



FIREBIRD

HEATING SOLUTIONS

Wood Pellet Boiler Brochure

Highly Efficient Carbon Neutral Heating



Working towards a greener planet



The Firebird wood pellet boiler represents the very latest in carbon neutral heating, for use in domestic and light commercial applications. This wood pellet boiler is highly efficient, robustly built, user friendly in operation and easy to service.

The Firebird wood pellet boiler is comprised of five key elements:

- pellet storage tank;
- auger feed screw;
- pellet burner;
- digital controller;
- boiler shell.

Pellets are drawn from the storage tank up through the motorised auger screw, where they slide down a tube onto a metal grate in the burner. An electric heater inside the burner ignites the pellets on start up. A fan regulates the supply of air into the burner to ensure correct combustion at all times during the boiler operation.

Once the flame has been established, more pellets are fed into the burner. The pellet feed rate is regulated by the controller, depending on the boiler temperature and heating system load.

The boiler includes a sizable water jacket to ensure an even distribution of heat.

FEATURES

High Efficiency

Firebird wood pellet boilers have efficiencies in the high 80's due to their highly efficient operation and well insulated boiler shell. The large chamber design ensures that the boiler does not clog up with ash.

Cost Effective

There are many local pellet suppliers, so pricing is competitive and delivery times are short. Furthermore, in many countries, Government grants or subsidies are available to cover some of the capital investment in biomass heating.

Robust Design

As with any Firebird product, quality is an integral part of the design. The boiler shell is made from a high grade steel and comes with a five year warranty. The burner fan is the only moving part and with the correct maintenance and service, the Firebird wood pellet boiler will give many years of trouble free operation.

Heating Comfort

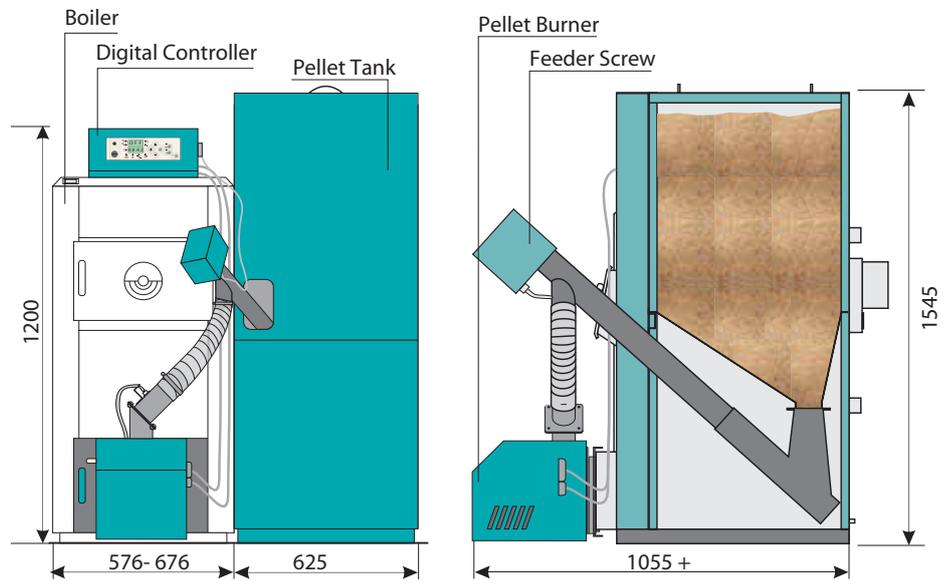
The wood pellet boiler is fully automatic in its operation. On start up, an electric heater ignites the pellets and the digital controller manages the entire operation. Pellets are fed into the burner in small amounts to ensure an even flame. The boiler is fully modulating in that the feed rate of pellets is varied, depending on the boiler temperature and heating demand.

Carbon Neutral

Wood pellets are a carbon neutral form of heating as the CO₂ emitted during combustion is balanced out by the CO₂ absorbed by trees during their growth. As pellets can now be sourced locally, the carbon footprint of the fuel supply chain and our dependence on imported fuels is reduced.

Ease of Cleaning

All biomass boilers regardless of make, must be cleaned regularly to ensure efficient and safe operation. Cleaning only takes a few minutes and should be done once a week during peak heating demands. The wood pellet boiler has easy access to all maintenance points and is supplied with a set of cleaning tools and brushes. The burner is on a hinged door and can be opened by hand. The burner grate, which should be cleaned weekly, is fully retractable.



SYSTEM COMPONENTS

Storage Tank & Auger Feed Screw

A metal-cased storage tank holds over 350 litres of pellets which are drawn from the bottom of the tank by a motorised auger feed screw. The tank can be located at the right or left hand side of the boiler.

