



SENFENG

Cutting | Cladding | Cleaning | Welding | Bending | Automation

SF3015H

Technical Solutions

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I. Product introduction

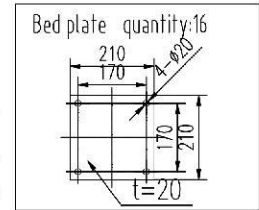
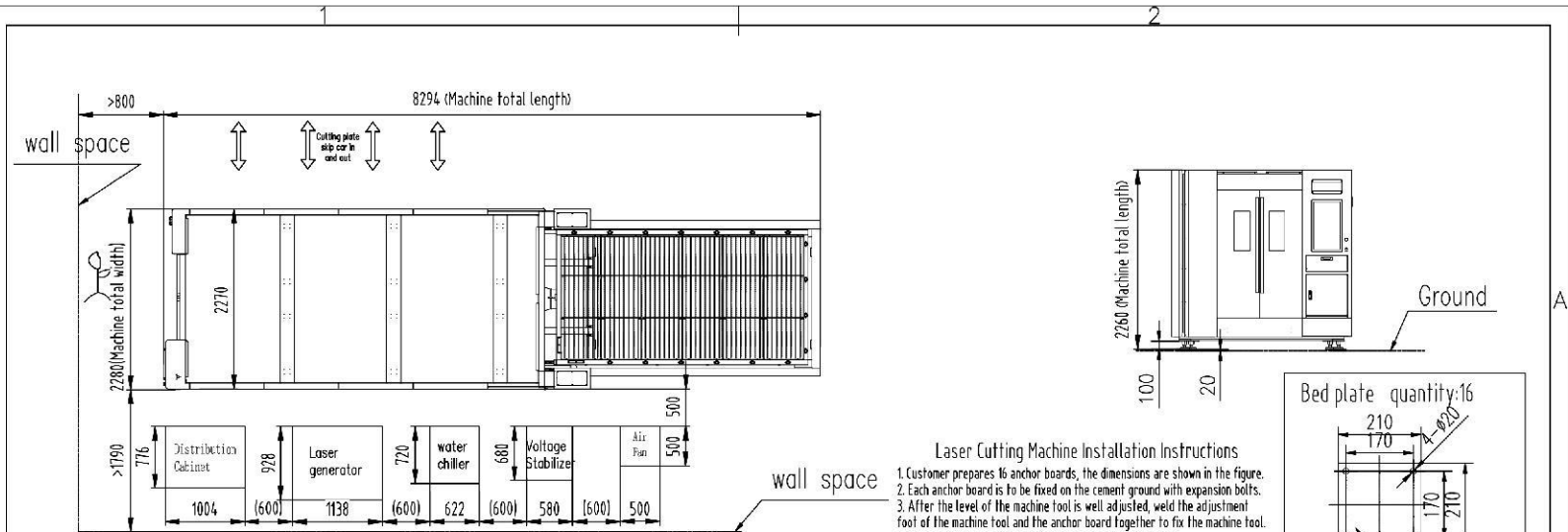
SF3015H
Fiber laser cutter



- SF3015H fiber laser cutter is mainly designed for the power :**1kw to 6kw**
- It is with full-protection cover, which can prevent the laser radiation and protect the worker safety, reduce the environment pollution;
- It is also with auto-exchangeable platforms, which can save the materials loading time, improve the processing efficiency. The exchange platform only takes 20 seconds to complete the exchange.
- The biggest feature of this machine is that the whole machine can fit into a 40HQ. No need frame container, which greatly saves freight cost.The sheet metal does not have to be dismantled for packing.It will save a lot of installation time.

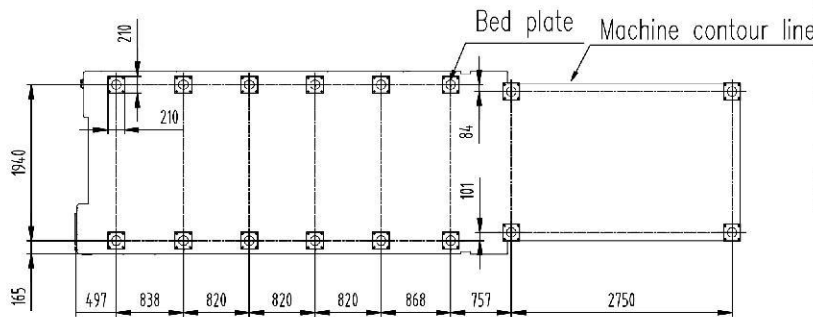
II. Technical Parameter

Item	Parameter					
	1KW	1.5kw	2KW	3KW	4KW	6KW
Work Area	3000*1500mm/9.84*4.92ft					
X-axis Travel	1530mm/5ft					
Y-axis Travel	3050mm/10ft					
Z-axis Travel	220mm/0.72ft					
Positioning accuracy	±0.05mm					
Repeated positioning	±0.02mm					
Maximum speed	130m/min					
Maximum acceleration	1.0G					
Machine Total weight(KG)	6125	6115	6217	6365	6660	6760
Table maximum load(KG)	700					
Outline size (mm)	8300*2270*2260mm					
Power parameters	Three-phase AC380V 50Hz/60Hz					
Protection Level of Total Power Supply	IP54					



