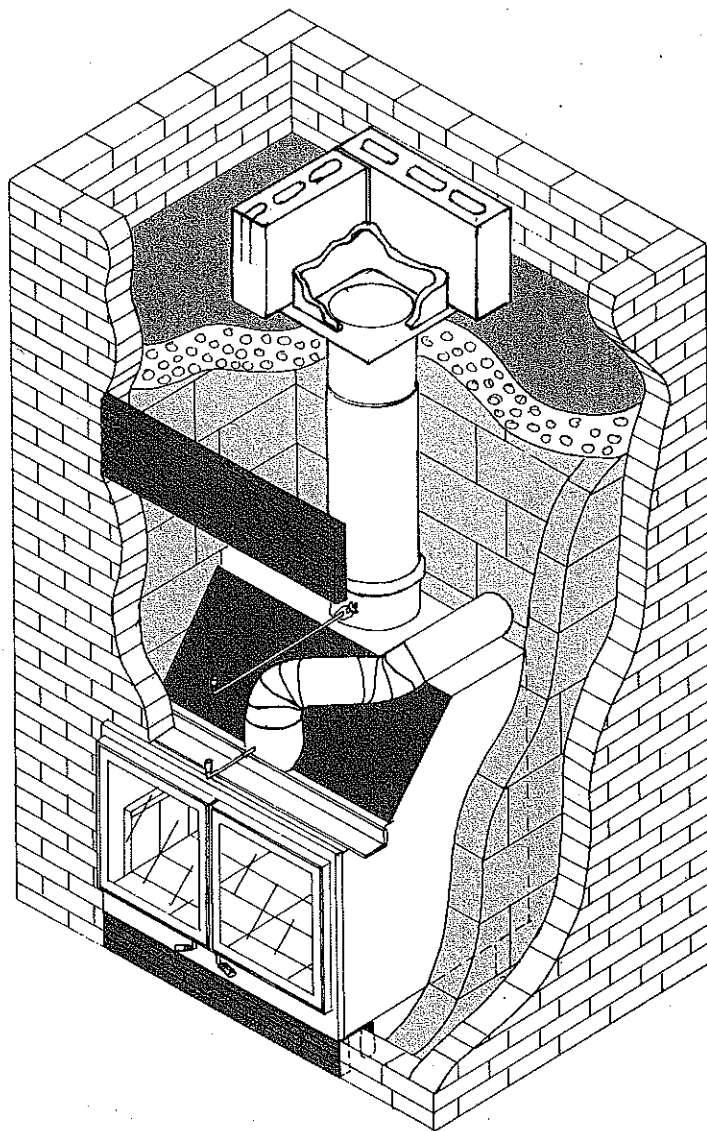


# INSTALLATION INSTRUCTIONS

# *Kozy Heat*<sup>TM</sup>

## FIREPLACE HEATING SYSTEM



### IMPORTANT:

READ INSTRUCTIONS CAREFULLY BEFORE  
INSTALLATION. FAILURE TO INSTALL THIS  
FIREPLACE CORRECTLY CAN CAUSE  
SERIOUS STRUCTURAL AND FIRE HAZARDS  
AND MAY VOID YOUR WARRANTY.

Model 230  
232  
234  
330  
332  
336  
430  
432  
436

Form #2003  
R 9/89

## READ ALL INSTRUCTIONS BEFORE INSTALLING

### MOST COMMON INSTALLATION PROBLEMS

#### Fire Hazards

- A) No wood should be left inside of the block chamber.
- B) If installing the block chamber adjacent to a combustible wall leave at least 6" of space between outside of the block and wood wall, and insulate with non-combustible insulation.
- C) Use only non-combustible insulation on outside of block chamber. DO NOT USE STYROFOAM.
- D) At least 12" of space must be left between the top of the chamber and any combustibles. Place 6" of non-faced fiberglass insulation on top of the slab.
- E) The top of the upper grill must be level with the bottom of the slab to prevent a heat sink.
- F) This unit must be connected to its own chimney.

#### Cold Air Transfer Areas

- A) The outside walls around the fireplace must be insulated just like any other wall in your home, if it is not, you will have a cold air transfer.
- B) The foundation slab directly under the fireplace must not extend to the outside of the house, see (D) in Fig. 1 for proper installation. If this is not done you will have a severe cold air draft through the bottom grill.
- C) Secure combustion air pipe together with screws to prevent them from coming apart and leaking cold air into your chamber.

#### Face Brick Cracking

- A) Do not lay face brick directly on top of the unit or the face, use a lintel iron across the top of the unit making sure a 3/8" space is left between the unit and the lintel.
- B) Do not allow mortar to fall between lintel and the unit. This can be prevented by using fiberglass insulation that is placed against the back side of the lintel.
- C) Allow at least 1/4" of space between face brick and sides of unit, and between the unit faceplate and the hearth.

#### Chimney/Intake Pipe Problems


- A) Clay flue chimneys with a block and/or brick surround contain a large amount of moisture and can also absorb moisture during installation if not properly covered at night, etc. Because of this situation it is best to have small fires until the chimney has dried out and no longer appears "green." This will be accomplished by burning the unit low to moderate (flue gas temps should not exceed 500°F) for at least five days. If this is not done cracking of the block or flue liner could occur.
- B) Do not reduce or modify the air intake pipe. Do not reduce the required opening at the point of termination, as this can cause a restriction in the units ability to burn adequately.
- C) Use a louvered vent cover with a screen at the point of termination. Do not use extremely fine mesh screen.


#### Smoking Back

- A) Do not reduce the size of the chimney, the unit will smoke back. An 8" x 8" clay flue has a 6½" diameter I.D. and will not work with any Kozy Heat unit. A 12" x 12" clay flue or a 10" metal chimney is required. The exceptions would be a 230 or 430 which can be used in conjunction with a 8" metal chimney or 12" x 12" clay flue liner.—
- B) The chimney should be at least 10' tall (above the fireplace) and at least 3' higher than the peak of the house.
- C) If an adapter (P) in Fig. 1 is not used a creosote leak could occur at this connection causing a rancid smoke smell in your home. See your warranty.

### INSTALLATION

NOTE: Installation of this unit as a furnace should be performed by a qualified installer.

 This symbol denotes cold transfer areas. Close adherence to instructions should be maintained to assure proper insulation.

 This symbol denotes fire caution areas. Close adherence to instructions must be followed to maintain fire safety.

NOTE: The letters in Figure 1 correspond to the letters in brackets in the following installation instructions.

