

# US WHEELER EUROPE

HANGZHOU WHEELER GENERAL MACHINERY EUROPE

**Add:**  
Riether Str. 41A, 48317 Drensteinfurt / Germany

**Tel:**  
+ 49 171 488 5278

**E mail:**  
info@wheeler-us.com

## COMPREHENSIVE PRODUCT CATALOG



# US WHEELER

INDUSTRIAL ROBOT/  
CNC MACHITOOLS/  
INTELLIGENT FACTORY

**24/7 Service Hotline**  
**Machine Tool Lifetime Service**  
We provide on-call service 24/7.If you encounter any equipment maintenance and repair problems,please contact us.If you have any suggestions,please log in to the company's official website to leave a message.  
[WWW.Wheeler-us.com](http://WWW.Wheeler-us.com)



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HL-ZH02512-08-1000

# ABOUT US

HANGZHOU WHEELER GENERAL MACHINERY INCORPORATED CO., LTD. is a national high-tech enterprise specialized in the design and manufacturing of CNC machining equipment, machine tool loading and unloading automation lines, digital factory, and non-standard fixtures. The company was established in January 2015, with its operation center Located in Linping Economic Development region, Hangzhou City. The company currently has over 500 employees and an efficient professional technical research and development team, including more than 60 professional technical personnel with various intermediate and senior technical titles (engineers). The company has an R&D center of 5000 square meters and a production and commissioning base of 43000 square meters, with more than 50 patented technologies. It has offices and after-sales service outlets in Shanghai, Jiangsu, Anhui, Shandong, Henan, Jilin, Chongqing, Ningbo, Taizhou, Wuhan, Xi'an, Zhengzhou and other places. Our products have been exported to Turkey, Egypt, South Africa, Brazil, Australia, Singapore, Malaysia, Thailand and other countries.



certification



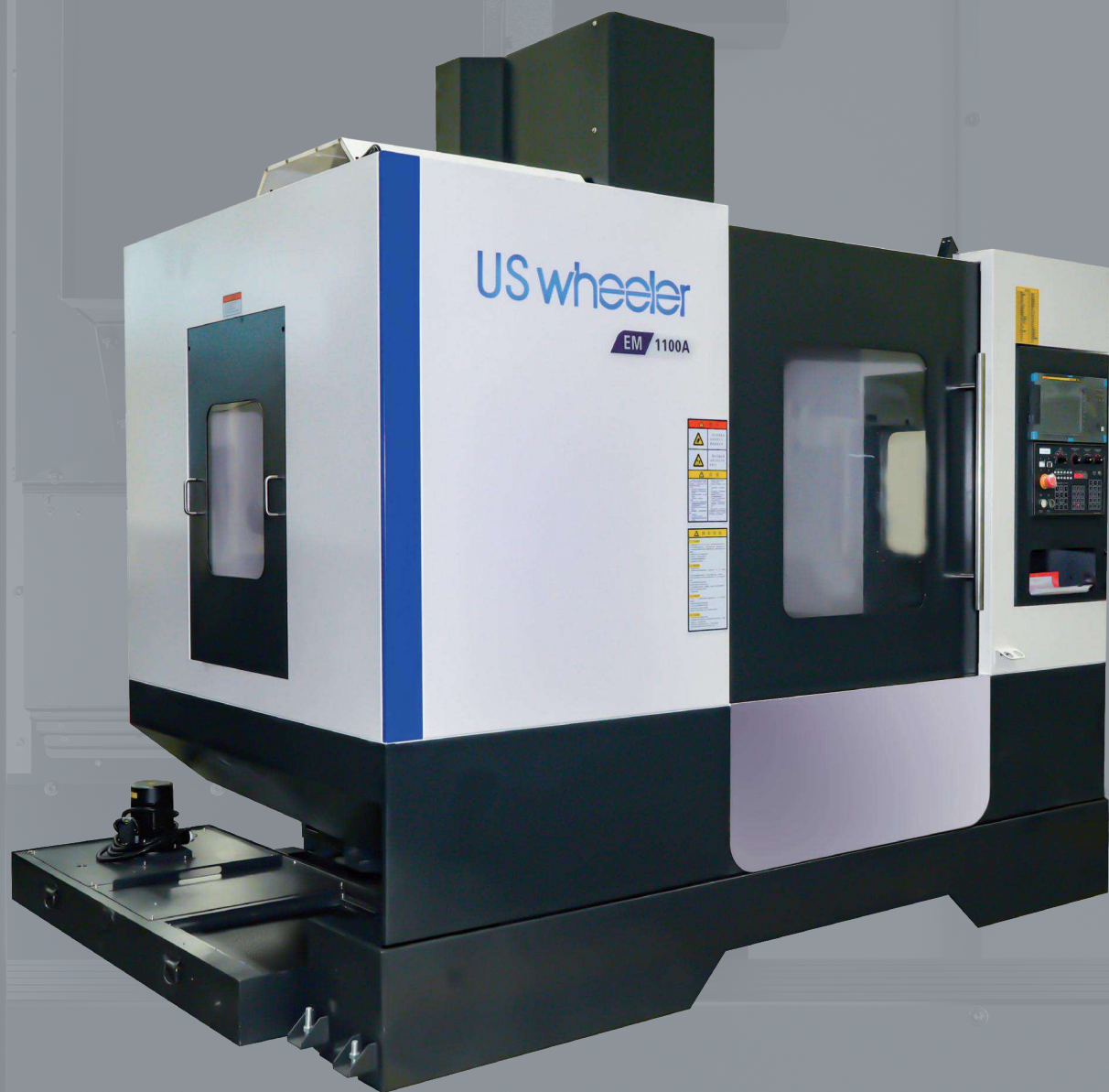
The company's main products include machining equipment, machine tool loading and unloading robots, machine tool fixtures, peripheral automated logistics equipment, and robot integration systems. It is a strategic partner of robot companies such as KUKA from Germany and ABB from Switzerland. Provide customers with mechanical processing automation technology solutions, a complete set of automation equipment, technical consulting, and comprehensive after-sales and technical services. The product is widely used in mass production industries such as automotive parts processing and construction machinery.



# EM series

## Vertical machining center

The EM series vertical machining center is a new generation of CNC machine tool produced by US WHEELER introducing advanced technologies. Its rational structural design, high rigidity, high stability, high accuracy, and high-quality parts effectively save the machining time. Its special shield design also greatly improves the service life of the machine tool.



### EM series

The tool changer is driven by a cam motor. During machining, the tool magazine can be rotated to the next tool to be used and wait for the tool change command, which can minimize non-cutting time, and at the same time, 24 tools can be equipped, diversifying the machining

The supported maximum tool diameter is up to 150 mm.

The maximum length is up to 300 mm.

The high-performance tool magazine and automatic tool change system enable fast tool changes and shorten non-production time.

The high-reliability tool magazine and automatic tool change system support a wide range of tools, ensuring reliable and flexible tool changes in production.

+Tool magazine capacity: 24 tools

+Maximum tool diameter (without/with adjacent tool):  $\Phi 150$  mm/ $\Phi 78$  mm

+Maximum tool weight: 8 kg



### +Core components



+Spindle

The spindle adopts a precision sleeve type design, with main body assembled with high-grade precision P4 bearing, and thick and stable tapered hole walls in the spindle hole ensures that the cutting will not vibrate at various speeds.



+Roller guide way

The roller guide rail has small elastic deformation due to force and achieves high rigidity by incorporating rollers into the sliding device.



+Ball screw

The imported C3 grinding grade ball screw is used, which has the characteristics of good rigidity, wear resistance, torsion resistance, long service life, etc.: the addition of pre-tensioned nut eliminates the backlash and ensures high machining accuracy of the machine.

### +User-friendly design



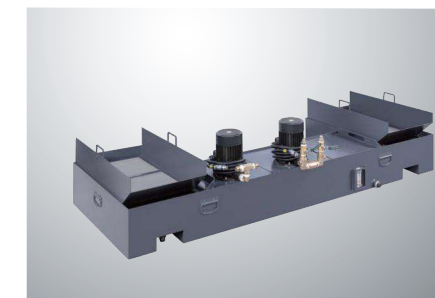
Centralized layout

The auxiliary equipment is centralized in the back of the machine for easy inspection.



Rotary operator panel

The 0°~60° rotatable operation panel improves the convenience and visibility of operation.



