

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 | 24 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

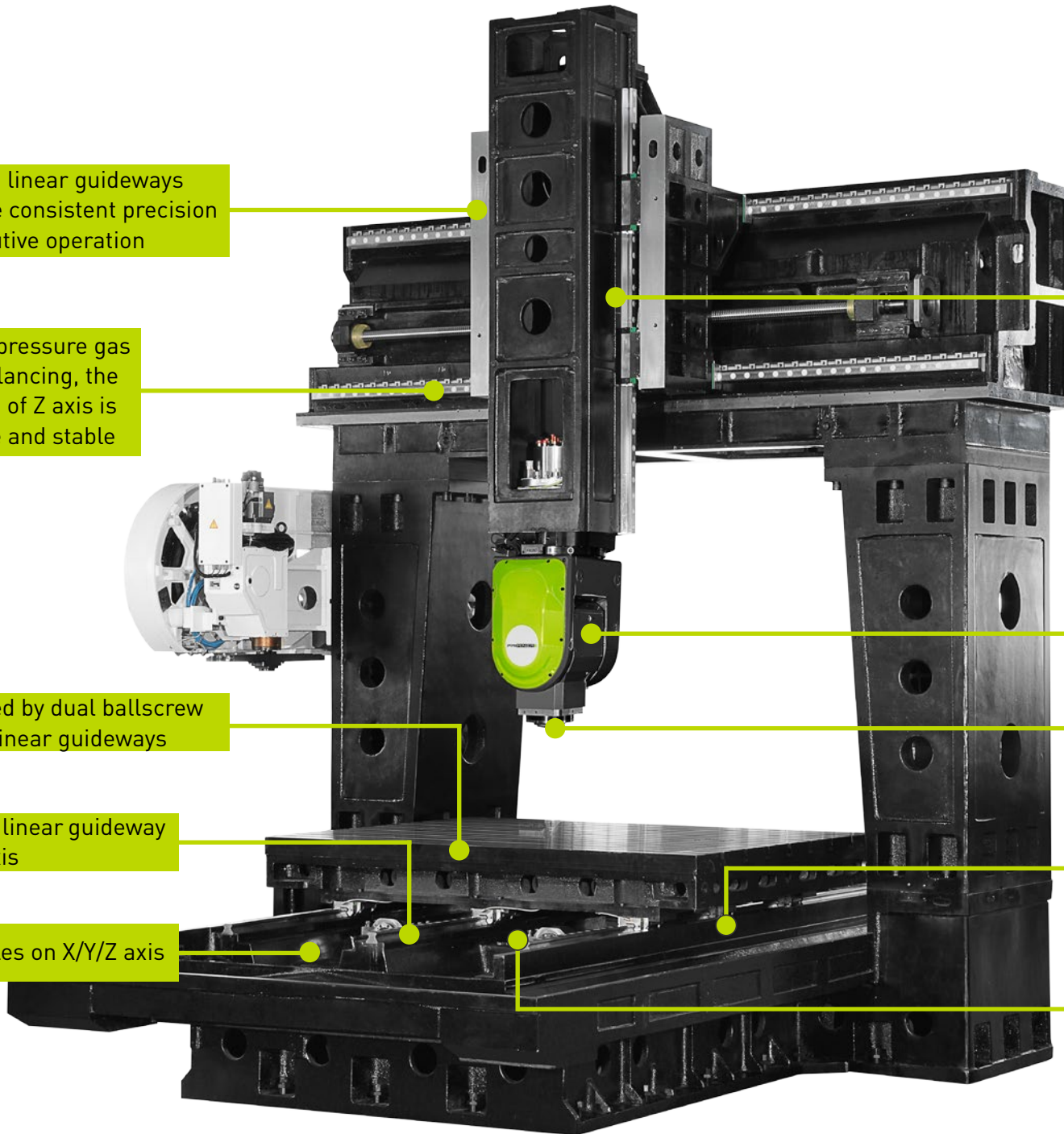
With symmetrical Z axis linear guideways design on both sides of headstock, to make sure high rigidity

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 (optional)



