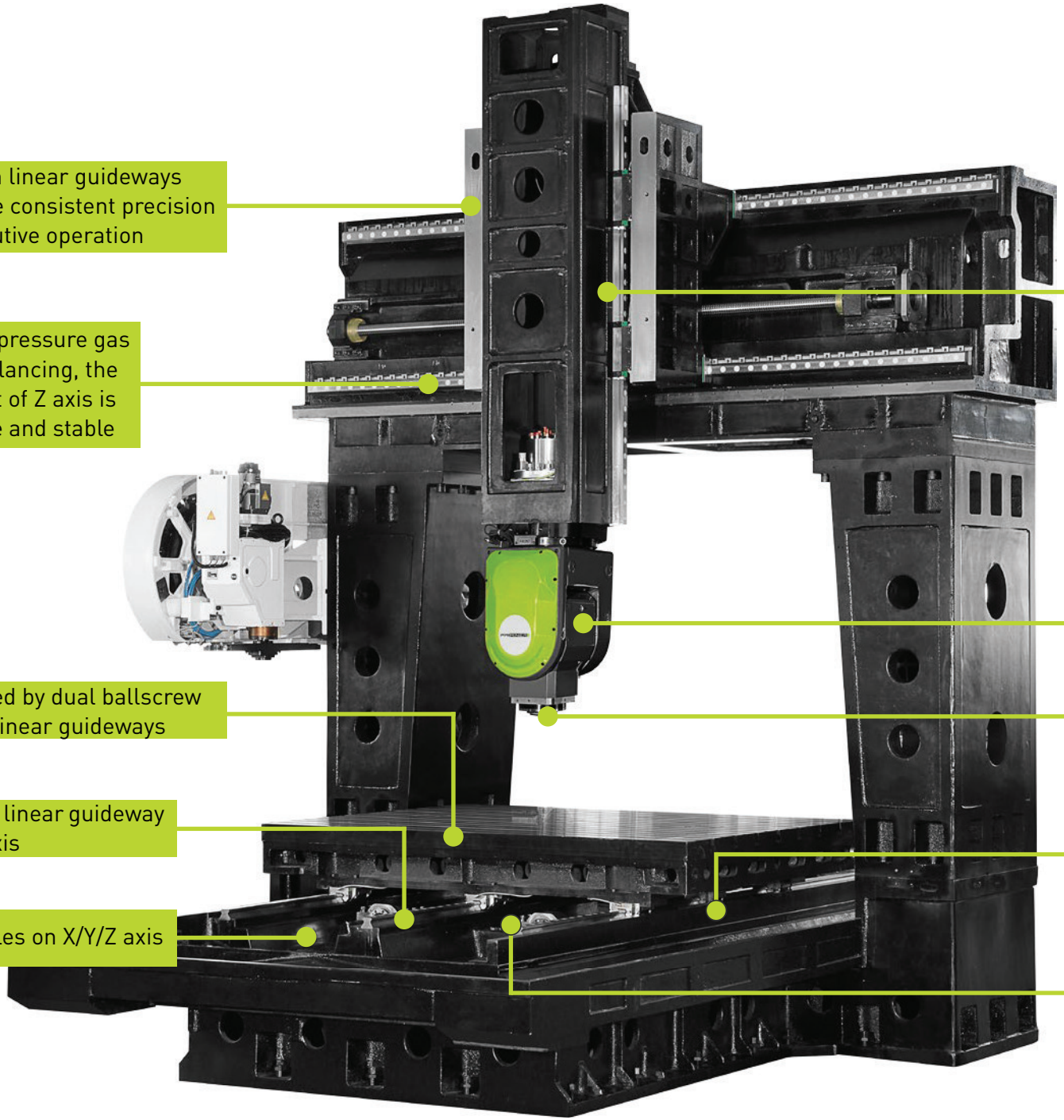
PRIMINER

# 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 |
| Spindle speed | 24000 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 HSK A63

