



Technical Proposal



X5 — Fiber Laser Cutting Machine





● Brief Introduction

1. Gantry Structure & Performance

Features a rigid dual-drive gantry structure for a processing area of 3000mm x 1500mm, delivering excellent dynamic performance. The machine boasts a compact design with high rigidity, ensuring reliable operation and high-efficiency cutting capabilities.

2. Bed Construction & Stress Relief

The machine bed is constructed from welded steel, stress-relieved through annealing and vibration aging. It is precisely pre-adjusted for level and squareness prior to installation to guarantee long-term accuracy.

3. Drive Systems & Speed

The X and Y axes utilize imported precision gear racks, while the Z axis is driven by an imported precision ball screw. This enables a maximum positioning speed of 60 meters per minute.

4. Work Table & Load Capacity

The work table is a solid welded structure with high strength and stability, capable of supporting sheets up to 3000mm x 1500mm with a maximum thickness of 10mm.

5. Scrap Removal System

Includes a dedicated scrap collection system for efficient removal of small cut-offs.

6. Capacitive Height Sensing & Auto-Focus

A non-contact capacitive sensor controls the Z-axis with high precision, fast response, and stable performance. It automatically tracks the sheet surface during cutting, maintaining a constant distance between the nozzle and the workpiece to compensate for material warping and ensure consistent cut quality.

7. Advanced Dust Extraction

An advanced multi-chamber, targeted dust extraction system responds instantly to the cutting head's position. It is significantly more efficient and environmentally friendly than single-chamber suction systems.

8. Drive Protection & Lubrication

All drive components (screw, guides, gear racks) are fully enclosed by flexible, flame-retardant bellows for protection against contaminants. A professional centralized lubrication system delivers point-to-point lubrication using specialized No. 40 guide/screw oil, ensuring the longevity of all moving parts.

9. EMI Shielding & Protection

Strict anti-interference measures are implemented, including high-density shielding for all signal and power cables, and separate grounding for neutral and earth wires, ensuring reliable and stable machine operation.

10. X-Axis Drive Components

The X-axis is equipped with world-renowned brand precision gear racks and a highly integrated, high-precision, high-torque reduction gearbox.

11. Custom Control System



The machine is powered by a professionally customized laser cutting control system, featuring specialized functions such as jump cutting, common-edge cutting, automatic edge finding, high-efficiency piercing, sharp corner processing, and more.

● About us

Hangzhou Chaohan 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:

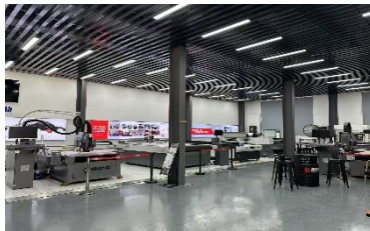
- High-Speed Vision-Guided Router Series
- High-Precision Machining Centers
- Multi-Functional Intelligent Cutting Systems
- Fiber Laser Cutting Machines
- CO₂ Laser Cutting Solutions

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.



Industry Applications

Our solutions serve diverse sectors including:



• Advertising & Signage • Craft/Gift Production • Hardware & Mold Making • Architectural Modeling • Electronics Manufacturing • Leather Goods • Decorative Materials • Woodworking & Furniture.etc.

Collaboration Models

Beyond our core product lines, we offer:

- OEM/ODM Partnerships
- Integrated Online & Offline Support

● Technical Parameters

No.	Content	Specification
1	Working area	X-axis:1500mm
		Y-axis:3000mm
2	Laser power	3000w
3	Rapid traverse speed	60m/min
4	Accelerated speed	0.6g
5	Drive	AC servo motor
6	Voltage	380V/50Hz 3Ph
7	Cable	6mm ² wire
8	Power consumption	6-10 kWh/h
9	Structure	Steel construction



● **Configurations**

ITEM	DESCRIPTION	QUANTITY	BRAND
Machine body	Working area: X:1500mm Y:3000mm	1	MNT-3015
	Machine size: 4500mm×2350mm×1800mm		
Motor	X-axis (include servo motor)	1	Delta
	Y-axis (include servo motor)	1	Delta
	Z-axis (include servo motor)	1	Delta
Reducer	/	3	Motor-France
Sliding table	/	1	HY
Transformer	Electronic transformer	1	Chinese
Guide rail	X-axis	2	Taiwan
	Y-axis	2	Taiwan
Rack & pinion	X-axis	1	Germany
	Y-axis	1	Germany
Drag chain	X-axis	1	Chinese
	Y-axis	1	Chinese
	Z-axis	1	Chinese
Guideway cover	X-axis	2	Chinese
	Y-axis	4	Chinese
Auxiliary equipment			
Electrical components	/	1	HY
Industrial PC & display	Include mouse and keyboard	1	HY
Control system	/	1	Weihong/FSCut
Laser	3000w	1	Raycus
Cutting head	/	1	Raytools
Chiller	/	1	S&A
Consumables			
Copper nozzle	/	9	/
Protection window	/	5	/
Ceramic ring	/	1	/
RF Cable	/	1	/



● **After-sales service**

A. After-Sales Service Commitment

1. Quality Assurance

All products provided by our company are original factory packaging, compliant with the international ISO9001:2015 quality certification system. We will provide product technical documents (including installation manuals, product packing lists, Chinese user manuals, certificates of conformity, and warranty credentials, etc.).

2. Delivery and Installation Timeline

Upon receiving the letter of acceptance, our company will promptly deliver the goods to the user. Both the manufacturing and inspection of products are accompanied by quality records and testing data. For product performance testing, we conduct full-process and full-performance inspections. All products undergo a 72-hour fatigue test before leaving the factory and are only packed and shipped after being confirmed qualified. Upon arrival of the goods at your company, our technical personnel will immediately visit for installation and training.

3. Product Delivery Time

Depending on the model, delivery will be made within 25 days after contract signing.

4. Warranty Commitment

We provide a 12-month warranty for all products offered during the validity period of this supply agreement. Throughout the validity period, we offer full-day service on normal working days and lifelong technical support for all products.

5. Response Time

We will respond to customer needs within 24 hours.

6. Service System

As the equipment supplier, our company provides a guarantee system for the products offered in this tender: When equipment malfunctions occur, we will dispatch designated professional technicians to carry out on-site repairs or return repairs within the specified time, if necessary.

B. Product Price Commitment

1. Under equivalent competitive conditions

Our company sincerely offers the most favorable prices to you without compromising product technical performance or altering product components.

2. During the warranty period

The supplier will provide free repair and replacement of component damage caused by quality issues. For component damage beyond the warranty period, the supplier will only charge cost price for provided accessories. In cases of equipment damage caused by the buyer's human factors, the supplier will charge cost price for repairs or provided accessories.



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C. After-Sales Service Guarantee

Company Strength Assurance:

Guided by the philosophy of "sincere service with utmost dedication," our company commits to responding to customer needs within 24 hours. We resolve customer issues through telephone, fax, Internet remote service, on-site visits, and other means.