# INTENS-A-FYRE™

This instruction is for Model #2822 and #3622 units.

**Failure to follow these installation Instructions will void your warranty and will cause a Fire Hazard and property damage which may result in Loss of Life.** These installation instructions are an integral part of this tested listed unit. Strict adherence is required. Prior to installation of any model 2822 and 3622 fireplace, check with state and local building officials regarding: building permits or licences and codes that apply to your area. **DO NOT alter dimensions B or G** stating the width and depth of the inner block heat chamber. If the owner wants a wider fireplace structure move the outer veneer walls to the desired dimension. **If you have any questions, call your dealer or (218) 547-3393 for factory direct assistance.**

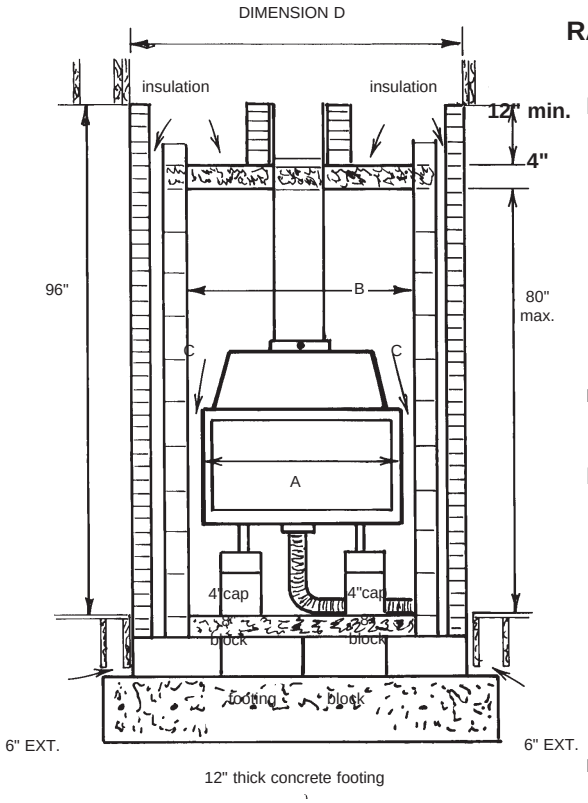



DIAGRAM #1

## RAISED HEARTH INSTALLATION

**Model #2822**

| Dimension | with 2" insul. | 4" insul. |
|---|---|---|
| A | 28" | 28" |
| B | 32" | 32" |
| C | 2" | 2" |
| D | 52" | 56" |
| E | 38" | 40" |
| F | 22" | 22" |
| G | 28" | 28" |
| H | 6" | 6" |
| K | 7" | 7" |

masonry front minimum 64"

**Model #3622**

| Dimension | with 2" insul. | 4" insul. |
|---|---|---|
| A | 36" | 36" |
| B | 40" | 40" |
| C | 2" | 2" |
| D | 60" | 64" |
| E | 38" | 40" |
| F | 22" | 22" |
| G | 28" | 28" |
| H | 6" | 6" |
| K | 7" | 7" |

masonry front minimum 72"

2-16-92 by Don W.

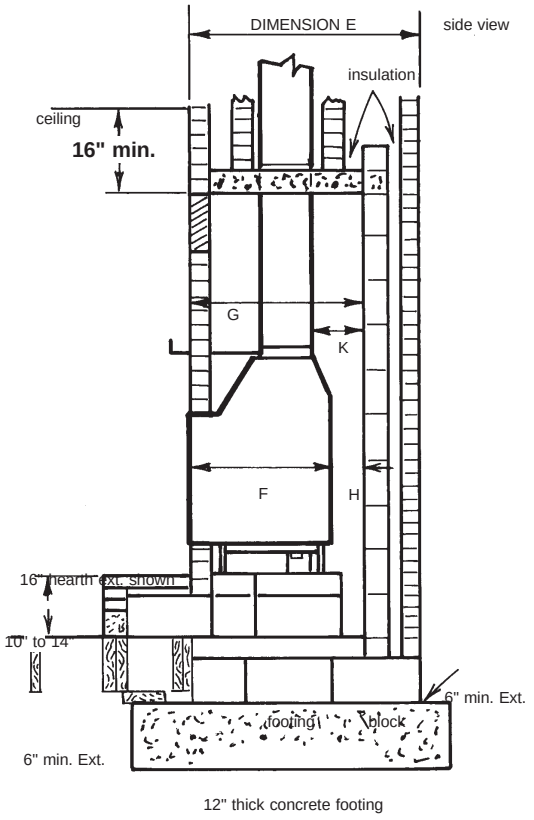



DIAGRAM #2

**Completely read and understand these instructions before starting your installation.**

FOR CORNER INSTALLATIONS OR STACKING UNITS ON TWO LEVELS SEE THE BACK PAGE FOR DIMENSIONAL INFORMATION.

