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Ingenuity for life

HIROTEC

Enabling greater competitiveness

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Siemens is supporting Hirotec India to secure benefits of digitalization.

Ready to compete

With a thriving automotive industry, India is expected to grow into the world's third-largest passenger-vehicle market by 2021. To compete in the global automotive market, however, India's OEMs need to pursue a transition to Industry 4.0 to boost efficiency, reduce production costs, minimize defects, and shorten time to market.

What is true for the vehicle manufacturers also applies to their upstream technology suppliers. Hirotec India supplies closure assembly and hemming technology to the automotive industry in India and internationally. Hemming refers to the installation of vehicle closure panels, such as the hood and door panels, and involves bending/folding the outer panels so that they fit perfectly over the inner panels. The accuracy of this process is crucial for the appearance and quality of the finished product.

Hirotec India faced the challenge of delivering automotive closure assembly line for their customers in a short time span with their existing setup and manpower.

For a project in Vietnam, Hirotec had an ambitious timetable of just 24 weeks. The company therefore required a solution that would significantly reduce development and commissioning time.

HIROTEC Group

Globally recognized as a leading supplier of automotive manufacturing equipment and parts, the Japanese HIROTEC Group has 16 facilities in eight countries, including India. Hirotec India was founded in 2005. With about 400 employees in locations in Coimbatore and Tamil Nadu, the company provides high-quality closure panel solutions to the automotive industry in India and abroad.



Manisha Priyadarshini – Business Development, Siemens India

“TIA Portal is the key enabler – your gateway to digitalization and Industry 4.0. Siemens was able to support Hirotec in addressing the key industrial challenges.”

Continuous improvement

Siemens offers complete solutions from the Digitalization portfolio.

In order to simulate and test machines efficiently in a virtual environment, Siemens provided S7-PLCSIM Advanced. This solution allows comprehensive simulation of functions during configuration and engineering. And by generating what-if scenarios – using NXMCD and S7-PLCSIM Advanced – the technology provides a platform for parallel working and saves a significant amount of time by carrying out tests before the real machine exists.

Standardization is another effective way to raise productivity quickly by reducing configuration time and preventing errors, particularly in recurring tasks. The Siemens solutions TIA Portal and SIMATIC Visualization Architect (SiVArC) played a crucial role in implementing company standards for Hirotec with regard to the PLC program and HMI screens.

Above all else, the highest priority is, of course, safety in the workplace. PROFISafe – one of the open solutions for safety-related communication – helps the customer achieve safety standards throughout the closure assembly line. What’s more, Safety Integrated uses the customer’s existing network structure for safety-relevant data, which makes significant cost savings possible as there is no need to create a separate safety solution.



A big step forward: Simulating in a virtual environment with Siemens S7-PLCSIM Advanced

Safety Integrated: maintain standards with significant cost savings for the customer





“In this journey, Siemens played a crucial role with the right products. We could launch the project efficiently and much before time.”

Sendtil Parthasarathy – Director and Executive Vice President, Business Development, Hirotec India

10 %

Reduction in development time thanks to PLC simulation.

15 %

Reduction in costs due to Integrated Safety function.

20 %

Faster creation of HMI screens with typical faceplates.

A seamless development environment

Digital solutions that boost productivity, transparency and safety.

With the application of S7-PLCSIM Advanced, Hirotec was able to simulate and test machines in a virtual world. This capability has led to a 10-percent reduction in development time, especially with regards to communication. Engineering time was further reduced thanks to SiVArC, which allowed Hirotec to become 20 percent faster in creating HMI screens with typical faceplates.

The time required for Prove out of Automation was cut by half. Instead of ten days in engineering, only five days were needed for completion of the logic.

The Multiuser Engineering feature in TIA Portal allows multiple users to work on a project together and work simultaneously. By processing different objects in parallel, the project planning and commissioning times can be significantly shortened. Hirotec’s engineering timeline was reduced from 30 working days to just 12.

Finally, the Integrated Safety function allowed Hirotec to achieve a 15% reduction in costs while maintaining safety standards at all levels.

Portfolio

SIMATIC S7-1500

[siemens.com/s7-1500](https://www.siemens.com/s7-1500)

Totally Integrated Automation Portal

[siemens.com/tia-portal](https://www.siemens.com/tia-portal)

SIVARC - SIMATIC Visualization Architect

[siemens.com/sivarC](https://www.siemens.com/sivarC)

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Security information

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens’ products and solutions constitute one element of such a concept. For more information about industrial security, please visit

[siemens.com/industrialsecurity](https://www.siemens.com/industrialsecurity).