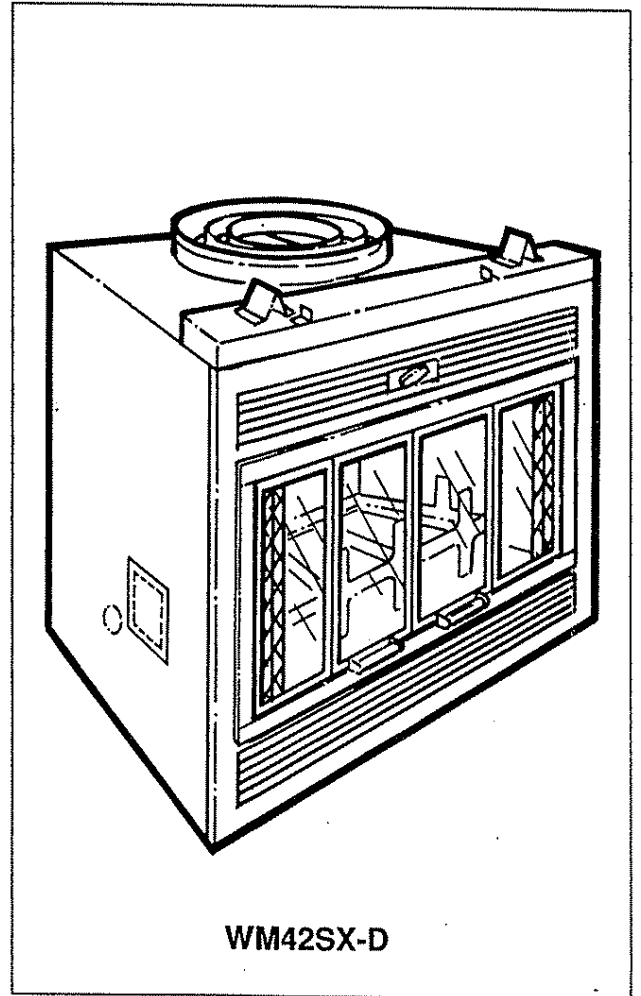
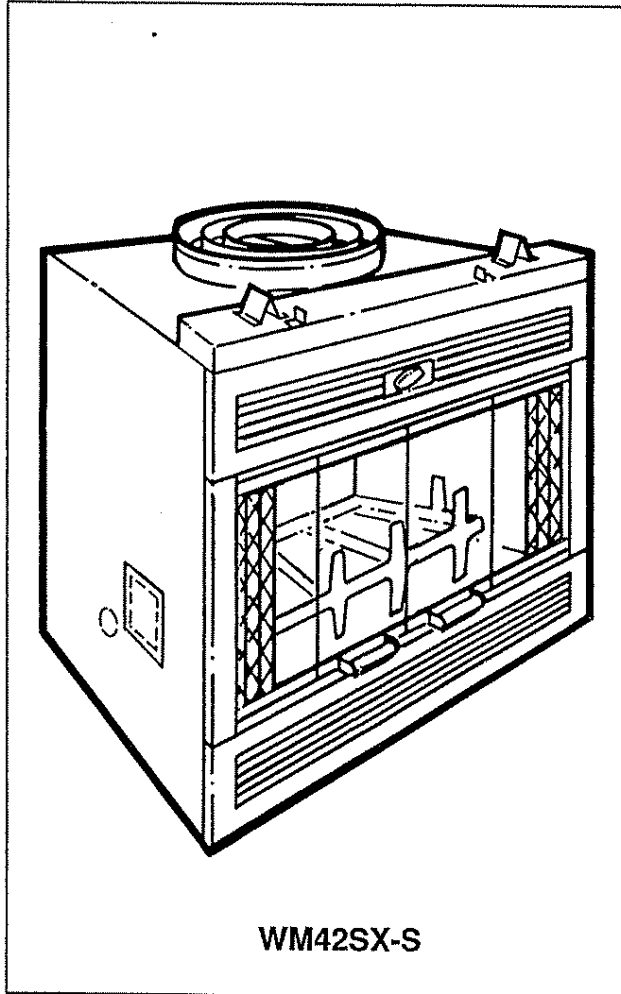


# INSTALLATION MANUAL

for the MAJESTIC.

WM42SX-S, WM42SX-D Heat Circulating Fireplace



**IMPORTANT:** Read all instructions carefully before starting installation. Failure to follow these installation instructions may result in a possible fire hazard and will void the MAJESTIC warranty.

Save this manual for future reference.

**MAJESTIC.**

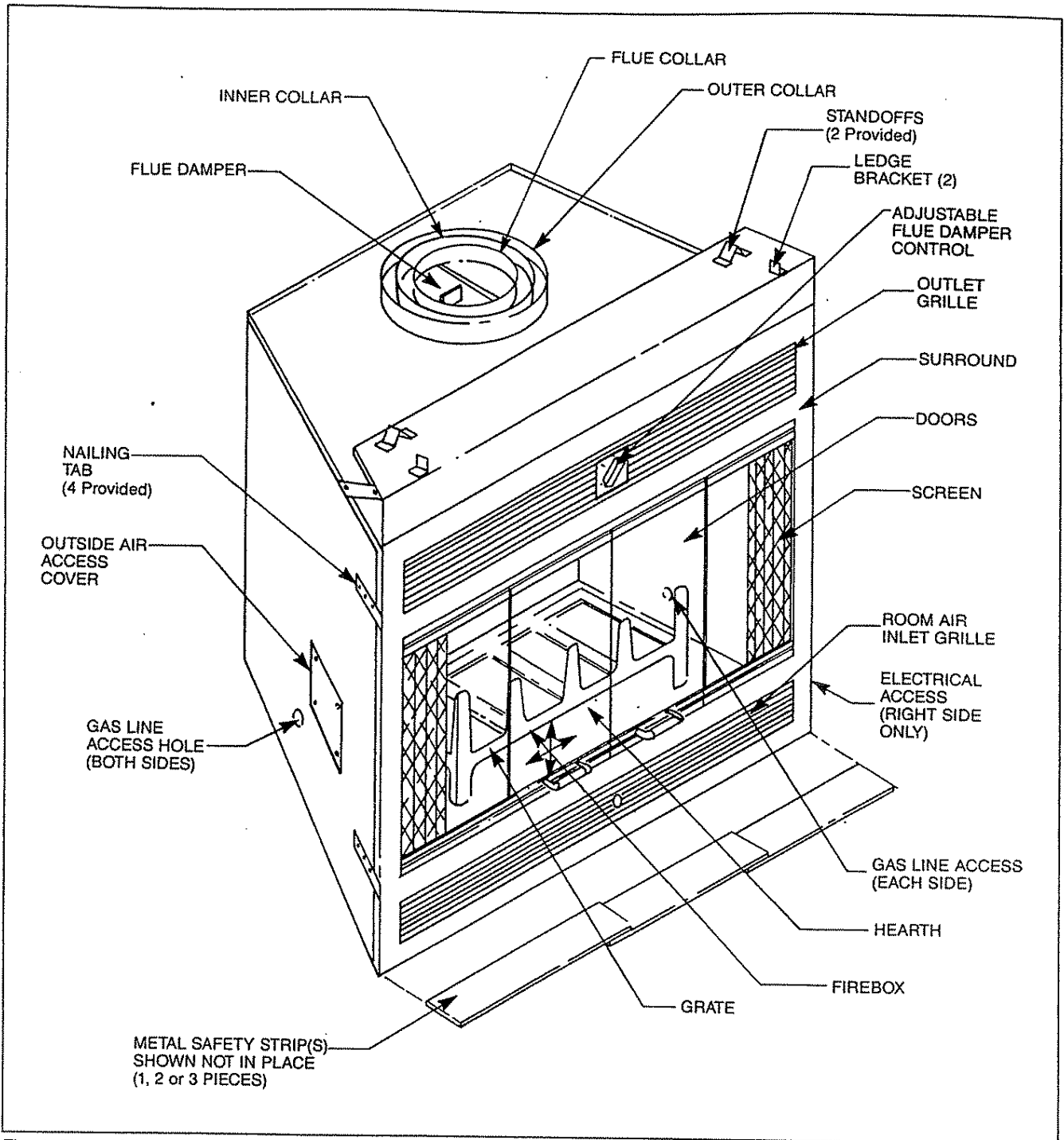


Fig. 1. Parts of the MAJESTIC WM42SX-S/D Fireplace.

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## INSTALLATION PRECAUTIONS

This Majestic Fireplace and its components have been tested and will operate safely when installed in accordance with this Installation Manual. Read all instructions **before** starting installation, then follow these instructions carefully **during** installation to maximize fireplace benefit and safety.

Report to your dealer any parts damaged in shipment. Specifically, check for loose insulation in the fireplace and damper operation.

This fireplace and chimney system are a highly engineered system, **unless** you use Majestic or Equus Building Products components which have been designed for the system, you may create a possible fire hazard.

**The MAJESTIC warranty will be voided by, and MAJESTIC disclaims any responsibility for, the following actions:**

- Installation of any damaged fireplace or chimney component;
  - Modification of the fireplace, chimney assembly or any of the component parts thereof; (except for chase flashings as detailed in EQUUS Chimney Top installation instructions.)
  - Installation other than as instructed by MAJESTIC;
- or
- Installation and/or use of any component part or accessory not manufactured or approved by MAJESTIC or EQUUS in combination or assembly with a MAJESTIC fireplace system, notwithstanding any independent testing laboratory or other third party approval of such component part or accessory.

Any such action may create a possible fire hazard.

Consult your local building codes.

This fireplace and chimney system must be vented out-of-doors.

Do not obstruct or modify air inlet/outlet grilles in any manner.

**Do not install combustible materials onto the black fireplace surround.**

**Burn solid wood fuel only.**

**Do not install a fireplace insert or other products not specified for use with this fireplace.**

The WM42SX Series Fireplaces are not approved for installation in mobile homes.

Prior to first firing, read Owner's Manual for operating instructions.

## INSTALLATION INSTRUCTIONS

### A. Installing the Fireplace

#### A-1. CHECK HOW ACCESSORIES ARE INSTALLED.

Determine where selected accessories fit into this fireplace installation procedure by checking the installation instructions provided with each accessory. See *Accessory Parts*, page 18.

**NOTE:** The outside air system and electrical connection for the fireplace cannot be installed after the fireplace is completely installed.

#### A-2. DETERMINE FIREPLACE LOCATION.

The fireplace can be mounted on any of the following surfaces:

- 1) A flat hard combustible surface.
- 2) A raised platform of combustible or non-combustible material.
- 3) On four (4) corners of the fireplace so contact is made on all four (4) dimples and perimeter edges on the bottom of the unit.  
(Example: Four (4) concrete masonry blocks.)

The fireplace must maintain a 3/4-inch air space at back and 7/16-inch air space at sides to combustible materials and insulation.

Nearby combustible floors and walls must be protected as detailed in Section H.

Refer to *Air Space Data and Dimensions* on Page 17 to be sure that the location which you have selected for your fireplace provides for clearance and framing restrictions.

At this point, you should have decided what components to include in your installation, where the fireplace is to be located, and how the chimney will be routed to the roof (straight-up, offset, or chase\*). If this has not been done, stop and consult your Majestic Dealer for assistance with this planning.

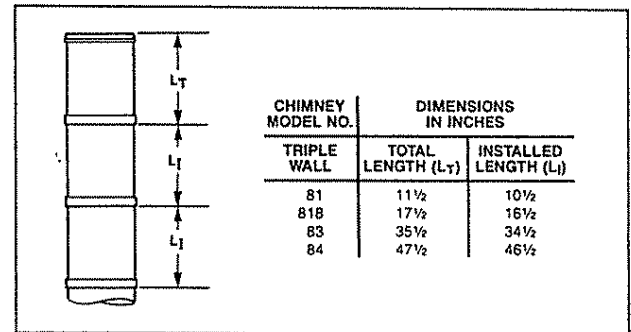


Fig. 2. Installed lengths of chimney sections.

Note that the installed length of any chimney section is less than its total length (except for the last section installed), because of its overlap at joints. (See Fig. 2.)

\*A chase is a vertical box-like structure which encloses the fireplace and/or its chimney, typically built on the outside of the house with the fireplace opening cut in the outer wall of the home.

#### A-3. INSTALL METAL SAFETY STRIPS UNDER FIREPLACE.

See Step G, *Insulating Fireplace Enclosure For Cold Climates*, before completing Step A-3.

Thoroughly clean intended fireplace location area. Move fireplace to the location where it is going to be installed. Lift fireplace front slightly to slide metal safety strip(s) under front bottom edge about 1½-inches, allowing the remainder to extend out in front of the fireplace. Overlap the strips at least ½-inch to provide a positive joint. (See Fig. 3.) (Flat safety strips are packed with fireplace.)

In the event the fireplace is elevated above the floor, a "Z" shaped metal safety strip should be fabricated and used to protect combustible surfaces in front of the fireplace. This "Z" shape is not provided, but must be fabricated of metal with each horizontal leg at least 1½" wide - equal in length to the metal strips provided with each fireplace.

When positioning the fireplace on all mounting surfaces (See Step A-2), the metal safety strips must be installed as described above to provide protection to combustible (burnable) surfaces in front of the fireplace.

