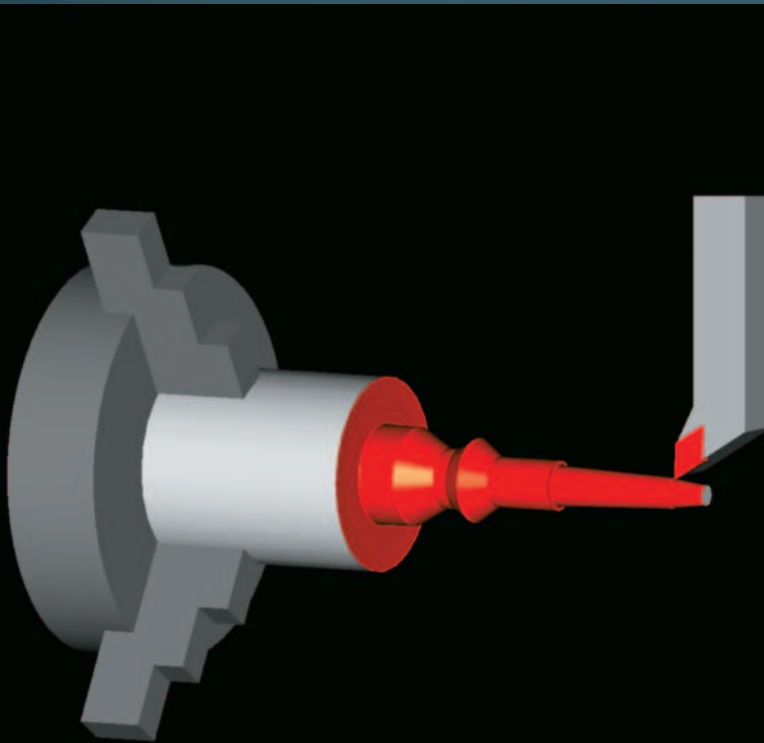


[E[M]CONOMY]
means:



Under Control – Learning and Producing. EMCO Industrial Training SOFTWARE

**Programming, simulation and CAD/CAM software
for CNC training**

The interchangeable control

The unique concept of the interchangeable control can be fitted to all Concept machines. In doing so, the user is trained on all CNC industry controls that are common to the market.

EMCO is the only company in the world to offer its customers this option of industry-specific training.

The task:



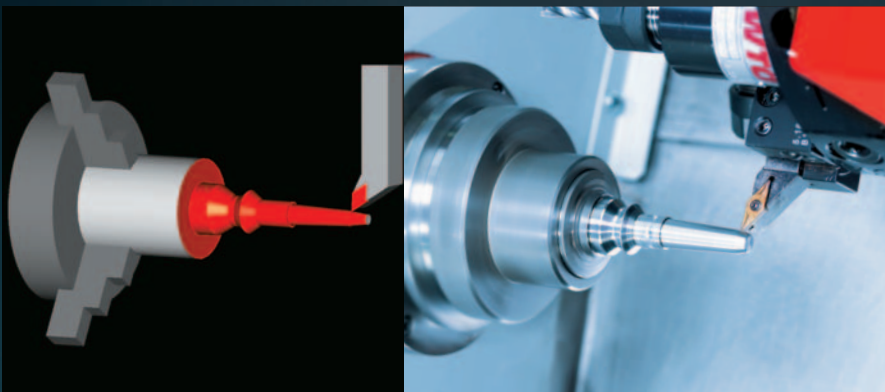
Professional training for precise programming on modern Computerized Numerical Control (CNC) industry machines

The solution:



Practice-oriented training of users on all standard CNC industry controls on only one machine. Changing to a different control is done by opening the appropriate software and simply exchanging the control-specific keyboard module within a minute. Alternatively by using the option Easy2control the keyboard is displayed on the monitor.

The goal:



Safe programming for smooth, industrial production

The result:

CNC technicians are flexible enough to work in a variety of settings, which is a decisive advantage for both skilled personnel and the company.

WinNC in detail

WinNC is a control-unit specific software which is installed on a normal PC. It is operated and functions just like the respective original control. Users work at the PC just like they would on the original control and therefore become familiar with all in-depth aspects of control programming.