1. Pour a properly reinforced concrete base for the fireplace footings with a minimum foundation not less than (12) twelve inches in thickness extending at least (6) six inches on each side of the footing. This footing and base MUST extend below the frost line. Use no less than (8) eight pieces of #4 reinforcement rod laid at right angles to each other in the base. For the base size refer to dimensions D and E and add (12) twelve inches to each. The concrete base must be no less than a 4000 psi mixture, poured on fill material in accordance with state and local codes. Failure to create a properly reinforced footing will result in structural damage and may create a fire hazard.

2. Construct the footing using 8 x 12 x 16 cement block up to a height of 4" below the finished floor level. At this point the foundation block should reduced to allow for the thickness of the outer veneer material, and if an outside installation, a minimum of a 4" insulation barrier. A 4" concrete slab is to be cast on this footing level with the finished floor height with no less than 4 pieces of #4 rerod cross lapped and tied. See diagrams on this page. **CAUTION:** DO NOT ALLOW THE LOWER CONCRETE SLAB TO CONTACT THE OUTER VENEER WALL ON AN OUTSIDE CONSTRUCTION. If this would occur severe cold transfer will occur. **If this installation requires vertical ducting for outside combustion air see step #5 before continuing.** If ducting to the right or left side for an air intake see Diagram #3. **Do not duct vertically within the heat chamber.** Note: A metal plate is provided to rest the hearth stone onto for Raised Hearth Installations. Position this plate on top of 4 x 8 x 16 cement block. See diagram #3 page 2. If brick or stone are to be used in place of the louvers, the inlet must be 256 sq. surface inches and the outlet 256 surface inches for model 2822 and for model 3622 the sq. surface inches should be 320 and the outlet 320 surface inches. A reduction of these will increase heat and result in unit failure.

3. The minimum side distance from a combustible wall to the fireplace opening is (19) nineteen inches. If a raised hearth is used it must be noncombustible and extend at least (16) sixteen inches in front of and at least (8) eight inches to each side of the fireplace opening. The hearth height should be no less than (10) ten inches and no more than (14) fourteen inches in height. The burning chamber sets on cement block piers (typically an 8" block with a 4" cap block set on its side). The top of these piers must be flush with the predetermined hearth height. If installing a fan into this unit refer to the instruction and electrical information in each fan kit, and refer to diagram numbers 1, 2 & 3 for this type of installation. If a non raised hearth is used it must extend (24) twenty-four inches in front of and must extend completely across the face of the fireplace. A fan cannot be installed in a non raised hearth installation. Refer to diagram numbers 1s, 2s & 3s for this type of installation.

**Diagrams 1s, 2s and 3s are to be used only with the following provisions.**

A. The total floor to ceiling height is at least 88".
B. A 1" Non combustible hearth extension is used in front of the fireplace opening.
C. The top of the heat outlet louver is not more than 80" off of the floor.

## NON RAISED HEARTH AND REDUCED HEIGHT INSTALLATIONS

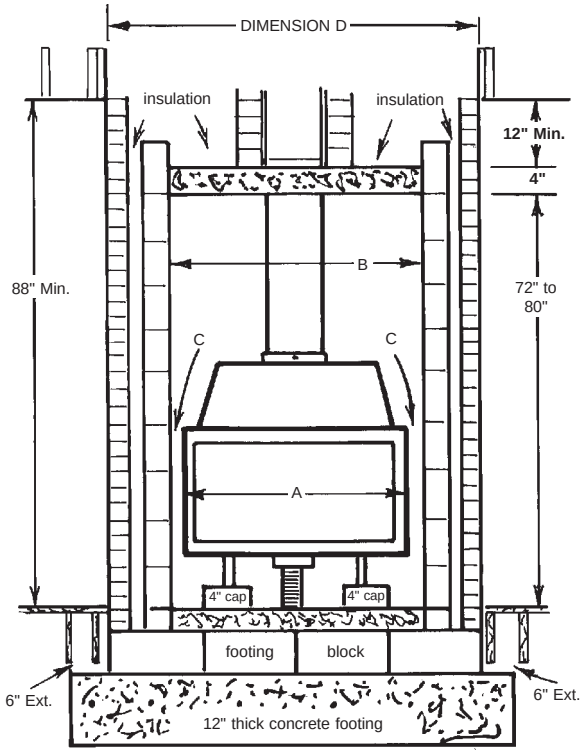



DIAGRAM 1s

**Model #2822**

| Dimension | with 2" insul. | 4" insul. |
|---|---|---|
| A | 28" | 28" |
| B | 32" | 32" |
| C | 2" | 2" |
| D | 52" | 56" |
| E | 38" | 40" |
| F | 22" | 22" |
| G | 28" | 28" |
| H | 6" | 6" |
| K | 7" | 7" |

masonry front minimum 64"

