

A detailed photograph of a Maximart 5-axis vertical machining center. The machine is shown from a low angle, looking up at the spindle and tool head. The spindle is a large, polished metal cylinder with four red-handled valves at the top. A blue coolant hose is connected to the side. The tool head is a long, black and silver assembly with a sharp, pointed tool bit. The tool bit is positioned just above a large, curved metal workpiece that has a complex, ribbed design. The background is a dark, industrial setting.

Maximart®
CE/EMC ISO 9001

5 AXIS VERTICAL MACHINING CENTERS

Versatility | Precision | Reliability

C Series

Versatility – Precision - Reliability

Dynamic Machining Accuracy

Eliminate Cumulative Errors

Sustained Machining Accuracy

Maximum Thermal Stability

Complex Mold & Part Excellence

Versatile Precision

Heidenhain Encoders on all Axes (Optional)

High Precision Tables

Greater Accuracy Away from Center of Rotation

2 Sides + Front Side Screw Drive Chip Conveyor



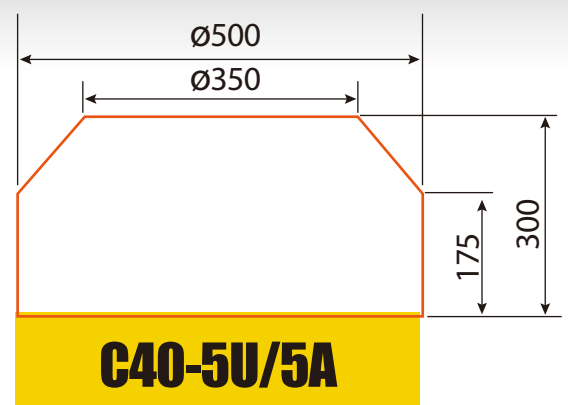
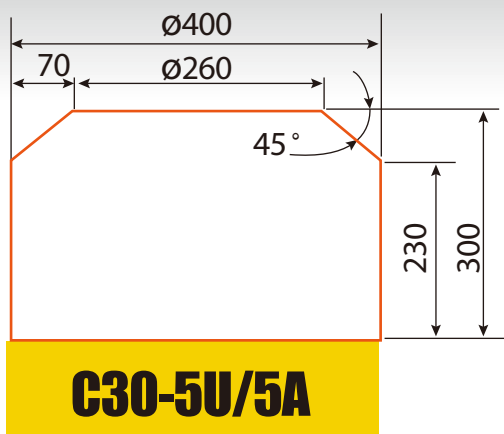
Smaller Footprint

"The Maximart C Series 5 Axis Vertical Machining Centers deliver outstanding performance in a smaller footprint for the machining of complex geometry parts for the Medical, Aerospace, Molds and Die Industries."

Outstanding Performance

Max Workpiece: Width **620** mm

Max Workpiece: Height **300** mm

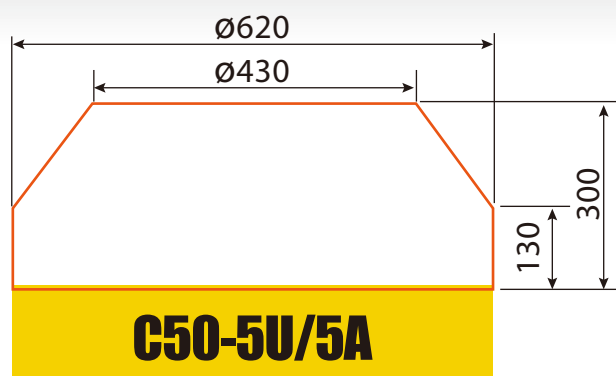


Maximum Versatility

The tilting rotary table on the Maximart C series machining centers delivers value for money with the widest range of machining operation. Unlike tilting head machining centers, these machines offer a wider working range with $+30^{\circ} \sim -120^{\circ}$ of travel on the A axis.

This trunnion type design delivers greater workpiece machining flexibility with better undercut capability. This is perfect for small workshops wishing to maximize the application of their machining investment.

A Axis $+30^{\circ}$ to -120° of Travel



Dynamic Machining Efficiency

5 Axis Positional Precision

The oversized box design column along with the extra heavy machine base on the C Series machines deliver the structural rigidity and stability to handle the dynamic forces associated with high efficiency 5 Axis cutting.