Highlights

- Submodes controlled via softkeys
- Graphics simulation
- Detailed error messages in the event of drive problems and programming errors
- Operated via the PC keyboard and mouse, control system keyboard or Easy2control
- Main programs, subroutines, tool data and zero shift are permanently stored

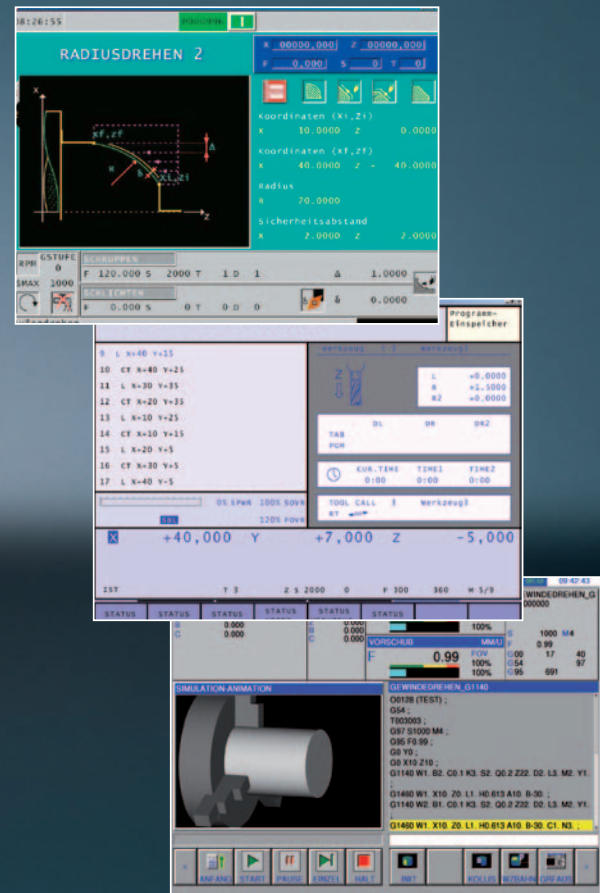
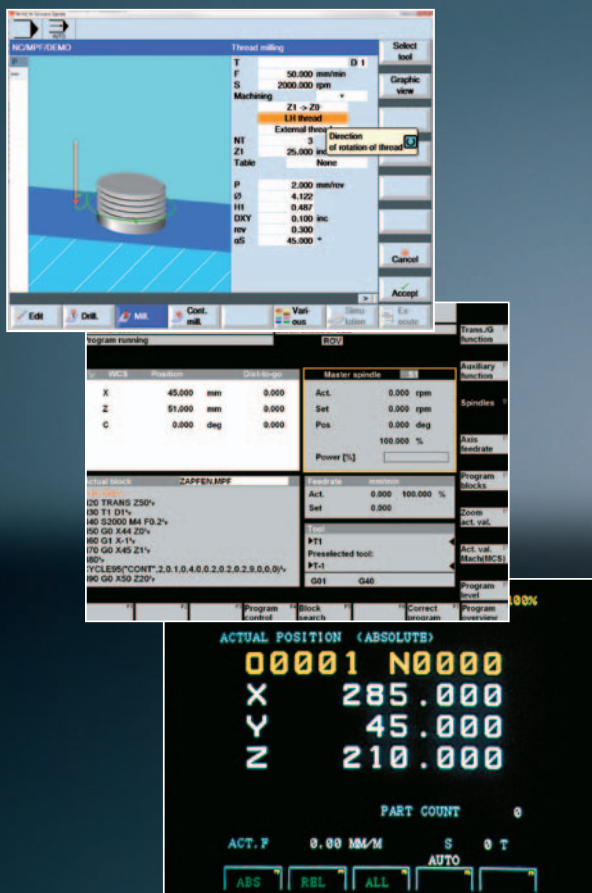


Options

- Machine license: Control software for all EMCO Concept machines
- Single-user license: External programming workstation for any CNC-control machine tools
- Multi-user license: A premises license within a training establishment; can be used with a PC network

Input and operation options for WinNC controls:

- Standard PC keyboard
- Keyboard with identical controls featuring interchangeable key inserts and integrated TFT display (option). PC keyboard/mouse and the keyboard with identical controls can be used simultaneously with no need for a changeover switch
- On-screen control keyboard / EMC0 Easy2control (option). PC keyboard/mouse and the on-screen control keyboard can be used simultaneously with no need for a changeover switch
- Easy2operate



