

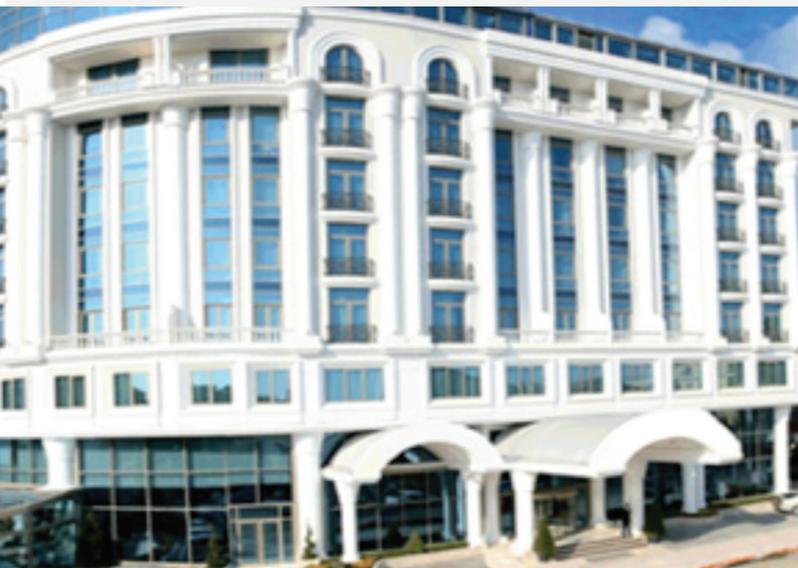
CASE STUDY

Hotels



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Pre-cooling system “Smart Cooling™” on Premier Palace hotel cooling equipment reduces electrical energy consumption by 24% and increased cooling capacity by 29% on average.”



CUSTOMER

The five-star Premier Palace Hotel has more than one hundred years long history of operation. The Premier Hotels are one of the best hotels in the world and provide unique apartments. In 2009 this hotel was awarded 6 Stars and 7 Stripes by the Seven Stars and Stripes® Committee.

CHALLENGE

Over last three years during the peak hours of hot summer period hotel has been short of electrical energy, which also concerns cooling equipment. When the outdoor air temperature reaches +35°C, cooling equipment operates in the peak regime, which means the equipment compressors become overloaded and switch off. Such a load requires heavy electrical energy consumption- during hot season hotel cooling equipment TRANE RTAC energy consumption increases by 45% on average. Such an increase considerably boosts the operational costs of the hotel since the electrical energy is an essential cost position.

There was defined task to reduce electrical energy consumption of cooling equipment TRANE RTAC in the hot summer period, to boost the efficiency of this equipment and ensure a normal mode of operation.

SOLUTION

In order to prevent the overload of the equipment, a solution was needed that would enable the installed cooling equipment to produce more cooling capacity in the hot period, i.e. to operate more efficiently. To serve this purpose, in 2012 the customer’s service company equipped the cooling facilities with intelligent adiabatic pre-cooling system “Smart Cooling™”. Adiabatic system lowered air temperature inflowing the cooling facilities. It allowed cooling facilities to produce more cooling capacity and consume less electrical energy.

Six cooling facilities of hotel: TRANE RTAC were equipped with intelligent adiabatic pre-cooling system “Smart Cooling™”.

RESULTS

Premier Palace hotel technical director has submitted a report, which indicates that, after the installation of “Smart Cooling™” adiabatic pre-cooling system, cooling equipment can produce noticeably more cooling capacity (the average increase by 29%) and the electrical energy consumption of equipment considerably decreases (by 24% on average). The return on investment period (ROI) of installed adiabatic pre-cooling system “Smart Cooling™” – 8 months. Additionally, cooling equipment operates under the circumstances of normal load, the operating cycle of compressors is shorter and the equipment does not become overloaded.



COOLING CAPACITY INCREASED BY

↑ 29%



ELECTRIC ENERGY CONSUMPTION REDUCED BY

↓ 24%

ROI
8
MONTHS

New intelligent adiabatic pre-cooling system “Smart Cooling™” is state of the art technology ensuring excellent energy saving results.

- Modular system
- Suitable for all type of dry coolers and chillers
- Easy and fast installation
- Certified system and approved by major cooling equipment manufactures
- Minimal maintenance

