

RITTAL



PARTNER PROGRAM

SAVING SIX FIGURES IN AUTOMOTIVE MANUFACTURING WITH COOLING EFFICIENCY

SNAPSHOT



Rittal helped a major automotive manufacturer reduce energy costs and enhance cooling efficiency through a comprehensive service check and cooling system upgrade.

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INTRODUCTION

To maintain uninterrupted production and reduce operational costs, system reliability and efficiency are absolutely essential, especially in the fast-paced automotive industry. Cooling systems in particular can optimize efficiency to maintain peak conditions for the best performance of an automation line. A major automotive manufacturer experienced multiple shutdowns at their engine plant due to defective cooling units. Recognizing the need for a comprehensive solution, the manufacturer partnered with Rittal to conduct a thorough service check of all cooling units, uncovering significant potential for energy savings and operational improvements.

THE CHALLENGE

The manufacturer faced two critical challenges:

1. Reduction of energy consumption
2. Availability of cooling devices

First, there was a pressing need to reduce energy consumption. High energy costs were becoming a financial burden, and there was increasing pressure to meet evolving environmental standards. This necessitated a shift towards more energy-efficient cooling solutions to lower operational costs and minimize environmental impact.

Secondly, the availability of cooling devices was crucial. The manufacturer experienced multiple shutdowns at their engine plant due to defective cooling units, leading to costly production downtimes. Ensuring continuous operation of cooling units was essential to maintain productivity and avoid interruptions in the manufacturing process.

Thus, cooling unit reliability was a key factor in establishing a solution.



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THE RITTAL SOLUTION

Rittal proposed a comprehensive solution to address the customer's cooling efficiency concerns, including:

1. A service and efficiency check
2. Upgrading cooling units

The first step was conducting a thorough service and efficiency check. This involved a complete inventory and assessment of all cooling units, regardless of manufacturer, to identify maintenance needs and potential energy savings. By examining the maintenance status of over 220 cooling units, Rittal specialists were able to pinpoint issues and suggest improvements.

According to the auto manufacturer's Plant Engineering & Environment Manager, "*Rittal's inspection revealed significant savings potentials of our plant.*"

In addition to the service check, Rittal recommended upgrading the cooling units. Specifically, they proposed replacing 150 outdated and defective cooling units with Rittal Blue e and Blue e+ models, which are renowned for their superior energy efficiency. These upgrades promised significant reductions in energy consumption and enhanced reliability, ensuring continuous operation and minimizing production downtimes.

"Rittal's inspection revealed significant savings potentials of our plant."

- PLANT ENGINEERING & ENVIRONMENT MANAGER

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IMPLEMENTATION

Over 220 cooling units from various manufacturers were meticulously inspected by Rittal technicians. The team evaluated the units for dirt accumulation, damage, and bearing noise, creating a maintenance checklist and recommending improvements. The inspection revealed that 25 units were defective and required immediate attention, with many being competitor products only five years old. In parallel, Rittal set up a test facility at the engine plant to compare their Blue e+ cooling units with competitor models.

THE RESULTS

The practical tests and data analysis led to a comprehensive efficiency calculation. Key findings included:

1. Improved cooling efficiency
2. Significant cost savings
3. Environmental impact
4. Rapid payback

The implementation of Rittal's Blue e and Blue e+ cooling units led to significantly improved cooling efficiency. The 2.6-kilowatt Blue e+ unit demonstrated an 88.9% energy savings over a comparable 2.5-kilowatt third-party unit, showcasing its superior performance. This improvement translated into significant cost savings for the manufacturer. By replacing 150 cooling units with Rittal's advanced systems, the company projected savings of over \$599,000 over ten years. Additionally, the new units would have a positive environmental impact, reducing CO2 emissions by 276.3 tons over the same period. Furthermore, the investment in these new cooling units had a rapid payback period of just 2.42 years, far exceeding the customer's requirement of 3.5 years, making it a financially sound decision.



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CONCLUSION

The collaboration between the automotive manufacturer and Rittal resulted in substantial operational and environmental benefits. The proactive service check and subsequent upgrade to energy-efficient cooling units ensured not only cost savings but also enhanced reliability and sustainability. This underscores the importance of regular maintenance checks for cooling units part of automation systems to optimize productivity and ROI.

CONTACT RITTAL FOR OPTIMAL COOLING FOR YOUR AUTOMATION LINES

Could your automation lines use a boost in efficiency?

[Contact Rittal today](#) for an assessment of your cooling systems. Our experts will help you identify potential savings and implement solutions to enhance your operational performance. Reach out to Rittal and start optimizing your cooling efficiency today.

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ABOUT RITTAL LLC

Rittal LLC is a global manufacturer of industrial and IT enclosures, racks, and accessories, including cooling solutions and power management systems for industrial, data center, outdoor, and hybrid applications. As the largest manufacturer of enclosures in the world, Rittal provides innovative, high-quality solutions for practically any industrial or IT infrastructure application, from single enclosures to comprehensive, mission critical systems. Products are tested and certified to the appropriate standards that apply, including UL, CSA, ATEX, NEMA, and more.

[Learn more at rittal.us.](http://www.rittal.us)



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