



# FIBER LASER CUTTING MACHINE

(suitable for 1000W to 6000W)



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## Brief introduction of Lonwillaser

Lonwillaser is specialized in CNC Cutting&Welding automation solutions.

Since 2009, with professional engineer team from HYD.CNC, we have started to supply CNC control system for plasma&oxyfuel cutting on oversea market.

Fiber laser cutting started growing fast in China from 2012. Then, our first member company Shenzhen Lonwill was established. Like many other YAG laser, CO2 laser machine manufacturers, we had been struggling in this field, experienced with all kinds of failures in the first couple of years.

Until 2015, With the joining of Wuxi factory, we established Wuxi Cylion, the second member company. Our fiber laser cutting machine ran on the right way. Along with the development of different laser application machines, we realized there're many more solutions we can make for the automation of industry. 2021, our first laser automation factory opened in Foshan, Guangdong.

2022, by joining with AJ JK, we had another new member company, supplying complete line of laser tube cutting machines, with self-designed EtherCat laser cutting system, nesting software, electric chuck, laser cutting head.



Machine display



## Machine parameters

No	Item	Brand
1	Machine cutting table	Our own
2	laser power	Raycus/Max
3	Laser head	Autofocus BTL421
4	Chiller	HANLI or S&A (Dual temperature, dual control)
5	CNC controller	FSCUT4000E
6	Auto height controller	BCS210E
7	Gear rack and pinion	SMAGIC from Japan
8	Rail guide	SMAGIC from Japan
9	X/Y axis servo motor	High speed Inovance servo motor
10	Planetary Gearbox	FASTON from Taiwan
11	Proportional valve	SMC from Japan
12	Pressure valve	SMC from Japan
13	Electric parts	Schneider from France

## Machine parameters

No	Item	Note
1	Spare parts	Nozzle, Protective lens, Focus lens, Collimation lens, Ceramic ring
2	Transmission system	Flange Transmission system
3	Wireless remote controller	Yes
4	Automatic lubrication system	Yes
5	Dust cover protector	Yes
6	Low pressure alarm function	Yes
7	Automatic dust removal device	Yes
8	Laser abnormal alarm	Yes
9	Cutting abnormal alarm	Yes
10	Waste collection box	Yes
11	Gas low pressure alarm	Yes
12	Water cooler abnormal alarm	Yes

## Technical Data

<b>Model</b>	<b>X2-3015</b>
Working Size	3000*1500mm
Stroke (X/ Y/ Z Axis)	1520mm/3040mm/100mm
Machine Size (L*W*H)	4850x2260x 1900mm
Machine weight (kg)	2200
Table load bearing (kg)	800
Laser Power	1.5KW-6KW
Positioning Accuracy	±0.03mm
Repositioning Accuracy	±0.03mm
Max. Linkage Speed	Max 100m/min
Max. Acceleration	0.8G-1.2G
Auxiliary Gas	oxygen, nitrogen, air
Work Environment	0-45°C, Moisture 45-85%

### Cutting parameter reference

	1500W	2000W	3000W	6000W
Carbon steel	1-14mm	1-16mm	1-18mm	1-22mm
Stainless steel	1-8mm	1-10mm	1-12mm	1-18mm
Aluminum	1-5mm	1-8mm	1-10mm	1-14mm

## Machine Bed

Our machine bed is made of sufficient materials, and the height of the equipment reaches the waist, which is convenient for operation.

**Note:** Our machine bed adopts a full welding process. Fuse and weld all parts of the machine bed. It makes the whole machine bed more durable and greatly extends the service life of the entire machine bed.



## ALUMINUM CROSS BEAM



### Integrated Steel Mold

Monolithic cast aluminum beam, light weight, high strength, no deformation. Molded and framed by integral steel mold and diecasting technology, light crossbeam make equipment a high operation speed, improving processing efficiency and processing quality.



