GOLDEN GRAIN CORN STOVE

MODEL 1201

STOVE SERIAL #_____

INSTALLATION & OPERATION MANUAL

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INDEX

FOR GOLDEN GRAIN CORN STOVE

SPECIFICATIONS

Model 1201

Dimensions. . . . . .24" wide
24" deep
22" tall

Hopper Capacity-. . . . . .40 lbs.

Minimum Clearance-Side to wall. . . . . 4 inches
Back to wall. . . . . .1 inches
(AS FREE STANDING STOVE)

Weight-. . . . . 228 lbs.

Shipping Weight. . . . . 248 lbs.

Room Blower-. . . . . 265 cfm

Exhaust Blower-. . . . . 216 cfm

Fuel-. . . . . .Shelled Corn/Wood Pellets

Air Intake Pipe outside diameter-. . . . . 2 inches

Flue Size-. (Free Standing) . . . . . .3 inch Type L Vent Pipe
Fireplace Insert. . . . . .3" Metal Flex

BTU Range- (Corn). . . . . 13,000 to 40,000

Feed Rate-. . . . . .1.5 lbs./hr. low to 4.5 lbs./ hr. maximum

Wattage-. . . . . .400 Watts

Voltage. . . . . .120 Volts AC

INSTALLATION OF THE STOVE

INSTALLATION

When installing and operating your Corn Stove, respect basic safety standards. Read these instructions carefully before you attempt to install or operate your corn stove. Failure to do so may result in damage to property or personal injury and may void the product warranty.

Consult with your local building code agency and insurance representative before you begin your installation to ensure compliance with local codes, including the need for permits and follow-up inspections.

STEP 1: LOCATION

A. In Fireplace as insert
B. Free standing stove mounted on legs or pedestal.

When selecting a location for your Corn Stove. Observe required clearances to combustible materials. Select a location to utilize the corn stoves ability to supply warm air to other parts of the building. In many cases, this is a lower level or central location within the building.

When placing the stove make sure to allow room to get around the stove. Do not place stove in sleeping areas.

Place the stove away from combustible walls at least as far as shown in figures 1 and 4.

- Note that the clearances shown are minimum for safety but do not leave much room for access when cleaning or servicing. Please take this into account when placing the stove.

  Never place cloth drapes or flammable materials behind or beside the stove.

  Never place stove near a solvent or flammable material storage area

- **WARNING: NEVER INSTALL IN A SLEEPING ROOM.**

STEP 2: FLOOR PROTECTION

Your corn stove must be placed on a non-combustible floor surface that extends a minimum of 6 inches to the front 6 inches to the side and 2 inches to the back. See figures 1 and 4.

STEP 3: VENTING

A combustion blower is used to extract the combustion gases from the firebox. This causes a negative pressure in the firebox and a positive pressure in the flue pipe system. The longer the pipe and more elbows used in the system, the greater the flow resistance. Because of these facts we recommend using as few elbows as possible and 15 feet or less of vent pipe, The maximum horizontal run should not exceed four feet. If more than 15 feet of pipe is needed, the diameter should be increased from 3 inches to 4 inches because a larger pipe causes less flow resistance.

Be sure to use type L vent pipe and wall/ceiling pass through fittings to go through combustible walls and ceilings. Since the stove has a positive pressure exhaust system all joints starting at the stove connection must be sealed all the way out of the house. The connection at the stove must be sealed to the stove with high temperature silicone caulking.

- WARNING: **Exhaust the corn stove to the outside.**
- WARNING: **Never exhaust the corn stove directly into a shop or garage. The danger of oxygen depletion can exist. serious injury can result.**

STEP 4: VENT PIPE

A: AS FIREPLACE INSERT

Use 3" metal flex vent pipe to extend up the fireplace chimney at least one foot above the smoke shelf or damper

B: As free standing unit

Vent pipe (also known as L vent) is constructed of two layers with air space between the layers, This air space acts as an insulator and reduces the outside surface temperature to allow a clearance to combustibles of only 3 inches. The sections of pipe lock together and in most cases a perfect seal is not achieved. For this reason **all joints must be sealed with silicone.**

When cutting the wall to install the wall/ceiling pass through fitting make sure not to cut any wires to prevent electrical shock hazards.

STEP 5: OUTSIDE AIR

A: AS FIREPLACE INSERT

Use 3" metal flex vent pipe to extend up the fireplace chimney to a minimum of 3 inches above the smoke shelf or damper.

B: AS FREE STANDING UNIT

Outside air is required to be supplied. The benefit of outside air is mainly noticed in small, very tight houses.

To install outside air use 2" I D. flex pipe PVC pipe. Connect the pipe to the center intake air hole and run the pipe outside and terminate 3 feet or more to the side or below the vent pipe outlet. Never terminate the outside air above the vent pipe outlet. The maximum length run of this pipe is 15 feet. If a longer run is needed, the size must be increased to 3 inches. A screened cover must be used to keep birds, rodents, etc. out of pipe.

When cutting the wall to pass the pipe through make sure not to cut any wires to prevent electrical shock hazards. It may be necessary to adjust the intake air damper slide. This slide is located on the intake air tube on the outside of the stove housing. Orange flames indicate a lack of air while black ash is an indicator of too much air. The clinker ash should be silver grey in color. Too much air will also increase the exhaust temperature, loosing heat to the outside.

VENT PIPE INSTALLATION VIEWS

Review the corresponding drawings for your type of venting system installation.

Figure 2: When installed as a fireplace insert, this method not only provides natural draft, it also provides outside combustion air. The damper area or smoke shelf must be sealed with a steel plate or fiberglass.

Figure 3, 6 and 7a: This method provides excellent venting for normal operation and allows the stove to be installed closest to the wall. Two inches from the wall is safe- however, three or four inches allows better access to remove the rear panel. The vertical portion of the vent should be three to five feet high. This vertical section will provide natural draft in the event of a power failure.

Figure 8: Shows minimum distances from the exhaust vent to doors, windows, and basement access and basement vents.

Figure 4: This method also provides excellent venting for normal operation but requires the stove to be installed farther from the wall. The vertical portion of the vent should be three to five feet high and at least three inches from a combustible wall. This vertical section will provide natural draft in the event of a power failure.

Figure 7: This method provides excellent venting for normal operation. This method also provides natural draft in the event of a power failure. The vertical portion must be at least 3 inches from a combustible wall.

Figure 5A: This method provides excellent venting for normal operation. This method also provides natural draft in the event of a power failure.

The damper area must be sealed with a steel plate or fiberglass. A cap should be installed on the chimney to keep out rain.

Figure 5B: This method provides excellent venting for normal operation. This method also provides natural draft in the event of a power failure.

Some building codes require that the vent pipe extend all the way to the top of the chimney.

In this method a cap should also be installed on the chimney to keep out rain. Be sure to use approved vent pipe fittings. Seal pipe joints with silicone in addition to the sealing system used by the manufacturer. Pipe size should be increased to 4" using this method.

Figure 8: This method is excellent for basement installations.

- **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.**
- **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**
- **INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT PIPE MANUFACTURER**

- **WARNING: DO NOT INSTALL IN SLEEPING ROOM**

AFTER THE INSTALLATION IS COMPLETED

Make sure that all covers are installed and secured with the fasteners provided with the stove.

Your corn stove has been pre-tested at the factory. It has been operated and tested for motor operation and temperature sensor operation.

- **NOTE: The factory vacuum safety switch may not be correct for all permanent installation conditions.**

VACUUM SWITCH ADJUSTMENT

The vacuum switch is equipped with an adjustment port. Located on the back side of the vacuum switch. The switch is located behind the right side cover plate (facing the front of the stove). There is a access hole provided in this cover plate for insertion of a common flat bladed screw driver.

- **NOTE:** If the vacuum switch is not adjusted properly, it can cause a safety concern. The function of this switch is to shoot off the auger (fuel supply) when
  1. The stove door is open
- 2. The exhaust is blocked.
- 3. The exhaust blower is not operating

The normal vacuum reading is from .20 to .25 inches of WC. If the vacuum switch is actuated then shut off the main power switch. The switch should set to off. If the switch does not actuate, use a common screw driver and turn the switch ¼ turn counter clockwise. Repeat the test. Make sure that when the stove is turned off the vacuum switch resets to off. If it does not reset then turn in the set screw until it does.

Easy adjustment, turn adjustment screw only ¼ turn or less at a time, when the stove door is opened the auger should stop turning and when the door is closed and latched the auger should resume turning, adjust to that result. Remember that the auger turns very slowly and it only turns full time on the high setting.

Before adjusting the vacuum switch, inspect the door gasket for damage. A good door seal is very important for proper vacuum switch operation. To check the seal place a piece of paper between the door and face of the door. Close the door and try to pull the paper out. If it slips out easily the door needs to be adjusted or the seal replaced.

INTERNAL INTAKE AIR DAMPER ADJUSTMENT

It may be necessary to adjust the intake air damper slide, located on the back of the stove in the air intake tube. By loosening the wing nut a little the slide can be slid up or down easily.