**Model #3622**

| Dimension | with 2" insul. | 4" insul. |
|---|---|---|
| A | 36" | 36" |
| B | 40" | 40" |
| C | 2" | 2" |
| D | 60" | 64" |
| E | 38" | 40" |
| F | 22" | 22" |
| G | 28" | 28" |
| H | 6" | 6" |
| K | 7" | 7" |

masonry front minimum 72"

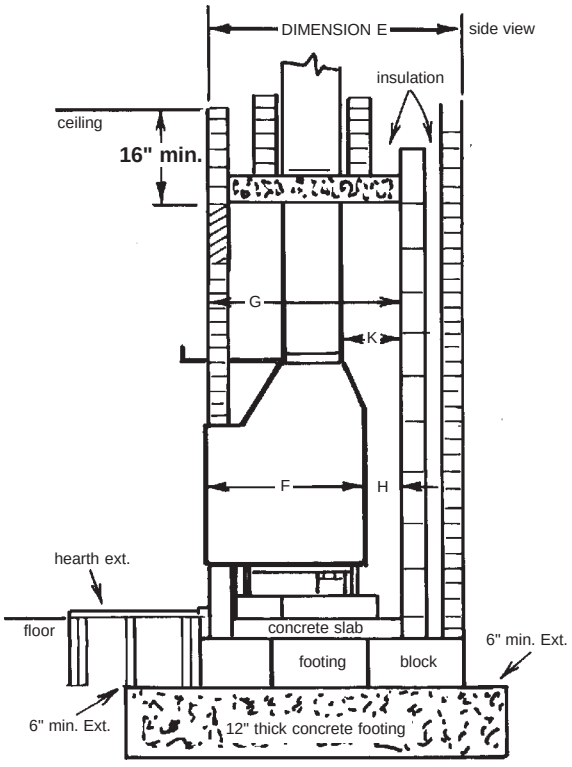



DIAGRAM 2s

For Non Raised Hearth Installations set the unit in place on top of 2 piers of 4" concrete block. See Diagrams 1s and 3s for placement. The base of the upper concrete slab must be at least 72" and no more than 80" from the finished floor. The bottom of the burning chamber must be at least 8" up from the top of the hearth extension height to allow for the lower louver to fit below the firebox. Do Not Block this louver. Lack of proper circulation and overheating of the masonry will occur. This may create a fire hazard.

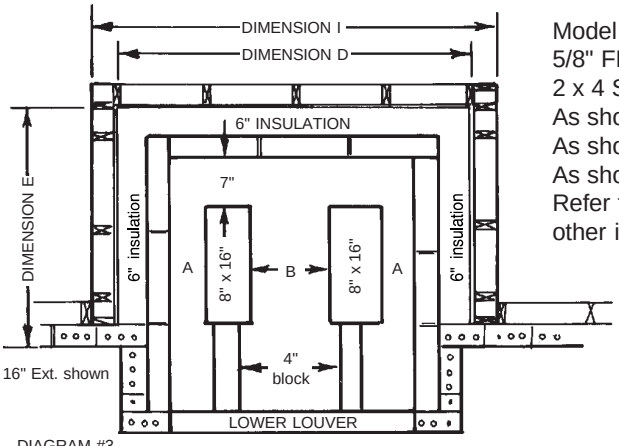



DIAGRAM #3

RAISED HEARTH

Model #3622 with
5/8" FIRE CODE GYPSUM
2 x 4 Stud wall shown
As shown dimension D = 60"
As shown dimension E = 38"
As shown dimension I = 69"
Refer to other drawings for
other important dimensions.