### "wings" and "bases"

We added "wings" and "bases" on both sides, and fixed them with screws to ensure that the machine will not shift eventhough long-term operation.



### More Efficient

The aluminum profile beam of the aerospace industry makes the equipment have efficient dynamic performance, greatly improving processing efficiency while ensuring processing quality.

## ● ANNEALING ---A necessary process of the machine bed

We have a professional annealing furnace, Each of our machine bed will strictly comply with annealing process, machine bed will be heat to 600°C and keep for 24 hours, the totally enclosed. The inner stress of mechanical connections will be eliminated as the following natural cooling  
**Note:** Without annealing, the welding joint would break quickly as time goes, not to mention the high-strength even 7/24 working situation.

- High-Precision Milling

High-Precision Milling is vital for inllation & running accuracy of motion parts, Lonwill adopt large gantry milling machine, error under 0.01mm/m, which comply with international standard ensuring parallelism and perpendicularity.



# ● MAIN PARTS



CypCut FSCUT4000E bus system



Boci BLT421 laser cutting head



SMG Rack



Inovance Servo Motor



Raycus Laser source

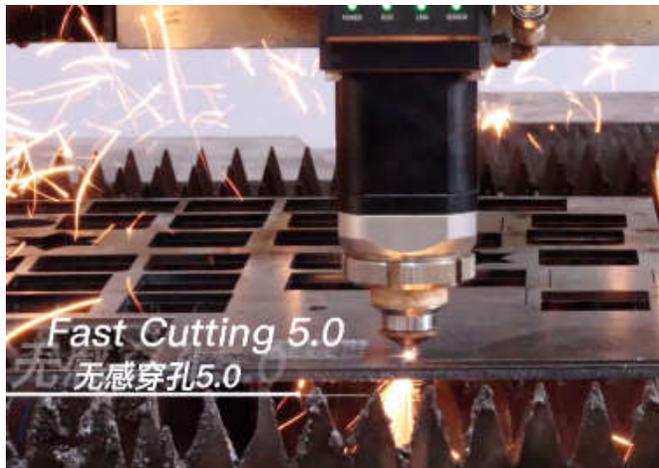


SMG Guide Rail

## CNC CONTROLLER

**FSCUT  
4000E**

FSCUT4000E is a cost-effective laser control system applies to 1.5-8KW power cutting. Based on EtherCAT, integrating motion control, laser control, and gas control, it widely applies to metal sheet, cookware and lamps cutting.



