



The prefabricated Queen Air forced air fireplace heat exchanger includes all the vital parts and accessories

SPECIFICATIONS

1. 7 gauge steel plate fire chamber
2. 7 gauge damper, positive friction control
3. 7 gauge smoke shelf
4. 12 gauge smoke dome
5. 16 gauge outer shell
6. 12" diameter flue collar
7. 8" diameter hot air duct collar (2)
8. Adjustable outside combustion air inlet and ash dump door
9. Coupling for gas line fire starter $\frac{1}{2}$ "
10. Massive integral heat exchanger system
11. Crane holders for grill and pot

ACCESSORIES - STANDARD

1. (2) 500 CFM squirrel cage air return blowers
2. (2) blower motor housings with grilles 12"x12"x16"
3. Thermo-responsive switch
4. (2) induction air housings with grilles 12"x12"
5. Variable Speed Control with OFF position
6. Wall thermostat
7. (2) angle seals
8. Insulation ($\frac{1}{2}$ " fiberglass)
9. Return air filters
10. (4) 3"x17" flats

ACCESSORIES - OPTIONAL

1. (4) pre-sized angle lintels
2. Clean out door
3. Grate
4. Rotary Damper Control

CABO
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INSTALLATION INSTRUCTIONS



Queen
Air

Forced Air Fireplace Heat Exchanger

001-014B

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Installation of this unit simplifies the task of building a fireplace. The masonry is merely laid around it. The unit insures proper and exact proportions of the critical parts.

1. CONSTRUCTION MUST COMPLY WITH LOCAL BUILDING CODES.
2. Queen Air forced air fireplace heat exchangers are available in two (2) sizes (see Fig. 1).
3. Before commencing construction of your fireplace, it is important to plan your footing (check local Building Code), plan your duct for outside combustion air (Figs. 7,8,9), plan your duct work and positioning of return air blowers and position of the induction air grilles (Figs. 3,5,6). When planning the positioning of the return air and induction air grilles, you may position them on the front, side, or on the back side of the fireplace. In all cases grilles must be installed flush with the surface of the masonry. The grilles need to be installed in such a manner as to insure that the four (4) edges of the grilles are free from any obstruction which would prevent their easy removal from the housing to which they are attached. Grilles must be left attached to the housing when installed in the masonry to prevent misalignment. Placement of lintels required to bear weight of masonry are shown in Fig. 3. Lintels are available from the manufacturer in three (3) sizes, 42", 48" and 54". When you install a 36" Queen Air you will need three (3) 48" lintels to support flue liners and fill, and one (1) 42" lintel over the fireplace opening. When installing a 42" Queen Air you will need three (3) 54" lintels to support flue liners and fill, and one (1) 48" lintel over the fireplace opening. You must use the "wye" specified in Fig. 2, except in that instance where no duct extends beyond the masonry. In this case refer to Fig. 4. Any ducting system in the home to which the Queen Air ducting would be coupled must be Class 1 or Class 2 duct suitable for use with air temperatures not to exceed 250°F. This duct must maintain 1" clearance from combustible materials and maintain a free open area (outlet register area) of a minimum of 78 sq. in. for each of the two ducts from the Queen Air.

Make arrangements to have an electrician available to provide proper wiring, to harmonize with local and national codes.

4. Included with all Queen Air forced air fireplace heat exchangers is a thermo-responsive switch. Installation of switch will vary depending upon the following circumstances:

a. Up-flow installation where the Queen Air is ducted into either an existing duct system or a duct system built to accommodate the Queen Air, the thermo-responsive switch should be installed on the duct system where it exits the masonry (see Figs. 3,5,10 and 13). When this thermo-responsive switch is installed, knock out the center plug on the junction box, and attach the thermo-responsive switch so that the sensing surface protrudes through the hole and makes solid contact with the duct. Do not cover this box and switch with insulation. In this case the use of high temperature wire is NOT required.

b. When installed with counterflow duct system, or when

hot air is expelled through grilles on the fireplace only, install the thermo-responsive switch as shown in Figs. 4,6, and 12. In this case, use 200°C/392°F wire. This thermo-responsive switch must be wired in series with the blower motors. This properly accomplished, the blowers will not run until the unit gets hot. Once the unit warms up and closes the thermo-responsive switch, the blowers will continue to burn unless de-energized by the thermostat, or until the unit cools off. The variable speed control provided has an off position. A thermostat is furnished (see wiring diagram for installation of thermostat Fig. 11). The recirculating blowers on high speed are rated at 500 CFM each. It is important to note that there is a "LEFT" and "RIGHT" hand blower.

5. The insulation provided must be used between the unit and the masonry at all points, with a double thickness at all corners. In laying the brick work and flue liner, care must be taken not to allow this material to rest against the Queen Air. DO NOT undersize flue liner (Fig. 1). In constructing the chimney, keep damper open and avoid dropping mortar that will hamper the opening or closing of the damper. Masonry chimneys for residential-type appliances shall extend at least three (3) feet (.92m) above the highest point where they pass through the roof of a building and at least two (2) feet (.61m) higher than any portion of a building within ten (10) feet (3.1m). (Ref. NFPA Standard 211 3-2.2 termination [height].)
6. For installation of a listed pre-fabricated metal low heat chimney system, refer to Fig. 10.

IMPORTANT THINGS TO REMEMBER

1. All masonry must be self-supporting. The Queen Air unit serves as a form for the masonry, but must not be used to support the masonry.
2. Do not build a fire in the new fireplace until the mortar has properly cured.
3. Be sure you use the "wye" with an up-flow or counter-flow installation as shown in Figs. 2,3,5,6 and 10, with hot air ducts.
4. Be careful to insure that a 78 sq. in. free open area (outlet register area) is provided for each of the two ducts from the Queen Air.
5. A simple duct system is almost always the best. Be sure that the 45° "wyes" are used. DO NOT use "T's" on your duct system.
6. Please remember that these instructions cover the basics. Each fireplace possesses its individual personality, complimentary to that of its creator. This one (yours) will be different. It will accomplish the same thing, but you should dare to make it elegant.

Note: These drawings are not to scale. They merely represent schematically the component layout. Masonry, in all cases, must comply with Sections 3703 through 3707 and Chapter 24 of the Uniform Building Code, Article 10 of the Basic Building Code, and Chapter VIII of the Standard Building Code.