Two screw type and one chain type chip conveyor

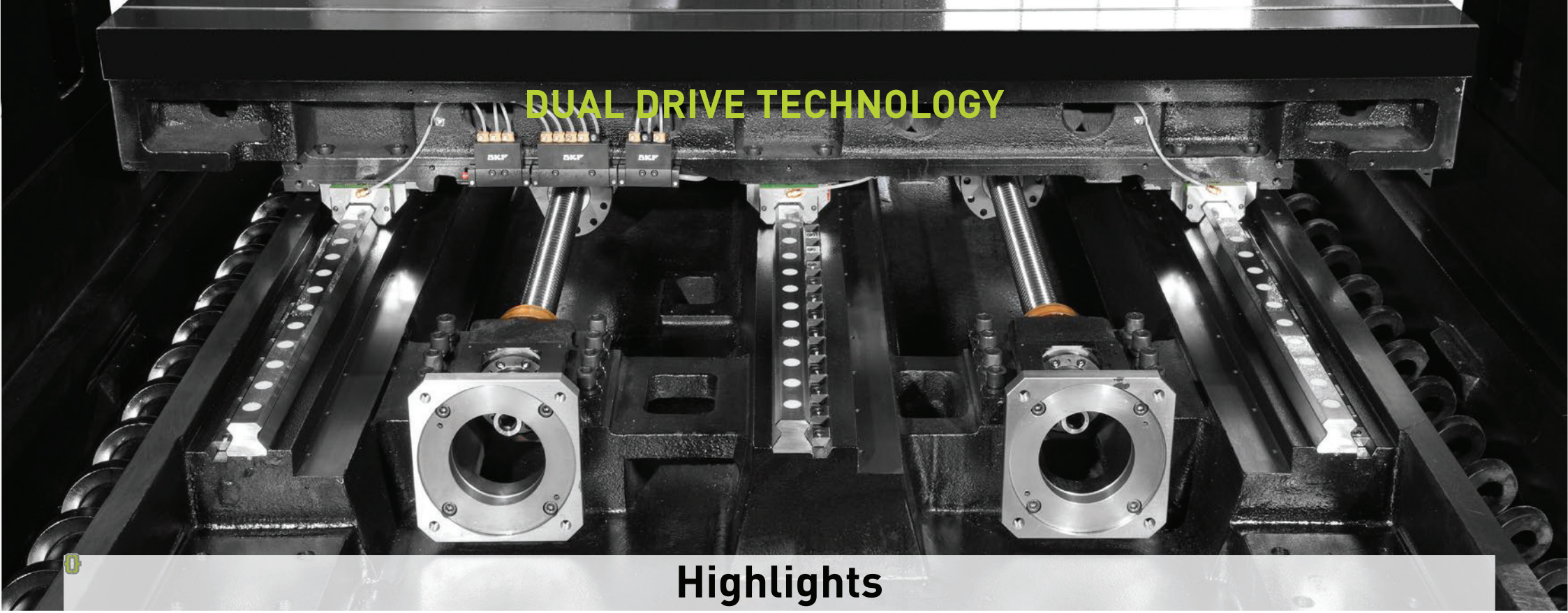
Oil cooling through ballscrew (optional)

# DD DRIVEN DOUBLE ARM HEAD

- Direct Drive motor on B/C axis
- B axis travel ±108°
- C axis travel ±270°
- 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



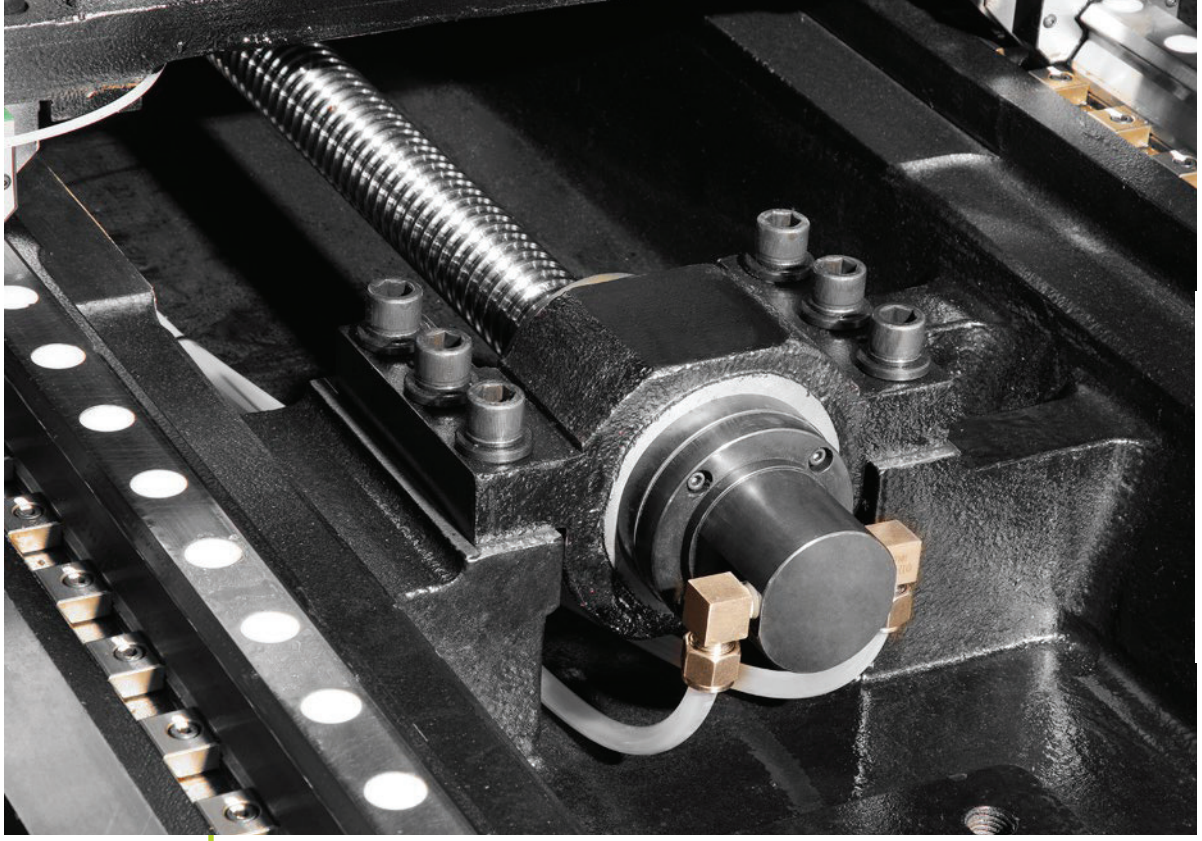
# DUAL DRIVE TECHNOLOGY

## 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 lenth 300 mm
- Max.tool diameter Φ78/Φ150mm(next release)
- Max.tool weight 8 kg

# USER-FRIENDLY DESIGN


### Rotatable operation panel

Allows users to operate at any angle and position.

