



## THELIN ECHO-COMSTOCK PELLET HEATER PLANNING & INSTALLATION GUIDE

### General Information

Thelin Echo-Comstock Pellet Heaters are uniquely designed to provide a classic pot belly stove appearance while incorporating the latest proprietary digital system with DC battery back up performance. The following planning guide will provide direction for placement, vent installation, outside combustion air, and electric requirements. This guide is not a replacement for the

installation manuals required for unit and vent systems. Please refer to those manuals and local building codes for more specific requirements.

### Pellet Heater Operation

Thelin Pellet Stoves use a combination of forced draft fan motor and pellet feed motor systems to provide controlled combustion of wood pellet fuel. A digital control system with auto light igniter are used to automatically start the fan and feed systems, light the pellets, and control the feed rate and heat output based on three main settings Low, Medium, and High. All Thelin Pellet Heaters are designed to provide the lowest overall operating cost by incorporating a 12VDC drive system. The system operates normally on battery voltage and therefore if equipped with optional battery will continue to operate during brief power outages.

Flue gas is expelled through a Type PL chimney system designed for pellet or multi-fuel operation. Ash from burning wood pellets accumulates in the ash hold inside the stove and some will deposit in the vent system. Therefore a vent system clean out must be installed on the back of the stove with easy access for seasonal servicing.

### Stove Location

There are several factors to consider when locating your stove. Primary considerations:

- \* ***Stove surfaces are Hot - Locate away from heavy traffic areas.***
- \* ***If children are present add additional barriers to keep them away from stove area.***
- \* ***Stove fan and feed system are running continuously and add to the ambient background noise. Consider other areas if a TV or you are bothered by the sound of a appliance running.***
- \* ***Type of construction and room configuration will affect sound, overall heating, and general operation. Hardwood floors with tile hearths and vaulted ceiling provide addition considerations when installing your stove.***
- \* ***Ease of access for stove service and chimney cleaning should be carefully considered.***
- \* ***Electric 115VAC service plug should be within 3 ft. of the installation to allow for cord to directly plug into without the use of extension cords.***
- \* ***Consider wind direction and large exterior surfaces when installing a wall mounted vertical***

***termination as in stormy conditions the wind against the vent system may affect drafting.***

- \* Fueling your stove requires storing fuel and lifting fuel buckets daily. Easy access will make this a quick and simple chore.***

### **GENERAL WARNINGS**

Hot Surfaces! Hot Glass Will Cause Burns. Surfaces and Glass Are Hot During Operation and During Cool-down Period.

Do Not Touch Glass until it Is Cooled.

Never Allow Children to Touch Glass. Alert Children to Hazards of High Temperatures.

High Temperatures May Ignite Clothing or Other Flammable Materials. Keep Clothing, Furniture, Draperies and Other Flammable Materials Away from Stove.

### **GENERAL FIRE SAFETY**

Maintain the designated clearances to combustibles as diagramed in this manual. Insulation must not touch the chimney or venting system. You must maintain the designated airspace clearance around the chimney. This space around the chimney is necessary to allow heat to flow away from the chimney area. Insulation in this area will cause heat buildup, which could ignite wood framing.

The following should be considered when installing any solid fuel appliance:

1. Install at least one smoke detector on each floor of your home to ensure safety. They should be located away from the heating appliance and near the sleeping area.
2. Conveniently locate a Class A fire extinguisher near the appliance.
3. Write down and practice an evacuation plan with two escape routes.

Check with your local building code department before you begin your installation. Obtain a building permit in order to meet local building code requirements.

Contact your local dealer if assistance is required before, during and after installation.

### **GENERAL INSTALLATION NOTICES**

This stove must be electrically grounded according to local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-2013.

Provide adequate clearances around air openings into the combustion chamber and provide adequate accessibility clearance for servicing and proper operation. Never obstruct the front opening of the stove.

