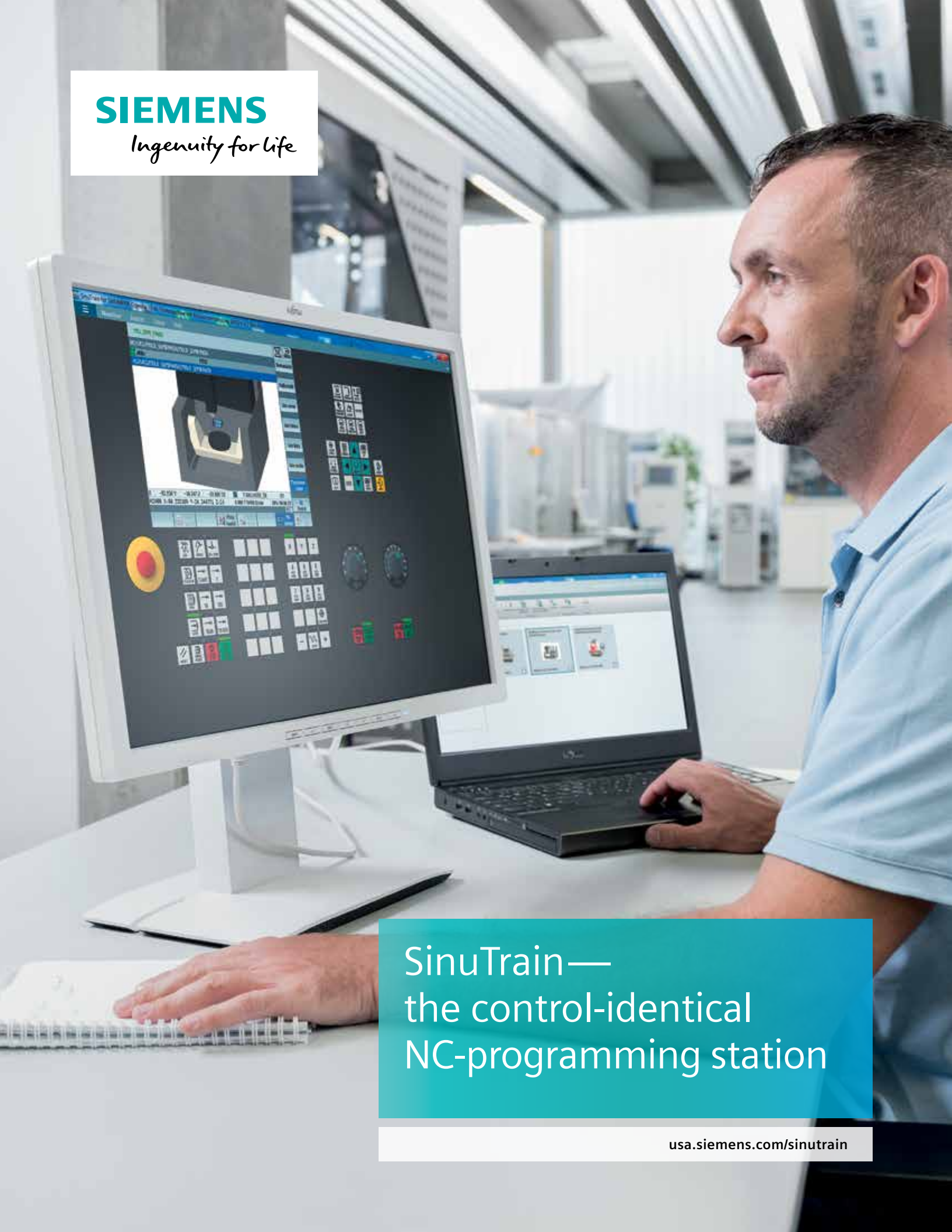


**SIEMENS**  
*Ingenuity for life*



SinuTrain—  
the control-identical  
NC-programming station

[usa.siemens.com/sinutrain](http://usa.siemens.com/sinutrain)

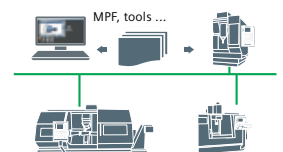


## Your challenges

### During production planning

Can machine availability be increased through production planning that is identical to the control system itself?

**Yes—learn more on page 6**



### In training

Can training be optimized on a platform that is identical to the real CNC machine?

**Yes—learn more on page 8**



### From machine tool builders

Can customer-specific machines also be used for production planning?

**Yes—learn more on page 10**



### In sales

Can SINUMERIK CNC functions be presented quickly and easily?