Laser Cutting Machine Installation Instructions

1. Customer prepares 16 anchor boards, the dimensions are shown in the figure.
2. Each anchor board is to be fixed on the cement ground with expansion bolts.
3. After the level of the machine foot is well adjusted, weld the adjustment foot of the machine foot and the anchor board together to fix the machine foot.
4. There must be no obstacles in the route of the feed truck.
5. In principle, it is required to pour a 500x500x400mm cement column under the anchor board, and then fix the anchor board on the concrete column. If the customer's ground hardness is sufficient and can bear about 5 tons per square meter, the anchor board can be directly fixed on the concrete floor.
6. Electrical system grounding requirements: use steel pipe of 40mm-50mm diameter and 3mm thickness, or 4#5H angle steel with a length of 2.5m, drive the tip three meters underground; each group of grounding bodies should be more than 2 pieces. If the local soil resistivity is too high, grounding bodies should be appropriately lengthened as well as increased. The grounding bodies can be arranged in either a straight line or a ring. The distance between two grounding bodies should be 3m-5m. The top ends are to be welded into a whole with flat steel or round steel; the welding of the grounding body must be firm, weld as many edges as possible. Pay attention to anti-corrosion. Finally use galvanized parts for buried parts.
7. The anchor boards, expansion bolts, flat washers, spring washers and nuts used shall all be provided by the customer.
8. The dimensions of the electrical control board, laser source, water cooler and fan are subject to the actual product.



Installation materials (provided by the customer)			
Name	Specifications	quantity	Remarks
Bed plate	210x210x20	16	
Expansion bolt	M16x250	64	

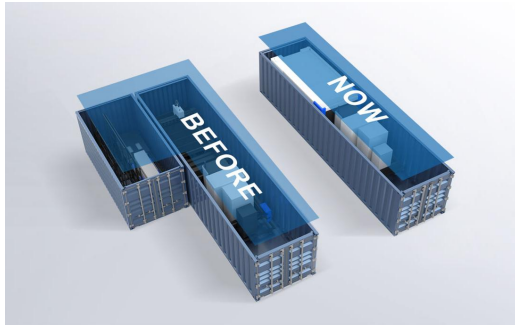
						Ground Plot			SENFENG LASER	
						Ground Plot			Ground Plot	
						SF3015HC			SF3015HC	
mark	Num	Partition	File	Signature	Date	Stage	Marking	Weight	Scale	
Designer				Supervisor					1:50	
Checked				Appraiser						
Process				Reviewer						
Standard				Approver		Total	Page	page		
						2				

III.Configuration

Name	NO.	Brand
fiber laser	1 set	Raycus /MAX
Laser head	1 set	WSX/Raytools
Transmission	4 set	LAPPING/SENFENG
Machine bed accessories	1 set	SENFENG
Motor reducer	3 set	MOTOREDUCER
Electrical and pneumatic	1 set	SCHNEIDERSMC/AIRTAC
Server motor and driver	4set	DELTA/SCHNEIDER
Water cooling	1 set	HANLI
Control system	1 set	FSCUT 2000

IV. More Details

Whole Machine Fit Into One 40HQ



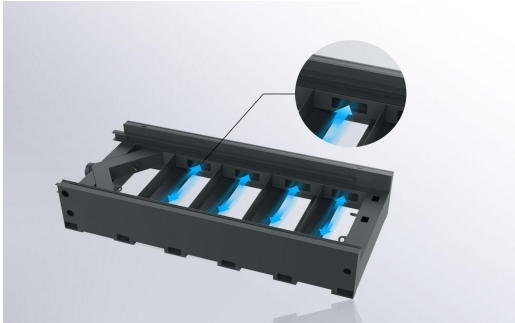
- Machine size is 2270mm*8300mm *2340mm (including Backing Board).
- The whole machine can fit into a 40HQ.
- No need frame container, which greatly saves freight cost.

High strength machine bed



- The high strength machine bed is welded with high-quality steel plates and pipes. The bed has sufficient structural stability and shock resistance. There is no connection inside the bed to block heat transfer, avoiding the heat generated by cutting from being transferred to the bed and affecting the processing accuracy.

Intelligent surrounding spiral negative pressure dust removal



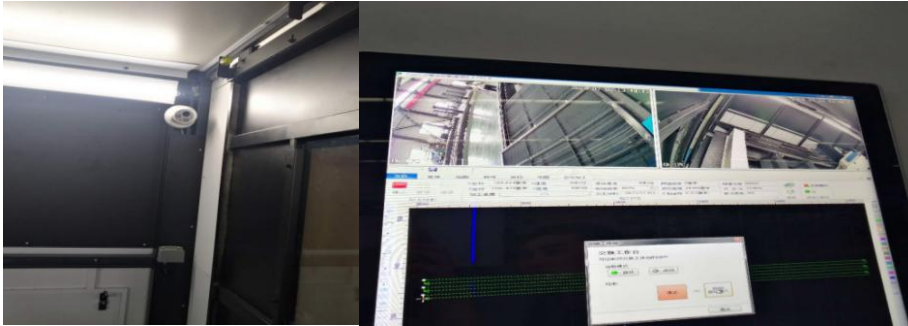
- Intelligent surrounding spiral negative pressure partition dust removal system, according to the current cutting position, intelligently switch the air outlet, time-sharing, partition, and sectional air exhaust, and cooperate with the back-shaped sealing structure design at the bottom of the base to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

Strong Aviation Aluminum Beam



- The use of aviation-grade high-strength aluminum alloy beams, light weight, low inertia;
- Built-in triangular reinforced structure, strong rigidity, good shock absorption;
- Rough machining after annealing to eliminate internal stress, and fine machining after secondary vibration aging treatment to ensure improve the overall strength and stability of the beam.

