

CASE STUDY

Bosch Manufacturing – The Netherlands



*The intelligent adiabatic **Smart Cooling™** system reduced electricity consumption by 19% and boosted cooling capacity by 25% on average at Bosch's plant in the Netherlands."*

SHAKED, TESTED AND PROVEN.

Efficacy results were tested, analyzed and validated. Tests were performed using **BTU** liquid flow and temperature meter **RIF600** and energy monitoring equipment **Eniscope** analytics.



CUSTOMER

Robert Bosch GmbH is a leading global supplier of technology and engineering solutions. The 134-year-old firm reached over 70 billion euros in worldwide sales in 2020, with operations divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting.

CHALLENGE

The Netherlands boast a typical maritime climate with mild summers and cold winters. Wind and rain are common throughout most of the year with July and August being the wettest months. March is the driest month of the year.

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

SOLUTION

To prevent the overloading of the plant's cooling equipment, installing the **Smart Cooling™** PRO 10 system was a pressing need. **Smart Cooling™** would allow the Guntner GVH 090 chiller to produce more cooling capacity and operate more efficiently, even in extreme heat.

In 2016, Bosch'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

Testing was conducted September 2016. After the installation of the **Smart Cooling™** system, the cooling equipment produced noticeably more cooling capacity: 25% on average. Electricity consumption dropped to around 19% on average. The return on investment (ROI) period of the **Smart Cooling™** system for this project is of only 24 months.

Test results data show that the intelligent adiabatic **Smart Cooling™** system increases chiller performance by, on average, 25% in a 24-hour operation cycle. This translates into further operational cost savings.



The intelligent adiabatic **Smart Cooling™** system is a proven, state-of-the-art cost-saving pre-cooling technology.

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

