

# 12020 LARGE FORMAT

## FIBER LASER CUTTING MACHINE

3000W/6000W/8000W/12000W/20000W



- Large-Format, Powerful Thick Cutting
- The Cutting Width Can Be Customized
- Can cut entire thick plates
- Welded Bed With Mortise And-Tenon Joint

# 12020 LARGE FORMAT FIBER LASER CUTTING MACHINE

The 12020 large-area fiber laser cutting machine has a customizable bed size and processing length according to customer requirements. It can process a wide range of materials. The large cross-section rectangular tubes have undergone annealing, welding and precision processing to ensure stability and reliability. It is particularly suitable for high-precision and high-efficiency cutting and processing of large-area metal plates.



HIGH POWER



LARGE  
WORKING AREA



OUTSTANDING  
STABILITY



MULTI-MATERIAL  
CUTTING

## SELLING POINT

### 01. Extra-Large Format, Thick Sheet Processing

The maximum processing size is 2000mm \* 12000mm. It can easily handle extremely large-sized and thick metal plates. There is almost no leftover material, and no additional cutting paths or micro connections will be generated. This significantly speeds up the processing of large components and supports efficient and large-scale production.

### 02. Subdivided Fluid Domain Dusting

The smoke exhaust device automatically senses the laser cutting position to open precise smoke exhaust, closes the non-cutting area for smoke exhaust, fully enclosed smoke control, increases suction, and removes smoke to the greatest extent.

### 03. Higher material utilization rate

More flexible layout, software has more space for optimal layout, and can easily handle parts with long or irregular combinations.

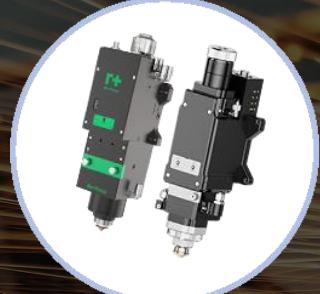
### 04. Replaceable Independent burn-proof sheet metal

Reduce the erosion of slag injection on the bed and improve the life of the bed.

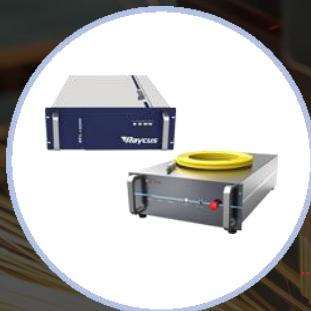
### 05. Energy conservation and environmental protection

Because of the high energy conversion efficiency and low energy consumption, it can not only reduce processing costs, but also achieve environmental protection and energy saving.

# CONFIGURATION



Raytools/BOCI Laser Head



Fiber Laser Generator  
(Raycus/MAX)



Servo Motor Driver  
(Delta/Fuji/Yaskawa)



Control System  
(Raytools/BOCHU)