**Model #2822**
Dimension A = 2"
Dimension B = 12"

**Model #3622**
Dimension A = 4"
Dimension B = 16"

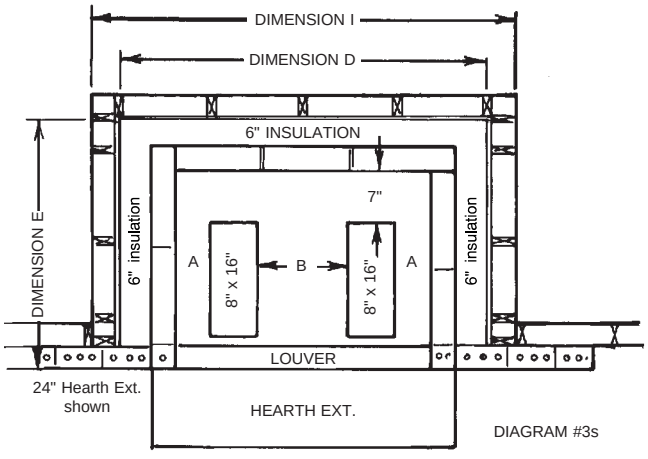



DIAGRAM #3s

NON-RAISED HEARTH

TOP VIEW MASONRY WALL WITH INSULATION

WHEN CONSTRUCTION IS IN SESMIC ZONES 2, 3, AND 4

Reinforcement rods must be end bent and tied to the reinforcement rods in the base and upper slabs. The number and placement of these rods must conform to chapter 37 of the UNIFORM BUILDING CODE.

4. Some installations require (2) two (4) four inch thick masonry walls (consult diagrams). The inner heat chamber walls may be constructed of either (4) four inch light weight or (4) four inch SOLID cement block. The outer veneer walls may be constructed of either brick, stone or block with a minimum thickness of (4) four inches. As the inner heat chamber is being constructed recess the side walls to allow for the veneer wall on the face of the fireplace. Insert metal ties into each course on the side walls to insure proper bond to the face material. **IMPORTANT:** Maintain clearances between the side walls of masonry and the burning chamber as shown by dimension C. A (6) six inch clearance is required from the back of the fireplace to the inner chamber wall. **Whenever** any portion of the masonry chamber extends outside of the frame wall of the home or into a garage a (4) four inch pour of Zonolite masonry insulation or an insulation type that conforms to ASTM standard C516-75 type 3 or 4 must be used between the inner heat chamber walls and the outer veneer walls. This insulation is to be poured into the (4) four inch space between the two walls and must extend below the lower concrete slab to grade level. **WARNING: If this space is not insulated on an outside construction severe cold transfer will occur. DO NOT use styrofoam or expanded polystyrene as this will melt and burn.** When construction is totally within the home install (2) two (4) four inch walls as described above and reduce the insulation barrier to (2) two inches. **An optional construction method for an inside installation** is to construct the (4) four inch inner heat chamber walls as described and assemble a chase with an inner lining of 5/8" fire code gypsum. Maintain a (6) six inch clearance from the outside of the block to the inside of the gypsum. This area is to be filled with Zonolite masonry insulation that conforms to the ASTM standard C516-75 type 3 or 4 material. **Never use polystyrene or plastic insulation as this may melt or burn.** The chase may be covered with any approved building material. See diagrams for details. Properly seal any area that the zonolite may leak from. Minimum insulation requirements are as follows: for a double wall masonry enclosure with 2" of insulation between them use no less than 21.48 cubic feet of insulation; for a double wall masonry enclosure with 4" of insulation between them use no less than 33.83 cubic feet of insulation; for a single masonry wall use no less than 41.55 cubic feet of insulation. Each of these above specifications is based on a minimum insulation thickness of 4" on the upper concrete slab. The MAXIMUM amount of insulation on top of concrete slab is 6

inches.

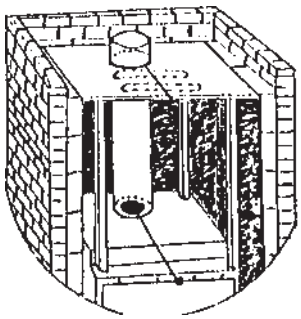
5. Position the burning chamber on the block piers. The front legs adjust for leveling. Attach the (4) four inch flex pipe to the air inlet with the clamp (both of these items are furnished). **If ducting more than (5) five feet increase the duct size to (6) six inch at (5) five feet. This is done to allow ample combustion air for the fire.** Continue with the air intake pipe to its termination point. The termination must be to the building exterior, screened and terminate above the snow line. **DO NOT** terminate this duct in an attic or garage. Screen size must be no larger than 1/4 inch square mesh. Route combustion air control cable toward masonry front. Verify that it works freely!!! See diagram #3 or 3s. Maximum duct length is 20' with no more than 3-90° elbows. **For Non Raised hearth installations, connect a 4" 90° elbow to the intake of the fireplace to ease ducting.**

6. Permanently secure all pipe connections with sheet metal screws or pop rivets and seal with furnace cement. If the air intake pipe runs through the building interior, adapt the aluminum pipe to plastic (4) four feet after it exists the heat chamber and insulate or condensation will occur.