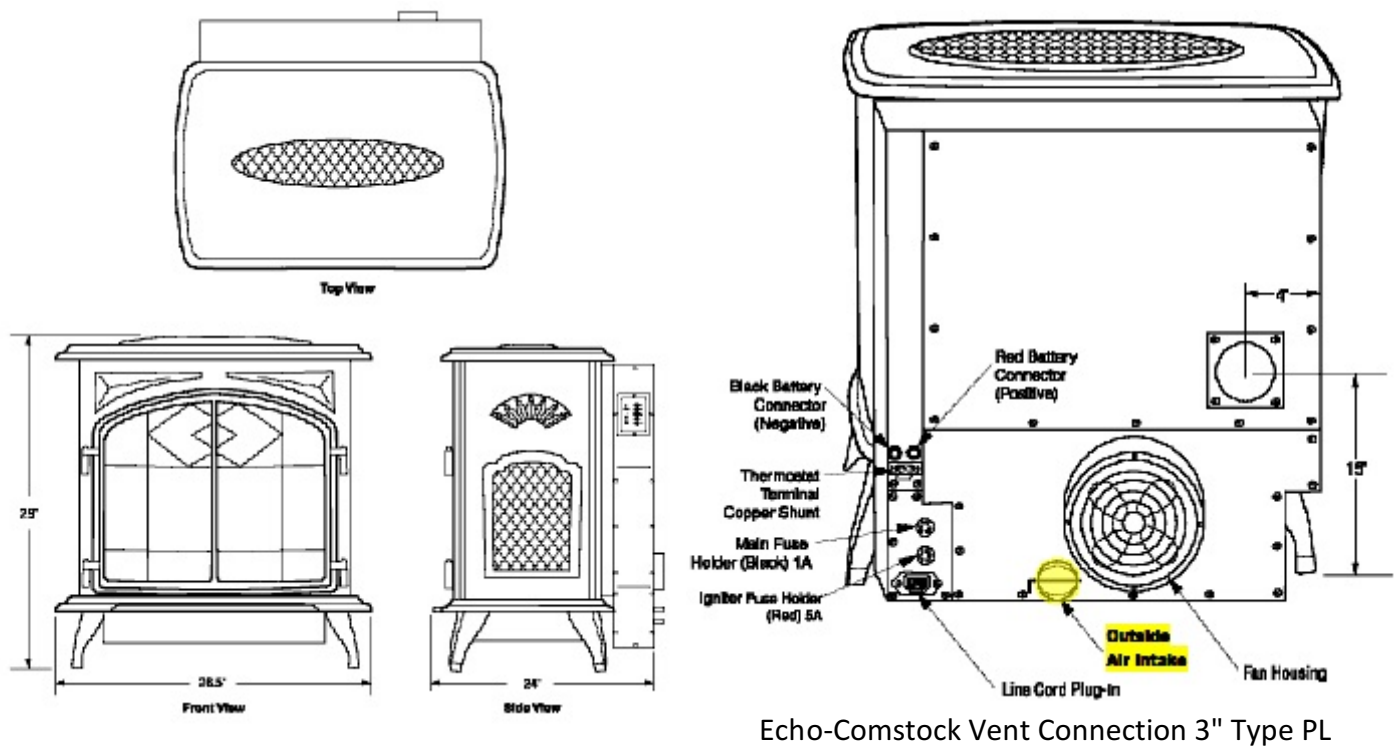
The stove may be installed as a free-standing unit mounted on a non-combustible protective floor pad or hearth. Non-combustible floor protection is required and must be used when placing the stove on any combustible material.

1. When deciding on the location of your stove and vent pipe, try to minimize the alteration and re-framing of structural components of the building. Vent pipe must be installed so that access is provided for inspection and cleaning.

2. Failure to follow these installation instructions may affect warranty.
3. Avoid installing stove in high-traffic areas. Keep children well away from the stove when in operation or cool down period. Never allow children to touch glass. Alert children to hazards of high temperature.
4. Venting clearance of 3" clearance to combustibles must be maintained for horizontal and vertical venting. When passing through ceilings or walls use a listed wall thimble. Ensure all combustible materials and insulation products are a minimum of 3" away from the pellet vent pipe.
5. Outside combustion air may be required as home construction dictates. Newer design and materials have made the inside rooms develop negative pressure between outside space. This pressure differential will cause the pellet heater to run improperly as it limits unit air for combustion. Additionally other kitchen fan systems, larger heating systems, and even high wind events outside the home may effect the way smaller systems function. Addition outside combustion air is a primary installation consideration. Review installation manual for more information.
6. A 5-inch clearance to combustibles must be maintained between unit and sidewall. A 2- inch clearance to combustibles must be maintained between unit and back wall. If installed in a corner, clearance must be 5" to combustibles. See FIGURES
7. A non-combustible hearth pad must be used if installed on a carpet, wood floor, or other combustible material. Maintain 6" (152mm) beyond the front and beyond each side of the fuel loading and ash removal opening.
8. Keep front door of appliance thirty-six (36) inches from combustibles (drapery, furniture).
9. When installing the exhaust vent into an existing chimney, the chimney should be relined with a 4" stainless steel liner or a 4" TYPE L pipe. A clean out tee must be installed behind the heater before going up into the chimney. This is necessary in order to remove the fly ash accumulation.
10. All installations have a maximum of two 90 degree elbows including the tee. NOTE - two 45 degree elbows = one 90 degree elbow.
11. The pellet stove must be operated with a power source and will not operate using natural draft. If there is a power failure the stove will shut down. If the 12-volt back-up system is installed, the stove will automatically switch to the 12-volt power.
12. Route the power supply cord so it does not touch any of the exterior components of the stove.

