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Dear Customer:

The ONYX fireplace incorporates technology with elegance to give you a beautiful view of the fire without compromising on heating efficiency or environmental quality.

We have designed your new ONYX to be easy to install, operate and maintain. It is in your best interest to become familiar with it. Study your manual to be sure the installation is correct, then follow the guide for operation and maintenance.

We at RSF ENERGY, congratulate you on your choice of the ONYX and are confident that you have purchased a fireplace that is simply, the best in its class.

Sincerely,

RSF ENERGY Ltd



JG (Hans) Duerichen PEng
President

February, 1997 Ver. 13

SAFETY FIRST

DO'S AND DONT'S

If this fireplace is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation requirements in your area.

NOTE: We strongly recommend installers to be WETT or WHERF certified.

To ANYONE using this fireplace:

These DO's and DO NOT's are for your safety.

1. DO read this instruction manual before lighting your first fire.
2. DO burn seasoned wood fuel only.
3. To avoid glass breakage, DO NOT slam the fireplace door.
4. DO NOT use gasoline, type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or freshen up a fire in this fireplace. Keep all such liquids well away from the fireplace while it is in use.
5. DO NOT overfill the fireplace.
6. DO keep all combustible materials (furniture, shoes etc.) at least 4 feet away from the front of the fireplace.

CREOSOTE

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

The chimney should be inspected periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/4" or more), it should be removed to reduce the risk of chimney fire.

WARNING: *Burn dried wood only! Do not burn:*

- *driftwood*
- *treated wood*
- *coal*
- *garbage*
- *plastic*

Do not use construction scraps (e.g., 2x4 or plywood scraps) as your only supply of fuel, as this may overheat and seriously damage the fireplace. Use no more than 3 densified fuel logs (e.g., Presto logs) at a time.

REMEMBER: *The ONYX fireplace is engineered as an air tight burn unit and demands controlled combustion air for optimum performance. Optimum performance is accomplished by ensuring that the door is always closed; thereby creating an air tight seal. This enables combustion air to be drawn through the outside air duct only, at a specified flow rate.*

GENERAL SPECIFICATIONS

THE COMBUSTION CONTROL SYSTEM

Since the door is sealed, all combustion air must come from outside the house through a draft control. This control has a bimetal coil to allow more air when the unit is cold and less when hot, guarding against overheating. It is controlled either manually through the lever below the door handle or through an optional electric wall thermostat.

To achieve a low burn, close draft control completely by moving the control all the way to the left. For medium low burn, set the control in the centre to the right. For maximum heat output, open the control all the way to the right.

Initially, it is best to operate the fireplace with the manual control fully "on" (moved to the right as far as possible) for the first few days. Just control the fire like you would any ordinary fireplace using two or three logs at a time for a smaller fire or more logs for more heat. Once you become familiar with operating the fireplace with the control open, you can start experimenting with lower settings. Remember: when it is hot, the control will not need as much movement to reduce the fire, than when it is cold. The bimetal coil will have already shut the damper part way.

Control of your fire also depends largely upon the wood you burn. Drier wood burns hotter and faster. A heavier species of wood increases your burn time. Using larger diameters of wood will increase the controllability of your fireplace as well as the burn time. We

encourage you to experiment with the type and size of wood you use to find what best suits your wood burning needs.

The combustion air inlet outside your home can be fitted with a shut-off damper. If your fireplace is not in use during very cold weather and you find frost building up above your door, see your dealer about this option (Part #FD-O). The damper should be closed when the fireplace is not in use. An optional power shut-off is also available (Part #FD-HD) - see Figure 6.

THERMOSTAT OPERATION

If you want constant heat day and night, you will be very surprised at what the wall thermostat option can do for you. Once you have your fire burning, just set the manual control on "low" and let the automatic thermostat take over. Your room temperature will keep as even as though you were heating with oil, gas or electricity - except you'll find wood heat more comfortable (See Options: Wall Thermostat FD-HC4).

Note: This thermostat controls the combustion air rate not the circulation blower.

THERMAL SWITCH

The Thermal Switch, which acts as an intermittent heat switch, restricts the blower operation of either the FD-HB5-N or FD-HB6 until the fireplace has reached a certain temperature. The switch has 2 settings. At 110 ° Fahrenheit, the switch enables the blower to turn on. Once the fireplace cools down to 90 ° Fahrenheit, the switch deactivates the blower and the cycle continues. You can have a by-pass switch installed if you do not want to wait for the thermal switch to come on. See page 42.

CIRCULATION BLOWER

If you have the optional internal blower installed, adjust the speed of the blower as you desire. The rheostat should have been installed at a convenient spot on the wall. When a fire is burning, the blower automatically turns on after the thermal switch temperature has been reached and then shuts off when the ONYX has cooled. The maximum heat output is higher with the blower running. (See Options: Circulating Blower FD-HB5)

THE GRAVITY VENT SYSTEM

If there are areas in your home that you would like to heat either in an upper level or an adjacent room, the gravity vent system can provide this heat without the use of a blower. It

is controlled by a gravity vent damper. The handle is located between the top louvres of the fireplace. Simply turn the lever to adjust the air flow through the gravity vent ducting. As the hot air rises, it will be distributed through the insulated ducting to the outlet (See Options: The Gravity Vent System FD-VO).

CENTRAL HEAT SYSTEM

You have the option to heat remote rooms in your home from the heat generated by your fireplace. If this option is installed, there will be a wall thermostat in the main room you want to heat, away from the room which contains the fireplace. This thermostat controls the blower which brings air to the other rooms in your home, keeping them at the temperature you desire. When the blower is operating, it pulls air from the room the ONYX is in, draws it around the fireplace and distributes it. (See Options: Central Heating System FD-HC6/FD-HB6)

NOTE: The blower (FD-HB6) can push warm air either up or down, and can also be zone controlled (See Options: Zone Heating and Diagrams).

HINT: If some evening you would like to enjoy the ambience of the wood flame, but you are a little too warm, turn up the central heating thermostat and open a window by the thermostat. This will keep your room in front of the fire from getting too warm.

OPERATION

LIGHTING

Slide the draft control under the doors all the way to the right. Light a fire in the fireplace, starting with paper and kindling only. Then add 2-3" diameter wood. You may leave the door open for a maximum of 5 minutes to help get the fire going. After the fire is established, close the door to prevent overheating of the fireplace which is designed to accept combustion air through the outside air duct only (See the Combustion Control section.). Never use any flammable liquids. Once a coal bed is established, add standard cord wood. Leave the draft control open until the fire is well lit, then adjust it to a comfortable temperature.

WARNING: *Do not use a grate or elevate the fire.*

THE FIRST FIRE

Before the first fire, be absolutely sure to wipe off all fingerprints and debris from the gold plating. The plating undergoes a sealing process during this first fire, and the acid from

your finger prints will permanently etch the gold plating. You will experience a slow start-up during the first fire. The refractory bricks still contain moisture and take a good hot fire to get rid of the moisture. While there is moisture in the bricks, the bricks will be black with smoke deposits. When the moisture is gone, the bricks will become white. You may also experience a slight odour during the first few fires. This odour results from the curing paint and the burn-off the residual oils.

REFUELLING

Fuel wood can be of any species. However, ensure that the wood is well seasoned and kept under cover. Sixteen to eighteen inch lengths work the best.

NOTE: The central heat and internal blowers, if installed, should be shut off during refuelling.

The door should be opened **slowly**, to keep smoke from spilling into your room. If you do have smoke spillage, check to see that all kitchen and bathroom fans have been shut off. They can cause a vacuum in the house, which pulls smoke out of the fireplace.

MAINTENANCE CLEANING

The hi-heat paint and gold plating can be cleaned with a soft moist cloth. Use a mild detergent and water only to clean these surfaces. **Do not use abrasive cleaners!**

ASHES

Clean the ashes out of the fireplace when they become too deep, i.e., before you have a spillage problem when opening the doors.

Ashes should be placed in a metal container with a tight-fitting lid. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

DOOR

If the door does not close tightly, adjust the door closer. You can do this by loosening the nuts under the door closer pins. Turn the hinge pins with a slotted screwdriver until a light

"click" is heard when closing the door. Note how the location of the pins vary as you turn them. The hinges are adjustable, by loosening the bolts holding the hinges, and sliding the hinges backwards or forwards. After adjustment, tighten the bolts. Make sure the door is square with the face of the ONYX, before tightening the hinge bolts. If the door seal is damaged to the point where it does not seal tightly, replace it. The gasket replacement kit, part #FD-GRK1 is available from your dealer.

If you want the ONYX fireplace door to open from the opposite side, i.e. if the door presently opens right to left with the handle on the right, and you would like to reverse this operation, follow these instructions: (Refer to Figure 1)

1. Remove the top and bottom louvres by pulling the louvres down and out.
2. With the door still closed, remove the top hinge by removing the 2 nuts.
3. Carefully remove the door by opening the door latch and lifting the door off the bottom hinge.
4. Remove the bottom hinge and both closer pins. The closer pins are held with a nut underneath the flange.
5. Remove the closer hook by pushing out the split pins with a drift.
6. Reassemble with door upside down, making sure the closer hooks point away from the

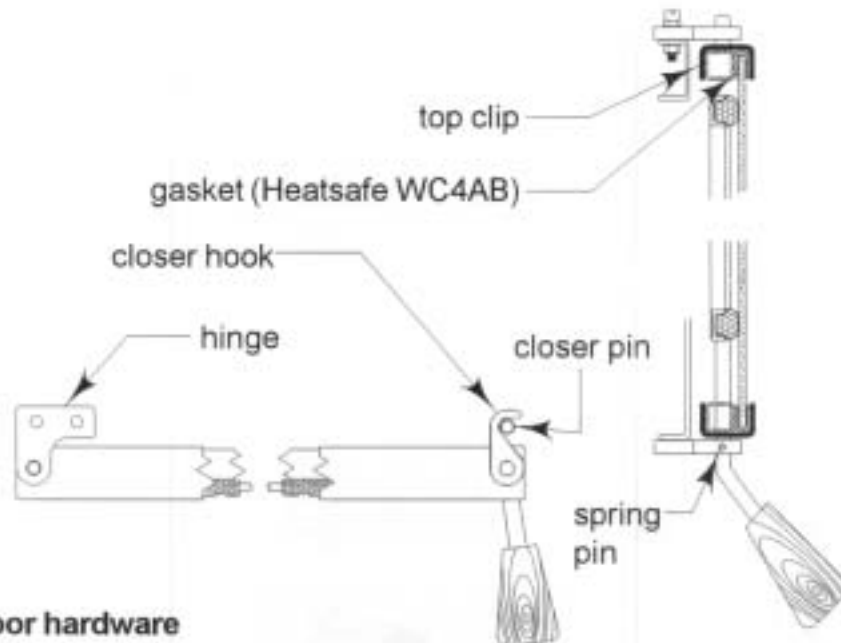


Figure 1: ONYX door hardware

door.

7. Reassemble hinges on the opposite side to where they were located.
8. Install closer pins on the opposite side and adjust, so the door closer 'clicks' closed easily.

GLASS

In a controlled combustion firebox, temperatures are not always high enough to keep the glass clean. We have supplied you with special ceramic glass which will withstand the heat from the fireplace without cracking. A good hot fire in the morning usually cleans most of the soot accumulated during the night. You can also purchase stove glass cleaner from your local speciality fireplace retailer. Remember the drier the wood, the cleaner the glass. Be careful not to hit the glass. Although heat will not break ceramic glass, a good blow can.

NEVER clean this glass with an abrasive cleaner. Use only a cleaner recommended by your dealer. Never clean the glass while it is hot. Do not operate the fireplace with the glass broken or removed.

IF YOUR GLASS BREAKS:

See your dealer for the exact replacement glass. If the gasket is damaged it must be replaced with the identical kind (HEATSAFE #WC4AB). Place the gasket around the top and bottom edges of the glass (it is self-sticking).

1. Remove the door from the fireplace by removing the top hinges.
2. Remove the top clip holding the glass by loosening the screws on the back of the door.
3. After cleaning out any bits of glass and soot from the glass retainer, set the glass into door opening and add a drop of silicone sealer near each end to keep the glass from sliding out.
4. Replace the clip being careful not to overtighten the screws.

GOLD PLATING

Your door frame and optional gold louvres are plated with gold and they will not tarnish. However, they are not scratch resistant and require totally abrasive free cleaning. **Use only mild soap and water to clean the gold when the surface is cool.** The use of any

household cleaner such as Windex, abrasive cleaners, or any form of acid, will permanently etch the gold plating. Before every fire, be absolutely sure to wipe off all fingerprints and debris from the gold plating. Acid from your fingerprints may permanently etch the gold plating.

CHIMNEY CLEANING

Check the chimney for creosote buildup every week until experience shows how often cleaning is necessary. A buildup of 1/4 inch or more should be cleaned mechanically before more creosote accumulates. Use a wire brush that fits correctly into the chimney.

PAINT

You may touch up the face of the ONYX with STOVE BRIGHT metallic black high temperature paint. The correct paint is available from your dealer. When you paint the face of the fireplace, remove or cover the gold plated items and cover the surrounding area with newspaper. Follow the directions outlined on the spray can. DO NOT attempt to paint while the fireplace is hot. Keep the spray can away from any source of heat or open flame. Ensure that there is adequate ventilation in the room, from the time you start painting until the paint is dry.

INSTALLATION

BEFORE YOU BEGIN YOU MUST INSTALL THE STANDOFFS:

REAR STANDOFF INSTALLATION

These stand offs must be fitted to the side and top rear corners of the fireplace to ensure proper clearances to combustibles. Follow Figure 2 of this manual and the sticker instructions on the rear of the fireplace to install them.

WARNING: *These stand offs are for safety purposes. They are for your protection and should be installed correctly.*

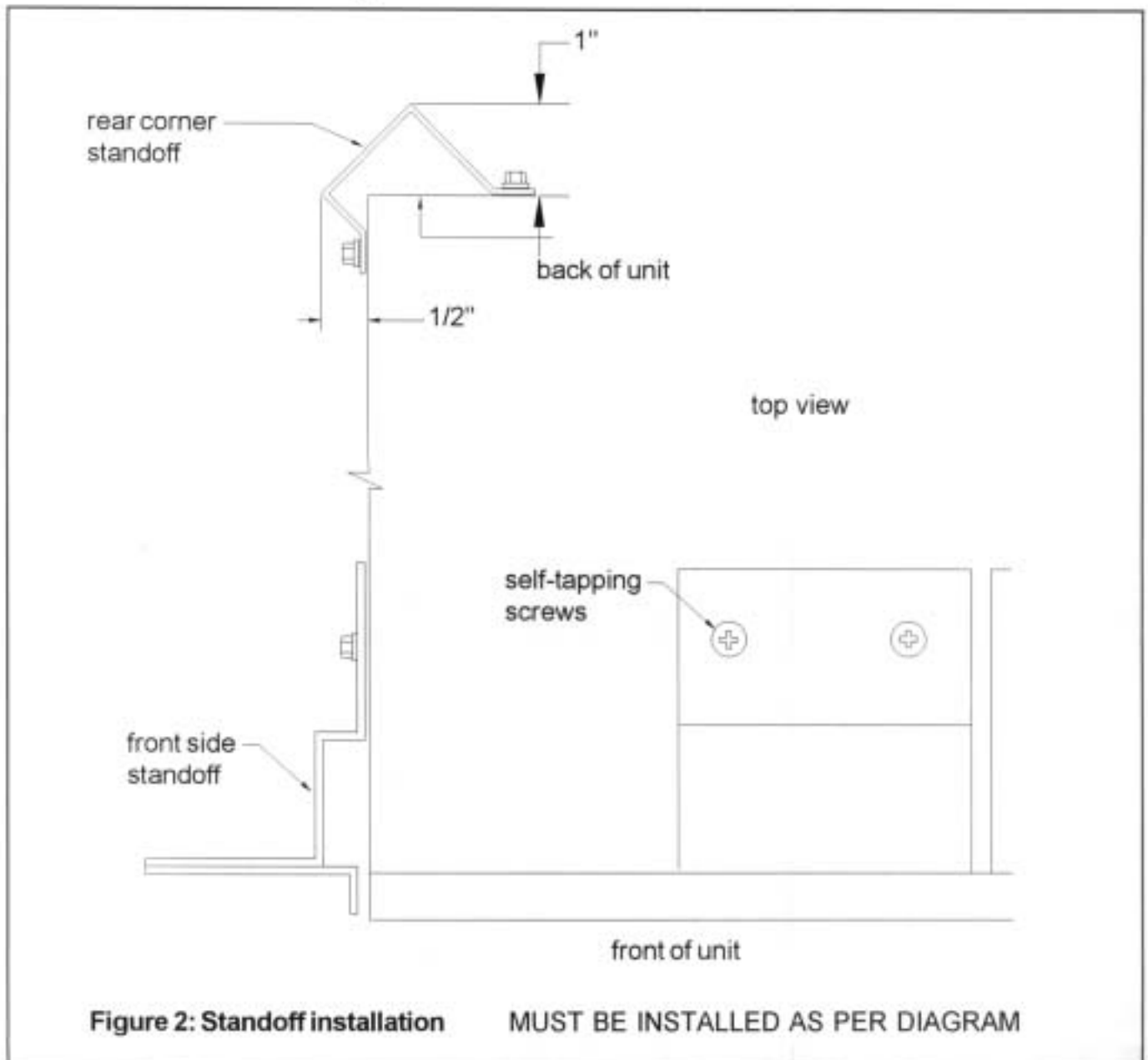


Figure 2: Standoff installation

MUST BE INSTALLED AS PER DIAGRAM

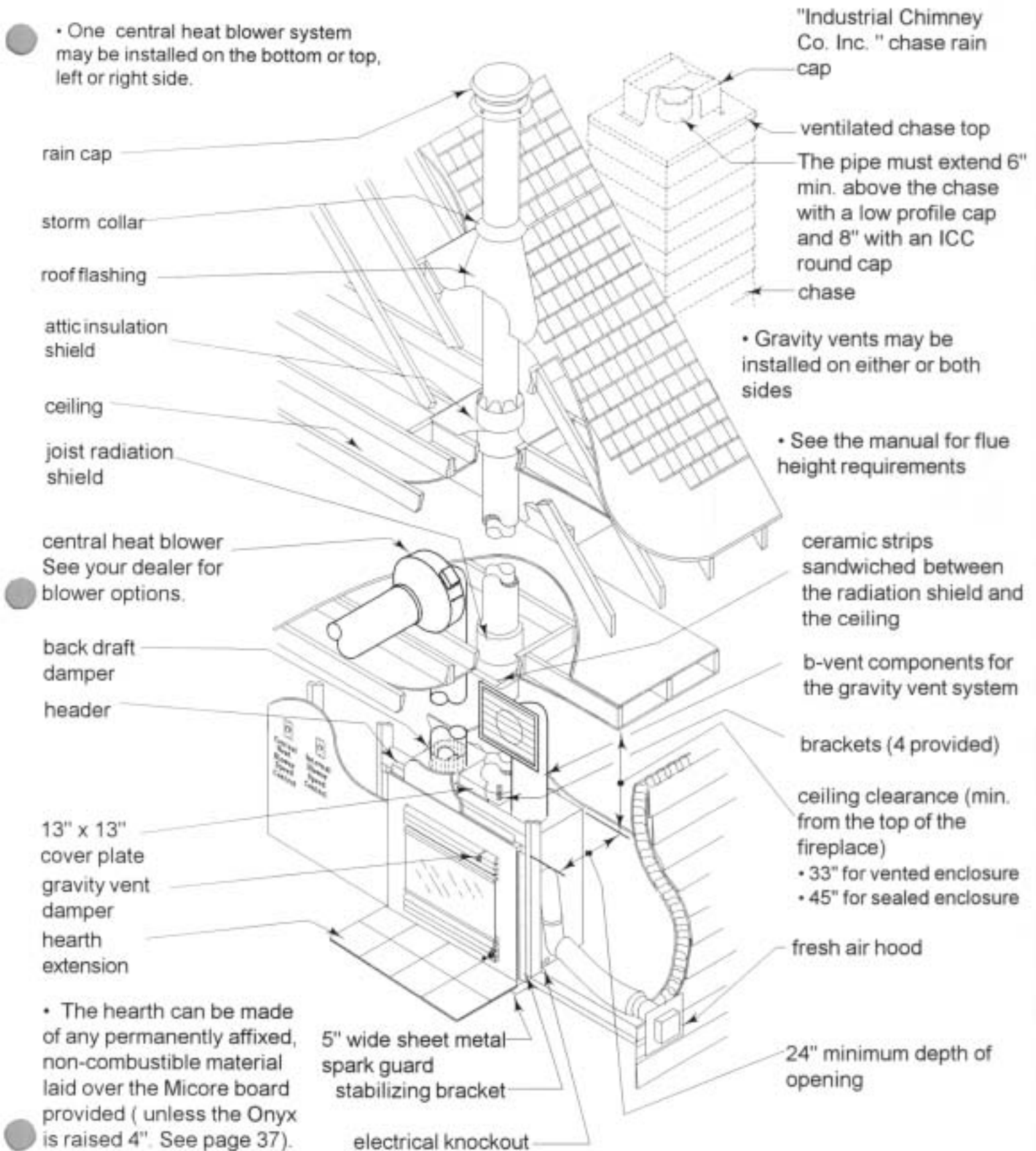


Figure 3: General assembly

COMPONENT CHECKLIST

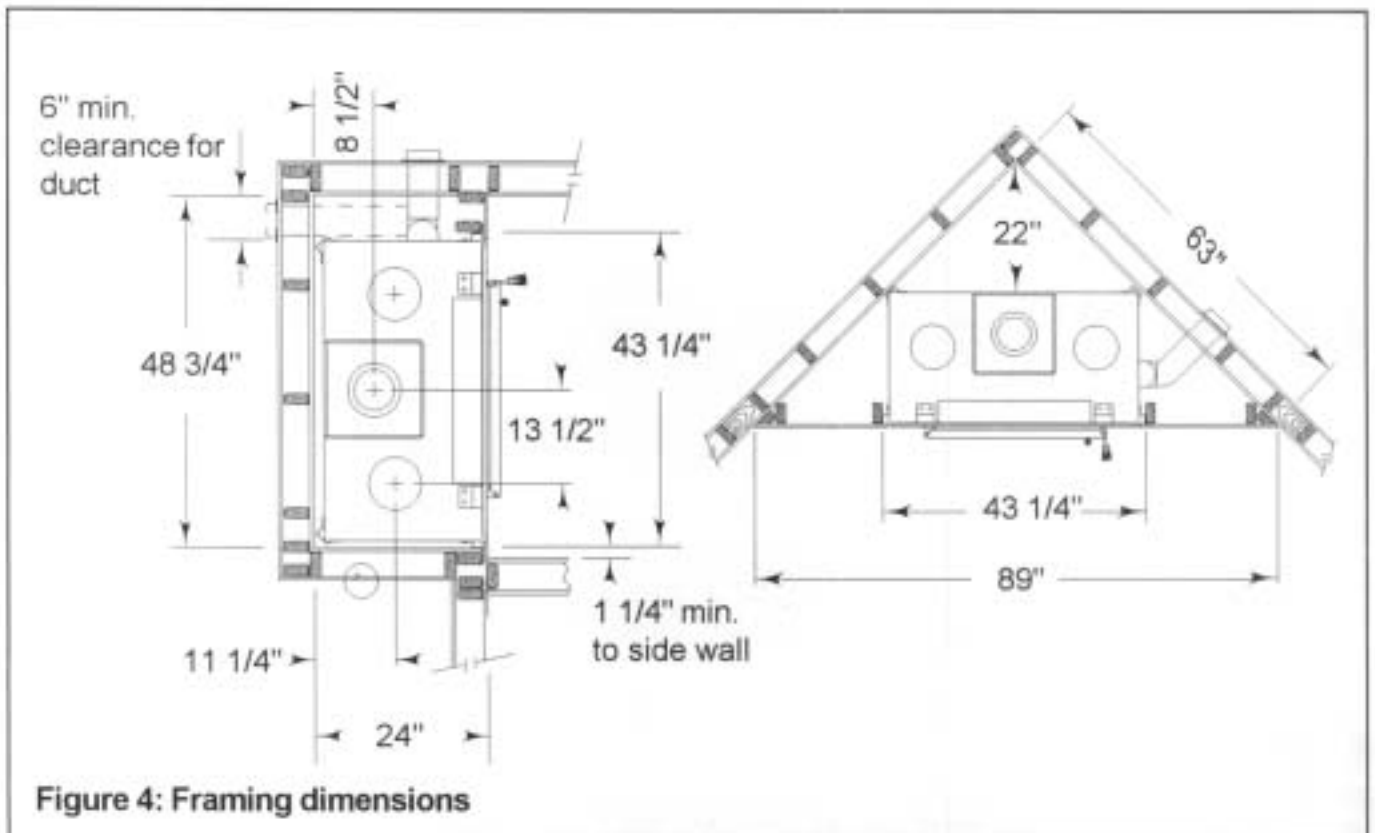
The following items should be included as part of your fireplace purchase. *(Check off the items received)*

- 2 - 5" Elbows & 15" Pipe with strap attached
- Fresh air hood
- Micore board
- 3' of Flex duct
- 3' of Insulation wrap
- Warranty Card and Instruction Manual

Contents of Plastic Bag:

- 90" of Aluminium tape
- 1 - Wood Handle
- 20 - #10 x 1/2 D&T screws
- 4 - 2" x 18" Ceramic felt strips
- 8 - #12 x 7/8 D&T screws

NOTE: We strongly recommend installers be WETT or WHERF certified.