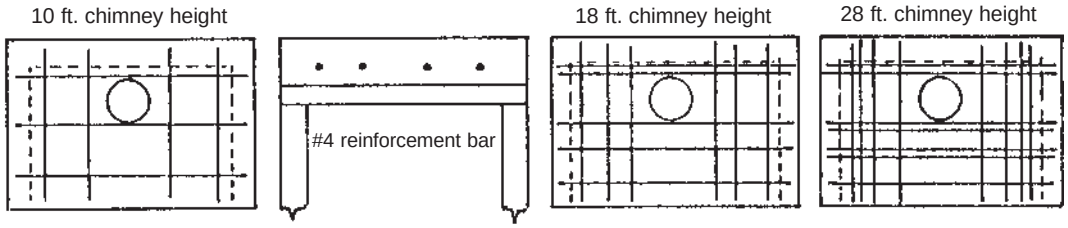
7. The finished height of the upper concrete slab to be cast must not be closer than (10) ten inches to ceiling headers or any other combustible material. In rooms with vaulted ceilings, the base of the upper concrete slab must not exceed 80" in height measured from the floor. Construct the Inner heat chamber walls. The maximum height is determined by the ceiling height. The top row of concrete block must allow at least a 16" clearance to the Finished ceiling height. See Diagrams 2 and 2s. **WARNING: Combustible material closer than 10" to the top of the concrete slab will cause a fire hazard.**

8. Install the chimney damper rod with knob and tighten the set screws with the allen wrench provided adjusting rod length so that the knob sticks out 2" beyond the finished masonry front. The wood knob should be vertical when the damper is open. Check that the air intake control and chimney damper operates freely.

9. Install the flue connection pipe by setting it onto the flue outlet on the burning chamber. A metal ring has been provided for the pipe to ride on. Offset pipe are available through your dealer. The maximum angle of an offset pipe or any approved chimney system is 30°. If this angle is exceeded, poor draft and back smoking will occur. Never extend the single wall metal pipe outside of the heat chamber in any manner other than shown in diagrams FC1 or FC2, as a fire hazard may result.



This drawing shows position of plywood form for pouring upper concrete slab on. REFER: to step II.




Minimum reinforcement rod number and placement. Drawings not to scale.

NOTICE: All forms and temporary supports MUST BE REMOVED when concrete is cured.

Drawing NOT to scale.

10. A (4) four inch minimum thickness, 3000 psi mixture, concrete slab reinforced with a minimum of (7) seven pieces of reinforcement rod (see reinforcement rod placement diagrams) must be cast. **As this slab is cast allow for a minimum of a (10) ten inch clearance from the top of this slab to any wooden frame materials.** This space is to be insulated with (6) six inches of Zonolite masonry insulation after the chimney is completed. **AN UPPER SLAB POUR PLATE IS AVAILABLE FROM YOUR DEALER** for a permanent form to cast the slab onto. The pour plate comes with most of the reinforcement rod necessary and is designed for a straight run face wall. The pour plate overlaps the side and back heat chamber walls by (2) two inches and is prestressed to carry the weight of the slab until it cures. To insure that the upper slab does not contact the outer veneer walls on an outside installation, place (4) four inch cement block around the perimeter of the pour plate creating the (4) four inch spacing required. Another alternative to the pour plate is to build a temporary form, as shown in the above diagram, from plywood and support with temporary posts until the slab cures. Cut the form in half and cleat together to ease removal. Position a board across the front of the form ensuring room for the face material to pass by it. Take care that the concrete being poured does not infiltrate the insulation space on an outside installation. This will cause cold transfer to occur. **NOTE:** ALL PLYWOOD AND TEMPORARY SUPPORTS MUST BE REMOVED AFTER THE SLAB CURES. **Any combustible within the heat chamber will BURN.**

NOTICE FOR INSTALLING IN SESMIC ZONES 2, 3, AND 4

When installing this product in sesmic zones 2, 3, and 4 the reinforcement in the upper concrete slab must be cast in place with no less than the minimum number of #4 reinforcement rods (see reinforcement rod placement diagrams). These rods must conform to chapters 24 and 26 of the Uniform Building Code. The upper slab must be no less than (4) four inches thick and of a 3000 psi mixture. All reinforcement rods must be end bent and tied to all vertical fireplace reinforcement rods and anchored to the wall where applicable. A minimum of (4) four #4 reinforcement rods must be end bent and tied to the horizontal rods embedded into the slab. These rods are to extend vertically and be spaced in accordance with the width of the masonry chimney. This fireplace and chimney structure must have reinforcement rods tied and spaced in accordance with chapter 37 of the Uniform Building Code. This chimney must be built in accordance with NFPA 211 standards.