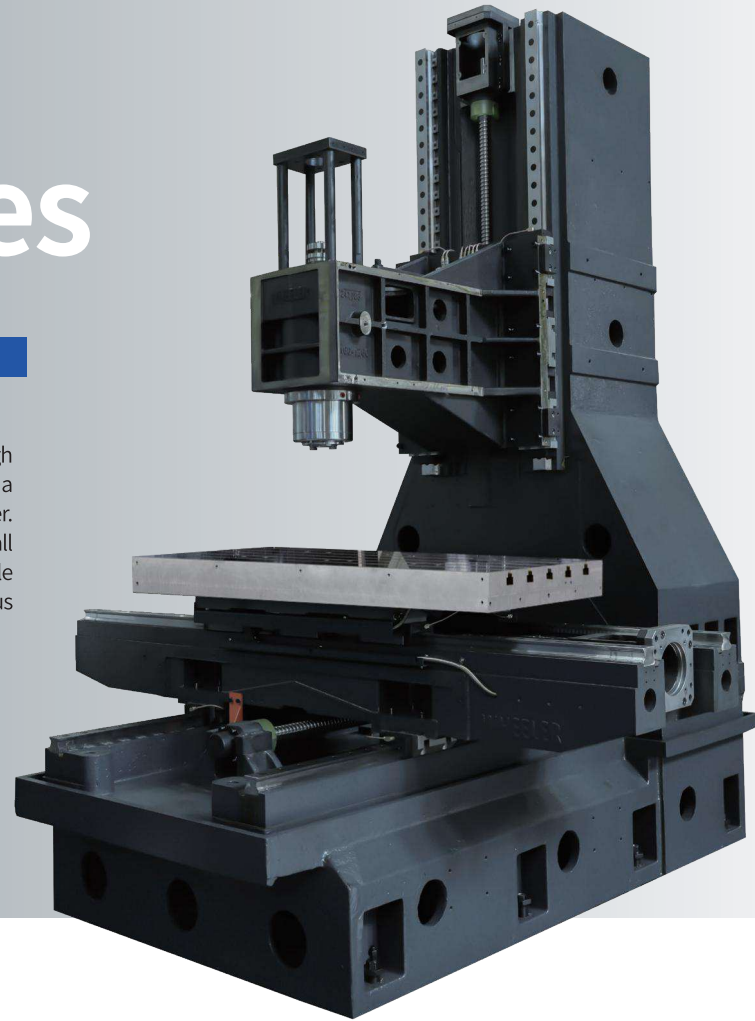
Rear flush water tank

The water tank realizes a full range of multi-layer filtration of sediment ensuring the cleanliness and efficiency of the return water.

# EM series

## +Machine Bed

The optimized mechanical design through advanced simulation and analysis provides a solid foundation for the entire machining center. The large cast iron structure improves the overall shock absorption performance and high stable rigidity, ensuring high accuracy in continuous cutting operation under full load.

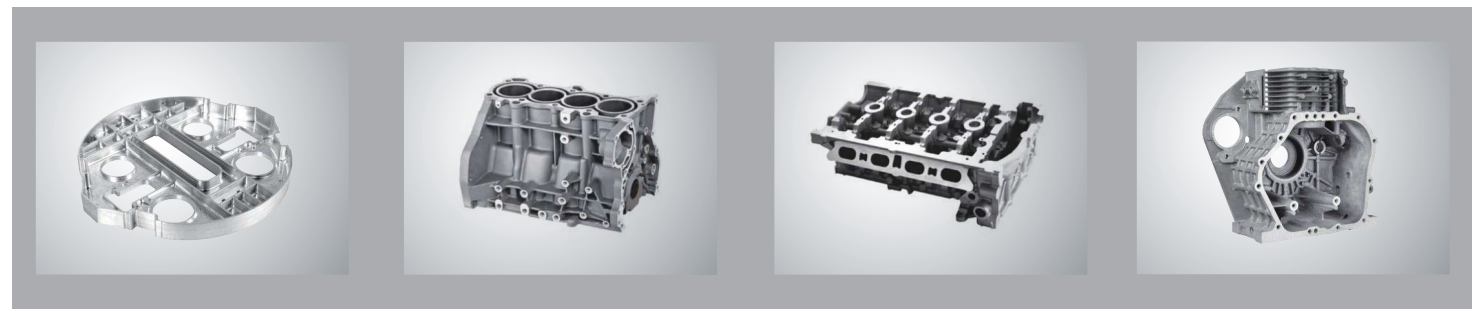


# EM Series: Application Scope & Fields

This series features high rigidity, easy operation, and fully enclosed protection. It is ideal for machining box-type parts and complex 2D/3D molds. Milling, drilling, boring, reaming, and tapping can be completed in a single clamping.

Widely used for high-precision, high-efficiency multi-process machining in automotive, mold, and high-end equipment manufacturing. Rotary axes can be added to machine multi-angle parts, cylindrical gears, cams, and other complex components as required.

## +Workpiece



## Specifications

Item	Vertical machining center	EM600A	EM855A	EM855Z	EM900-2S
Travel	Horizontal X-axis	600mm	800mm	800mm	900mm
	Longitudinal Y-axis	400mm	550mm	550mm	550mm
	Vertical Z-axis	450mm	550mm	550mm	550mm
	Distance from spindle end face to worktable	150-600mm	120-670mm	120-670mm	120-670mm
	Distance from spindle center to column rail surface	447mm	590mm	590mm	600mm
Worktable	Worktable size	700*420mm	1000*550mm	1000*550mm	1100*550mm
	T-slot quantity/size/spacing	4*14*84	5*18*90	5*18*90	5*18*100
	Maximum loading capacity	350kg	600kg	500kg	800kg
Spindle	Spindle speed	50-8000rpm	50-8000rpm	50-8000rpm	50-8000rpm
	Drive mode	Belt Drive	Belt Drive	Belt Drive	Belt Drive
	Spindle motor torque	35.8/95.5Nm	52.5/118Nm	52.5/118Nm	52.5/118Nm
	Main motor power	7.5/15kW	11/15kW	11/18.5kW	11/18.5kW
Servo axis	X/Y/Z rapid traverse speed	42/42/42m/min	42/42/42m/min	42/42/20m/min	42/42/42m/min
	Cutting feed rate	1-10000mm/min	1-10000mm/min	1-10000mm/min	1-10000mm/min
Tool magazine	Tool magazine type	ATC 24 Tools	ATC 24/32 Tools	ATC 24 Tools	ATC 24*2/32*2 Tools
	Shank specification	BT-40	BT-40	BT-40	BT-40
Others	Machine footprint and height	2050*2280*2850mm	2600*2310*3000mm	2600*2310*3000mm	2600*2900*3000mm
	Machine weight (apx.)	3700kg	5400kg	5500kg	7200kg
	Power capacity	25KVA	25KVA	25KVA	40KVA
	CNC system	FANUC 0iMF PLUS(MITSUBISHI)			

## Specifications

EM1100A	EM1100B	EM1300A	EM1570	EM1500Z
1100mm	1100mm	1300mm	1500mm	1500mm
600mm	600mm	700mm	700mm	800mm
600mm	600mm	700mm	700mm	700mm
120-720mm	120-720mm	120-820mm	130-830mm	175-875mm
650mm	650mm	750mm	750mm	862mm
1200*600mm	1200*600mm	1400*700mm	1600*700mm	1600*800mm
5*18*100	5*18*100	5*18*125	5*18*125	7*22*110
800kg	800kg	1000kg	1000kg	1500kg
50-8000rpm	50-6000rpm	50-8000rpm	50-8000rpm	50-6000rpm
Belt Drive	Belt Drive	Belt Drive	Belt Drive	Belt Drive
52.5/118Nm	143/236Nm	118Nm	52.5/118Nm	143/236N·m
11/18.5kW	15/18.5kW	11/18.5kW	11/18.5kW	15/18.5kW
36/36/36m/min	36/36/20m/min	36/36/24m/min	24/24/20m/min	20/20/12m/min
1-10000mm/min	1-10000mm/min	1-8000mm/min	1-8000mm/min	1-10000mm/min
ATC24 Tools	ATC24 Tools	ATC24 Tools	ATC 24 Tools	ATC24 Tools
BT-40	BT-50	BT-40	BT-40	BT-50
2900*2400*3000mm	2900*2400*3000mm	3400*2600*3200mm	3700*2800*3300mm	4055*2980*3200mm
6500kg	6800kg	7800kg	9000kg	11400kg
30KVA	30KVA	30KVA	30KVA	30KVA
/				
FANUC 0iMF PLUS(MITSUBISHI)				

# DT series

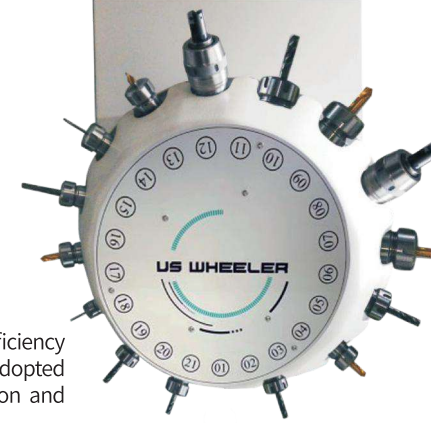
## Vertical drilling and tapping center

The design and development of DT series drilling and tapping center meet the requirements of users for high-speed/high-productivity vertical drilling and tapping center. The overall layout of the DT series drilling and tapping center adopts an overall compact and vertical frame structure. The column is a Y-shape structure with high rigidity, solid saddle and wide base. It can withstand heavy loads during machining and maintain no vibration or deformation during high-speed displacement. It is suitable for machining automobile and motorcycle accessories, small generator accessories, etc.



