

PRIMINER



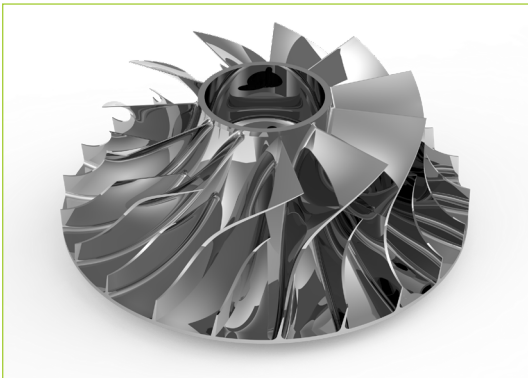
U500-5X · U630-5X · U800-5X

5 AXIS GANTRY TYPE MACHINING CENTER

High speed, High efficiency, High precision



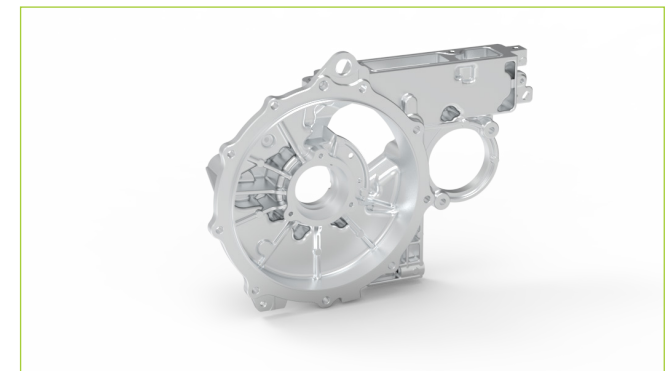
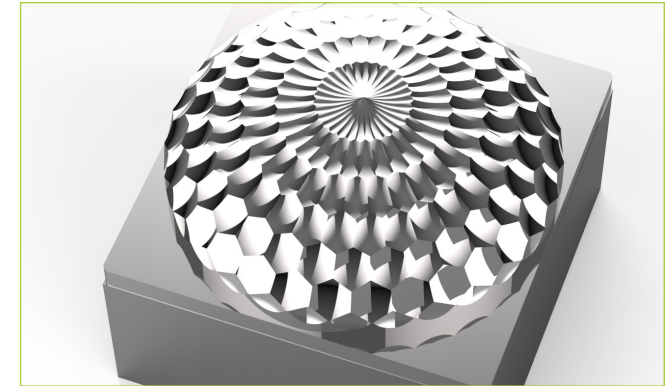
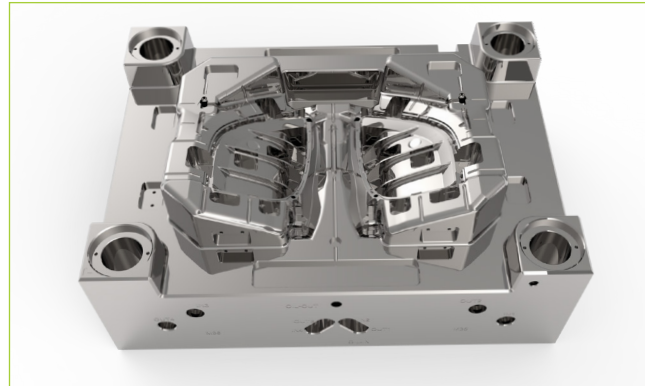
Applications



- Aircraft
- Precision Mold
- Medical

- General Machining
- Semiconductor

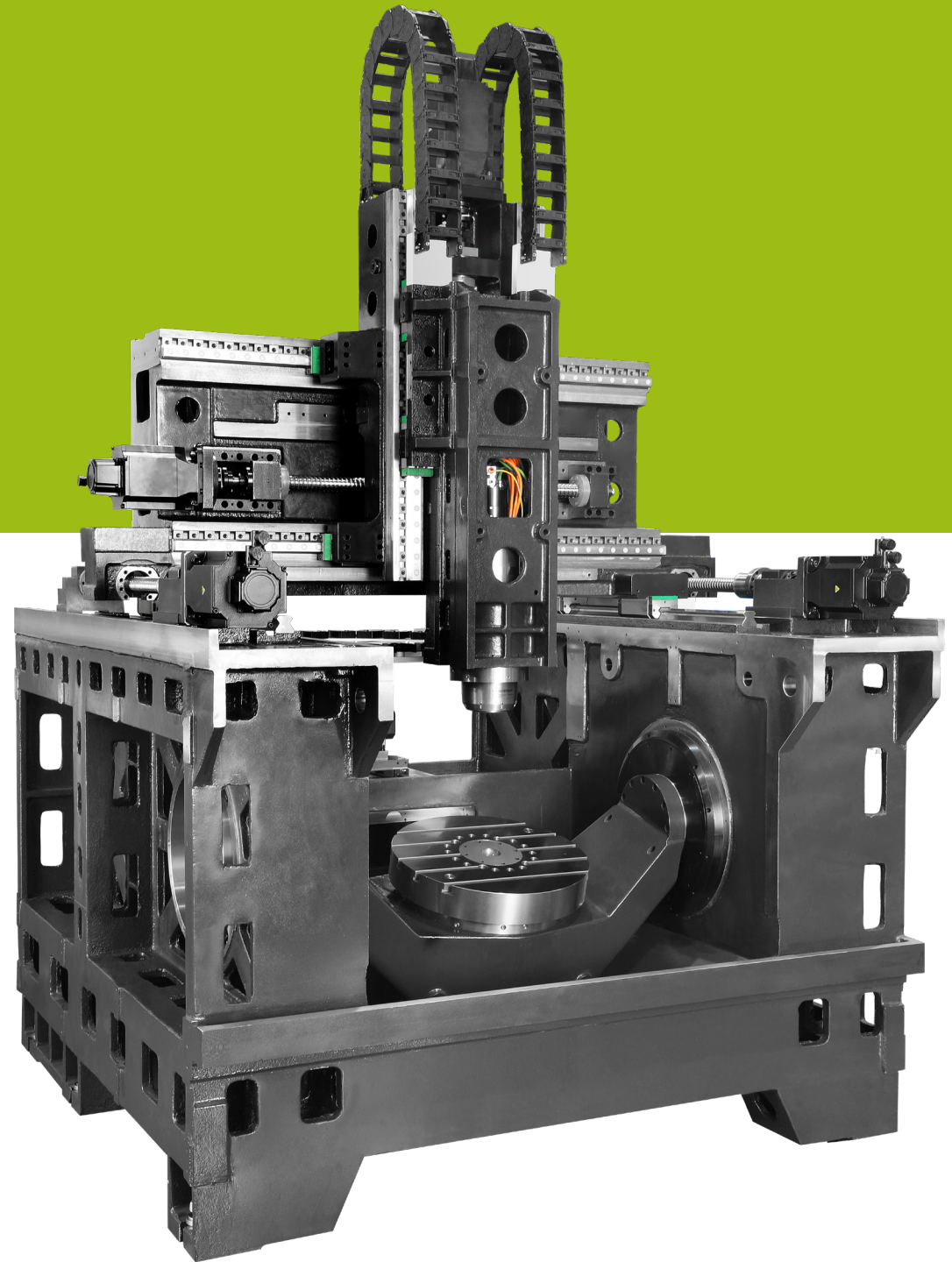
- Die Casting
- Automotive



U500-5X

Machine Features

- One-piece high-quality casting bed
- Gantry-type structure design, X/Y/Z axes movement are separated from the machining area
- A/C axes maximum load of 500kg
- The A/C axes adopts DD motor direct drive technology by high performance torque motor
- Y-axis dual synchronous drive design
- Germany high-torque pneumatic brakes
- Maximum travel up to 700mm

