

PRIMINER



GT18-5X

5 Axis High Speed Double Column Center



Technical Specifications		GT18-5X	
Table size	1800×1400 mm		
X/Y/Z Travel	1900/1400/800 mm		
X/Y/Z Rapid feed	30 m/min		
B/C Max. speed	50 rpm		
Spindle taper	HSK A63	HSK A100	
Spindle speed	24000 rpm	15000 rpm	



Z axis with linear guideways ensure the consistent precision of consecutive operation

With high pressure gas counterbalancing, the movement of Z axis is more agile and stable

Table moved by dual ballscrew and three linear guideways

Roller type linear guideway on X/Y/Z axis

Linear scales on X/Y/Z axis

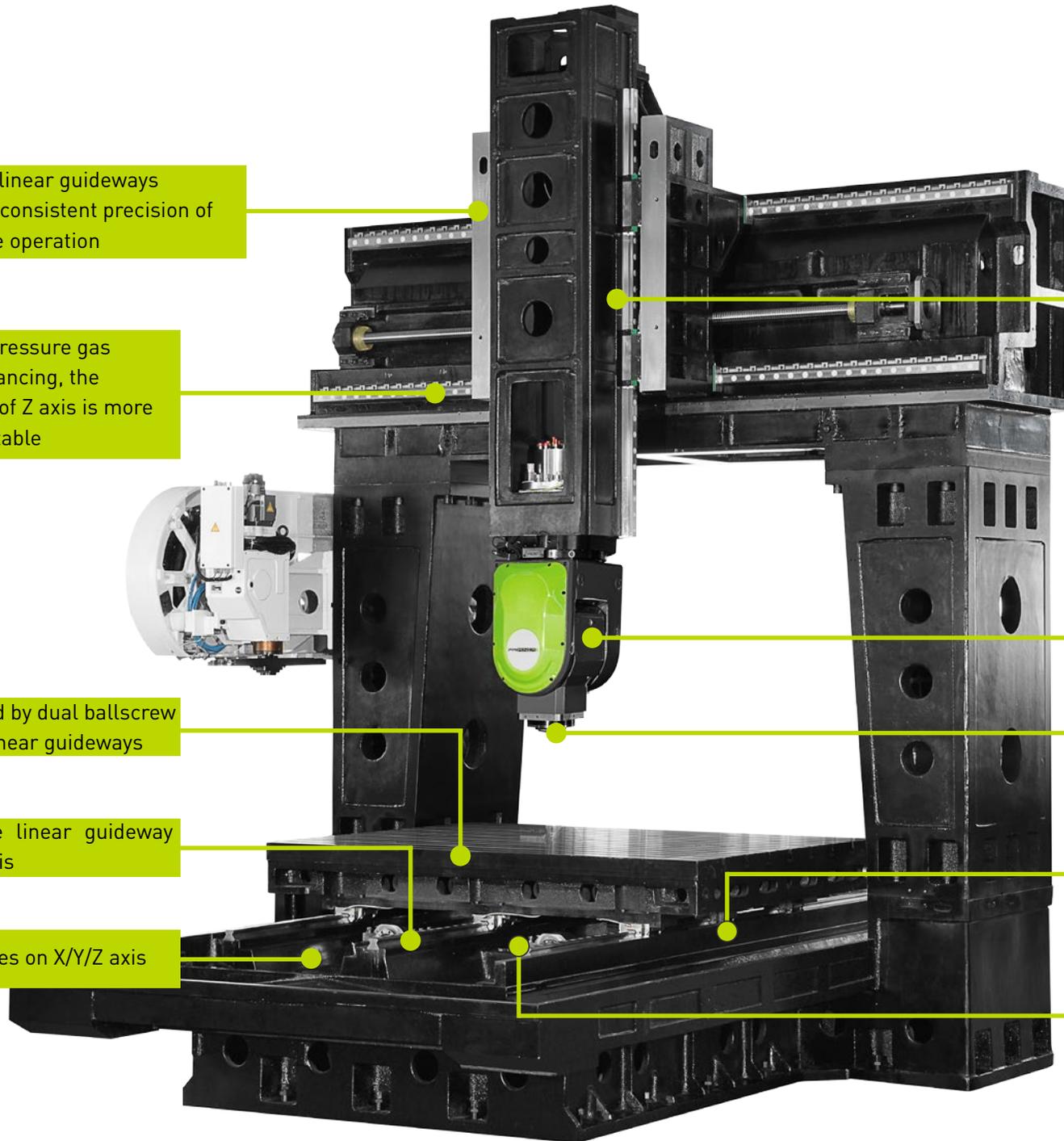
With symmetrical Z axis linear guideways design on both sides of headstock, to make sure high rigidity

