



Air curtain helps
increase energy
efficiency and
customer comfort

As a world famous brand, McDonald's Restaurants Ltd faces the challenge of delivering high standards of service and comfort for customers whilst maximising operational and energy efficiency across a diverse range of premises.

This is where a comparison at two drive-thru sites is paying real dividends for the corporation after it looked for ways of delivering complete customer comfort in the most energy efficient way possible.

Sites in Stoke-on-Trent and Milton Keynes were chosen because they were almost identical in terms of footfall, sales and opening hours.



Air Conditioning | Heating
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Dave Holden has overseen a programme of energy improvements that has helped maximise customer comfort and increase the number of useful seats in each restaurant.

Installation Summary

Mr Slim PHV DXE Heat Pump with
Thermoscreens wall-mounted air curtain.

The restaurants had electronic doors which improve accessibility for customers but also increases exposure to the outside air.

The air curtain minimises the amount of cold air entering the seating area, whilst keeping warm air inside to maximise efficiency.

The use of a Mr Slim inverter-driven, outdoor heat pump significantly minimises the energy used and helps maximise comfort in the restaurant.

Both sites with similar weather conditions are situated on exposed retail parks and suffered from problems with unused seats by the door due to cold drafts.

"It's going to be cold in there no matter what you do with your heating", explains McDonald's UK Equipment Manager Dave Holden. So we decided that we needed to target this cold, incoming air at source rather than trying to heat the whole room".

For an accurate comparison, the restaurant in Milton Keynes was fitted with a heat pump air curtain connected to a Mr Slim air conditioning unit above its sliding door, while in Stoke-on-Trent the outlet was left to operate without the installation.

The heat pump-driven unit blows a 'curtain' of air across the doorway protecting the inside environment from outside drafts and debris whilst helping to maintain a stable and comfortable temperature inside the restaurant – and also preventing leakage and wasted energy costs.

The figures proved to be fairly staggering with the Milton Keynes store showing a saving of 59kW per day in energy consumed compared to the Stoke location – equating to a direct saving in energy of £6.20 per day.

After installation of the air curtain, conditions in Milton Keynes improved significantly meaning that all of the seats were occupied, including the ones by the door. It eliminated cold spots and drafts and created a much more comfortable environment due to this protective barrier.

The test led to an initial roll-out to a further 50 stores and the system has now been installed in over 300 sites with sliding doors.

Dave says: "We estimate that even if we have them set on heating only, they will have paid for themselves within two winters.

"I spoke to one franchisee who before they had it installed, had 20 seats near the entrance door that no one ever sat in because it was too cold. Now, without spending money on extra seats, he has effectively regained 20 spaces which has got to be good business for any restaurant".



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