### + ATC 1.7 s without pause

1.7 S  
Tool change time



BBT30 spindle and high-efficiency servo tool magazine are adopted to realize high-speed action and optimal change.

### + High output spindle motor

Standard specification High torque specification

**28.6Nm**

Maximum torque (Instantaneous)

**9KW**

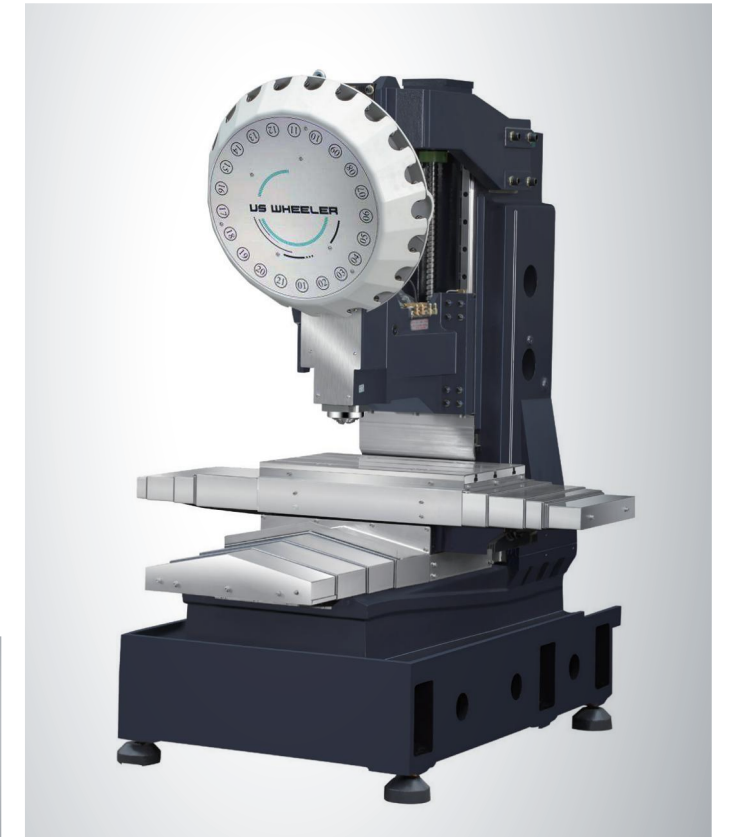
Maximum output power

**82.8Nm**

Maximum torque (Instantaneous)

**13KW**

Maximum output power



### Application

DT series high-speed and high-productivity vertical drilling and tapping center is suitable for machining automobile and motorcycle accessories and small generator accessories. DT series high-speed and high-productivity vertical drilling and tapping center is suitable for machining automobile and motorcycle accessories and small generator accessories.



## Specifications

Item	High-speed drilling and tapping center	DT600	DT700	DT800
Travel	Horizontal X-axis	600mm	700mm	800mm
	Longitudinal Y-axis	450mm	450mm	500mm
	Vertical Z-axis	330mm	330mm	430mm
	Distance from spindle end face to worktable	150-480mm	150-580mm	155-580mm
Worktable	Distance from spindle center to column rail surface	464mm	464mm	564mm
	Worktable size	700*420mm	800*420mm	1000*500mm
	T-slot quantity/size/spacing	3*14*125mm	3*4*125mm	5*18*100mm
	Maximum loading capacity	250kg	250kg	350kg
Spindle	Spindle speed	50-20000rpm	50-20000rpm	50-20000rpm
	Drive mode	Direct drive	Direct drive	Direct drive
	Spindle motor torque	11.8/28.6 Nm	11.8/28.6 Nm	11.8/28.6 Nm
	Main motor power	3.7/9 kW	3.7/9 kW	3.7/9 kW
Servo axis	X/Y/Z rapid traverse speed	48/48/48m/min	48/48/48m/min	48/48/48m/min
	Cutting feed rate	1-10000mm/min	1-10000mm/min	1-10000mm/min
Tool magazine	Tool magazine type	Reversible servo tool magazine with 21 tools	Reversible servo tool magazine with 21 tools	Reversible servo tool magazine with 21 tools
	Shank specification	BBT-30	BBT-30	BBT-30
		/	/	/
Others	Machine footprint and height	1750*2300*2300mm	1980*2540*2450mm	2480*2500*2440mm
	Machine weight (apx.)	3100kg	3500kg	4200kg
	Power capacity	15KVA	15KVA	15KVA
	CNC system		FANUC OiMF PLUS (MITSUBISHI)	

# LT series

## CNC lathe/turning-milling composite

LT series CNC lathe is a high-precision and high-efficiency automatic lathe. It is equipped with multi-station turret, with a wide range of machining performance. It also has linear interpolation, circular interpolation and various compensation functions, which has played a good economic effect in the mass production of complex components.



### + Core components



**+ Tool Turret**  
Standard configuration: imported 12-station servo tool turret, hydraulic clamping. Optional: driven tool



**+ Chuck**  
The entire series is equipped with a hollow hydraulic chuck.



**+ Chip conveyor**  
Chain-type chip conveyor is suitable for collecting and conveying various types of curled, clustered, and blocky chips, realizing automatic chip removal.



**+ Lathe Bed**  
It adopts an integrated slant bed structure with high rigidity and reasonable layout, which is beneficial to chip removal and cooling during machining.

### +Double Spindle Lathe

Items	LT-300S	LT-300SY	
Machining Capacity	Max. swing Dia over Bed	610mm	610mm
	Max. Turning Diameter	400mm	400mm
	Recommended Turning Diameter	210mm	210mm
	Max. Turning Length	380mm	380mm
	Bar Diameter	52mm	52mm
Travel	Distance from Spindle Center to Ground	1058mm	1058mm
	X travel	221mm	221mm
	Y travel	-	±50mm
Spindle	Z travel	440mm	440mm
	Spindle Speed	4000/5000rpm	4000/5000rpm
	Spindle Interface	A2-6/A2-5	A2-6/A2-5
	Main Motor Power	15/10kW	15/10kW
	Spindle Bore Dia	φ66/φ56	φ66/φ56
Servo Axis	X/Z Rapid Traverse	12/24m/min	12/24m/min
	Cutting Feed Speed	1-10000mm/min	1-10000mm/min
Tool Turret	Capacity	12 Station Bot	12 Station Bot
	Boring Bar Dia	32mm	32mm
	Turret Type	伺服刀塔+液压锁紧	动力刀塔+液压锁紧
Accuracy	Driven turret Spec	-	BMT-55-ER32,MAXφ20mm
	Driven Turret power Spec	-	6000rpm/4.5kW/18Nm
Others		/	/
		/	/
	Machine Footprint	2590*2400*1745mm	2590*2400*2184mm
	Machine Weight	4900kg	5400kg