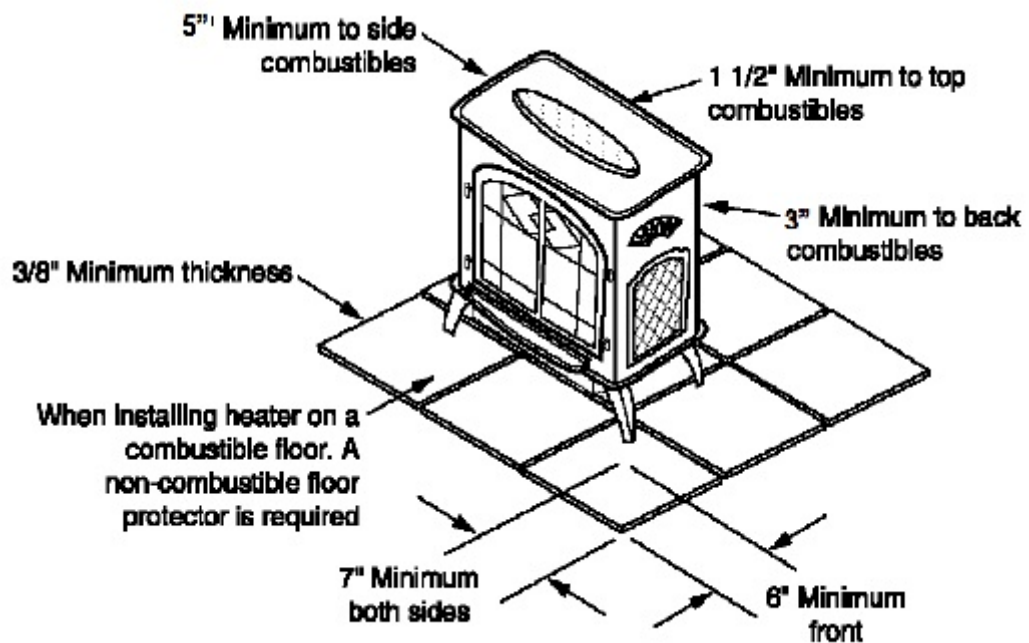
**CAUTION:** Do not connect this unit to a chimney flue serving another appliance. Do not install flue damper in the exhaust venting system of the unit.

## THELIN Echo-Comstock PELLET HEATER - OVERALL DIMENSIONS



### Clearance to Combustibles

Unit to Sidewall .....	5"	(125 mm)
Unit to Back wall .....	3"	(80 mm)
Unit to Diagonal Wall .....	5"	(125 mm)
Unit to Alcove Ceiling .....	1.5"	(40 mm)



## VENT INFORMATION

Install vent clearances as specified in this Owner's Manual.

USE TYPE L 3" OR 4" PELLET VENT PIPE DEPENDING ON YOUR INSTALLATION.

Secure pipe adapter to rear flange with 500 degree HIGH-TEMP RTV silicone and using at least three sheet metal screws. Subsequent sections must be attached with three screws also. Each pipe section should be sealed with hi-temp silicone and/or follow vent manufacturer's instructions Use only Type L 3" or 4" venting systems depending on your installation requirements.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

