



Airbus UK CHP Phase 1 Case Study

Barron Evers Ltd staff, while employed by Alfred Mc Alpine led the design & construction of CHP Phase 1 & 2 for Airbus UK at Broughton, one of Europe’s leading Aircraft Manufacturers.

The Opportunity

The extensive redevelopment of Airbus UK’s manufacturing facility in Broughton, Cheshire comprises of several buildings which accommodate the equipment required to manufacture the wings for the A380 double deck super jumbo. With a number of manufacturing units dispersed around the site, Airbus were keen to explore the possibility of implementing a distributed CHP solution that could provide secure power and flexible thermal outputs to serve both space heating and process requirements.

The Solution

Our team in conjunction with Aircogen a Peter Brotherhood company were responsible for the design, installation, test and commissioning of each AirCHP package, we engaged Aircogen who were able to deliver an optimised solution that would maximise the commercial and environmental benefits to Airbus.

The Stringer Facility

The principal heating demand in the Stringers building is for seasonal air heating, but there are also a number of treatment tanks and a small paint shop which require a constant supply of hot water. We provided two 407kW AirCHP units for this facility, each housing a single Perkins 4008 TESI gas engine. The units are configured to supply base load electricity, hot water for the processes, and air heating for the 20,000m² building.



Stringers packaged AirCHP Energy Centre

Skin Mill

The Skin Mill is a machining centre for the highly profiled, aerodynamic wing sections and represents a seasonal air-heating requirement. Immediately adjacent is the existing Treatments building, which has a constant demand for hot water and beyond that another new building which heat treats the machined components. This latter building derives much of its heating from the processes, but needs supplementary input in winter.

We specified a single 407kW AirCHP unit for this facility, housing a Perkins 4008 TESI gas engine. The unit is configured to supply base load electricity and air heating to the Skin Mill, whilst supplying any unused heat as LTHW to both the Treatments and Creep buildings.

“We are delighted to have been involved in what was the largest CHP installation in Europe, this was truly an innovative solution that exceeded our customers challenging requirements and we are proud to have been able to help Airbus to exceed their objectives for this project.”

Project Details

Location

Airbus UK,
Broughton, Cheshire

Approx Value

£ 25m

Duration

July 2002 – Mar 2003

Services Delivered

Project Finance, Project Management, Electrical and Mechanical Design,
All civil engineering works,
All high voltage 11kV infrastructure,
Planning Supervisor, Appointment of suppliers and CHP manufacturer, CHP Operations and maintenance