DD DRIVEN DOUBLE ARM HEAD

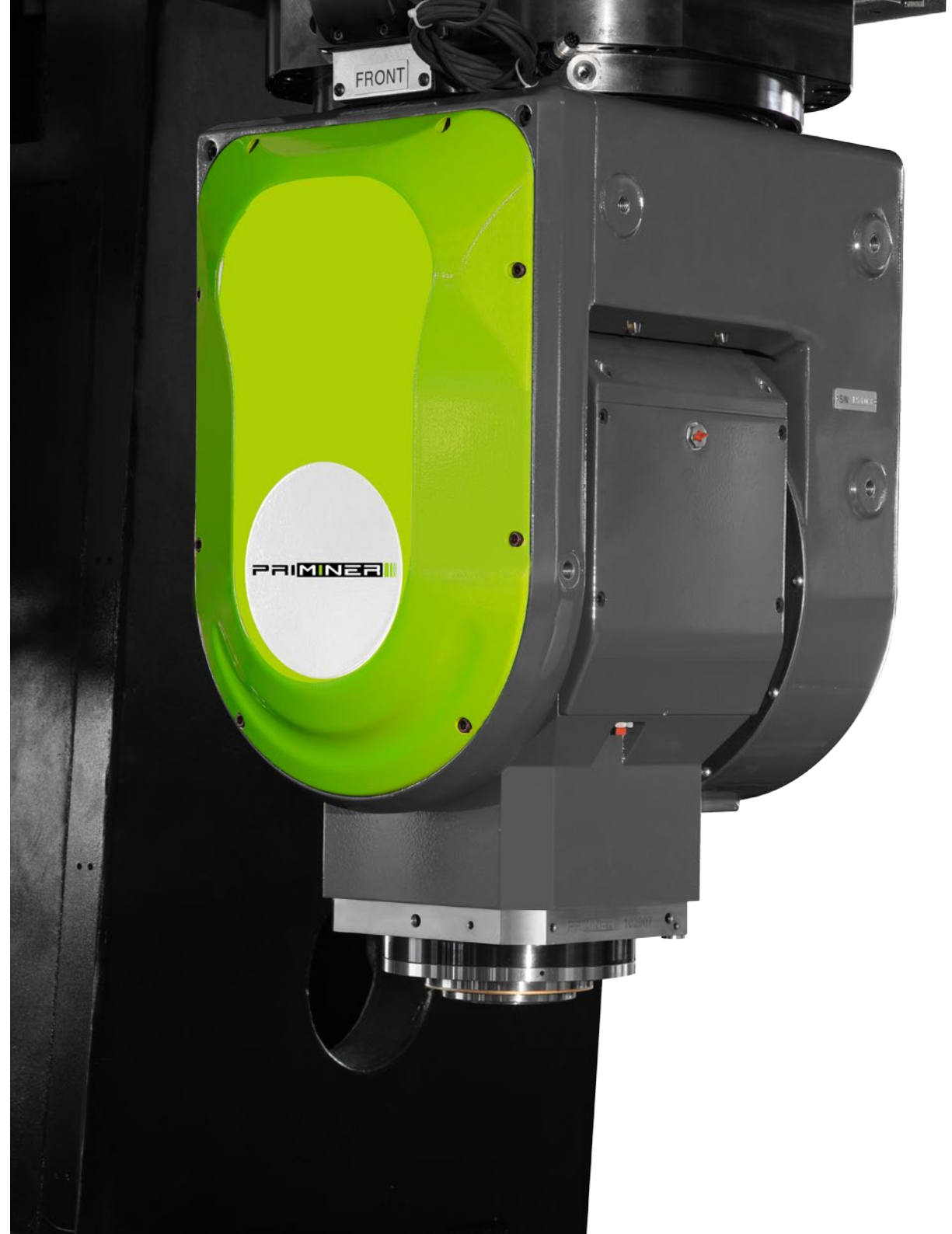
- Direct Drive motor on B/C axis
- B axis travel $\pm 108^\circ$
- C axis travel $\pm 270^\circ$
- B axis clamping torque 2000 Nm
- C axis clamping torque 3000 Nm

