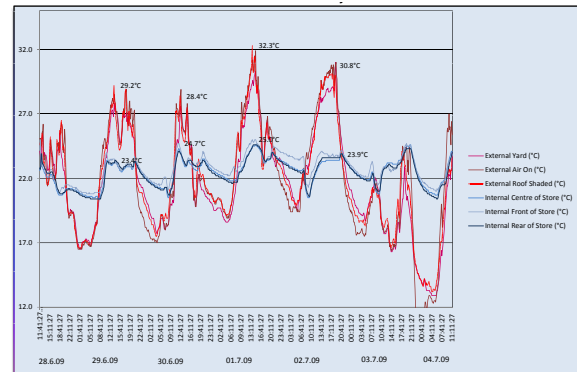


## 2013 -EcoCooling Case Study - Warehouse and Space Cooling

### DECATHALON CHOOSES ECOCOOLING SOLUTION FOR STOCKPORT STORE

The Decathlon store at Stockport was refurbished in 2009. The existing refrigeration based air handlers provided only 100kW of cooling and in store temperatures reaching 40°C were experienced during hot periods. An independent report commissioned by the store prior to refurbishment recommended at least 400kW of cooling. An analysis showed the comparison between EcoCooling and refrigeration.

A total of 12 EcoCoolers together with extract fans were fitted to the store. The EcoCoolers and extract fans are thermostatically controlled in four zones. Down discharge EcoCoolers distribute air to 8 way plenum chambers positioned above the lighting level.



The performance of the cooling system was monitored during a warm period in July 2009. It can be seen from the graph above that the store temperature never exceeded 24°C.

The comparative costs were calculated by Decathlon before installation and are outlined in the below table:

	EcoCooling	Refridgeration
Capital	£20.00/m <sup>2</sup>	£62.50/m <sup>2</sup>
Operating Cost	£0.20/m <sup>2</sup>	£3.00/m <sup>2</sup>
Electrical Supply	1x30A	3x100A

### NET-A-PORTER USE ECOCOOLING EVAPORATIVE COOLING IN THEIR WAREHOUSE

Net A Porter.com, the online high end fashion chain opened their third warehouse in Charlton next to the Millennium Dome, and chose EcoCooling to provide the cooling.

4 roof mounted EcoCoolers have been installed along with 8 extraction units to provide cool air both above and below the mezzanine floor.

The coolers are controlled automatically with individual thermostatically controlled wall mounted panels; these are interlinked into the fire alarm system and existing Building Management System to provide a simple safe and secure system.

The temperature in the warehouse is now always below 23°C even on the hottest days, providing comfortable working conditions all year round.



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Compared to a traditional refrigeration system the estimated energy savings are expected to be around 90%. **A single EcoCooler, rated at 35kW, can show carbon savings of up to 10,000kg per year and cost less than 15p per hour to run.**

### Energy Consumption

Running costs for a single unit (35kW) based on an average airflow of 14,000 m<sup>3</sup>/hr are:

Utility	Usage and Cost per Hour
Electrical Consumption	£0.120
Water Consumption (average)	£0.012
Total Cost per Hour	£0.132
Total cost per 168 hour continuous working week	£22.18

## ECOCOOLING INSTALLATION EXAMPLES AND PRODUCT RANGE

### Evaporative Cooler Range

The Standard ECP EcoCooler has a down-discharge air flow, to allow for more flexibility for installations the cooler can be converted upon request. The drawing below shows some installation types for the different models of the ECP08 unit.

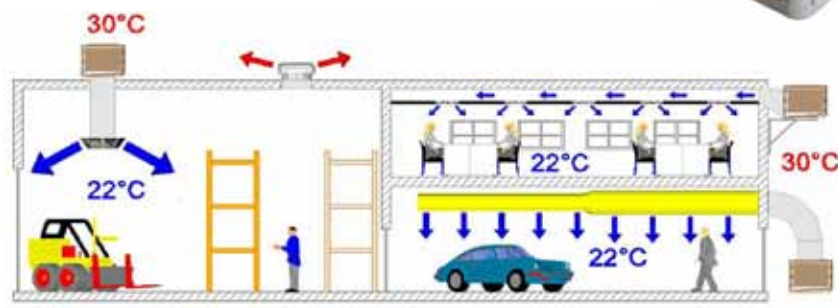
Top Discharge (ECP08-T)



Side Discharge (ECP08-S)



Standard Down Discharge (ECP08):



## TESTIMONIALS

### Matalan Thurrock Manager

"Temperatures in parts of the store pre-cooling were getting up to over 40°C making temperatures in the menswear section in particular intolerable. Temperatures are now 23°C throughout the store making shopping and working conditions ideal."

**Stylo Barrat - Site Facilities Manager Keith Pemberton** - confirmed that conditions in the warehouse during summer 2007 had been "beautiful" and there were noticeable decreases in absenteeism and a better working atmosphere both literally and metaphorically since the completion of the installation.

For more information and case studies please visit the EcoCooling website [www.ecocooling.org](http://www.ecocooling.org). Presentations and introduction videos are also available on the EcoCooling YouTube channel.



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