



# Manchester Airport

## Case Study



### About

Manchester Airport is one of the busiest airports in the UK, initially opening in 1938 as Ringway Airport. It is the global gateway for the North of the UK and the largest airport outside London with over 210 destinations served by 70 airlines. In 2015, they had a record breaking amount of passengers with over 25 million people passing through the airport. Ambitious development plans are now in place to expand and advance the airports services extensively to cater for the growing market. Current plans aim to double the size of some areas of the airport, with a 10-year scheme currently underway. The airport is owned by the airport operations group M.A.G, who also own London Stansted, East Midlands and Bournemouth Airport.

### The Brief

With the increasing expansion and development of the airport, Sudlows were commissioned to deliver a number of technical upgrades to the airports' existing data centre. The mechanical team at Sudlows installed a series of upgrades to the airport's infrastructure, installing two new cooling systems that will deliver carbon savings of over 31,000kg of CO<sub>2</sub>, every year, compared to the previous legacy equipment.

### The Solution

The installations were undertaken in two of the airports existing computer rooms, which both had ageing cooling systems that were over 16 years. These were reaching the end of their operational life and would soon be out of use due to new technologies coming into play.

Therefore, Sudlows proposed to install 2No. Airedale Smartcool dual circuit R410a downflow CRAC units to place the redundant units.

Before the project could begin, careful planning was undertaken to ensure the best possible systems were being installed. Sudlows went through an intensive planning and design stage to ensure every angle was covered. It was critical that the new units were resilient and reliable as the computer rooms were controlling critical systems such as the lighting for the runway. Therefore it was highly important whichever system was in place would not affect the running of these critical operations for the airport.

There were some challenges for the project as it was in a critical and high security environment, which is why the planning phase was so important to ensure in terms of security, everything ran smoothly. Additionally, as Sudlows were removing the redundant unit, cooling to the comms rooms would be lost during this time, so temporary cooling procedures were put in place to ensure staff and passenger safety during this time.

## The Conclusion

The new technology installed was not only resilient and reliable, but energy efficient with a much higher cooling capacity. Additional to this they were much quieter and had more air delivery, meaning the hot spots in the room were eradicated, making it a much safer option for such a critical environment.

The works were carried out to a strict 6 week time scale to ensure minimal disruption to the airport, executed perfectly due to the intensive planning phase. The team successfully handed over to the airports maintenance team so they were able to manage the new cooling units themselves.

## Testimonials

Stuart Gaffney, Project Manager for Manchester Airport Commented;

“Manchester is one of the leading UK airports and this new mechanical upgrade to two of our existing data centres will deliver a highly resilient and energy efficient cooling infrastructure to our facilities. Furthermore, Sudlows’ expertise and knowledge will be a huge benefit to our ongoing work and expansion.”

Gary Frith, Mechanical Services Director at Sudlows added;

“Manchester Airport has chosen the ideal time to commission this upgrade to its cooling systems. This project is a great example of the direct benefits that any company can witness when considering replacing its legacy cooling systems with a more environmental and energy efficient system.”



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