

CENTURY MANUFACTURING

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- 1. Before lighting read operation instructions.
- 2. WARNING: Build flash fire daily during heating season to reduce creosote build up in flue. See operations manual.
- 3. ALWAYS open main damper before opening doors to allow normal drafting, close doors before closing main damper.
- 4. Install only according to instructions, any deviation will void warranty.
- 5. DO NOT put live coals in ash box, only burnt cold ash.
- 6. Do not use chemical cleaner for the removal of creosote.
- 7. Install only per installation and operation manual. Standoff on unit including door and heat dump must be carefully adhered to.

Approval
National Research Board
NRB-113

BOCA

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United States Patent #4,042,160 Canadian Patent #1,048,362

Century Manufacturing

P.O. Box 1744

Joplin, MO 64801

(417) 624-1469

WOODBURNING FIREPLACE

Installation Instructions

Model CO-36-0-F or R

(F-Front Ash Dump---- R-Rear Ash Dump)

GENERAL INFORMATION

INTRODUCTION

Instructions cover selection of proper location for your fireplace, setting of basic unit, flue pipe and accessories, framing dimensions and details, warm air convection heat ducts, and installation with forced air heating system.

LOCAL CODES

When installing the Century factory built fireplace system, local building codes should be consulted. Fireplace installation must be in compliance with local codes.

CLEARANCE TO COMBUSTIBLES

- A. Floor--The fireplace may be placed directly on a combustible floor, that is protected with the Insulation Heat Shield furnished with the unit.
- B. Walls (Enclosure) -- Framing may be placed directly against the side, back, and front spacers of the unit.
- C. Walls (Room) -- Walls should be a minimum of 24" from glass door opening (Drawing B).
- D. Convection Heat Ducts--require a 1" clearance which is maintained by the attached spacers. CAUTION: ALL CLEARANCES MUST BE MAINTAINED. Air temperatures emitted from the convection heat ducts may exceed 500°.
- E. Chimney-The Metal Fab Chimney which comes with your fireplace unit requires a minimum of 2" clearance. There is no other chimney approved for use with this unit. If additional chimney is required, it must be Class A Vent Pipe, manufactured by Metal Fab, Inc., Wichita, Kansas, and available from your Century dealer.
- F. Combustion air duct and Ash door extension--Framing may be placed directly against insulated ducts and extension. Insulation is furnished with each kit.

CHIMNEY SYSTEMS

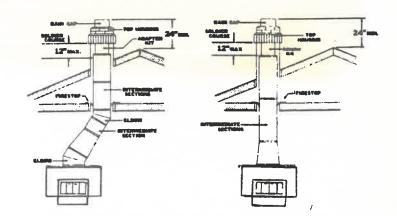
Century Fireplace systems are designed and code listed for use only with 10" (Inner pipe diameter) chimney sections, offset/return elbows, fittings, and

NOTE: Drawings and Illustrations NOT to Scale Revised August 20, 1980

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CHIMNEY SYSTEMS (CONT)
roof termination devices. Century
Fireplace systems are listed for 48'
maximum height and 17' minimum height.
This measurement includes fireplace,
flue pipe, and the termination cap. A
30° offset elbow, angling in any
direction, may be the first piece of
flue pipe off the top of the fireplace. Enough flue pipe for minimum
height is included with your unit.
Additional pipe and firestops may be
purchased from your Century dealer.



DIMENSIONS FOR FRAMING (SEE ILL. B & C)

CAUTION: During operation of the Century Fireplace, convection heat outlet grill temperatures may exceed 200°F. These grills are mounted 72 1/2" from the floor.

- A. The convection heat duct is shipped ready for installation, flush with the surface of a finished wall. The attached plaster stop is provided on the convection heat duct which maintains a 1" clearance. Framing may be made directly to the plaster stop spacer.
- B. Spacers are attached around the face of the glass door opening. This 1" clearance must be maintained to allow proper cooling of the face of the unit (See III. C-side).
- C. Furnished with the unit is the convection heat grill. This grill is attached to the center of the unit in studwall 2" below ceiling. The convection heat grill allows additional heat build up in chase area to be returned to the room for heating (See Ill. C).
- D. It is recommended for installation with forced air furnace or separate blower duct system, with the outlet duct system to be insulated with a material capable of withstanding a temperature of 250°F, such as 1/2" fiberglass. It is also recommended that each joint be wrapped with duct tape to prevent heat loss.