FANUC 0i TF\_PLUS

### Specifications

Item	LT-210	LT-210M	LT-300A	LT-300M	LT-400	LT-400M
Machining capacity	Maximum swing over bed	510mm	510mm	570mm	570mm	790mm
	Maximum turning diameter	320mm	235mm	460mm	400mm	600mm
	Recommended turning diameter	210mm	210mm	260mm	260mm	380mm
	Maximum turning length	500mm	450mm	640mm	550mm	1500mm
	Bar workpiece diameter	51mm	51mm	74mm	74mm	115mm
Travel	Distance from spindle center to ground	1050mm	1050mm	1050mm	1050mm	1245mm
	X travel	175mm	175mm	260mm	220mm	340mm
	Z travel	510mm	510mm	680mm	600mm	1600mm
Spindle	Spindle speed	4500rpm	4500rpm	3000rpm	3000rpm	2000rpm
	Spindle interface specification	A2-6	A2-6	A2-8	A2-8	A2-11
	Main motor power	11/18.5kW	11/18.5kW	15/18.5kW	15/18.5kW	15/18.5kW
	Spindle through hole diameter	62mm	62mm	87mm	87mm	127mm
Servo Axis	X/Z rapid traverse speed	30/24m/min	30/24m/min	30/24m/min	30/24m/min	12/12m/min
	Cutting feed rate	1-10000mm/min	1-10000mm/min	1-10000mm/min	1-10000mm/min	1-10000mm/min
	Turret capacity	12 Station Bot	12 Station Bot	12 Station Bot	12 Station Bot	12 Station Bot
Tool Turret	Boring bar diameter	40mm	32mm	40mm	32mm	60mm
	Turret type	Servo turret +hydraulic clamping	Servo turret +hydraulic clamping	Servo turret +hydraulic clamping	Servo turret +hydraulic clamping	Hydraulic turret + hydraulic locking
Tail stock	Turret +hydraulic clamping	Servo turret +hydraulic clamping	Servo turret +hydraulic clamping	Servo turret +hydraulic clamping	Hydraulic turret + hydraulic locking	Servo turret +hydraulic clamping
	Tailstock type	Manual/servo	Manual/servo	Manual/Servo	Manual/Servo	Programmable hydraulic tail stock
	Tailstock sleeve taper	MT-4/MT-5	MT-4MT-5	MT-5	MT-5	MT-6 live quill
Others		/	/	/	/	/
	Machine tool footprint	2570*2400*1750mm	2570*2400*1750mm	3010*2500*1900mm	3010*2500*1900mm	6050*2300*2520mm
	Machine tool weight	3200kg	3500kg	3900kg	3900kg	11000kg
	CNC system FANUC 0iTF (SIEMENS 828D)					

# Five-axis series

## High speed Machining Center

The design of this series of machine tools is optimized through advanced finite element analysis. The overall structure has strong rigidity, high precision retention and stability. The main parts of the machine tools, such as the bed, column, saddle, worktable and spindle box, are made of high-quality gray cast iron with high seismic resistance. They are cast in metal molds and treated with special processes to improve the mechanical properties of the materials.



### + Sample Display



+ Impeller



+ Caliper



+ Wheel Hub

### + Scope of Application

The five-axis high-speed machining center is suitable for processing various milling parts and complex curved surface parts, completing milling, drilling, boring, reaming, tapping and other multi-process processing. The machine tool has high rigidity and high precision, and has good thermal stability, long-term precision retention and excellent shock absorption. It is widely used in parts and mold processing in the automotive and motorcycle parts, molds, ships, and other industries. The five axis CNC rotary table can expand the processing of multi-angle parts and gear and cam parts.



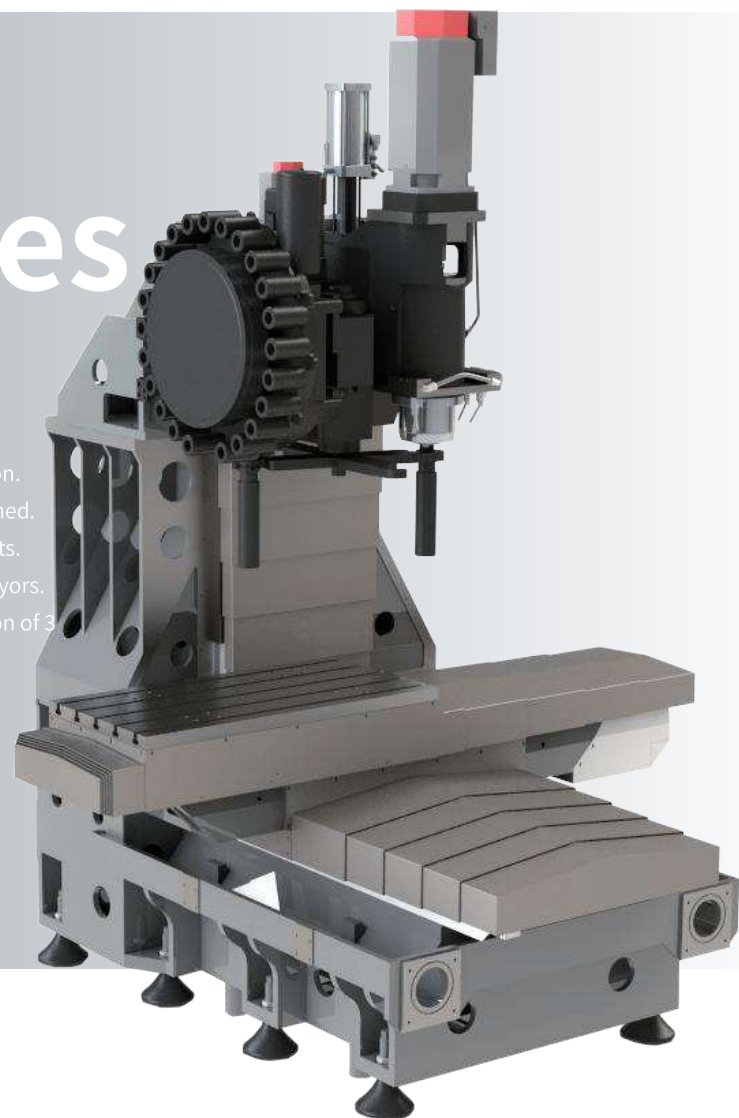
### Specifications

	Item	VTU-260	MU-650	VTU-400	MU-800
Processing Capacity	X axis Travel(mm)	500	820	750	800
	Y axis Travel(mm)	500	520	600	1100
	Z axis Trave(mm)	450	500	600	600
	Caxis °	360°	360°	360°	360°
	A/B axis Travel °	A axis-30°~+110°	B axis±110°	A axis+30°~-120°	A axis±120°
Spindle	Drive Type	Direct Drive	Direct Drive	Direct Drive	electric spindle
	Max. Speed(rpm)	12000	12000	12000	15000
	Power (kW)	7.5/11	11/15	11/18.5	30/46
Main Motor	Max. Torque(Nm)	71.7	118	118	200
	Spindle Taper	BT-40	BT-40	BT-40	HSK A63
Servo Axis	X/Y/Z Rapid Traverse(m/min)	48/48/48	36/36/36	36/36/36	50/50/50
	X/Y/Z Servo Motor Drive	Direct Drive	Direct Drive	Direct Drive	Direct Drive
	X/Y/Z Servo Motor Speed	3000/3000/3000	3000/3000/3000	3000/3000/3000	3000/3000/3000
	X/Y/Z axis Lead Screw Pitch	16/16/16	12/12/12	12/12/12	20/20/20
	X/Y/Z axis Lead Screw Dia	Φ32/Φ32/Φ32	Φ40/Φ40/Φ40	Φ40/Φ40/Φ40	Φ40/Φ40/Φ40
	Cutting Feedrate(mm/min)	1-10000	1-10000	1-10000	1-30000
	Min. Feed(mm)	0.001	0.001	0.001	0.001
	Guideway Type	X/Y/Z	Linear	Linear	Linear
Main Accuracy	Indexing Accuracy A(B)/C(sec.)	20/20	45/15	60/20	8/8
	Repeatable Indexing Accuracy A/C(sec)	5/5	6/6	8/6	5/5
Dimension	L*W*H(mm)	2200*2400*2900	3150*2920*3200	2900*2400*3000	5400*4500*3300
Weight (KG)		4000	12500	8000	15000
Controller		SYNTEC	SYNTEC/FANUC/SIEMENS	SYNTEC/FANUC/SIEMENS	SIEMENS

# MAX Series

## +Machine Features

1. The tool magazine adopts a shoulder-mounted installation.
2. The installation surfaces of the column and bed are widened.
3. Low center-of-gravity design with lightweight moving parts.
4. Large components integrated with dual screw chip conveyors.
5. The 3-axis screws are supported by a bearing configuration of 3 at the front and 2 at the rear.