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



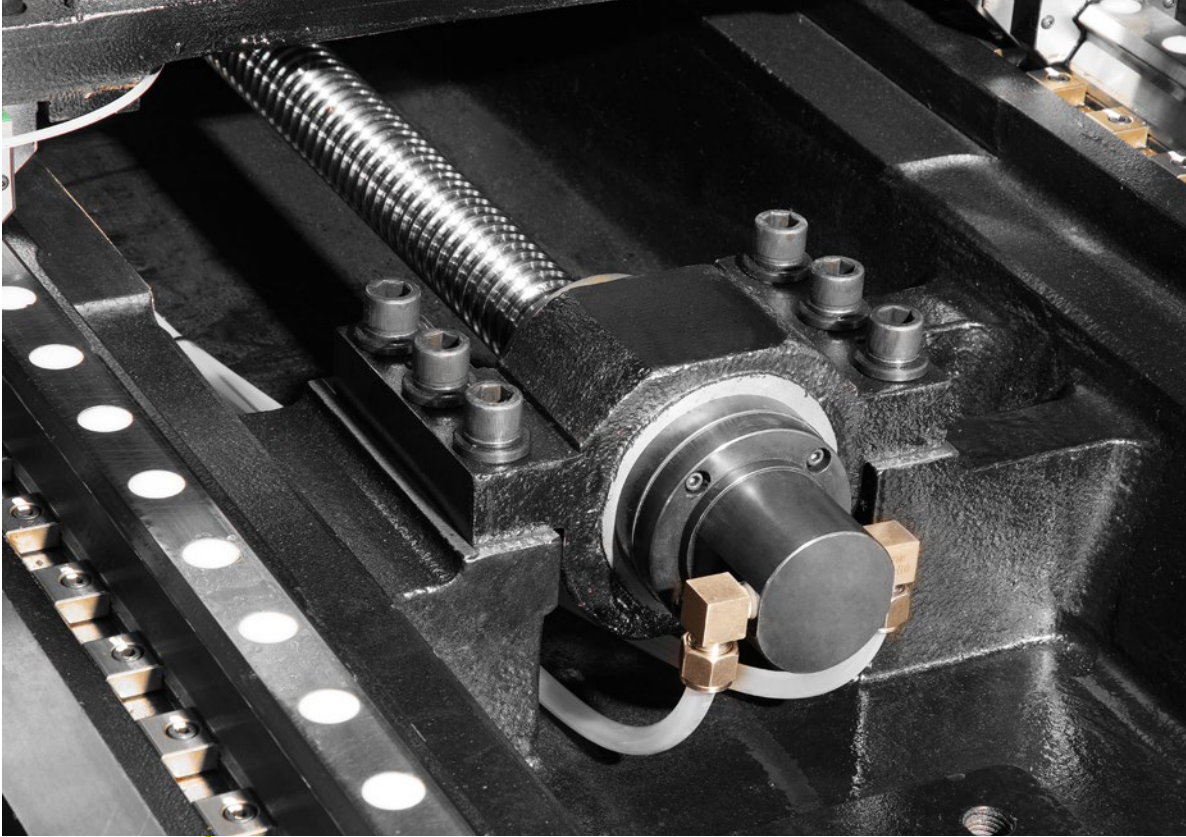
DUAL DRIVE TECHNOLOGY

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(optional)



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

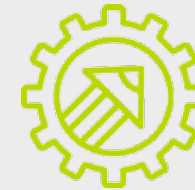
- Number of tools 60
- Max.tool length 300 mm
- Max.tool diameter $\Phi 78/\Phi 150\text{mm}$ (next release)
- Max.tool weight 8 kg

HSK A100

- Number of tools 40
- Max.tool length 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

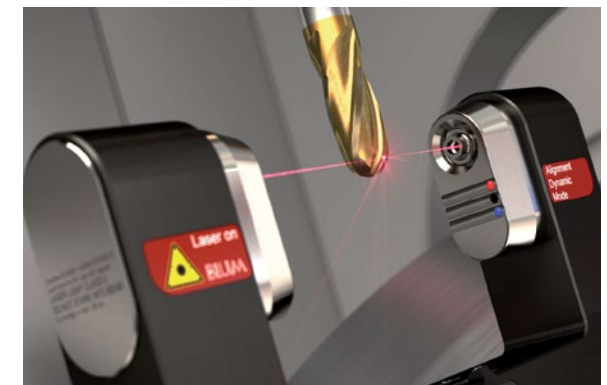
- ✓ Detection of workpiece position
- ✓ Correction of workpiece orientation
- ✓ Thermal compensation of the machine tool
- ✓ Contour measurement

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
- ✓ 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