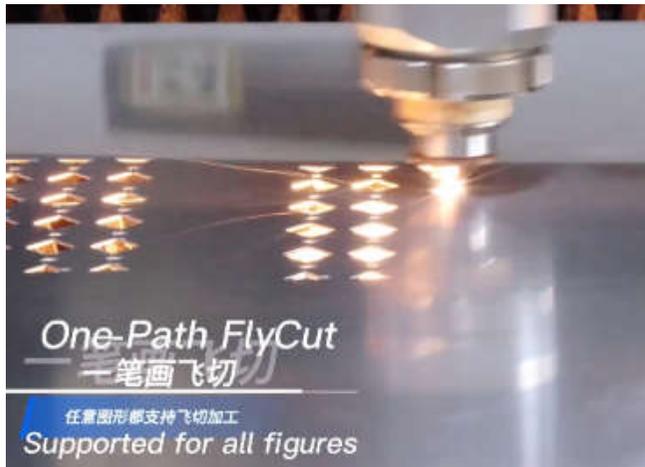
Fast Cutting  
speed up sheet cutting



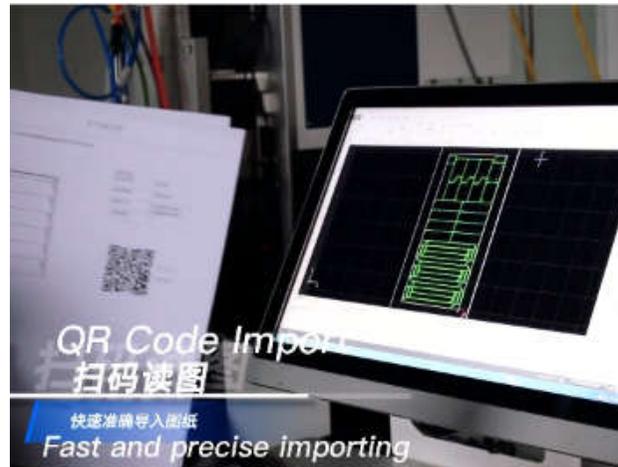
Smooth MicroJoint  
batch unload, piece of cake



Circle Centering  
locate the center on circular sheet metal  
and processing



One-Path FlyCut  
create fly cutting paths for any shapes to  
improve cutting efficiency



Scan-to-Import  
read drawings with a simple scan



Envelope Check  
contouring for non-rectangular sheet  
metal

## Cutting Head: BOCI BLT421



BLT 4 series, cost-effective smart cutter that focuses on 2D, 3D and bevel cutting machine, delivers a great performance with stable cutting, simple installation and setup, available for power levels below 30KW. Find more details in technical parameters.



**Bevel Cutting**  
**One Time Forming**  
With AB swing axis can support cutting V, Y, X and other types of bevels, maximum  $\pm 45^\circ$  bevel and one time forming, reducing beveling process, reducing cost and increasing efficiency.



**Water Cooling**  
**Full Body Water Cooling**  
Cover 90% of the cutting head to improve cutting stability.

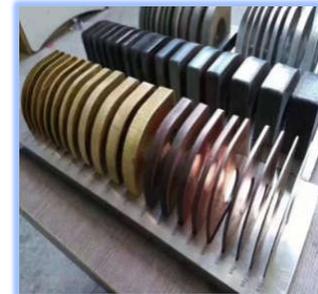
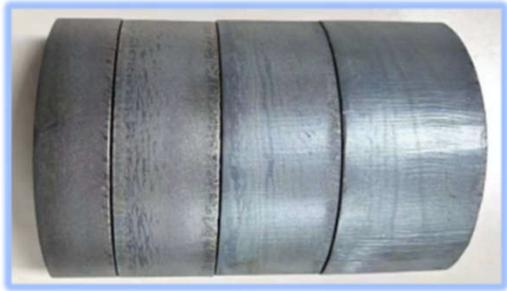


**Closed-Loop Monitoring**  
**Smarter and More Efficient**  
Built-in multi-sensor, real time closed-loop intelligent monitoring, rapid diagnosis of problems and early warning.



**Gas Pressure Monitoring**  
**More Stable Cutting**  
Real-time monitor the gas output to reduce the impact on the cutting quality.

Sample display



# AFTER-SALE SERVICE

## Pre-service

### Free sample cutting

For free sample cutting/testing, please send us your CAD file, we will do cutting here and make video to show you the cutting ,or send sample to you check cutting quality.

### Customized machine design

According to customer's application, we may revise our machine accordingly for customer's convenience and high production efficiency

## Warranty and service

Laser power: **Two years** warranty, guaranteed by laser manufacturer

Machine table: **Ten** years warrant

Motion parts: **One year** warranty, Guaranteed by parts manufacturer.

Free Warranty Service: We will send replacement parts on our cost first keep customer's machine running is top concern. If machine needs onsite service for quality issue, we send technician to your site.



## Service after sales

Machine will be supplied with training video and user's manual in English for installation, operation, maintenance and trouble-shooting, and shall give technical guide by e-mail, fax, telephone, skype.. for fast solution, **24 hours** on line

Customer may come to our factory for training. We will offer training of installation, operation, machine trouble-shooting, and maintenance. During training in our workshop, we offer **free training and living cost for 5 days limit 2 people.**

Or we offer technician to customer sites for installation and training, customer covers local living cost and travel cost