XIANMING LASER

4020-FULL ENCLOSED LASER CUTTING MACHINE

- ☑ Thickened full shield
- ☑ Visual guard window
- ☑ Dust and smoke removal system
- ☑ All-round intelligent monitoring



PRODUCT INTRODUCTION

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This is a fully enclosed metal sheet fiber laser cutting machine equipped with a replaceable working platform. The fiber laser power range is selectable at 3000W/6000W/12000W/20000W, and it can cut metal plates up to 25mm in thickness. The working area size ranges from 3000mm×1500mm to 6000mm×2500mm.

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The fully protective and enclosed design ensures the safety of the processing. It has the advantages of fast cutting speed, excellent cutting effect, low operating cost, and good processing stability.

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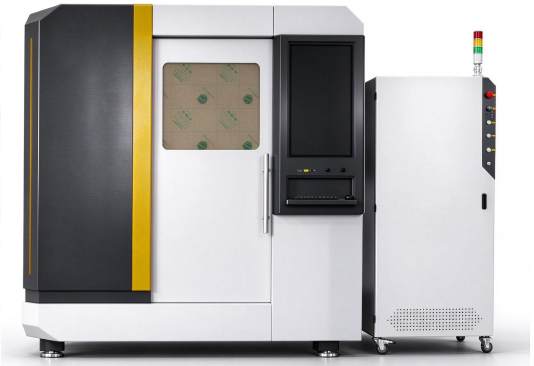
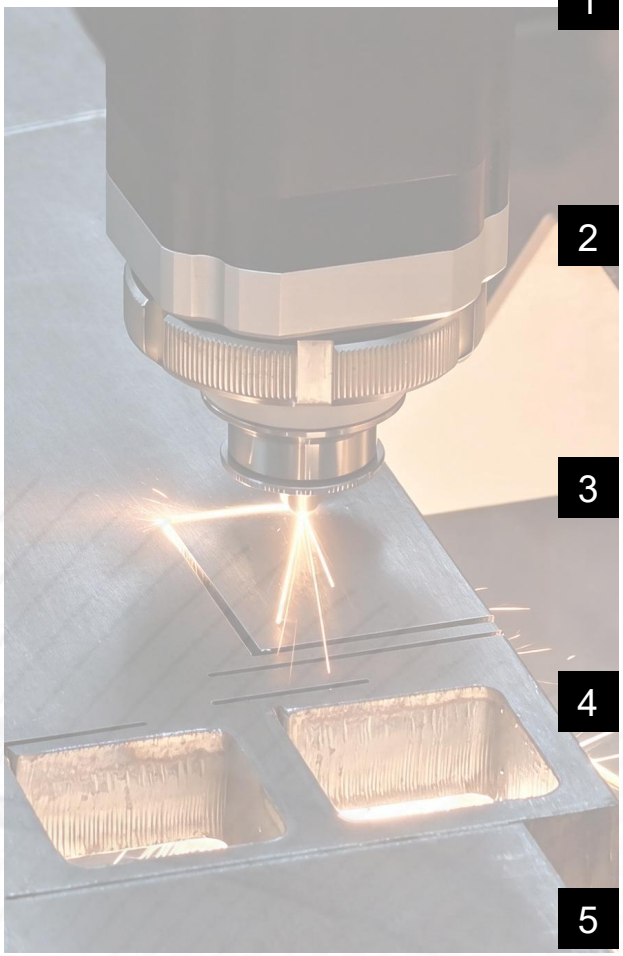
This CNC laser cutting machine is equipped with the international mainstream transmission drive system, a new generation welding machine, aluminum beams, a newly designed air circuit control module, a newly optimized control system, and also features advanced fiber laser and laser cutting head, with outstanding comprehensive performance.





This machine's working area: 4000mm * 2000mm

PRODUCT SELLING POINTS



1 DUAL EXCHANGE WORK PLATFORM

The dual-exchange worktable automatically swaps workpieces, greatly improving production uptime. Suitable for large-batch sheet metal processing, its production capacity is increased by 30%-50% compared with single-table models.

2 INTELLIGENT MONITORING & CONTROL SYSTEM

The whole processing procedure supports real- time status monitoring for all zones. Operators can flexibly adjust and control the process flow at any time to guarantee stable and reliable machining performance.

