KOZY HEAT

ZERO CLEARANCE FIREPLACE
INSTALLATION & OPERATING MANUAL

MODEL: #231 ZC

MODEL: #241 ZC

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

FEBRUARY 2002
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IMPORTANT:

READ THIS MANUAL BEFORE INSTALLING
AND USING THIS FIREPLACE

INSTALLATION CAUTIONS:

Heat Transfer:
A) The heat register outlet covers must not terminate below the hot air ductwork outlets to prevent a heat sink. See Fig. 6.

Chimney:
A) Use only a listed type HT Chimney per UL 103 or ULC S629
B) Do not vent any other appliance through this chimney system.
C) Follow manufacturer’s instructions for proper installation of the chimney.
D) Ensure that the chimney brand you purchase is equipped with the corresponding anchor plate for attachment to the fireplace.
E) The chimney must be a minimum of 10’ tall above the fireplace and must extend a minimum of 3 ft. above the highest point where it passes through the roof and at least 2 ft. higher than any portion of a building within 10 ft.

Cold Air Transfer Areas
A) If this fireplace is installed on an exterior wall it must be insulated just like any other wall in your home, if it is not, you will have a cold air transfer.
B) Secure combustion air pipes together with screws to prevent them from coming apart and leaking cold air.

Foundation:
A) Although no foundation is required for the unit and its metal chimney, the foundation must be sufficient to carry the weight of the face brick and/or rock front, if used.

INSTALLATION

Sealing Strip: A non-combustible sealing strip must be installed and centered under the fireplace and hearth extension. A set of metal sealing strips are included with this fireplace which will extend the full width of the hearth extension. Overlap the strips slightly where they meet in the center. The minimum depth of the sealing strip is 3". See figure #3, page 5 and figure #9, page 10. A sand-cement grout may also be used between the hearth and an on-site-constructed hearth extension.

NOTE: Installation and/or repair of this unit should only be done by a qualified installer.

This appliance has been tested to and complies with U.L. Standard 127(1999) and CAN/ULC-S610-M87. Installation must conform with local building codes, or in the absence of local building codes, with the NFPA 211 Standard for Chimney, Fireplaces, & Vents, CAN/CSA B365.

A. SPECIFICATIONS. See Figure 1.

| Height   | 49-1/2" |
| Width    | 41"     |
| Depth    | 22"     |
| Flue Size| 8"      |
| Hot Air Ducts | 8"  |
Minimum clearance to combustibles:

Unit back to wood enclosure - 1/2"
Unit sides to wood enclosure - 1/2"
Unit door to an adjacent wall - 16"
Heat vents to ceiling - 10"
Top of grill opening to a mantel (using both 8" heat ducts) - 6"
Top of grill opening to a mantel (heat ducts not used) - 11"

CAUTION: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.
B. PREPARE THE OPENING

1. Place the unit in the desired location. This unit may be placed on any flat combustible or non-combustible floor surface without carpeting or linoleum. A minimum depth of 22-1/2", width of 41", and height of 49-1/2" plus the hearth height is required for installation. See Figure 2A.

**NOTE:** A non-combustible hearth extension equivalent to 3/8" millboard (R=.75, C=1.3, K= 0.5) must be used. If the unit is to be installed without a raised hearth, it 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, it must extend 16" in front of and 8" beyond the sides of the fuel opening. See Figure 2B.

**Sealing Strip:** A non-combustible sealing strip must be installed and centered under the fireplace and hearth extension. A set of metal sealing strips are included with this fireplace which will extend the full width of the hearth extension. Overlap the strips slightly where they meet in the center. See figure #3, page 5 and figure #9B, page 10. The minimum depth of the sealing strip is 3". A sand-cement grout may also be used between the hearth and an on-site-constructed hearth extension.

**NOTE:** If using the optional fan kit run 115V wiring into the lower left of the unit (a knockout is provided). The insulation must be cut away.
C. CHIMNEY & VENTING INSTALLATION

CAUTION: The bottom grill must be allowed to open. Do not place the unit in a manner that would obstruct this grill. See Figure 3.

NOTE: Recommended chimney systems are 8" HT Double-wall insulated pipes, such as Dura-Vent, Metalbestos, Security, Metal-Fab, or American Metal Products. Hussong Mfg Co Inc does not recommend the air-cooled chimney system.

IMPORTANT: Purchase the appropriate anchor plate with your chimney system. Sealant and screws for attaching the anchor plate to the fireplace are included. See Figure 4.

