

PRIMINER



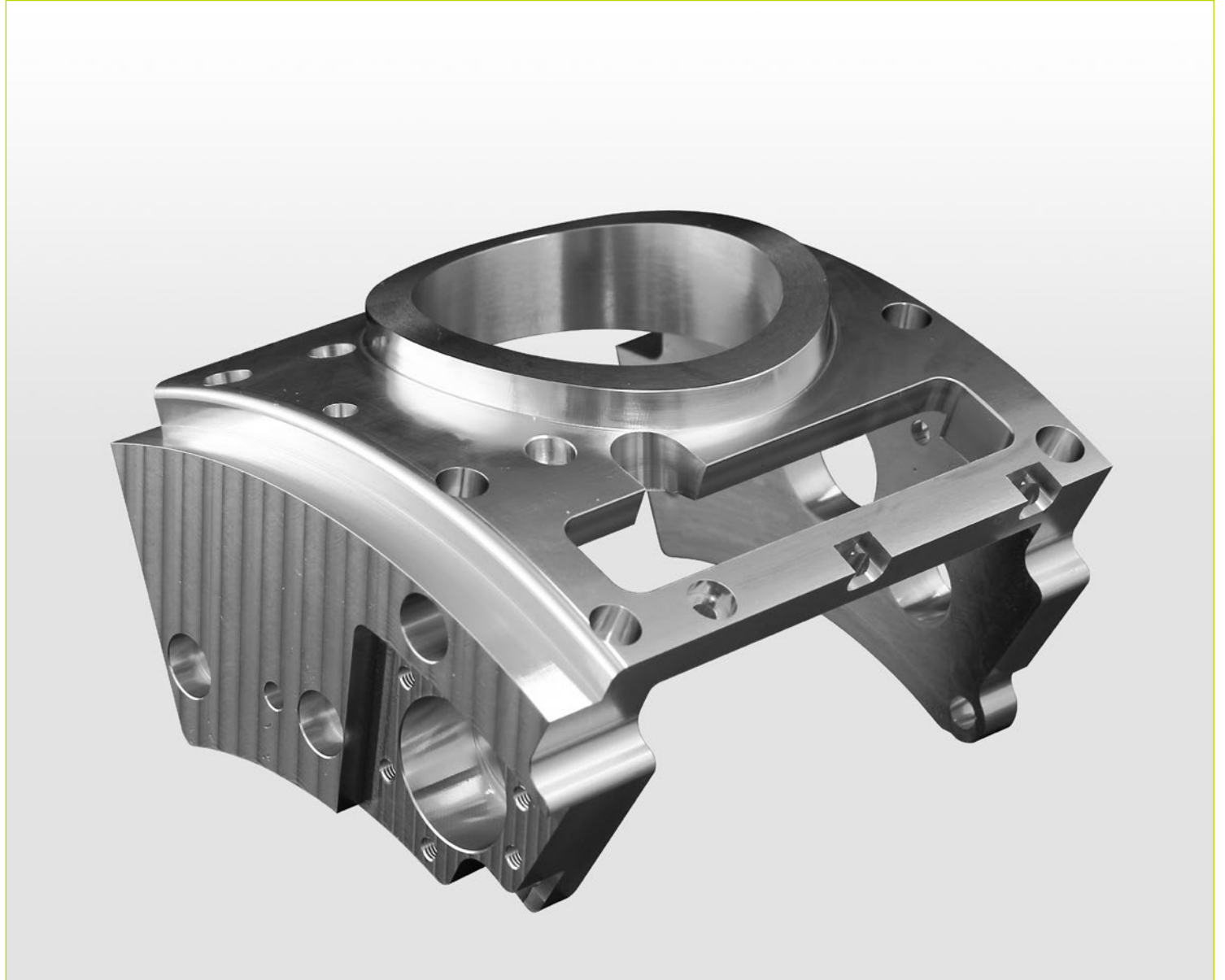
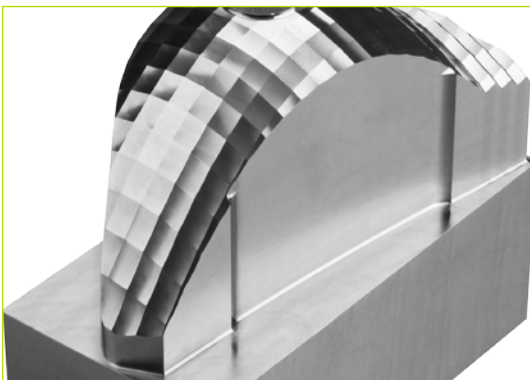
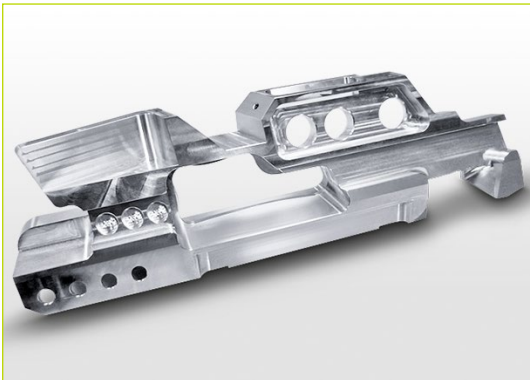
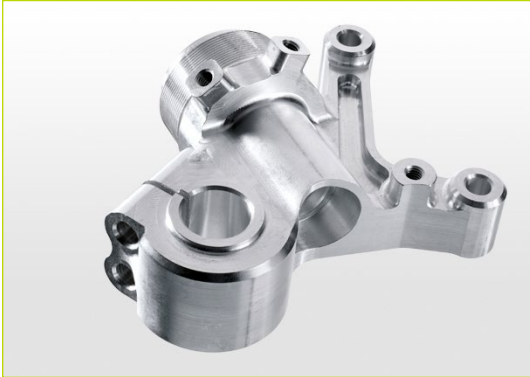
U500-5X