Fig. 1

Model No.	Finished Opening			Over-All Dimension			Flue Size	Shipping Wt.	Recommended Minimum Footing Size	Duct Size
	Depth	Width	Height	Width	Height	Depth				
QA-36	20"	36"	26"	40 $\frac{1}{2}$	54 $\frac{1}{2}$	23 $\frac{1}{2}$	12" Dia	535	48"x96"	8" & 10" Dia
QA-42	22"	42"	28"	46 $\frac{1}{2}$	58 $\frac{1}{2}$	25	12" Dia	615	48"x102"	8" & 10" Dia

Fig. 2

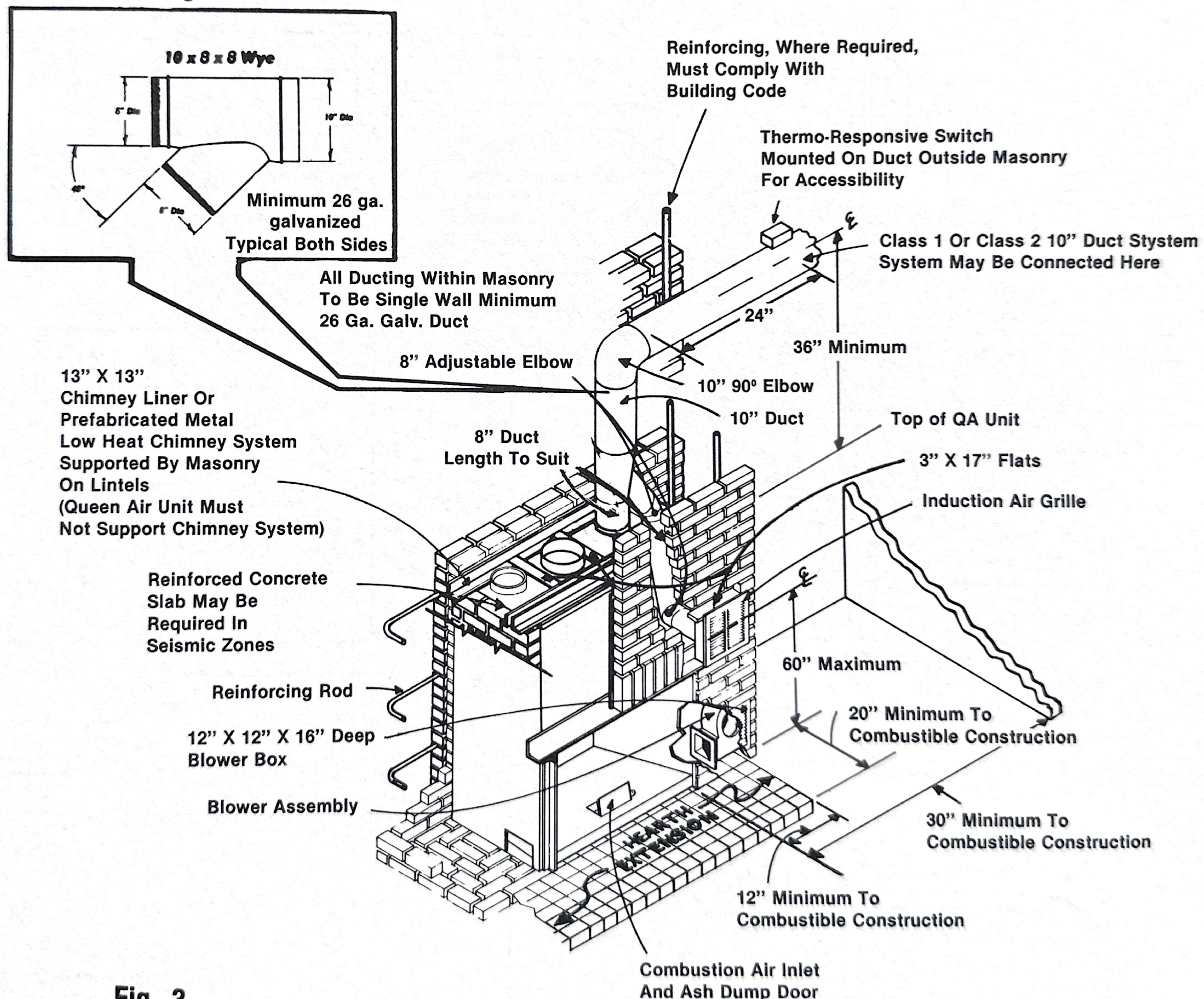
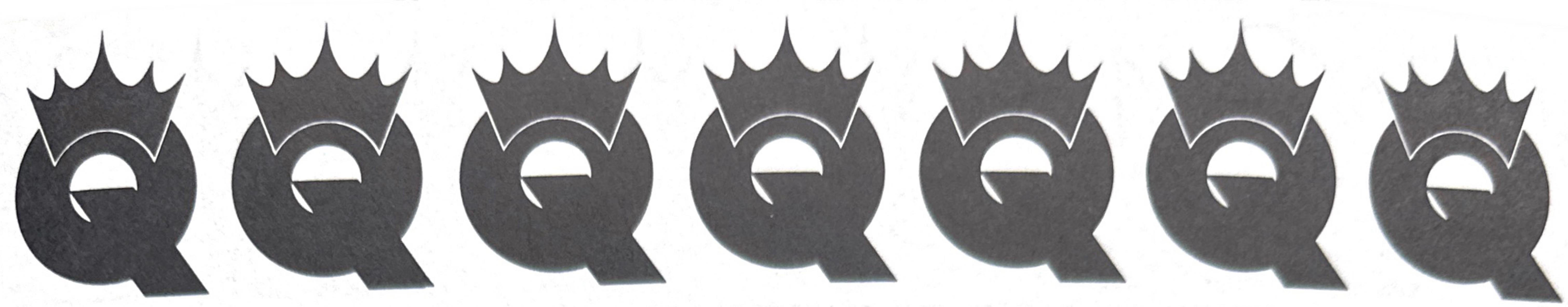


Fig. 3

Blower Electrical Supply May Drop From Ceiling Or Route Under Hearth Extension



All Ducting in Masonry to be Single Wall minimum 26 Ga. Galv. Duct.