720° all-round safety inspection



- The omni-directional monitoring system greatly reduces the blind spot of the operator's line of sight and ensures the safe and stable cutting operation.

Automatic gas distribution device for auxiliary gas

- SF3015H CNC laser cutting machine can control the oxygen automatically and control its flow and pressure independently.
- The type and pressure of the auxiliary gas can be automatically set and selected through the numerical control program, without manual operation.
- The pressure of compressed air and oxygen can be adjusted between 150 mBar and 6 Bar, and the pressure of nitrogen can be adjusted between 150 mBar and 25 Bar.
- In addition, the actual air pressure at the exit of the cutting head can also be easily read and displayed on the panel in real time.

Automatic Focusing Fiber Laser Cutting Head



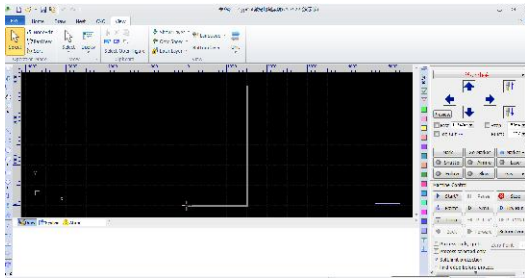
- 1.This kind laser head has a strong advantage on medium power large format fiber laser cutting application.
- 2.Completely sealed internal structure of laser head can avoid optical part polluted by dust.
- 3.Two point centering adjustment of laser head; the focus adjusting take imported motor driving and has great improvement in perforation.
- 4.Protective lens take more convenient replacement drawer installation way.
- 5.Can be equipped with various kind of QBH connectors laser machine.

Raycus Laser Device



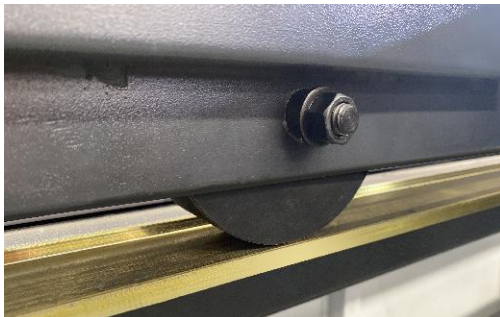
- It has the advantages of high electro-optical conversion efficiency (>40%), good beam quality, high energy density, wide modulation frequency, strong reliability, long life, and maintenance-free operation. It can be widely used in welding, precision cutting, cladding, and surface treatment , 3D printing and other fields.

FSCUT2000 medium and low power laser cutting system

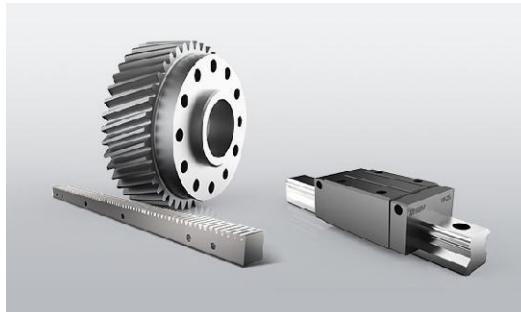


- Convenient installation, easy debugging, excellent performance, complete solutions, stable and reliable, easy deployment, easy debugging, safe production, rich functions, excellent performance, etc.;
- support and provide modular, personalized, automated, and information solutions that can be realized 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



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.

- More durable and stable, ensuring the fast exchanging time

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



- 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.

Automatic Lubrication System

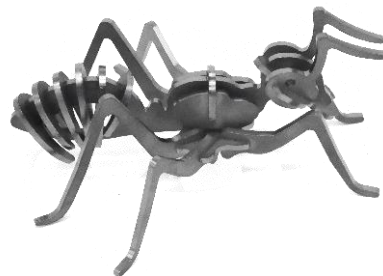


- Lubricating the guide rails of X axis, Y axis, Z axis automatically, which could reduce maintenance cost and save time significantly.
- Oiling time can be adjusted
- According to processing
- Amount, which is more humanized.

