



Riselasers Technology Co.,Ltd.

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Riselasers

# Width-direction Exchange Platform Fiber Laser Cutting Machine

## RL1530-1500



EJmail: [sales@riselasers.com](mailto:sales@riselasers.com)

tebsite: [www.riselasers.com](http://www.riselasers.com)      [www.sdlaser.com](http://www.sdlaser.com)

Address: Building 5, COFCO (Fuan) Robot Intelligent Manufacturing Industrial Park, No. 90 Dayang Road, Fuhai Street,  
Bao'an District, Shenzhen, China, 518103



## RL-1530 NEW MODEL

### Technical parameters:



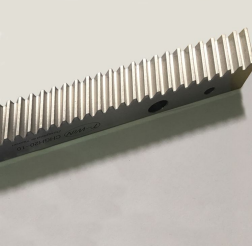
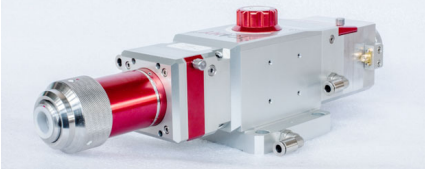
Model	RL1530
Laser Wavelength	1070 nm
Power	1500W
Beam Quality	<0.373mrad
Max cutting thickness	15mm carbon steel
Working area	2500mm×1300mm
Positioning Accuracy	≤±0.05 mm/m
Repeation Accuracy	≤±0.05 mm/m
Power Supply	Three-phase four-wire AC 380V/50Hz, 50Hz±1%, 60A
Pulse frequency	1-500HZ Continuously adjustable
Energy instability	≤2%
Minimum cutting line width	0.1mm (Material below 0.4mm)
Maximum idling speed	50m/min
Maximum acceleration	1G
Maximum cutting speed	20m/min (Depends on different materials)
Continuous working time	≥20H
Mechanical accuracy of worktable	±0.03mm
Software	The software has the function of selecting segments
Equipment weight (estimated value)	3500KG
Power consumption	13 kW



## Machine base introduction

- Tube welding.
- Total machine weight 3.5 tons.
- With 24 hours quenching process.
- Italian COLGAR machine milling boring.
- Machine error accuracy 0.05mm.
- Support max moving speed 70m/min.

## Other main parts

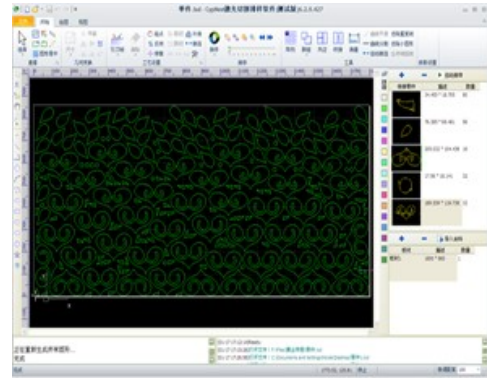
<b>Motor</b>	Yaskawa	
<b>Guide</b>	PMI	
<b>Rack</b>	DIN-6	
<b>Cutting head</b>	TONY	



## Control Cypcut (FSCUT1000)

FSCUT1000 medium power laser cutting system is a full-solution open-loop control system specially designed for sheet metal processing industry, which owns a wide market share with the features of easy to install and adjust, excellent performance and fully integrated solutions.

FSCUT1000 cutting software is a three-dimensional pipe cutting software, you can directly read UG, SolidWorks software export IGS format files, automatically extract the section to be cut and the track to be cut, without manual editing and selection. Fast and convenient automatic leveling and center correction function eliminates the cumbersome manual operation, improve the accuracy of cutting; automatically according to the size of the pipe to calculate the pipe rotation and single-sided cutting head when the lifting height, to avoid cutting the process of collision. But also greatly reduces the single-sided cutting when the unnecessary lift, save time.



## S&A Water Chiller

When laser head cut metals, there will produce some hot energy in laser head and laser device. Water chiller is for cooling this two parts. Laser head part, mainly cooling the mirrors.

Temperature in the water chiller is auto adjustment, mainly set up with 25 degree around.

Water in chiller should be pure water.

