

*******PLEASE GIVE TO HOME OWNER*******

SOME TIPS
ON
WOODBURNING

W.R. BENJAMIN PRODUCTS LTD.

AUSSI DISPONIBLE EN FRANCAIS

6. Generally speaking, inside flues are better for wood burning than outside ones; since the inside flue is warmer, it creates more "buoyance or draw" than an outside flue. When a wood burning product is installed on an outside flue, more care must be taken to ensure hotter fires than would be the case with an inside one.
7. Cleaning is very important for a wood burning product. Please see the instruction manual that comes along with the product for instruction. Cleaning should be most frequent when the unit is first installed, until the necessary pattern for regular cleaning is established. A dirty furnace requires more fuel to heat a home than a clean one, since accumulation on the heat exchanger passages prevents heat from getting through your home. Cleaning is especially important in the spring, since burning wood in milder weather always results in more accumulation on the heat exchanger. If a liquid creosote is allowed to remain in the unit all summer, it would reduce the life expectancy because of its corrosive nature.

Basically, once you become accustomed to how the product works under the conditions in your home, you should be very satisfied with the results. Just remember that every installation is slightly different, and a little experimentation to your individual requirements is certainly not unusual. It is better to start with small fires and work up to your home requirements than the other way around.

If you encounter unforeseen problems, contact your installer, he is a professional and should be able to help. If this fails, contact our customer service department at (902) 597-3796 from 8:00 - 5:00 Monday - Friday. Please have the serial number off the front of the furnace and your installer's name and telephone number when you call.

Thank you for your support,

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1. Double Wall Insulated: Insulated chimney section consist of an inner wall of stainless steel and an outer wall of stainless steel or galvanized steel. (2100 degrees must use stainless outer). Even with 1700 degree chimney, outer stainless is preferable and should always be used when the pipe is exposed to outside air. The space between the walls is one inch or more and is filled or packed with special insulation. This insulation provides 17 times the insulation value of brick. Manufactures are GSW Jackes-Evans, Metalbestos, Pro-Jet, Security, Hart & Cooley and Heatilator.

2. Triple Wall Air Insulted: Triple wall pipe is constructed of a stainless steel inner wall, and intermediate wall of galvanized or aluminized steel and an outer wall of galvanized steel. The wall thickness/space varies by manufactures from 1 - 1 1/2" minimum to over 2" for 1700 degree chimney. (For 2100 degree chimney it is estimated that the wall thickness/space will be over 4".) Triple wall air insulated chimney uses two chambers of static air for insulation. Both these air spaces connect to one common chamber at the top and bottom. The intermediate wall is not directly connected. As warm air leaves the top common chamber it breathes cool air in as a replacement. Manufactures of this type of chimney are Air-Jet, Ameri-Vent, Dura-Vent, Metal-Fab and White Metal Products.

3. Thermosyphon Chimney: This chimney utilizes the same construction as triple wall air insulated. However, the intermediate wall connects. Cool air is brought in to the outer chamber and circulated and exits through the inner chamber. Usually this chimney is only used with non-controlled combustion appliances (prefabricated fireplaces.) Some manufactures of this type of chimney are Majestic, Martin, Superior, Prepay, and Ternco.

4. Cast Refractory: The Van Packer Chimney is a refractory liner that is 2" thick. The refractory liner is surrounded with 2" thernosyphon air chambers. The chimney sections must be cemented together with refractory cement that is provided.

The connector pipe should only be used in the same room as the appliance and may not pass through the walls, partitions or ceilings. It is recommended by most building officials, fire marshals and testing laboratories that the safe minimum distance between stove pipes and combustible surfaces be 18". This pipe should be of 24 gauge steel for 6" to 10" diameter.

The diameter of the stove pipe should be the same size as the flue collar on the stove or larger, never smaller. The overall length should be kept as short as possible with the fewest elbows. Remember a 90 degree elbow equals 10' of pipe. If you have horizontal sections of stove pipe, you must use 1/4' of vertical rise for every foot of horizontal pipe.

Finally, there are other means of controlling combustion air supply for a solid flue appliance. Some of them are:

1. Draft control or damper built into the appliances.
2. Manual stove pipe damper.
3. Barometric draft regulators.
4. Air inducers.

WOOD BURNING

What is a chimney fire?

Chimney fires are caused by the burning of creosote from the inside of the chimney. The amount of creosote deposit depends mostly on two factors: the density of the smoke and fumes from the fire and the temperature of the surfaces on which it is condensing. Leaky stoves, open stoves, and fireplaces typically have the least severe creosote problems, primarily because enough heat is exhausted up the chimney to prevent the condensation of the vapours which form creosote. No wood eliminated the creosote formation, but green wood and softwood have a reputation for generating creosote. When the creosote hardens on the inside of the chimney, it is flaky and shiny on one side. When these combustible deposits build up on the inside of a chimney they can ignite by a hot fire in a stove, furnace, or fireplace. A crackling sound can often be heard at the beginning of the fire, and as the intensity of the fire rises, the stovepipes will probably glow red and a tall plume of flames and sparks can be seen rising from the top of the chimney. The stovepipe will almost certainly become hot enough to ignite any combustible material should any be within a few inches of the pipe. Even the chimney may become hot enough to ignite any combustible material which might be in contact with it. If there are any loose bricks, cracks, or holes in the mortar, fire and sparks may issue forth and the sparks and cinders shooting out of the top of the chimney may ignite the roof of the building and any other combustible material within several hundred feet on the leeward side.

Does green wood cause creosote?

Yes. Indirectly, green wood does cause creosote. The exhaust gases cool as they rise up the chimney. If the temperature falls below the dew point, any moisture contained in these gases will condense on the inside of the chimney, absorb the various products of incomplete combustion and form creosote. When green wood is burned the exhaust gases carry a high moisture content. In addition, because of the heat required for evaporation, these gases are cooler and more likely to condense than would be the case with dry wood.

Why this concern about allowing the wood to dry?

Green or wet wood is undesirable for several reasons. Green or wet wood tends to mildew. When the wood has been cut into stovewood lengths, and split, it should be piled outside during the months of June, July, and August. Two poles should be placed on the ground to serve as rails to keep the firewood off the moist ground and the wood should be piled up in such a way that it is well exposed to the sun and the wind. The moisture content of the wood will drop until it reaches equilibrium with the ambient weather conditions. When the relative humidity is 60%, the equilibrium moisture content is about 11%. When the wood has reached this equilibrium moisture content, it is said to be "air dried". Around mid-August, it should be placed under cover so that it will not reabsorb moisture from the rain and snow before it is used.