

PRIMINER

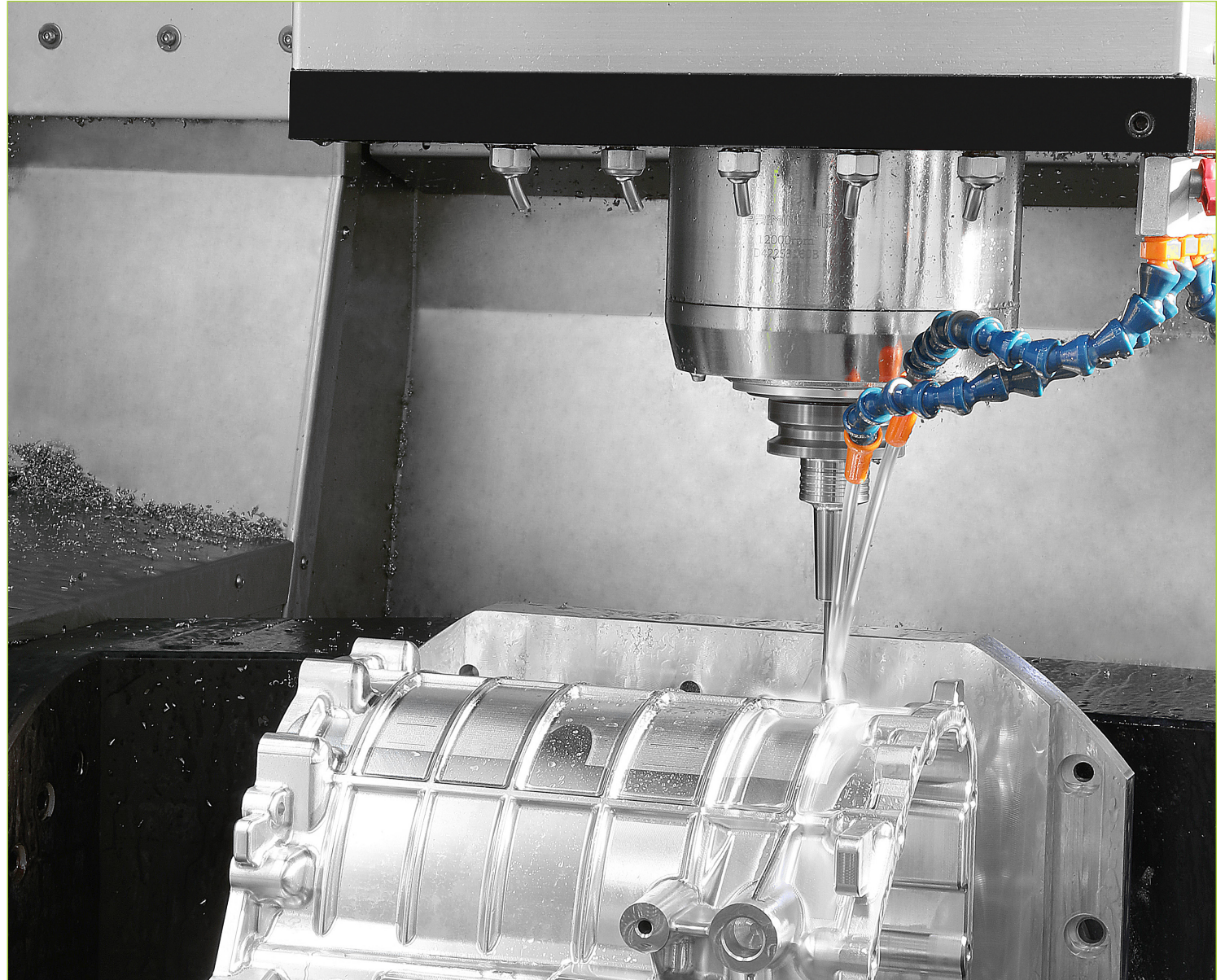
C500-5X-C800-5X

5-axis Machining Center

High rigidity, High efficiency



APPLICATIONS



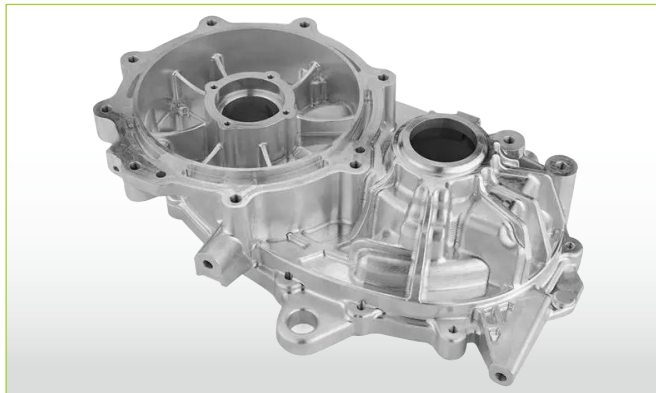
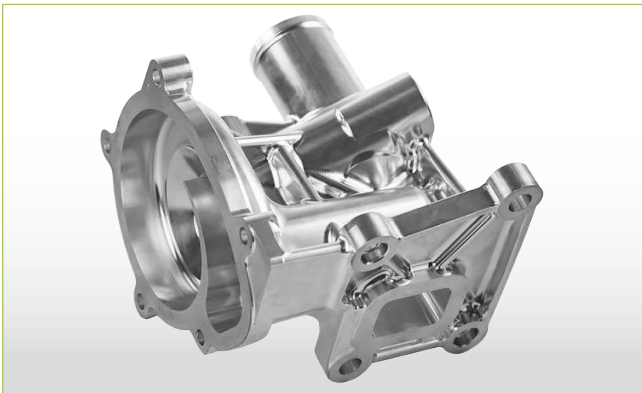
- Die casting
- Medical



