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ENGINEERING THE EXCEPTIONAL:

How Rajoo Engineers is Building the Future of Extrusion with Eplan

BACKGROUND

Rajoo Engineers Ltd. (REL), headquartered in Rajkot, is a globally respected manufacturer of **plastic extrusion machinery**. Its extensive product portfolio includes **Blown Film Lines**, **Sheet Extrusion Systems**, **Extrusion Coating and Lamination (ECL) Lines**, and **Thermoformers**. Known for innovation, precision, and customization, REL has consistently delivered **high-performance solutions** to converters and processors across international markets.

To uphold its leadership position and meet increasing demands for complexity and speed, REL took a decisive step toward engineering digitalization by integrating **Eplan**, a globally recognized **electrical design and automation platform**. This strategic move reflects REL's philosophy of **continuous improvement** and strengthens its capabilities in delivering next-generation extrusion solutions.



THE DIGITAL PIVOT

REL's engineering team was not looking for just another drafting tool. Instead, the goal was to adopt an intelligent, **integrated engineering environment** that would support their commitment to delivering **customized, high-performance machines** with **precision, efficiency, and consistency**.

"Eplan has transformed our engineering workflows by reducing design time by nearly 50 percent while eliminating manual errors. It is not just a software solution but a strategic enabler for innovation and precision"

Pratik Kothari, Technical Head, Rajoo Engineers Ltd.

With **Eplan Electric P8** as the foundation, REL implemented a unified platform for **electrical schematics, wiring harness design, control cabinet layouts, and automated bill of materials generation**. This shift enabled REL to move from manual, fragmented workflows to a streamlined, **data-driven process** across product lines.

ENGINEERING CHALLENGES

Prior to Eplan, REL faced several challenges:

- ✓ **Manual drafting errors and inconsistent documentation** across projects
- ✓ Long design cycles due to a lack of **standardized templates**
- ✓ Difficulties in managing **complex electrical systems** across customized machines

However, as machine configurations grew more customized and customer expectations evolved, the need for a more structured, scalable engineering process became clear.

EPLAN IMPLEMENTATION AND IMPACT

1

STANDARDIZED DESIGN WORKFLOWS

Using Eplan, REL created **custom macros and reusable design templates** that dramatically improved consistency. These assets eliminated repetitive tasks and ensured that engineers followed a clear, structured approach to documentation across projects.

2

FASTER DESIGN EXECUTION

Automated BOMs, prebuilt device models, and intelligent schematics generation significantly reduced engineering time. Engineers could now complete designs in a fraction of the time previously required, allowing faster handoffs to production and testing.

3

HIGHER DESIGN ACCURACY

With built-in **error detection mechanisms**, Eplan allowed engineers to catch and correct issues early in the design process. This reduced errors, cut down rework during panel assembly, and improved quality during commissioning.

4

HIGHER DESIGN ACCURACY

REL's engineering, assembly, and service teams began working from a **single, shared documentation** system. The result was smoother communication, fewer misunderstandings, and greater confidence in the design output.

"With Eplan we have standardized our designs across product lines which ensures clear and accurate documentation that accelerates assembly commissioning and service."

Engineering Team, Rajoo Engineers Ltd.



PREPARED FOR FUTURE GROWTH

5

Eplan has laid the foundation for future capabilities such as **3D panel design**, **wiring visualization**, and **integration with product lifecycle management (PLM) systems**. The platform also supports faster **onboarding of new engineers**, which will be key as REL scales its operations.

MEASURABLE RESULTS

The outcomes of Eplan integration have been both **quantifiable** and **transformative**.

REL achieved a **45 to 50 percent reduction in design time per project**. This improvement came from automating critical steps such as BOM generation, wiring diagrams, and reports. With the help of reusable templates and macros, what previously took weeks can now be completed in just a few days, even for complex machinery.

Manual errors have been reduced significantly. The system automatically flags **duplicate device tags, wiring mismatches, and short circuit risks**. These features have led to fewer issues during assembly and commissioning, saving valuable time and reducing costs associated with rework.

Documentation is **now uniform and centrally managed, enabling clearer communication** between electrical designers, mechanical assemblers, and field technicians. In complex projects such as customized Blown Film Lines, this clarity ensures that assembly and service teams immediately understand the schematics, reducing commissioning time and improving fault resolution.



The standardized framework also supports **faster onboarding** of new engineers. With clearly defined documentation practices and visual design logic, REL can scale its teams without compromising engineering quality.

Customers benefit directly from these improvements through **faster delivery timelines, reliable machine performance, and better post-sales service**. In a competitive industry driven by customization and speed, these outcomes help REL maintain its edge and reputation.

CONCLUSION

Eplan has redefined how Rajoo Engineers Ltd. approaches electrical and automation design. What was once a manual, fragmented workflow has been transformed into an intelligent, connected system capable of supporting **fast-paced, high-quality, and customized machine development**.

The partnership between REL and Eplan has delivered clear returns in **productivity, accuracy, and customer satisfaction**, and continues to evolve as REL looks to adopt more advanced capabilities in the future.

For engineering-driven organizations navigating complex, large-scale custom machinery projects, Eplan offers more than just a software platform. It is a **strategic asset** that drives efficiency, reduces errors, and standardizes excellence.

Contact Eplan to discover how your business can unlock engineering transformation and future-proof your workflows with digital intelligence.(853)

Eplan Software Private Limited

5th Floor, Brigade Triumph, Dasarahalli Main Road,
Sector B, Hebbal Kempapura, Bengaluru – 560092
☎ +91-80-61079100 | 🌐 www.eplan.in

Ms. Pooja Narain ☎ +91 97311 57563 ✉ pooja.narain@eplan.in