

PRIMINER

GT320-5X · GT420-5X

5 Axis High Speed Double Column Center



Technical Specifications	GT320-5X	GT420-5X
Table size	3300×1700 mm	4000×1700 mm
X/Y/Z Travel	3300/2700/1000 mm	4200/2700/1000 mm
X/Y/Z Rapid feed	20 mm/min	15/20/20 mm/min
A/C Max.speed	50 rpm	
Standard spindle	HSK A63, 24000 rpm	
Optional spindle	HSK A100,15000 rpm	

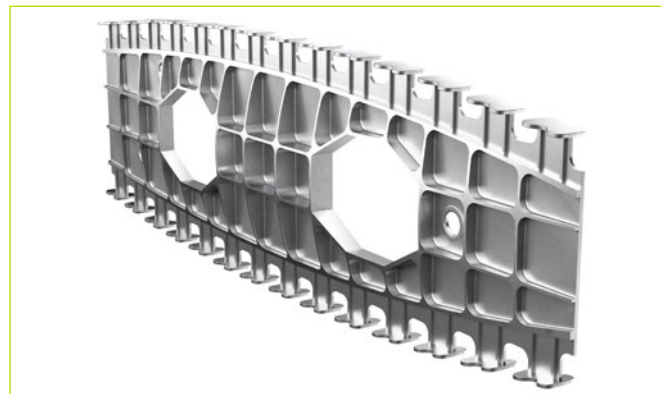


APPLICATIONS

● Aerospace

● Big Die & Mold

● Machine struction



Longer Y axis travel as standard to ensure more machining capacity when using 90° milling head

DD Driven Double arm head

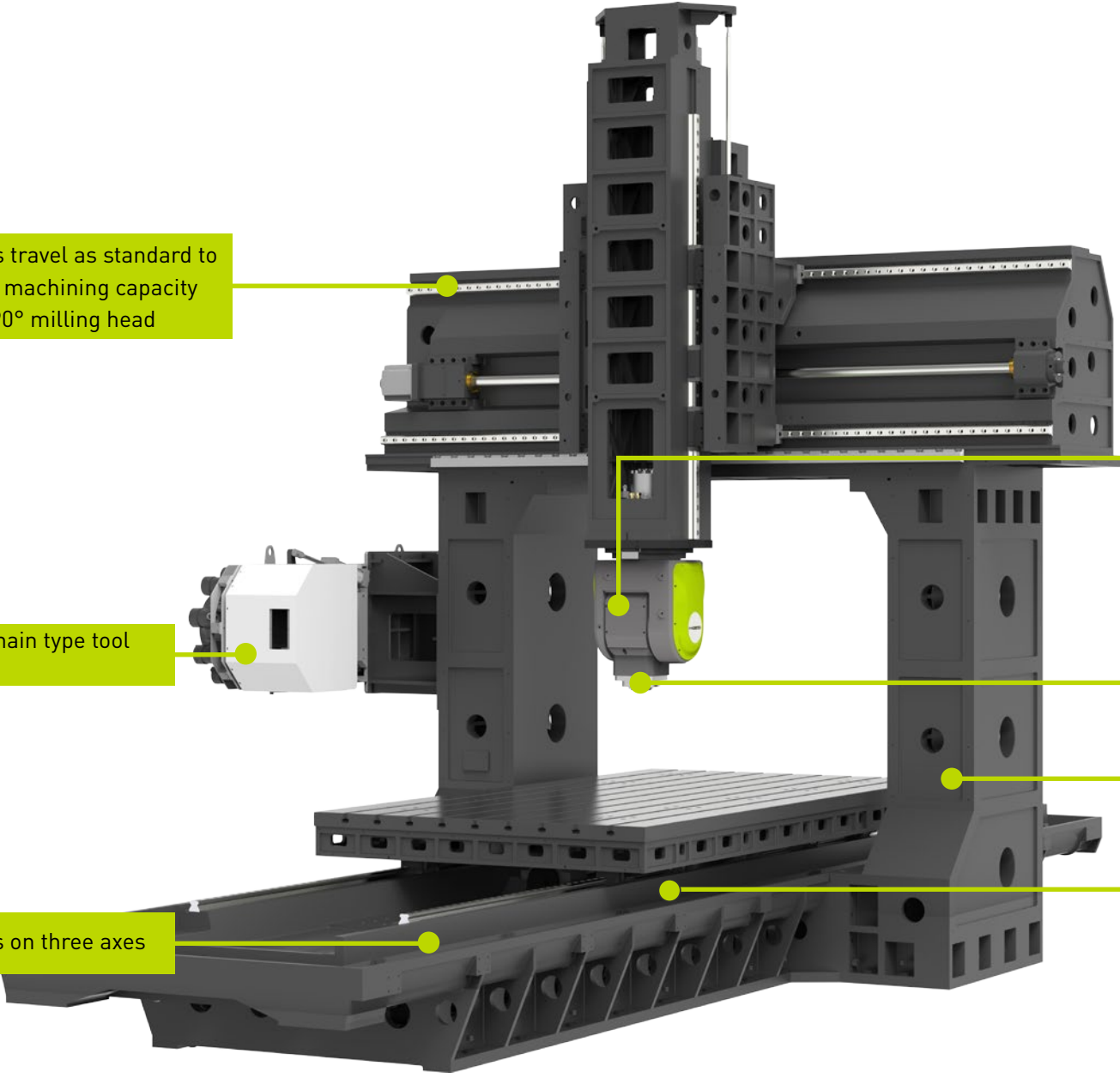
High performance built-in type spindle with both HSK A63 and HSK A100 available