3 HIGH POWER AND HIGH PRECISION

High-power fiber light source + stable machine tool, high-speed cutting of thin plates, flat cutting surfaces of thick plates, reducing subsequent grinding processes.

4 LONG LIFESPAN AND LOW MAINTENANCE COSTS

The protective shell protects the internal guide rails, motors, and optical path, reducing dust intrusion, lowering component wear, extending machine lifespan, and reducing maintenance costs;

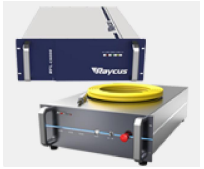
5 SUITABLE FOR CUSTOMER GROUPS

Sheet metal processing factories, stainless steel processing, construction machinery, chassis and cabinets, hardware products, etc., enterprises that pursue safety, large-scale efficient production.

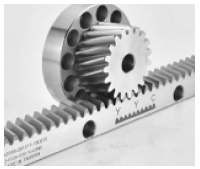
PRODUCT CONFIGURATION



Raytools / BOCI
Laser Head



Laser source
(Raycus / MAX / IPG)



TAIWAN YYC Rack



Intelligent Monitoring





Control System
(Raytools / BOCHU)



Exchange platform



Japan Shimpo reducer



Servo Motor Driver
(Delta / Fuji / Yaskawa)

