SURDIAC

COAL BURNING STOVES

HARMONY III - MODEL 086 65 31/11
BAYARD 312 - MODEL 086 65 33/13

INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS

Warning: If your stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation requirements in your area.

SAVE THESE INSTRUCTIONS FOR FUTURE USE AND REFERENCE.

THERMIC DISTRIBUTION EUROPE 5660 Couvin, Belgium

MADE IN BELGIUM BY EFEL

086653310A

INSTALLATION

WARNING:

- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
- READ ALL INSTRUCTIONS COMPLETELY BEFORE BEGINNING.
- INSTALLATIONS OTHER THAN THOSE SPECIFICALLY COVERED HEREIN HAVE NOT BEEN CONFIRMED BY TEST AND ARE NOT COVERED BY THE LISTING.
- UNIT MUST BE INSTALLED PER ALL LOCAL CODES. A BUILDING PERMIT MUST BE OBTAINED BEFORE INSTALLING.
- SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

The Harmony is designed so that you can attach the flue pipe in the rear vent position. **Note** that the mounting holes on the stove are tapped so no nuts are needed. Make certain that the gaskets on the flue collar and the round blank plate are properly seated in place before tightening the screws.
READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS.

SPECIAL NOTE:

The installation of a barometric damper is recommended for all free standing coal stoves, providing the installation is in a newly constructed chimney, free of creosote deposits. The barometric damper is an automatic device designed to regulate the draft in a heating appliance, which in turn, stabilises the chimney temperatures, lessening the potential of over-firing.

Do not place the barometric damper greater than 24 inches (610mm) above the unit. Excessive draft will lead to poor control of the burning rate and possible over-firing of the stove and damage to the cast iron firebox. Most barometric dampers are calibrated in inches of water column and can be set to draft requirements of -.03 to -.08 inches (7.5 to 20 Pa).

THE RECOMMENDED DRAFT REQUIREMENT FOR SURDIAC COAL STOVES IS NO LESS THAN -.05 AND NO GREATER THAN -.06 OPERATING YOUR STOVE WITH A DRAFT GREATER THAN -.06 CAN POSSIBLY CAUSE DAMAGE TO YOUR STOVE AND VOID YOUR WARRANTY.

STANDARD INSTALLATION:

Rear Vent- 24 gauge single wall pipe
Please refer to illustrations 3E and 3F.

1. Install a 6-inch diameter, 24 gauge black or blue steel pipe on the flue collar of the unit. Rotate the elbow so the open end is pointing straight upward.
2. Position the unit no closer than the minimum clearances to combustible materials? Check that no overhead cross members in the ceiling or roof will be cut. Reposition unit if necessary being careful not to move closer than the minimum clearances.

The minimum clearances to combustible materials are as follows: (in. (mm)). Local building officials may require greater clearances.

CLEARANCES INDICATED ARE MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS, AS DETERMINED BY TESTING METHODS. YOUR LOCAL BUILDING DEPARTMENT MAY REQUIRE GREATER CLEARANCES (i.e., MINIMUM 18" CLEARANCE FROM ALL INSTALLTATIONS SHOULD BE INSPECTED BY YOUR LOCAL BUILDING DEPARTMENT PRIOR TO INITIAL USE.

HARMONY

16" (406mm)	inches to the side wall as measured from the side of the unit.
24" (610mm)	inches to the back wall as measured from the back of the unit
15" (381mm)	inches to the side wall as measured from the corner of the unit *(corner installation)*
26.5" (673mm)	inches to the side wall as measured from the chimney connector
13" (330mm)	inches to the back wall as measured from the chimney connector
15.5" (394mm)	inches to the side wall as measured from the chimney connector *(corner installation)*

