

# GRANT WOOD PELLET BOILER RANGE

**Awarded 'Best Renewable Energy Product' at the SEAI Energy Show 2011**

**OVER 97% EFFICIENT!**



Condensing Biomass Boilers with Outputs from 6-36kW



**EFFICIENT HEATING SOLUTIONS**

## **FEATURES:**

- ULTRA HIGH EFFICIENCY DESIGN
- AWARD WINNING VORTEX CONDENSING HEAT EXCHANGER
- AUTOMATIC PELLET FEED AND IGNITION
- INTEGRATED PELLET STORE/HOPPER
- RAPID IGNITION SYSTEM
- AUTOMATIC DE-ASHING OF BOILER AND BURNER HEAD
- BURNER STEPPED MODULATION OPERATION
- EXHAUST FAN AND DRAUGHT STABILISER
- AUTOMATIC WASH CLEAN SYSTEM FOR CONDENSING UNIT
- HIGH QUALITY POWDER COATED CASING
- ONLY REQUIRES SERVICING ONCE PER YEAR
- NO NEED FOR BUFFER TANK

April 2011



## Grant Profile

### The Company

With an established history of over 35 years designing, manufacturing and supplying a wide range of highly efficient and reliable heating products, Grant has become a firm favourite for many householders and engineers, when choosing a new or replacement heating system. From the award winning Vortex range of oil-fired condensing boilers to the latest renewable products, Grant has focused on providing cost effective solutions to the problem of rising energy costs.

The Managing Director of Grant Engineering, Stephen Grant, who is also winner of 'Ernst & Young's Entrepreneur of the Year 2008' headed the Design Team responsible for the Grant Spira Condensing Wood Pellet Boiler. The range was recently awarded Best Renewable Energy Product 2011 by the SEAI.



### Wood Pellet Boiler design

Wood pellet boilers are an environmentally friendly, safe and convenient way of heating the home, using pellets of wood as fuel.

However, they differ from that of traditional solid fuel boilers. Apart from the green aspects, the units are fully automatic more like an oil or gas boiler and use advanced controls which cleverly regulate the amount of fuel being delivered to the burner. The fuel is fed via an auger connected to the adjacent pellet store/hopper, which can hold up to 110kg of fuel. To achieve even further savings, it is recommended to use a bulk hopper for pellet storage.

The process of burning wood produces ash build up, so wood pellet boilers require a certain amount of cleaning and maintenance, which can be tedious. Grant has, however, found a better solution with their unique 'self cleaning' boiler design.

### The Grant approach

In this eco-aware climate, it is imperative for Grant to provide both householders and installers with green innovative options for home heating.

The brief behind the Grant Wood Pellet Boiler range was to ensure installation is straightforward, daily operation easy and maintenance as effortless as possible, whilst guaranteeing the same high quality and efficiency people expect from Grant products.

For over three years Grant has been developing their efficient condensing easy operation wood pellet boilers, to complement the existing range of home heating products.

### What are wood pellets?

Wood pellets are cylindrical in shape and generally made from compressed sawdust, which is often the waste product from industries (e.g sawmills) They are fused by the natural lignin present in dry wood. It strengthens the wood as well as having water proofing properties.

**Grant Wood Pellet boilers can only be used with 6mm approved premium pellets such as 'Balcas Brites, Bord na Mona or GWP' with attributes as follows:**

- ◆ Moisture content below 10%
- ◆ Calorific value of 4.8 - 5.2kWh/kg
- ◆ Ash content of <1% (Low)
- ◆ Bulk density of 650kg/m<sup>3</sup> or less
- ◆ Chlorine content of 0.03% or less
- ◆ No additives



**Using pellets which are not approved by Grant Engineering will void your boiler warranty. If you are in any doubt, please contact Grant before purchasing your pellets.**



# Grant Spira Condensing Range

## Unique and efficient

The new highly efficient Grant Spira Condensing Wood Pellet Boilers utilises Grant's award winning patented stainless steel turbulator baffle system, which is featured in Vortex Condensing oil-fired boilers.

The units are available in outputs of 6-26kW with an efficiency of 97.4% gross, and 9-36kW with an efficiency of 93.1% gross. They come complete with a 110kg pellet store/hopper, which automatically supplies the Spira with fuel.

## How the Spira works

An auger feeds the wood pellets from the hopper into a burner brazier/head where it is lit by an ignition element. The operation of the boiler is fully automatic. The intelligent microprocessors within the boiler also control the feed auger, the flue fan, boiler temperature and cleaning system. The fan in the burner propels hot gas generated from the fuel into the Spira's primary heat exchanger. The heat energy is then transferred to water from the central heating system which is contained within, before being circulated around the house through radiators/underfloor system.

It is important to note that in other modern pellet boilers, up to 20% of the energy that is produced is lost to the atmosphere through waste gases exhausted by the flue system. The Spira has a unique secondary condensing heat exchanger which has been designed to capture most of this lost latent heat energy, so it can maintain extremely high efficiencies.

The boiler's cleaning system will periodically wash the condensing unit of any debris in the tubes and also activate the brazier within the burner to clear the combustion head of ash build up, which reduces maintenance time.