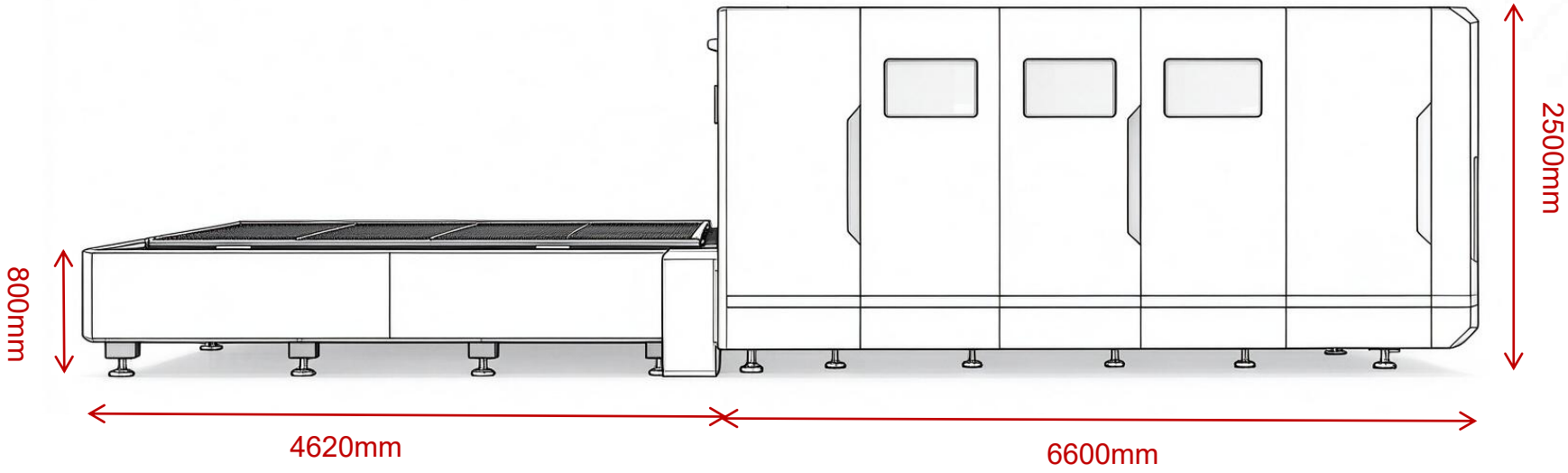


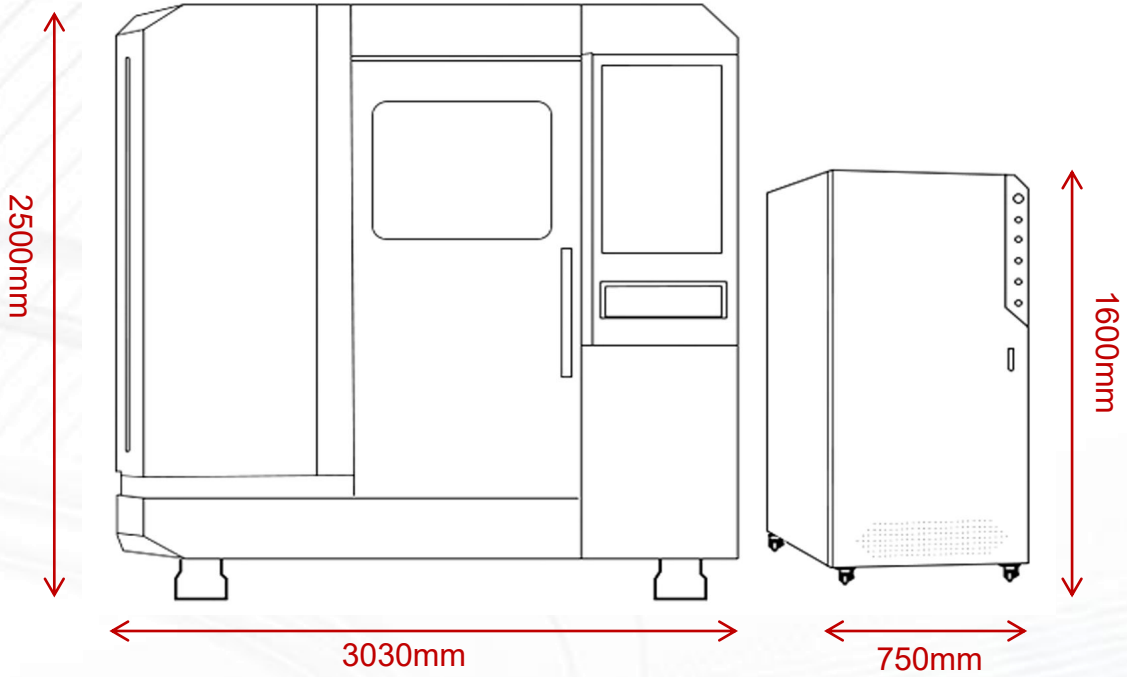
Linear guide rail

PRODUCT PARAMETERS

Mode	4020 - Fully enclosed laser cutting machine
Working Area	4000mm*2000mm
Laser Power	3000W/6000W/12000W/20000W etc.
Cutting system	Cypcut/Raytools
Laser source	Raycus / MAX
Cooling Method	Water cooling protection
Positioning Accuracy	±0.01mm
Maximum acceleration	1G-2G
Compatible software	CorelDraw/AutoCAD/Photoshop/AI etc.
Working voltage	220V/380V
Transmission system	Dual Rack & Pinion Type
Environmental temperature	0-45°℃
Maximum stroke speed	110m/min

PRODUCT SIZE





Fully enclosed laser cutting machine

Working area: 4000mm * 2000mm

Dimensions: 11220mm * 3030mm * 2500mm

Weight: About 6T

PRODUCT INTRODUCTION



Environmentally friendly and safe production environment

The fully enclosed structure blocks laser leakage at the source, avoiding the risk of work-related injuries and conforming to safety and environmental production standards.

