



# SENFENG

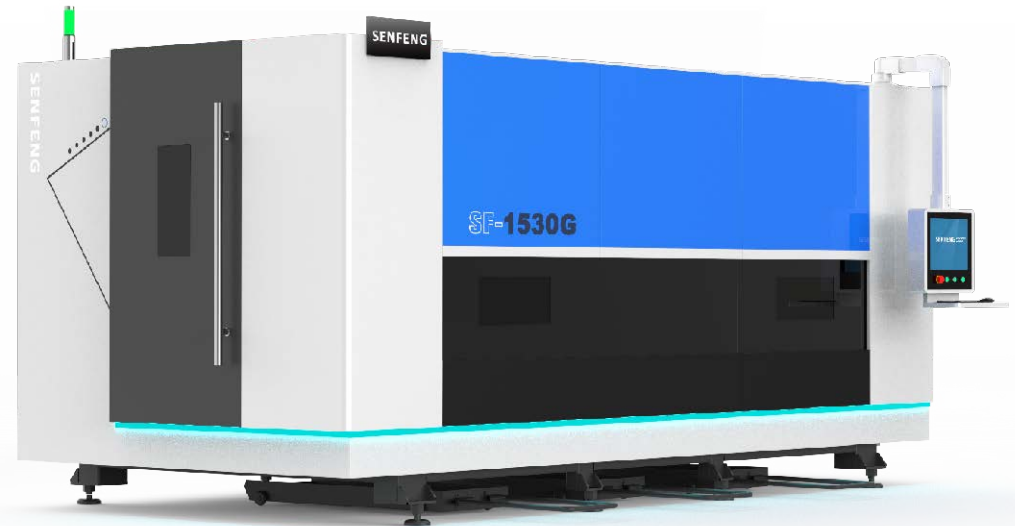
Cutting | Cladding | Cleaning | Welding | Bending | Automation

## SF1530G

Technical Solutions

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## I. Product introduction



- **SF1530G** is a single table fiber laser cutter machine for cutting metal sheet. The fiber laser power 1000w to 3000w.
- It is with full-protection cover, which can prevent the laser radiation and protect the worker safety, reduce the environment pollution; and it is also with the pull-out platform, which is more convenient for loading and unloading materials.
- The machine bed is welded with high-quality steel plate and pipe, which ensures that the bed has sufficient structural stability, shock resistance and no deformation for long time.
- The partitioned dust removal system can automatically open and close the air outlet to achieve smokeless cutting.

## II. Technical Parameter

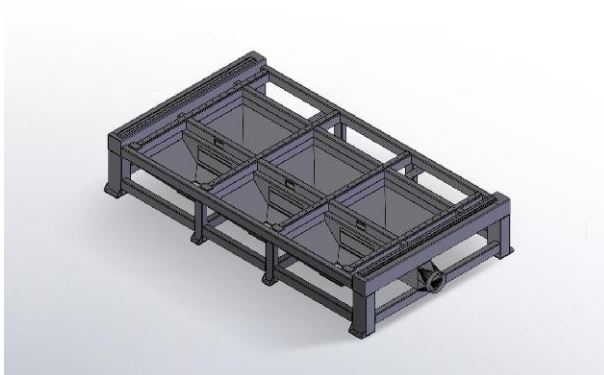
Item	Parameter			
	1000W	1500W	2000W	3000W
Work Area	3050*1530mm or 10*5ft			
X-axis Travel	3050mm/10ft			
Y-axis Travel	1530mm/5ft			
Z-axis Travel	120mm/0.39ft			
Positioning accuracy	±0.05mm			
Repeated positioning	±0.02mm			
Maximum speed	80m/min			
Maximum acceleration	0.8G			
Machine Total weight(KG)	2900			
Table maximum load(KG)	700			
Outline size ( mm )	4890x2300x2290			
Power parameters	Three-phase AC380V 50Hz			
Protection Level of Total Power Supply	IP54			

