

Biomass Boilers and Stoves

CONSUMER GUIDELINES



Congratulations on choosing a Biomass Appliance for your home renewable energy system. This leaflet outlines some important points you should be aware of when the appliance is installed. For the safe and efficient operation of your appliance it should be installed to current Building Regulations. Please consult with your installer concerning the points below and any other issues regarding the installation and operation of the system.

1 Flues

The flue is used for the exhaust of the boiler or stove. It can be installed through a chimney or outside the building. The flue must be installed to current Building Regulations. Some things to look for would be:

- It is above the eaves line by about 1 metre or 600mm if coming out near the roof apex.
- It is twin walled and insulated.
- It has a cowl or hood on top to help prevent down draught.
- It should be separated from any combustible material.

2 Constructional Hearth

A constructional hearth should be placed under a stove to separate the stove from combustible material and to provide protection from the threat of fire. The constructional hearth could be a metal or a non-combustible plate. The appliance should not be placed close to the edge of a hearth or any combustible material.

3 Air Supply

A stove or boiler must have a secure air supply for safe operation. This can be either in the form of a controlled dedicated air supply directly to the appliance, or in the form of a permanent ventilation opening to the room in which the appliance is located. Best practise is to rely upon dedicated ventilation and **not** on air infiltration and/or leakage in the room. The size of the opening depends on the size of the appliance. Your installer should be able to size this correctly. In addition, extractor fans may interfere with the operation of the appliance causing smoke to spill out of the appliance into the room so please consult with your installer.

Operation & Maintenance

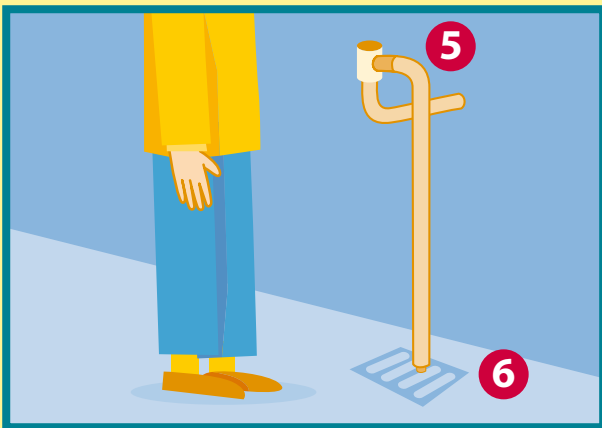
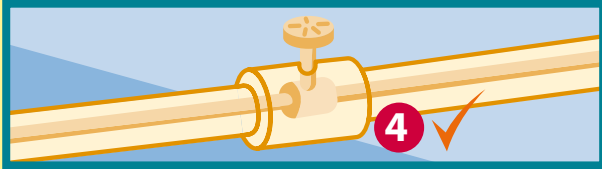
Your installer will supply you with an English language Operation Manual, Maintenance Schedule and provide guidance on the operation of the appliance.

It is important to follow the manufacturer's cleaning and maintenance instructions to ensure the safe and efficient operation of your appliance.

It is vital to read and understand the operation characteristics of the appliance with particular attention to the start-up and shutdown procedures. Note many systems continue to operate for a period after being "turned off" to allow full combustion of remaining fuel in the combustion chamber.

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4 Insulation

Pipe runs are a prime source of heat loss. All pipes and fittings should be appropriately insulated. This will ensure that minimal heat is lost through the pipe-work and it is delivered to your living space or through the taps as hot water.

5 Pressure Relief Valves

All heating systems will have pressure relief valves. In the event of high pressure build up in a sealed system due to a malfunction the pressure relief valve will open up to relieve excess pressure and prevent damage to the system. 6 These valves should be routed to the ground/drain/vessel and placed to cause minimal damage if they do vent.

Thermal Mixing Valve (Anti Scald Valve)

Best practise calls for the fitting of a thermal mixing (anti-scald) valve on a hot water system. With the current recommendation to store hot water at 60°C to prevent the growth of legionella bacteria it is becoming more of a consideration to install thermal mixing valves. A thermal mixing valve 'mixes' cold and hot water together to ensure the water temperature is safe for people to use.

Thermostats

Thermostats are used to control the temperature of an area or space. You should consider what the optimum location of the thermostat is; usually it is the living space where you will spend most of your time. It is very worthwhile to have all main rooms "zoned" and fitted with their own thermostat.

Pellets

Quality pellets are essential to ensure clean combustion and trouble-free operation of your appliance. When buying pellets, consumers should consider those that are supplied with a quality mark and with a complete fuel analysis. Often this information will be printed on the packaging. Poor pellet quality can greatly interfere with the functioning of the heating system.

There are various European pellet quality standards currently in operation. Some of the more common standards are:

- Austria: ÖNORM M1735
- Sweden: SS 187120 and SS 187121
- Germany: DIN 51731
- In Canada and the US the equivalent standard is Premium grade.

Pellet Supply

Bulk pellets are much cheaper than bagged and should be considered when specifying and installing a biomass boiler system. To organise a delivery of pellets ask your installer. In addition SEI publishes a list of quality pellet suppliers on its website www.sei.ie/pellets.

Pellet Storage

When purchasing a Biomass boiler system one should consider the installation of fuel storage at the same time. Wood pellets should be stored in a dry, covered area; this can be in a dedicated silo or shed. Many pellet boiler manufacturers also supply bulk storage systems, both internal and external units. Talk to your installer for more information.



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Greener Homes Scheme

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