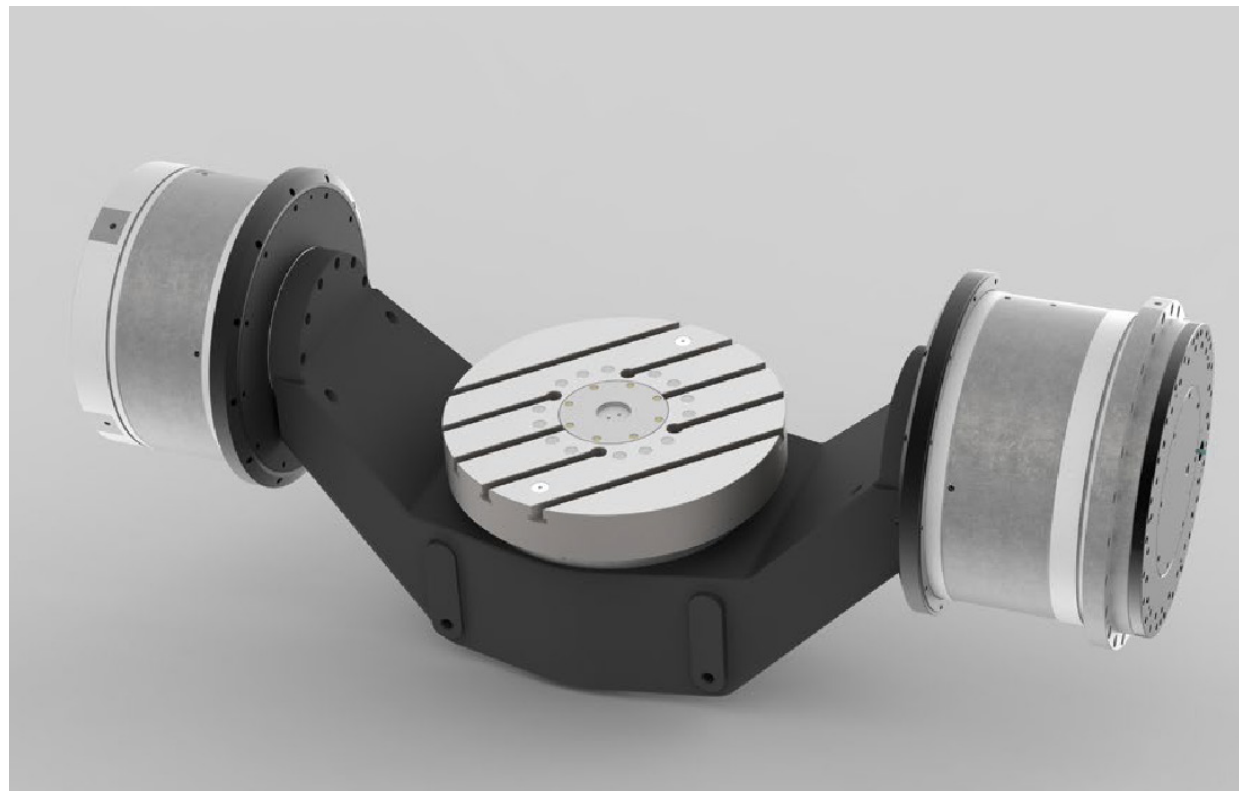
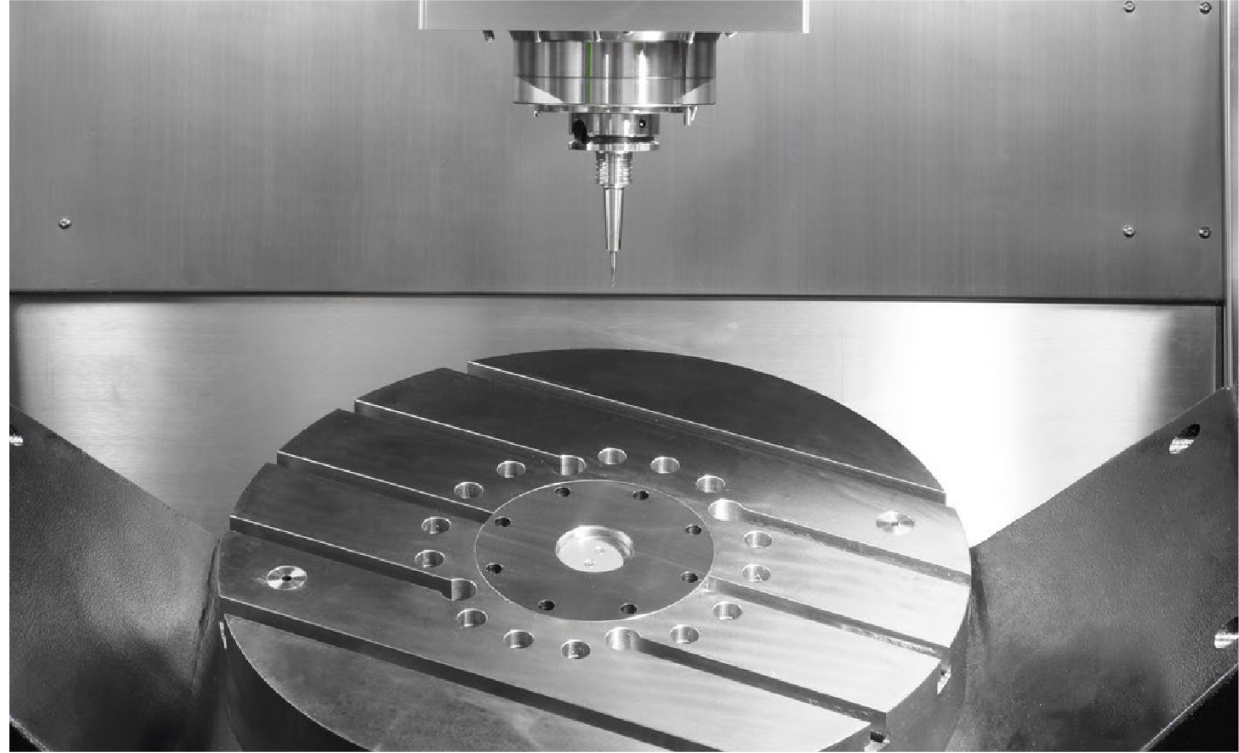


High Precision 5 Axis Rotary Table

- A/C axis with dual DD motor drive device
- A/C axis with Max. speed 100/170 rpm
- A axis travel $+30^{\circ} \sim -110^{\circ}$
- C axis travel $\pm 360^{\circ}$

Machining Capability

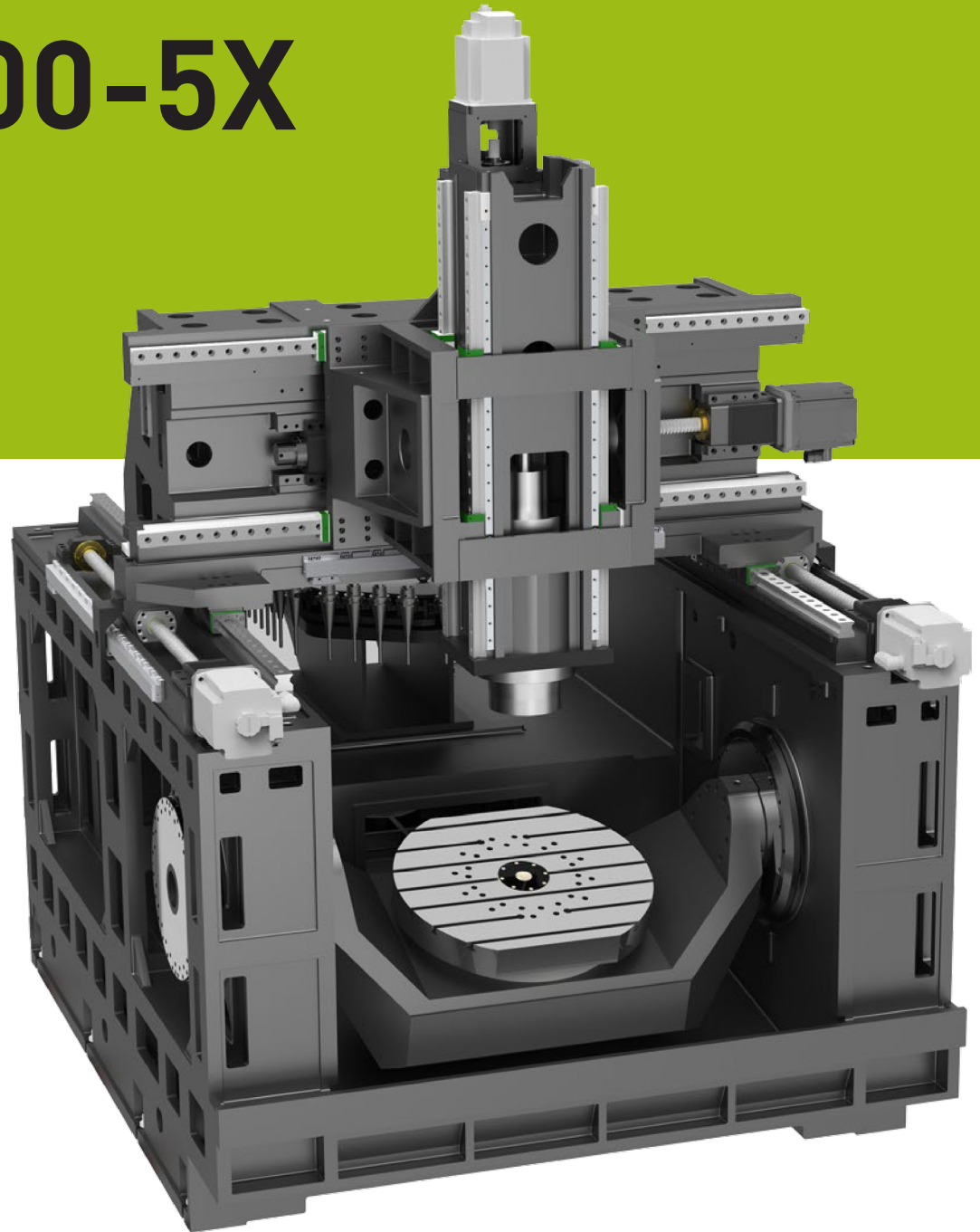
- Max. workpiece diameter 700mm
- Max. workpiece height 400mm
- Max. workpiece weight 500kg



