HILTON MINA | DUBAI, UAE

Hilton Mina

CARRIER air-cooled chillers

Chiller electricity use fell 18.90% with GACS adiabatic cooling system

Measured performance from 2 CARRIER chillers upgraded with the GACS adiabatic cooling system

18.90%	8.12°C	2
MEASURED ENERGY REDUCTION	TEMPERATURE DROP BELOW AMBIENT	CARRIER CHILLERS UPGRADED



CUSTOMER

The Hilton Mina Hotel operates Carrier chillers at its Dubai,UAE site.

CHALLENGE

Reduce condenser inlet-air temperature and chiller electricity use during hot-weather operation.

GACS DESCRIPTION

Designed and manufactured in the UAE, GACS combines condenser protection with high-pressure evaporative pre-cooling, multi-stage water treatment, water recirculation and intelligent PLC control. It cools air entering the condenser coils to approximately 2°C above the ambient wet-bulb temperature.

TEST INSTRUMENTS USED DURING THE TEST

BTU Meter	Temperature & Humidity Reader	Eniscope (Energy Meter)
		



GACS installation at the Hilton Mina, Dubai Site

MEASURED PERFORMANCE

TWO Carrier chillers upgraded with GACS used 18.90% less electricity.

During GACS operation, average condenser inlet air was 26.49°C compared with 34.61°C average ambient air, a 8.12°C difference.

TEST CONDITIONS Average ambient 37.34°C OFF / 34.61°C ON | Relative humidity 39.77% OFF / 46.49% ON

Energy and environmental conditions were monitored in both operating modes.