DD Driven Double arm head

High performance built-in type spindle with both HSK A63 and HSK A100 available

Two screw type and one chain type chip conveyor

Oil cooling through ballscrew



DD DRIVEN DOUBLE ARM HEAD

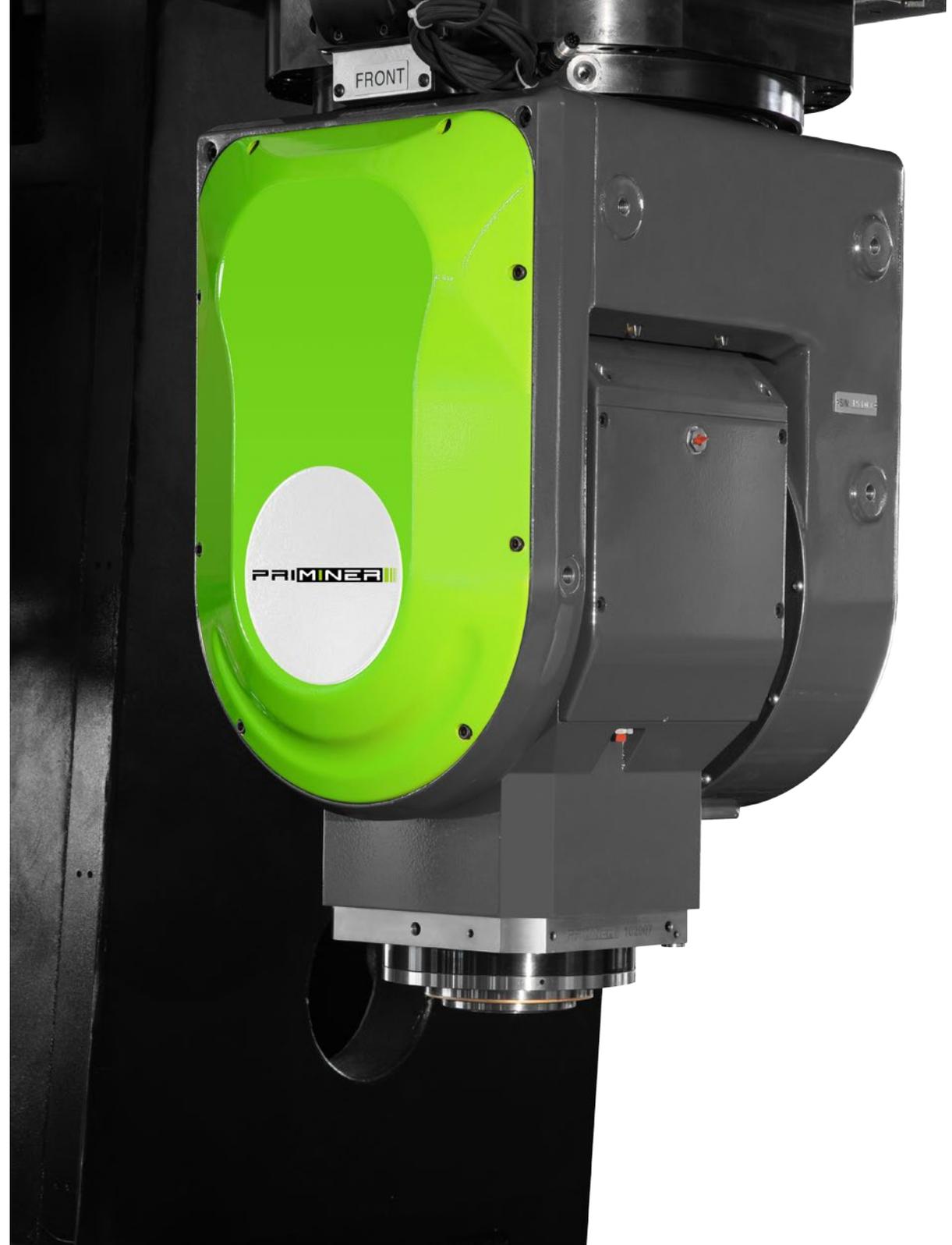
- Direct Drive motor on B/C axis
- B axis travel $\pm 108^\circ$
- C axis travel $\pm 270^\circ$
- B axis clamping torque 2000 Nm
- C axis clamping torque 3000 Nm

Standard spindle

- Built-in spindle HSK A63, 24000 rpm
- Spindle motor power 42/56.7 kW
- Spindle motor torque 68/90.2 Nm

Optional spindle

- Built-in spindle HSK A100, 15000 rpm
- Spindle motor power 40/50 kW
- Spindle motor torque 103/129 Nm



