CUSTOMER REPORT

Tyrolit Enterprise Group

Lino®



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From manual input to 24/7 production with Lino® Hub

Tyrolit, a global leader in the technology and manufacturing of grinding and dressing tools, shows how the Lino Hub integration platform helps unlock the full potential of modern machining centers.



Challenge

- Continue using Solidworks and Solidcam as core systems
- Generate verified CAD and CAM data automatically
- Increase order throughput and improve production flow

Software

- Lino Hub integration platform with CAD automation
- Cosling Configurator for rule-based product configuration
- Integration of SAP S/4HANA via Lino Hub and Lino Automate

Result

- Significantly shorter engineering times reduce the engineering team's workload
- New automated CNC machining center is fully utilized
- Consistent data quality supports the manufacturing strategy

When precision and innovation are part of a company's DNA, manufacturing also requires tools that support both. For the family-owned company based in Schwaz, Austria, this became especially evident when it introduced a new, highly automated machining center.

"We knew that for this system to reach its full potential, we needed continuous, reliable CAM data – fast, automated and without manual interruptions," says Florian Zitt, responsible for Process Engineering at Plant 5.

The answer: Lino® Hub. A platform that enables a seamless digital workflow from sales through to the machine.

Difficult data flow between sales and production

On the IT side, the Tyrolean company relies on Solidworks® as its 3D CAD solution and Solidcam® to plan and control machining processes on CNC production machines. The ERP system SAP® S/4HANA® serves as the digital backbone for all business processes. Until recently, however, the potential of these systems and their interplay remained largely untapped.

Consider a typical case: When an industrial customer requested a precision grinding wheel, the sales representative first clarified the specific application – the right abrasive layer, a suitable bore size, the overall diameter, coolant supply, and more. This information was entered into the SAP system, where application engineering reviewed it and provided feedback on implementation. After consulting with production planning, the sales representative prepared the quotation. While standard wheels went directly into production once ordered, custom products required involvement from the engineering department.

A modern machining center needs end-to-end processes

Engineering created custom CAD models and descriptive 2D CAM drawings. These drawings were printed out and sent to production, where machine operators used them to set up the equipment. It was a process full of pitfalls, as Zitt explains: "The machine operator had to enter the data manually – while production was stopped. Such transfers not only interrupted operations but were also error-prone and depended on the operator's experience in spotting implausible values right away."



> We benefit from much shorter engineering processes that now result in automatically generated CAM data. We have excellent product data quality because knowledge silos, manual handoffs between systems, and other sources of error are a thing of the past."
>
> Florian Zitt

The Company

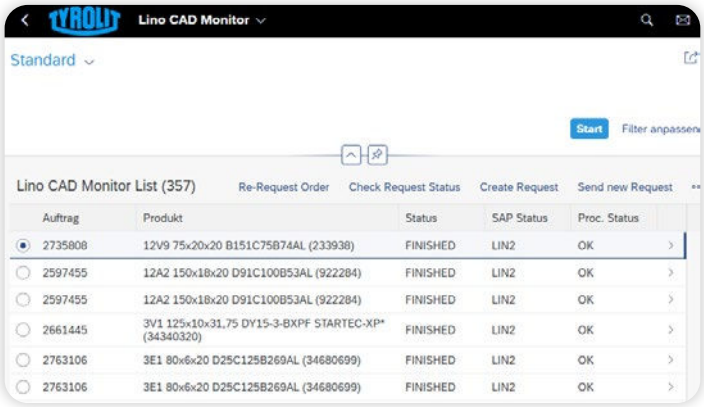
Name	Tyrolit AG
Headquarters	Schwaz, Austria
Portfolio	Grinding tools and abrasives
Employees	Over 4,500
Founded	1919
Website	www.tyrolit.group/en

With the new machining center, it became clear that, without clean, automatically generated CAM data, the potential of the high-tech system could not be realized. Tyrolit looked for a solution that maintained high standards while remaining flexible enough to handle individual customer requirements. "The machine is designed for 24/7 operation. But that only works if all upstream and downstream processes are fully digital," says Zitt. In a pilot project, the company collaborated with Lino GmbH and its long-standing partner barho ecs GmbH to implement the Lino Hub integration platform.