#### Minimum clearances to combustibles:

- A) Unit back to block enclosure 4"
- B) Unit sides to block enclosure 4"
- C) Block enclosure to combustible walls 6"  
NOTE: Combustible walls surrounding the block enclosure must be surfaced with a least 3½" of non-faced fiberglass insulation.
- D) Top of fuel opening to combustible mantle 21"
- E) Top of chamber top slab to joists or rafters 12"  
NOTE: Top slab must be covered with 6" of non-faced fiberglass insulation.
- F) Side of fuel opening to combustible walls 24"
- G) Side trim from opening 10"

- 1) Dig foundation to conform with frost level. See Fig. 2 to determine the hole size based on the model number being installed.
- 2) Set up and pour foundation concrete (A) 12" thick with re-rod. See Fig. 3 for proper re-rod requirements. If a vast amount of brick is being used, or if a masonry chimney 19' or taller is being used, make foundation 18" thick with re-rod. This foundation may be located on an outside wall or inside the house.

**NOTE:** If the unit is being installed on an existing slab you need at least 12" of slab to support the installation. See Fig. 2 for proper foundation dimensions.

- 3) Lay up regular 8" x 8" x 16" concrete block (B) from the foundation to ground level (C).
  - a) Foundation block should now be reduced to allow for at least 4" of insulation space and 4" of space for the face brick. Block should be laid with this reduction to floor level. Fill area (D) with insulation. Set up and pour 6" slab for this reduction.
  - b) If desired the foundation block can be used as an ash pit. If so, install a clean out door (E) above ground level, or put the door in the basement. **An air tight door must be used.** **NOTE:** Styrofoam or blue board may be used on the outside of the house up to the fireplace foundation level to prevent cold air transfer.
- 4) Set up form and pour a concrete slab (F). Minimum thickness recommended is 6". This slab must not extend into the insulation space.
  - a) If installing the optional blower, a metal junction box should be centrally located in the slab below the unit and metal conduit routed to the desired switch locations. The blower should be plugged into this receptacle. See Figure 1 for the optional placements of the blower.
  - b) The hearth extension must be placed on non-combustible flooring. If the unit is to be installed without a raised hearth a non-combustible hearth must extend 24" in front of and 8" beyond the sides of the fuel opening. If the unit is to be installed with a raised hearth, a non-combustible hearth must extend 16" in front of and 8" beyond the sides of the fuel opening. The lower grill may be positioned either above the hearth or in the raised hearth extension.
  - c) If an ash pit is to be used, leave a 5" x 10" hole in the slab. The location of the hole is determined by the placement of the firebox. See Fig. 8 for proper placement. Make certain the ash chute is properly sealed to the firebox and to the cement slab to prevent air flow. This can be done with furnace cement, or mortar.




- 5) Lay up the inner chamber walls (I) constructed of 4" x 8" x 16" light weight block or concrete block. Refer to the top view diagram Fig. 2 for the proper dimensions required for this chamber, depending on the model you are installing.

**NOTE:** Keep this wall 4" back from the desired front of the fireplace to allow the face brick to be installed in front of it, and behind the fireplace faceplate.


- a) Metal ties should be used on the ends of this wall to tie the facebrick to the block chamber walls to insure a seal.
- b) As the wall progresses to the height of the combustion air intake, stub the intake (J) through the chamber wall and seal with mortar. Use 30 gauge or heavier galvanized pipe from this point to the point of termination.

**NOTE:** Models 230, 232, 234, 236, 330 and 430 require a 4" pipe. Models 332, 336, 432, and 436 require a 6" pipe.

**CAUTION:** DO NOT reduce this pipe.

-  c) The maximum height of the heat chamber is determined by the room ceiling height. A minimum of 17" from the top of the chamber (L) to the ceiling level is required.

**NOTE:** If installing adjacent to combustible materials leave at **LEAST 6"** of open space between combustible materials and line the walls with at least 3½" of non-faced fiberglass insulation. **DO NOT USE STYROFOAM.**

-  d) If a wooden support header is used above the top slab, leave at least 12" of open space between the top of the slab and the bottom of the header. This area must have 6" of non-faced fiberglass insulation (N) placed on the slab. This header must not have direct contact with the masonry chimney block. A minimum of 2" of space should be left between the header and the chimney block (O).

- 6) The Kozy Heat fireplace is now placed inside the chamber with the faceplate of the fireplace 4" in front of the leading edges of the heat chamber walls, and 4" of space from each side wall and the back wall. (This will vary slightly with the 430, 432, and 436 models. See Fig. 2). Level and plum the unit across the top of the face.
- 7) Place the connector (provided) onto the combustion air pipe. Connect 4" or 6" flex pipe (included with unit) between the intake pipe and the section already placed through the chamber wall. (Step #5). The flexible pipe will extend to approximately 5'. **CAUTION: PIPE CRUSHES EASILY.** Connect by placing over the intake pipe and the galvanized pipe. **DO NOT RUN FLEX PIPE OUTSIDE THE CHAMBER WALLS.**



**NOTE:** If the combustion air pipe runs for any length outside of the heat chamber, but inside the house, wrap it with insulation to eliminate condensation or frost build up.



- 8) Run combustion air to the outside using 30 gauge or heavier galvanized pipe. The combustion air can be run to the outside with various methods. If when using 4" pipe and the run is longer than 10' it is recommended that you increase to a 6" pipe. The maximum length recommended to run the pipe is not more than 26 feet and not more than three elbows. It is best to duct the shortest possible way. **DO NOT terminate in the attic or into the garage.** If ducting beside the chimney chase, terminate the intake air at least three feet below the termination level of the chimney. The air can also be ducted below the floor level of the fireplace providing it is ducted to the outside. A louvered screen must be used on the outside of the house.

**NOTE:** A closure vent is available to shut off the air at the outside termination of the intake pipe from inside the home. When the fireplace is not in use this eliminates any cold transfer into the home. See Kozy Heat's accessory catalog for more information on the closure and non-closure vents available. We recommend the use of this vent on all Kozy Heat installations.