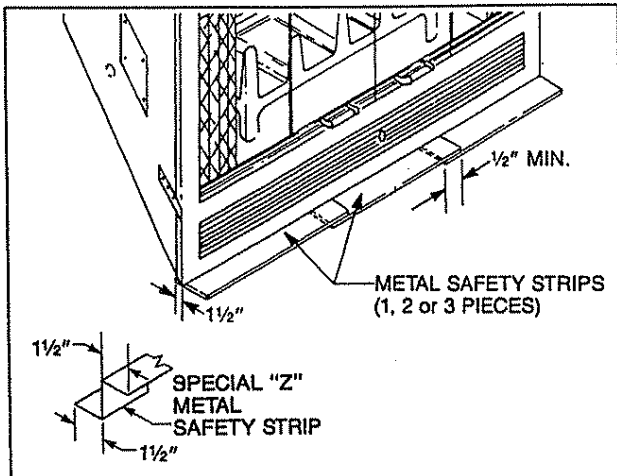


Fig. 3. Install metal safety strip(s) under front of fireplace.

**NOTE:** Safety strip is not required over non-combustible floors where all supports at the base of the fireplace are non-combustible.

#### □ A-4. ANCHOR FIREPLACE IN POSITION.

To prevent shifting of the fireplace and to maintain sealing (described later), anchor the fireplace by using the fastening tabs provided on the fireplace. (See Fig. 4.) The fireplace can then be secured to the vertical framing members. Refer to Framing and Finishing Section H.

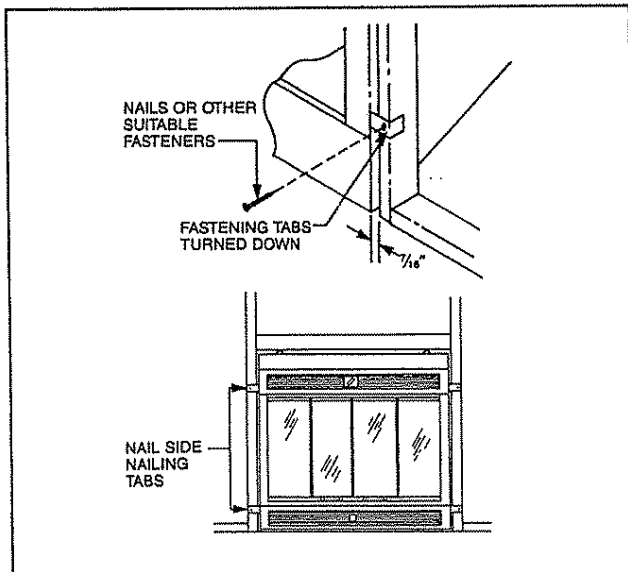


Fig. 4. Fasten fireplace in position using the fastening tabs of top standoff.

## B. Installing the Chimney

**CAUTION: REPORT TO YOUR DEALER ANY PARTS DAMAGED IN SHIPMENT, SPECIFICALLY, CHECK THE END CONNECTIONS OF CHIMNEY SECTIONS AND ELBOWS.**

**NOTE:** The WM42SX Series Fireplace uses EQUUS Model S, 3-wall chimney system only. See installation procedure described in Section B (Installing the Chimney). Refer to the Accessory Section of this manual beginning on page 18.

#### □ B-1. LOCATE CENTERPOINT OF CHIMNEY – STRAIGHT UP INSTALLATION.

If the fireplace is positioned against the wall behind it, measure out 10<sup>3</sup>/<sub>4</sub> inches from that wall and make a mark on the ceiling above the fireplace. Draw a line through this mark parallel to the back wall, defining the centerline of the chimney. (See Fig. 5.) Then, using a plumb bob positioned directly over the centerpoint of the fireplace flue collar, mark the ceiling to establish the chimney centerpoint. (See Fig. 5.)

#### □ B-2. LOCATE CENTERPOINT OF CHIMNEY – OFFSET INSTALLATION.

In order to clear an obstruction, it may be necessary to offset the chimney from the vertical plane. This is done by using EQUUS CHIMNEY ELBOWS: Model 830A (30°). Each offset requires a pair of elbows. Use Table 1 and Fig. 6 to determine the offset that may be obtained using the various elbows.

Table 1. Offset dimensions.

	T	S
	830A	830A
No Intermediate Section	0' 3"	0' 11"
One 1' Section	0' 8 <sup>1</sup> / <sub>4</sub> "	1' 8"
One 1 <sup>1</sup> / <sub>2</sub> ' Section	0' 11 <sup>1</sup> / <sub>4</sub> "	2' 1 <sup>1</sup> / <sub>4</sub> "
Two 1' Sections	1' 1 <sup>1</sup> / <sub>2</sub> "	2' 5 <sup>1</sup> / <sub>4</sub> "
One 1' and One 1 <sup>1</sup> / <sub>2</sub> ' Section	1' 4 <sup>1</sup> / <sub>2</sub> "	2' 10 <sup>1</sup> / <sub>4</sub> "
One 3' Section	1' 8 <sup>1</sup> / <sub>4</sub> "	3' 4 <sup>3</sup> / <sub>4</sub> "
Two 1' and One 1 <sup>1</sup> / <sub>2</sub> ' Sections	1' 9 <sup>3</sup> / <sub>4</sub> "	3' 7 <sup>1</sup> / <sub>2</sub> "
One 4' Section	2' 2 <sup>1</sup> / <sub>4</sub> "	4' 3 <sup>1</sup> / <sub>4</sub> "
One 3' and One 1 <sup>1</sup> / <sub>2</sub> ' Section	2' 4 <sup>1</sup> / <sub>4</sub> "	4' 7 <sup>1</sup> / <sub>4</sub> "
One 4' and One 1' Section	2' 7 <sup>1</sup> / <sub>2</sub> "	5' 0 <sup>1</sup> / <sub>4</sub> "
One 1', One 3' and One 1 <sup>1</sup> / <sub>2</sub> ' Section	2' 10 <sup>1</sup> / <sub>2</sub> "	5' 5 <sup>1</sup> / <sub>2</sub> "
Two 3' Sections	3' 1 <sup>1</sup> / <sub>2</sub> "	5' 10 <sup>3</sup> / <sub>4</sub> "

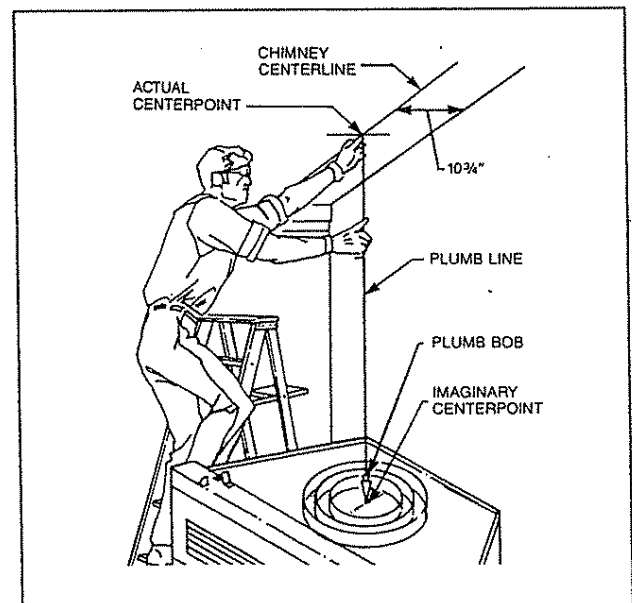


Fig. 5. Locate centerpoint of chimney with plumb line.

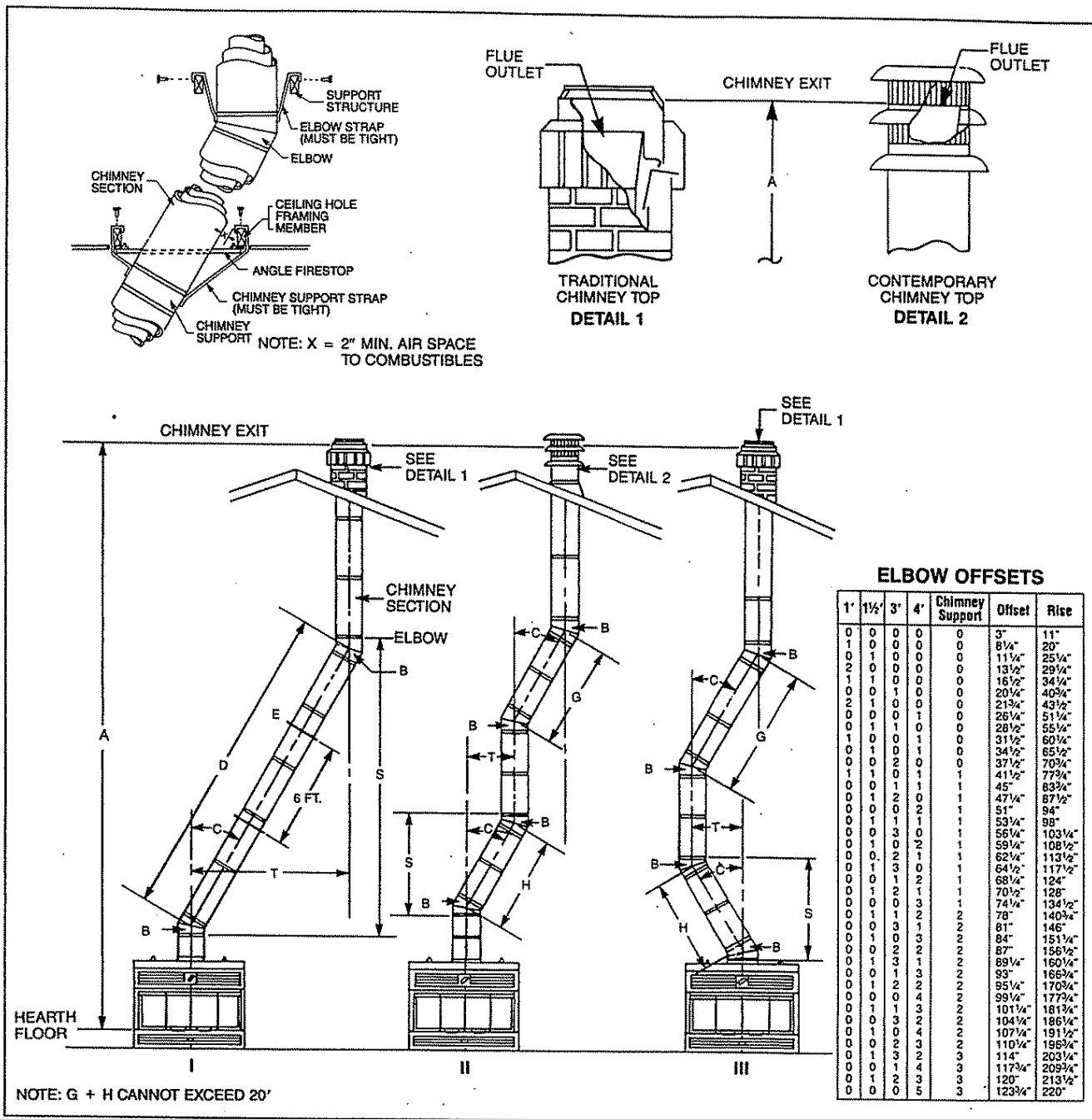


Fig. 6. Typical offset installations.

The following **safety rules** apply to offset installations. (The letters below match the letters in Fig. 6.)

A. Height of the chimney measured from the hearth to the chimney exit at top:

Maximum	90 Feet
Minimum	
Without Elbows	14 Feet 0 Inches
With 2 Elbows	15 Feet 6 Inches
With 4 Elbows	21 Feet 0 Inches

B. Do not use more than four (4) elbows per chimney.

Attach the straps of the top elbows to a structural framing member.

The first elbow of any pair does not have straps.

C. The chimney cannot be more than 30° from the vertical plane.

D. The maximum length of the angled run of the total chimney system is 20 feet. (G plus H cannot exceed 20 feet.)

E. A chimney support (Model TCS8A) is required every 6 feet of angled run of chimney. Chimney supports are required at 30 feet and 60 feet of vertical chimney height above the hearth.

Determine the offset distance of your chimney arrangement from the centerline of the fireplace to the centerline of the chimney where it is to pass through the first ceiling. **NOTE:** This offset distance may not be your full offset distance (T). (See above.)

Locate on the ceiling the centerpoint of the chimney, as though a straight up chimney arrangement is to be used, by following the procedure outlined in Step B-1. Then measure your offset dimension from the actual chimney centerpoint on the ceiling (Fig. 7.)