11. Place the chimney adaptor into the flue connection pipe. Fill the void between the bottom of the adaptor and the top of the concrete slab with masonry cement. Position brick or block around the perimeter of the adaptor to hold the cement in place. This provides support for the chimney to the concrete slab. For a class A 2100 degree metal chimney a different adaptor is available from your dealer. For use of a metal chimney skip step 13 and go to #14. See Diagram FC2. Failure to use a chimney adaptor may result in a creosote leak and voids your warranties.

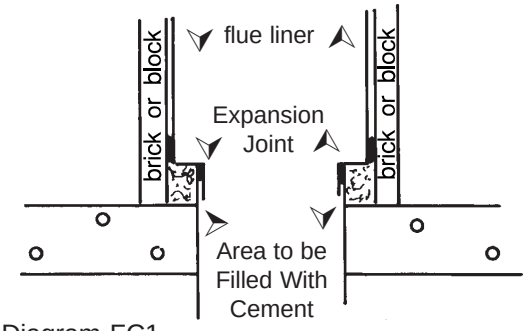



Diagram FC1

CLAY FLUE ADAPTOR

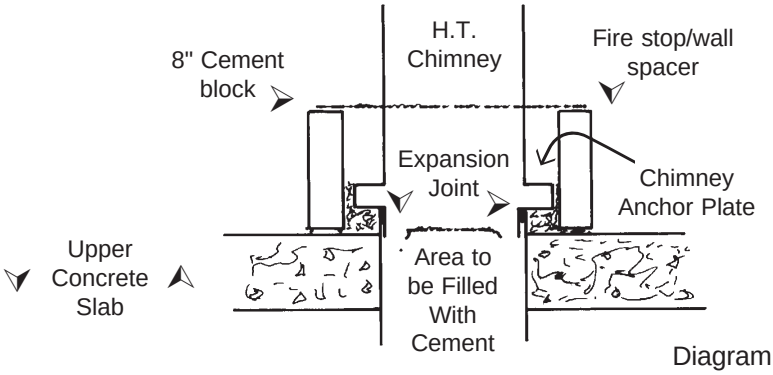



Diagram FC2

HIGH TEMPERATURE CHIMNEY ADAPTOR

The expansion space provided will allow the metal pipe to expand during operation.
Drawings not to scale.

12. Set the first flue tile into the clay tile adaptor and install the block or brick around it. See Diagram FC1. **This unit requires a 8 x 12 O.D. clay flue tile** with no less than 68 square inches of surface opening. For chimneys that use less than 14 foot of clay tile liner, a 12 x 12 O.D. flue is recommended for proper draft. Wilkening does not warrant "smoke free" operation, nor are we responsible for inadequate system draft caused by mechanical systems, general construction conditions, inadequate chimney height, adverse wind conditions and/or unusual environmental factors beyond our control. This chimney must conform to NFPA 211 and all other building codes. Note: we have installed a fiberglass seal around the flange of the flue adaptor to allow for the expansion of the pipe during operation.

13. If a class A 2100 degree metal chimney is used, do so in accordance with the chimney manufacturers directions. A (8) eight inch diameter chimney is required. Lag screw a chimney starter plate to our adaptor. See Diagram FC2. Place one section of liner in place at a time, supporting and maintaining clearances as recommended by the manufacturer.

14. Construct the chimney to the proper height. All masonry chimneys must have a (4) four inch minimum encasement of masonry, preferably insulated between the liner and the encasement. Maintain at least a (2) two inch clearance between the chimney structure and any combustibles **(see state and local building codes).** The chimney should terminate at least (3) three feet above any flat roof, or (2) two feet above any point that is within (10) ten feet of the closest peak (measured from the inside of the liner horizontally to the roof slope.) This chimney must conform to NFPA 211 standards and all applicable codes. The chimney or fireplace structure must not be used as a structural support for any framing material. Combustible material imbedded into this structure is a fire hazard.

15. Finish the outer veneer walls of the fireplace. IMPORTANT: Use unfaced fiberglass insulation as an expansion joint between the side walls of the burning chamber and the masonry and between the back and bottom of the lintel and the top of the burning chamber. This fiberglass should be 1/2" thick and (4) four inches wide. Allow at least 3/8" expansion room between the masonry face and the burning chamber. A lintel iron must be used across the face wall opening. NO metal or masonry may contact the burning chamber as cracking of the face wall will occur from thermal expansion during use. Position outside combustion air control cable in masonry front. VERIFY! FREE OPERATION.

16. When the face wall reaches the damper height position the damper rod with shaft into the masonry seam. Make sure that this rod is perpendicular to the flue connection pipe to insure smooth operation.

