



Energy savings take off at an International Airport

Systems: Various Air Handling Units accommodating over 600 air filter sets
Building: International Airport
Environment: Urban environment

This facility is part of a busy international airport complex constructed and re-developed over several years. The building managers requested an Opportunities Assessment to identify any energy saving opportunities that are available in order that they can not only reduce operating costs, but also establish a framework to approach the forthcoming mandatory legislation on The European Energy Directive from Jan 2009.

The agreed objectives of the Assessment were to identify and prioritise any actions that can be taken by the site to save energy, money and carbon. Estimates are based on surveying a typical Air handling Unit (AHU) and projecting the consumption across similar systems accommodating over 600 filter elements.

The site is keen to be regarded by customers and their peers as applying the best practice in energy management.

Based upon an estimated 8760 hours running time per year, nominal air flow values, a fan efficiency of 50% and a period of 5 years (estimated installation life), Camfil undertook a Life Cycle Costing (LCC) analysis of the current filter installation in order to establish if any saving would be generated by a filtration upgrade.

The LCC also takes into account disposal costs (based upon € 1.4 per filter) and other factors such as potential cleaning costs, and Minimum Lifetime Efficiency (MLE), however labour costs for installation have not been included at this stage.

The current installation utilises low grade synthetic panel filters with some secondary bag filters (this could not be established for all systems and has therefore been assumed for the purpose of the following calculation).



Projected savings

Based on multiple Air Handling Units accommodating over 600 air filter sets over a 5 year period

Cost saving per filter set (€) *	7,3
Cost saving for all filters (€) *	4,411
Energy saving per filter set (kWh)	2,870
Energy saving for all filters (kWh)	1,724,870
CO ₂ saving per filter set (tonnes)	1.25
CO ₂ saving for all filters (tonnes)	750

* calculations based on € 0.10 / kWh

For further information regarding this service, please contact your local Camfil Farr office

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Camfil Farr Case Study
Opportunity Assessment Survey