5 Axis Gantry Type Machining Center

High precision, High speed



APPLICATIONS



- Mold
- Medical

- Die casting
- Tooling

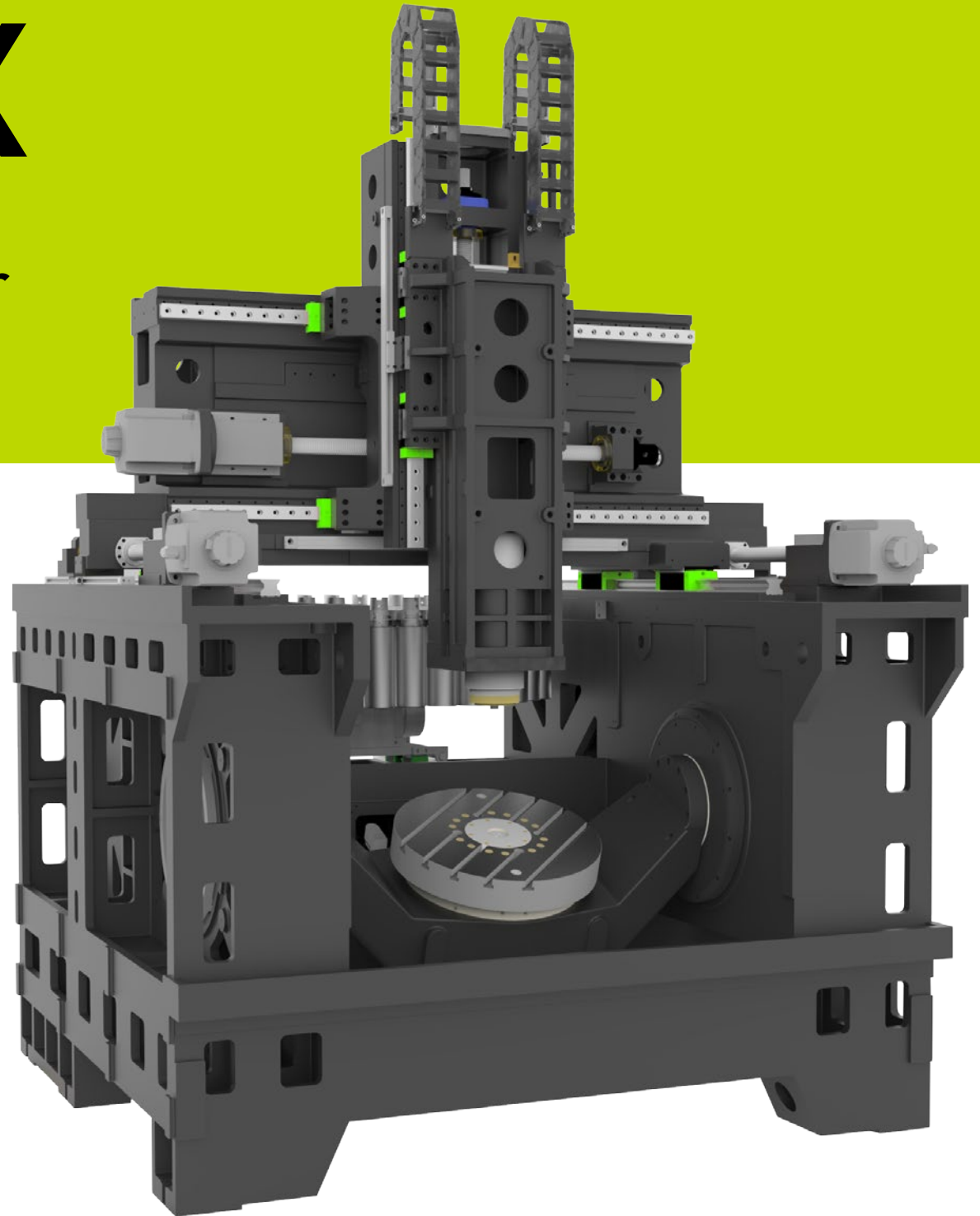
- Machine construction
- Aerospace



U500-5X

Highest precision with optimized gantry design for ultimate 5 axis machining

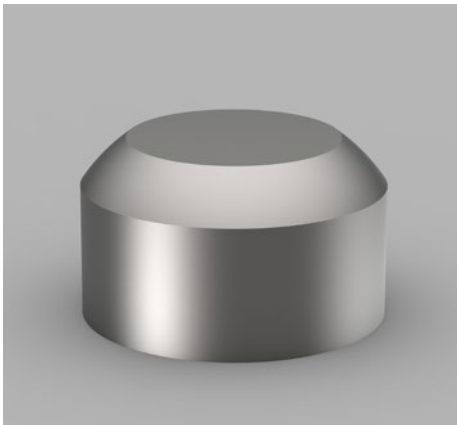
- Gantry design
- XYZ axis movement are separated from the machining area
- Dual drive system on Y axis to ensure the best dynamic
- A/C axis with direct drive by high performance torque motor
- XYZ aixe standard with Heidenhain Direct measuring system
- A/C axis standard with Heidenhain rotary encoder
- Compact design with Minimum floor plan area