17. When using a combustible mantle a minimum of 24 inches clearance is required between the top of the fireplace opening and the bottom of the mantle. The top of the mantle must be no closer than (8) eight inches to the bottom of the heat outlet louver. Non-combustible mantle can be placed at any height. The masonry work must be structurally capable of supporting all imposed loads of the mantle. The maximum mantle depth is (14) fourteen inches.

18. Position the upper louver so that the top of it is flush with the bottom of the upper concrete slab. If a pocket is created at this location, reduced natural circulation will result. The fins on the louvers point downward. See attached tag for proper placement. Improper placement of the heat outlet louver will result in excessive temperatures due to increased heat. This may cause unit failure and a fire hazard. If a masonry outlet is used instead of our louver, the open surface area must be 256 sq. inches for model 2822, and 320 sq. inches for model 3622, and be positioned as stated above.

19. Continue with the face wall to the ceiling height. Fill the void between the face wall and upper slab with cement. If this void is not sealed heat with flow through the void into the upper cavity and may create a fire hazard. For additional circulation of heated air through out the home it is recommended to position a cold air return to your forced air system in the ceiling directly above the heat outlet louver. DO NOT directly connect this fireplace to your forced air system without the approval of your building inspector.

20. Clean the face wall to remove any cement residue on the masonry material. CAUTION caustic cleaning solvents will discolor any painted surface they contact and cause rust to appear.

21. Install the doors according to the instructions in the door carton. The door is provided with a roll of thermotape to be used as a seal between the back of the door and the burning chamber. To do this remove the paper backing and stick it to the outer perimeter of the fireplace front. Install Castable panel. Refer to instructions in panel carton.

22. If you or your contractor has any questions contact your dealer or call (218) 547-3393 for factory direct assistance. Read and understand these instructions before beginning.

23. Save these and all other instructions provided for future reference. Do not allow the owner to operate this unit for at least 3 weeks from completion. Premature usage may result in deterioration of the masonry cement which will cause cracking. Refer the owner to warranty card and operation instructions packaged inside. Save for subsequent home owner.

# CORNER MODEL INSTALLATION AND STACKING OF UNITS ON TWO LEVELS

**FOR MODEL #2822**

DIMENSION A = 28" DIMENSION H = 6"
DIMENSION B = 32" DIMENSION I = 60"
DIMENSION C = 7-1/2" DIMENSION J = 120"
DIMENSION D = 86" DIMENSION X = 68"
DIMENSION E = 32" DIMENSION Y = 74"
DIMENSION F = 22" DIMENSION Z = 52"
DIMENSION G = 28"

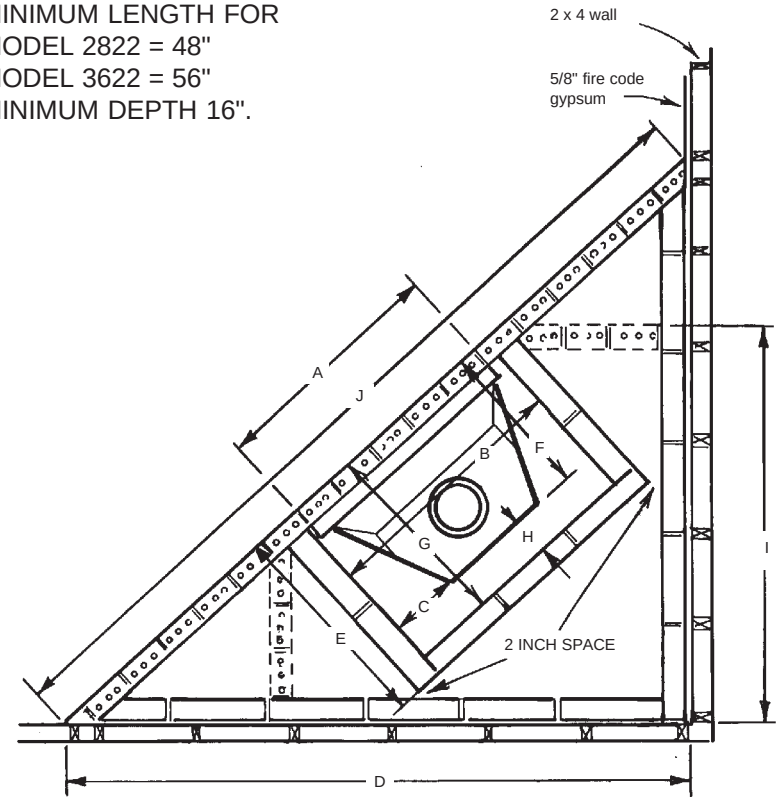
**FOR MODEL #3622**

DIMENSION A = 36" DIMENSION H = 6"
DIMENSION B = 40" DIMENSION I = 65"
DIMENSION C = 8-1/2" DIMENSION J = 128"
DIMENSION D = 90" DIMENSION X = 76"
DIMENSION E = 32" DIMENSION Y = 82"
DIMENSION F = 22" DIMENSION Z = 60"
DIMENSION G = 28"