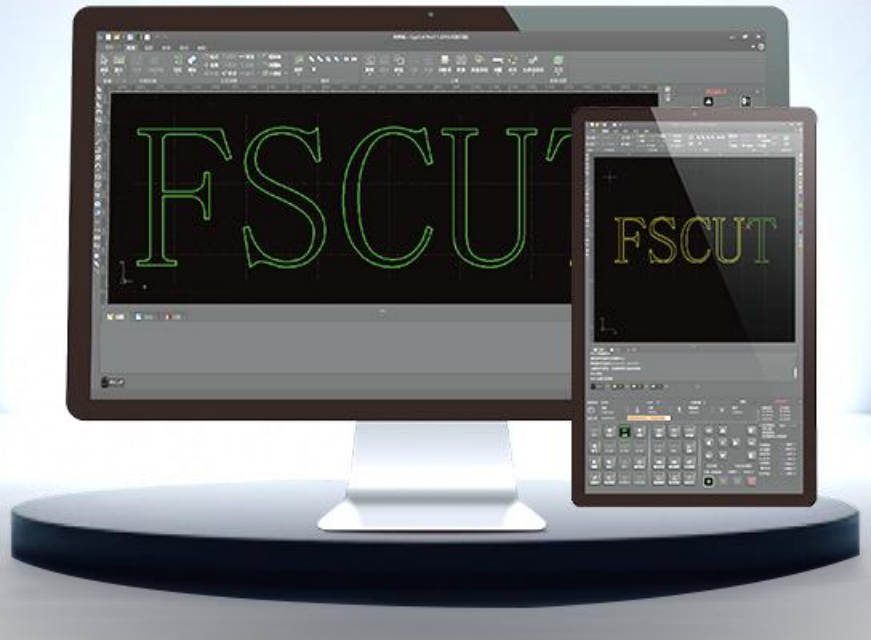
CypCutE

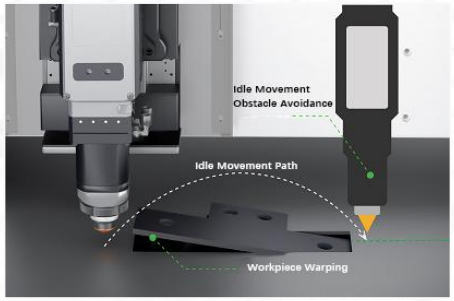
Sheet Cutting Software

This is a highly cost-effective CNC system specifically designed for laser cutting, suitable for power ranges from 1.5 to 8 kW.

Based on Ether CAT bus technology, the system enables precise motion control, laser control, and cutting gas management.

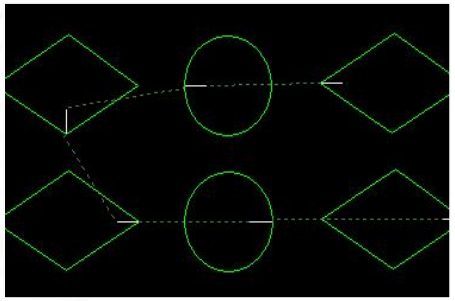
It is widely used in industries such as sheet metal fabrication, kitchenware, and lighting.





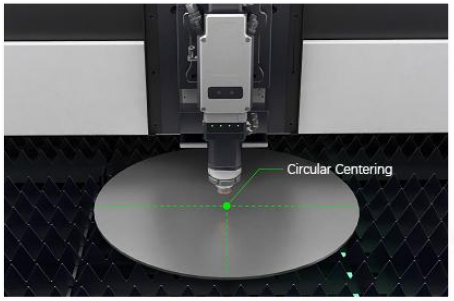
01.Idle Movement Obstacle Avoidance

Intelligently adapts the lifting height according to part cutting conditions during idle travel, reducing nozzle collision risks.



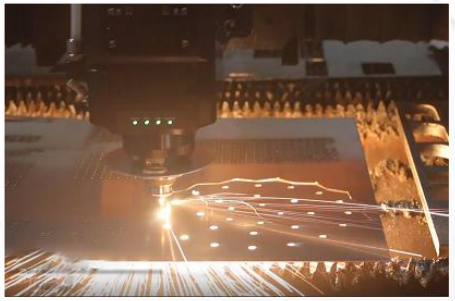
03.One-Pass Fly Cutting

Generates fly cutting paths for all shapes, boosting overall machining efficiency.



04.Circular Centering

Allows positioned machining after centering circular parts.



05.Smooth Piercing

Fast & smooth piercing, boosts thin sheet machining efficiency.

LASER CUTTING HEAD

Multiple Protection

3 protective lenses , highly effective collimating focus lens protection.2-way optical water cooling extends the continuous working time effectively.