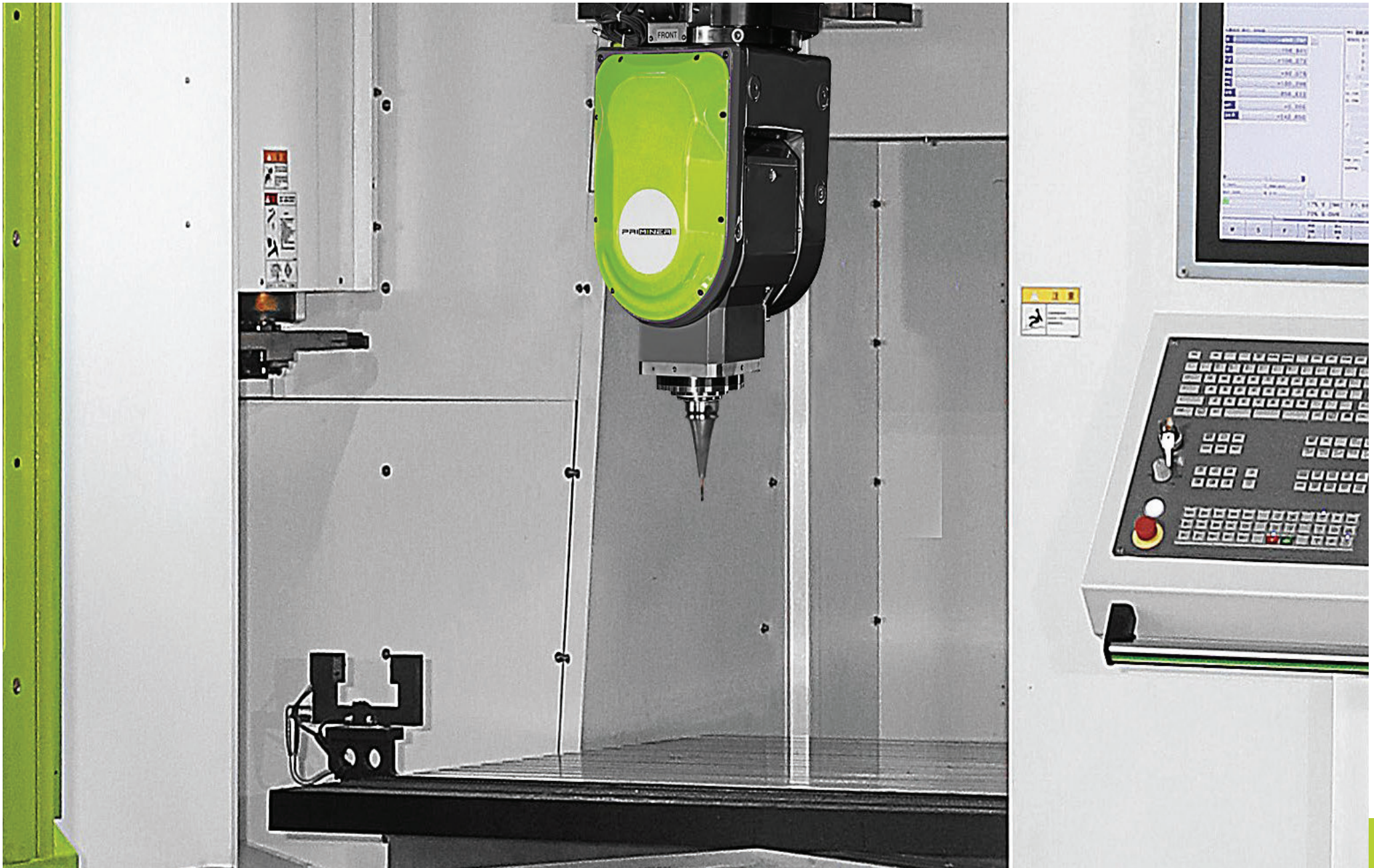
### Three doors design

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

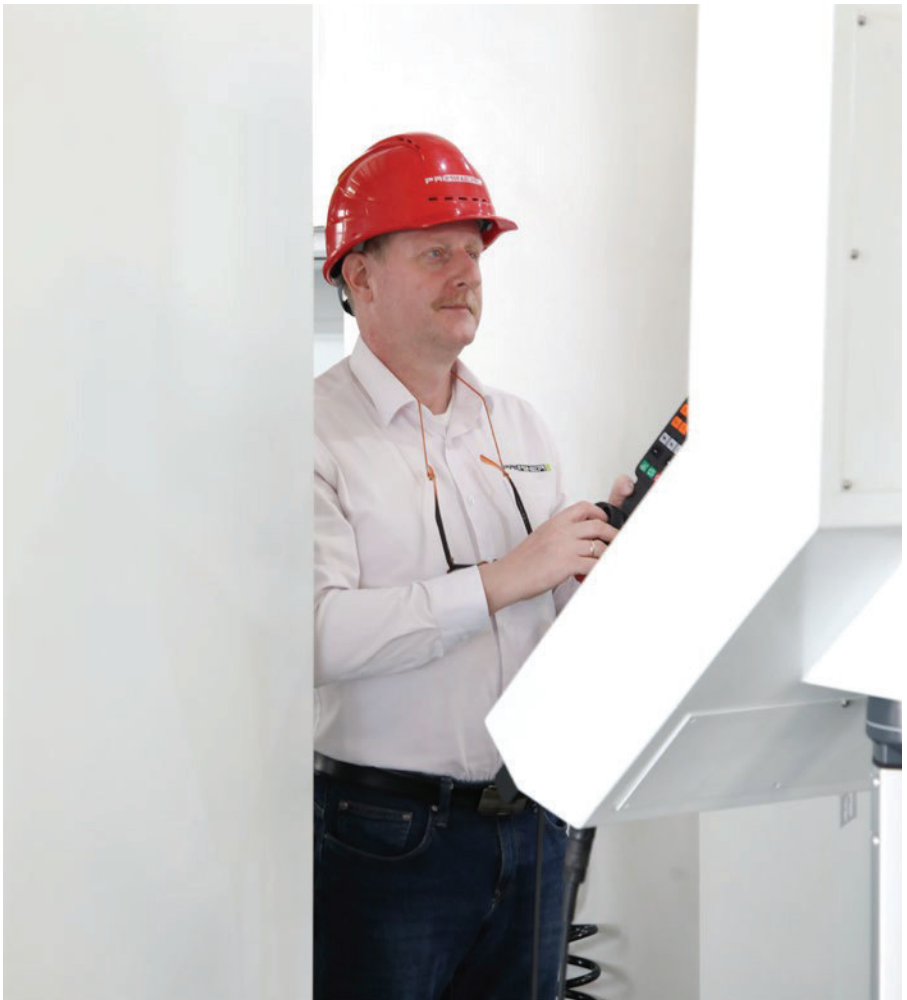
### Front door with wider open

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**