High rigidity column structure

Two screw type and one chain type chip conveyor

60 pockets chain type tool changer

Linear scales on three axes



DD DRIVEN DOUBLE ARM HEAD

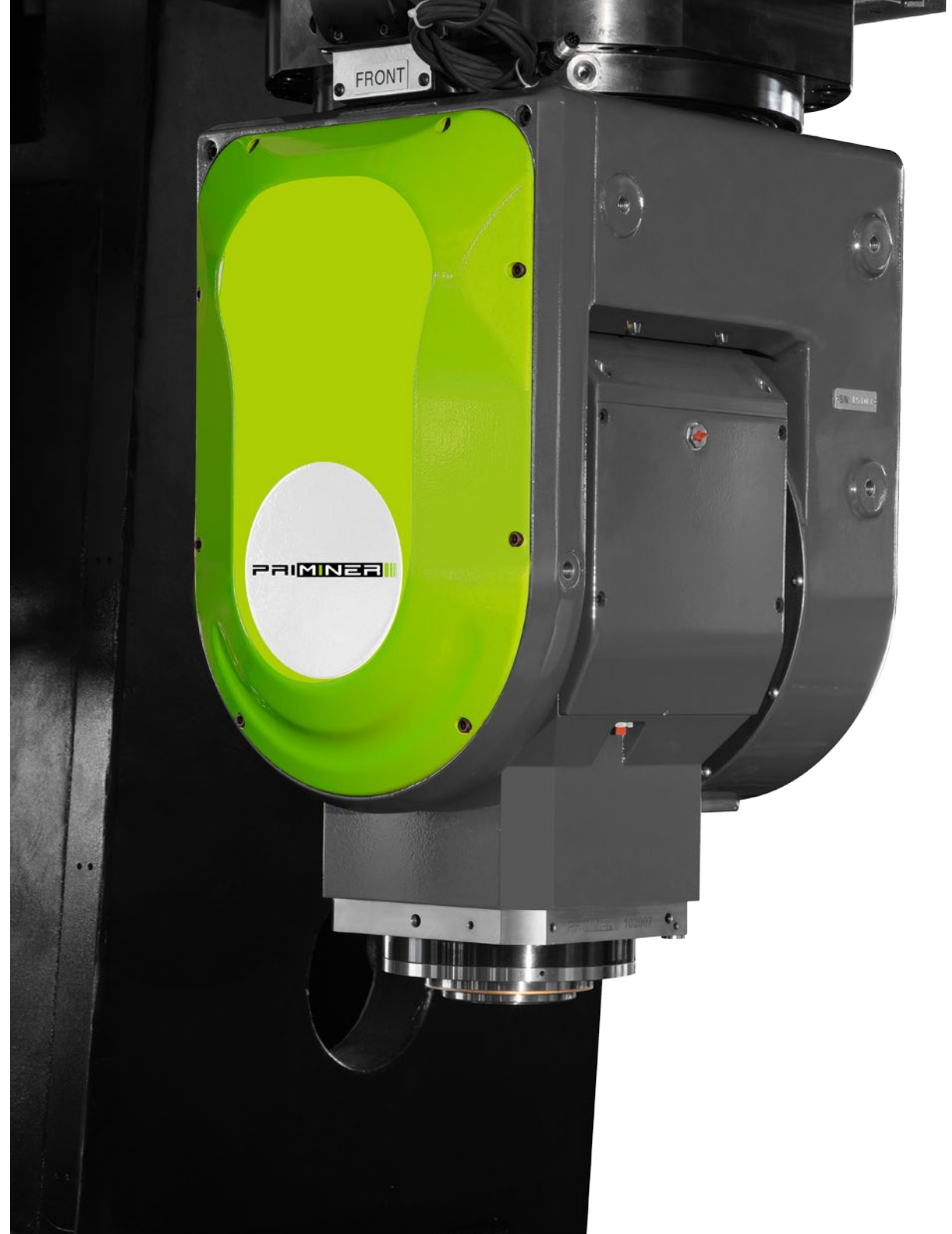
- A axis travel $\pm 108^\circ$
- C axis travel $\pm 270^\circ$
- A axis clamping torque 2000 Nm
- C axis clamping torque 3000 Nm

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



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 40/60
- Max.tool lenth 400 mm
- Max.tool diameter $\Phi 125/\Phi 250\text{mm}$ (next release)
- Max.tool weight 16 kg