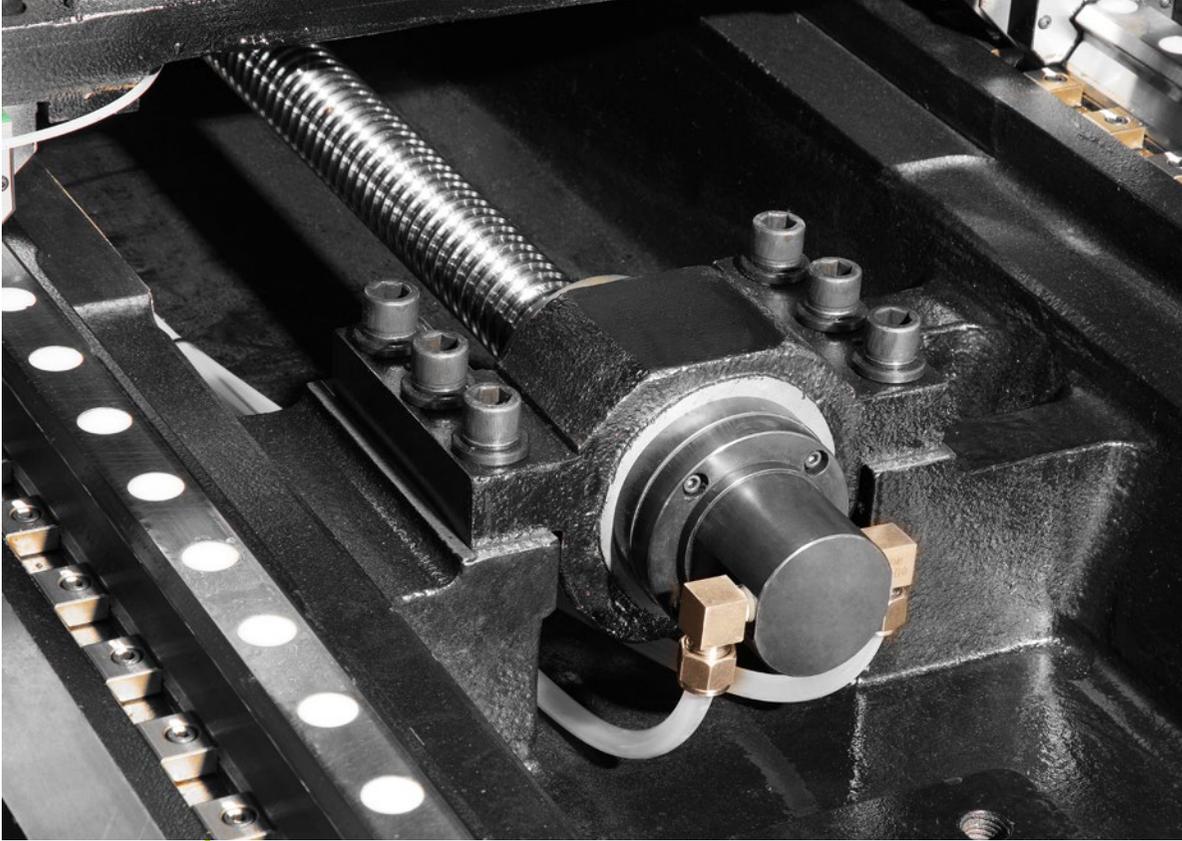
DUAL DRIVE TECHNOLOGY

Highlights

Dual drive system with two ballscrews and three linear guideways on Y axis to ensure the best dynamic performance

Ballscrew pairing ensure high accuracy

Dual linear scales



Oil cooling through ballscrew



Heidenhain linear scales on X/Y/Z axis

HIGH PRECISION

CHAIN TYPE TOOL CHANGER



- Tools can be loaded and unloaded during machining
- User-Friendly door and button make the loading and unloading of workpiece easier
- High production efficiency

Technical Specification

HSK A63

- Number of tools 60
- Max.tool lenth 300 mm
- Max.tool diameter $\Phi 78/\Phi 150\text{mm}$ (next release)
- Max.tool weight 8 kg

HSK A100

- Number of tools 40
- Max.tool lenth 400 mm
- Max.tool diameter $\Phi 125/\Phi 250\text{mm}$ (next release)
- Max.tool weight 16 kg



USER-FRIENDLY DESIGN



Rotatable operation panel

Allows users to operate at any angle and position.



Three doors design

Easy to clamp and measure workpiece, and confirm machining status.



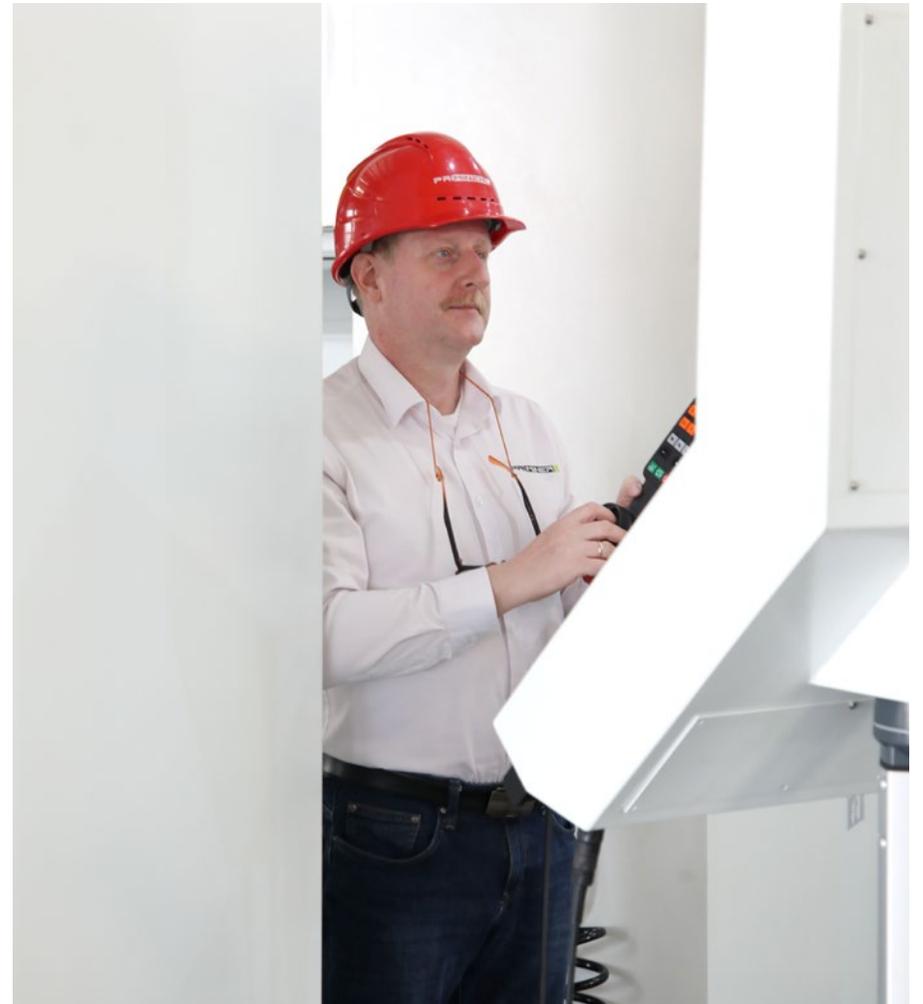
Front door with wider open

Make the loading/unloading of the workpiece more convenient.