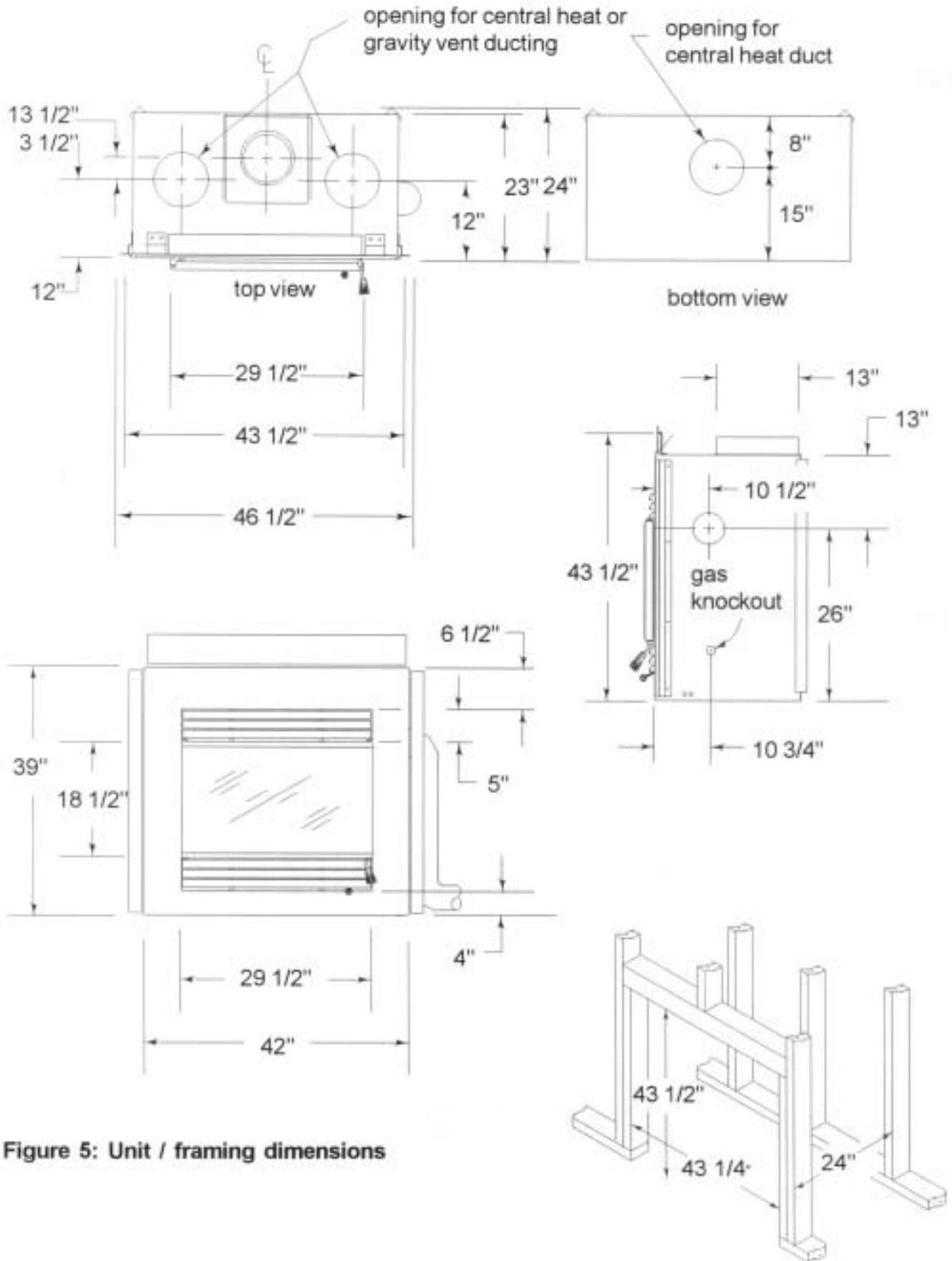


Figure 5: Unit / framing dimensions

Check local codes concerning installation requirements and restrictions in your area.

WARNING: *Remove the door and louvres before installation and place them in a safe area to reduce the risk of:*

1. *Vandalism.*
2. *Sub-trade tool abrasion, chipping, or breaking of glass.*
3. *Gold finish damage because of muriatic acid, plaster, cement, paint and harmful sprays or liquids, and sub-trade tool abrasion.*

LOCATION

Your ONYX fireplace may be installed without any special floor reinforcement.

WARNING: *If this fireplace is not properly installed, a house fire may result. For your safety, follow the installation directions and heed the minimum clearances.*

The enclosure walls can be framed using any suitable materials (2 x 4 studs, plywood, gypsum board, etc.). See Figure 5 for dimensions. Normally, framing will be set back to allow the sheeting to be level with the front of the fireplace.

When framing in the header (directly above the fireplace), DO NOT bring any combustible material lower than the top of the standoffs.

1. Note the location of floor and roof joists. Choose a location which does not require cutting the joists. Note the location of doors and windows in relation to the fireplace and chimney on all floors of the house.
2. Frame an area to fit the ONYX. Follow the framing dimensions on Figure 5.
3. Prepare the unit for installation. Be sure that the top and side standoffs are placed correctly for your particular installation. The holes in the side standoffs have been elongated to allow easy alignment of the framing and the fireplace sides. The end of the L-shaped part of the standoff should be flush with the face of the fireplace so the fireplace does not appear recessed when the wall facing is put in place.
4. Push the ONYX into the pre-framed area. Then hammer nails through all of the holes in the standoffs to secure the fireplace in that position.

WARNING: *No insulation or other materials are allowed between the framing and the fireplace.*

MOBILE HOME INSTALLATION

Installation is the same as any residential installation. Please note the following restrictions in mobile homes:

1. The roof flashing must be the vented style.
2. The gravity vent system option is not allowed.
3. The central heating system is not allowed.

CEILING CLEARANCE

Ceiling Clearance is the distance from the top of the fireplace to the ceiling.

If the space between the top of the fireplace and the ceiling joists is less than 45 inches, the enclosure around the fireplace **MUST** be vented. Place a minimum 3" X 10" vent grille into holes cut within one foot of both the floor and ceiling levels, to allow room air to circulate through the fireplace enclosure and reduce heat build-up. These vent grilles may be placed vertically or horizontally. Under no circumstances is the distance between the first firestop and the top of the unit to be less than 33 inches (See Figure 3).

OUTSIDE AIR DUCT

After the fireplace is correctly positioned, connect the combustion air inlet to the outside.

1. Find a convenient location for the combustion air duct and register. The location of the register may be below or above floor level (See Figure 3 - General Assembly). If necessary, air may be taken from inside the home. However, air taken from inside the home must be taken from floor level or below. Check local codes to confirm whether combustion air from inside the home is allowed.
2. Make a 5 1/4" hole in the outside wall of the house. Mount the register in the hole from outside with inlet facing down, as shown.
3. Attach the elbows and pipe supplied by fastening the strap to the side of the unit with screws. (See Figure 6)

OUTSIDE AIR REGISTER OPTIONS

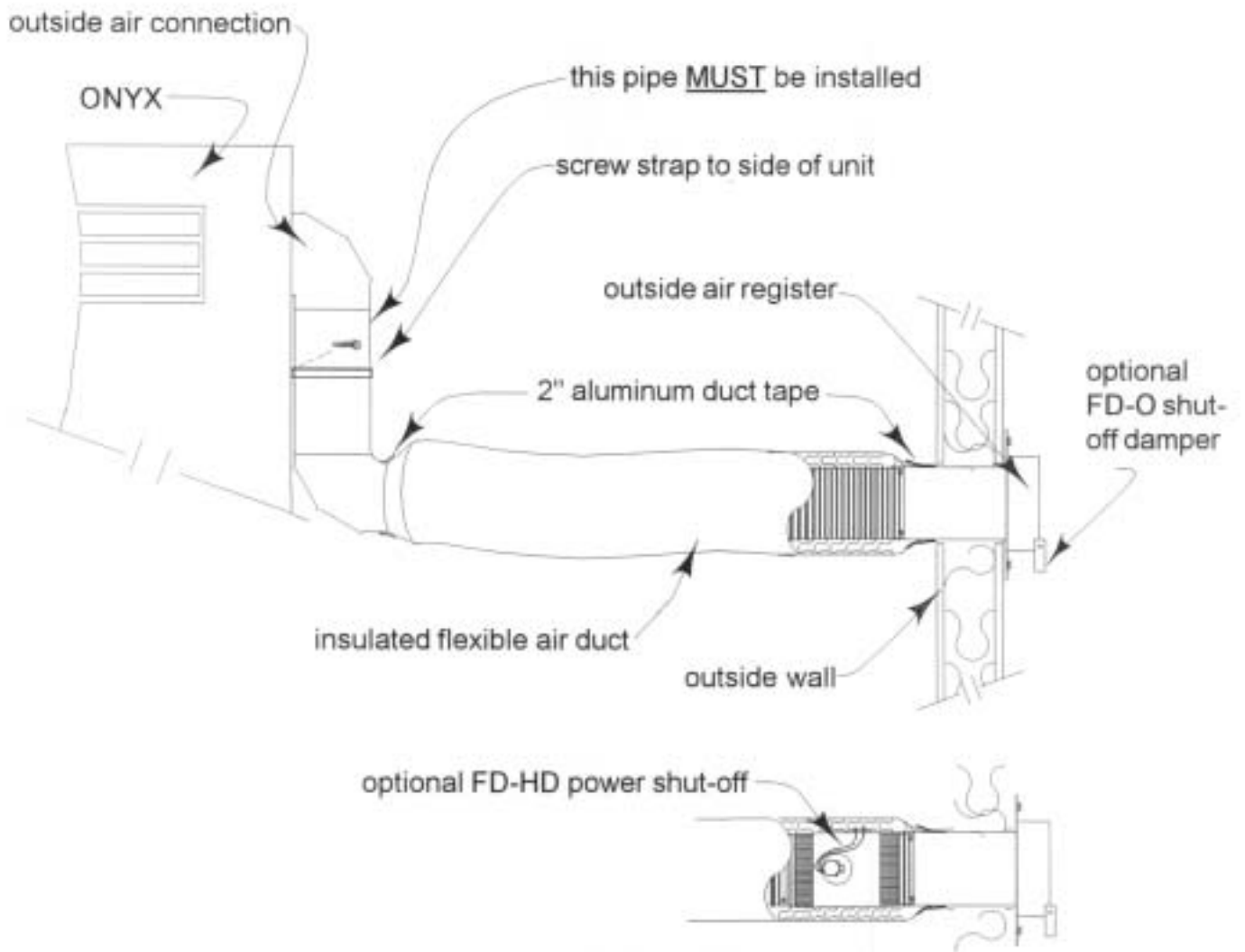
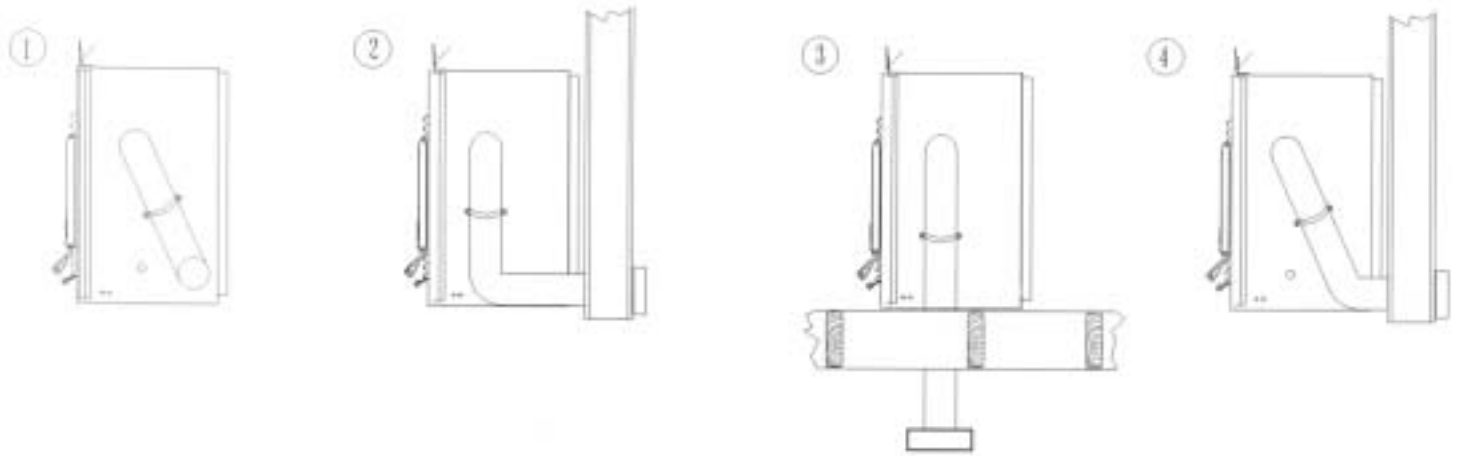


Figure 6: Outside air connection and installation option

4. Place the insulated flexible duct over the register tube and over the second elbow. At both ends carefully pull back the insulation and plastic cover, exposing the flexible duct. Then at each end, attach the duct with metal screws to the inlet and tube. Carefully push the insulation and cover back over the duct. Tape the plastic cover in place with the 2" aluminium duct tape provided.

CAUTION: *When running duct around corners, make certain no crimping that would restrict combustion air flow occurs.*

LONG DUCTS: If the duct supplied is not long enough, it must be replaced with a 5" diameter insulated duct rated at over 200° F. Our testing has shown that as long as 5" diameter insulated duct is utilized properly, there is no restriction on the length of the run. It is recommended that the duct does not exceed 12' vertical height rise above the base of the unit. The air inlet should never be less than 5 ft. below the top of the chimney flue.

NOTE: *The 15" piece of pipe must be used to bring the combustion air intake to the lower level. Otherwise, the unit may smoke back through the pipe when the fireplace door is opened.*

CLOSE CLEARANCE

If you like, you can bring combustible framing down to the top of the standoff. This allows many options for installation. Figure 7 is just one example. When you build a close clearance installation, remember that there must be 1" clearance along the back of the fireplace, 1/2" along the sides of the fireplace, and 4 1/2" on top of the fireplace. No combustibles should move within these boundaries.

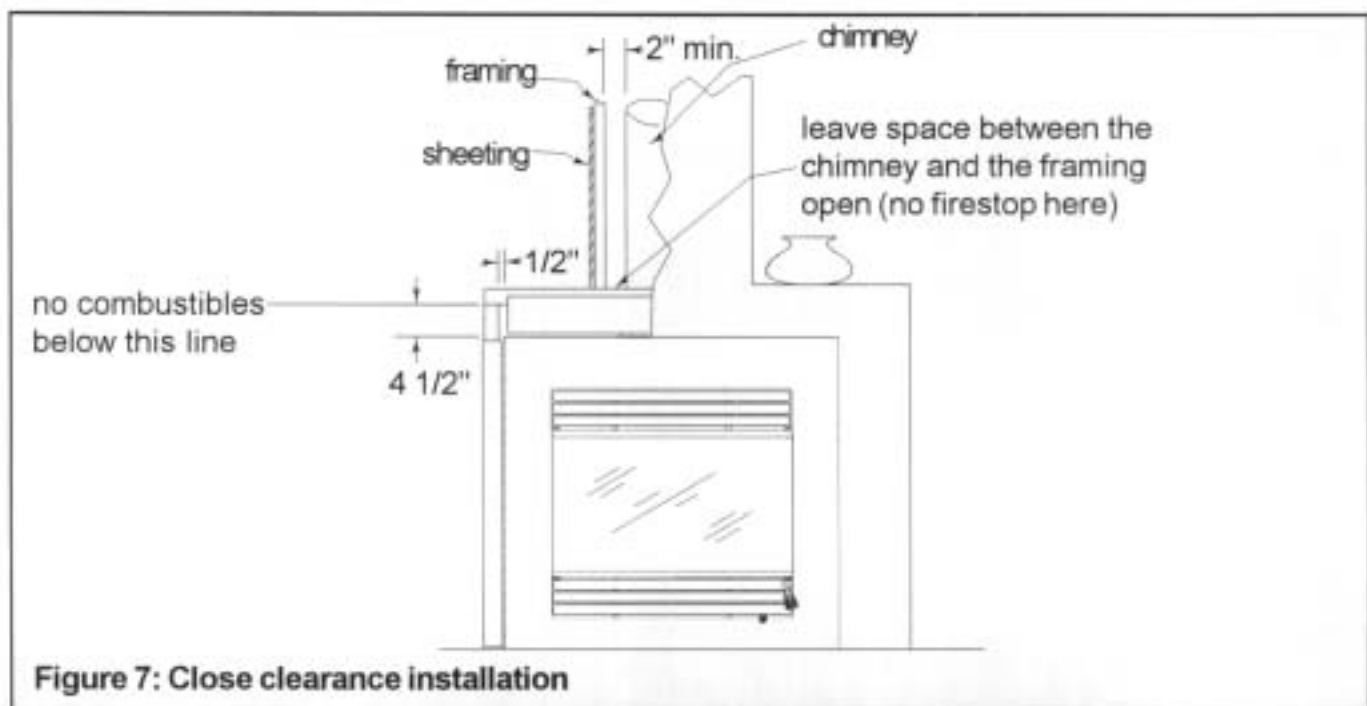


Figure 7: Close clearance installation

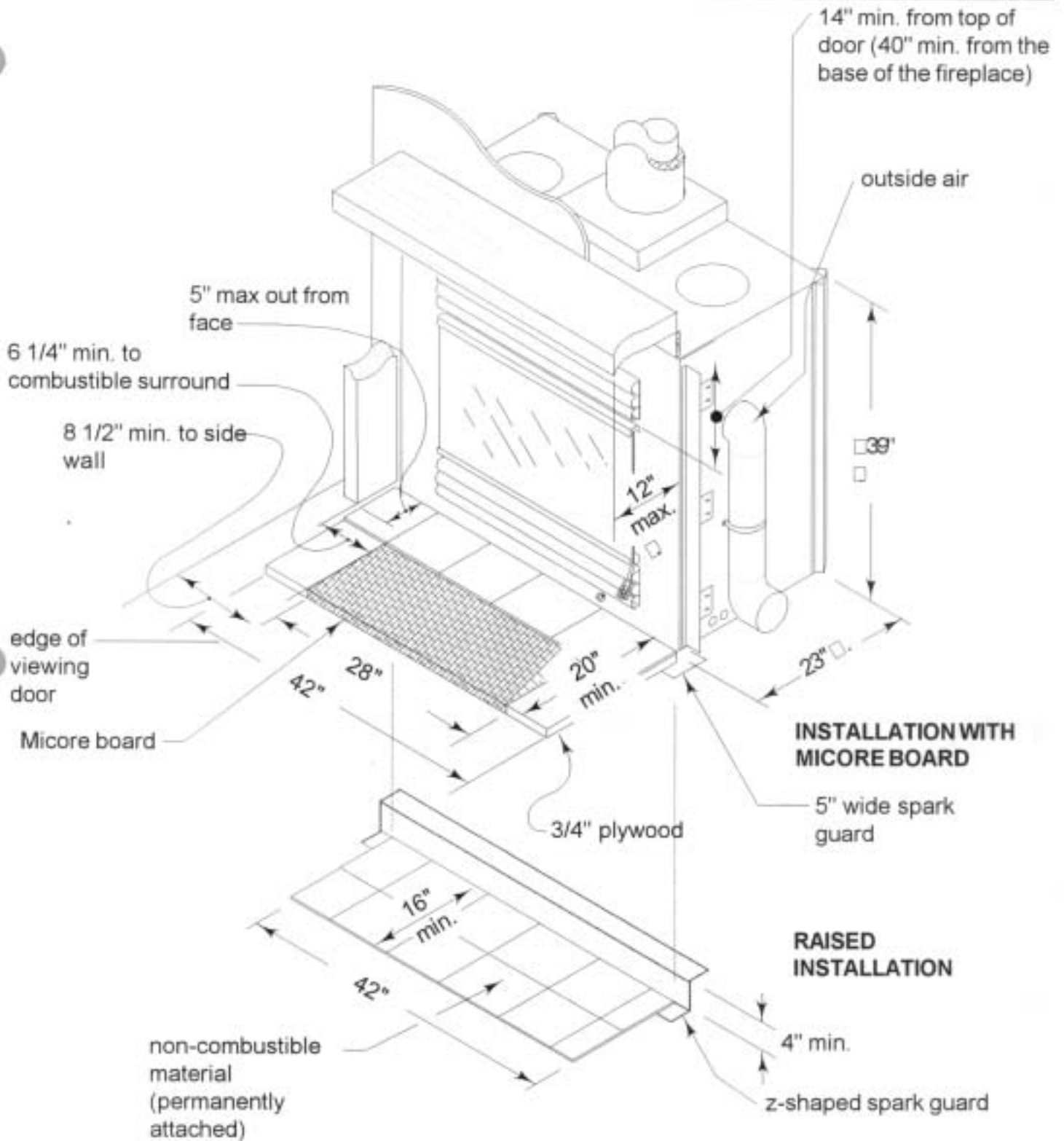


Figure 22: Clearances to combustibles and hearth requirements

CHIMNEY SYSTEMS

This fireplace is certified for use with a 7" or 8" listed factory-built chimney, suitable for use with solid fuels. The chimney system height from the top of the unit must be between a minimum of 12 feet and a maximum of 28 feet.

NOTE: The minimum system height of 12 feet must be increased by 1 foot for every 2000 feet of elevation above sea level. Every 30° or 45° elbow also increases the minimum height by 1 foot. For example, if you are living 6000 feet above sea level, your chimney should terminate at least 12 plus 3 or 15 feet above the top of the fireplace. (See Table 1)

Choose one of the following systems: **(Do not mix and match!)**

IN CANADA:

All makes of listed ULC S629M standard chimneys or the following chimneys covered by ULC S610:

Security Chimneys Ltd	Model ASHT
Oliver-MacLeod Ltd	Model Pro-Jet 3103
GSW Heating Products Co	Model JSC
Energy Vent	Model Commander 5103 or Model AC
Selkirk Metalbestos	Model SS
ICC Inc	Model 2100
Majestic Co.	Model SK (Air Cooled)

IN THE UNITED STATES:

The following chimneys covered by UL 103HT/UL127:

Security Chimneys Ltd	Model ASHT
Oliver-MacLeod Ltd	Model Pro-Jet 3103
GSW Heating Products Co	Model JSC
Selkirk Metalbestos	Model SSII
Simpson Dura-Vent Co Inc	Model Dura-Plus SDP
<i>NOTE: The starter section IS NOT required with Dura-Plus</i>	
American Metal Product Co	Model Ameri-Tec HS
Energy Vent	Model HT Commander 5103 or Model AC
Metal Fab Inc	Model Temp/Guard 2100
ICC Inc	Model HT/Excel
Majestic Co.	Model SK (Air Cooled)

MANUFACTURER	Security Chimney Ltd	Oliver-MacLeod Ltd	GSW Heating Products	Energy Vent	Energy Vent	Energy Vent	Selkirk Metalbestos	ICC Inc	Simpson Dura-Vent Co	American Metal Products	Metal Fab	Majestic Co
Model	HT	Pro-Jet 3103	JFC	HT-5103	AC	AC	SSII	Excel 2100	Dura/Plus	HS	Terra/Guard 2100	SK
Chimney Lengths	L*	USHTO*SL%	JSC*P%	HT-%	AT-%	AT-%	20*0%	EL%	2100	*HS-%	*TGG%	SK**
Chimney Elbows	E%	USHTO*IE%	JSC*DE%	HT-%	AT-%	AT-%	EE%	EE%	9*17	*HS-0%	*TGA%	SK**
Offset Support	SO	IFO*OS-N	JSC*ES	HT-OS	AT-OS	AT-OS	OS	OS	9*66	*HS-SBA	*TGSB	SKCS*
Joist Freestop/Radiation Shield	BF,RS	IFO*CFRS	JSC*FRS	HT-FRS	AT-FRS	AT-FRS	20*465	RS	9*60	*HS-FSA	*TGFS	SKFS%A
Attic Insulation Shield	RSA	IFO*LAFRS	JSC*AIS	AIS	AIS	AIS	20*490	SC	9*44	*HS-AIS	*TGIS	AIS-SK
Roof Flashing/Storm Collar (unvented for open attic)	F%R	IFO*RF0	N/A	HT-ARF	AT-ARF	AT-ARF	20*825	F%	9859	*F%	*TGF%	**
Roof Flashing/Storm Collar (vented for enclosed chase)	FAMH	IFO*VRF%	JSC*AT%	HT-AFRV	AT-AFRV	AT-AFRV	20*815	V%	9*51	*SC	*TGF%	N/A
Rafter Radiation Shield (for enclosed chase only)	RSMH	IFO*RRS	JSC*RRS	HT-FLRS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rain Cap	CPE	IFO*RC	JSC*FRC	HT-RC	AT-RC	AT-RC	20*800	RC	9*84	*HS-RCS	*TGC	SKC**

NOTE: * = Chimney Diameter % = Length/Angle/Pitch

MANUFACTURER	Security Chimney Ltd	Oliver-MacLeod Ltd	GSW Heating Products	Energy Vent	Energy Vent	Energy Vent	Selkirk Metalbestos	ICC Inc	Majestic Co
Model	HT	Pro-Jet 3103	JFC	HT-5103	AC	AC	SS	Excel 2100	SK
Chimney Lengths	L*	USHTO*SL%	JFC*P%	HT-%	AT-%	AT-%	07070*	CL%	SK**
Chimney Elbows	E%	USHTO*IE%	JFC*DE%	HT-%	AT-%	AT-%	CE%	CE%	SK**
Offset Support	SO	IFO*OS-N	JFC*ES	HT-OS	AT-OS	AT-OS	OS	OS	SKCS*
Joist Fire stop/Radiation Shield	BF,RS	IFO*CFRS	JFC*FRS	HT-FRS	AT-FRS	AT-FRS	070900*	CRS	SKFS%A
Attic Insulation Shield	RSA	IFO*LAFRS	JFC*AIS	AIS	AIS	AIS	070910*	CARST	AIS-SK
Roof Flashing/Storm Collar (unvented for open attic)	F%R	IFO*RF0	N/A	HT-ARF	AT-ARF	AT-ARF	070350*	F%	**
Roof Flashing/Storm Collar (vented for enclosed chase)	FAMH	IFO*VRF%	JFC*AT%	HT-AFRV	AT-AFRV	AT-AFRV	070380*	V%	N/A
Rafter Radiation Shield (for enclosed chase only)	RSMH	IFO*RRS	JFC*RRS	HT-FLRS	N/A	N/A	4038999	N/A	N/A
Rain Cap	CPE	IFO*RC	JFC*FRC	HT-RC	AT-RC	AT-RC	053750*	RC	SKC**

TABLE 2: CHIMNEY PARTS LIST FOR CANADA

TABLE 3: CHIMNEY PARTS LIST FOR USA

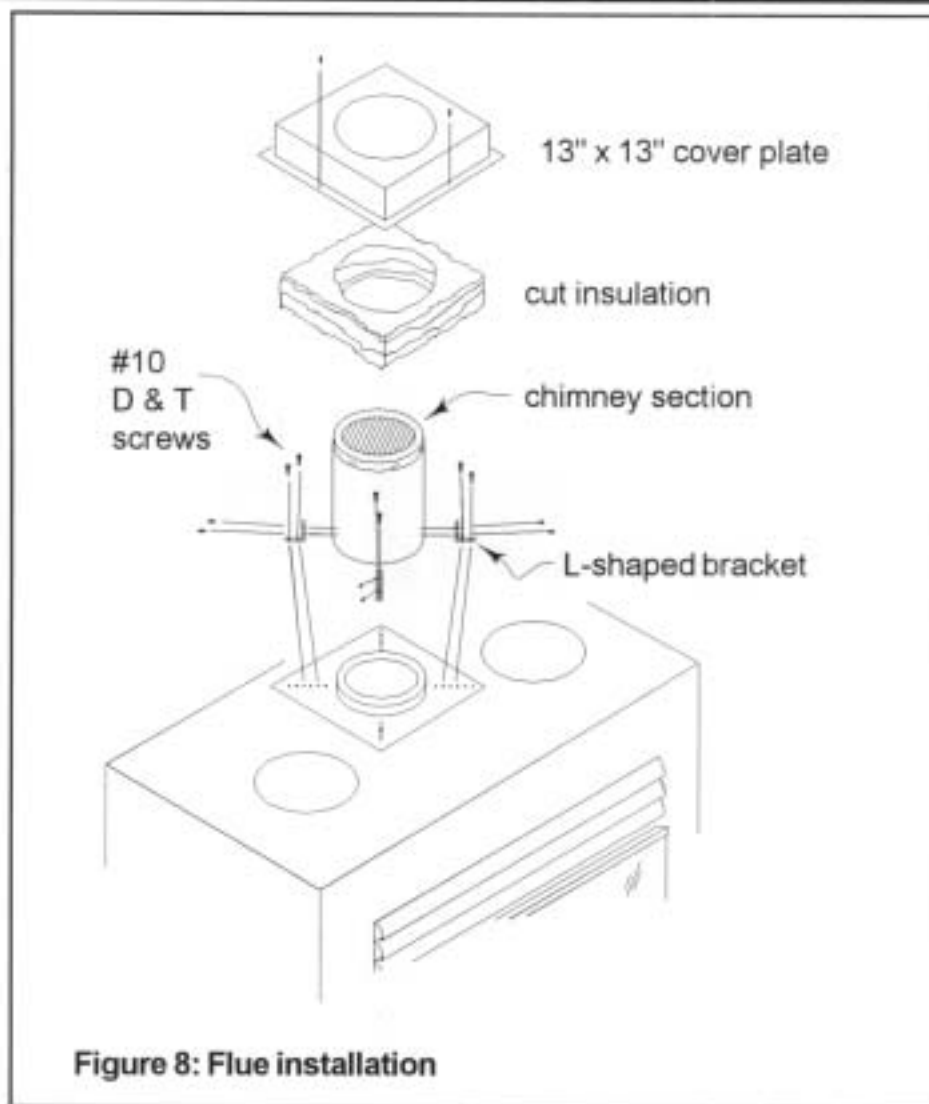


Figure 8: Flue installation

AIR COOLED CHIMNEY OPTION

The ONYX is certified with the Energy Vent Model AC and Majestic model SK air cooled chimney system. Note that in Canada, the air cooled chimney must include the outside air connection, where in the United States, the chimney needs only to be vented to the chase. Refer to the installation manual supplied with the air cooled chimney for the complete instructions.

