

Sustainable cooling solutions: Heat Pump Chiller System to provide free cooling for dairy products at Dry Hill Farm in the UK

CATEGORY:

Commercial Refrigeration, Thermal Comfort

THE CONTEXT:

Buckley and Son (Watson Dairy) based in Huddersfield process 1,000,000 litres of milk and cream per week at their Dry Hill Farm processing factory. Calibrate Energy Engineering has developed a unique, energy efficient agricultural solution utilising a Mitsubishi Electric heat pump chiller system, which provides free cooling to chill the milk produced at the Farm.

SUSTAINABLE COOLING SOLUTION:

- A 998kW heat pump for heating and cooling (Heat Chill Technology) has been installed with 26km of in-ground pipework to benefit from the UK Government backed 20 years RHI scheme.
- The heat pump pre-heats the pasteurisation process and the packing sheds and provides hot water.
- Fully automated solution to provide efficient heating and cooling, maximising and monitoring every aspect of the system via an in-house designed and built remote access control system.



BENEFITS:

- The free by-product of the (RHI-earning) heating process is cooling used to provide the chilling of the milk, cream and cold store.
- To maintain the required chilling by-product, 50,000 litres of water for the factory processes per day are heated. When the heat pump is operating in heating mode, there is 100% fossil fuel replacement.
- The Heat Chill technology is also controlled by a bespoke solution enabling remote monitoring of the entire system.



TOPIC:

- Energy Efficiency
- Synergies with Heating
- Heat Recovery
- Heat Pumps
- Building Automation and Control



GENERAL INFORMATION

NAME OF THE COMPANY: Mitsubishi Electric Europe B.V. (UK Branch)

CONTACT PERSON:

Wayne Perrins

HYPERLINK TO LEARN MORE ABOUT THE SUSTAINABLE COOLING SOLUTION:

<https://www.calibrateenergy.co.uk/sectors/agriculture/>



**EPEE - European Partnership
for Energy and the Environment**

Avenue des Arts, 46 - 1000 Brussels
Tel: +32 (0)2 732 70 40
Fax: +32 (0)2 732 71 16
secretariat@epeeglobal.org
www.epeeglobal.org

Follow us on:

 @EPEESecretariat - #CountOnCooling

 epee-secretariat

 epee secretariat