	VMC	MAX-560	MAX-610	MAX-610 (BT50)
Travel	X-axis	850mm	1100mm	1100mm
	Y-axis	560mm	610mm	610mm
	Z-axis	580mm	610mm	610mm
Worktable	Distance from spindle nose to worktable	120-700mm	120-730mm	120-730mm
	Distance from spindle center to column guideway	602mm	650mm	650mm
	Worktable Size	1000*500mm	1300*600mm	1300*600mm
Worktable	T-slots (number/size/pitch)	5*18*100	5*18*100	5*18*100
	Max. Loading Capacity	600kg	800kg	800kg
Spindle	Spindle Speed	50-12000rpm	50-12000rpm	50-6000rpm
	Drive Mode	Direct Drive	Direct Drive	Timing belt drive
	Spindle Motor Torque	52.5/118Nm	52.5/118Nm	143/236Nm
	Spindle Motor Power	11/15kW	11/15kW	15/18.5kW
Servo Axis	Rapid Traverse Rate (X/Y/Z)	48/48/42m/min	40/40/36m/min	40/40/20m/min
	Cutting Feed Rate	1-10000mm/min	1-10000mm/min	1-10000mm/min
Tool Magazine	Tool Magazine Type	ATC 24Tools	ATC 24Tools	ATC 24Tools
	Tool Holder Type	BT-40	BT-40	BT-50
Others		/	/	/
	Machine Footprint & Height	3010*3120*2952mm	2900*2450*3000mm	2900*2450*3000mm
	Machine Weight (Approx.)	5500kg	6500kg	6900kg
	Power Capacity	30KVA	30KVA	30KVA
	CNC System	FANUC 0iMF PLUS		

## +Spindle

The spindle box structure is designed around the direct-drive spindle, fully maximizing its performance. A high-speed, low-vibration, fast-accelerating motorized spindle is also available upon customers request.



### MAX-560

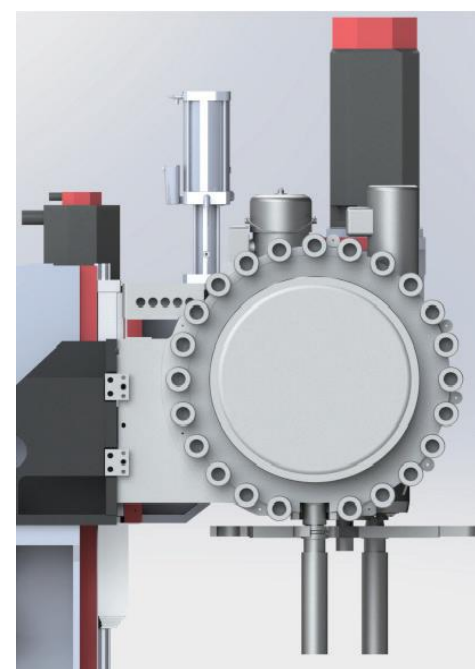
Configuration	Max. Speed (RPM)	Spindle Power (KW)	Maximum Torque (NM)
STD.BT-40	12000/ STD. CTS	11-18.5	118
Opt. BBT-40/SK-40	15000/ STD. CTS	7.5-15	118
Opt. BBT40	16000 (ElectricSpindle) /STD. CTS	11-15	70

### MAX-610

Configuration	Max. Speed (RPM)	Spindle Power (KW)	Maximum Torque (NM)
STD.BT-40	12000/ STD. CTS	11-18.5	118
Opt.BT-50	6000/ STD. CTS	15-18.5	236
Opt.BBT-40	16000 (ElectricSpindle) /STD. CTS	11-15	70

## +Tool Magazine

Various tool magazine options available upon customers request.



	MAX-560	BT40	HSK63A	MAX-610	BT40	BT50
Tool Magazine Types	Dual Inverter Disc-type	Tool Magazine with Robot Arm		Dual Inverter Disc-type	Tool Magazine with Robot Arm	
Capacity	24 (OPT32)			24 (OPT32)		
Max. Tool Length	300mm			Max. Tool Length	300mm	300mm
Max. Tool Dia. (Full / NotFull)	80/150mm			Max. Tool Dia. (Full / NotFull)	80/150mm	105/200mm
Max. Tool Weight	8kg			Max. Tool Weight	8kg	15kg
Tool Selection Method	Shortest bidirectional tool selection			Tool Selection Method	Shortest bidirectional tool selection	
Tool Selection Time	2s			Tool Selection Time	2s	4.5s

# LM Series Gantry machining center

LM series gantry machining center is a high-end technology-intensive product of high quality, high precision and high performance carefully designed and manufactured by US WHEELER. The machine tool is novel in design, beautiful in overall structure, stable in precision, reliable in performance, and flexible and convenient in operation.

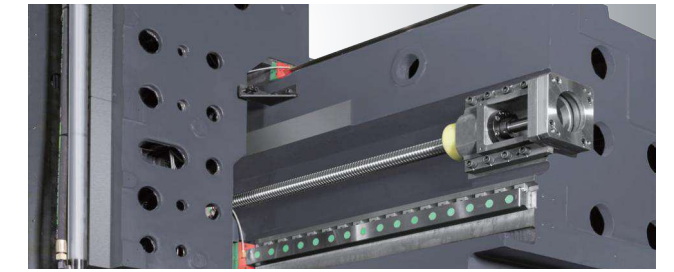


## + Mechanical structure



### +Double column mechanism

The overweight-bearing machine tool body structure is supported by oversized columns, beams and box structures (bottom rail support is reinforced). The head ribs are completely arranged. The whole machine has good rigidity and can realize heavy cutting of large workpieces and molds.



### +X/Y/Z-axis

The Z-axis uses nitrogen hydraulic counterweight to ensure stable and reliable balance quality. The X/Y-axis uses roller linear rail, and the Z-axis uses roller linear rail or hard rail. The Y-axis adopts linear rail, which prevents crawling at low speeds. At the same time, it adopts the rail step structure design, which not only ensures the rigidity of the gantry frame, but also reduces the overturning moment of the saddle and ram.

## +Application

This series of machine tools has strong overall rigidity and flexible and convenient operation, and is suitable for machining large sheet metal parts, box parts, molds, etc. After the clamping of parts, multiple processes such as milling, boring (drilling, chambering and reaming), tapping and countersinking can be implemented. This machine tool is widely used in automobile industry, construction machinery, household appliance mold, mold base machining, construction manufacturing and other industries.



## Specifications

Item	LM-1613Z	LM-2015Z	LM-2519Z	LM-3225	HLM-3221	HLM-4221	HLM-4225	HLM-8032	
Travel	X-axis travel	1600mm	2000mm	2500mm	3200mm	3200mm	4200mm	8200mm	
	Y-axis travel	1300mm	1500mm	1900mm	2500mm	2100mm	2100mm	3800mm	
	Z-axis travel	800mm	800mm	800mm	950mm	950mm	950mm	1250mm	
	Distance from spindle end face to worktable	170-970mm	105-950mm	200-1000mm	150-1100mm	150-1100mm	150-1100mm	150-1100mm	160-1410mm
	Gantry width	1400mm	1500mm	1900mm	2500mm	2100mm	2100mm	2500mm	3200mm
Worktable	Worktable size	1700*1200mm	2100*1200mm	2700*1600mm	3000*2000mm	3000*1800mm	4000*1800mm	4000*2000mm	8000*2800mm
	T-slot quantity/size/spacing	7*22*150	7*22*170	9*22*180	11*22*160	11*22*160	11*22*160	11*22*160	11*28*250
	Maximum loading capacity	3000kg	3500kg	8000kg	15000kg	12000kg	15000kg	18000kg	35000kg
Spindle	Spindle speed	50-6000rpm	50-6000rpm	50-6000rpm	50-6000rpm	6000rpm	6000rpm	50-6000rpm	50-6000rpm
	Drive mode	Belt Drive	Belt Drive	Belt Drive	Belt Drive	Belt Drive	Belt Drive	Belt Drive	Belt Drive
	Spindle motor torque (rated/maximum)	143/236Nm	143/236Nm	143/236Nm	143/236Nm	143/236Nm	143/236Nm	143/236Nm	140/223Nm
	Main motor power	15/18.5kW	15/18.5kW	15/18.5kW	15/18.5kW	15/18.5kW	15/18.5kW	15/18.5kW	22/26kW
Servo axis	X/Y/Z rapid traverse speed	15/15/10m/min	15/15/10m/min	12/15/10m/min	12/10/10m/min	12/10/10m/min	10/10/10m/min	10/10/10m/min	8/10/10m/min
	Cutting feed rate	1-10000m/min	1-10000m/min	1-10000m/min	1-8000m/min	1-8000m/min	1-8000m/min	1-8000m/min	1-6000m/min
Tool magazine	Tool magazine type	ATC tool magazine (optional)							
	Shank specification	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50
	Machine footprint (including pedal)	4450*4024mm	5365*4065mm	7350*4600mm	8300*5700mm	8300*5300mm	10700*5300mm	10250*5700mm	20300*6970mm
Other	Height	3200mm	3700mm	4110mm	4650mm	4650mm	4650mm	4650mm	5780mm
	Machine weight (approx.)	12000kg	13500kg	20000kg	26500kg	24500kg	28500kg	30500kg	70000kg
CNC system				FANUC 0iMF PLUS					

