The 2' in 10' rule is necessary in the interest of safety, but does not ensure smoke-free operation. Trees, buildings, adjoining roof lines, adverse wind conditions, etc., may require a taller chimney should the fireplace not draft properly (Figure 36).

**\*\*Note:** 2' (51 mm) when installing in Canada and 2' when installing TF8 chimney on Model HC-4320A fireplace.

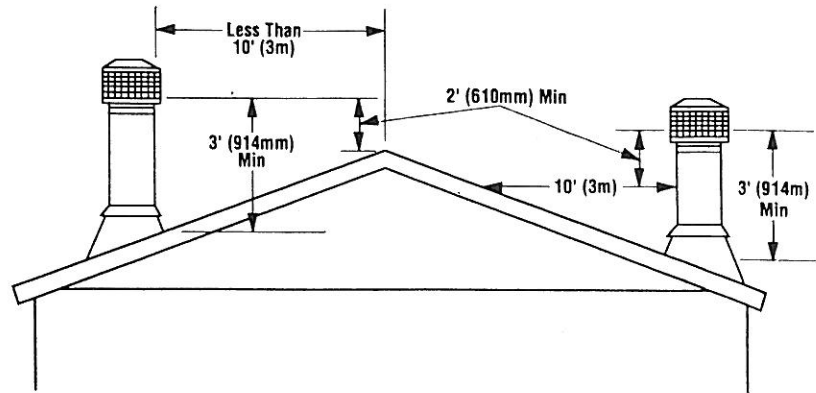


Figure 36

## MULTIPLE TERMINATIONS

If more than one termination is located in the same chase or within the same general proximity, they should be separated in distance at least 24" (610 mm) horizontally from flue center to flue center and stacked or staggered vertically at least 18" (457 mm) apart, from the termination of one smoke exit to the termination of another smoke exit (Figure 37).

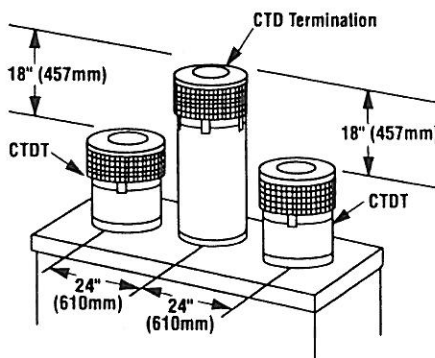


Figure 37

This suggestion is provided in the interest of better operation. If the terminations are located too close to each other, smoke may migrate from one flue into the other.

## TF8 AND TF10 CHIMNEY COMPONENT CALCULATIONS

The minimum installed height of the HC-3320A and HC-3820A Series Fireplace Systems is 12' 0" (3.67 m). The minimum installed height of the HC-4320A Series Fireplace Systems is 15' 0" (4.57 m). The maximum height for all systems is 80' 0" (24.38 m). The installed height includes the fireplace and chimney components.

To determine the number of chimney sections and chimney components required, follow these steps:

1. Determine total vertical height of the fireplace installation. This dimension is the distance from the surface the fireplace sets on to the point where smoke exits from the termination.

2. Determine the number of chimney components required, except chimney sections. This would include firestop spacers, stabilizers, roof flashing, etc.

3. The effective heights of the components are:

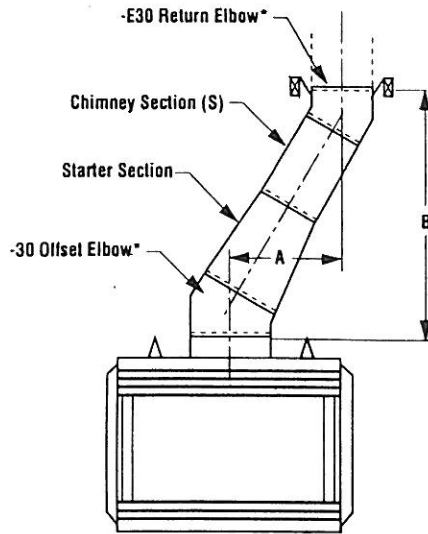
The Fireplace	= 38" (965 mm)
TF8/10-12	= 10 ¼" (260 mm)
TF8/10-18	= 16 ¼" (413 mm)
TF8/10-36	= 34 ¼" (870 mm)
TF8-48	= 46 ¼" (1175 mm)
CTD Termination	= 4" (102 mm)
CT1 Termination	= 12" to 18" (305 to 457 mm)
CT2 Termination	= 15" to 23" (381 to 584 mm)
CTDT Termination	= 12" to 18" (305 to 457 mm)
SS Starter	= 19" (483 mm)
S4 Stabilizer *	= 3" (76 mm)*

\* Required for every 30' (9.1 m) of vertical chimney and/or 10' of offset chimney.

4. Determine amount of chimney height required by subtracting total combined height of all pre-selected components (fireplace and chimney components from total desired height.)

Reference Vertical Elevation Chart and determine the number of chimney sections (quantity and length) required.





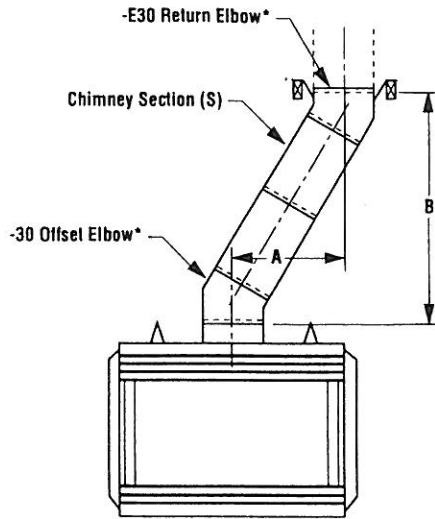
\* Part of Offset/Return Package, Model TF10/8-ES30