U630-5X - U800-5X

Machine Features

- One-piece high-quality casting bed
- Gantry-type structure design
- A/C axes maximum load of 800kg
- The A/C axes adopts DD motor direct drive technology and the A axis is driven by dual DD motors
- Y-axis dual synchronous drive design
- Germany high-torque pneumatic brakes
- Maximum travel up to 850mm(U630 1000mm(U800))

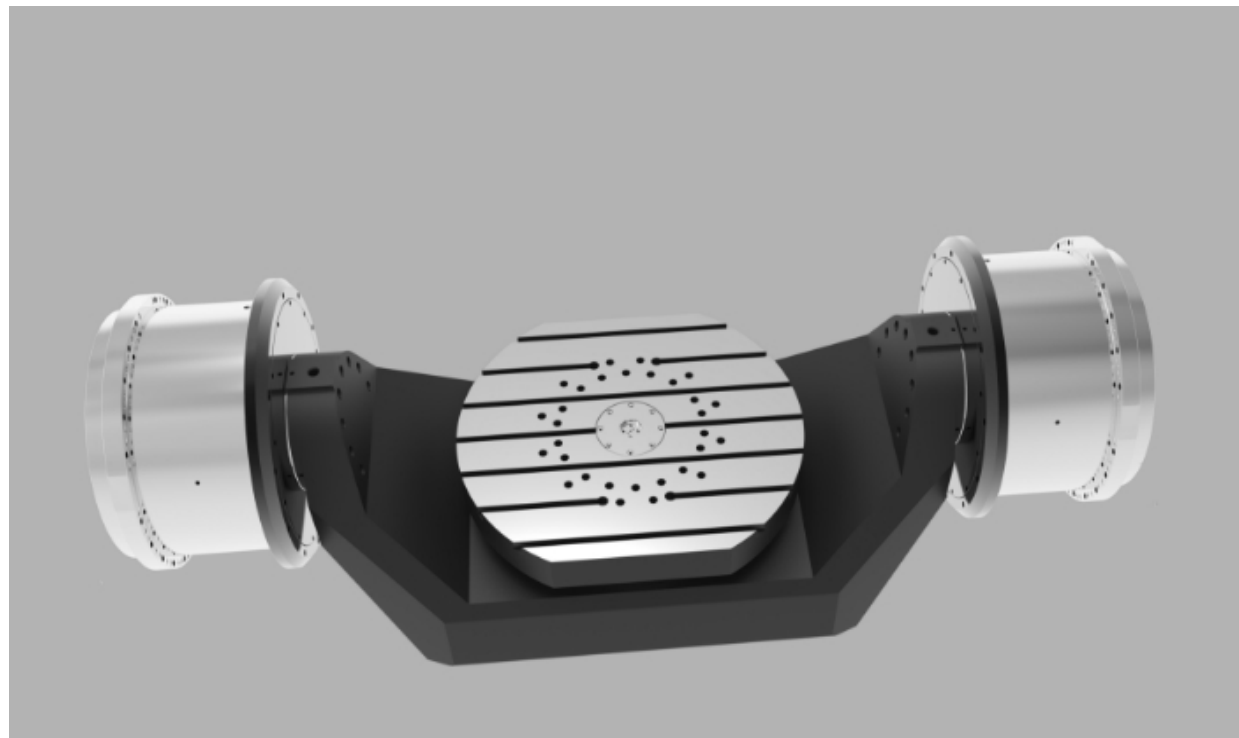
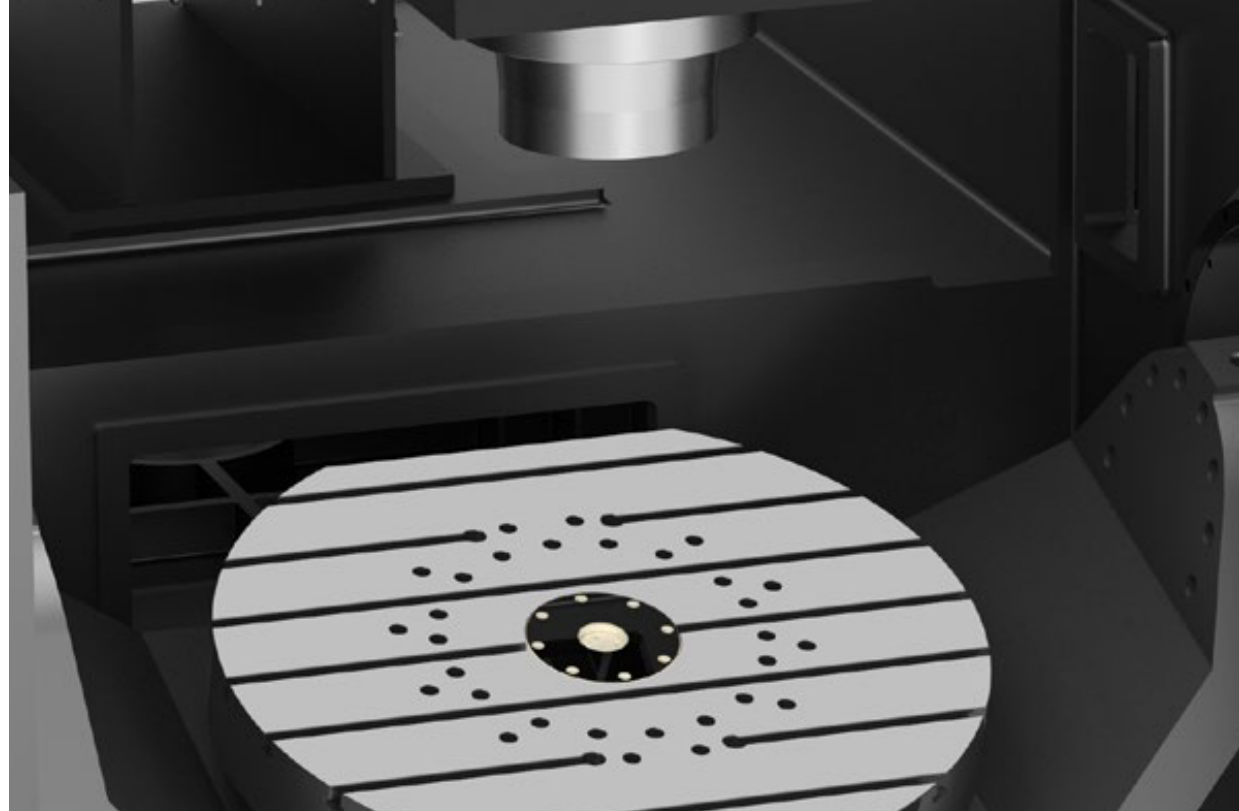


High Precision 5 Axis Rotary Table

- A/C axis with dual DD motor drive device
- A/C axis with Max. speed
100/100rpm (U630/U800)
100/1000rpm (U630T/U800T)
- A axis travel $+30^{\circ} \sim -110^{\circ}$
- C axis travel $\pm 360^{\circ}$