A/C Axis

- Full circumference braking system:
Maximum braking force - minimum impact on precision.
- A axis: $+30^{\circ} \sim -120^{\circ}$ - greater undercut performance.
- C axis: $+360^{\circ}$ - wider cutting range.



Z Axis

- Powerful Z axis motor alleviates need for counter balance system.
- Powerful brake motor delivers excellent performance during high speed dynamic machining.



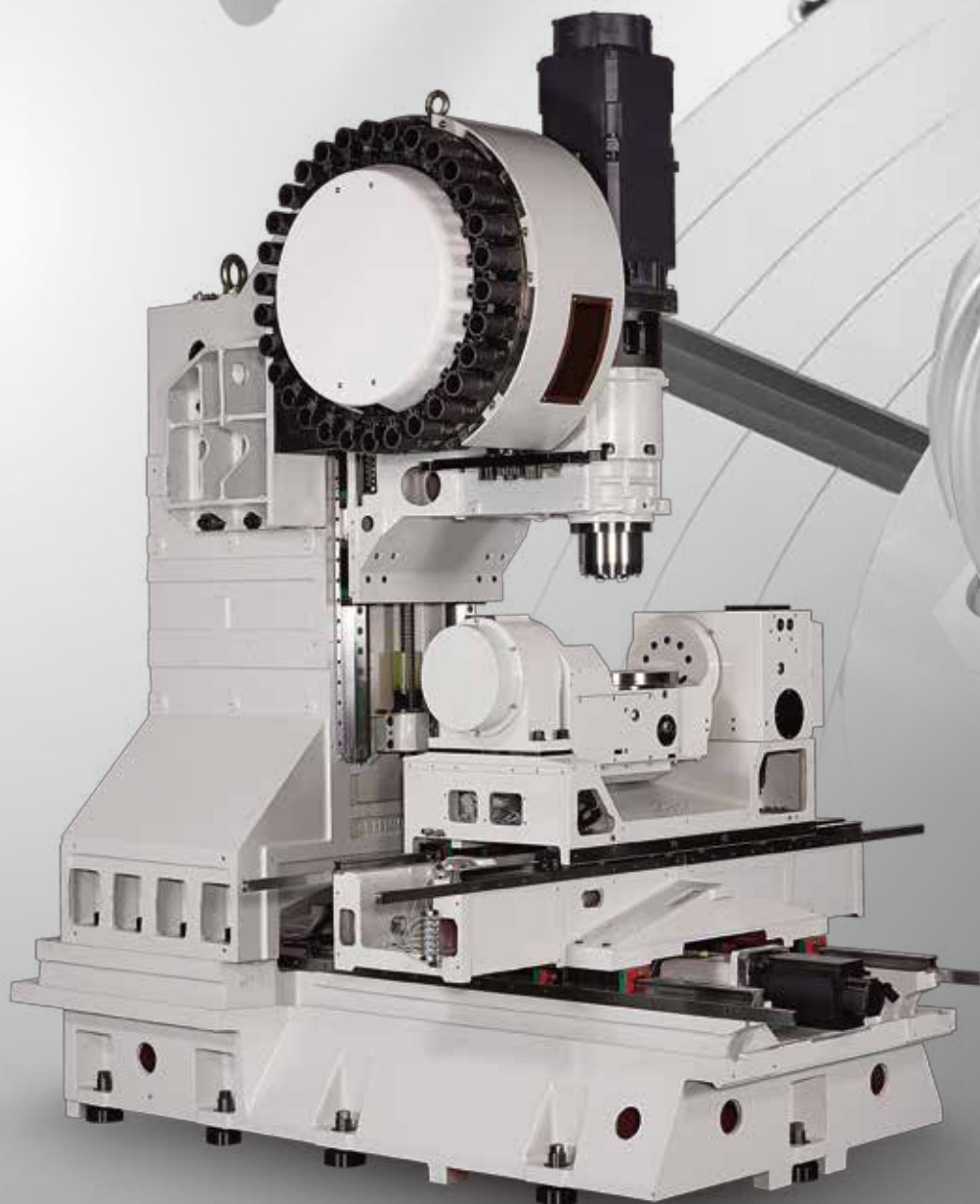
X, Y, Z Axes

- Wide span high performance precision roller type linear guideways on all axes.
- Delivers excellent stability and avoids deflection issues even during high speed heavy work piece machining.

