Charles de Gaulle airport complies with environmental guidelines thanks to SAUTER EMS.

Satellite 3 (S3 for short) of Terminal 2E at Charles de Gaulle airport in Paris has 225 000 square metres of floor space spread over seven levels, providing a handling capacity of 8.5 million passengers. In 2011, S3 was equipped with SAUTER EMS. This investment brought energy savings of 38 per cent compared with 2010 – for heating alone.

In order to guarantee a consistently high level of interior comfort and continuous energy monitoring, Charles de Gaulle airport sought an easy-to-use measurement system that provides comprehensive analysis capabilities and generates detailed graphs and comprehensive reports – and found it in SAUTER EMS. The system is able to verify whether the energy produced is equivalent to the energy consumed. After the generating plant has calculated the energy via totalisers, it is passed on to the consumers. All parts of the network are equipped with meters, which, in turn, are connected to the EMS. This enables the energy consumption to be tracked and monitored, and also to be analysed and processed on a daily basis.

In addition, the EMS energy management software and the monitoring system for the technical installations are permanently connected with each other, so that settings for the installations can be adjusted in order to achieve the stated objectives without compromising the comfort of the passengers.

Compared with 2010, the amount of hot water used for the heating system in S3 was reduced by 38%. Admittedly, the mild outside temperatures certainly played a role, this year, but the daily monitoring of energy consumption meant that the control devices were set according to demand, thereby enabling energy to be managed optimally. The consumption of chilled water, domestic cold water and electricity was considerably reduced in relation to the targets and the previous year's consumption. For instance, the con-

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sumption of chilled water decreased by 3 per cent compared with the targets, and by 6 per cent compared with the year 2010. In relation to the targets for 2011, consumption of electricity fell by as much as 8 per cent. Furthermore, consumption of domestic cold water decreased by nearly 4 per cent compared with the previous year.

Since July 2012, Satellite 4 (S4) of Terminal 2E, which has a handling capacity of 7.8 million passengers a year, has been equipped with meters for hot water, chilled water and mains water networks which, in turn, are all connected to EMS. This enables Satellite 4 to meet the new French HQE standards regarding high environmental quality *(Haute Qualité Environnementale)*.

Alain Stephan, the manager responsible for technology and installation at S3 and S4 at Charles de Gaulle Airport, says: "Environmental aspects are taking on an increasingly important role in our daily business. For this reason, energy has to be managed well. EMS offers simple energy monitoring and a comprehensive overview of our energy expenditures."

Aéroports de Paris and Charles de Gaulle airport

Aéroports de Paris is the second-largest European airport group for passenger traffic and the principal one for cargo and courier services. It owns and manages the three main airports in the Paris region: Paris-Charles de Gaulle, Paris-Orly and Paris-Le Bourget. Paris-Charles de Gaulle, which handled 61 million passengers in 2011, is the major international airport in France and the sec-ond-largest in Europe. Paris-Charles de Gaulle is the worldwide hub for Air France-KLM and the main European hub for the SkyTeam alliance. The airport platform is the base for 700 companies and approximately 90 000 employees, which makes it one of the most important business sites in the Île-de-France region.

EMS at Aéroports de Paris

The use of the SAUTER EMS solution at *Aéroports de Paris* will gradually be extended to other installations in order to make further savings and perform administration centrally. Since December 2011, time-consuming manual processes – such as taking meter readings – have been performed automatically, and the introduction of remote data acquisition has significantly simplified invoicing. As part of a second phase, the measuring of energy consumption will be summarised in order to be able to adjust consumption accordingly.

SAUTER's EMS software is an indispensable tool for meeting the targets imposed by environmental standards such as HQE.