- Sinumerik 810D / 840D
- Sinumerik 810
- Sinumerik 820
- Sinumerik Operate 840D sl/ 828D
- Fanuc Series 0
- Fanuc Series 21
- Fanuc Series 31i

- Heidenhain TNC 426/430
- Fagor 8055
- EASY CYCLE (available for free Concept MILL/TURN 55/60 and 105)
- EMCOTRONIC TM02
- * Further controls under development

EMCO Easy2control

“Easy2control” adds a range of attractive applications to the successful interchangeable control system used in EMCO training machines. Suitable for use in machines and simulation workplaces alike, it displays additional control elements directly on the screen and, when used together with a touchscreen monitor, provides the ideal input interface. With support for a wide range of keyboard variants, customer-specific screen layouts and tailored solutions for individual customers, Easy2control represents a promising and highly flexible extension to the modular EMCO training concept. The interchangeable controls are represented using an on-screen keyboard, which makes switching between different control systems even easier and quicker.



Highlights

- On-screen display of control-specific and machine keyboard
- Virtual machine control panel
- Option to use with the latest WinNC controls
- Different tabs enable switching between different control panels for machine, controls and quick access
- To operate use either the mouse or a touch screen monitor
- Full HD monitor 16:9 necessary allowing a good overview of the control
- A wide range of keyboard variants and configuration options, including customer-specific keyboards (upon request)
- Alternative to USB control keyboard, maximum mobility without additional hardware for programming stations
- Additional hardware „Easy2operate“ for machines

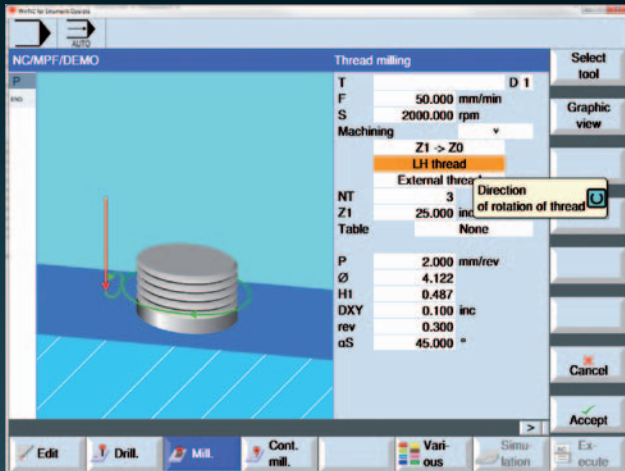
Technical details Easy2control:

- Available as a single licence
- Easy2control is activated using a USB dongle. No additional download/installation required
- Suitable for upgrade possibility
- Recommended screen resolution: Full HD 1920x1080 (16:9)

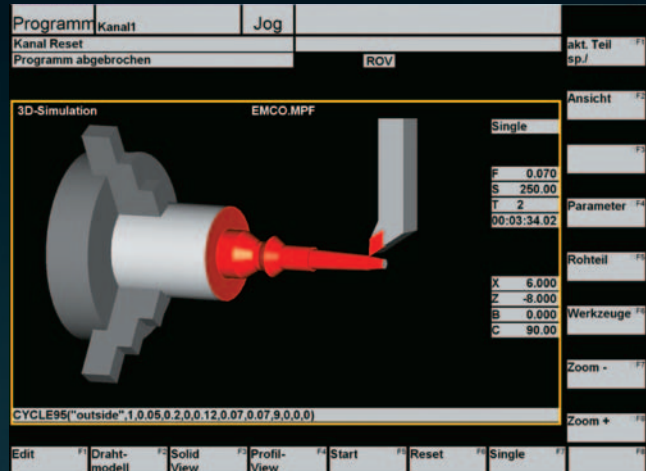
User Interface for Easy2control:

- SINUMERIK OPERATE 840D sl / 828D
- SIEMENS 810D/840D
- FANUC Series 31i
- FAGOR 8055 TC
- HEIDENHAIN TNC 426/430

Better control with Win3D-View



Easy programming with
EMCO WinNC controls



Better control using
Win3D-View simulation

Win3D-View is a 3D simulation for turning and milling and is available as an option in addition to the WinNC Control. Graphic simulations of CNC controls are designed especially for industrial experience. WinNC control displays exceed industry standards. Tools, blanks, clamping devices, and work processes are highly realistic. The system checks the programmed move of the tool to prevent collision with clamping devices and blanks. If there is a collision, a warning is given so that manufacturing processes can be understood and controlled from the very beginning.

