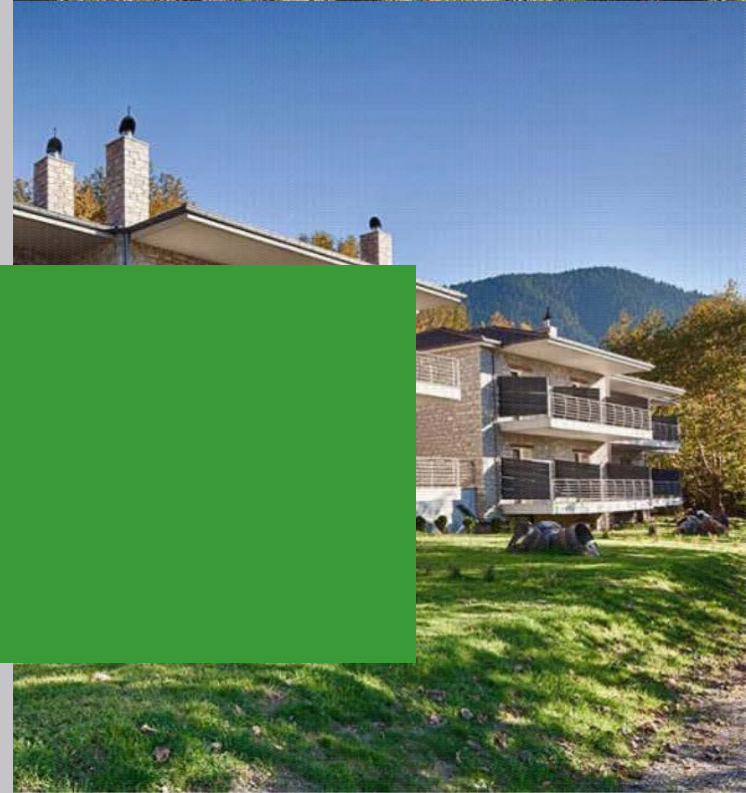







Oniropetra Boutique Hotel

CASE STUDY



-  G. Farmakis
-  Oniropetra Boutique Hotel, Karpenisi, Greece
-  PelleTech Idro 200 kW



PROJECT OVERVIEW

- ▶ 1 x PelleTech 200 kW Idro Wood Chips Industrial boiler
- ▶ Supplying heat to the Hotel's rooms and installations
- ▶ Runs on wood chips and almond shells
- ▶ Design and build of boiler house and fuel storage solutions

OUTCOME

- ▶ Fuel Cost Savings of 50-80%
- ▶ CO2 Reduction of 95%
- ▶ Major factor to enable the owner to reach low carbon status of the farm
- ▶ Project Payback Period of **2-3 Years**

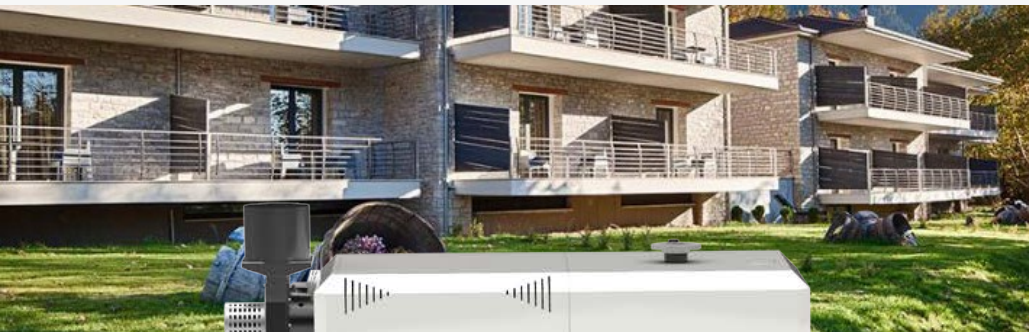


I would like to express my complete satisfaction with the product provided by Camino Design. The PelleTech 200 kW Idro Wood chip boiler fulfils the Hotel's requirements for heating. A reliable partner.



Oniropetra is the new boutique hotel type in Karpenisi for those who love a luxury stay.