## III. Configuration

NAME	NO.	BRAND
Fiber Laser	1 set	Raycus
Laser head	1 set	Raytools /WSX
Transmission	4 set	LAPPING/PEK
Rack	3 set	SENFENG
Machine bed accessories	1 set	LEIMING
Motor reducer	3 set	EREFAT
Electrical and pneumatic	1 set	SIEMENS/SCHNEIDER/ABB/SMC/AIRTAC
Server motor and driver	5 set	DELTA/SCHNEIDER
Water cooling	1 set	HANLI
FSCUT system	1 set	FSCUT 2000

## IV. Main Features

### Honeycomb Carbon Structural Steel Welding Bed



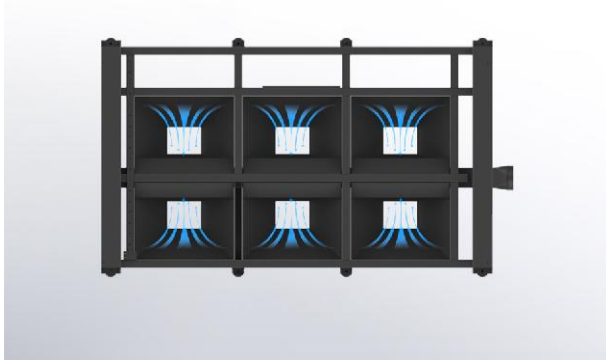
- The bed is welded by high-quality steel plate and pipe. After welding, it undergoes stress relief annealing, secondary aging treatment, and ultra-large gantry milling machine precision processing to ensure that the bed has sufficient structural stability and shock resistance. The bed will not be deformed after long-term use, which improves the service life of the equipment.

### Strong Aviation Aluminum Beam



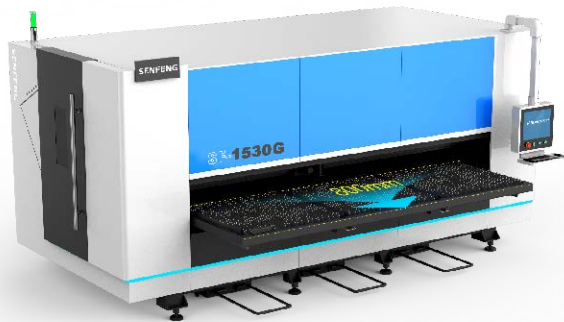
- SF1530G Fiber Laser Cutter adopts aviation-grade high-strength aluminum alloy beam, which has the characteristics of light weight, low inertia, strong rigidity and good shock absorption.
- Rough machining after annealing to eliminate internal stress and fine machining after secondary vibration aging treatment ensure the overall strength and stability of the beam.

## Intelligent Spiral Surrounding Vacuum Dust Removal System



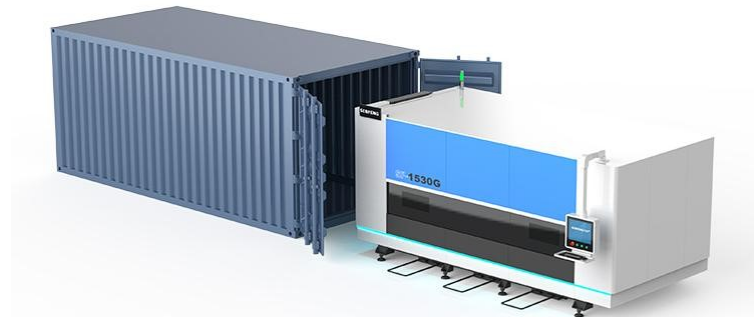
- Intelligent spiral surrounding negative pressure partition dust removal system, according to the current cutting position, intelligently switch the air outlet, time-sharing, partition, and sectional air exhaust, At the same time, it cooperates with the back-shaped sealing structure design at the bottom of the base to realize smokeless cutting.

## Pull-out Platform



- The worktable can pull out the bed 800mm, and at the same time it can use auxiliary equipment to load and unload materials.

## Packing



- Save freight cost. Save installation time. Whole machine can fit into a 20-foot container.