Japan Shimpo reducer

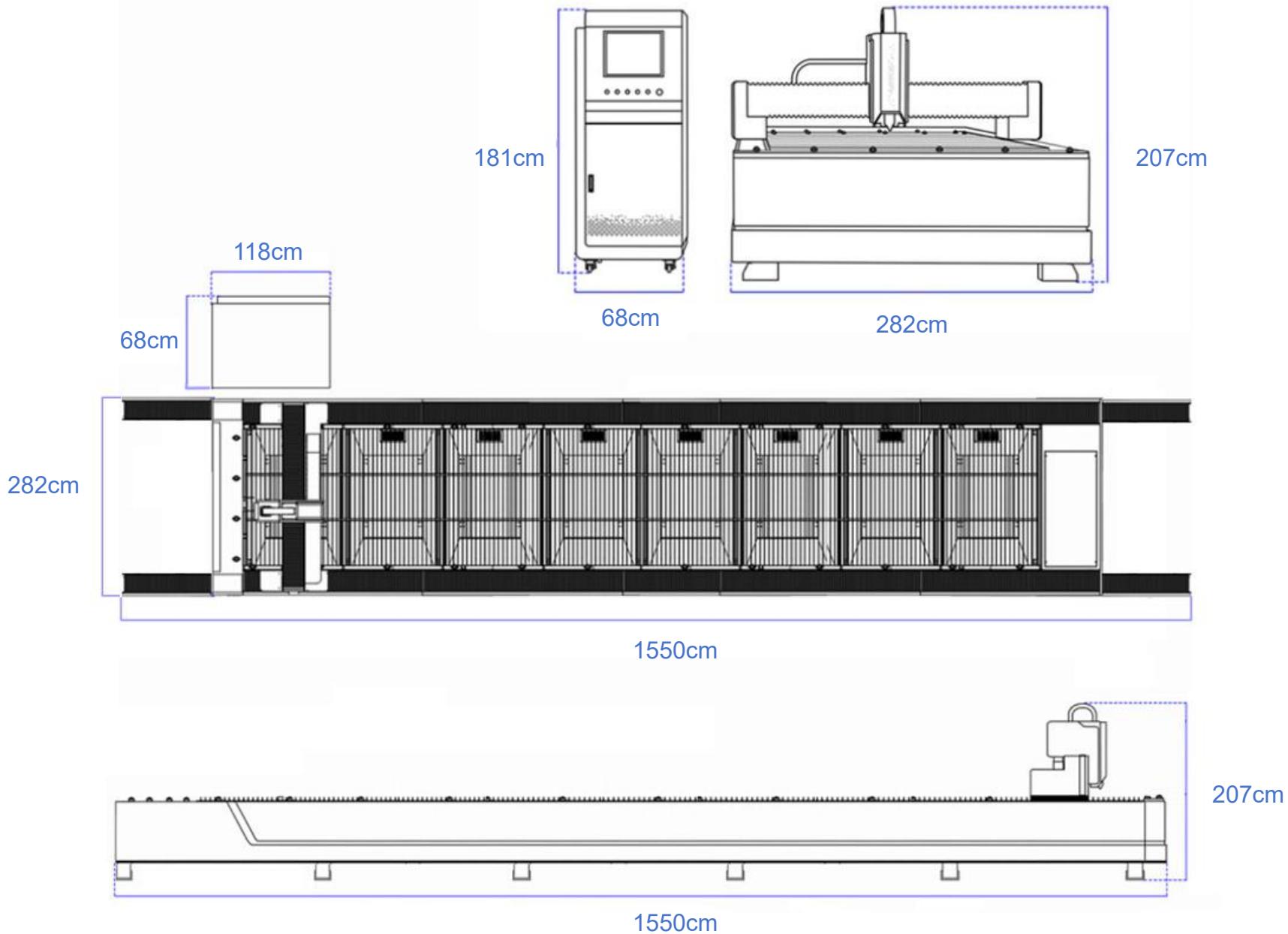


TAIWAN YYC Rack

# PARAMETERS

Model	12020/12015/14020
Working Area	12000*2000mm/12000*1500mm/14000*2000mm
Fiber Source	Raycus/Max/Reci/BWT
Control system	BOCHU/Raytools
Laser Wavelength	1080nm
Maximum acceleration	1G
Laser power	3000W/6000W/8000W/12000W/20000W
Compatible software	AutoCAD,CorelDraw, etc.
Graphic Format	DXF/PLT/AI/LXD/GBX/NC code
Power supply Voltage	380V 3Ph, 50/60Hz
Cooling Mode	Water Cooling
Working Life of Fiber source	More than 10,0000 hours
Weight	6T
Size	15500*2820*2070mm

# PARAMETERS



## When should I choose 12020?

**\*Mainly processing 12-meter boards:** If your business uses a large amount of 2000x12000mm boards, choosing 12020 is undoubtedly beneficial as it can directly bring dual benefits of materials and efficiency.

