

CASE STUDY

Hilton hotel

Dubai

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Electricity consumption reduced by **23%** and cooling capacity boosted by **15%** on average at the DoubleTree by Hilton hotel thanks to the installation of the intelligent adiabatic **Smart Cooling™** system.”



SOLUTION

To prevent the overloading of the equipment, installing the intelligent adiabatic **Smart Cooling™** system was a pressing need.

Smart Cooling™ would allow the Carrier 30XA chiller to produce more cooling capacity and operate more efficiently even in extreme heat.

So in 2019 Hilton's service division equipped their cooling facilities with the intelligent adiabatic **Smart Cooling™** system.

Smart Cooling™ lowered the air temperature flowing into the chiller, boosting its cooling capacity and significantly reducing its electricity consumption.

RESULTS

Hilton Al Barsha Dubai hotel technical director's report states that after the installation of the intelligent adiabatic **Smart Cooling™** system, the cooling equipment produce noticeably more cooling capacity: **15%** on average. Electricity consumption dropped significantly to around **23%** on average.

The return on investment (ROI) period of the **Smart Cooling™** system for this project is of only 10 months.

Moreover, the chiller now operates at a steady normal load and the operating cycle of the compressors is shorter. This translates into further operational cost savings.

CHECKED AND TESTED FOR PROVEN RESULTS

Efficacy assessment has been conducted and validated. Testing was performed with BTU liquid flow and temperature meter RIF600 and Eniscope energy monitoring equipment.

CUSTOMER

DoubleTree by Hilton is an American hotel chain and a part of Hilton Worldwide. Hilton Hotels are some of the finest international hotels providing exclusive accommodation.

The DoubleTree by Hilton Hotel & Residences Dubai is located in the Al Barsha area of the city. Al Barsha boasts bustling shopping, dining and entertainment options. It is an ideal location at the heart of Dubai.

CHALLENGE

Over the last three years, during peak heat hours in summer, the hotel operated at excessive electricity consumption levels, which directly affected its cooling equipment.

When the outdoor air temperature reaches over 35°C, the cooling equipment operates in peak regime, its compressors overload and even switch off. Such a load requires heavy electricity consumption.

In summer, the Carrier 30XA chiller used by the hotel consumes around 23% more electricity than usual, raising operational costs to undesirable levels.

The challenge was clear: reduce electricity consumption of the chiller during heat season, boost its efficiency and ensure a constant normal operation mode.



COOLING CAPACITY
INCREASED BY



ELECTRIC ENERGY
CONSUMPTION
REDUCED BY

↑ 15%

↓ 31%

ROI

10

MONTHS