Guide for proper adjustment. Orange flames indicates a lack of air, while black ash is an indicator of too much air. The clinker ash should be silver gray in color.

NOTE: Too much air will increase the exhaust temperature, loosing heat to the outdoors. Too little air will create a lot of soot which will collect in the exhaust system and reduce the efficiency of the stove.

This adjustment process should be done over a couple of days so that you have enough burn time for proper evaluation.

MOBILE HOME INSTALLATION

When installing the stove in a mobile home it **is** required that the stove be bolted to the floor. This is usually fastened through the legs where bolt holes are provided.

Due to high temperatures, the stove must be placed out of traffic and away from furniture and draperies.

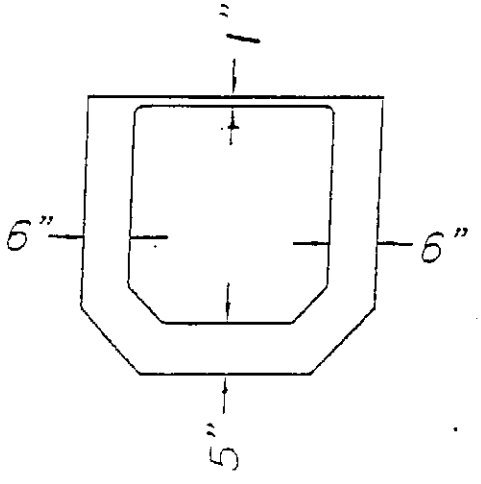
Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burn to skin and/or clothing.

Young children should be carefully supervised when they are in the same room as the stove.

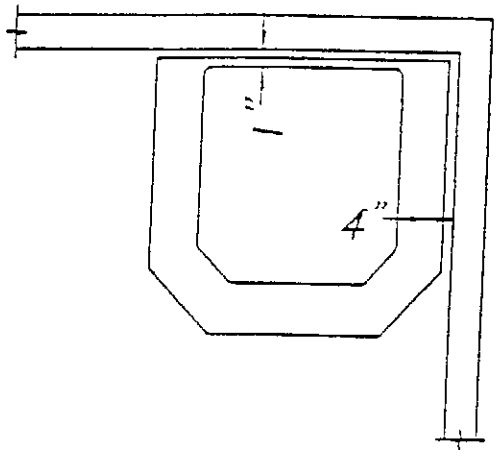
Clothing and other flammable materials should not be placed on or near the corn stove.

- **CAUTION**: This appliance must be vented to the outside. Installation and repair of the **Golden Grain** Stove should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning will be required.
- **CAUTION:** The Stove is hot while in operation
  Keep children, clothing and furniture away
  Contact may cause skin burns

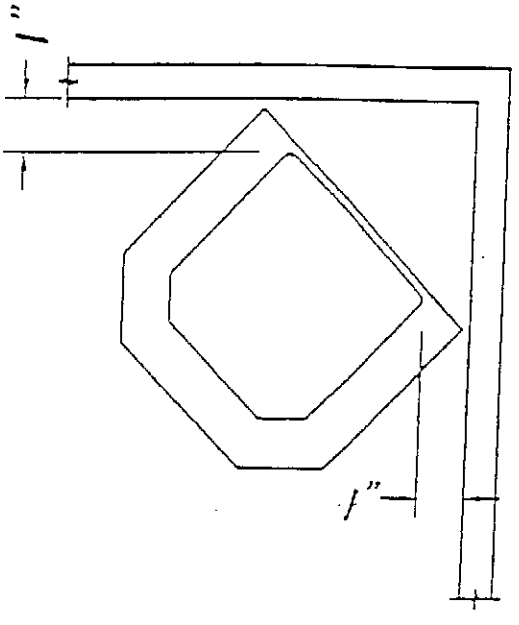
FLOOR PROTECTOR
MINUMUM SIZE



SIDEWALL/BACKWALL
INSTALLATION



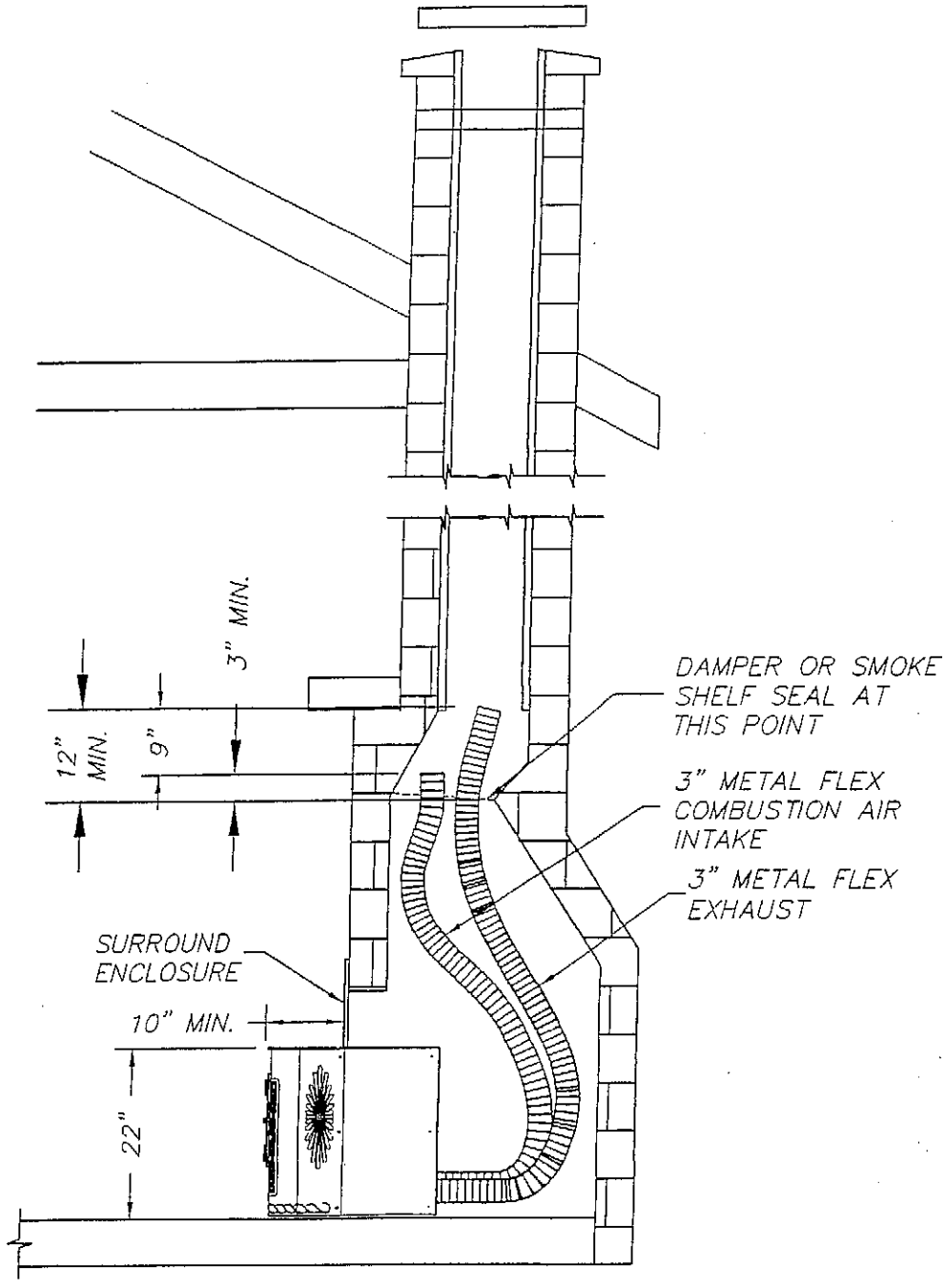
CORNER
INSTALLATION



CLEARANCES TO COMBUSTABLES

MODEL 1201

FIGURE 1



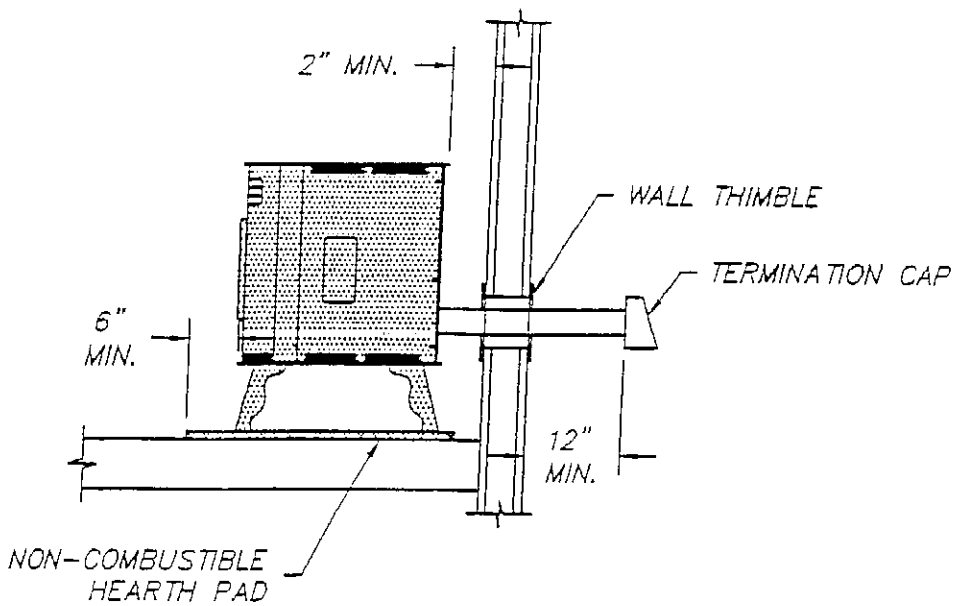
INSTALLING INTO AN EXISTING FIREPLACE CHIMNEY