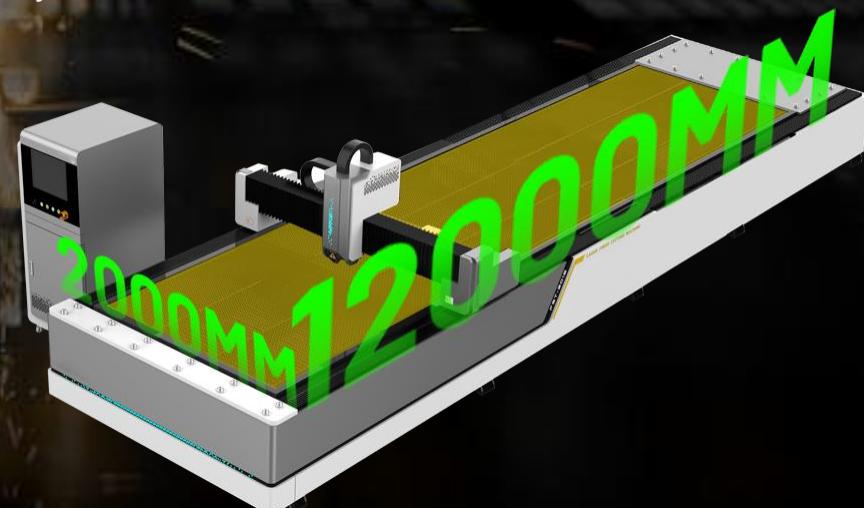
**\*There is a demand for large-sized finished products:** Your product itself is in the form of a long strip, such as elevator car wall panels, production line frames, and long ventilation ducts. 12020 can eliminate the welding and splicing process, ensuring overall quality and aesthetics.

**\*Pursuing scale production:** Your order volume is large and stable, and you need to maximize the production capacity of a single equipment. The high efficiency of 12020 can significantly shorten the delivery cycle

**\*Diverse material types:** You often need to handle boards of different sizes, and the large format of 12020 provides unparalleled layout flexibility, making it easy to handle scattered orders of various sizes.

**Working area can be customized to any size**

Multiple formats and sizes are available for your choice. Find the perfect product that suits you best!



# 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 1M 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.



# CAST ALUMINUM BEAM

## Monolithic cast aluminum beam

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

## High Speed

The light crossbeam allows the machine to move at a faster rate and enhance cutting efficiency.