High-precision

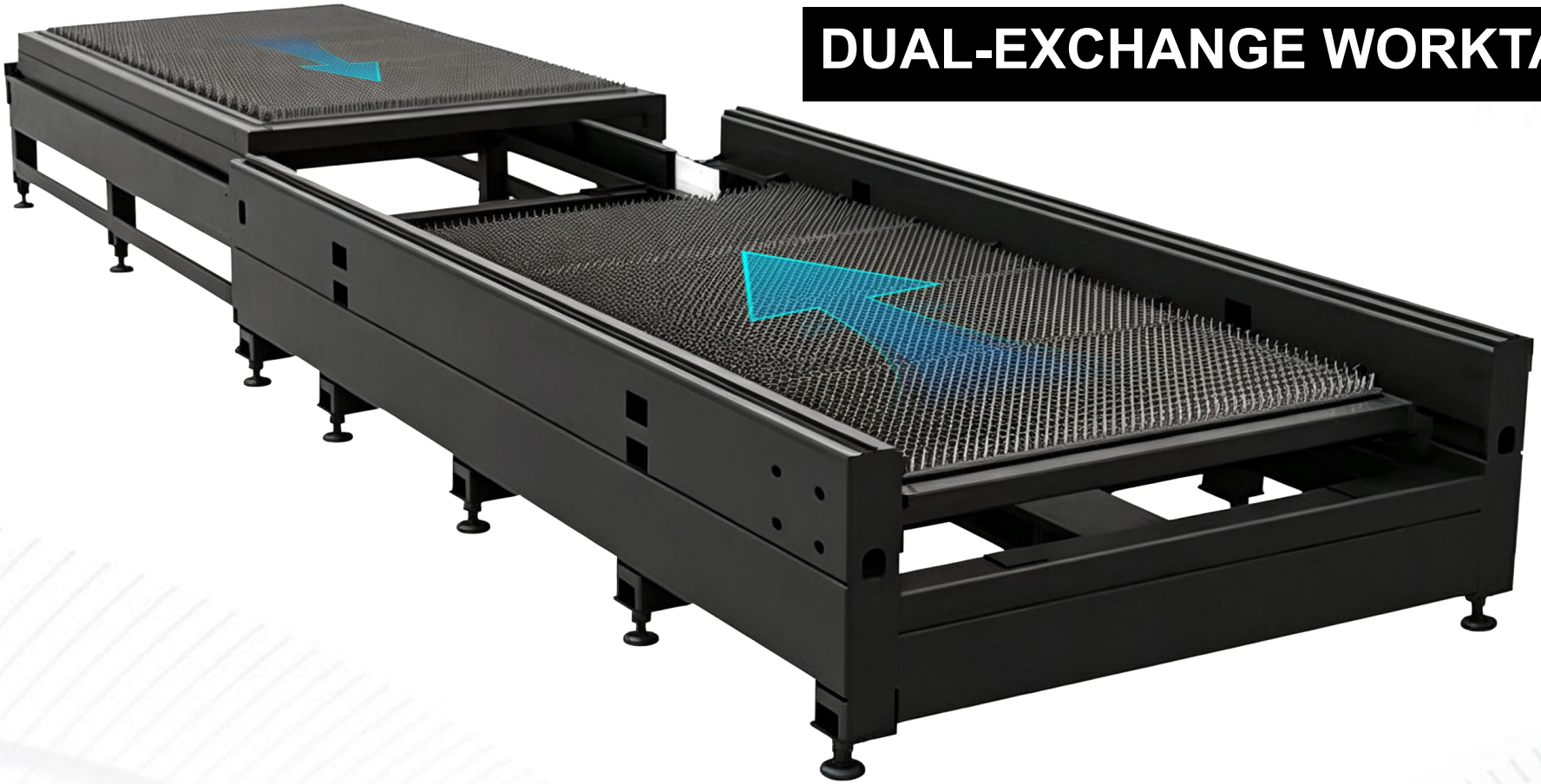
To successfully avoid step loss,a closed-loop stepping motor is used.The repetition accuracy is 1μm and the focusing speed is 100mm/s. Dust-proof to IP65,with a patent-protected mirror cover plate and no dead angle.

Various Brands Of Laser Head Are Available

We can provide all high quality laser heads . It has been tested by us for a long time.



DUAL-EXCHANGE WORKTABLE



The exchange table is a critical component of the fiber laser cutting machine, consistingof two platforms and associated automation systems.This feature allows operatorsto swap work pieces on the alternate platform during the cutting process without halting operations. With the automatic exchange table system,operators can prepare the next work piece in advance,enabling continuous cutting,the exchange platform only takes 15 seconds for each exchange,operations and thus enhancing production efficiency while minimizing downtime.

Working Area： 1500mm*3000mm / 1500mm*6000mm / 2000mm*4000mm / 2500mm*6000mm (Optional)



MONOLITHIC EXTRUDED ALUMINUM BEAM

☑ No deformation, light weight, high strength Light cross beams allow equipment to operate at a faster rate, boosting processing efficiency and quality.