Machining Capability

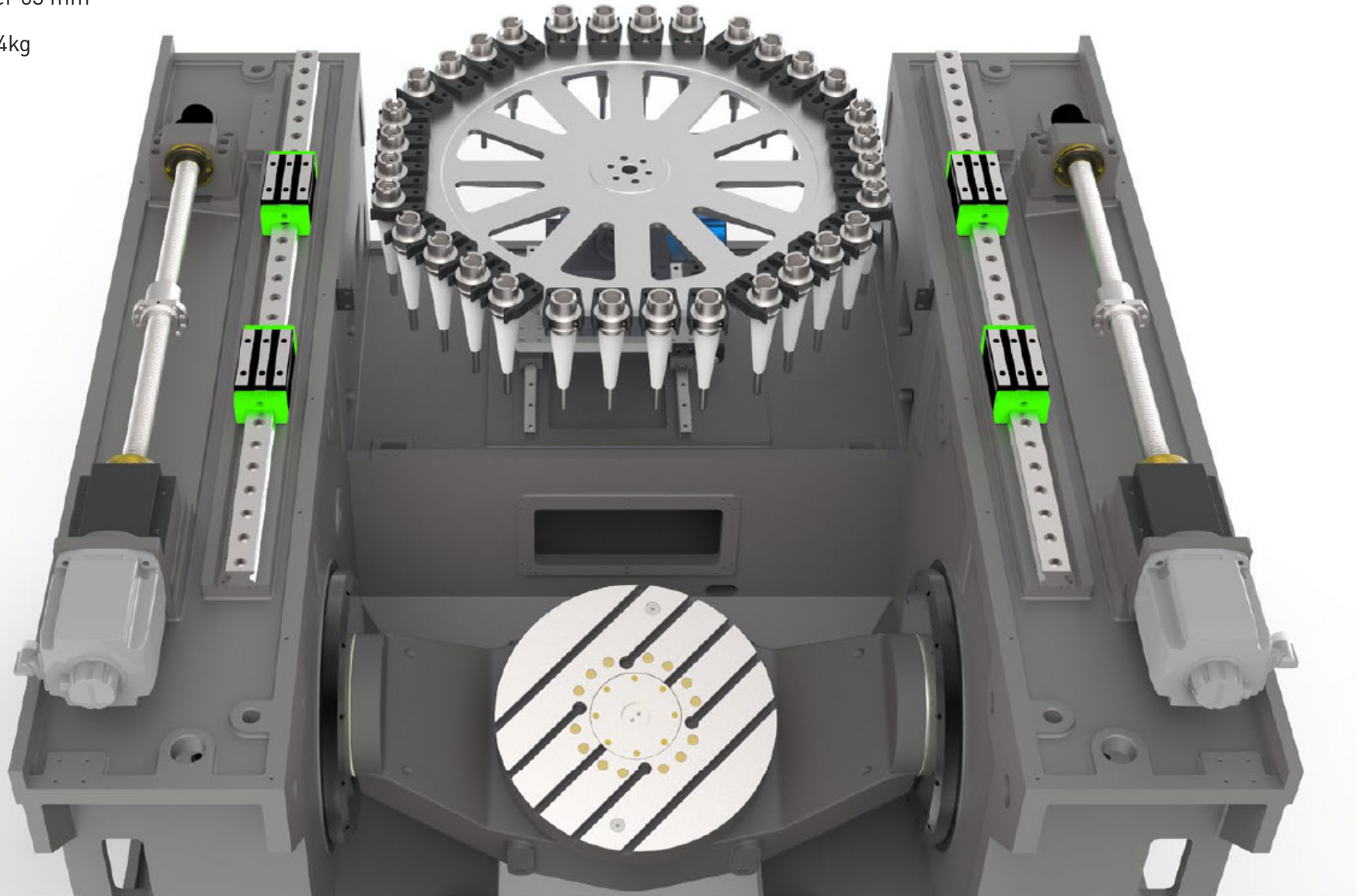
- Max. workpiece diameter
850mm (U630 & U630T)
1000mm (U800 & U800T)
- Max. workpiece height 400mm
550mm (U630 & U630T)
700mm (U800 & U800T)
- Max. workpiece weight 500kg
800 kg(U630) & 500kg(U630T)
1200 kg(U800) & 800kg(U800T)



U500-5X

Standard with 32 pockets tool changer

- Max. tool length 250mm
- Max. tool diameter 63 mm
- Max. tool weight 4kg



U630-5X / 800-5X

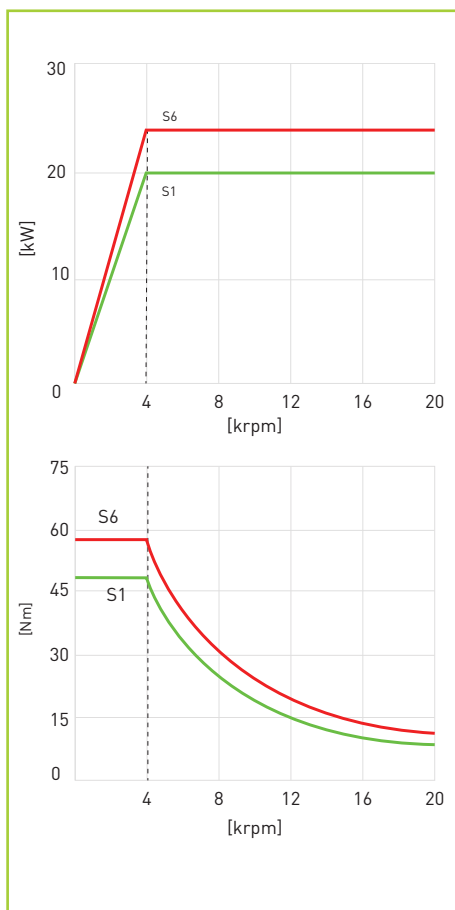
Standard with 60 pockets tool changer

- Max. tool length 300mm
- Max. tool diameter 70/120 mm (next release)
- Max. tool weight 8kg