CENTURY INVENTORY LIST

The following items are packaged with the firebox kit:

- A. Hearth--ashbox
 - *1. Rear stop hearth (Drawing A)
 - *2. Firebox gasket (Drawing A)
 - *3. Ash dump (Drawing A)
 - 4. Insulation Heat Shield (Drawing A)

INVENTORY LIST (CONT)

- B. Firebox
 - *I. Glass doors attached
 - 2. Convection heat ducts top (Drawing B)
 - 3. Cold air returns transitions (Drawing B)
 - 4. Grills for return air bottom
 - 5. Chase heat grill (Drawing C & D)
 - 6. Combustion air take off
 - *7. Firebrick bottom
 - 8. Hearth extensions
 - *9. Ash dump door attached for front or rear
 - *10. Ash dump installed in unit
- * Attached to unit before shipping

NOTE: Carefully inventory and check all parts of your fireplace system. Assure that no freight damage or loss has occurred. Read each step of these installation instructions before starting to assemble. Read separate instructions packed with termination selected and consider each item in the Century Fireplace system inventory before you begin.

INSTALLATION INSTRUCTIONS

CAUTION: UNIT MUST BE COVERED BEFORE AND DURING FRAMING TO PREVENT SAWDUST AND OTHER COMBUSTIBLE MATERIALS FROM COLLECTING ON THE UNIT.

STEP 1--SELECTION OF A WALL

Select a wall with a minimum width of 10' to accommodate your Century unit. Pay close attention to the minimum side clearance specified in Drawing B. If the Century unit is to be installed with central duct system, a location which will allow easy hook up to the duct system is desirable. Remove carpet or other material from sub floor and secure 4' x 8' Insulation Heat Shield on floor.

STEP 2--SETTING YOUR ASH BOX

The ash door is designed for front or rear discharge. For rear discharge, use Kit #1214 to connect ash box to your outside wall. Insulate the extension prior to framing with insulation supplied with the extension. Attach rear support stop in slot on the rear of ash box. (Drawing A)

STEP 3--COMBUSTION AIR

The Century unit is equipped with two combustion air ducts located at the rear of the unit, which should be connected to an outside air source for the most efficient operation. Drawings A & B show dimensions for wall cuts. Combustion air may be drawn from outside, from crawl space, or from inside the living space the latter being the least efficient method. For exterior cold air, install

INSTALLATION INSTRUCTIONS (CONT)

Kit #C-5 through the wall ready to be clamped to the combustion air outlet.

CAUTION: Combustion air must not be drawn from a garage or other areas where combustible liquids may be stored.

STEP 4--INSTALLING YOUR DUCTS

The Century unit is designed for convection heat or to be installed to a central duct system. (Unit is not to be used in application where ceiling is less than eight feet).

A. Convection heat:

- 1. Install bottom duct transition by use of drive cleat attached to the transition. (Drawing B)
- Attach top convection heat ducts with screws to the top of unit. (Drawing B)
- 3. Attach bottom inlet air grills to hearth extensions. (Drawing A)
- Install chase heat grill above the unit 2" from ceiling, in wall. (Drawing C & D)

B. Duct Installation Central System:

Installation of duct in crawl space or basement

- A. Add duct work package 2210-1. This duct extends beneath the floor to which the standard transition, which comes with your unit, is attached.
- B. Add duct work package 2210-2. This kit is the same as 2210-1 except that it includes two bypass valves and a connecting duct, which allows isolation of the Century unit from the duct system while using your central air conditioning unit. Installation drawings are with the duct package.

STEP 5--MANTLE

Wooden mantle may be installed from 38" to 46" from the steel hearth.

STEP 6--CHIMNEY FLUE DAMPER

Check damper operation to assure damper opens and closes easily and that damper is able to be locked in the closed position.

STEP 7--CHIMNEY ROUTE

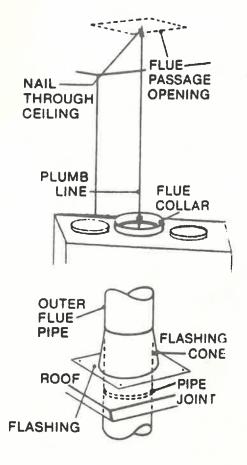
Cut and frame openings for chimney route up and through ceiling and roof construction or into outside chase. Roof framing must be 2 x 4's or 2 x 6's securely nailed to support roof flashing. NOTE: On vertical flue pipe runs, a simple technique

STEP 7--CHIMNEY ROUTE (CONT)

for aligning chimney passages is to plumb from ceiling level directly above hole which has just been completed. On straight flue pipe run from top of fireplace, plumb to center of flue collar from ceiling directly above, drive nail through ceiling from below to mark position, and then mark and cut passage from above ceiling (a-round nail). Thus you can always work "from the top down."

