



C Series

*Maximart*®  
CE / EMC ISO 9001



5-Axis  
Vertical Machining Center

MAXIMART CORPORATION

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- Roller type linear guideways on three axes in combination with six blocks, featuring high rigidity, machining stability and high accuracy.
- The contact surface between machine spindle and motor is precisely hand-scraped and subject to various strict inspections.
- All machines equipped with a high accuracy proportional spindle cooling unit.
- Z-axis is driven by a powerful brake motor without the use of counter-balance weight.
- The tilting axis equipped with Heidenhain angle encoder is standard feature.
- Chip flushing under worktable, two front chip augers combined with front-mount chip conveyor offer comprehensive chip removing to meet long time machining requirement.



# Committed To The Ultimate

C30-5U/5A • C40-5U/5A • C50-5U/5A 5-Axis Vertical Machining Center

## C30-5U/5A

- X, Y, Z-axis travel: 610 X 610 X 510 mm
- Rotary table Ø320 mm

## C40-5U/5A

- X, Y, Z-axis travel: 710 X 700 X 610 mm
- Rotary table Ø410 mm

## C50-5U/5A

- X, Y, Z-axis travel: 810 X 700 X 610 mm
- Rotary table Ø500 mm



## RIGID MACHINE STRUCTURE

### Designed Specifically for High Speed Machining

Major Structural Parts are analyzed through "Finite Element Analysis" to achieve the optimal design

### Massive Column and Base

- Oversized box type column with enlarged bottom in combination with a massive machine base that fully exhibits extraordinary structural rigidity and stability.



Dual-axis Trunnion Table (A/C-axis)

- The A/C-axis brake device employs a full-circumference hydraulic system, producing greater braking force with minimum affection on accuracy.
- A-axis tilting angle: +30° ~ -120°.
- C-axis rotating angle: +360°.



No counter-balance block on Z-axis

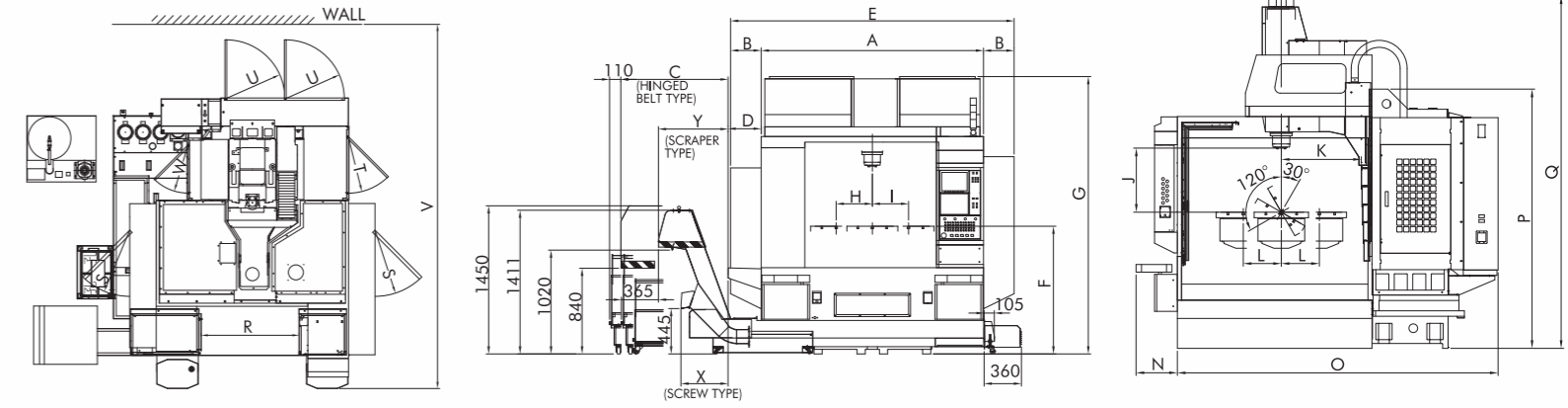
- Z-axis equipped with a powerful brake motor, no counter-balance needed. Excellent performance in 3D machining



Roller Type Linear Guideways on 3 Axes

- X, Y, Z-axis are all mounted with roller type linear guideways with large span design, resulting in outstanding stability at high speed traverse.
- X,Y,Z-axis linear guideways are all fitted with 6 blocks to provide solid support.