**THE FRONT DOOR WITH WIDER OPEN MAKES THE LOADING/
UNLOADING OF THE WORKPIECE MORE CONVENIENT.**



**ROTATABLE PANEL MAKES
OPERATION AT EVERY
CONVENIENT ANGLE.**



Efficient chip-removal

STANDARD WITH THREE CHIP CONVEYOR

Equipped with two screw type
chip conveyor and one chain
type chip conveyor



BLUM MEASURING SYSTEM

Universal High-Speed touch probe with multidirectional measuring mechanism

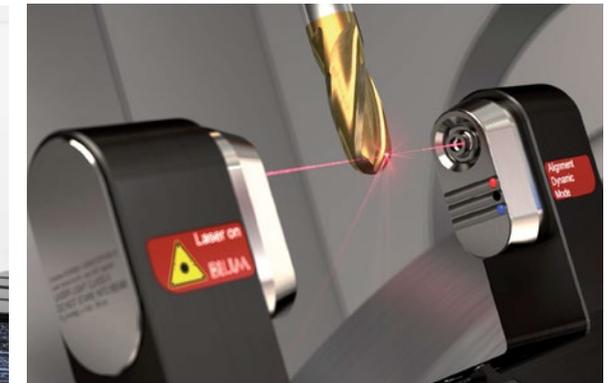
- ✓ Detection of workpiece position
- ✓ Correction of workpiece orientation
- ✓ Thermal compensation of the machine tool
- ✓ Contour measurement

Your benefit:

- ✓ Measuring speed up to 3 m/min
- ✓ Precise, non-lobing touch characteristics
- ✓ No-wear, optoelectronic measuring mechanism
- ✓ Use of two measuring systems with one IR receiver
- ✓ Extended battery life
- ✓ Precise measurement even with coolant
- ✓ Proven and robust design

Highlights

- ✓ Proven high-precision laser measuring system;
- ✓ Non-contact, optical tool measurement;
- ✓ 100 % reliable due to BLUM protection system