GOLDEN GRAIN CORN STOVES

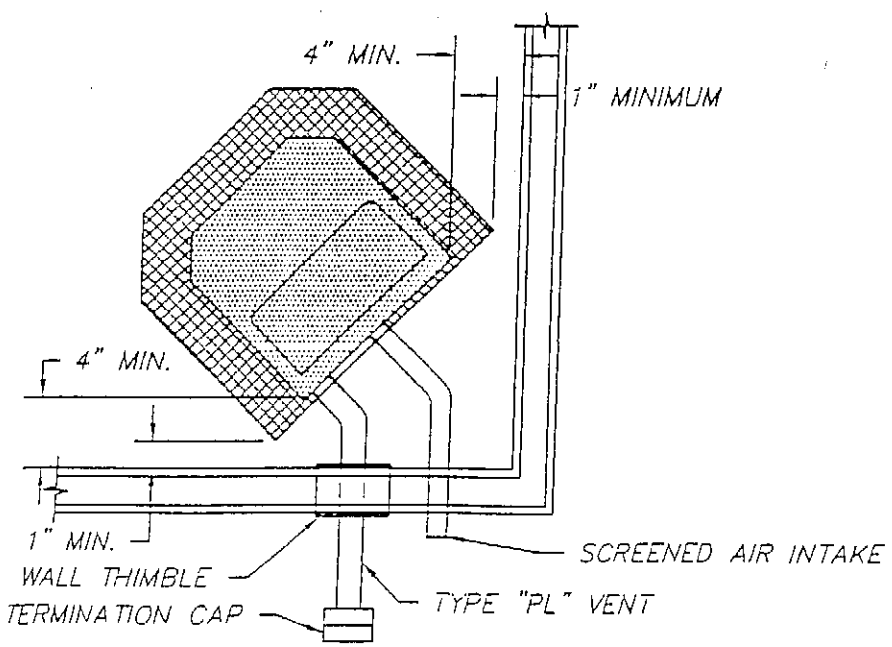
DESCRIPTION: MODEL 1200		SCALE: N.T.S.	
		DATE: 04-01-03	
GOLDEN GRAIN CORN STOVES Merino, CO 80741	DRAWN BY: JJR	DRAWING NUMBER: 3C 050	

