



Cheaper and greener heating and cooling for McDonald's

McDonald's Restaurants Ltd are using a new heating and ventilation system that has cut running costs by over £4,500 a year for each site, whilst also significantly reducing carbon emissions and improving the indoor environment for customers.

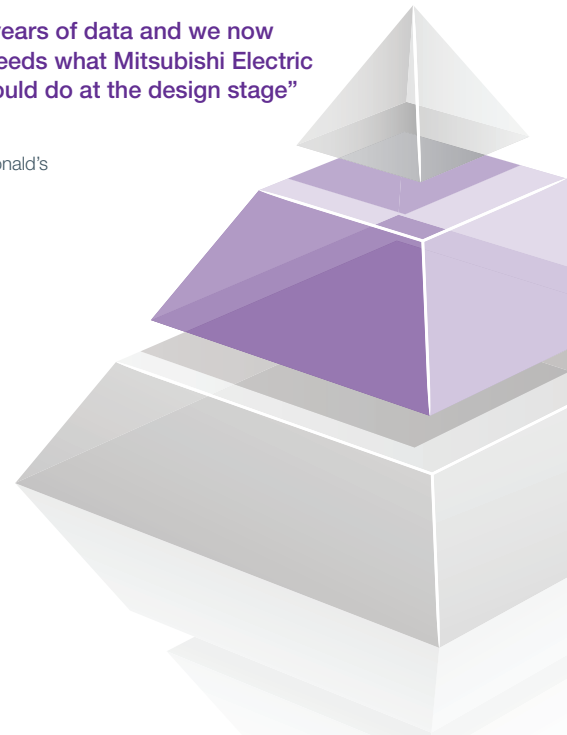
The unique Air Handling Unit (AHU) solution has been developed by manufacturers Mitsubishi Electric and Nordair Niche for McDonald's Restaurants Ltd, which has over 1,200 sites in the UK.

"We have three and a half years of data and we now know that performance exceeds what Mitsubishi Electric and Nordair Niche said it would do at the design stage"

Dave Holden
Capital Investment Manager for McDonald's
Restaurants Ltd Service Department.



Air Conditioning | Heating
Ventilation | Controls



Installation Summary

McDonald's Restaurants Ltd invest in new AHU System linked to Air Source Heat Pumps

Replacing traditional gas-fired or electric rooftop packages

Over £4,500 running cost reductions per site

2 year payback period



Dave Holden
Capital Investment Manager for McDonald's Restaurants Ltd Service Department.

Nearly 250 restaurants now have the new Air Handling System, with each delivering an average 35 per cent reduction in energy consumption for cooling, heating and ventilation, with the added benefit of free cooling. McDonald's Restaurants Ltd is converting around 100 more systems each year as existing equipment ages.

"When we started looking at replacing our air conditioning equipment we quickly realised we needed a bespoke system," explained Dave Holden. **"We were coming at this with very specific requirements and off-the-shelf systems didn't satisfy those needs."**

When Mitsubishi Electric and Nordair Niche agreed to work together McDonald's Restaurants Ltd gave them a wish list of requirements. Between the two companies, they developed an innovative solution that would reduce running costs, be transferable across sites and improve customer experiences. The new systems replaced traditional gas-fired or electric rooftop packages which were not cost effective and for which replacement parts were becoming expensive. They combined Nordair Niche's IDF Air Handling Units with Mitsubishi Electric's Air Source Heat Pumps controlled by a Trend Building Energy Management System to achieve maximum operating efficiency.

McDonald's Restaurants Ltd conducted two trial sites before committing to the system. **"Our own trial data demonstrated that the new system gave each restaurant an annual cost saving of £4,515 per year and emits on average 20 tonnes less CO₂,"** said Dave Holden.

The systems initial capital outlay is more expensive than the previous system, however due to the efficiencies in the system the payback is a little over 2 years.*

The solution was designed to accommodate a variety of standard sized Air Handling Units previously installed so that the replacement solution could be rolled out across all restaurants. This provides savings for McDonald's Restaurants Ltd and comfortable environments for its customers.

"It is commercially critical for us to operate effectively all year round," said Dave Holden. **"Our customers expect McDonald's to have a comfortable internal temperature and the ability to offer that, reliably and consistently, is part of our relationship with customers."**

Mitsubishi Electric's Corporate Solutions team providing renewable heating, cooling, ventilation and control solutions to end users.

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* Based on the average site requiring 4 Mr Slim, PUHZ-RP 200 condensing units across two 120 Nordair Niche AHUs



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