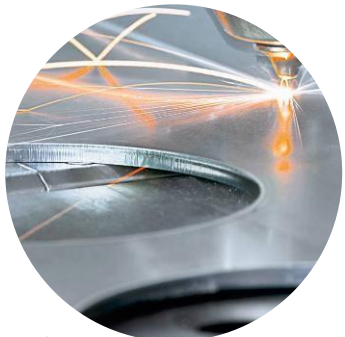
V. Cutting Capability and Application

Cutting Materials

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



Application Industry



Sheet Metal Fabrication



Manufacturing industry



Refrigeration equipment



Mechanical processing

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Elevator production

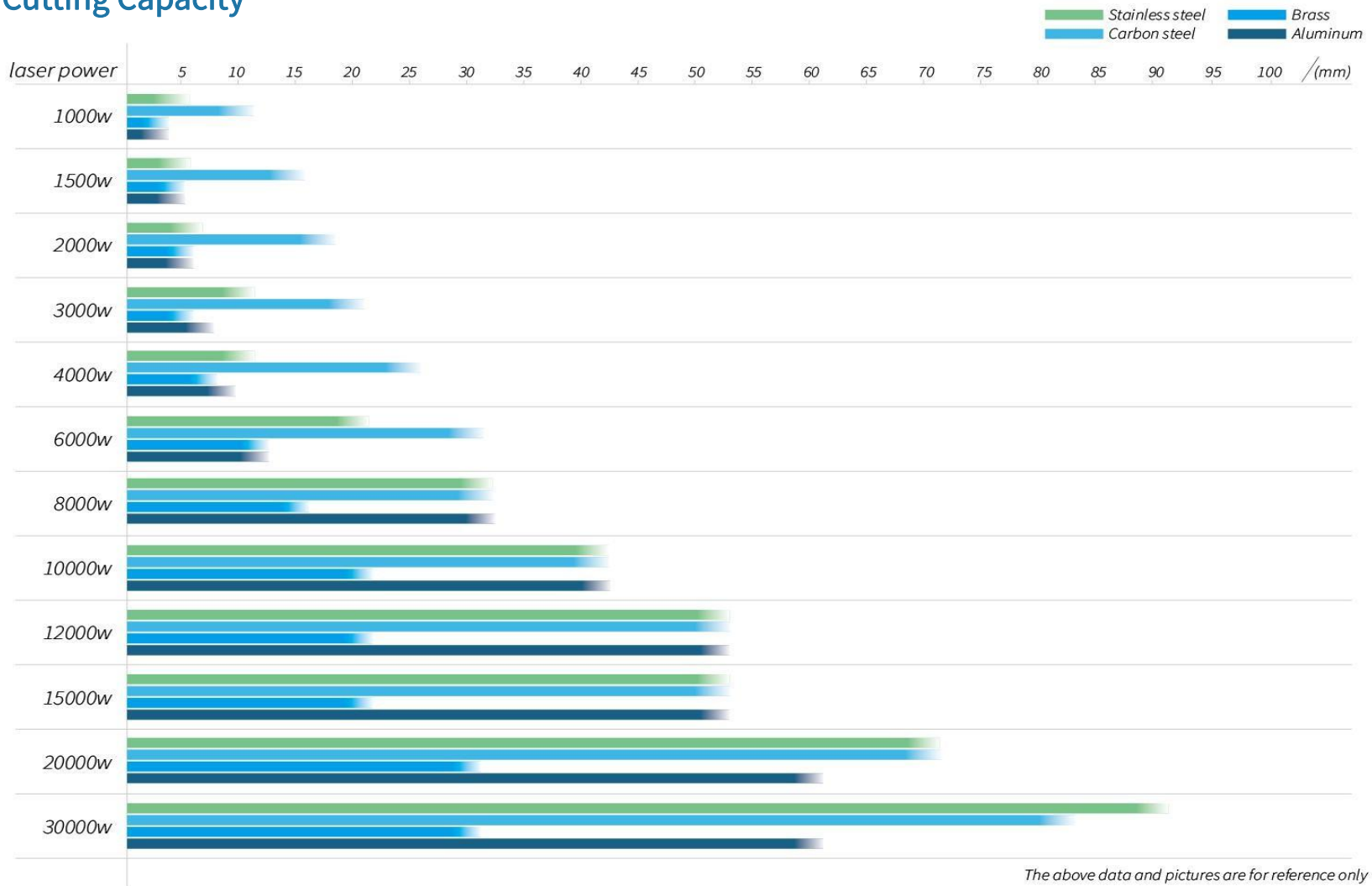


Advertising industry



Metal Cabinet Industry

Cutting Capacity



The above data and pictures are for reference only

Cutting Thickness

Material	Thickness (MM)	1KW	1.5kw	2KW	3KW	4KW	6KW	8KW	10KW	12KW	15KW	20KW	30KW
		Cutting Speed (m/min) (gas)											
Stainless Steel	1	18-20(N ₂)	23-30(N ₂)	30-35(N ₂)	30-45(N ₂)	45-55(N ₂)	50-55(N ₂)	50-65(N ₂)	60-80(N ₂ air)				
	2	6.0-8.0(N ₂)	7.0-13(N ₂)	10-15(N ₂)	20-25(N ₂)	25-30(N ₂)	30-35(N ₂)						
	3	2.8-3.5(N ₂)	4.5-5.5(N ₂)	5.0-6.5(N ₂)	8.0-10(N ₂)	8.5-12(N ₂)	18-22(N ₂)	21-25(N ₂)	28-33(N ₂ air)				
	4	1.5-2.0(N ₂)	2.0-2.5(N ₂)	4.0-5.0(N ₂)	6.0-9.0(N ₂)	6.0-9.3(N ₂)	10-14(N ₂)						
	5	0.8-1.0(N ₂)	1.4-1.8(N ₂)	2.0-2.3(N ₂)			8.0-10(N ₂)	10-14(N ₂)	17-20(N ₂ air)		17-22(N ₂ air)		
	6		1.0-1.2(N ₂)	1.5-2.0(N ₂)	3.0-3.5(N ₂)	4.0-5.0(N ₂)	6.0-7.0(N ₂)			17-20(N ₂ air)		23-25(N ₂)	24-26(N ₂)
	8			0.8-1.2(N ₂)	1.0-1.5(N ₂)	2.0-3.0(N ₂)	4.0-5.0(N ₂)	5-6(N ₂)	5.5-7(N ₂ air)	8.0-11(N ₂ air)	11-15(N ₂ air)		
	10				0.6-1.0(N ₂)	1.2-1.6(N ₂)	1.8-2.5(N ₂)	3.5-4(N ₂)	4.0-5(N ₂ air)	7.0-9.0(N ₂ air)	8-11(N ₂ air)	15-17(N ₂)	15-18(N ₂)
	12				0.4-0.6(N ₂)	0.8-1.2(N ₂)	1.0-1.5(N ₂)	2-2.5(N ₂)		5-5.5(N ₂ air)			
	14						0.8-1.2(N ₂)	1.5-2(N ₂)	2.0-2.7(N ₂ air)	3.0-3.5(N ₂ air)		10-12(N ₂)	10-13(N ₂)
	16						0.6-1.0(N ₂)	1.0-1.4(N ₂)	1.5-1.9(N ₂ air)	2-2.3(N ₂ air)	2.8-3.8(N ₂ air)		
	18									1.4-2.0(N ₂ air)			
	20						0.4-0.5(air)	0.9-1.1(N ₂)	1.0-1.2(N ₂ air)	1.4-1.8(N ₂ air)	1.8-2.5(N ₂ air)	3-3.2(N ₂)	4-5(N ₂)
	25							0.3-0.6(N ₂)	0.4-0.7(N ₂ air)	0.7-1.2(N ₂ air)		2.5-2.8(N ₂)	3-3.5(N ₂)
	30							0.2-0.4(N ₂)	0.3-0.5(N ₂ air)	0.6-0.8(N ₂ air)	0.7-1.0(N ₂ air)	1.5-1.8(N ₂)	1.5-2(N ₂)
	35											1-1.3(N ₂)	1-1.5(N ₂)
	40								0.2-0.3(N ₂ air)	0.25-0.5(N ₂ air)	0.3-0.6(N ₂ air)	0.5-0.8(N ₂)	0.6-0.8(N ₂)
	45											0.3-0.5(N ₂)	0.3-0.5(N ₂)
	50									0.1-0.3(N ₂ air)	0.15-0.35(N ₂ air)	0.2-0.3(N ₂)	0.2-0.3(N ₂)
60											0.15-0.2(N ₂)	0.15-0.2(N ₂)	
70											0.1-0.13(N ₂)	0.1-0.13(N ₂)	
80												0.08-1.1(N ₂)	
90												0.05-0.06(N ₂)	