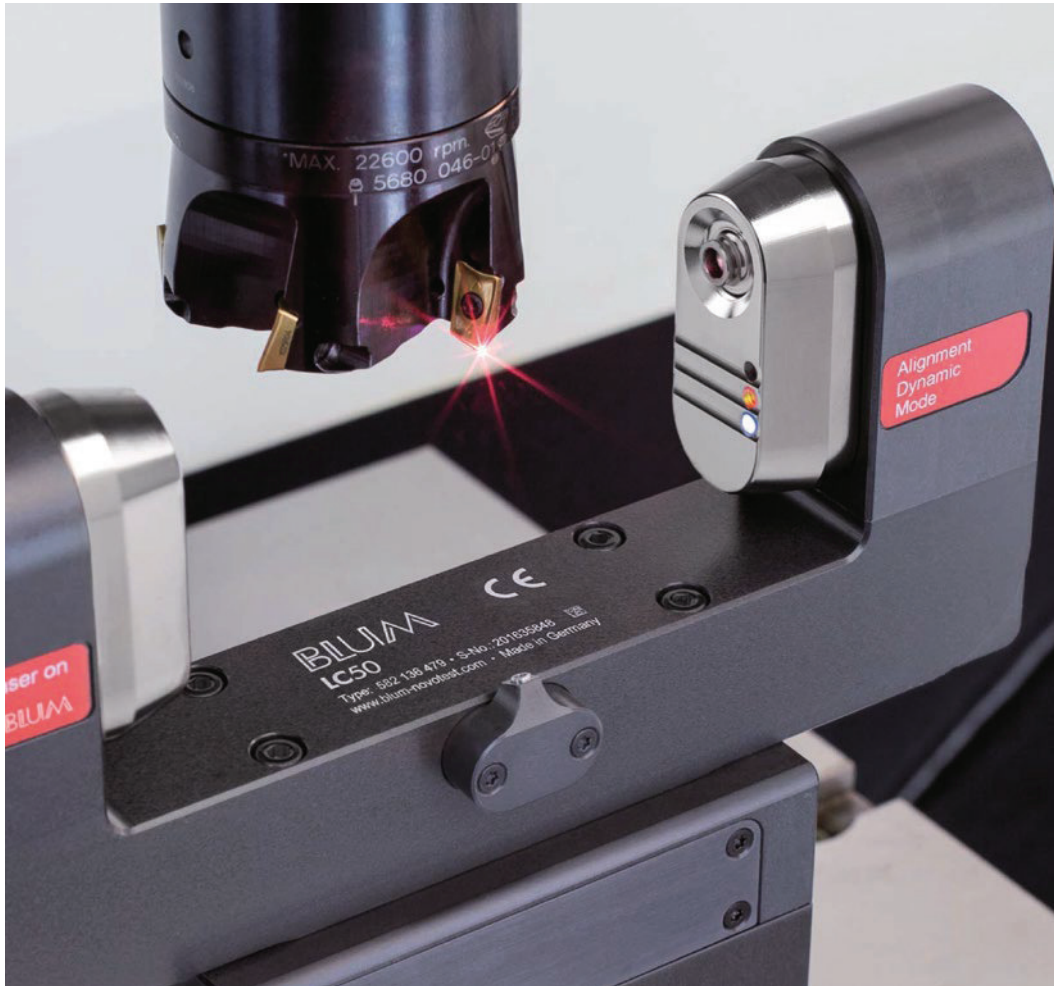
- ✔ Detection of workpiece position
- ✔ Correction of workpiece orientation
- ✔ Thermal compensation of the machine tool
- ✔ Contour measurement