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

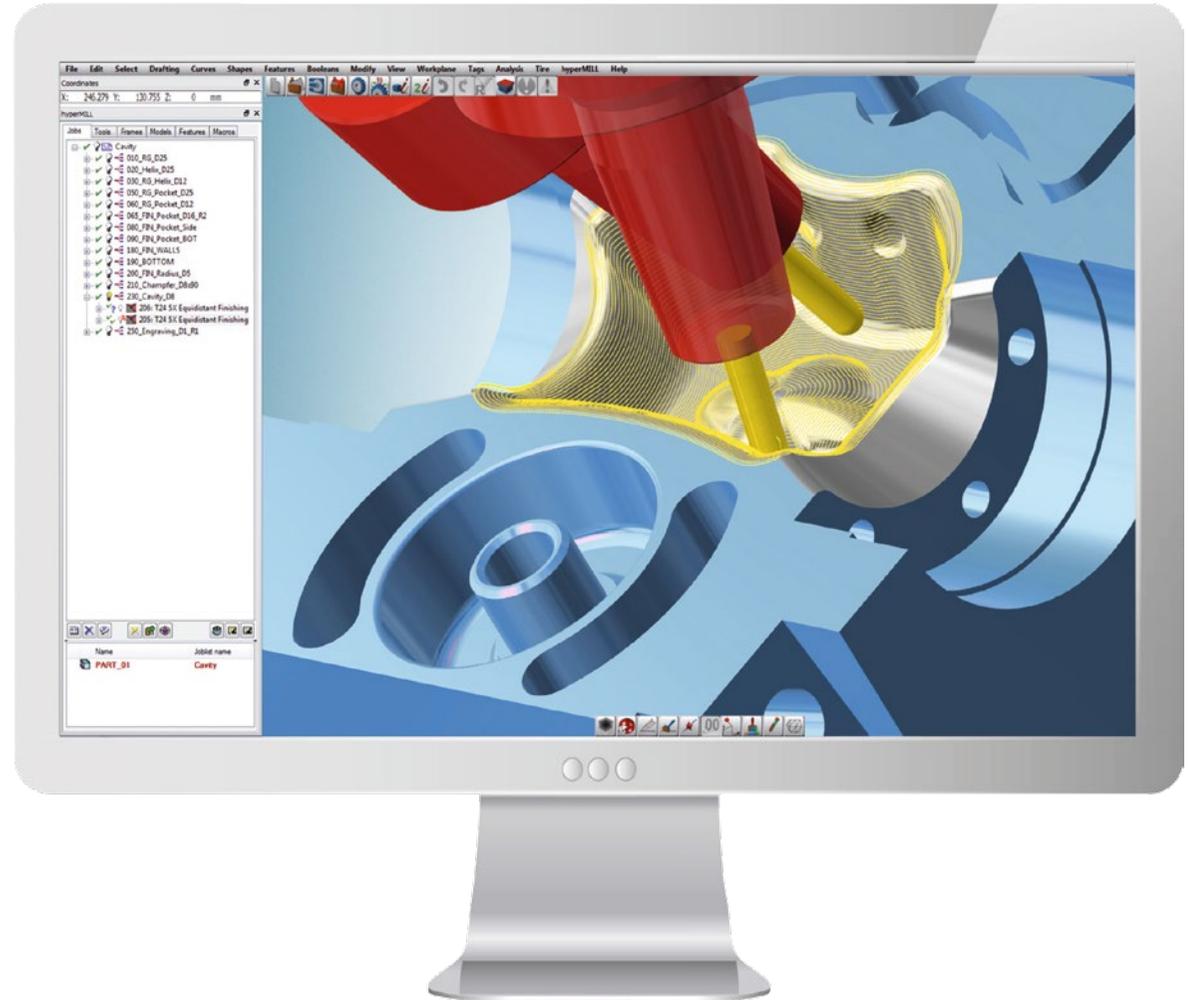
Open to outside information

- ✓ 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

hyperMILL® is the high-performance, complete CAM solution from OPEN MIND. 2.5D, 3D, 5-axis milling and mill/turn tasks can be programmed perfectly and precisely with hyperMILL®.

Benefits

- ✓ CAM strategies that are easy to operate
- ✓ Comprehensive range of machining operations for simple to complex components
- ✓ The world's leading 5-axis technology
- ✓ One postprocessor for all milling and turning operations
- ✓ Extensive automation
- ✓ Integration in leading CAD systems
- ✓ Reliable processes thanks to true-to-detail simulation and comprehensive collision control
- ✓ State-of-the-art CAD/CAM technologies for optimal programming and manufacturing
- ✓ Continuous and efficient processes, reduced processing times and extremely high level of reliability
- ✓ Gets the most out of machine tools.



