

# **Corn Flame Energy Corn Stove Model 3000**

## **Installation and Operation Guide**

**Read thoroughly before starting installation.  
Save this manual for future reference.**

### **SAFETY NOTICE**

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

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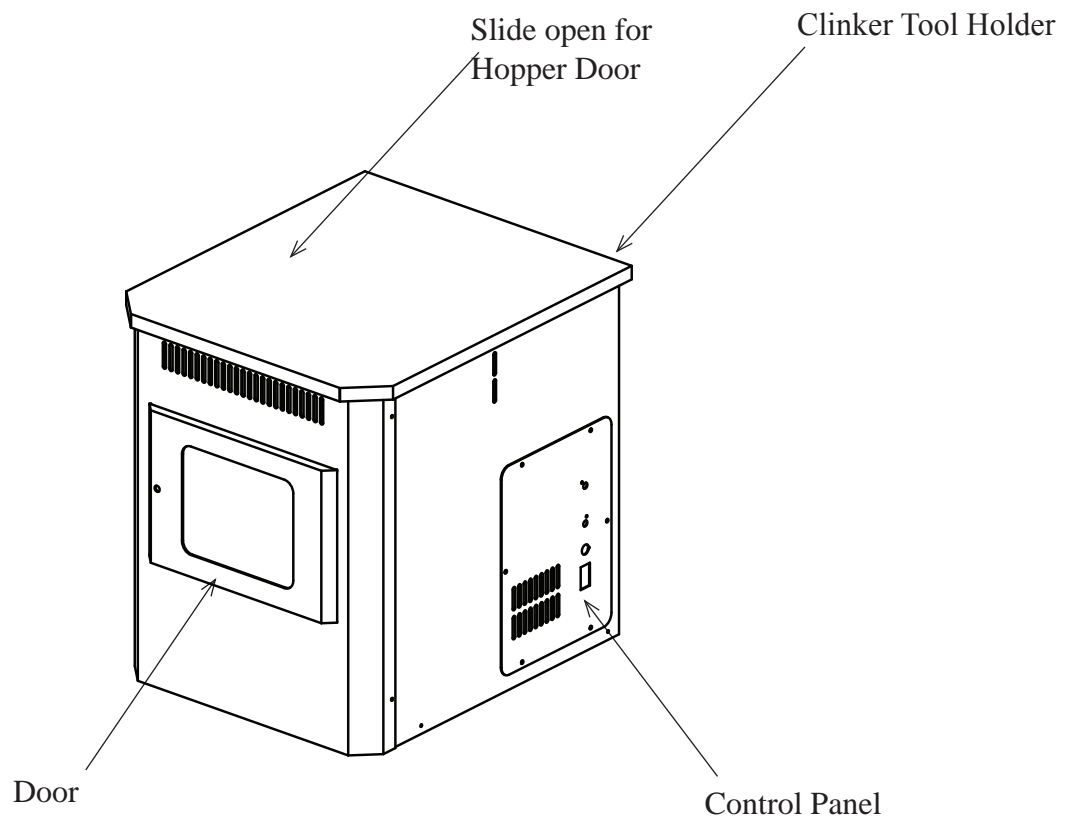
# SAFETY REQUIREMENTS

- **SAFETY NOTICE: IF this stove is not properly installed, a house fire may result.** For your safety, follow the installation directions. Contact your local building or fire officials about restrictions and installation requirements in your area.
- The manufacturer assumes no responsibility for equipment installed in violation of either this manual or local codes and ordinances.
- During the first start up, curing of the heat exchanger and paint will take place. You may have some smoke and odor for a short period. Open windows for ventilation until process is complete.
- Use clean shelled corn for fuel only. Do not use seed corn. **DO NOT USE ANY OTHER TYPE FUELS!**
- Never burn the unit without the burner box in place.
- **WARNING: DO NOT CONNECT STOVE'S FLUE TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.**
- Do not install a flue damper in the exhaust venting of this unit.
- Inspect and clean flues and chimney regularly. Inspections should be conducted once a month during heating season.
- **CAUTION: NEVER USE GASOLINE TYPE FUELS, LANTERN FUELS, KEROSENE, DIESEL FUEL, OR SIMILAR FUELS TO START A FIRE. KEEP ALL SUCH FLAMMABLE LIQUIDS AWAY FROM THE UNIT WHILE IN USE.**
- Use smoke detectors around the unit and locate a fire extinguisher rated for class "A" fires nearby.
- At the end of each heating season remove all corn from hopper and auger system.
- Do not extend the Direct Vent Flue more than 15 feet without consulting the manufacturer. Do not have more than two offsets in the flue. Intake air could become restricted or overheated. Use UL listed type L pipe for extending the flue. **DO NOT USE ALUMINUM LINERS.**
- Always set POWER switch to "RUN/AUTO OFF" position and rotate FUEL switch to "OFF" position (a positive click occurs) for timed shut down, or smoke may spill into the home as the fire dies.
- Corn Flame Energy is not liable for any smoke or soot damage.
- **CAUTION: Due to risk of electrical shock, unplug unit before removing any access panel for servicing.**

## UNIT PREPARATION

- Check stove for possible shipping damage. If any damage is found notify the dealer from whom stove was purchased.
- Remove all items (clinker tool, etc...) from the hopper.
- Using either hole in the top of the stove, store the clinker tool when not in use.
- Close door and check for proper seal. Adjust by rotating the handle clockwise to loosen and counter-clockwise to tighten. Do not over-tighten.