STEP 8--ROOF FLASHING

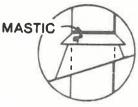
Center roof flashing carefully over roof passage hole. Nail temporarily into position, so flashing will not slide off center. Make sure proper alignment exists with flue pipe below, and that flue pipe will fit in fully vertical position as it passes through flashing. Check vertical alignment of outer flue pipe section with level. If necessary, adjust position of flashing to allow proper vertical alignment of flue pipe. Secure flashing in place permanently by nailing along perimeter onto roof construction. If shingled roof, cover the side and upper flashing with roofing material, but cover the roofing with the lower part of the flashing. Cover nail heads with mastic.

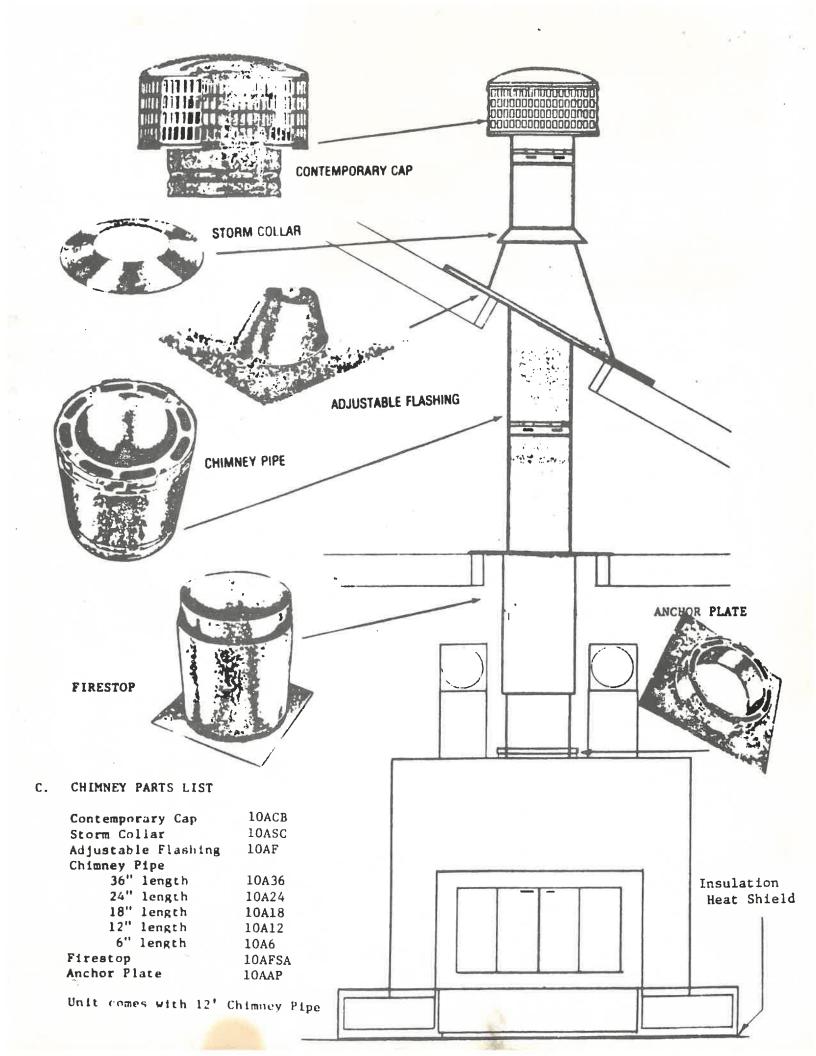


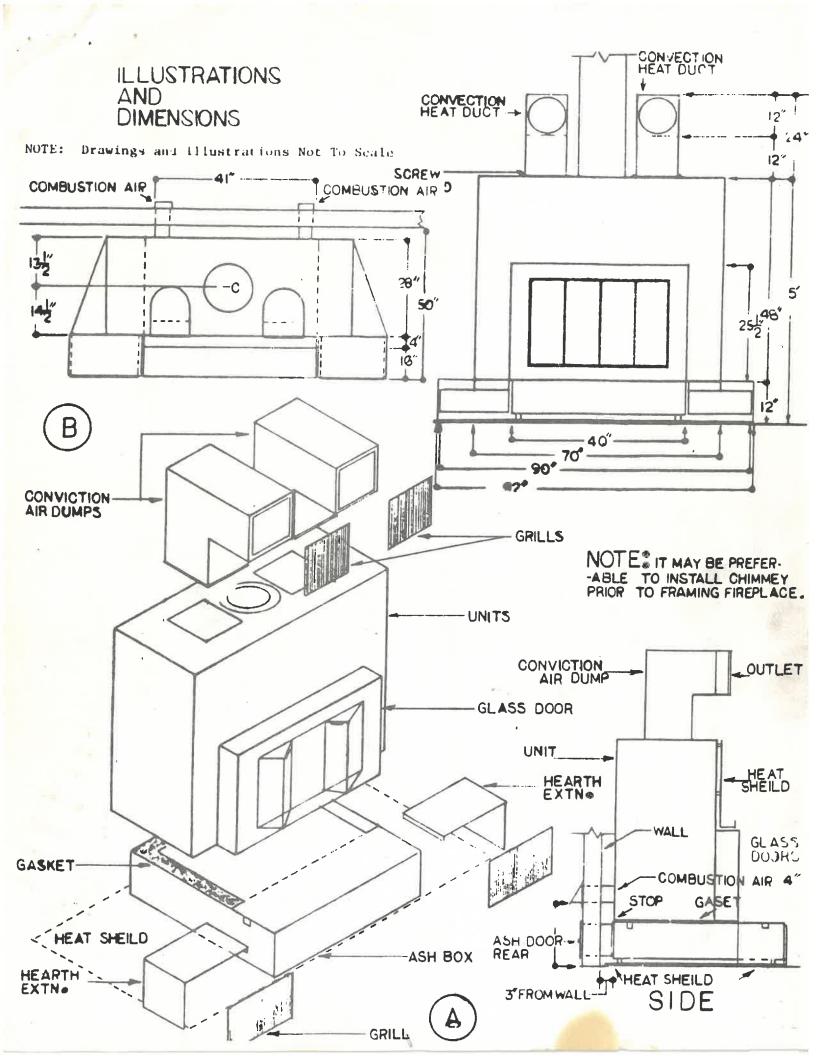
STEP 9--STORM COLLAR

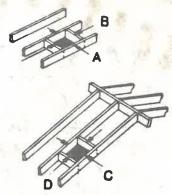