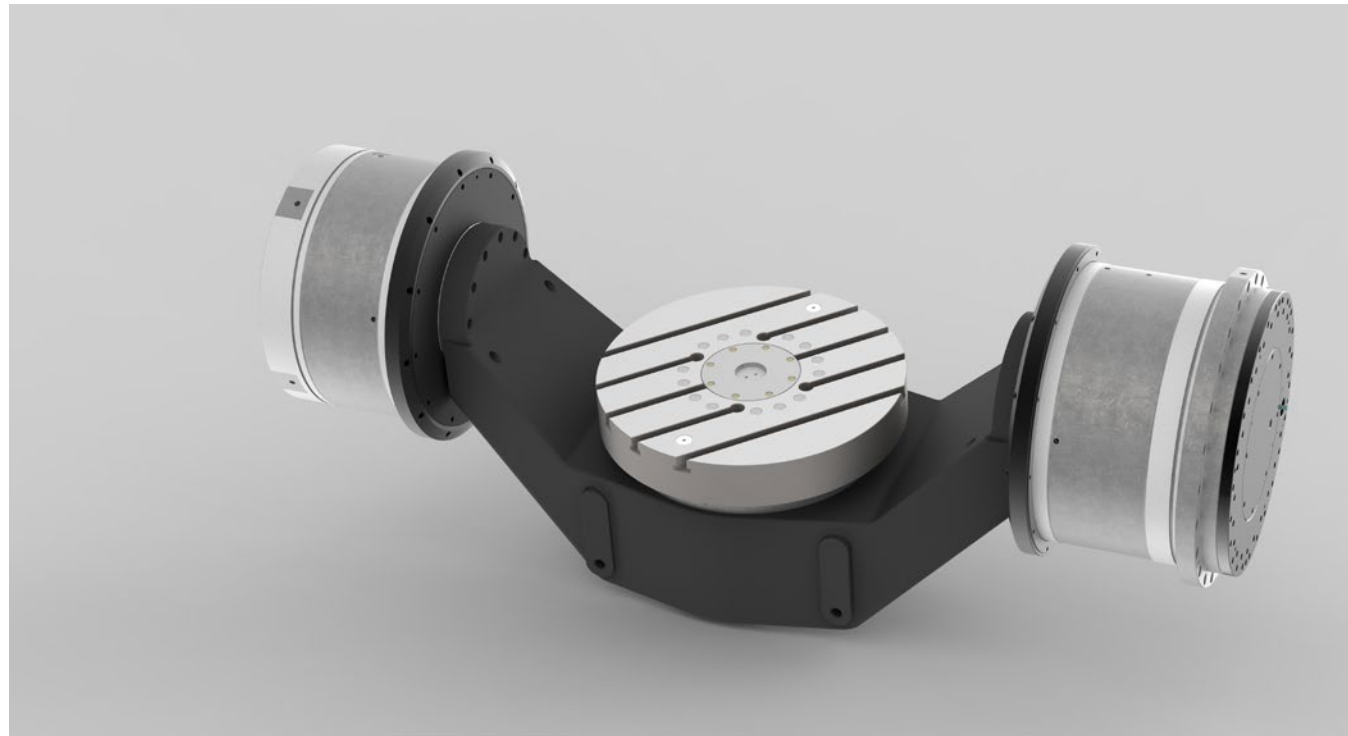
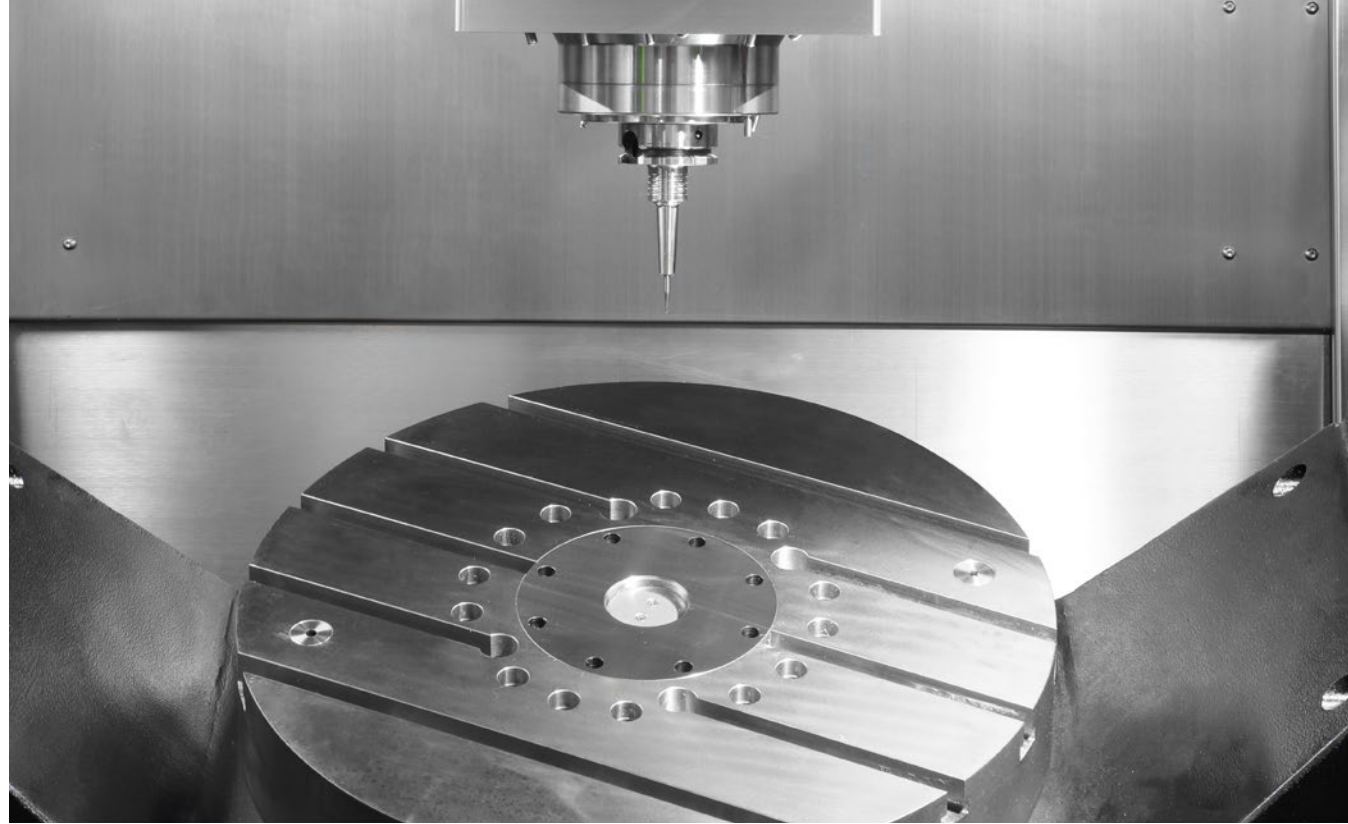
DIRECT DRIVE TORQURE MOTOR ON A/C AXIS