- Structural components
- Mould parts



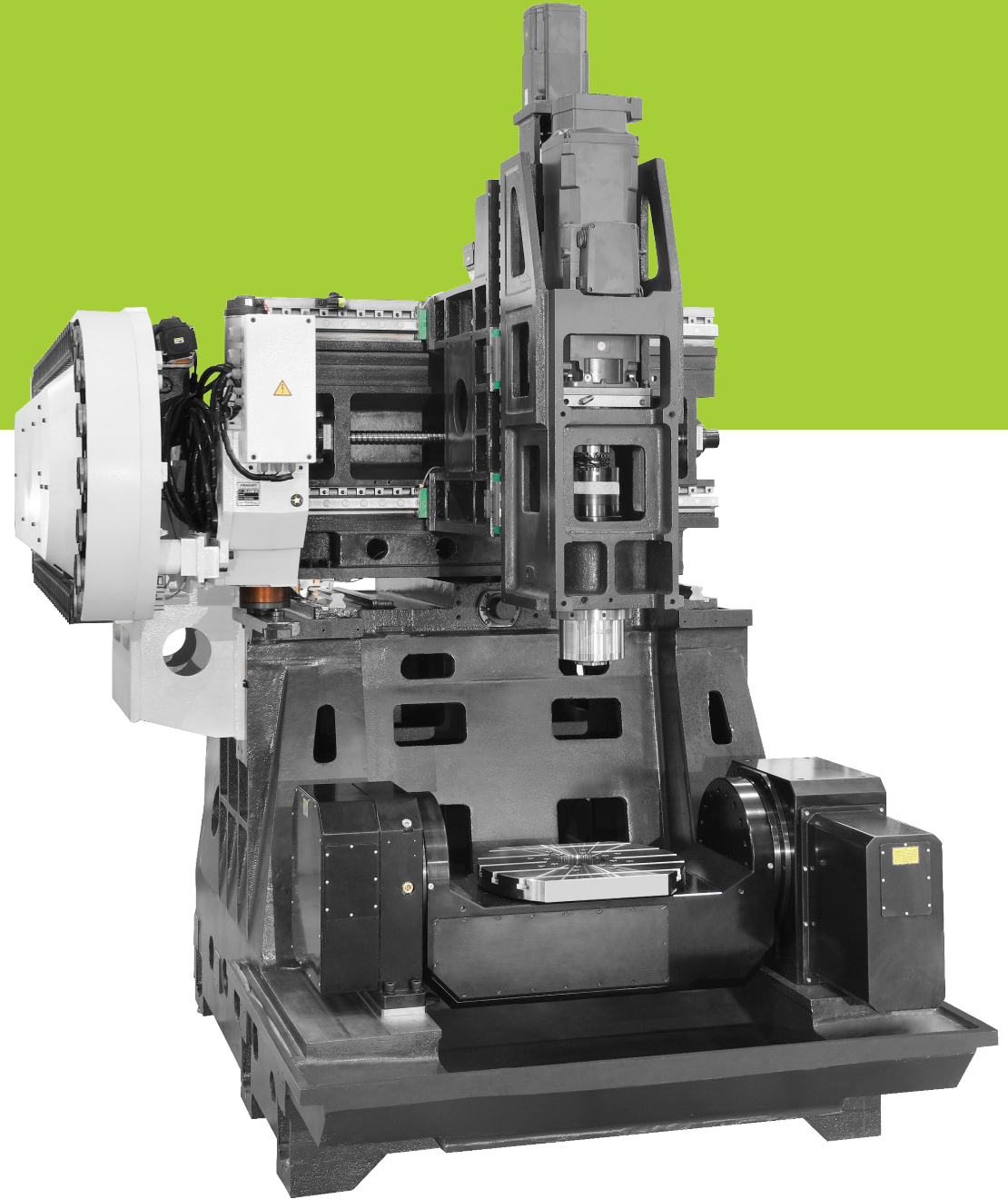
- Tooling
- Aerospace



C500-5X

Cost-effective entry into the 5 -sided and 5 axis simultaneous machining

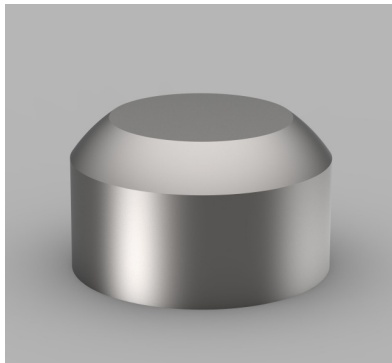
- X/Y/Z axes movement are separated from the machining area
- Dual-support rotary table, high rigidity, high performance and efficiency
- A/C axis with roller gear cam drive
- X/Y/Z axis optional with direct measuring system
- A/C axis standard with rotary encoder