TECHNICAL SPECIFICATIONS

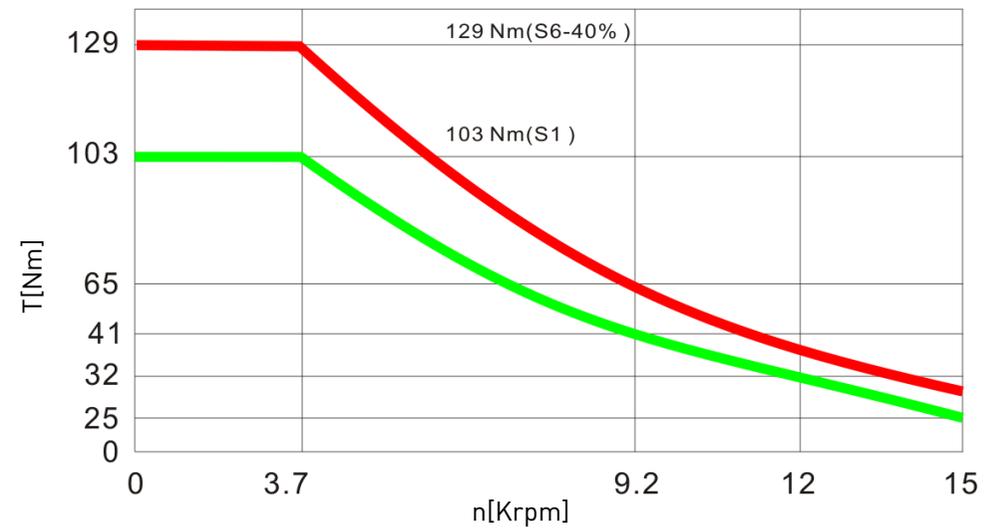
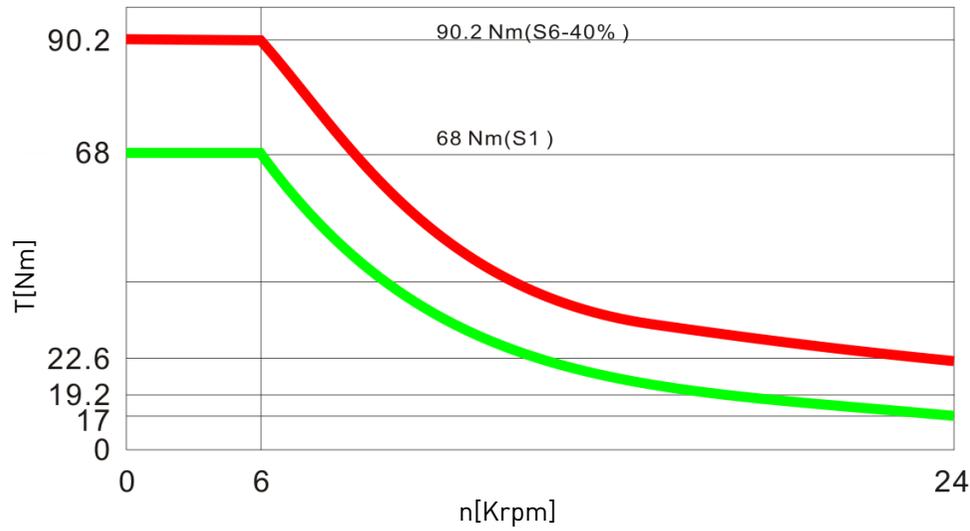
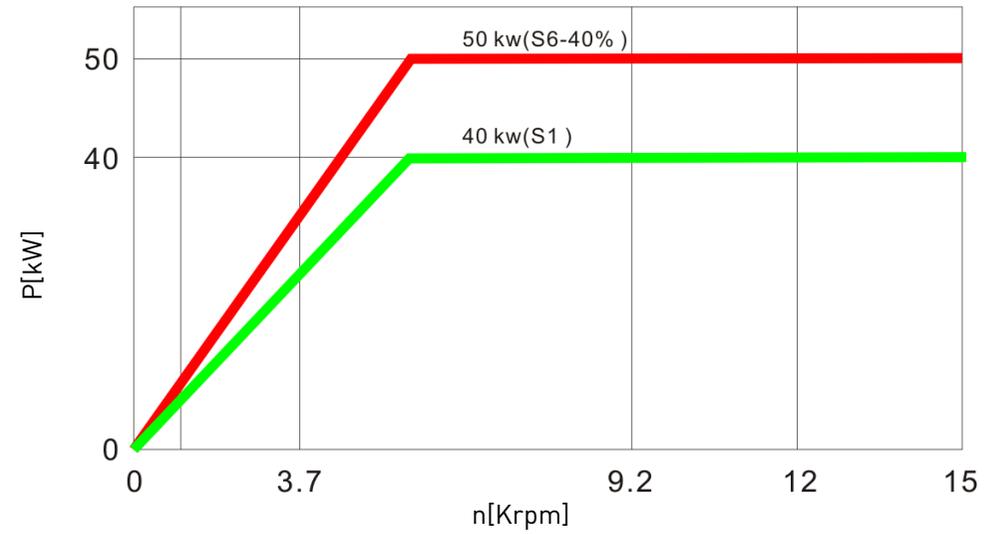
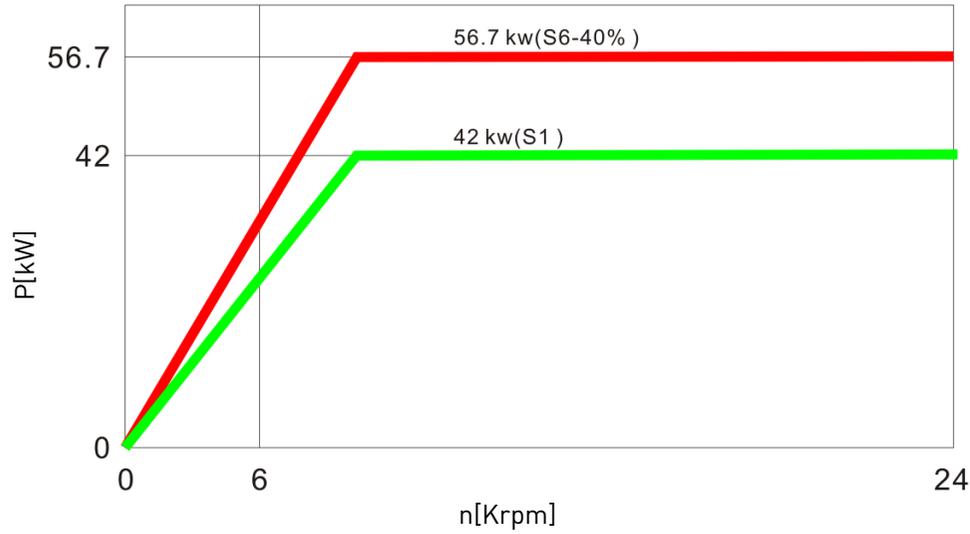
		GT18-5X	
Table			
Table size	1800 x 1400 mm		
T-slot(width x number x distance)	22 x 7 x 170 mm		
Max.load	6000 kg		
Travel			
X/Y/Z Travel	1900 / 1400 / 800 mm		
B/C Axis	±108° / ±270°		
Spindle nose to table	100 - 900 mm HSK A63		42.5 - 842.5 mm HSK A100
90° spindle center line to table	410 - 1210 mm		
Distance between column	1960 mm		
Spindle			
Spindle taper	HSK A63		HSK A100
Spindle motor power	42 / 56.7 kW		40 / 50 kW
Spindle motor torque	68 / 90.2 Nm		103 / 129 Nm
Spinder speed	24000 rpm		15000 rpm
Feed			
Rapid feed XY/Z	30 m/min		
Cutting speed X/Y/Z	1-12000 mm/min		
Max. speed B/C	50 rpm		
Tool changer			
Number of tools	60		40
Max. tool length	300 mm		400 mm
Max. tool diameter	Φ78 / Φ150 mm		Φ125 / Φ250 mm
Max. tool weight	8 kg		16 kg
Accuracy(VDI 3441 Full travel)			
Positioning accuracy	0.010/0.010/0.008 mm(X/Y/Z); 6/8 arc-sec(B/C)		
Repeatability accuracy	0.006 mm(X/Y/Z); 3/4 arc-sec(B/C)		
Dimensions & Weight			
Dimensions	6160×4970×4840 mm		
Weight	24000 kg		