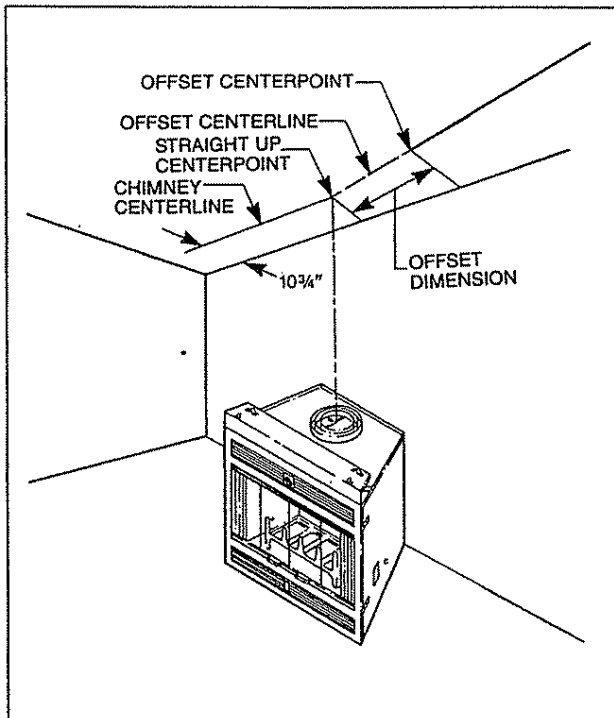


Fig. 7. Measure ceiling offset distance from actual straight up centerpoint.

**B-3. MARK AREA OF CEILING CHIMNEY HOLE.**

The size of the ceiling chimney hole will vary with the angle at which the chimney passes through the ceiling. Refer to Table 2.

Drive a nail up through the ceiling at the marked chimney centerpoint. Go to the floor above and check where the hole will be cut, relative to the ceiling joists and any obstructions such as wiring or plumbing runs. If necessary, reposition the chimney and/or the fireplace to better accommodate these joists and/or obstructions.

**B-4. CUT CEILING CHIMNEY HOLE.**

After covering the opening of the fireplace collar, cut the chimney hole through the ceiling. Recheck the hole to be sure that it measures the hole size selected from Table 2.

**B-5. FRAME CEILING CHIMNEY HOLE.**

Frame the ceiling chimney hole as shown in Fig. 8. It is good practice to use framing lumber that is the same size as the ceiling joists. (This is a requirement at the attic level.)

The **inside dimension** of the frame **must** be the same as the hole size selected from Table 2 in order to provide the required 2 inch air space between the outside diameter of the chimney and the edges of the framed ceiling hole.

Table 2. Sizes of ceiling chimney hole for installing firestop spacer.

Size of Chimney	Angle of chimney at ceiling	
	Vertical	30°
8" Flue	17 1/2 x 17 1/2	17 7/8 x 29 5/8

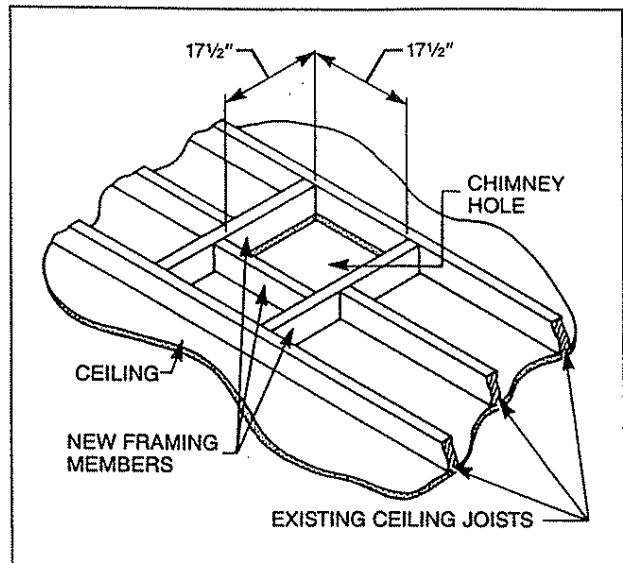


Fig. 8. Typical frame for ceiling chimney hole.

**B-6. INSTALL FIRESTOP SPACER.**

Firestop spacers are required for safety. The hole sizes listed in Table 2 for angled firestop spacers provide the minimum required air space to the chimney pipe for ceiling thicknesses up to 8 inches. When the combined thickness of the ceiling material, ceiling joists and flooring material exceeds 8 inches, adjustments must be made in the framing to assure that the minimum air spaces to the chimney are maintained.

If the area above the ceiling is **not** an attic, position the firestop spacer with the flange on the ceiling side and the dished or angled portion extending up into the hole. If the area above the ceiling is an attic, position the firestop spacer with the flange on the top of the framed hole and the dished or angled portion extending down into the hole. (See Figs. 9 & 10.)

Nail each corner of the firestop spacer to the framing members of the ceiling hole. **NOTE:** A firestop spacer is not required at the roof.

Table 3. Firestop model numbers.

TYPE OF FLUE	TYPE OF SPACER	MODEL NO.
8" straight	Dished	FS2A
8" 30° inclined	Angled	FS6A

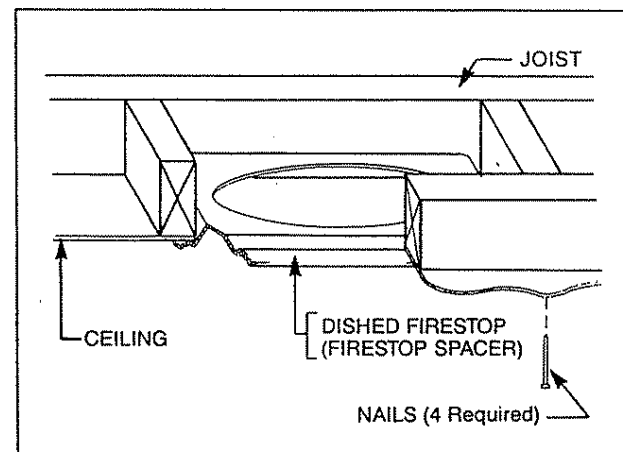


Fig. 9. Position of firestop when area above ceiling is not an attic.

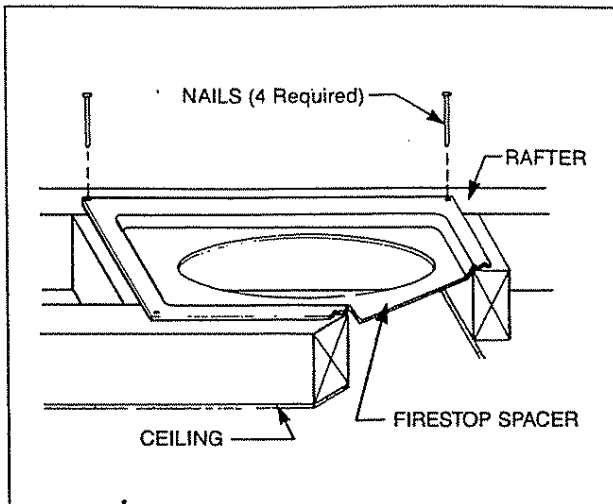


Fig. 10. Position of firestop when area above ceiling is an attic.

**B-7. ATTACH CHIMNEY SECTIONS.**

Attach the first straight chimney section to the fireplace collar, or if offset installation attach elbow to the fireplace collar. (Refer to Step B-8.) Mount the flue pipe first, using the built-in snap-lock fasteners. (See Fig. 11.) Then mount the additional pipe(s). Position each pipe section so the direction arrow is pointing UP.

**Make sure each pipe is firmly snapped and locked together as it is mounted.**

Continue installing chimney sections until ONE SECTION (all pipes) extend up through the ceiling hole. To extend through the ceiling, it may be necessary to assemble all pipes, push them up through the ceiling hole and then slide them down one at a time to connect them.

**B-8. ATTACH FIRST ELBOW – OFFSET INSTALLATION.**

If the first elbow is not to be attached to the fireplace, install chimney sections as required.

Attach first elbow where required. Note that only the outer pipe of the elbow snap-locks.

Attach the straps of all upper elbows to a structural framing member. (See Fig. 6.)

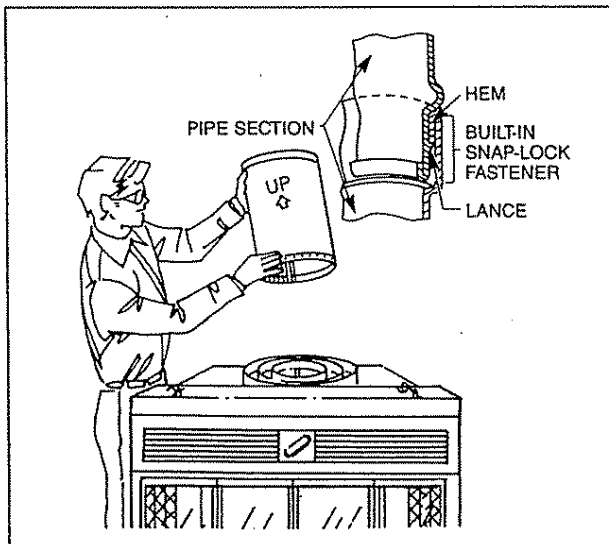


Fig. 11. Use built-in snap-lock fasteners to attach chimney pipe sections.

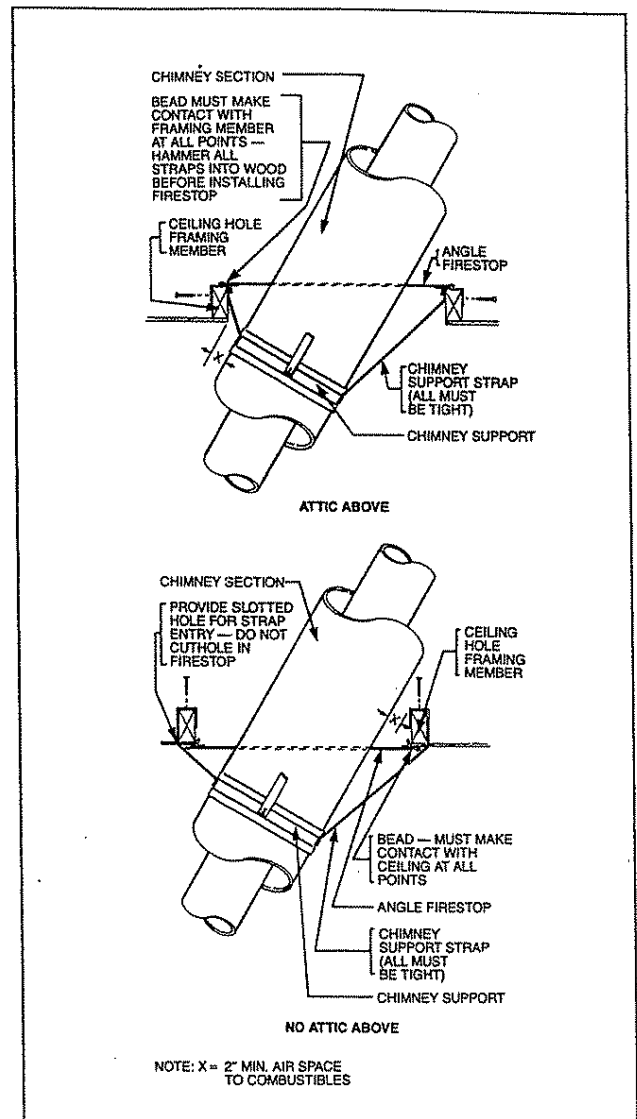


Fig. 12. Mount chimney supports at ceiling hole frames or other structural framing.

**B-9. DETERMINE HOW MANY CHIMNEY SUPPORTS ARE NEEDED.**

The chimney system is supported by the fireplace for chimney heights less than 30 feet of vertical height above the hearth. Chimney supports are required if the chimney height exceeds 30 feet. Locate chimney supports at ceiling holes or other structural framing at 30 foot heights. Spacing between chimney supports must not exceed 30 feet. Use EQUUS Chimney Support Model TCS8A. (NOTE: The TCS8A cannot be mounted directly onto the fireplace.) Support provided by elbow straps fulfills the support requirement only if they are spaced as required above.

Angled chimney runs require support every 6 feet in addition to the elbow straps. EQUUS Chimney Supports are used for this function.

Refer to Step B-2 to determine how many chimney supports are needed and where they will be placed in the chimney run.

**NOTE:** A chimney support is 2½-inches long when installed. This dimension must be considered when determining how many straight chimney sections are needed to provide the desired offset.

### B-10. ATTACH CHIMNEY SECTIONS.

Chimney supports are attached to chimney sections the same way elbows are attached. Refer to Step B-8. Nail the chimney support straps to adjacent structural framing, as shown in Fig. 12. Bend the straps as necessary and make sure they are tight so they will be able to support the weight of the chimney.

### B-11. LOCATE CENTERPOINT OF NEXT CEILING HOLE.

**NOTE:** If there is no other ceiling, you have completed Section B. Turn now to Section C, *Penetrating the Roof*. In a manner similar to that used in Steps B-1 and B-2, mark the centerpoint of the next ceiling hole.

### B-12. PREPARE SECOND CEILING HOLE.

Repeat Steps B-3. Mark area of ceiling chimney hole; B-4, Cut ceiling chimney hole; B-5, Frame ceiling chimney hole; and B-6, Install firestop spacer.

### B-13. CONTINUE INSTALLING CHIMNEY SECTIONS.

Continue installing chimney sections and chimney supports (as required), until the chimney passes through the second ceiling hole.

**NOTE:** Repeat Steps B-11 through B-13 as many times as necessary to pass through all the ceilings in the building and bring the chimney just short of the roof.

## C. Penetrating the Roof

The chimney system must be vented out-of-doors and must be terminated in an approved EQUUS top termination.