MAJESTIC SK CHIMNEY SPECIAL STARTER INSTRUCTIONS:

The Majestic SK air cooled chimney system requires RSF ENERGY kit# FD-MSK.

INSTALLATION:

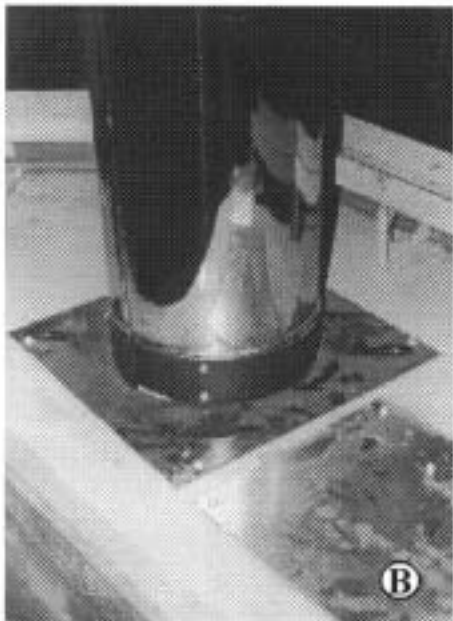
1. Remove 13" x 13" box cover with insulation and discard.



2. Remove the four brackets from the support plate.

3. Using the #10 D & T screws provided, attach the round adapter to the flue outlet as snugly as possible (A).

4. Attach the inner chimney as shown making sure the smaller end is down (B).



5. Attach the square part over the chimney after removing the screws which hold the support plate. Reuse these screws to hold both parts together (C).

6. Install the outer chimney with the 4 brackets as shown (D).

7. The rest of the chimney can now be installed as per Majestic instructions.

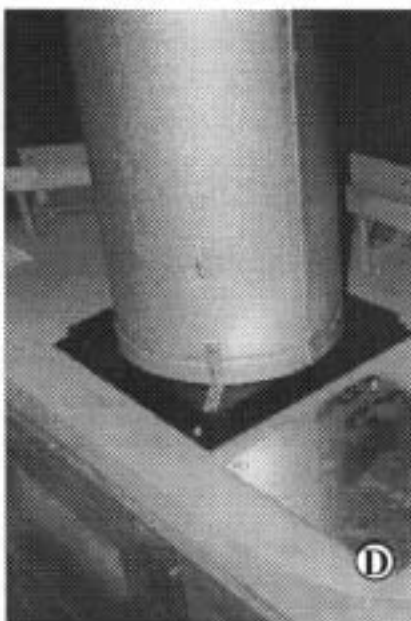
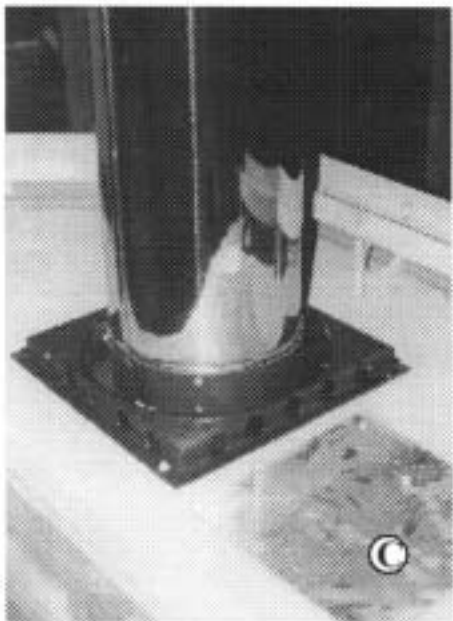


Figure 9: Majestic SK chimney installation

ICC CHASE RAIN CAP OPTION

The ONYX is also certified with the "Industrial Chimney Co. Inc." chase top option (see chase portion of Figure 3). This option can be used if you prefer its design over the conventional rain cap. Be aware that the chase top must be ventilated and that the flue must extend at least 6" beyond the chase top. Please refer to the installation manual supplied by ICC for the complete installation instructions.

TABLE #1

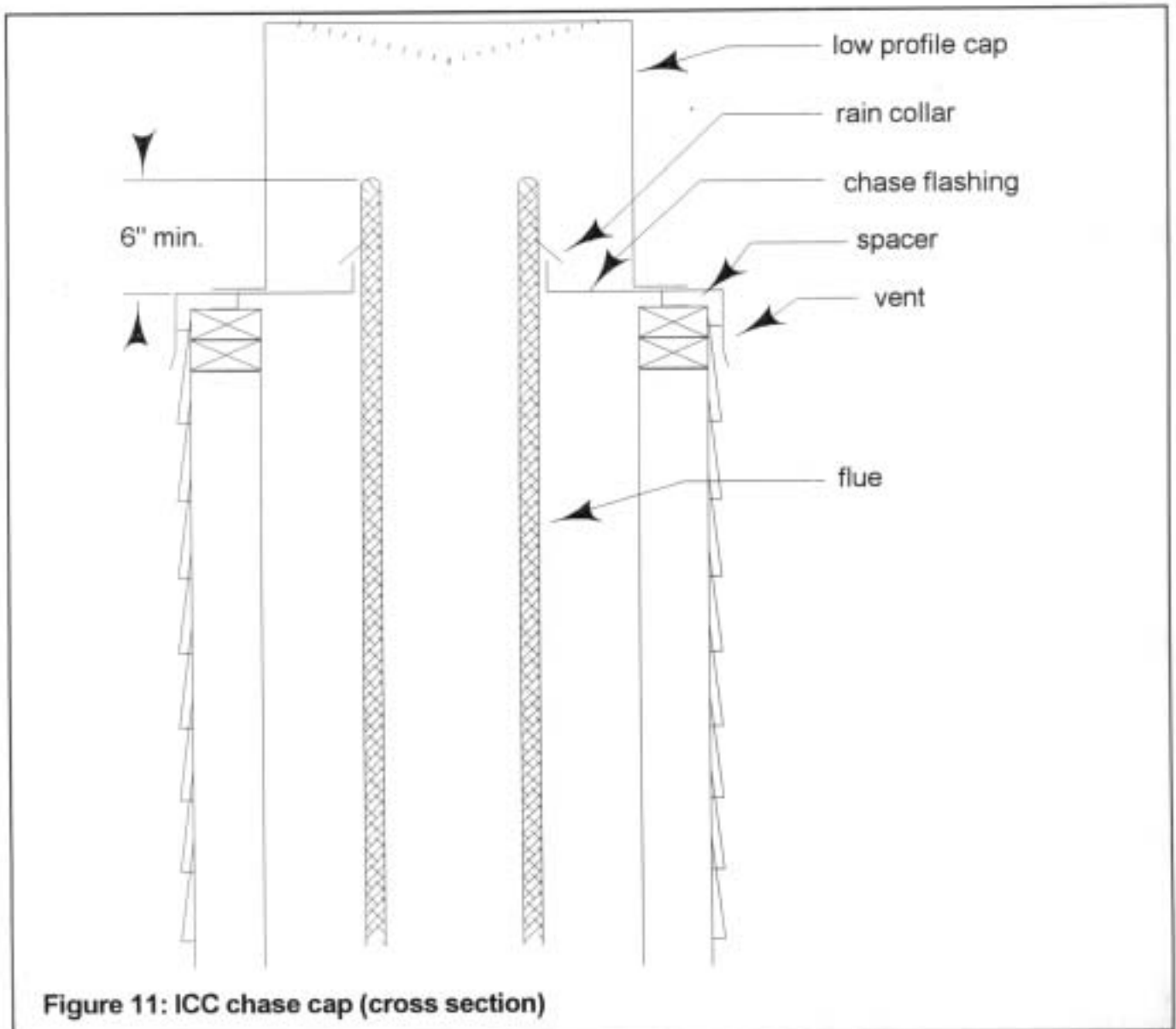
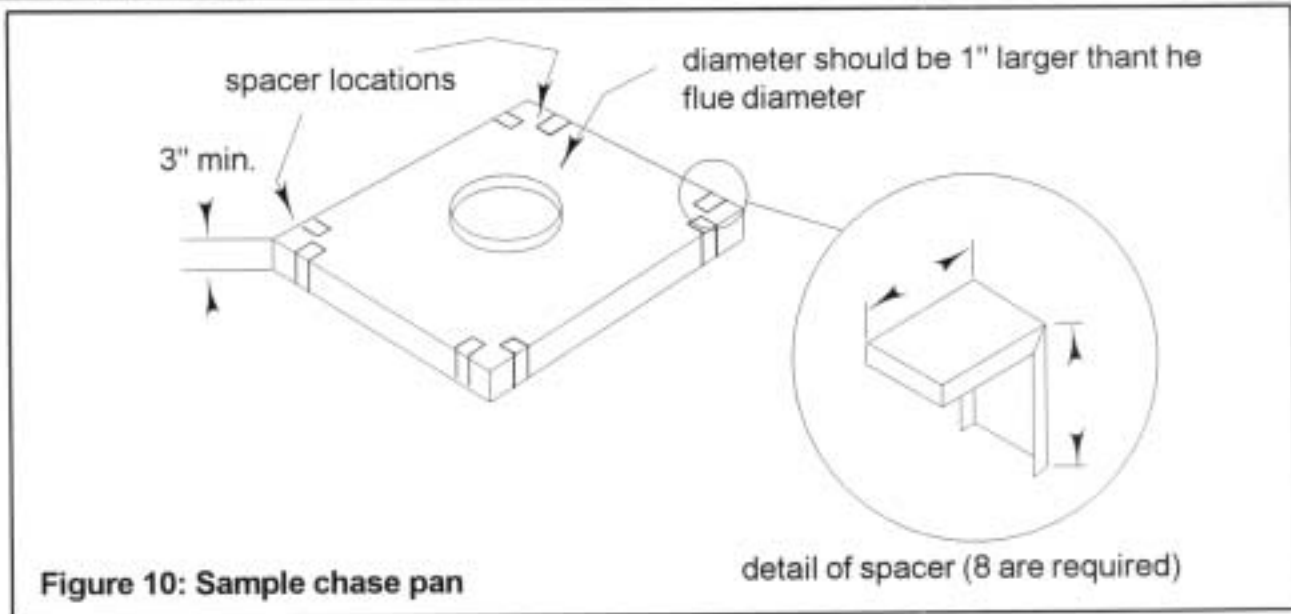
MINIMUM RECOMMENDED FLUE HEIGHTS IN FEET
FROM THE TOP OF THE FIREPLACE

<u>Elevation(ft)</u>	<u>#OF ELBOWS</u>						
	<u>0</u>	<u>2x15</u>	<u>4x15</u>	<u>2x30</u>	<u>4x30</u>	<u>2x45</u>	<u>4x45</u>
0-2000	12	13	14	15	18	16	20
2000-4000	13	14	15	16	19	17	22
4000-6000	14	16	16	18	22	19	24
6000-8000	15	17	17	19	23	20	26
8000-10000	16	18	18	20	25	22	27

CHIMNEY INSTALLATION

Note: The clearance between the chimney and combustible material must not be less than 2". **DO NOT** fill this area with insulation.

1. Cut and frame the required holes in the floor, ceiling and roof where the chimney will pass through. Use a plumb bob. CHECK CHIMNEY MANUFACTURER'S INSTRUCTIONS FOR FRAMING SIZE.
2. From below, install a radiation shield in each floor though which the chimney passes. At the attic level, install an attic insulation shield (if required) as shown in Figure 12. The first radiation shield above the fireplace must have strips of ceramic felt placed between the shield and the ceiling. These strips come with the fireplace. (See Figures 2 & 12).
3. Remove the 13" x 13" cover and insulation from the top of the fireplace. Cut the insula-



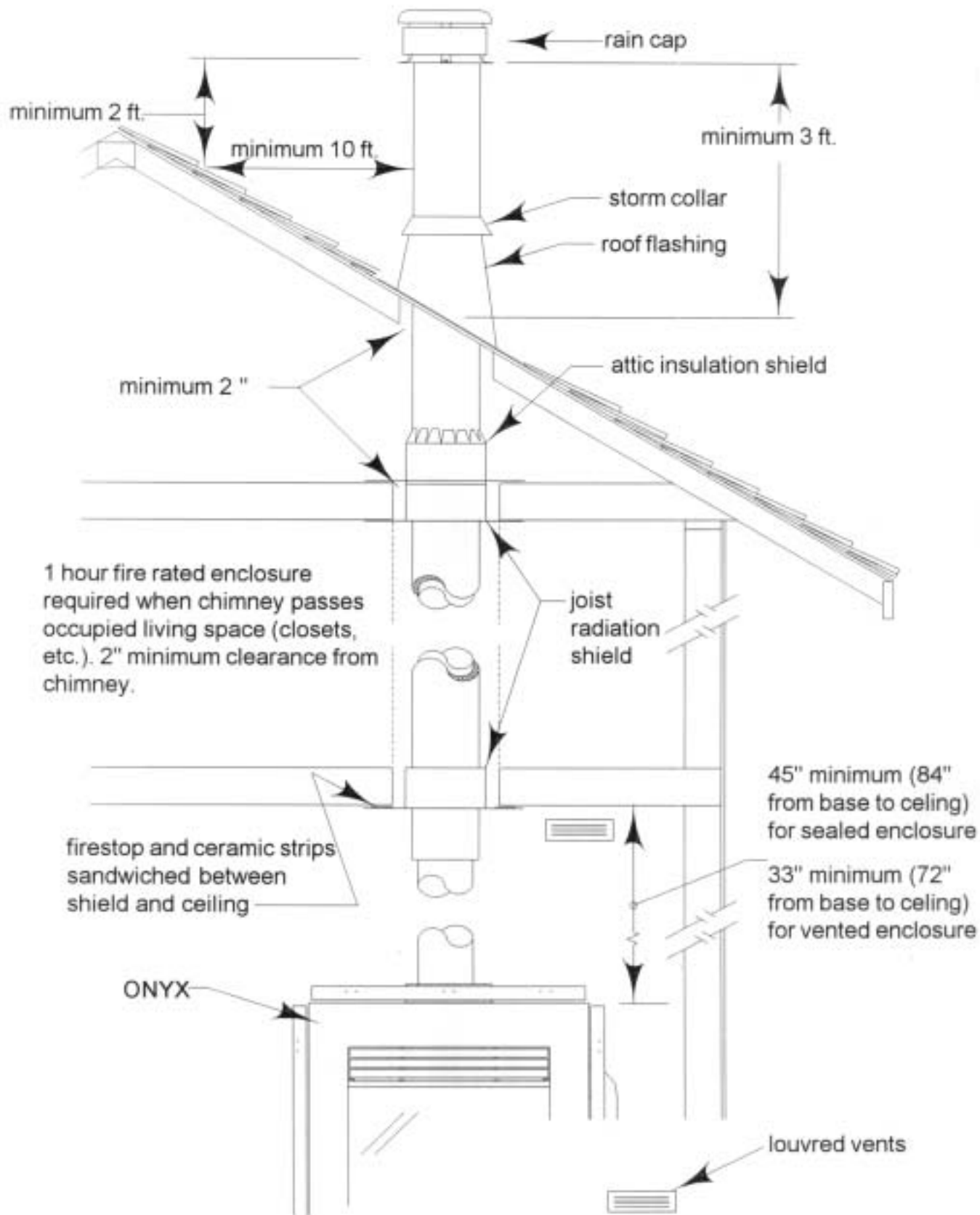


Figure 12: Chimney installation

tion to size by setting a section of pipe on it and cutting a hole out.

NOTE: The purpose of this cover box and insulation is to insulate the chimney connection. This prevents excessive heat transfer into the fireplace enclosure.

4. Place the first chimney length on the fireplace. Secure the chimney length to the fireplace with the four angle brackets provided (see Figure 8). Slide the cut insulation and the 13" x 13" cover over the first chimney length, then fasten the cover to the top of the fireplace with small drill and tap screws. Continue installing chimney lengths until you reach the desired height.

The chimney must extend at least 3 ft. above its point of contact with the roof and at least 2 ft. higher than any wall, roof, or building within 10 ft. of it. Refer to the chimney manufacturer's flue height requirements for penetration above a chase.

Note: If the chimney is higher than 5 ft. above the roof, it must be secured using a roof brace or guy wires.

5. Put the roof flashing into place. Seal the joint between the roof and the flashing with roofing tar. For sloping roofs, place the flashing under the upper shingles and on top of the lower shingles. Nail the flashing to the roof using roofing nails.

6. Place the storm collar over the chimney and flashing. Seal it around the chimney with silicone sealer (DO NOT use roofing tar).

7. Fit the rain cap on the chimney. Secure it tightly in place.

8. Wash the roof flashing with solvent (or vinegar if the flashing is galvanized), then paint it with exterior paint.

9. Read and follow the chimney manufacturer's installation manual concerning requirements for supports, bracings, anchors, etc.

MASONRY CHIMNEY

Warning: When contemplating using an existing chimney, it must first be thoroughly inspected by an authority having jurisdiction to determine the following:

1. It is a well constructed, lined masonry chimney, fully in accordance with Local Building Codes and the National Building Code of Canada (NBCC) 9.21

2. It has been thoroughly cleaned of any soot or creosote residue and inspected to determine that it is in good condition.
3. There is no attic insulation of any type in contact with the chimney and no insulation stuffed in around the chimney at any point, for any reason.
4. There is, as per NBCC 21.9.5, the necessary air space clearance at all points around the chimney from floor to roof flashing. If the chimney is enclosed in drywall, openings will be required to verify clearances at all points.
5. Chimney will be used only for the fireplace and may not be used to vent a furnace, water heater or any other appliance.
6. If major repairs are required to meet the above conditions, a new chimney should be constructed

NEW CHIMNEY INSTALLATION:

To ensure adequate draft and to facilitate cleaning, the fireplace must be connected to the chimney using 7" diameter listed HT metal chimney with an elbow. As shown in Figure 13, a listed 7" rigid stainless steel liner and a 45° stainless steel elbow are attached to the chimney and secured in place using mortar. If you use an 6 x 10 clay liner you will need to ovalize the stainless steel liner to fit into the clay liner. It is recommended that you position your fireplace before building the chimney. The factory built chimney sections can easily be installed as the layers of brick are being placed.

Note: If the ceiling is high enough some vertical chimney can be installed before the 45° or 30° elbow is installed.

EXISTING CHIMNEY INSTALLATION:

If it is difficult to install rigid stainless on an existing chimney, a listed stainless steel flex liner can be used (See Figure 14). Special care is to be taken when installing the flexible liner. A positive connection is assured with the masonry adaptor (part #FDM) available from your dealer. The stainless steel flex liner connects into the masonry adaptor and is secured with the 4 stainless steel screws provided. The masonry adaptor is then secured to the metal HT chimney with the 4 screws provided. The stainless steel liner fits inside the clay liner all the way to the top of the masonry chimney. It is not meant to replace the clay liner. After mortaring in place, the connection should not be visible. It is important that the heat from the flue is isolated from the fire place enclosure. Figure 14 illustrates a typical flex liner installation. Care must be taken when cleaning to ensure that the stainless steel flex liner is not dislodged.

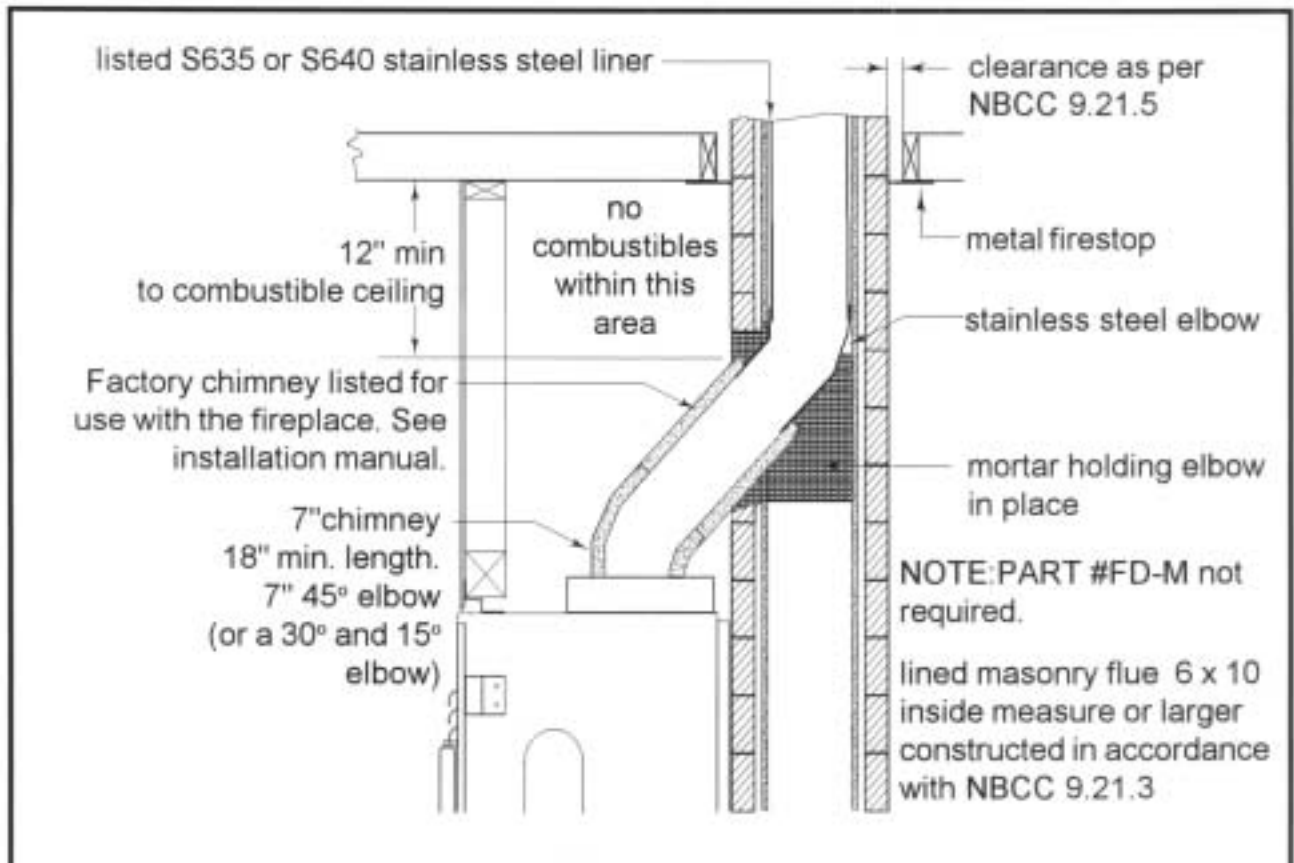


Figure 13: Connection to a masonry chimney with a stainless steel elbow

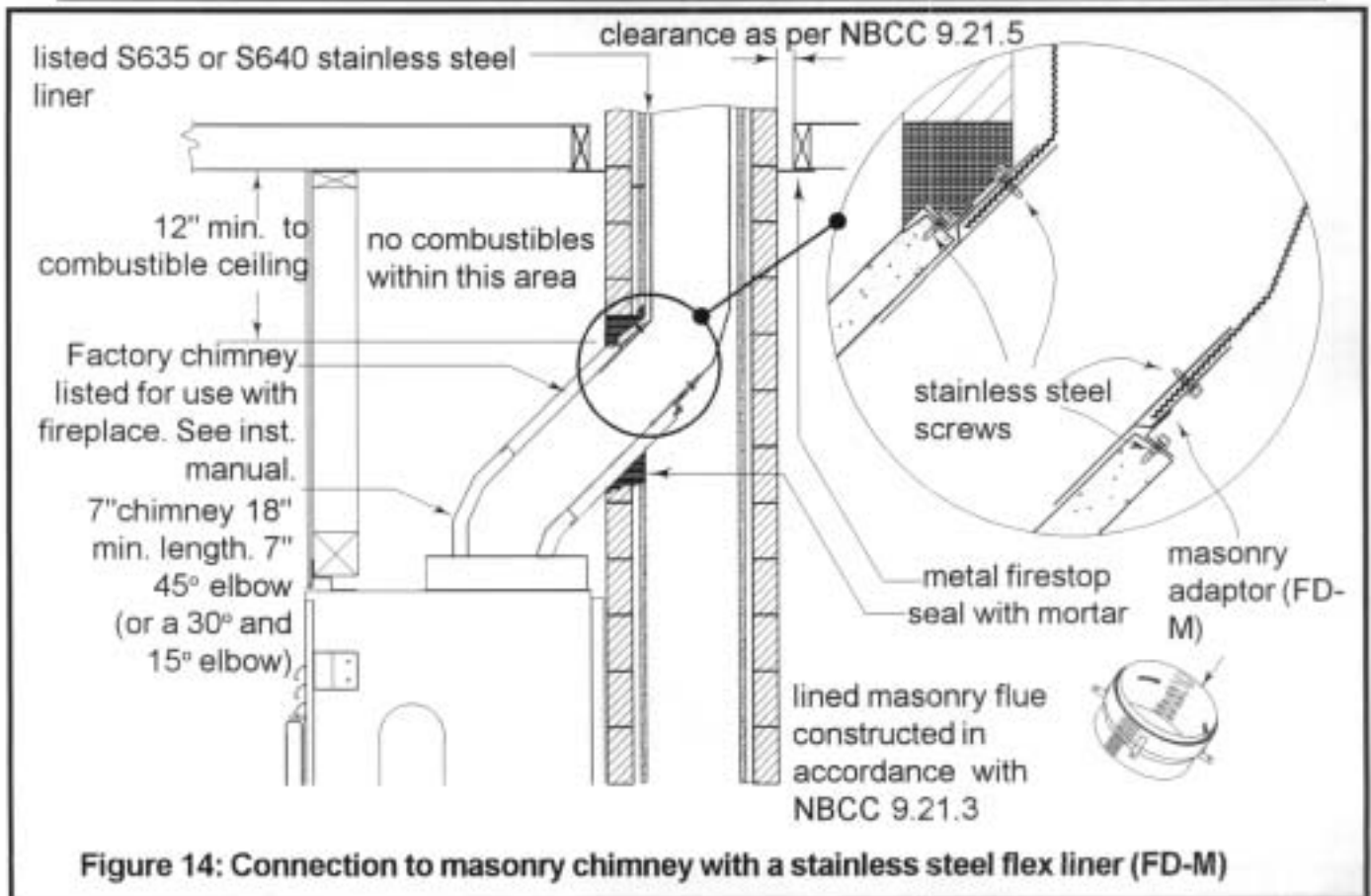


Figure 14: Connection to masonry chimney with a stainless steel flex liner (FD-M)

As depicted in Figure 14, the metal chimney is to be a minimum of 18" from the connection point at the elbow to the masonry adaptor. The uppermost part of the metal chimney where it enters the masonry chimney must be a minimum of 12 inches from the ceiling.

