



/ EVERY NETWORK IS ONE OF A KIND.  
SO ARE OUR SOLUTIONS.

EMCONNECT



# Connectivity for optimal workflows & increased productivity

## EMCONNECT

- / Direct interaction of EMCO-Apps with the control system
- / Intuitive user interface optimized for touch operation
- / Ongoing expansion of available apps
- / Customized applications are possible
- / Optimized for the EMCO machine portfolio
- / Easy update and upgrade options



All required information and systems can be centrally accessed from the machine

## HIGHLIGHTS

- / EMCONNECT means connectivity and networking of the production environment. It enables functions such as:
  - Access to office computers and CAD / CAM systems
  - Web browser for accessing information and IT systems
  - Interfaces for seamless integration into the operating environment
  - Remote diagnostics and maintenance of the machine
- / EMCONNECT creates the prerequisite for the paperless workstations at machinery
- / Clear display of monitoring of the current machine status and production data ensures a structured production process
- / EMCONNECT is designed as an open platform for machine integration into the production environment
- / EMCO's modular system is ideal for the flexible implementation of applications designed for customer and project-specific requirements
- / Depending on the machine type, EMCONNECT is universally available for all current control units (SINUMERIK 840 D sl, Heidenhain TNC 640, FANUC 31i-B)

# APPLICATIONS FOR OPTIMAL ASSISTANCE, CONTROL AND OVERVIEW



## DASHBOARD

- Clear and compact – machine status, machine data and operating mode at a glance.
- Depending on the machine configuration and active mode (JOG, MDA, AUTO)
- All relevant data such as active program, selected tool, axis positions, etc. at a glance
- Colored visualization of the current spindle utilization and override values



## CUTTING CALCULATOR

- Assists the operator in the optimization of cutting data
- Tool geometries, material tables and machining methods are taken into account
- Full-screen or sidebar mode with direct export of the values to the control unit



## DOCUMENTS

- The digital collection of documents, which can be expanded to meet your individual requirements, provides important information directly at the machine at hand.
- Direct access to production and workpiece documentation for a paperless production, without travel times
- Machine documentation incl. service and spare parts documentation
- Programming guide



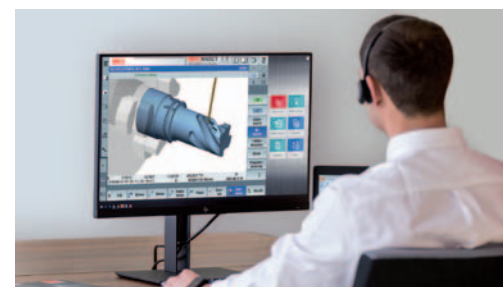
## REMOTE DESKTOP

- Allows direct access from the machine to the office PC – without interrupting the production process.
- Access to all applications and data on the office PC
- Use of CAD / CAM systems
- Access to e-mail



## WEB BROWSER

- Direct access to information and IT applications saves legwork and the installation of individual PC workplaces in the production area.
- Access to leading ERP and production control systems
- The time recording system can be used directly at the machine
- Information on the intranet and selected websites (e.g. tool manufacturers) depending on the IT configuration



## REMOTE SUPPORT

- For simple remote diagnostics and remote maintenance of the machine, the EMCO helpdesk team connects remotely to the machine on request.
- Accelerates problem analysis and resolution
- Reduces costly machine downtimes



## Other applications:

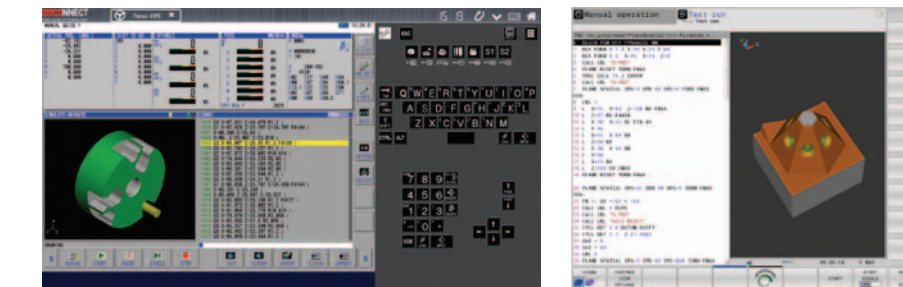
- MACHINE DATA: Machine data for determining OEE values
- NOTES: for storage of important notes, e.g. at shift change
- THREAD REFERENCE: Interactive thread table (metric, UNC, ...)
- CALCULATOR: pocket calculator with extensive trigonometric functions
- etc.