1. Place a bead of sealant under the chimney anchor plate and push the plate collar into the fireplace flue. See Figure 4. Secure with metal screws. Connect the first chimney section per the manufacturer's installation instructions.
1. Install the chimney in accordance to the chimney manufacturer's installation instructions. The chimney must be a minimum of 10' tall above the fireplace and must extend a minimum of 3 ft. above the highest point where it passes through the roof and at least 2 ft. higher than any portion of a building within 10 ft. See Figure 5A & B.

**CAUTION:** A straight chimney system is the preferred method. A maximum of 30 degree elbows are approved for use with this unit. Follow manufacturer's suggested clearances to combustibles.
2. This unit requires an outside air source for combustion. This should be connected before framing the unit in.
   
   a) Connect 4" 30 gauge, (or heavier), galvanized pipe to the adapter.
   
   b) Run pipe to the nearest outside wall. Connect sections with metal screws. DO NOT use flex aluminum outside of the chamber.

   **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.

   c) If it is necessary to run the pipe for more 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. Duct the shortest possible way. **DO NOT** terminate in the attic or into a 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.

   **NOTE:** A closure vent (#940) 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 air transfer into the home. We recommend the use of this vent on all Kozy Heat installations.

3. Optional heat outlet ducts may be vented into the same room as the fireplace or may be vented to other rooms. Venting should be completed before framing the unit in. An optional duct kit is available from your dealer and includes the necessary adapters and vent grills. A maximum run of 10' is recommended.

   **CAUTION:** Use ONLY Kozy Heat duct kit #669. Use ONLY 8" vent pipe, do not reduce the size. Leave a 2" clearance to combustibles.

   **CAUTION:** Do not terminate the heat register outlet covers below the hot air ductwork outlets to prevent a heat sink - **Fig. 6.**

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**FIG. 6**

**CAUTION:** Do not terminate the heat register outlet covers below the hot air ductwork to prevent a heat sink.
D. HEAT DUCT KIT INSTALLATION

Your optional #669 heat duct kit includes 2 each of the following:

1. Adaptor Rings - (C)
2. Extension Sleeve - (F)
3. Wall Thimble - (H)
4. Grill Cover - (I)

NOTE: Kit #669 does not include 8" B-Vent components D and E above. These are purchased through your dealer.

When running the pipe through a wall, the thimble shield must be used.

Using Figure 7 as a guide:

a) Using a utility knife, cut the insulation (A) away from the 8" holes on top of the unit (B).
b) Place an adaptor ring (C) into the hole and bend the tabs back to secure in place.
c) Connect 8" 'B' vent pipe (D) to the adaptor ring and secure.
d) Connect additional pipe sections, and/or elbows (E) to the desired length.
e) When passing through the wall termination install the thimble (H), and extension sleeve (F) to prevent heat transfer.
f) The grill covers (I) are attached upon completion of the wall.

NOTE: Thimbles should terminate 10" below ceiling level.

NOTE: The maximum length of the ducting run is not more than 10' in any direction. DO NOT run the ductwork downward, this will cause a heat sink.
E. FAN KIT INSTALLATION

**INSTALLATION OF THIS FAN SHOULD BE DONE ONLY BY A QUALIFIED INSTALLER**

**NOTE:** If a fan is going to be installed, the wiring must be done prior to enclosing the sides of the unit.

Your optional fan kit includes:

1. Fan assembly with 2-110 CFM fans and limit switch already mounted.
2. Components Package (Includes: Speed control with nut & knob*, Receptacle, 2" cover, (2) nuts.)

*NOTE: To wall-mount the speed control, you will need to purchase: (1) Electrical box, (1) Cover / switch plate

**NOTE:** Code approved line voltage wiring 16 gauge or better must be used when wiring this system.

**NOTE:** Place the temperature control switch on the bottom of the firebox, approximately in the center.

**NOTE: The lower grill must be removed to install this fan kit.**

1. Slide the left fan (without receptacle) through the lower grill opening and place over the (2) left mounting studs located towards the back of the unit.
2. Slide the right fan (with receptacle) through the lower grill opening and place over the (2) right side mounting studs located towards the back of the unit.
3. Place nuts on mounting studs and tighten.
4. Plug fans together by inserting the three-prong fan cord on the left fan assembly into the receptacle in the right fan assembly.
5. Install an electrical box and mount the speed control on a wall, if desired.
6. Run 115V wiring (with ground) through the romex connector installed in the electrical box on the left side of the unit and wire to the receptacle.
7. Place the cover on the electrical box (in the side of the unit) and secure with screws.
8. Place the temperature control switch on the bottom of the unit, as close to the center as possible.
9. Plug cord into receptacle in the electrical box.
10. Turn on/off speed control clockwise until it clicks.