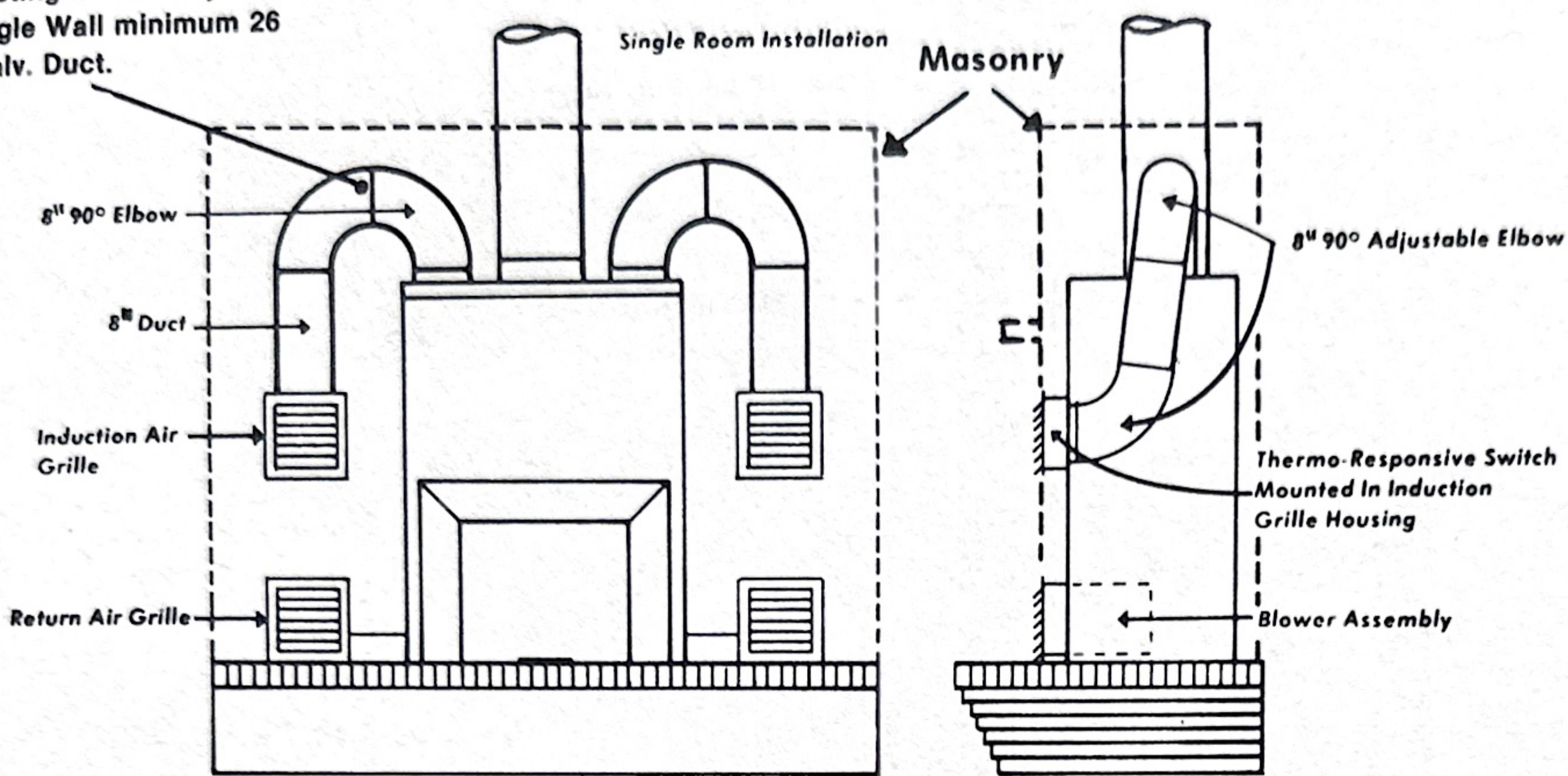


Fig. 4

No Duct Beyond Masonry

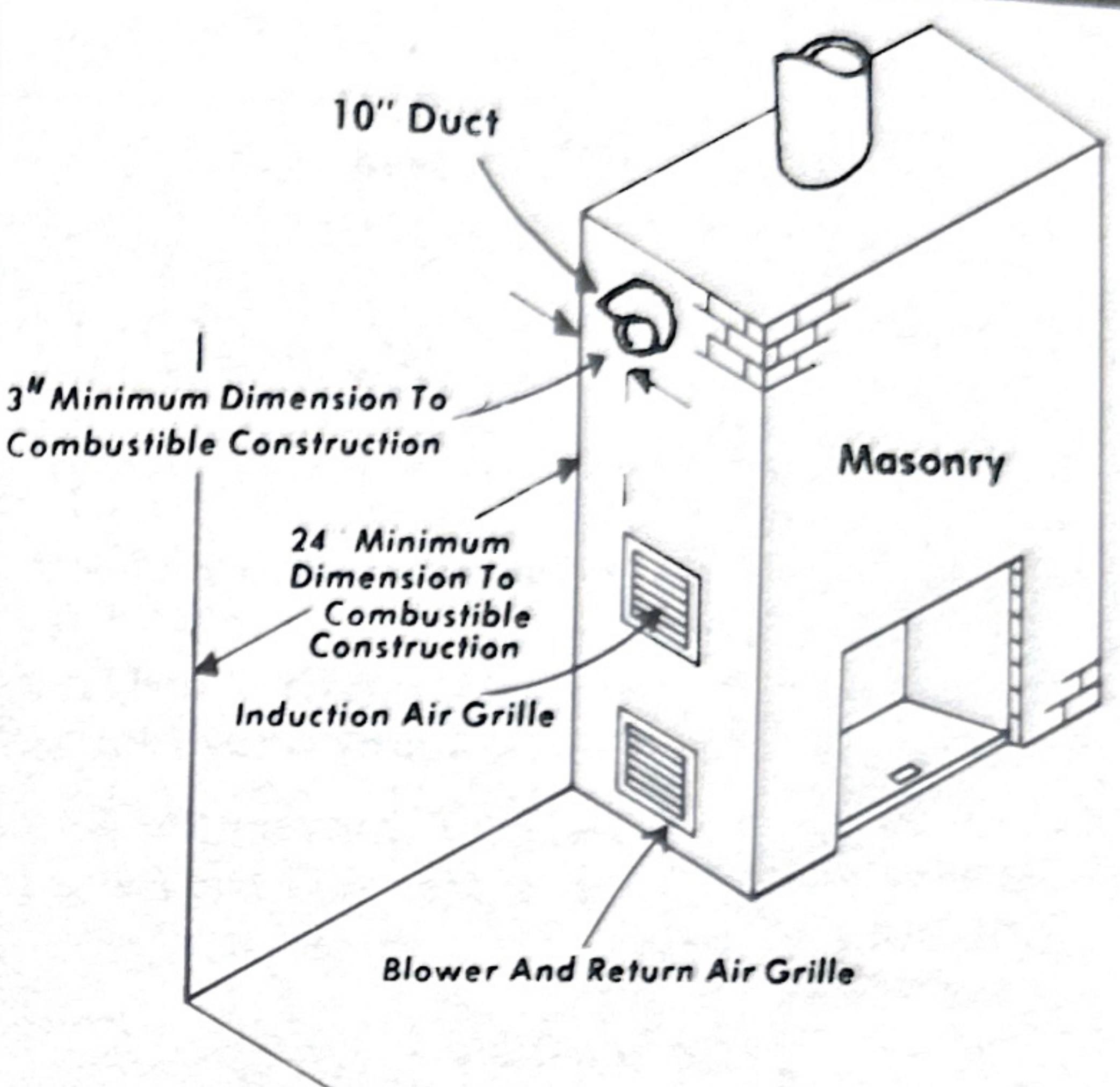
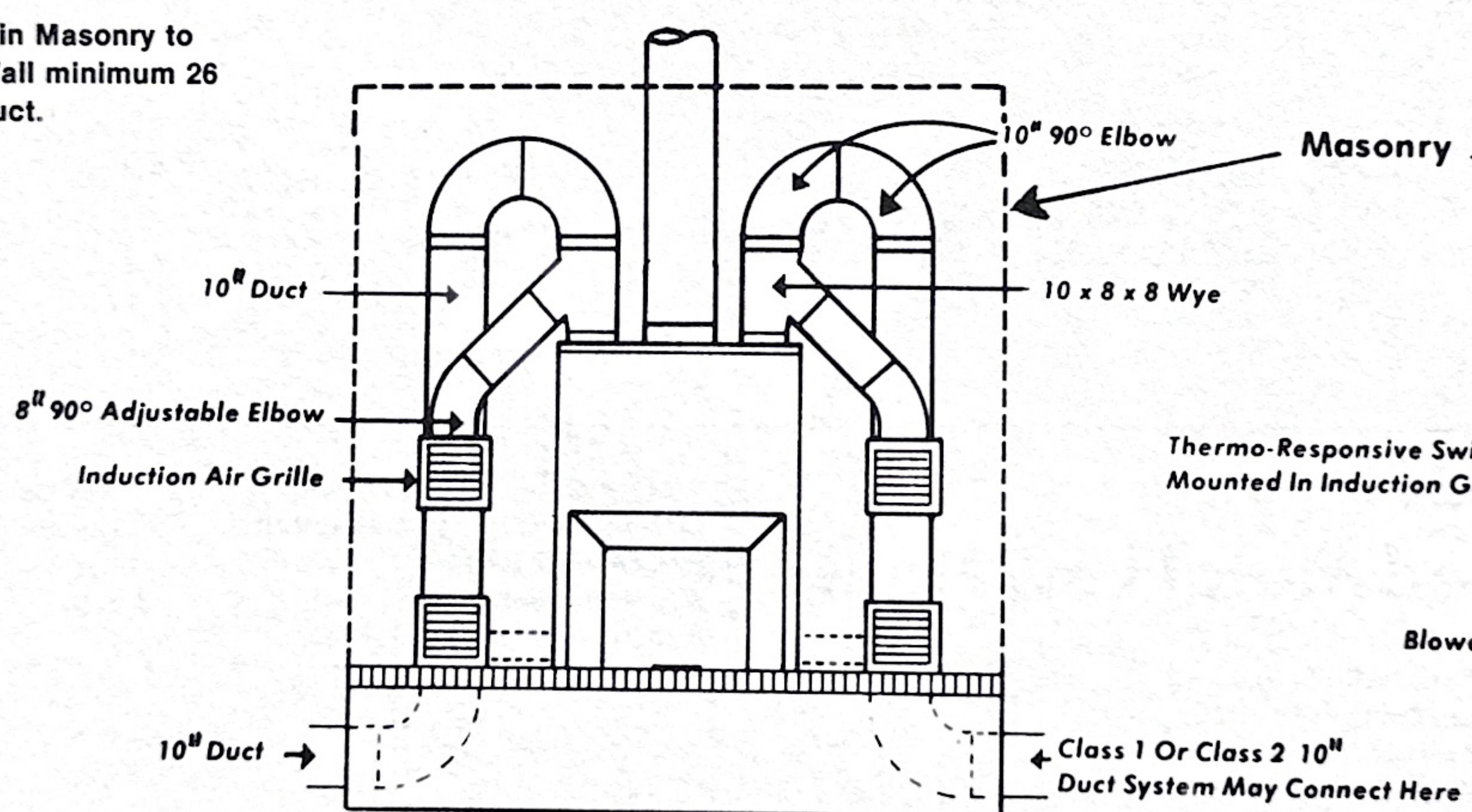


Fig. 5

Optional Side Location For Grilles

All Ducting in Masonry to be Single Wall minimum 26 Ga. Galv. Duct.