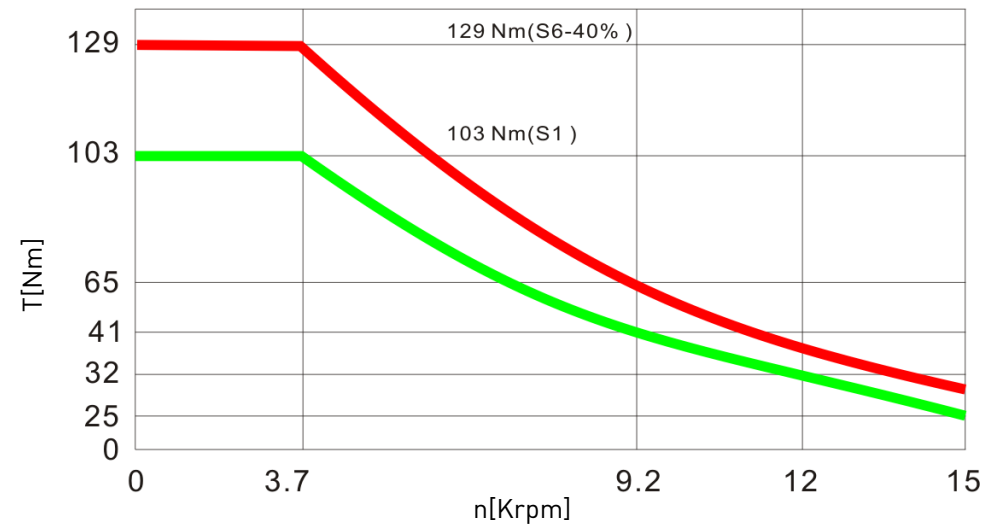
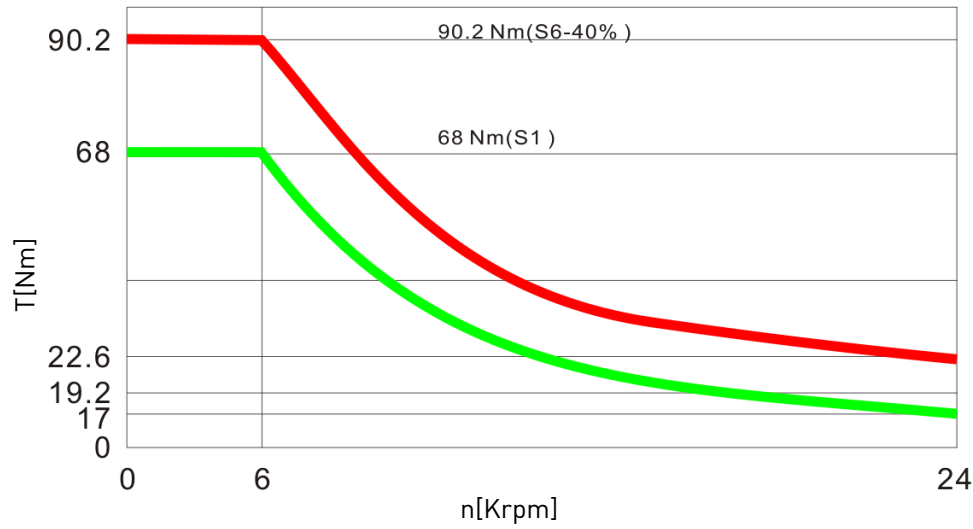
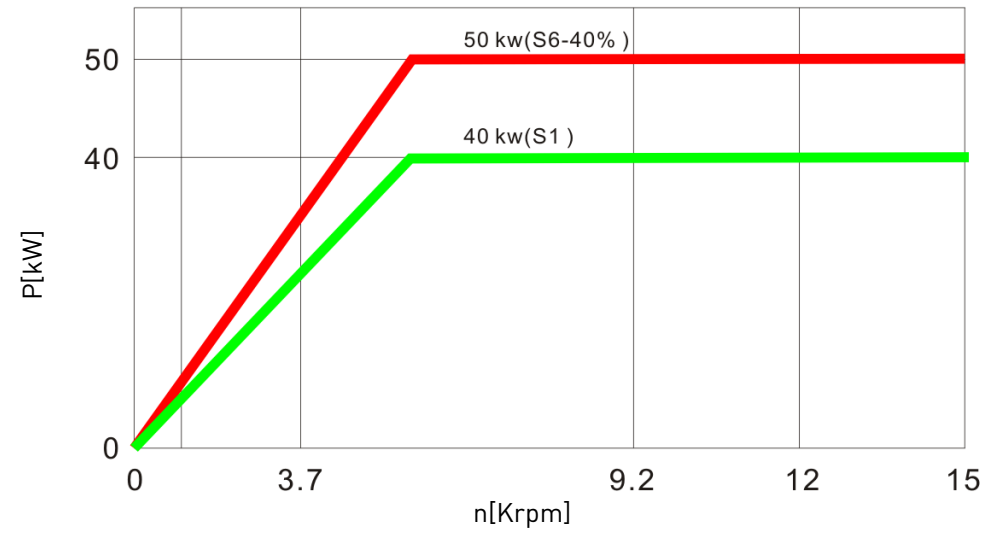
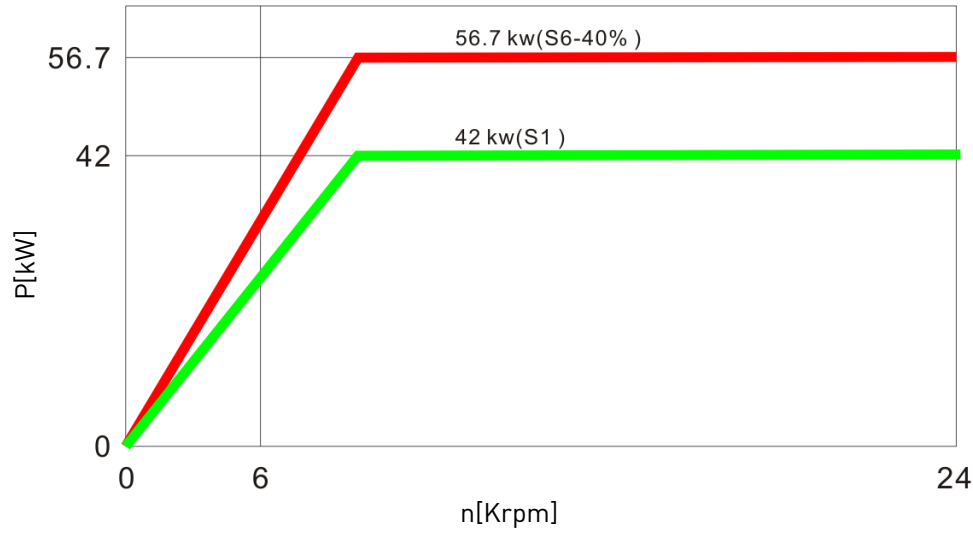
| | | GT18-5X | |
|---------------------------------------|---|---------|--------------------------|
| Table | | | |
| Table size | 1800 x 1400 mm | | |
| T-slot(width x number x distance) | 22 x 7 x 170 mm | | |
| Max.load | 6000 kg | | |
| Travel | | | |
| X/Y/Z Travel | 1900 / 1400 / 800 mm | | |
| 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 | 24 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 throught 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 | ● | |