Optimum Structural Design

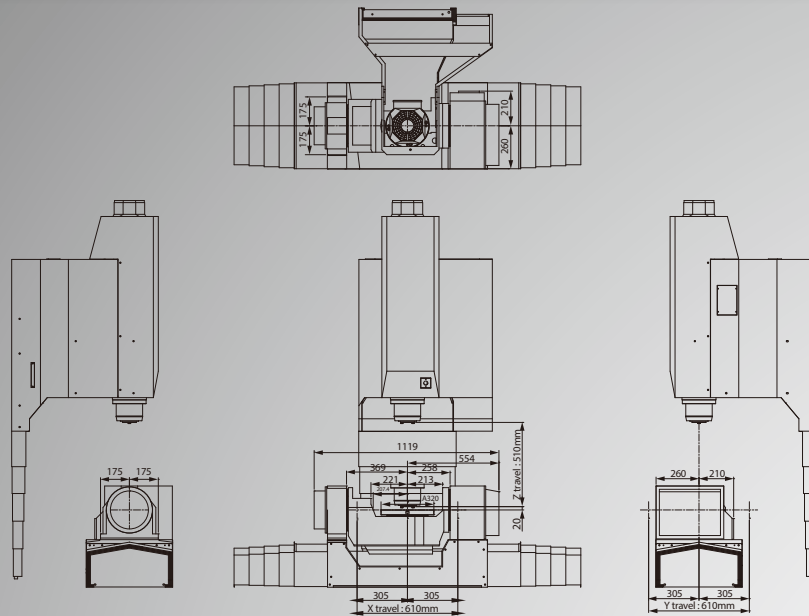
FEA Analysis for Performance

High speed machining precision is the key to 5 Axis cutting efficiency and the structure of the C series machines has been thoroughly analyzed and optimized through FEA (Finite Element Analysis). This ensures the C series machining centers deliver class leading performance and surface finish.