## REFERENCE

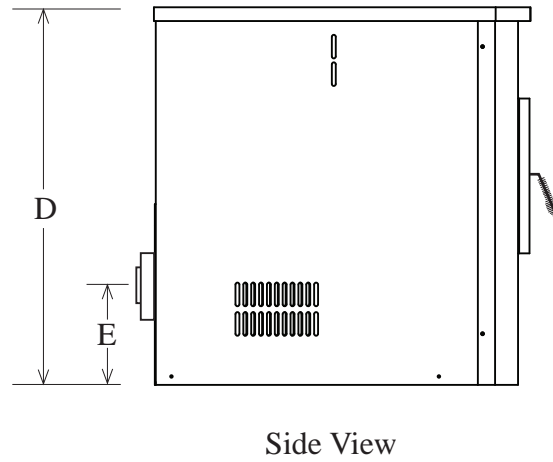
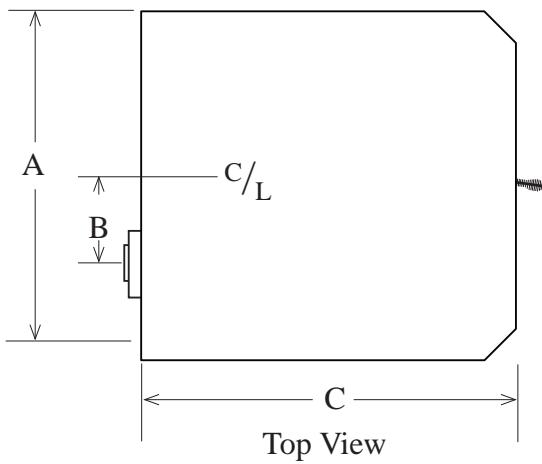


# MODEL 3000 SPECIFICATIONS

## DIMENSIONS

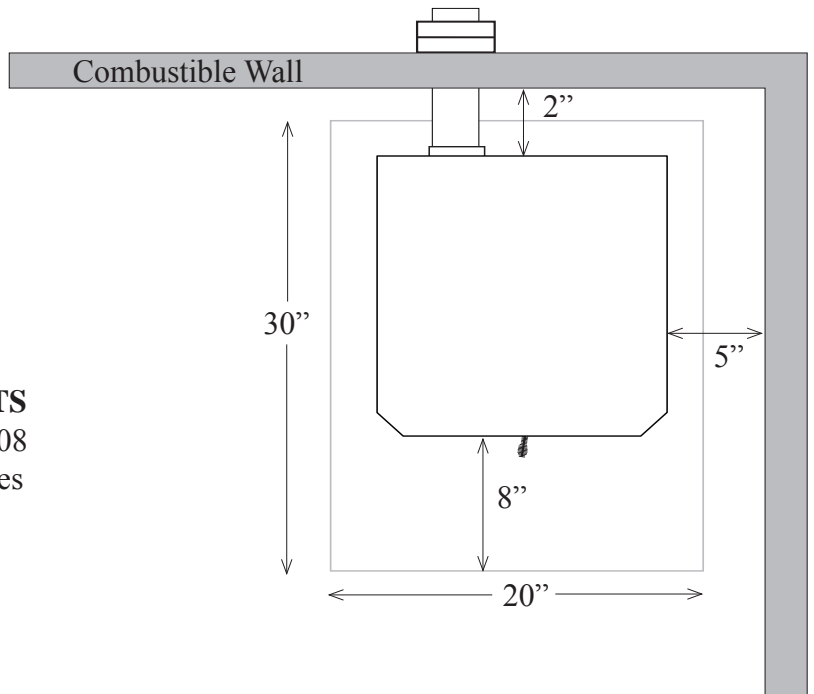
	A	B	C	D	E
Inch	20 1/2	4 1/4	24	24	8
mm	521	108	610	610	204

WEIGHT	180 Lbs	82 Kg
EXHAUST	3 Inch	76 mm
RATING	120 Volts, 60 Hz, AC Only	



## MINIMUM CLEARANCES TO COMBUSTIBLES

Sides	5 Inches (127 mm)
Back	2 Inches (51 mm)
Front	8 Inches (204 mm)
Above	12 Inches (305 mm)



### FLOOR PROTECTION REQUIREMENTS

The floor protector shall be 20 x 30 inches (508 x 762 mm) minimum and must extend 8 inches (204 mm) in front of stove. Material must be 3/8 inch (10 mm) minimum thickness non-combustible material listed to UL standards.

## **FREESTANDING/DIRECT HORIZONTAL VENTING**

Note: For direct horizontal venting you must use manufacturer's zero clearance venting system CF-900.

- **SAFETY:** Carefully read and follow all safety requirements previously set forth under **SAFETY REQUIREMENTS** before continuing with the following information.
- **CAUTION:** WHEN PASSING THROUGH WALLS, DO NOT INTERFERE WITH WIRING, PIPES, OR STRUCTURAL ELEMENTS.

### **LOCATION PREPARATION**

For this type of installation the stove must be located near an exterior wall and should be located for best heat circulation through the room. The exhaust vent should not be placed on a wall that receives strong winds.

Review location inside of home and check outside where vent pipe will be passing through for any obstructions that may prevent proper exhausting.

Consider the design and construction of the building so as to minimize the need to pass through existing structural supports, ect...

Be sure that the exit termination of the combined outside air/exhaust system is located in accordance with the following:

- Not less than 3 feet (915 mm) above any forced air inlet located within 10 feet (3048 mm) to either side.
- Not less than 4 feet (1220 mm) below, 4 feet (1220 mm) horizontally to either side, or 1 foot (305 mm) above any door, window, or gravity air inlet into any building.
- Not less than 2 feet (610 mm) from an adjacent building and not less than 7 feet (2134 mm) above grade when located adjacent to public walkways.
- The bottom of the vent terminal shall not be less than 12 inches (305 mm) above grade.
- The exit termination must be arranged such that flue gases are not directed so they could jeopardize people, overheat combustible structures, or enter buildings.
- The exit termination must be located at least 12 inches (305 mm) from any opening into a building.