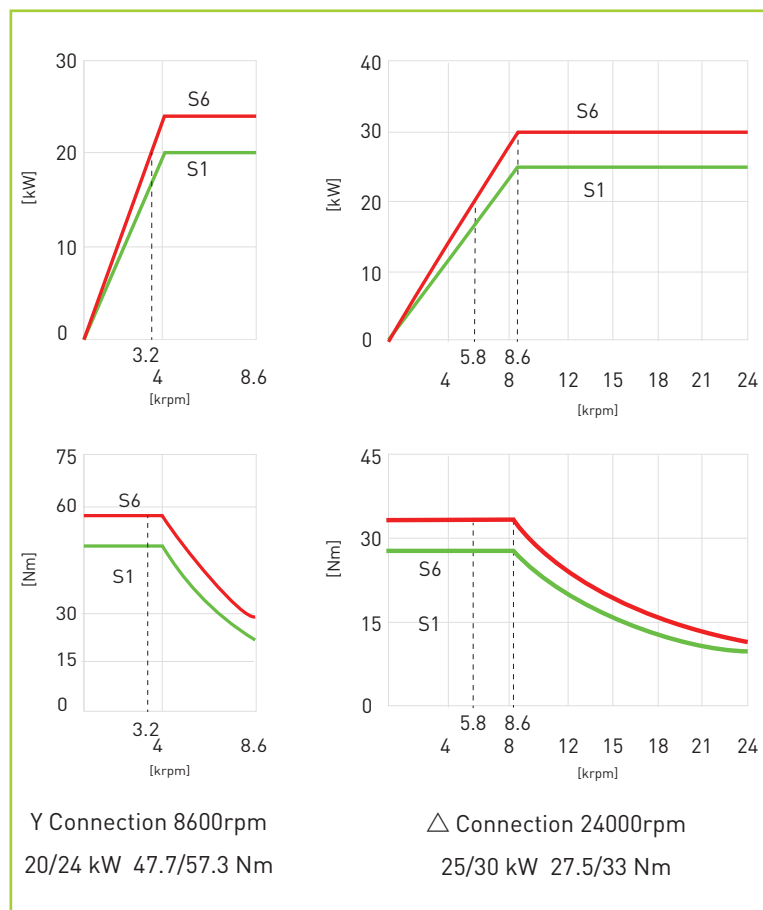
Torque Diagram

U500-5X



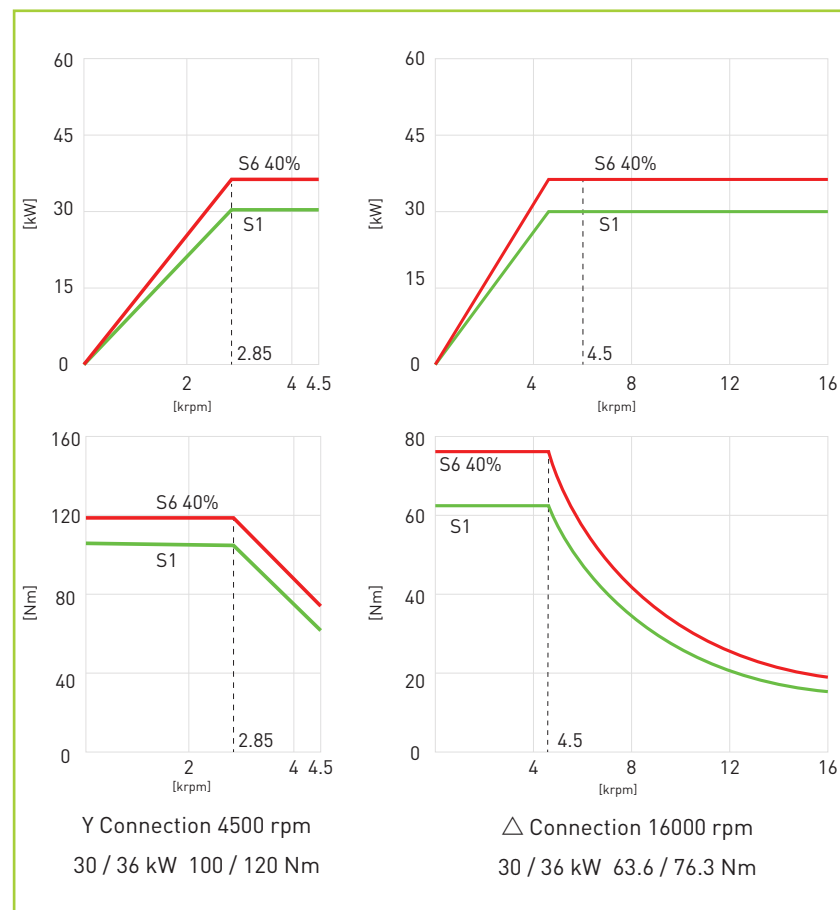
HSK A63 20000 rpm
20 / 24 kW 48 / 58 Nm

U500-5X



HSK A63 24000 rpm
20 / 24 kW 47.7 / 57.3 Nm

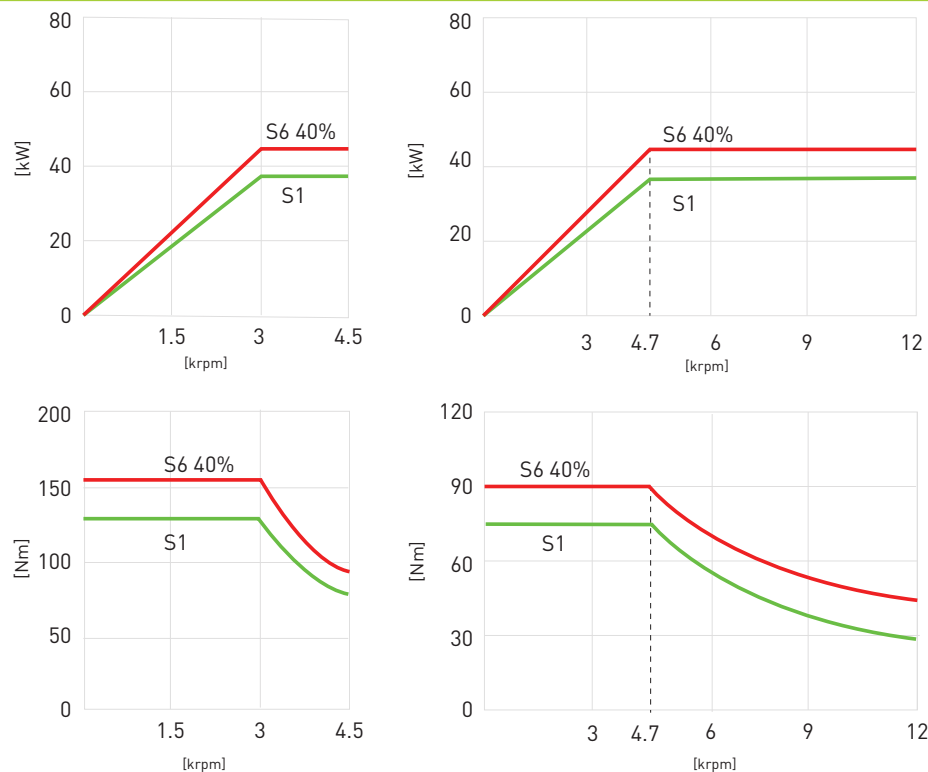
U630-5X · U800-5X



HSK A63 16000 rpm
30 / 36 kW 100 / 120 Nm

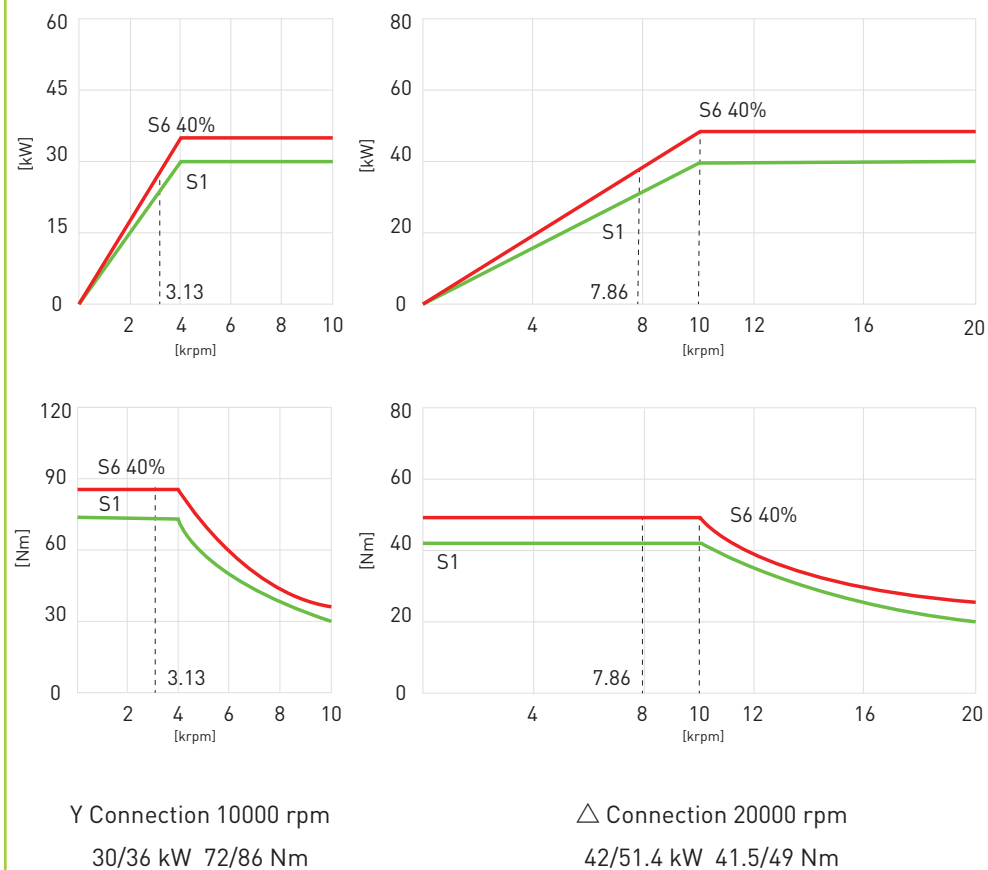
Torque Diagram

U630-5X · U800-5X



HSK A63 12000 rpm
37 / 44 kW 130 / 156 Nm

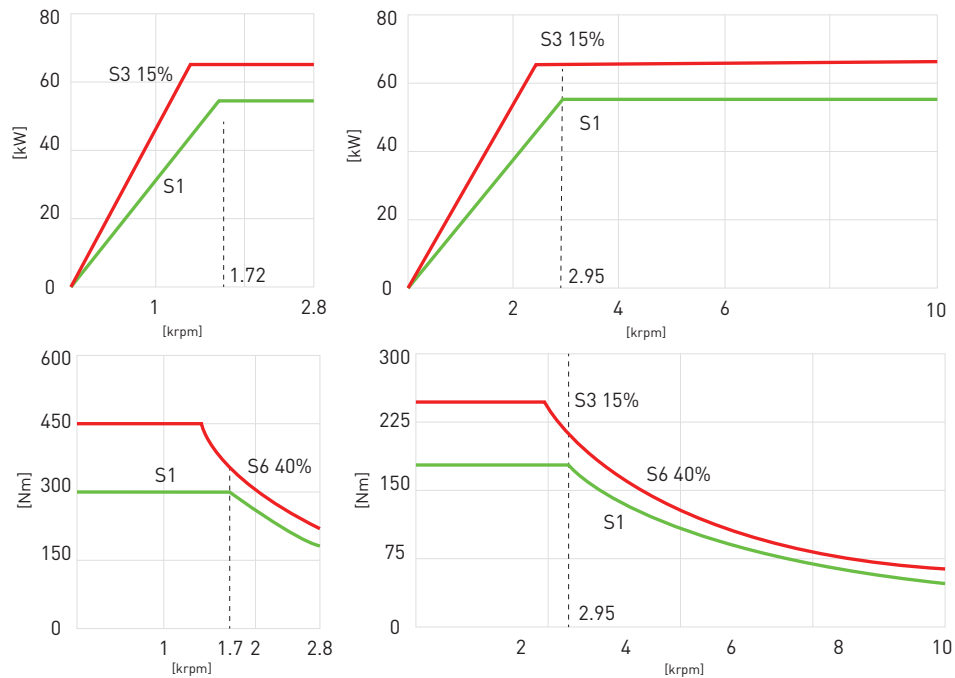
U630-5X · U800-5X



HSK A63 20000 rpm
30 / 36 kW 72 / 86 Nm

Torque Diagram

U800-5X

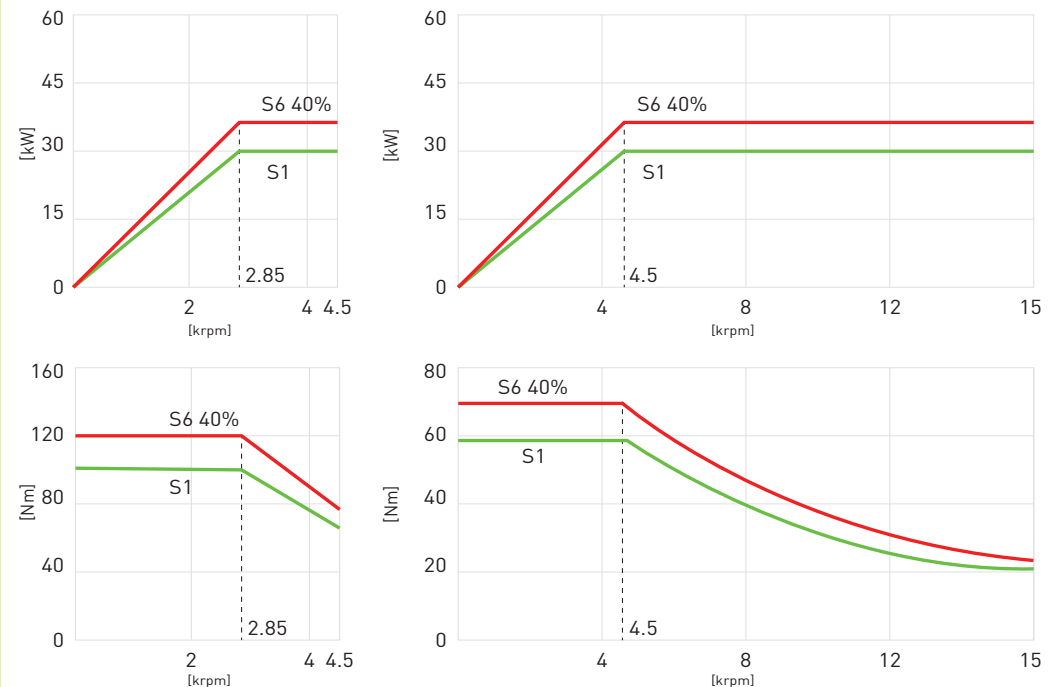


Y Connection 2800 rpm
54 / 65 kW 300 / 360 Nm

Δ Connection 10000 rpm
54 / 65 kW 174.8 / 210 Nm

HSK A100 10000 rpm
54 / 65 kW 300 / 360 Nm

U630T-5X · U800T-5X



Y Connection 4500 rpm
30/36 kW 100/120 Nm

Δ Connection 15000 rpm
30/36 kW 57.7/69.2 Nm

HSK T63 15000 rpm
30 / 36 kW 100 / 120 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 Kinematics Opt

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
- MachiningMachining and measuring 3-D contours
- The TNC 640 makes setup easy

SIEMENS SINUMERIK ONE

Platforms and digitalization drive innovations

Key features:

- 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

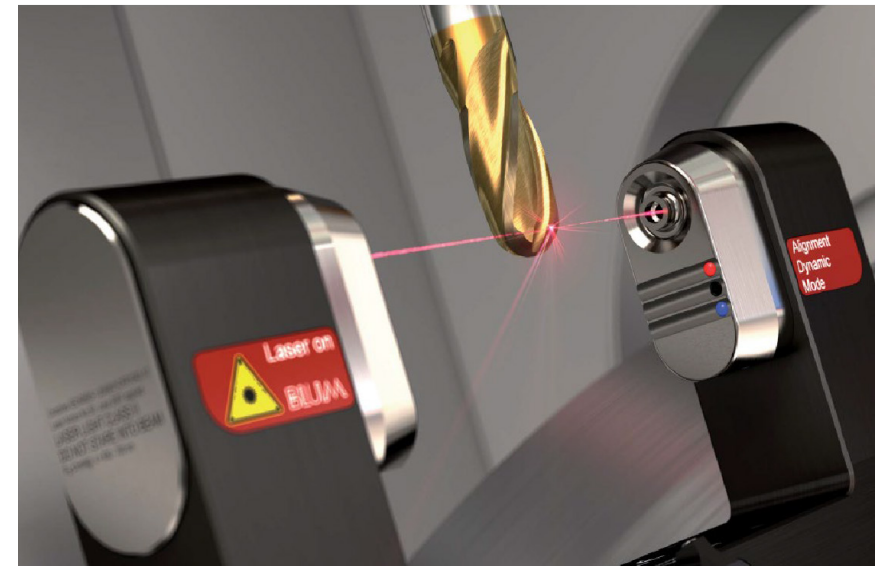


<Option>

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



Specification

	U500-5X		U630-5X			U630T-5X	U800-5X				U800T-5X
Table											
Max. workpiece diameter	Φ 700 mm		Φ 850 x 550 mm				Φ 1000 mm				
Table Size	Φ 500 mm		Φ 630 x 560 mm			Φ 630 mm	Φ 800 x 700 mm				Φ 800 mm
T slot (width* distance*number)	14 mm × 80 mm × 5		14 mm × 100 mm × 5			14 mm × 8	14 mm × 100 mm × 7				14 mm × 8
Max. load	500 kg		800 kg			500 kg	1200 kg				800 kg