1. After temporarily removing the 13" X 13" cover, move the fire place into its proposed position and install the 45° factory built chimney elbow on top of the fireplace flue opening.
2. Sight-in and mark the outline of where the factory-built chimney will penetrate the masonry chimney.
3. Using a large (3/4" - 2") masonry drill bit, drill a hole exactly in the centre of the oval outline. With a masonry hammer and drill, slowly enlarge the hole to the size required. Remember to work from the centre out. Be especially careful with the clay liner behind the brick because three sides of it **must** stay in place.
4. Bring the stainless steel liner down from the top of the chimney. If you are using a rigid liner you will need enough room to secure an elbow to it with at least two screws. For chimneys with less than 10" X 10" inside you may find it easier to install a flex liner and secure the end with a special masonry adaptor (part #FD-M) available from your dealer.
5. Move the fireplace forward enough to install the length of factory built chimney and put the 13" x 13" cover over the top (with insulation cut out around to fit snugly over the chimney). Move the fireplace back into position as you connect the elbow or the masonry adaptor to the factory built chimney.
6. If you mortar the stainless steel elbow into place, you will not need to fasten it to the factory built chimney. The crimped end should go into the factory built chimney at least 1 1/2". If you use the masonry adaptor, it must be screwed to the factory-built chimney with the screws provided.

CHASE ENCLOSURE

If the chimney runs up the outside of the house, it must be enclosed in a chase structure. The chase should be constructed in such a way that it is an extension of the home, and is well insulated between the footings and the floor of the home, to prevent heat loss. Insulate the chase to the first firestop to prevent heat loss in mild climates. In cold climates, the chase could be insulated to the top to keep the flue warmer and increase draft. It is best to locate a chase away from any overhead obstructions and meet all clearances from such objects (See Figure 15).

NOTE: If the chase is enclosed or flashed to a roof as shown in Figure 15, then the flashing

must be vented.

If required by local codes, make certain that the walls have been properly insulated, vapour sealed and sheathed with a fire rated gypsum board (See Figure 15).

FIRESTOP

A fire-stop must be in place where the chimney passes through each floor level overhead. This will assist in retarding any spread of fire and act to contain the fire within the area below the fire-stop.

OFFSET CHIMNEY

Maximum offset angle: 45° (Check local codes to confirm this)

Maximum number of elbows: four (4), resulting in two (2) offsets

45° can be achieved using a combination of 30° and 15° if a 45° elbow is not available.

Use elbows if the chimney needs to be offset to avoid an above-unit obstacle or to clear a joist. An elbow may be installed directly on top of the fireplace if required.

Install the fireplace and chimney as described above. When you require an elbow, proceed as follows:

1. Install the insulated elbow. Turn it the required direction and fasten it to the other section with 3 metal screws at the joint (if the chimney manufacturer allows this in its instruction manual). If required, locking bands could be used in place of metal screws as per manufacturers' brands and instructions.
2. Install enough lengths to get the required offset (Maximum offset: 8 feet). Turn the chimney lengths clockwise to lock them together, then secure them with 3 metal screws at each joint.
3. Use another elbow to return the chimney to vertical.
4. Install a roof support, floor support, or an offset support at each offset, to support the weight of the flue (Class A elbows are not designed to support a flue above an offset).

SEALING

Be sure to seal the 1/4" space between the fireplace and the standoffs with a bead of sili-

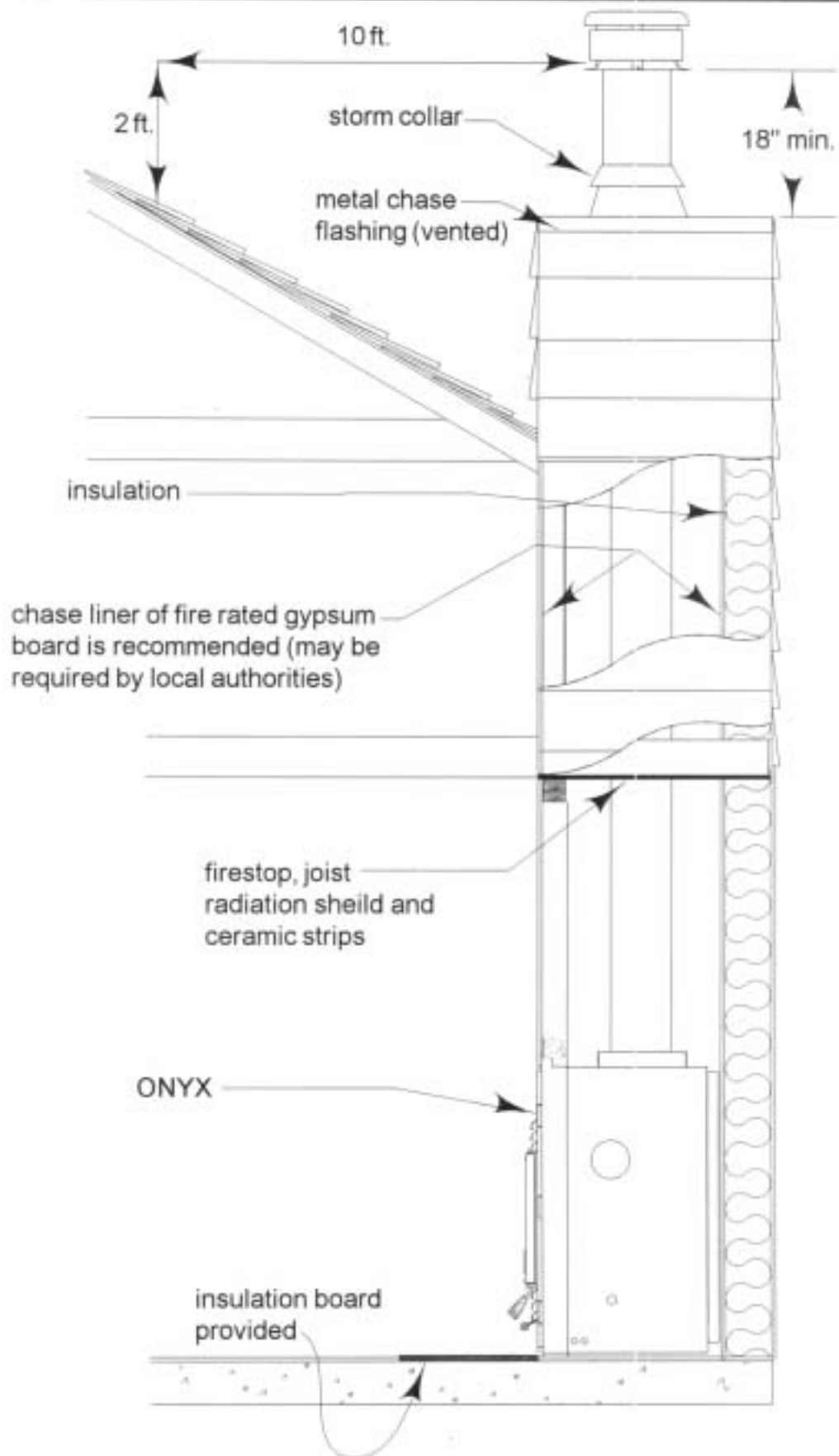


Figure 15: Chimney installation with chase enclosure

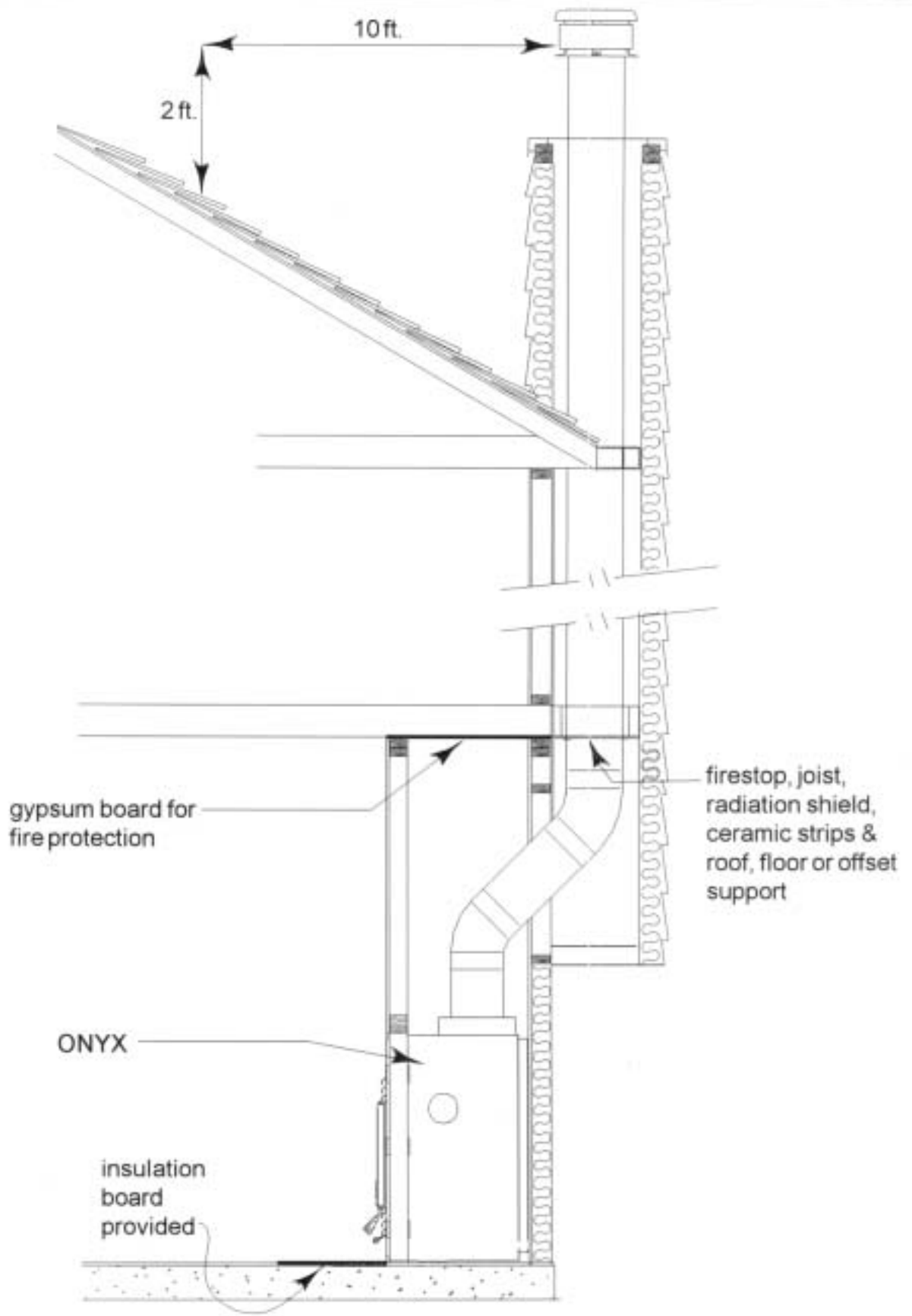


Figure 16: Offset chimney through a wall

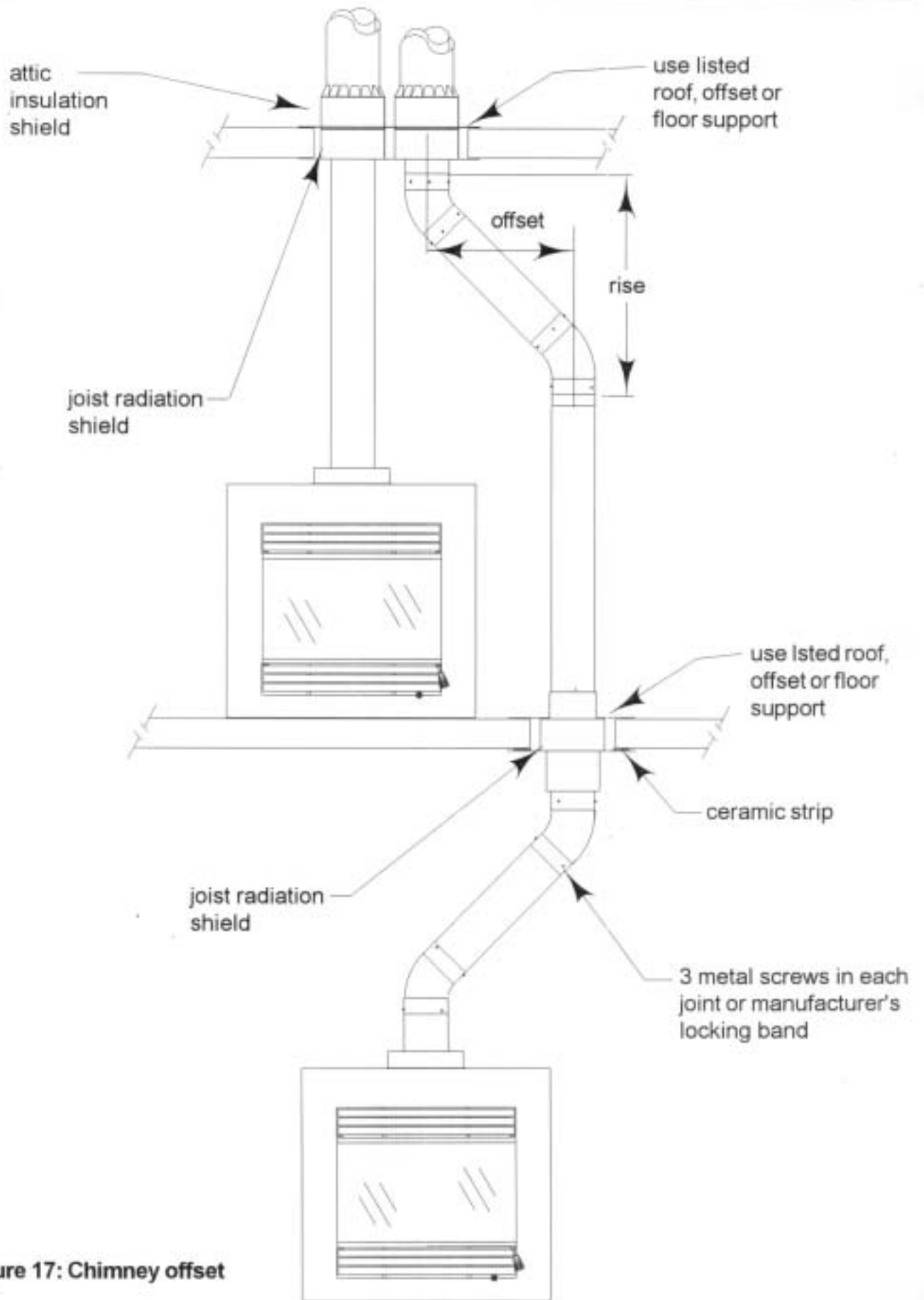


Figure 17: Chimney offset

cone sealer. (See Figures 18, 19 & 20.)

FACING

Facing materials may only be non-combustible such as metal, brick, rock, concrete board, or ceramic tile. Gypsum board is **NOT** an acceptable facing material.

If you desire to fully face the fireplace with thin masonry, it is recommended that you purchase the rock retainer kit (part# FD-KO). This kit is **NOT** recommended for brick or other -self-supporting materials. Follow these steps and refer to Figures 21 & 22.

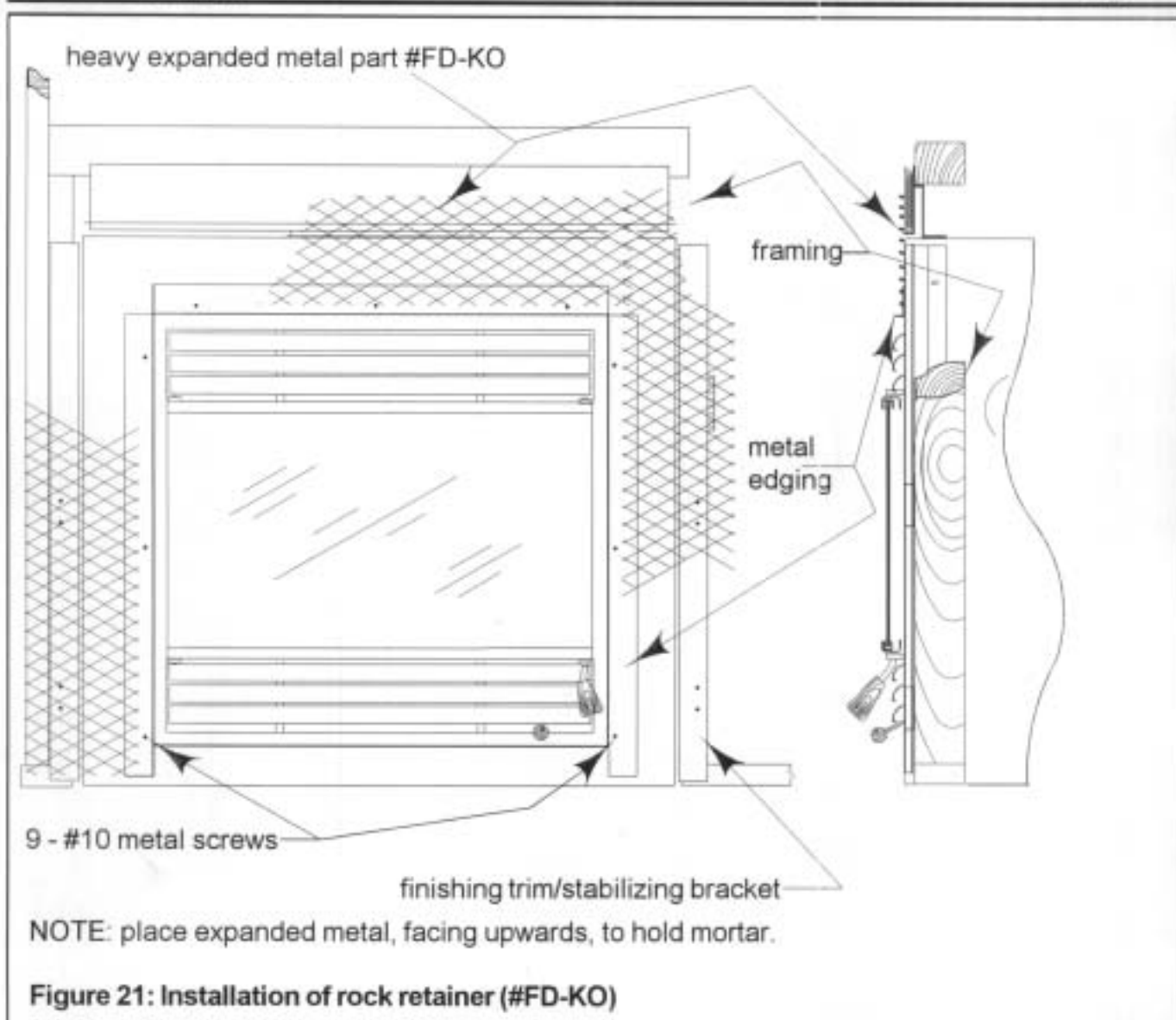
IMPORTANT: Make certain that the 1/4" space between the finishing trim and unit is sealed with silicone sealer before installing the rock retainer kit.

WARNING: *DO NOT RESTRICT AIR FLOW THROUGH THE INLET AND OUTLET LOUVRES OF THE FIREPLACE.*

NOTE: Remove the louvres and leave the door wrapped in the shipping plastic. Store them in a safe place until all the masonry work is finished. Acid from the cleaning operation could permanently damage the gold plating.

FACING INSTALLATION:

1. Install the heavy expanded metal on the face above and beside the door and louvres using drill-and-tap screws. There are right and left side expanded metal pieces. The expanded metal is correctly installed when the expanded metal is facing upwards, to catch the mortar (See Figure 21).
2. Cover the rest of the area with wire mesh or metal lath, overlapping the heavy expanded metal. Make sure nails or staples used for fastening mesh penetrate studs at least 1".
3. Mortar must be "thin set" or "thin bed" type, inherently polymer modified. Do not add water to the mixture (this applies to the grout as well). If the mortar is not modified, you should add a synthetic latex additive. Mix to a firm, moist consistency.
4. Using a plasterer's or mason's trowel, apply a scratch coat that covers the wire mesh. Let the mortar set before adding another coat. This will take several hours. Afterwards, apply a thinner coat and the facing. Do not spread plaster over more than a workable area so that the mortar will not set before the facing is applied.



5. If additional mortar is required, use a grout bag to fill in joints. Care must be taken to avoid smearing on the surface of the stone or brick.

SPARK GUARD

Install a 5" wide piece of sheet metal centered under the joint between the fireplace and the hearth extension. This will make certain that sparks can't lodge in the crack and start a fire (See Figures 3 & 23). If your unit is being installed as a raised fireplace as indicated in Figure 23 and does not require the Micore board (see next section), then a "Z" shaped spark guard must be installed. Depending on the allowable height your unit can be raised, the height dimension of the spark guard will differ. The minimum depth the spark guard must extend beneath the ONYX and the non-combustible material in front of the fireplace is 2 1/2 inches. The "Z" shaped sheet metal must run the full width of the unit. (See Figure 23) **(Z-SHAPED SPARK GUARD NOT SUPPLIED)**

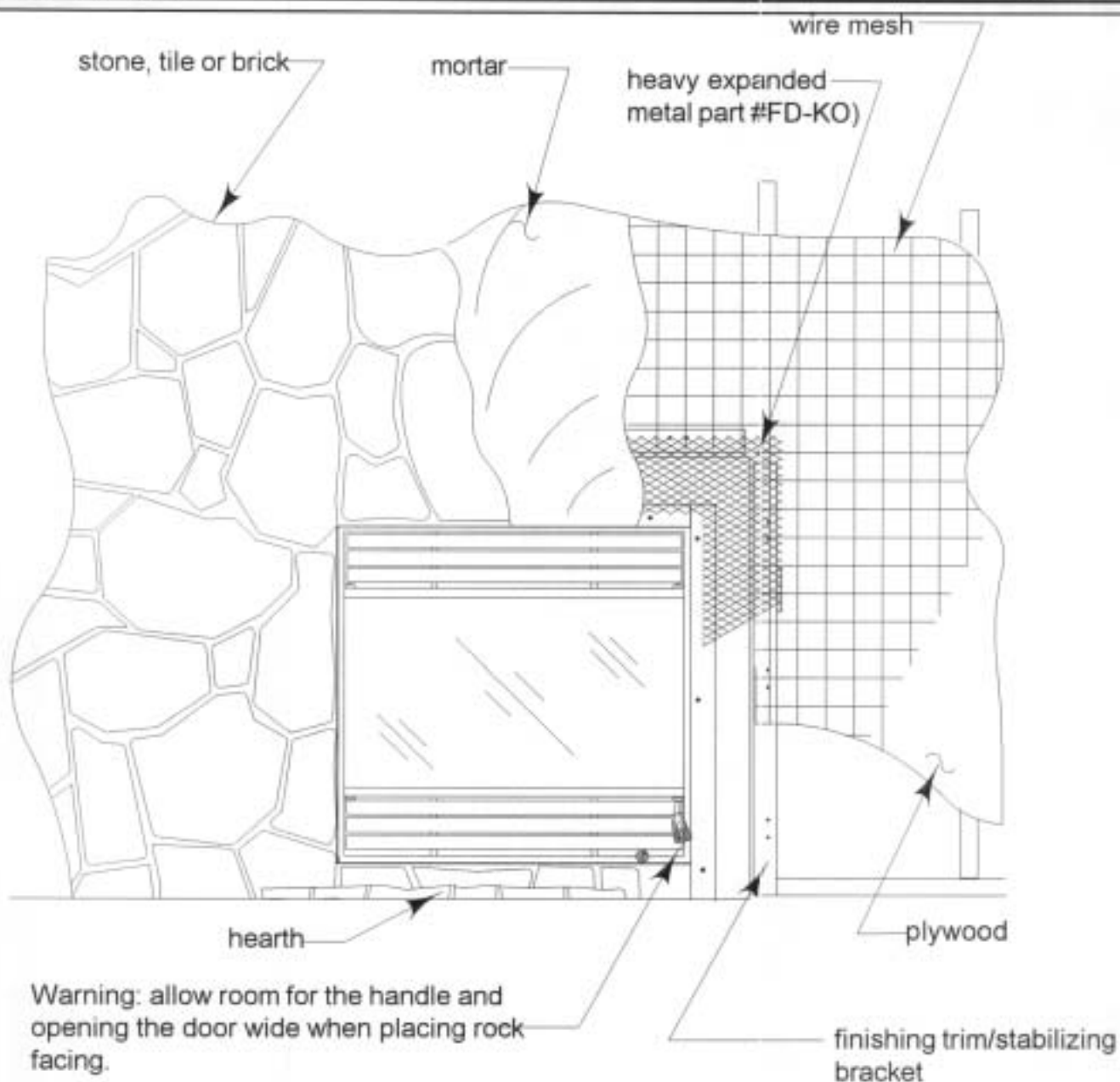


Figure 22: Installation of rock retainer (#FD-KO)

MICORE BOARD

The ONYX **must** use the included Micore board, unless it is raised at least 4 inches above the base of the hearth (See Figure 23). The Micore board is not as wide as the hearth requirements. Cut 3/4" plywood and put it on both sides to meet the dimensions of your desired hearth.