## Standard-Apps

Control	Dashboard
Machine Data	System
Remote Desktop	Web Browser
Remote Support	Settings
Cutting Calculator	Calculator
Notes	Service
Documents	EMCO TechSheet
GD&T	File Import
Tricalc	Thread Reference



# MACHINE CONTROL AND EMCONNECT



## EMCONNECT offers situation-specific options for operation

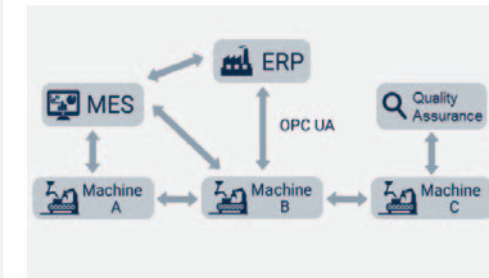
- The familiar CNC control as the heart of the machine – the usual machine operation is retained
- With EMCONNECT, the machine control console becomes the central platform for access to all the required functions and data
- With just one click you can switch between EMCONNECT and the CNC control at any time
- The sidebar facilitates quick access to your apps, which can also be used simultaneously with the control
- Innovative and user-friendly hardware: clear, modern 22" multi-touch display, industrial PC and keyboard with HMI hotkeys



## INDUSTRIAL SECURITY WITH EMCONNECT

- When it comes to networking and integrating production machines into the operating environment, IT security is of central importance. The protection against unauthorized access is carried out at EMCO by activation of whitelisting and use of a firewall, amongst other things.
- Effective blocking of malicious software
- Preventing unauthorized access from the network
- No execution of unknown programs on the machine

## Additional options



### OPC UA

Interface for connection to MDC/PDC systems  
(basic MDC/PDC data are included by default)

- / Machine, program and alarm states
- / Information about quantities, loading/bar change & programmable signal



### SHOP FLOOR DATA

Manufacturing Execution System (MES) for the comprehensive organization of all machinery-related processes

- / Machine Data Collection (MDC), Production Data Collection (PDC)
- / All machine and production states at a glance – also on mobile devices
- / Detailed planning and analysis for optimized production utilization
- / Machine and manufacturer-independent thanks to cooperation with a renowned partner
- / Seamless integration with EMCONNECT