**FIGURE 8**
NOTE: If the optional speed control is used, the fan will not operate unless the speed control has been turned on. Adjust fan to desired speed while it is running.

NOTE: The fan will not turn 'on' until sufficient heat is applied to the temperature control switch. The fan will turn 'on' and 'off' automatically when the fireplace heats and cools.

NOTE: This system, when installed, must be electrically connected and grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-Current edition or the Canadian Electrical Code, CSA C22.1.

F. FIREPLACE FRAMING & FACING

1. Frame in the fireplace. See Figures 9A & 9B. Maintain the necessary clearances to combustibles. The framing materials should not come in actual contact with the fireplace. If installing a mantel, (a combustible mantel may be used) maintain a 6" clearance to the upper grill if using both hot air ducts and 11" clearance when no hot air ducts are used. The mantel should be no more than 6" deep.

2. Complete the fireplace front.

NOTE: The fireplace may have an exposed face, or may be covered with a surface material. This material MUST be non-combustible in nature from the bottom of the unit to 6" above the upper grill. Brick, tile, marble, or stone may be used. This material MUST NOT come in direct contact with the unit or cracking of the face materials will occur.

Do not place the facing or other surface materials closer than 3" from the unit door, to allow adequate room for opening the doors. Allow adequate space from the chimney damper handle to the brick to easily turn the handle.

CAUTION: If using "thin" brick a non-combustible facing material such as rock board must be used in front of the unit face. This facing must not be attached to the unit. See Figure 10 for proper cutting diagrams.
If installing with an exposed face, or using "thin brick", place the facing material behind the fireplace face flange. See Figure 11 for proper clearances. Exposed face installations should now go to Section G, page 13.

**NOTE:** The facing material should overlap the side framing studs approximately 1/4"-3/8" in order for the outer face of the unit to cover the sheetings edge.

3. Lay the face brick in front of the fireplace (do not tie the brick to the unit).

4. At approximately 11 brick courses high (depending on the brick size) lay the optional arched lintel iron on the brick (do not tie to the fireplace). See Figure 12.

**CAUTION:** Do not lay the brick closer than 3" to the doors or it will hinder their opening.

**NOTE:** If using a straight lintel, the lintel would be placed approximately 13 courses high.

**NOTE:** A grill extension (part #749) **must** be used to extend the grill out even with your brickwork. This may be ordered through your local dealer.
5. If using brick facing, it will be necessary to lengthen the damper rod to allow for the extra depth of the brick facing. To lengthen: See Figure 13.

a) Reaching into the opening of the upper grill area, loosen the wing bolt located near the face of the unit. Pull the square damper rod out to the necessary length. The rod should extend 1-1/2" beyond the facing material to allow for the damper handle and "finger room".

b) Re-tighten the wing bolt.

6. Soldier brick may be used in place of the upper grill **ONLY** under the following conditions:

A. The equivalent air flow of the upper grill must be maintained. Approximately 140 square inches.
B. To achieve the required air flow **BOTH** 8" heat ducts must be used as well as the soldier brick. See figure 12 above.

**CAUTION:** If the heat ducts are not used in conjunction with the soldier brick application, the unit will overheat and a fire could occur.
G. COMPLETE THE INSTALLATION

1. Install the grills.

Upper Grill
a) Line the rods of the grill up with the upper holes.
b) Place the rods in the holes and push up until the bottoms of the rods clear the face.
c) Place the bottom of the rod into the lower hole and release. The grill will set down into place.

Lower Grill - see Figure 14
a) The lower grill is attached to the hinges (A) located at the bottom of your unit.
b) Remove the 1/4" nuts (B) from the lower grill assembly.
c) Slip the bolts through the hinges (A).
d) Re-attach the 1/4" nuts (B).

The grill is now in place.

![Image of grill installation]

FIG. 14

2. Install the firebrick. See Figure 15.

a) Starting in the back of the unit, place five firebrick under the firebrick brackets (1).
b) Using the same method, place three firebrick on each side (2).
c) Place the bottom firebrick in using the diagram as a pattern (3).
d) Place five firebrick (5) into the angled brick bracket (4). These firebrick are positioned at a 45 degree angle. Leave a 1-1/2" space on each end.
e) Place the stainless steel firebrick retainer (6) over the top edge of the angled firebrick and rest the ends on the brackets (7).

