



# CASE STUDY

## IAG Cargo's Constant Climate Centre

### designed and built by BDP in under 6 months

One of the fastest growing markets in air cargo handling is the worldwide transportation of high value / high priority temperature sensitive pharmaceuticals. In order to capitalise on this high growth sector, IAG Cargo's Infrastructure Projects team identified the need to quickly construct a temperature controlled storage facility at its London Heathrow hub.

IAG Cargo commissioned a feasibility study to be undertaken by a selection of architects and engineers and in February 2013 issued a tender for the delivery of its "Constant Climate Centre" on a design and build basis. Against stiff competition from construction companies and other materials handling specialists, BDP Solutions was awarded an initial design contract in April 2013.

Working with IAG Cargos's team of technical experts, BDP's design was approved and a full contract awarded in early June 2013, with BDP taking the lead role as Principal Contractor, supported by construction companies, cooling plant specialists and building services suppliers as sub-contractors. The target for completion was September 2013.

Under BDP's leadership a steel support structure was built on a specially designed reinforced concrete ring-beam as a protective canopy for the facility. The structure was erected in the confined space between IAG's flagship "Ascentis" World Cargo Centre and its smaller neighbour, the "Premia" Premium Products facility. This operation took a high degree of careful planning and site management as the landside operation of the Premia facility remained in constant daily use. Due to the space constraints the steel canopy structure literally had to be built from the inside out.

Once the steel canopy was in place the construction of a large insulated "cool box", measuring approximately 23m x 25m could commence. This insulated environment houses the temperature controlled storage area for 56 AKE containers or 28 x 10ft aircraft pallets, stored on gravity roller storage beds, with the freight moved manually on fully galvanized castor deck. The complete system requires minimum maintenance and is energy efficient.





The insulated inner enclosure is divided, by further polyurethane foam walls and fast-acting roller-shutter doors, into 3 separate chambers:

- an outer lobby area (at ambient temperature) for waiting freight
- a larger temperature controlled chamber, with 20 x 10ft storage positions, maintained at +15°C < +25°C. This chamber also has a plug-in facility for 14 self-cooled 10ft Envirotainers®
- a smaller chamber, with 8 x 10ft storage positions, maintained at +2°C < +8°C

The temperature in each of the climate controlled areas is monitored and controlled by a sophisticated, computerised system which is linked to the IAG Cargo BMS system and provides regular remote monitoring and reporting to IAG Cargo's technical support staff in addition to collation of historical reports on climate for IAG Cargo's customer audit.

In addition to managing the construction, supplying and installing the cargo handling system, managing the design and installation of the cooling plant, BDP was also responsible for co-ordinating the design, supply and installation of all building services; these included the power supply, fire detection and protection systems, security and access control and building management systems.

Despite the wide scope and very tight timetable, BDP were able to meet IAG Cargo's target and the completed facility was handed over for operation on 27<sup>th</sup> September 2013, prompting the following statement from Steve Gunning, Managing Director at IAG Cargo:

***"This underpins just how important the pharmaceuticals market is to our growth strategy. It is at the heart of one of the largest temperature-controlled cargo networks in the world, and will be a huge benefit to pharmaceuticals companies."*** [Air Cargo News 16.10.2013]

Visit our website – [www.bdp-solutions.co.uk](http://www.bdp-solutions.co.uk) - to view the official IAG Cargo marketing video of the Heathrow Constant Climate Centre.





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