**NOTE:** If you are using a chase, go to Section D.

### C-1. LOCATE CHIMNEY CENTERPOINT AT ROOF.

Use the same procedure detailed in Steps B-1 and B-2.

Drive a nail up through the roof at the marked centerpoint. This will mark the centerpoint on the outside of the roof.

### C-2. CUT AND FRAME ROOF HOLE.

The size of the roof hole varies with the type of chimney top that will be installed. Refer to the installation instructions provided with your EQUUS chimney top termination to find the correct size of roof hole for this installation. There must be at least a 2 inch air space between the outermost section of the chimney sections and any adjacent combustible (burnable) surfaces.

**WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.**

(Combustible surfaces include such things as ceiling members, joists, flooring, combustible insulation and roof structures.)

Mark the outline of the roof hole around the centerpoint nail. **Note:** The hole dimensions given in the chimney top installation instructions are **horizontal** dimensions; therefore, the hole size must be marked on the roof accordingly.

Cover the opening of the installed chimney.

Cut and frame the hole. It is good practice to use framing lumber that is the same size as the rafters. **Install frame securely. Chimney top and flashing anchored to frame must withstand heavy winds.**

### C-3. DETERMINE MINIMUM CHIMNEY HEIGHT ABOVE ROOF.

Major U.S. building codes specify minimum chimney height above the roof top. These specifications are summarized in the Ten Foot Rule. (See Fig. 13.) The key points of this rule are:

1. If the horizontal distance from the center of the chimney to the peak of the roof is 10 feet or less, the top of the chimney must be at least 2 feet above the peak of the roof, but never less than 3 feet in height above the highest point where it passes through the roof.
2. If a horizontal distance from the center of the chimney to the peak of the roof is more than 10 feet, a chimney height reference point is established that is on the surface of the roof a distance of 10 feet from the center of the chimney in a horizontal plane. (See Fig. 13.) The top of the chimney must be at least 2 feet above this reference point, but never less than 3 feet in height above the highest point where it passes through the roof.

These chimney heights are necessary in the interest of safety and do not assure a smoke-free operation.

### C-4. INSTALL REMAINDER OF CHIMNEY SECTIONS.

Continue installing chimney sections up through the roof hole. Check your chimney top installation instructions for data on how high above the top of roof the CHIMNEY SECTIONS (all pipes) should go.

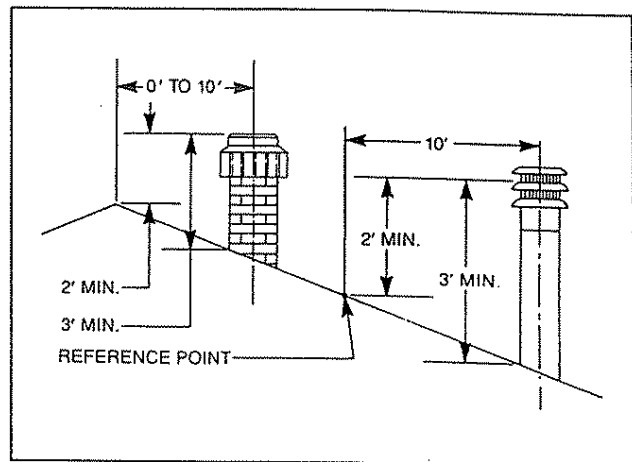


Fig. 13. Ten foot rule for chimney height.

### C-5. INSTALL CHIMNEY TOP HOUSING OR TERMINATION.

Follow the installation instructions provided with the EQUUS chimney top you have selected.

Then proceed to *Framing and Finishing*, Section H.

## D. Installing Chimney in a Chase

A chase is a vertical box-like structure built to enclose the fireplace and/or its chimney.

**CAUTION:** Treatment of firestop spacers and construction of the chase may vary with the type of building. These instructions are **not** substitutes for the requirements of local building codes. Therefore, your local building codes must be checked to determine the requirements for these steps.

**NOTE:** Other material may be required in addition to EQUUS Firestop Spacers.



When installing the fireplace and chimney in a chase, it is always good building practice to **insulate the chimney chase as you would an outside wall of your home.** See Section G, which describes the insulation methods.

Refer to *Framing and Finishing* on Page 11. Upon completion of building your chase frame, install the chimney system. Follow the instructions for *Installing the Chimney* starting on page 4. Then proceed to Step D-1.

#### D-1. INSTALL CHIMNEY TOP HOUSING OR TERMINATION.

Follow the installation instructions provided with the EQUUS chimney top you have selected.

Then proceed to *Framing and Finishing*, Step H-1.

### E. Install the Electrical Connection

#### E-1. ELECTRICAL CONNECTION.

**CAUTION: ALL WIRING SHALL BE DONE BY A QUALIFIED ELECTRICIAN AND SHALL BE IN COMPLIANCE WITH ALL LOCAL, CITY AND STATE BUILDING CODES.**

**IMPORTANT:** To prevent electrical shock, the house power must be disabled. This can be accomplished by positioning the circuit breaker to off.

#### E-2. INSTALLATION OF FIELD WIRING.

The fans require 120VAC, 60 Hz power which may be connected to the right side of the fireplace at the junction box (J box) provided with the unit. This power should be provided at initial installation, since access to the outer casing is normally not practical at a later date.

The junction box (J box) is attached to one (1) screen assembly of the fireplace.

Before installing the junction box (J box) to the fireplace, remove the cover plate and two (2) mounting screws from the lower right side of the fireplace and set aside.

The outer casing insulation is perforated on the sides for installation of the J box. Tear at the perforations and lift up - do not remove this insulation.

Remove the knockout in the center of the cover plate. Install the house power connection to the cover plate using listed cable clamps. Feed the house wire through the listed cable clamp leaving approximately 6 inches of wire exposed through the cover plate. Secure the listed cable clamp to the wire.

Using pliers, remove the nut from the grounding stud in the J box and attach the green ground wire from the house power. Reinstall the nut securely. (See Fig. 15.)

Attach the white wire from house power to one (1) wire of the receptacle and secure within a wire nut. Attach the black wire from the house power to the other wire of the receptacle and secure within a wire nut. (See Fig. 15.)

**IMPORTANT:** The wire nuts must be tight.

Install the J box into the fireplace through the hole made available by removing the cover plate. The flange has a hole which will align with the hole in the outer casing. (See Fig. 14.)

Secure the J box to the fireplace with the sheet metal screw provided.

**NOTE:** The flange of the J box goes outside the outer casing.

Reinstall the cover plate being careful to position the excess wire within the J box.

#### E-3. INSTALL BLOWER ASSEMBLY.

The Model FKSX blower assembly is provided for your convenience, cartoned and setting in the firebox of the fireplace.

Follow the installation instructions provided with the blower, to install in the fireplace.

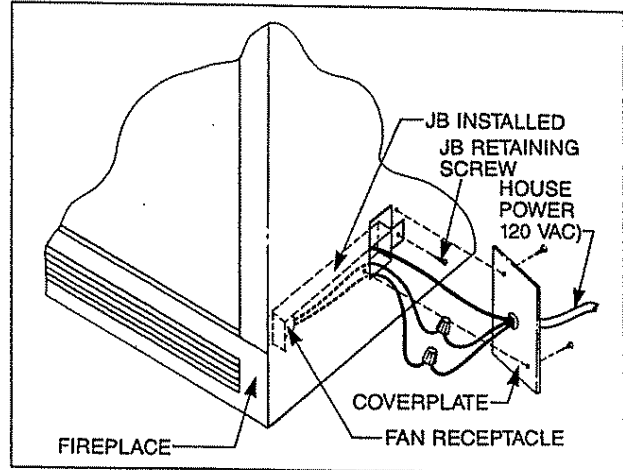


Fig. 14. Installing JB (Junction Box/Receptacle).

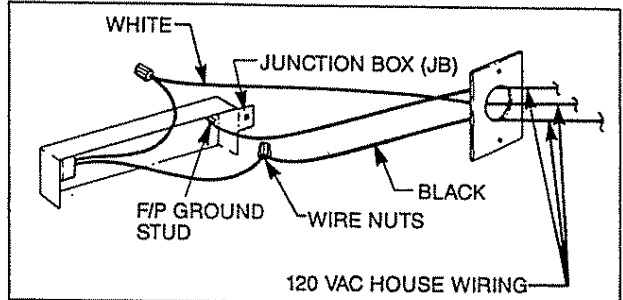


Fig. 15. Wiring diagram.

### F. Install Outside Air System

#### INSTALLATION PRECAUTIONS

The duct termination should be located so it is exposed to an out-of-doors opening at least 100 square inches. If the duct termination must be located in a crawl space or basement, be sure the termination area has 100 square inches of ventilation opening to outside air.

The duct termination must be located so it does not compete for air flow with exhaust fans, gas vent hoods or other air consuming devices or appliances. It must not be obstructed by rafters, insulating materials or other obstructions.

It is a good practice to protect your hands and eyes during installation by wearing work gloves and safety glasses.

**CAUTION: DO NOT INSTALL TERMINATION INTO A GARAGE OR OTHER AREA THAT COULD CONTAIN FLAMMABLE LIQUIDS OR FUMES, OR INTO AN ATTIC SPACE.**

#### F-1. PLAN INSTALLATION.

Determine the location of the fireplace as described in this fireplace Installation Manual. Then plan the location of the duct termination and the route of the duct run between the fireplace and the duct termination. (Refer to Fig. 16.)

Duct run must be limited to a maximum distance of 40 feet from the fireplace pipe collar to duct termination. This will provide the least restriction to air flow. No more than four 90° elbows can be used. Duct run may be horizontal, vertical, inclined or any combination of these. Vertical duct runs must be at least three (3) feet below the fireplace chimney flue exit. (See Fig. 16.)

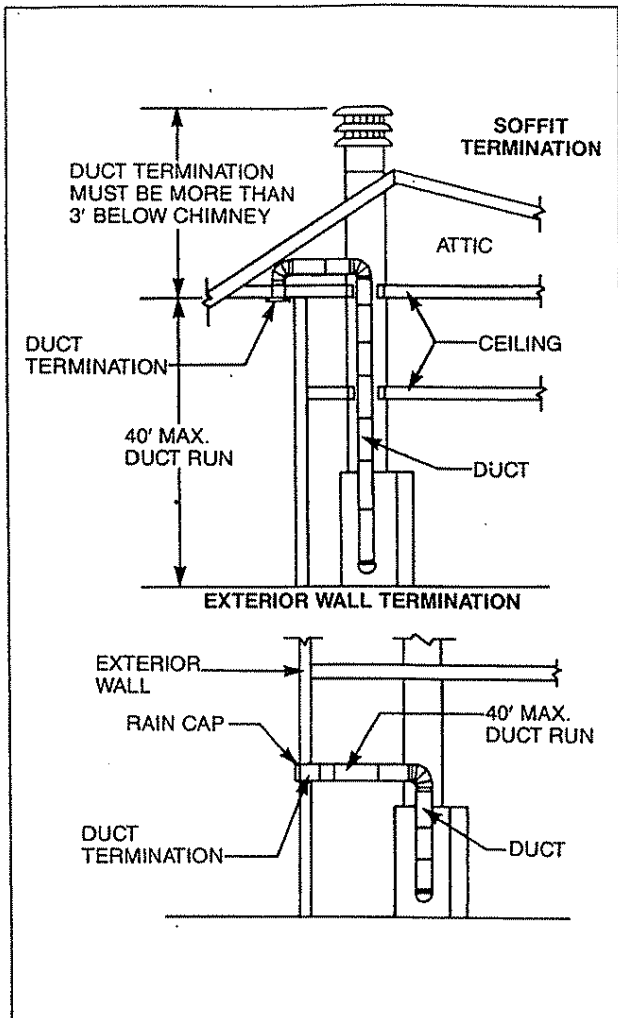


Fig. 16. Typical installations.

### □ F-2. INSTALL DAMPER ASSEMBLY.

Remove the four (4) screws, outside air cover plate and internal insulation knockout from the left side of the fireplace. Retain the screws for mounting the damper assembly to the fireplace. Discard the cover plate and insulation knockout.

The cartoned outside air components are shipped within the firebox of the fireplace.

You are ready to install the damper assembly. Position the gasket to the backside of the damper assembly by inserting its damper rod through the keyhole in the bottom of the left side brick retainer. (See Fig. 17.) The damper assembly should be positioned so the damper blade swings freely in operation. When positioned properly, attach the damper assembly to the outer casing by aligning the four (4) mounting holes and securing with four (4) screws removed previously. Attach the knob to the threaded end of the damper rod.

Check to see if the damper operates correctly. Push and pull damper rod to check that damper blade freely opens and closes. The damper door is spring loaded and will close automatically when released unless it is locked in the open position. To lock open, lift the damper rod up and pull forward until the detent in the damper rod is engaged in the keyhole. Push the damper rod down to lock in place. To close, lift the damper rod up and release. The spring will close the damper door.

### □ F-3. ATTACH DUCTING.

Secure 4 inch diameter ducting (supplied) to inlet collar. Route ducting to termination point.