## WXS laser cutting head



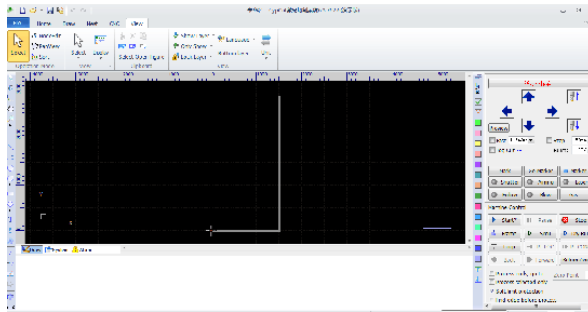
- The internal structure of the laser head is completely enclosed, which can prevent the optical part from being polluted by dust.
- The laser head adopts two-point centering adjustment, and the focusing adopts servo drive, which significantly improves the efficiency in perforation.
- The protective mirror adopts drawer type installation for easy replacement.
- Compatible with all QBH connector lasers of 3000 watts and below.
- Focal length: 125mm, 150mm.
- The maximum thickness of carbon steel can reach 20mm · The maximum thickness of stainless steel can reach 12mm.

## Raycus RFL-C3000S Laser Device



- 25nm fiber core quasi-single mode output.
- 50nm fiber core quasi-single mode output.
- The electro-optical efficiency is as high as 35%.
- Multi-level security and high anti-protection.
- Power monitoring accuracy up to 3.

## FSCUT2000 medium and high power laser cutting system



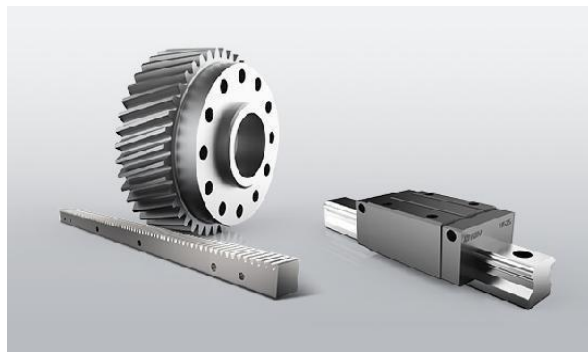
- Convenient installation, easy debugging, excellent performance, complete solutions, stable and reliable, easy deployment, easy debugging, safe production, rich functions, excellent performance, etc.
- support and provide modular, personalized, automated, and information solutions that can be realized Memory cache, powerful cutting process database, all kinds of cutting parameters of different thicknesses and different plates, fast operation and efficient cutting.

## Metal Wheel Exchange Table



More durable and stable, ensuring the fast exchanging time

## Transmission System



- High precision, long life, can provide rigorous support for quenching helical gears and grinding helical gears, so that the load drive structure is compact, can effectively reduce the driving torque.



## Circuit board



## Water Cooling System



- Large cooling capacity, stable performance, trouble-free, clean water quality, good heat exchange effect with fiber laser, and linkage signal to protect the laser

## Height Controller



## Automatic Lubrication System



- Lubricating the guide rails of X axis, Y axis, Z axis automatically, which could reduce maintenance cost and save time significantly.
- Oiling time can be adjusted according to processing amount, which is more humanized.

## V. Cutting Capability and Application

### Cutting Materials

Carbon steel,  
 stainless steel,  
 aluminum alloy,  
 brass, copper,  
 galvanized  
 sheet, silicon  
 steel sheet,  
 electrolytic  
 sheet, titanium  
 alloy,  
 manganese  
 alloy, etc.