Tank dimensions:

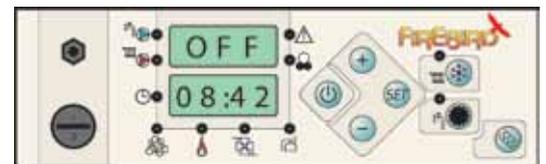
- Height - 1545mm
- Depth - 730mm
- Width - 625mm

Burner

At the heart of the Firebird wood pellet boiler is the uniquely designed burner. The special design of the combustion chamber enables a high quality of air mixing, which results in a highly efficient burning process. Flame development is monitored by a photocell. The burner also includes a number of safety features, including a pressure switch that monitors the combustion chamber pressure and powers down the boiler if an unsafe pressure is detected due to a blocked flue or other impediment. A thermal safety device is fitted on the pellet feed tube and will switch the boiler off in the unlikely case of pellet burn-back.

Controller

The digital controller, located at the top of the boiler, has been designed to be user friendly. The main boiler functions can be controlled from here and key system parameters entered. The LCD screen shows key system data such as the operation mode, time and boiler temperature. Central heating and hot water can be controlled separately by the user and the controller also comes with a seven day 24 hour timer.



FUEL

Only certified wood pellets approved to EN14961 may be burned in the Firebird wood pellet boilers. The following fuel characteristics must be adhered to:"

- calorific value > 5 kW/kg (18 MJ/kg)
- diameter = 6 mm
- max. length = 35 mm
- max. humidity = 8%
- max. dust = 0,5%



TECHNICAL DATA

Model		25	35
Rated thermal output (kW)		25	35
Boiler water content (litres)		90	101
Boiler weight (kg)		435	475
Flue diameter (mm)		150	160
Power Supply		230 V AC/50Hz	
Outer dimensions (boiler & tank)			
Height (mm)		1545	1545
Depth (mm)		1055	1055
Width (mm)		1201	1301

Sales Code		25	35
Wood Pellet Boiler		FWP025NKT	FWP035NKT
Wood Pellet Flue Kit		FWP025FLU	FWP035FLU
Wood Pellet Auger & Hopper		FWP000FED	FWP000FED

ACCREDITATIONS

All wood pellet boilers are CE approved and have been tested in accordance with the EN 304 efficiency directive. Testing was carried out at the renowned TGM Institute in Vienna.



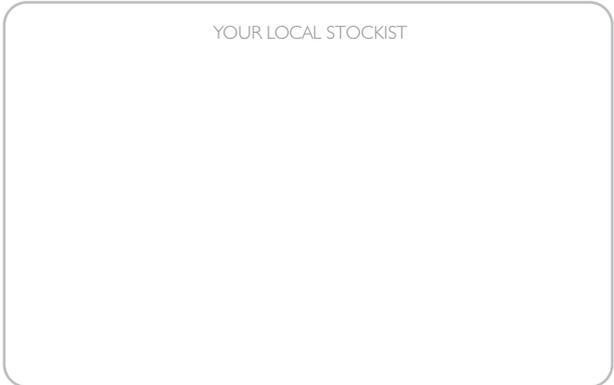
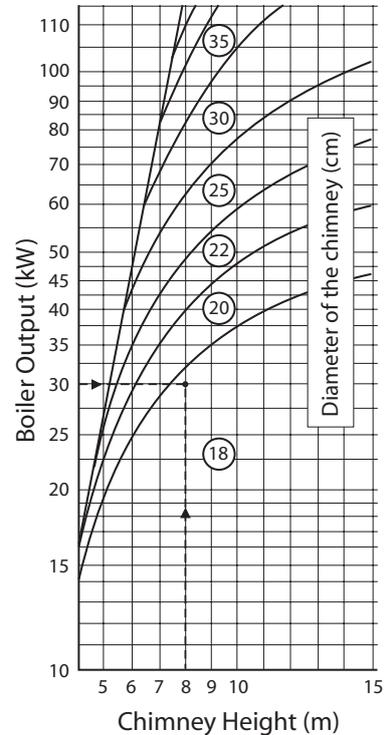
WARRANTY

Firebird offers a 5 years warranty on the boiler shell and a 2 year warranty on all other parts from date of installation, provided installation has occurred within 12 months from date of purchase. Please see our website for full terms and conditions of warranty.

FLUE

Ensuring the correct size flue is critical to the operation of any biomass boiler.

The chart below outlines the minimum flue diameter and height required for the different boiler outputs.



For information on all Firebird products, please contact your local merchant/builder provider or Firebird.

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