Cutting Thickness

Material	Thickness (MM)	1KW	1.5kw	2KW	3KW	4KW	6KW	8KW	10KW	12KW	15KW	20KW	30KW	
		Cutting Speed (m/min) (gas)												
Carbon Steel	1	15-18 (N ₂)	25-28 (O ₂)	25-35(O ₂)	30-40(N ₂ /Air)	35-40(N ₂ /Air)	40-45(N ₂ /Air)	40-65(N ₂)	60-70(N ₂ air)	15-25(N ₂ air)				
	2	5.0-7.0 (O ₂)	6.2-8.5 (O ₂)	10-15(O ₂)	15-17(N ₂ /Air)	15-20(N ₂ /Air)	20-25(N ₂ /Air)							
	3	3.0-4.0 (O ₂)	3.5-5.0 (O ₂)	3.5-5.5(O ₂)	4.5-5.0 (O ₂)	7.0-9.0(N ₂ /Air)	10-15(N ₂ /Air)	21-25(N ₂ air)	30-35(N ₂ air)					
	4	2.0-3.5 (O ₂)	3.5-4.0 (O ₂)	3.8-4.5(O ₂)	2.8-3.5 (O ₂)	3.5-4.5(O ₂)	8-10(N ₂ /Air)							
	5	1.8-2.5 (O ₂)						13-15(N ₂ air)	15-17(N ₂ air)		18-25(air)	23-28(N ₂ air)	24-30(N ₂ air)	
	6	1.5-2.2 (O ₂)	1.7-2.5(O ₂)	2.0-2.7(O ₂)	2.8-3.5(O ₂)	2.8-4.0(O ₂)	3-4.5(O ₂)					21-25(N ₂ air)	20-27(N ₂ air)	
	8	1.0-1.5 (O ₂)	1.2-1.6(O ₂)	1.3-1.7(O ₂)	2.3-2.5(O ₂)	2.3-3.0(O ₂)	2.3-3.5(O ₂)	5-7(N ₂ air)	6-8.5(N ₂ air)	9-12(N ₂ air)	10-13(air)	14-16(N ₂ air)	14-18(N ₂ air)	
	10	0.8-1.0 (O ₂)	1.0-1.2(O ₂)	1.0-1.6(O ₂)	1.8-2.1(O ₂)	2.0-2.3(O ₂)	2.0-2.5(O ₂)	2-2.8(N ₂)	3-5(N ₂ air)	2.3-3.0/8.0-9.0(O ₂ air)	8-10(air)	10-12(N ₂ air)	12-14(N ₂ air)	
	12	0.6-0.8 (O ₂)	0.8-1.0(O ₂)	0.8-1.2(O ₂)	1.4-1.6(O ₂)	1.5-1.7(O ₂)	1.8-2.2(O ₂)		2.0-2.5(O ₂)				8-10(N ₂ air)	
	14		0.6-0.7(O ₂)	0.8-1.0(O ₂)	1.0-1.3(O ₂)	1.0-1.4(O ₂)	1.4-1.7(O ₂)	1.4-1.8(O ₂)	1.7-2.0(O ₂)				6-8(N ₂ air)	8-8.5(N ₂ air)
	16		0.5-0.6(O ₂)	0.7-1.0(O ₂)	0.7-1.2(O ₂)	0.8-1.4(O ₂)	1.0-1.6(O ₂)	1.5-2.0(O ₂)	1.5-2.3(O ₂)	1.5-3.0(O ₂)	3-3.5(air)	5-6(N ₂ air)	5.5-6.5(N ₂ air)	
	18			0.5-0.6(O ₂)								3.2-4(N ₂ air)	4.5-5.5(N ₂ air)	
	20				0.5-0.7(O ₂)	0.6-0.8(O ₂)	0.6-1.2(O ₂)	0.9-1.5(O ₂)	1.0-1.8(O ₂)	1.2-1.5(O ₂)	1.2-1.5(O ₂)	2.7-3.2(N ₂ air)		
	22								0.5-0.9(O ₂)					
	25					0.4-0.6(O ₂)	0.5-0.7(O ₂)	0.5-0.8(O ₂)	0.5-0.8(O ₂)	0.8-1.1(O ₂)	0.8-1.1(O ₂)	1.3-1.5(O ₂)	2.8-3.2(N ₂ air)	
	30						0.4-0.6(O ₂)	0.4-0.8(O ₂)	0.1-0.3(O ₂)	0.5-1.0(O ₂)	0.5-1.0(O ₂)	1.2-1.3(O ₂)	1.3-1.4(O ₂)	
	35											0.9-1.2(O ₂)	0.9-1.2(O ₂)	
	40									0.3-0.5(O ₂)	0.3-0.5(O ₂)	0.6-0.9(O ₂)	0.9-1.3(O ₂)	
	50									0.18(O ₂)	0.2-0.3(O ₂)	0.3-0.5(O ₂)	0.6-0.8(O ₂)	
	60											0.17-0.22(O ₂)	0.2-0.25(O ₂)	
70											0.15-0.18(O ₂)	0.18-0.2(O ₂)		
80												0.12-0.15(O ₂)		