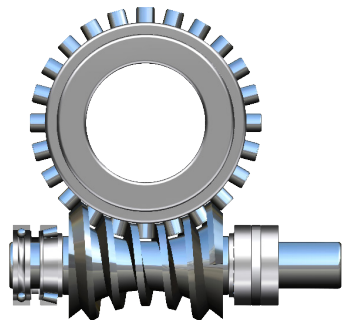
A/C AXIS WITH ROLLER GRAR CAM DRIVE

- Roller gear cam drive rotary table
- A/C axis rotation speed 50/60 rpm (C500),
- A axis trave+30°~ -120° (C500), C axis trave 360°

Machining dimensions

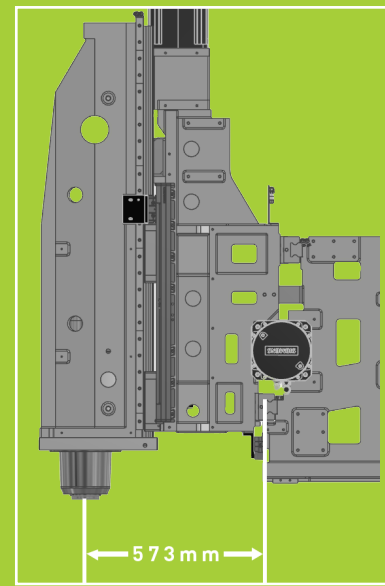


Specifications	C500
Max. workpiece diameter	700 mm
Max. workpiece height	500 mm
Max. workpiece weight	300 kg

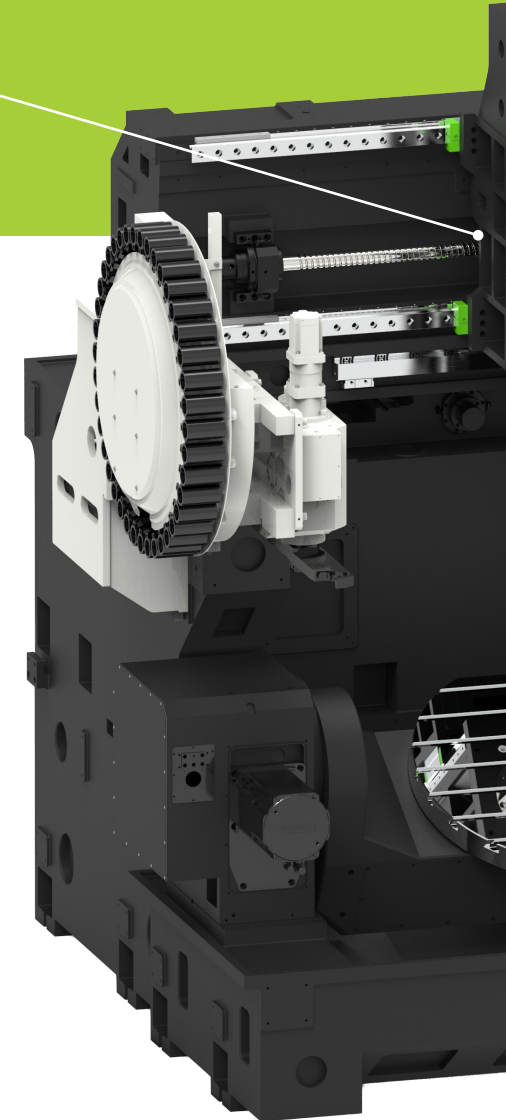


C800-5X

Cost-effective entry into the 5 -sided and 5 axis simultaneous machining

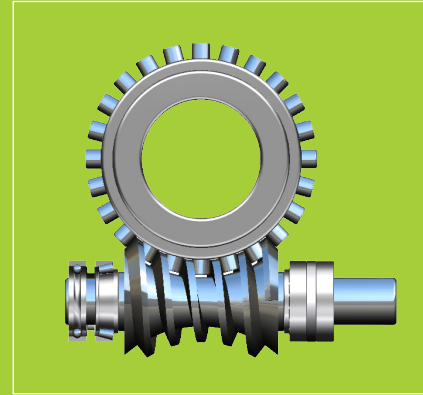


- Moving beam bed structure, allows operators to approach the processing area more easily
- X/Y/Z axes movement are separated from the machining area
- Dual-support rotary table, high rigidity, high performance and efficiency
- A/C axes with roller gear cam drive, high rigidity and heavy-load cutting capability
- The A/C axes adopts DD motor direct drive technology by high performance torque motor (C800-5X Optional)
- The X-axis guideway-to-spindle center distance is minimized to 573 mm, while the saddle overhang is reduced by 34%



Standard A/C AXIS WITH ROLLER GRAR CAM DRIVE

- Roller gear cam drive rotary table
- A/C axis rotation speed 20/30rpm
- A axis trave $\pm 120^\circ$
- C axis trave 360°

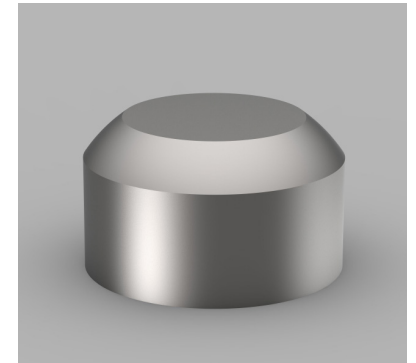


Optional DD 5-axis rotary table

- A-axis with dual DD motor drive
- A/C axes with German-made clamping units
- A/C axes with Heidenhain rotary encoders for full closed-loop feedback
- A/C axis rotation speed 100/100rpm
- A axis trave $+30^\circ \sim -110^\circ$
- C axis trave 360°