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



TECHNICAL SPECIFICATIONS

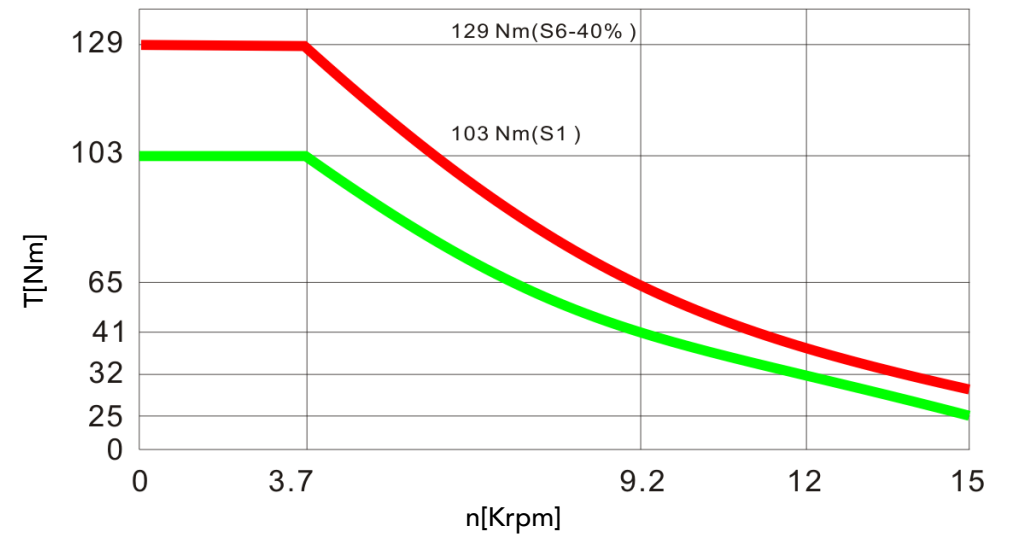
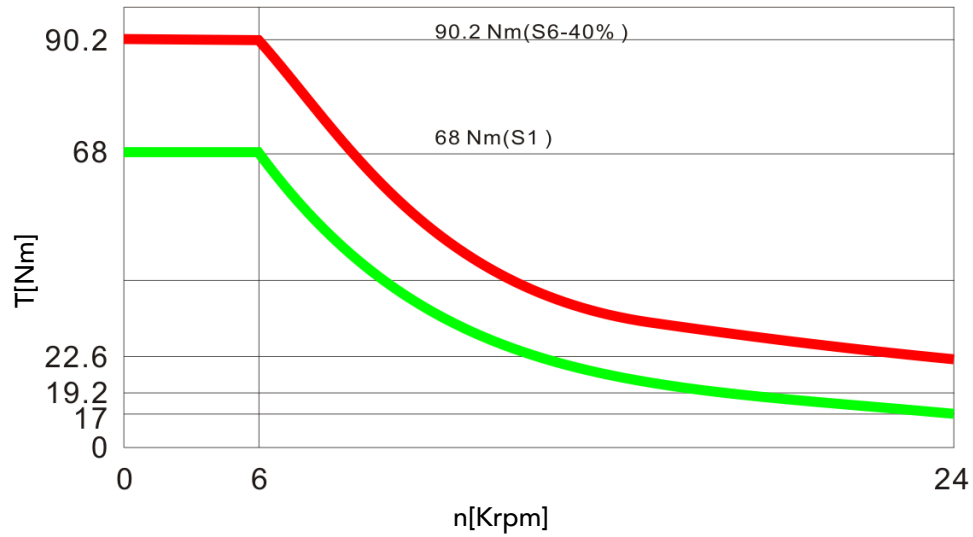
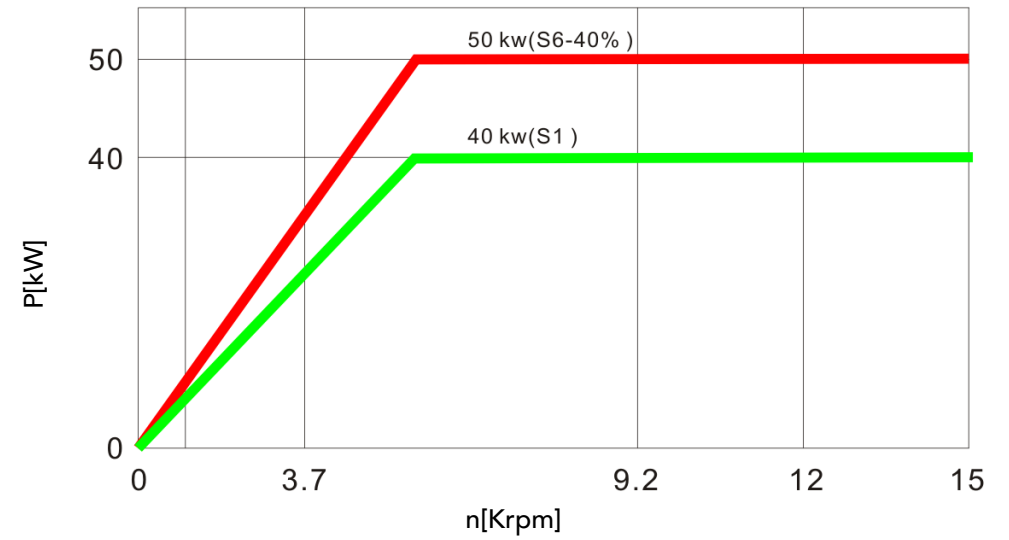
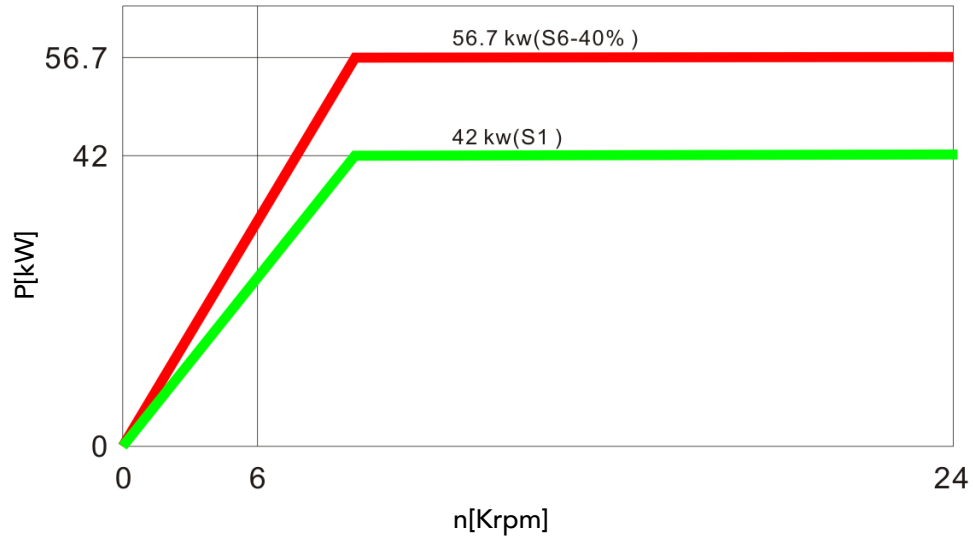
Technical Specifications	GT320-5X	GT420-5X
Table		
Table size	3300×1700 mm	4000×700 mm
T-slot (width x number x distance)	22×9×170 mm	22×11×170 mm
Max. load	8000 kg	10000 kg
Travel		
X/Y/Z Travel	3300/2700/1000 mm	4200/2700/1000 mm
Spindle nose to table	155-1155 mm(HSK A63)/100-1100 mm(HSK A100)	
90°spindle center line to table	465-1465 mm(HSK A63)/467.5-1467.5 mm(HSK A100)	
Distance between columns	2000 mm	
A/C Head		
Model S		
A/C Travel	±108° / ±270°	
A/C Clamplng torque	2000/3000 Nm	
Spindle		
Spindle(standard)	HSK A63, 24000 rpm	
Spindle motor power and torque	42/56.7 kW, 68/90.2 Nm	