3. Install damper and door handles.
PARTS LIST

1. Door Frame (Arched Door Shown)  
2. Pyroceram Glass  
3. Intake Damper Handle  
4. Chimney Damper Handle  
5. Heat Outlet Grill  
6. Hot Air Ductwork  
7. Type HT Chimney  
8. Hot Air Duct Cover  
9. Anchor Plate  
10. Header Stand-off  
11. Outside Air Inlet  
12. Arched Lintel Iron  
13. Firebrick Lining  
14. Lower Grill
H. FIREPLACE OPERATION

This fireplace system uses outside air for combustion. The air is drawn into the unit from outside your home to provide oxygen for the fire. This eliminates robbing valuable oxygen from your home and starving other fuel burning appliances of combustion, ventilation, and dilution air.

Kozy Heat's air tight door system seals the fireplace eliminating heat loss and allowing you to completely control your fire. This gives you maximum heat potential, using a minimum of firewood to produce this heat. This is accomplished by controlling the burn rate with the inlet air control and the damper control.

The Kozy Heat fireplace heating system creates heat for your home by a convective air flow through the heat chamber that is constructed around the fireplace. Room air is drawn in through the lower grill, the air then circulates upward around the fireplace as heat radiates off the fireplace. This heated air exits the chamber through the upper grill area back into the room. Air can also be ducted to another room through the use of the heat duct kit.

An optional blower increases the circulating air flow.

FOR USE WITH SOLID FUEL ONLY. Do not use a fireplace insert or other products not specified for use with this product.

_How to use your Kozy Heat Zero Clearance Fireplace_

1) Open both dampers counter clockwise until they stop.

**NOTE:** The combustion air is controlled by the damper control closest to the door level and the exhaust damper is controlled by the damper control closest to the upper grill.

2) Place two logs (3" to 6" diameter) into the unit with the ends front to back and approximately 12" of space between them. Crumble a few pieces of newspaper (or use small kindling) and lay it between the logs. Now lay 2 to 4 pieces of wood (small) across the first two logs (bridging over the kindling.)

**NOTE:** Build the fire directly on the firebrick. Do not elevate the fire or use a grate.

3) Build the fire no closer than 6" from the front of the unit.

4) Light paper and kindling with matches.

**CAUTION:** Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or freshen up a fire. Keep all such liquids well away from the fireplace while it's in use.

5) Close doors against latch holding open about 1/2".

6) When the fire is burning well on kindling, add larger wood.

**NOTE:** Slowly load your firebox with average sized split wood. Approximately 40-60 pounds over a period of one-half hour. **DO NOT OVERFIRE**, this could damage the unit and void the warranty.

7) Close doors and latch.

**NOTE:** Fireplaces equipped with doors should be operated only with 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.
8) After large logs are burning, close draft and damper to create desired fire level.
   a) The chimney damper (top knob) is used to hold heat with the firebox, providing more heat for your home. When completely closed it will allow a small amount of smoke and gas to escape. Adjust this knob to the desired setting first. The further closed the damper, the more heat produced per log.
   b) The intake damper (bottom knob) is used to control the burn rate. Adjust this knob to the desired setting, usually allowing a flame level of about 4" maximum.
   c) Each fireplace installation is different. You will need to experiment to determine the best setting for your fireplace and chimney to achieve the best fire and heat.

   NOTE: Your zero clearance fireplace is equipped with a secondary burn chamber providing a cleaner, more efficient burn. As smoke and gases discharge from the logs, a second air chamber introduces combustion air and these gases are automatically burned again, reducing emissions and increasing efficiency.

9) When adding wood, first open the chimney damper, wait 2 or 3 minutes, then open the doors and add wood. This will prevent any smoke spillage from entering your home.

10) Always leave the intake damper slightly open. This will help keep the glass doors cleaner.

11) When disposing of ashes always place ashes in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in the soil or otherwise locally dispersed, they must be retained in the closed container until all cinders have thoroughly cooled.

Precautions

1) Do not burn waste paper.

2) Except when loading, the fireplace may not be operated with the doors open.

3) Do not obstruct room air inlet and outlet air grills. This can cause the unit to overheat.

4) Do not store clothing, furniture or combustibles within 36" of the unit.

5) The chimney should be inspected monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire. We recommend a professional chimney cleaner inspect and clean the chimney at least once annually.

6) Burn only dry seasoned wood. Extremely hard woods, such as oak or ash can require up to two years of drying time to be adequately dried.

