

PRIMINER

GT320-5X · GT420-5X

5 Axis High Speed Double Column Center



Technical Specifications	GT320-5X	GT420-5X
Table size	3300×1700 mm	4000×1900 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	

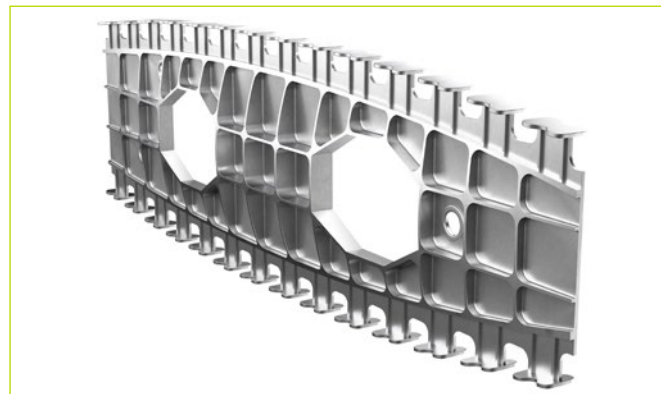


APPLICATIONS

● Aerospace

● Big Die & Mold

● Machine struction



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

60 pockets chain type tool changer

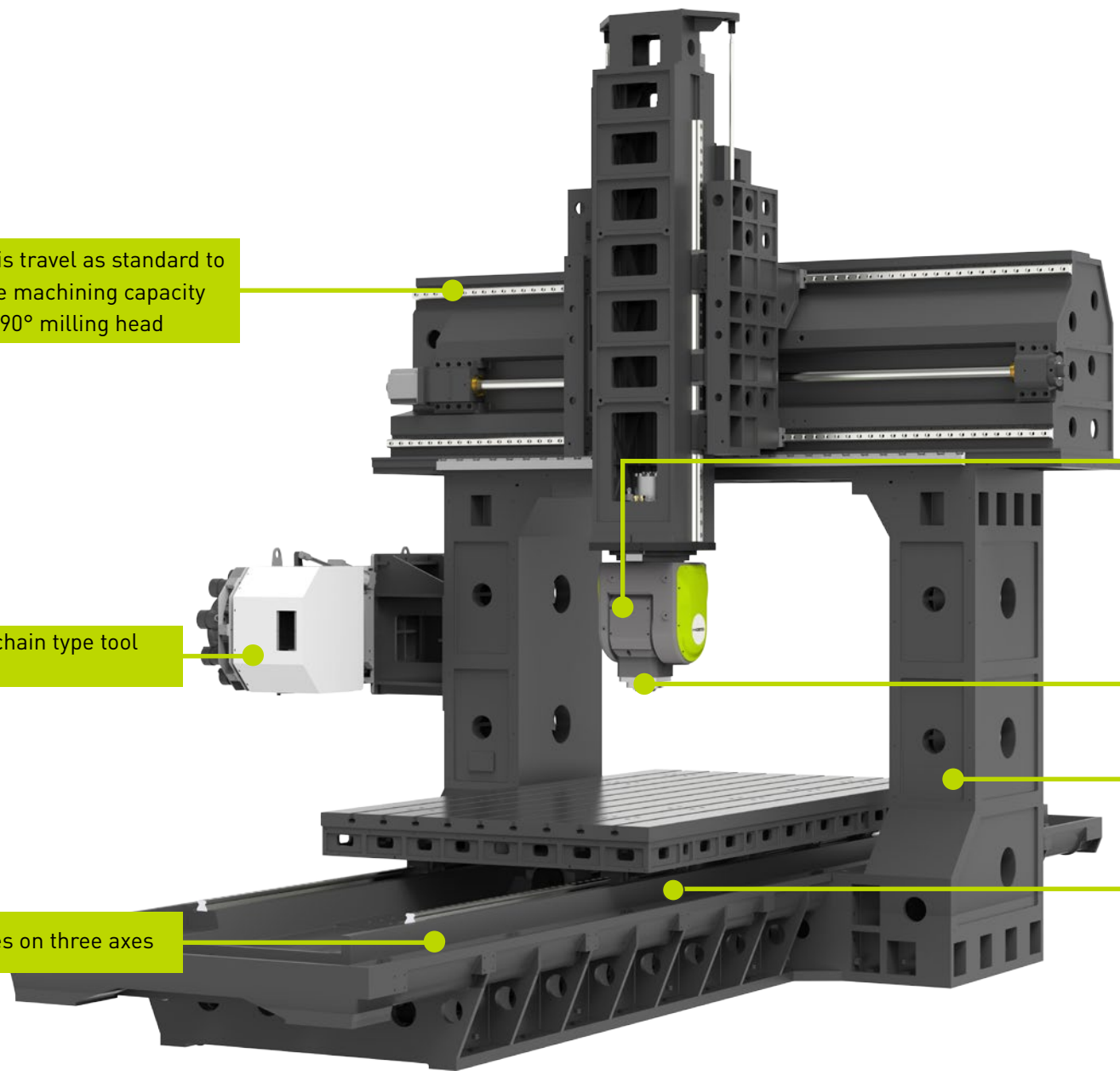
Linear scales on three axes

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



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

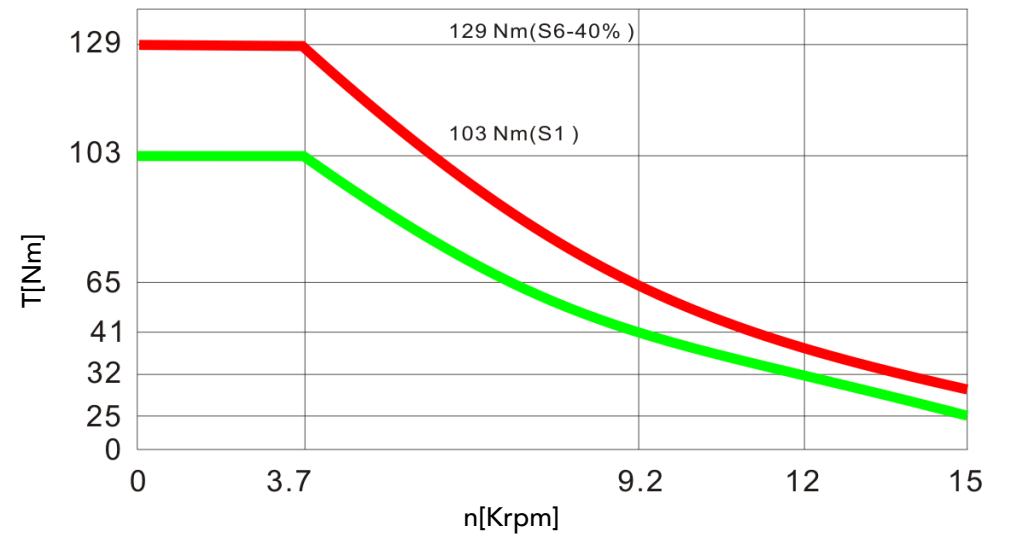
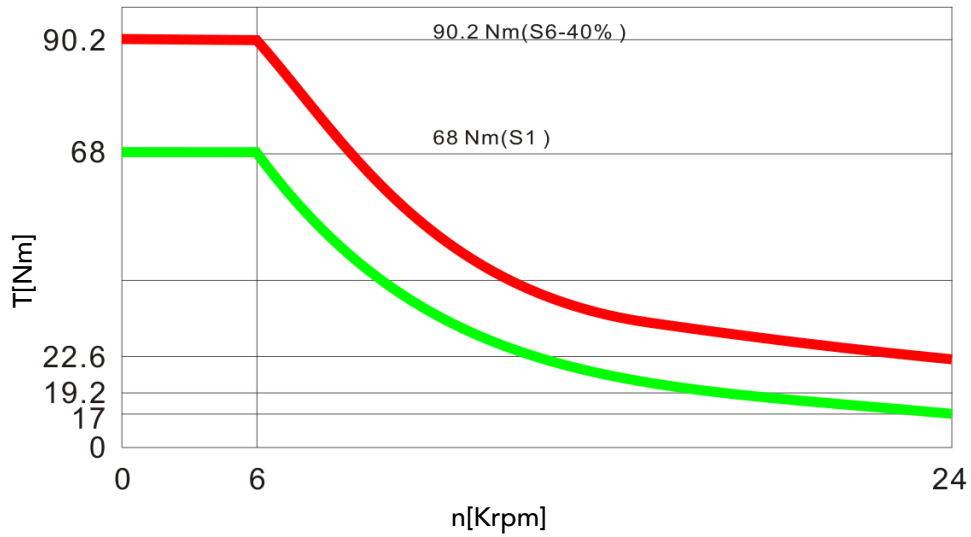
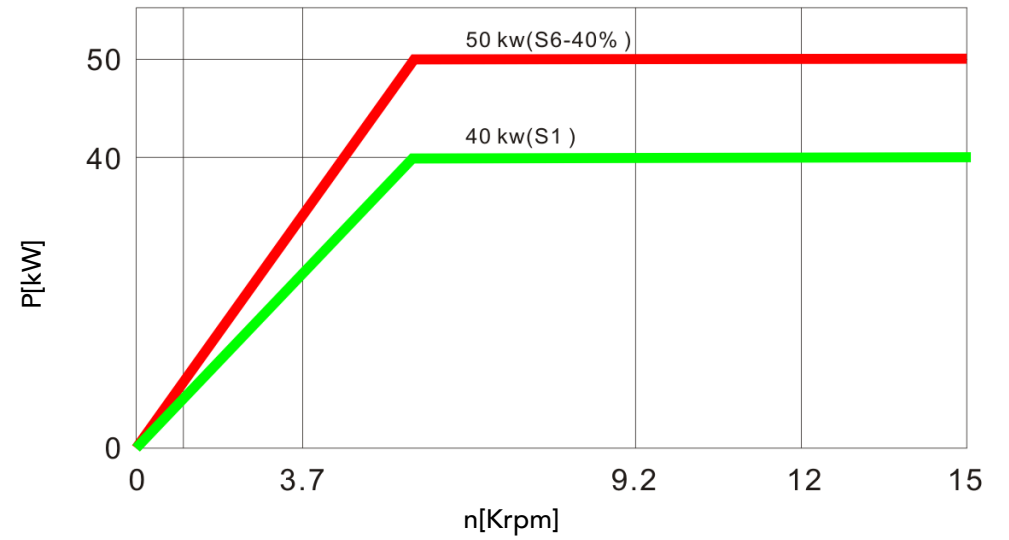
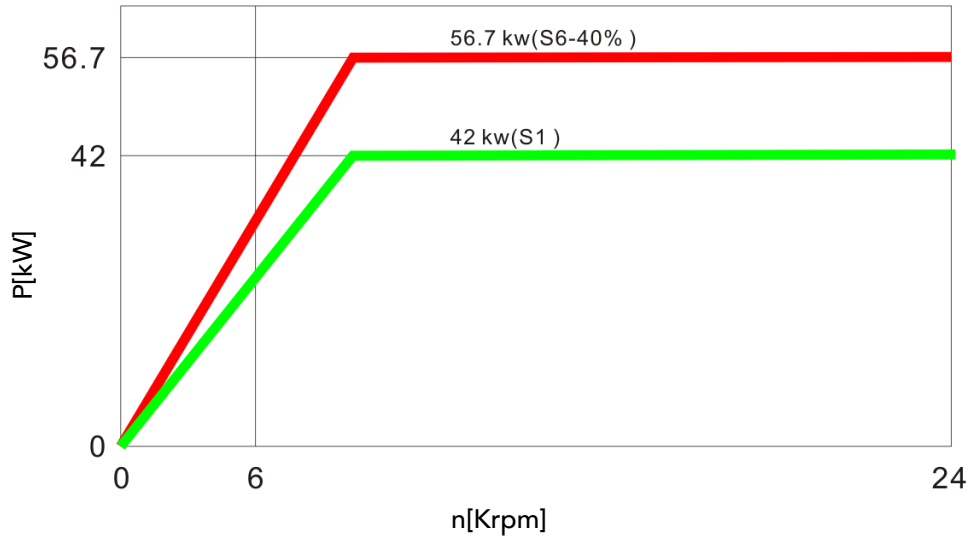
Technical Specifications	GT320-5X	GT420-5X
Table		
Table size	3300×1700 mm	4000×1900 mm
T-slot (width x number x distance)	22×9×170 mm	22×11×170 mm
Max. load	10000 kg	12000 kg
Travel		
X/Y/Z Travel	3300/2700/1000 mm	4200/2700/1000 mm
Spindle nose to table	155-1155 mm(HSK A63)/100-1100 mm(HSK A100)	
90°spindle 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	●	