- Direct drive servo motor in A/C axes
- A axis rotation speed 100 rpm
- C axis rotation speed 170 rpm
- A axis travel +30° ~ -110°
- C axis travel ±360°

Machining dimensions

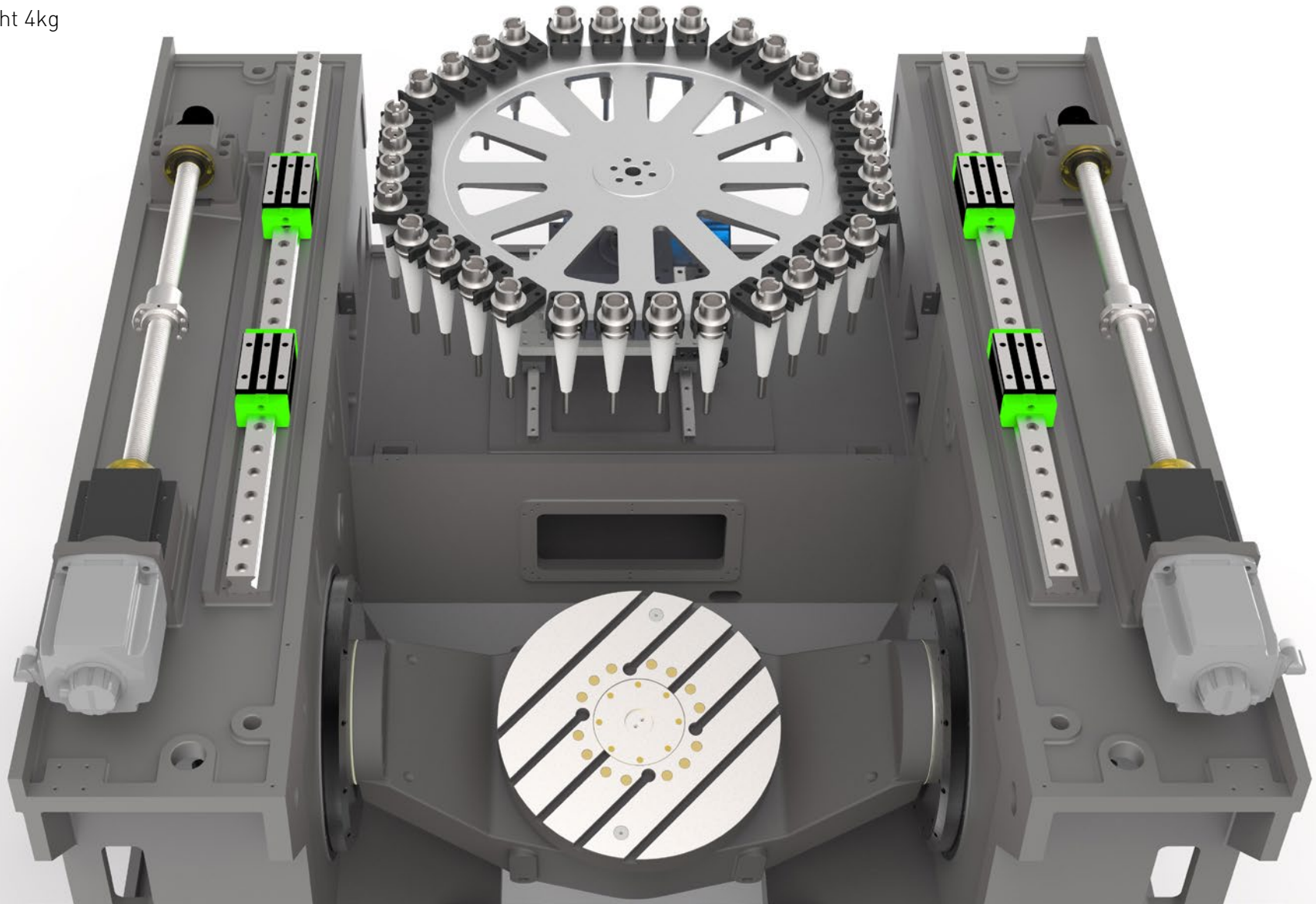


- Max. diameter 700 mm
- Max.height 400 mm
- Max.weight 500 kg

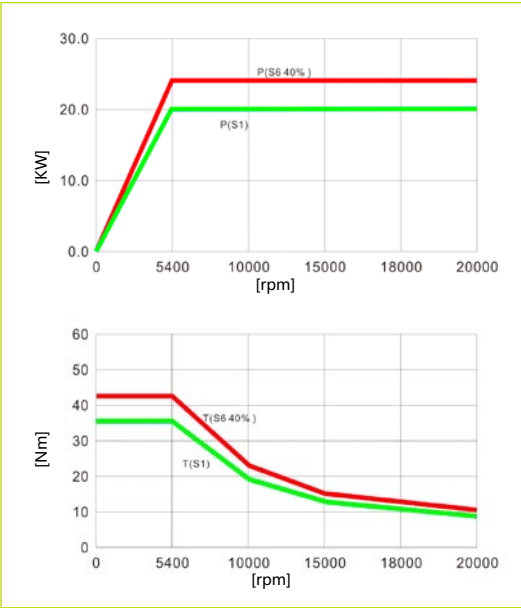


STANDARD WITH 32 POCKETS TOOL CHANGER

- Max.tool lenth 250 mm
- Max.tool diameter 63 mm
- Max.tolol weight 4kg

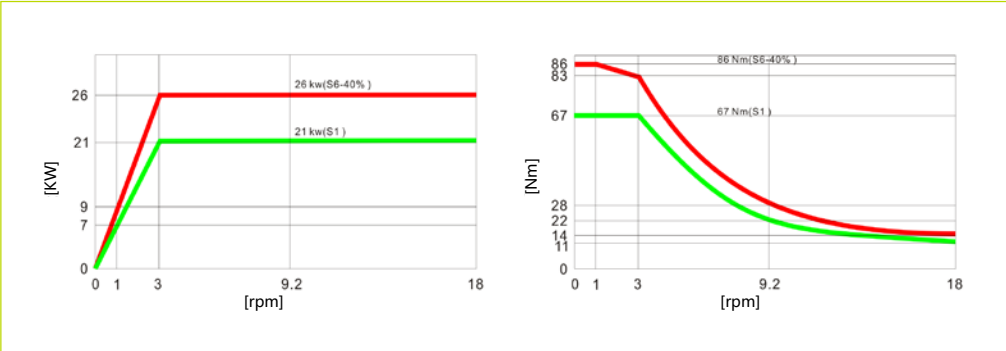


HIGH-PERFORMANCE SPINDLE

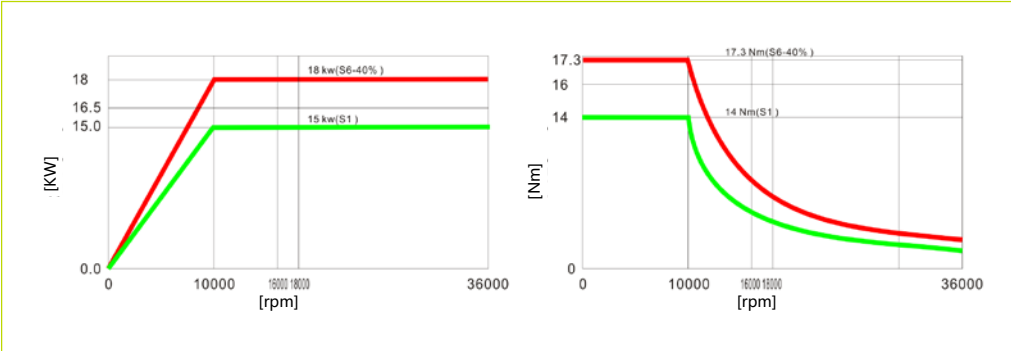


HSK A63 · 20000 rpm
20/24 kW 35/42 Nm

Torque Diagram



HSK A63 · 18000 rpm
21/26 kW 67/86 Nm



HSK E50 · 36000 rpm
15/18 kW 14/17.3 Nm



HEIDENHAIN TNC 640

The TNC contouring control for milling and milling-turning machines

Key features:

Intelligent-Dynamic Precision Machining

- ✓ Dynamic Collision Monitoring (DCM)
- ✓ Dynamic Efficiency
- ✓ Active Chatter Control (ACC)
- ✓ Adaptive feed control (AFC)
- ✓ Machine any contour slot with trochoidal milling

Fast and reliable machining at high contour fidelity

- ✓ Optimal tool guidance by the TNC 640

Programming, Editing, Testing and Automated machining

- ✓ A full range of possibilities with the TNC 640
- ✓ Graphical support in any scenario
- ✓ Straightforward function keys for complex contours
- ✓ Programming free contours and Data Matrix codes
- ✓ Easy calibration of rotary axes with KinematicsOpt

Tool measurement and Workpiece measurement

- ✓ Measuring length, radius, and wear inside the machine
- ✓ Setup, preset setting, and measuring with touch trigger probes
- ✓ Machining and measuring 3-D contours
- ✓ The TNC 640 makes setup easy

Open to outside information

- ✓ Processing CAD files with the TNC 640
- ✓ The TNC 640 programming station
- ✓ Uniformly digital job management with Connected Machining
- ✓ Machining and measuring 3-D contours
- ✓ The TNC 640 makes setup easy