STANDARD /OPTIONAL CONFIGURATION

● Standard ○ Optional

Configurations	Standard	Optional
Full enclosed splash guard	●	
Chip conveyor (two screw type and one chain type)	●	
Linear scales on X/Y/Z axes	●	
Oil-air lubrication system for spindle	●	
High precision spindle water cooler	●	
Built-in spindle HSK A63 24000rpm_42/56.7KW_68/90.2Nm,60 pockets tool changer	●	
Built-in spindle HSK A100 15000rpm_40/50kW_103/129Nm,40pockets tool changer		○
Oil cooling through ballscrew		○
CTS Coolant through spindle+ATS		○
Oil mist collector		○
Tool probe		○
Workpiece probe		○
Coolant Cooling system		○
Oil skimmer		○
Kinematics		○
Dynamic Collision Monitoring		○
Extra 200GB SSD program memory		○
Rigid tapping	●	
Air-conditioned electrical cabinet	●	
Ethernet,CFcard and USB interface	●	
Automatic lubrication system	●	
Coolant system	●	
LED workinglamp	●	
End of program light	●	
Electronic handwheel	●	
Tool box	●	
Leveling bolts and blocks	●	
Coolant gun	●	
Air gun	●	
User Manual	●	

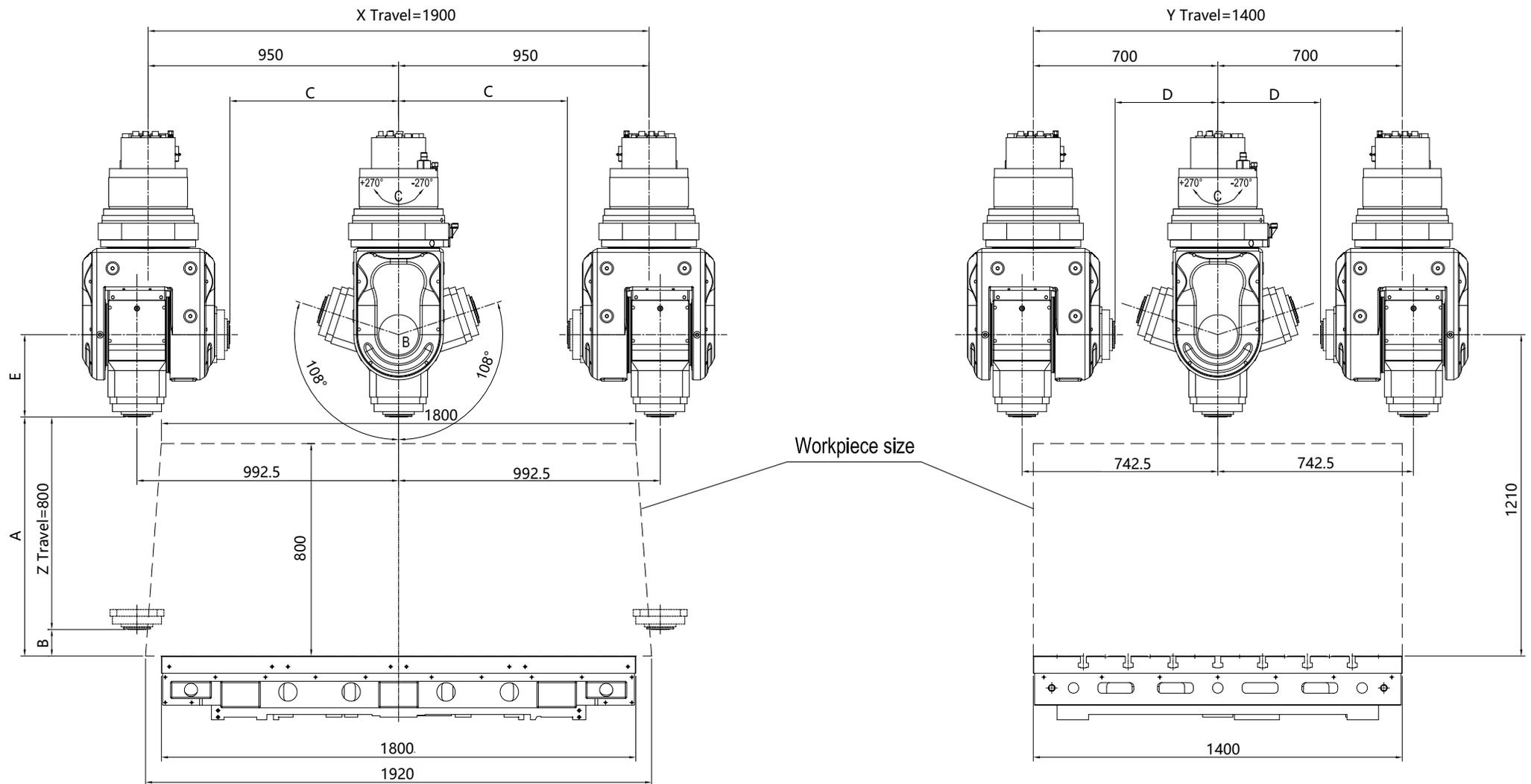
TORQUE DIAGRAM



HSK A63-24000 rpm

HSK A100-15000 rpm

CUTTING AREA



Spindle	A	B	C	D	E
HSK A63	900 mm	100 mm	640 mm	390 mm	310 mm
HSK A100	842.5 mm	42.5 mm	582.5 mm	332.5 mm	367.5 mm





IMINER Global TEAM

PRIMINER Solutions



hyperMILL

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SolidCAM
The Leaders in Integrated CAM

