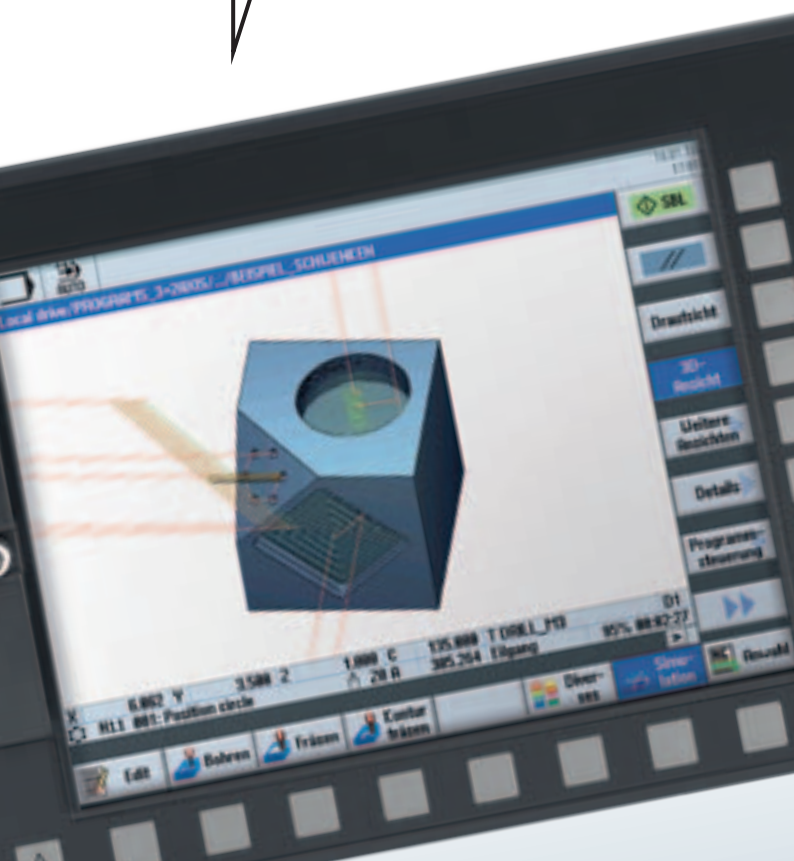


# What guides you through CNC programming every step of the way?



SINUMERIK Operate –  
the user interface for efficient  
machine control.

Answers for industry.

**SIEMENS**

# The new SINUMERIK user interface

The new SINUMERIK® Operate user interface is now even more transparent and intuitive. It combines the well-known HMI Advanced, ShopMill and ShopTurn under a standard, integrated and innovative operation and programming interface, and also includes the complete range of functions for efficient machine operation.



## **Operation and programming were never easier**

The new CNC user interface is transparent, can be intuitively used and presents new, powerful functions. This allows machining step and high-level language programming to be combined under one user interface – and results in extremely fast, rational and intuitive NC programming and production planning.



## **Many new and useful functions**

Intelligent HMI functions support users in the simplest way possible in their day-to-day work – e.g. screenshots with the shortcut key CTRL+P.

The optimum display in the modern Windows style is also user-oriented. Also when it comes to graphic support, SINUMERIK Operate sets new standards regarding usability. "Animated Elements" is a helpful function, as it provides predictive graphic and animated simulation before each machining step.

# User-friendly

## Simple steps for successful CNC machining

When setting up a workpiece, measuring is clearly and transparently displayed using animated elements.



Using simple and fast handling, complex workpieces can be machined in just one clamping operation. Different kinematics can be easily setup.



Simultaneous recording of the machining can be activated and displayed when required.

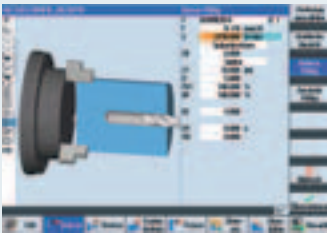


# Many powerful functions



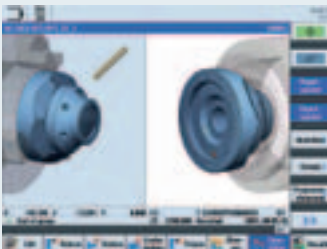
## Tool list for transparency

The tool list provides a configurable display. It can be intuitively used as a result of the context-dependent functions and self-explanatory symbols. The tool list displays all of the relevant data in a transparent fashion, so it can be seen and understood at a glance.



## User-friendly Animated Elements

Using animated elements, the CNC achieves a unique level of user-friendliness when it comes to operation and programming – even for technological cycles.

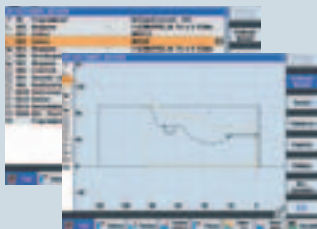


## Reliability and security through simulation

The simulation offers a wide range of various workpiece views. This means that the programming can be immediately checked.

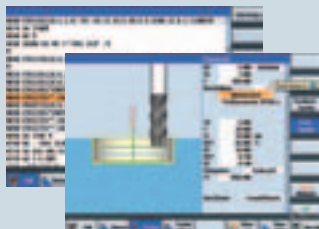
While the simulation is running, it is possible to zoom into individual elements – and also onto swiveled planes.