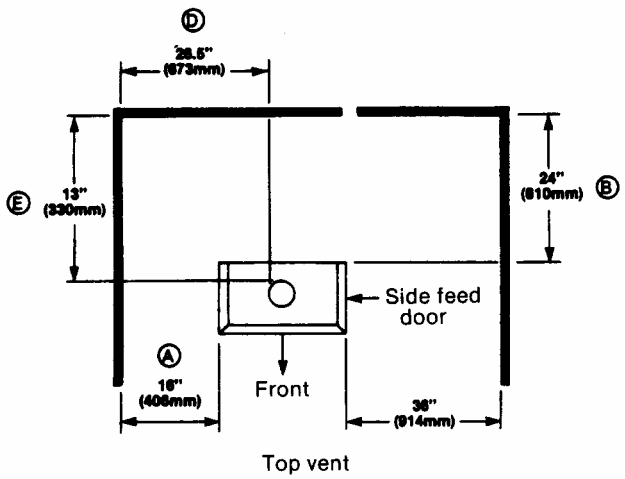

Illustration 3E. Rear Vent Installation (Harmony Coal Stove with Single Wall Pipe)

SPECIAL NOTE :

The 36 inch minimum clearance on the right side of the stove is shown for practical consideration only. The unit is certified for a 24" (610mm) minimal clearance. But, in reality, may not be practical for loading coal and working around the stove.

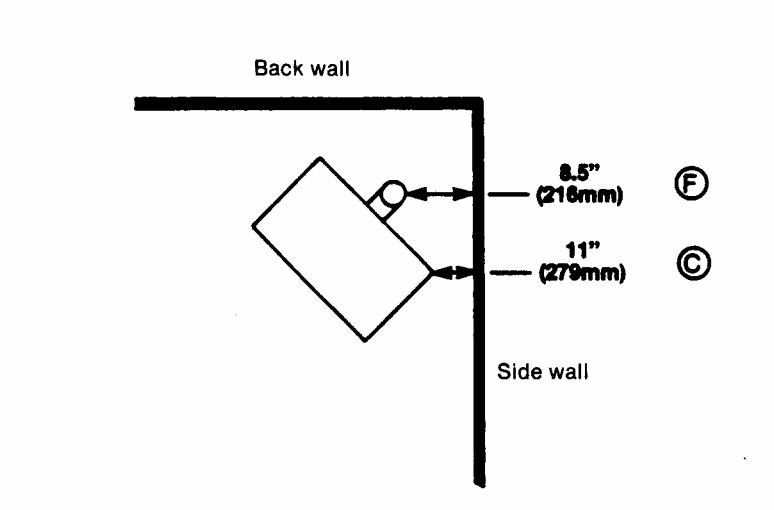

Illustration 3F. Top Vent, Corner Installation (Harmony Coal Stove with Single Wall Pipe)

INSTALLATION INSTRUCTIONS :

- **DO NOT INSTALL IN A MOBILE HOME.**
- **READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION.**
- **UNIT MUST BE PROPERLY INSTALLED OR LISTING WILL BE VOID.**
- **INSTALLATIONS OTHER THAN THOSE SPECIFICALLY COVERED HEREIN HAVE NOT BEEN CONFIRMED BY TEST AND ARE NOT COVERED BY THE LISTING.**

3. Install chimney and accessories through ceiling and roof directly above the unit per chimney manufacturer's instructions. Please note that in the United States, the chimney must be either warnock-Hersey or Underwriters Laboratories Listed 6 inch (152mm) Low Heat Residential Appliance Type Chimney (ALL FUEL). In Canada, the chimney must be "listed" and conform to the requirements of Underwriters Laboratories of Canada Test Standard # 5629 for 650 degree Celsius Factory-Built chimney. Installation must be made per local building code.

DO NO CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE

See illustration 6.