If flashing assembly includes a storm collar, as with conical style flashings, slide storm collar over outer flue pipe section, insert storm tab in slot, pull tight, and bend tab back over slot.

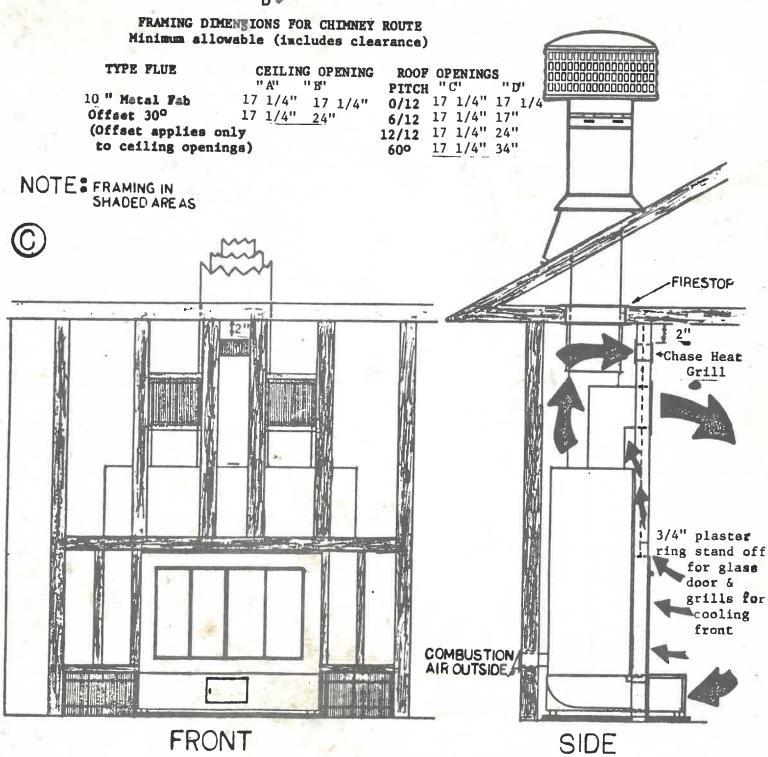
Seal storm collar to outer flue pipe with mastic bead around entire circumference of pipe. Also add extra mastic where storm collar meets flashing and to the tab/slot area to seal completely against water penetration. NOTE: Align storm collar with top surface of flashing.









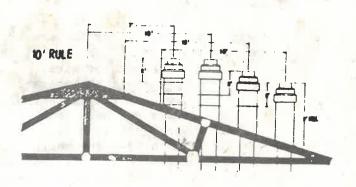


STEP 10--CHIMNEY HEIGHTS ABOVE ROOF

See separate installation instructions packaged with each termination.

NOTE: Extension of chimney above roof, as required by UBC and NFPA 211, shall be at least 3' above the highest point where it passes through the roof of the building and also shall be at least 2' higher than any part of the building (Including roof) within 10'.

