

FREESTANDING PELLET STOVE BUYERS GUIDE



WARNING! DO NOT PURCHASE FROM BIG BOX STORES! Find out why on pages 5 & 6

Advantages of Burning Pellets

The pellets that a pellet stove burns are actually recycled sawdust, wood shavings, corn, walnut and peanut shells, and similar bio-mass wastes that are ground up, compressed, and extruded. The 3/8-to-1-inch-long pellets look like rabbit feed and are typically sold in 40-pound bags. Pellets turn wastes that would otherwise be dumped at landfills into energy, lessening our dependence on oil.

Pellets Burn Cleaner

Both because of the fuel's consistency and the stove's combustion mechanics, pellets burn very hot. This means they burn more efficiently and more cleanly than wood—putting far fewer particulates into the air.

Intense compression squeezes the moisture out of the pellets, dropping their moisture content to below 8 percent, which is very dry compared with cord wood, which has from 20 percent to 30 percent moisture. The drier the fuel, the more heat it can produce. And the hotter the fire burns, the more fuel it can consume. Compared with EPA-certified wood stoves, which give off about 5 grams of particulates per hour, pellet stoves give off less than 1 gram per hour.

Pellets also create much less ash than cord wood and produce far less creosote, a common wood stove and fireplace hazard that blackens glass doors and collects in chimneys, potentially causing chimney fires.

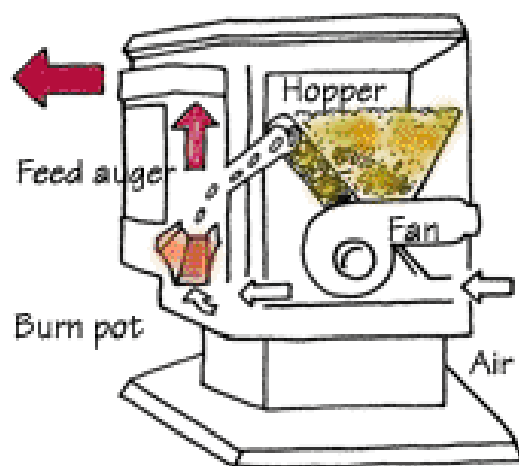
Pellets Produce More Heat

Combustion efficiency is a measure of how much of a fuel is converted to energy by an appliance. Pellet stoves offer 75 percent to 90 percent overall efficiency (be sure to look for

“overall efficiency” ratings when comparing makes). In fact, so much heat is extracted that most pellet stoves may be vented horizontally out through a wall instead of through a conventional chimney (see illustration below).

An illustrated explanation of how pellet stoves are fed and work

You pour the pellets into a holding bin or hopper, which is located either at the top or bottom of the unit. Hoppers typically hold from 35 to 130 pounds of pellets; the larger the hopper, the longer an unattended stove will burn. Depending upon the rate of burn and size of the hopper, most stoves will operate from one to two days on a single load of pellets.



Pellet Stove Heat Exchangers

Room air is drawn in by a fan and blown across the heat exchanger, which is heated to about 250 degrees F., and the warmed air is returned to the room. Unlike wood stoves, pellet stoves rely on convective, not radiant, heat.

Pellet Stove Venting

Residual combustion gases are vented outside, normally through a 3-inch flue that exits out the unit’s back or top. Some have an interchangeable top/rear vent. Pellet stove venting kits can be purchased online or from pellet stove dealers.

Though most pellet stoves don’t require a conventional chimney, saving you from considerable expense and design inflexibility, most types draw better if the flue goes out through the wall and turns upward. For safety and soot control, it’s wise to extend the vertical section past the eaves.

Pellet Stove Maintenance

Because pellet stoves receive constant use during the heating season, regular and proper

maintenance is necessary to keep them operating efficiently. Just how often a pellet stove will need cleaning will depend on the design of the stove and the grade of fuel burned.

Not all pellets are created equal; generally speaking, high-priced pellets burn more cleanly and hotter than low-cost pellets. Your stove supplier will likely recommend a certain brand, but do a bit of experimenting. Buy just a few bags of one brand and try it, and then try another brand until you find pellets that heat satisfactorily and don't leave too much ash and clinker residue. In general, top-fed stoves require high-quality pellets while bottom-fed stoves can use pellets of lesser quality.

How often you must add pellets depends on the size of the hopper and how hot you run the stove. A pellet stove with a small hopper may need to be filled twice a day while stoves with large-capacity hoppers can run hot for four or five days before they need to be refilled.

Here are some tasks you should perform on a weekly basis during heating season:

- Empty the ash trap or drawer, usually situated behind the fire chamber.
- Look for “clinkers” that form when ash melts and hardens. Clinkers can impede air flow and upset the proper mixture of fuel and oxygen to the burn pot. Remove them with a special rake or ash tool made for this purpose.
- Look for a build-up of soot on the inside surfaces of the stove. (As little as 1/10 inch of soot can drop the heat transfer by 50 percent.) Clean the soot off with a wire brush, but do not use the brush on the glass doors.
- Clean the heat exchanger as advised by the owner's manual.
- Clean the glass so you can tell whether the fuel is burning efficiently. Turn off the stove, wait for it to cool, about 20 minutes, and then use paper towels and a commercial glass cleaner made for heated glass to clean both the inside and outside surfaces.
- Check the flame—if it is orange or dark instead of bright yellow or white, it is time to call in a service professional.
- Allow the auger tube and fuel hopper to completely empty on occasion so that sawdust and pellet debris don't build up and block the feed system.
- Empty unused pellets from the stove hopper and feed system at the end of the heating season, as they can collect moisture and cause rust that can damage the stove. Fresh pellets will also be easier to start at the beginning of the next heating season. Have a professional come out and clean the vent pipe.