### Machining step programming ShopMill/ShopTurn



- Shortest programming times
- For single-part and small-series production

### SINUMERIK high-level language with programGUIDE



- Maximum degree of flexibility and very short machining times
- For medium- and large-series production

## Standard and simple for every programming type

SINUMERIK offers unique programming methods for every application area.

## Ideal for individual parts and small-series production

ShopMill and ShopTurn machining step programming is the tailored programming solution for manufacturing individual parts and small batches.

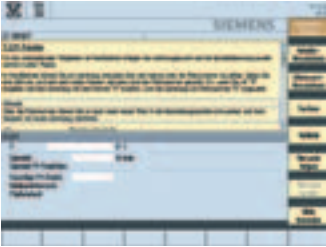
## Flexible and fast

Siemens has combined G-code programming with cycle support in programGUIDE. This represents a maximum degree of flexibility and short machining times – and is the optimum solution for medium up to large batch sizes. In addition, SINUMERIK supports ISO-code programming.

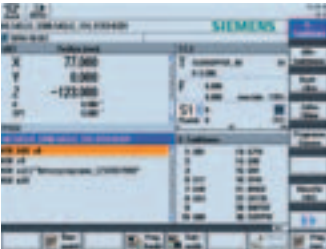
# Tips and tricks for SINUMERIK Operate

See exactly how the helpful functions of SINUMERIK Operate can make your production environment even more efficient. The best tips and tricks for the SINUMERIK new user interface are explained.



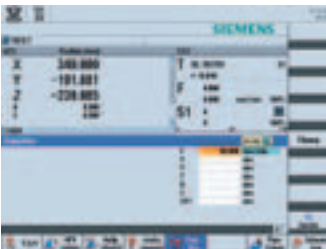


Language-independent help can be called up in every screen using the Help key.



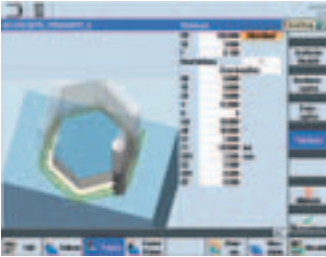
Vertical softkeys on the right-hand side can all be used as switch-on/switch-off element.

“Grayed-out softkeys” indicate that the function is presently not possible.

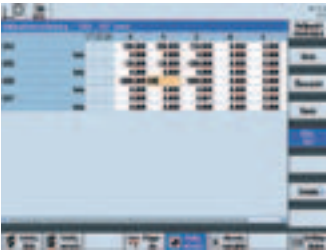


Tips as “simple” help on every screen are displayed in red when incorrect entries are made on the screen.

# Tips and tricks



Using short film sequences, animated elements offer a high degree of user-friendliness when it comes to operation and programming.



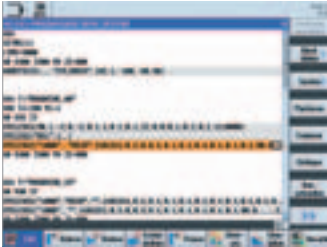
Undo function with “Insert” – as long as an input key has not been pressed or data has not been accepted in the fields.



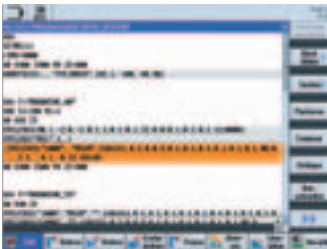
Select option with the insert key and/or using any other key.



Calculator function can be called using the “=” function.



All cycles can be recompiled using the right arrow key.



Cycles can be commented out or edited without recompiling using:



Zero offsets can be written from the ShopTurn program header.



ShopTurn and ShopMill cycles can also be defined using parameters.



# Functions – softkeys – shortcut keys

Your overview of the most important shortcut keys

## Insert key



Edit mode of input fields or selection mode of combo boxes and toggle fields.

These can be exited without any change by pressing Insert again.



Undo function, as long as no input or no data has been transferred into the fields.

## Toggle key



You can also directly change over toggle fields using the toggle key (Select) without opening them. You can scroll through them backwards using Shift-Toggle.

## Cursor keys



Open/close folder, open/close program, open/close cycle

## Various



Commenting out cycles and directly editing programGUIDE cycles

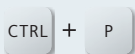


Calculator function

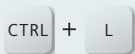


Help function

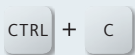
## Control key



Create screenshot



Toggle between languages



Copy



Cut



Insert



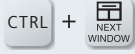
Repeat input (editor functionality)



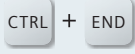
Undo function – max. 5 lines in the editor (editor functionality)



Select all (editor functionality)



Go to the start of program.



Go to the end of program.



Backup log files on USB or Compact Flash (CF) card

## Simulation/simultaneous recording



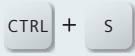
Shift:  
Shift cursor up/down and rotate in the 3-D screen



Shift cut out



Override +/- (simulation)



Single block on/off (simulation)

## Want more information?

Everything you want to know about SINUMERIK CNC:

[www.siemens.com/sinumerik](http://www.siemens.com/sinumerik)

Everything about shopfloor production:

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

Everything about our value-added services:

[www.siemens.com/sinumerik/manufacturing-excellence](http://www.siemens.com/sinumerik/manufacturing-excellence)

Information about CNC training:

[www.siemens.com/sinumerik/training](http://www.siemens.com/sinumerik/training)

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