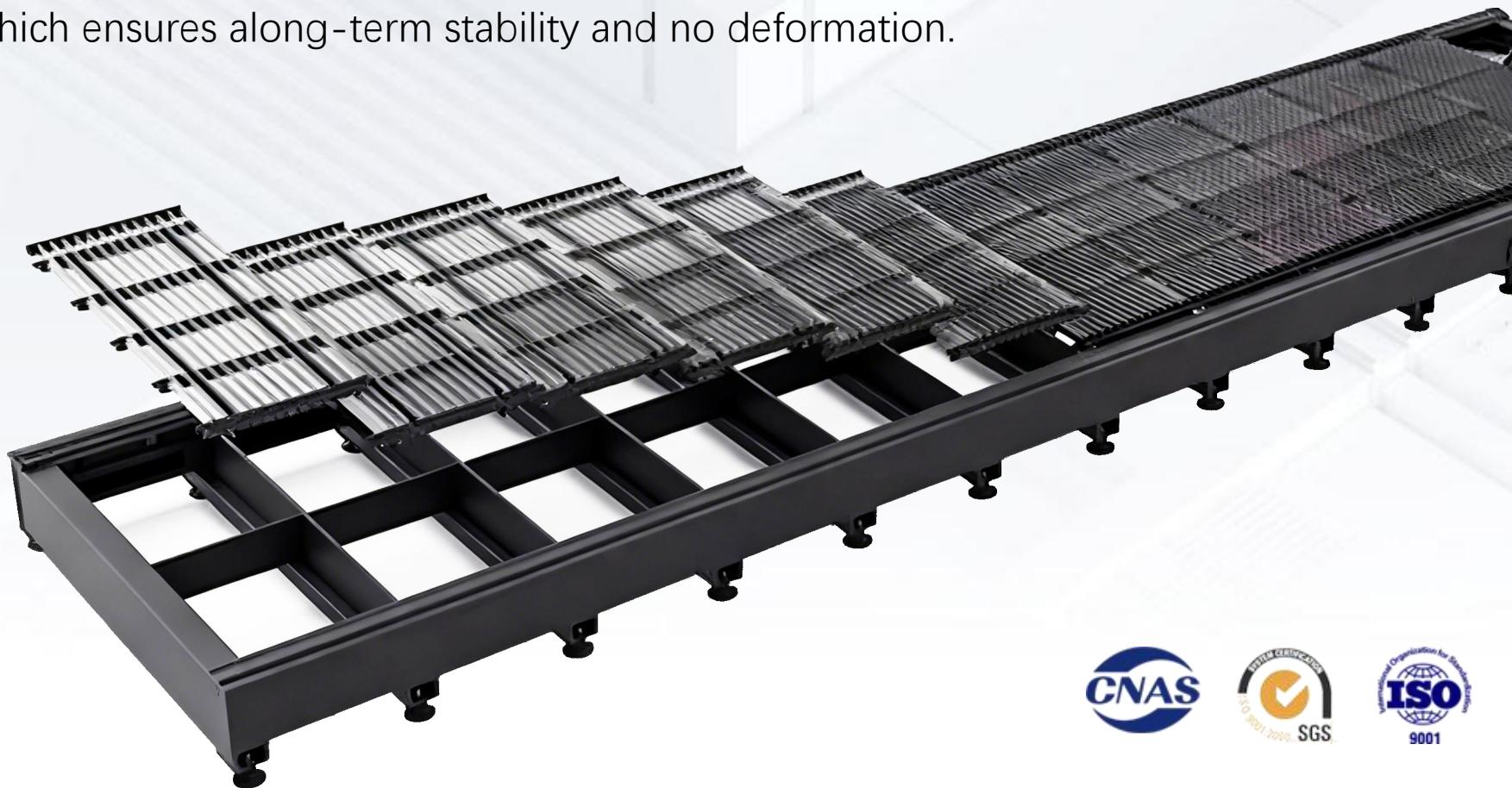
## More Efficient

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



## STRONG MACHINE LATHED BED

The lathed bed is after aging treatment: 1600°C high temperature heat treatment, 24 hours with furnace cooling and precise co2 protection welding, which ensures long-term stability and no deformation.





# CypCutE

## Sheet Cutting Software

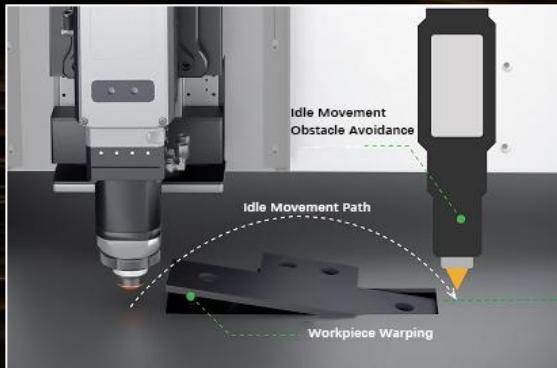
Friendess CypCutE 2D cutting software is for medium power EtherCAT cutting system. CypCutE is easy to use, rich in functions, stable and reliable. It has advanced functions such as "Smooth MicroJoint", "Fast Cutting" and "Circle Center" to meet various processing needs.





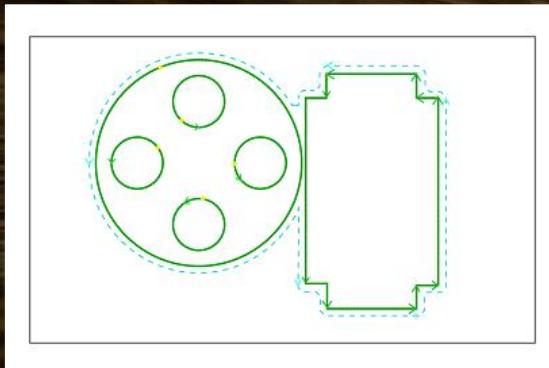
# CypCutE

## Sheet Cutting Software



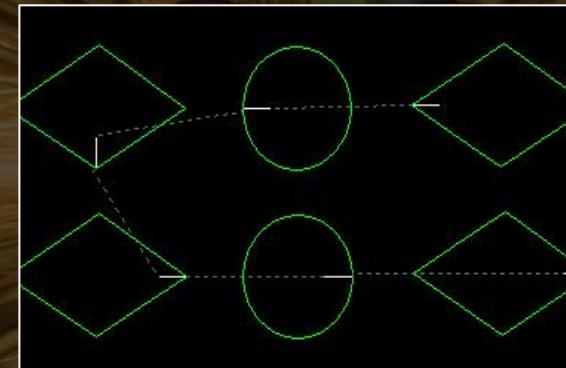
### 01. Idle Movement Obstacle Avoidance

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



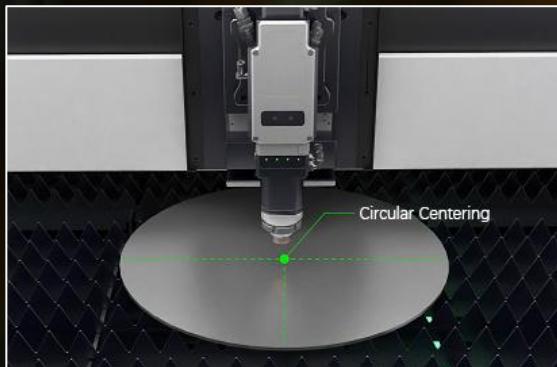
### 02. Envelope Curve Edge Tracking

Designed for irregular edge tracing of non-rectangular plates.