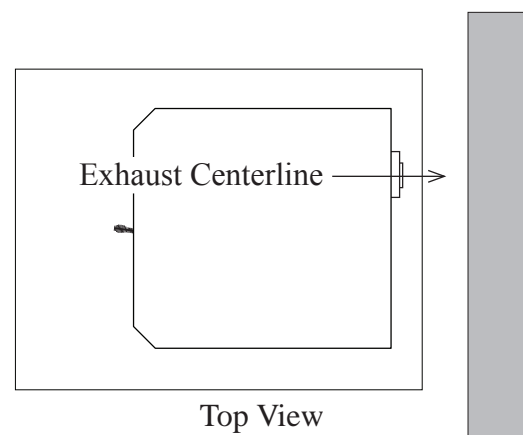
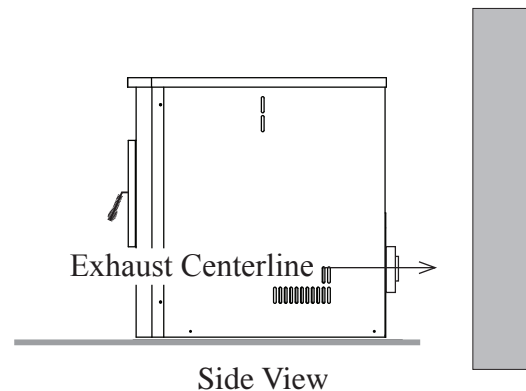
# FREESTANDING/DIRECT HORIZONTAL VENTING

## MARKING AND CUTTING HOLE IN EXTERIOR WALL

1. Temporarily position the stove on the floor protector in it's final location.
2. Determine the centerline of the stove's 5 inch (127 mm) combustion air intake (For corner application determine by measuring the centerline location of the 5 inch (127 mm) elbow). On the same centerline, mark a center point on the wall.
3. Using the point marked on the wall as a center point, cut a 5 inch (127 mm) hole through the exterior wall. This can be accomplished with a variety of tools. Your needs will depend upon the type of wall material

- **CAUTION: WHEN CUTTING THROUGH WALLS INSURE THERE IS NO INTERFERENCE WITH WIRING, PIPES, STRUCTURE, ECT...**

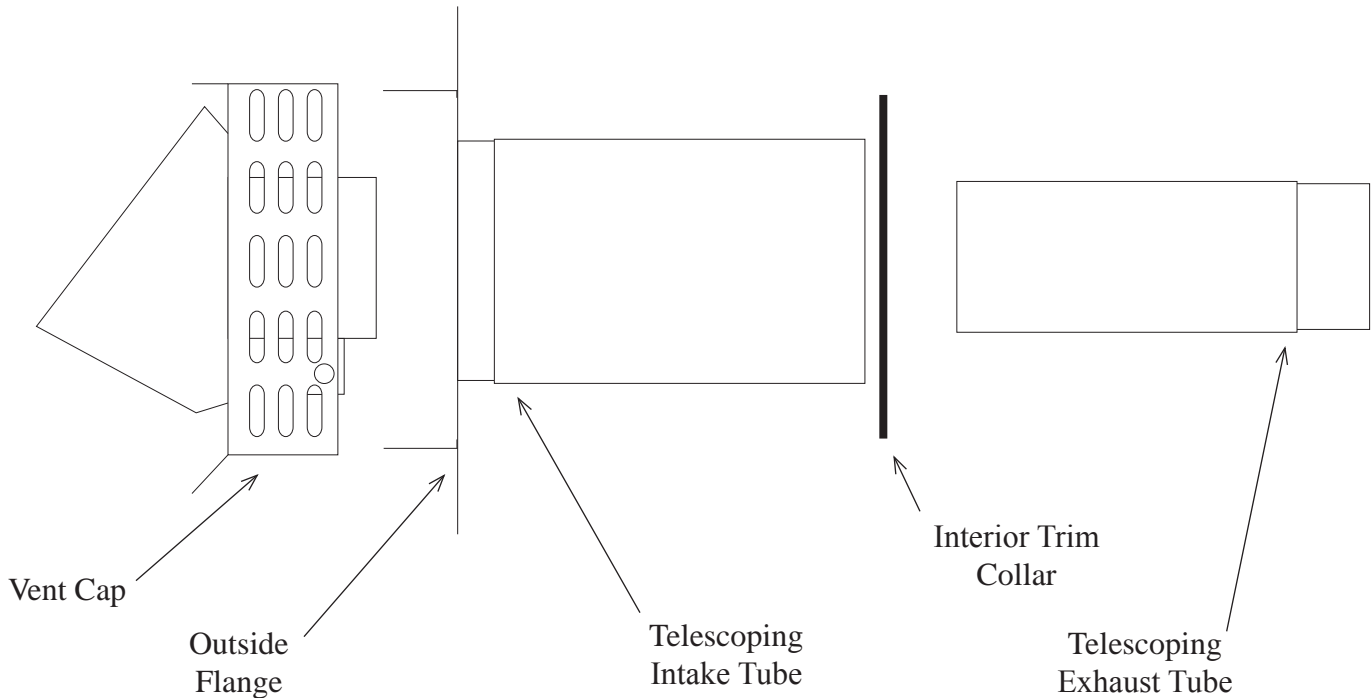
**Note:** For corner installation, it will be necessary to temporarily install the adjustable elbow pipe into the 5 inch (127 mm) intake pipe from the stove with the crimped end fitting into the intake pipe.