Spindle(option)	HSK A100, 15000 rpm	
Spindle motor power and torque	40/50 kW, 103/129 Nm	
Feed		
Rapid feed X/Y/Z	20 m/min	15/20/20 m/min
Cutting speed	1-12000 mm/min	
A/C Max. speed	50 rpm	
Tool changer(standard)		
HSK A63		
Number of tools	60 pcs	
Max. tool length	300 mm	
Max. tool diameter	Φ80 / Φ125 mm	
Max. tool weight	8 kg	
Tool changer(option)		
HSK A100		
Number of tools	40 / 60 pcs	
Max. tool length	400 mm	
Max. tool diameter	Φ125 / Φ250 mm	
Max. tool weight	16 kg	
Accuracy(VDI 3441 Full travel)		
Positioning accuracy	0.015/0.015/0.010 mm(X/Y/Z); 6/8 arc-sec(A/C)	0.020/0.015/0.010 mm(X/Y/Z); 6/8 arc-sec(A/C)
Repeatability accuracy	0.010/0.010/0.006 mm(X/Y/Z); 3/4 arc-sec(A/C)	0.015/0.010/0.006 mm(X/Y/Z); 3/4 arc-sec(A/C)
Dimensions & Weight		
Dimensions	9672×6300×5570 mm	11692×6300×5560 mm
Weight	30000 kg	42000 kg

