Friendly Fires
Fires that are friendly

Pellet & Corn FAQs

Congratulations on purchasing a pellet appliance! Whether you purchased it in order to save the environment or simply to save money on home heating costs, your pellet appliance (if purchased from a reputable retailer) will provide you with years of inexpensive heat. For the purpose of this document, we will refer to corn & pellet interchangeably and/or as biomass.

How do pellet stoves work?

Pellet appliances automate as many functions as possible, the most significant being that of fuel delivery. The heat setting or thermostat controls an auger motor that delivers regulated amounts of fuel from the hopper to the fire. Automatic fuel delivery from the hopper frees the operator from frequent attention and loading, while providing clean burns and the desired comfort level.

The amount of air needed for optimum combustion efficiency is delivered automatically or with minor manual adjustments. In most designs, a fan delivers air to the fire and blows exhaust by-products out of a vent pipe that is smaller and typically less expensive than wood chimney. The fan delivers heat to the home by blowing air through heat exchangers in the stove and out into the home. Heating efficiency is greatly enhanced by removing the heat from the appliance before it can exit the system to the outside.

Pellet vs. Wood

Advantages

- Convenience: automatic operation
- One load can last 24 hours or more
- Fuel is conveniently stored in compact bags
- No need for a complete chimney system
- Consistent high burn
  (less peak than plain wood)
- Cost of operation
- Lower combustible clearances

Disadvantages

- Unit cost is slightly higher
- Pellet appliances require electricity to run (although battery back-ups are available)
- Wood stoves operating at peak capacity can generate more heat

What type of pellet appliances are available?

- **Freestanding Stoves:** Offer the greatest flexibility in the installation choice as they can be installed virtually anywhere as long as access can be made to the outside.
- **Fireplace Inserts:** Are installed into existing working wood fireplaces.
- **Factory Fireplaces:** Are similar to a stove but can be installed with the look and appearance of a standard fireplace.
- **Pellet Furnaces:** Can be installed to connect to new or existing ductwork.

What is pellet fuel?

All pellets are biomass materials, that is, products of commonly grown plants and trees. The most common residential pellets are made from sawdust and ground wood chips, which are waste materials from trees used to make furniture, lumber, and other products. Resins and binders occurring naturally in the sawdust hold wood pellets together, so better quality pellets usually contain no additives. Pellets are available for purchase at stove dealers, nurseries, building supply stores, feed and garden supply stores, as well as big box retailers. Pellets are usually packaged in forty pound bags and sold by the bag or by the ton (50 bags).

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Is all pellet fuel created equal?

No. Today, over seventy pellet mills across North America produce in excess of 700,000 tons of fuel per year. As a general rule, the less you are paying for pellet fuel the less you are receiving. Inexpensive pellet fuel will typically not generate as much heat and will burn dirtier, requiring more maintenance. Please note that every time you change pellet fuel brands, you will need to adjust your air controls for optimal burn.

What is the difference between grades of pellet fuel?

- **Ash Content.** Higher quality pellet fuel will contain less than 1% ash content. Ash content in pellet fuel typically increases as the use of bark is used to compress the original pellet.
- **BTU Output:** Typically range in between 8,000 & 9,000 BTU's.
- **Trace materials:** Some regional pellet fuel have increased trace materials in them, leading to increase risk of clinker or formation of clumps.

Why is a vertical rise recommended on the installation of my pellet stove?

A vertical rise on the pellet vent (either inside or outside the home) is recommended in order to:

- Prevent a strong wind from shutting off the unit
- Eliminate back drafting in case of power outage
- Improve the natural draft hence efficiency of the unit
- Move past the negative pressure area surrounding the home

What maintenance is required on a pellet appliance?

Refer to your owners' manual for specific details, but regular maintenance on your appliance should include:

- Empty the ash
- Clean the glass
- Clean the vent pipe
- Remove auger & motors, clean and grease

See our separate FAQ on maintaining a pellet appliance.

How much pellet fuel will my appliance consume this winter?

If your pellet stove is the primary heater for the area where it is installed, it will consume on average 3 tons of pellets per heating season (approximately 150 bags or one bag per day).

For more up to date information, please visit www.pelletheat.org.