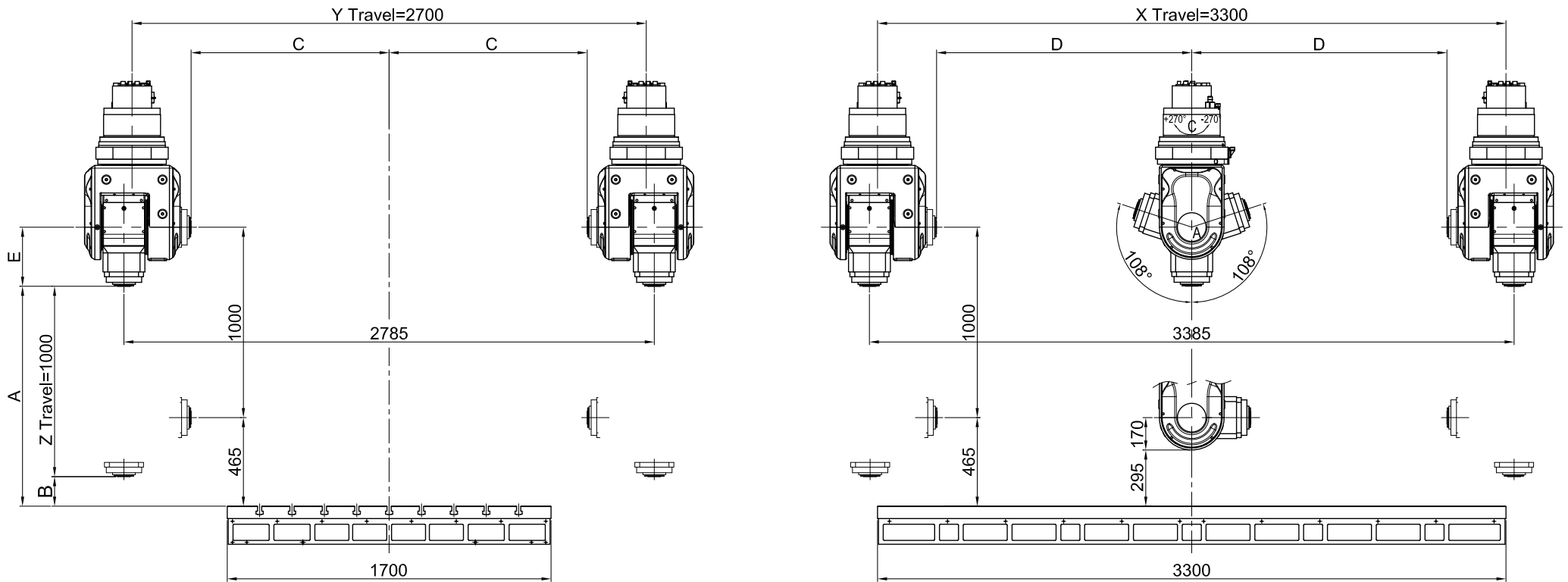
TORQUE DIAGRAM



HSK A63-24000rpm

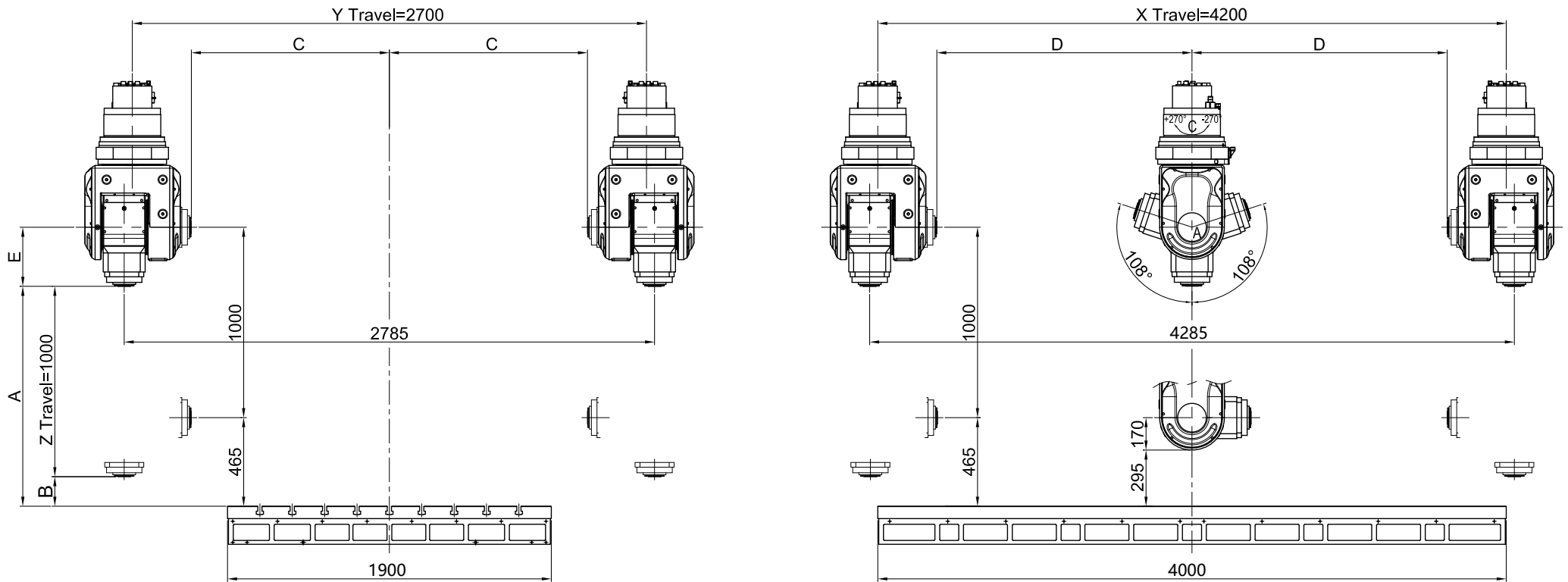
HSK A100-15000rpm

CUTTING AREA OF GT320-5X



