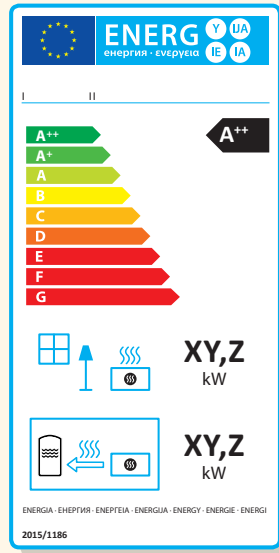




In the EU, **from the 1st January 2018** solid fuel local space heating appliances (<50kW) must be sold with a printed label which shows their heat output and energy efficiency index. Moreover, any promotional information must include reference to the efficiency class - on a scale from A++ (most efficient) to G (least efficient).



From the 1st January 2022, in addition to the label, the Ecodesign Regulations sets out a suite of emissions limits which must be met - including particulates, carbon monoxide (CO), nitrogen oxides (NOx) and Organic Gaseous Compounds (OGC). Minimum seasonal space heating efficiency will be:

- **30%** for open fronted space heaters
- **65%** for closed fronted space heaters (non-wood pellet fired)
- **79%** for closed fronted space heaters (wood pellet fired)
- **65%** for cookers

Enforcement of the new regulations will be carried out by national Market Surveillance Authorities (MSAs).

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Modern efficient biomass heating appliances

HOW TO CHOOSE EFFICIENT APPLIANCES FOR HEATING WITH BIOMASS?



When thinking of **heating**, it is assumed that all the energy from the fuel is released, and all the heat is available to heat the home. However, in practice, when a fuel is burned in a stove or boiler not all the heat is available for the end user, as the energy efficiency of the appliance is not 100%. For example, if the appliance's efficiency is 50% - twice as much fuel would be needed to heat a home.

The health hazardous particle pollution from modern wood stoves and boilers connected to a good new chimney will under optimal conditions be much lower than the one for older appliances.

A rule of thumb: the more automatized the biomass heating appliance is, the fewer particle emissions will be produced.

Therefore, pellet stoves and boilers are a comparable efficient and low-emission alternative. With regard to firewood appliances, stoves with electronic automation, two-stage combustion (gasification) or effective exhaust cleaning cause fewer emissions than standard appliances in the market.



If a new **biomass** heating appliance is to be purchased, a proper sizing and integration in an overall heating concept is strongly required (e.g. buffer storage for excess heat).

In contrast to automated (pellet) appliances, emission from firewood stoves considerably depend on user behavior and quality of the firewood used. Emissions may be up to 100 times higher if a stove is not operated properly.

If the optimal combustion air supply is ensured and if only permitted and properly stored wood is burned, emissions can be reduced substantially. Wet, dirty or even treated wood, as well as any waste, must not be used. In addition, regular maintenance can help to avoid excessive emissions.

If you want to make sure that the biomass heating appliance you're buying is **efficient** and **eco-friendly**, it's a good idea to look for certifications and labels



The CE-label shows that your biomass heating appliance meets the European Union's legislation and requirements of safety, health and environment – both during production and as a finished product. The CE-labelling provides formal access to marketing and sales on the European market.

For example, CE-labelling for firewood stoves is awarded based on testing according to the European standard EN13240 and means that the efficiency of the firewood stove is at least 50%.