Cutting Thickness

Material	Thickness (MM)	1KW	1.5kw	2KW	3KW	4KW	6KW	8KW	10KW	12KW	15KW	20KW	30KW	
		Cutting Speed (m/min) (gas)												
Brass	1	10.0-12.0 (N ₂)	12.0-13.0 (N ₂)	15-25 (N ₂)	25-35 (N ₂)	30-35 (N ₂)	40-45 (N ₂)	40-55 (N ₂)	40-55 (N ₂)					
	2	4.5-5.0 (N ₂)	5.0-6.0 (N ₂)	8.0-11 (N ₂)	12-18 (N ₂)	15-18 (N ₂)	20-25 (N ₂)							
	3	1.0-1.2 (N ₂)	1.5-2.0 (N ₂)	3.0-4.5 (N ₂)	6.0-8.0 (N ₂)	8.0-12 (N ₂)	12-15 (N ₂)	15-20 (N ₂)	20-30 (N ₂)					
	4			1.3-1.7 (N ₂)	3.0-4.0 (N ₂)	3.0-4.0 (N ₂)								
	5		0.5-0.7 (N ₂)		1.8-2.0 (N ₂)	2.0-2.5 (N ₂)	5.0-6.0 (N ₂)	5-9 (N ₂)	9-13 (N ₂)	13-16 (N ₂)	13-17 (N ₂)	25-28(N ₂)	25-28(N ₂)	
	6			0.6-0.8 (N ₂)	0.8-1.0 (N ₂)	1.0-1.6 (N ₂)	3.5-4.5 (N ₂)							
	8						1.5-2.0 (N ₂)	2-3.5 (N ₂)	5-6.5 (N ₂)	6.0-8.0 (N ₂)	6-9 (N ₂)	17-20(N ₂)	17-20(N ₂)	
	10						1.0-1.5 (N ₂)	1.5-2.2 (N ₂)	2.5-3.5 (N ₂)	4.5-5.5 (N ₂)	4.5-6 (N ₂)	10-13(N ₂)	10-13(N ₂)	
	12						0.8-1 (N ₂)	1-1.4 (N ₂)				6-8(N ₂)	6-8(N ₂)	
	14							0.8-1 (N ₂)	1.0-1.4 (N ₂)		1.7-2.5 (N ₂)	4-5(N ₂)	4-5(N ₂)	
	16							0.5-0.7 (N ₂)	0.7-0.9 (N ₂)	1.7-2.3 (N ₂)		2.5-3.5(N ₂)	2.5-3.5(N ₂)	
	18													
	20									0.2-0.4 (N ₂)	1.5-2.5 (N ₂)	1.5-2.8 (N ₂)	1.8-2.3(N ₂)	1.8-2.3(N ₂)
	22													
	25												1.2-1.5(N ₂)	1.2-1.5(N ₂)