The amount of "effective flue length" of the termination devise is used in calculating the 3' and 2-feet-in-10 feet measurements above.



STEP 11--COMPLETION OF FRAMING

Framing around your Century Fireplace is to be constructed of 2 x 4's which should be installed flat per Drawing C. It is important to place plaster rings for convection heat grill and upper heat grills in your framing per Drawing C. After completion of framing, your enclosure is ready for installation of grills and the final wall finish of sheetrock, paneling, man-made stone or brick, etc.

DO NOT COVER STEEL HEARTH WITH COMBUSTIBLE MATERIAL. THIS COVERING MUST BE OF NON-COMBUSTIBLE MATERIAL SUCH AS HEARTH STONE, OR OTHER NON-COMBUSTIBLES.

DO NOT alter plaster rings around doors or convection heat grills and standoffs. These minimum openings are required for cooling.

THERMOSTAT HOOK-UP

A. Thermostat hook-up for furnace equipped with A/C sub base.

Material required: 1 Honeywell T822D-1024 or equal heating thermostat and 12" of #18-2 thermostat wire.

Procedure to install thermostat:

(See Drawing E)

- 1. Remove existing thermostat face from sub base.
- 2. Remove sub base from wall.
- 3. Disconnect wire from terminal G.
- 4. Attach 18-2 thermostat wires to Honeywell T8220-1024 or equal.
- 5. Make hole in wall approximately 4" from existing thermostat.
- 6. Route the end of the 16-2 thermostat wires through hole and out the hole where the existing wires come through the wall.
- 7. Connect one of the 18-2 thermostat wires to terminal G. Connect the other to the wire which was disconnected from terminal G originally (use a small wire nut to secure the joining of these two wires).
- 8. Replace the original sub base to wall and attach thermostat.
- B. Thermostat hook up for installation with existing heating only thermostat (See Drawing F).
 - 1. Do not disturb existing thermostat.
 - Use thermostat with voltage and current rating capable of carrying the voltage and current of the blower motor. This will normally be a 110v, 15 amp thermostat.
 - 3. Locate the 110v thermostat beside the existing thermostat. Run a 12-2 romex wire from furnace control box to the 110v thermostat. Hook the black wire to one terminal, and the white wire to the other terminal of the thermostat. At the furnace, hook the white wire to the black wire of the furnace supply, and black wire to the blower motor lead.

CAUTION: The 110v thermostat must be on the same circuit as the furnace fan motor, otherwise it is possible to put 220v across the furnace components and damage them.

These methods allow automatic operation of the fan to remove heat from the fireplace without activating main heating system.

OPERATION OF THERMOSTAT

- A. Heating:
 - 1. On original thermostat turn the "on" or "auto" switch to "on."
 - Turn the "heat" or "cool" switch to "heat."
 - 3. Set the original thermostat at least 2° lower than second thermostat which was added.

OPERATION OF THERMOSTAT (CONT)

When the home reaches the temperature set on the second thermostat, the furnace blower only will come on. If the Century unit is not in use or is insufficiently fired to handle the home's heating requirement, the drop of two additional degrees turns on the original furnace.

B. Airconditioning cycle:

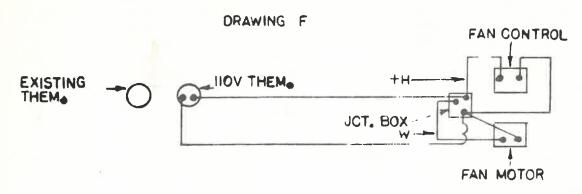
- 1. Turn the "on auto" switch to "auto."
- 2. Turn the second thermostat to 90°.
- 3. Turn the "heat cool" switch to "cool."

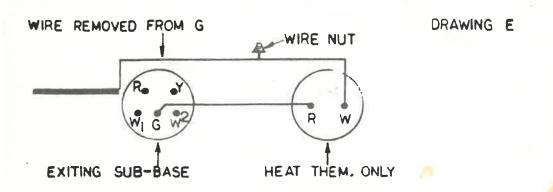
The fan will operate when the airconditioning is operating. If continuous fan operation is desired, turn the "on auto" switch to the "on" position.

EXAMPLE (HEATING):

Main thermostat set at $68^{\circ}F$, secondary thermostat set at $70^{\circ}F$. When temperature cools to $70^{\circ}F$, the furnace blower is turned on removing heat from your Century unit. After the home is heated, secondary thermostat opens shutting off furnace blower. The Century fireplace unit then automatically returns to a convection heating unit. In the event that the Century unit is not in operation, or fire is not adequate to maintain $70^{\circ}F$ in the home—and temperature cools to $68^{\circ}F$ —your standard furnace is engaged to supplement your heating requirements.