Figure 38

### TF8 OFFSET ELEVATION CHART (With TF8-SS Starter Section)

A Offset (Inches)	B Height (Inches)	TF10/8-ES30 Offset/Return Elbow Set	TF8-SS Starter Section	TF8-S4 Stabilizer	Number of TF8 Chimney Sections				A Offset (mm)	B Height (mm)
					12"	18"	36"	48"		
14	32 1/2	1	1	0	0	0	0	0	356	826
19	41 1/4	1	1	0	1	0	0	0	483	1048
22	46 1/2	1	1	0	0	1	0	0	559	1181
24 1/4	50 1/4	1	1	0	2	0	0	0	616	1276
27 1/4	55 1/4	1	1	0	1	1	0	0	692	1403
30 1/4	60 1/2	1	1	0	0	2	0	0	768	1537
31	62	1	1	0	0	0	1	0	787	1575
32 1/4	64 1/4	1	1	0	2	1	0	0	819	1632
35 1/4	69 1/4	1	1	0	1	2	0	0	895	1759
36 1/4	71	1	1	0	1	0	1	0	921	1803
37	72 1/2	1	1	0	0	0	0	1	940	1842
38 1/4	74 1/2	1	1	0	0	3	0	0	972	1892
39 1/4	76	1	1	0	0	1	1	0	997	1930
41 1/2	79 3/4	1	1	0	2	0	1	0	1048	2026
42 1/4	81 1/4	1	1	0	1	0	0	1	1073	2064
44 1/4	85	1	1	0	1	1	1	0	1124	2159
45 1/4	86 1/2	1	1	0	0	1	0	1	1149	2197
47 1/4	90	1	1	0	0	2	1	0	1200	2286
48 1/4	91 3/4	1	1	0	0	0	2	0	1226	2330
49 1/4	93 3/4	1	1	0	2	1	1	0	1251	2381
51 1/2	97 1/4	1	1	0	1	4	0	0	1308	2470
53 1/4	100 1/2	1	1	0	1	0	2	0	1353	2553
54 1/4	102	1	1	0	0	0	1	1	1378	2591
55 1/2	104 1/4	1	1	0	0	3	1	0	1403	2648
56 1/4	105 3/4	1	1	0	0	1	2	0	1429	2686
58 1/4	109 1/4	1	1	0	2	0	2	0	1480	2775
59 1/4	111	1	1	0	1	0	1	1	1505	2819
60 1/4	112 1/2	1	1	0	0	0	0	2	1530	2858
61 1/4	114 1/2	1	1	1	1	1	2	0	1556	2908
66 1/2	123	1	1	1	0	2	2	0	1689	3124
67 1/2	124 3/4	1	1	1	1	0	0	2	1715	3169
68 3/4	126 3/4	1	1	1	2	1	2	0	1746	3219
70 1/2	129 3/4	1	1	1	0	1	0	2	1791	3296
72 1/2	133 1/2	1	1	1	1	0	3	0	1842	3391
75 1/2	138 3/4	1	1	1	0	1	3	0	1918	3524
77 3/4	142 1/4	1	1	1	2	0	3	0	1975	3613
79 1/2	145 1/2	1	1	1	0	0	1	2	2019	3696
80 3/4	147 1/2	1	1	1	1	1	3	0	2051	3747
83 3/4	152 3/4	1	1	1	0	2	3	0	2127	3880
85 1/2	155 3/4	1	1	1	0	0	0	3	2172	3956
89 3/4	163	1	1	1	1	0	4	0	2280	4140
90 1/2	164 3/4	1	1	1	1	0	0	3	2299	4185
92 3/4	168 1/4	1	1	1	0	1	4	0	2356	4274
93 1/2	169 3/4	1	1	1	0	1	0	3	2375	4312

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.



\* Part of Offset/Return Package, Model TF10/8-ES30

Figure 39

### TF8/TF10 OFFSET ELEVATION CHART

A Offset (Inches)	B Height (Inches)	ES30 Offset/Return Elbow Set	S4 Stabilizer	Number of Chimney Sections				A Offset (mm)	B Height (mm)
				12"	18"	36"	48"		
4	15 3/4	1	0	0	0	0	0	102	400
9	24 1/2	1	0	1	0	0	0	229	622
12	29 3/4	1	0	0	1	0	0	305	756
14 1/4	33 1/2	1	0	2	0	0	0	362	851
17 1/4	38 1/2	1	0	1	1	0	0	433	978
20 1/4	43 3/4	1	0	0	2	0	0	514	1111
21	45 1/4	1	0	0	0	1	0	533	1149
22 1/4	47 1/2	1	0	2	1	0	0	565	1207
25 1/4	52 1/2	1	0	1	2	0	0	641	1334
26 1/4	54 1/4	1	0	1	0	1	0	667	1378
27	55 3/4	1	0	0	0	0	1	686	1416
28 1/4	57 3/4	1	0	0	0	3	0	718	1467
29 1/4	59 1/4	1	0	0	1	1	0	743	1505
31 1/4	63	1	0	2	0	1	0	794	1600
32 1/4	64 1/2	1	0	1	0	0	1	819	1638
34 1/4	68 1/4	1	0	1	1	1	0	870	1734
35 1/4	69 3/4	1	0	0	1	0	1	895	1772
37 1/4	73 1/4	1	0	0	2	1	0	946	1861
38 1/4	75	1	0	0	0	2	0	972	1905
39 1/4	77	1	0	2	1	1	0	997	1956
41 1/2	80 1/2	1	0	1	4	0	0	1054	2045
43 1/4	83 3/4	1	0	1	0	2	0	1099	2127
44 1/4	85 1/4	1	0	0	0	1	1	1124	2165
45 1/4	87 1/2	1	0	0	3	1	0	1149	2223
46 1/4	89	1	0	0	1	2	0	1175	2261
48 1/4	91 1/2	1	0	2	0	2	0	1226	2324
49 1/4	94 1/4	1	0	1	0	1	1	1251	2394
50 1/4	95 3/4	1	0	0	0	0	2	1276	2432
51 1/4	97 3/4	1	0	1	1	2	0	1302	2483
54 1/4	103	1	0	0	2	2	0	1378	2616
55 1/4	104 1/2	1	0	1	0	0	2	1403	2654
56 1/2	106 1/2	1	0	2	1	2	0	1435	2705
58 1/4	109 3/4	1	0	0	1	0	2	1480	2788
62 1/2	116 3/4	1	1	1	0	3	0	1588	2965
65 1/2	122	1	1	0	1	3	0	1664	3099
67 3/4	125 1/2	1	1	2	0	3	0	1721	3188
69 1/2	128 3/4	1	1	0	0	1	2	1765	3270
70 3/4	130 3/4	1	1	1	1	3	0	1797	3321
73 3/4	136	1	1	0	2	3	0	1873	3454
75 1/2	139	1	1	0	0	0	3	1919	3531
79 3/4	146 1/4	1	1	1	0	4	0	2026	3715
80 3/4	148	1	1	1	0	0	3	2051	3759
82 3/4	151 1/2	1	1	0	1	4	0	2102	3848
83 1/2	153	1	1	0	1	0	3	2121	3886

\* 48" chimney sections are not available with the TF10 system.