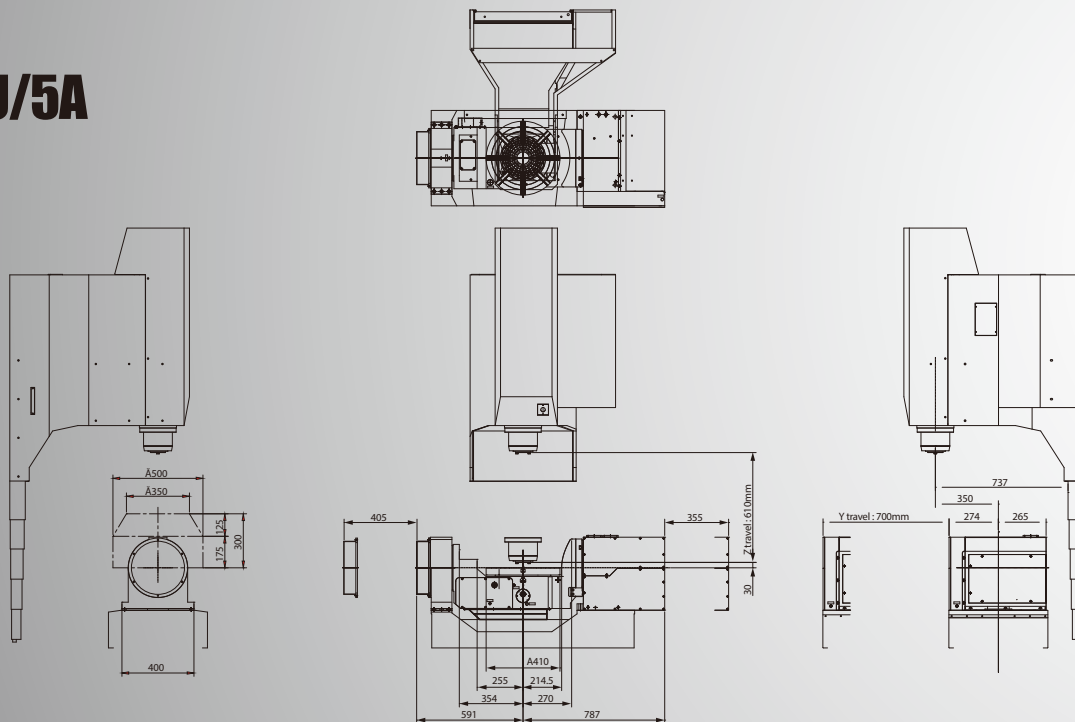


Machine Layouts, Cutting Area & Interference Diagrams

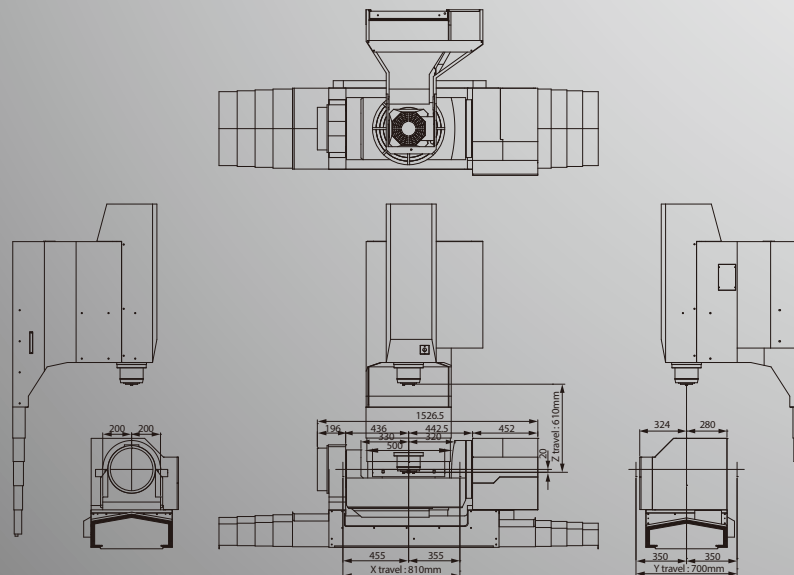
C30-5U/5A

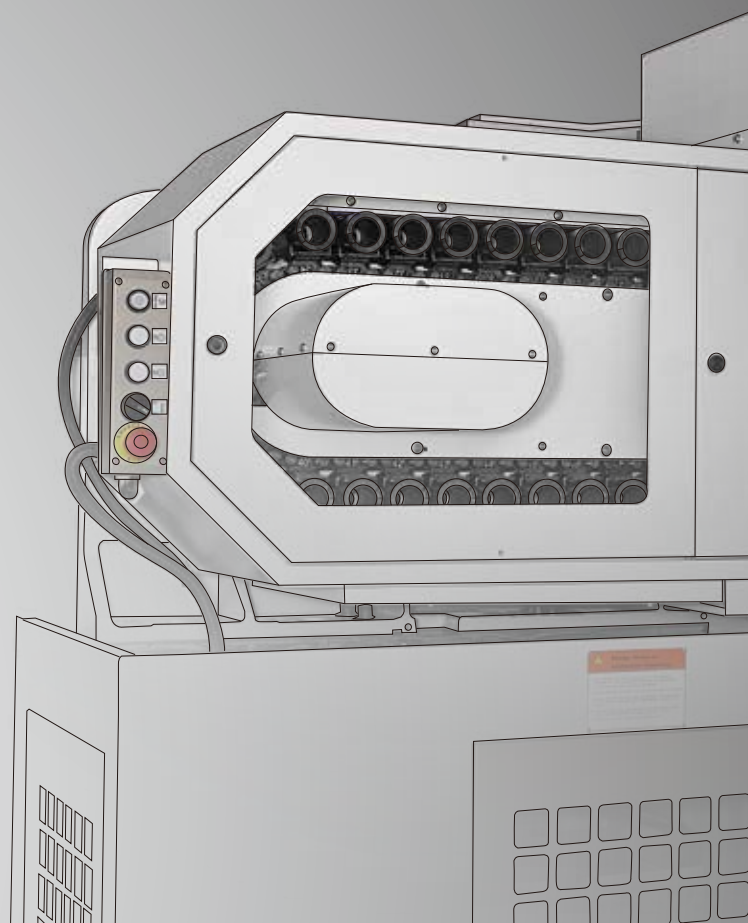
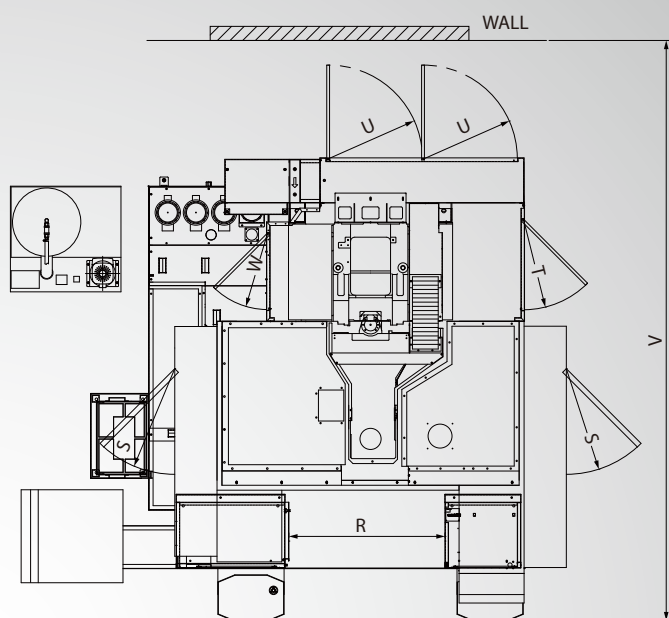