**Yes—learn more on page 11**



# The smart answer to the demand for maximum CNC efficiency

Whether for production planning or training, whether for machine tool builders or sales organizations—SinuTrain truly offers added value for anyone working with SINUMERIK CNC systems.

This PC-based solution is designed for practical learning and offline programming. It's an intuitive, control-identical software package and is the perfect solution for beginner and expert machine tool users.

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## Greater efficiency in production planning, training and in presentations

The SinuTrain programming station brings SINUMERIK Operate—including an interactive machine tool operator panel—to the PC.

It facilitates smooth knowledge transfer from training into practical machining environments. This powerful tool allows you to program offline at the PC and then transfer your NC programs directly to the machine.

Using SINUMERIK Operate and the original SINUMERIK CNC kernel, operation, programming and even the execution of machine programs can be achieved without any restrictions.

### Can be universally used

The intuitive PC-based SinuTrain solution comprises software that is identical with that of the control system. This perfectly addresses learning and programming as required in practice, and supports all of the CNC programming methods established worldwide.

SinuTrain for SINUMERIK Operate can be individually adapted to the axis configurations of various machines. This in turn permits maximum compatibility to be achieved between the CNC programs generated offline and the machines on the factory floor.

#### Your advantages at a glance

**Reliable and secure:** Almost 100% offline verification / assessment of NC programs as a result of the original CNC kernel

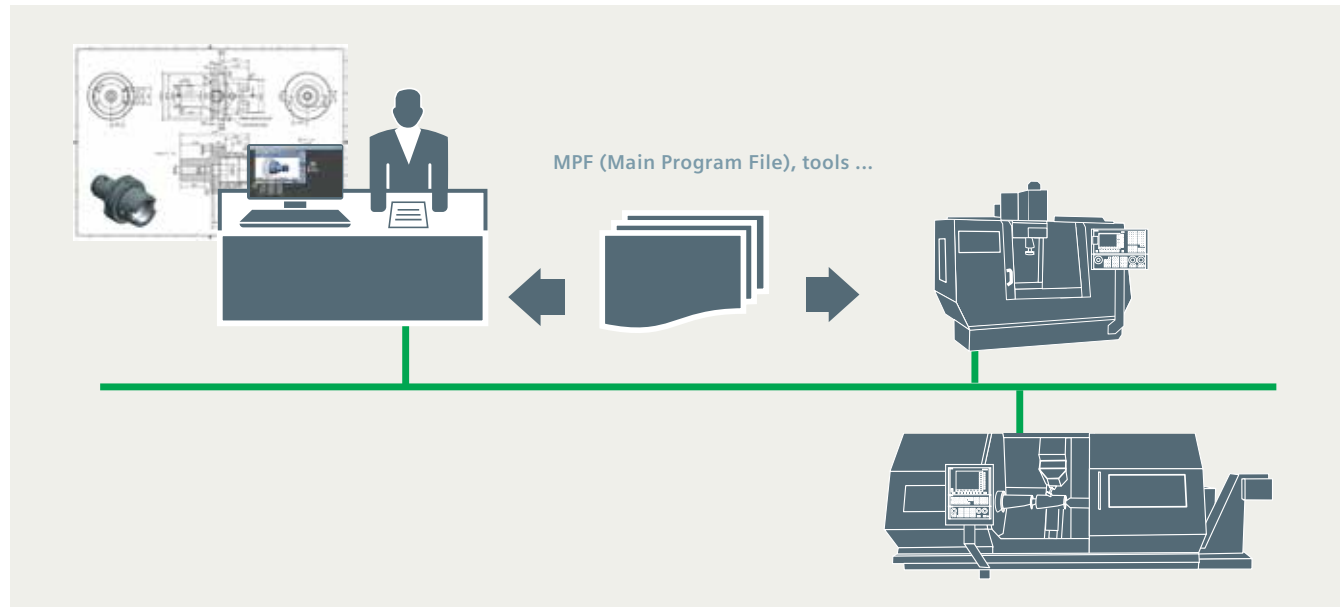
**Customized:** Can be used as the ideal programming station by adapting to the real CNC machine (e.g. the machine tool builder can do this)

**Flexible:** Perfectly tailored packages for training and production planning

**Practical:** Operation and programming are exactly the same as if you were at the machine



# SinuTrain during production planning



Now it's even easier for shopfloor-oriented companies to benefit from the full productivity of their manufacturing environment. Thanks to SinuTrain, your people can use their PC workstation for production planning and preparation of the next workpiece — without having to interrupt expensive machining operations.