- 9) Complete chamber walls (I).
- 10) To install the duct work for a central furnace, models 230,232 and 234 only, or to other parts of the home, all models, a minimum size of 7" x 12" (84 square inches) is required. The duct must exit the cement block enclosure at the side or rear of the block enclosure. This duct must be 48" above the bottom slab (this would be in the fifth course of the block enclosure). **NOTE:** If installed as a supplementary furnace the duct must enter the central duct system down-stream from the Kozy Heat unit at an angle of approximately 45° to prevent excessive back-drafting into the Kozy Heat unit duct. See Fig. 8. **NOTE:** The combined static pressure of the central furnace plenum and the Kozy Heat unit must not exceed .2 in water column with both fans running.
- 11) The ducting from the Kozy Heat unit shall not be directly connected to the return air duct of the central furnace, with the exception that a return air grill may be placed in the ceiling a minimum of 28" from the face of the units installation. See Fig. 9. **NOTE:** A minimum clearance of 1 inch to combustibles must be maintained at all wall pass throughs and throughout the length of the duct runs.
- 12) Place the connector pipe onto the fireplace unit (K).  
**NOTE:** Offset connector pipes are available in 5", 10", and 16" to connect to a chimney not centered above the unit. Offsets cannot be more than a 30° angle. **DO NOT run single wall metal pipe outside of the block chamber!**  
**NOTE:** If installing model 430, 432, or 436 and a recessed mantel is being used, a 5" offset is required. This offset is required so that the connector pipe does not make contact with the face brick. See Figure 4.  
**NOTE:** If installing vertically adjacent units see Figure 5 for proper unit placement and required offset.
- 13) Set the top plate (L) on the chamber walls insuring that the hole is in line with the connector pipe. See Figure 6 for the various top plates that are available.  
**NOTE:** The top connector pipe must be at least 1" below the top plate.  
**NOTE:** Appropriate sized chamber top plates are available from your local dealer. If you are manufacturing your own, the plate should rest 2" onto the block for proper support.
- 14) If using a masonry chimney build a masonry form on the top plate.
- 15) Place the adapter (P) through the hole in the top plate and into the connector pipe.  
**NOTE:** A chimney adapter is required (P) to eliminate any chance of moisture or creosote from dripping onto the unit. An adapter for a clay flue chimney is included with your unit. If using a pre-fabricated metal chimney contact your local dealer for the appropriate adapter. **The connection must be made under the slab, not within. See warranty.**
- 16) **The adapter must rest on top of the slab, it should not be cemented within the slab.** Use a couple of re-rods to hold the adapter up until the slab has set up.
- 17) Pour slab (M). When concrete is still wet insert required amount of re-rods into position. See re-rod requirements Figure 3.
- 18) The space between the connector pipe and the bottom of the slab (Q) is necessary due to expansion and contraction of the unit while heating. This 1" clearance is sufficient for this purpose.
- 19) Place the first section of Class "A" Chimney Pipe onto the adapter (either Chim-Tek, a 12" x 12" clay flue or a 10" metal chimney). **NOTE:** Hussong Mfg. recommends the use of Chim-tek chimney systems. Tested to U.L. 1777-2100°. **NOTE:** If using a factory built all-fuel metal chimney, it must be a type HT (high temperature) steel chimney.
- 20) The lower grill can slide directly under the front of the unit, but the most preferred location is under the hearth at floor level. This is the point of the "coolest" air in the room.
- 21) Lay up face brick on exterior (front) wall. Allow 3/8" expansion room along sides of fireplace and 3/8" - 1/2" over top, supported by lintel iron (T). It is recommended that you place fiberglass insulation against the back of the lintel to prevent mortar from getting between the lintel and the firebox. If installing a model 430, 432, or 436 see Fig. 7 for proper lintel placement.
-  **CAUTION:** If this expansion room is not left between the unit and the face brick, face brick cracking can occur, and the unit will not be able to expand when heated—as designed.
- CAUTION:** This face material must be a masonry product from the lower grill level to the ceiling.
- 22) As you lay up the face brick the damper controls should be run through the face brick (R). **They must run straight out and parallel to the floor to avoid any binding action.** They are equipped with sleeves to avoid binding where contact is made with the mortar. Do not allow mortar to fall between the intake pipe and the facebrick. It will cause the damper to stick when the unit is hot.  
**NOTE:** If installing a mantle leave at least 21" of space between the top of the fuel door and a combustible mantle.
- 23) Leave at least 6" of space between the heat chamber walls and face brick on the sides and back. Fill this space with 6" of non-combustible insulation. This is to prevent cold air from penetrating into the chamber. This insulation is optional on an interior installation.
-  **NOTE:** If installing adjacent to combustible materials leave at **LEAST 6"** of open space between combustible surfaces and inner chamber walls. Insulate the 6" open area between the block and outer wood with at least 3 1/2" of non-faced fiberglass insulation on the block wall surface. Insulate the outer wall between the studs.

24) Install upper grill and frame (S). The top of the grill **must** be even with the bottom of the slab to prevent a heat sink. The grill should be installed with the louvers pointing downward to direct the heat flow.

**NOTE:** As the face brick are being laid up in front of the slab, be sure that the brick are sealed together with mortar so heat cannot flow between.

- a) You may wish to install a brick grill for a different appearance. Consult your dealer for the proper parts. Install the framework as you would the upper grill bracket. Continue laying the face brick. Install half-brick inside the framework leaving a minimum of 3½" between brick.
- b) It is necessary to have an opening with at least 360 square inches of open space for air flow at the top opening of the unit. The brick grill will also give the proper air flow if properly installed. If soldier brick is being used it must be designed to allow at least 360 square inches of air flow.

**NOTE:** The 230 and 430 units have a smaller grill because they have a lower BTU output and thus require less air flow.

25) Complete your chimney. A masonry chimney must be installed in accordance with the requirements of NFPA 211 Standard for Chimneys, Fireplaces and Vents. The chimney system must be to a height of at least three feet taller than the peak of the house. The fireplace must be installed with its own separate chimney system. **DO NOT** connect to an existing flue serving another appliance. Install metal chimneys according to manufacturer's installation instructions and clearances. See your local building inspector for specific codes in your area.

26) A chimney cap must be installed on top of the chimney to prevent rust forming on the inside of the fireplace. (See warranty.)

27) Wash the face brick.

**CAUTION: DO NOT USE MURATIC ACID.** To neutralize use baking soda and water.

28) Install damper and door latch handles.

29) Install firebrick on the bottom, sides, and back of unit. See Figure 10.

