

Wood Heat at RSPB Dearne Valley

In February 2004 Econergy installed a 100 kW KWB automatic woodchip boiler to provide heat to a visitor centre, offices and accommodation for RSPB Dearne Valley in Barnsley.



The boiler house and woodfuel hopper

KWB USV D 100 kW automatic woodchip boiler, fuel feed from left, ash bin on right

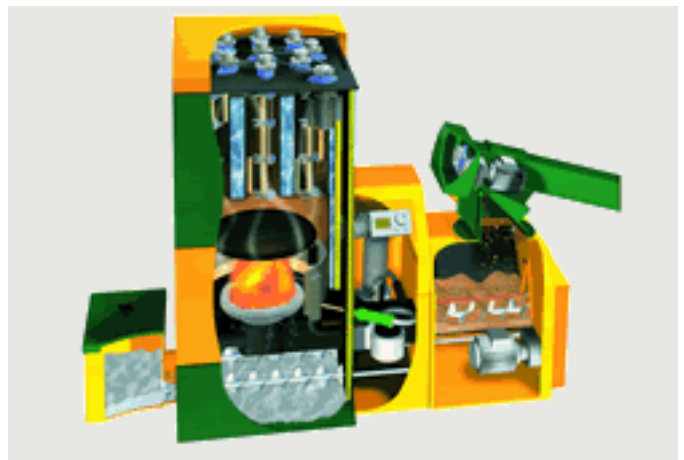


Technical summary

- The installation comprises a KWB USV D 100 kW woodchip boiler, fed via an auger from a spring-arm fuel extractor in the external hopper.
- The Econergy designed steel fuel hopper holds up to 20m³ of woodchip and has a hydraulically lifting lid for refuelling by bucket loader.
- Combustion is regulated by an integral KWB modulating boiler controller, automatically optimising combustion for 91% or better efficiency across the full output range of 30 to 100 kW.
- The boiler includes automatic boiler tube cleaning and automatic soot and ash compression and extraction to an easy to empty sealed ash box.
- Automatic ignition allows the boiler to fire up automatically on demand.
- The KWB Comfort 3.0 controller incorporates weather compensating control for all of the heating and hot water circuits, which include
 - Visitor centre and café
 - Education wing
 - Volunteers accommodation
 - Offices and meeting rooms
 - Rangers cottage
- The system will deliver an estimated 175,000 kWh / year of renewable heat, avoiding some 45 tonnes of Carbon Dioxide emissions per year.



Hopper lid open for fuel loading



KWB; state of the art woodchip boiler technology

Woodfuel supply

- Some 55 tonnes of seasoned (30% moisture) woodfuel per year is sourced from local woodland management.

Grants

- The installation was supported by Econergy’s Bioenergy Capital Grant Scheme contract funded by the New Opportunities Lottery Fund.



Comfort 3.0 boiler / heating control system networks up to 34 zones



**New Opportunities Fund
LOTTERY FUNDED**