Cutting Thickness

Material	Thickness (MM)	1KW	1.5kw	2KW	3KW	4KW	6KW	8KW	10KW	12KW	15KW	20KW	30KW	
		Cutting Speed (m/min) (gas)												
Aluminum	1	13-17 (N ₂)	15-23 (N ₂)	20-25(N ₂)	30-35(N ₂)	35-40(N ₂)	50-55(N ₂ /Air)	50-65(N ₂)	50-65(N ₂ /Air)					
	2	4.8-5.2 (N ₂)	6.0-8.0 (N ₂)	10-15(N ₂)	14-20(N ₂)	20-25(N ₂)	25-30(N ₂ /Air)							
	3	1.2-1.6 (N ₂)	2.0-3.0 (N ₂)	4.0-5.0(N ₂)	8.0-10(N ₂)	8.0-13(N ₂)	12-15(N ₂ /Air)	20-30(N ₂)	25-30(N ₂ /Air)					
	4		1.0-1.7 (N ₂)	2.0-2.5(N ₂)	5.0-7.5(N ₂)	6.0-7.5(N ₂)	10-13(N ₂ /Air)							
	5		0.5-0.8 (N ₂)		3.0-3.5(N ₂)			10-15(N ₂)	13-16(N ₂ /Air)	15-17(N ₂ /Air)	17-20(N ₂ /Air)	21-24(N ₂)	21-24(N ₂)	
	6			0.6-1.0(N ₂)	1.2-1.5(N ₂)	3.5-4.0(N ₂)	4.0-5.0(N ₂ /Air)							
	8				0.7-1.0(N ₂)	2.0-2.5(N ₂)	2.0-3.0(N ₂ /Air)	4-6(N ₂)	5-7.5(N ₂ /Air)	6-10(N ₂ /Air)	11-15(N ₂ /Air)	18-20(N ₂)	18-20(N ₂)	
	10					1.0-1.2(N ₂)	1.0-1.7(N ₂ /Air)	2-3(N ₂)	4-6(N ₂ /Air)	5-7(N ₂ /Air)	7-9(N ₂ /Air)	14-16(N ₂)		
	12					0.4-0.6(N ₂)	0.7-1.2(N ₂ /Air)		2-3(N ₂ /Air)				14-16(N ₂)	
	16								1-1.4(N ₂)	1.0-1.8(N ₂ /Air)	1.5-1.8(N ₂ /Air)	1.8-2.0(N ₂ /Air)	5-8(N ₂)	5-8(N ₂)
	20								0.6-1(N ₂)	1.0-1.4(N ₂ /Air)	1.0-1.5(N ₂ /Air)	1.0-1.8(N ₂ /Air)	2.5-4.5(N ₂)	2.5-4.5(N ₂)
	25								0.3-0.6(N ₂)					
	30								0.3-0.5(N ₂)	0.3-0.6(N ₂ /Air)	0.4-0.7(N ₂ /Air)	0.6-0.8(N ₂ /Air)	1.8-2.3(N ₂)	1.8-2.3(N ₂)
	35												1.3-1.5(N ₂)	1.3-1.5(N ₂)
	40									0.2-0.3(N ₂ /Air)	0.3-0.5(N ₂ /Air)	0.3-0.5(N ₂ /Air)	0.8-1(N ₂)	0.8-1(N ₂)
	50										0.1-0.3(N ₂ /Air)	0.2-0.3(N ₂ /Air)	0.4-0.6(N ₂)	0.4-0.6(N ₂)
60												0.2-0.3(N ₂)		

VI.Cost

Mode		1KW			1.5kw			2KW			3KW			4KW			6KW		
		Air compr ess	O ₂	N ₂	Air compr ess	O ₂	N ₂	Air compr ess	O ₂	N ₂	Air compr ess	O ₂	N ₂	Air compr ess	O ₂	N ₂	Air compr ess	O ₂	N ₂
Electricity consumption	laser device	4KW			6KW			7KW			10.5KW			13.6KW			20KW		
	Chiller power	2.6KW			3.3KW			3.6KW			7.37KW			8.1KW			10.33KW		
	Air compressor power	11KW	/	/	11KW	/	/	11KW	/	/	11KW	/	/	11KW	/	/	11KW	/	/
	Main body	10KW																	
	Dust removal equipment	3KW																	
	USD	(1USD ≈ 6.4392RMB)																	
Consumable parts&Gas Consumption	RMB/H	0	4.5	60	0	4.5	60	0	4.5	60	0	4.5	60	0	4.5	60	0	4.5	60
	USD/H	0	0.7	9.17	0	0.7	9.17	0	0.7	9.17	0	0.7	9.17	0	0.7	9.17	0	0.7	9.17
Total Power (KW)		30.6	19.6	19.6	33.3	22.3	22.3	34.6	23.6	23.6	41.9	30.9	30.9	45.7	34.7	34.7	54.3	43.3	43.3
Total Power Consumption(KW/H)		18.4	11.8	11.8	20	13.4	13.4	20.8	14.2	14.2	25.1	18.5	18.5	27.4	20.8	20.8	32.6	26	26
Total Operation Cost1RMB/KW/H		18.9	16.3	72.3	20.5	17.9	73.9	21.3	18.7	74.7	25.6	23	79	27.9	25.3	81.3	33.1	31.5	86.5
		2.93	2.53	11.2	3.18	2.78	11.5	3.3	2.9	11.6	3.96	3.57	12.2	4.3	3.92	12.6	5.14	4.9	13.4

VII. Bed body processing process



01 Metal Cutting

The raw materials for machine bed welding are all cut by laser.



02 Machine Bed Welding

Machine bed welding adapts mixed gas (80% argon 20% carbon dioxide) which can better ensure the formation, firmness and smoothness of the welding, to improve the overall quality of the bed.



03 Natural Aging Treatment

The bed will be placed outdoors for 1 to 6 months after welding, under the overload caused by thermal stress, the residual stress is relaxed and the dimensional accuracy is stabilized.



04 Heat Treatment

It takes about 24 hours for the overall heat treatment of a bed, achieving the purpose of eliminating residual stress, stabilizing size, reducing deformation and cracks, making our bed more durable and longer in service life.





05 Shot Blasting

It can clear the excess rust layer, oxide skin and oil stains on the bed, which can greatly improve the cleaning efficiency and strengthen the surface quality of the bed.



06 Spray

We adopt automatic process, which is safe and stable, and efficient; the high temperature paint baking room can heat up quickly, dry quickly, and make the surface of the bed smooth and without impurities.



07 Machining

The final finishing of the bed and beam can completely eliminate the stress caused by welding and processing, ensuring the stability and high precision of the bed, which will run for a long time without deformation.



08 Accuracy Detection

We use CMM and other instruments to test the accuracy of the bed.