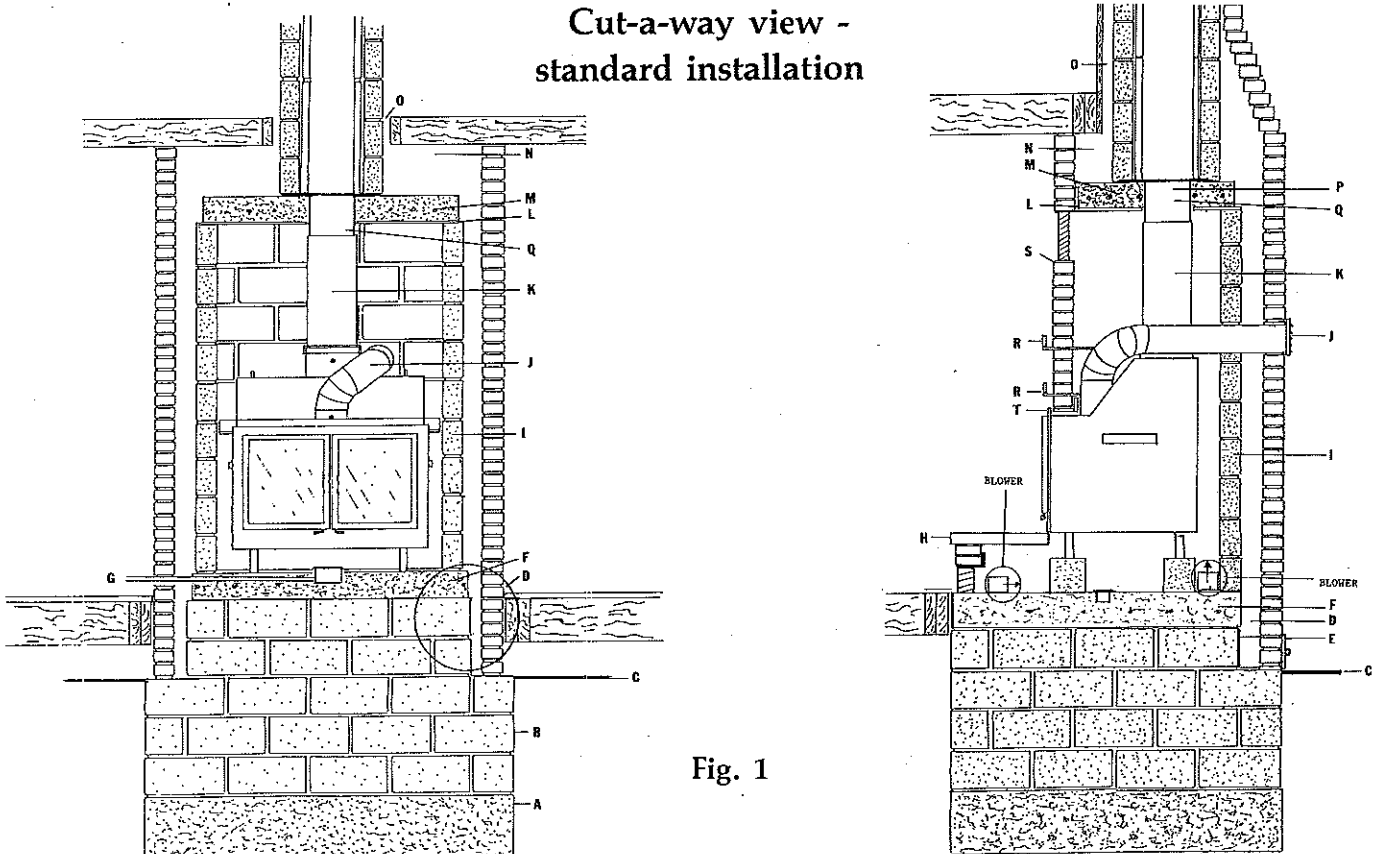
**NOTE:** Evenly space firebrick across the bottom and fill the small gaps with masonry sand.

**SAVE THESE INSTRUCTIONS!**

- |                              |                       |                     |                        |
|------------------------------|-----------------------|---------------------|------------------------|
| A. Foundation Concrete       | F. Concrete Slab      | K. Connector Pipe   | P. Chimney Adapter     |
| B. 8 x 8 x 16 Concrete Block | G. Electrical Conduit | L. Chamber Top      | Q. 1" Expansion Space  |
| C. Ground Level              | H. Hearth Extension   | M. Top Slab         | R. Damper Control Rods |
| D. Insulation Area           | I. Chamber Walls      | N. Insulation Space | S. Upper Grill & Frame |
| E. Clean Out Door            | J. Air Intake         | O. Air Space        | T. Lintel Iron         |

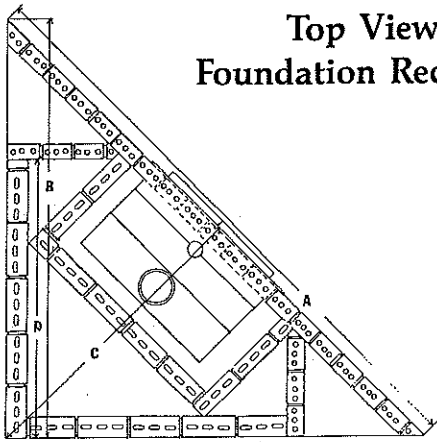
*We reserve the right to change or update these instructions without notice. The form number on the front cover is the print date and should be used for reference.*

**Cut-a-way view - standard installation**



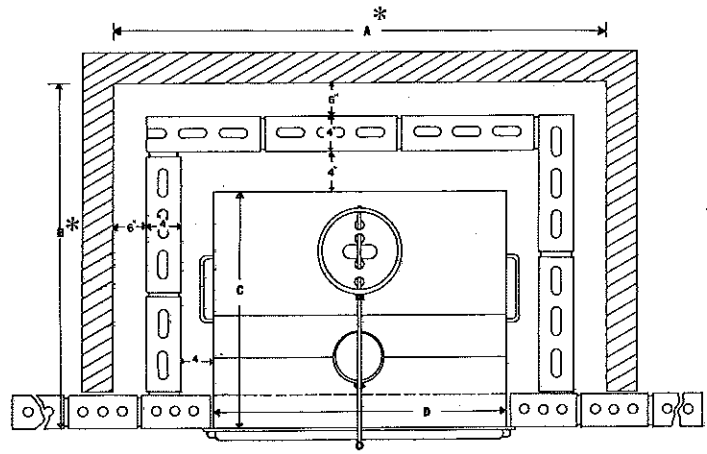
**Fig. 1**

# Top View with Foundation Requirements



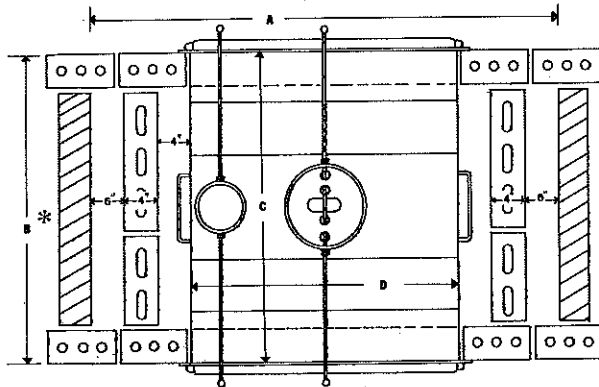
	230	232	234	236
A	10' 6"	11' 3"	11' 4"	11' 8"
B	7' 8"	8'	8' 4"	8' 4"
C	5' 4"	5' 8"	5' 8½"	5' 10½"
D	5'	5' 4"	5' 7"	5' 9"

All other dimensions remain constant with standard brick-in. D\* option angled face brick treatment.



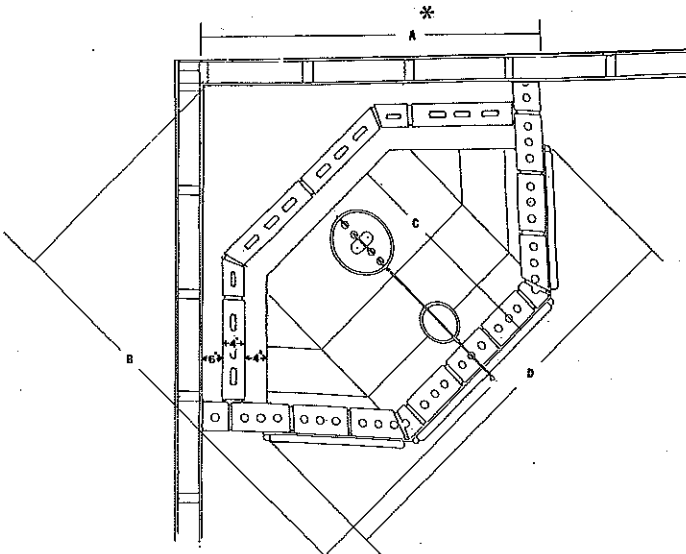
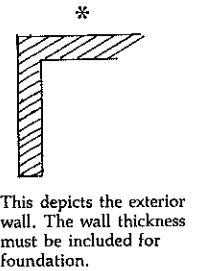
	230	232	234	236
A *	54"	60"	63"	64"
B *	37½"	40"	40"	42"
C	24"	26"	26"	28"
D	26"	32"	35"	36"
*Height	36"	42"	45"	48"

NOTE: Foundation width and depth must equal "A" and "B" plus hearth and the dimensions of the outside walls.  
\*Includes legs and chimney connector.