Highlights

- Collision detection
- Work space is displayed with blank part, tool and clamping devices (chuck, tailstock or vice)
- Sectional view
- Various views
- Scaling
- Tools represented in solid or wireframe graphics
- Integrated library of tools

Licenses

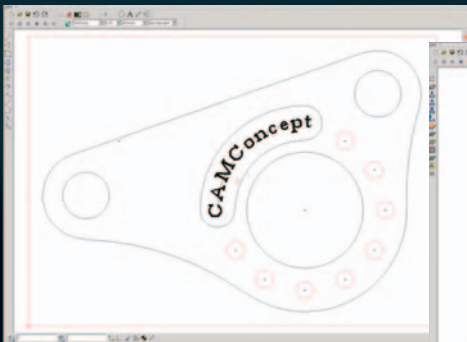
- Machine license: Control software for all EMCO machines
- Single-user license: External programming workstation for an unlimited number of CNC-controls on a programming station.
- Multi-user licenses: A premises license within a training establishment; can be used with a PC network

CAD/CAM made easy – CAMConcept

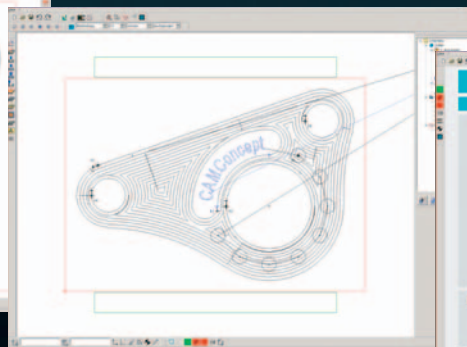


CAMConcept is innovative software for complete CAD/CAM and CNC training, from design to manufacture. CAMConcept incorporates both the functions of a professional CAD/CAM system and the advantages of a special training program. All core CAD program functions are available. Graphic displays of CNC cycles allow quick programming, while simulations and collision checks ensure that control programming is safe. The 3D simulations make it perfect for training at programming stations, and also for making complex turning and milling workpieces simple to produce any time. With its many functions, user-friendly operation and clear structure, CAMConcept is one of the leading software systems in the field of training.

CAMConcept consists of CAD, CAM and CNC elements.
It is also possible to print drawings and tool lists.



- All core CAD functions are available, which replace many complex CAD programs for training
- DXF drawings are simple to import and use as production tools



- Programming for all CNC machines with clear operating cycles
- Teaches cycle programming for the industrial use of dialog-based NC-controls
- Drawings of stages of the work process are transferred quickly to the machined parts



- Workpieces produced through direct control of the CNC machine
- Views of the machine's functions, positions, and status when the program is running
- Simulation of workpiece processing for program control and training.
- New projects can be drafted, programmed, and edited during production

Highlights

- Symbol controlled operator guidance
- Graphic input form
- Displays various control formats
- 3D machining simulation
- Text milling
- Editable tool library
- Help given in context
- Direct control of 55/60 and 105 Concept machines
- Export using postprocessing (option) in different NC formats
- DXF Interface
- Network-compatible

[Overview]

WinNC

- Interchangeable control for Concept machines and PC workstations
- Control unit-specific keyboard on Concept machines and PC workstations
- Reduced investment costs
- Various controls that are common on the market can be used and trained on one single machine
- Training on all commonly available CNC industry controls
- Easy change of various controls and key modules within 1 minute

Easy2control (additional option to WinNC)

- Virtual control panel
- Option for specific WinNC controls
- Operation is performed using a mouse or a touchscreen monitor
- Easy and quick to configure
- Easy2operate - Hardware to control the machine with axis buttons, feedoverride switch etc.

Win3D-View (additional option to WinNC)

- Sectional view
- Collision detection
- A useful training tool
- Tool and workpiece display
- Library of tools
- Displays work processes

CAMConcept

- CAD, CAM and CNC elements plus work preparation all from one source
- 3D simulations included
- Symbol controlled
- DXF Interface
- Direct control of 55/60 and 105 Concept machines
- Export using postprocessing (option) in different NC formats