APR 02, 2003 - 13:14:19 < L:\CORNSTOVE\INSERT\INSTALLATION\FIGURE 2.DWG >

FIGURE 2

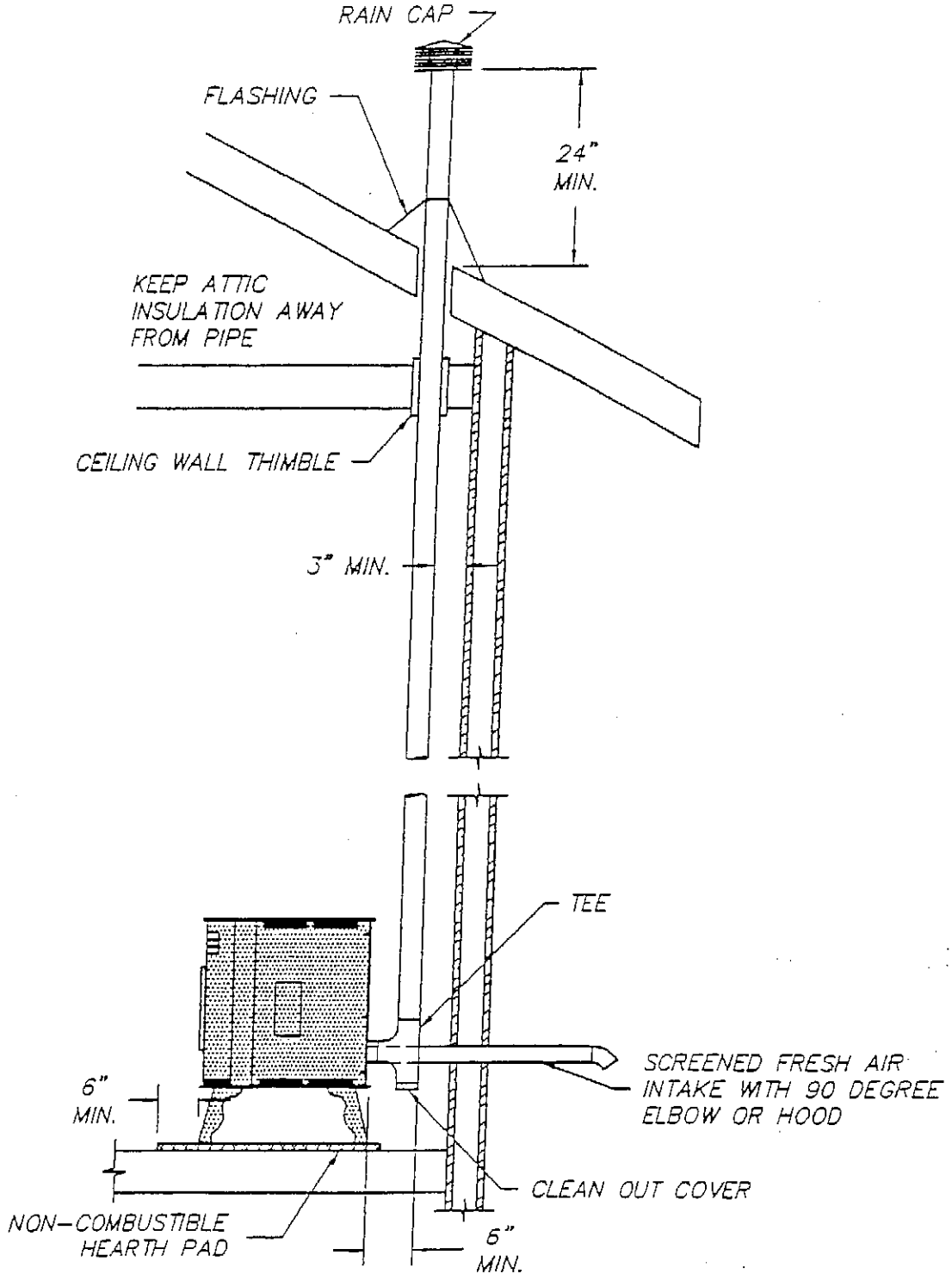


OUTSIDE WALL TERMINATION



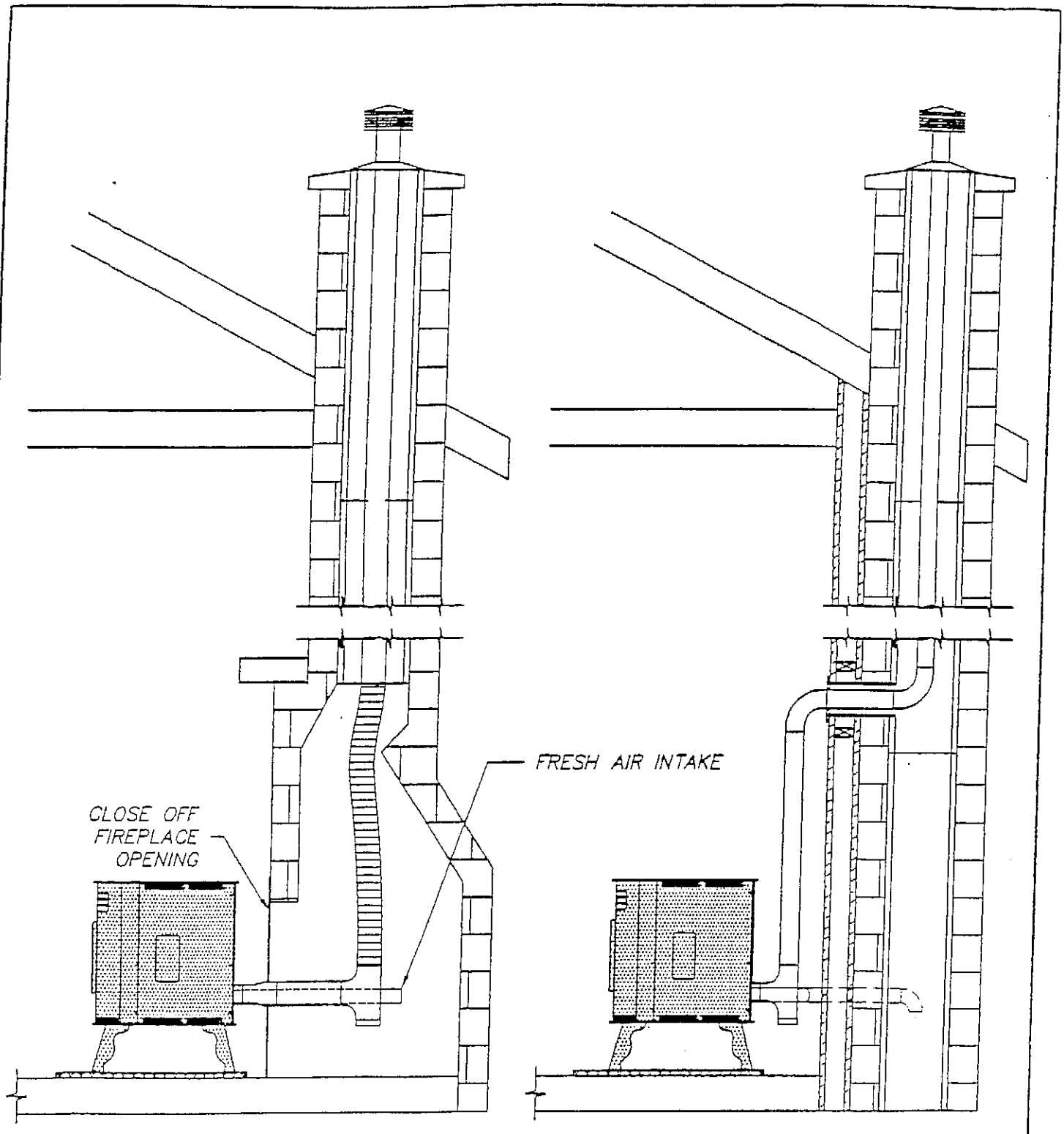
CORNER INSTALLATION OF STOVE

FIGURE 3



INSIDE VERTICAL PIPE WITH ROOF TERMINATION

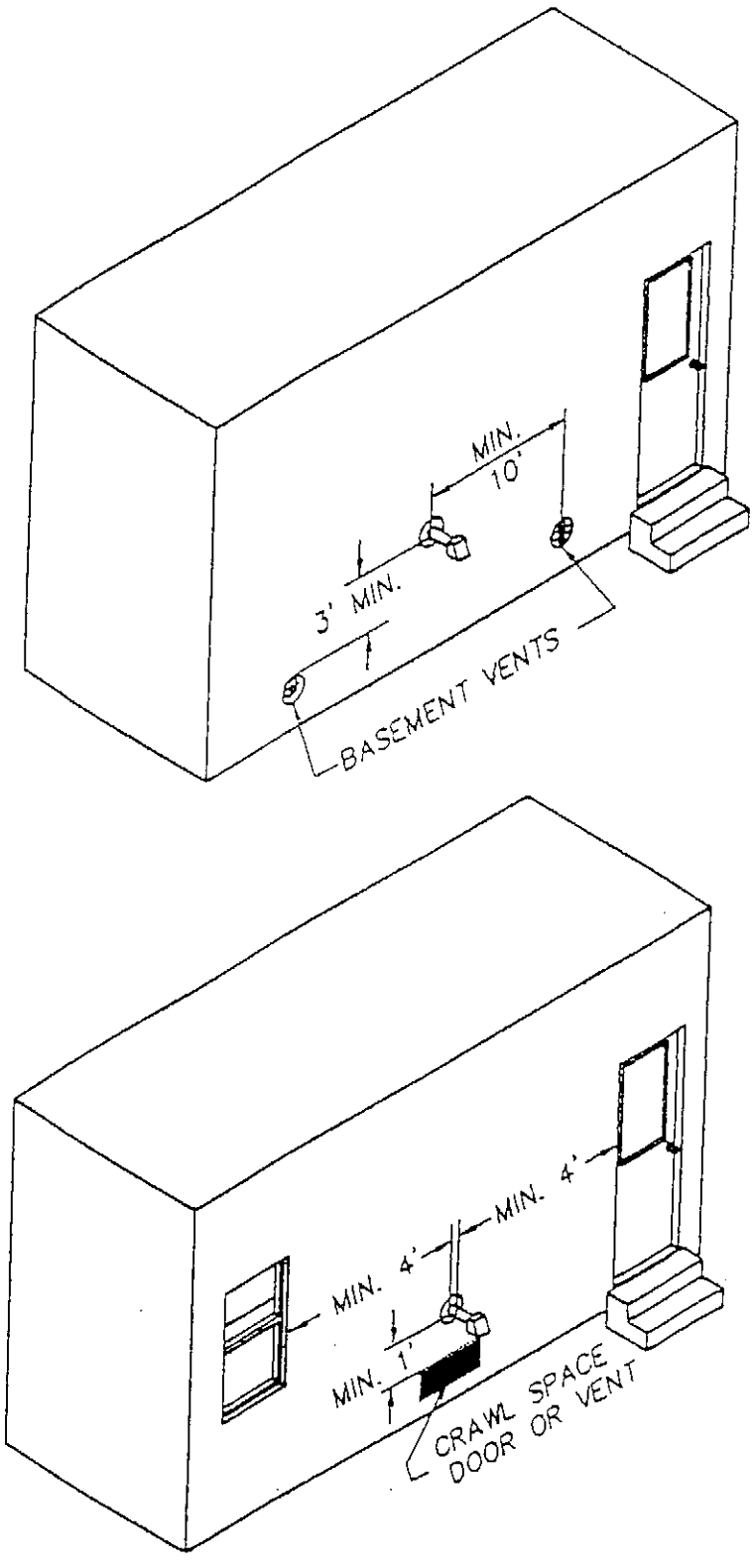
FIGURE 4



INSTALLING INTO AN EXISTING FIREPLACE CHIMNEY
(A)

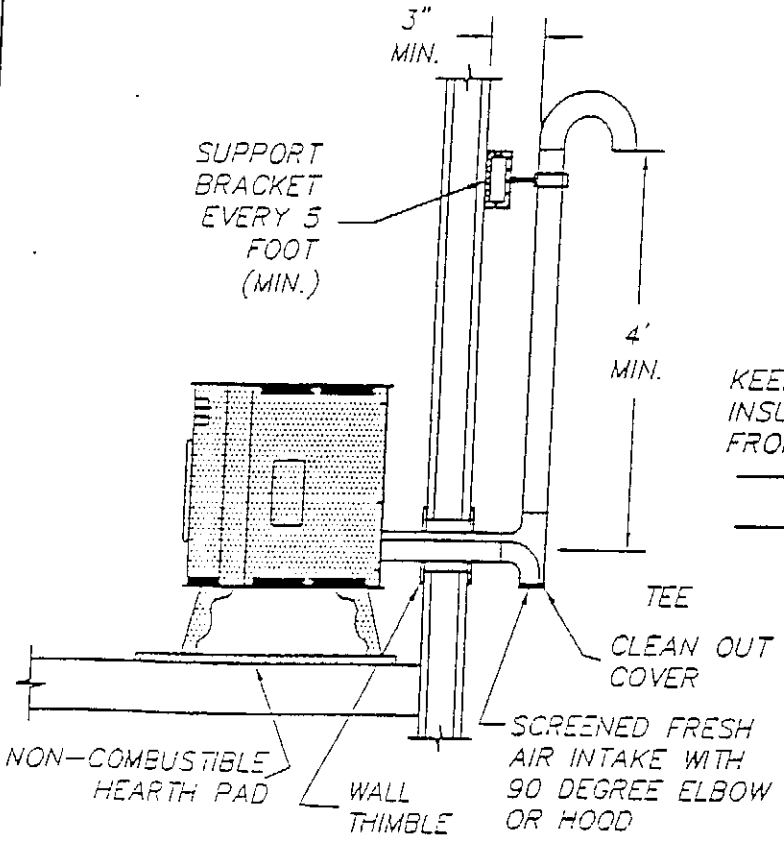
INSTALLING INTO AN EXISTING CHIMNEY
(B)