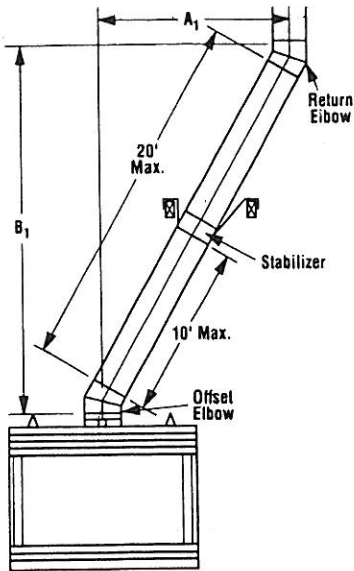


Figure 40

### SPECIAL OFFSET INSTRUCTIONS

To clear any overhead obstructions, you may offset your chimney system using Superior 30° offset and return elbows. Use two elbows – an offset elbow to initiate the offset and a return elbow to terminate it (Figure 40).

The offset and return elbows may be attached together, or a section(s) of chimney may be used between them. Do not exceed 20' (6.1 m) in total length between elbows (Figure 40). When offsetting directly off Model HC-4320A, **always** use a TF10-30 offset elbow. The TF8-SS starter section may then be used as a transition to the TF8 chimney system. If sections of pipe exceed 10' (3 m) between elbows, a chimney stabilizer must be used at the 10' (3 m) point (Figure 41). The stabilizer support straps must be attached under tension (in shear) to structural framing members above. When two sets of elbows are used, the maximum combined length of chimney used between elbows cannot exceed 20' (6.1 m) (Figure 42). **Example:** If  $C_1 = 10'$  (3 m) then  $C_2$  cannot exceed 10' (3 m). A 30° offset elbow, angling in any direction, may be the first component used off the top of the fireplace flue collar.

If an offset exceeds 6' in length, each chimney joint beyond the first 6' of offset to the return elbow, must be secured by a No. 8 x 1/2" sheet metal screw located at the underside of the joint (Figure 43).

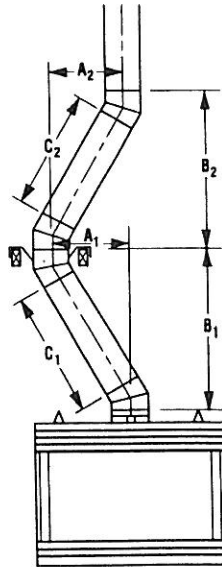


Figure 41

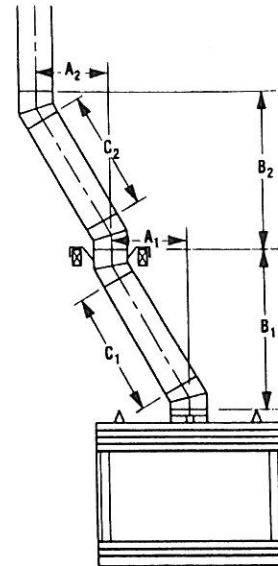


Figure 42

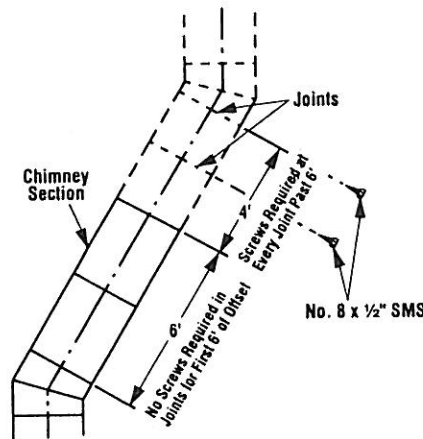


Figure 43

A 1/8" (3 mm) diameter hole must be drilled in the chimney joint using a 1/8" (3 mm) diameter drill. Hole should be drilled in center of joint overlap (Figure 44). Be sure to drill only through the outer chimney casting. Do not puncture the inner flue.

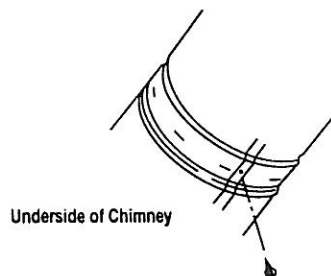


Figure 44

Maximum offset of chimney system in the U.S. is 30°. In Canada, the maximum offset is 45°. Refer to the Canadian installation addendum for specific information and application. Two offsets must not be assembled to form a 60° offset. However, two sets of offset and return elbows may be used on a single flue system, provided the total height of the system exceeds 25' (7.5 m) (Figure 42).

Return elbow support straps must be securely attached under tension (in shear) to structural framing members above. Do not substitute a TF8-30 or TF10-30 offset elbow in place of a TF8-E30 or TF10-E30 return elbow.

### OFFSET CALCULATIONS

1. Use Offset Chart to determine amount of horizontal offset (A) and height (B) for various chimney section assemblies.
2. Use "Height of chimney Only" column in the Vertical Elevation Charts on pages 12 and 13 to determine combinations of chimney used above return elbow to achieve desired heights. Reference Components Effective Height Chart in vertical elevation chart section.
3. Use Elevation Chart as job estimator only. Add necessary firestop spacers and stabilizers as required. Firestop spacers must be used as shown in Figures 23 and 24 and stabilizers as shown in Figure 29.

## TO INSTALL OFFSETS

First, review Offset Elevation Charts and Figures 41 and 42 on page 13 for reference.

**Step 1.** Select the desired chimney system; use TF8 pipe for Models HC-3320A and HC-3820A, use TF8 or TF10 pipe for Model HC-4320A. Determine the offset distance where chimney is to pass through the first ceiling-dimension "A." To find this point on your ceiling, first determine the center point for a vertical chimney following the instructions for vertical installation.

Measure height to the ceiling from the top of fireplace-dimension "B." Use Offset Elevation Chart to find dimension "A." Mark point where you will drive your nail to show the center point for your offset ceiling cut.

**Step 2.** Proceed by using the straight-up installation instructions for cutting and framing ceiling and roof openings.

**Note:** See Framing and Dimension Chart for the sizes of the ceiling and roof openings. The size of the roof opening varies with the degree of pitch of the roof.

## OFFSET ELBOW ASSEMBLY

Offset elbows install the same as chimney sections. First, snap the inner section INTO the preceding inner section of flue. Check connection by pulling up slightly to ensure a tight fit. Next, the outer sections snap lock OVER the preceding outer section of chimney. Again, check outer section by pulling up slightly to ensure proper connection is made.

## RETURN ELBOW ASSEMBLY

Return elbows install the same way as round terminations and stabilizers.