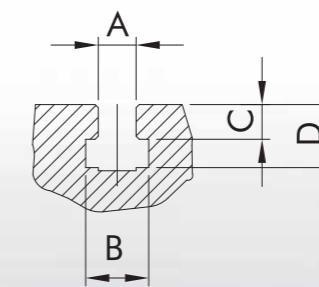
### Machine Overall Dimensions



unit: mm

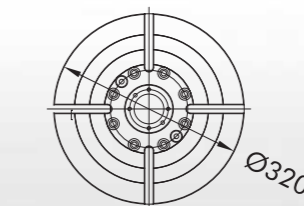
ITEM MODEL	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	U	V	W	X	Y
C30	2180	70	1035	325	2320	1175	2580	305	305	20~530	630	305	380	2800	2352	3050	1080	R744	R645	R675	4050	R545	425	651
C40	2180	300	1035	325	2780	1200	2720	355	355	30~610	740	350	380	2950	2382	3240	1080	R744	R645	R675	4200	R545	425	651
C50	2180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

### T-Slot

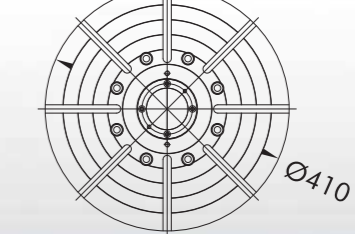


### Table Size

C30



C40



C50

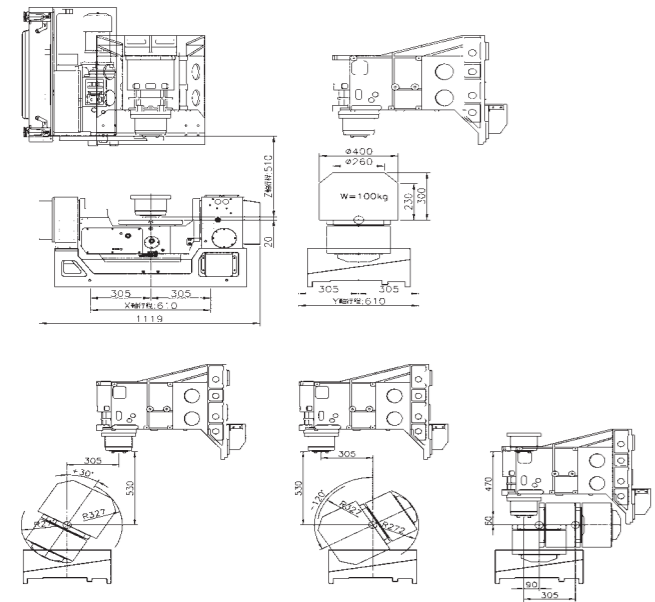


unit: mm

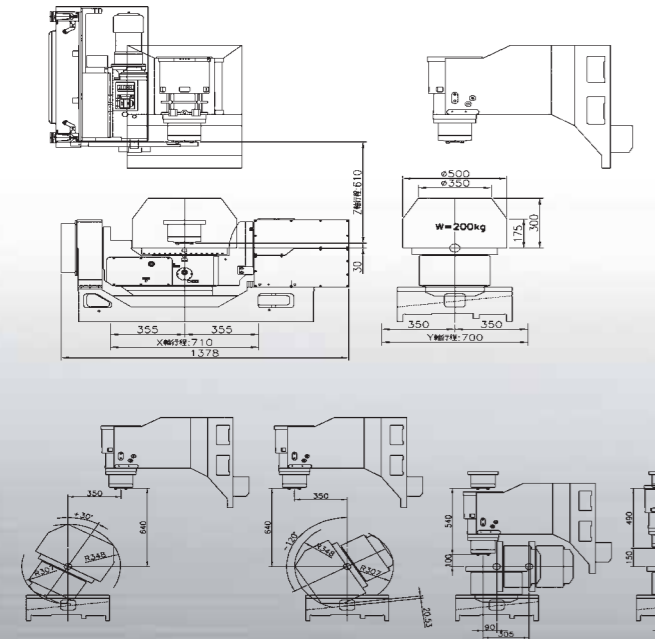
MODEL	ITEM	A	B	C	D
C30		12H7	20	11	20
C40		14H7	23	13	23
C50		14H7	23	13	23