Machining dimensions



Specifications	C800
Max. workpiece diameter	900 mm
Max. workpiece height	500 mm
Max. workpiece weight	800 kg

C800-5X

Modular coolant unit, with integrated filtration and chip removal devices

NEW

Now also available
with automation



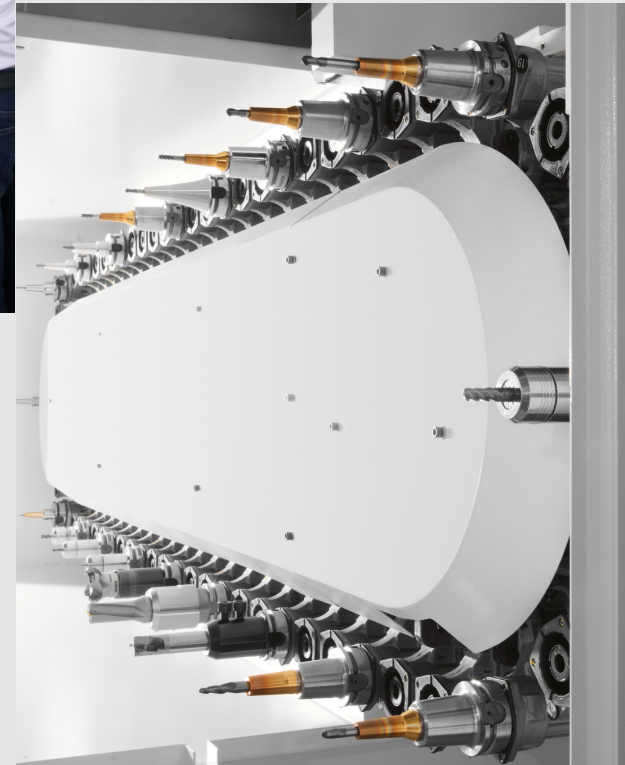
CHAIN TYPE TOOL CHANGER



- Tools can be loaded and unloaded while machining
- User-Friendly interface make the loading and unloading of the tools easier
- High production efficiency

Technical Specification:

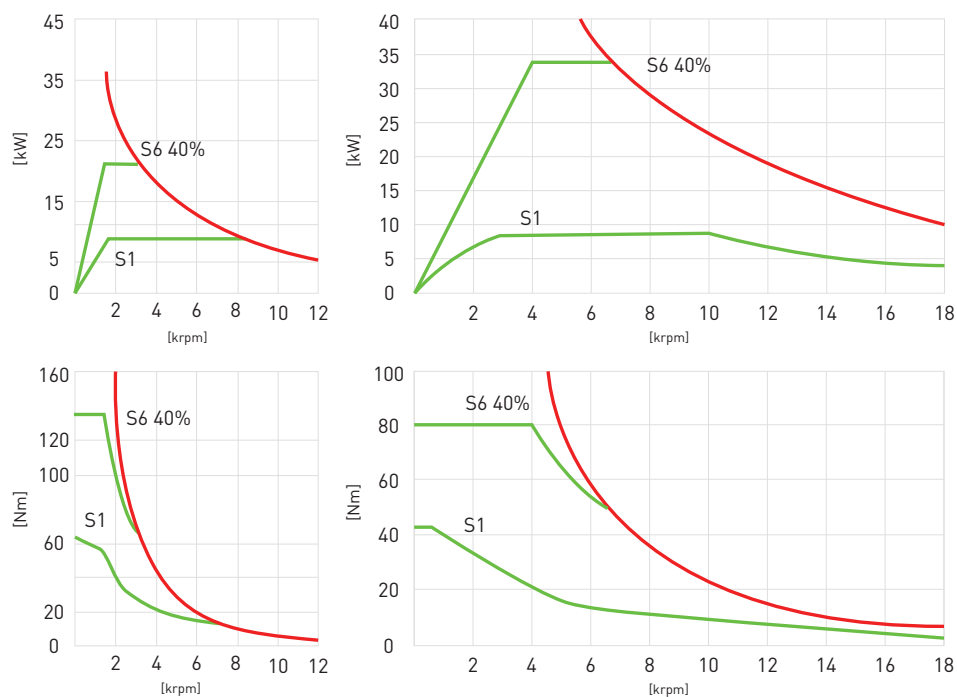
- HSK A63
- 60 pockets
- Max.tool length 300 mm
- Max.tool diameter $\Phi 80$ / $\Phi 125$ mm(C500-5X)
 $\Phi 78$ / $\Phi 160$ mm(C800-5X)
- Max.tool weight 8 kg