# HM Series

## Horizontal machining center

HM series horizontal machining centers incorporate internationally advanced design concepts: inverted T-shaped bed, front hanging box layout, moving column structure, large span design, high rigidity and high strength; three-axis high-rigidity roller guides achieve the perfect combination of high precision and high efficiency processing. Widely used in automobiles, High-end Equipment Manufacturing, rail transit, petroleum valves, plastic machinery, mining machinery, general machinery and other mechanical processing fields.

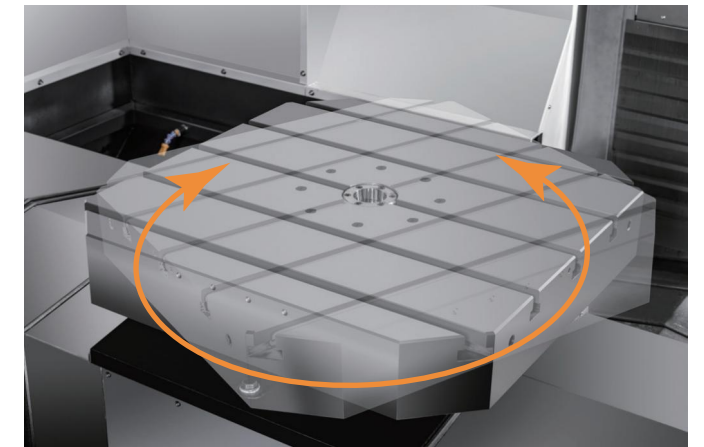


### +Mechanical structure



#### +Rotatable operation panel

The rotatable operation panel can adjust the operating angle according to needs, making better observe the processing workpiece easier.



#### +360° rotating turntable

The standard configuration of the worktable is an indexing worktable with rat tooth plate (1°×360) positioning, which has high positioning accuracy: CNC workbench with continuous indexing (0.001°) positioning is optional.

### +High-speed, efficient processing characteristics

It is suitable for rapid roughing and finishing of various boxes and valve body parts.

The positioning time is shortened through high acceleration/deceleration axis feed, and the machining cycle is greatly shortened through high-speed spindle, high-speed ATC and high-speed drilling to rank among the world's mainstream machine tools.

Aluminum casting processing time is 34% shorter than traditional machine tools.

### Specifications

	Item	HM5000	HM6300	HM8000
Travel	X-axis travel	1100mm	1100mm	1300mm
	Y-axis travel	600mm	800mm	1000mm
	Z-axis travel	600mm	900mm	1100mm
	Distance from spindle end face to worktable	-20~580mm	130~930mm	50~1050mm
	Distance from spindle end face to worktable	180~780mm	170~1070mm	270~1350mm
Worktable	Worktable size	500*500mm	630*630mm	800*800mm
	T-slot quantity/size/spacing	5*18*100	5*18*125	7*22*100
	Maximum loading capacity	350kg	1500kg	2000kg
Spindle	Spindle speed	50-10000rpm	50-6000rpm	50-6000rpm
	Drive mode	Direct Drive	Belt Drive	Belt Drive
	Spindle motor torque	52.2/118Nm	143/236Nm	143/236Nm
	Main motor power	11/18.5kW	15/18.5kW	15/18.5kW
Servo axis	X/Y/Z rapid traverse speed	36/36/36m/min	24/24/24m/min	24/24/24m/min
	Cutting feed rate	1-10000mm/min	1-10000mm/min	1-10000mm/min
Tool magazine	Tool magazine type	ATC 24 tools	ATC 30 tools	ATC 30 tools
	Shank specification	BT-40	BT-50	BT-50
Other	Machine footprint and height	2680*2950*2850mm	4940*3600*2883mm	5700*3960*3467mm
	Machine weight (apx.)	6500kg	11500kg	12500kg
	CNC system		FANUC 0IMF	

# LV vertical lathe

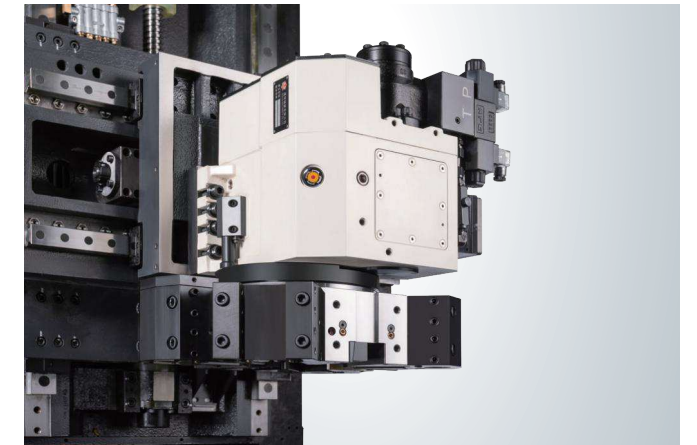
The vertical lathe targets large and medium-sized workpieces to achieve powerful, high-precision and high-efficiency machining, especially for machining large parts such as brake drums, brake discs, wheels, driving wheels, hubs, transmission gears, snap rings, pulleys and others in the automobile, power generation, shipbuilding, metallurgy, mining and other industries. It has high accuracy and efficiency, and is suitable for machining large batches of parts.



## +Mechanical structure



+Spindl



+Turret

High-quality casting: The whole machine adopts HT300 high-grade resin sand castings, which has been tempered and subjected to vibration and natural aging treatment to eliminate internal stress;

Square base structure: It is easier to ensure accuracy by machine the main spindle box surface, bed mounting surface and main motor surface in one-time: realizing space-saving, good vibration resistance, good overall rigidity and good machining stability;

Spindle: The spindle box and the base are integrated structures, which is more rigid. The spindle uses four front and two rear original bearings imported from Japan, which has better accuracy and service life;

Bed worktable: the bed is widened, the Z-axis guide rail span is larger, and the vibration resistance is better;

### Application

The vertical lathe has an overall box-shaped structure and a rectangular cross-section column. It has good rigidity, pro heavy cutting, and has strong accuracy retention. The spindle diameter is large, and the bearing structure has good rigidity for high-precision and powerful cutting. The longitudinal and orizontal move-ments are on the cross ram structure, realizing full protection design, beautiful appearance, and convenient operation and maintenance.

