

## GRUNDFOS iSOLUTIONS BOSCH INDIA SAVES 65% ENERGY IN CHILLED WATER SYSTEM



PROCESS  
OPTIMIZATION



OPERATIONAL  
BENEFITS



ENVIRONMENTAL  
BENEFITS

### OVERVIEW

Bosch Automotive Electronics India in Naganathapura, Bengaluru manufactures Electronic Control Units for the Automotive Electronics Division and are consistently on the lookout for more energy-efficient ways to develop their electronics. The primary goods produced in this plant, which serve both domestic and International OE Customers, are spark plugs, starter motors, alternators, generators, and gasoline system equipment.

### THE SITUATION

The HVAC system in industrial buildings consume almost 50% of the overall energy, making it a vital detail to consider. Therefore, Bosch was looking for measures that aim at enhancing energy efficiency as it minimizes the cost implications, reduces the impact on the environment, and sustains efficiency in a system.



**GRUNDFOS**

Possibility in every drop

## THE SOLUTION

Grundfos stepped in as a reliable partner and conducted an energy audit of their chilled water system to evaluate their energy consumption and efficiency. The investigation revealed that the pumps were oversized, subsequently escalating the operational and maintenance costs.

A further simulation study was carried out to differentiate the energy usage of conventional pumps (IE2/ IE3) with Grundfos e-pumps. As a solution, Grundfos proposed a CRE pump with IE5 (MGE) motor which is a multistage pump with integrated drives that constantly adjusts pump performance to accommodate dynamically changing demands. Grundfos successfully carried out the pilot project for the chilled water circulation system, which resulted in a 45% rise in efficiency and reliability.

*Right from inception to final execution of the project, we received exceptional support from Grundfos and its distributor Saptha Innovations and their remarkably efficient teams. Our management appreciates the efforts taken and for the immense energy consumption being saved on a daily basis.*

*Steevan S Fernandes, Deputy Manager, Facility Management, Bosch Automotive Electronics India*

## GRUNDFOS SUPPLIED

For Bosch Automotive Electronics, Grundfos worked with its Distributor Saptha Innovation to perform energy assessments for Chilled water circulation systems and **CRE 64-1-1 P-F-A-E-HQQE (IE5 Model) x 6** was supplied as Secondary Pump Chiller.

### INFO BOX

**Topic :** Chilled Water Circulation

**Company:** Bosch Automotive Electronics India

**Location :** Nagnathpura Bangalore, India

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118 Rajiv Gandhi Salai,  
Thoraiyakkam,  
Chennai 600 097  
grundfos.com/in

## THE OUTCOME

Grundfos through its authorised distributor, Saptha Innovation, installed and integrated pumps in the chiller system. Through Grundfos e-pumps, Bosch facility was able to enhance the system's efficiency and ascertain their sustainability targets. Moreover, Bosch Automotive Electronics India, Nagnathpura Bangalore received an award from CII under the Gold category on Low-Cost Automation, one of the projects being the installation of energy-efficient pumps.



**188 Mwh/year**  
Annual Energy Savings



**65%**  
Energy Savings



**9 months**  
Payback time



**135 tons/year**  
CO<sub>2</sub> emission reduction



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