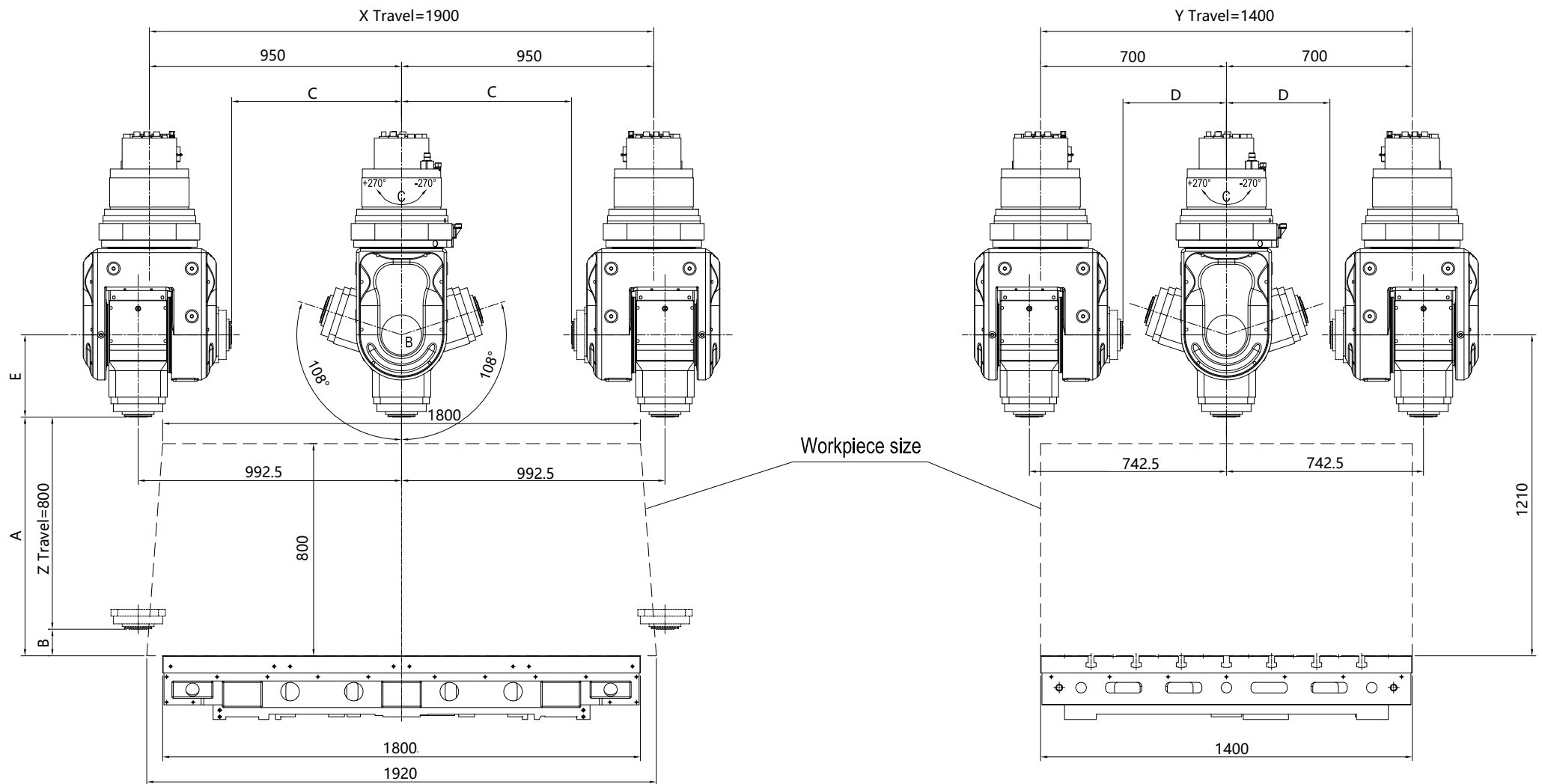
TORQUE DIAGRAM



HSK A63-24000 rpm

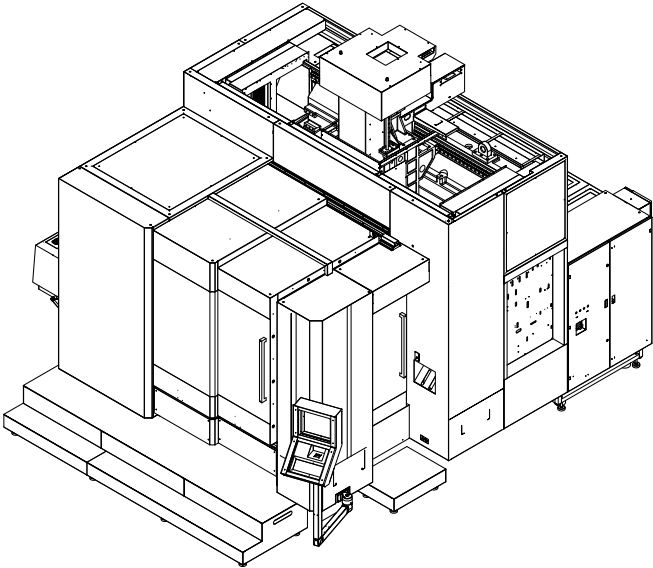
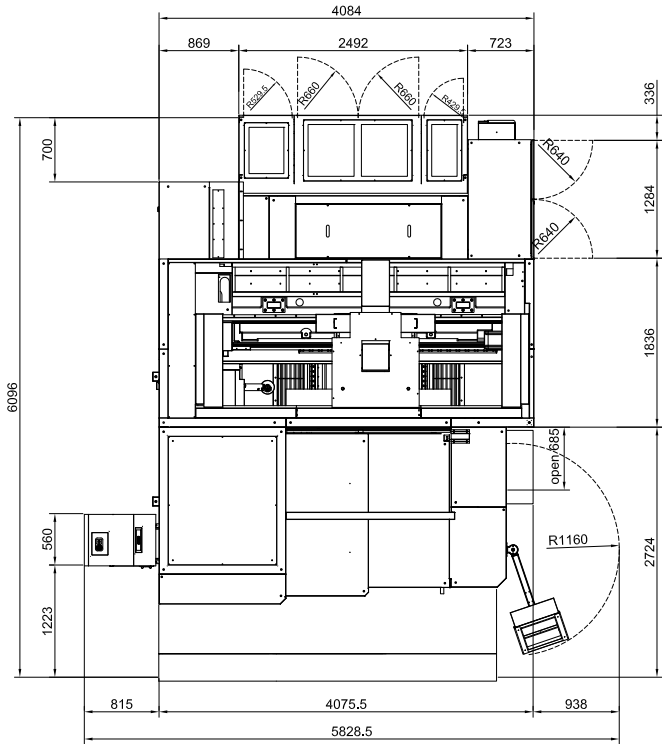
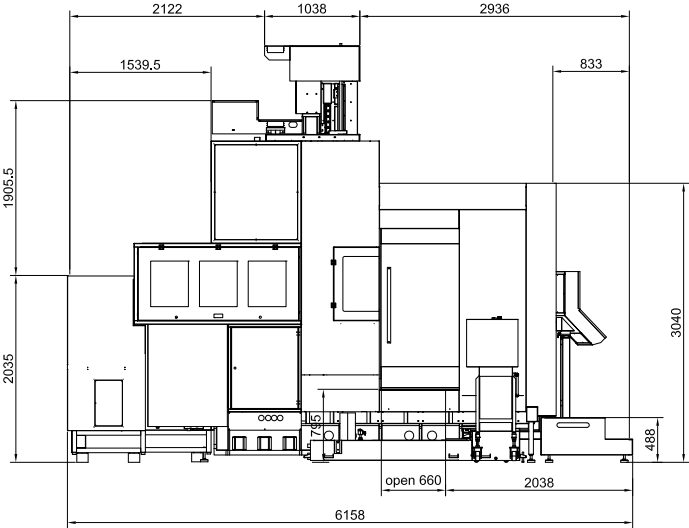
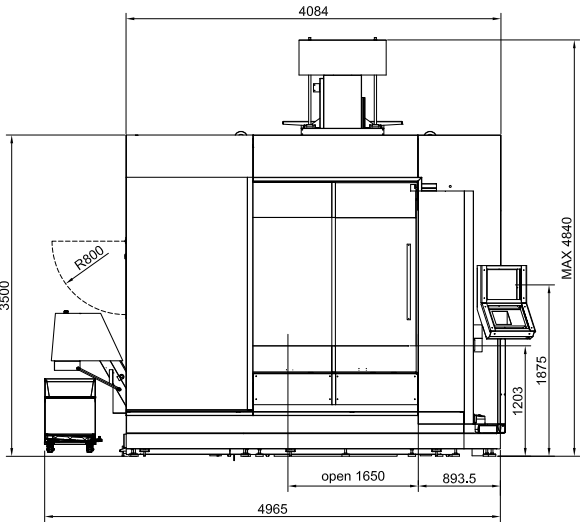
HSK A100-15000 rpm

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 |

DIMENSIONS







IMINER Global TEAM

PRIMINER Solutions



hyperMILL

DIJET NS TOOL

SolidCAM
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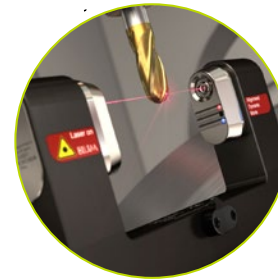
SCHUNK