Travel											
X/Y/Z travel	700 / 650 / 450 mm		850 / 875 / 550 mm				1000 / 1100 / 600 mm				
A/C travel	+30° ~ -110° / ±360°										
Spindle											
Spindle taper	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK T63	HSK A100	HSK A63	HSK A63	HSK A63	HSK T63
Spindle motor power	20 / 24 kW	20 / 24 kW	37 / 44 kW	30 / 36 kW	30 / 36 kW	30 / 36 kW	54 / 65 kW	37 / 44 kW	30 / 36 kW	30 / 36 kW	30 / 36 kW
Spindle motor torque	48 / 58 Nm	47.7 / 57.3 Nm	130 / 156 Nm	100 / 120 Nm	72 / 86 Nm	100 / 120 Nm	300 / 360 Nm	130 / 156 Nm	100 / 120 Nm	72 / 86 Nm	100 / 120 Nm
Spindle speed	20000 rpm	24000 rpm	12000 rpm	16000 rpm	20000 rpm	15000 rpm	10000 rpm	12000 rpm	16000 rpm	20000 rpm	15000 rpm
Spindle nose to table	110-560 mm		151-701 mm	160-710 mm	160-710 mm	213-763 mm	190-790 mm	180-780 mm	180-780 mm	180-780 mm	233-833 mm
Feed											
Rapid feed X/Y/Z	36 / 36 / 36 m/min (Opt 15 / 15 / 15 m/min)		60 / 60 / 36 m/min				48 / 48 / 24 m/min (Opt 24 / 24 / 24 m/min)				
Rotation speed A/C	100 / 170 rpm		100 / 100 rpm			100 / 1000 rpm	100 / 100 rpm				100 / 1000 rpm
Cutting speed	1-12000 mm/min										
Tool Changer											
No. of tools	32		60								
Max. tool length	250 mm		300mm								
Max. diameter	Φ 63 mm		70 / 120 mm								
Max. tool weight	4 kg		8 kg								
Accuracy [VDI 3441]											
Positioning accuracy	0.006 mm [X/Y/Z]; 4 / 3 arc-sec [A/C]		0.008 mm [X/Y/Z]; 6/4 arc-sec [A/C]								
Positioning repeatability	0.003 mm [X/Y/Z]; 2.5 / 2 arc-sec [A/C]		0.004 mm [X/Y/Z]; 5/3 arc-sec [A/C]								
Machine weight and dimension											
Dimension[L×W×H]	3480 × 4530 × 2995 mm		3945 × 5325 × 3770 mm				4115 × 5870 × 3950 mm				
Weight	10000 kg		14500 kg				20000 kg				