☑ The light crossbeam allows the machine to move at a faster rate and boosts cutting eficiency.

☑ The aerospace industry's aluminum profile beam ensures that the equipment has efficient dynamic performance ,considerably increasing processing efficiency whilemaintaining processing quality.

INTELLIGENT MONITORING CONTROL SYSTEM

High-definition image quality

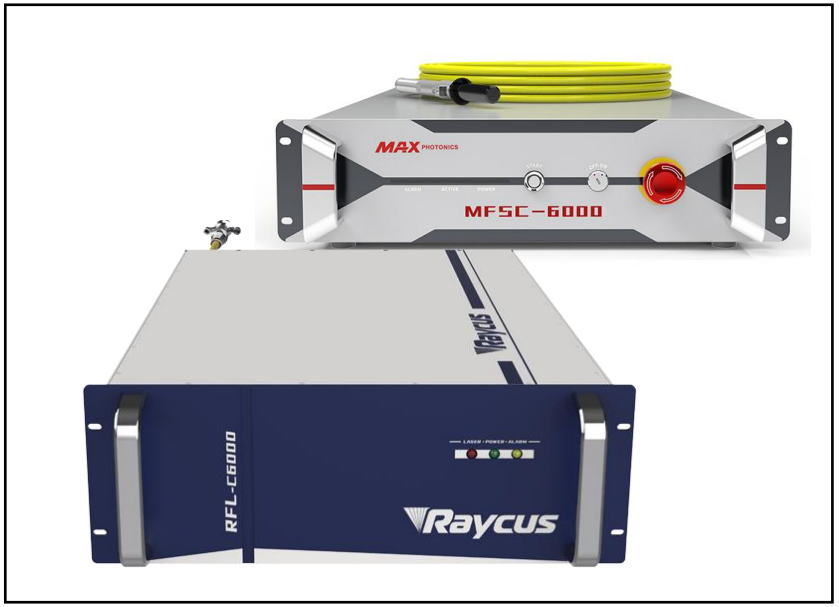
Plug and Play

Intelligent lighting enhancement

An HD monitoring system is embedded within the gantry protective enclosure.

Operators can monitor the real-time working conditions of the laser cutting head on the control system display screen.





Laser source

With high-quality beam quality,high light conversion efficiency, the light emitting mode is more conducive to achieving a good and stable cutting effect with high quality.

Raycus / Max（Optional）

Water chiller

1. Specifically developed for fiber laser equipment, compatible with various brands of laser devices.
2. Complete series of environmentally friendly refrigerants, ensuring smooth export.
3. Stable and reliable performance, low failure rate, energy-saving and power-efficient.

S&A / HanLi（Optional）





Servo driver and servo motor

Servo motors stabilise and drive the beam to control the movement of the XYZ axis according to the programmed instructions to complete the cutting operations with complex precision and the user can adjust the parameters according to their needs.

Reducer

High precision and high rigidity

Using a helical gear structure, it effectively reduces operating noise.

Use high-grade lubricating grease, with a maintenance period of up to 20,000 hours.







VOLTAGE STABILIZER

Stable voltage to ensure smooth operation of equipment.

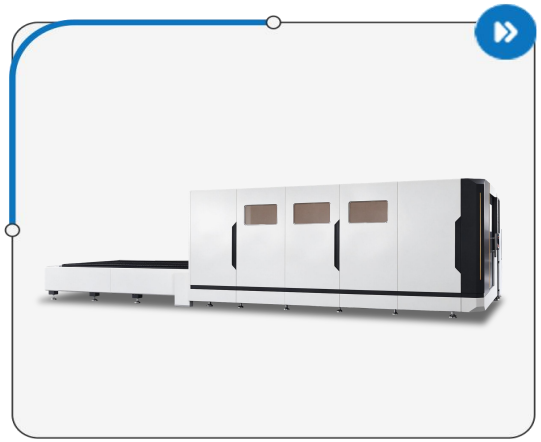
(Optional)

AIR COMPRESSOR

It is an essential tool for cutting stainless steel and thin carbon steel materials. More cost saving.