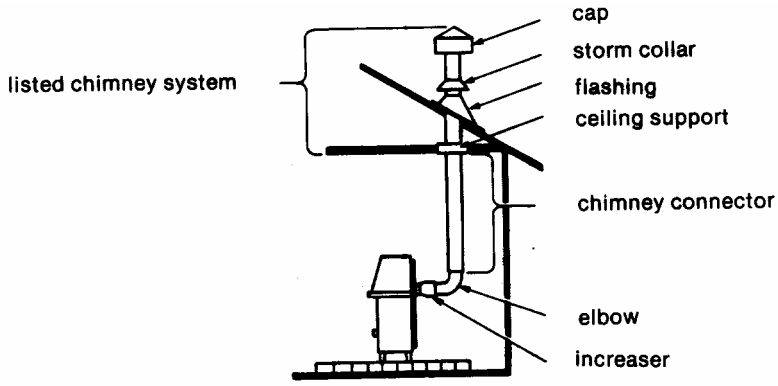

Illustration 6.

4. A non-combustible floor protector (hearth extension) must be installed under the unit. The floor protector must be equivalent to 3/8 inch (9.5mm) asbestos cement board. (I.E. single layer of 2 ½ inch thick common solid brick, over 26 gauge sheet metal. Brick must be mortared or otherwise suitably fastened in place). Check with local building authorities as to what other materials are acceptable. The floor protector must extend a minimum of 6 inches (406mm) beyond the front opening, 16 inches (406mm) beyond the side feed opening, 8 inches (203mm) beyond the back of the chimney connector and 8 inches (203mm) beyond the left side of the unit. Mark the position of the required floor protector on the floor.
   See illustration 7.

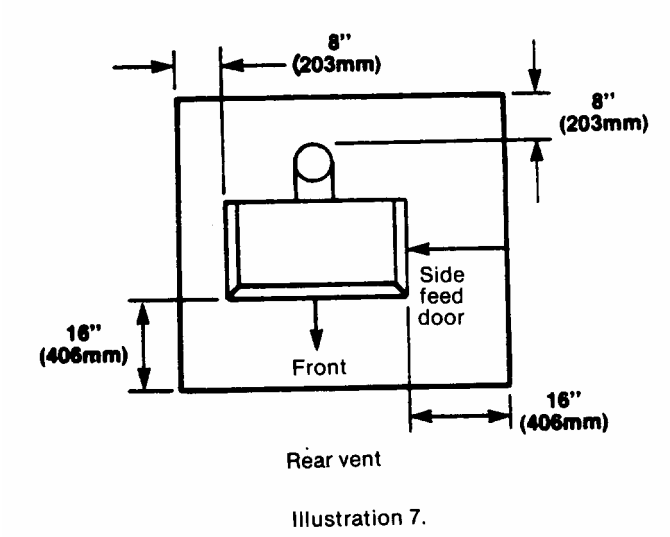

Illustration 7.

5. Remove the unit and install the floor protector.
6. Position the unit on the floor protector at the proper clearances with the elbow directly under the chimney.
7. Side a section of chimney connector up into the chimney several inches. Install additional sections of chimney connector as needed between the elbow and the connector section side up into the chimney. The crimped ends should all point down. Position all seams toward the back for aesthetics. The chimney connector must be 6 inch (152mm) diameter black or blue steel, of 24 gauge minimum.
8. Slide the top section of chimney connector down to engage the lower section of chimney connector. The top section of chimney connector must still extend up into the chimney a minimum of 2 or 3 inches (51-76mm).
9. Check that all clearances are still within the allowable tolerances.
10. Secure adjoining sections of chimney connector and elbow to each other with three stainless steel sheet metal screws equally spaced around each joint. Secure elbow to flue collar using holes provided. **DO NOT secure chimney connector to chimney with screws.**

OPERATION

Your unit is designed for use with or without the fuel hopper. Use of the hopper will allow for increased burn times and less refuelling of the unit.

The first six fires should be small in order to properly "cure" the cast iron parts and paint. Some smoking may occur during the first few fires as the paint cures. You may wish to partially open a window to minimise discomfort during this curing period.

Be sure to provide combustion air into the dwelling when using the appliance. A partially open widow or outside air register in the vicinity of the unit would be acceptable.

