Eureka

VIRTUAL MACHINING

SIEMENS

Ingenuity for life

SINUMERIK Run MyVNCK

Enhance your virtual machine by integrating the original NC control software

powered by **Roboris**

With SINUMERIK Run My VCNK, machine manufacturers and end users can create their own control-specific virtual world, as Run MyVNCK embeds the original CNC Kernel into a virtual machine. NC programs and their processing can be simulated in the same control environment with Run MyVNCK.

The challenge

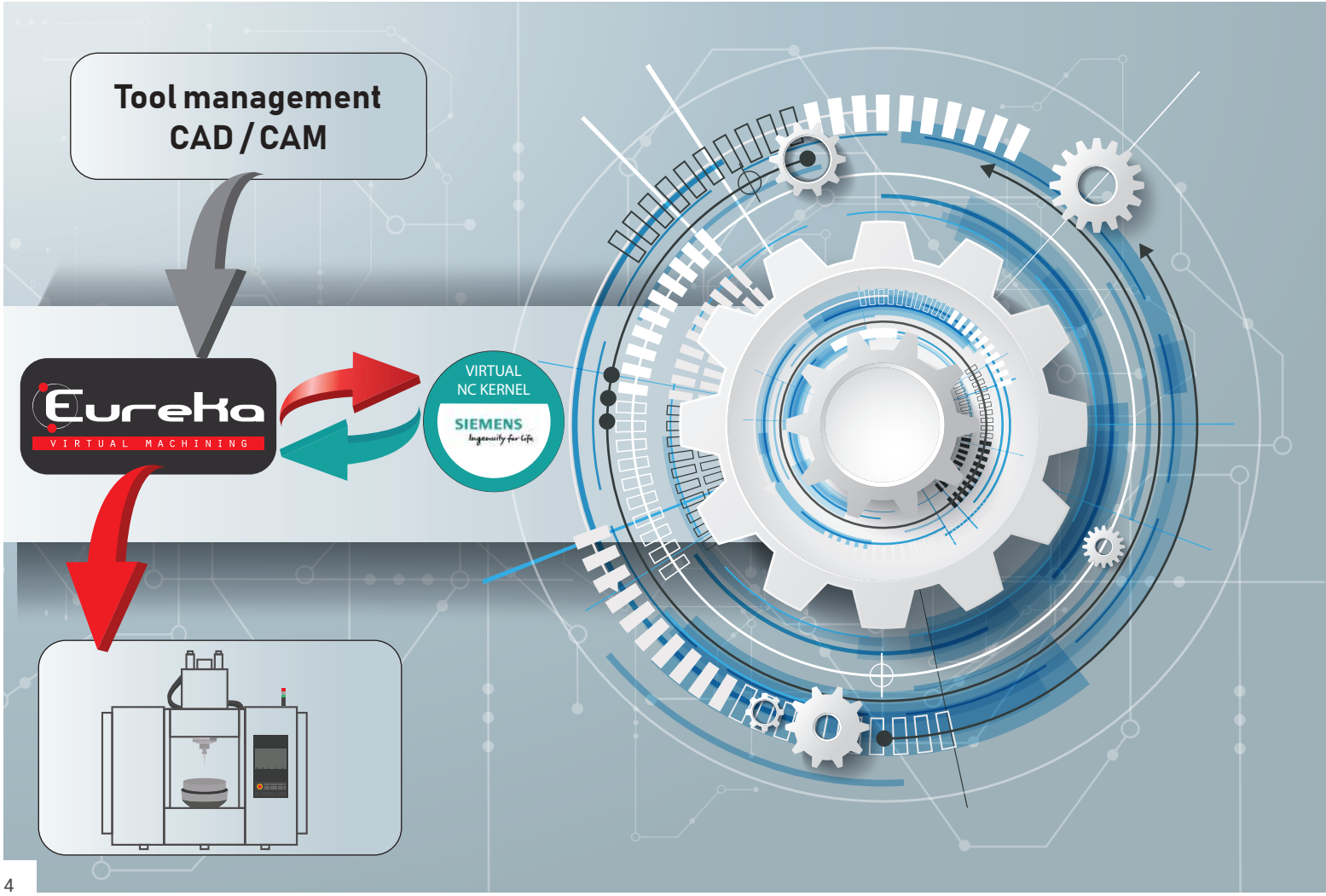
The following points must be ensured to guarantee the smoothest possible experience and optimum machine utilization in a production environment:

- Do NC programs run collision-free?
- Is the program syntax error-free?
- How long will the machine take to cut the workpiece?
- How can new part programs be run as quickly as possible?

Eureka shows all error messages and jumps with a double click to the NC line which caused the syntax error message.

It is no longer necessary to search for the error because Eureka does the job.

Eureka's user interface is easy to use. It meets the needs of users in the technical department and on the shop floor.