# FREESTANDING/DIRECT HORIZONTAL VENTING

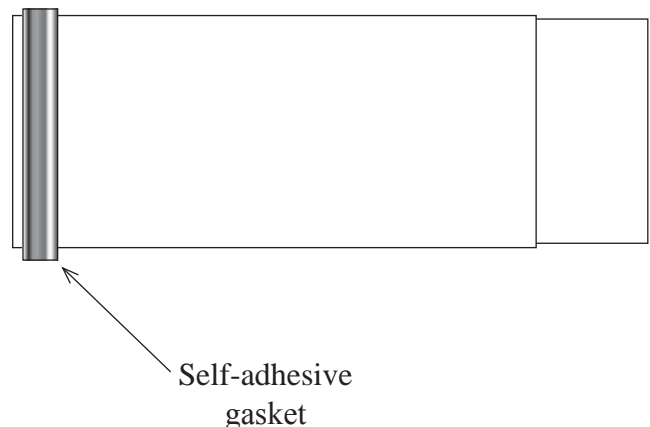
## VENT KIT INSTALLATION PROCEDURES

Note the placement of parts in order to facilitate reassembly



Note that the vent kit has two telescoping tube sections. This allows for a range of adjustment between the wall and the stove without the need to cut and fit to exacting dimensions. Also notice that the intake tube is larger than the exhaust tube and creates an air gap between them when installed. This air gap allows the zero clearance mounting of the vent kit. **DO NOT MODIFY** this vent kit in any way that may compromise this air gap.

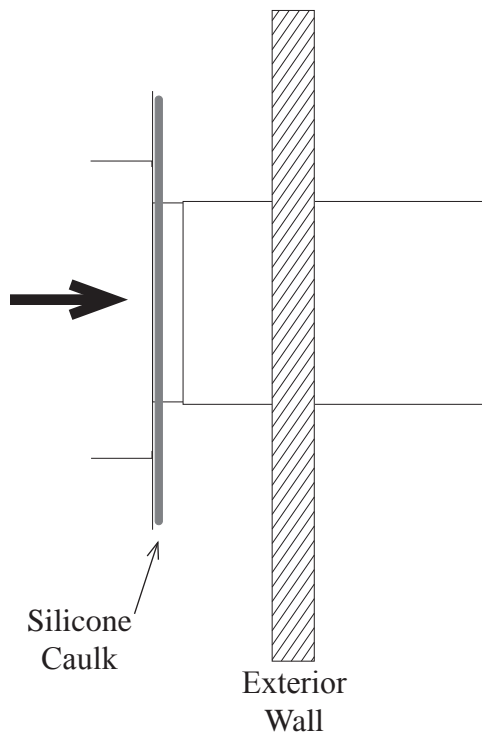
1. Begin vent kit installation by placing the self-adhesive gasket at the end of the LARGE telescoping exhaust tube. Trim gasket to length if necessary.



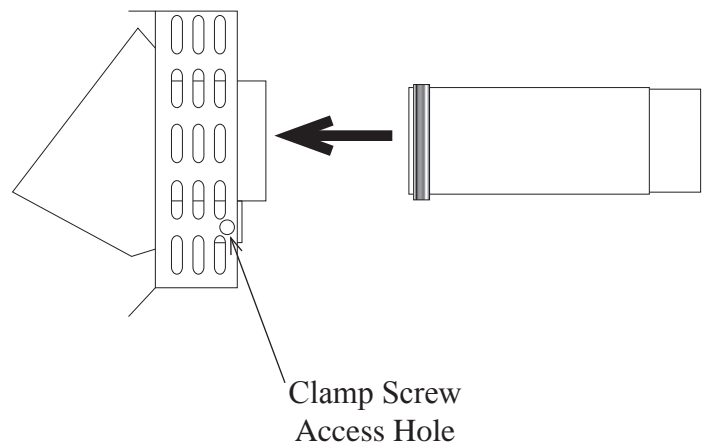


## FREESTANDING/DIRECT HORIZONTAL VENTING

2. Place a small bead of caulk around the back perimeter of the outside flange to prevent air and moisture infiltration.
3. From outside, push the outer flange with the 5 inch (127 mm) extension through the wall and secure to the wall with screws. (The type and length of the screws required will depend on wall materials.)