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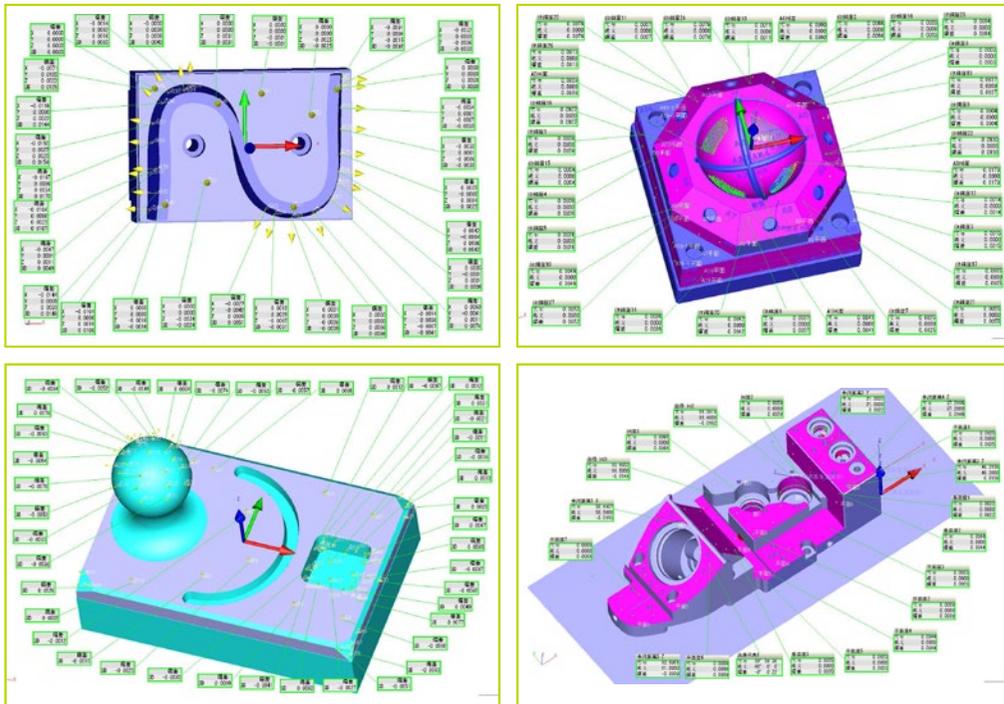


REGO-FIX

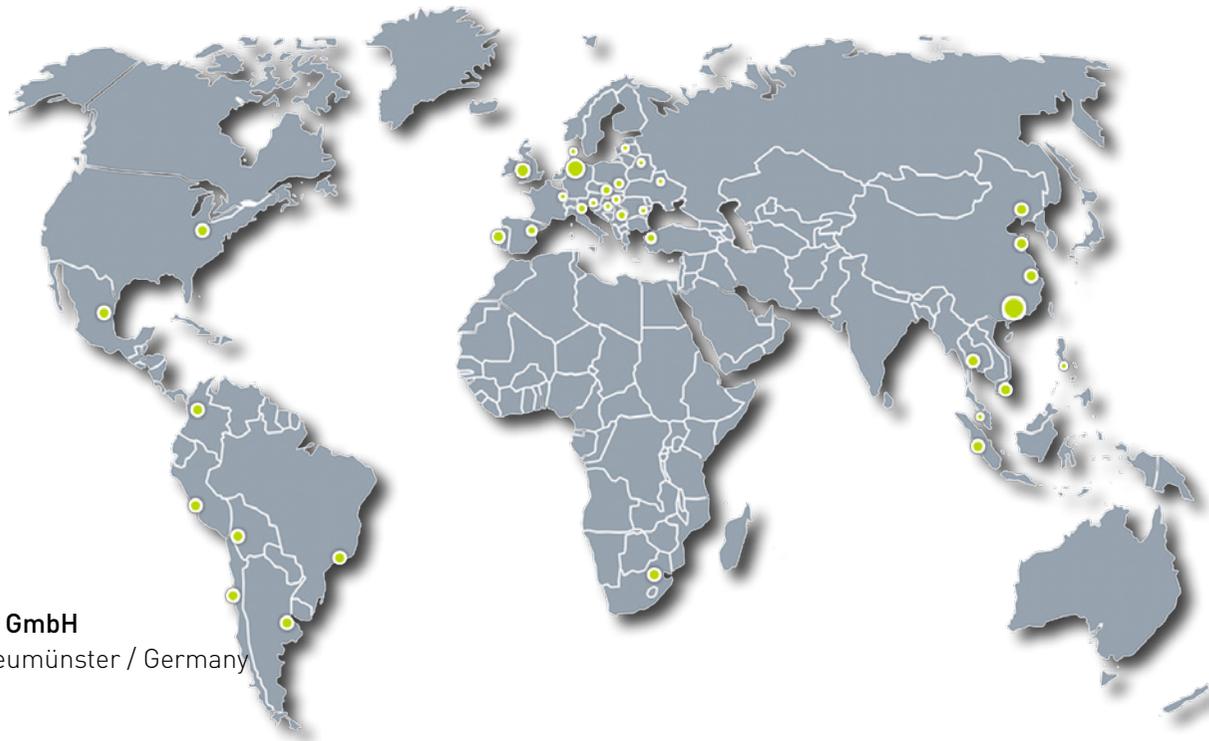
BLUM
focus on productivity



Workpiece measuring by CMM



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