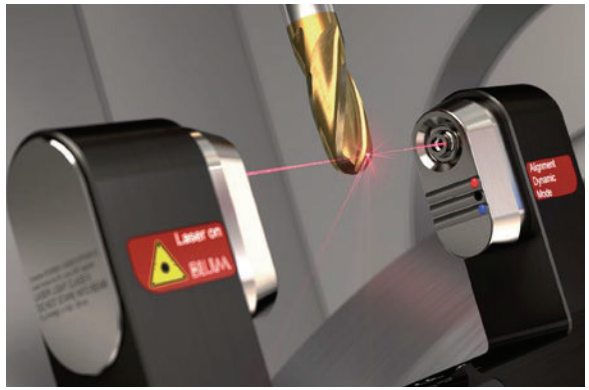
**Your benefit:**

- ✔ 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
- ✔ Programing 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 SPECIFCATIONS

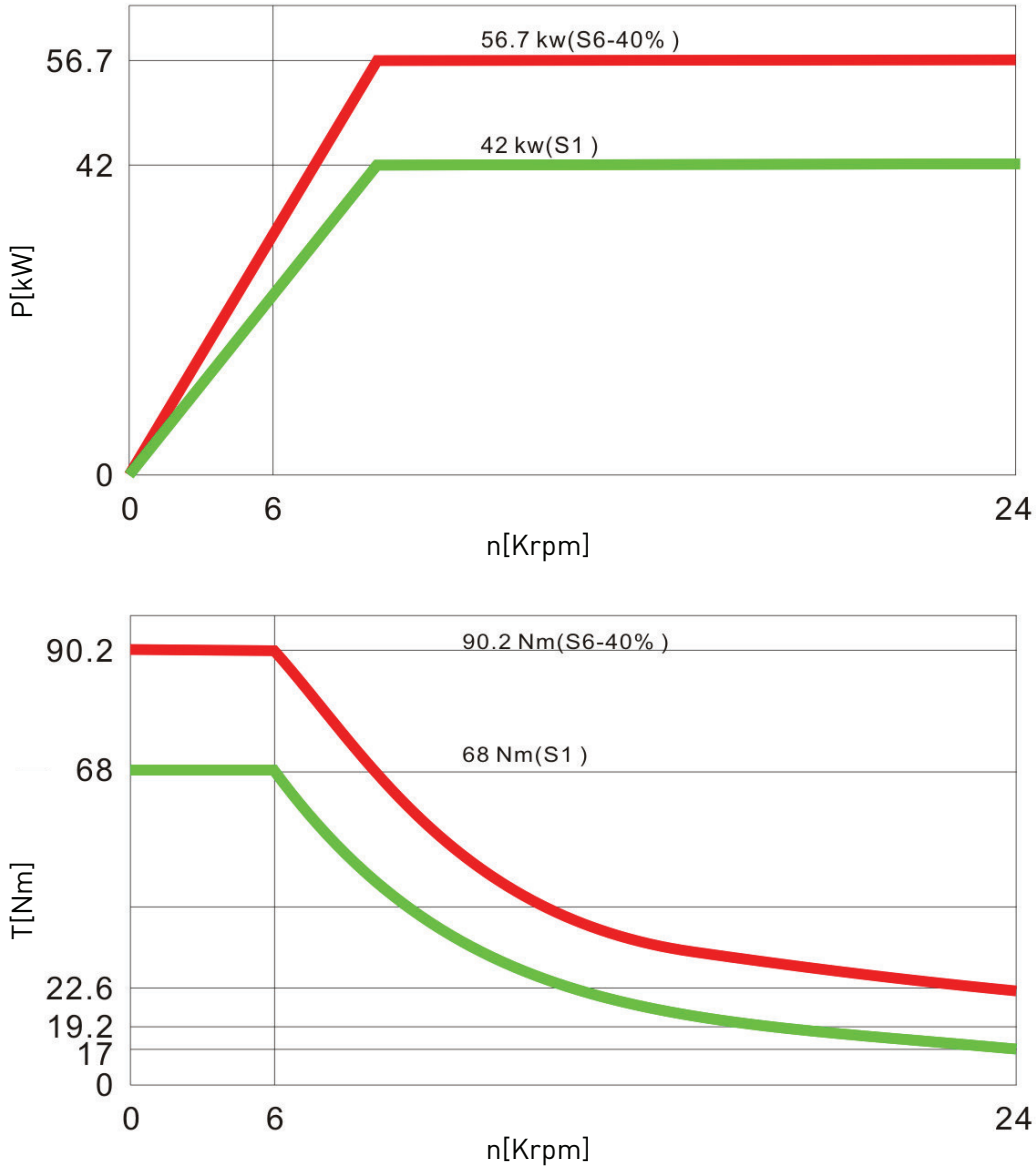
| | GT18-5X |
|---|---|
| **Table** | |
| Table size | 1800 x 1400 mm |
| T-slot(width x number x distance) | 22 x 7 x 170 mm |
| Max.load | 6000 kg |
| **Travel** | |
| X/Y/Z Travel | 1900 / 1400 / 800 mm |
| B/C Axis | ±108° / ±270° |
| Spindle nose to table | 50 - 850 mm HSK A63 |
| 90° spindle center line to table | 410 -1210 mm |
| Distance between column | 1960 mm |
| **Spindle** | |
| Spindle taper | HSK A63 |
| Spindle motor power | 42 / 56.7 kW |
| Spindle motor torque | 68 / 90.2 Nm |
| Spinder speed | 24000 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 |
| Max. tool length | 300 mm |
| Max. tool diameter | Φ78 / Φ150 mm |
| Max. tool weight | 8 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