## Grant Black Flue System

Grant Spira models have their own 'Black' flue system, which must be used (note: no other make of flue is suitable and will void the boiler warranty).

This 125mm (5") vertical conventional stainless steel, twin wall insulated flue system specifically designed for use with Grant Condensing Wood pellet boilers. The system is designed so that the stainless steel outer case is load bearing and stainless steel inner liner is free to expand independently to accommodate temperature change.

Available in a range of extension pieces and bends, the system can easily be assembled to fit bespoke situations.



## Trained for installation

Grant Spira Wood Pellet Boilers must only be fitted and commissioned by a heating installer who has been fully trained and approved by Grant. Failure to comply with this may result in the product warranty becoming invalid.

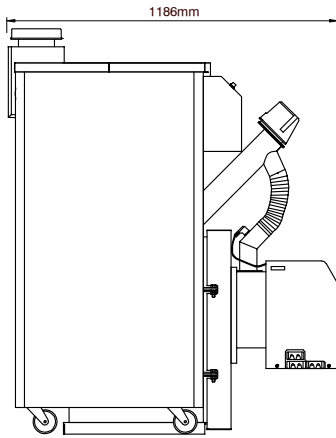
It is important to remember that the installer must be FETAC registered via SEAI to enable the householder to claim the available installation grant.

For details of the latest Grant Wood Pellet product courses at the Grant Training Academy, call: **057 9120089** or visit the website: **www.grantengineering.ie**

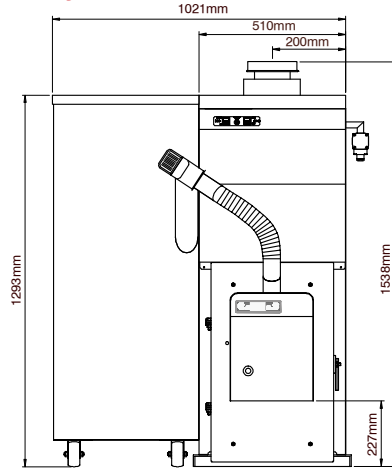


# Boiler Information

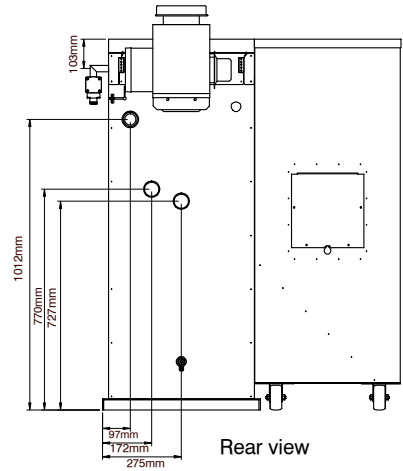
## Grant Spira 6-26kW boiler and hopper layout



Side view

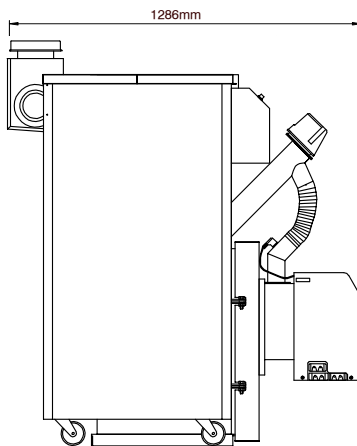


Front view

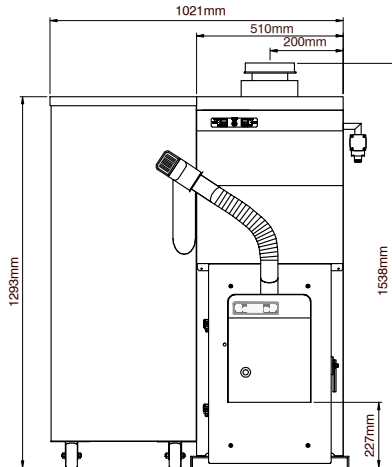


Rear view

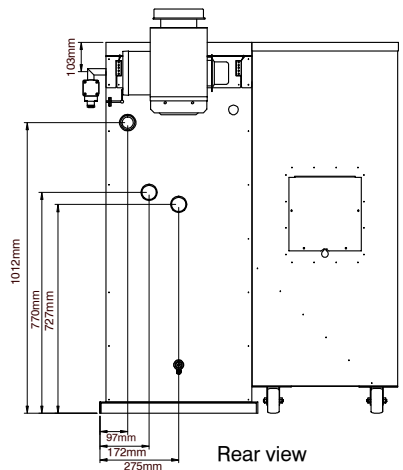
## Grant Spira 9-36kW boiler and hopper layout



Side view



Front view



Rear view

## Guarantees and after sales service

Grant Wood Pellet boilers are guaranteed for one year from the date of purchase (excluding consumable items), subject to being serviced annually, installed in accordance with the manufacturer's instructions and de-ashed after every 3 tonnes of pellets burnt. For after sales service, please contact our Customer Service Department on 057 9120089 or your installer.



**EFFICIENT HEATING SOLUTIONS**

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All products manufactured under I.S. EN ISO 9001 and ISO 14001.

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