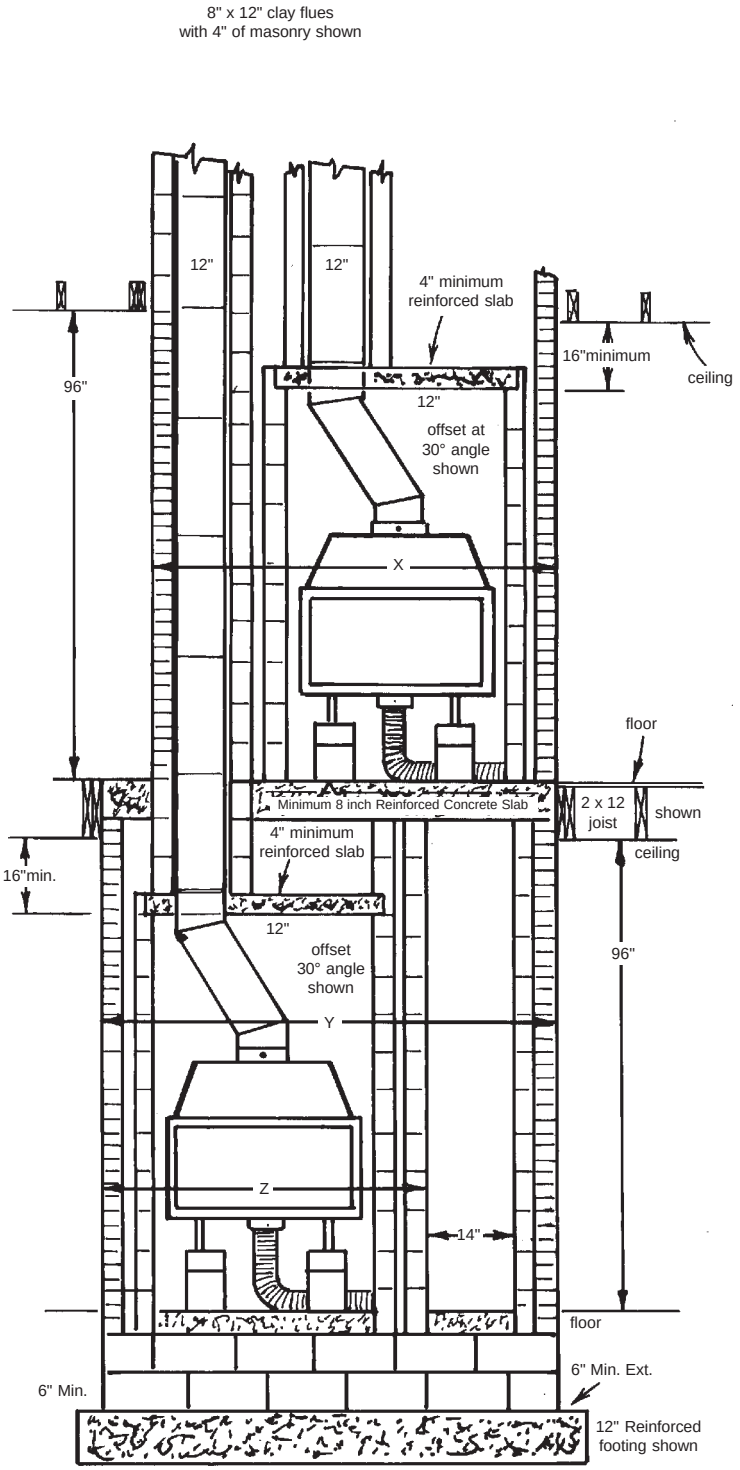
DIMENSIONS SHOWN ARE FOR EITHER (2) MASONRY WALL (4") THICK WITH (2") OF INSULATION OR (1) (4") THICK MASONRY WALL WITH (6") OF INSULATION. FOOTING SIZE MUST EXCEED PERIMETER BY 6" ON ALL SIDES.

**Consult instruction for complete dimensions before starting.**

NO HEARTH EXTENSION SHOWN
MINIMUM LENGTH FOR
MODEL 2822 = 48"
MODEL 3622 = 56"
MINIMUM DEPTH 16".




2-16-92 models #2822 and #3622 corner install by Don W.




Vertical placement construction
Consult instructions for complete dimensions before starting.

2-16-92
Models #2822 and #3622
by Don W.



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