(suggest change once a week)





## MAX laser source 1500w

MAX laser source has higher electro-optical conversion efficiency (>30%), higher and more stable optical quality, stronger altitude stress-resisting capacity and it applies optimized second-generation fiber transmission system to ensure more stable and more sophisticated cutting effect in thick sheet cutting. This machine applies to many application scenarios: cutting, welding, holing, medical device processing, etc., with a narrow seam of the cut sheet and bright section. Compared with same lasers, it has obvious advantages.

- High electro-optical conversion efficiency
- Altitude stress-resisting capacity
- Sheet cutting efficiency
- Customized output fiber length
- Maintenance-free operation
- Wide modulation frequency range



### Features

- ▶ Output Power up to 20 kW at Workpiece
- ▶ Wall-plug Efficiency 40%
- ▶ Fiber Delivery 50, 100, 150 or 200  $\mu\text{m}$
- ▶ Hot Redundancy
- ▶ Maintenance-free Operation
- ▶ Cost-effective Cutting System
- ▶ Record Reliability
- ▶ Compact Rugged Design



### Applications

- ▶ 2D/3D Thin & Thick Metal Cutting
- ▶ Optimized for 24/7 Cutting Operations
- ▶ Processing Highly Reflective Materials: Copper, Brass & Aluminum
- ▶ Cutting Mild and Stainless Steel
- ▶ Processing Titanium

**1500W Cutting data:**

Single module 1500w core 50um cutting data (collimation 100, focus 125)

Material	Thickness (mm)	Speed (m/min)	Power (W)	Gas	Air pressure (Bar)	Nozzle (mm)	Cutting height (mm)
stainless steel	1	25	1500	N <sub>2</sub>	12	1.5S	0.5
	2	8			14	2.0S	0.5
	3	4.5			16	2.5S	0.5
	4.5	1.5			18	3.0S	0.5
	5.5	0.8			18	3.0S	0.5
Carbon steel	1	22	1500	N <sub>2</sub>	12	1.5S	0.5
	3	3.6		O <sub>2</sub>	0.6	1.0D	1
	6	1.4			0.6	1.5D	1
	8	1.2			0.6	1.5D	1
	10	1			0.6	2.0D	1
	12	0.8			0.6	2.5D	1
	14	0.65			0.6	3.0D	1
	16	0.5			0.6	3.0D	1
Aluminum	1	18	1500	N <sub>2</sub>	12	1.5S	0.5
	2	6			14	2.0S	0.5
	3	2.5			15	2.5S	0.5
	4	0.8			17	3.0S	0.5
Brass	1	15	1500	N <sub>2</sub>	14	1.5S	0.5
	2	5			16	2.0S	0.5
	3	1.8			18	2.5S	0.5
	4	1			20	3.0S	0.5

Remarks: The red parameters in the figure are proofing parameters, which are greatly affected by various factors in actual processing, and actual production processing is not recommended.



## Maintenance

### Electrical power cost

Equipment components	Power consumption (KW)	Total
Laser source	4	13 KW/H
Machine bed	5	
Water chiller system +Exhaust fan	4	

### Auxiliary gas cost

Gas type	Air cost	Life time	Cutting effect	Note
Oxygen	30L	60 minutes	Black edge	Take 1mm carbon steel as example
Nitrogen	80L	60 minutes	White edge	Take 1mm stainless steel as example

### Spare parts price list

name	Life time (hour)	Unit price	Note
Protect lens	>=600		If the working area is better, the machine life time will be longer
Copper nozzle	>=600		
Focus lens	>=3000		





## Company Profile

Riselaser Technology Co., Ltd. is a highly integrated enterprise which specializes in laser products, laser cutting machine, laser engraving machine, laser welding machine, etc. Manufacturer and processing international sales and domestic sales. The company was founded in 2015. As a modernized enterprise with high technology and mature sales channel, we have solid financial base and great capability for production, research and development.





## After-sales Service

Warranty: 1 year for the whole machine, but lens/mirror/nozzle without warranty.

3 years for the laser source.

Certificate support: CE

Manuals and CD along with machine,

After-sales department with English speakers supports customer on-line.

**We are looking forward to serve you and please don not hesitate to contact us for more information.**

**Sincerely**

**yours,**

**Shenzhen Riselaser Technology Co.,Ltd.**