## Application Industry



Manufacturing industry



Refrigeration equipment



Mechanical processing



Sheet Metal Fabrication

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Elevator production

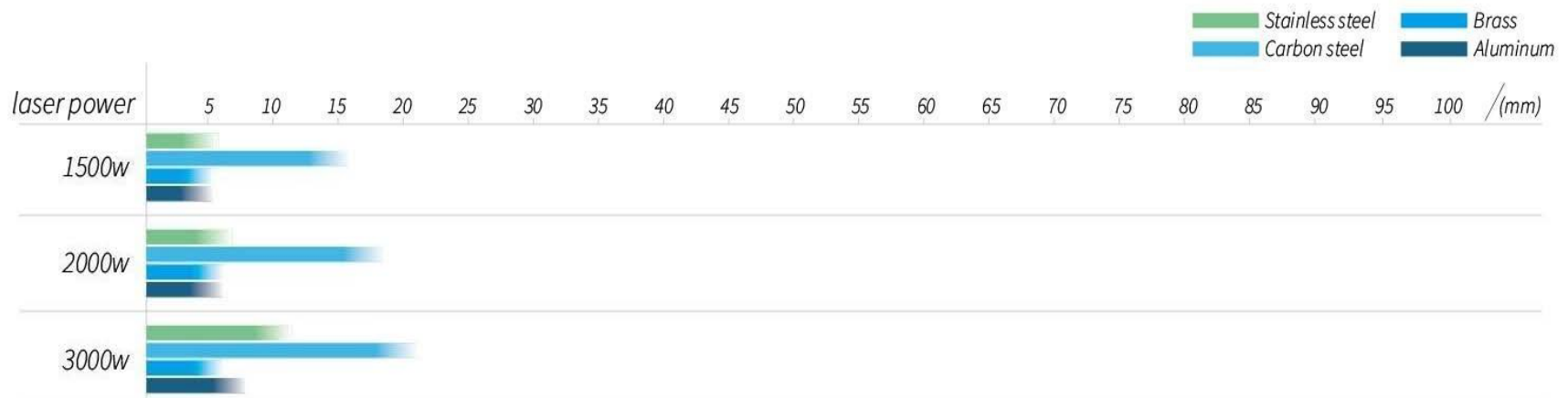


Advertising industry



Petroleum machinery

## Cutting Capacity



*The above data and pictures are for reference only*

## Cutting Parameters

Material	Thickness ( MM )	1KW	1.5kw	2KW	3KW
		Cutting Speed ( m/min ) ( gas )			
Stainless Steel	1	18-20(N <sub>2</sub> )	23-30(N <sub>2</sub> )	30-35(N <sub>2</sub> )	30-45(N <sub>2</sub> )
	2	6.0-8.0(N <sub>2</sub> )	7.0-13(N <sub>2</sub> )	10-15(N <sub>2</sub> )	20-25(N <sub>2</sub> )
	3	2.8-3.5(N <sub>2</sub> )	4.5-5.5(N <sub>2</sub> )	5.0-6.5(N <sub>2</sub> )	8.0-10(N <sub>2</sub> )
	4	1.5-2.0(N <sub>2</sub> )	2.0-2.5(N <sub>2</sub> )	4.0-5.0(N <sub>2</sub> )	6.0-9.0(N <sub>2</sub> )
	5	0.8-1.0(N <sub>2</sub> )	1.4-1.8(N <sub>2</sub> )	2.0-2.3(N <sub>2</sub> )	
	6		1.0-1.2(N <sub>2</sub> )	1.5-2.0(N <sub>2</sub> )	3.0-3.5(N <sub>2</sub> )
	8			0.8-1.2(N <sub>2</sub> )	1.0-1.5(N <sub>2</sub> )
	10				0.6-1.0(N <sub>2</sub> )
	12				0.4-0.6(N <sub>2</sub> )
Carbon Steel	1	15-18 (N <sub>2</sub> )	25-28 (O <sub>2</sub> )	25-35(O <sub>2</sub> )	30-40(N <sub>2</sub> /Air)
	2	5.0-7.0 (O <sub>2</sub> )	6.2-8.5 (O <sub>2</sub> )	10-15(O <sub>2</sub> )	15-17(N <sub>2</sub> /Air)
	3	3.0-4.0 (O <sub>2</sub> )	3.5-5.0 (O <sub>2</sub> )	3.5-5.5(O <sub>2</sub> )	4.5-5.0 (O <sub>2</sub> )
	4	2.0-3.5 (O <sub>2</sub> )	3.5-4.0 (O <sub>2</sub> )	3.8-4.5(O <sub>2</sub> )	2.8-3.5 (O <sub>2</sub> )
	5	1.8-2.5 (O <sub>2</sub> )			
	6	1.5-2.2 (O <sub>2</sub> )	1.7-2.5(O <sub>2</sub> )	2.0-2.7(O <sub>2</sub> )	2.8-3.5(O <sub>2</sub> )
	8	1.0-1.5 (O <sub>2</sub> )	1.2-1.6(O <sub>2</sub> )	1.3-1.7(O <sub>2</sub> )	2.3-2.5(O <sub>2</sub> )
	10	0.8-1.0 (O <sub>2</sub> )	1.0-1.2(O <sub>2</sub> )	1.0-1.6(O <sub>2</sub> )	1.8-2.1(O <sub>2</sub> )
	12	0.6-0.8 (O <sub>2</sub> )	0.8-1.0(O <sub>2</sub> )	0.8-1.2(O <sub>2</sub> )	1.4-1.6(O <sub>2</sub> )
	14		0.6-0.7(O <sub>2</sub> )	0.8-1.0(O <sub>2</sub> )	1.0-1.3(O <sub>2</sub> )
	16		0.5-0.6(O <sub>2</sub> )	0.7-1.0(O <sub>2</sub> )	0.7-1.2(O <sub>2</sub> )
	18			0.5-0.6(O <sub>2</sub> )	
20				0.5-0.7(O <sub>2</sub> )	