### 03. One-Pass Fly Cutting

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



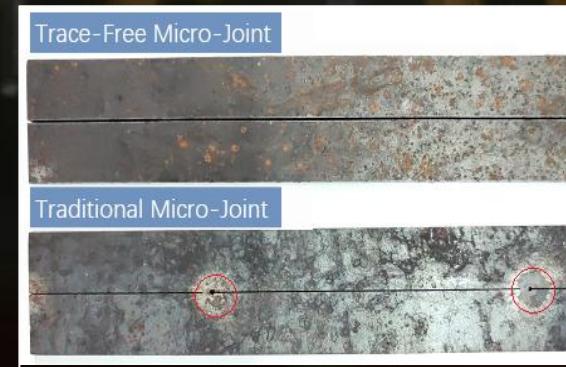
### 04. Circular Centering

Allows positioned machining after centering circular parts.



### 05. Smooth Piercing

Fast & smooth piercing, boosts thin sheet machining efficiency.

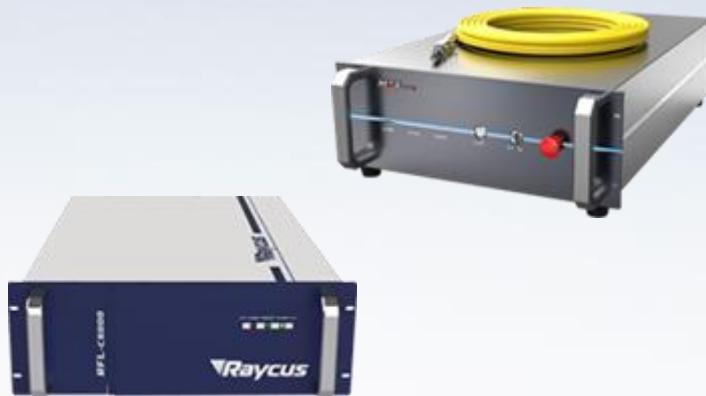


### 06. Trace-Free Micro-Joint

Smooth, mark-free surface, hassle-free batch blanking, and maximized production efficiency.

## LASER SOURCE

Professional cutting 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.



## SERVO DRIVER AND SERVO MOTOR



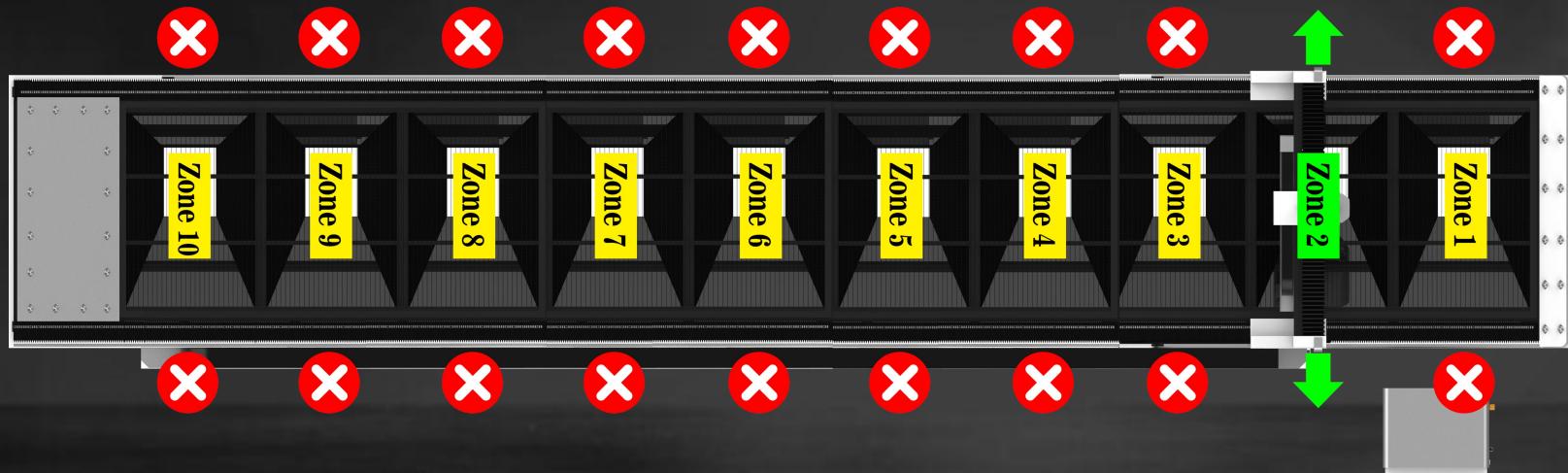
Professional cutting laser source. With high-quality beam quality, high light conversion efficiency, the light emitting mode is more conducive to achieving a good and stable cutting effect with high quality.