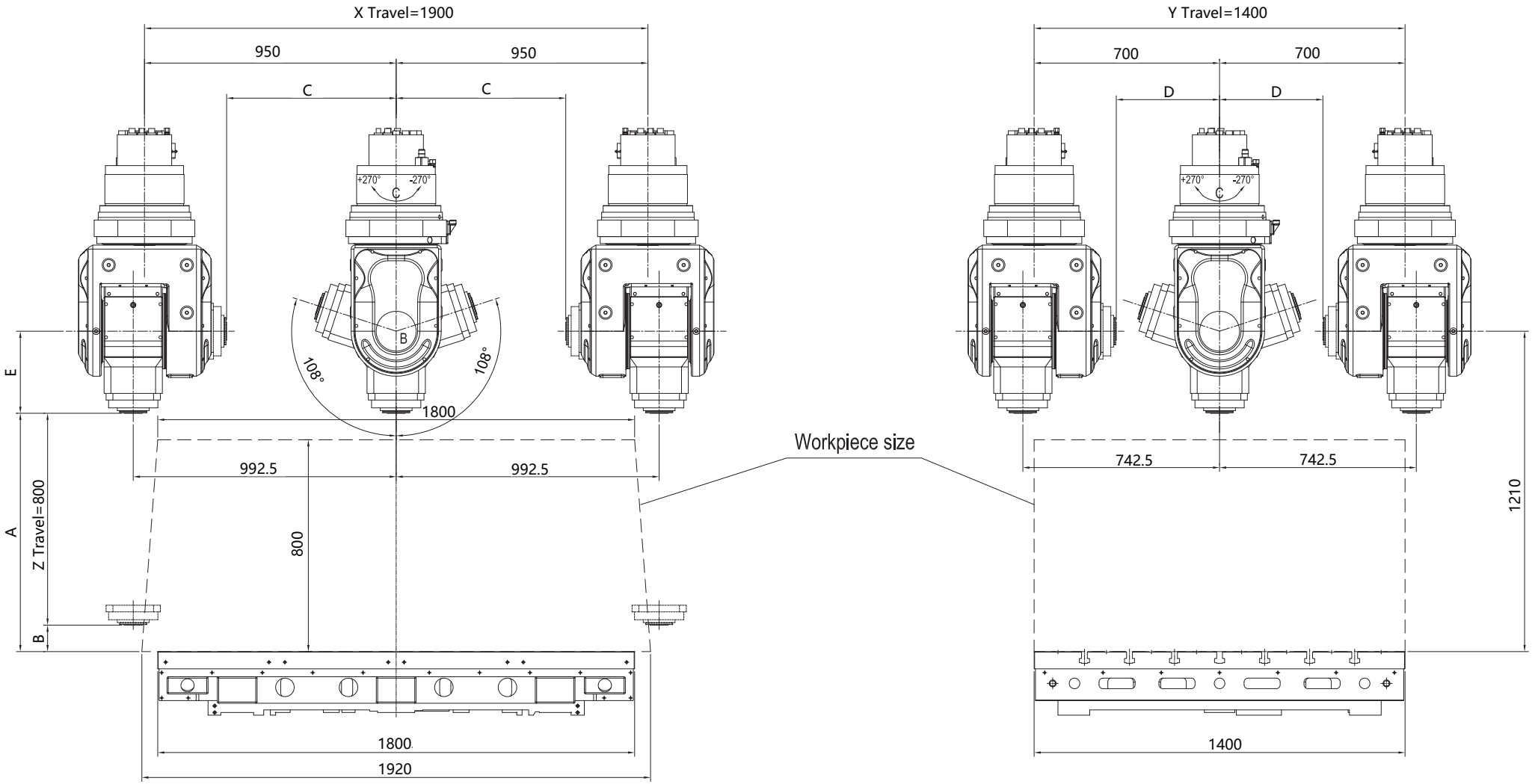
| Configurations | Standard | Optional |
|---|---|---|
| Full enclosed splash guard | ● | |
| Chip conveyor (two screw type and one chain type) | ● | |
| Linear scales on X/Y/Z axes | ● | |
| Oil-air lubrication system for spindle | ● | |
| High precision spindle water cooler | ● | |
| Built-in spindle HSK A63 24000rpm_42/56.7KW_68/90.2Nm,60 pockets tool changer | ● | |
| Oil cooling through ballscrew | | ○ |
| CTS Coolant throught spindle+ATS | | ○ |
| Oil mist collector | | ○ |
| Tool probe | | ○ |
| Workpiece probe | | ○ |
| Coolant Cooling system | | ○ |
| Oil skimmer | | ○ |
| Kinmatics | | ○ |
| 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