## Higher machine availability

Production planning at the NC programming station

Offline verification with the original CNC kernel for a high degree of reliability and security

## 1:1 programming and operation

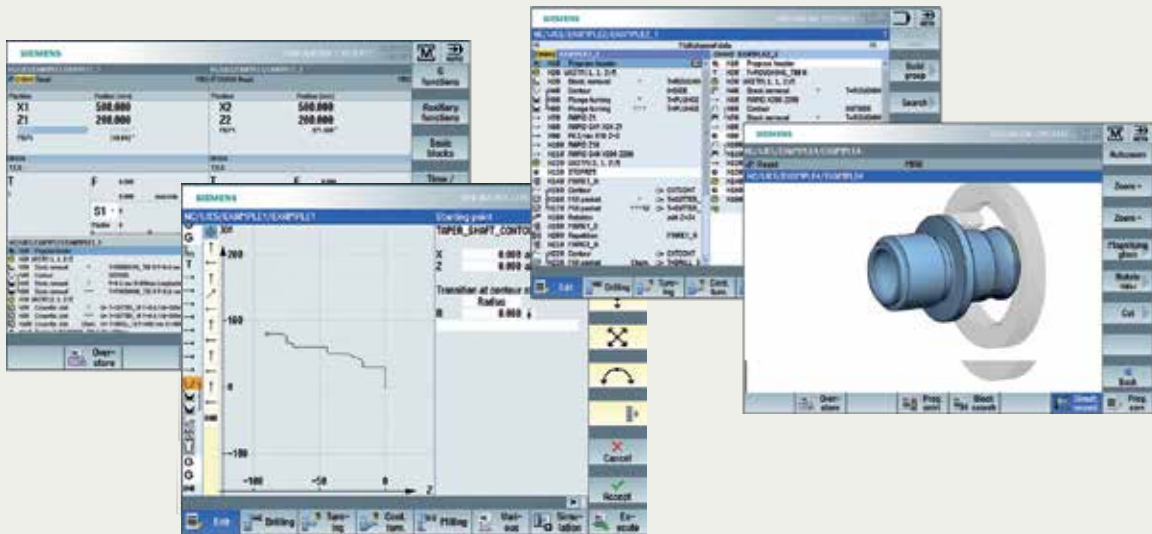
No new programming knowledge is required

Machine setup, data transfer, automatic functions, etc.

## Increased productivity

Seamless and integrated program and tool management, just like at the actual machine

Integrated into the company network; use of external data storage media (e.g. USB stick)



### Perfectly prepared for subsequent programming tasks

Generally speaking, the machine tool operator receives a customer order in the form of a drawing — a DXF or PDF file. This file and the contours to be machined can be easily imported into SinuTrain by using the integrated DXF reader. They can then be transferred and saved to a file structure. Any programming work required can now be directly carried out in SinuTrain, employing the usual SINUMERIK operation and programming workflow.

Operators can choose the programming language they wish to use when generating their NC programs. ShopMill/ShopTurn machining step programming, as well as programGuide, are available. programGuide is a G-code language that supports cycles. As SinuTrain uses an original CNC kernel, by employing 3D simulation, it's possible to verify NC programs almost 100% offline. Part programs that are generated can now be transferred to the CNC of any particular machine tool via your network or even a USB stick.



# SinuTrain for use in training



SinuTrain for SINUMERIK Operate is a very practical training solution — and this applies to both beginner and expert machine tool users. Your staff can hone their operation and programming skills on the innovative SINUMERIK 828D/840D sl controls by simply using SinuTrain from the very start.

## Simple learning and professional training

Pre-configured SinuTrain machines that can be immediately used

No additional hardware costs

Additional SINUMERIK CNC languages are available

## Just the same as at the CNC and more ...

Programming and operation are exactly the same as if you were at the machine

Machine setup, data transfer, automatic functions, etc.

Tutorials, programming instructions, online help

## Perfectly tailored training packages

Additional student licenses

Additional programming manuals

Easy to administer through Siemens Cooperates with Education (SCE):  
[usa.siemens.com/sce](http://usa.siemens.com/sce)



### Perfectly prepared for subsequent programming work

With SinuTrain for SINUMERIK Operate, machine tool users can learn CNC programming during the training phase — exactly the same as it will be used in operation with SINUMERIK-controlled machines. Training packages, that are precisely tailored for this purpose, as well as free-of-charge basic versions, are available to facilitate efficient training at home — and computer system requirements are generally minimal.