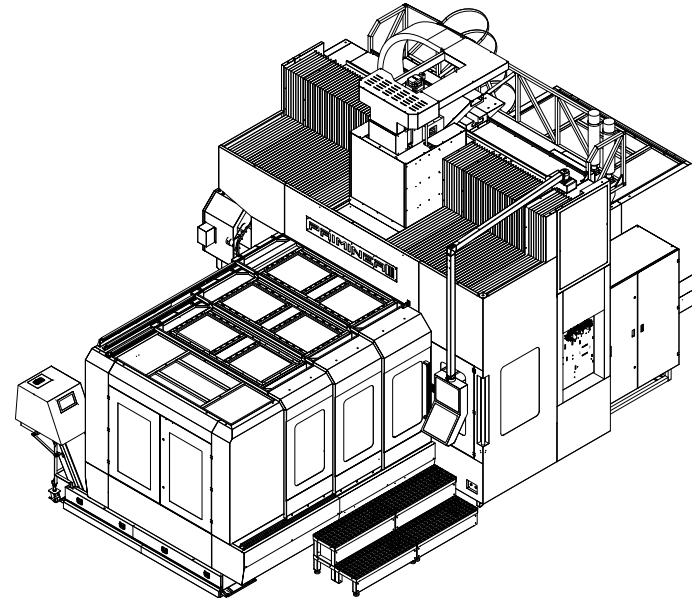
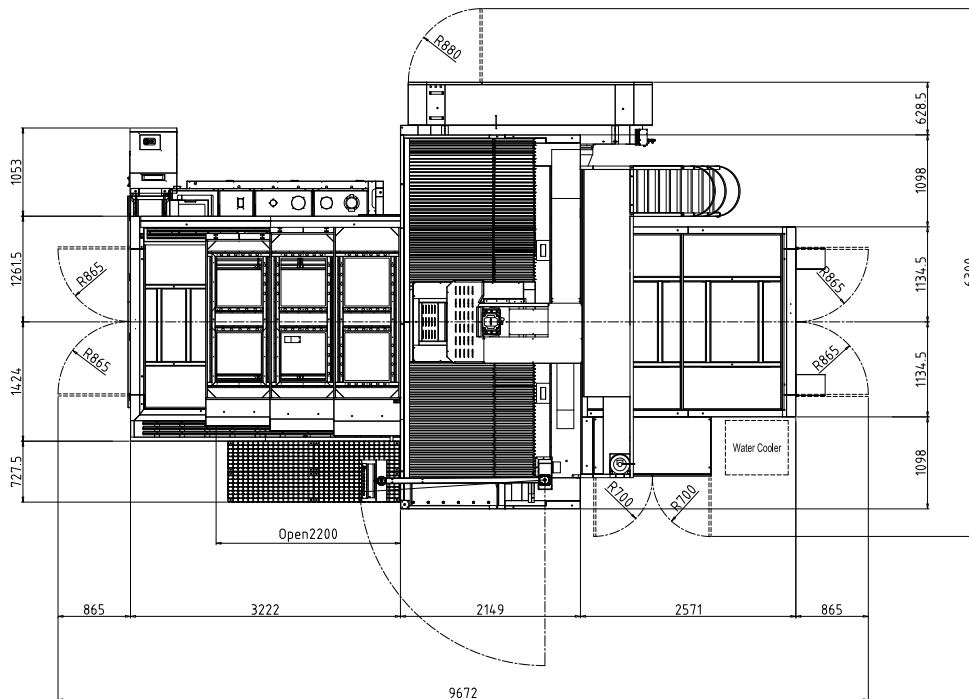
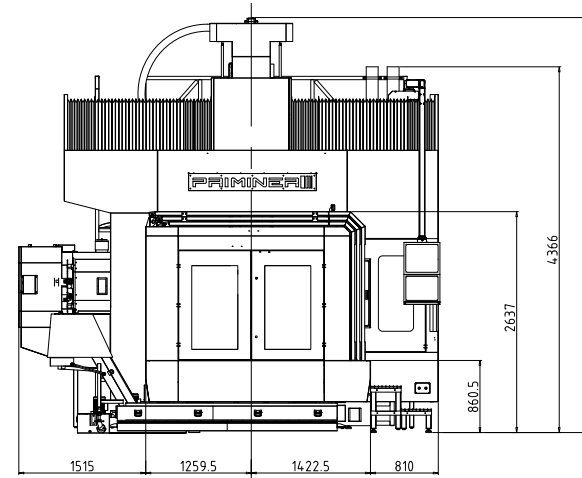