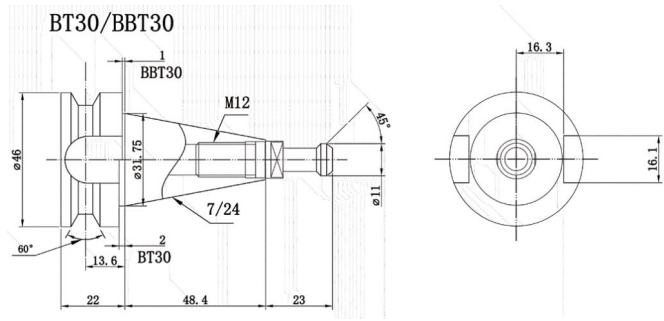


### Specifications

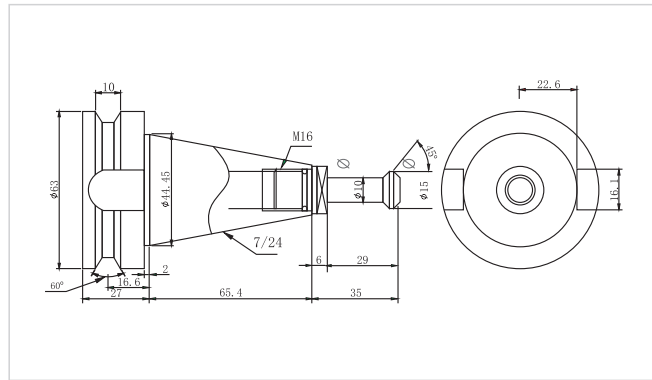
	Item	LV500	LV800
Machining capacity	Maximum swing over bed	650mm	920mm
	Maximum turning diameter	550mm	830mm
	Maximum turning length	425mm	780mm
Spindle	Main motor power	15/18.5 kW	15/18.5 kW
	Spindle motor torque	590 N·m	489N·m
	Maximum spindle speed	2000rpm	2000rpm
	Standard chuck size	12 inch	15 inch
Servo axis	X/Z rapid traverse speed	24/24 m/min	16/16 m/min
	Cutting feed rate	1-10000 mm/min	1-10000 mm/min
Travel	X-axis travel	310mm	440mm
	Z-axis travel	460mm	780mm
Turret	Turret capacity	8	8
	Turret type	Hydraulic Turret	Hydraulic indexing+ Hydraulic clamping
	Maximum boring bar diameter	40mm	50mm
Others	Machine footprint and height	1700*3060*2900mm	2100*3132*3636mm
	Machine weight (apx.)	6100Kg	9400Kg
	CNC system	FANUC-0iTF PLUS	FANUC-0iTF PLUS

## Tool holder model

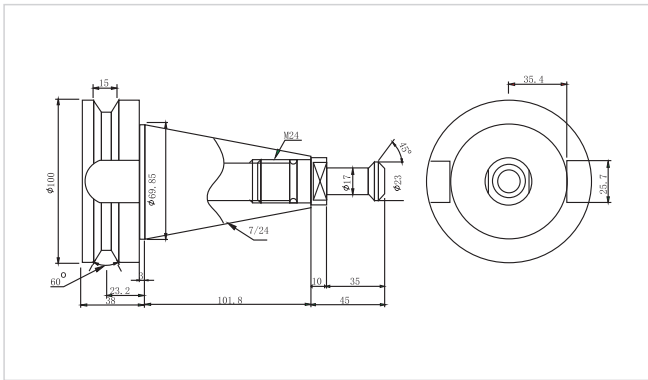
### BT30/BBT30



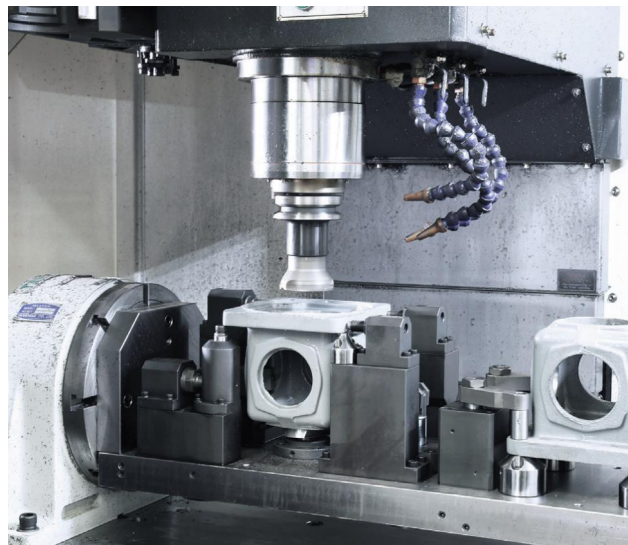
### BT40



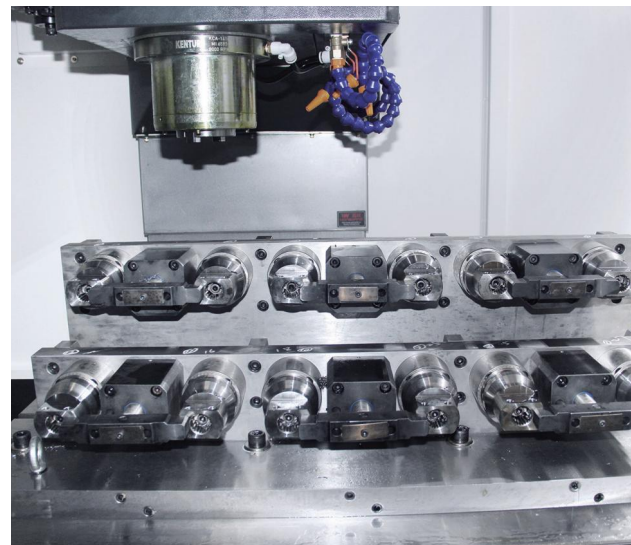
### BT50



## Four-axis hydraulic fixture



## Hydraulic clamp and pneumatic clamp



## Optional

The customers are provided with mainstream system configurations from Fanuc, Siemens, Mitsubishi, etc., SYNTEC, as well as various optional equipment with different functions. You can choose freely according to production needs and usage habits



5 axis



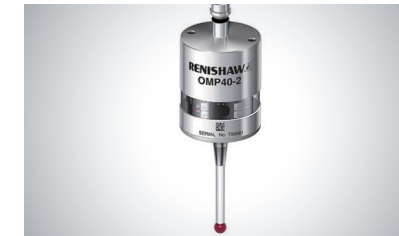
Coolant through spindle with filter tank



Optical linear encoder



Tool setter



Workpiece probe



Chip conveyor



Hydraulic station



Oil mist collector



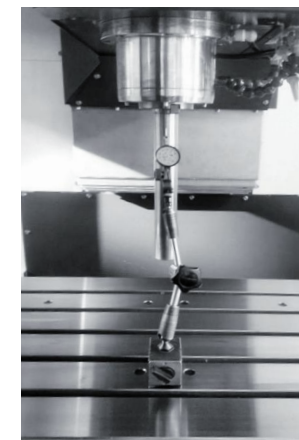
Direct drive spindle 12000 RPM

## Quality control

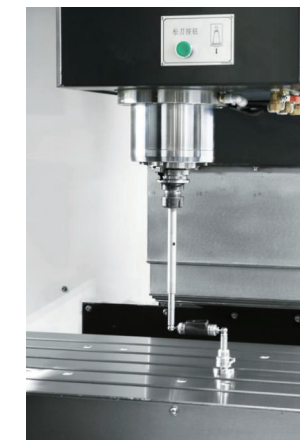
100% full inspection for each machine



Laser detection



Spindle deflection detection



Circle detection



Cutting Performance Test



## Robot automation production line 1

Product: Automobile rim hub  
The automated unit covers an area of about 270 square meters and has an annual output of about 800,000 pieces (single production line and three shifts). Only one worker is required for regular loading and unloading and daily inspection. The system adopts 14 sets of equipment (machining center, robot loading and unloading, automatic coding, online monitoring, automatic cleaning)



## Ground rail robot automation production line 2

Product: High-end lock  
The production line is a multifunctional composite production line with one set of robot ground rails to complete the workpiece loading and unloading of seven machines, and is equipped with vision, truss, sampling inspection, online inspection, AGV docking silo and other equipment.