(Optional)

DELIVERY PROCESS



Machine cleaning and Protective oil processing



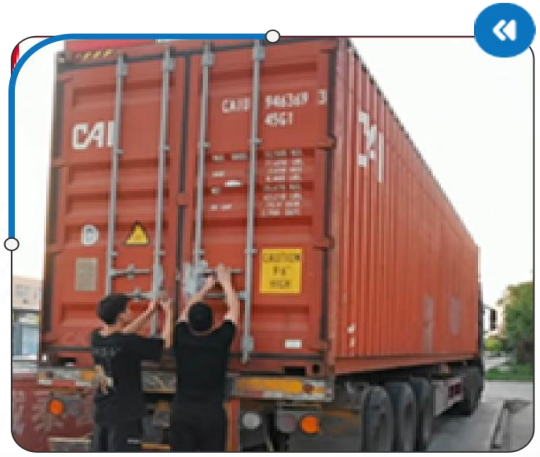
Wrapping with protective film



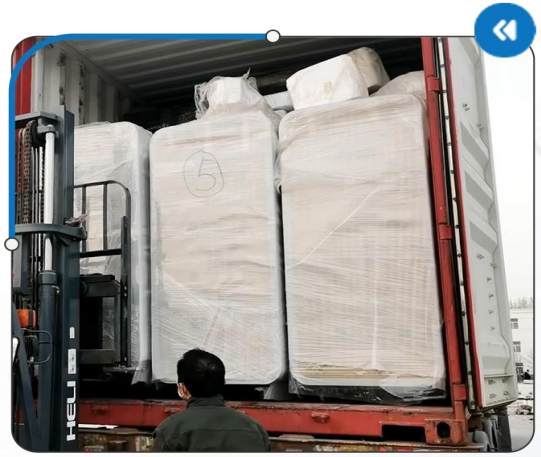
Forklift moving goods



Transportation



Container Sealing



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APPLICATION INDUSTRY

Main application industries: Machinery manufacturing, hardware processing, automotive parts, electrical equipment, steel structure processing, kitchenware, sheet metal, pipe processing, etc.

Main applicable materials: Carbon steel, stainless steel, aluminum alloy, brass, galvanized sheet and some metal plates and alloy materials.







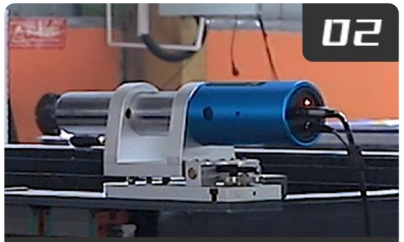



QUALITY INSPECTION



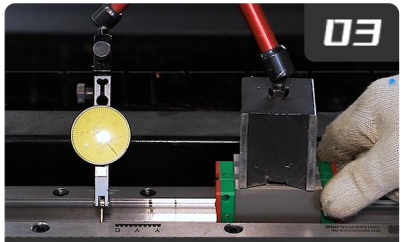
Machine Bead

Adjust the height of the feet according to the test results ofthe strip level to ensure the accuracy of subsequent installation.



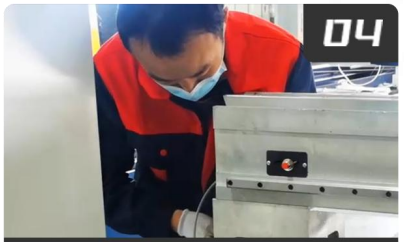
Rail Installation

Use photoelectric autocollimator to detect the straightness and flatness of the guide rail to ensure that the detection value is within the standard range.



Rack Installation

The relative position of the guide rail and the guide rail is locked and clamped by the measuring rod,Statistics and analysis of measurement data to ensure thatthey are parallel.



Beam inspection

After the beam is installed,Use athree-coordinate measuring instrument tocheck the coaxiality to ensure the relative perpendicularity of the X/Y/Z three-axis.



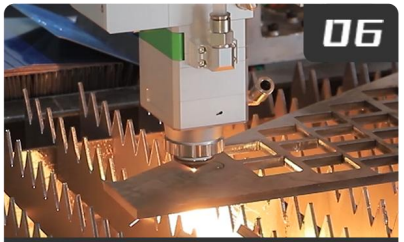
Packing inspection

Secure multi-layer packaging or wooden case shipping available.



