



## PROJECT REPORT

# MALAGA AIRPORT

## TrilliumSeries Coolers for the passenger terminal



(16) TrilliumSeries Coolers,  
DFCV-S 9026-M616-B-AD

Malaga Airport is the fourth busiest airport in Spain, it handles over 12 millions passengers a year. An airport with such features and a steady growth needs a good infrastructure. For the new passenger terminal, several innovations, amongst which improved access to the airport, parking spaces and the second runway, will convert Malaga Airport to one of the most modern airports in Europe.



### Innovative green technology for Malaga Airport

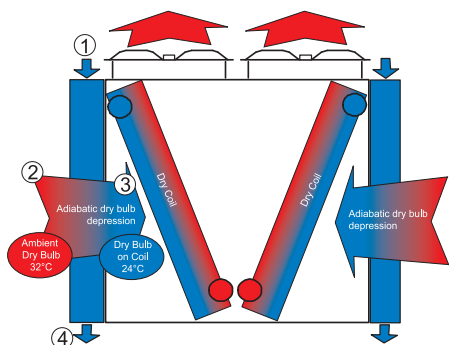
One of the important goals of TERMINAL AEROPUERTO DE MALAGA UTE during the building activities was to aim for a **maximum protection of the environment, the soils, the water quality and the atmosphere.**

Amongst the special precautions that have been taken to realize this, (16) of Baltimore Aircoil's largest adiabatic TrilliumSeries Coolers were selected for the 12,6 mW heat rejection of the passenger terminal.

### Optimal COP

Thanks to the unique adiabatic air pre-cooling section, the TrilliumSeries Coolers are capable to cool a total of 602 l/s of water from 38°C down to 33°C with a design ambient dry bulb temperature of 35°C and an ambient wet bulb temperature of 24°C.

Doing so the TrilliumSeries Coolers not only **reduce** the installed fan power as compared to conventional dry heat rejection equipment, but with the low condensing temperatures the coolers also **ensure** an optimal COP of the chiller plant.



1. City water in; 2. Ambient air;  
3. Pre-cooled air; 4. Water out to the sewer



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## Water saving and operational safety solution

Despite the fact that the TrilliumSeries Coolers are capable to deliver low process temperatures similar to conventional evaporative cooling equipment, the units can operate dry during the majority of the year. Hence TrilliumSeries Coolers **minimize the annual water consumption** to a fraction of conventional evaporative equipment (typically less than 10%). This also guarantees a **plume free operation** at all times.



For the Airport Terminal in Malaga the coolers can reject the total design heat load in dry mode starting at an ambient dry bulb temperature of 26.4°C.

TrilliumSeries Coolers use a once-through-system for the adiabatic pre-cooling of the air which **eliminates the need for water treatment or chemicals**. The special low pressure water distribution system outside the air stream guarantees **an aerosol free air flow**, and ensures a complete year-round safe operation.



**HIGH THERMAL PERFORMANCE, OPERATIONAL SAFETY and LIMITED WATER CONSUMPTION** satisfy the needs of the end-user, maintenance personnel and the entire environment which was precisely the goal of the customer.

### CUSTOMER BENEFITS

- High thermal performance
- Low water consumption
- Plume-free
- No water treatment needed
- Operational safety



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