

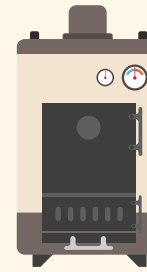
The Ecodesign Directive (2009/125/EC) and the Energy Labelling Directive (2010/30/EC) set the framework for the requirement for energy-related products to be put on the European market. The actual technical standards that biomass heating appliances need to fulfill are set in specific Regulations applicable to individual product categories. For wood-biomass heating appliances, two product categories/lots, are relevant:

Lot 15 - solid fuel boilers with a rated heat output of 500 kW or less

Lot 20 - solid fuel local space heaters with a nominal heat output of 50 kW or less.

The Ecodesign directive sets limits on their emissions and efficiency and helps eliminate the least performing products from the market, contributing to the 2020 energy efficiency objective.

The assessment method which determines efficiency and emissions of biomass heating appliances is defined by the technical standard EN 303-5 for manually and automatically stoked heating boilers for solid fuels with a nominal heat output of up to 500 kW.



Testing of biomass heating appliance according to standard EN 303-5 may be carried out only by testing entities certified by the Accreditation bodies. The conformance to parameters is affirmed by a certificate issued by such accredited testing entity.

Technical standardization and certification of biomass heating appliances

HOW CAN BIOMASS HEATING APPLIANCES BE EFFICIENT AND SUSTAINABLE?



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A regulatory framework for defining, testing, and monitoring the quality of biomass heating appliances is not developed in Western Balkan countries. Most of the biomass heating appliances found at the market have not undergone testing defined by **EN standards**. Air quality, human health, protection of natural resources and development of a sustainable biomass heating market require a policy that encourages the production and sale of safe and clean biomass heating appliances.

Western Balkan countries may choose to use international standards for biomass heating appliances or to develop their own national standards.

The application of technical standards is voluntary, and as such does not impose any regulation. However, national laws and regulations may refer to technical standards and even require compulsory compliance with them. If products (e.g. biomass heating appliances) are regulated by compulsory technical standards, and they do not satisfy such standards - they cannot be introduced to the market.



EU has developed a comprehensive regulatory framework with the set of technical standards for different types of biomass heating appliances.

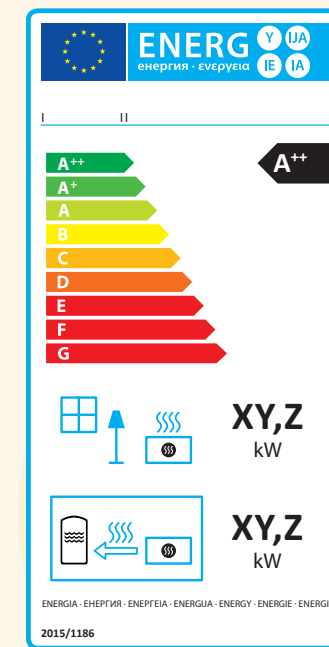
To provide formal access to marketing and sales of biomass heating appliances on the European market, all appliances must meet the European Union's legislation and requirements of safety, health and environment – both during production and as a finished product. CE-labelling is a proof of this conformity. To get the CE-label, biomass heating appliances must fulfill requirements of the following technical standards:

- **EN 13229** Inset appliances including open fires fired by solid fuels
- **EN 13240** Room heaters fired by solid fuel
- **EN 14785** Residential space heating appliances fired by wood pellets
- **EN 12809** Residential independent boilers fired by solid fuel
- **EN 12815** Residential cookers fired by solid fuel

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%.



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. In addition to this, 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).