Sample inspection

Cutting sample inspection



Cutting test

Simulate high- intensity tests for diverse harsh working conditions, and make rational improvements as required to raise factory pass- rate and equipment reliability.



Laser interferometer

The laser interferometer tests the X/Y-axis positioning accuracy to ensure the accuracy of the whole machine.

聊城市显铭光电设备有限公司
Liaocheng Xianming Laser Co.,Ltd.

Liaocheng Xianming Laser Co., Ltd. is a manufacturer specializing in the production and manufacturing of laser engraving machines, laser cutting machines, and laser marking machines. It has a history of over 12 years.

1 300+

Our goal is to produce 300 fiber laser cutting machines per month.

2 10+

We currently have 10 tech parents and are adding more every year.

3 30000+

Our factory is located in Liaocheng, with 30000 square meters of standard ized plant

4 10+

We have ten aftermarket centers all over the world.



OBJECTIVE

Scientific management, quality first, reputation foremost

MISSION

Oriented towards market demands, committed to innovation, and constantly developing

MAIN PRODUCTS









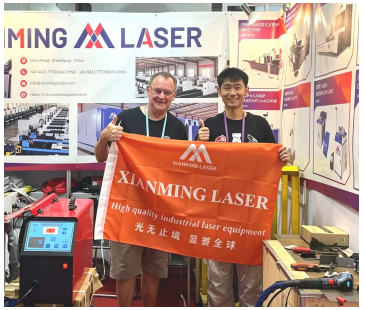


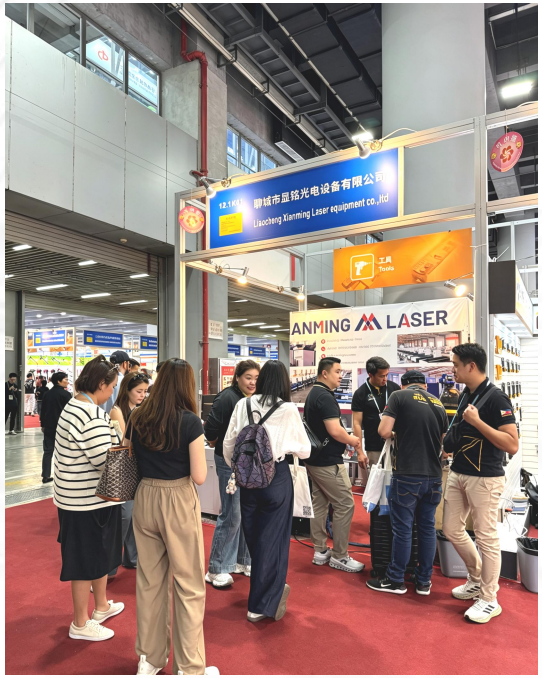
EXHIBITION STYLE

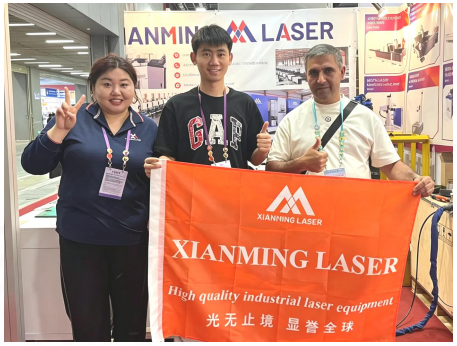
















COMMON PROBLEM

Q: How can I choose the most suitable machine?

A: In order to recommend you the most suitable machine model, please let us know the following details:
1.What is your material? 2.The size of material? 3.The thickness of material?

Q:When I got this machine,but I don’t know how to use it. What should I do?

A:We will send operation video and manual for the machine. Our engineer will do training online. If needed, we can send our engineer to your site for training or you can send the operator to our factory for training.

Q:If some problems happen to this machine, what should I do?

A:We provide 2-year machine warranty. During the two-year warranty, in case any problem for the machine, we will provide the parts free of charge (except for artificial damage). After the warranty, we still provide whole lifetime service. So any doubts, just let us know, we will give you solutions.

Q:What is the payment terms?

A:The payment terms we accept include:Western Union,T/T,VISA,Online Bank Payment.

Q:How about the shipping ways?

A:Transport by sea is the normal way;If special requirement,need to be final confirmed on both sides.