



Project Review

Open Country Dairy - Horotiu New Zealand

144tph Gas Fired Air Heater

Client: Open Country Dairy

Location: Horotiu, Waikato, New Zealand

Duration: 21 Weeks Design and Build

Background

Open Country Dairy, OCD, the world's 2nd largest exporter of dried whole milk powders, approached Windsor Energy for an urgent replacement air heater for their Horotiu site after the sudden failure of a competitor's unit. As the peak of the dairy season was nearing and milk was being diverted to other sites, the request was made for a suitable replacement air heater with the fastest possible delivery time.

Solution

Windsor Energy's scope included design, manufacture, (both completed in New Zealand), install supervision, and full testing and commissioning.

Being a local New Zealand based company Windsor was able to offer a 22-week design and build timeline, which was an important factor in OCD selecting

Windsor as their vendor of choice.

The tubular type air heater proposed was of the size that would replace both of the incumbent air heaters' duties combined. It comprises three main units that are pre-assembled in the workshop and FAT tested prior to leaving for site.

The complete air heater package included:

- Gas fired low NO_x Driezler burner with O₂ and CO monitoring
- Combustion chamber optimally sized for the burner flame
- 2 pass cranked tube air-to-air heat exchanger made from stainless steel for food grade applications
- Stainless steel recuperator to pre-heat combustion air with flue gases

- FGR circuit for regulating the combustion gas temperatures

Windsor were able to complete the design and fabrication in 21 weeks.

OCD reported a large drop in their next fuel bill and report that the site now has the lowest energy input per kg of dried product of all of its sites.





Why Windsor Energy?

As a trusted provider of energy plant and services in New Zealand and Australia, Windsor Energy offered the following advantages:

- Extensive installed base of heat plants for a number of large industrial clients.
- Modular plant package, optimised for long-distance transport of components, and efficient, safe assembly at destination.
- Innovative component and plant designs for high efficiency, simple operation, high availability and low overall cost of ownership.

Project Name	OCD Air Heater Replacement
Date Installed	2021
Fuel Source	Natural Gas
Air Heater Type	Tubular Type, Indirect Air, 2-pass with recuperator
Air Heater Model	TT144-230 Chubasco
Air Heater Thermal Capacity	8.6 MW
Process Air Flow	144,000 kg/h
Process Air Outlet Temperature	230°C
Measured Thermal Efficiency	>96% NCV Basis

Contact Us

Level 2
 6 Albion Street, Napier 4110
 PO Box 1045, Napier 4140
 New Zealand
 P +64 6 899 5050
 E energy@windsor.co.nz
 www.windsorenergy.co.nz