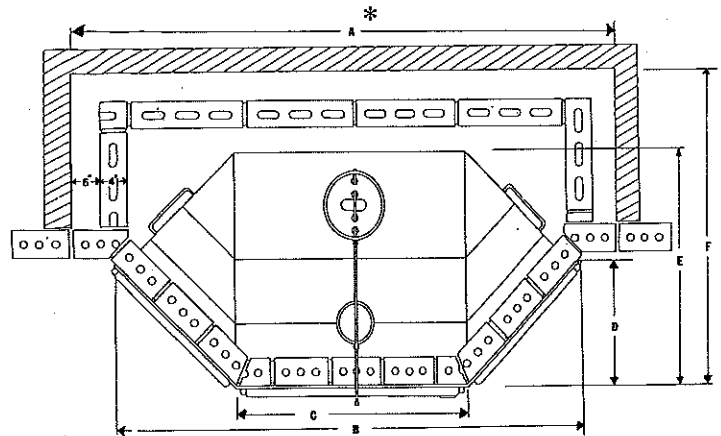


	330	332	336
A	54"	60"	64"
B *	32"	36"	40"
C	32"	36"	40"
D	26"	32"	36"
*Height	36"	42"	48"

NOTE: Foundation dimensions are "A" and "B" widths plus hearth.  
\*Includes legs and chimney connector.



	430	432	436
A *	45"	55½"	61"
B	51"	65"	71½"
C	24"	30"	33"
D	48"	60"	69"



	430	432	436
A *	68"	80"	89"
B	48"	60"	69"
C	27"	35"	36"
D	10"	14"	16"
E	24"	29"	31"
F *	38"	43"	45"
*Height	36"	42"	48"

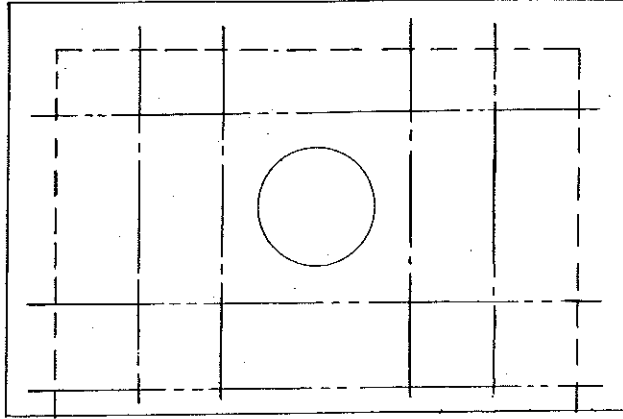
NOTE: Foundation must equal "A" & "F" plus hearth.  
NOTE: All other dimensions remain constant and must be adhered to for safe operation in each style of fireplace.  
\*Includes legs and chimney connector.