**NOTE:** Four (4) inch diameter Class 1 air duct/connector material or metal duct (not supplied) may be used.

**(For installation in New York State, only aluminum, non-combustible flexible or type "O" metal ducting is permissible.)**

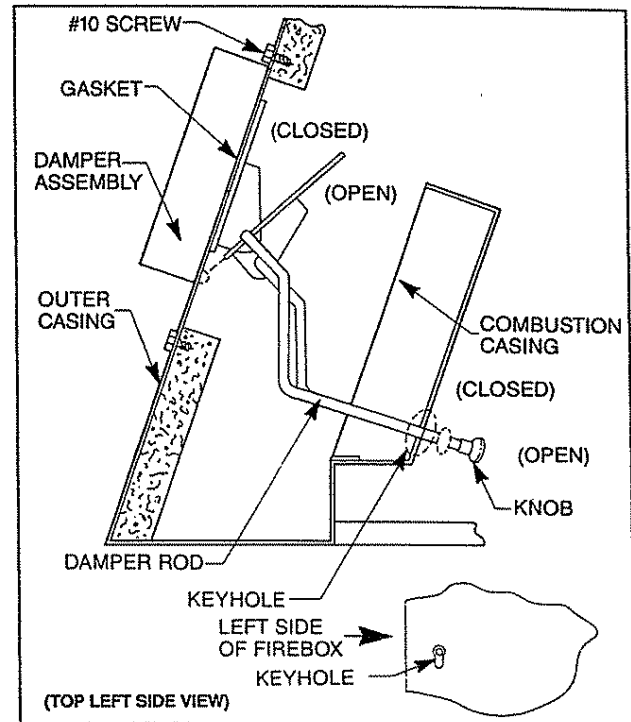


Fig. 17. Mounting damper assembly.

### □ F-4. INSTALL TERMINATION AND CAP.

At the termination end, you should install the duct termination. This should be installed from the outside of the home and should be covered with the rain cap (the rain cap snaps on). Cut a hole in the desired location approximately 4½-inches in diameter, caulk around the hole, and slide the termination, with rain cap attached, through the opening from outside the home. The termination/rain cap should be caulked around its perimeter to assure a tight seal. The rain cap opening should be positioned downward. (See Fig. 18.)

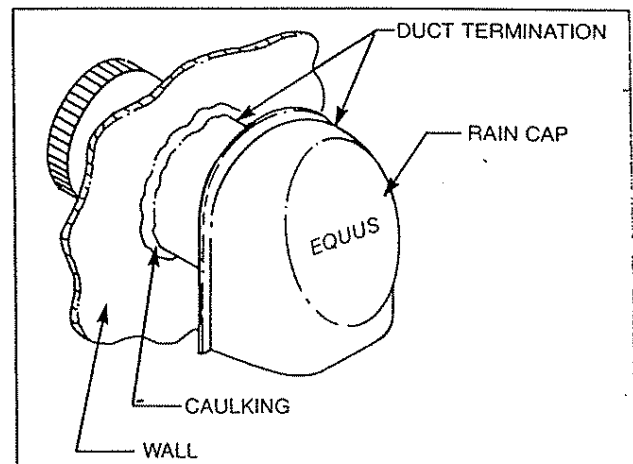


Fig. 18. Caulk and install duct termination cap in place.

## G. Insulating Fireplace Enclosure For Cold Climates

When installing the fireplace, it is always good building practice to insulate as you would an outside wall of your home.

The WM42SX-(S/D) is fully insulated as shipped from MAJESTIC. To further reduce cold air into your home in cold climate areas, Sections G-1 through G-3 are recommended.

### G-1. INSULATE BASE OF FIREPLACE.

Insulate the base of the fireplace with a non-combustible insulation rated for a minimum of 300°F. This step is particularly important for outside wall installations over concrete slab floor construction. If a platform is used to raise the fireplace, the insulation should be placed on top of the platform before the fireplace is set. (See Fig. 19.)

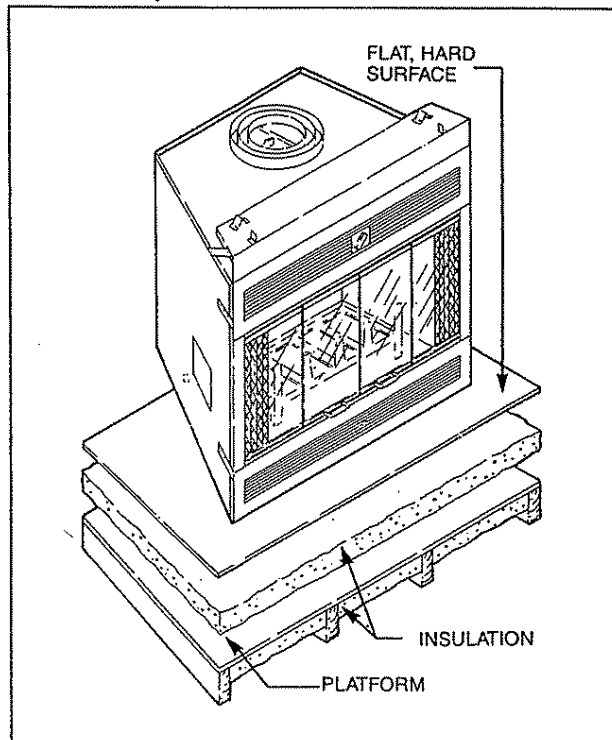


Fig. 19. Insulation between platform and fireplace.

### G-2. INSPECT JOINTS.

Inspect joints of the fireplace as well as the points of sealing between the fireplace and the finishing materials. Any cracks should be sealed with non-combustible caulking or insulation. See Fig. 20 for details of sealing between the fireplace and finishing materials.

### G-3. INSULATION OF ENCLOSURE.

When a fireplace is installed in a chase or on an outside wall, the enclosure should be insulated like any other wall of the home. Insulation should be installed on the inside wall as well as the outside wall(s). In a chase, it is also a good idea to install a firestop at the first ceiling level above the fireplace and close the chase with sheeting material. Insulation may then be installed above the sheeting material to assure the space around the fireplace is totally protected. See Fig. 21 for additional details of suggested insulating methods.

**CAUTION: WHEN INSTALLING A FIREPLACE IN AN INSULATED ENCLOSURE, BE SURE ALL MARKED AIR SPACES ARE MAINTAINED.**

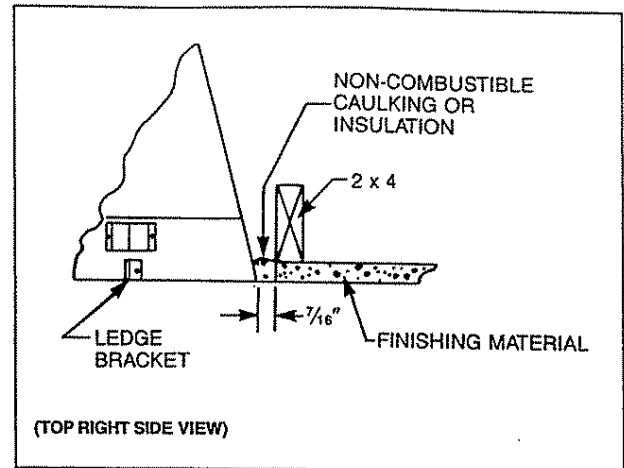


Fig. 20. Sealing spaces between fireplace and finishing materials.

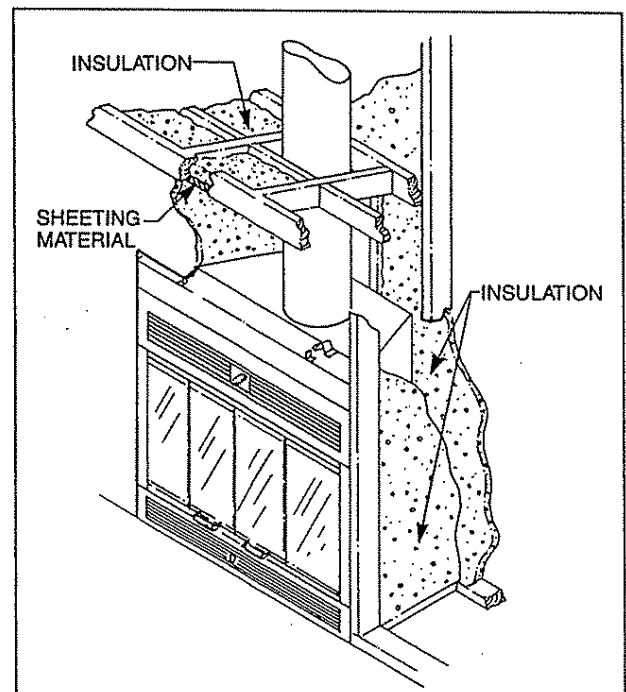


Fig. 21. Additional insulating methods.

## H. Framing and Finishing

### H-1. DETERMINE WHEN TO INSTALL FRAMING.

Fireplace framing can be built before or after the fireplace is set in place. Fig. 22 shows the minimum framing dimensions.

### H-2. BUILD FRAMING.

The fireplace framing should be constructed of 2 x 4 lumber or heavier. Refer to *Dimensions* on page 17 for basic fireplace dimensions that will affect the framing dimensions.

The header may rest on the fireplace standoffs (V-angles on the front ledge of the fireplace), but must NOT be notched to fit around them.

Framing should be positioned to accommodate wall covering and fireplace facing material. Fastening tabs provided on the side of the fireplace can be used to anchor the fireplace. Nail through the tabs into the vertical framing members. (See Fig. 4.)

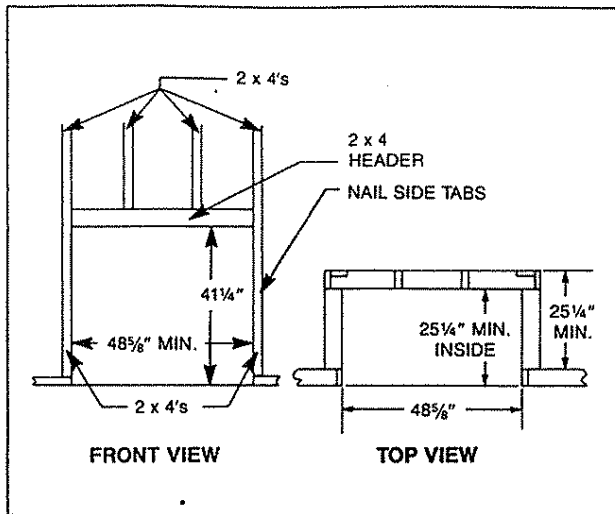


Fig. 22. Minimum fireplace enclosure dimensions.

**CAUTION:** All joints between the finished wall and the fireplace surround (top and sides) must be sealed with non-combustible material. Only non-combustible material may be applied as facing to the fireplace surround.

**H-3. FINISH WALL.**

Finish the wall with material of your choice. Do not install a combustible mantel closer than 12 inches above the outlet grille. If a combustible material is used below a flat mantel shelf, consult your local building codes for the minimum clearance from the top of the fireplace opening to the bottom of the material.

When finishing the fireplace, a combustible facing material (i.e. drywall or wood paneling) may be installed at the fireplace surround top as shown in Fig. 23. This material may rest on the ledge brackets (L-brackets on the front edge of the fireplace), but must NOT be notched to fit around them.

All joints (top, bottom and sides), where the wall or decorative facing material meets the fireplace surround must be completely sealed with a non-combustible material. (See Figs. 23, 25 and 26.)

Only non-combustible material may be applied as facing to the black fireplace surround.

When finishing the fireplace, never obstruct or modify the air inlet/outlet grilles in any manner.

**H-4. ADD PROTECTION TO SIDE WALLS.**

Adjacent combustible side walls that are within 28" of the fireplace openings must be protected with EQUUS Wall Shield Model SP40, or a built-up wall shield design described in Fig. 24.

The built-up wall shield design described in Fig. 24 is an alternate method for adding protection to side walls and can be used in place of the SP40 with the same wall clearances specified for the SP40.

**EXAMPLES OF INSULATION:**

1. Manville — CERAFORM 126, K = .27, 1/2" thick required.
2. EQUUS Building Products - EH2416, K = .458, 1" thick required.

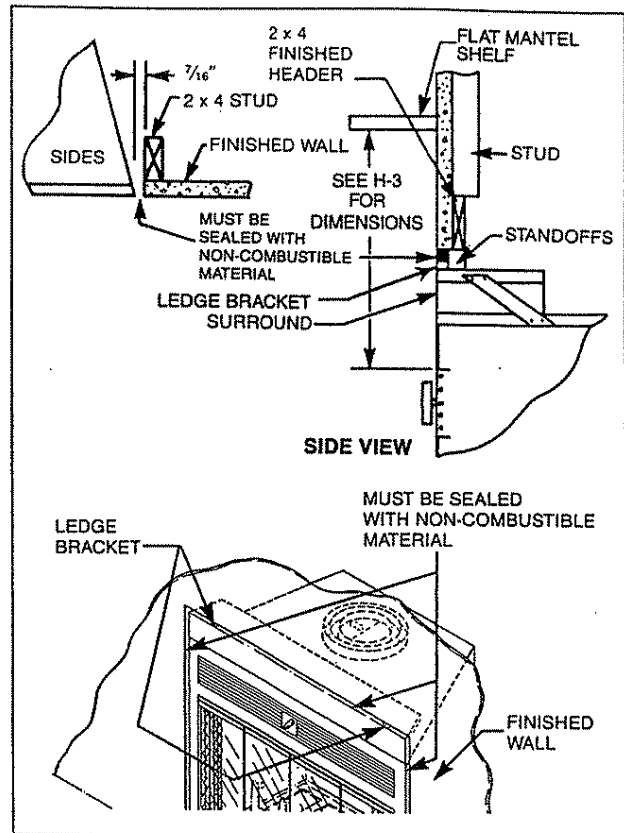


Fig. 23. Fireplace surround flush with finished wall.