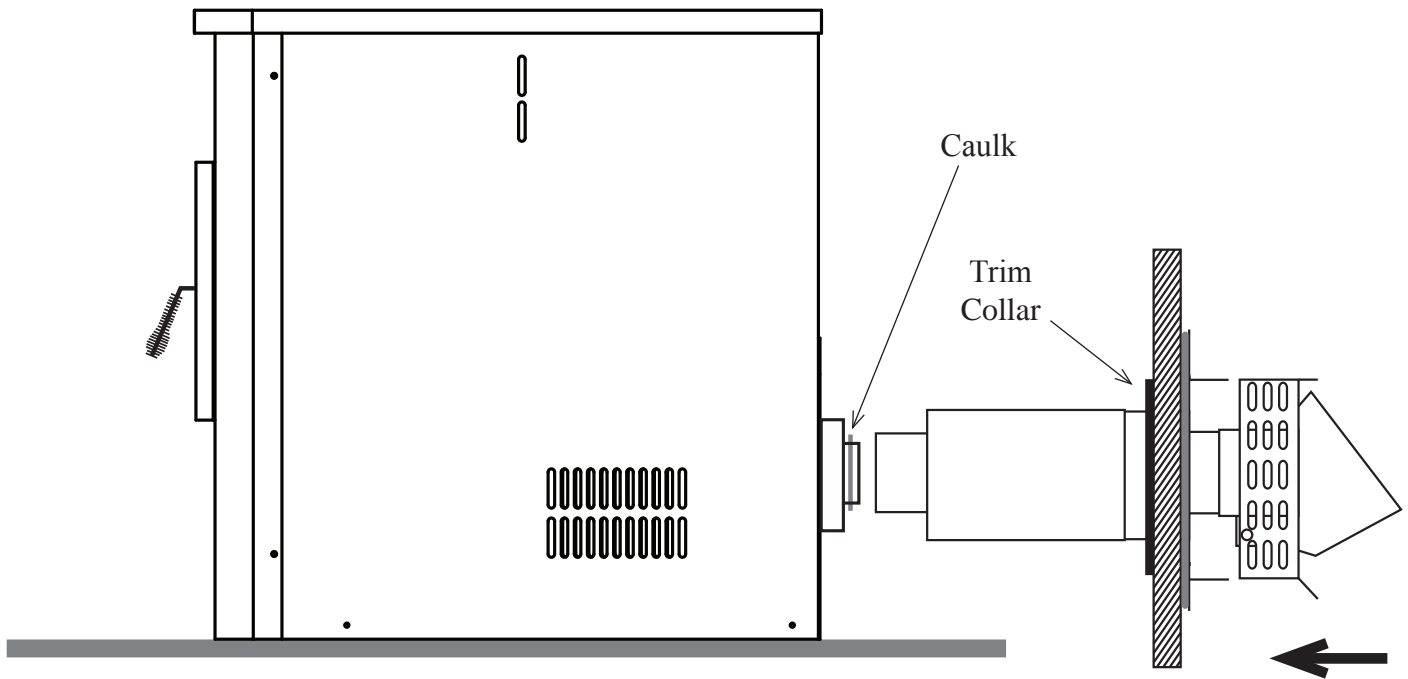


4. Place the end of the telescoping exhaust tube prepared in step 1 into the vent cap and tighten with a screwdriver.



## FREESTANDING/DIRECT HORIZONTAL VENTING

5. Place a bead of high temperature silicone caulk around the 3 inch (76 mm) stove exhaust tube.
6. Place the trim collar on the 5 inch (127 mm) extension pushed through in step 3.
7. Place the exhaust tube and vent cap through the outer flange and push onto the stove's 3 inch (76 mm) exhaust tube about 2 inches (52 mm).
8. Slide the telescoping 5 inch (127 mm) intake tube onto the stove's intake tube.
9. Push the vent cap onto the outside wall flange and secure with 2 provided screws.



# OPERATING INSTRUCTIONS

## CONTROL DESCRIPTIONS AND FUNCTIONS

### POWER

#### On position

Turns on the combustion air blower and energizes the stove's electrical system.

#### Off position

Turns the power supply off to all components.

#### Auto Off position

Applies main electrical power to an Auto Off thermostat. This is selected during a shut down.

### FUEL

A rotary control combining on/off and fuel feed control functions.

When in the Off (fully counter-clockwise) position, the control turns off power to the auger feed system. This prevents fuel feeding into the burner box.

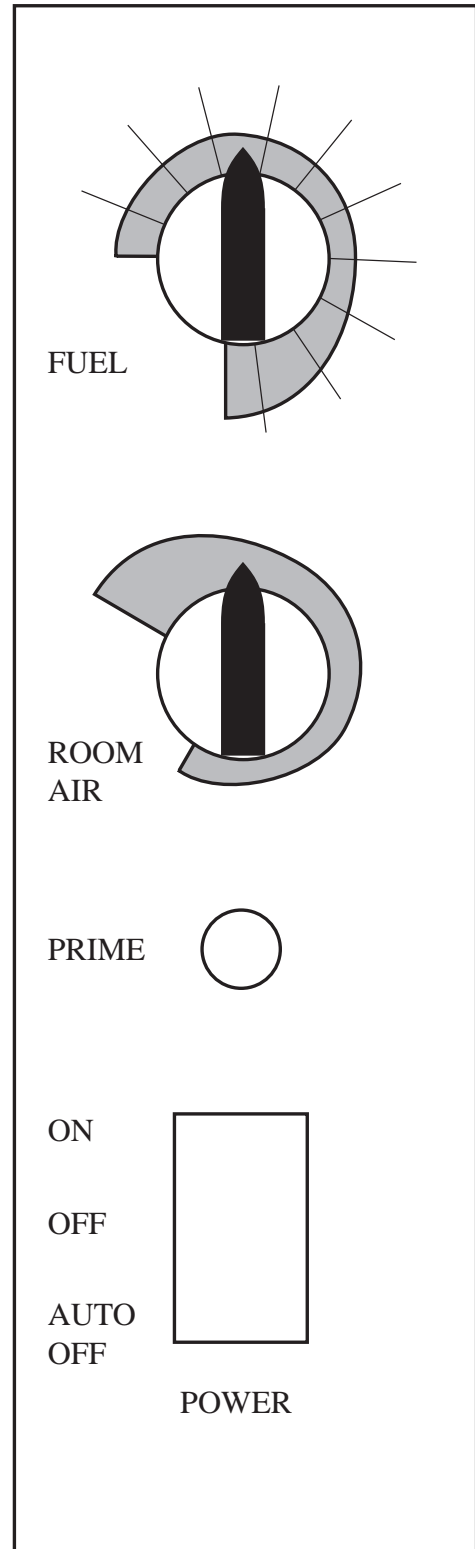
When rotated clockwise from the Off position, the control turns on power to the auger feed system. Continued rotation clockwise increases the fuel feed rate.

### ROOM AIR

A rotary control that controls the air flow through the heat exchanger.

### PRIME

A pushbutton switch that, when pressed, manually operates the auger feed system.