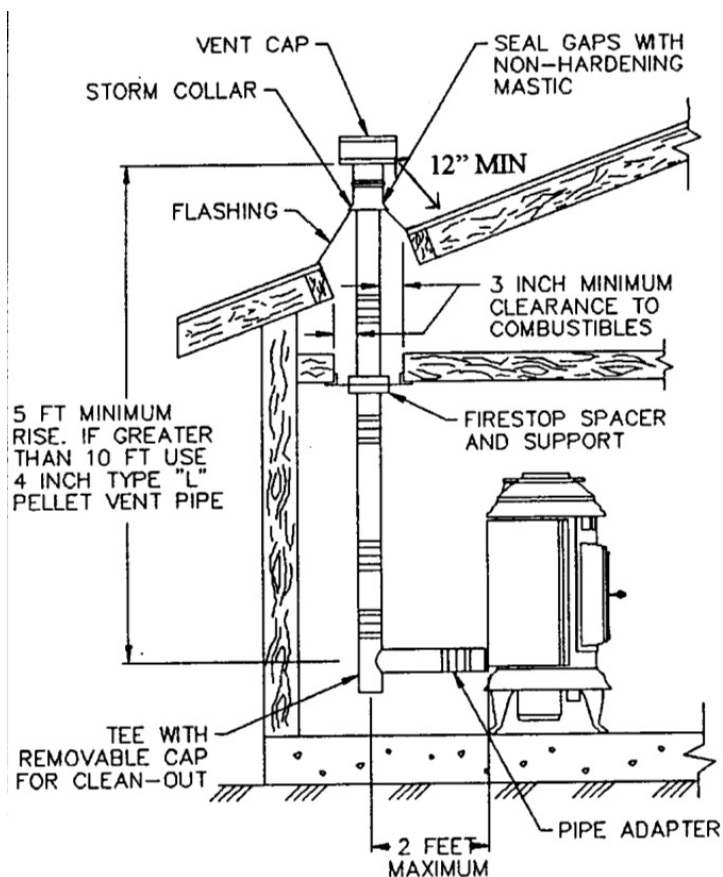
### Termination

DO NOT terminate vent in any enclosed or semi-enclosed area such as carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closely fenced area or any location where fumes can build up and concentrate such as stairwell, covered breeze way, etc.

### Distance to openings

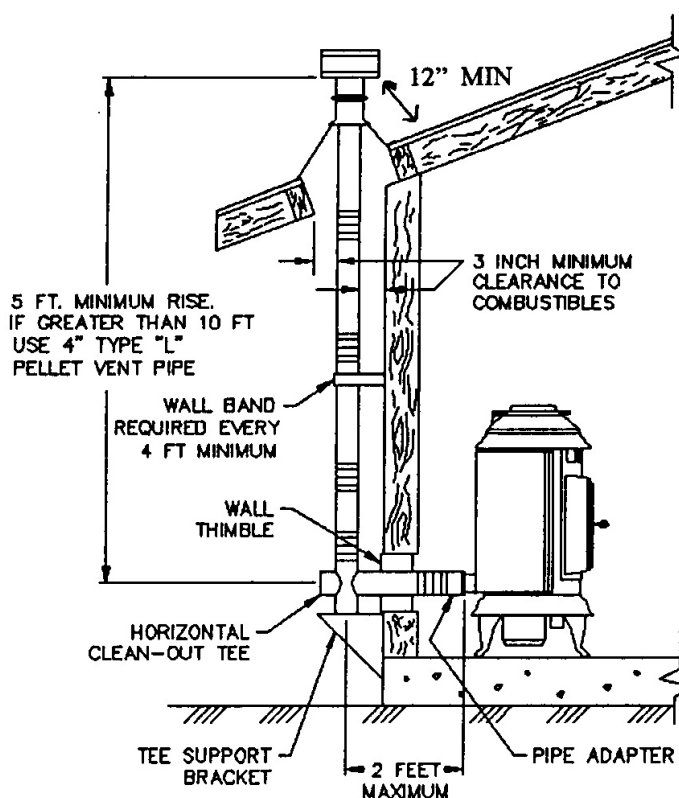
1. 3 feet minimum above any forced air inlet located within 10 feet.
2. 4 ft. minimum below, or 4 ft. horizontally from, or 1 foot minimum above any door, window, or gravity air inlet into any building.
3. Permanently closed windows – not less than 1 foot below, horizontally from, or above the permanently closed window.
4. 2 feet minimum to an adjacent building and 7 feet minimum above grade when located adjacent to public walkways
5. Distance to bottom of termination cap and grade should be 12".
6. Grade surface must be non-combustible material such as rock, dirt, gravel. Beware of plants, lawn, bushes, and shrubs, which are considered combustible material.

Consult local building, fire or other official codes. Local codes may be different and require other clearances than described here.