HIGH-PERFORMANCE SPINDLE

Power and torque diagram

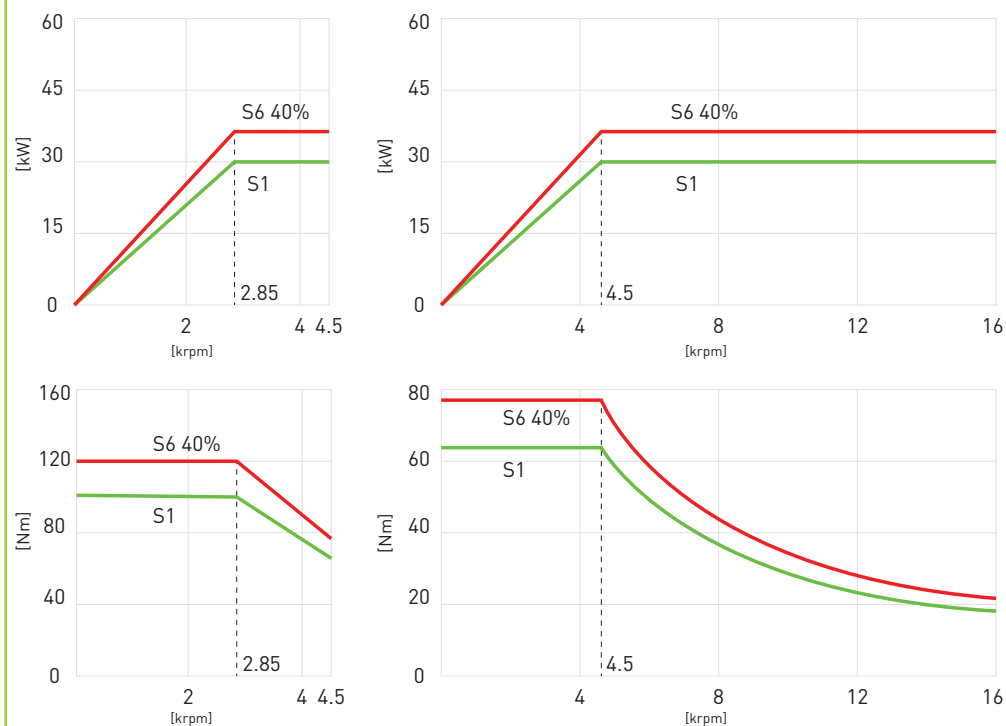
HSK A63 · 15000 rpm (C500)



Y connection 12,000rpm
8.5/21.2 kW 63/135 Nm

Δ connection 15,000rpm
8.5/33.5 kW 42/80 Nm

HSK A63 · 16000 rpm (C800)

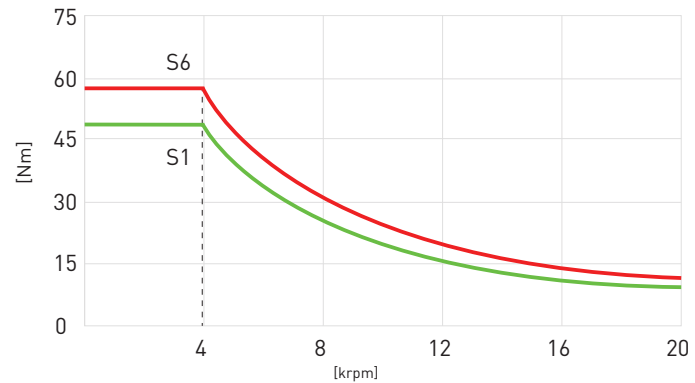
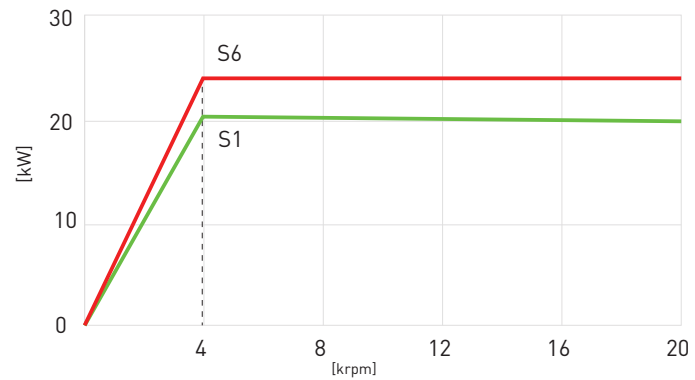


Y connection 4,500rpm
30/36 kW 100/120 Nm

Δ connection 16,000rpm
30/36 kW 63.6/76.3 Nm

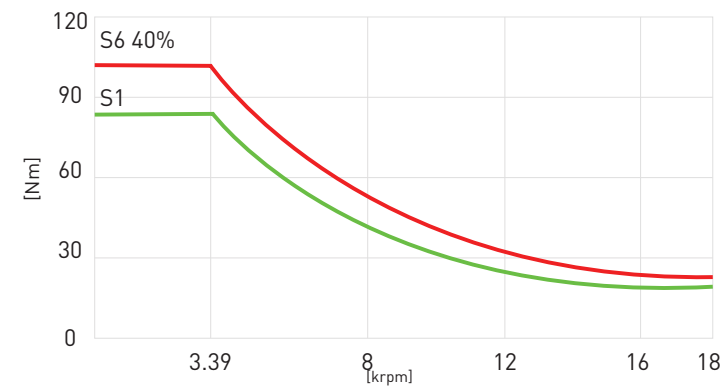
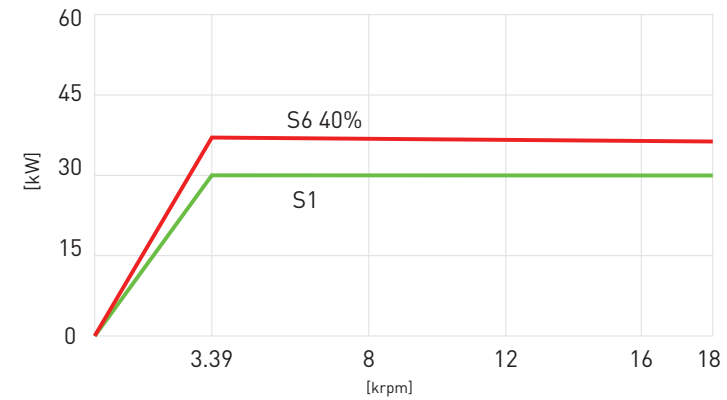
Power and torque diagram