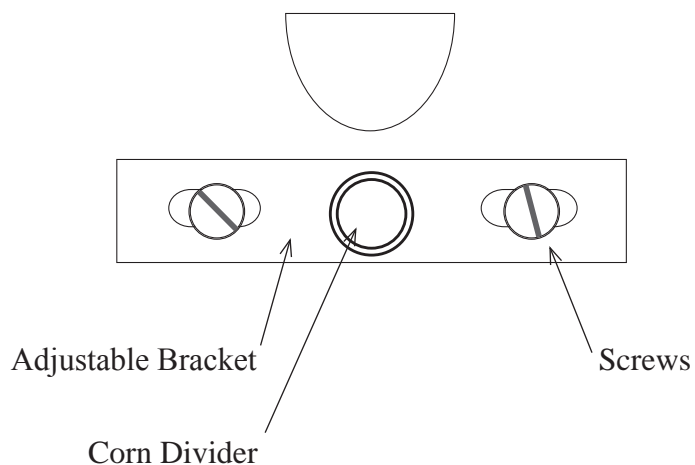


# OPERATING INSTRUCTIONS

## FIRST TIME AND SEASON START-UP

1. Fill hopper with clean, shelled corn.
2. Set POWER switch to “ON“ position.
3. Prime the feed system by pressing and holding the PRIME button until corn enters the burner box. Release PRIME button.
4. Set POWER switch to “OFF“ position before following the Lighting Procedure.

**Note:** Corn should distribute evenly in burner box as it strikes the corn divider. If necessary, adjust the divider to achieve even distribution.



## LIGHTING PROCEDURE

1. Fill hopper with clean, shelled corn. Remove ashes from burner box if necessary.
2. Fill burner box 1/2 full with solid fire starter blocks or starter log pieces (can be purchased from grocery stores, ect...).
3. Ignite solid fire starter blocks and close door.
4. Set POWER switch to “ON“ position.
5. Set FUEL control to “2” and set ROOM AIR control 1/2 on.
6. When heat exchanger reaches a preset temperature, auger will begin to feed corn. Approximately 5 minutes after corn starts to flow, reset FUEL and ROOM AIR controls for comfort.
7. Occasionally solid fire starter blocks will leave a haze on the door glass. To clean, turn off POWER switch, open door and carefully wipe glass with a dry paper towel. Close the door and turn POWER switch on. Normal operation should resume.

## SHUT DOWN PROCEDURE

1. Set FUEL control to “OFF” position.
2. Set POWER switch to “AUTO-OFF” position. All fans will automatically shut off when heat exchanger temperature drops to a preset level.

# OPERATING INSTRUCTIONS

## SEASON SHUT DOWN PROCEDURE

Burn or otherwise remove all corn from hopper. Insure auger is empty of corn, by use of the PRIME button.

## WARNING:

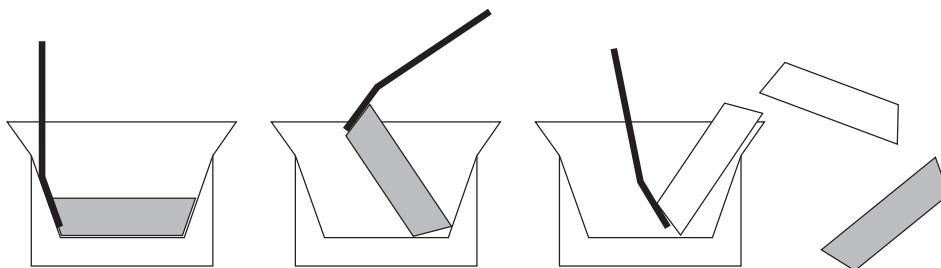
- **THIS UNIT IS DESIGNED TO USE SHELLED CORN ONLY!**
- **TO START FIRE USE ONLY SOLID FIRE STARTER BLOCKS. DO NOT USE ANY LIQUID FUELS OR ANY OTHER TYPE OF MATERIAL TO START FIRE.**
- **ALWAYS TURN POWER SWITCH OFF BEFORE OPENING COMBUSTION CHAMBER DOOR**

## REMOVING THE CLINKER

During the combustion of corn, what is known as a clinker will form in the bottom of the burner box. A clinker is best described a fused ash, almost glassy in appearance, conforming to the shape of the bottom of the burner box. If not removed, it will eventually extinguish the fire. For best results, remove the clinker every 12 to 24 hours of use. This can be accomplished while a fire is burning, however it must be done quickly (about a minute) to restore fuel and air to the burner box.

1. Turn POWER switch to "OFF" position, then open door.
2. Remove clinker by placing the point of the clinker tool in the front corner of the burner box. Push down to bottom of box, making sure that the tool point slips beneath the clinker.
3. Turn clinker upright so that the burnable ashes and corn fall back into the burner box. Lift clinker out of the burner box and onto the ash pan.
4. Close the door and turn POWER switch to "ON" position.

This procedure requires some practice to master. If the flame is lost, simply shut down stove and relight.



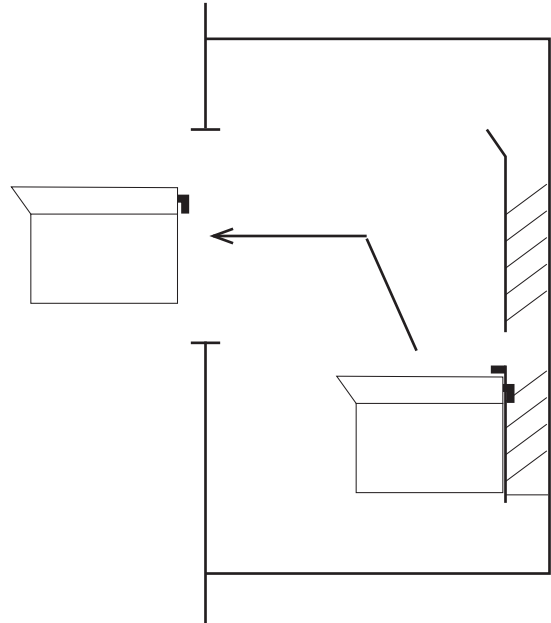
# ROUTINE MAINTENANCE

## CLEANING GLASS DOOR

Although the stove is equipped with an air glass wash system, and burns clean, the glass will cloud up. For best results when hot use a dry towel to clean glass. For best results when cool use glass cleaner. Heat from the fire will not break the glass, however, the glass should be handled with care. Rough handling may cause damage.

