

# CASE STUDY

## GSK Pharmaceutical factory

### Spain

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The intelligent adiabatic **Smart Cooling™** system reduced electricity consumption by **23%** and boosted cooling capacity by **20%** on average at GSK España plant.”

#### 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

GlaxoSmithKline is the world's sixth largest pharmaceutical company, manufacturing vital products for health and life.

Cooling efficiency and reliability for their manufacturing plants are serious issues for GSK.

#### CHALLENGE

To implement energy-savings and environmentally-friendly manufacturing policies, GSK faced the challenge of finding a solution to reduce electricity consumption of its cooling units and lower CO2 emissions using sustainable technology.

At GSK España plant, outdoor air temperatures can rise above **38°C** during heat season. The costs associated with cooling equipment operations rise dramatically and at times present a risk of equipment overload. GSK decided an effective solution should be put in place immediately.

#### SOLUTION

The intelligent adiabatic **Smart Cooling™** system was installed at GSK España plant's McQuay cooling equipment.

**Smart Cooling™** reduced the air temperature flowing into the cooling units by **15°C (29% lower)**, allowing the equipment to operate efficiently and produce the required cooling power the factory needed during even the hottest days.

Substantially improved air exchange in cooling equipment condensers and better operational efficiency were also achieved with **Smart Cooling™**.

#### RESULTS

GSK engineering team's evaluation shows that, with **Smart Cooling™**, CO2 emissions produced by cooling facilities decreased **17%**, while electricity consumption was **23% lower**. Cooling capacity increased by a whopping **20%**, exceeding all expectations.

In this project, the return on investment period (ROI) was of just 9 months.

Additionally, **Smart Cooling™** helps the cooling equipment operate under normal load, with a shorter compressor operating cycle and no overloading. That translates into less technical maintenance and longer equipment lifespan.



COOLING CAPACITY  
INCREASED BY



ELECTRIC ENERGY  
CONSUMPTION  
REDUCED BY

↑ 20 %

↓ 23 %

ROI  
9  
MONTHS