Configuration

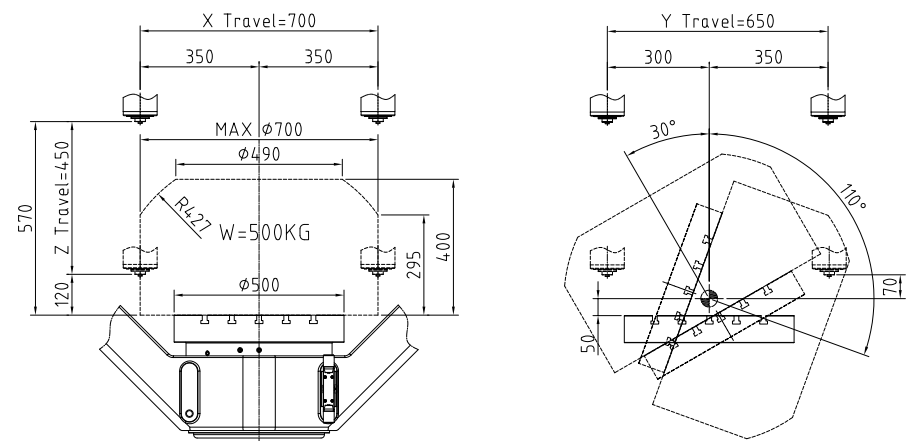
	U500-5X	U630-5X	U630T-5X	U800-5X	U800T-5X
Full enclosed splash guard	●	●	●	●	●
Built in spindle HSK A63 12000 rpm, 37 /44 kW, 130 / 156 Nm	×	○	×	○	×
Built in spindle HSK A63 16000 rpm, 30 /36 kW, 100 /120 Nm	×	●	×	●	×
Built in spindle HSK A63 20000 rpm, 20/24 kW, 48/58 Nm	●	×	×	×	×
Built in spindle HSK A63 20000 rpm, 30/36 kW, 72/86 Nm	×	○	×	○	×
Built in spindle HSK A63 24000 rpm, 20/24 kW, 47.7/57.3 Nm (Oil lubrication)	○	×	×	×	×
Built in spindle HSK T63 15000 rpm, 30 /36 kW, 100 /120 Nm	×	×	●	×	●
32 pockets tool changer HSK A63	●	×	×	×	×
60 pockets tool changer HSK A63	×	●	●	●	●
90 pockets chain type tool changer HSK A63	×	○	×	○	×
Built in spindle HSK A100 10000 rpm, 54/65 kW, 300/360 Nm, 48 pockets tool changer	×	○	×	○	×
Sealed linear scales on X/Y/Z axes	●	●	●	●	●
Rotary encoder on A/C axes	●	●	●	●	●
A axis dual DD motor direct drive	×	●	●	●	●
Y-axis dual synchronous drive	●	●	●	●	●
Hollow ball screw cooling system	●	●	●	●	●
±0.1 degree high precision spindle water cooler	●	●	●	●	●
Laser tool setter	●	●	●	●	●
Workpiece probe	○	○	○	○	○

	U500-5X	U630-5X	U630T-5X	U800-5X	U800T-5X
Oil mist collector	○	○	○	○	○
Oil skimmer	○	○	○	○	○
Coolant temperature control system	○	○	○	○	○
CTS Coolant Through Spindle + ATS	○	○	○	○	○
Extra 200GB SSD program memory	○	○	○	○	○
LAC Load adaptive control	○	○	○	○	○
Automatic correction system for rotation center error	○	○	○	○	○
Dynamic Collision Monitoring (DCM)	○	○	○	○	○
Graphite machining	○	×	×	×	×
Air-conditioned electrical cabinet	●	●	●	●	●
Rigid tapping	●	●	●	●	●
Ethernet, CF card and USB interface	●	●	●	●	●
Chain 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	●	●	●	●	●

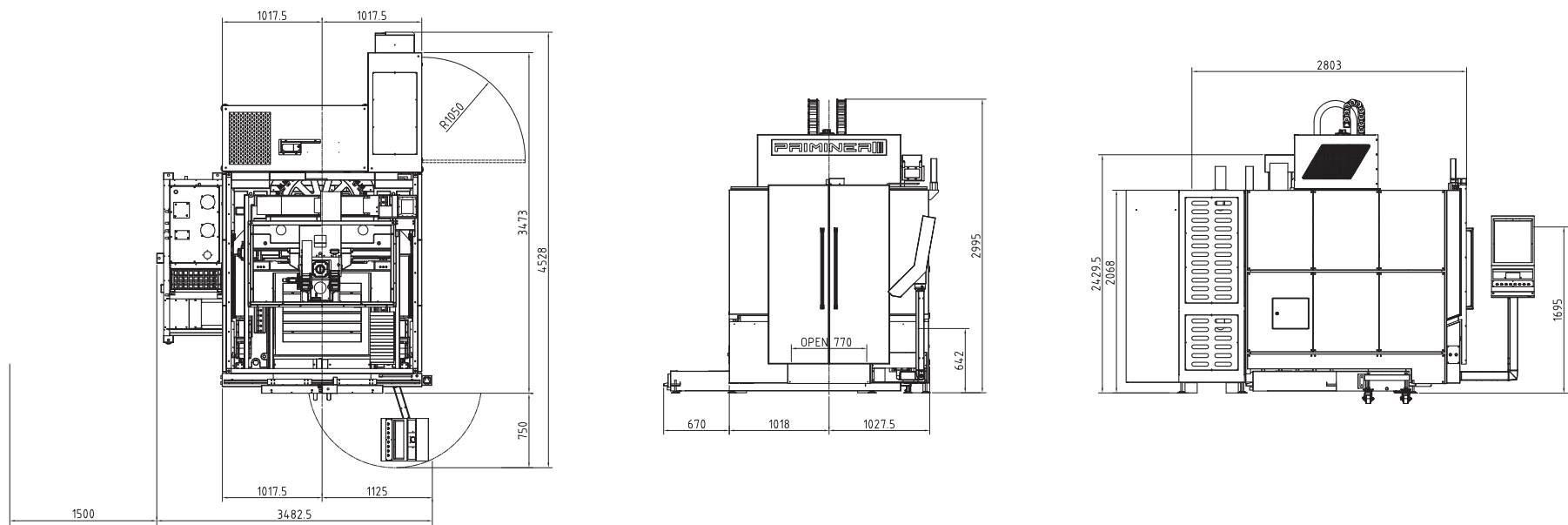
● Standard ○ Optional × Not Available

U500-5X

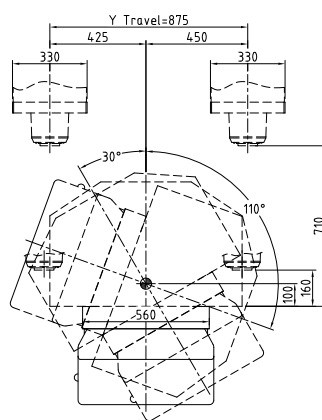
Cutting Area



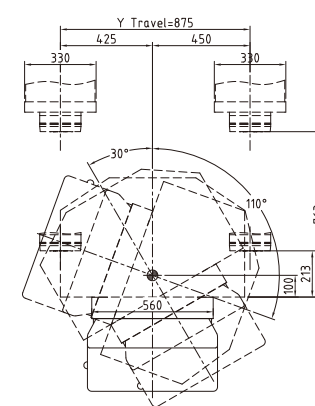
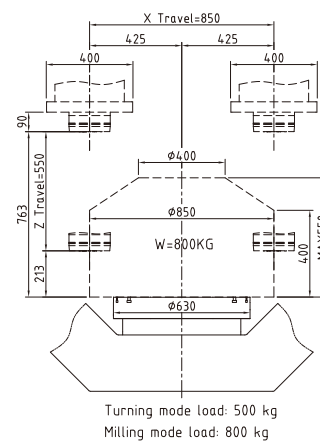
Layout Drawing