If the fireplace is raised 4" or more, the area in front of the fireplace just needs to be covered with a non-combustible material, such as metal, brick, stone or slate. There is no minimum thickness required for this non-combustible hearth extension. The 5" wide spark

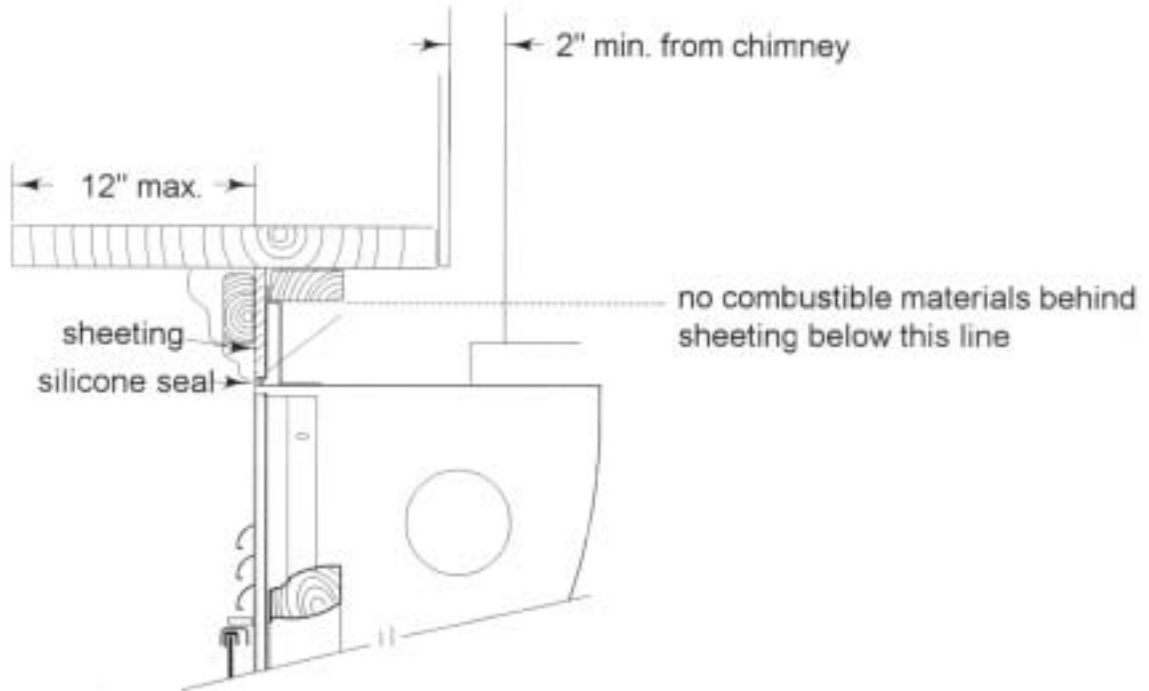


Figure 18: Recessed mantel

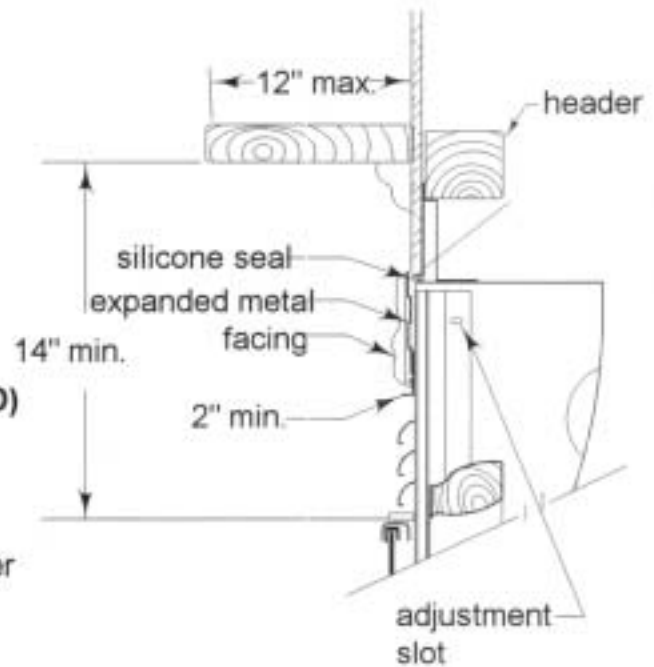


Figure 19: Sheeting and facing (with F-DKO)

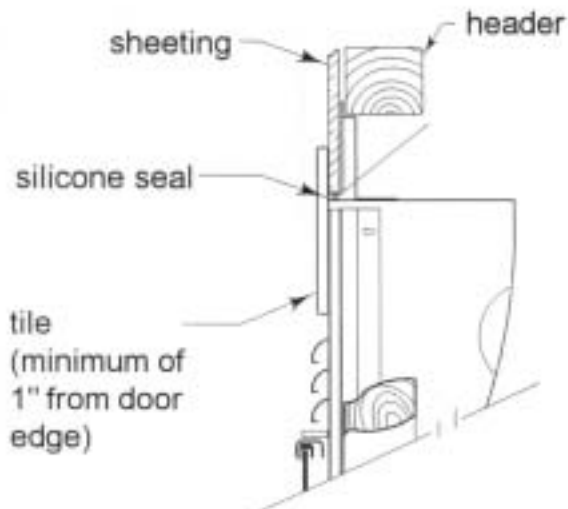


Figure 20: Sheeting and trim

guard must be installed underneath either the hearth extension or the Micore board.

Note: If the *ONYX* is installed on a concrete floor, the Micore board and spark guard are not required.

MANTEL

A masonry or other non-combustible mantel may be placed directly above the top louvres. If a wood or other combustible mantel is desired, it must be at least 14 inches above the top of door (See Figure 18 & 23).

OPTIONS

Just a few comments about your *ONYX* options. The size and shape of your home and how you intend to use your fireplace, will determine the options required:

1. For a basic high efficiency fireplace, you won't need any options or electricity.
2. Temperature control can be accomplished by adding the **thermostat option FD-HC4**. This unit automatically controls the amount of combustion air to the fire, leaving your home at an even preset temperature. If you seriously plan to heat your home with wood, this option increases comfort, reduces the fuss of continued manual adjustment and reduces wood consumption.
3. For more heat output and more air circulation, you could add the **internal blower FD-HB5**.
4. If you have rooms directly above or adjacent to the room(s) with the fireplace, which you would like to heat, you may consider the **gravity vent option (FD-VO)**. The gravity vent distributes hot air to other rooms without the assistance of a blower. However, with the internal blower (FD-HB5) installed, there will be some increase in warm air movement to the room(s) serviced by the gravity vent.
5. If you desire even heat throughout your whole home from the fireplace, or you want to move heat to a remote area of your home, it is recommended that you incorporate the central heating option. (See **CENTRAL HEAT BLOWER - FD-HB6**). A thermostatically controlled blower takes heat from the room with the fireplace and distributes it throughout the rest of the home - even a couple of stories down or up.

NOTE: It will be difficult to install the blower in the unit if wiring is not run during framing. If there is any chance this option might be desirable in the future, power should be run to the unit and wire must be run to a switch box for mounting the blower control.

WALL THERMOSTAT (FD-HC4)

This optional kit allows you to control the temperature by a remote electric wall mounted thermostat.

NOTE: It is strongly recommended that this kit be installed during framing so that wiring can easily be hidden.

1. Remove both top and bottom louvres. These are held in place by springs underneath. Therefore, push down from the top and pull forward.
2. The damper motor and transformer are mounted on a bracket in the bottom right hand corner of the fireplace. Mounting screws are supplied and are already in place in the bracket (See Figure 24).
3. BEFORE fastening the controls with the 2 screws provided, thread the chain supplied through the spare keyhole in the draft control and attach a pendant to the end just like the chain that is beside it. Let the chain down on the same side of the inner heat shield as the existing one and attach it to the lever on the damper motor with another pendant. Push the pendant snug into the hole in the lever. Then mount the controls to the bracket.
4. Adjust the chain on the draft control lever until it is just snug and the damper is still closed. When the damper motor is energized, the damper should open all the way. Lock the chain into the keyhole with another pendant, just like the chain beside it.
5. Wire the thermostat as shown in Figure 43, making sure the wall control is sufficiently away from direct radiation of the fireplace. Make certain to place it at least 10 feet away from the fireplace, but in the same room.

CIRCULATING BLOWER (FD-HB5)

NOTE: It is strongly recommended that the wiring for the blower kit be installed during framing so that wiring can easily be hidden.

1. Remove the bottom louver. It is held in place by springs underneath. Therefore, push

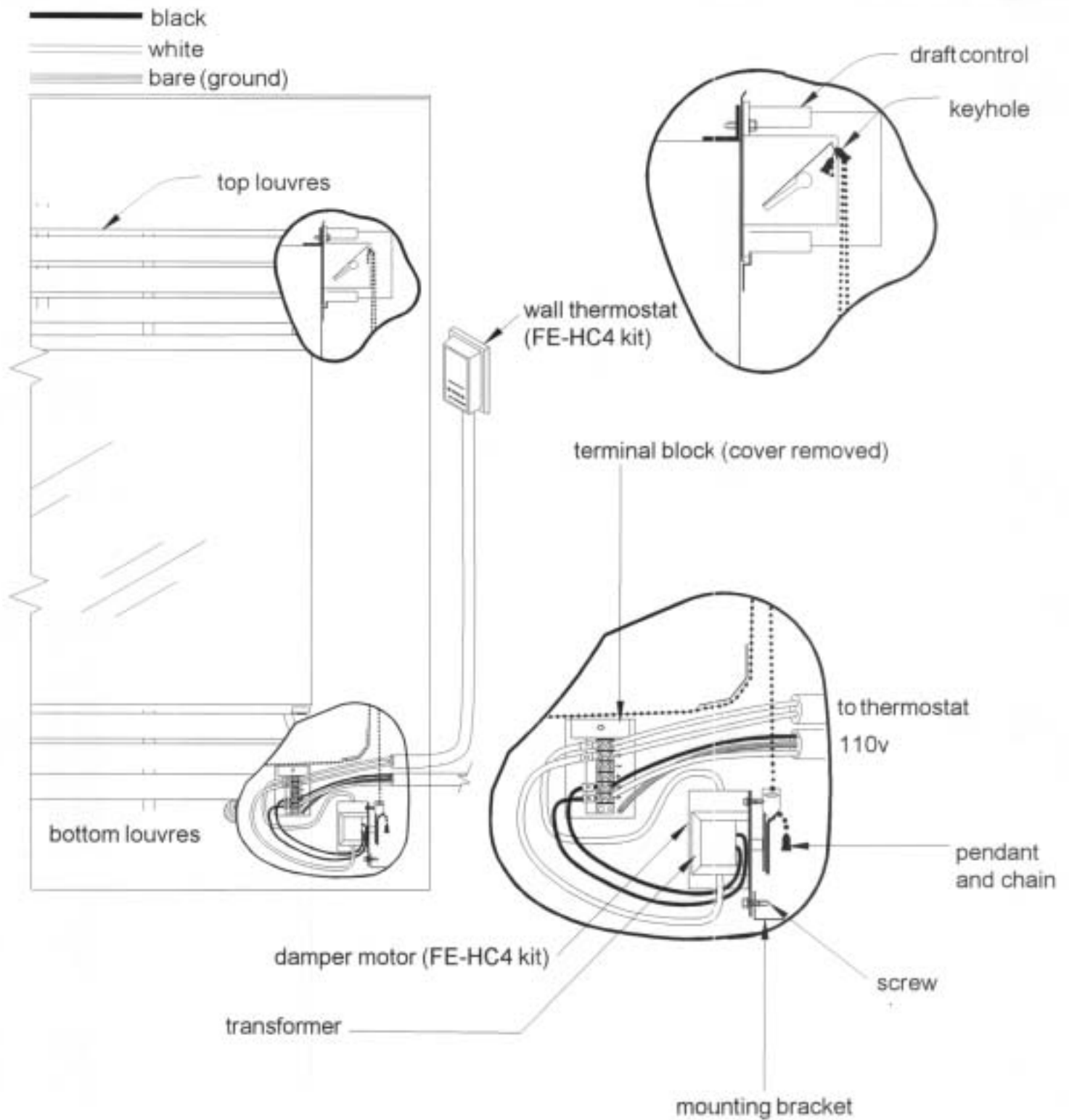


Figure 24: Thermostat control installation

See wiring diagram figure 43.

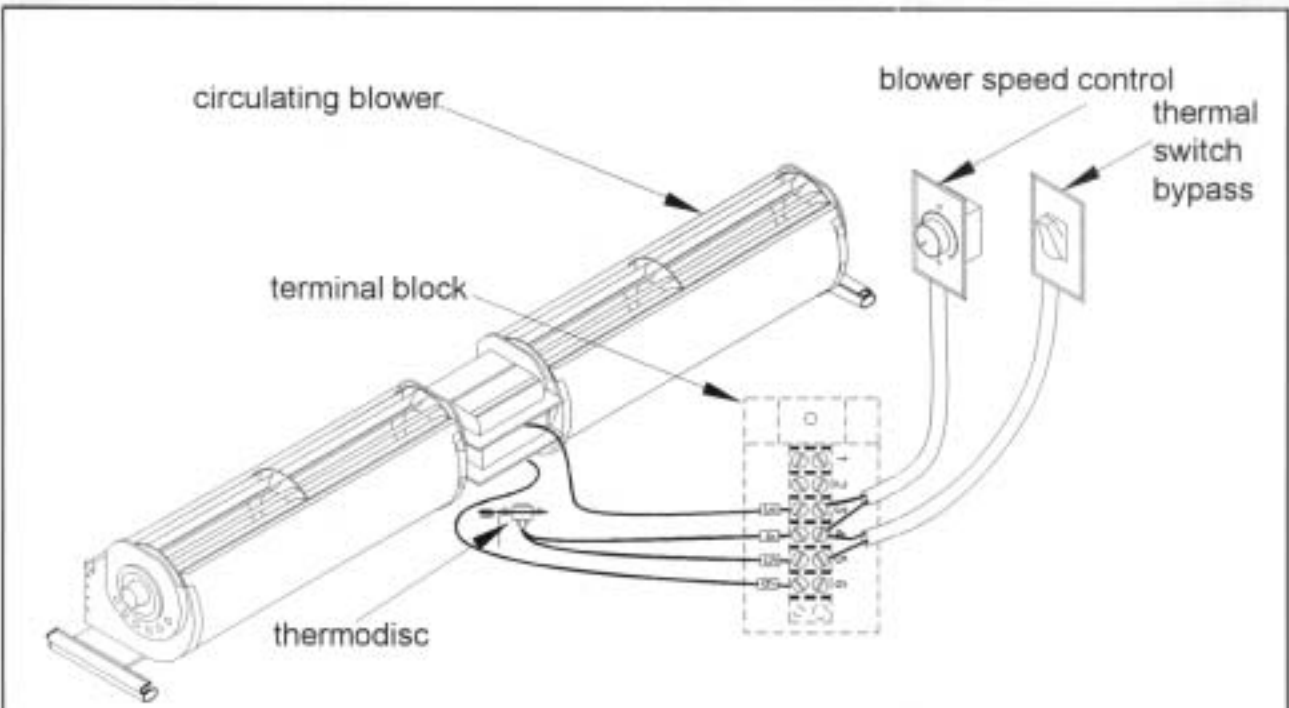


Figure 25: Circulating blower See wiring diagram Figure 44.

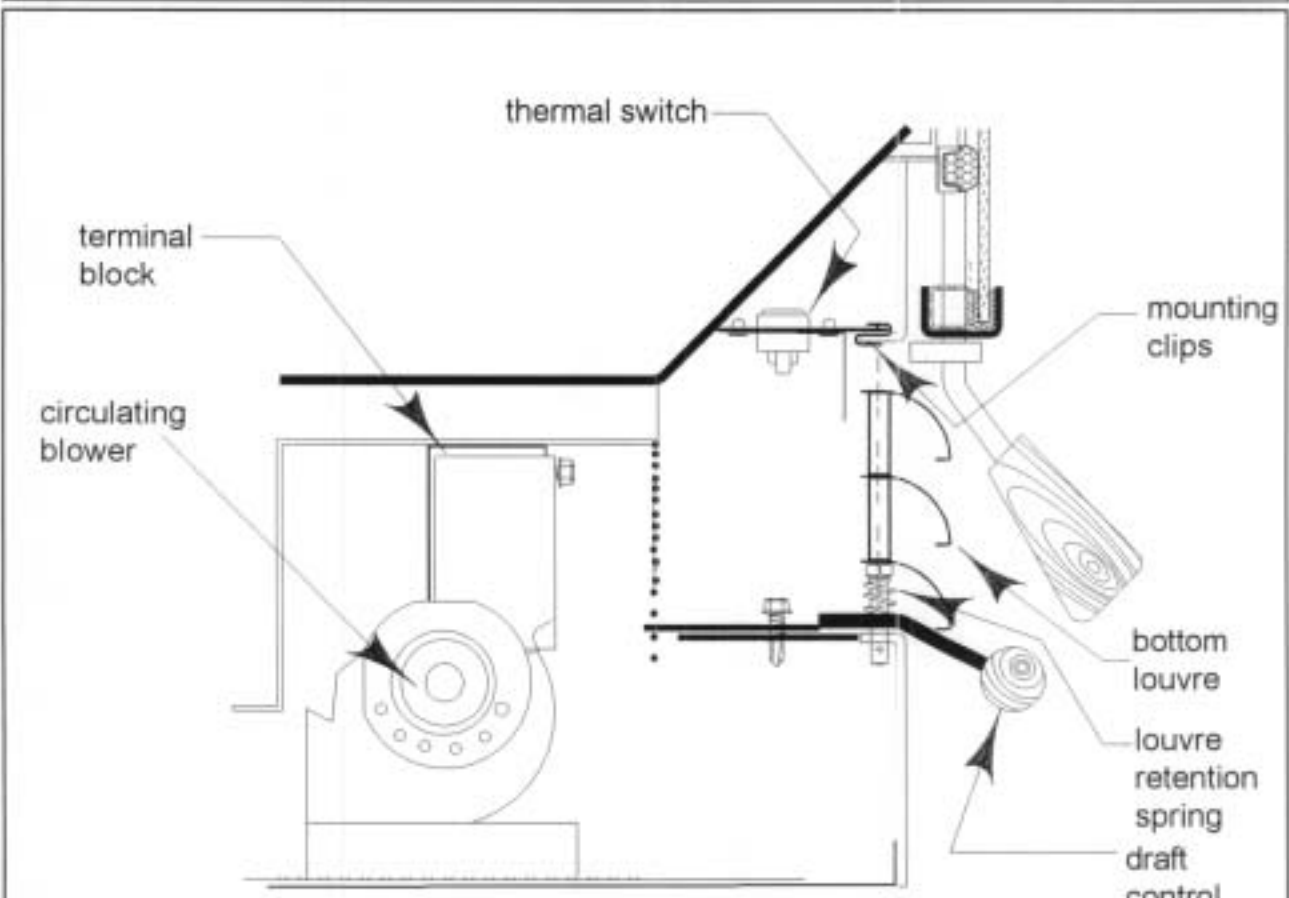


Figure 26: Circulating blower location (sectional view)

down from the top, then rotate and pull forward.

2. Hold the blower with the outlet facing up from the back. Fit the blower through the louvre opening.
3. Slide the blower into place between the two brackets.
4. Mount the thermal switch as shown in Figure 24. The front face of the fireplace is bent into a flange just above the lower opening. It has 2 holes to hold the bottom louvre rods. The thermal switch mounts just to the right of the right hole. Push the clips on to the flange as far as they will go.

NOTE: One thermal switch is all that is required to operate either the internal blower, the central heat blower, or both.

5. Locate the provided speed control in a switch box at a convenient location on the wall and connect it with conventional 90° C 14 gauge wire (see Figure 23).

Note: One thermal switch is all that is required to operate either the FD-HB5, the FD-HB6 or both. For an explanation of the thermal switch, see page 5.

GOLD LOUVRES OR ENAMEL LOUVRES

The standard louvres above and below the door can be replaced with a gold plated or black enamel set. You may order these from your dealer.

DISMANTLING AND ASSEMBLING LOUVRES

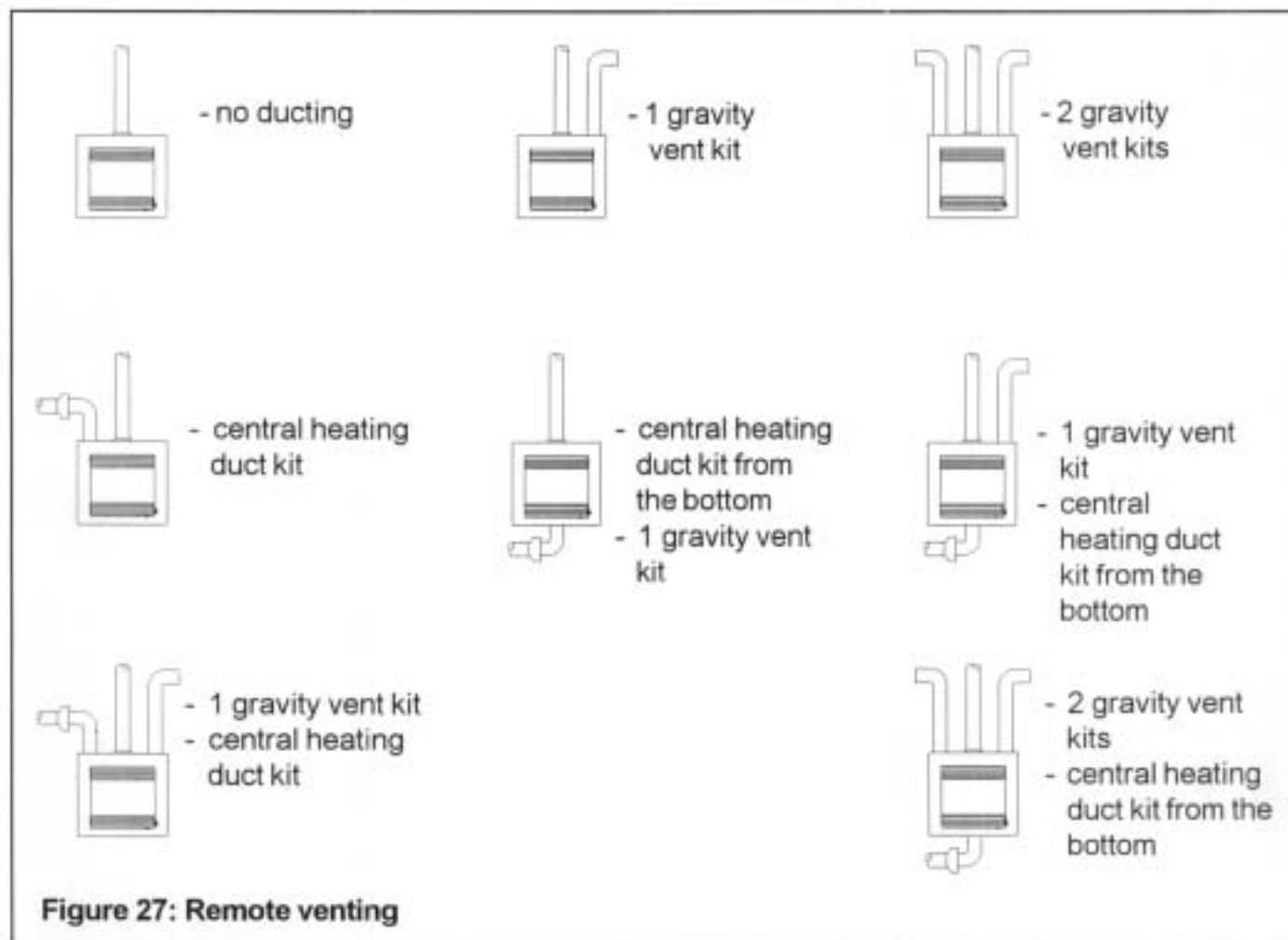
1. The louvres are held in place by springs underneath. Therefore, push down from the top and rotate the louvres forward.
2. Take the assembly apart by first removing the top nuts from the rods. Then take off the louvres and spacers.
3. Assemble the new louvres the same way the old ones came apart, reusing the original rods and spacers. Leave about 1/4" of the rod protruding above the top nut.
4. Install the assemblies, inserting the rods into the lower holes first. (Top and bottom assemblies are the same size). Wipe off all finger prints etc., with a soft cloth and mild

soap and water.

REMOTE VENTING

Heat from the ONYX may be vented to other areas in the home by a number of ways, with or without a central heating blower:

The gravity vent system can distribute air to an upper level or to a room next door without an extra blower. **The central heating option allows heat to be sent up to 50 feet away.** Figure 27 illustrates various certified ways of incorporating the two systems.



THE GRAVITY VENT SYSTEM (part FD-VO)

The FD-VO Kit includes:

- a grille
- a grille adaptor
- a B-vent starter section
- a shut-off damper

IMPORTANT: No substitution of any of these parts is allowed. These genuine RSF ENERGY parts have the correct clearances. These clearances must be maintained for your safety.

The FD-VO system incorporates standard 8" B-vent components for installation. Single wall pipe is **not allowed** due to the high temperature of the air in a gravity vent system. Any listed brand of 8" B-vent pipe may be used and is not a part of the FD-VO. The maximum pipe length is 15 ft. from the top of the fireplace to the outlet.

NOTE: If two gravity vent lines are installed, then two FD-VO kits must be ordered.

