THE GREEN PLANET | AL WASL, DUBAI, UAE

The Green Planet

DAIKIN air-cooled chillers

Chiller electricity use fell 11.50% with GACS adiabatic cooling system

Measured performance from 1 DAIKIN chillers upgraded with the GACS adiabatic cooling system

11.50%	8.2°C	1
MEASURED ENERGY REDUCTION	TEMPERATURE DROP BELOW AMBIENT	DAIKIN CHILLER UPGRADED



GACS installation at the SAAB Bank site

CUSTOMER

The GREEN Planet operates Daikin chiller at its Al Wasl, Dubai 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)
		

MEASURED PERFORMANCE

ONE Daikin chiller upgraded with GACS used 11.50% less electricity.

During GACS operation, average condenser inlet air was 28.78°C compared with 36.98°C average ambient air, a 8.2°C difference.

TEST CONDITIONS Average ambient 35.77°C OFF / 36.88°C ON | Relative humidity 57.26% OFF / 45.12% ON

Energy and environmental conditions were monitored in both operating modes.