The recommended thermostat installation method allows automatic temperature control reaping all available heat from your Century unit before activating your standard furnace.





CONNECTING TO CENTRAL FURNACE OR DUCT SYSTEM

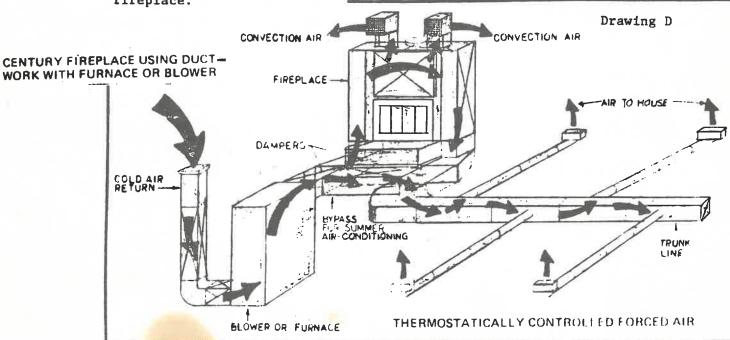
The Century Fireplace unit may be hooked directly to a central heating system not to exceed 175,000 BTU input or 2000 CFM blower (see Drawing D).

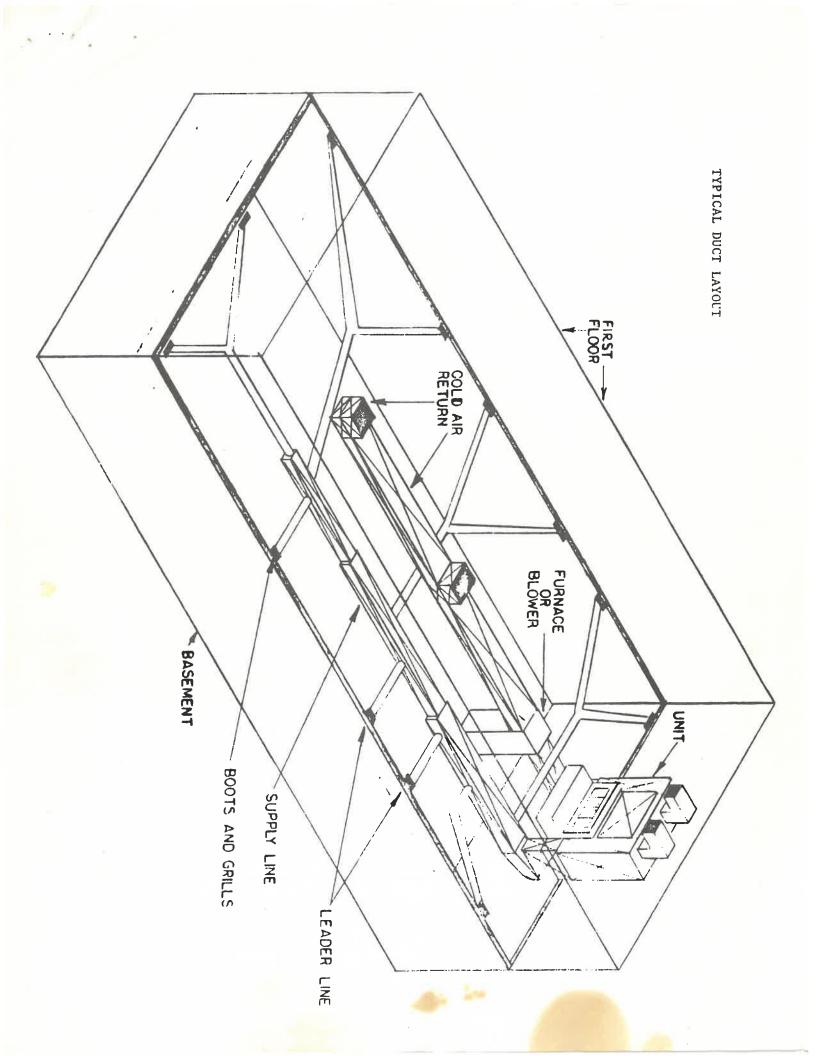
FURNACE/DUCT SYSTEMS

Static pressure drop through the Century unit is .14--this rating is at 2,000 CFM and air temperature of $76^{\circ}F$.

When attaching the Century fireplace to a central heating system the following instructions must be adhered to (see Drawing D).