FIGURE 5

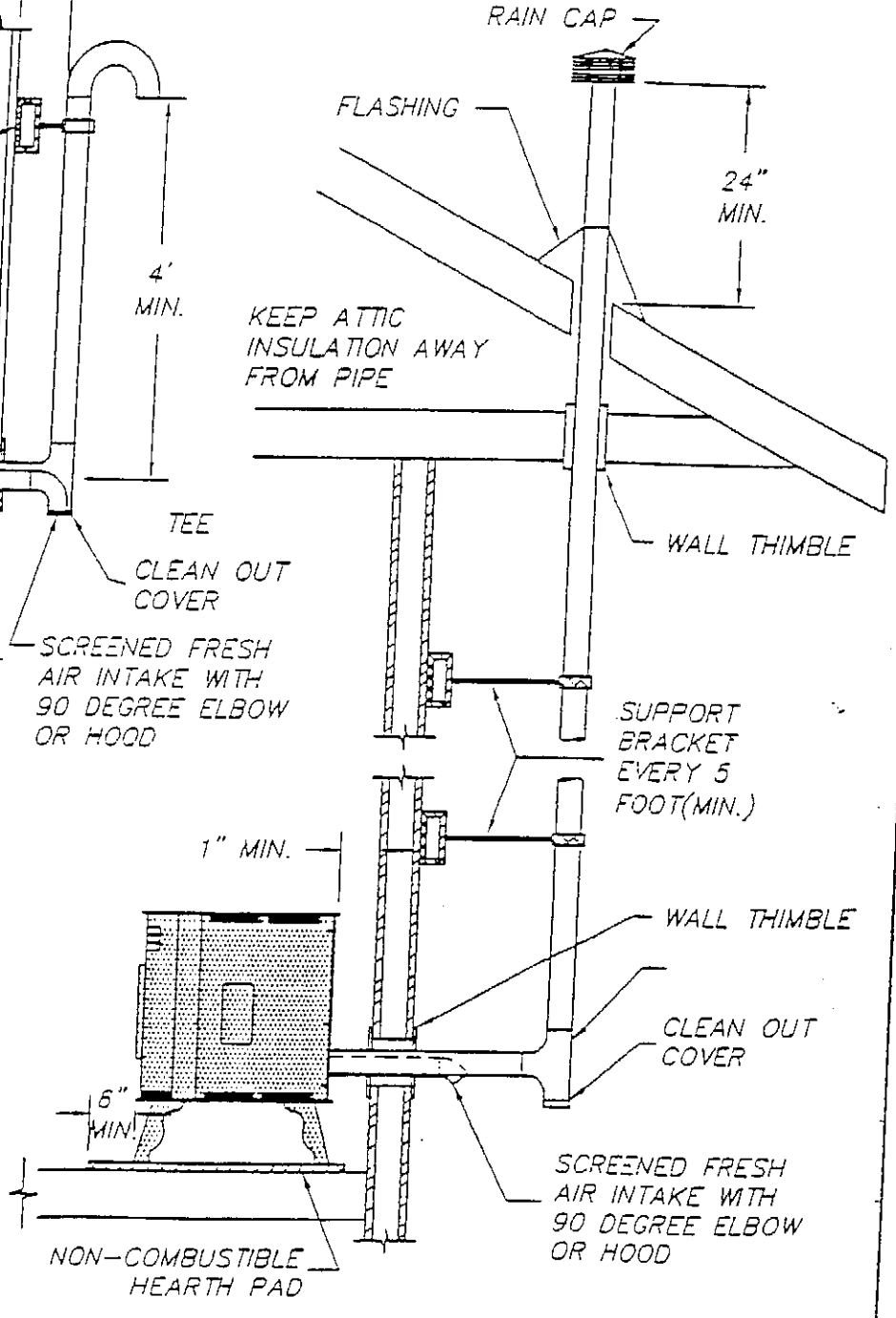


EXHAUST MINIMUM DIMENSIONS TO WINDOWS, DOORS, & BASEMENT VENTS

FIGURE 6

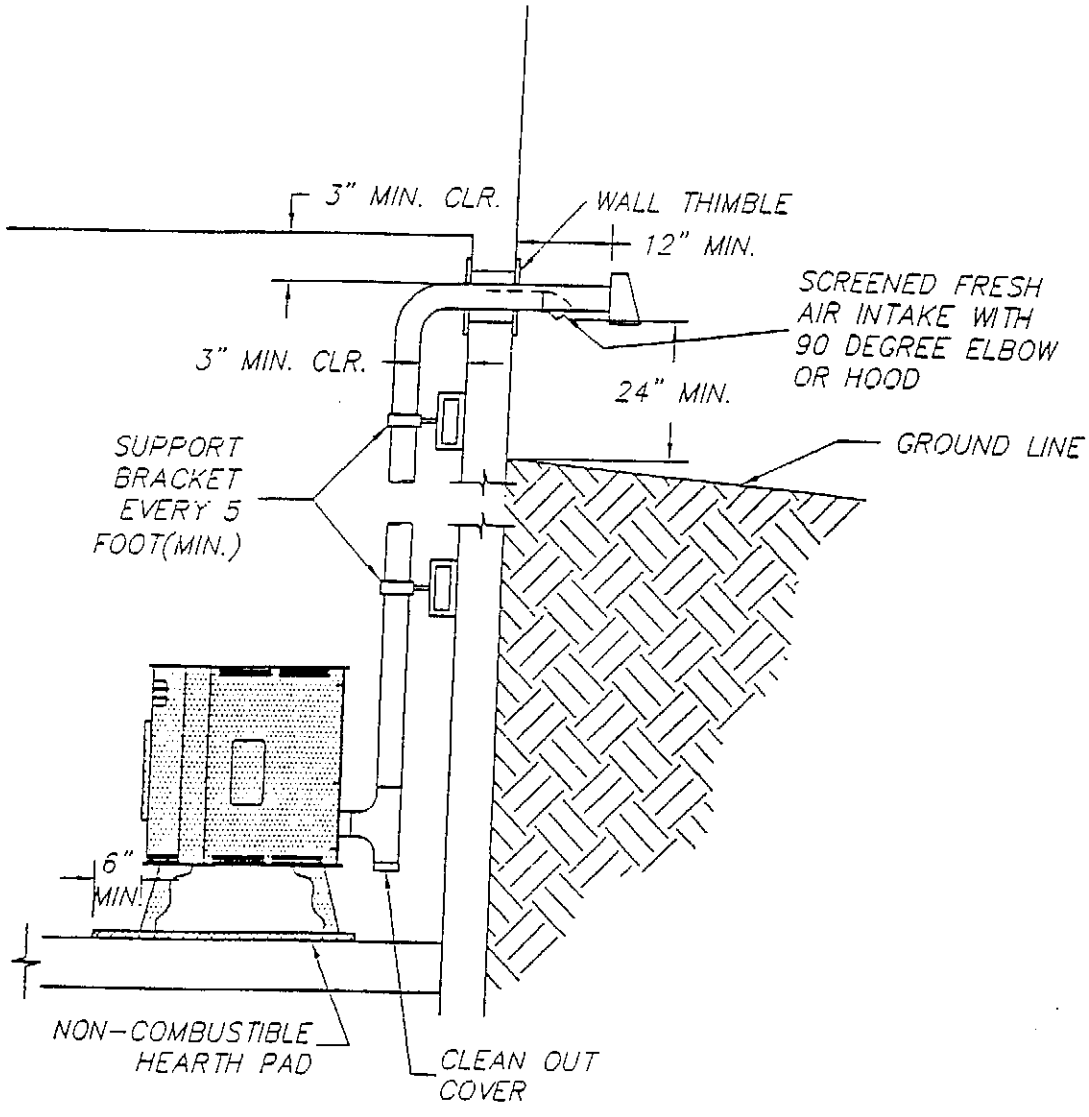


THROUGH THE WALL, VERTICAL PIPE INSTALLATION
(A)



THROUGH THE WALL, VERTICAL PIPE INSTALLATION WITH TERMINATION THROUGH THE ROOF
(B)

FIGURE 7



THROUGH THE WALL, VERTICAL PIPE
BASEMENT INSTALLATION

FIGURE 8

INSTRUCTIONS FOR INSTALLING SURROUND

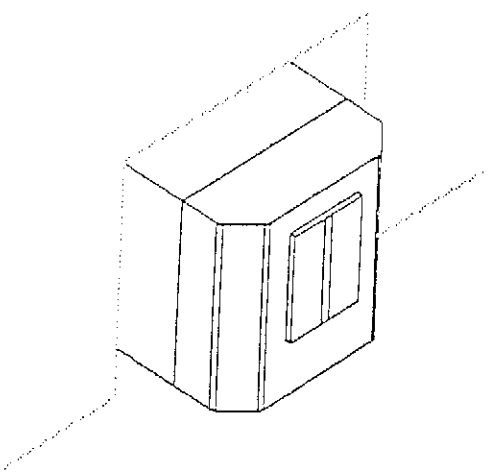


FIGURE: 1

STEP 1:

PLACE INSERT INTO FIREPLACE
TO DESIRED DEPTH AND LOCATION.

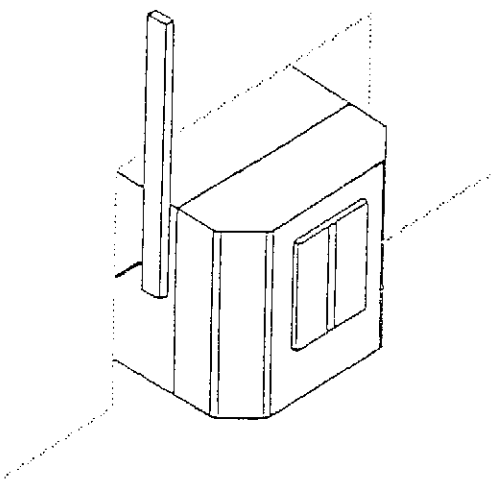


FIGURE: 2

STEP 2:

PLACE STRAIGHT EDGE ALONG FACE
OF FIREPLACE .

