

What are Wood Pellets?

Wood pellets are pellets made from fine wood particles. They are cylindrical in shape, typically 6 or 8mm wide (diameter), and 15-30mm long.

Because of their consistent shape and characteristics, they flow more easily and burn more consistently than other forms of wood, which makes it easier to design clean, automated heating systems that need little more intervention than gas- or oil-fired boilers.

How are wood pellets produced?

Wood pellets are made either from the bits of wood left over from other uses of wood (e.g. the sawdust from timber mills), or from wood that is grown and harvested for the purpose of energy-production (e.g. from FSC-certified forests or "short-rotation coppicing").

The wood needs to be dried to a very low moisture-content (< 12%) before it can be pelletised. If the wood is not already in small pieces (e.g. sawdust), the first step is to chip it into small chunks. The chunks or sawdust are then put through a dryer.

The dried wood is ground to produce very fine particles. These particles are squeezed at high pressure through a die – typically a drum with lots of holes and a press rotating inside. The process also raises the temperature of the wood. The combination of temperature and pressure causes the lignin in the wood to melt and bind the particles together, creating dense cylinders of wood as they emerge from the holes in the die.

The pellets are cooled as they are moved away from the die, and screened to remove the smaller particles that were not successfully bound into the pellets. Once the pellets are cool and clean enough, they are put into store, ready either to be bagged or loaded loose onto lorries for delivery in bulk.



Where do your wood pellets come from?

Wood pellets are made in several places around Britain, and in many countries around the world.

Forever Fuels aims to support local production wherever possible. But we do not lower the bar for these producers. All producers must meet our high quality-standards, and must be able to supply at a price that does not increase costs to our customers. And we must be certain that we always have plenty of suitable pellets to satisfy our customers' demands. We therefore also contract with large-scale pellet-producers to ensure that we have a baseload supply of quality-controlled pellets.

How are wood pellets delivered?

We can deliver wood pellets in a couple of ways. Bagged pellets are delivered on pallets (stacked 10 or 12.5 kg bags) using third-party hauliers. Bulk deliveries (upto 15 tonnes) use our HGV blower vehicle. If you cannot easily move 1-tonne pallets from the curbside to your store, we recommend that you buy your pellets by the bag from local retailers.

What equipment do I need to use wood pellets?

Pellets can be used to heat individual rooms, the whole building, or for specialist applications (e.g. barbecues, patio heaters, and someone has even invented a buggy that will run on them!).

The cheapest and simplest option is a stove to heat a room. More sophisticated pellet-stoves also come with back-boilers and can be plumbed in to your heating system to provide hot water and heat for the whole property. Larger buildings can be heated with dedicated pellet boilers.

All pellet-burners require somewhere to store the pellets. Hoppers are normally built into pellet-stoves and are typically loaded a bag at a time. Some boilers have a built-in pellet-store, but it is more common for it to be separate. A pellet store can be simpler and smaller than an equivalent store for wood chips, but generally, it is a good idea to have as large a store as you can accommodate. See our Design Guide and speak to suppliers for advice.

It is common to install a buffer tank to store hot water from the boiler, but unlike for chip and log boilers, this is not necessarily required for a modern pellet boiler. Again, your installer will advise.

In general, stoves require Grade A pellets. Some boilers also require Grade A pellets, but some can accept a wider range of qualities. If you are thinking of having a pellet boiler, make sure you ask what types of pellets it can handle, as this will affect your running costs (see our Price Guide).

There are many suppliers of pellet-stoves and -boilers in the UK. See our website for recommendations.

What about the ash?

Very little ash is produced. One tonne of our Grade A pellets (enough to heat a typical house for a couple of months) will produce under 7 kg of ash. It will have to be removed occasionally, but has a high nutrient value and can be spread on your land.