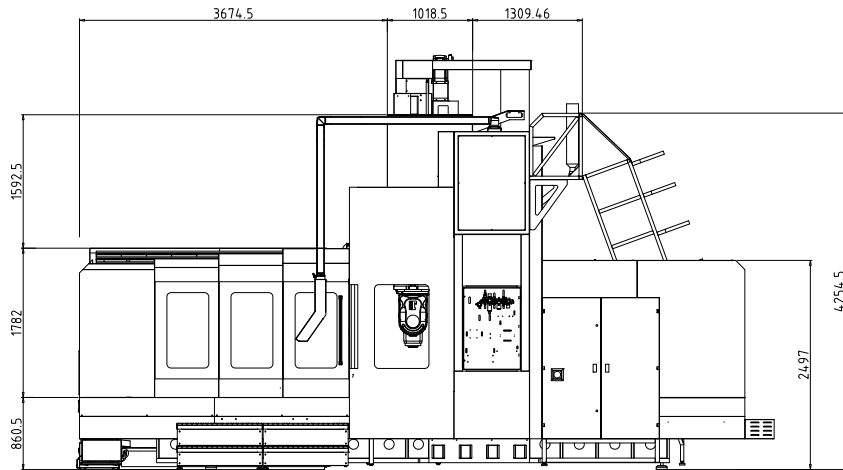
Spindle taper	A	B	C	D	E
HSK A63	1155 mm	155 mm	1040 mm	1340 mm	310 mm
HSK A100	1097.5 mm	97.5 mm	982.5 mm	1282.5 mm	367.5 mm