7) For further information on using your heater safely obtain a copy of the National Fire Protection Association publication "Using Coal & Wood Stoves Safely." NFPA No. HS-10-1987.
**Maintenance Requirements**

The chimney should be inspected monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire. Inspection can be accomplished from the top of the chimney, or from inside the stove by removing the chimney baffle. The baffle may be removed by removing the 2 - 1/2" nuts holding it in place. We recommend a professional chimney cleaner inspect and clean the chimney at least once annually.

Should the glass become discolored with creosote clean on a regular basis. We recommend oven cleaner or a cleaner specifically designed for fireplace glass.

DO NOT use abrasive cleaners. Clean only when the glass is cooled.

In the event of glass breakage, due to overfiring or a log falling against the glass, let the unit cool completely. Do not use the fireplace with broken or cracked glass. Replace only with Kozy Heat part #150375.

To remove broken glass:

1. Open the door and lift off the hinges.
2. Place the door (right side down) on a flat surface.
3. Remove the glass clips and carefully remove the broken pane.
4. Properly discard the broken glass.

Follow the directions included with your replacement glass for proper installation.

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## I. TROUBLE SHOOTING GUIDE

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
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| Smokes back through the door opening when the doors are opened, when first starting or when the fire dies down. OR Smokes out the doors or the intake pipe when the wind is blowing from a certain direction. | A. Negative Pressure  
B. Chimney damper not opening.  
C. Chimney not high enough.  
D. Chimney diameter not large enough.  
E. Cold wind cooling poorly insulated chimney.  
F. Chimney cap too close to flue termination.  
G. Adjacent structures, trees, etc. too close to chimney, remove or raise chimney.  
H. Screen on chimney top plugged, or too fine.  
I. Restriction within chimney, creosote, mortar, leaves, bird nest, etc.  
J. Ice build-up on chimney top. |

| The unit won’t generate enough heat. | A. Wood is not seasoned or it is wet from snow or rain.  
B. Not enough wood being used. 40-60 lbs. of wood is necessary for optimum heat.  
C. Not enough grill opening for heat to come out or for air to get in. |

| There is a terrible odor coming from my stove. | A. New paint. This odor should not last past the third burn at a moderate burn rate. |
Replacement Parts

The following replacements parts and optional accessories are available through your local dealer. Please contact them for availability and pricing.

**Gas Log Conversion Kit:**
KLS-2K   Gas Conversion Kit - Natural Gas
KLS-2K1  Gas Conversion Kit - LP Gas

**Heat Duct Kit:**
669     Heat Duct Kit - (for both heat ducts) - 8” B-vent pipe not included.

**Grills & Grill Extension:**
749     Grill Extension
753     Black Upper Grill
754     Black Lower Grill
756     Brass Upper Grill
757     Brass Lower Grill

**Optional Accessories:**
600-1   Fan Kit - 220 CFM
628     Arched Brass face trim (#231ZC)
730-045 Outer Brass face trim
997-1   Arched Door Trim (#231ZC)
940     4” Air vent closure
945     4” Air vent non-closure
615     Lintel Iron (#241ZC)
616     Arched Lintel Iron (#231ZC)
620     Expanded Metal Face (#231ZC)
620-1   Expanded Metal Face (#241ZC)
900-100 Wonder board Template (#231ZC)

**Glass & Glass Parts:**
150-375 16 1/2” x 11” Glass (#231ZC)
150-250 12” x 14” Glass (#241ZC)
200-160 Glass Clips w/ screws (8)
808     Glass Gasket Kit

**Handles:**
500-302 5/16” Wood Cone Handle

**Trim Parts:**
140-707 Door Frame Spring Clips (4) (#231ZC)

**Fan Parts:**
404-4   Limit Switch Assembly
600-085 Speed Control

**Duct Kit Parts:**
300-609 Wall Thimble
300-610 Grill Cover
300-612 Extension Sleeve
300-613 Adaptor Ring

**Miscellaneous Parts:**
300-351 Open/Close Choke Cable
300-601 Firebrick
300-604 12 oz. Touch-up Paint
111-120 Stainless Steel Firebrick Retainer

**Door & Door Parts:**
807     Door Gasket Kit
500-405 Banger Rope
300-349 Black 1 1/2” Door Pins (4)

Manufactured by:
Hussong Manufacturing Company Inc.
204 Industrial Park Drive
Lakefield, MN 56150
Ph:  507-662-6641
Fax: 507-662-6644

www.kozyheat.com

MODELS #231 ZC & #241 ZC
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