When Premier Foods needed to keep their production areas cool at their Bury St Edmonds plant, where they produce Branston Pickles and Lloyd Grossman Sauces, they contacted Celsius.

**Problem**

The production areas contain many heat emitting machines, Pasturisers, Shrink Wrap Tunnels, Cookers and bottling plants. These combine to produce a very warm internal environment, with summer time temperatures regularly exceeding 35°C.

**Solution**

After surveying the area Celsius determined the likely internal heatload and designed a suitable ventilation system.

Extraction is provided by 82 no. Celsius Roof Mounted Vertical discharge powered extraction units, each providing 5.1m³/s of positive extraction.

The fresh air was introduced to the areas through 85 no. Celsius evaporative cooling units. Each Inflow contained two roof mounted evaporative chillers to reduce the incoming temperature during the warmer months by as much as 10°C, they also contained steam heater coils to heat the incoming air in the winter.

This is to both heat the areas and also reduce the condensation that forms due to the processes within the areas.

All of the equipment is controlled from stainless steel centralised control panels, also supplied, wired and installed by Celsius.
As part of the re-roofing project that was carried out at the same time Celsius also supplied and fitted a louvred smoke ventilation system consisting of 80 Celsius smoke vents, each measuring 1.8m wide by 3.4m long.

Evaporative Cooling

The Celsius system of evaporative cooling units economically cool the incoming air in the most environmentally friendly way possible, each unit provides up to 45KW of cooling using only 1.5KW of electrical power for the main fan motor and a standard water supply.

The Celsius coolers have an IP65 local controller and all ducting is in corrosion resistant stainless steel.

The system was commissioned and tested after installation and the production area temperature measured, on the day of the test the outside summer temperature was 28°C and the internal temperature was a comfortable 24°C around the personnel with all the plant and machinery operating.

“A combination of the Evaporative coolers and the steam heater batteries are working really effectively and efficiently.” Said Jan Ling, Premier Foods Senior engineer. The project was completed on time and within budget, with Celsius undertaking the complete turnkey installation.