

→ Reference Report

Increase performance through integrated measurements

With improved production quality, reduced error rates and shorter processing times, the NX RSP+ software delivers impressive results. It is now being used as a customised solution on Röders machines. This was made possible by a successful development partnership between Röders, Renishaw and JANUS Engineering.

Integrated measurement technology optimizes the manufacturing process

Röders GmbH has developed an innovative solution for self-calibration of its high-precision milling and grinding machines. This calibration, which can be carried out by the customer at any time, is based on the annual inspection by a measurement technician on a coordinate measuring machine. Against this background, the Röders team wanted to map a special integrated measuring strategy with the control system. Based on NX Renishaw Productivity+, a software solution for measuring functions in the manufacturing process, a customised product was then created in the project team with Renishaw, Röder and JANUS Engineering, which was presented at AMB 2023.

Customers who use Röders machines with the RMS6 control system now benefit from numerous advantages:

- Less waste and rework thanks to direct measurement on the machine
- Faster production processes thanks to automated measuring procedures
- Simple operation without in-depth control knowledge
- Flexible integration into existing production environments



↑ RXP601DS – 5-axis machine



Image credit © Röders GmbH

'Measuring strategies that could previously only be realised on a measuring machine can now be carried out directly in the same clamping on the machine tool,' says Dr Oliver Gossel, Sales Manager at Röders. 'The measurement results are then stored in a log on the Röders machine in order to fulfil the obligation to provide proof of the results.'

'As an extension for Siemens NX CAM, the add-on enables the direct creation of measurement operations for process setup and results control within the familiar programming environment,' explains Dr Jan Linnenburger, Head of Metrology at Renishaw GmbH. 'This means that even complex measurements and compensations can be programmed efficiently without the need for in-depth knowledge of the control code'.

As part of the project, JANUS Engineering integrated the NXRSRSP+ software into the Siemens NX CAM environment, providing a common platform for programming and control.

“The partnerships with companies such as Röders and Renishaw illustrate that products that are developed and continuously refined in close collaboration with technology companies are particularly impressive due to their high quality, sustainability and customer focus. Such co-operations make it possible to create innovative solutions that meet the requirements of the market and ensure long-term success. **”**

Martin Marquardt
Chief Operating Officer at JANUS Engineering AG



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Innovation in high-precision mechanical engineering

Röders GmbH is an owner-managed German family business that specialises in the manufacture of high-precision machines for milling, grinding and, more recently, measuring. Röders machines are known for their exceptional precision, speed and thermal stability, especially for highly complex geometries. One of the key features is the very easy-to-operate RMS6 control system. This MS Windows-based control system can be easily updated so that new functions such as the use of Productivity+™ on older machines is also possible.

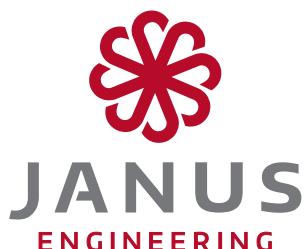


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Leading in precision measurement technology

Renishaw GmbH is a global leader specialising in precision metrology, motion control and spectroscopy. With an extensive portfolio of measurement technologies, Renishaw supports numerous industries including manufacturing, medical and research. One of Renishaw's key innovations is its Productivity+™ software, which enables measurement routines to be integrated directly into the machining process, significantly improving efficiency and quality in manufacturing. This technology seamlessly integrates measurements into production processes, reduces waste and optimises process control.



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Let's make it real

JANUS Engineering is the expert team that loves challenges. Where others see the limits of what is possible, we create solutions for greater efficiency in CAD / CAM / PLM. In more than 30 years of active use of NX, we have gathered a unique wealth of experience that we use every day as a team and continue to expand for our customers. So that good ideas, perfect processes and the right tools can lead to the production possibilities of tomorrow.