- 1. Central furnace output duct must run to the Century fireplace.
- Air enters either bottom side of Century unit, flows through the unit, and exits from the opposite bottom outlet.
- 3. Extentions for the Century unit may be purchased from your Century dealer--Kit #2210-1--or you may purchase standard duct from supply house which measures 10" x 22" x your desired length.
- 4. Attach to the extensions the transitions which comes with your Century unit.
- 5. Attach the output side to master trunk line and distribute throughout the home.
- 6. In the event your system is equipped with a central air conditioning system, a manual bypass valve may be purchased from your Century dealer—Kit #2210-2--or be fabricated by a sheet metal shop. DO NOT run air conditioned air through unit because condensation will rust inner parts of the fireplace and reduce the life of your heat exchanger in the fireplace.







HOW TO BUILD A FIRE IN YOUR CENTURY FIREPLACE UNIT

- STEP 1--Open glass door and the main damper (open full) with combustion air dampers open. These are located on each side of the firebox near the front. They may be controlled with a fireplace tool.
- STEP 2--Place 2 small logs (approx. 3" diameter, 16" long) parallel to sides of unit approximately 1 ft. apart. Fill space between logs with paper, top paper with kindling. This aids in burning. Ignite the paper and shut the glass doors. Add larger sticks of wood (4" diameter) across the original logs to maintain fire.
- STEP 3--Continue to burn to heat firebox and to obtain approximately 3" bed of coals. Let fire burn down and spread coals to sides and back of the firebox.
- STEP 4--Add logs, main log in back, 4 or 5 smaller logs in front of that one, still maintaining fire to the back of the firebox. Allow wood to catch fire.
- STEP 5--Adjust combustion air dampers towards closed position. Close glass doors. Close main damper until unit smokes, reopen damper until smoking stops.
- STEP 6--If glass doors are opened for any purpose--such as adding wood--the main damper must be opened PRIOR to opening glass doors to prevent smoking.
- STEP 7--When loading the fireplace, load to the rear and put a full load of wood, not just one or two sticks. To control the burn, adjust the combustion air dampers.

ADDITIONAL TIPS ON FIREPLACE USE

- 1. For maximum efficiency, the Century fireplace should be operated at all times with the glass doors closed. Combustion air dampers should be towards closed position to attain desired heat output.
- 2. The firebox contains a firebrick floor; thus, you should not use a grate with your Century Fireplace unit. Research shows that building your fire at the back of the box on existing coals actually extends the burn time. Ash continues to burn long after initial burn appears completed. This method aids in complete burning of the wood. Coals should be stirred periodically with fireplace tools to burn all residue possible.
- 3. Proper care and "burn-in" of your firebox will prolong the period of enjoyment without maintenance. For the first fire, build a small fire and increase size to a normal fire to temper glass doors.

ADDITIONAL TIPS ON FIREPLACE USE (CONT)

- 4. A proper amount of combustion air is important for your fireplace. Regulation of the oxygen supply directly controls heat output from the Century unit. Reducing the oxygen will reduce the fire, therefore reducing the heat and prolonging the duration of wood burn. Close the air intakes after the unit has been heated, allowing only the amount of oxygen required to maintain the fire that is adequate to heat your home.
- 5. Fireplace use creates creosote build up in the flue chambers and in pipes. It is imperative that a flash fire be built on a daily basis to keep the chimney flue free of this build up. If the chimney is not flashed on a regular basis, large build ups of creosote can result in dangerous flue fires. To build flash fire the following procedure should be followed:
 - A. Open combustion air full open.
 - B. Load fire box approximately 1/3 full of dry kindling material.

- C. Close doors <u>immediately</u> after kindling material is ignited to prevent damage to glass doors.
- D. Do not close main damper.

INSTALLATION PROCEDURE FOR FRAME-IN-KITS 1002, 1102, 1202 (May be used for either 7 • 11 or Lytecaster trim)

INSTRUCTION SHEET NO.

NEW CONSTRUCTION

IMPORTANT NOTE

It is recommended you maintain a copy of the following instrctions for reference.

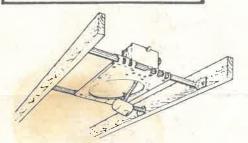


FIG. A 1. FRAME-IN



FIG B 2. CLOSE-IN



FIG. C 3. SNAP-ON



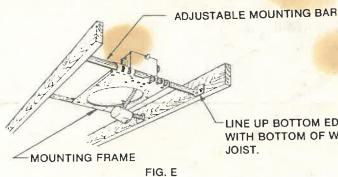
FIG. D 4. PUSH-UP

WARNING—(RISK OF FIRE) DO NOT INSTALL INSULATION WITHIN 3 INCHES OF FIXTURE SIDES OR WIRING COMPARTMENT, NOR ABOVE FIXTURE IN SUCH A MANNER TO ENTRAP HEAT.