**Step 1.** Hold return elbow over top of last chimney section.

**Step 2.** Center inner slip section into inner flue pipe and slip down.

**Step 3.** Center outer-locking section over outer chimney pipe. Push down until locking joint has firmly engaged.

**Step 4.** Pull up slightly on return elbow to ensure locking joint has firmly engaged.

**Step 5.** Secure support straps to framing members by nailing under tension in shear.

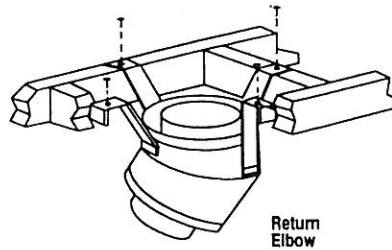


Figure 45

**Note:** The return elbow assembly performs the same function as a stabilizer. Consider this when determining the need for a stabilizer.

**Note:** Do not apply excessive pressure to any subsequent chimney section following return elbow assembly when installing. Ensure that each subsequent chimney section is securely attached by testing as noted above.

## TF8 AND TF10 OFFSET/RETURN ELBOWS

Primarily used when fireplace penetrates a 6" (152 mm) thick wall. Refer to installation instructions packed with TF8-OR15 and TF10-OR15 for proper usage.

## CHIMNEY OFFSET 30° THROUGH FLOOR OR CEILING

It may be necessary to assemble the chimney at 30° when passing through the floor or ceiling area. Use appropriate 30° angled firestop spacer as shown in Figures 46 and 47. Support the chimney at floor or ceiling penetration with a stabilizer if distance of chimney below ceiling is 10' (3 m) or more. Maintain 1" (25 mm) minimum air space to combustibles from chimney sections (See \*\*Note).

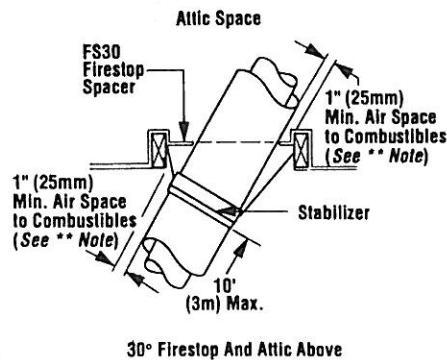


Figure 46

**\*\*Note:** 2" (51 mm) when installing in Canada and 2" when installing TF8 chimney on Model HC-4320A fireplace. Use FS30-2 firestop spacer.

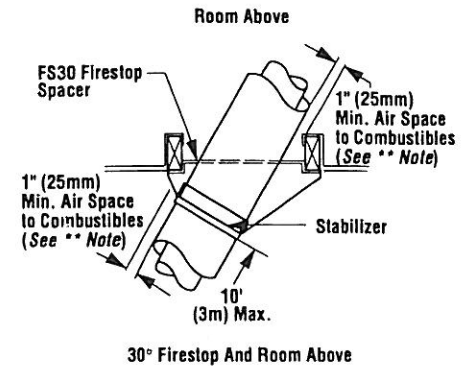


Figure 47

## OPTIONAL EQUIPMENT Glass Doors

If glass doors are to be installed on the HC-A fireplace, refer to specific installation instructions packed with the glass doors. Superior glass doors, Models 38BF, 43BF, 33BF-PB, 38BF-PB, 43BF-PB, 33BF-SPB, 38BF-SPB, 43BF-SPB, 33BF-ABR, 38BF-ABR, 43BF-ABR, 33C-SPB, 38C-SPB, 43C-SPB, 33SBF-BR, 38SBF-BR, 43SBF-BR, Sonata 38 and Sonata 43 are for use only on these Superior factory-built fireplaces.

Use of other non-listed glass doors on these fireplaces may constitute a potential fire hazard and are not recommended.

**CAUTION: DO NOT ATTEMPT TO TOUCH THE DOORS WITH YOUR HANDS WHILE THE FIREPLACE IS IN USE. ALWAYS USE DOOR HANDLES. DOORS WILL BECOME VERY HOT WHEN FIREPLACE IS IN USE.**

**WARNING: FIREPLACES EQUIPPED WITH DOORS SHOULD BE OPERATED ONLY WITH THE DOORS FULLY OPEN OR FULLY CLOSED.**

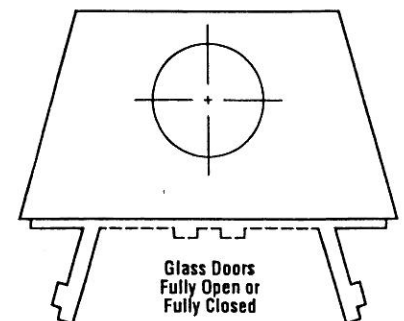


Figure 48



**CAUTION: CERTAIN GLASS DOORS OVERLAP THE BLACK METAL FACING OF THE FIREPLACE. IF THE FIREPLACE HAS BEEN FACED WITH NONCOMBUSTIBLE MATERIALS, THERE MIGHT NOT BE SUFFICIENT CLEARANCE TO INSTALL THE GLASS DOORS OF YOUR CHOICE. ENSURE ADEQUATE CLEARANCE IS MAINTAINED AT ALL TIMES SO AS NOT TO INTERFERE WITH THE INSTALLATION AND OPERATION OF GLASS DOORS.**

### Combustion Air Kit

Optional combustion air kits, Model CAK-4 or CAK-4LD, may be used with the HC-A Series fireplaces. An optional adapter, Model ATO-4A, is also available for use with the combustion air kits for easier installation under certain conditions, especially when installing the duct vertically. Refer to the installation instructions packaged with the air kits for specific installation information. If used, the outside air kit must be installed before the fireplace is framed and enclosed in the finished wall.

Outside air drawn into the fireplace supplies air to the fire for combustion. Only one combustion air duct on the left side of the fireplace is necessary if installed.

If additional length of duct is necessary, purchase locally available U.L. Class 0 or Class 1 metallic ducting. The duct may extend up to 50' (15.24 m) in any direction.

**Note:** When installing the air duct vertically, DO NOT terminate the duct closer than 3' below the chimney top.

There is one hand operated shut-off valve located in the left side of the fireplace opening behind the screen. To open, pull the handle out. The combustion air damper should be fully open when the fireplace is in use and fully closed when the fireplace is not in operation to prevent outside air from entering your home.