USEING PENCIL MARK SIDES OF INSERT.

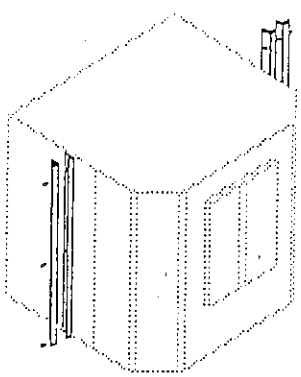


FIGURE: 3

STEP 3:

PULL INSERT OUT OF FIREPLACE.
ASSEMBLE SUPPORT ANGLES AS SHOWN IN
FIGURES; 4 AND 5: USE 1/8" DRILL
AND DRILL FOR SCREW HOLES.
PENCIL MARKS SHOULD LINE UP WITH INSIDE
OF REAR ANGLE AS SHOWN IN FIG .5
REPEAT FOR OTHER SIDE.

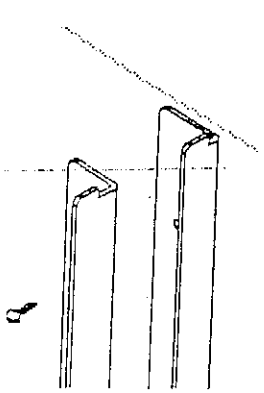


FIGURE: 4

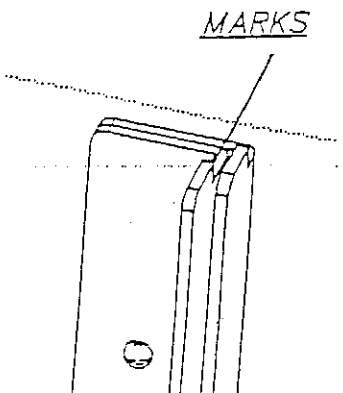


FIGURE: 5

INSTRUCTIONS FOR INSTALLING SURROUND

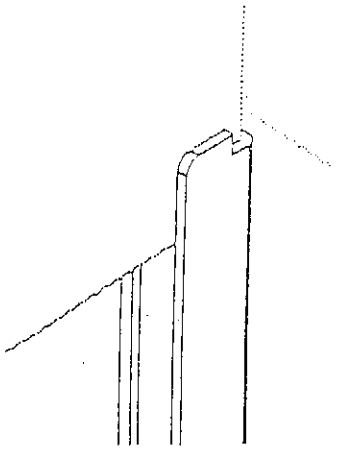


FIGURE: 6

STEP 4:

SLIDE SURROUND INTO CHANNEL CREATED BY ANGLES.

SEE FIGURES: 6 AND 7

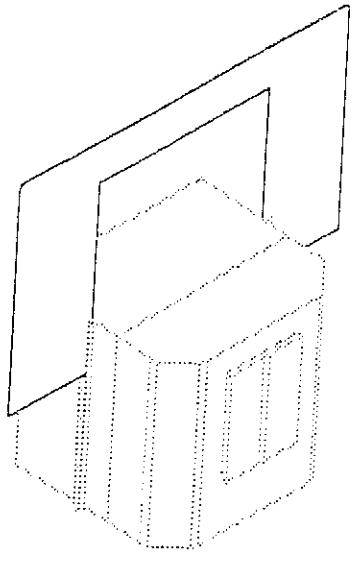


FIGURE: 7

STEP 5:

SLIDE INSERT AND SURROUND BACK INTO FIREPLACE.

MAKE SURE SURROUND IS TIGHT AGAINST FACE OF FIRE PLACE.

ENJOY

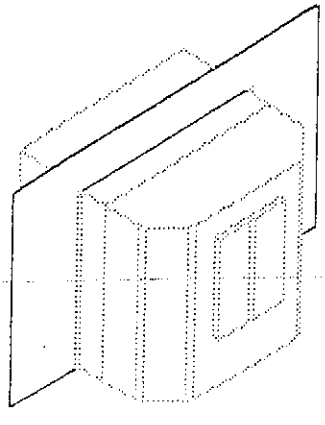


FIGURE: 8

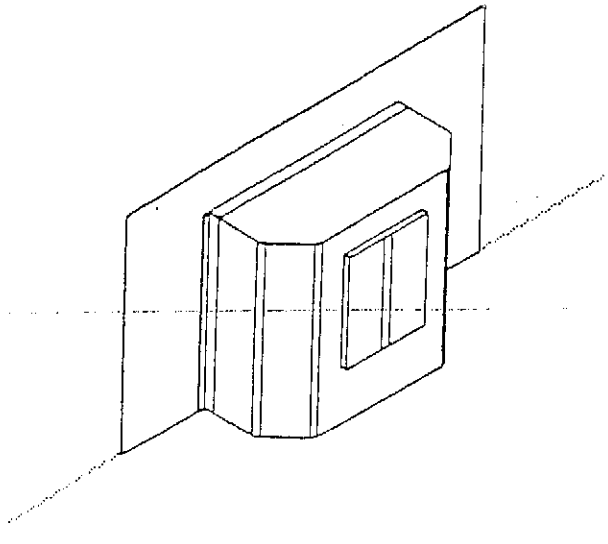


FIGURE: 9

- **CAUTION:** The structural integrity of the mobile home floor, wall and ceiling/roof must be maintained.

Mobile home installation should be done in accordance with the Manufactured Home and Safety Standard (HUD), CFR 3280, Part 24.

OPERATION OF THE CORN STOVE

LIGHTING THE STOVE

1. Fill the hopper with clean corn.
2. Add a hand full of wood pellets to the burner box. (about ½ cup)

- **NOTE**: If this is the first time the stove has been operated or if the hopper was completely run out of corn the previous time it was used, you need to add 2 handfuls of wood pellets to the burn box.

3. Add one squirt of starter gel. (Alcohol base starting gel)
4. Place burner box inside the corn stove. Make sure that the burner box intake hole is lined up with the air intake hole in the combustion chamber. Slide the burner box against the back wall of the combustion chamber.
5. Place the burner box chimney on top of the burner box.

- **NOTE:** The corn stove will not burn reliably at low settings without the chimney installed.

6. Turn the control knob to 1. The suction blower will turn on.
7. Use fireplace match or barbeque lighter to start fire
8. Light a small piece of paper on fire and place into the burner box.
9. Close and seal the door with the door Allen wrench.

After about 10 to 15 minutes you will be able to adjust the heat setting dial to your desired rate.

- **NOTE**: It is normal, when the stove is on high settings that one or 2 tongues of flame to come from under the lip of the burner box chimney.

CONTROLLER

Adjusting the heat turn the control knob to 1 of five settings.

	Duty Cycle	BTU	Lbs/hour
Setting 1	26%	10,800	1.2 lbs.
Setting 2	43%	17,200	1.9 lbs.
Setting 3	59%	23,600	2.6 lbs.
Setting 4	75%	30,000	3.3 lbs.
Setting 5	100%	40,000	4.4 lbs.

Operation of the Unit

When the selector switch is moved from of to one of the five heat settings, the unit will enter a 15 minute start up period to allow the fire to get started. During the 1st three minutes of this start up period, only the exhaust blower will operate. When this three minute period expires, the auger will being operation at the duty cycle determined by the heat setting. If the low temperature thermal disc closes during this start up period, the unit will exit the start procedure and begin normal operation. If this 15 minute start up period ends without the low temperature thermal disc closing, the unit will consider this an error condition and begin an error shut down procedure. (discussed later)

When the low temperature disc closes and normal operation begins, the room blower will be turned on.

Error Conditions (flashing indicator light)

Three conditions will be considered by the control to be an error condition.

1. The 15 minute start up period expires without the low temperature thermal disc closing.
2. During normal operation, the low temperature thermal disc opens.
3. The high temperature thermal disc opens.

When an error condition is detected, the control will begin a shut down period that will last a minimum of 15 minutes. The system LED on the control panel will indicate and error condition by blinking. The exhaust blower and room blower will continue to operate for 15 minutes. At the end of 15 minutes, if the low temperature disc is open, the exhaust blower and room blower will be turned off. The system LED will continue to blink to indicate that and error condition occurred.

If the selector switch is moved to the off position during and error shut down, the control will exit the error shut down and perform a normal shutdown.

Normal Shutdown

When the selector switch is moved to the off position from one of the heat settings, the control will shut off the auger, but will continue to operate the room blower and exhaust blower until the low temperature thermal disc opens. When this occurs, everything will be turned off.

BURN DURATION

The Golden Grain Corn Stove can burn for 14 hours and up to 2 days with out removing the clinker depending on the amount of corn burned and type of corn. Normally remove the clinker on a daily basis is recommended. The longer the time between cleanings, the less efficient the stove will burn corn.

RELIGHTING THE STOVE

Wait till the stove has completely cooled before removing the burner box from the combustion chamber. Use leather or insulated gloves to handle the warm components.