HSK A63 · 18000 rpm (C500)



HSK A63 20,000rpm
20/24 kW 48/58 Nm

HSK A63 · 20000 rpm (C500)



HSK A63 18,000rpm
30/36 kW 85/102 Nm



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 Specifications

Specifications	C500-5X	C800-5X
Table		
Max. workpiece diameter	Φ700 mm	Φ900 mm
Table size	Φ500×400 mm	Φ800×700 mm
T-slot (width×pitch×quantity)	14 mm×80 mm×5	18 mm×100 mm×7
Max. load	300 kg	800 kg
Travel		
X/Y/Z Travel	700 / 550 / 500 mm	900 / 850 / 600 mm
A/C Travel	+30°~-120°/360°	±120°/360°
Spindle nose to table	120-620 mm	170-770 mm
Spindle		
Spindle taper	HSK A63, 15000 rpm	HSK A63, 16000 rpm
Spindle motor power	8.5/33.5 kW, 63/135 Nm	30/36 kW, 100/120 Nm
Feed		
Rapid feed X/Y/Z	48 m/min	60 / 60 / 40 m/min
Rotation speed A/C	50 / 60 rpm	20 / 30 rpm

Specifications	C500-5X	C800-5X
Cutting speed	1-12000 mm/min	
Tool changer		
Number of tools	60 pcs	
Max. tool length	300mm	
Max. tool diameter	Φ80 / Φ125 mm	Φ78 / Φ160 mm
Max. tool weight	8 kg	
Accuracy(VDI 3441 Full travel)		
Positioning accuracy X/Y/Z axis (Without linear scales)	0.008 (X/Y/Z) 10/8 arc-sec (A/C)	0.008 (X/Y/Z) 15/12 arc-sec (A/C)
Repeatability accuracy X/Y/Z axis (Without linear scales)	0.006 (X/Y/Z) 8/6 arc-sec (A/C)	0.006 (X/Y/Z) 12/8 arc-sec (A/C)
Positioning accuracy X/Y/Z axis (With linear scales)	0.006 (X/Y/Z) 10/8 arc-sec (A/C)	0.006 (X/Y/Z) 12/12 arc-sec (A/C)
Repeatability accuracy X/Y/Z axis (With linear scales)	0.004 (X/Y/Z) 8/6 arc-sec (A/C)	0.006 (X/Y/Z) 10/6 arc-sec (A/C)
Dimensions & Weight		
Dimensions	3490×4210×3250 mm	3200×5323×3570 mm
Weight	9500 kg	14500 kg

Configuration

	C500-5X	C800-5X
Full enclosed splash guard	●	●
Roller gear cam driverotary table	●	●
DD 5-axis rotary table	×	○
Direct drive spindle HSK A63 15000rpm, 8.5/33.5 kW, 63/135 Nm	●	×
Built-in spindle HSK A63 16000 rpm, 30/36 kW, 100/120 Nm	×	●
Built in spindle HSK A63 18000 rpm, 30/36 kW, 85/102 Nm	○	×
Built in spindle HSK A63 20000 rpm, 20/24 kW, 48/58 Nm	○	×
60 pockets chain type tool changer	●	●
Spindle oil cooler	●	×
±0.1 degree high precision spindle water cooler	○	●
Sealed linear scales on X/Y/Z axes	○	○
Rotary encoder on A/C axes	●	●
Laser tool setter	○	○
Workpiece probe	○	○
Oil mist collector	○	○
Oil skimmer	○	○
CTS Coolant Through Spindle + ATS	○	○