FUELS:

Your unit is designed for operation with anthracite or bituminous coal only. **DO NOT USE OTHER FUELS.** Use 20/30 (3/4" to 1-1/8" or 19-29 mm), 12/22 (1/2" to 7/8" or 13-22mm), or 6/12 (1/4" to ½" or 6-13mm) size anthracite coal only. Risk of excessive temperatures and damage to this unit may occur if the proper coal is not used. **DO NOT BURN TRASH.**

CAUTION:

Heating the air in a closed building decreases the relative humidity of the air, which will dry wood and other combustible materials. This drying lowers the ignition temperature of these materials, thus increasing fire hazards. To reduce the risk of fire, some provision should be made for replenishing moisture to the air whenever a structure is being heated for extended periods.

The size of the fire can be controlled by adjusting the combustion air inlet thermostat. By closing down the draft, you will have a smaller fire that will last a longer time. Your unit has a thermostatically controlled draft located on the right side of the unit. To adjust, rotate the plastic knobbed lever at the upper right side to the desired setting. Once set, the thermostatic control will adjust the air shutter to maintain the fire intensity selected.

Adjust the control and then allow sufficient time for the fire to stabilise before again adjusting.

WARNING:

Hot while in operation. Do not touch. Keep children, clothing and furniture away. Contact may cause skin burns. See nameplate for instructions.
This room heater is a heat producing appliance and may cause severe burns if touched. **Keep children away.**
All furnishings and other materials should be kept a considerable distance from the appliance.
Do not over-fire: if any portion of unit or chimney connector starts to glow, you are over-firing.
This unit is designed as a radiant room heater and should be used for no other purpose.

NOTE ON UNATTENDED FIRES:

Many structure fires have resulted when a slow burning fire has been left unattended for any extended period of time (such as when banking a fire for a long overnight burn). These fires normally occur because combustible materials close to an appliance become heated to the ignition point by an over-fired appliance which the operator thought was safely "throttled down".
Fire intensity is a function of several factors. One of these factors is DRAFT. Normally, increasing the draft increases fire intensity. Conversely, increasing the fire intensity will increase draft. Draft can also be affected by external factors such as wind strength and direction, outside temperature, airflow in or out of the structure, and so forth. If one of these factors changes, the draft of a low-burning appliance may increase. This increased draft may cause dangerously high temperatures to develop, possibly causing failure of the unit or flue, or ignition of nearby combustibles. Closing down the combustion air flow ("draft") controls (even on a thermostatically controlled unit) may not guarantee that this will not happen.

Exercise extreme caution if a fire must be left unattended.

A detachable handle has been supplied with your heater for operating the doors, handling the ash pan and for shaking or slicing the fire. Use it to avoid burns.

CAUTION:

Top feed lid must be closed during firing expect when adding fuel. Keep face and hands away from opening. After adding coal, it is important to make sure no coal is on gasket of the top feed lid.
Side feed lid must be closed during firing except when adding fuel.
Front firebox door must be closed during firing except when adding fuel.
Keep ash door closed during firing of the heater to avoid developing excessive temperatures.
Always check for high flames when opening feed doors by partially opening doors for a few seconds before opening fully.

LIGHTING AND OPERATING

CAUTION: DO NOT USE HIGH VOLATILE TYPES OF COAL.

a) To start, turn draft control knob to its maximum setting and place a small amount of wadded paper and kindling on the grate at the bottom of the firebox. This maybe done through the front firebox door. Light paper with a match, then close and latch the door.
b) Adjust the thermostatic draft control to obtain the desired fire intensity.
c) The fire should be periodically poked and stirred with a proper fireplace poker to clear the fuel and grate of accumulated ash. If the grate should become blocked, it can be cleared by "slicing the grate". Insert the flat bar portion of the supplied slicing tool through the two slicing ports on the front of the unit; the two cover plates on the inside of the ports will swing back to admit the tool. Move the tool back and forth across the grate in a slicing port, then check to make certain that the cover plates have dropped back into a closed position. The slicing port covers must be kept closed during firing of the unit except when slicing the grate.
d) After the fire has died and the unit has cooled, the flue damper may closed to keep heated room air from escaping up the chimney.