- Remove the clinker from the burner box.
- **NOTE**: The first 3 or 4 times the stove is burned the clinker will be difficult to remove. If you spray the new clean burner box with a cooking oil it will make the clinker easier to remove from the burner box. After a few burning cycles the box will cure and the clinker should pop out with a screwdriver, poker, or heavy tongs.
- Follow the stove lighting procedure listed above.

MAINTENANCE

Soot and Fly Ash

The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and on the heat exchanger tubes which can restrict the flow of the flue gases and reduce the efficiency of the stove. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the corn stove, will lead to some soot formation which will collect in the exhaust venting system and on the heat exchanger tubes.

DAILY

This stove is equipped with a heat exchanger tube wiper. This is a stainless steel handled rod which is located between the grills in the front of the stove. Pulling the rod in and out 3 or 4 times will wipe soot and ash from the heat exchanger tubes. This should be done every time you remove the clinker from the burner box.

SEMI ANNUAL AND/OR ANNUAL

1. Turn the control knob to the off position. Allow the stove to cool and the exhaust blower to turn off then let the stove set for at least 4 hours. This will result in a cool stove and burner box.
2. The exhaust venting system should be cleaned at least once each year.
3. Remove burner box from burn chamber and vacuum burn chamber. Remove 2 plugs from the burn chamber floor located near the back corners and vacuum through the holes. Replace plugs and burner box. Remove the right side panel and locate pipe plug on the side of the exhaust blower housing.

With the stove door closed and latched turn the control knob to 1 (this will start the exhaust blower) now remove the pipe plug from the blower housing and blow compressed air into the hole in the blower housing. This will dislodge soot and ash from the blower wheel and blow the soot and ash outside through the exhaust pipe. Turn the control knob to the off position, place the plug into the blower housing and tighten firmly (do not over tighten). Inspect the exhaust piping for soot build up and clean if necessary.

- **WARNING: Make sure that the stove has cooled completely to prevent a fire in the shop vacuum. Immediately after cleaning empty the vacuumed ash into a sealed metal container to prevent the possibility of fire in the shop vacuum.**

DOOR

1. Inspect the door gasket for worn or missing pieces. Replace if necessary.
2. Closing: When closing the door, always turn the door latch clockwise until it has caught the side of the door opening and tightens up and the door is fully sealed.
3. Glass: Check glass for cracks or missing pieces. **REPLACE GLASS WITH HIGH TEMPERATURE CERAMIC GLASS ONLY.** The glass is retained by a high temperature silicone adhesive. Contact the dealer for the proper silicone to use.

Burner Box and Combustion Chamber Cleaning

- **WARNING! Ashes should be placed in a metal container with a tight fitting metal lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If ashes are disposed of by burial in soil or otherwise locally dispersed, they should be kept in the closed metal container until all cinders have thoroughly cooled.**

- When removing the firebox to empty the clinker, you will note a build up of ash fines around the box. After the stove has cooled these can by cleaned by a small brush and pan or a shop vacuum.

- Whenever your stove is not burning, take the opportunity to scrape the burn box to remove ash build up. A shop vacuum cleaner can be used to remove the residue. **Be sure the stove is cold if you use a vacuum.**

- **WARNING: THE STOVE SURFACES WILL GET HOT DURING OPERATION. BURNS CAN RESULT. TURN OFF THE STOVE AND ALLOW THE STOVE COMPONENTS TO COOL BEFORE HANDLING. DO NOT ALLOW CHILDREN TO PLAY IN THE AREA OF A HOT STOVE.**

1. Turn off the stove.
2. Allow the stove to cool. This may take 1 to 2 hours before all internal surfaces are totally cool to the touch.
3. Remove the burner box.
   - **WARNING:** The burner box will be very hot after extinguishing. Allow plenty of time for the stove to cool after the stove is tuned off before trying to handle the box. Use leather or insulated gloves to reduce the risk of burns.
4. Scrape the sides and bottom of the burn pot. After several operations the clinker and ash will easily pop out of the burner box.
5. Empty the clinker and ashes into a metal container. Cover the container with a metal lid. Place the container in an area that will not be affected by the possibility of hot ashes starting a fire.

You can clean ash build up from inside the chamber while the burner box is out. It is important to keep the area under the burn box swept clean so that the box will sit level and all the way back against the air intake tube.

You can use a shop vacuum to vacuum the interior of the combustion chamber. Do not use a bag type vacuum.

- **WARNING:** Make sure that the vacuum does not have any wood shavings or dust inside before vacuuming the ashes from the combustion chamber.

After vacuuming the interior of the combustion chamber, **IMMEDIATELY**, empty the ashes from the vacuum into a closed metal container and place outside away from any combustible materials. Dispose of the ashes properly to prevent a fire from occurring.

CORN FUEL

There are 2 types of corn moisture. Dry corn has a moisture content of 15 percent or less. This is the normal corn that can be purchased at most grain stores. Moist corn maybe considered distressed or high moisture content corn.

Your Corn Stove is capable of burning either type of corn.

Higher moisture content corn will be harder to start, a risk of molding in the hopper and storage bin, and will probably only burn at higher settings than dry corn.

For the best operation the moisture content should be about 12 to 15 percent. Higher moisture will rob BTUs and may not burn properly.

CLEANLINESS OF CORN

Corn that has had a majority of its fine dust (flour) and cob ends removed will operate the best. The fine corn dust can cause some back smoking in the hopper during high heat operation. The cob ends can cause the auger to jam during operation. The cleaner the corn is the less trouble with auger operation you will have.

CLEANING THE GLASS

Use a soft rag to clean the interior of the glass.

- **WARNING:** Never use cold water on hot glass. This can cause the glass to shatter. Make sure that the stove has cooled before cleaning.
- A damp rag will normally clean off the interior of the cool stove glass windows.
- For heavy buildups of smoke on the glass, use an oven cleaner with protective latex gloves. Make sure that the stove has completely cooled before using the oven cleaner. Be careful not to get any oven cleaner in your eyes during the cleaning process. Follow the instructions on the oven cleaner as to proper use of this material.
- **WARNING:** Do not allow children or animals near to the oven cleaner or the used rags/paper towels.
- **WARNING**: Oven cleaners are a caustic substance and can cause chemical burns if you get it on your skin. Immediately flush the affected area with water and contact your physician for treatment.

TROUBLE SHOOTING

PARTIALLY BURNED CORN

After installation or during use of the corn burning stove use the following as a guide to assist you in troubleshooting problems that you may have in maintaining and operating the stove.

- **DANGER: At any time that you have any of the side or rear panels removed from the stove make sure that the electrical cord is unplugged. The interior of this stove contains 120 volt electrical components and severe electrical shock can occur.**

- **DANGER: Do not allow children near the stove when the covers are removed. Severe injury can result from the blower fans. Do not operate this stove with the covers removed.**

1. Feed rate too high.
2. Draft too low. (Check that burn box is against the air intake tube and that the door is completely closed.
3. Burn box may need to be cleaned.
4. Corn may be too moist.
5. Combination of all the above.

EXHAUST BLOWER WILL NOT TURN ON.

- Check that electric cord is plugged in.
  Plug in cord.

- Main switch is bad.
  Replace controller.

- Exhaust blower motor is bad.
  Replace blower and motor assembly.

AUGER DOES NOT FEED CORN

1. Firebox draft may be too low for the vacuum switch in the feeder circuit to operate. **Check for closed doors,** loose or missing gasket on door faulty vacuum switch.

2. Corn Feed motor will not run until the exhaust temperature sensor senses 110 deg. F. There may not have been enough wood pellets added to the burn box before lighting the fire to raise the temperature enough to start the auger.

    - Auger is jammed.
      Clean out hopper and check that the auger can be moved back and forth with your fingers. Remove obstruction. **NOTE: Auger cannot be turned by hand because of the gear motor.**

    - Auger is loose on auger motor shaft.
      Tighten set screw in auger shaft.

    - Check the vacuum safety switch
      Replace if bad. May need adjusting

    - Auger motor is bad.
      Replace auger motor.

    - Feed rate control is bad.
      Replace controller.

    - Exhaust over temperature switch is bad
      The sensor is mounted on the exhaust blower motor.
      Replace switch.

EXHAUST BLOWER DOES NOT TURN OFF AFTER CONTROL KNOB IS TURNED OFF AND STOVE COOLS.

- The cool down thermal switch is bad.

Replace thermal switch. The blower should turn off after no more than two hours if the stove has been operating at high burn. If the stove does not turn off the thermal switch is bad. It is the rear most thermal switch mounted on the blower housing with the black and brown wire connected to it.

- Controller is bad.

Replace controller.

ROOM BLOWER DOES NOT OPERATE

- Room Blower/Auger thermal switch is bad.

  After the stove has warmed, and the auger is running, check the room blower/auger thermal switch. The thermal switch is the switch with the orange and blue wires connected to it on the exhaust blower. Replace thermal switch if bad.

- Blower motor is bad or jammed.

  Unplug stove

  Turn room blower fan with a screwdriver or stick. Do not place your fingers into the fan in case it starts to spin. If blower does not turn easily remove obstruction or replace blower.