STANDARD /OPTIONAL CONFIGURATION

● Standard ○ Optional

Configurations	Standard	Optional
Direct drive A/C head	●	
Full enclosed splash guard	●	
Chip conveyor (two screw type and one chain type)	●	
Linear scales on X/Y/Z axis, Rotary encoder on A/C axis	●	
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 chain type tool changer	●	
Built-in spindle HSK A100 15000rpm_40/50kW_103/129Nm,40/60 pockets chain type tool changer		○
CTS Coolant through spindle + ATS		○
Tool probe		○
Workpiece probe		○
Oil skimmer		○
Kinematics		○
Dynamic Collision Monitoring (DCM)		○
Auto Power Off		○
Extra 200GB SSD program memory		○
Rigid tapping	●	
Air-conditioned electrical cabinet	●	
Ethernet, CF card and USB interface	●	
Automatic lubrication system	●	
Coolant system	●	
LED working lamp	●	
End of program light	●	
Electronic handwheel (MPG)	●	
Tool box	●	
Leveling bolts and blocks	●	
Air blast during cutting	●	
Coolant gun	●	
Air gun	●	
User Manual	●	

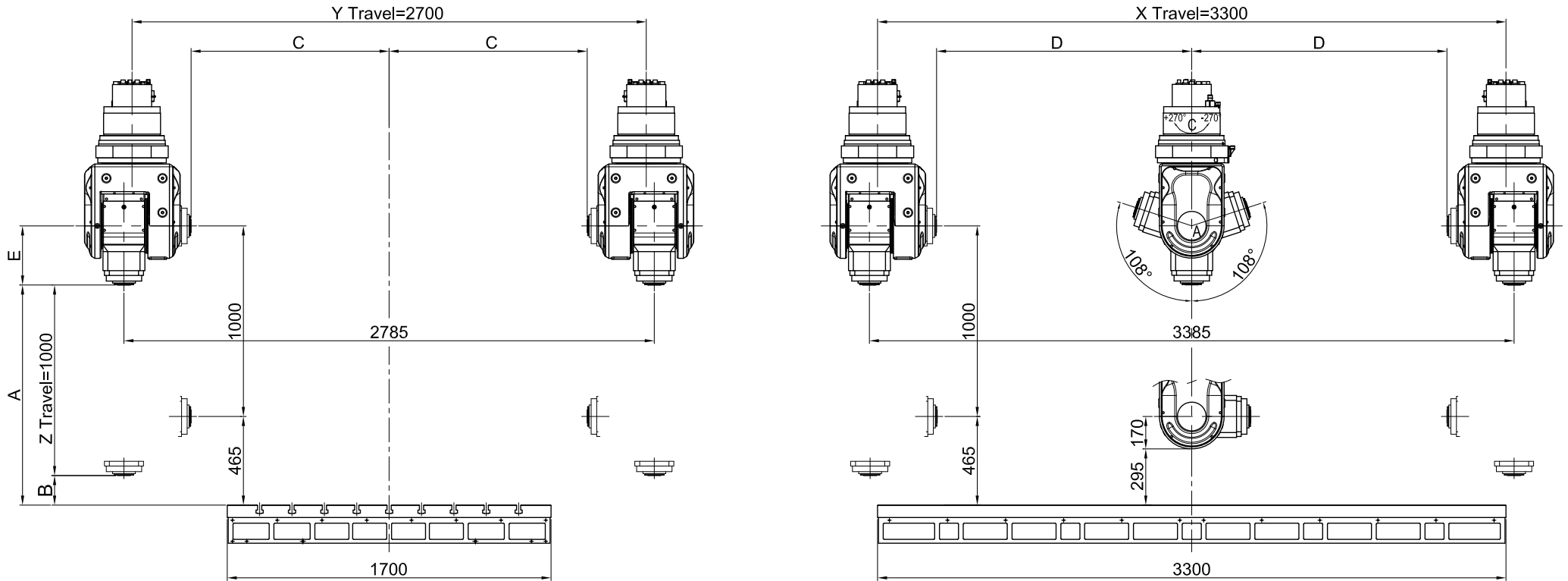
TORQUE DIAGRAM



HSK A63-24000rpm

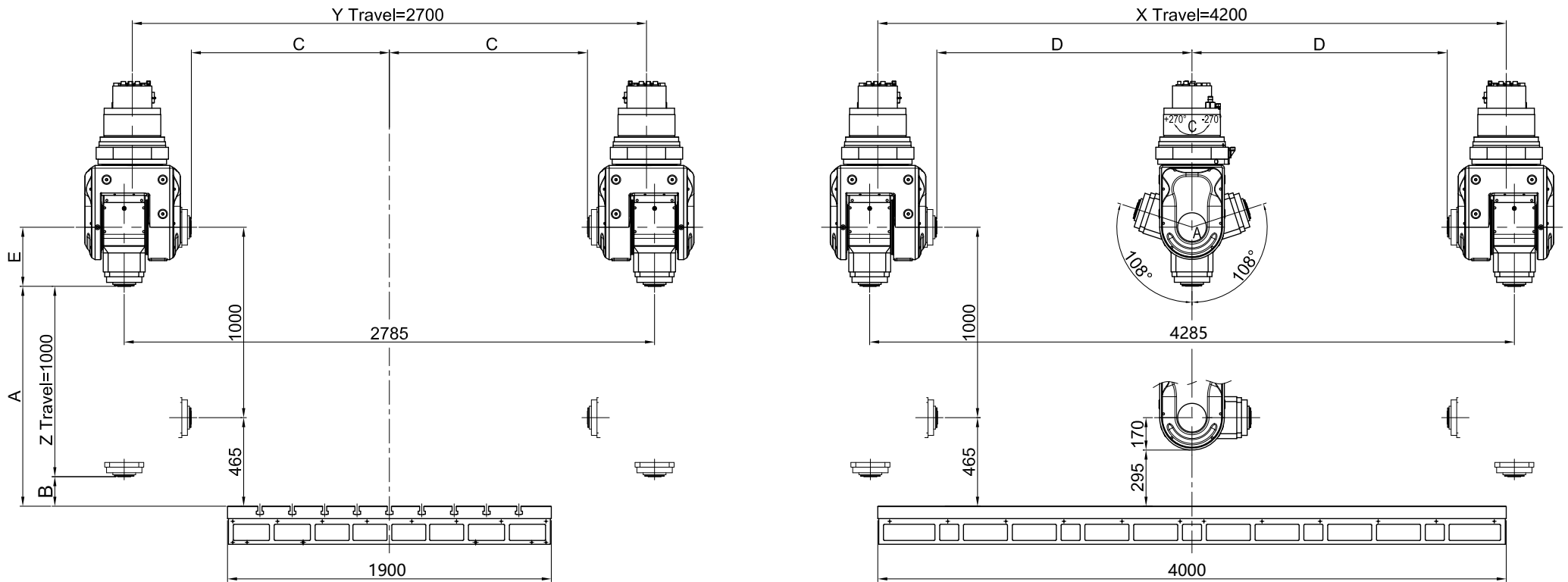
HSK A100-15000rpm

CUTTING AREA OF GT320-5X



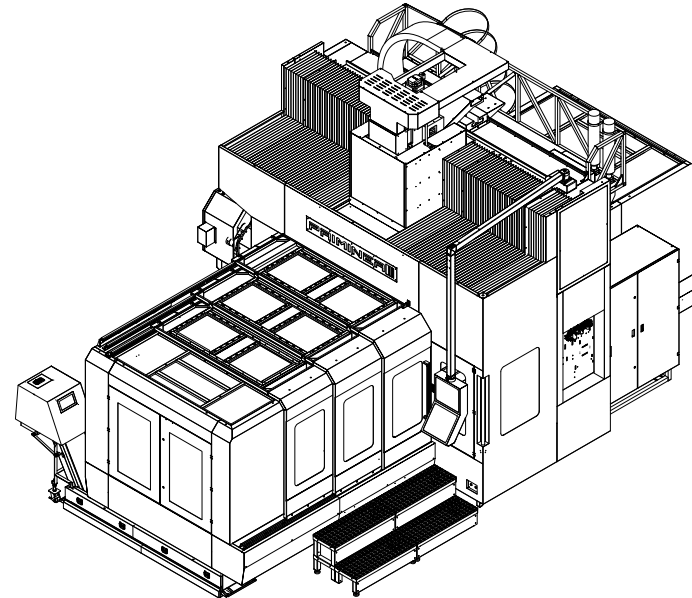
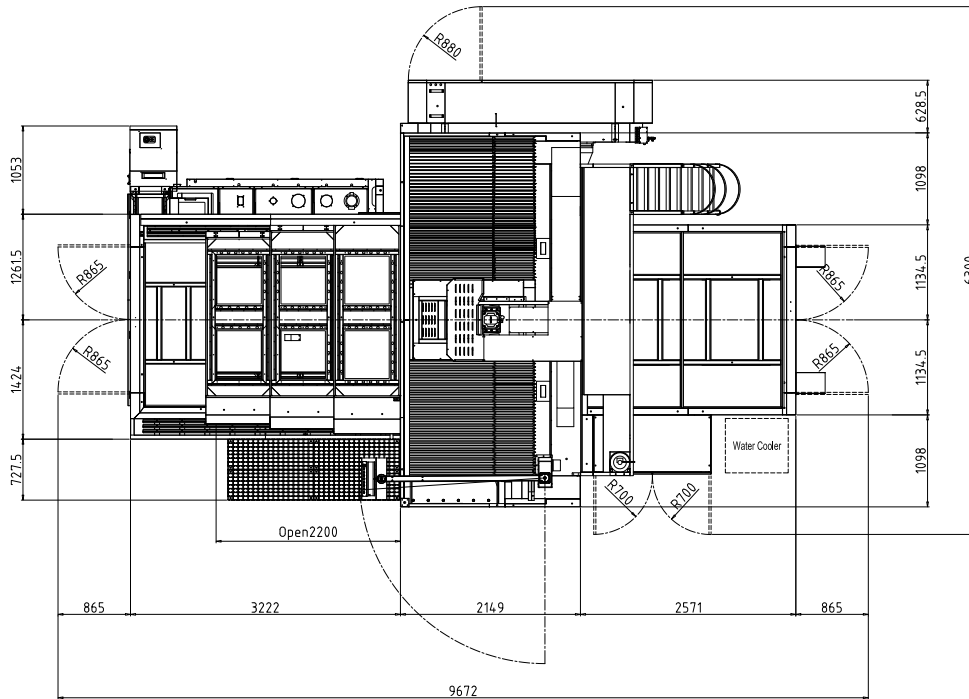
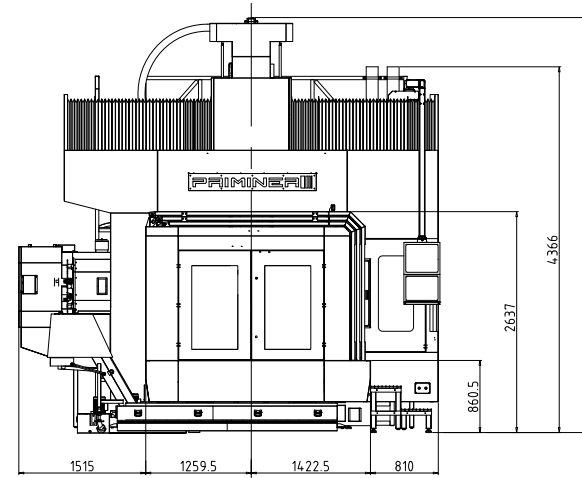
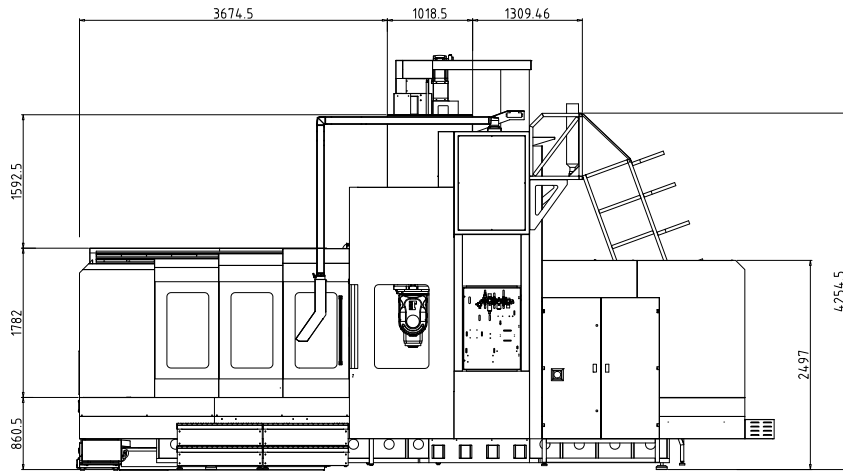
Spindle taper	A	B	C	D	E
HSK A63	1155 mm	155 mm	1040 mm	1340 mm	310 mm
HSK A100	1097.5 mm	97.5 mm	982.5 mm	1282.5 mm	367.5 mm