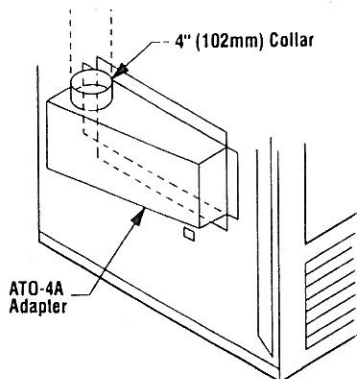


Figure 49

**CAUTION: NEVER LOCATE INLET WHERE IT CAN BE BLOCKED BY SHRUBS, SNOWDRIFTS, ETC. NEVER LOCATE INLET IN GARAGE OR ANY AREA WHERE THERE IS ANOTHER FUEL BURNING APPLIANCE OR PRODUCTS EMITTING COMBUSTIBLE GASES SUCH AS PAINT, GASOLINE, ETC. IN COLD CLIMATES, IT IS RECOMMENDED THE COMBUSTION AIR DUCT BE INSULATED.**

Outside combustion air ducting may be run upwards or vertically through framing and ceiling joists, with the hood installed through an outside wall and 3' (1 m) below the termination. Ducting may also be run downward through floor joists and under the home to a ventilated crawlspace not considered part of the living area of the home.

**Note:** Do not terminate combustion air kit in attic space under any circumstances.

### Collar Duct Kit

Refer to the installation instructions provided with the collar duct kits, Models TF8-CDK and TF10-CDK (P/N 097881), for proper usage.

### Variable Speed Wall Switch

Refer to the installation instructions provided with the variable speed wall switch, Model VSWS, for installation details.

### Forced Air Kit Electrical Connections

If you are installing a Superior forced air kit, Model FAK-1500 or Model FAK-3000, see the installation instructions provided with the appropriate kit for electrical wiring requirements. The fireplace has been pre-wired at the factory but must be connected to the main power supply at the time of installation if either fan kit is to be installed later. The electrical connections must be made before the fireplace is framed and enclosed in the finished walls.

**CAUTION: ELECTRICAL CONNECTIONS SHOULD ONLY BE PERFORMED BY A QUALIFIED, LICENSED ELECTRICIAN. MAIN POWER MUST BE OFF WHEN CONNECTING FANS TO MAIN ELECTRICAL POWER SUPPLY OR PERFORMING SERVICE.**

### GAS LINE INSTALLATION

Superior's HC-A Series have been approved to accept a 1/2" (13 mm) gas line for an approved gas appliance. Always have the appliance installed by a qualified, licensed plumber in accordance with all local building codes. The gas line may enter either end of the fireplace.

**CAUTION: PLUMBING CONNECTIONS SHOULD ONLY BE PERFORMED BY A QUALIFIED, LICENSED PLUMBER. MAIN GAS SUPPLY MUST BE OFF WHEN PLUMBING GAS LINE TO THE FIREPLACE OR PERFORMING SERVICE.**

If you're installing a gas line, connect it before the fireplace is framed and enclosed in the finished wall. The gas knockout is determined by a 1 1/8" (29 mm) round indentation located at the bottom and slightly off center in the side refractories. **THE KNOCKOUT IS ALWAYS REMOVED FROM INSIDE THE FIREPLACE. DO NOT REMOVE THE KNOCKOUT UNLESS YOU ARE INSTALLING A GAS LINE.** If removal is attempted from the outer wrapper, side-refractory damage may occur. With a medium-sized hammer, lightly tap the surface of the indentation. The refractory material is very thin in this area and is easily removed. Once a small hole has been made, continue tapping until you have reached sufficient diameter for the gas line to fit through. The entire knockout does not have to be removed. Remove insulation in the gas line channel.

Install only a 1/2" (13 mm) black iron pipe through fireplace wall for connection to a decorative gas appliance inside the firebox. Outside, the iron pipe connects to a gas shut-off valve recessed flush into the wall or floor. The valve should be controlled by a removable valve key for safety.

Always plumb gas line installation per local codes. Check all connections with soap suds; leaks will bubble. Never test any gas line connection with a match or open flame.

**IMPORTANT: RE-PACK INSULATION MATERIAL IN SQUARE HOLE AROUND GAS LINE; INTERIOR AND EXTERIOR, TO SEAL.**

In Canada, this provision is intended for connection to a decorative gas appliance only in accordance with the latest National Gas Installation Code, CAN 1-B149.1. This complies with the ULC S610 standard.

For all areas other than Canada, this provision is intended only for connection to a decorative gas appliance incorporating an automatic shut-off device and complying with the standard for Decorative Gas Appliances for installation in vented fireplaces, ANSI Z21.60. Install in accordance with the National Fuel Gas Code, ANSI Z223.1. This complies with the revised UL 127 standard.

**CAUTION: WHEN USING THE DECORATIVE GAS APPLIANCE, THE FIREPLACE DAMPER MUST BE SET IN THE FULLY OPEN POSITION.**

## COLD CLIMATE INSULATION

If you live in a cold climate, it is especially important to seal all cracks around the fireplace opening with noncombustible material and wherever cold air could enter the room. Surrounding materials must be caulked where it meets the black metal facing of the fireplace to avoid cold air intrusion. Use noncombustible caulking material only on fireplace facing to seal. Also, the outside air inlet duct should be wrapped with noncombustible insulation to minimize the formation of condensation. Do not place insulation materials against chimney sections. Installing the collar duct kit may be beneficial in cold climates.

**Note:** A 1" (25 mm) air space must be preserved for all materials extending for any continuous length adjacent to the chimney (See **\*\*Note**).

It is especially important to insulate between the studs of an outside chase cavity and under the floor if the floor is above ground level. Do not place insulation directly against the fireplace or chimney system.

## FIREPLACE FINISHES Mantels and Trim

In Canada, the minimum height for a combustible mantel is 18" (457 mm) above the fireplace opening. *Figures 50 and 51* show typical Canadian installations.

In installations other than Canada, combustible mantels and trim may either project in front of or be flush with the finished wall as per NFPA 211 section 7-3.3.3. and *Figure 52*. If a mantel is of a noncombustible material, it is exempt from these requirements as long as it does not interfere with the installation or operation of glass doors or block the inlets and outlets.