CAUTION:

Never use gasoline type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids well away from the heater while it is in use.

e) Continue to fire with kindling, adding a handful of coal each time kindling is added until coal is burning well.

Go slow. Coal takes time to start and must develop a good bed of live coal to burn properly. This is especially true of the harder types of coal. Once the coal is burning well, stop adding wood.

All coal through the top feed opening only. Do not use front door.

f) Once a good bed of coals is established in the grate, coal may be added as high in the hopper as desired to produce a long lasting fire.
g) Adjust the thermostatic draft control to obtain the desired fire intensity.
h) Occasionally the fire must be "shaked" to clear the grate of accumulated ash. Clearing the grate will allow combustion air to flow up through the fire bed for proper combustion.
i)

The fire can be "shaked" by moving the shaker handle located on the top, rear portion of the stove. Simply move the handle back and forth in a slow but steady manner. Do not shake it too vigorously, as you do not want to disrupt the coal bed.

Also, the fire can be stoked or stirred by inserting this slicing tool provided through the two slicing ports located on the front of the unit. Insert the slicing tool and move it left-to-right several times to shake down the accumulated ash. Always make sure that the slicing ports are closed after slicing.

j) After the fire has died and the unit has cooled, the flue damper may be closed to keep heated room air from escaping up the chimney.

CONTROL AND MEASUREMENT OF CHIMNEY DRAFT:

Coal burning appliances are designed such that the fuel sits on a grate which separates the firebox from an ash compartment.

Combustion air enters the ash compartment below the fuel load and the natural draft created by the chimney pulls the combustion air up trough the grate and the fuel load. Due to the low amount of volatile materials in coal, this arrangement is necessary to get the coal to burn properly.
As the draft increases in such a coal unit, more air moves through the fuel load, which fans the fire and makes it burn hotter. Conversely, as the fire becomes hotter, the air moving through the firebox is heated more, which increases the draft intensity. These two conditions can feed off each other to cause dangerously excessive temperatures to develop. Therefore, it is important to supply some means for controlling the draft intensity in any unit intended for burning coal as the only fuel or as the primary fuel. The thermostatic draft control on your unit is designed to control flue draft by controlling the intensity of the fire which generates the draft.
For proper operation, your unit should have a minimum flue collar draft of between -.05 and –.06 inches of water. It is advisable to have your draft checked before the unit is in full operation. You can do so by obtaining from your dealer an appropriate flue draft gauge following the gauge manufacture's instructions.

CARBON MONOXIDE:

Carbon monoxide is a colorless, odourless gas which is very deadly. While carbon monoxide cannot be smelled, there are other gases also being produced, known as aldehydes. These have a distinctive odour described as "sour". Thus a sour odour coming from your unit indicates that carbon monoxide is being produced and is somehow entering the space around the heater. The first physical symptoms of carbon monoxide poisoning will be severe headache, dizziness, and possibly an upset stomach. If sour odours are noticed, or the above symptoms are noticed, then take the following actions:

a. Immediately open the doors and windows of your house and let some fresh air in.
b. Shut down the heat by closing the draft control.
c. Investigate further to determine if the heater of the chimney connector is leaking combustion products.
d. Check the chimney thoroughly as it may have become partially blocked.
e. If the source of the problem cannot be determined, call in a reputable installer or qualified person.
f. Correct before again burning.

MAINTENANCE

1. Always keep the area around the unit clean of furniture and other objects. Furnishings and other combustible materials should be kept a considerable distance from the appliance.

2. Ashes should be removed from ash pan when cold. Ashes should be placed 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 soil or otherwise locally dispersed, they should be retained until all cinders have thoroughly cooled.

3. Clean the heater surface with a dry or slightly damp cloth. In case of condensation, clean the affected areas before they dry. Clean the glass door with glass cleaner or all-purpose cleaning solution.
   DO NOT CLEAN UNIT WHILE HOT.