HCFA

DELTA 台达

## INTELLIGENT REGIONAL SMOKE EXHAUST

The laser machine working area is divided into three exhaust zones. This system is designed to automatically open and close the exhaust ports in different zones according to the position of the laser head.



- When the laser head is working in Zone 2, only the exhaust port of Zone 2 is open, while the ports in Zone 1,3-10 remain closed.
- Similarly, when the laser head is operating in a certain area, the exhaust port in that area is open, while the exhaust ports in other areas remain closed.

This means the fan's suction is concentrated only in the area where the laser head is currently working, which greatly improves the extraction efficiency. Because the area is smaller, the suction power is stronger, which leads to better smoke removal and cleaner working conditions.

Compared to a regular system where the fan and tube try to exhaust the entire working table at once, the zone system is more energy-efficient and effective, especially for high-precision or long-time engraving and cutting work.



## VOLTAGE STABILIZE

Stable voltage to ensure smooth operation of equipment.(Optional)



## AIR COMPRESSOR

It is a essential tool for cutting stainless steel and thin carbon steel materials. More cost saving.(Optional)



# 10 YEARS PROFESSIONAL ODM/OEM MANUFACTURER OF LASER EQUIPMENT

**30,000m<sup>2</sup>+**

30,000-square-meter  
standardized workshop.

**27+**

We currently hold 27  
technical patents.

**300+**

We produce more than  
300 laser equipment  
every month.

**4+**

We own four separate  
trademarks.



# Liaocheng Foster Laser Science & Technology Co., Ltd.

Liaocheng Foster Laser Science & Technology Co., Ltd. A professional manufacturer dedicated to the research and production of laser equipment, covers an area of over 10000 square meters. We mainly produce laser engraving machines, laser marking machines, laser cutting machines, laser welding machines, laser cleaning machines.

Since its establishment in 2004, Foster Laser has always adhered to the Customer centric . By 2023, Foster laser equipment has been exported to more than 100 countries and regions, including the United States, Brazil, Mexico, Australia, Turkey, and South Korea, winning the trust and support of customers. The company's products have CE, ROHS and other test certificates, a number of application technology patents, and provides OEM services for many manufacturers.

Foster Laser is equipped with a professional R&D team, sales team, and after-sales team, which can provide you with a perfect purchasing and usage experience. The company can customize products, logos, exterior colors, etc. according to demand. Meet your customization needs.

Foster Laser, looking forward to your visit.





## TRADEMARK

# 10+

United States

Mexico

Britain

Brazil

Italy

Germany

Foster Laser has successfully registered trademarks in 10+ countries, which means the company has obtained legal protection for trademarks in these countries. These registrations not only ensure exclusive use of the company's brand and prevent others from infringing or imitating it, but also provide strong support for the company's expansion in the international market.

## International Certification Shows Brand Strength

1. Strict Quality Control Standards

2. Authoritative Certification

3. Brand Guarantee



# PACKAGING



Machine cleaning and  
Protective oil processing



Wrapping with  
protective film



Forklift moving goods



Transportation



Container Sealing



Container loading

# EXHIBITION

Partners come from all over the world  
With 10 years of export experience





## **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?

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## **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.

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

A:We provide two years 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.

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## **Q:What is the payment terms?**

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

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## **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.