## Cutting Area & Interference

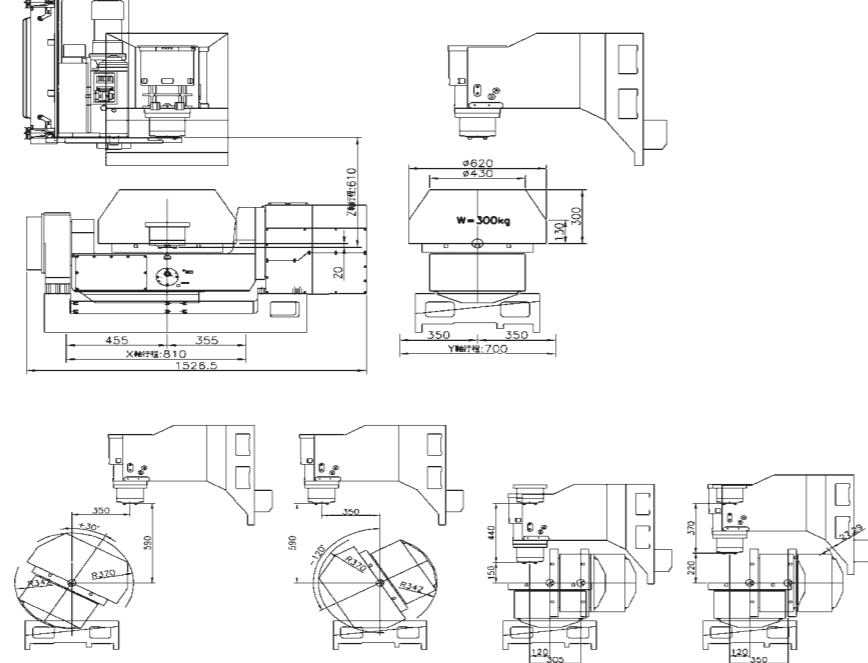
C30-5U/5A



C40-5U/5A

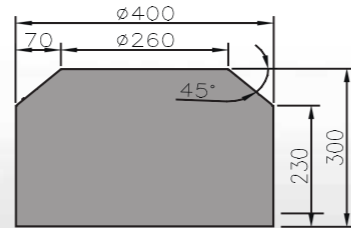


C50-5U/5A

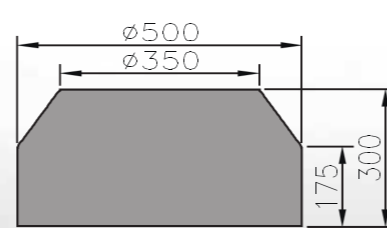


## Workpiece Size

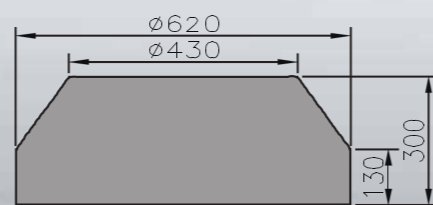
C30-5U/5A



C40-5U/5A



C50-5U/5A



## Machine Specifications

ITEM/MODEL	C30-5U/5A	C40-5U/5A	C50-5U/5A
<b>WORK TABLE</b>			
Table Size	Ø320 mm	Ø410 mm	Ø500 mm
T-Slot	12H7 x 4	14H7 x 8	14H7 x 8
Max. work piece size	Ø400 x H300 mm	Ø500 x H300 mm	Ø620 x H300 mm
Table load capacity	100 kg (10kg•m)	200 kg (19kg•m)	300 kg (30kg•m)
<b>TRAVEL</b>			
X/Y/Z axis Travel	610/610/510 mm	710 / 700 / 610 mm	810 / 700 / 610 mm
A axis Travel	+30° ~ -120°	+30° ~ -120°	+30° ~ -120°
C axis Travel	360° (Continuous)	360° (Continuous)	360° (Continuous)
Spindle nose to work table	20~530 mm	30~640 mm	-20~590 mm
<b>MOVEMENT &amp; RANGE</b>			
3 axes ballscrew	Ø40m / P12m / C1		
3 axes precision roller type linear guideway	C30:X(35mm)/Y/Z(45mm) x 6 pcs self-lube roller type block C40&50:X/Y/Z (45mm) x 6 pcs self-lube roller type block		
3 axes transmission	Direct drive		
Rapid traverse X/Y/Z	32/32/32 m/min	32/32/32 m/min	32/32/32 m/min
Rapid traverse A/C	25 / 25 min <sup>-1</sup>	11.1 / 16.6 min <sup>-1</sup>	11.1 / 16.6 min <sup>-1</sup>
Acceleration X/Y/Z	3 / 3 / 3 m/s <sup>2</sup>	2 / 2 / 3 m/s <sup>2</sup>	2 / 2 / 3 m/s <sup>2</sup>
X/Y/Z Feed rate	12 m/min	12 m/min	12 m/min
A/C Feed rate	2000°/min		
<b>SPINDLE</b>			
Spindle taper	BT40 / CAT40 / DIN40 (Optional: HSK-63A)		
Spindle cooling unit	12000 rpm (Optional: 15000 rpm)		