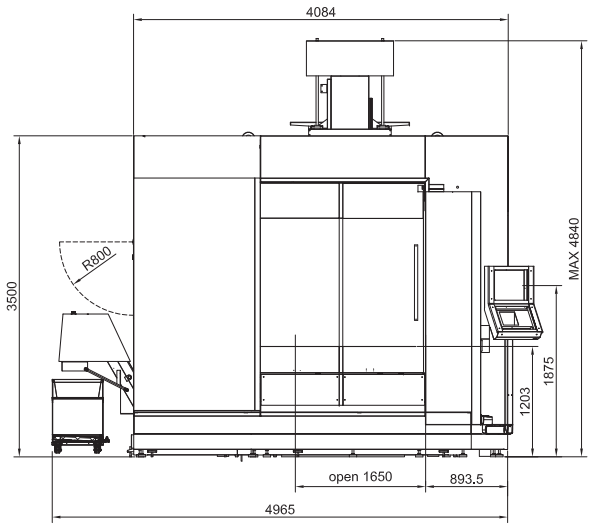

**HSK A63·24000 rpm**

# CUTTING AREA




| Spindle | A | B | C | D | E |
|---|---|---|---|---|---|
| HSK A63 | 850 mm | 50 mm | 587.8 mm | 337.8 mm | 362.2 mm |

# DIMENSIONS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MAX 4840
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open 1650
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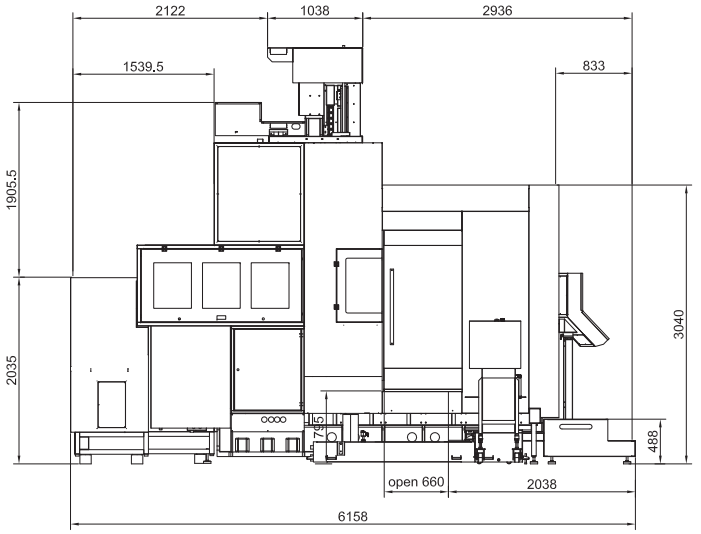
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2038
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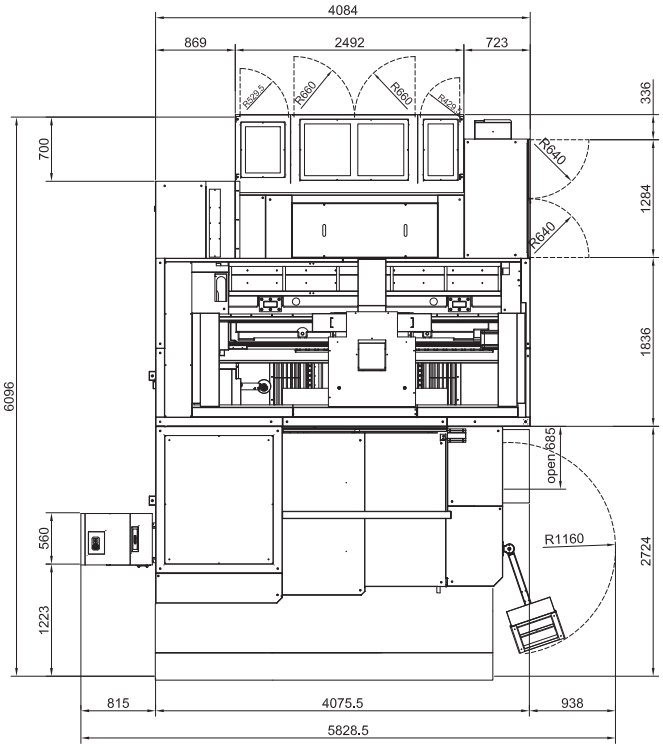
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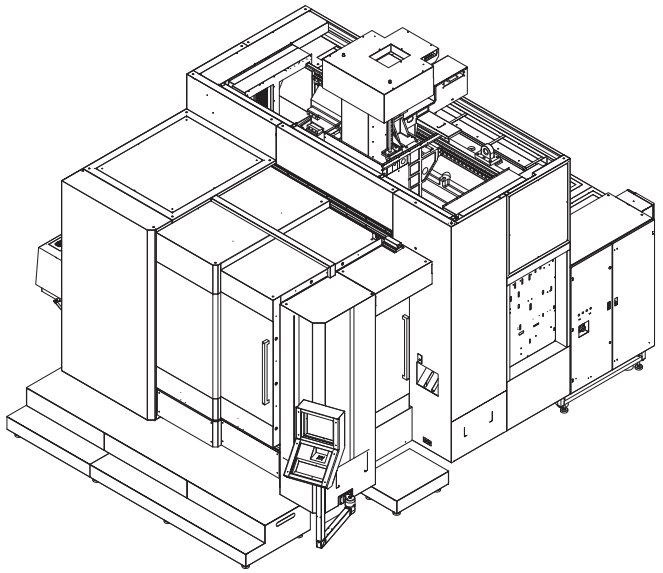


