

# Wood Pellet Boilers

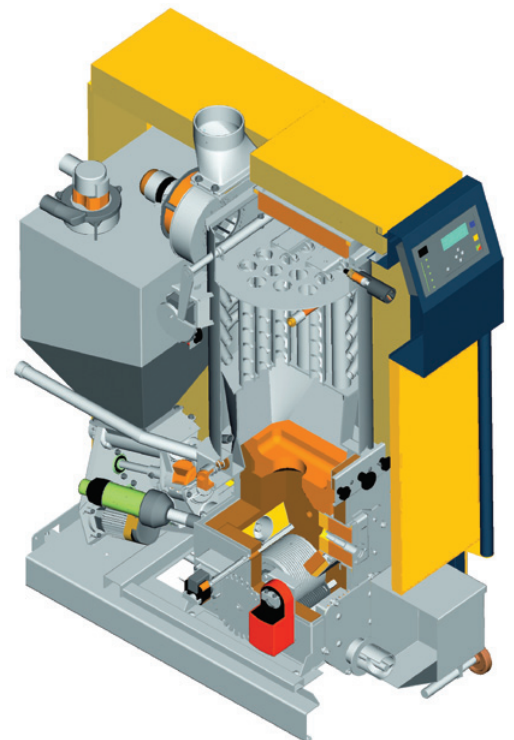


Whilst fossil fuel prices rise and fall the only way that we in Ireland can ensure security of supply and stability in price is to switch to fuels that are sustainable and can be produced here. Wood Pellets provide the most convenient and widely available renewable energy alternative to fossil fuels for central heating.

- **Reduced heating bills.**
- **Future proof against rising energy costs.**
- **Good control & high efficiency (up to 94%)**
- **Improved Building Energy Rating (BER).**
- **Reduced carbon footprint.**
- **Fully automatic, safe and reliable supply of heat.**
- **Self cleaning & auto de-ashing.**
- **Long life & low maintenance.**

## How it works (the basics)

- 1** Wood Pellets are delivered and pumped into a bulk pellet store (just like getting a delivery of oil).
- 2** The pellets are transferred automatically, by the internal vacuum feed system, to the boiler through flexible feed hoses.
- 3** Pellets are automatically ignited and burned (in small quantities) on a specially designed burning grate when the time-clock and/or thermostats in the house call for heat.
- 4** The heat is transferred from the burning grate to the central heating system via the boilers heat exchanger.
- 5** The heat exchanger automatically goes through a self cleaning process every day to keep it running at a high level of efficiency.
- 6** When the building is up to temperature the boiler output is modulated downward and eventually shuts down automatically until heat is required again.



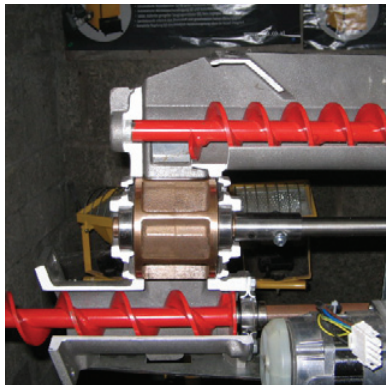
## Installation

A Wood pellet boiler can be installed during construction of a new building or retro fitted to an existing building provided space in a suitable location is available. Usually the only parts of an existing system that will have to be replaced are the boiler and fuel store.

Fuel storage space need only be about 4m<sup>2</sup>, (indoor or outdoor), little more than the space of an oil tank. The pellet store is usually next to the boiler, but can be up to 20m away from the boiler if required. 2 Tonne of pellets (approx. 4m<sup>3</sup>) provides the same amount of heat as 1000 Litres of oil or 1000m<sup>3</sup> of gas.

### Wood pellet heating is fully compatible with:

Water Heating, Radiator Heating Systems, Under-floor Heating Systems, Panel & Skirting Heating Systems or any combination of these systems.



Fire Proof Rotary Valve



Wood Pellets

## Installation process

- The boiler and fuel store can be located in the corner of a garage, a basement or purpose built boiler house. In low energy houses it may be possible to locate a smaller pellet boiler in a utility or laundry room.
- Pellet stores can be located indoors, outdoors or even buried underground. The pellet store is usually next to the boiler (but can be up to 20m away if necessary).
- In a new build Elementary Energy can work in conjunction with your builder, electrician and plumber in a co-ordinated manner to ensure a smooth trouble free installation.
- In a retrofit we can take care of all aspects of the installation.
- If your old boiler is located in a garage or adequate boiler house the changeover can be very straightforward. If not, new pipes may need to be installed between the old boiler location and the new boiler position.
- The new boiler is connected to the heating system.
- The boiler power supply and controls are wired into the new boiler.
- The heating system is flushed, filled and tested.
- The boiler is commissioned (set-up) and left ready to provide heat.