Tool management
CAD / CAM
Eureka
VIRTUAL MACHINING
VIRTUAL
NC KERNEL
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The solution

Integrate Run MyVNCK in the process chain

All of these questions can be answered based on a virtual machine with Run MyVNCK.

Eureka offers in cooperation with Siemens a solution that allows machine availability to be significantly increased:

An optimized CAD/CAM-CNC process chain for preparing the job, including simulation in an identical control environment in Eureka.

This allows a virtual machine to be seamlessly integrated into the normal product development process.

As a consequence, production companies can have a virtual, identical job preparation station, independent of the state and availability of the actual machine. They can then fully plan, optimize and verify production steps in this virtual environment.

Eureka provides more than just simulation. It analyzes machining results under many scenarios to detect and remove mistakes, reduce production time, while providing machining process reports and time summary sheets.

Offline programming

Secure your investment through off-line programming

The virtual machine plays an essential role in ensuring that investing in a new machine tool or adapting an existing machine pays for itself as quickly as possible.

This means that the new workpiece can be preliminarily tested on a virtual machine with the desired machining strategy – while the physical machine is available for other machining tasks, has still not even been delivered, is presently being installed or is machining another part.

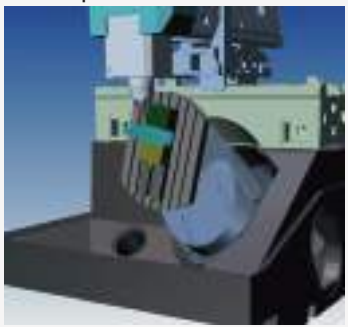
End users can improve cycle times and do not have to wait for machines to become available in order to test new workpieces.

The original SINUMERIK software is used

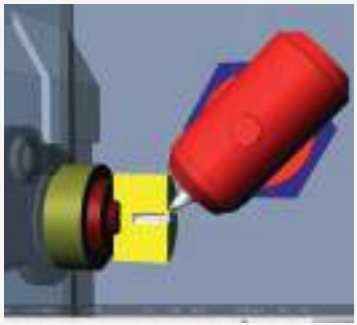
By using the original SINUMERIK software in a virtual machine and a virtual production environment, we are offering end users the necessary degree of security to optimize their job preparation and the utilization of their machine.

This allows NC programs to be verified and evaluated 100% off-line – therefore avoiding possible programming errors and collisions.

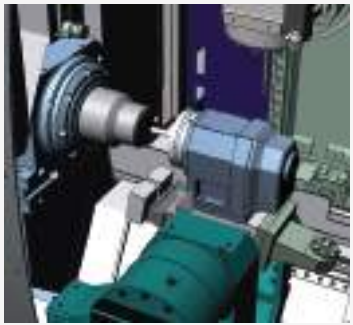
In addition, workpiece costs can be reliably calculated using the machining time accurately computed using Run MyVNCK.



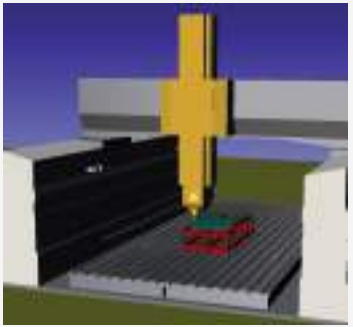
5-axis machine with dual-axis rotary table



5-axis continuous machining with sub-spindle



Machining with workpiece transfer



5-axis machine with dual-axis rotary head

The value-added

What is the value-added of Run MyVNCK for a virtual machine?

- Based on the original software and the language scope of the SINUMERIK 840D sl
  - Original NC code
  - Complete scope of the SINUMERIK language
  - 100% syntax check
- 100% accurate machining simulation, whether the program is from a CAM system or from the machine (including G-code and JobShop)
- Supports OEM and customer cycles
- Offers the highest precision for
  - Motion
  - Acceleration
  - Deceleration
  - Control operations
  - Time calculations

Higher machine availability thanks to offline programming and optimizing

Increased productivity through programs optimal test on a virtual machine

Safety: by using the original CNC kernel, NC programs can be verified almost 100% offline – also ensuring collision-free machining

Highest possible **precision** by using the original CNC kernel, e.g. for calculating times, NC algorithms, etc.

Effective **personnel training** in an environment close to the actual machine itself

Eureka conserves production time by eliminating the need to test the program on your machine.

Potential errors such as collisions, over travels and gouging, can be easily detected ahead of time on your PC

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www.roboris.com

ITALY
Roboris Srl
Via Ivan Rocchi, 7
I56021 Cascina (PI)Phone
+39 050 886 52 48
Fax +39 050 866 51 62
Email: info@roboris.it

GERMANY
Roboris-Deutschland GmbH
Sienstraße 4
D-33428 Harsewinkel
Phone +49 5247 985 00 40
Fax +49 5247 985 00 41
Email: info@roboris-deutschland.de

USA
Roboris USA, LLC
PO BOX 7114
Goodyear, AZ 85338
Phone +1 602-394-3678
Email: info@roboris.com