Lino Hub connects what was previously separate

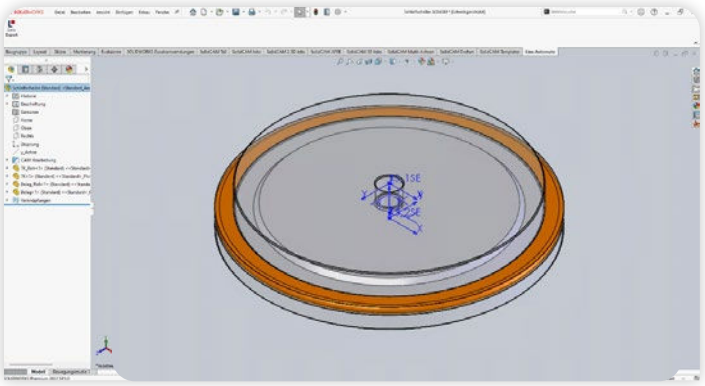
Lino Hub enabled a seamless digital chain from customer requests, through the Cosling Configurator and CAD automation, to CAM programming. "Suddenly we were able to generate complete 3D data and verify manufacturing information at the push of a button," says Zitt about the changeover. The precise rule set maps not only materials and tolerances but also all necessary machining steps. Variants can be simulated, checked, and transferred directly – without system breaks or manual input.

> Our plant management, executive board, and employees quickly became enthusiastic about Lino Hub and its success. Everyone here is pulling in the same direction."
>
> Florian Zitt



The process request is sent to the Lino Hub integration platform based on the order number selected in Tyrolit's Lino CAD Monitor.

> **Lino Hub helps us manufacture our continuous stream of new, innovative products profitably, even in very small batches."**
>
> Florian Zitt

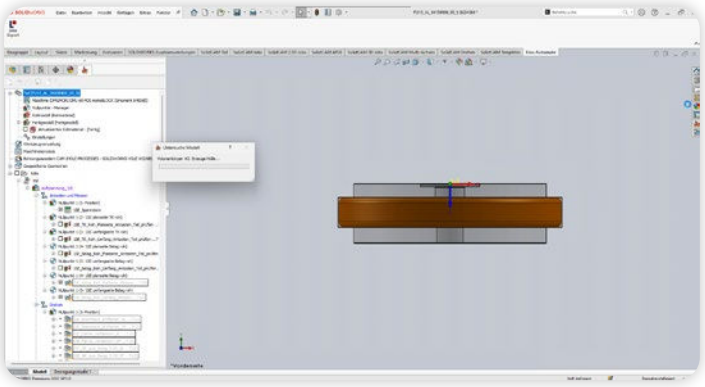


Lino Hub starts CAD data generation in Solidworks and saves the resulting variants to a directory.

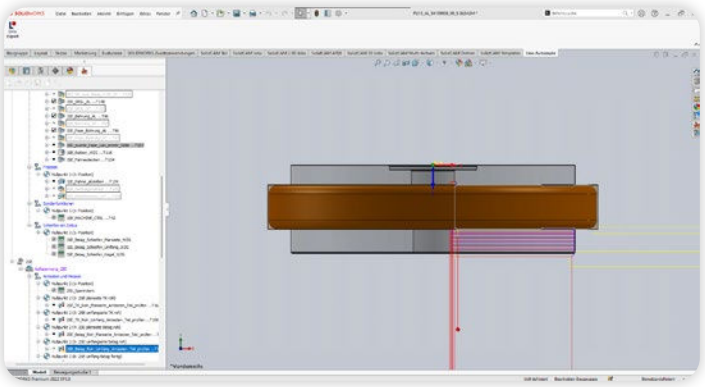
Lino makes production more economical and reliable

"Today we manufacture much more flexibly – and at the same time significantly reduce the workload on our engineering department. Given the shortage of skilled workers, this is a huge advantage," says Zitt. Knowledge silos are broken down, standardization increases process reliability, and machine utilization rises.

Connecting SAP S/4HANA via the Lino Hub integration platform, combined with Lino Automate, makes it possible to generate and provide all production-relevant data – particular, to create CAM programs automatically. "Our plant is the center of innovation for special abrasives. It is only fitting, then, that we are also setting digital benchmarks with this project," says Zitt. "Our Lino Hub solution has become a blueprint for other locations."



Lino Hub then begins generating the relevant production data ...



... and exports the corresponding machine code.



> “Thanks to process automation with Lino Hub, Tyrolit has already been able to offset the engineering staff shortage we had been facing.”
>
> Florian Zitt, Process Engineer in charge at Plant 5 of Tyrolit AG

Engineering Automation by Lino®

The Lino Group is a software developer and integration specialist for digital engineering in the machinery and plant engineering sector. For almost 20 years, Lino has been helping established manufacturers radically simplify complex processes across sales, design, and manufacturing – with measurably fewer errors and significantly shorter lead times. Lino is headquartered in Mainz, with further offices in Germany, Austria, and Switzerland.

At its core is the modular software platform Lino® Hub, which connects configurators, CAD, PDM, ERP, and CRM systems to create seamless, automated processes. Complementary Lino® software, some of it AI-powered, automates product configuration and design. Lino is an authorized Tacton Business Partner, Cosling Partner, Solidworks Solution Partner, Microsoft Solution Partner, and a member of the Autodesk Developer Network (ADN).

Lino®

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Want to learn more?

Contact us – we’ll be happy to help.
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