Spindle transmission	Direct drive		
<b>A.T.C.</b>			
Tool storage capacity	30		
Max. tool weight	7 kgs / PCS		
Max. tool diameter	Ø76 mm (Ø150 mm)		
Max. tool length	300 mm		
Tool change time (CTC)	5 sec.	6 sec.	
Tool change time (Tool to Tool)	1.8 sec.		
Tool selection	Bi-direction random shortest path		
<b>COOLANT SYSTEM</b>			
Coolant tank capacity	250L		
Coolant motor	380V 50HZ 0.85kW 2kg/cm <sup>2</sup> -67L/min		
Coolant spray gun	220V 60HZ 0.1.27kW 3kg/cm <sup>2</sup> -67L/min		
Chip conveyor motor	220V 60HZ 0.2kWx2, 0.2kW (Chain type/Scrapers type) 0.4kW (Screw type) 380V 50HZ 0.2kWx2, 0.2kW (Chain type/Scrapers type) 0.4kW (Screw type)		
<b>GENERAL INFORMATION</b>			
Power consumption	30kVA	35kVA	40kVA
Air pressure required	6kg /cm <sup>2</sup>		
Machine weight	8200 kg	8800 kg	9200 kg

• Above specifications are for reference only, and are subject to change without prior notice.

## Machine Accessories

MODEL	C30-5U/5A	C40-5U/5A	C50-5U/5A
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 glasses	●	●	●
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	●	●	●
CE/EMC conformity machine	○	○	○
3 axes internally cooled ballscrew	○	○	○
Front side chain/scrapers type chip conveyor	○	○	○
Chip cart	○	○	○
Arm type 48/60 tools ATC with quick tool change device	○	○	○
Tool length measurement system	○	○	○
Absolute type 0.1μ 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 wash 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 taper spindle	○	○	○

— Not Available ○ Optional Accessory ● Standard Accessory