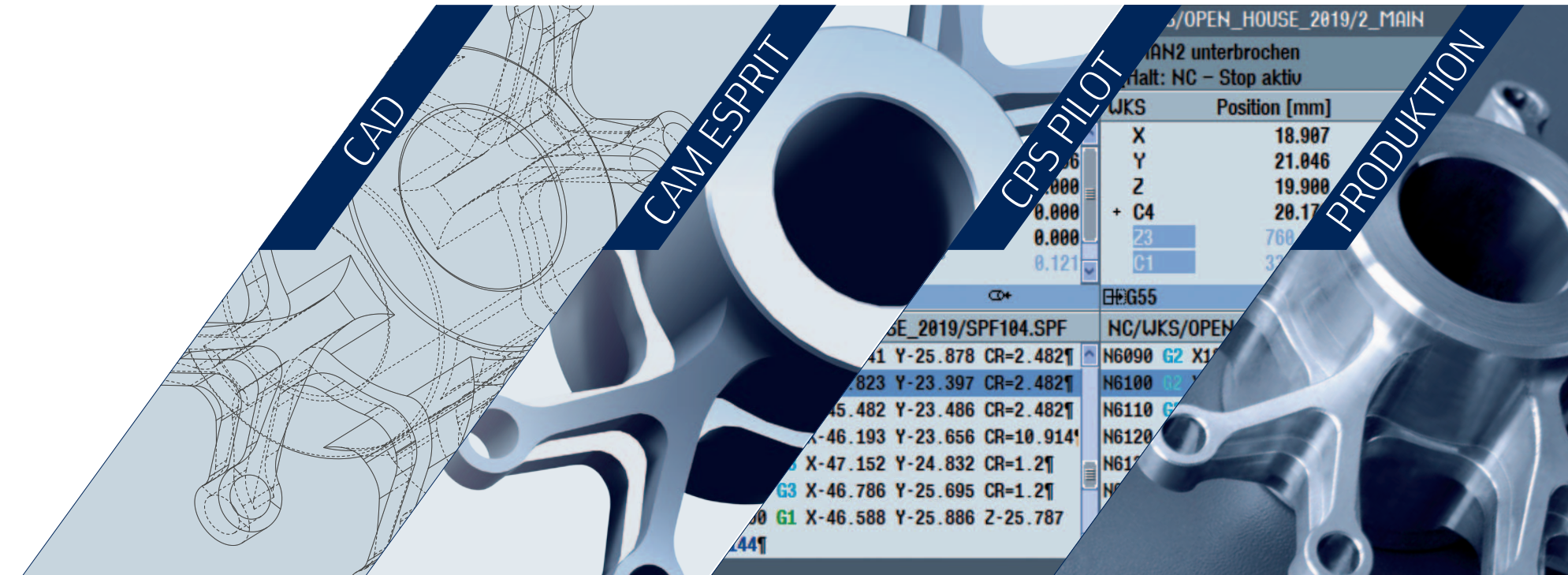


### DATA SERVICE

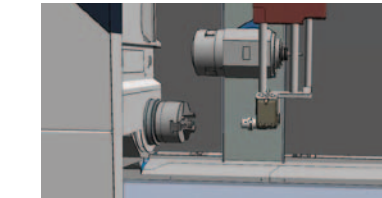
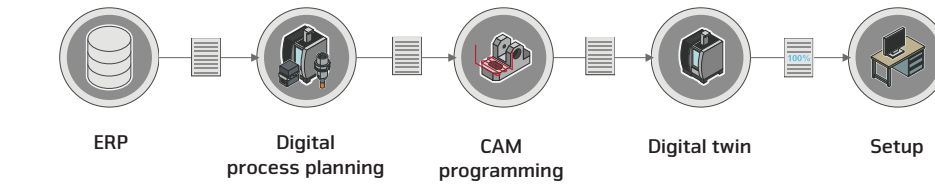
Condition monitoring for detailed machine monitoring and enhanced service support

- / New possibilities for optimized production processes
- / E-mail notifications in case of malfunctions and threshold exceedance
- / Targeted, predictive maintenance
- / Less unplanned downtime

## VIRTUAL MACHINING PROCESS



## A CONSISTENT PROCESS CHAIN AS A PREREQUISITE FOR DIGITAL PRODUCTION



### CHECKitB4

Quick and straightforward process validation of the machine, setup and tool data

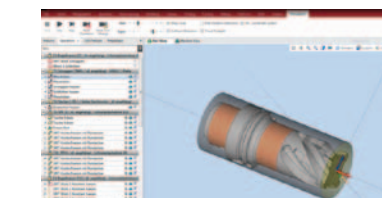
- / Tools can be easily moved over the workpiece – without NC codes
- / Collision detection and identification of axis travel limits
- / No CAD/CAM skills required
- / Easy and innovative design of clamping situations and complete tools
- / Creation of blanks
- / Interfaces for connection to many CAM systems



### CPS PILOT

The machine's digital twin ensures workshop-oriented programming during industrial engineering

- / 100% identical with the machine including its control and machine-specific parameters
- / Original virtual control (Siemens, Heidenhain)
- / Reliable collision detection and identification of errors prior to production
- / Interfaces for many CAM systems
- / Reduced risk and setup times
- / Maximized machine utilization



### CAM PROGRAMMING

Program each and every EMCO machine:

- / Quick and easy programming of milling and multi-channel turning machines
- / Quick and easy learning
- / High-performance strategies for roughing operations
- / Knowledge-based machining with partially or fully automated programming
- / Data import from any CAD system
- / Certified post-processors



### PRODUCTION

- / Reduced setup costs
- / Reduced downtimes
- / Reduced repair costs
- / Ideal machine utilization

Whoever wants to design scenarios for the future, needs as much information as possible from different sources. EMCO's Virtual Workflow enables you to simulate and optimise your processes. This helps you test processes and train skilled workers without any downtime.

- / From drawings to good parts in a fast and straightforward way
- / Continuous digital process chain in cooperation with an experienced partner

beyond standard /

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