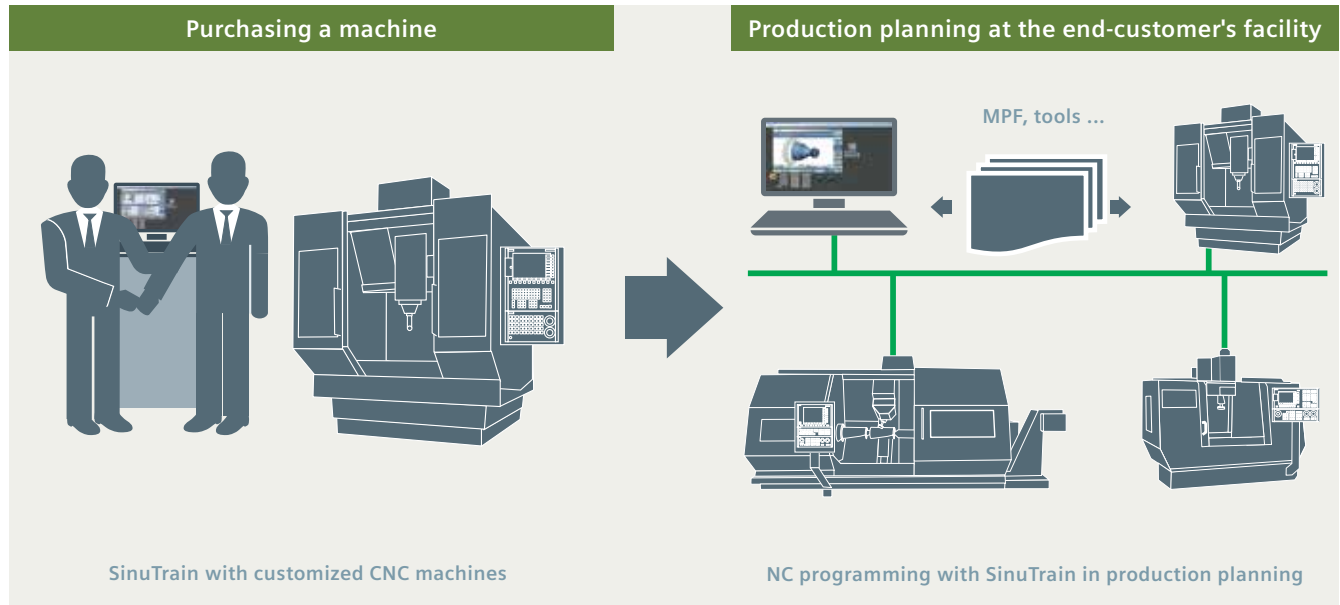
With the basic version, programs of demo machines for 3-axis milling or 2-axis turning can be transferred to the appropriate machining centers where parts can be machined. This is also applicable for the full version. At the same time, all SINUMERIK functions, which are helpful in many other complex machine types, can be demonstrated live and used for training purposes.

### Simulation and help

CNC programs can be tested using the integrated CNC simulation and simultaneous recording with SinuTrain. Optimum self-learning is facilitated with the integrated training program and online help.



# SinuTrain from machine tool builders



**SinuTrain for SINUMERIK Operate supports customized machine tool configurations. This means that a programmer obtains an NC-programming station that is adapted to his/her particular CNC machine.**

## Machine image in the offline programming software

Several machine tool builders support their customers with specifically-adapted configuration files that they provide. These represent a 1:1 image of the machining center and include all of the cycles integrated by Siemens and the machine builder. This simplifies programming and allows perfect results to be obtained quickly.

An original CNC kernel means that 3D simulation allows part programs to be verified almost 100% offline. If there are no configuration files, the workbench provides a function with which the machine tool commissioning archive can be read.



## SinuTrain in sales



SinuTrain for SINUMERIK Operate is the ideal tool for sales professionals. For outside sales teams, a laptop is a standard tool — and no additional hardware is required to present the SINUMERIK control. This allows every SINUMERIK function to be demonstrated in real-time.

With SinuTrain, free-of-charge, basic versions are available and can be used for an unlimited length of time.