EXHAUST BLOWER TURNS OFF WHEN RUNNING STOVE AND CONTROL KNOB IS TURNED TO ANY ONE POSITION.

- One of the motor over temperature safety switch has tripped out. Indicator light will flash.

  Let stove cool down, then turn control knob to off and relight. Contact dealer if problem persists.

Part Description	Part Number
Door Assembly with glass and latch	WCS1000
Door Glass	WSG0007
Door hinge.	WHI0050
Door latch assembly	
1/4" gasket for door (43")	WRP0051
Door Latch Allen Wrench	XXT0013
Right Side Panel	
Left Side Panel	
Owner's Manual	
Wiring Diagram	3C802
Wiring Harness Assembly	
Exhaust Motor Over temperature sensor 220 degrees	ETH0002
Auger/Room Blower temperature sensor 110 degrees	ETH0001
Vacuum Switch	ESA0002
Exhaust Blower	EAP0051
Room air Blower	EAP0052
Auger motor	DGG0060
Auger shaft	3C13501
Auger motor to shaft set screw and collar	
Control Panel Plate	
Exhaust Blower to vent pipe adapter	
Exhaust Blower to vent pipe adapter gasket	3C71001
Exhaust blower to stove Gasket	3C71001
Hopper Lid Label	
Burn Box	3C14001
Burn Box Chimney	3C43301

WARRANTY

3 YEAR TRANSFERABLE LIMITED
WARRANTY (Residential)
1 YEAR LIMITED WARRANTY (Commercial)

Golden Grain Stove Company warrants its products to be free from defects in material or workmanship, in normal use and service, for a period of 3 years from the date of sales invoice and for mechanical and electrical failures, in normal use and service, for a period of 1 year from the date of sales invoice if the unit is used in a residential installation. If the unit is used in a commercial installation this warranty is for 1 year.

If detective in material or workmanship, during the warranty period, Golden Grain Stove Company will, at its option repair or replace the product as described below.

The warranty above constitutes the entire warranty with respect to Golden Grain Stove Company products. GOLDEN GRAIN STOVE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING "ANY" WARRANTY OF MERCHANTABILITY. OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. No employee, agent, dealer, or other person authorized to give any warranty on behalf of Golden Grain Stove Company. This warranty does not apply if the product has been altered in any way after leaving the factory. Golden Grain Stove Company and its agents assume no liability for "resultant damages of any kind" arising from the use of its products. In addition, and its warranty administrator shall be hold free and harmless from liability from damage to property related to the operation, proper or improper, of the equipment.

- THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

- THESE WARRANTIES APPLY only if the device is installed and operated as recommended in the user's manual.

THESE WARRANTIES WILL NOT APPLY if abuse, accident, improper installation negligence, or use beyond rated capacity causes damage.

HOW TO MAKE A CLAIM - Any claim under this warranty should be made to the dealer from whom this stove was purchased. When contact is made with manufacturer, give the model and serial numbers, the date of purchase, your dealer's name and address, plus a simple explanation of the nature of the defect. Extra costs such as mileage and overtime are not covered. Nuisance calls are not covered by these warranties.

THIS WARRANTY IS LIMITED TO DEFECTIVE PARTS - REPAIR AND/OR REPLACEMENT AT STOVE COMPANY'S OPTION AND EXCLUDES ANY INCIDENTAL AND CONSEQUENTIAL DAMAGES CONNECTED THEREWITH.

WARRANTY EXCLUSIONS:

Failure due, but not limited to, fire, lightning, acts of God, power failures and/or surges, rust, corrosion and venting problems are not covered. Damage and/or repairs to cabinets and all exterior components, including but not limited to, handles, glass, gaskets, door packing, burner box, paint, and related duct work are not covered. Additional or unusual utility bills incurred due to any malfunction or defect in equipment and the labor cost of gaining access to or removal of a unit that requires special tools or equipment are not covered. Maintenance needed to keep the stove in "good operating condition" is not covered. This includes, but is not limited to, cleaning, adjustment of customer controls and customer education. Labor, materials, expenses and/or equipment needed to comply with law and/or regulations set forth by any governmental agencies are not covered.

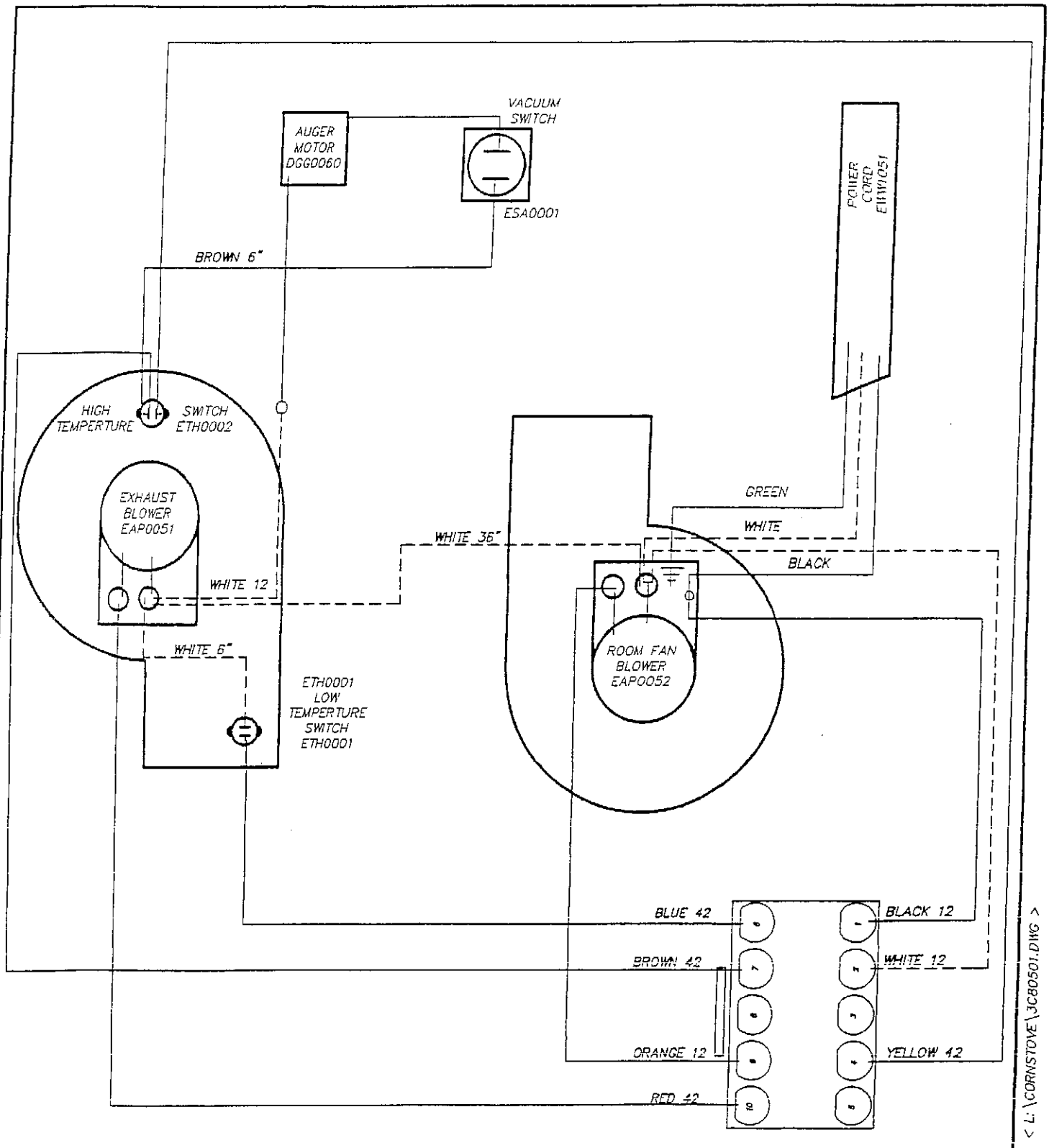
This Warranty provides specific legal rights and the consumer may have other rights that vary from state to state.

In the event of change in ownership, the remaining portion of this warranty may be transferred to the new owner by, sending the new owner information and a transfer fee of $25.00 US, to the Golden Grain Stove Company.

WARRANTY for electrical components such as switches, blower motors, feed rate control, blower speed control are covered for one year or the original component manufacturers warranty.

REMEDIES - The remedies set forth herein are exclusive and the liability of seller with respect to any contract or sale or anything done in connection therewith, whether in Contract, in tort, under any warranty, or otherwise, shall not, except as herein expressly provided, exceed the price of the equipment or part of which such liability is based.

CLARIFY - The above represents the complete warranty, which is given in connection with stoves, manufactured by Golden Grain Stove Company. No other commitments, verbal or otherwise, shall apply except by a written addendum to this warranty.



WISDOM INDUSTRIES Merino, CO 80741

APPROVED BY:

DESCRIPTION: CONTROL WIRING

SCALE: NTS

DATE: 10-23-03

EQUIPMENT: CORNSTOVE, 1101,1201,2004

DRAWN BY: CWM

DRAWING NUMBER: 3C 802

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