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PROJECT: CASTLEMANOR NURSING HOME, CAVAN




System Specification

220kW Fröling Turbomat (TM) boiler with 2no separate 5m woodchip feed systems

- 2no 5000l buffer tanks with low loss thermal insulation
- Low loss header system and integration with existing LPG gas backup system
- Remote monitoring and visualisation system

Fuel

Locally sourced woodchip

Fuel Consumption

220 Tonnes per annum

HGV with moving floor delivers the woodchip into the underground fuel stores

CO2 Saving

155 Tonnes per annum

Financial Saving

Support Scheme for Renewable Heat

A building with a similar heat profile would expect to receive annual payments of approx. €29,000 per annum for 15 years under the
support scheme.

Projected payback on capital expenditure for full turnkey system 4-5 years

About the Renewable Energy System

The Fröling 220kW Turbomat woodchip boiler is equipped with a high temperature cast iron step grate inside the combustion chamber. Combustion is efficiently controlled from the Fröling H3000 Lambdatronic PLC control system. Primary and secondary air are injected at separate combustion areas via rotary slide valves and modulating actuators.

Combustion air is drawn from between the outer panels and the insulation of boiler casing reducing the heat losses from the boiler and preheating the combustion air. The air then circulates around the outside of the fire brick preventing the outside of the fire brick from overheating and further preheating the combustion air for higher efficiency combustion before it's injected into the combustion chamber.

The heat exchanger of the Fröling Turbomat is a vertical 3 pass exchanger with integrated dust separator. The heat exchanger is equipped with automatic cleaning system.

About Castlemanor

Castlemanor Nursing Home is located on the outskirts of Cavan town. All 70 bedrooms have ensuite facilities and spacious day rooms are located on each wing.

The nursing home is designed specifically to meet the needs of residents who may require low, medium, high or maximum dependency care.

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