### SINUMERIK CNC — anytime and anywhere

All SINUMERIK features can be demonstrated and used for training purposes

### Free-of-charge basic versions

Download it from our website: [usa.siemens.com/sinutrain-downloads](http://usa.siemens.com/sinutrain-downloads)

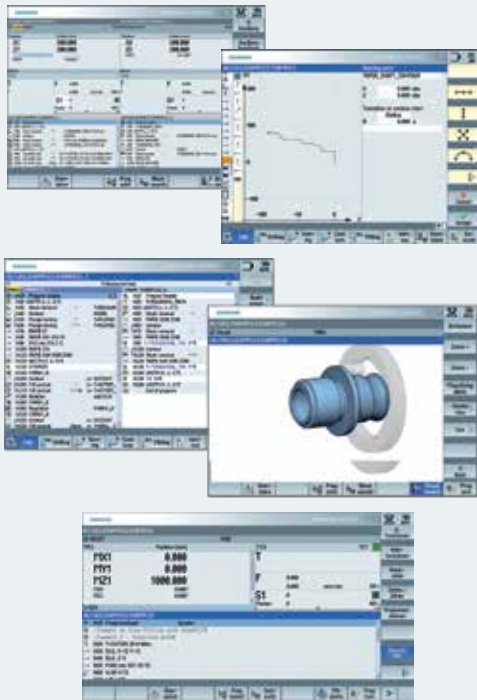
Can be used for an unlimited time

### Experience SINUMERIK in real-time

Functions are professionally presented in real-time instead of using presentation slides

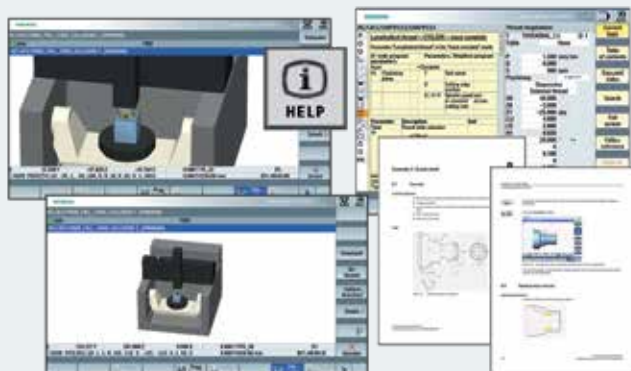
Showrooms can be equipped at no cost

# SinuTrain—an overview of the technology



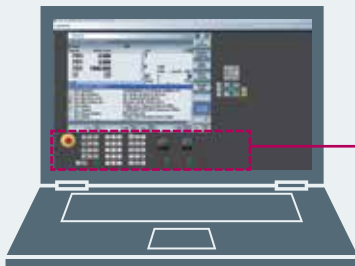
## Functions:

- Additional CNC software releases (4.7 and 4.8) are available
- Improved machine emulation as the 16:9 screen format is supported with various resolutions
- Standard ISO/DIN and SINUMERIK CNC code, ShopMill/ShopTurn,
- Machine setup, data transfer



## Functions:

- CNC simulation, simultaneous recording
- Tutorials, programming instructions, etc.
- Online help

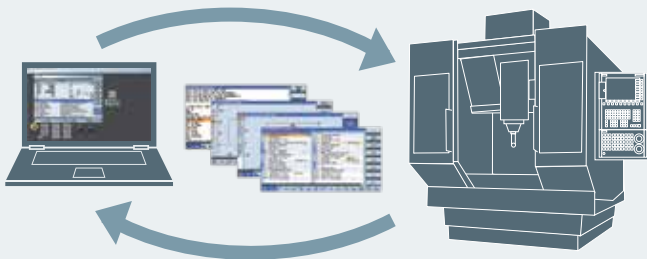


#### Functions:

- Simple operation with a mouse click
- No costs for additional hardware

#### Improved user interface:

- Using the sorting function, the sequence of virtual machines can be flexibly adapted to specific user requirements.
- Ribbon user interface for improved touch operation
- Simplified control possible in the multi-window mode—and improved arrangement of the control elements to address specific requirements
- Fast recognition of manufacturer's specific machines using customized machine templates with the company logo



#### Functions:

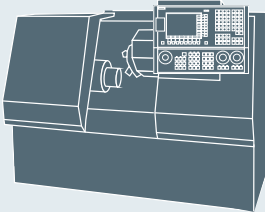

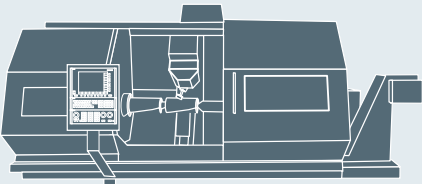

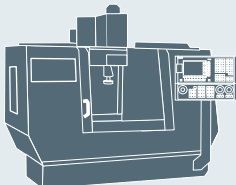

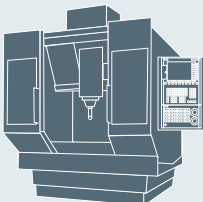


- Programs can be directly transferred to or from the machine via a network or USB