Counterflow Installation

Fig. 6

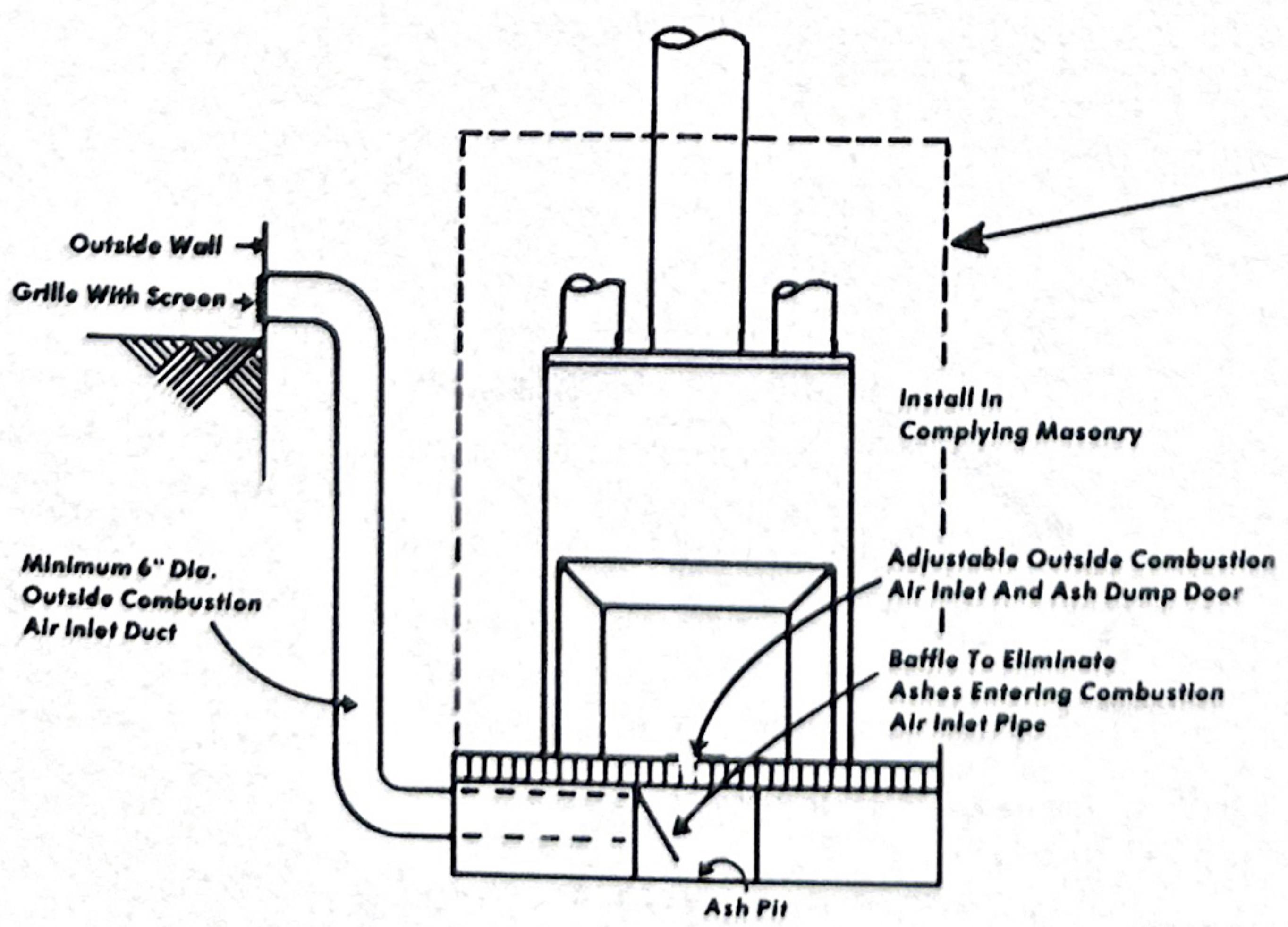


Fig. 7

Outside Combustion Air Duct Basement Installation

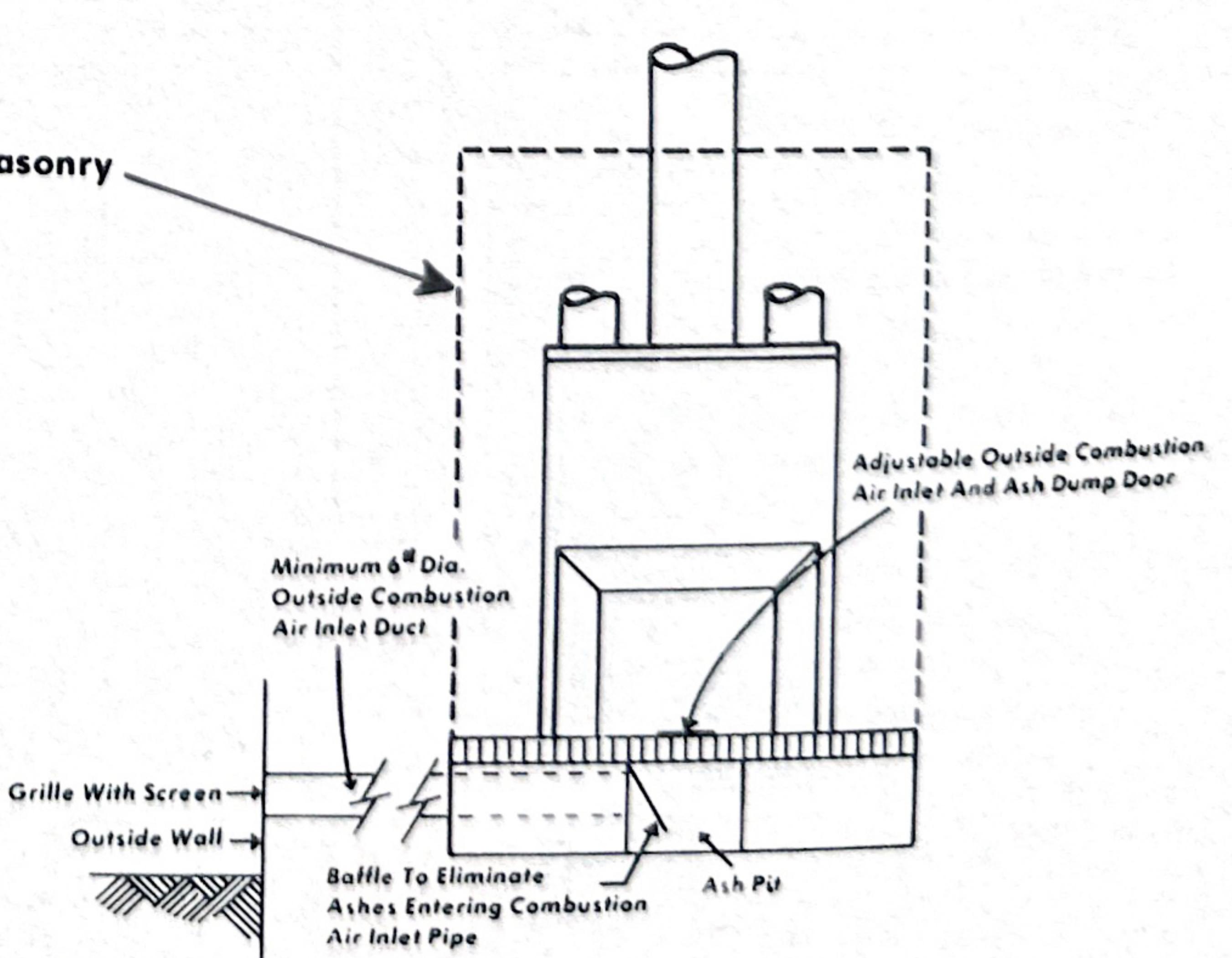


Fig. 8

Outside Combustion Air Duct

Queen Air

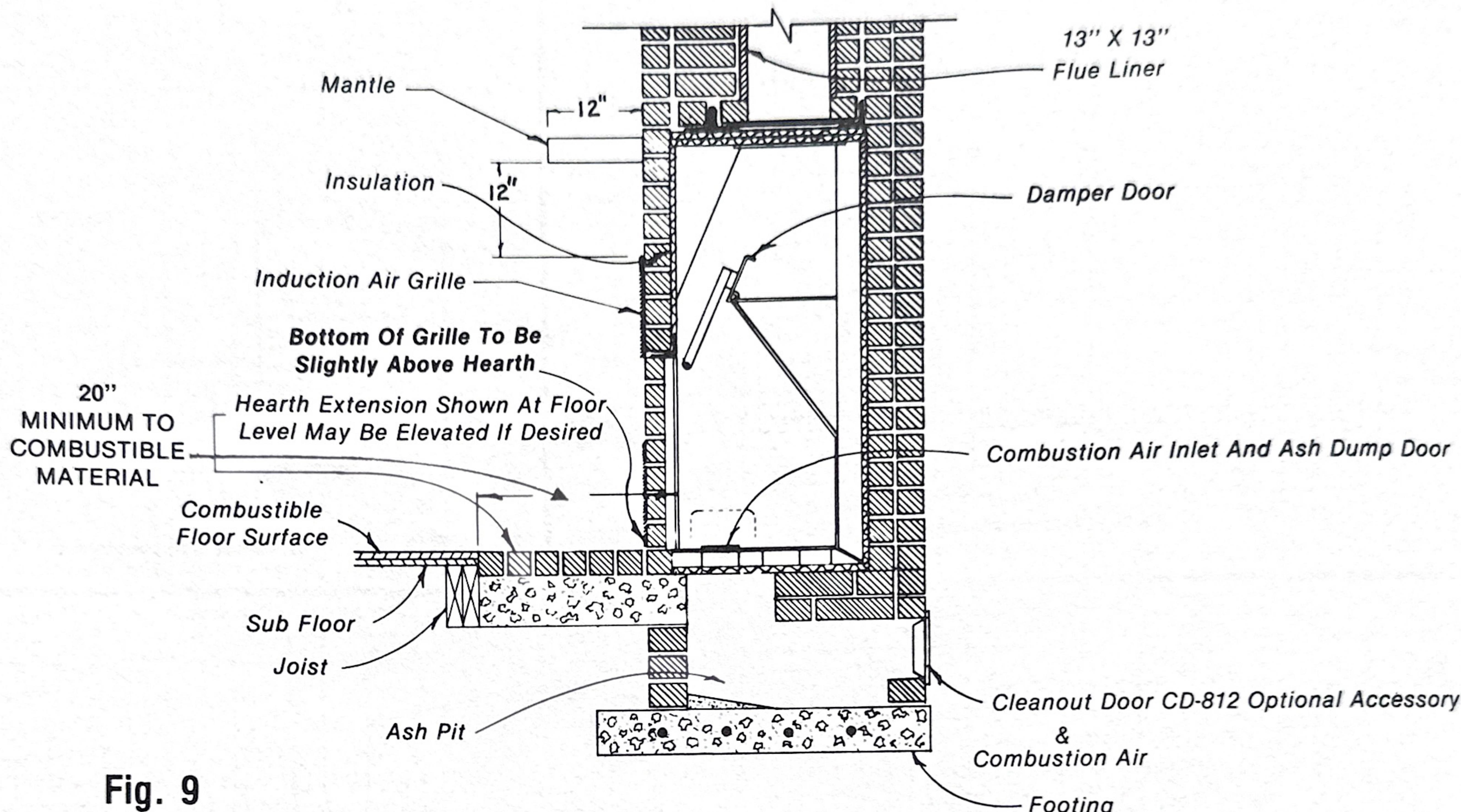


Fig. 9

QUEEN AIR INSTALLATION With Listed Pre-fabricated Metal Low Heat Chimney System.

Reinforcing, Where Required, Must Comply With Building Code

QA Unit Must Be Completely Enclosed In Masonry To This Point Above Duct

All Ducting In Masonry To Be Minimum 26 Ga. Galv. Duct

Anchor Plate To Be Supported By Masonry On Lintels
(Queen Air Unit Must Not Support Chimney System)