1. FRAME—IN (Fig. A)

Fasten MOUNTING FRAME to wood joist. Line up bottom edge of ADJUSTABLE MOUNTING BAR with bottom of wood joist (Fig. E). Wire to supply leads.(For Cable, use built-in Cable Clamp in J-Box.)

NOTE: ADJUSTABLE MOUNTING BARS can be extended for 24" mounting. (For suspended ceiling, make certain that the bottom of MOUNTING FRAME is no higher than 1" above ceiling line (Fig.F)



LINE UP BOTTOM EDGE WITH BOTTOM OF WOOD

2. CLOSE—IN (Fig. B)

Install plasterboard or other dry type ceiling, as required. Hole in board can be cut either on the ground or after the board is nailed to the ceiling, using MOUNTING FRAME opening as cutting guide. (Make sure ROTO CLIPS are rotated out of hole area to cut.)

NOTE: For wet plaster ceiling, use Plaster Ring Accessory (order separately). No. 1960 for 1002 Frame-In-Kit. No. 1961 for 1102 Frame-In-Kit.

No. 1962 for 1202 Frame-In-Kit.

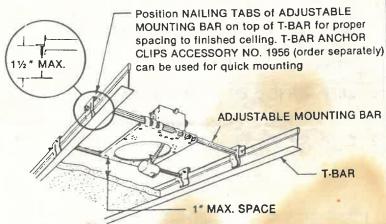
3. SNAP—ON (Fig.C)

4. PUSH-UP (Fig. D)

SEE SEPARATE REFLECTOR TRIM INSTRUCTION SHEETS.

U.S. PATENT NO 4,039,822 OTHER U.S. AND FOREIGN PATENTS PENDING.



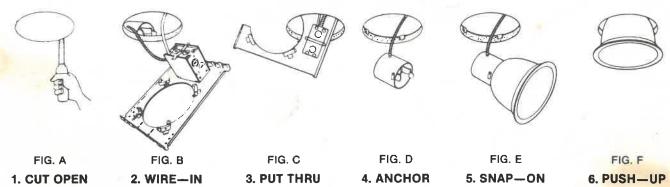


LIGITOLIE 2 JERSEY CITY, NEW JERSEY 07305 MONTREAL, QUEBEC, CANADA

INSTALLATION PROCEDURE FOR FRAME-IN-KITS 1002, 1102, 1202

IS: 1102 R0182

EXISTING CONSTRUCTION



1. CUT OPEN (Fig. A)

Use MOUNTING FRAME opening as template.

2. WIRE—IN (Fig. B)

Wire to supply leads. (For Cable, use built-in Cable Clamp in J—Box.)

3. PUT THRU (Fig. C)

- a. Remove ADJUSTABLE MOUNTING BARS
- Break off BRIDGE on MOUNTING FRAME as shown in Fig. G (break WEBS on SLOTS with cutting plier).
- c. Pass MOUNTING FRAME into CEILING as shown.

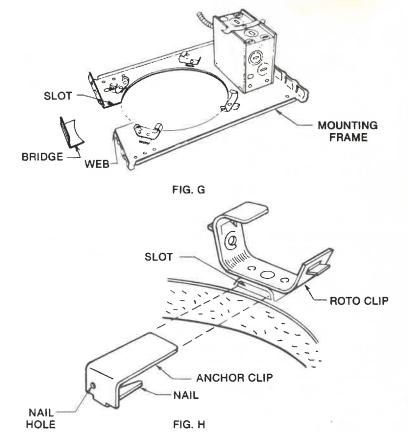
4. ANCHOR (Fig. D)

Use ANCHOR CLIPS supplied. Slide ANCHOR CLIP into SLOT underneath the ROTO CLIP (see Fig. H). Hold down MOUNTING FRAME tight against the ceiling, push the NAIL portion of ANCHOR CLIP into ceiling (Fig. 1). Use small nail through NAIL HOLE to secure ANCHOR CLIP to ceiling if desired. Install all (4) ANCHOR CLIPS.

5. SNAP—ON (Fig. E)

SEE SEPARATE REFLECTOR TRIM INSTRUCTION SHEETS.

6. PUSH—UP (Fig. F)



WARNING: USE ONLY REFLECTOR TRIMS PROVIDED BY LIGHTOLIER INC. USE OF OTHER MANUFACTURERS' REFLECTOR TRIMS VOIDS THE UNDERWRITERS LABORATORIES LISTING AND COULD CONSTITUTE A FIRE HAZARD.

(CAUTION-- Dampers Mandatory)

Air flow may be reversed

on #2, 3, 4

Note:

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