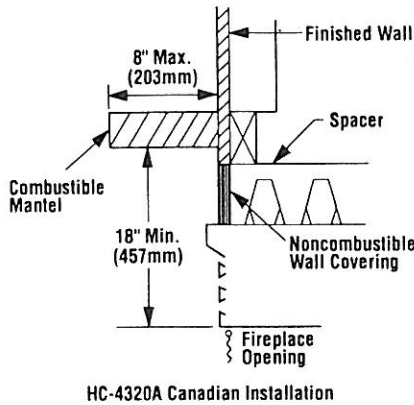


Figure 50

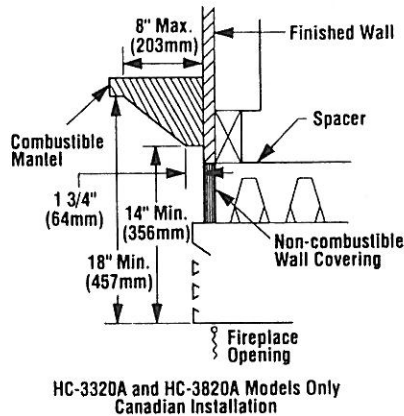


Figure 51

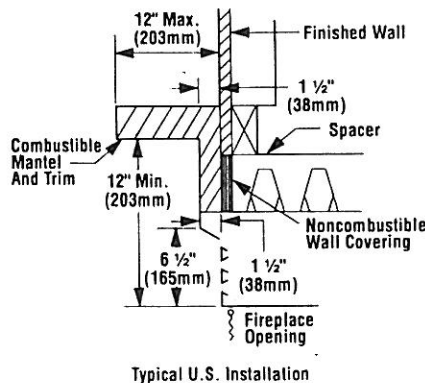


Figure 52

## Hearth Extensions and Wall Shields

A hearth extension must be installed with all fireplaces. It is to protect the floor in front of the fireplace from both radiant heat and sparks. The hearth extension must extend 8" (203 mm) beyond both sides of the fireplace opening and 16" (406 mm) beyond the front. Use a hearth extension constructed of a durable noncombustible material having an equal or greater insulating value of  $k = .84 \text{ BTU IN/FT}^2 \text{ HR } ^\circ\text{F}$  or a thermal resistance that equals or exceeds  $r = 1.19 \text{ HR } ^\circ\text{F FT}^2/\text{BTU IN}$ . A minimum  $3/8$ " (10 mm) thick noncombustible material is all that is required over a noncombustible or slab floor.

**Note:** Any noncombustible material whose  $1/2$ " (13 mm)  $k$  value is less than .84 or whose  $r$  value is more than 1.19 is acceptable.

If the fireplace is installed on a combustible floor, use the metal safety strips (provided) on the floor extending half under the fireplace and half under the hearth extension.

Secure the hearth extension to the floor to prevent possible shifting.

If a continuous perpendicular side wall is closer than 15" (381 mm) to the fireplace opening on the HC-3320A or HC-3820A and 18" (457 mm) to the fireplace opening on the HC-4320A a wall shield is required. Construct a 40" x 40" x  $1/2$ " (1016 mm x 1016 mm x 13 mm) wall shield made of millboard or a durable noncombustible material with equal or greater insulating value than  $K = .84 \text{ BTU IN/FT}^2 \text{ HR } ^\circ\text{F}$ . In no case shall a continuous perpendicular side wall be closer to the fireplace opening than 8" (203 mm).

If fireplace is installed diagonally across a 90° corner no wall shields are required.

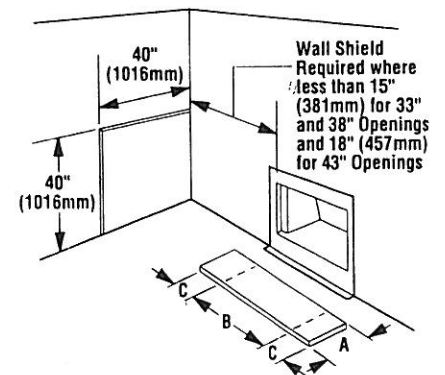


Figure 53

**\*\*Note:** 2" (51 mm) when installing in Canada and 2" when installing TF8 chimney on Model HC-4320A fireplace.

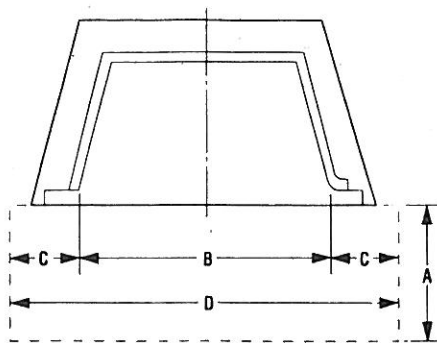


Figure 54

**Hearth Extension Dimensions**

Opening Width	33"	38"	43"
A	16" (406 mm)	16" (406 mm)	16" (406 mm)
B	25 1/2" (648 mm)	30 1/4" (794 mm)	35" (889 mm)
C	8" (203 mm)	8" (203 mm)	8" (203 mm)
D	41 1/2" (1054 mm)	46 1/2" (1175 mm)	51" (1295 mm)

**Methods of Determining Hearth Extension and Wall Shield Equivalents**

To determine the thickness required for any desired material when either the k or r values are known:

- $T_M$  = Thickness of desired material in inches
- $k_M$  = k value of desired material
- $r_M$  = r value of desired material
- $T_L$  = Minimum listed thickness

**Example:** Micore CV230 is to be used with the HC-3820A fireplace. How thick must this material be?

Using the k formula:

Desired Required Thickness =  $\frac{\text{k value of desired material (per inch)}}{\text{k value of listed material (per inch)}} \times \text{Min. Thickness of Listed Material}$

$$T_M \text{ (inches)} = \frac{k_M}{0.84} \times T_L$$

$$T_M \text{ (inches)} = \frac{0.43^* \times 1/2^{**}}{0.84}$$

Answer using  $k = 0.51 \times 1/2" = 0.25 = 1/4"$

\* value taken from chart  
\*\* minimum thickness per listing

Using the r formula:

Desired Required Thickness =  $\frac{\text{r value of listed material (per inch)}}{\text{r value of desired material (per inch)}} \times \text{Min. Thickness of Listed Material}$

$$T_M \text{ (inches)} = \frac{1.19}{r_M} \times T_L$$

$$T_M \text{ (inches)} = \frac{1.19}{2.33^*} \times 1/2^{**}$$

Answer using  $r = 0.51 \times 1/2" = 0.25 = 1/4"$

**Alternate Hearth Extension and Wall Shield Materials**

Listed Material	Values		Min. Thick
	k	r	$T_L$
Millboard	.84	1.19	1/2"
Alternative Materials	Values		Min. Thick
	k	r	$T_M$
Common brick	5.00	0.20	3"
Cement mortar	5.00	0.20	3"
Ceramic tile	12.5	0.08	7 1/2"
Marble	11.0	0.09	6 1/2"
Micore CV230 (U.S. Gypsum)	0.43	2.33	1/4"
Ceraform 126 (Johns-Manville)	0.27	3.70	1/4"

At times it is important to know what combinations of materials are acceptable for use as hearth extensions. The "R values" are used to determine acceptable combinations of materials because "R values" are additive where r and k values are not.

$$\text{"R value"} = \frac{1}{k} = r \times \text{thickness of material used}$$

**Example:** Given that the required "R value" for a suitable hearth extension used with the HC-3820A must be equal to or greater than:

$$\text{"R"} = r \times T_L = 1.19 \times 1/2" = 0.595$$

If it is desired to elevate a marble hearth extension to a level of 5" or more above the floor surface. What combination of noncombustible materials can be used to accomplish this?