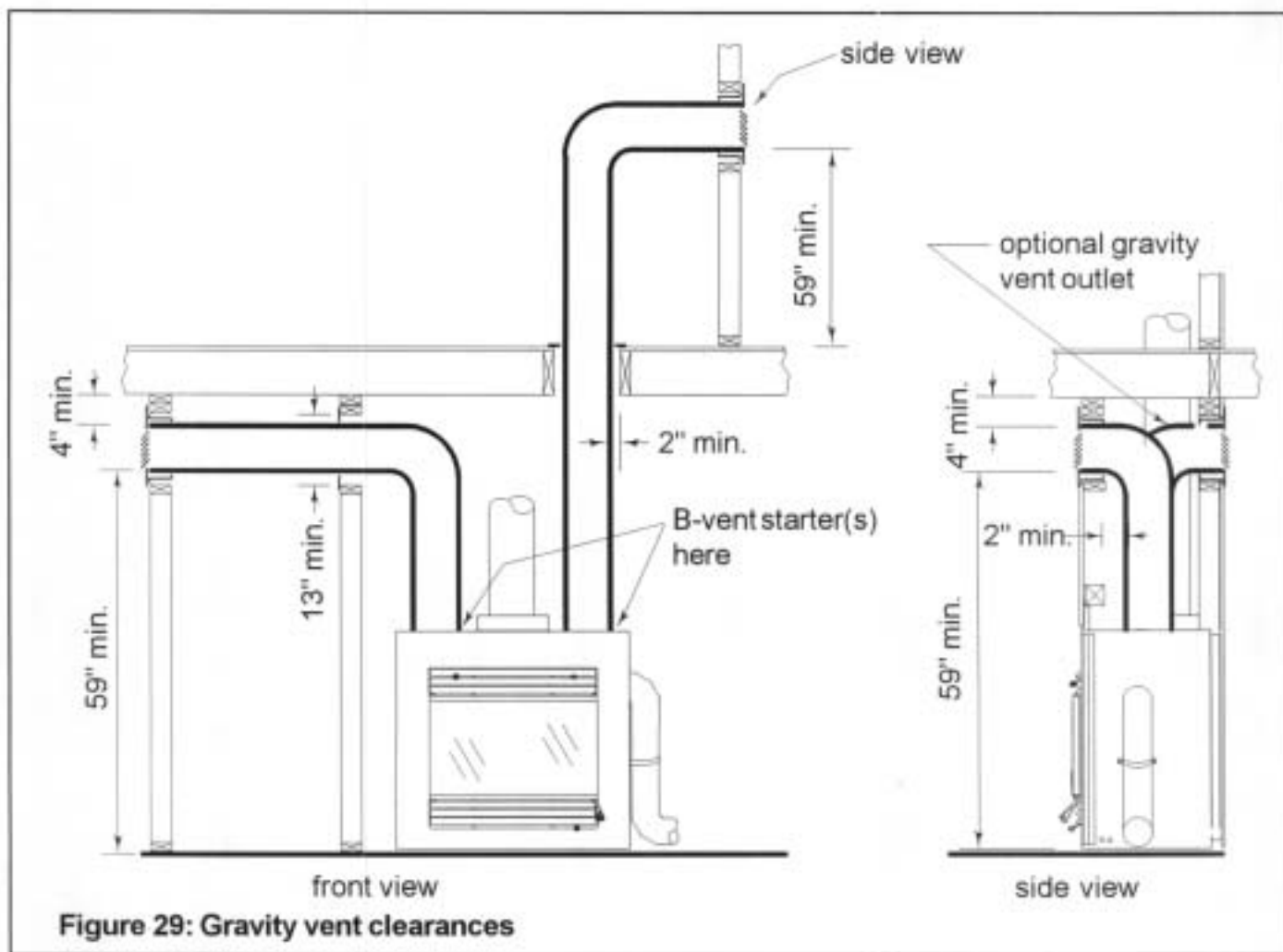
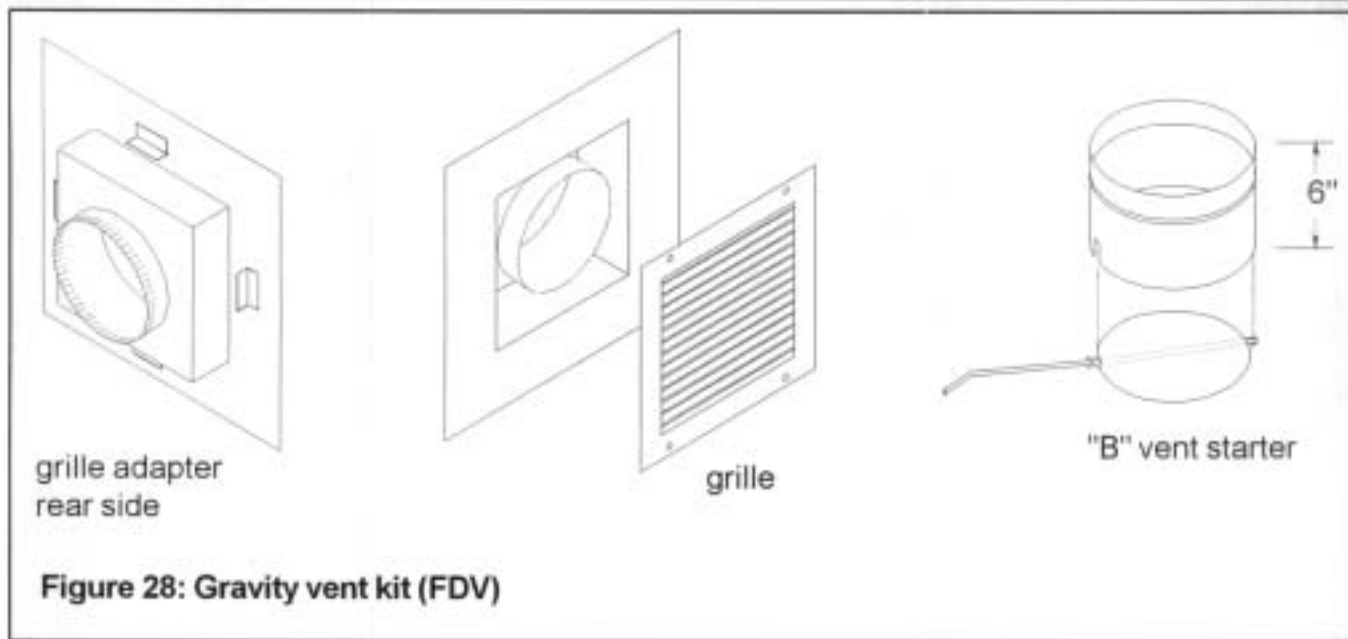
Figure 29 indicates the minimum clearances and framing dimensions. Passing through a combustible wall or ceiling requires a minimum 13" x 13" opening.

WARNING: *Every measurement and clearance on the illustrations must be followed to assure safety of the installation.*

INSTALLATION

CAUTION: *Do not replace the grille from the FD-VO with shutters.
Do not allow heat to be trapped in the gravity vent system.*

1. Plan the gravity vent run first. Be aware that the maximum distance between the top of the fireplace and the outlet is 15 feet. There is no maximum number of elbows in a run, but the run must never go in a downward direction as this can trap heat in the gravity vent system.
2. The grill adaptor is designed to be installed underneath the gypsum board in the wall. In the desired location, frame a 13" x 13" hole to accept the gravity vent grille adaptor. Fit the gravity vent grille adaptor into the framed hole and fasten it into place with nails or screws.
3. Remove the outer cover to the left, right, or both sides of the flue outlet, on the ONYX.
4. Cut the insulation to the size of the opening and remove the cover plate underneath (it is taped in place).
5. Install the B-vent starter section. The slot in the B-vent starter section should be facing the front and the hole should be facing the back. Bend up the four tabs at the base of the starter section to hold it in place.
6. Install the "shut off" damper at the base of the starter section. The shut off damper



enables the manual control of hot air flowing through the gravity vent pipe. With the top louvres removed and the angular portion of the rod in hand, insert the damper rod into the hole in the starter section. Next, make sure that the washer and spring on the control arm are both on the outside of the starter section and that the rod has fit snugly into the slot. A definite tension should exist between the shut off damper rod and the starter section. Replace the louvres. The damper rod should protrude above the top of the louvres.

7. Install the B-vent pipe, between B-vent starter and the grille adaptor. Fasten each joint with 3 screws. Insert the B-vent pipe into the grille adaptor and fasten it with three screws. The B-vent pipe needs only be inserted far enough to be able to screw it into place. This allows you about 3 1/2" of adjustment.

8. Once the wall facing around the gravity vent grille adaptor has been completed, install the grille with the supplied screws. The gravity vent is now ready for operation.

CENTRAL HEAT SYSTEM (NOT FOR MOBILE HOME USE)

Use the blower and ducting to move heat from the room where the fireplace is located. The Central Heating System components are available from your dealer, in three parts:

- 1) Part FD-HC6 - a blower control center, a thermostat, and a thermal switch.
- 2) Part FD-HC6-1 - An 8" diameter back draft damper
- 3) Part FD-HB6 - A maximum 650 c.f.m. blower with a variable speed motor, 2 mounting clamps, a blower speed control, and a mounting bracket.

OR

The Granger two speed blower #1C792 (with Granger 3 position switch #3D367) may also be available from your dealer. This blower has a higher maximum output, and may be more ideally suited for longer ducting runs (see Figure 33). See Figures 48 and 49 for the two speed blower wiring diagrams. The blower is supplied with a two speed switch. If you are using 8" round duct in your home, RSF ENERGY supplies a square-to-round adapter for use with the two speed blower (part # FD-SRD).

When the central heating option is installed on top of the fireplace, it **MUST** be accompanied by the backdraft damper, **FD-HC6-1**. If you decide to duct out of the bottom of the fireplace, do not use it. The 8" backdraft damper prevents hot air from travelling into the 'C' vent (single wall) ducting unless the Central Heat Blower (FD-HB6) is operating. When the thermostat calls for heat, the blower turns on, causing a negative pressure in the ducting, opening the one-way valve. At the same time, the room air is drawn through the upper and lower louvres, which mixes and reduces the overall temperature of the forced air that travels through the ducting.

WARNING: *If you are ducting out of the top of the fireplace and the backdraft damper is not installed, the central heat ducting may become too hot for the surrounding combustible materials. Any substitute for the FD-HC6-1 kit will void all warranty coverage by RSF ENERGY.*

INSTALLATION INSTRUCTIONS

NOTE: *If you decide to draw air from the bottom of the ONYX, you will need to have a hole in the floor at the appropriate location, before you move the fireplace into position. Skip to step 5. If you are ducting from the top, begin at step 1.*

1. Remove the cover to the left or the right of the flue outlet on the ONYX.
2. Cut the insulation to the size of the opening and remove the cover plate underneath (it is taped in place).
3. Install the back draft damper crimped side up, making sure it is pushed all the way down. Bend out the tabs on the lower edge of the damper at 4 places inside the fireplace with a pair of pliers, so the back draft damper cannot be pulled out again.
4. Before proceeding with the installation of the blower, make sure that the electrical service to the blower is in the "OFF" position. All wiring should be in accordance with local ordinances and the National Electric Code.

NOTE: *The blower can basically be installed anywhere in the home. However, some thought should go into the planning, to ensure that the blower noise does not affect rooms you would like kept quiet. If the central heating system duct work is passing through an area in your home that you do not wish to be heated, then the ducting should be insulated. Length of runs should be as short as possible to conserve space and minimize cost. Maximum duct length should not exceed 50 feet from the fireplace to the furthest outlet. There is a loss of about 15% performance at 50 feet. Also: The blower automatically shuts off if the air temperature reaches 180° F inside the ducting .*

6. Locate the blower in a convenient location. The blower may be installed vertically or horizontally. The horizontal installation can utilize either the supplied mounting bracket or, if you want to install the blower farther away from the ceiling, you can use plumber's strapping. A vertical installation must include the mounting bracket.

Note: If you have an existing hot air system, you may safely 'tie in' to this hot air system. However, no hot air duct is to be connected to the return air of another central heating system.

7. Connect the INLET of the blower to the ducting coming from the fireplace, using 8" diameter metal ducting (rigid or flex). Any other size will not work properly. **Use only metal ducting between the fireplace and the blower.** You may use plastic ducting after the blower, provided the temperature rating of the ducting is at least 250° F. Do not use plastic ducting in a chase. If you are ducting out of the bottom of the fireplace, put the first piece of central heat duct into the flange under the firebox, then put a couple of drill and tap screws through the flange and the duct to hold the duct in place.

Note: The central heat ducting may be run at a 0" clearance to combustibles.

8. Attach the noise reduction collars to the blower using self-tapping screws.

9. Duct-work can then be run to the desired rooms. Up to six 5" or five 6" diameter runs can be installed from this system.

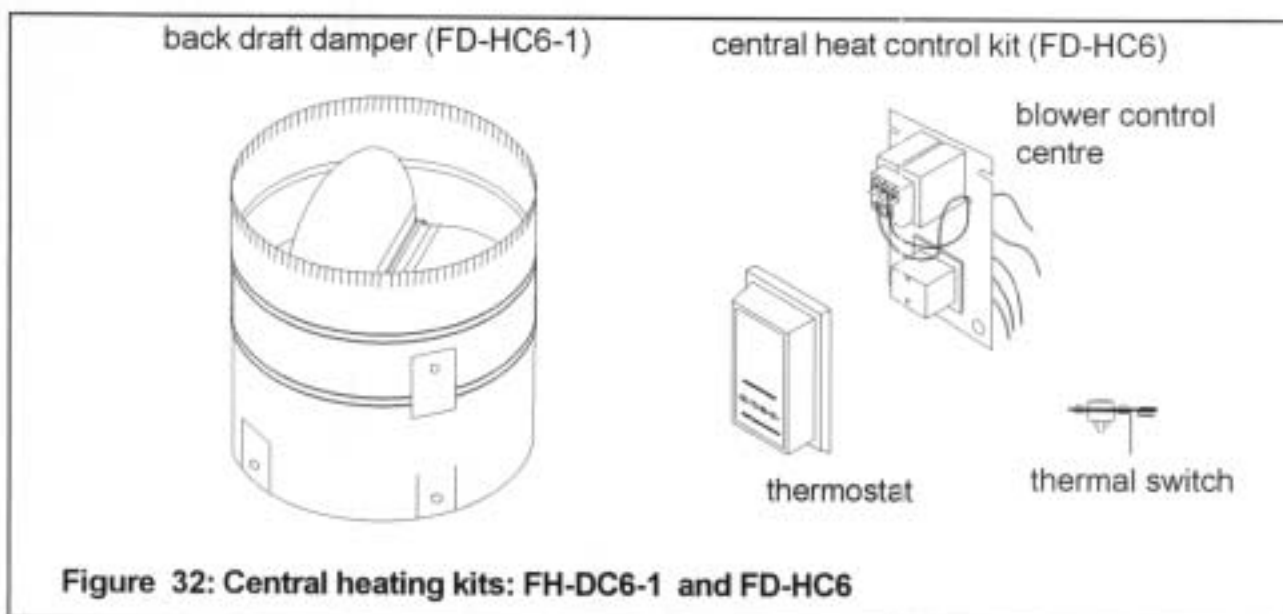
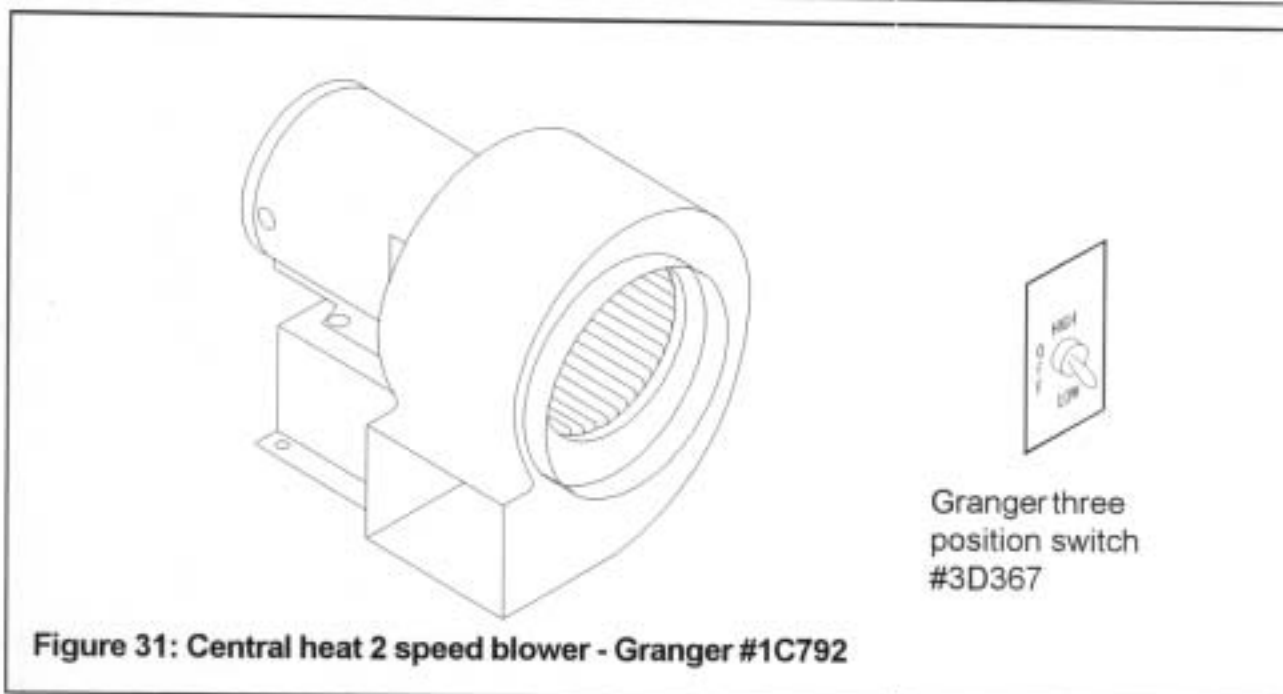
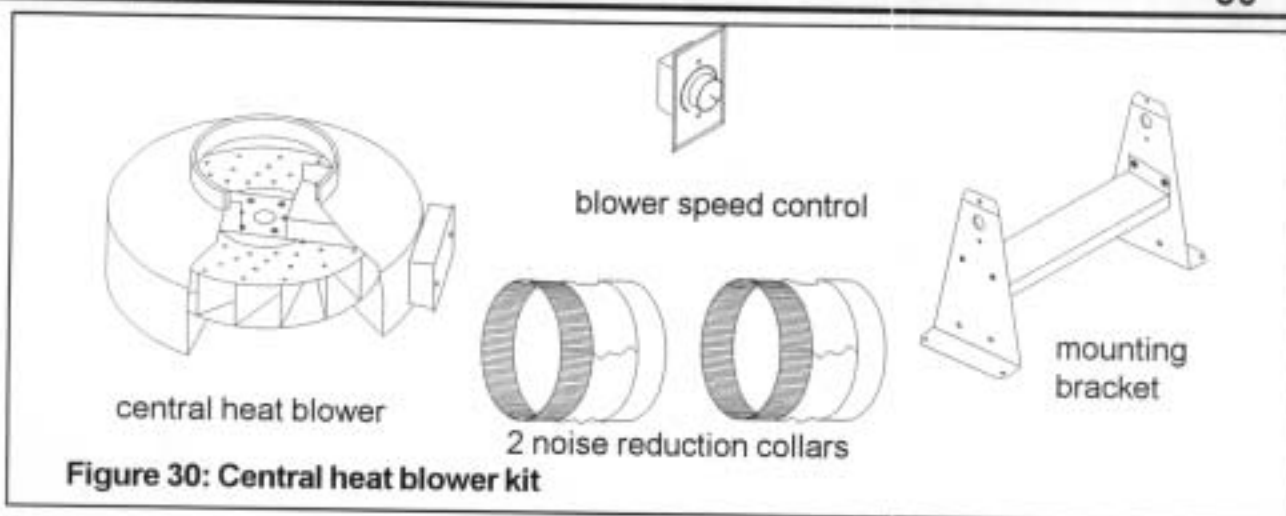
Note: Runs must be balanced as air travels along the path of least resistance. Balance the air flow by diameter and length of runs. Longer runs should have larger diameters. Houses vary in size and layout, so duct systems must be specifically designed for each home. The diagrams in this manual are examples only. The cross sectional area of the distribution system must total at least 50 square inches. If you have more than 50 square inches some of the system may be shut off, but there must always be 50 square inches of ducting open at all times. For example, if 5" pipe is used for distribution, the cross section of each is 20 square inches. The minimum allowable ducting would be three runs of 5" pipe.

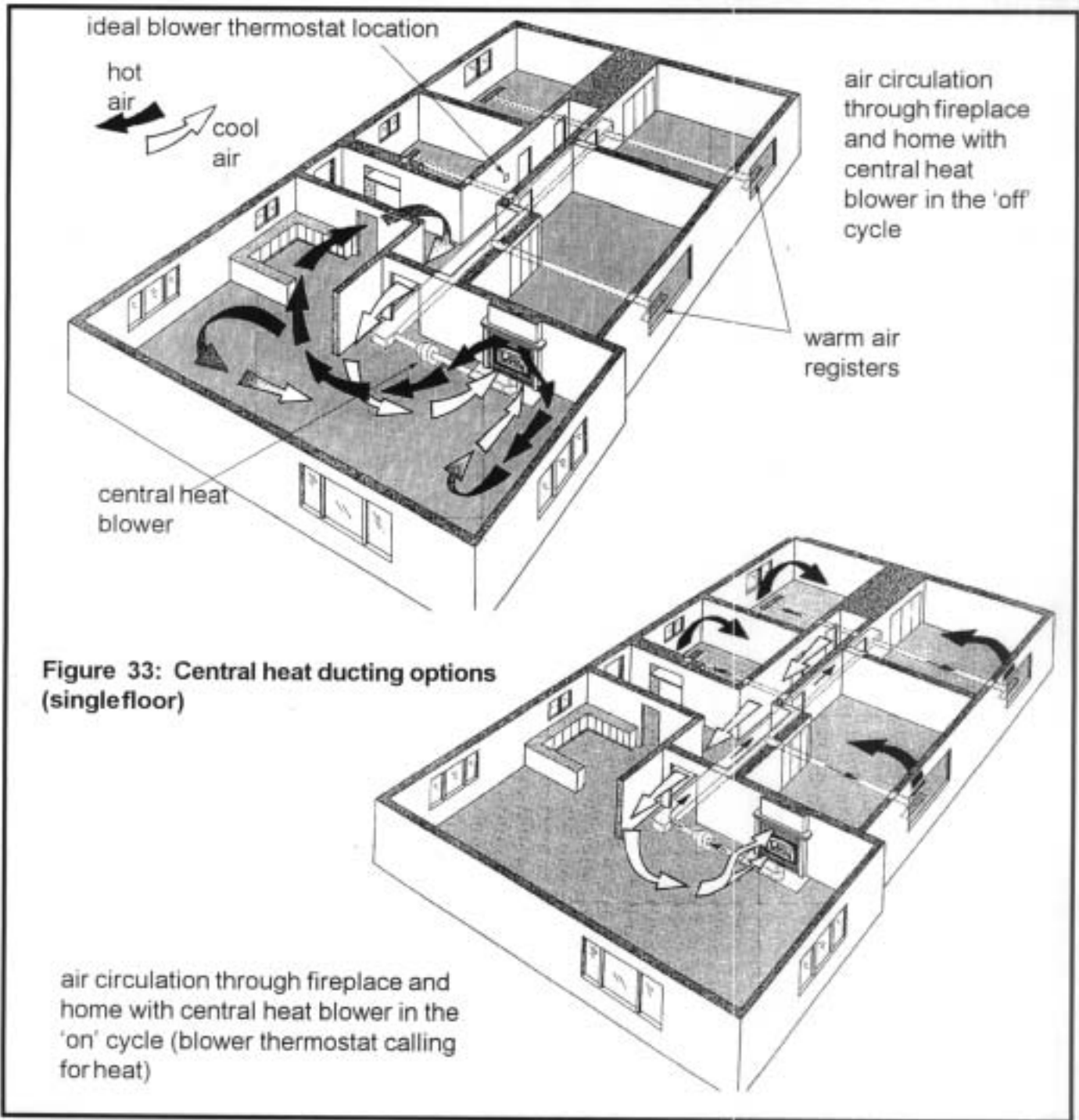
Figure 36 and 37 illustrate two examples of "tying" in to existing duct work. Directing air in the right direction will reduce reverse flow when the existing furnace blower is off. Some reverse flow will not cause any problems.

CAUTION: *Tie-ins into existing duct work must be down stream from the existing furnace.*

Note: When the central heating blower is in operation, it removes air from the room containing the fireplace. If this room can be closed off from the rest of the house (e.g. with a door), a grille with at least a 100 square inch open area must be installed to allow the air to return to the fireplace. Otherwise periodic smoking from the fireplace will result.