## Truss line robot automation production line

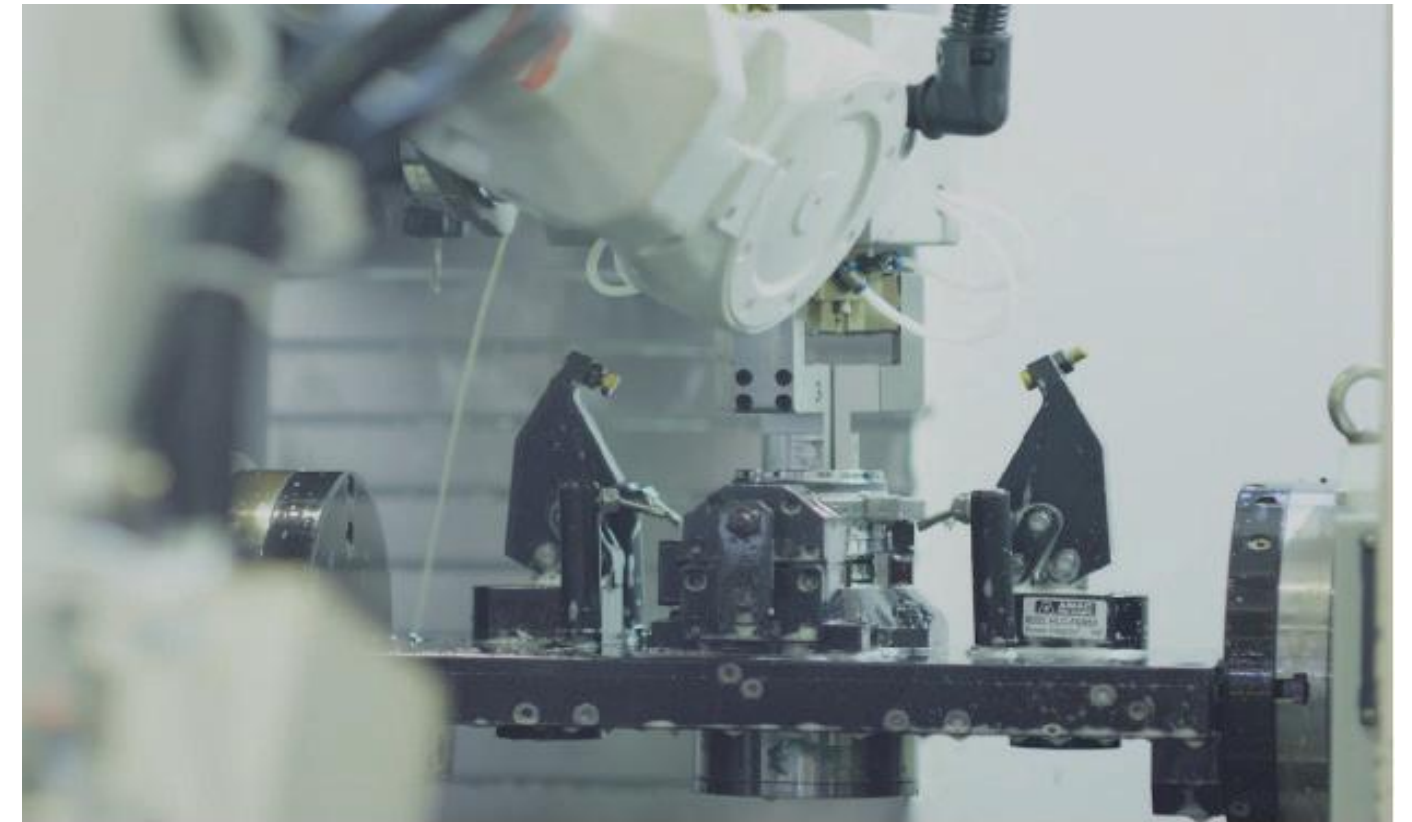
Product: Automobile transmission housing  
Automated machining line configuration: vertical machining center, vertical lathe, loading & unloading line, cleaning machine, angular positioning, sample inspection machine, laser marking, online inspection, flip & protection device.



Product: Bellows valve body

### Robot unit line 1

This automated production line uses one robot to complete the loading and unloading of three machine tools. The loading and unloading station use positioning trolleys, with a precise position-ing table and a turning table in the middle. The efficiency of the entire line has been greatly improved compared to the original equipment.



Product: Automobile hub

### Robot unit line 3

One robot is used for the loading and unloading of three machines. This automated unit includes three vertical machines, one robot, a loading station, an unloading conveyor line, a set of visual positioning system, safety protection device, etc. This automated unit realizes a set of gripping, positioning and clamping system using six types of automated machining of workpieces, which realizes flexible manufacturing, and improves the economic bene-fits and profitability of the enterprise.



Product: Piston

### Robot unit line 2

The production line consists of three robot units, each unit is equipped with two machines, a work-piece station, and a sample inspection machine. The loading only needs to place the tray on the work-piece station, which is convenient and fast. The whole line has high production efficiency, and the cycle time of a single piece is about 22 s.



## Sales and after-sales service outlets

In order to provide better customer service, US WHEELER has offices and after-sales service outlets in Shanghai, Jiangsu, Anhui, Shandong, Henan, Jilin, Chongqing, Ningbo, Taizhou, Wuhan, Xi'an, Zhengzhou and other places. In addition to domestic market, US WHEELER's products have a good influence overseas, and the products are exported to Turkey, Egypt, South Africa, Brazil, Australia, Singapore, Malaysia, Thailand, etc.

## Offices and after-sales

The Company has established a complete sales service network system to provide high-quality and efficient installation and after-sales services.

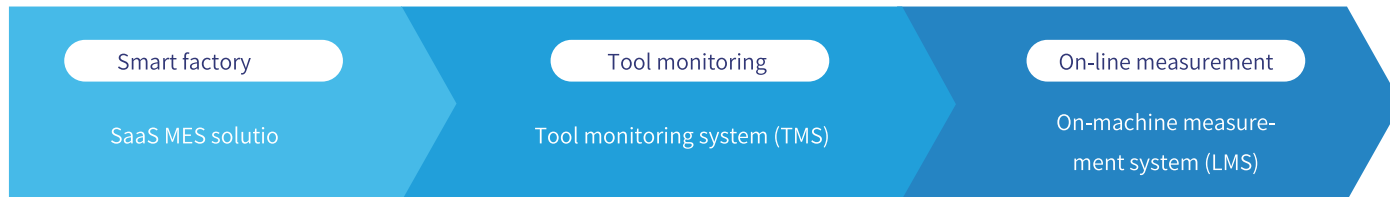


## About Wheelink

Wheelink was established in July 2021 as an industrial Internet platform company incubated by HANG-ZHOU WHEELER GENERAL MACHINERY INCORPORATED CO., LTD. It is committed to providing SaaS MES, digital factory, machine measurement system, tool monitoring, spindle failure prediction and other digital intelligent products for machine tool users, and helping customers solve problems such as difficult production management, high tool cost, and high machining defective rate. More than 90% of the employee of Wheelink have a bachelor's degree or above.

It covers 50+ countries and regions around the world: 500+ global cooperative customers: covering 80+ industries

## Product structure



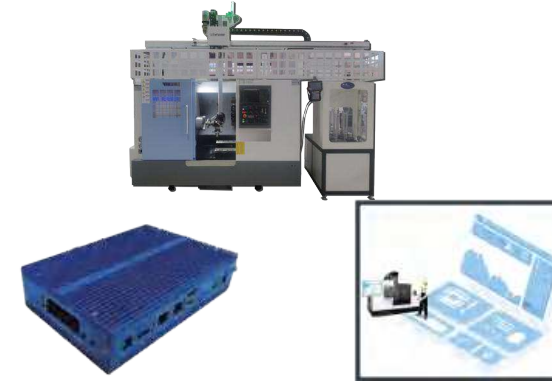
## Screen out look management module

The key indicators are automatically counted and presented in real time, and key information such as equipment operating status, equipment alarm status, and utilization rate are monitored in real time, which promotes the enterprise production and operation.



Improve Enterprise Operational Efficiency by 70%

## SaaS MES



- The machine tool is connected to the Internet as soon as it leaves the factory, and functionally implements functions such as equipment monitoring, program management, output statistics and reporting, quality management, and remote operation and maintenance management.

- Support more than 99% of mainstream CNC control systems and more than 95% of PLC plug-and-play

- Increase data collection efficiency by 99%

Improve efficiency and reduce costs

## On-machine measurement system



- For automatic setting of workpiece datum in mass production.

- Reduce production auxiliary time and improve productivity
- Increase automated operations
- Reduce labor costs and human intervention

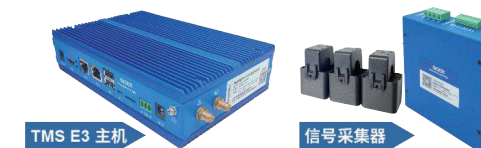
- For precision control of workpieces during the production process.

- Update the tool offset of the machining coordinate system based on the actual allowance
- Improve workpiece accuracy
- Reduce rework, out-of-tolerance and scrap

- For the measurement of geometric tolerance workpieces and curved surface features (requires dedicated software)

- Quickly measure internal and external diameters, rectangles, position, parallelism, flatness, symmetry, concentricity, and other geometric and positional features of workpieces.
- Measure workpiece surface features

## Tool monitoring system



- Tool Breakage Monitoring: Monitors tool breakage in real time, controls machine stop, with 100% monitoring accuracy.

- Tool Chipping Monitoring: Uses big data feature comparison to detect tool chipping in real time, with monitoring accuracy over 100%.

- Tool Wear Monitoring: Monitors spindle load current in real time to reflect tool wear, calculates actual tool life, with tool life prediction accuracy over 99%.

Tool Monitoring Terminal = Real-time Monitoring + Life Prediction