If common brick is used so that the 3 1/2" dimension is the height, "R" for the common brick becomes:

$$\text{"R"}_M = r \times T_M = 0.20 \times 3 1/2" = 0.70$$

Using 1/2" of mortar to set the brick, "R" for the mortar is calculated as follows:

$$\text{"R"}_M = r \times T_M = 0.20 \times 1/2" = 0.10$$

A 3/4" marble slab set in 1/2" mortar covers the brick, "R" for the marble and mortar becomes:

$$\text{"R"}_M = r \times T_M = 0.09 \times 3/4" = 0.068$$

$$\text{"R"}_M = r \times T_M = 0.20 \times 1/2" = 0.10$$

The sum of all "R values" is:

$$0.70 + 0.10 + 0.068 + 0.10 = 0.968$$

This would be an acceptable combination of material for the hearth extension since the total calculated "R value" of the materials used exceeds the required "R value" of 0.595

**WARNING: THE CRACK BETWEEN THE FIREPLACE AND THE HEARTH EXTENSION MUST BE SEALED WITH A NON-COMBUSTIBLE MATERIAL.**

**WARNING: WHEN INSTALLING THE HEARTH EXTENSION, BE CAREFUL NOT TO BLOCK THE HEAT-CIRCULATING AIR INLET GRILL.**

**WARNING: FIREPLACE MUST BE RAISED IF HEIGHT OF HEARTH EXTENSION EXCEEDS 1 1/2" (38MM) ABOVE BOTTOM OF FIREPLACE (FIGURE 55).**

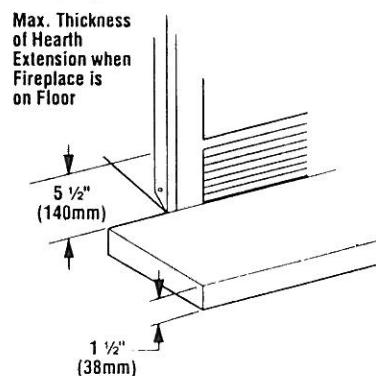


Figure 55

## FINISH TO YOUR TASTE

There are a wide variety of "finished looks" for your HC-A Series from formal wall decor with elaborate mantels to rustic wood paneling or warm brick and marble facings.

Only noncombustible materials like stone, tile, brick, etc. may overlap the black front facing, but be sure not to interfere with the installation and operation of glass doors or block the upper or lower grilles. Seal all joints between the black facing and wall surrounds to prevent air intrusion. Use noncombustible caulking material only to seal the black metal facing to the surround material on the finished wall.

Combustible materials may project beyond the sides of the fireplace opening as long as they are kept within the shaded areas illustrated in Figures 57 and 58.

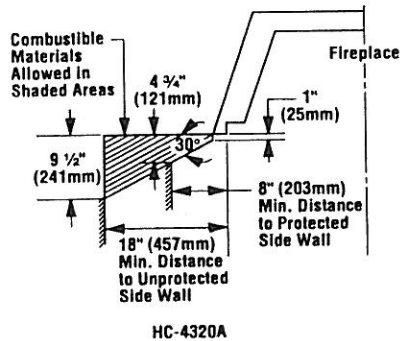


Figure 56

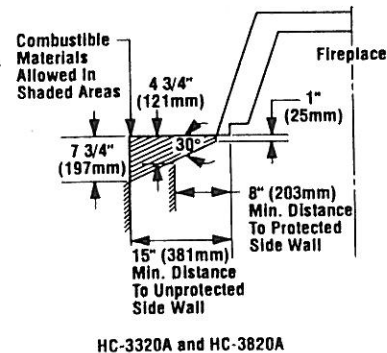


Figure 57

## SUPERIOR ACCESSORY PARTS AND COMPONENTS LIST FOR HC-A SERIES FIREPLACES

The following accessory parts and components are to be used only with your Superior fireplace system. Separate installation instructions are packaged with all combustion air kits, glass doors, forced air kits and chimney terminations.

If you encounter any problems or have questions concerning the installation or application of this system, please contact your distributor. For your nearest distributor contact:

**SUPERIOR FIREPLACE COMPANY**  
**4325 Artesia Ave.**  
**Fullerton, California 92633**  
**714-521-7302**

Model	Part Number	Weight
HC-3320A	P/N 036531	150 lbs.
HC-3820A	P/N 036532	170 lbs.
HC-4320A	P/N 036533	190 lbs.



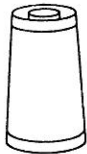
P/N 008330 TF8-12  
 P/N 008335 TF8-18  
 P/N 008340 TF8-36  
 P/N 017931 TF8-48  
 P/N 010297 TF10-12  
 P/N 010298 TF10-18  
 P/N 010299 TF10-36

Chimney Section



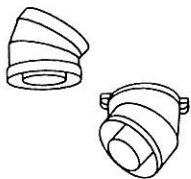
P/N 040621 TF8-18C  
 P/N 040622 TF8-36C  
 P/N 040657 TF10-18C  
 P/N 040652 TF10-36C

Canadian (Exterior)  
 Chimney Section



P/N 008345 TF8-SS

Starter Section



P/N 022152 TF8-ES30  
 P/N 031691 TF8-ES45  
 P/N 022153 TF10-ES30  
 P/N 022154 TF10/8-ES30

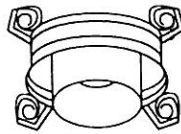
(Canada Only)

Offse/Return Package



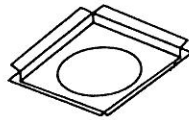
P/N 014881 TF8-OR15  
 P/N 014882 TF10-OR15

Offse/Return



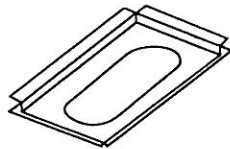
P/N 010293 TF8-S4  
 P/N 010292 TF10-S4

Stabilizer



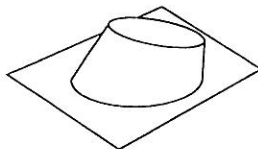
P/N 006916 8FS  
 P/N 002150 10FS  
 P/N 020141 8FS-2  
 P/N 020121 10FS-2