Pellet Stove Cost & Savings

Prices for pellet stoves run from \$1,700 to \$4,000 for the stove plus the cost of installation. The cost of installation varies greatly from home to home because they are all so different from each other. The ONLY way to provide our customer with a cost for installation is to come to the home and give an estimate. This estimate is free of charge.

When comparing prices of pellet stoves with wood stoves, it's important to note that pellet stoves offer a substantial savings in that they don't require installation of a full-height conventional chimney or flue, the most costly part of most wood stove installations. In fact, some are so incredibly efficient at extracting the heat from their emissions that they can be direct-vented out a wall. As a result, the complete installed cost of a pellet stove can be far less than the installed cost of a conventional wood-burning stove or fireplace.

How does the cost of pellets compare with the cost of wood? On face value, pellets are more expensive, at \$130 to \$200 per ton, compared with firewood, which runs \$100 to \$175 per cord. But comparing a ton to a cord is a bit like comparing a pound to an inch.

One ton of pellets consists of 50 bags weighing 40 pounds each. A cord of wood, which typically measures 4 by 4 by 8 feet (128 cubic feet) is purchased by volume, a measurement that includes the spaces between the logs when stacked and the moisture in wood that can't be converted to heat (20 percent to 30 percent). As a rule, one ton of pellets is roughly equivalent to about 1 1/2 cords of wood.

It's better to evaluate usage. Wood stove users burn from 3 to 4 cords of wood per year. An average pellet stove will use from 1 to 3 tons of pellets per year. Figuring in the costs cited above on a usage basis, pellets are less expensive than cord wood. Of course, with pellets you also save on the time and energy needed to stack and carry wood, and pellets can be stored in only one-third the space needed for cord wood.

Because freight is a big part of the cost of pellets, finding a source of pellets nearby can result in significant savings. Most of the pellet mills in the United States and Canada are located near lumber mills or furniture-manufacturing or millwork plants. Be sure to ask your pellet stove dealer about sources and prices. Also check large grocery and home improvement stores, discount chains, nurseries, and feed and garden supply stores.

Pellet Stove Drawbacks

One drawback of pellet stoves is that they're relatively complex. As shown in the diagram on page 2 they have a variety of moving parts and motors that require maintenance, so it's a good idea to select a model that gives you easy access to its parts. It's also the best idea to

get a service contract. Preferably from the dealer you are purchasing from.

BUYING AT BIG BOX STORES IS A NO-NO

In an effort to deliver quality products, service, and safety, we receive our family of products exclusively through authorized and trained distributors. Occasionally, individuals will attempt to sell products online without the consent of the manufacturer. Most manufacturers do not authorize the sale of products online. Here are a few things to consider if you are contemplating a Big Box Store purchase of a quality hearth product:

Use a Trusted Dealer

First things first, unless you are super knowledgeable when it comes to wood stoves, a good dealer can be a great resource. I'm not talking an "expert" at a big box store, unless they have been in the business for a number of years, heats their own home with wood, and can show you a showroom full of lit models. Unless they burn regularly, it's very hard for them to learn the ins and outs from a manual! Only your trusted dealer will help you identify trusted brands. We only recommend brands that routinely honor warranties, have been around for years and have replacement parts on the ready. It's hard to trust a brand that has only been around a few years and is foreign made because you have no idea how their stoves will hold up long-term. A trusted dealer is an absolute must!

Warranty

Most manufacturers do not warranty products sold outside of an authorized dealer network, nor will they warranty service work on the product that is performed by anyone other than an authorized dealer.

Maintenance & Service are Non-Existent

Our professionals are trained to evaluate your specific needs and suggest to you the products that will best meet those needs. When buying products at these Big Box Stores, you are more than likely purchasing products that are not ideal for your situation, not quality made, and have no tech or service department if something goes wrong and, as a result, will be much more costly than you anticipated. You can purchase a stove at a Big Box Store, but when you call or stop in because you need it cleaned or serviced you will be left unsatisfied. They do not service or maintain the units they sell. Nor do they have ANY education about them whatsoever. It is actually quite dangerous in our opinion. These products also require specific venting components with restrictions as to their installation which will not be evident in the purchase without a trained professional to assess the installation application and recommend the appropriate venting. Your local TSC worker is not properly educated or trained in this field.

Con't >>>>>>

Quality

The quality of the units we sell is incomparable to those purchased at a big box store. We have customers call and say that their stove from TSC has only lasted one year.

Shipping Damage

Our products are designed to ship to our customers using approved carriers and processes. The risk for damage increases if you attempt to ship product outside of a dealer network. This means if you buy online or have the store deliver. The seller will not be responsible for any costs related to shipping damage.

Installation and Service - Our professionals are trained to install and service the products that we sell. We strongly recommend our products be installed and serviced by us. Your warranty will be void if the product is not installed, operated and maintained in compliance with local building codes and with the instructions in the installer's guide, owner's guide and listing agent identification label furnished with the product. Your warranty will also be void if any service work is performed on the product by anyone other than an authorized representative. Furthermore, many local professionals like us will not service a fireplace they did not sell, making the authorized service of your product much more expensive and most of the time non-existent. Lastly, the installation and set up of a product requires very specific installation and operational accessories. These accessories are often times not included in online or big box sales, and can be very difficult (sometimes impossible) and expensive to find after the fact. For proper sales and service, please contact us today. 517-688-5278.