CUTTING AREA OF GT420-5X

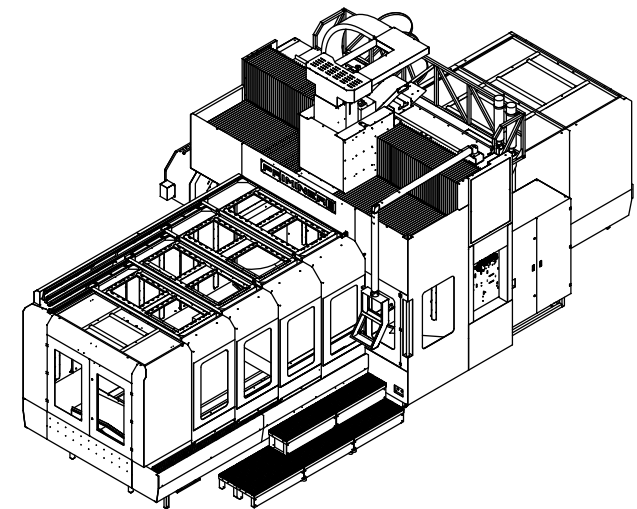
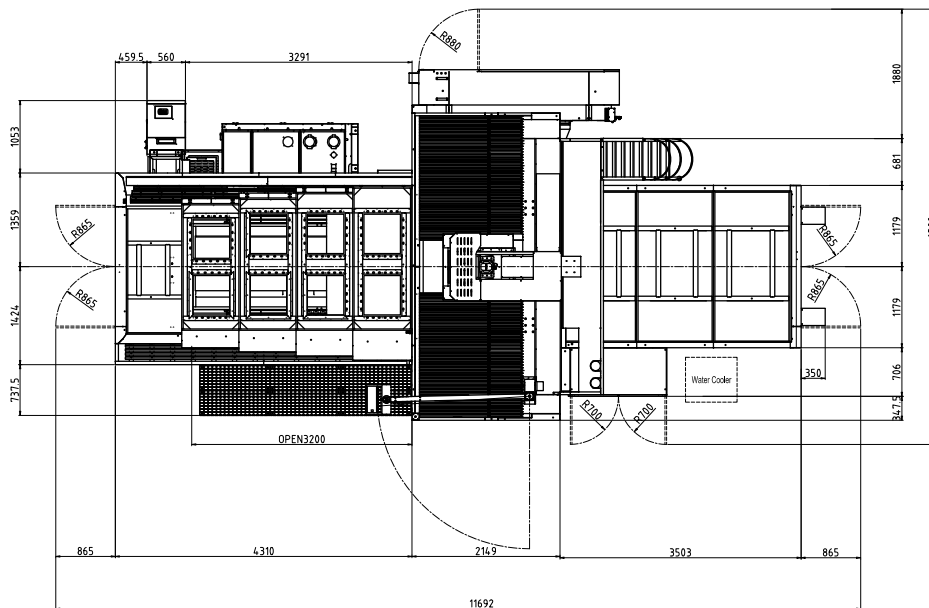
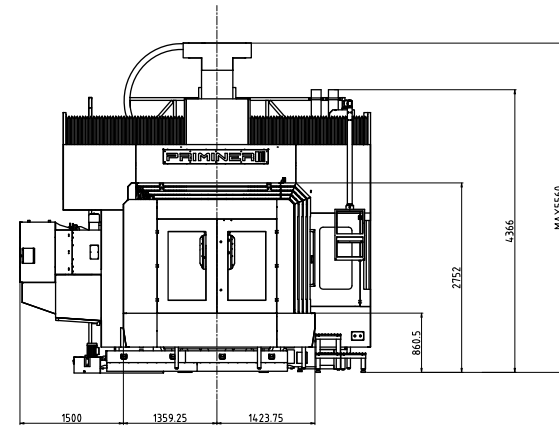
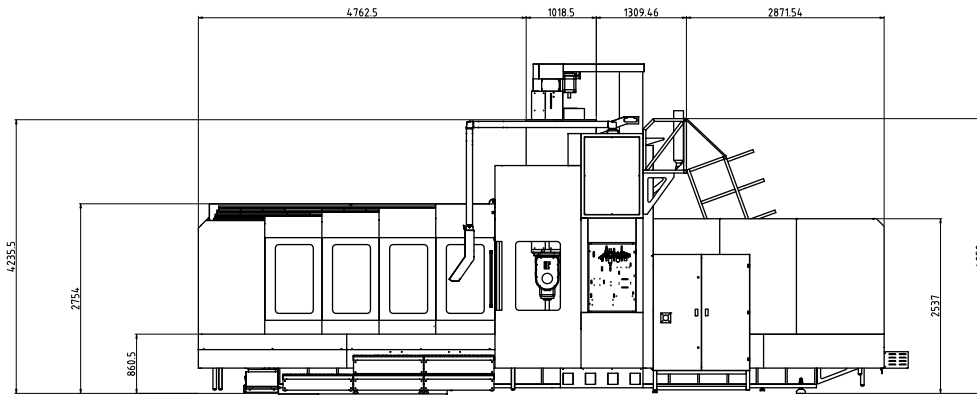


Spindle taper	A	B	C	D	E
HSK A63	1155 mm	155 mm	1040 mm	1790 mm	310 mm
HSK A100	1097.5 mm	97.5 mm	982.5 mm	1732.5 mm	367.5 mm