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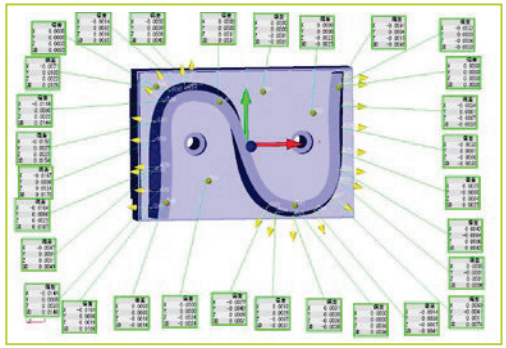
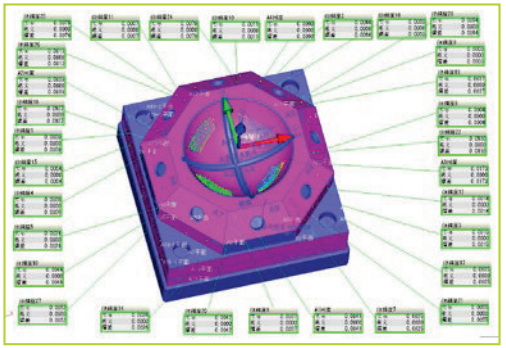
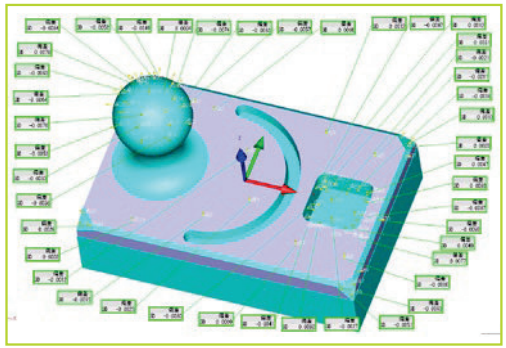
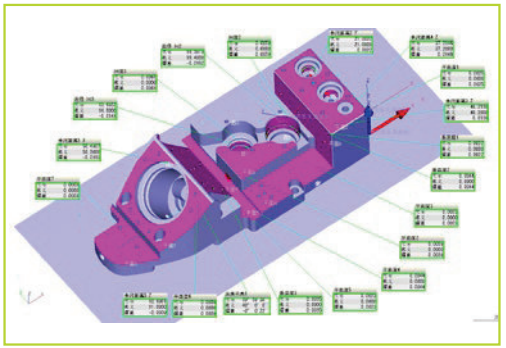
Blaser. SWISSLUBE

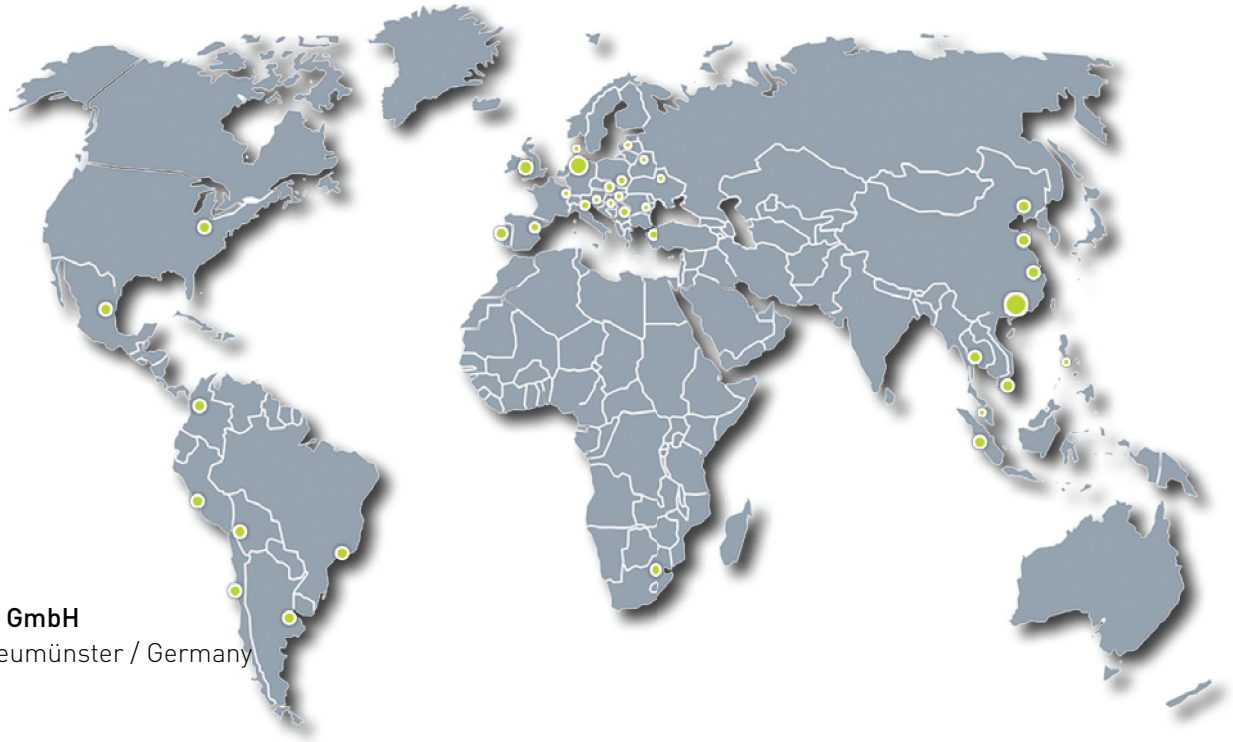

Workpiece measuring by CMM











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