Class 1 Or 2
10" Duct System
May Connect Here

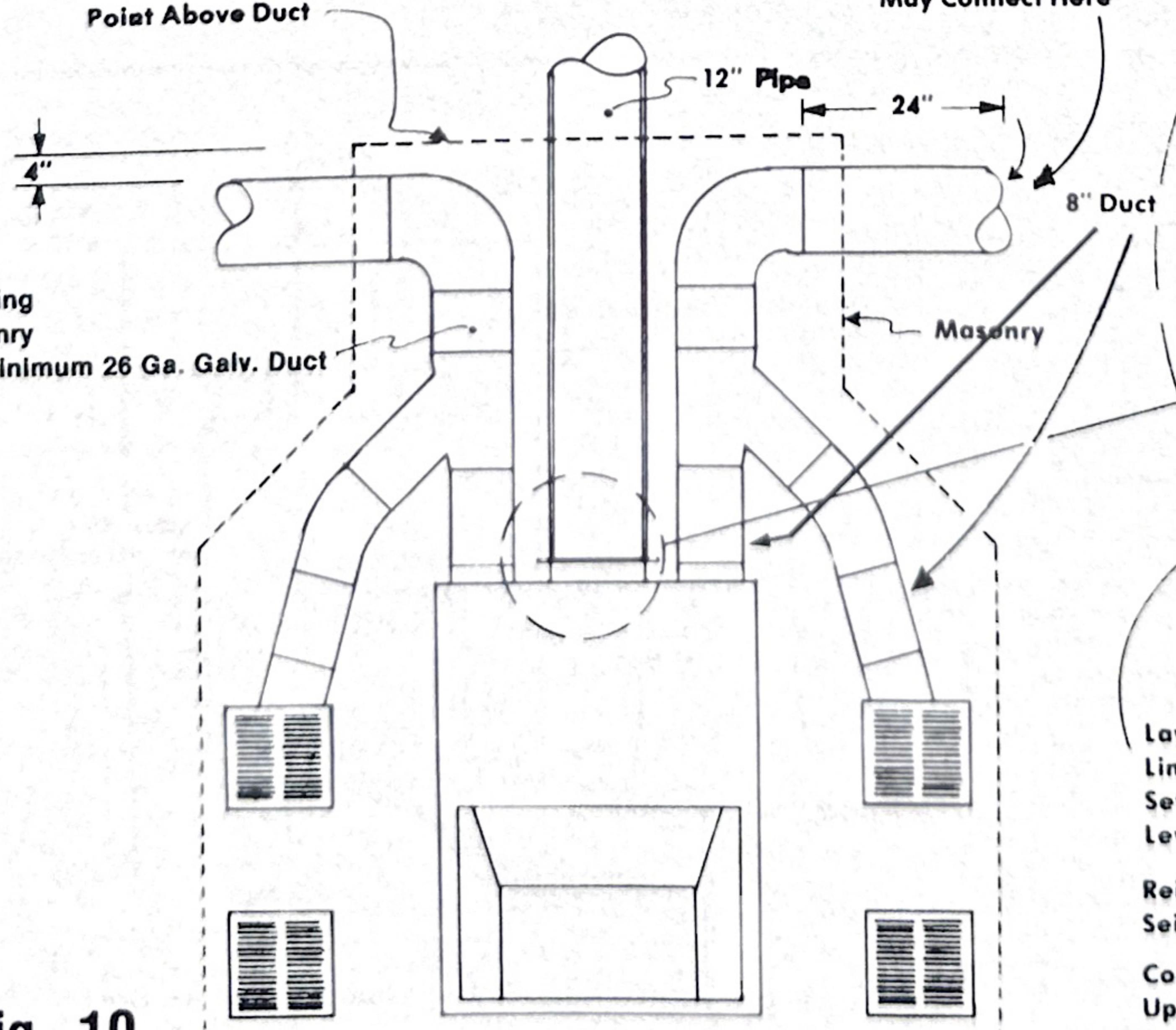
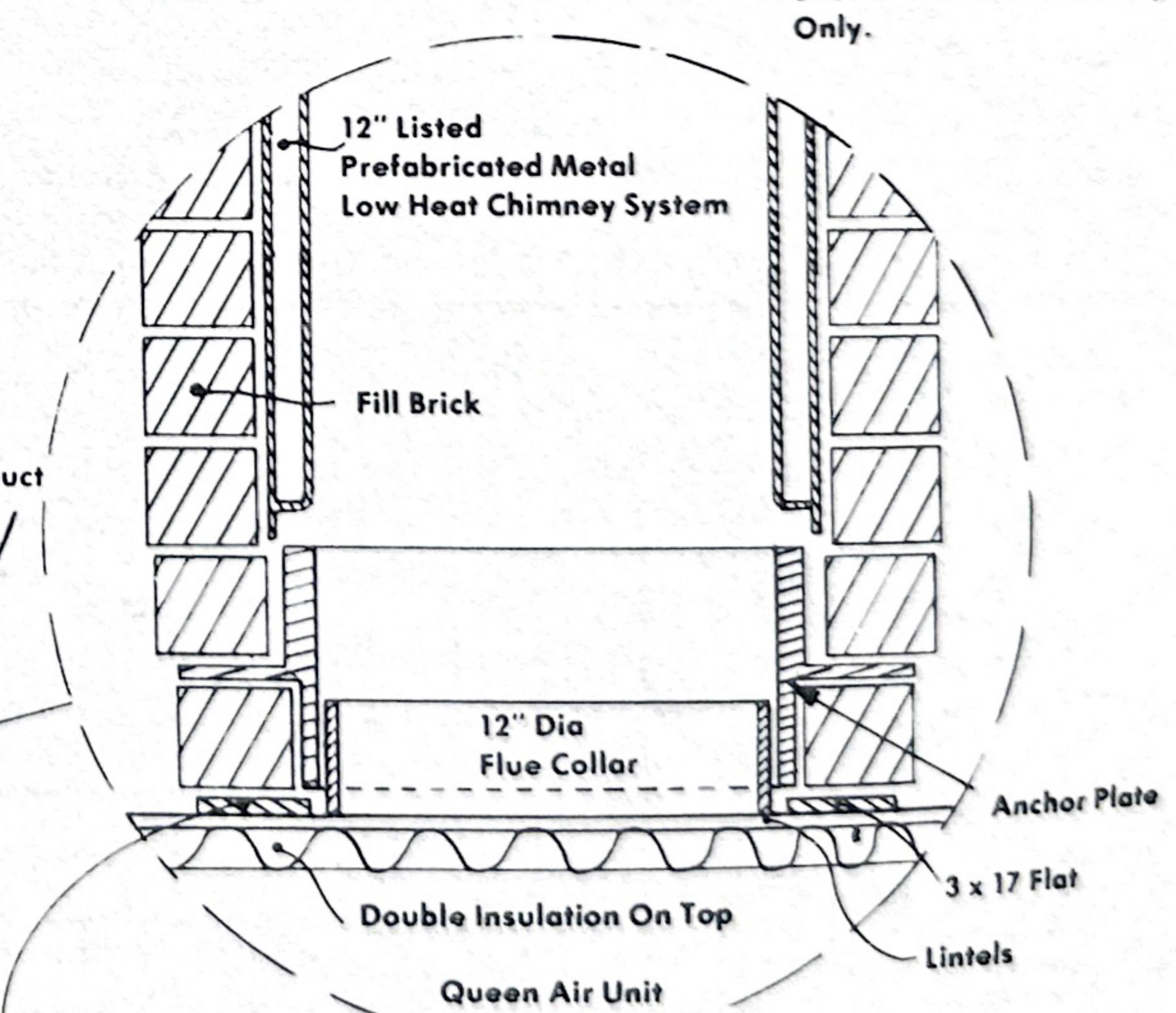


Fig. 10

Prefabricated Metal Low Heat Chimney System Must Be Installed To Comply With Manufacturer's Recommended Clearances And Installation Instructions.

Any Listed Prefabricated Low Heat Metal Chimney System May Be Used.

Double Wall Pipe System Shown For Illustrative Purposes Only.



Lay One Course Of Masonry On Lintel Support.
Set Anchor Plate In Place and Level.

Reinforced Concrete Slab May Be Required In Seismic Zones In Lieu Of Above Procedure.

Continue Laying Masonry Upward, Filling Solid With Fill Masonry To A Point 4" Above Horizontal Duct.