10. Wire the blower to a 115 volt, 15 amp breaker through the thermostat provided. The variable speed switch provided should be installed in a convenient location near the fireplace so the blower can be shut off during refuelling. The blower control center should be placed in an accessible location near the blower. It should be mounted in a 4x4 electrician's



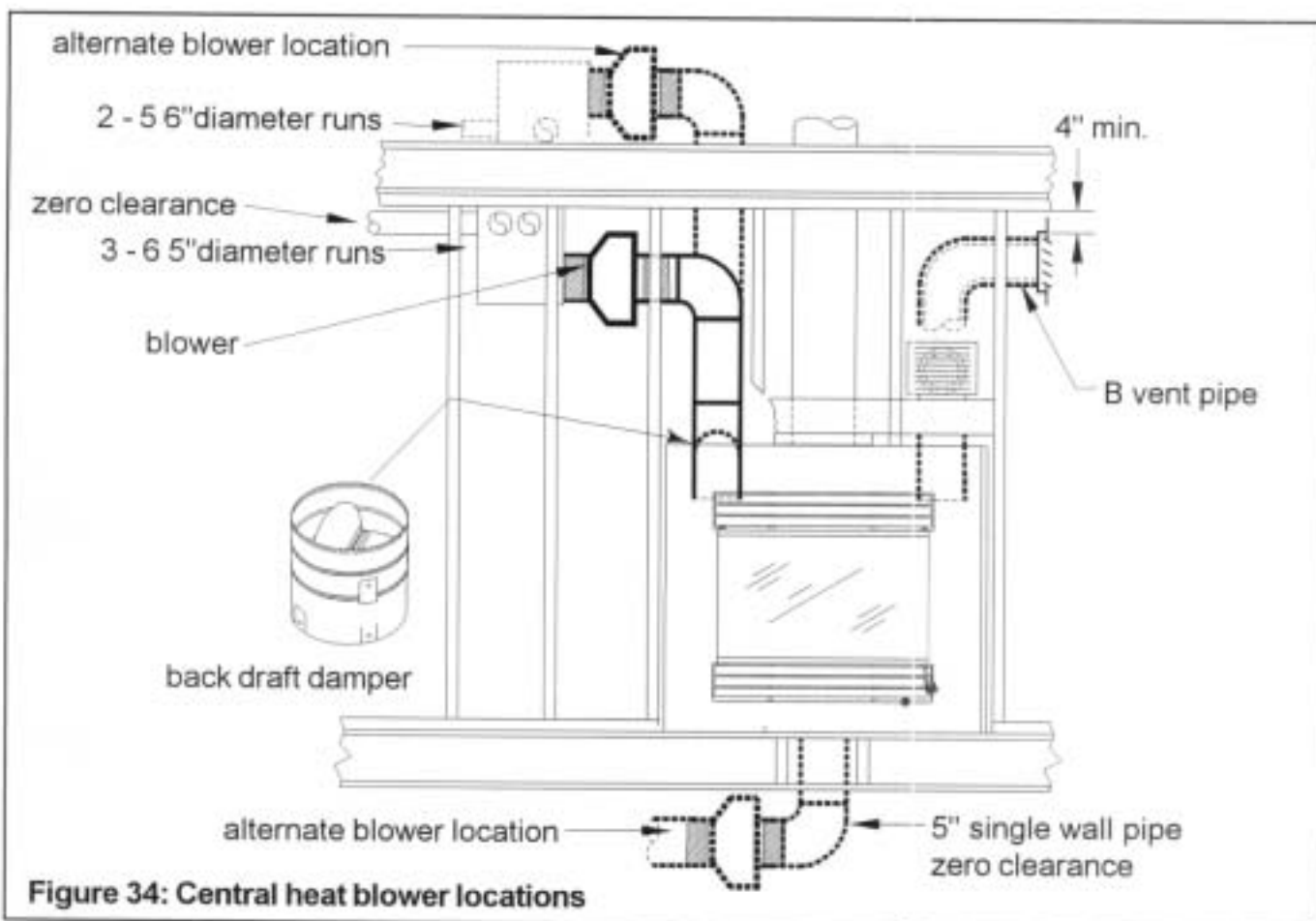


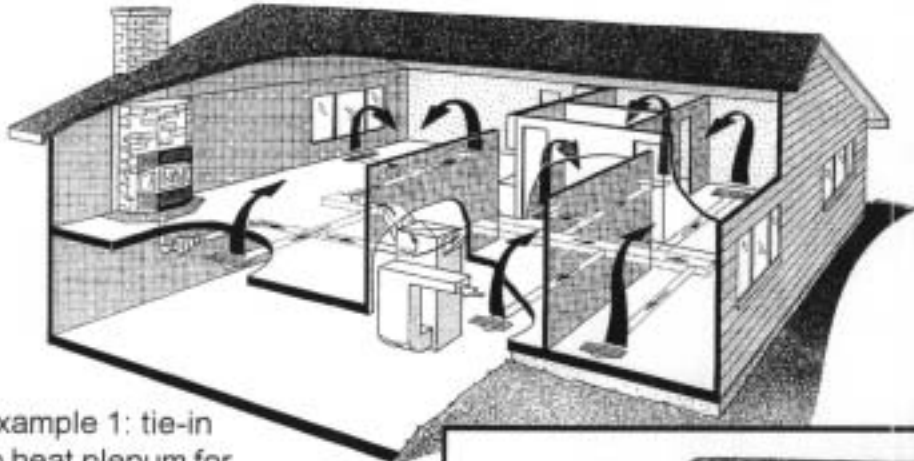
box. You have two options of how you can connect the central heat blower to the blower control assembly.

a) If you would like the blower to turn on when the thermostat calls for heat, first locate the thermostat in the principal room heated by the duct system (this is the most popular use of the central heat blower). Do not install it in the room where the fireplace is installed. There are yellow black and red wires coming out of the relay as shown in the wiring diagram. Connect the wire from #4 of the terminal block to the black wire and put the marrette connector on the red wire for protection (see Option 1, Figure 38).

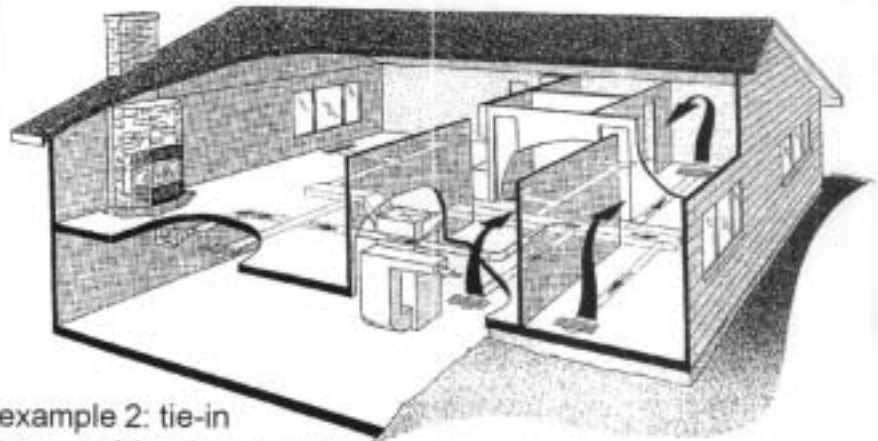
b) If the fireplace is in a small room and/or you would like the central heat blower to remove air from this room when it becomes too hot, locate the thermostat in the room with the fireplace (this is a less common use of the central heat blower). Connect the wire from #4 of the terminal block to the red wire and put the marrette connector on the black wire for protection (see Option 2, Figure 38).

WARNING: *Do not interchange the variable speed control between the central heat blower kit and the internal blower kit.*





example 1: tie-in to heat plenum for circulation throughout all rooms



example 2: tie-in to part of the duct system

Figure 35: 2 examples of air circulation when tying-in to existing ducting

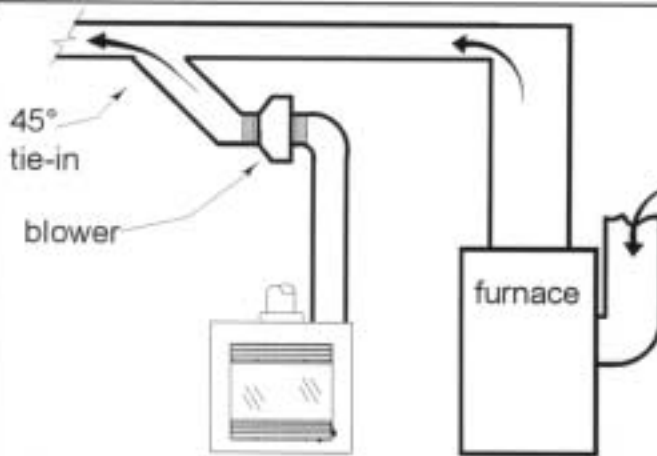


Figure 36: Example of tie-in to central heat duct

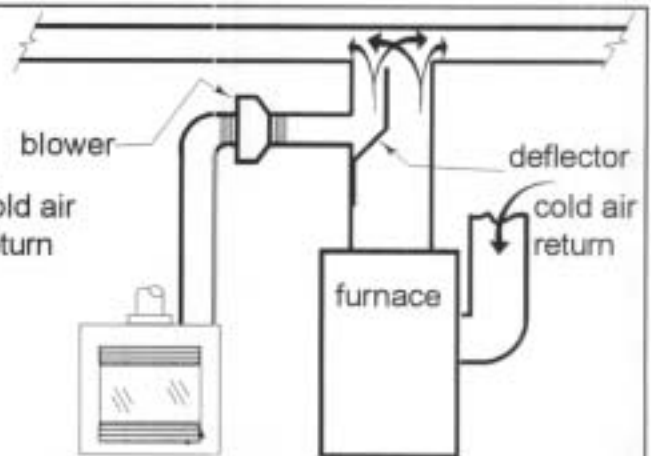


Figure 37: Example of tie-in to central heat plenum

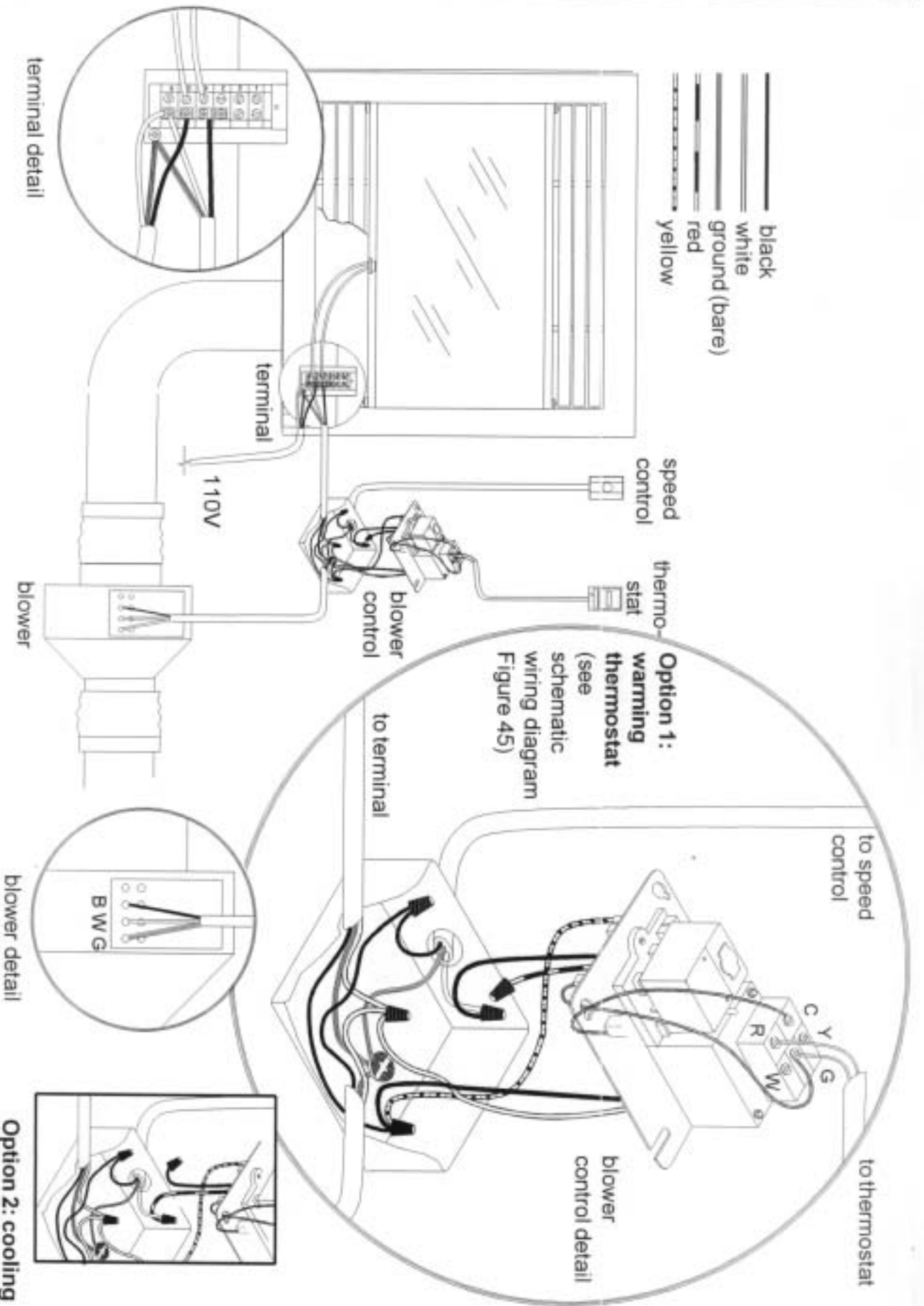


Figure 38: Central heat system wiring diagram

Option 2: cooling thermostat (see schematic wiring diagram Figure 45)

Figure 33 and 34 show some ways of ducting the hot air from the blower. You are not restricted in the size of pipe as long as the total cross sectional area of all runs combined is not less than 50 square inches. The diagram shows alternate blower locations. Only one external blower can be installed.

1. If the blower fails to operate, check the following:
 - a. Consult the wiring diagram to assure proper connections.
 - b. To assure proper contact, check the motor lead wiring, incoming supply wiring, and capacitor connections.
 - c. If possible, use a meter to test for continuity between the fan leads. Please note that the capacitor will show no reading if it is tested with a meter.
2. If the blower still fails to operate, consult your local RSF Energy authorized dealer for repair / replacement instructions.

ZONE HEATING (FDHCZ1 AND FDHCZ2)

For more regional heat control, the ONYX is ideally suited for Zone Heating. Figure 39 shows an example of a three zone system. The thermostat simultaneously opens the desired valve and starts the blower when heat is required.

The zone control system consists of:

- 1 - FDHCZ1
 - 1 Blower Control Box
 - 1 Blower Control Center
 - 1 Thermal Switch

NOTE: The FDHCZ1 kit replaces the FEHC6 kit if you are installing the zone system.

- 1 to 3 - FDHCZ2
 - Zone Valve (normally closed)
 - Thermostat

The system is wired similarly to the single zone system with the addition of the blower control and blower centre. The whole control system runs on 24V AC. Make sure that the thermostats are matched with the correct zone valve. See Figure 49, the zone wiring diagram.

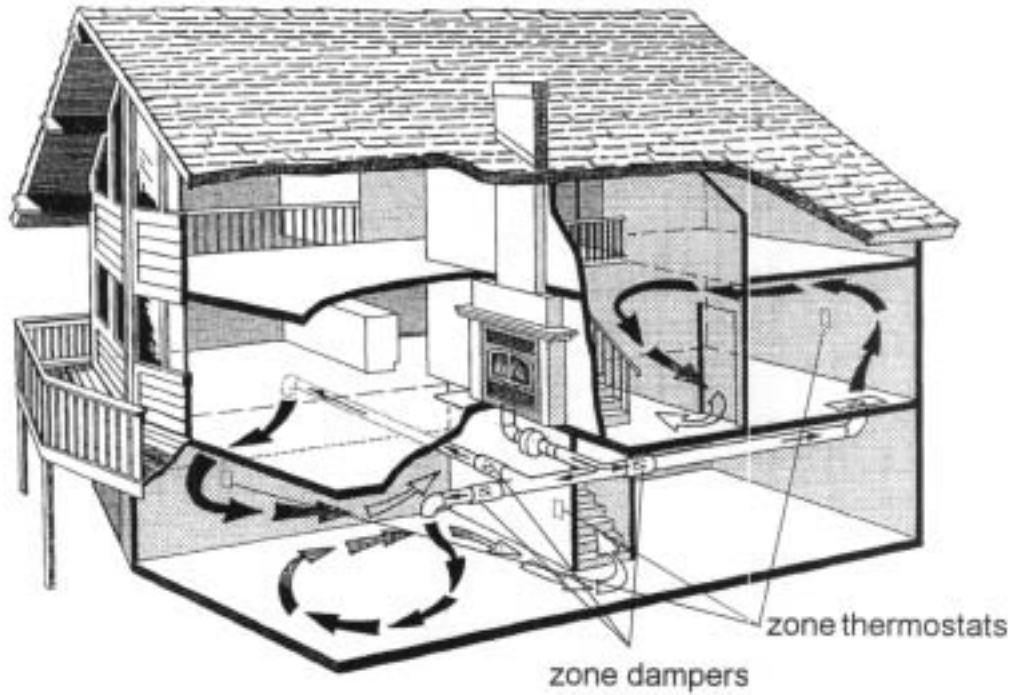


Figure 39: Zone heating - example 3 zone

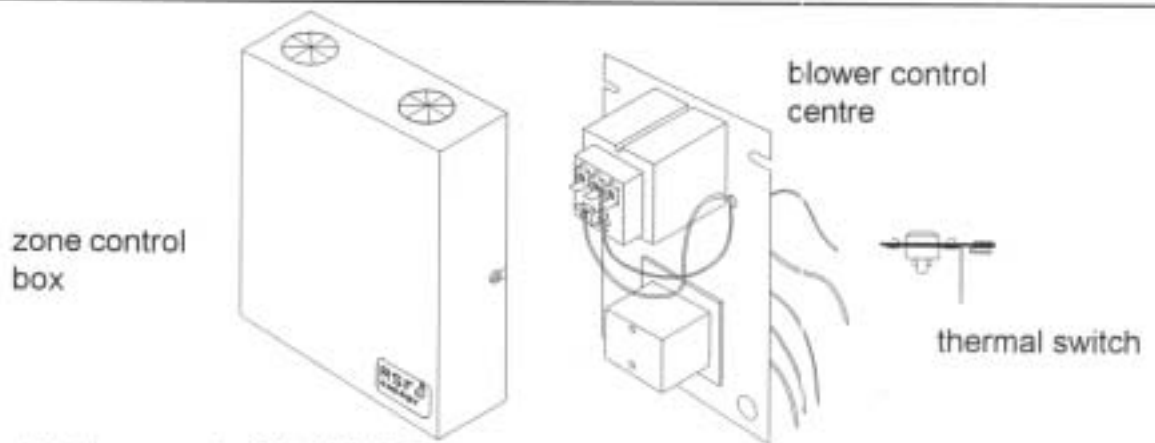


Figure 40: Zone control kit (F-FHCZ1)

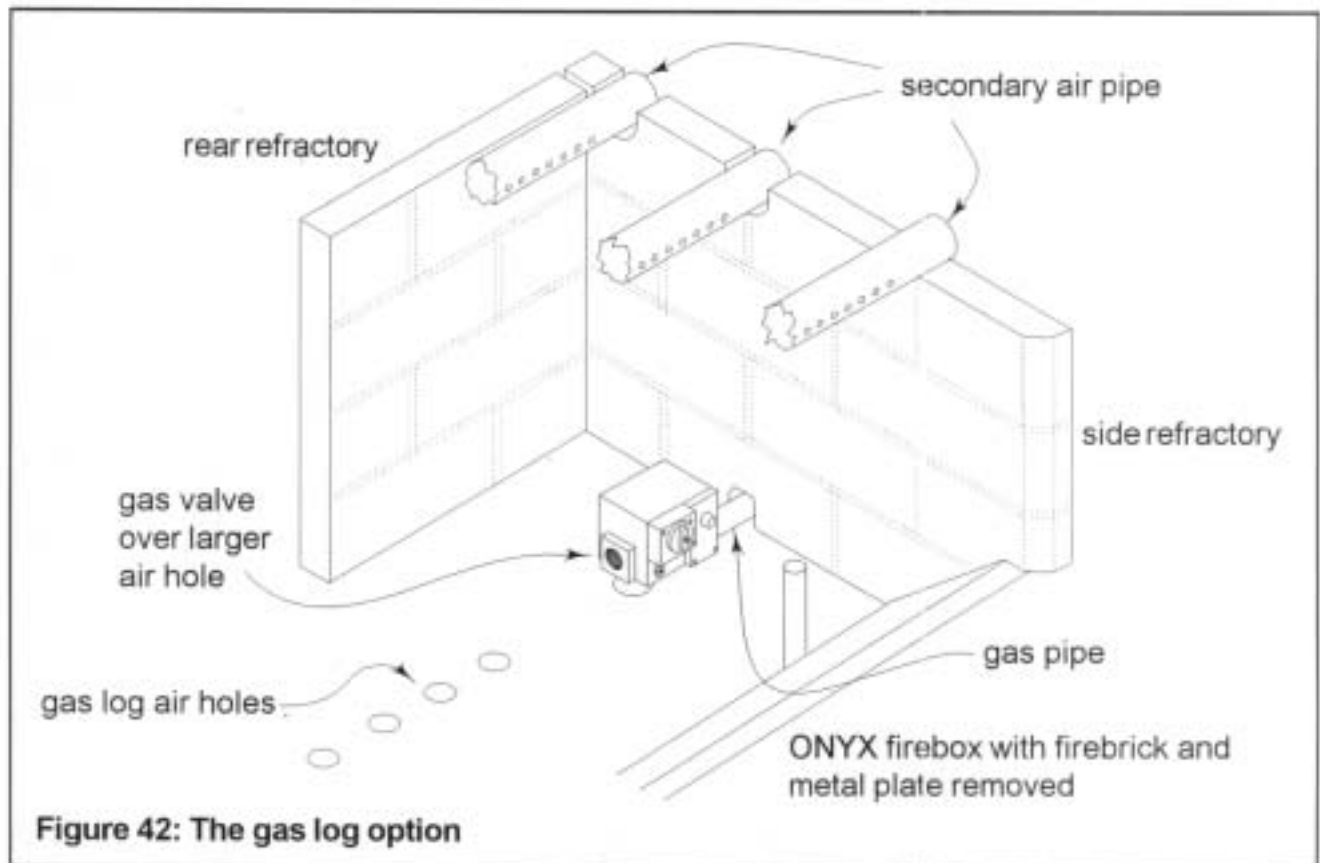


Figure 41: Zone heating kit (F-FHCZ2)

GAS LOG OPTION

The Onyx now features a gas conversion option. You can use your choice of gas log sets with this conversion. The installation of the gas should only be done by qualified personnel. To convert the Onyx for use with the gas log option:

1. You will notice a 1-1/4" diameter knockout on both sides of the Onyx, about 9" up from the bottom of the fireplace (see Figure 4). The gas line will be installed through one of these knockouts. Choose the side that is best for your installation.
2. Remove the firebrick from the base of the firebox. You will notice two sheet metal pieces underneath the firebrick. Remove these also. Keep the firebrick and sheet metal, as they will be needed to operate the Onyx, if you would like to burn wood again.
3. Underneath the firebrick and sheet metal, there are four 1" diameter holes in the centre of the bottom, to bring air to the gas log set. These holes **must not** be blocked.
4. There are two 1-1/4" diameter holes closer to the sides of the bottom of the firebox. If you are installing a gas valve, install it over one of these larger holes, to allow the air flow to cool the gas valve.
5. When you remove the firebrick you will notice a notch in the bottom of the side refrac-



ories. The gas line will come through one of these notches (see Figure 42).

6. Follow the instructions supplied with your gas log set concerning the installation of gas lines, shut-off valves, etc. If you have the sand pan type of gas log set that covers the air holes, place some of the firebrick, or some other suitable non-combustible material around the edges of the sand pan to raise the gas log set above the air holes.

Maximum gas input: 40 000 BTU

There are no minimum clearances to the sides or top of the firebox. However, any clearances stated by the gas log set manufacturer must be maintained.

You may install the gas valve inside the firebox if the gas log set manufacturer allows this in its instructions, and the required clearances are met.

