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New technology functions for Sinumerik One simplify operation and increase productivity

- **Y-turning and Advanced Rapid Movement for even more machine tool productivity**
- **Reduced Dynamic Mode reduces wear and increases availability**
- **End-to-end keyboard and machine control panel portfolio from 15 to 24 inches**

Siemens is expanding its offering around the Sinumerik One "digital native" CNC. The new CNC generation from Siemens, which was introduced to the market in 2019, is also coming up with innovations in software and hardware this year. With the new Sinumerik V6.20 software, there are new technology functions for the Sinumerik One that simplify operation, reduce machine wear, and increase productivity. Siemens is thus demonstrating once again how the powerful Sinumerik One machine tool control system can be optimally used for digital transformation in a highly productive, flexible, and modular way.

With the new Y-turning function, Sinumerik One can now be used for machines that turn from the Y-axis, enabling up to 3 times the feed rate and resulting in increased productivity. New tool types were created for this purpose and all turning functionalities and cycles were adapted for these tools.

The Advanced Rapid Movement function is also one of the innovations in the technology functions. It enables time-optimized movement, which means that faster movements take place between machining operations. The part program does not have to be changed for this. Overall, machining can be up to ten percent faster. The function must be implemented together with the machine builder.

With Reduced Dynamic Mode, there is now a function that reduces wear on the machine and thus increases its availability. The NCK function enables the machine tool builder to automatically transfer the machine tool to reduced operation, for example if the axis becomes too warm. On the other hand, the machine can also be returned to full load. In this way, the Reduced Dynamic Mode enables individual operation in motion.

In the area of hardware, there are also innovations for the Sinumerik One that are designed to simplify operation: The new keyboards and Machine Control Panels (MCPs) are now available from 15 to 24 inches consistently to match the HMI. And the Simatic Industrial Thin Clients (ITCs) and industrial PCs are being launched with increased performance and a resolution of up to 1920 x 1080 pixels.

The new MCPs are also integrated in the digital twin of Sinumerik One (Create and Run MyVirtual Machine), so that the appearance and operation here correspond to the real CNC in every respect. In addition, the digital twin of Sinumerik One has been given new features that simplify engineering and work preparation. To mention just a few of the many innovations: The /3D option offers support for a second channel. In addition, each tool can be assigned an individual color, so that the ablated surfaces are color-coded depending on the tool used. The import of STEP format is an important feature especially for complex geometries of the clamping situation of a turning operation. Collision detection now also offers extensive functionalities such as the display of all collided bodies, NC program line and much more, so that the cause of collisions can be quickly investigated and eliminated.

Background information Sinumerik One

Sinumerik One plays a central role in the transformation of machine tools in the age of Industry 4.0, outperforming previous generations of controllers in terms of PLC and CNC performance in machine operation, cutting speed, and data capture and processing power. With its integrated Simatic S7-1500F PLC, it offers up to 10 times faster PLC cycle times. With the Simatic S7-1500F PLC, Sinumerik One is fully integrated into the TIA Portal engineering framework, enabling standardization of all engineering tasks for operators of larger plants. Sinumerik One is fully compatible with the previous Sinumerik 840D sl controller generation in terms of programming and operation. This makes the changeover to Sinumerik One even easier.

With Sinumerik One, Siemens offers the technology to easily create and work with digital twins of machine tools. Work preparation and engineering departments can also benefit from the digital twin. Siemens offers a comprehensive user interface for Sinumerik One that enables convenient, flexible, and efficient operation of machine tools across all technologies.



Under the motto "Accelerate digitalization for a sustainable tomorrow", Siemens will be demonstrating at this year's AMB how the enormous potential for optimizing machine tools can be utilized thanks to the continuous analysis of production data.

This press release and a press picture are available at <https://sie.ag/3K27wpN>

Further information on Siemens at AMB 2022 at www.siemens.com/press/amb22 and www.siemens.com/amb

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