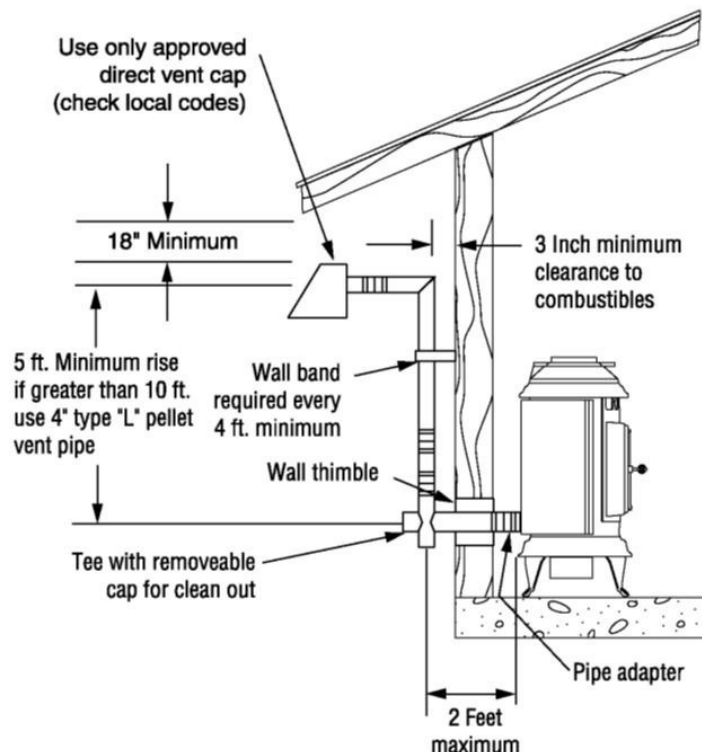


## HORIZONTAL INSTALLATION WITH VERTICAL RISE

1. Hook up the pipe adapter to the rear exhaust flange of the stove, and silicone with 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.
2. When exiting through the wall an approved wall thimble MUST be used. A MAXIMUM HORIZONTAL RUN of two feet is allowed.



3. Connect a pellet vent tee with clean out cap and extend the vent pipe a MINIMUM OF 5 FT VERTICALLY maintaining a MINIMUM 3" clearance to combustibles with a square horizontal cap as shown in FIGURE 5.
4. When the vertical pipe run in any installation is 5 feet or more, the use of 4-inch Type L vent pipe is required on the entire run from back of stove to vent termination.
5. On vertical runs on an exterior wall, a wall band is required every 4 feet.
6. All vent pipe connections including exit at the rear of the stove should be secured and sealed with 500 degree HIGH-TEMP silicone and at least three sheet metal screws. If this is not done, there is a possibility that the room fan will pick up any leakage and blow it into the room. This requirement is waived if Dura Vent Pellet Pro pipe is used. However, rear connection of the stove still requires 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.
7. Installation per FIGURE 6 requires 4" Type L pipe with a minimum 5 foot vertical rise with a square horizontal cap.

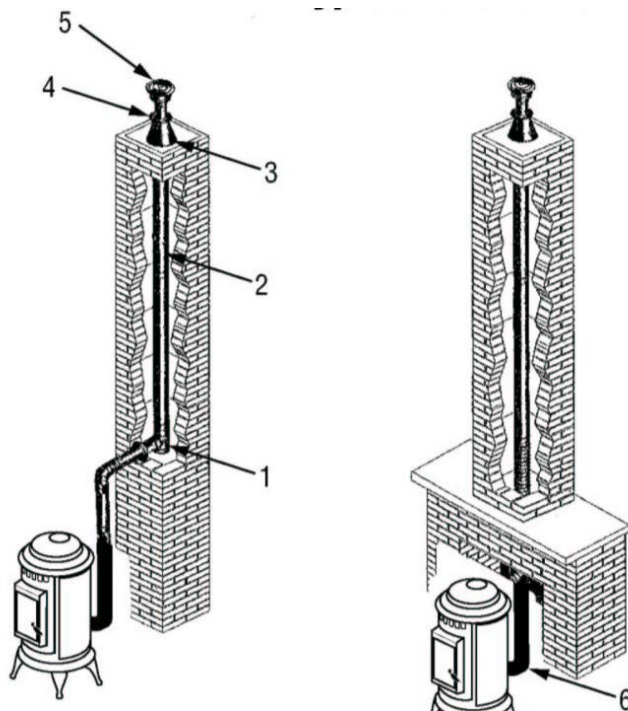


8. Connect a 3" to 4" appliance adapter/increaser on the rear exhaust flange and sealed with 500 degree HIGH-TEMP silicone screwed together with 3 sheet metal screws.