Blaser.
SWISSLUBE



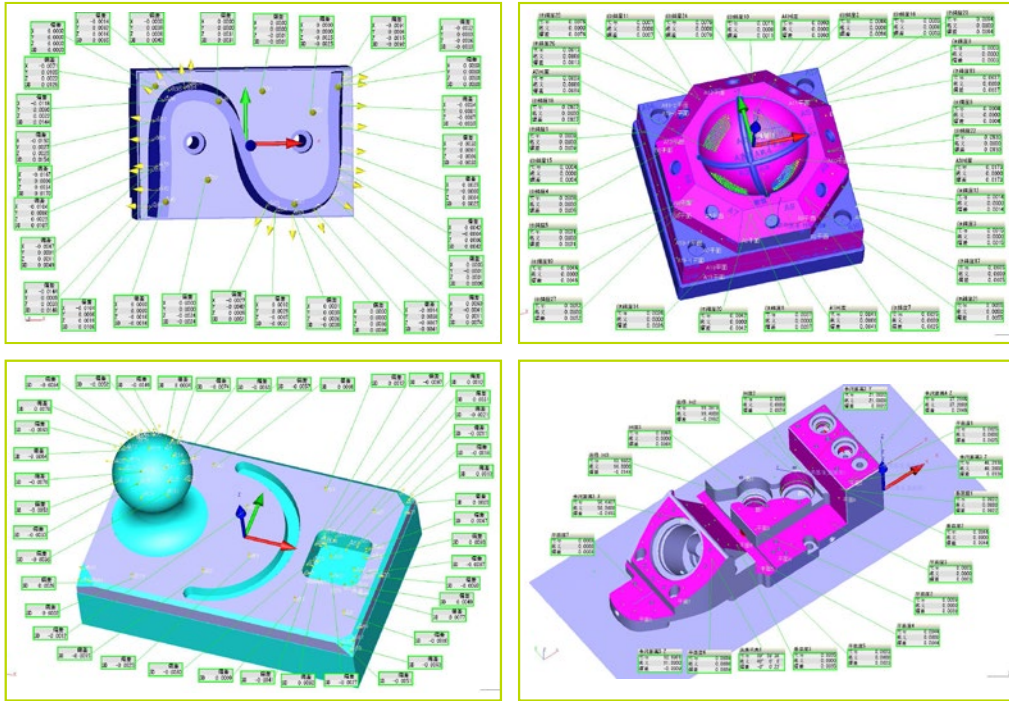
REGO-FIX



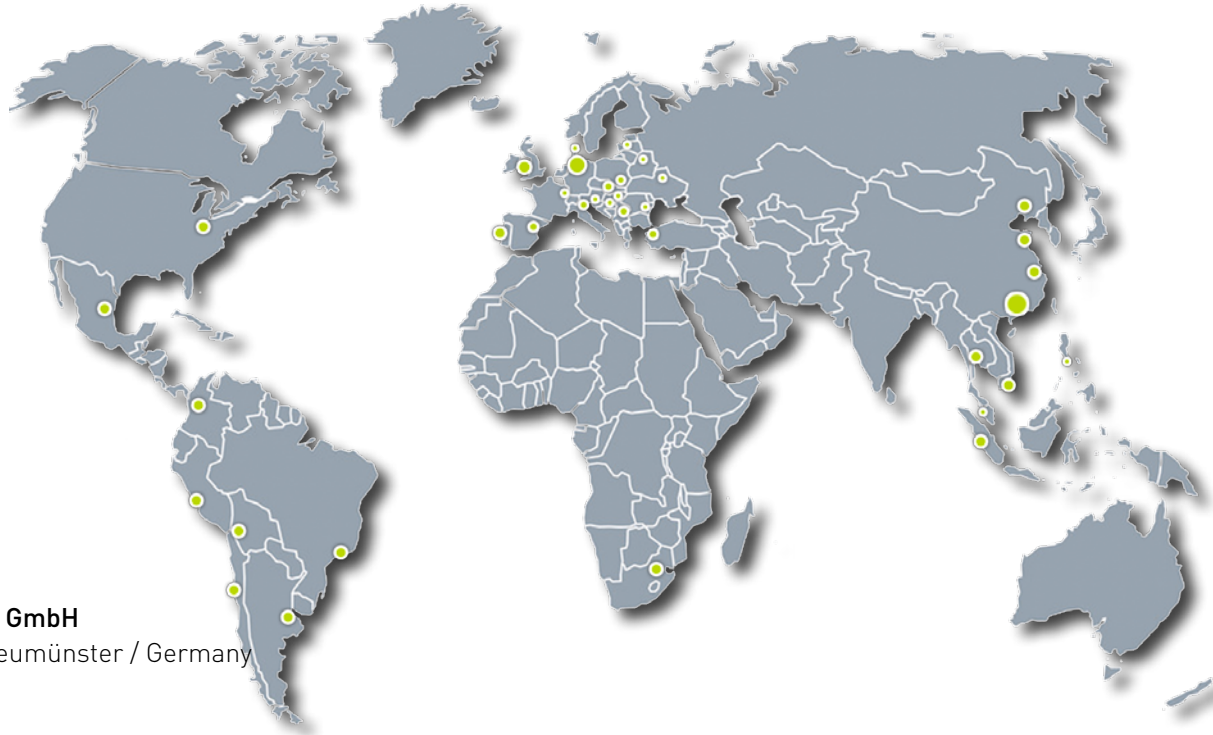
BLUM
focus on productivity



Workpiece measuring by CMM



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