Firestop Spacer



P/N 006918 8FS30  
 P/N 002300 10FS30  
 P/N 020151 8FS30-2  
 P/N 020131 10FS30-2

Firestop Spacer



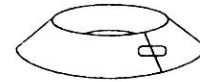
P/N 006921 8F6  
 P/N 002000 1062  
 P/N 006923 8F12  
 P/N 002050 10F12

Flashing



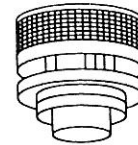
P/N 002400 LB

Locking Band



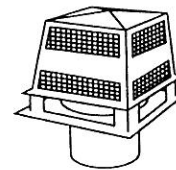
P/N 002013 SC

Storm Collar



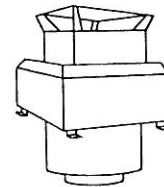
P/N 010218 TF8-CTD  
 P/N 010399 TF10-CTD

Round Termination



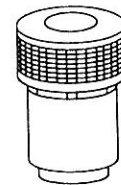
P/N 005302 TF8-CT1  
 P/N 010400 TF10-CT1

Chase Termination



P/N 015601 TF8-CT2  
 P/N 015602 TF10-CT2

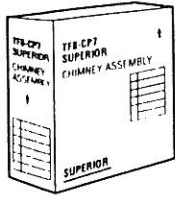
Chase Termination  
 (Square)



P/N 021961 TF8-CTDT  
 P/N 021971 TF10-CTDT

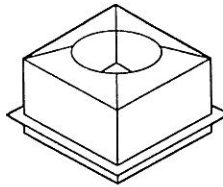
Chase Termination  
 (Round)

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE



Contents:  
 3 - TF8-36  
 1 - 8FS  
 1 - 8F6  
 1 - TF8-CTD

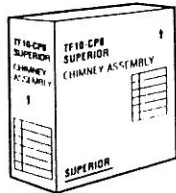
Chimney Pack  
 Conventional P/N 011691 TF8-CP7



Attic Shield Assembly  
 Firestop Spacer (Canadian) P/N 037371 TF8-FSAS  
 P/N 037372 TF10-FSAS

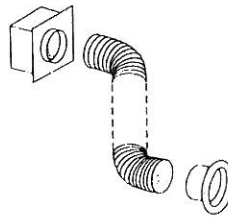


Refractory Tint Kit P/N 008988 RTK

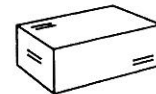


Contents:  
 4 - TF10-36  
 1 - 10FS  
 1 - 10F6  
 1 - TF10-CTD

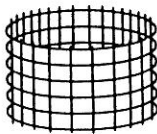
Chimney Pack  
 Conventional P/N 013981 TF10-CP8



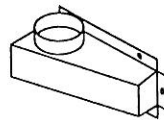
Combustion Air Kit  
 Less Duct P/N 08373 CAK-4  
 P/N 045341 CAK-4LD



Refractory Patch Kit P/N 010405 RPK



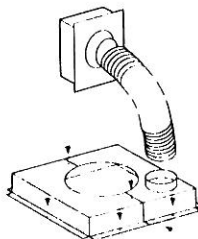
Spark Arrester  
 (CT2 Terminations) P/N 032331 SA-2



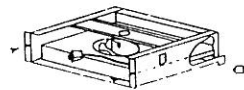
Air Take-off  
 Boot Adapter P/N 037981 ATO-4A



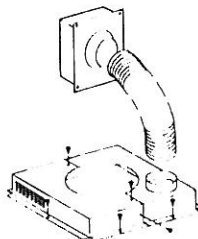
Bulk Duct Kit P/N 015801 BDK



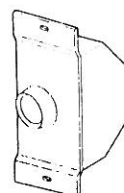
Chimney Collar  
 Enclosure Kit P/N 020161 TF8-CCEK  
 (Canada Only) P/N 020171 TF10-CCEK



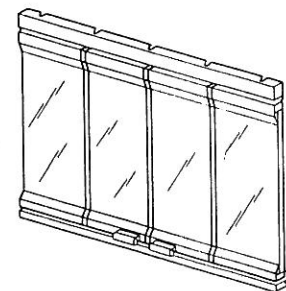
Forced Air Kit P/N 011781 FAK-1500  
 P/N 045421 FAK-3000



Collar Duct Kit P/N 020165 TF8-CDK  
 (U.S. Only) P/N 020173 TF10-CDK



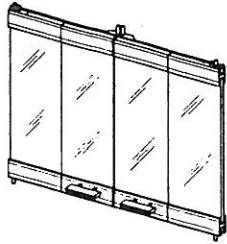
Variable Speed  
 Wall Switch P/N 045571 VSWS



*Note: The Bi-Fold Series glass doors overlap the frame around the fireplace. Allow 1/16" clearance; top, bottom and each side when applying facing materials.*

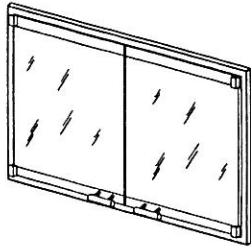
P/N 027711	38BF
P/N 027712	43BF
P/N 027631	33BF-PB
P/N 027632	38BF-PB
P/N 027633	43BF-PB
P/N 026961	33BF-SPB
P/N 026962	38BF-SPB
P/N 026963	43BF-SPB
P/N 027637	33BF-ABR
P/N 027634	38BF-ABR
P/N 027635	43BF-ABR

"ALL-GLASS™"  
 Bi-Fold Doors



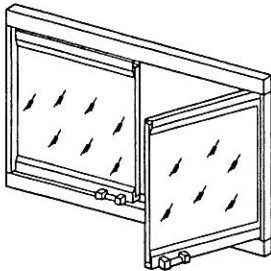
"ALL-GLASS™"	P/N 037831	33SBF-BR
Extruded Aluminum	P/N 037832	38SBF-BR
Bi-Fold Doors	P/N 037833	43SBF-BR

*Note: The Sonata Series glass doors overlap the frame around the fireplace opening. Allow 1/16" clearance at each side when applying facing materials.*



	P/N 097271	Sonata 38
Brass Twin-Pane Doors	P/N 097272	Sonata 43

*Note: The C Series glass doors overlap the frame around the fireplace opening. Allow 1/4" clearance at the top and the bottom and 1/2" clearance at each side.*



"ALL-GLASS™"	P/N 038951	33C-SPB
Doors	P/N 038952	33C-SPB
	P/N 038953	43C-SPB

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P/N 095713 REV. 1 6/95

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