DIMENSIONS OF GT320-5X



DIMENSIONS OF GT420-5X







IMINER Global TEAM

PRIMINER Solutions



hyperMILL

SolidCAM
The Leaders in Integrated CAM



DIJET NS TOOL

GÜHRING



PL LEHMANN



HAIMER



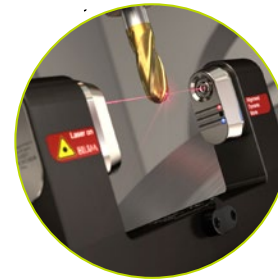
SCHUNK



Blaser.
SWISSLUBE



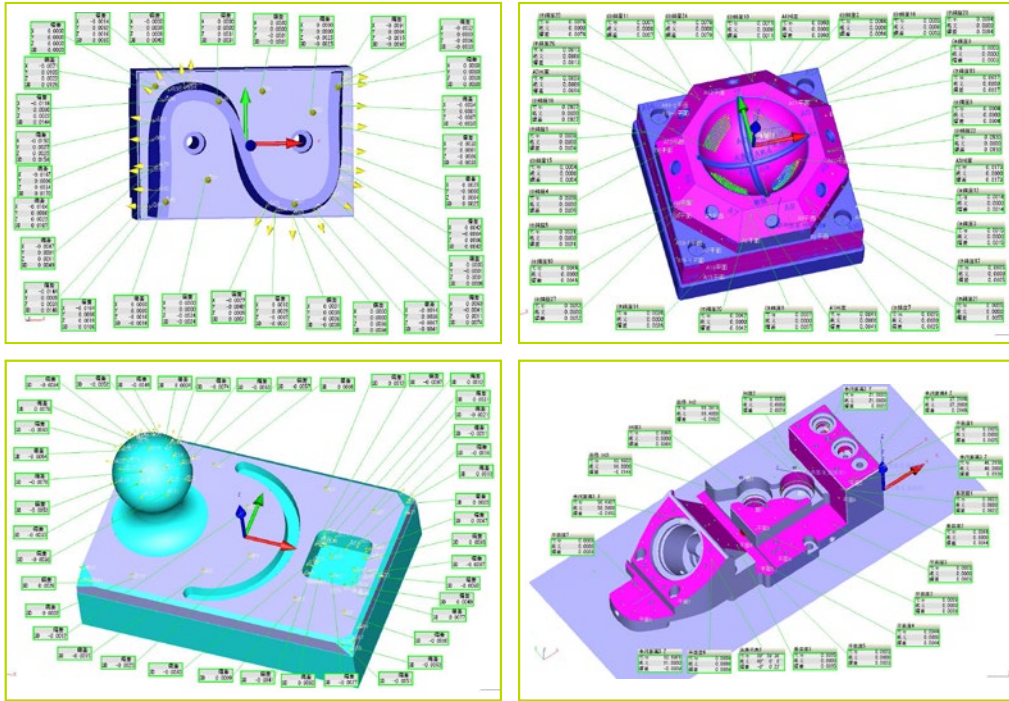
REGO-FIX



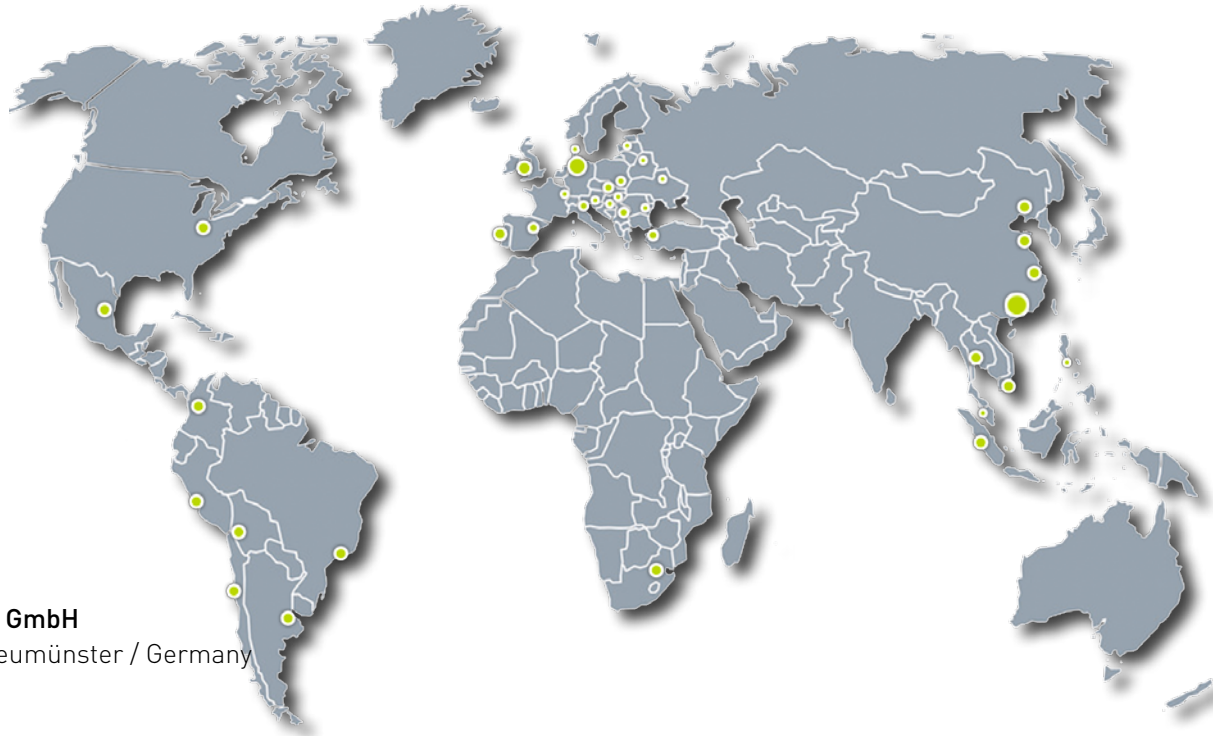
BLUM
focus on productivity



Workpiece measuring by CMM



PRIMINER



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