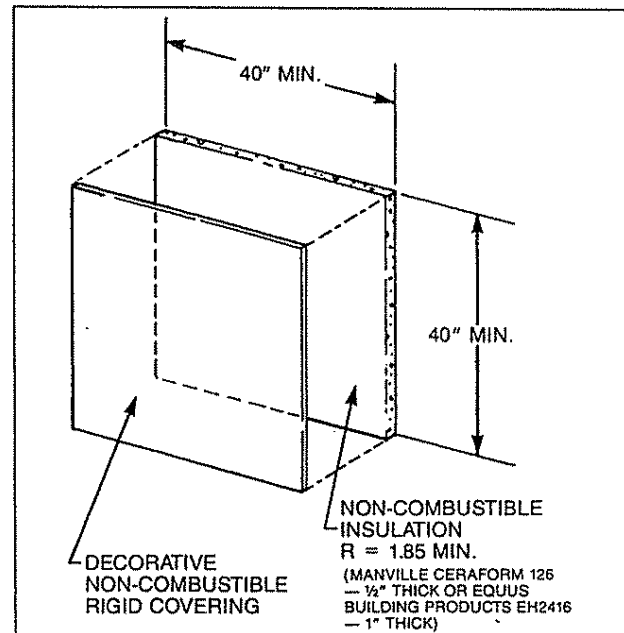


Fig. 24. Non-combustible wall shield dimensions.

**H-5. INSTALL HEARTH EXTENSION.**

A hearth extension is required to protect combustible floor construction in front of the fireplace. (See Figs. 27 and 28.)

The hearth extension described in Fig. 27 must be constructed of a rigid insulation with a minimum (total) R<sub>T</sub> value of 2.18. (See Table 4 for examples.) The overall height (above combustible floor), depth and width must be as indicated, with it centered to the fireplace opening.

MATERIAL	K*	R	MINIMUM THICKNESS
EQUUS Building Products EH2416	0.458	2.18	1.00 in.
Common Brick	5.0	0.20	10.92 in.

R Value is for one (1) inch  
 \* Units of K = BTU/SQ FT/HR/°F/IN  
 \*\* Thickness of Listed Material

Table 4. Common materials and their factors.

The top of the insulation must be covered with a non-combustible decorative covering or a piece of .018" minimum sheet metal, to protect the hearth extension material. (See Fig. 27.)

Secure the hearth extension to the floor to prevent shifting, using trim molding or other similar means at the three (3) outer edges. Seal the crack between the fireplace hearth and the hearth extension with a non-combustible material. (See Fig. 27.)

**WARNING: HEARTH EXTENSION MUST BE INSTALLED IN ACCORDANCE WITH FIGS. 27 AND 28 AND MUST NOT COVER THE GRILLE OPENING OF THE FIREPLACE.**

Alternate, non-combustible materials may be used, providing the (total) thermal resistance ( $R_T$  value) of the alternate material employed is greater than or equal to an  $R = 2.18$ . The thermal resistance ( $R$ ) or the thermal conductivity ( $K$ ) may be obtained from the manufacturer of the material. The factors are related by the formula  $K = 1/R$ .

T = given thickness

R = thermal resistance for a given thickness (T)

K = thermal conductivity

Non-combustible material with a lower R value may be used, provided the thickness of the material is sufficiently greater to maintain an equivalent (total) thermal resistance ( $R_T$ ).

**EXAMPLE OF DETERMINING HEARTH EXTENSION EQUIVALENT**

To determine the thickness required for any new material:

$$\text{NEW required thickness} = \frac{\text{K of new material (per inch)} \times \text{thickness of listed material}}{\text{K of listed material (per inch)}}$$

**EXAMPLE FOR EQUUS BUILDING PRODUCTS EH2416 INSULATING BOARD**

$$T(\text{new}) = 5.0 / 0.458 \times 1.00 \text{ in.} = 10.92 \text{ in.}$$

(new required thickness)

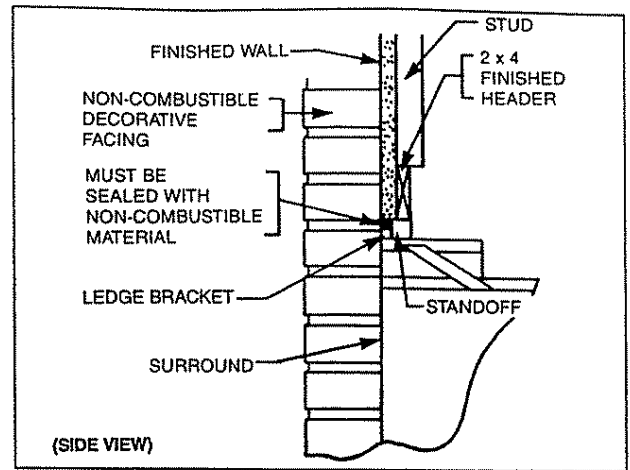


Fig. 25. Fireplace surround flush with finished wall.

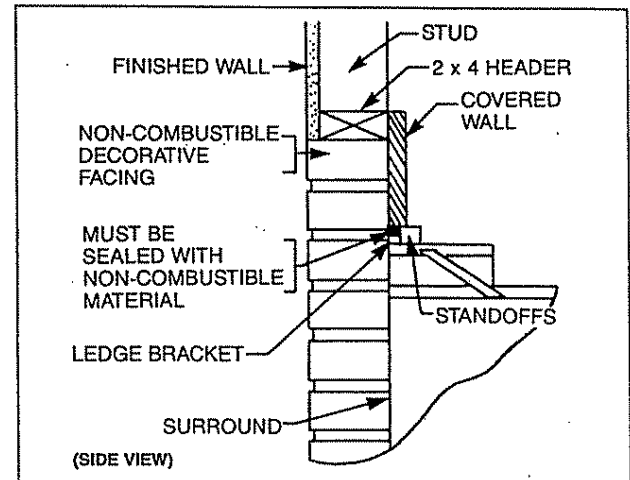


Fig. 26. Facing on fireplace surround flush with finished wall.

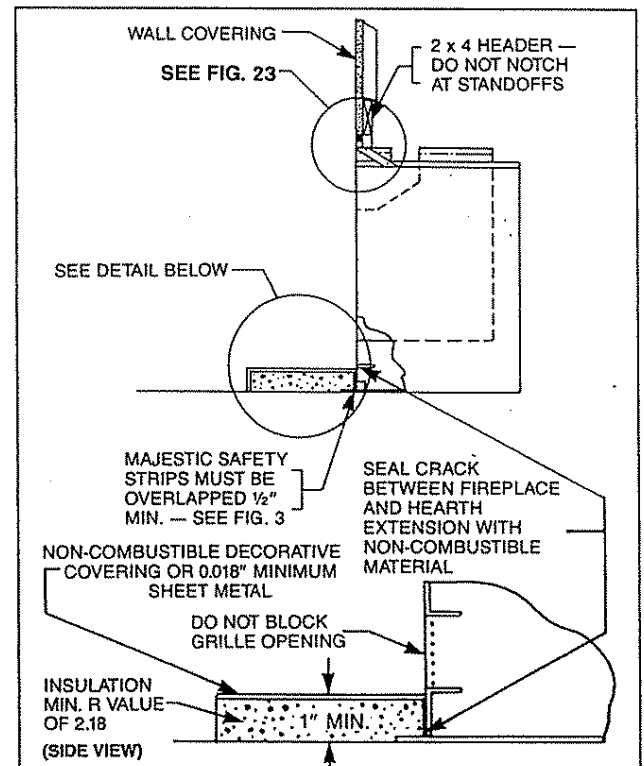


Fig. 27. Sealing detail.

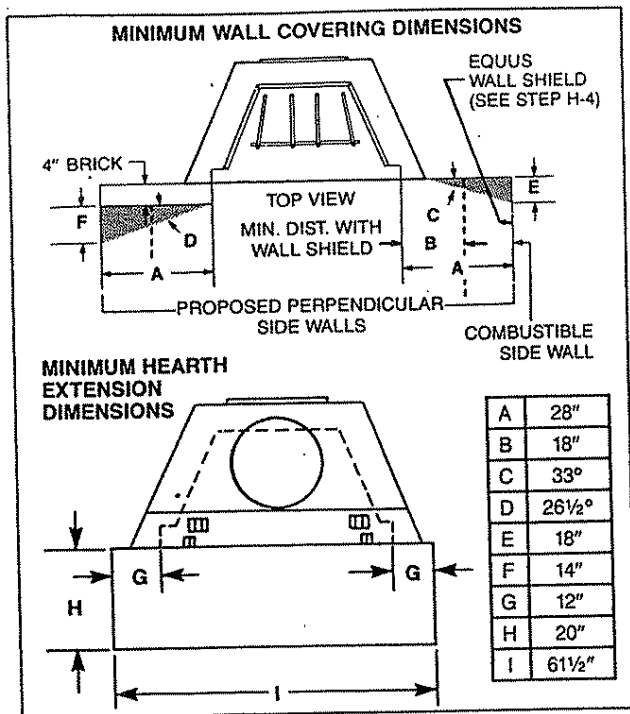


Fig. 28. Protection of adjacent combustible walls and hearth extension dimensions.

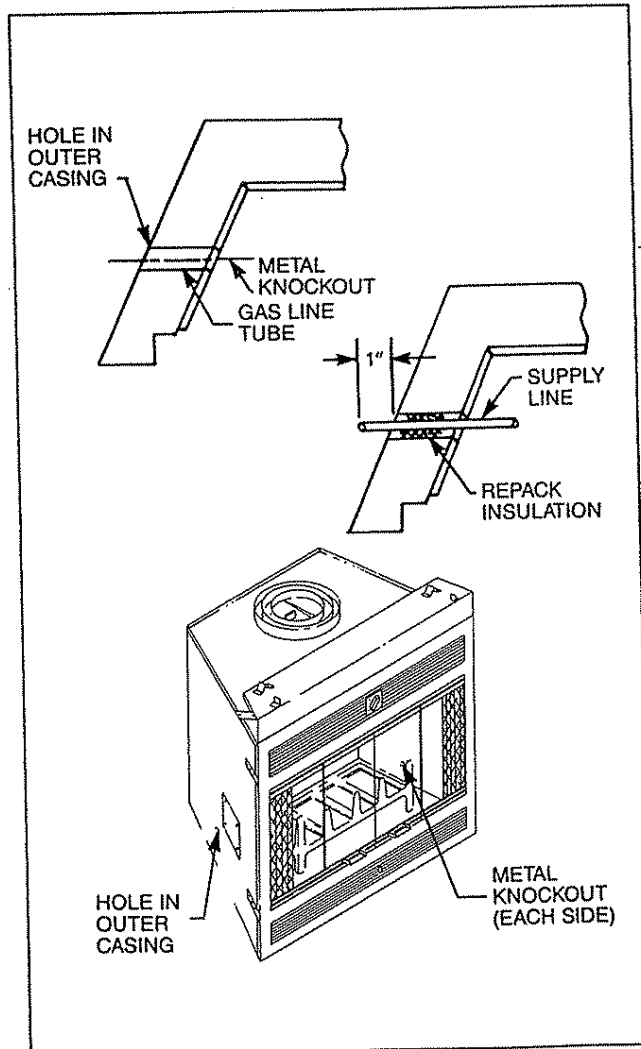


Fig. 29. Install iron pipe gas line through provided hole in either side of fireplace.

## □ H-6. INSTALL DECORATIVE GAS APPLIANCE.

The Majestic WM42SX Series fireplace is designed to accept a 1/2-inch gas line for an approved gas appliance. Have the appliance installed by a qualified plumber in accordance with all building codes. The gas connection may enter from either side of the fireplace. The following instructions apply to the side selected.

Locate the gas line hole in the outer casing of the fireplace and remove the insulation from the gas line tube. (Refer to Fig. 29).

Next, insert a 1/2-inch gas pipe through the gas line tube from the outside of the fireplace and forcibly punch out the metal knockout on the inside of fireplace.

Now, install the 1/2-inch gas pipe through the opening. After the gas pipe installation is complete, use the insulation that was removed from the gas line tube to repack the space around the pipe. This should be inserted from the outside of the fireplace and packed tightly to totally seal between the pipe and the tube.

**NOTE:** The gas pipe should not come in contact with any wood structure until it has reached a point at least one (1) inch away from the fireplace side. (See Fig. 29 for installation clarification.)

**NOTE:** Local codes may require removal of the flue damper when installing any type of gas appliance in a fireplace. For instructions on damper removal, refer to Majestic Instruction BFI51. Heat output of a gas appliance installed in the fireplace should be rated less than 100,000 BTU/HR.

The gas pipe installation is intended for connection to a decorative gas appliance only (1) incorporating an automatic shutoff device and (2) complying with the Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60.