Cutting Area

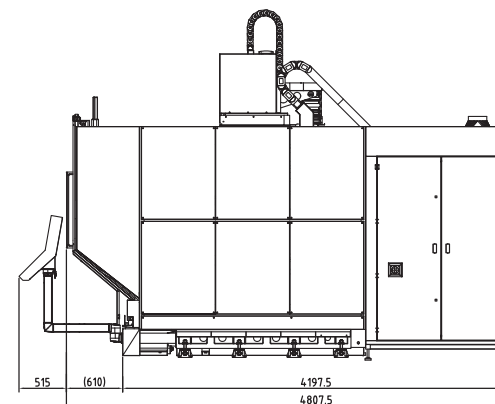
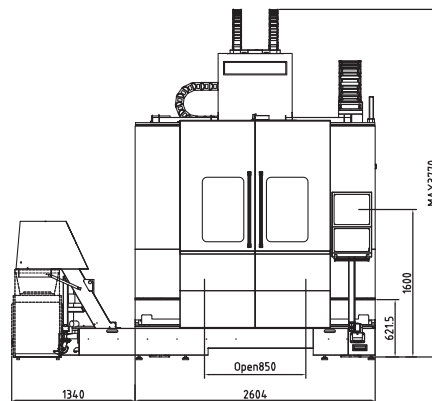
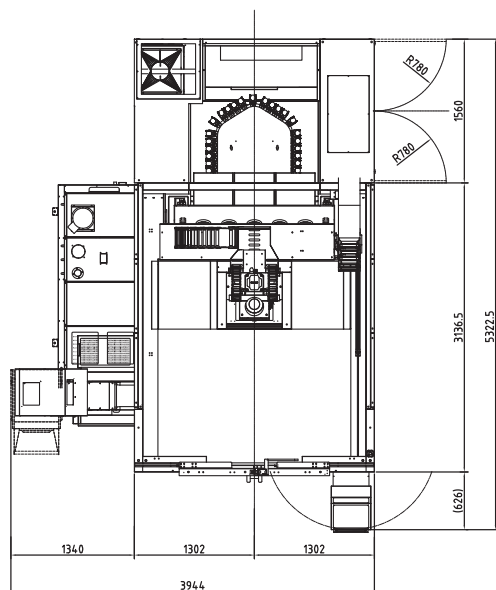


U630-5X



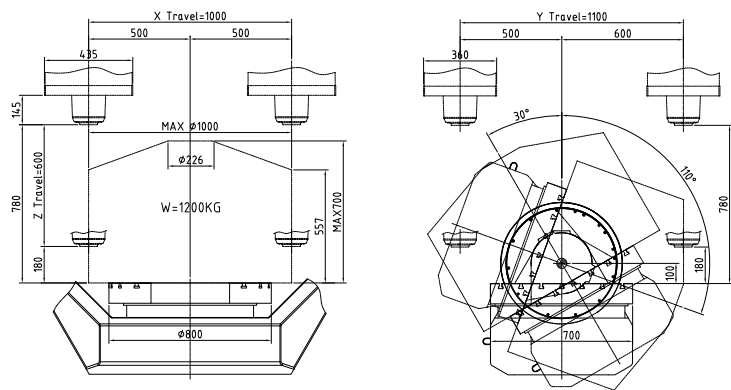
U630T-5X

Layout Drawing

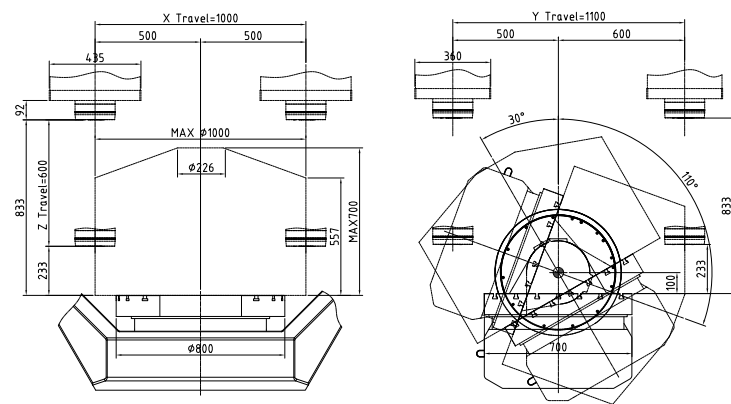


U800-5X / U800T-5X

Cutting Area

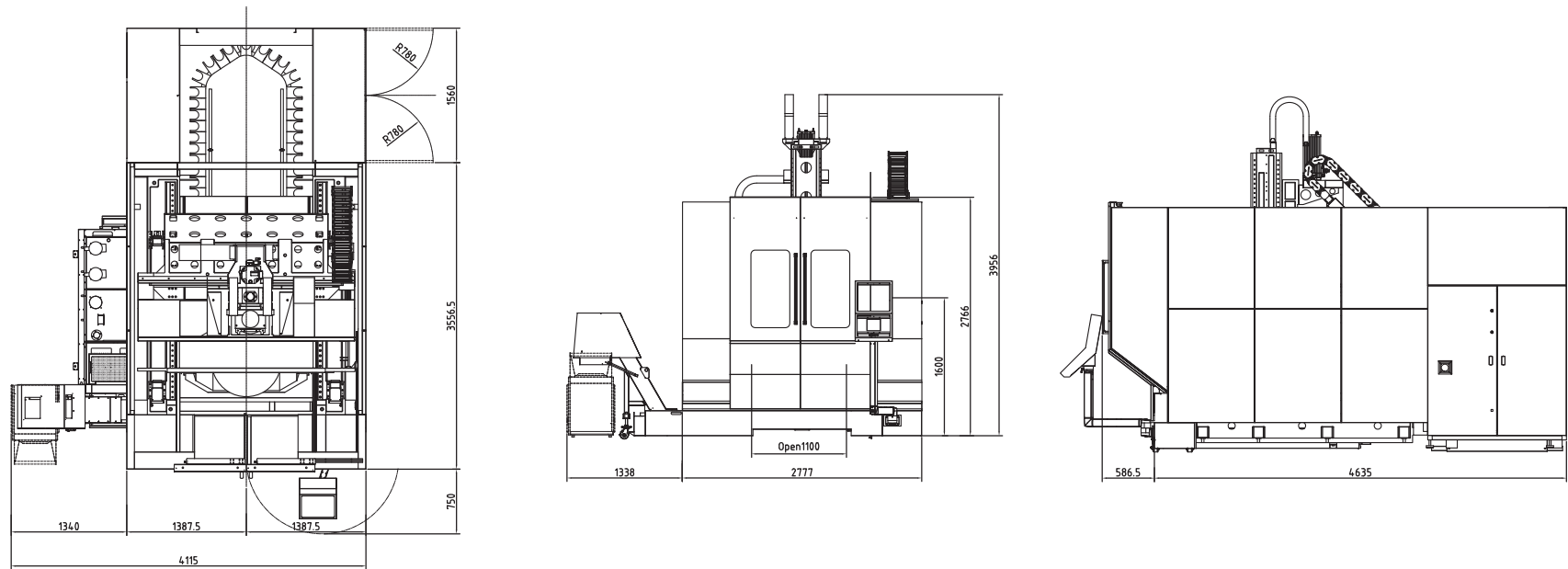


U800-5X



U800T-5X

Layout Drawing





PRIMINER INTERNATIONAL
TEAM

PRIMINER GLOBAL



PRIMINER USA
Greenville, South
Carolina USA



Network of dealers
and partners
Europe



PRIMINER Brazil

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.

Jack Chen und Benjamin Kaehlcke
CEOs
Priminer Machine Tools



PRIMINER Werkzeugmaschinen GmbH
Neumünster | Germany

PRIMINER Machine Tools
location Dongguan | China



PRIMINER Machine Tools Global Manufacture
location Enping | China



PRIMINER South East Europe
Belgrad | Serbia



PRIMINER Asia
Thailand





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