#### Functions:

- Contours and positions can be imported using the integrated DXF reader, for example
- Programs can be directly printed out

# Ready-to-use thanks to sample machines — and can be expanded at any time

Machines	Functions
	 <ul style="list-style-type: none"> <li>■ Demo lathe</li> <li>■ Lathe with driven tool</li> </ul>
	 <ul style="list-style-type: none"> <li>■ Lathe with driven tool, Y-axis and counter-spindle</li> <li>■ Two-channel lathe with driven tool</li> </ul>
	 <ul style="list-style-type: none"> <li>■ Demo milling machine</li> <li>■ Vertical milling machine</li> </ul>
	 <ul style="list-style-type: none"> <li>■ Vertical milling machine with swiveling table</li> <li>■ Mill-turn machine with collision avoidance</li> </ul>
<p>Importing a machine Exporting a machine</p> <p>Importing an NC archive</p>	 <ul style="list-style-type: none"> <li>■ Importing an existing machine configuration file</li> <li>■ Exporting an existing machine configuration file</li> <li>■ Creating a new machine configuration from a commissioning archive (option)</li> </ul>

## SinuTrain speaks your language

Available in English, French, German, Italian, Spanish and Chinese (simplified) plus an additional 15 language packages — learn more at:

[usa.siemens.com/cnc4you](http://usa.siemens.com/cnc4you)

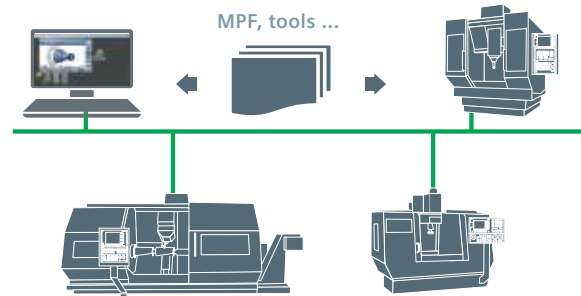
You can obtain the basic version  
of SinuTrain free-of-charge at:

[usa.siemens.com/sinutrain-downloads](http://usa.siemens.com/sinutrain-downloads)

# SinuTrain at a glance

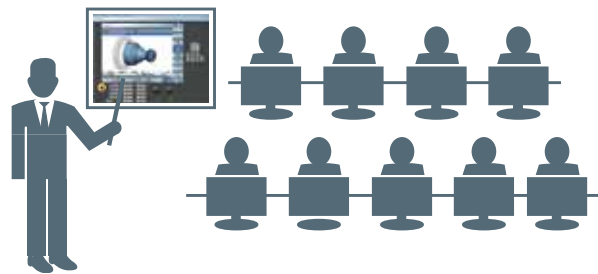
## During production planning

- Higher machine availability
- 1:1 programming and operation
- Increased productivity



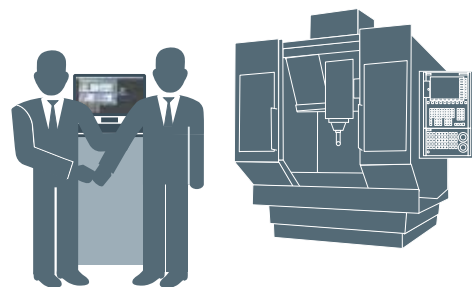
## In training

- Simple learning and professional training
- It's the same as if you were at the machine
- Perfectly tailored training packages



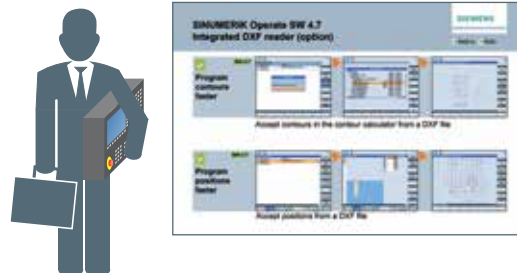
## From machine tool builders

- Optimally adapted by the OEM
- Individual production planning station
- Direct sales activities with the machine



## In sales

- SINUMERIK CNC — anytime and anywhere
- Free-of-charge, basic versions available for everyone
- Experience SINUMERIK CNC in real-time



**Everything about SinuTrain  
can be found on the web**

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**[usa.siemens.com/sinutrain](http://usa.siemens.com/sinutrain)**

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