

Technical Proposal



M1631ATC- Smart Engraver

Application areas: mini luminous characters, organic glass products, aluminum high-gloss products, plastic products, cabinet doors, composite materials, copper, aluminum.etc.

● About us

Hangzhou Joyhigh Intelligent Equipment Co., Ltd.

Founded in 2010 and headquartered in Hangzhou, China, we specialize in designing and manufacturing premium CNC equipment for global markets. Our comprehensive product range includes:







- High-Speed Vision-Guided Router Series
- High-Precision Machining Centers
- Multi-Functional Intelligent Cutting Systems
- Fiber Laser Cutting Machines
- CO₂ Laser Cutting Solutions

Manufacturing Excellence

Operating from an **5,000 m² facility** in Yuhang Liangzhu, our vertically integrated production features:

- Sheet Metal Fabrication Workshop
- Precision Assembly Center
- Dedicated R&D Departments for:
 - ◆ Software Development
 - ◆ Mechanical Engineering
 - ◆ Machine Tool Processing

Supported by **35+ skilled professionals**, we maintain an annual production capacity valued at **¥40 million** with streamlined manufacturing processes refined over a decade.

		
Factory	Showroom	Future factory
		
Precision testing instruments	Production room	Warehouse

● Technical Parameters

No.	Content	Specification		Notes
1	Cutting Area	X-axis	3000mm	/
		Y-axis	1500mm	/
		Z-axis	150mm	/
2	Accuracy	Positioning accuracy	0.025mm/Full travel	/
		Positioning repeatability	0.025mm/m	/
3	Worktable	Worktable size	3100*1600mm	/
		Maximum Load Capacity	800kg	/
		Table Material	High-pressure Phenolic Resin	/
4	Rapid Traverse Speed	X-axis	30m/min	/
		Y-axis	30m/min	/
		Z-axis	15m/min	/
5	Cutting Feed Rate	X-axis	1-20000mm/min	Depends on materials and tools
		Y-axis	1-20000mm/min	
		Z-axis	1-10000mm/min	
6	Tool Magazine	disc-type	8 stations	/
7	Material Fixing	2-Zone vacuum adsorption	Independently controllable	/
8	Rapid Movement	X/Y Axis	30m/min	/
		Z Axis	15m/min	/
9	Distance from Beam to Table	>200mm		/
10	Maximum Processing Thickness	>150mm		/
11	CNC System	Syntec 6MA-E Controller		/
12	Drive System	Syntec Bus Servo Motors with Absolute Encoders		/
13	Spindle	Motor	11kW ATC Water-cooled Spindle	/
		Maximum Speed	18000RPM	/
		Tool Holder Specification	NBT40	/
		Maximum Tool Diameter	20mm	/

● Configurations

No.	Item	QTY	Notes
1	Frame	1 SET	MEINAITE Net weight:3500kg
2	CNC Control System	1 SET	Syntec 6MA-E
3	Servo System	3 SETs	Syntec Bus Type with Absolute Encoders
4	Spindle	1 PC	11kW water-cooled spindle Tool holder interface: NBT40 Max. Speed: 18000RPM
5	Bearing Housing	6 SETs	Japan NSK
6	Ball Screw Drive	1 SET	X-axis, 4040 C5 ground ball screw TBI
		1 SET	Y-axis, 2510 C5 ground ball screw TBI
		1 SET	Z-axis, 4040 C5 ground ball screw TBI
7	Linear Guide	2 SETs	MSA30, HIWIN
		4 SETs	MSA30, HIWIN
		2 SETs	MSA25, HIWIN
8	Tool Magazine	1 SET	8-position disc tool magazine
9	Pneumatic Components	1 SET	AIRTAC
10	Cables	1 SET	Machine tool special flexible cables
11	Inverter	1 PC	Qma
12	Cable Drag Chain System	1 SET	Chinese
13	Electrical Control Components	1 SET	Schneider
14	Main Power Switch	1 PC	Schneider
15	Y-axis Reducer	1 PC	/
16	Automatic Lubrication System	1 PC	Chinese
17	Tool Setter	1 PC	Chinese
18	Tri-color Warning Light	1 PC	Chinese
19	Cabinet Air Conditioner	1 PC	Chinese
20	Spindle Constant Temperature Cooling System	1 PC	/
21	Phase Loss and Overload Protector	1PC	Suitable for 7.5kW water pump
22	Warranty	/	1 year for machine, software update for lifetime
23	Training	/	online & on site
24	After-sales service	/	online & on site