SIEMENS SINUMERIK ONE

Platforms and digitalization drive innovations

- ✓ Reduction of time to market
- ✓ Further individualization in mechanical engineering
- ✓ High quality and best possible availability
- ✓ Defined precision and increased productivity
- ✓ Safety of man and machine and security of individual property in the digital age
- ✓ High-performance processor and communication technologies
- ✓ Scalable intelligent control and drive technology
- ✓ Best safety and security standards
- ✓ Innovative digital engineering

An integrated solution along the entire value chain raises new potentials for machine builders and users

- ✓ The digital native CNC
- ✓ Development from VIRTUAL to REAL
- ✓ Scalable in VIRTUAL and REAL
- ✓ Intelligent and highly productive
- ✓ Digital Transformation of machine tools
- ✓ Maximize productivity
- ✓ Innovate faster
- ✓ Excite digitalization
- ✓ Discover a new way of thinking

Platforms and digitalization drive innovations

- ✓ Top Speed plus
- ✓ Intelligent Load Control
- ✓ Intelligent Dynamic Control
- ✓ Interpolation turning
- ✓ Configured stop
- ✓ Angle head adapter
- ✓ Identify tool demand



Standard configuration:

- Full enclosed splash guard
- Built-in spindle HSK A63 20000 rpm
- 32 pockets tool changer
- Chain type chip conveyor
- Air-conditioned electrical cabinet
- High precision spindle water cooler
- Linear scales on X/Y/Z axis
- Rotary encoder on AC axis
- Rigid tapping
- Ethernet ,CF card and USB interface
- Centralized automatic grease lubrication system
- Coolant system
- Air blast during cutting
- LED working lamp
- End of program light
- Electronic handwheel(MPG)
- Tool box
- Leveling bolts and blocks
- Coolant gun
- Air gun
- User Manual

Optional configuration:

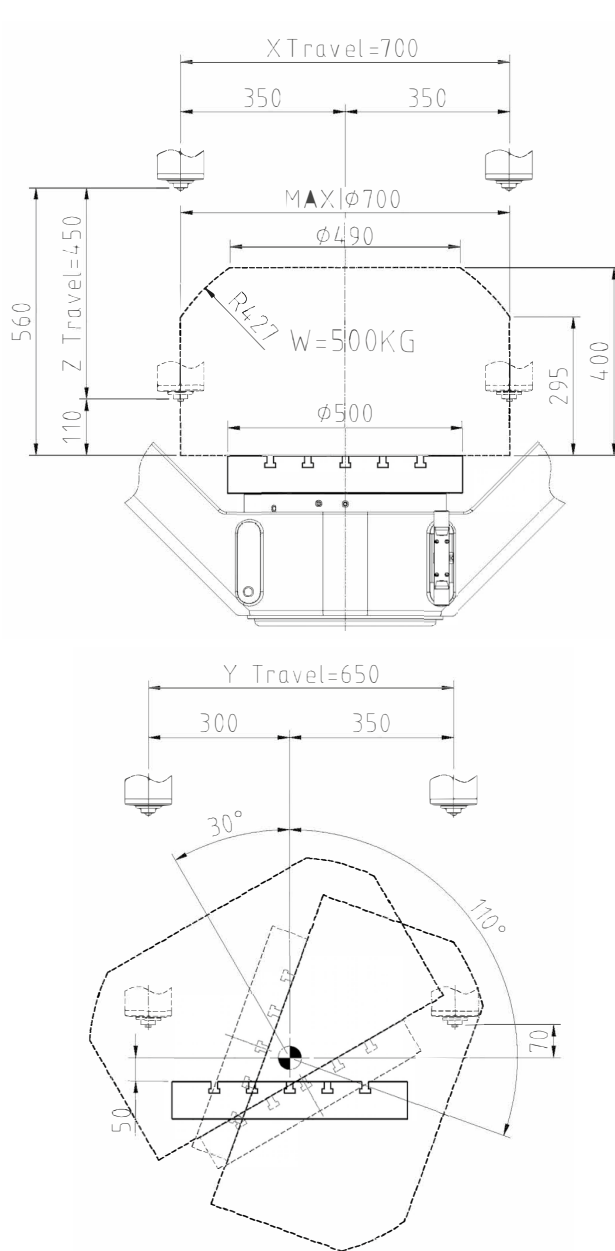
- Built-in spindle HSK A63 18000 rpm
- Built-in spindle HSK E50 36000 rpm
- CTS Coolant through spindle + ATS
- Oil cooling through ballscrew
- Workpiece probe
- Tool probe
- Dynamic Collision
- Monitoring(DCM)
- Kinematics
- Oil mist collector
- Minimum Quantity Lubrication system