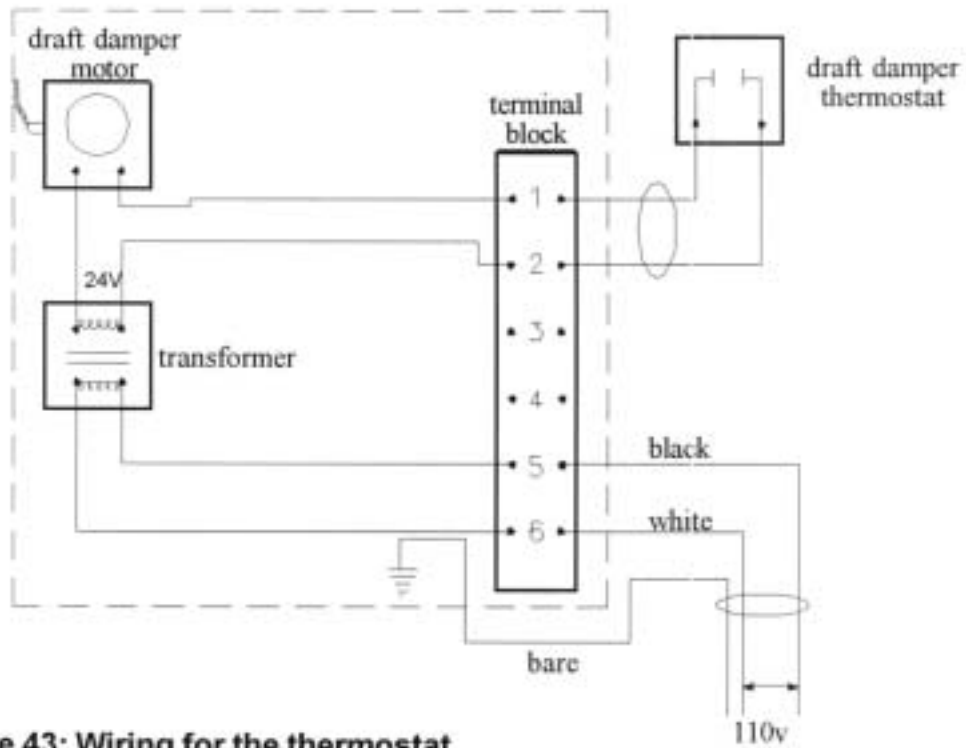


Figure 43: Wiring for the thermostat

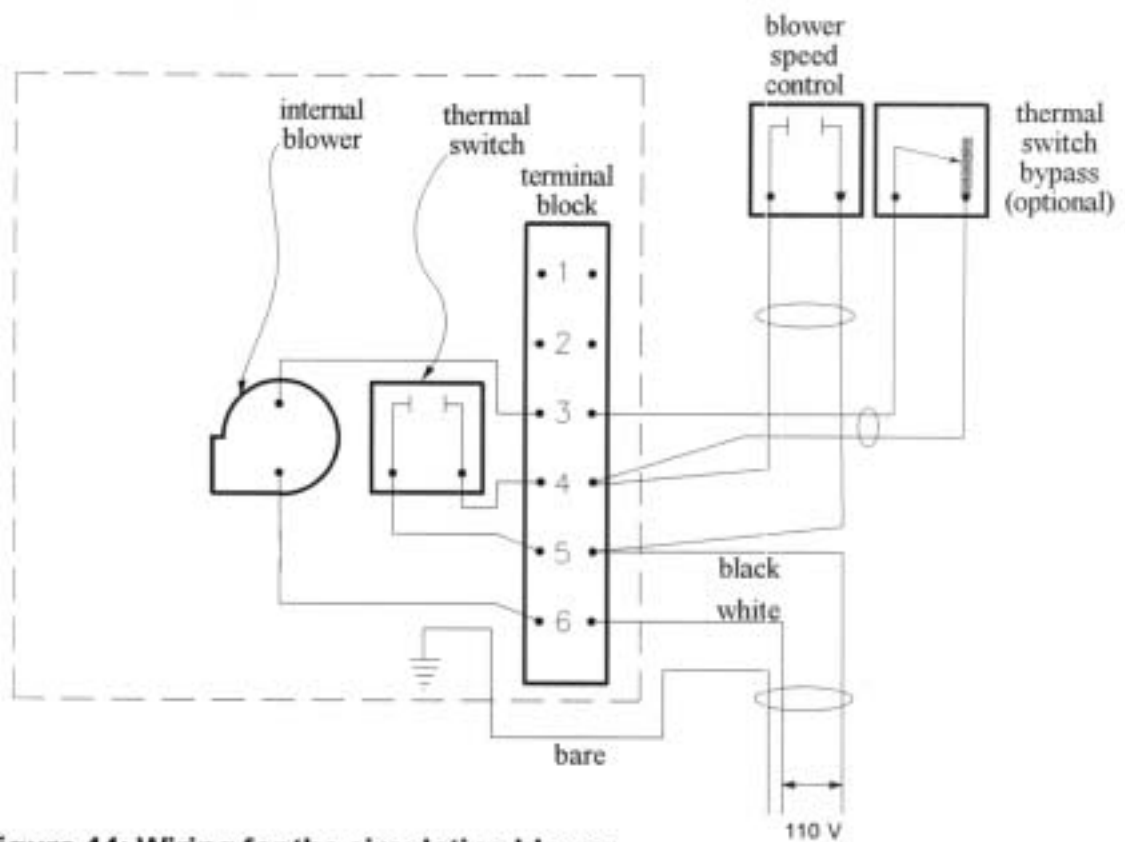


Figure 44: Wiring for the circulating blower

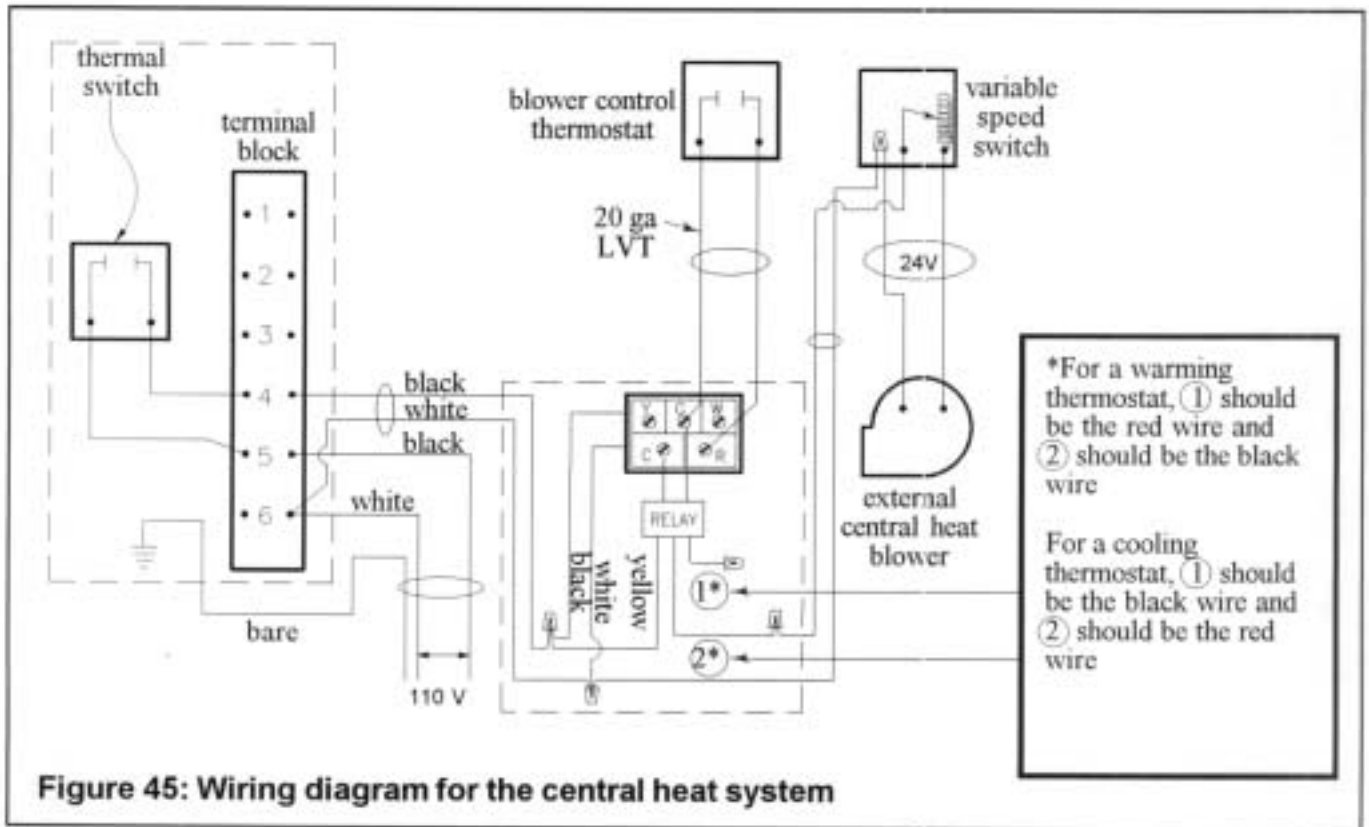


Figure 45: Wiring diagram for the central heat system

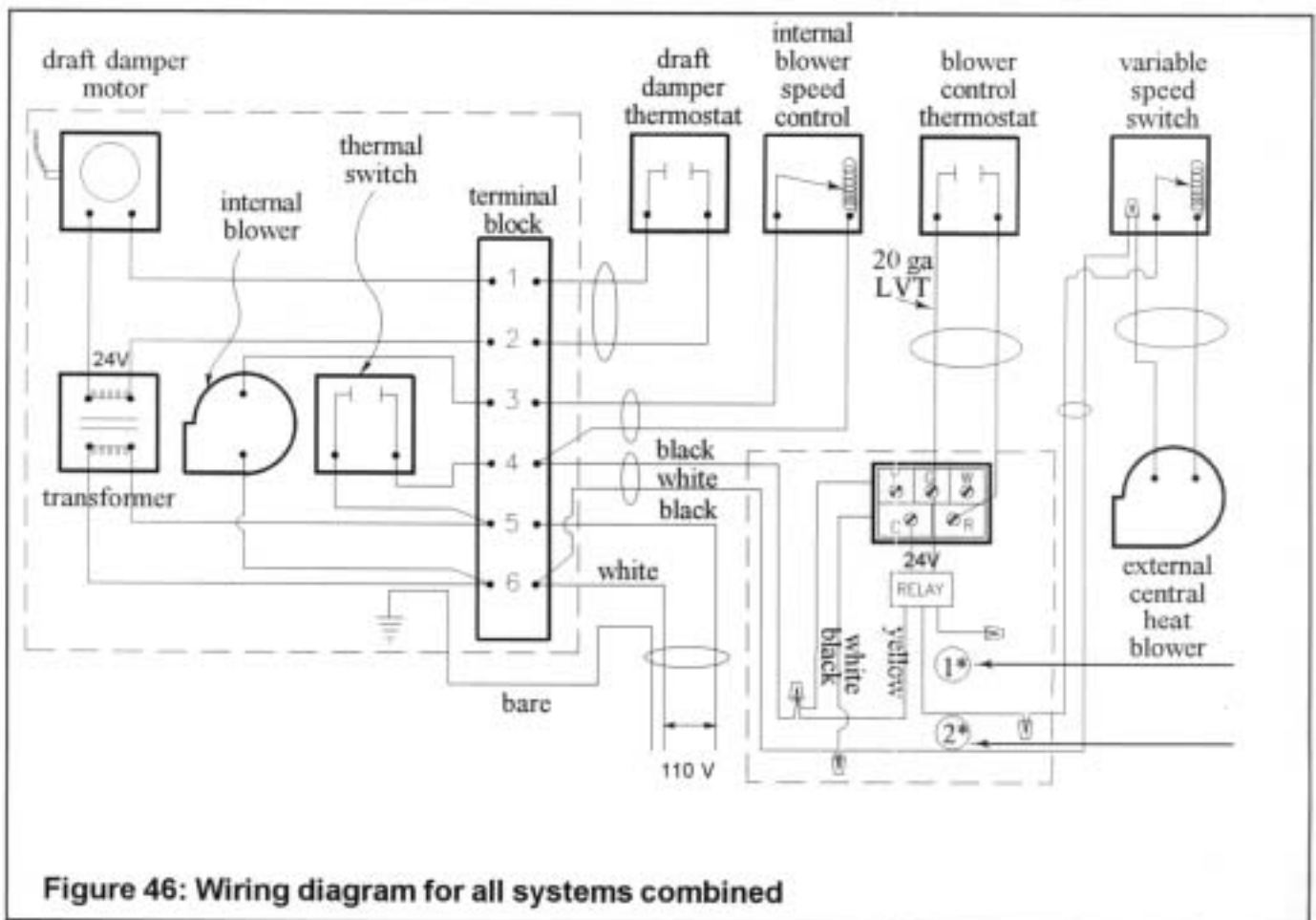


Figure 46: Wiring diagram for all systems combined

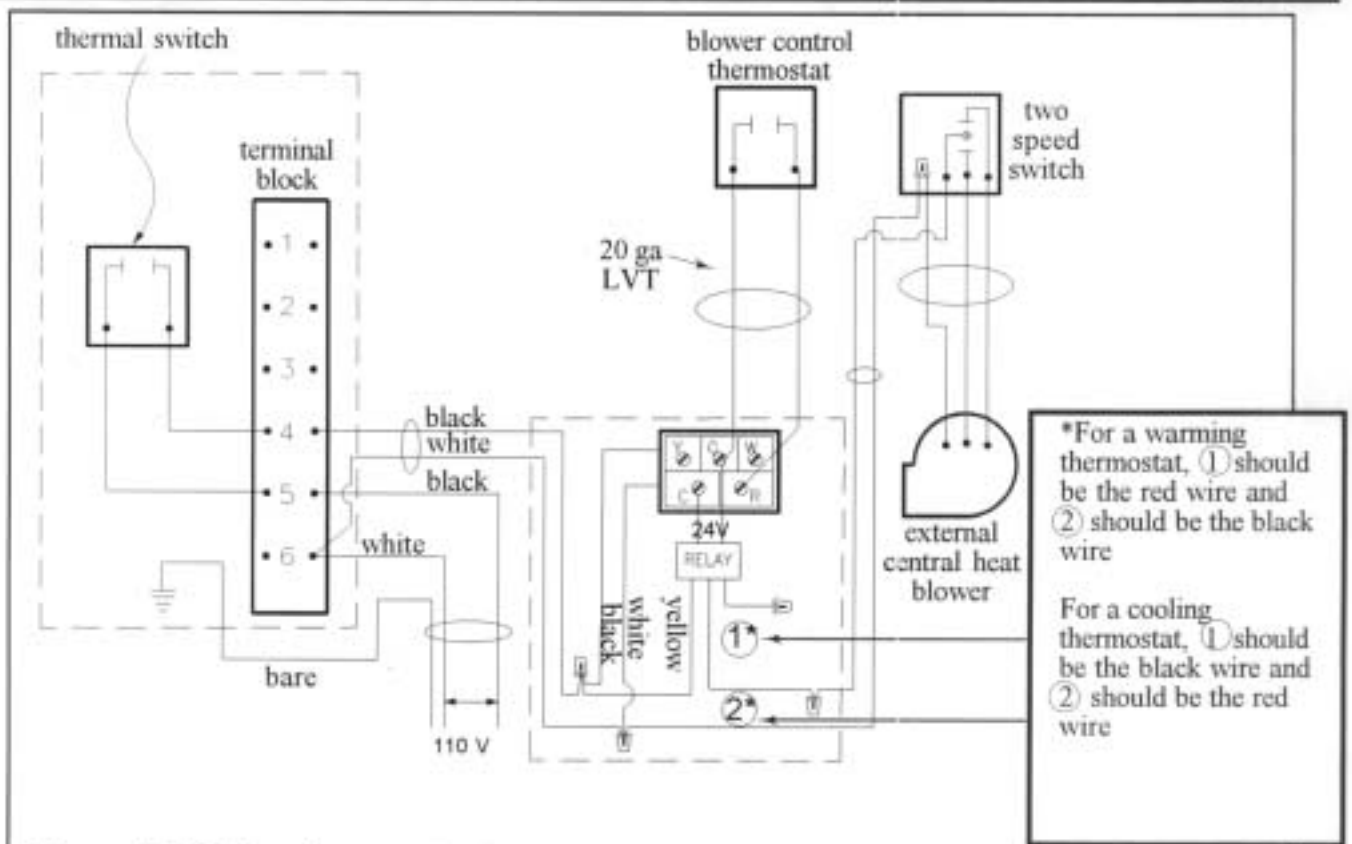


Figure 47: Wiring diagram for the central heat system with the two speed blower

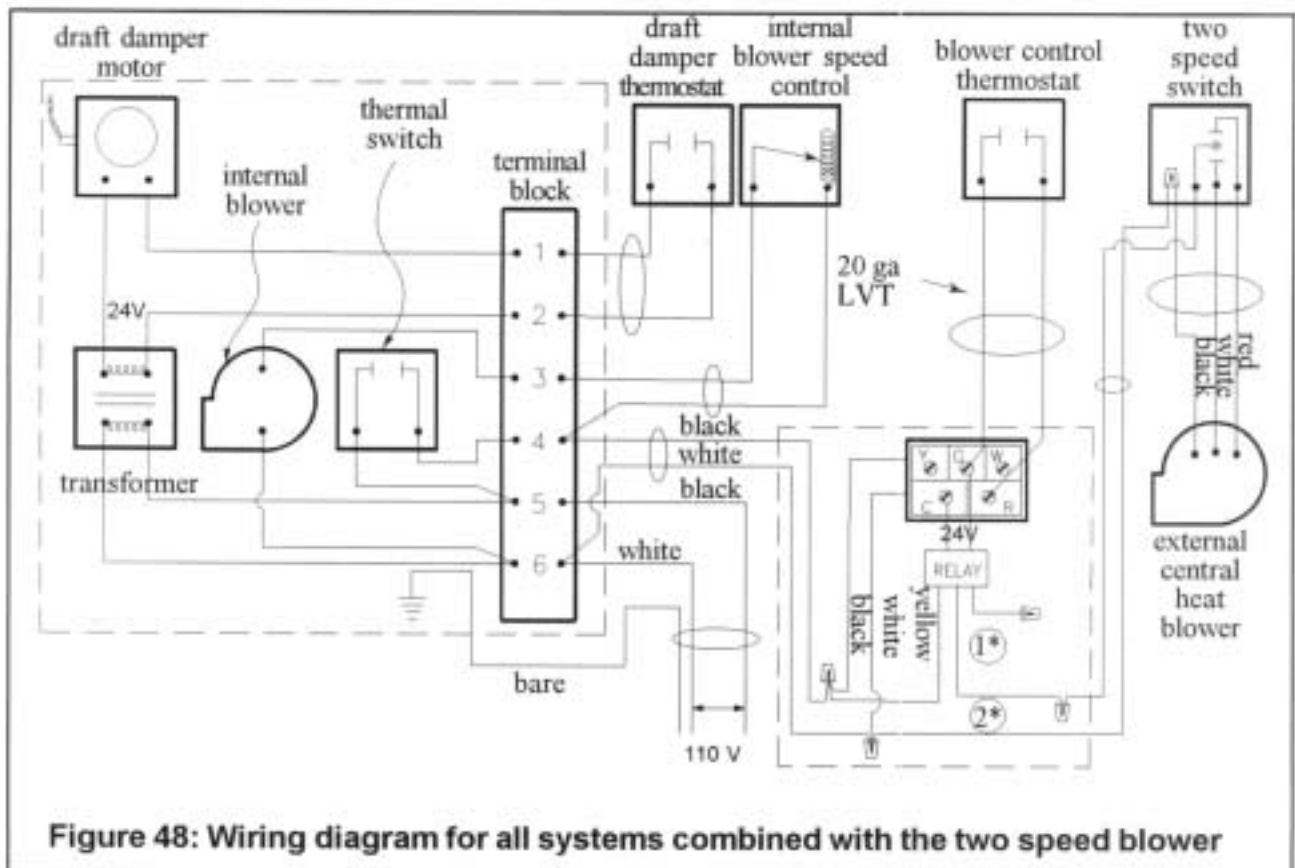


Figure 48: Wiring diagram for all systems combined with the two speed blower

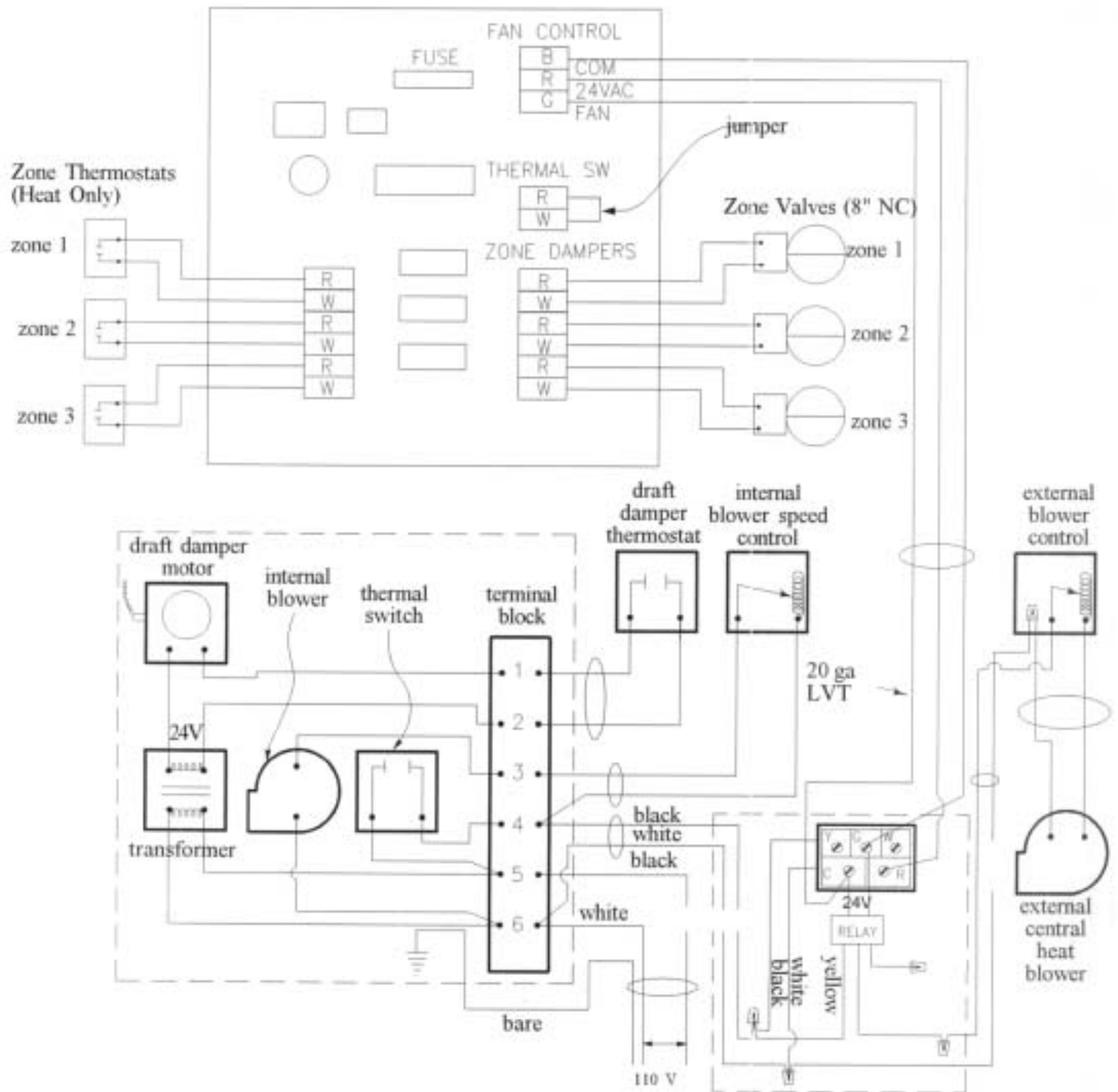


Figure 49: Wiring for all systems with a zone heat system

#	PART#	DESCRIPTION	QTY
1	R6417	Louvre rod	4
2	A959	Louvre	6
3	R6149	Louvre spacer	8
4	R6309	Retention spring for louvres	4
5	AA1204	Draft control assembly	1
6	A989	Draft control gasket	2
7	R6410	Door closer pin	2
8	AA1211	Hinges	2
8A	AA1242W	Door hinge fastener	2
9	AA1232G	Door glass channel caps	2
10	R7000	Gasket for door glass	60"
11	AA1212W	Door frame 3/4" x 3/4"	1
12	AA1215W	Inner shield	1
13	AA1222	Primary air screen	1
14	R1833	Cotter pin	1
15	AA1226-1	Front secondary air pipe	1
16	AA1226	Centre secondary air pipe	1
17	AA1240-5	Top refractory liner	2
18	AA1226	Rear secondary air pipe	1
19	AA1240-6	Back refractory liner	2
20	AA1240-2	Right side refractory liner	1
21	AA1240-1	Left side refractory liner	1
22	R7101	Firebrick	7.5
23	AA1240-3	Left front refractory liner	1
24	AA1240-4	Right front refractory liner	1
25	FKGRK1	Door gasket replacement kit	1
26	R6246	Ceramic glass (for door)	1
27	AA1210	Door closer hook	2
28	AA1214	Latch rod	1
29	R6012	Door handle grip (wood)	1
30	R2125	Thermal switch (optional)	1
31	R6000	1" diameter control knob	1
31A	A953W	Draft control lever	1
32	R6307	Tension spring for control	1
33	R6110	Control chain	42"
34	R6121	Control chain end	3
35	FFHB5	FFHB5 Blower (optional)	1

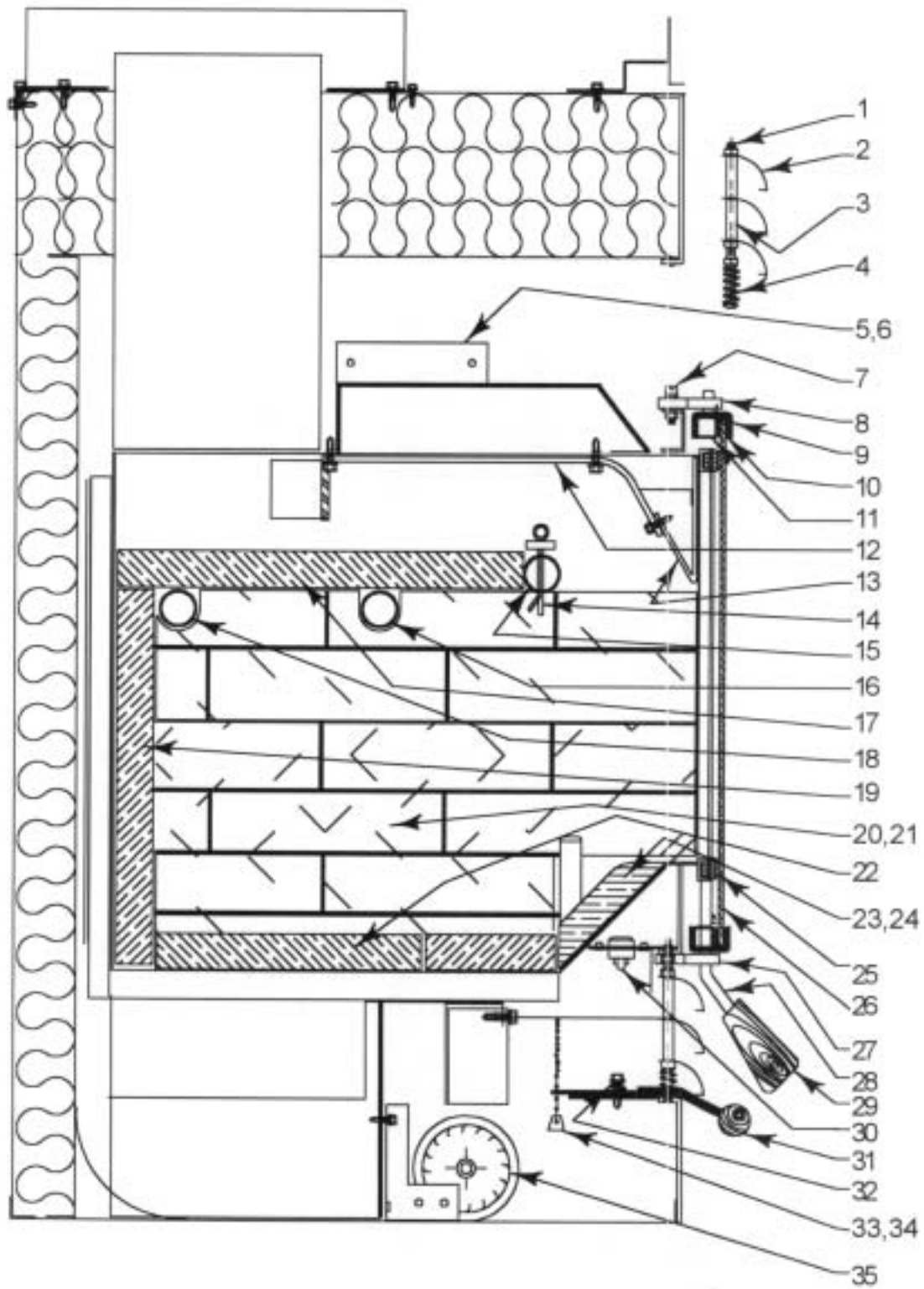


Figure 50: Section view of the ONYX



Limited Warranty

OPEL 2000/ONYX - 30 Year Limited Warranty

Simply The Best!

RSF ENERGY Ltd. warrants the RSF ENERGY OPEL 2000/ONYX against defects in workmanship and material for a period of 30 years, subject to the following conditions:

- 1) During the first 5 years, RSF ENERGY Ltd. will replace, repair, or cause to be repaired, at our option, any part or parts which, upon examination by an authorized RSF ENERGY representative is found to be defective, except the parts listed in the EXCLUSIONS portion of this warranty.
- 2) From 5 to 30 years, RSF ENERGY will provide replacement parts at 50% off the then current price, with exception of the parts listed in the EXCLUSIONS portion of this warranty.

EXCLUSIONS

This Limited Warranty covers only repairs or replacements resulting from defects caused by normal use, operation and maintenance.

Excluded from coverage by the Limited Warranty are:

- a) Repairs or replacements necessitated by the use of the unit other than for normal home use as directed in the instruction manual.
- b) Repairs or replacements of motors, transformers, thermostats, blowers, etc., beyond 1 year from the date of purchase.
- c) Repairs or replacements necessitated by vandalism, neglect, abuse or failure to adequately service the unit, as stated in the instruction manual.
- d) Repairs or replacements necessitated by work or service not authorized by RSF ENERGY Ltd.
- e) Replacement of any glass, gasket or refractory brick parts.

LIMITATIONS

- 1) All items found to be defective will be replaced or repaired upon return of the defective part to an authorized RSF ENERGY Ltd. dealer.
- 2) Any OPEL 2000/ONYX or part thereof that is replaced or serviced during either the five year or one year warranty period, will be warranted under the terms of that particular limited warranty for a period not exceeding the remaining term of the original limited warranty, or six months, whichever is longer.
- 3) This warranty is transferrable. However, proof of purchase is required before service or replacement of any defective part is performed.
- 4) This Limited Warranty does not apply to damage to the appliance while in transit. Any claim of such must be directed to the common carrier. Any operation or attempt to operate the fireplace may negate the possibility of processing the claim with the carrier.
- 5) If the installation does not conform to local building or fire codes, or in their absence, the installation requirements in the instruction manual, any claims are not valid and will not be processed.
- 6) The remedies set forth herein are exclusive, and the liability of the seller shall not exceed the price of the fireplace or part thereof upon which the liability is based.

This warranty is expressly in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness for use and all other obligations or liabilities on the part of RSF ENERGY Ltd.