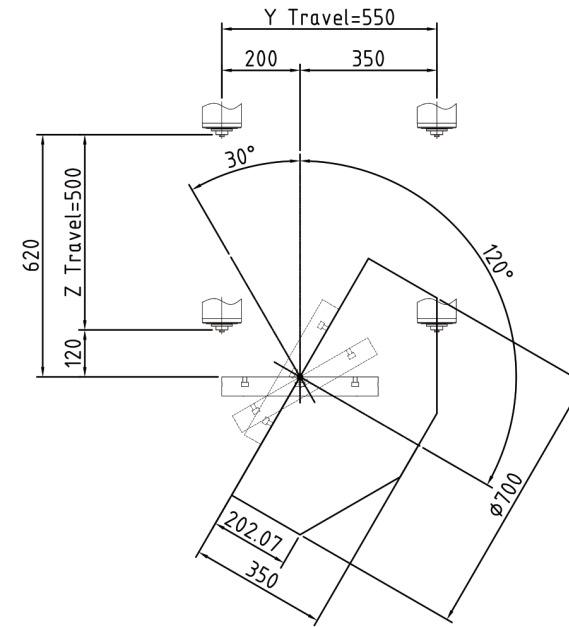
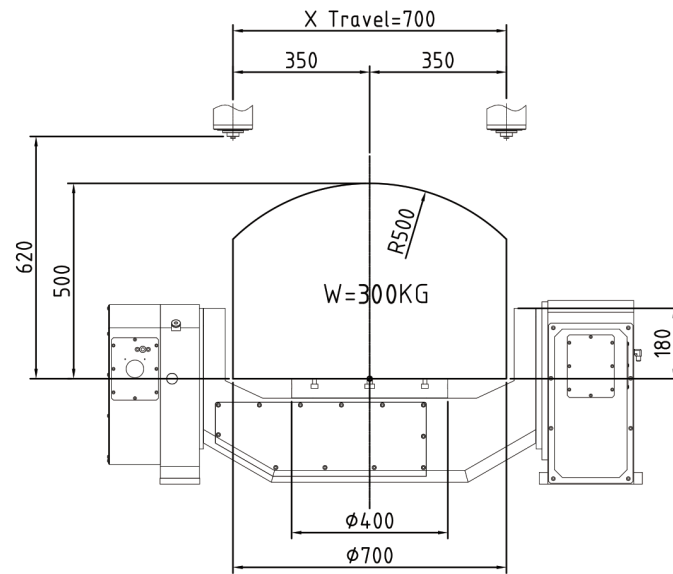
	C500-5X	C800-5X
Extra 200GB SSD program memory	○	○
Automatic correction system for rotation center error	○	○
Dynamic Collision Monitoring (DCM)	○	○
Air-conditioned electrical cabinet	●	●
Rigid tapping	●	●
Ethernet, CF card and USB interface	●	●
Chain type chip conveyor	●	×
Drum-type chip conveyor	×	●
Automatic lubrication system	●	●
Air blast during cutting	●	●
LED working lamp	●	●
Tool box	●	●
End of program light	●	●
Electrical handwheel (MGP)	●	●
Leveling bolts and blocks	●	●
Coolant gun	●	●
Air gun	●	●
User manua	●	●

● Standard ○ Optional × Not Available

C500-5X

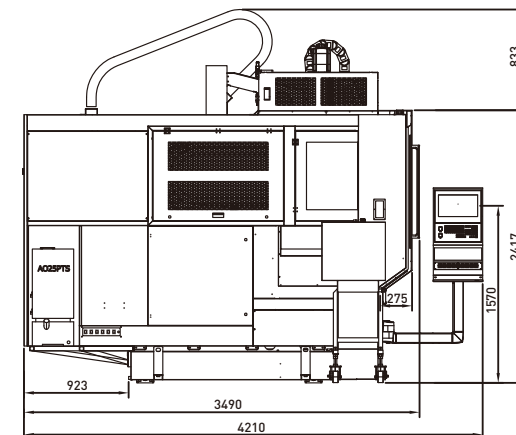
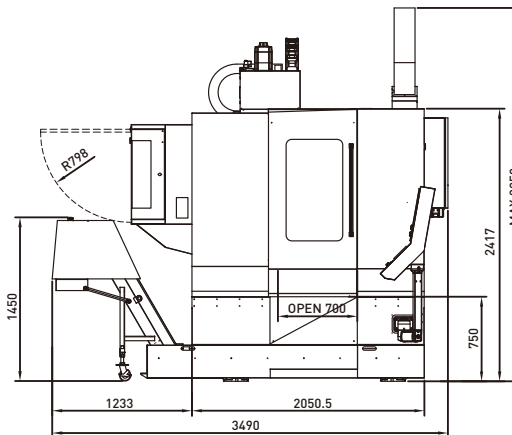
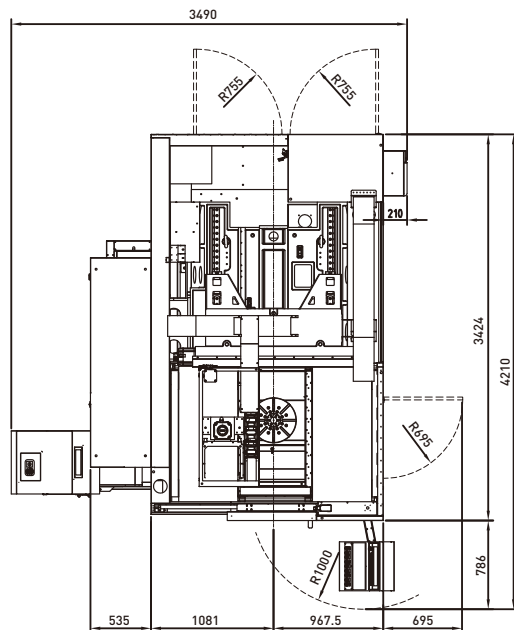
CUTTING AREA