Fig. 2

# Slab Support Re-rod Requirements

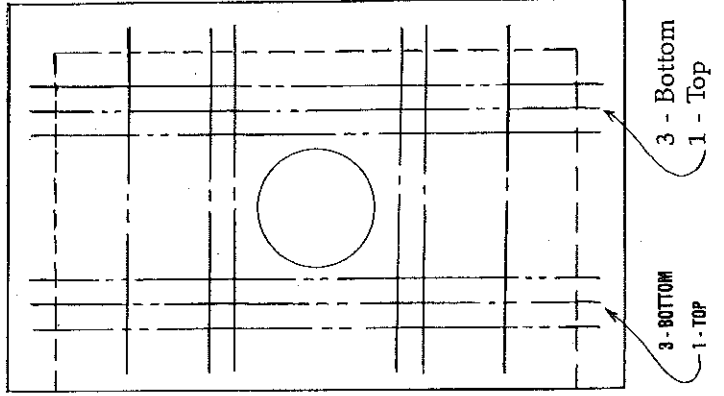
10' Chimney

1 Story, First Floor Fireplace



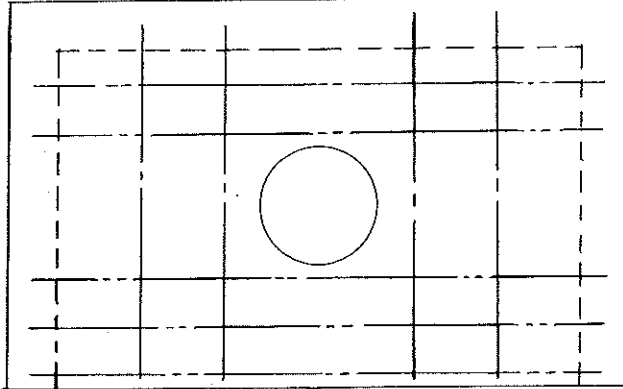
28' Chimney

2 Story, Basement Fireplace  
Tensile Steel Bottom

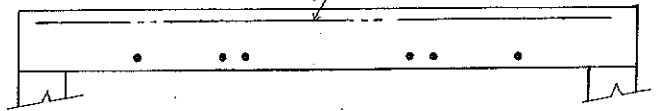


19' Chimney

1 Story, Basement Fireplace or  
2 Story, First Floor Fireplace



Compressive Steel #4



All Reinforcing  $\frac{1}{2}$   $\emptyset$ , #4

All Ends Bent and Anchored to Wall  
Where Applicable

Fig. 3

400 Series with a Recessed Mantle  
(5" offset required)

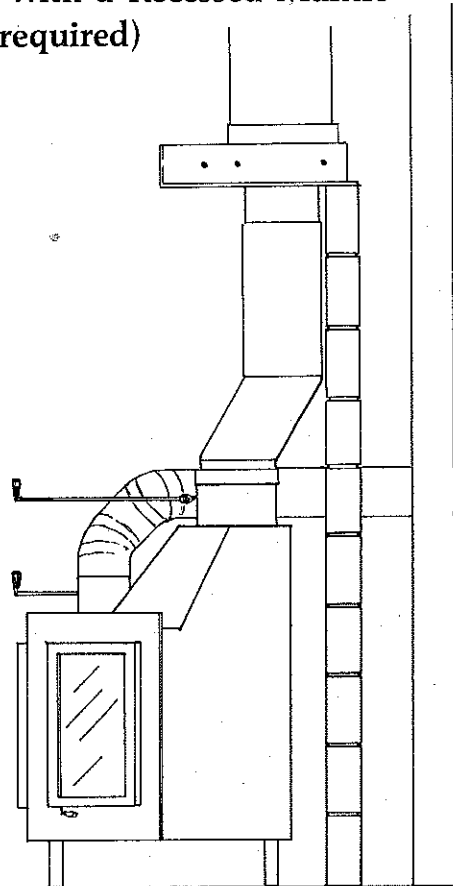
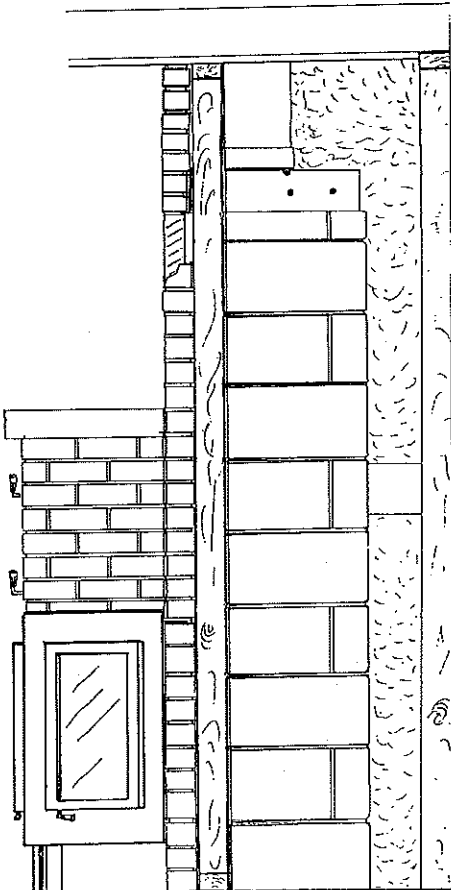


Fig. 4

Vertically Adjacent Installations (16" offset required)

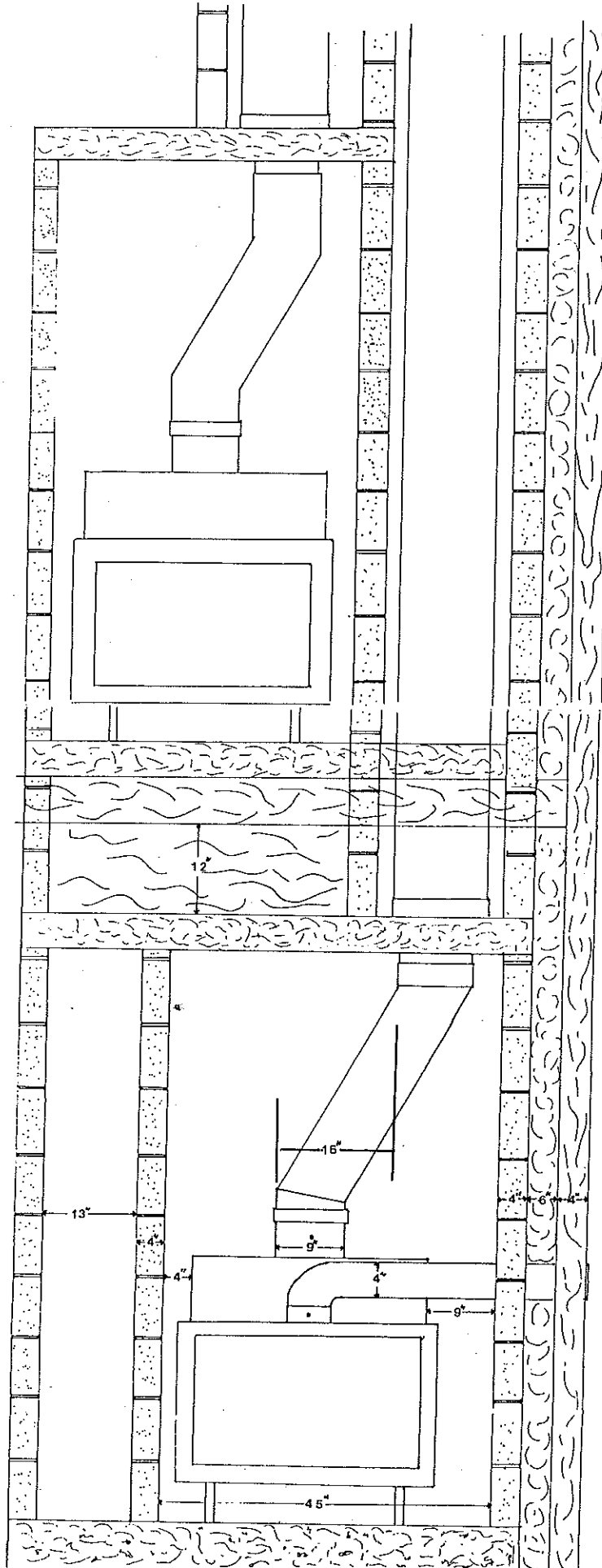
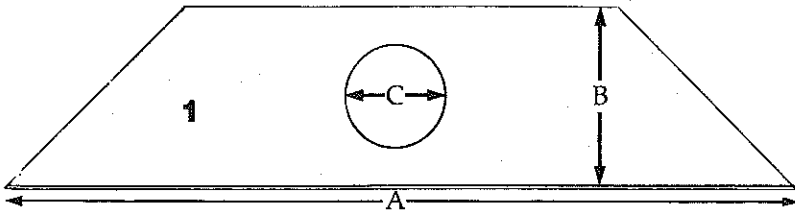