C40-5U/5A

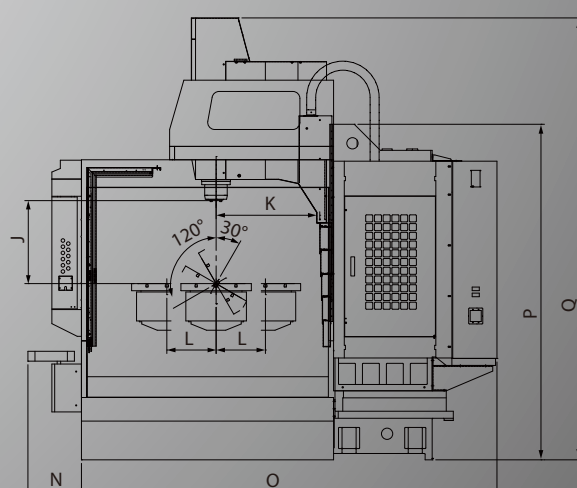
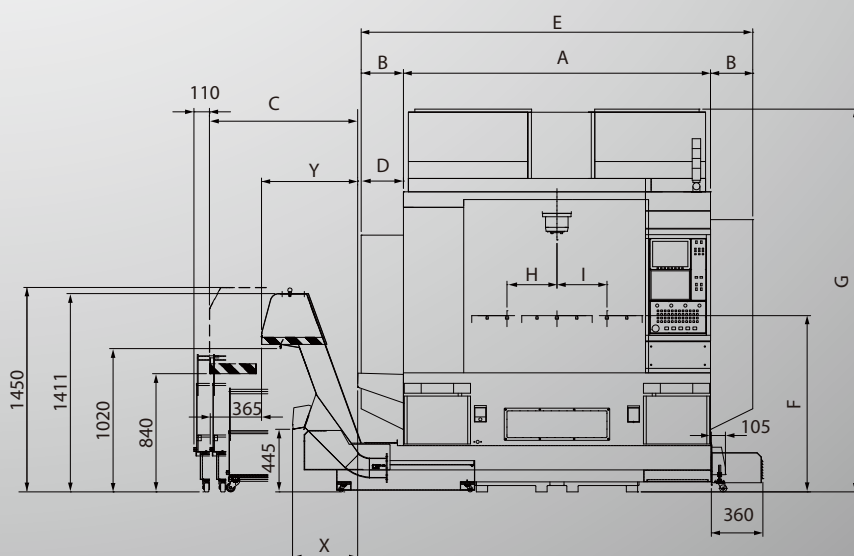


C50-5U/5A





MODEL	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	U	V	W	X	Y
C30		70			2320	1175	2580	305	305	20~530	630	305		2800	2352	3050					4050			
C40	2180		1035	325	2780	1200	2720	355	355	30~610			380				1080	R744	R645	R675		R545	425	651
C50		300				1250		455		20~590	740	350		2950	2382	3240					4200			