4. Inspect the entire unit frequently for proper operation, fit and soundless of parts. If any malfunctioning, cracked, broken, or loose parts or other problems are noted, contact your dealer or qualified serviceman to inspect any repair the unit.

   DO NOT OPERATE THE UNIT IS INSTALLED OR FUNCTIONING IMPROPERLY.

5. Check the fit and seal of the doors and ash drawer frequently. For proper operation an air-tight seal must be maintained around these openings. If the seal is not tight, inspect the gasketing. If the gasketing needs replacement, contact your dealer. If the gasketing is in good condition, check the closure latch screws; if these are loose, tighten with a screw-driver and retest the seal.
   If you are unable to get an air-tight seal following these instructions, contact your dealer for repair.

6. This stove is also equipped with ceramic glass which can only be broken by impact or misuse. DO NOT slam the stove door or impact the glass when closing the door.
   DO NOT clean the glass with materials which may scratch or otherwise damage the glass. Scratches on the glass can develop into cracks or breaks.
   Inspect the glass regularly. If you detect a crack while using the appliance, extinguish the fire immediately and return the door to your dealer for glass replacement.

7. For further information on using your heater safely, obtain a copy of the National Fire Protection Association Publication "Using Coal and Wood Stoves Safely". NFPA HS-10-1078.

WARRANTY

Thermic Distribution Europe warrants that your stove has been built with quality material and workmanship and will be free of defect for a period of **twelve months**.

This warranty is given for a period of **twelve months** starting from the initial date of purchase on all parts except those that are subject to normal wear and tear, glass doors, breakable accessories, coal grate, coal hoppers, gasketing, coal linkages cleaning of appliances, burners and pilots.

If within the appropriate period of the date from initial purchase, the appliance or any parts thereof with the exception of above-mentioned ones is provided to be defective, under normal use, because of faulty material or workmanship, your distributor undertakes at his option to repair the same under following conditions:

1. The warranty covers the exchange, at no charge, of the defective part.

2. You must pay any and all labour and shipping charges or other expenses of removing, inspecting or returning to us any part, accessory or stove, or of shipping to you installing or inspecting any replacement part or stove furnished by us, and we will not be responsible for such charges or expenses under this warranty.

3. The final decision of Thermic Distribution Europe concerning defects and whether defective parts should be replaced or renewed shall be conclusive.

Of course, this warranty **shall not apply**, and we shall have no obligations hereunder with respect to any stove, part, trim or accessory which has been subject to accident, abuse, alteration, misuse or neglect, or which has been installed, inspected, operated and maintained in accordance with the printed instructions or which or which has been used with incorrect fuels, or if any repairs or modifications have been made by another than Thermic Distribution Europe or its official representative without prior written consent of Thermic Distribution Europe.

This warranty does not cover damage resulting from overfiring the appliance-overfiring can be identified by warped plates and areas where the paint pigment has been burned off. Overfiring of enamel stoves is identified by chipping, cracking, bubbling and discoloration of the porcelain enamel finish.

Thermic Distribution Europe does not give any warranty on porcelain enamel parts subjected to abnormally high temperatures or thermal shocks, abnormally high temperatures and thermal shocks resulting in chipping, cracking, bubbling and discoloration of the porcelain enamel finish.

Thermic Distribution Europe does not give any warranty on porcelain enamel parts subjected to abnormally high temperature or thermal shocks, abnormally high temperatures and thermal shocks resulting in chipping, cracking, bubbling and discoloration and crazing of the porcelain surfaces.

Our obligation under this warranty shall be limited to the furnishing of replacement part of stove at our option and as described here above and we shall in no event be liable for liable for incidental, consequential or other monetary damages.
Any claim under this limited warranty should be submitted first to the dealer from whom the stove was purchased.

If such dealer cannot be located, the warranty claim, in writing should be mailed to us at the address shown below, indicating the model number size and serial number, the place, price and date the stove was purchased, the date it was installed and all information necessary.