Fig. 5

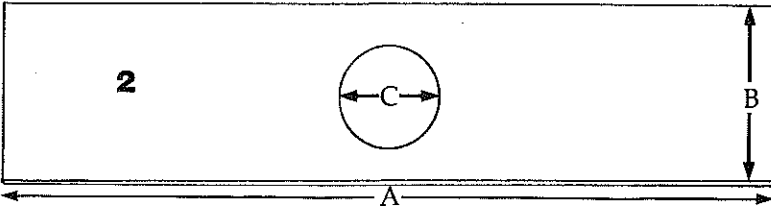


# 400 Series Top Plates Available



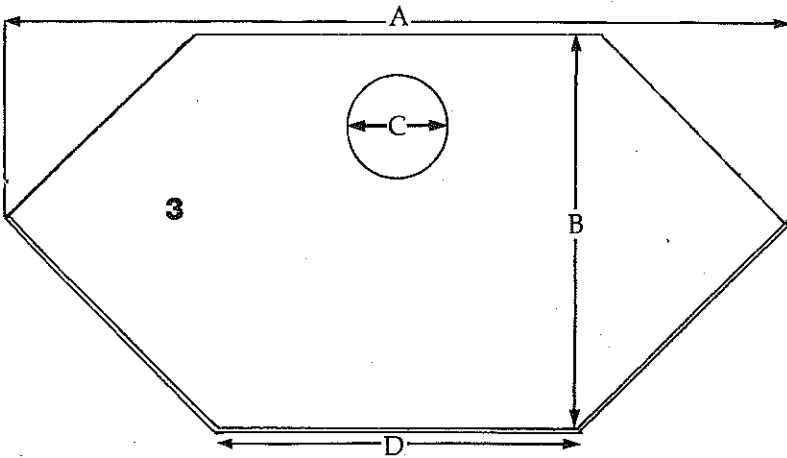
Corner Installation - Recessed Mantel

1	430	432	436
A	56"	69½"	72"
B	16"	17"	19"
C	8¼"	10¼"	10¼"
WT	35#	48#	58#



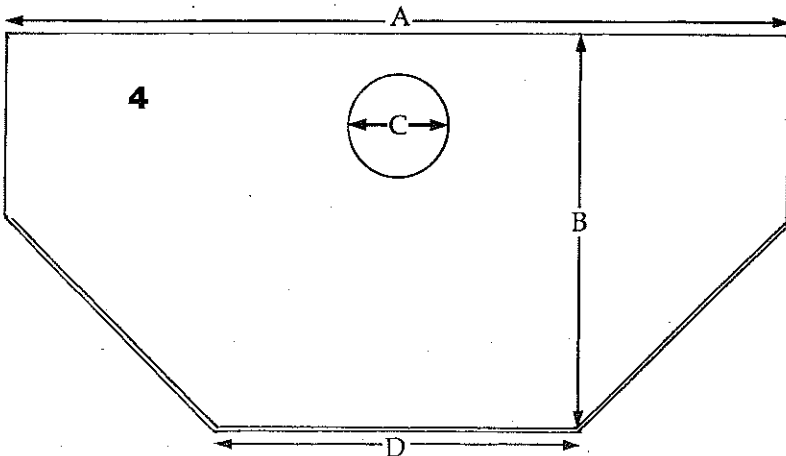
Recessed Mantel - Straight Wall Installation

2	430	432	436
A	56"	69½"	72"
B	16"	17"	19"
C	8¼"	10¼"	10¼"
WT	40#	53#	63#



Corner Installation

3	430	432	436
A	50"	64"	70"
B	26"	31"	33"
C	8¼"	10¼"	10¼"
D	24"	30"	33"
WT	55#	82#	95#

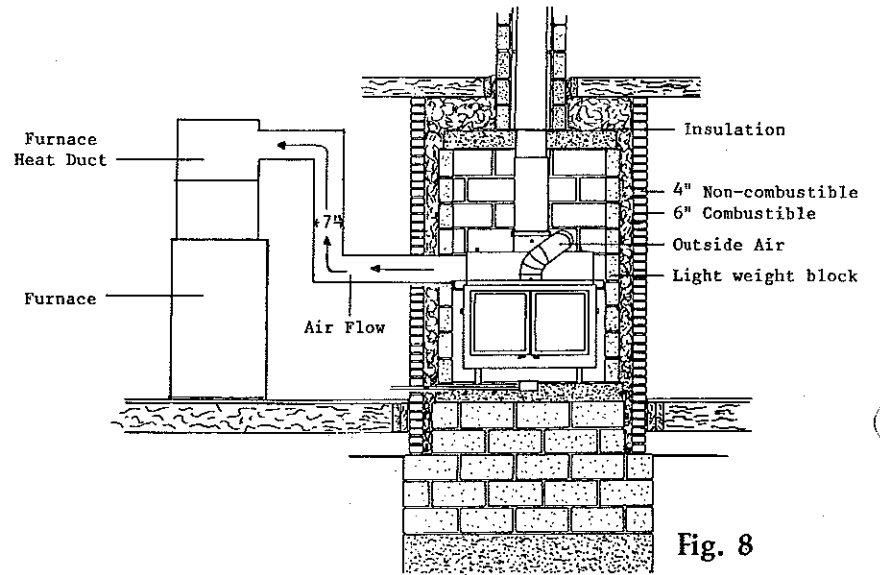
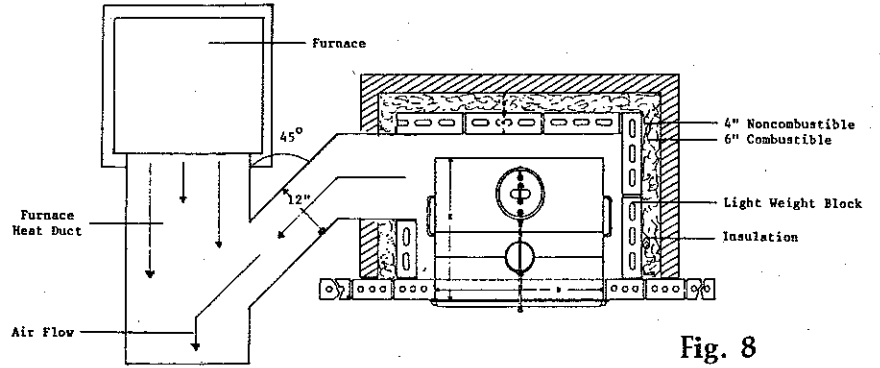
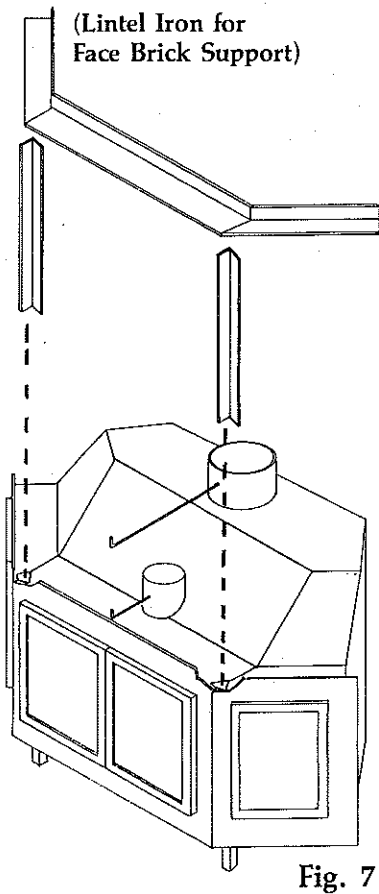