UNIT:mm



DIMENSIONS

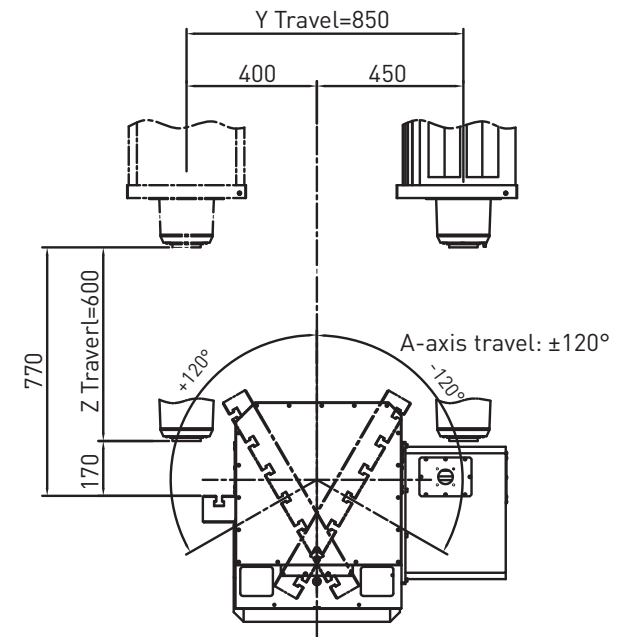
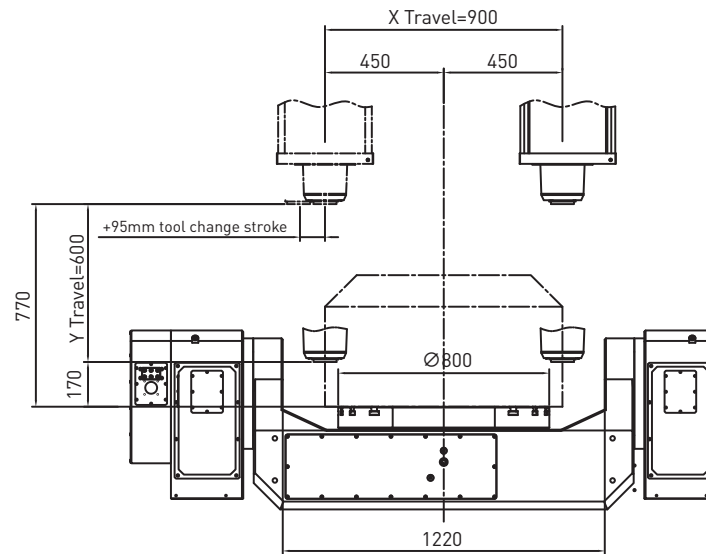
UNIT:mm



C800-5X

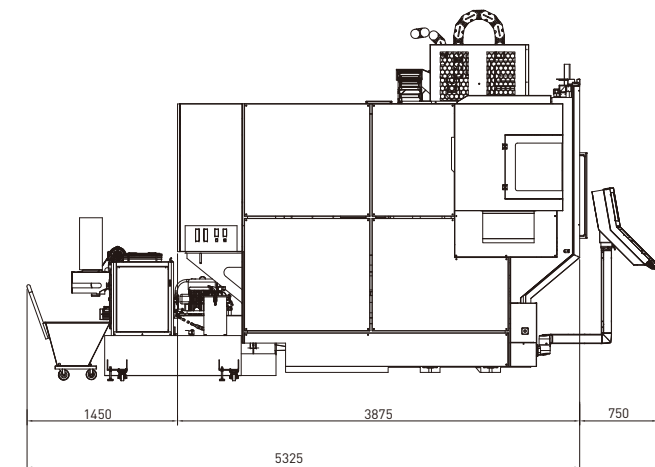
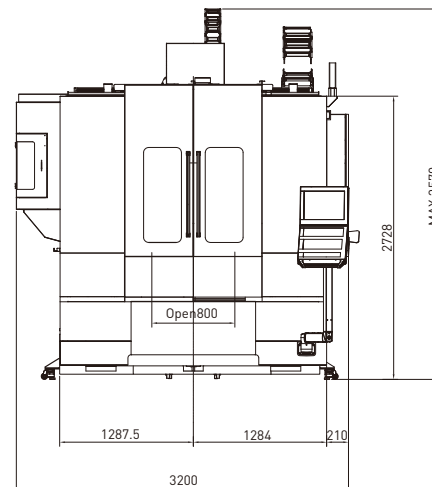
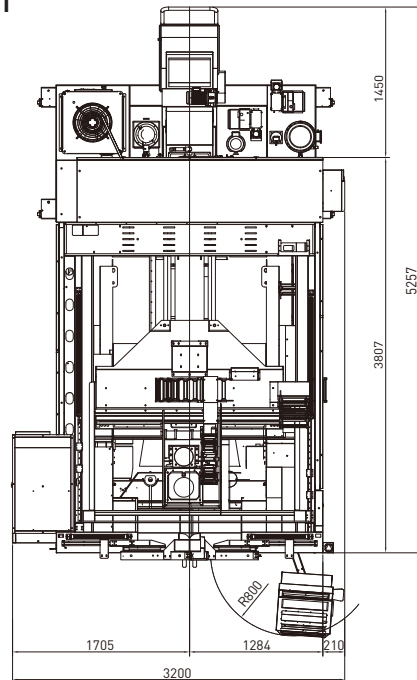
CUTTING AREA

UNIT:mm



DIMENSIONS

UNIT:mm



”

What began as a shared vision has grown into a globally operating group for high-level CNC technology. Jack and Benjamin founders, partners, doers – embody what PRIMINER stands for: technical excellence, entrepreneurial clarity, and genuine trust.

PRIMINER combines the best of both worlds: efficient series production and engineering expertise from Asia – paired with German quality assurance, service commitment, and market insight. Our philosophy is clear: true CNC expertise emerges only when technology, teamwork, and customer focus come together in perfect harmony.

“



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