Fig. 11 Wiring Diagram For Queen Air

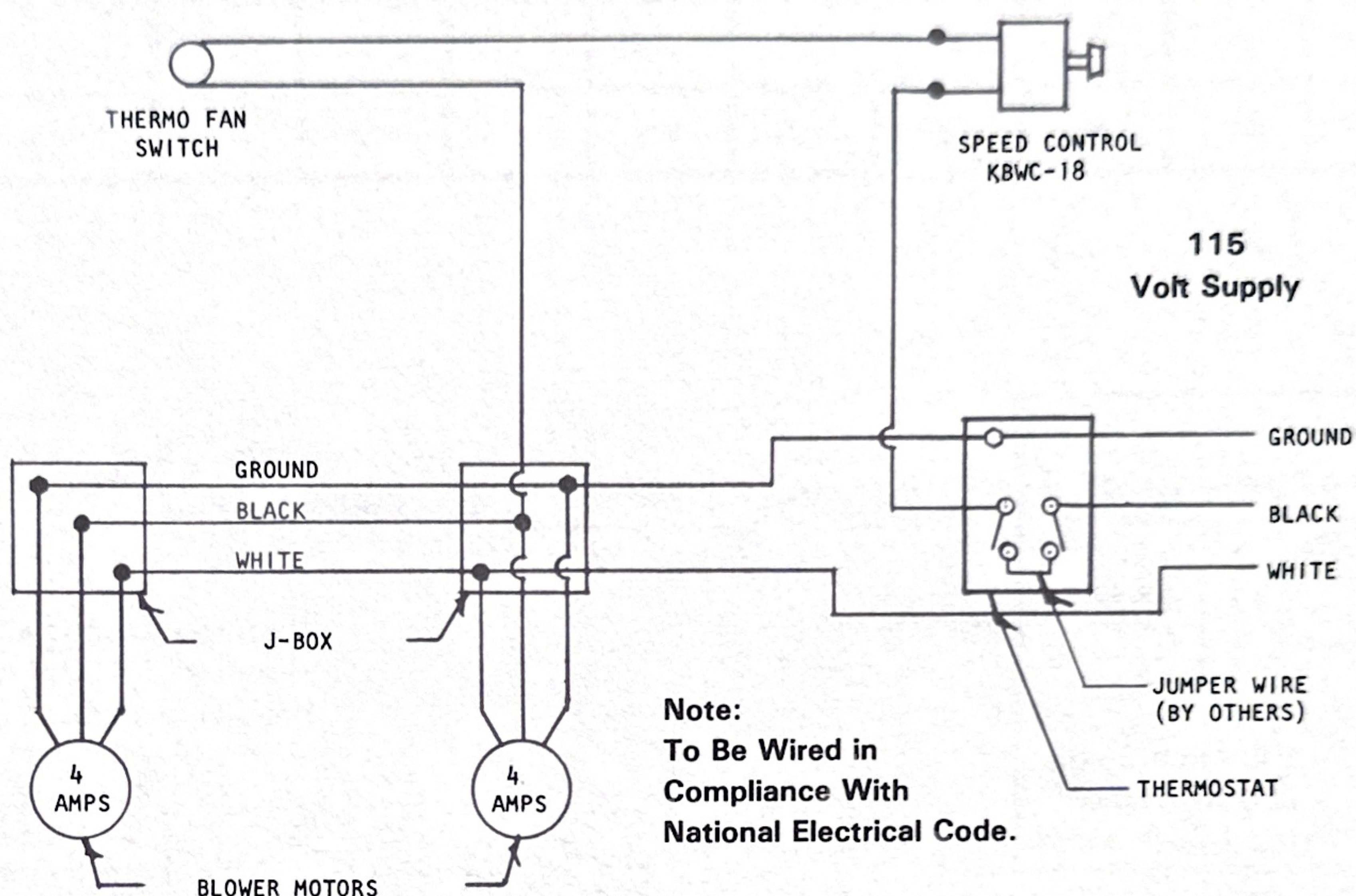
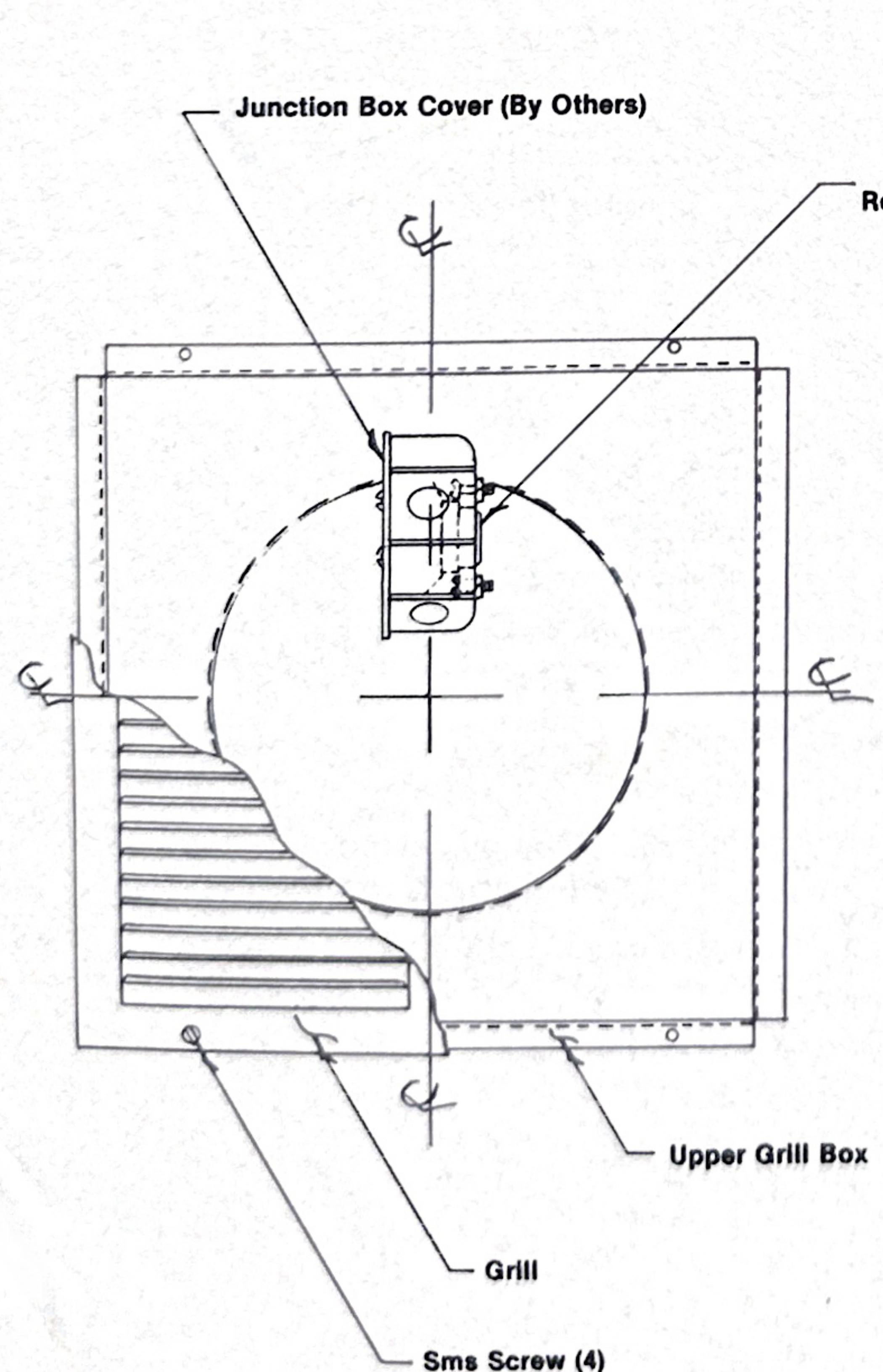


FIG. 12



**Thermoresponsive Switch Box
Must Be Mounted At
Top Of Grille Box Or Duct.**

Fig. 13