THE SYSTEM

- ▶ PelleTech 200kW Idro wood chip boiler.
- ▶ Replaces 2 oil boilers, runs on almond shell.
- ▶ Supplies heating and hot water for 34 bedroom hotel.



THE RESULT

(Compared to heating oil. Source, Biomass Energy Centre)

- ▶ Biomass Fuel Cost Saving; 40-50% (Almond shells and woodchip).
- ▶ CO2 Reduced; Up to 96% or 88 tonnes, per annum.
- ▶ Financial Benefit; Fuel cost saving and a 2-3 year payback on the capital cost.



Background

Oniropetra boutique hotel (34 bedrooms, a restaurant and service rooms).

The owners wanted to reduce both their heating costs and CO2 emissions while maintaining the comfort of their guests.

This project was the first that this hotel group had purchased from CaminoDesign and the management is scheduling another one.

The Requirement

CaminoDesign were briefed to supply, install and commission a biomass boiler system to replace the 2 oil fired boilers that were currently supplying heat and hot water.

Complete Biomass Heating Package

Camino Design supplied a PelleTech 200kW Idro Wood chip boiler cascade system with a 4,000 litre Thermal Store and worked with the local installers to commission the system.

The boiler and fuel store were installed in a purpose-built boiler house with the entire property linked using insulated underground pipework.

Project Summary

CaminoDesign, installation, commissioning and maintenance service included;

- ✓ A top-of-the-range, fully automated PelleTech 200kW Idro biomass boiler system, with automatic ignition.
- ✓ Burns wood chips and almond shells.
- ✓ 4,000 litre thermal store.
- ✓ Electronic control panel, enabling the client to monitor boiler performance.
- ✓ Self-cleaning moving step grate system improves efficiency and allows the boiler to cope with a wide variation in fuel quality.
- ✓ Integration with the existing heating system and automatic de-ashing.
- ✓ Design of system compliant with the State and Hotel requirements

Background

According to the information used in this case study, the installation of the PelleTech 200 kW Idro Industrial biomass boiler was a very good investment, with a simple payback period of 2 to 3 years.

The biomass boiler has a reasonable payback period. The cost of fossil fuels is the key driver in this analysis. The demand for biomass fuels has increased recently, resulting in an increase in fuel cost, a trend that is likely to continue. If this same hotel had access to oil, the cost of heating would be approximately as per the table below.

PelleTech200 Idro	190.000 Kcal/h	Cost (€)
Annual operating hours	1800 h	
Annual oil consumption (11,8 KWh/ kg)	34 tn or 40.000 Lit	49.560
Annual almond shell consumption (4,7 KWh/kg)	73 tn	5.076



Specifications

- Heat output at 200 kW.
- Dimensions; 2.937 w x 2.082 h x 1.660 d (mm).
- Weight; 1950 Kg
- Fuel; almond shells, woodchips and pelletized biomass.
- Moving step grate allows the boiler to cope with a wide variation in fuel quality.
- Boiler output; perfect modulation at up to 91% efficiency from 22%-100% of output.
- Boiler temperature; 60-80 °C.
- Return flow temperature regulated to protect boiler.
- Water capacity; 550 Litres.
- Operating pressure; Max 3Bar.
- Power connection; 400V /16 Amp.

Total project price: 25.000€*.

Payback Period: 2-3 years

**Financial information not specific to this project –figures are based on an average of several typical projects of this size.*

Key Facts

Project Included

PelleTech 200kW Idro boiler system including flue system, 4,000 liters thermal store and agitator feeding system.

Fuel Consumption

73 tones of biomass fuel per annum. (Based on 200kW boiler, in a similar application)

Fuel Cost Saving

(Source; Biomass Energy Centre) Almond shells; 80-90% vs heating oil.

CO2 Saving

(Source; Biomass Energy Centre) Up to 96% or 88 tones vs heating oil.



CAMINODESIGN
G. SAMOUKATSIDIS BROS

HEAD QUARTERS - SHOWROOM

7th km Kozani-Ptolemaida
Tel: 24610 45446
Fax: 24610 45360

www.caminodesign.gr • ✉ info@caminodesign.gr

BRANCH OFFICE

5th km Ioannina-Athens
Tel/ Fax: 26510 91413



www.caminodesign.gr
✉ info@caminodesign.gr