9. Connect a vent tee with clean out cap and extend the vent pipe a MINIMUM OF 5 FT VERTICALLY maintaining a MINIMUM 3" clearance to combustibles.
10. A MAXIMUM HORIZONTAL RUN of two feet is allowed.
11. An approved wall thimble must be used.

### **VERTICAL INSTALLATION INTO AN EXISTING CHIMNEY**

1. We recommend a chimney be relined with a 4" stainless steel flex liner with an approved chimney adapter.
2. All vent pipe connections including exit at the rear of the stove should be secured and sealed with 500 degree HIGH-TEMP RTV silicone and at least three sheet metal screws. If this is not done, there is a possibility that the room fan will pick up any leakage and blow it into the room. This requirement is waived if Dura Vent Pellet Pro pipe is used. However, rear connection of the stove still requires 500 degree HIGH-TEMP RTV silicone. Screw together with at least three sheet metal screws.
3. Outside Air Hook-up: An aluminum flex pipe can be used to bring combustion air into the stove. 1/4" round pipe with air shutter located on the rear of the stove. Use a stainless hose clamp to attach flex pipe to the stove air intake flange.
4. Thelin Hearth Products recommends using a Dura Vent Wall Thimble Kit part # 60-0070-0003. Call your authorized Thelin Hearth Products dealer for this item.



### **OTHER VENTING INFORMATION**

Occasionally, the vent configuration can create a noisy, harmonic condition. This sound can be eliminated by closing the air damper located on the air intake tube on the rear of the stove.

The Gnome pellet stove is equipped with a blocked flue/high temp safety sensor that will shut the stove off if there is a down draft, blocked flue, or high temperature condition.

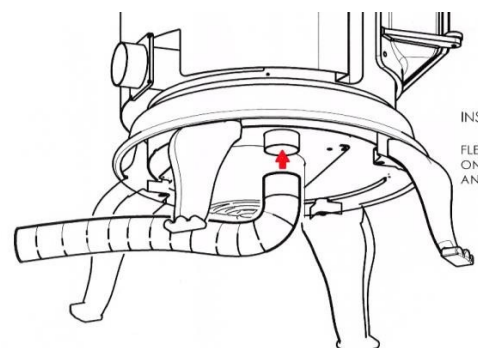
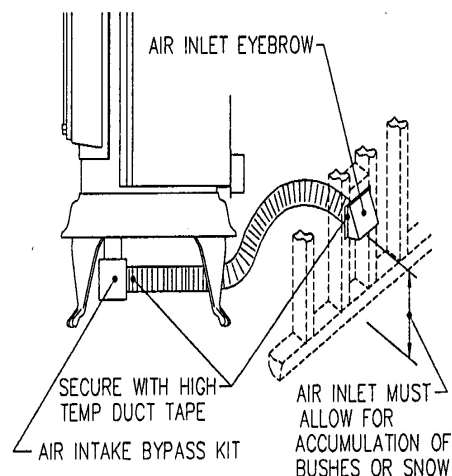
If you install the stove on the side of the house that is hit by prevailing winds (usually 30 to 40 mph or greater) there is a chance that the sensor will be activated and the stove will shut off. Should this occur is, run the pipe up vertically through the eave and use a high wind cap on the vertical termination (see diagram).

Please contact your Dealer if you have any questions about this potential problem.

## **OUTSIDE COMBUSTION AIR & MOBILE HOME INSTALLATIONS**

Mobile home installation should be in accordance with the manufactured home and safety standard (HUD), CFR 3280, PART 24.

1. Outside combustion air is mandatory in mobile or modular home installations. An outside air inlet **MUST** be provided for combustion and ventilation air. The air inlet must remain unrestricted while unit is in use. Outside air connection is made at the air intake located on the rear of the stove (see FIGURE 2 and 3). The kit contains 2" flex tubing (part #43000-270). Outside air kit includes flex tube, hose clamp, and rodent screen/cap.
2. Unit must be electrically grounded to steel frame of mobile home.
3. The stove must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC-approved grounding device.
4. A grounded power outlet with a surge protector is recommended.
5. Clearance to combustibles and floor protection is exactly the same for mobile homes as residential installs.



**WARNING: THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOORS, WALL, CEILING, AND ROOF MUST BE MAINTAINED. DO NOT INSTALL IN SLEEPING ROOM.**

For additional information and to download a complete installation manual visit our website:

<http://www.thelinco.com/resources/index.php>

Visit us at [www.thelinco.com](http://www.thelinco.com) or contact via e-mail [thpcs@thelinco.com](mailto:thpcs@thelinco.com) or 775-241-2586 x 250.

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