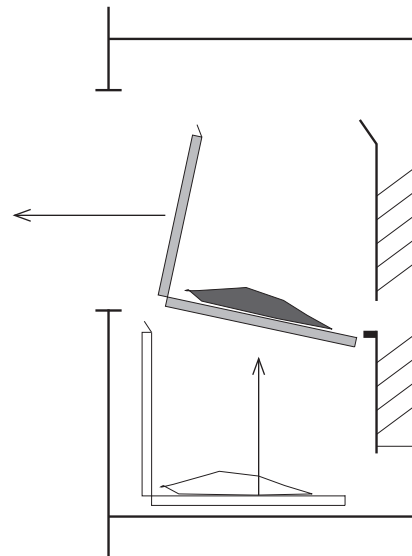
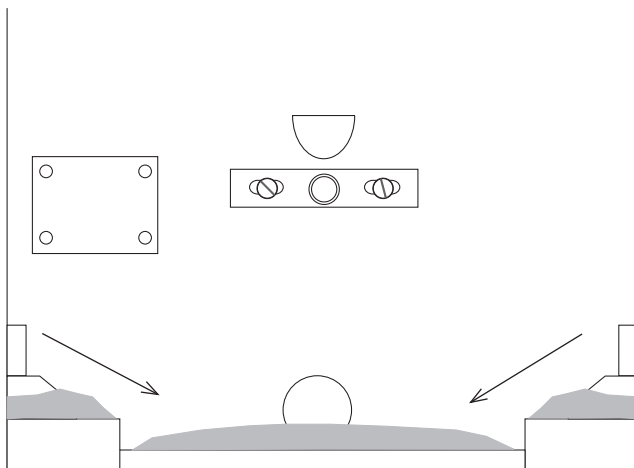
## REMOVING AND CLEANING THE BURNER BOX

1. Turn POWER switch to "AUTO-OFF" position.
2. Wait until heater shuts down and cools.
3. The burner box is attached by hooks to the inner wall. To remove, lift the burner box upward and pull forward.
4. Empty ashes into a metal container.



## REMOVING ASHES

1. Shut down the stove. Wait until the stove completely cools. Open door and remove burner box.
2. Using a brush (i.e. paint brush, ect...), brush ashes from both side walls to the center.
3. To remove, lift ash pan from the stove. Or vacuum loose ashes from the chamber floor.

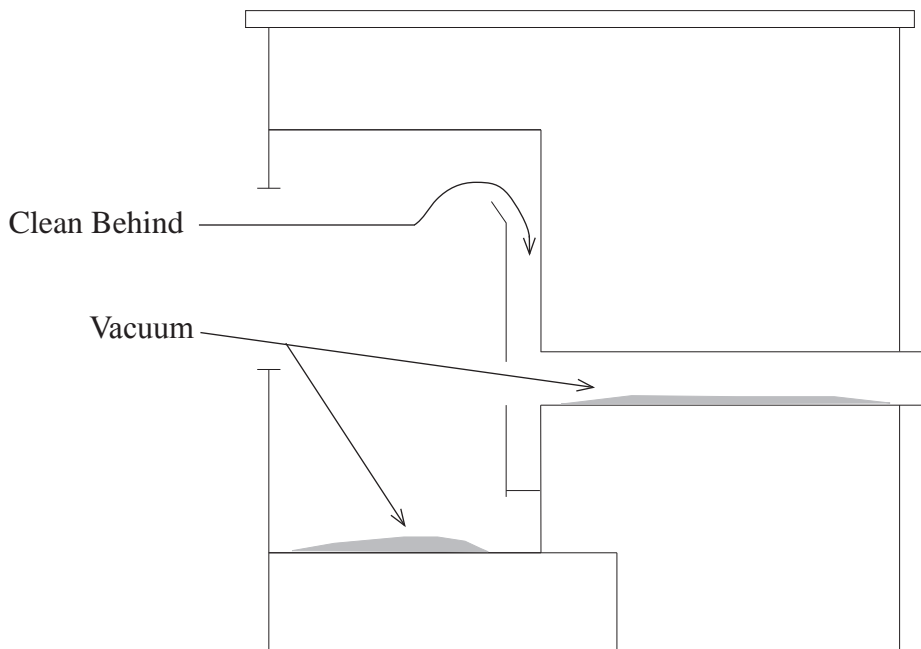


## BIMONTHLY MAINTENANCE

**NOTE:** The frequency of the following cleaning will depend on usage.

### HEAT EXCHANGER / EXHAUST CLEANING

1. Shut down the stove. Wait until the stove completely cools.
2. Open the door and remove burner box.
3. Remove clean-out cover plate.
4. From inside the combustion chamber, using a brush, clean the heat exchanger tubes and all walls of the combustion chamber. Vacuum loose debris thoroughly from the floor of the chamber and exhaust pipe.