VIII.Product Certification

Senfeng fiber laser machines have passed CE from **TÜV,ROHS,FDA,ETL certificates**, which is in line with European and American standards.



IX.5 Star Service



High efficiency

24 hours a day (mainly for international), 7 days a week, 365 days a year at any time to receive repair calls;
Within 10 minutes, technical engineers will consult, fix maintenance plan in one hour, and send engineers in one working day.



After-sale service

The seller provides one time free installation and training in buyer's factory. Seller pays for the airplane tickets and salary for engineers, buyer should provide accommodation and food to engineers.
The seller will provide technical guide's e-mail, telephone, WeChat, WhatsApp and so on.
The seller should pay for the travel expense if local service needed within warranty time.



Warranty

The warranty of laser source is 2 years.
The warranty of the machine is 2 years (main spare parts) ,except for the consumable parts such as ceramic ring, focus lens, nozzle etc. Warranty counts from the date marked on the label of the laser source and machine.
Except the damage artificially, seller is responsible for offering the fittings free of charge during the warranty period.
Exceeding the warranty period, parts need to be repaired or changed, shall be paid.



Worry-free

Pre-sale service: theoretical + practical operation training, self-diagnosis training for common faults, guidance for quick repair of difficult faults, and warning of matters needing attention in use;

Regular service: regular maintenance reminder, regular door-to-door service, regular promotional activities;

Value-added services: equipment software and hardware upgrading services, financial leasing services, delayed warranty service.



Field Service

Our branches in United States, Germany, India, Pakistan, Serbia provide localized services and technical support for global customers.

Service Oriented and Customer First



X.Customer Testimonials



XI.Trade show



SENFENG
LASER



XII. Company Strength



About us



Senfeng is a leading manufacturer engaged in the research, development, Production, sale and service of fiber laser cutters, fiber laser cleaning machine, laser cladding machine, laser welding machine, 3D robot, press brake bending machine, metal sander, etc.



XIII.Product Line

Fully Enclosed Metal Sheet Cutter

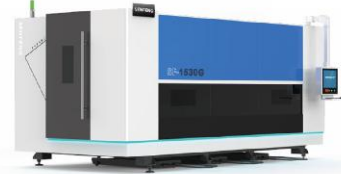
SF3015H

Fourth Generation Metal Fiber Laser Cutter



SF1530G

Security Protective Fiber Laser Cutter



Automatic Laser Cutting Production Line



Metal Sheet Cutting Machine

SF3015G

Open Type Metal Sheet Laser Cutting Machine



SF20040R

Ultra Large Metal Laser Cutter



Plate And Tube Cutting Machine

SF3015HM

Full Protection Steel Sheet and Tube Laser Cutter



Tube Laser Cutting Machine

SF6020GT

Bevel Tube Laser Cutting Machine



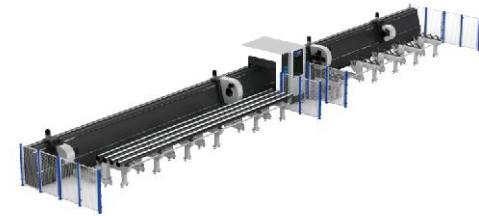
SF6020TZ

Affordable metal tube laser cutter



SF12038HT

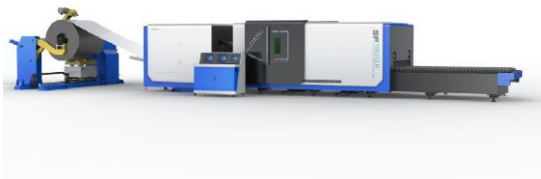
Ultra Heavy Four-chuck Tube Laser Cutting Machine



Coil Fed Laser Cutting System

SF1503CLH

Aluminum Coil-fed Laser Cutting Machine



SF2014CH

Heavy-load coil laser cutting machine



SF1503CH

Coiled Fiber Laser cutting machine



Fiber Laser Welding Machine / Fiber Laser Cleaning Machine

SF1500HWM

Handheld Fiber Laser Welding Machine



SF200HC

Fiber Laser Cleaning Machine



SF1500HC

Portable laser cleaning machine



3D Robot

3D Robot Laser System



3D Robot Fiber Laser Cutting Machine



3D robot fiber laser welding machine



Laser Cladding Equipment

SFHS3050

Metal additive machine



SFR6063

Robot Laser Cladding Machine



SFMR02

Mobile Robot Laser Cladding System



Metal sheet bending machine

BDE13032

CNC Bending Machine



BDC-1800

Servo Electric Press Brake



Wide Belt Sheet Metal Sander

SF1000SSD

Automatic Wide Belt Sheet Metal Sander



XIV.Global Layout

Senfeng provide localized services and technical support for global customers.



XV.Core Technology

Senfeng laser generators which are independently developed have been widely used in laser cutting, welding, cleaning, cladding additive and other fields



- **Auto Focus**

Operator can set consequent focus adjustment by procedure, finishing quick piercing to thick plates and cutting different thickness plates automatically.

- **Storm cut**

Storm cut technology with ultra high power laser source, with SENFENG cutting technology, realizing high speed

- **Water cooling**

Focusing parts of laser cutting head with water cooling, reducing high temperature and flog by long time cutting.

- **Bright Cut Technology**

Bright Cut Technology developed by SENFENG LASER can efficiently solve: too much burr, cutting surface not smoothly, difficult to cut high-reflect material etc.



More details about senfeng R&D, feel free to visit website: www.sfcnclaser.com

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