**Note:** As gas purity, on-site voltage and current, plate type and operator expertise are different, the cutting parameters above are only for your reference.

## Cutting Parameters

Material	Thickness ( MM )	1KW	1.5kw	2KW	3KW
		Cutting Speed ( m/min ) ( gas )			
Brass	1	10.0-12.0 (N <sub>2</sub> )	12.0-13.0 (N <sub>2</sub> )	15-25 (N <sub>2</sub> )	25-35 (N <sub>2</sub> )
	2	4.5-5.0 (N <sub>2</sub> )	5.0-6.0 (N <sub>2</sub> )	8.0-11 (N <sub>2</sub> )	12-18 (N <sub>2</sub> )
	3	1.0-1.2 (N <sub>2</sub> )	1.5-2.0 (N <sub>2</sub> )	3.0-4.5 (N <sub>2</sub> )	6.0-8.0 (N <sub>2</sub> )
	4			1.3-1.7 (N <sub>2</sub> )	3.0-4.0 (N <sub>2</sub> )
	5		0.5-0.7 (N <sub>2</sub> )		1.8-2.0 (N <sub>2</sub> )
	6			0.6-0.8 (N <sub>2</sub> )	0.8-1.0 (N <sub>2</sub> )
Aluminum	1	13-17 (N <sub>2</sub> )	15-23 (N <sub>2</sub> )	20-25(N <sub>2</sub> )	30-35(N <sub>2</sub> )
	2	4.8-5.2 (N <sub>2</sub> )	6.0-8.0 (N <sub>2</sub> )	10-15(N <sub>2</sub> )	14-20(N <sub>2</sub> )
	3	1.2-1.6 (N <sub>2</sub> )	2.0-3.0 (N <sub>2</sub> )	4.0-5.0(N <sub>2</sub> )	8.0-10(N <sub>2</sub> )
	4		1.0-1.7 (N <sub>2</sub> )	2.0-2.5(N <sub>2</sub> )	5.0-7.5(N <sub>2</sub> )
	5		0.5-0.8 (N <sub>2</sub> )		3.0-3.5(N <sub>2</sub> )
	6			0.6-1.0(N <sub>2</sub> )	1.2-1.5(N <sub>2</sub> )
	7				
	8				0.7-1.0(N <sub>2</sub> )

**Note:** As gas purity, on-site voltage and current, plate type and operator expertise are different, the cutting parameters above are only for your reference.