Technical Specifications

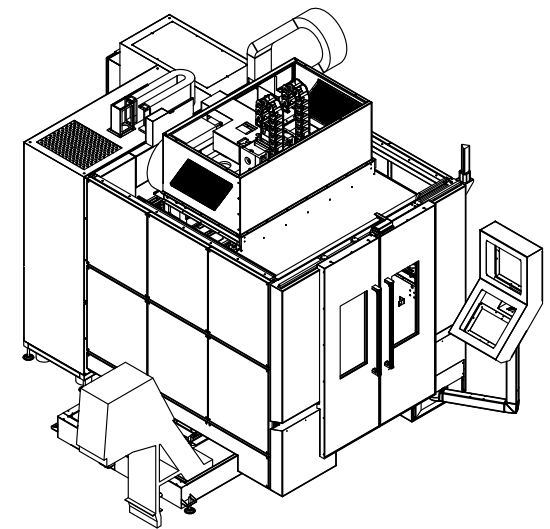
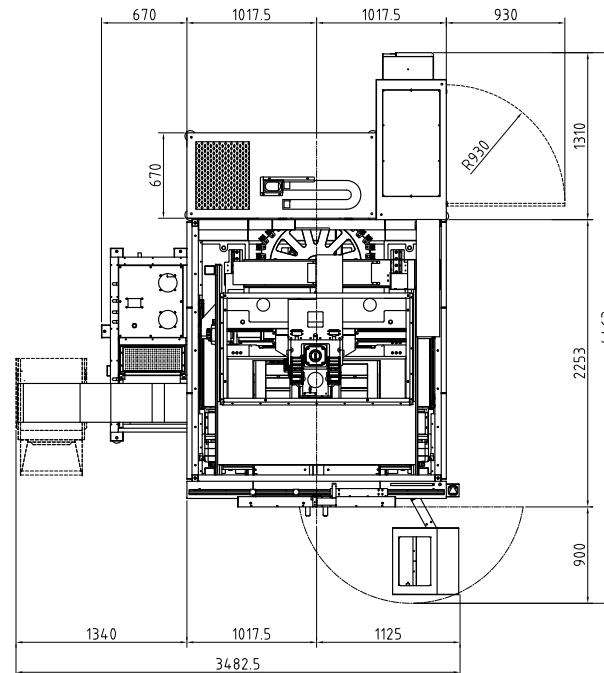
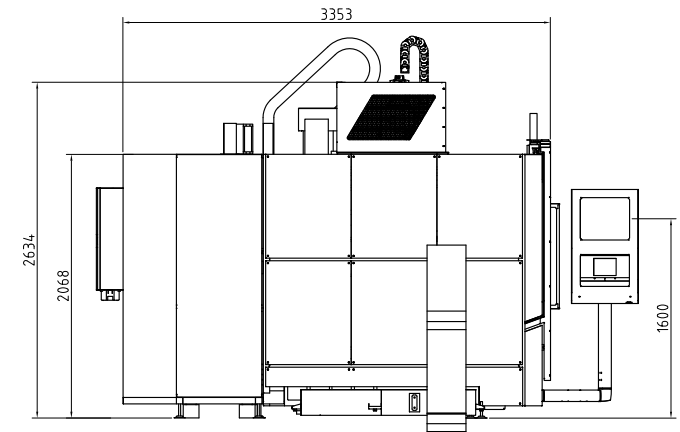
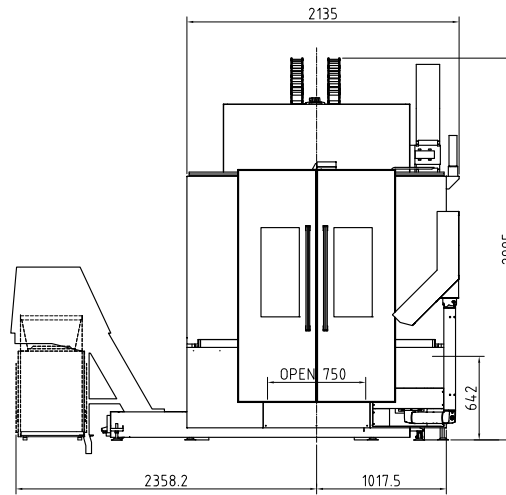
Table	U500-5X		
Max. workpiece diameter	Φ700 mm		
Table size	Φ500 mm		
T-slot (width x number x distance)	14 x 5 x 80 mm		
Max. load	500 kg		
Travel			
X/Y/Z Travel	700 / 650 / 450 mm		
A/C Travel	+30° ~ -110° / 360° deg		
Spindle			
Spindle taper	HSK A63	HSK A63	HSK E50
Spindle motor power	21 / 26 kW	20 / 24 kW	15 / 18 kW
Spindle motor torque	67 / 86 Nm	35 / 42 Nm	14 / 17.3 Nm
Spindle speed	18000 rpm	20000 rpm	36000 rpm
Spindle nose to table	135-585 mm	110-560 mm	110-560 mm

Feed	
Rapid feed X/Y/Z	36 m/min
Rotation speed A/C	100 / 170 rpm
Cutting speed	1-12000 mm/min
Tool changer	
Number of tools	32 pcs
Max. tool length	250 mm
Max. tool diameter	Φ63 mm
Max. tool weight	4 kg
Accuracy(VDI 3441 Full travel)	
Positioning accuracy	0.006 mm (X/Y/Z) 5/3 arc-sec(A/C)
Repeatability accuracy	0.003 mm (X/Y/Z) 2.5/2 arc-sec(A/C)
Dimensions & Weight	
Dimensions	3560×3380×2995 mm
Weight	9000 kg