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







IMINER Global TEAM

PRIMINER Solutions



hyperMILL

DIJET NS TOOL

SolidCAM
The Leaders in Integrated CAM

GÜHRING



pl LEHMANN



HAIMER



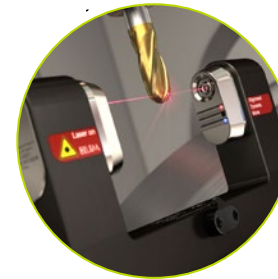
SCHUNK



Blaser
SWISSLUBE



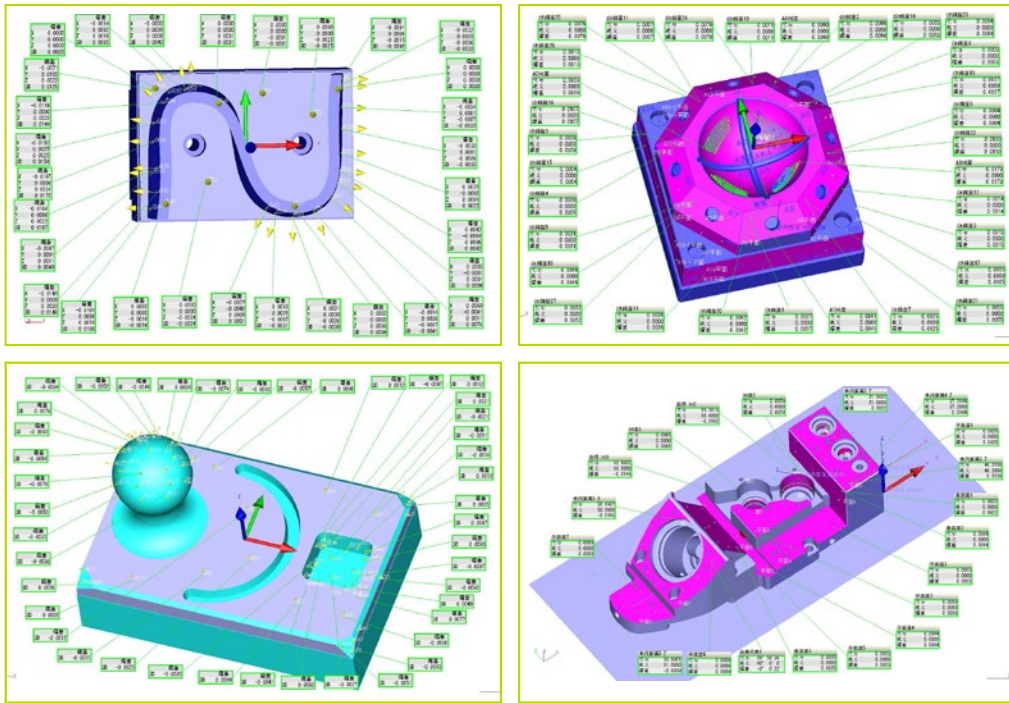
REGO-FIX



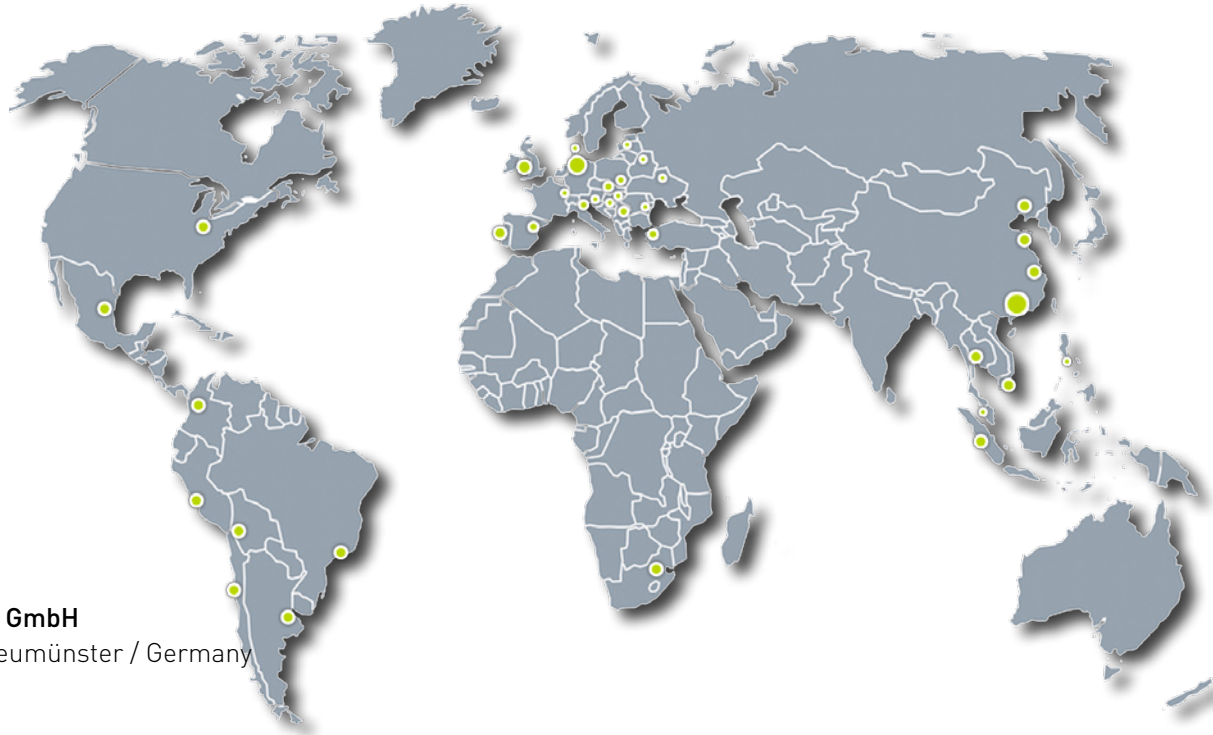
BLUM
focus on productivity



Workpiece measuring by CMM



PRIMINER



PRIMINER Werkzeugmaschinen GmbH

Tungendorfer Str.10 · D-24536 Neumünster / Germany
Tel: +49 (0) 4321-53 9946 -0
Fax: +49 (0) 4321-25 2003 -90
E-mail: info@priminer.de

PRIMINER SOUTH EAST EUROPE · PRIMINER d.o.o. BEOGRAD

Vladimira Popovica 38-40 · GTC - 11070 Beograd / Srbija
Tel: +381 69 702 705
Fax: +381 11 715 69 00
E-mail: office@priminer.de

PRIMINER MACHINE TOOLS DONGGUAN CO., LTD

XinRuYi Industrial Park, Fuxing Road, Xingguang Village, Huangjiang Town, Dongguan, P.R.China
Tel: +86 769 838 490 61
Fax: +86 769 838 490 62
E-mail: sales@priminer.de

www.priminer.de