Straight Wall Installation

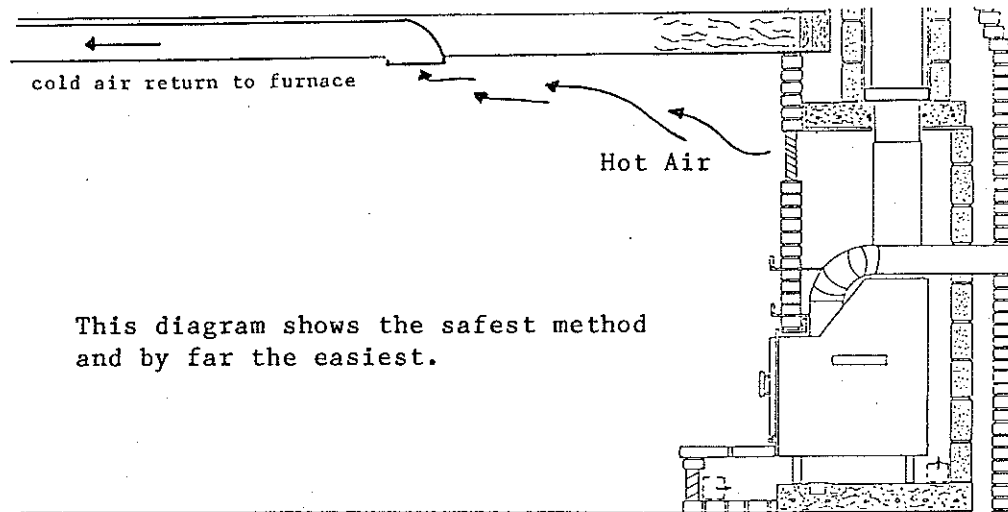
4	430	432	436
A	50"	64"	70"
B	26"	31"	33"
C	8¼"	10¼"	10¼"
D	24"	30"	33"
WT	60#	86#	100#

Fig. 6

# Lintel Placement (400 Series Only)

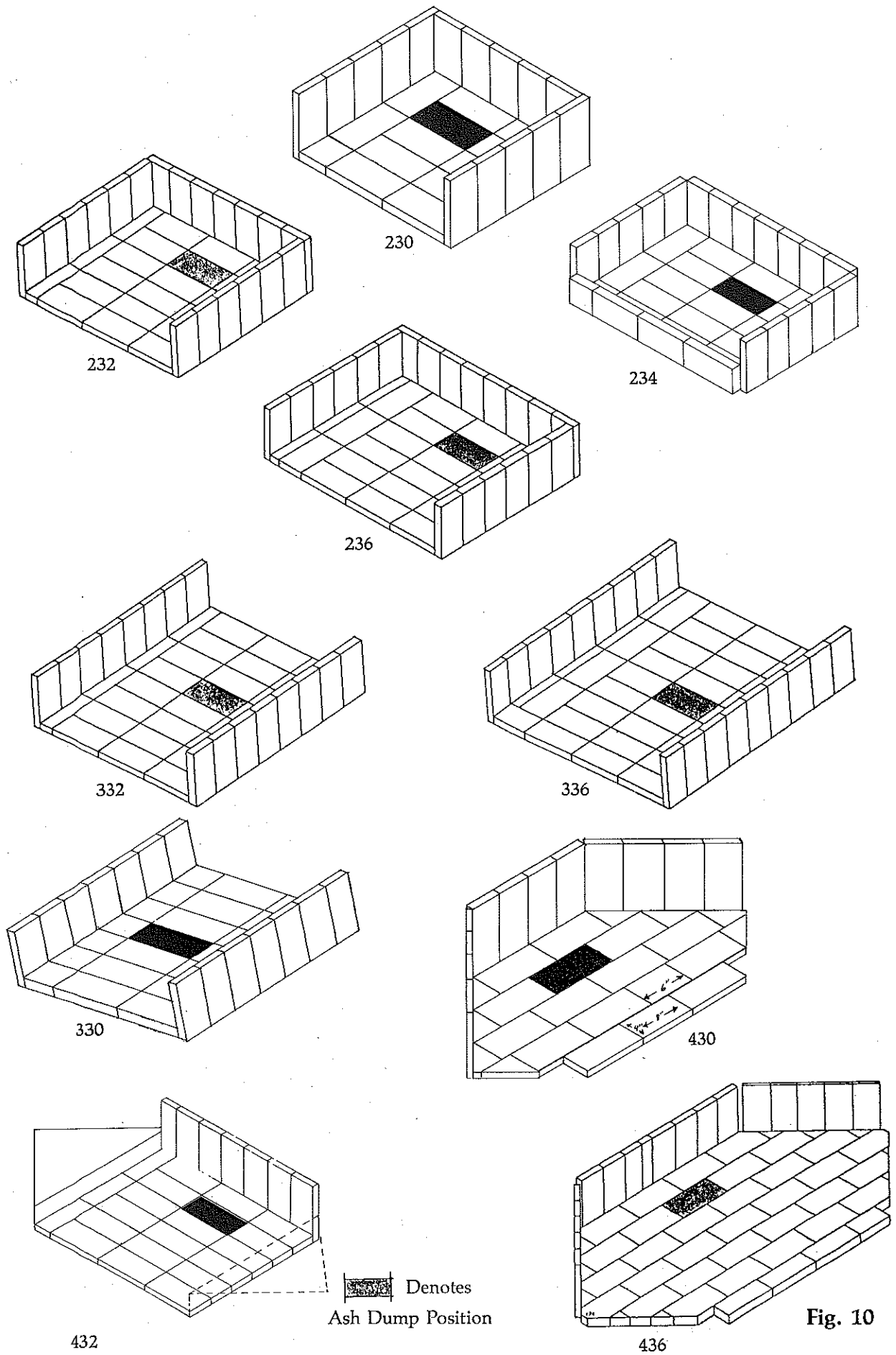


## Furnace Ducting Method



This diagram shows the safest method and by far the easiest.

# Firebrick Layout



### CLASS "A" ALL-FUEL STEEL CHIMNEY (OPTIONAL INSTALLATION)

Approved Class "A" All-Fuel Metal Chimney can be used as an alternative to Class "A" Masonry.

— We recommend type HT — High Temperature Class "A" steel chimney. —

**CAUTION:** Always check with chimney Manufacturer's Installation procedures and Building Codes in your area before starting installation.

1. After metal support plate is in place, a Class "A" Starter Section is placed within the adapter and secured with metal band.
2. The Class "A" All-Fuel Chimney is then ready to be placed (one section at a time) onto the starter section.
3. At least 12 inches of fiberglass insulation is then placed on the Metal Plate around the Class "A" Chimney.
4. The installer must follow all correct installation, clearance, and support procedures as specified by the All-Fuel Chimney Manufacturer.

### SAVE THESE INSTRUCTIONS!

Contact your dealer or the factory for any additional information you may need.

#### REPLACEMENT PARTS

- 1) a) 14½ x 17 glass for 234, 336, 436; b) 14 x 15 glass for 232, 332, 432; c) 10 x 12 glass 230, 430, 330
- 2) Damper knob (1)
- 3) Air inlet knob (1)
- 4) Latch knob (1 per door)
- 5) Upper grill
- 6) Lower grill
- 7) Firebrick (each)
- 8) Door felt
- 9) Door rope

#### AVAILABLE OPTIONS

- 1) Fan
- 2) Chimney stack offset (max. 30° offset)
- 3) Ash chute and cover
- 4) Ash clean-out door
- 5) Adapter (for steel chimney)
- 6) Fan speed control
- 7) Outside air vent
- 8) Polished brass trim for doors & face
- 9) Chamber top plates
- 10) Lintel iron

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