CUTTING AREA AND INTERFERENCE AREA



DIMENSIONS





PR



PRIMINER Global TEAM

PRIMINER Solutions



hyperMILL

SolidCAM
The Leaders in Integrated CAM



DIJET NS TOOL

GÜHRING



PL LEHMANN



MST



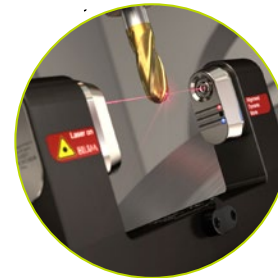
SCHUNK



Blaser.
SWISSLUBE



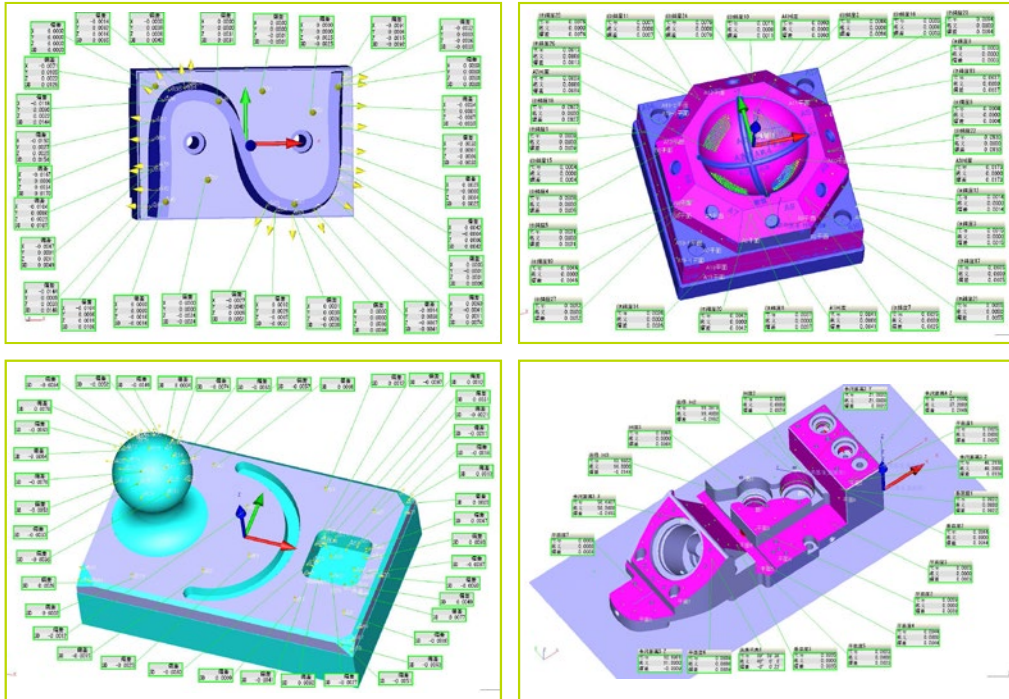
REGO-FIX



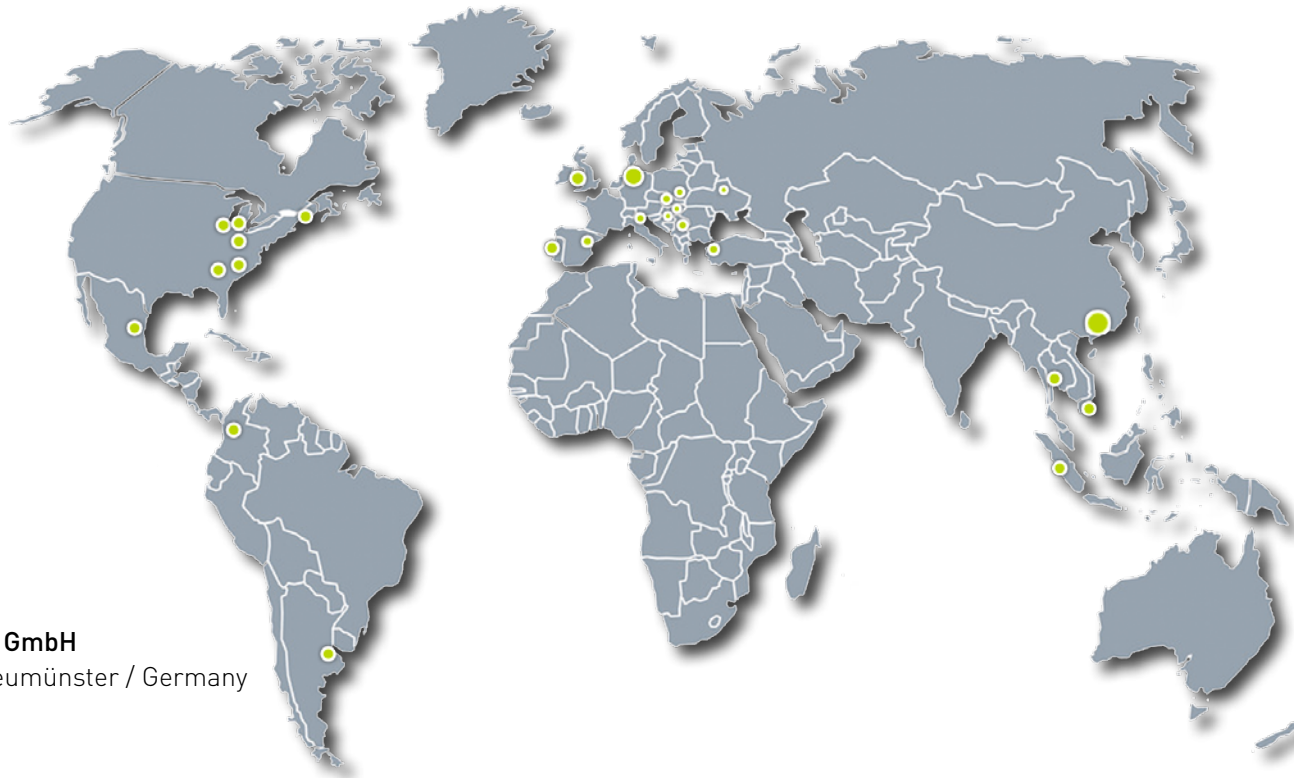
BLUM
focus on productivity



Workpiece measuring by CMM



PRIMINER



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