Accessories & Options

Specifications

ITEM/MODEL	C30-5U/5A	C40-5U/5A	C50-5U/5A
WORK TABLE			
Table Size	ø320mm	ø410mm	ø500mm
T-Slot	12H7 x 4	14H7 x 8	14H7 x 8
Max. Work Piece Size	ø400 x H300mm	ø500 x H300mm	ø620 x H300mm
Table Load Capacity	100kg	200kg	300kg
TRAVEL			
X/Y/Z Axis Travel	610/610/510mm	710/710/610mm	810/700/610mm
A Axis Travel	+30~-120°		
C Axis Travel	360° (Continuous)		
Spindle Nose to Work Table	20~530mm	30~640mm	-20~590mm
MOVEMENT & RANGE			
3 Axes Ballscrews	ø40m/P12m/C1		
3 Axes Precision Roller Type Linear Guideway	C30: X(35mm)/Y/Z(45mm) x 6pcs Self-lube Roller Type Block C40 & 50: X/Y/Z(45mm) x 6pcs Self-lube Roller Type Block 32/32/32m/min		
3 Axes Transmission	Direct Drive		
Rapid Traverse X/Y/Z	32/32/32m/min		
Rapid Traverse A/C	25/25min ⁻¹	11.1/16.6min ⁻¹	11.1/16.6 min ⁻¹
Acceleration X/Y/Z	3/3/3 m/s ²	2/2/3m/s ²	2/2/3 m/s ²
X/Y/Z Feed Rate	12/m/min		
A/C Feed Rate	2,000° /min		
SPINDLE			
Spindle Taper	BT40/CAT40/DIN40 (Optional:HSK-63A)		
Spindle Cooling Unit	12,000rpm (Optional:15,000rpm)		
Spindle Transmission	Direct Drive		
A. T. C.			
Tool Storage Capacity	30		
Max. Tool Weight	7kgs/PCS		
Max. Tool Diameter	ø76mm (ø150mm)		
Max. Tool Length	300mm		
Tool Change Time (CTC)	5sec.	6sec.	
Tool Change Time (Tool to Tool)	2.2sec		
Tool Selection	Bi-direction Random Shortest Path		
COOLANT SYSTEM			
Coolant Tank Capacity	250L		
Coolant Motor	380V 50HZ 0.85kW 2kg/cm2-67L/min		
Coolant Spray Gun	220V 60HZ 0.1.27kW 3kg/cm2-67L/min		
Chip Conveyor Motor	220V 60HZ 0.2kW x 2, 0.2kW (Chain Type/ Scraper Type) 0.4kW (Screw Type) 380V 50HZ 0.2kW x 2, 0.2kW (Chain Type/ Scraper Type) 0.4kW (Screw Type)		
GENERAL INFORMATION			
Power Consumption	30kVA	35kVA	40kVA
Air Pressure Required	6kg/cm ²	6kg/cm ²	6kg/cm ²
Machine Weight	8,200kg	8,800kg	9,200kg

Machine Accessories

	C30-5U/5A	C40-5U/5A	C50-5U/5A
MODEL			
Spindle Cooling Unit	●	●	●
3 Axes Roller Type Guideway with Self-lube Device	●	●	●
Automatic Central Lubrication System with Alarm	●	●	●
Z Axis Brake Motor Without Counter-balance Block	●	●	●
Arm Type 30 Tools ATC with Quick Tool Change Device	●	●	●
Spindle Nose Coolant Jet Flushing	●	●	●
Spindle Side Air Blow & Coolant Nozzle & All-time Air Curtain	●	●	●
Air Gun & Coolant Spray Gun	●	●	●
Machine Window with Safety Glass	●	●	●
Chip Conveyor (2 Sides Screw Drive + Front Side Screw Drive)	●	●	●
Rigid Tapping	●	●	●
Auto Power Off	●	●	●
3 Colors Warning Lamp	●	●	●
Tools & Tool Box	●	●	●
Fluorescent Work Lamp (2 sets)	●	●	●
Ethernet Port	●	●	●
A Axis with Heidenhain Angle Encoder	●	●	●
EC/EMC Conformity Machine	○	○	○
3 Axes Internally Cooled Ballscrew	○	○	○
Front Side Chain/ Scraper Type Chip Conveyor Chip Cart	○	○	○
Arm Type 48/60 Tool ATC with Quick Tool Change Device	○	○	○
Tool Length Measurement System	○	○	○
Absolute Type 0.1u Resolution 3 Axes Optical Scale with Air-blow Protection	○	○	○
High Pressure Coolant Thru Spindle 22bar/50bar	○	○	○
Extra Coolant Flushing Injection Around Spindle	○	○	○
2 Side Chip Flush System	○	○	○
Coolant Cooling System	○	○	○
Oil-mist Coolant System	○	○	○
Oil-mist Filtering & Recycle System	○	○	○
Transformer to Suit Local Power	○	○	○
Voltage Regulator	○	○	○
Workpiece Measurement System	○	○	○
C Axis Heidenhain Angle Encoder	○	○	○
15000rpm Direct Drive Spindle	○	○	○
HSK-63A Spindle Tapper Spindle	○	○	○

— Not Available ○ Optional Accessory ● Standard Accessory



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