## END OF SEASON MAINTENANCE

**IMPORTANT:** Using the PRIME button, remove all corn from the hopper and auger system.

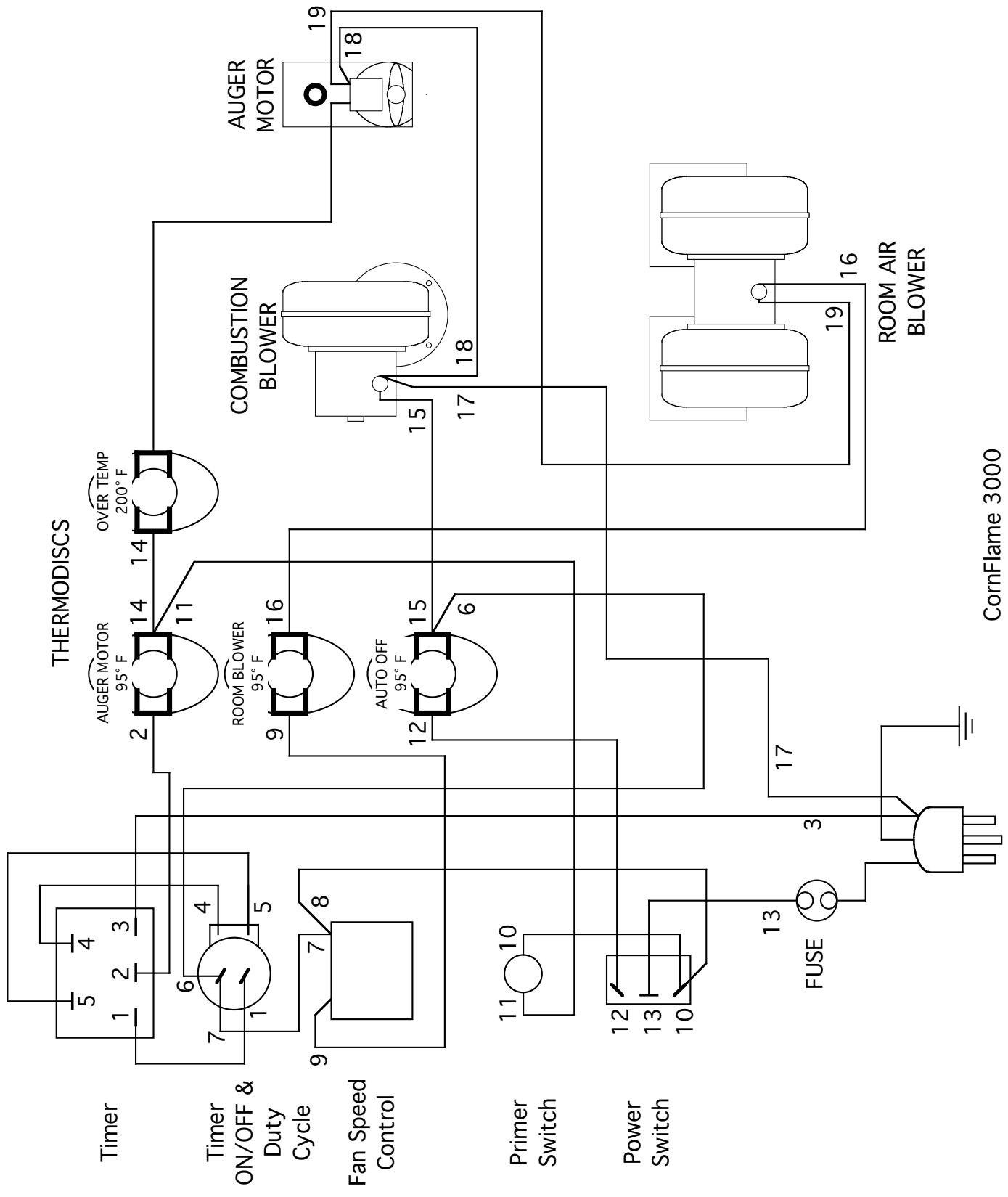
### BLOWERS LUBRICATION

- **SAFETY:** Unplug the stove before performing the following instructions.

Always disconnect the power supply before servicing the blower or any other portion of the unit.

The motor bearings should be relubricated every 6 months with a few drops of SAE 10W or 20W nondetergent oil (ML - TYPE) or with electric motor oil.

# WIRING DIAGRAM



CornFlame 3000



# WARRANTY

## LIMITED WARRANTY PLEASE READ CAREFULLY WARRANTY IS NOT TRANSFERABLE

### PRODUCTS NOT COVERED:

This warranty does not cover the following: Standard and optional gold trim, glass, gasket material and will not cover any damage and/or failure caused by abuse or improper use or improper installation of the product covered.

### (A) Period I

For the period of the first one (1) year from the date of purchase, we will replace or repair, at our option, any part defective in materials or workmanship affecting the operation of the heating system. The cost of parts only are included. The customer pays any labor or transportation charges.

### (B) Period II

For the period of the first three (3) year from the date of purchase, we will replace or repair, at our option, any portion of the firebox which has been damaged due to heat thereby affecting the heating system operation. The cost of parts only are included. The customer pays any labor or transportation charges.

### PROCEDURE

Should you feel your heating system is defective, please contact your heating system dealer. They will instruct you in the proper procedures, depending on which warranty period (A or B) applies.

### CONDITIONS AND EXCLUSIONS

- A. There is no other expressed warranty. All implied warranties of merchantability and fitness for use are limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied lasts, so the above limitations may not apply to you.
- B. The manufacturer is not liable for indirect, incidental, or consequential damages in connection with the use of the product including any cost or expense of providing substitute equipment or service during periods of malfunction or non-use. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- C. This warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accident or lack of proper maintenance.

### OTHER RIGHTS

This warranty gives your specific legal rights, and you may have other rights, which vary from state to state.