The decorative gas appliance should be installed in accordance with the National Fuel Gas Code, ANSI Z223.1-1988.

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

## I. Installing Glass Doors/Door Tracks/Door Frame

The WM42SX-S and WM42SX-D door track/door frame and glass door panels are individually packaged to protect the finish during fireplace installation. The glass door enclosures are carefully engineered and tested as part of the fireplace installation and MUST be installed in accordance with the following instructions.

### □ I-1. MOUNT WM42SX-S DOOR TRACKS.

You will find prepunched holes in the top and bottom surround for the mounting of the door tracks. With the shorter leg of the track facing away from the fireplace, place one (1) spring bracket in each end of the door track. (See Fig. 30.) (NOTE: #10 x 3/8 inch long pan head screws must be installed into slots in spring brackets with holes in brackets positioned to outward ends of door tracks.) Position the door track as shown in Fig. 30, install two (2) #8 x 3/4 inch long flat head screws in center of two (2) holes of door track, securing the door track to the bottom surround. Using two (2) #10 x 3/8 inch long screws, attach two (2) spring brackets, making certain the spring brackets are positioned as close to the sides of the fireplace as possible. Attach the remaining door track to the top surround using the same method.

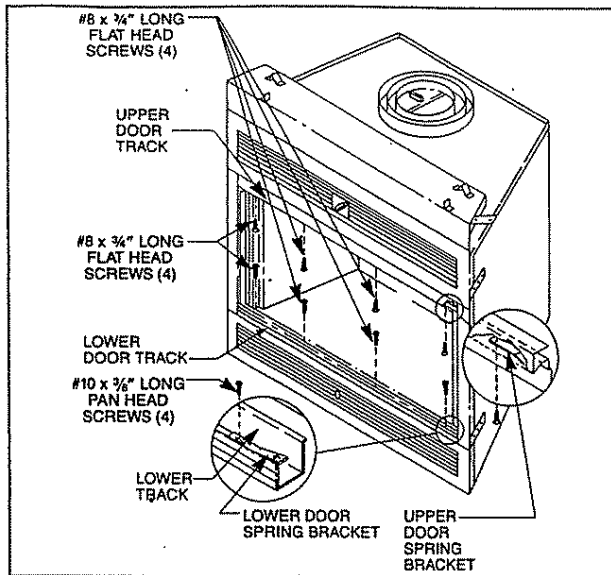


Fig. 30. Mounting door tracks.

**I-2. MOUNT WM42SX-D DOOR FRAME.**

Locate and remove the three (3) sheet metal screws from each side of the firebox opening that attaches the surround to the firebox casing. (See Fig. 31.) Slide door frame into firebox opening until top and bottom edges are tight against fireplace surround. Align holes in side mounting flanges with mounting holes in firebox casing sides. Secure each side by reinstalling the three (3) sheet metal screws. (See Fig. 32.)

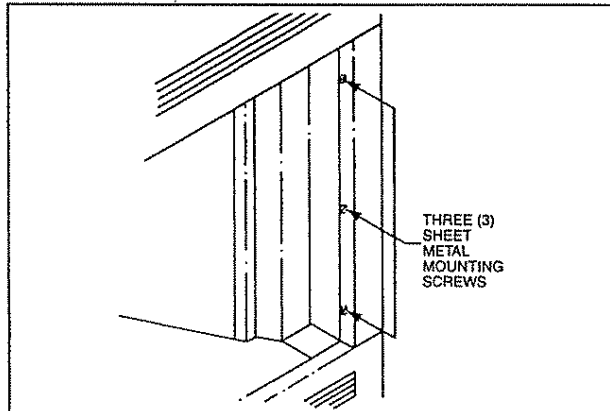


Fig. 31. Remove mounting screws.

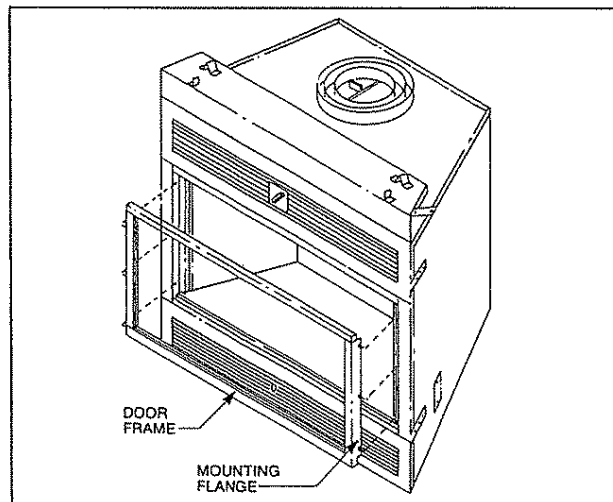


Fig. 32. Mounting door frame.

**I-3. INSTALL GLASS DOORS.**

Install the door assemblies by folding each door and then placing it in the track at an angle and sliding the pivot pin into the spring bracket. When the hinge pin is snapped in place, top and bottom, the door should slide smoothly in the track. (See Fig. 33.)

To remove door panel, open door assembly, depress top spring bracket and swing upper door panel inward and out of track.

Close door panels and check vertical gap between edges of inner door panels and inner frame sides. If uneven gap exists, the spring bracket(s) located in each corner of the frame track will need to be adjusted. (See Fig. 34.)

To adjust, determine which spring bracket and direction bracket needs to be moved. Remove door panel as described above. Loosen attachment screw retaining spring bracket and slide bracket in desired direction. (See Fig. 34.) Secure screw and reinstall door panel. Check alignment and repeat procedure if necessary.

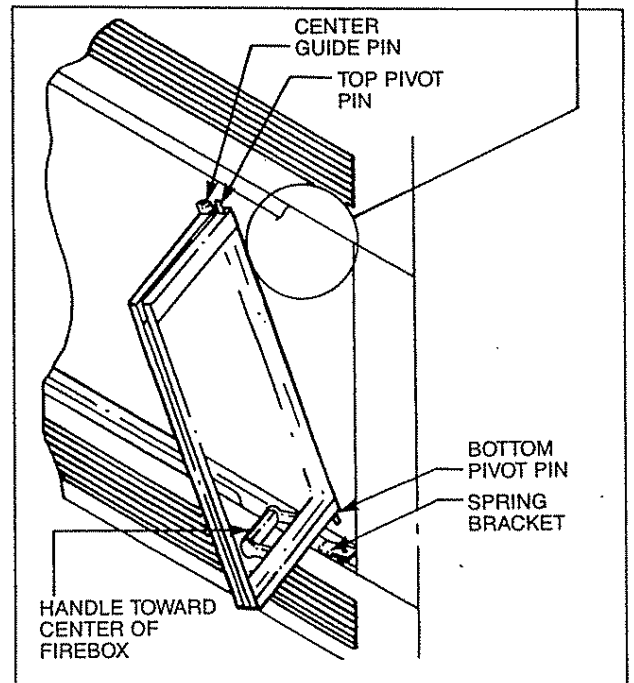
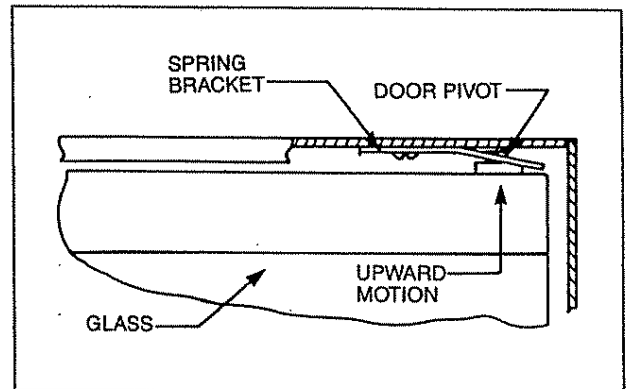


Fig. 33. Mounting door assembly in door tracks. Depress top spring bracket to remove door assembly.

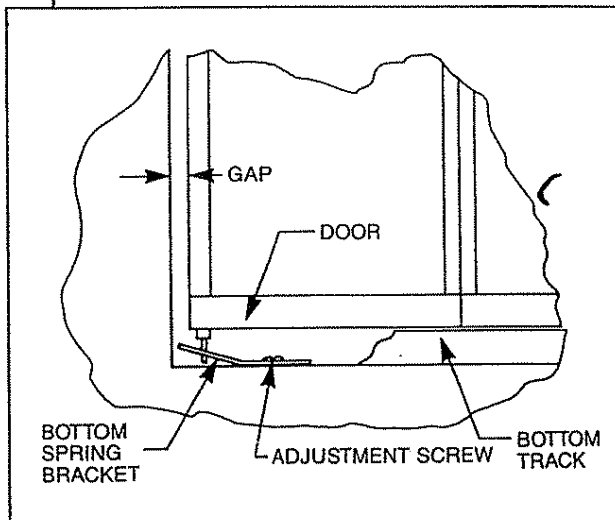
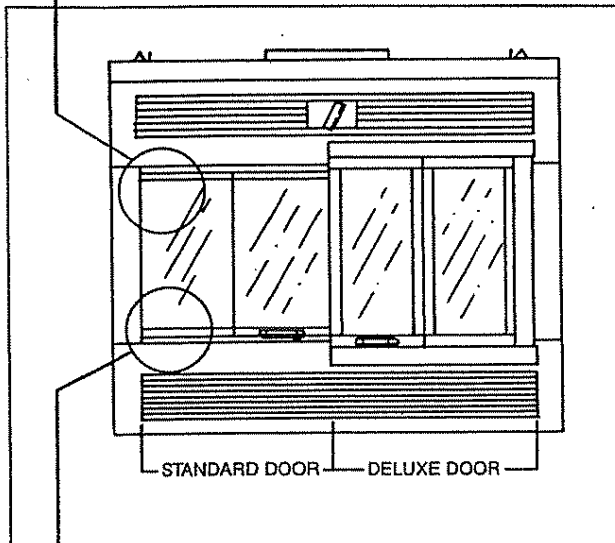
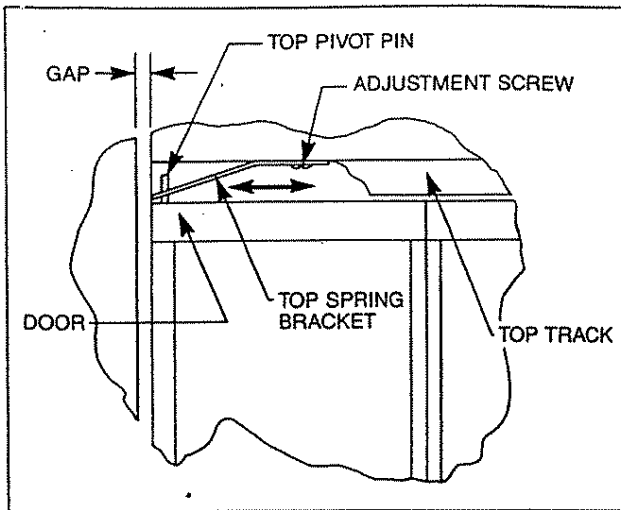


Fig. 34. Adjusting door panels.

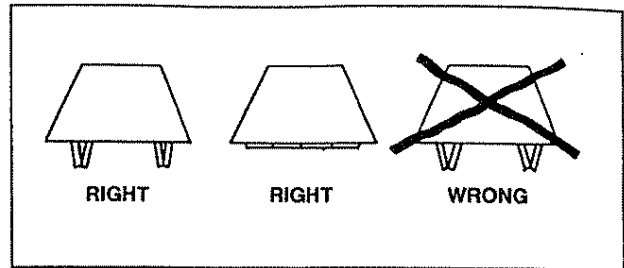


Fig. 35. Correct glass door position.

#### □ I-4. OPERATING GLASS DOORS.

Your fireplace is equipped with glass doors. Start the fire and leave the doors fully open (with screens closed). AFTER the fire is well started, then the doors may be closed. Do not close the doors on an excessively hot fire. The glass must be allowed to warm slowly. An excessively hot fire can be created by such things as pitch laden logs, very dry mill end lumber, or large amounts of paper or cardboard cartons. Keep the fire well back from the doors and never let flames contact the glass.

The glass doors must always be in either the fully opened or fully closed position. Partially opened doors can cause air drafts that may swirl the fire dangerously or cause smoke to be blown into the room. Any time you have a fire burning in the fireplace and you open the glass doors, be sure to close the fireplace screen.

**WARNING: FIREPLACES EQUIPPED WITH DOORS SHOULD BE OPERATED WITH DOORS FULLY OPEN OR DOORS FULLY CLOSED. IF DOORS ARE LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE FIREPLACE OPENING, CREATING RISKS OF BOTH FIRE AND SMOKE.**

(See Fig. 35 for correct door positions.)



## Reference Data

### AIR SPACE DATA

Any MAJESTIC WM42SX Series fireplace can be located directly on a flat hard-surfaced combustible floor or on a wooden platform without air space from combustible construction. Some protection, however, is required for adjacent surfaces as detailed in Fig. 36.

The minimum air space-to-combustibles requirements for chimney sections and dome are detailed in Fig. 36.

**WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.**

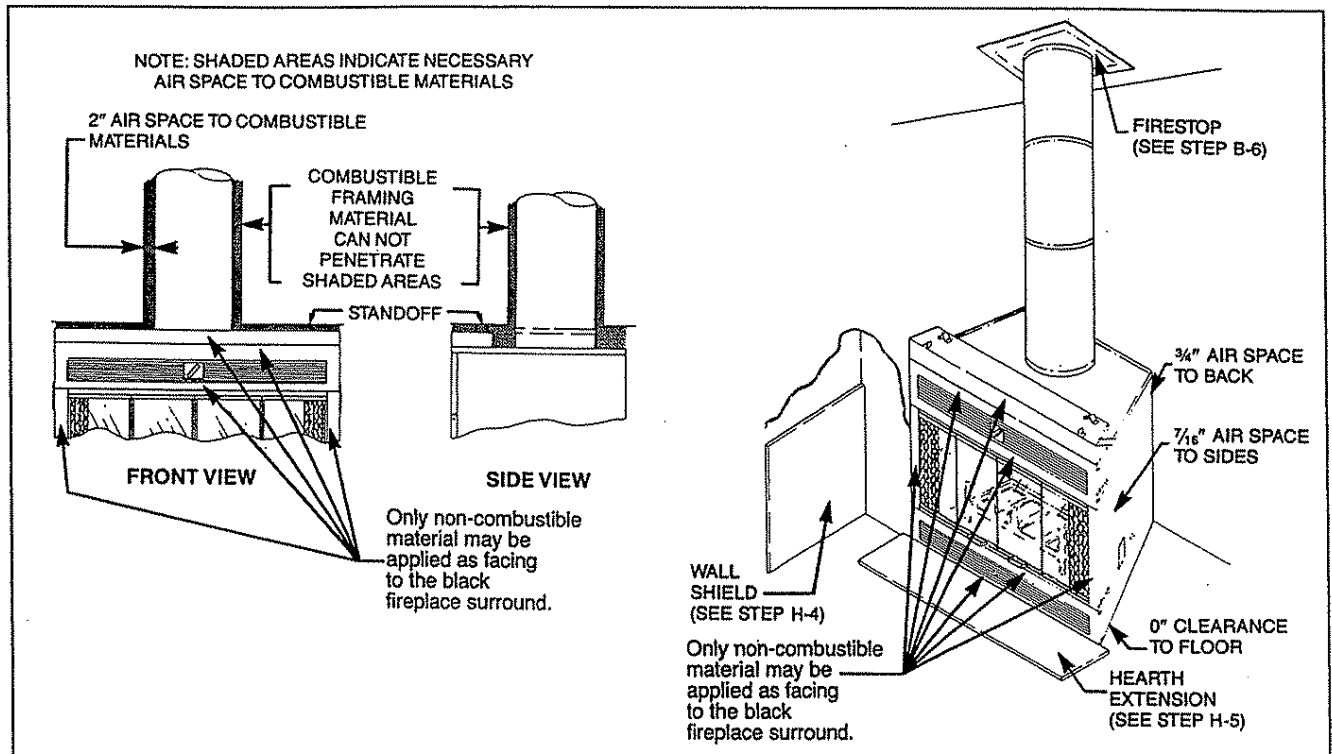


Fig. 36. Minimum air space to combustible materials.

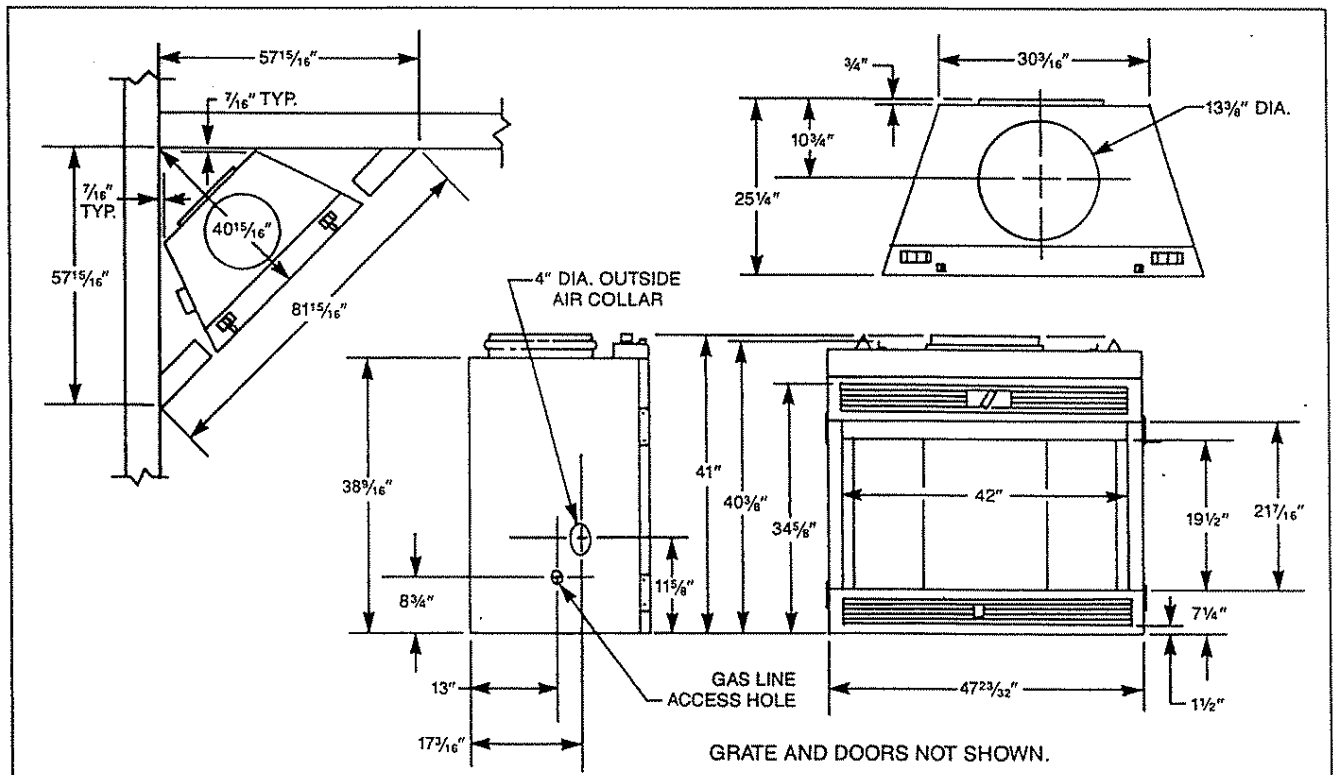
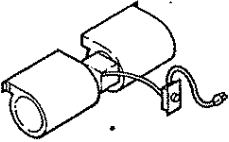
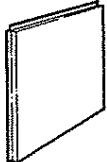
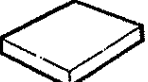
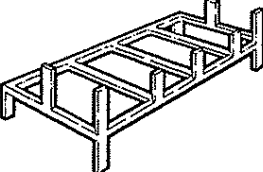

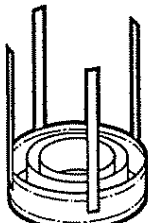


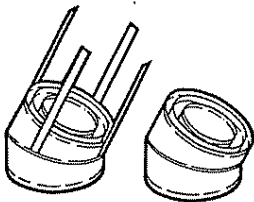
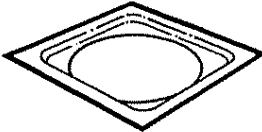
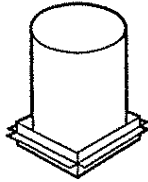
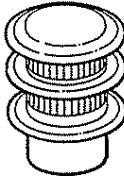
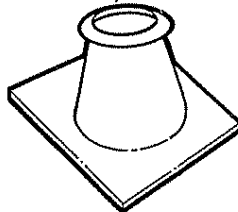
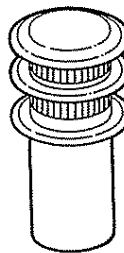
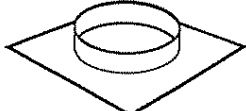
Fig. 37. Dimensions of WM42SX-(S/D).

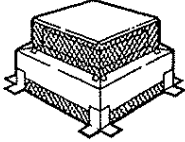
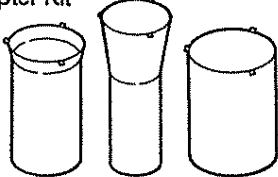
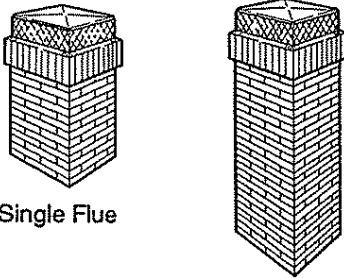
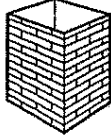
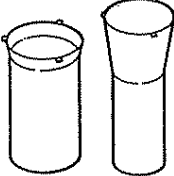
## Accessory Parts

The following accessory parts can be obtained from your Majestic Dealer. The fan kit, top terminations, outside air kit, glass doors, and hearth patching kits are supplied with installation instructions packaged with the unit. Should you need additional information beyond what your dealer can furnish, contact the Majestic Company, Huntington, Indiana 46750, Attention: Director of Customer Service.

**CAUTION:** This fireplace and chimney assembly are a highly engineered system and, as such, must be operated only with Majestic or EQUUS Building Products approved components that have been designed as parts of the system. If you use an unapproved component or make any modifications, you may create a possible fire hazard and will void the Majestic warranty. In addition, such action may void the coverage provided by the owner's home insurance.


Accessory	Description	Model No.
 <p>Blower System</p>	<p>Designed for use with the fireplace to provide forced air flow.</p>	<p>FKSX</p>
 <p>Wall Shield</p>	<p>Used to protect walls adjacent to the fireplace.</p>	<p>SP40</p>
 <p>Hearth Extension</p>	<p>Located on the floor in front of the fireplace opening to protect the floor from heat, hot embers, ashes, etc.</p>	<p>EH2416</p>
 <p>Basket Grate</p>	<p>Used in the firebox to hold firewood.</p>	<p>Standard Equipment Replacement RBG42-C</p>
 <p>Chimney Sections</p>	<p>Used to build chimney systems.</p>	<p>8" flue 81 (1' long) 818 (1½' long) 83 (3' long) 84 (4' long)</p>
 <p>Chimney Support</p>	<p>Used to support the chimney at each 30 feet of vertical height above the hearth and at every 6 feet of inclined chimney run. Each support adds 2½-inches to chimney length.</p>	<p>TCS8A (8" flue)</p>

Accessory	Description	Model No.
<p>Chimney Elbows</p> 	<p>Used to develop offset chimney systems. 30° elbows are available. (Elbows packed 2 per carton – upper and lower elbow set.)</p>	<p>830A/2 (8" 30° flue)</p>
<p>Firestop</p> 	<p>Required at each floor level and attic on multi-story installation.</p>	<p>FS2A (8" straight flue) FS6A (8" 30° inclined flue)</p>
<p>Radiant Shield</p> 	<p>Used as an alternate to FS2A firestop to reduce the clearance from the chimney to combustible framing.</p>	<p>RS-8A</p>
<p>Round Top Termination</p> 	<p>Used to terminate chimney on the roof. Flashing not included.</p>	<p>RT8C (8" flue)</p>
<p>Contemporary Flashing</p> 	<p>Required for contemporary round top termination on the roof to prevent rain entry.</p>	<p>8-6-12 (8" flue: 0 to 6/12 pitch) 8-12-12 (8" flue: 6/12 to 12/12 pitch)</p>
<p>Extended Round Top Chase Termination</p> 	<p>Used to terminate chimney at the top of a chase. Adapter kit included. Flashing not included.</p>	<p>RT8CL (8" flue)</p>
<p>Chase Top Flashing</p> 	<p>Used with chase termination to prevent rain entry.</p>	<p>FL88 (8" flue)</p>

Accessory	Description	Model No.
<p>Contemporary Chase Top Termination</p> 	<p>Used to terminate chimney at the top of a chase. Flashing not included. Appropriate adapter is required.</p>	<p>TT200C</p>
<p>Adapter Kit</p> 	<p>Required to unite triple-wall chimney with Contemporary Chase Top – TT200B.</p>	<p>TT8CB (8" flue)</p>
<p>Traditional Top Housings</p>  <p>Single Flue</p> <p>Extra Tall Single Flue</p>	<p>Gives traditional chimney top look using simulated brick in red, tan or white color. Brick pattern is embossed into galvanized steel unit. Roof flashing is included. Appropriate adapter is required.</p>	<p>T20B (single flue) TL20B (extra tall single flue)</p>
<p>Housing Extensions</p> 	<p>Required to extend Traditional Top Housings on steeply pitched roofs.</p>	<p>202036 (single flue) 204436 (double flue)</p>
<p>Adapter Kit</p> 	<p>Required to unite triple-wall chimney with Traditional Top Housing.</p>	<p>8CA (8" flue)</p>
<p>Hearth Patching Kit</p>	<p>Used to patch cracks in hearth.</p>	<p>HPC1</p>

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LISTINGS FOR RESIDENTIAL CONSTRUCTION: WM42SX-S, WM42SX-D  
• UNDERWRITERS LABORATORIES REPORT NO. MH6018



Underwriters Laboratories, Inc.

\* WM42SX Fireplaces are covered by Mechanical Patent 4,519,376