



LASER

SF3015HC TECHNICAL SOLUTION

Supplier: Gentronics

Buyer:



GENTRONICS
WELDING SUPPLIES AND SERVICE

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I. Introduction

SF3015H fiber laser cutter is designed for power levels between 1kw and 6kw.

It comes complete with a full size enclosure to ensure the safety of all workers.

With the supplied material transfer table with a changeover of just 20 seconds, it saves time loading and unloading, which in turn increases productivity and efficiency

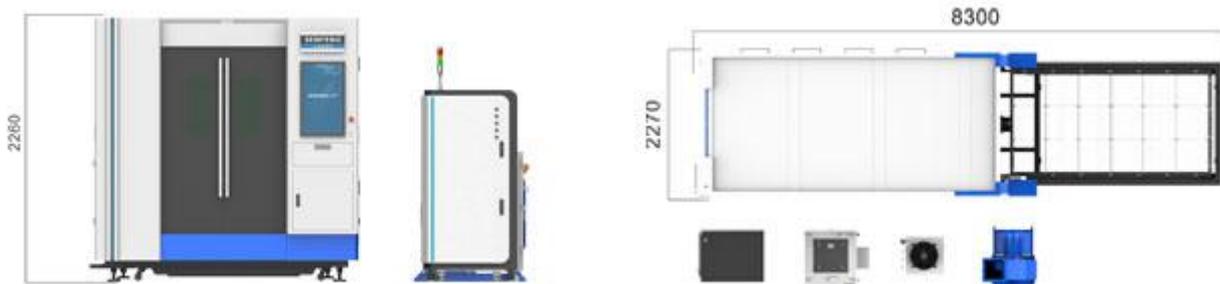
The complete machine also fits within a 40ft hq container, which saves freight costs and decreases machine setup time as the machine comes almost completely assembled.





II. Technical Parameter

Item	Parameter
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)	7000
Table maximum load(KG)	700
Outline size (mm)	8300*2270*2260mm
Power parameters	Three-phase AC 380V 50Hz
Protection Level of Total Power Supply	IP54





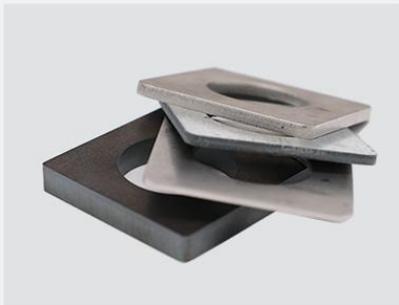
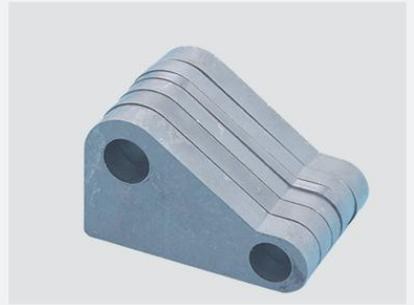
III. Configuration

NAME	NO.	BRAND
FIBER LASER DEVICE		
fiber laser source	1 set	Raycus/Max/IPG
LASER HEAD		
Laser head	1 set	Raytools /WSX
Main Machine		
Transmission	4 set	LAPPING/SENFENG
Machine bed accessories	1 set	SENFENG
Motor reducer	3 set	MOTOREDUCER
Electrical and pneumatic	1 set	SCHNEIDER SMC/AIRTAC
Server motor and driver	4 set	DELTA/SCHNEIDER
Water cooling	1 set	HANLI
CNC CONTROL SYSTEM		
Laser software	1 set	FSCUT2000

IV. Cutting Capability and Application

Suitable materials are as below.

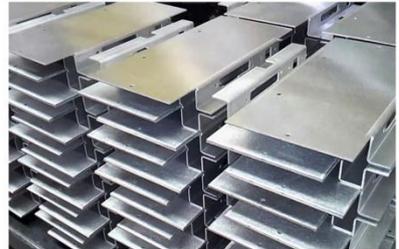
Carbon steel, stainless steel, aluminum alloy, brass, copper, galvanized sheet, silicon steel sheet, electrolytic sheet, titanium alloy, manganese alloy, etc.





· Application Industry

Sheet metal processing, machinery manufacturing, auto parts manufacturing, electrical manufacturing, elevator manufacturing, petroleum machinery, food machinery, shipbuilding etc.



· Cutting Thickness

Material	1000w	1500w	2000w	3000w	4000w	6000w
Carbon steel (mm)	0.4-10	0.4-12	0.4-14	0.4-16	0.4-18	0.4-22
Stainless steel (mm)	0.4-4	0.4-5	0.4-6	0.4-8	0.4-10	0.4-14
Aluminum (mm)	0.4-2	0.4-3	0.4-4	0.4-5	0.4-8	0.4-12



- Cutting Parameters

Material	Thickness (MM)	1KW	1.5kw	2KW	3KW	4KW	6KW
		Cutting Speed (m/min) (gas)					
Stainless Steel	1	18-20 (N2)	27-35 (N2)	30-35 (N2)	30-45 (N2)	40-50 (N2)	65 (N2)
	2	6.0-8.0 (N2)	8.0-12 (N2)	10-13 (N2)	18-25 (N2)	20-28 (N2)	30-35 (N2)
	3	2.5-3.2 (N2)	4.0-5.0 (N2)	5.0-6.5 (N2)	7.5-8.5 (N2)	8.5-12 (N2)	18-22 (N2)
	4	1.5-2.0 (N2)	2.5-3.3 (N2)	3.5-4.5 (N2)	5.0-8.0 (N2)	6.0-8.3 (N2)	10-14 (N2)
	5	0.8-1.0 (N2)	1.0-1.8 (N2)	2.0-2.3 (N2)			8.0-10 (N2)
	6		0.6-1.0 (N2)	1.5-2.0 (N2)	2.5-3.3 (N2)	3.0-4.0 (N2)	6.0-7.0 (N2)
	8			0.8-1.2 (N2)	1.0-1.5 (N2)	1.8-2.5 (N2)	4.0-5.0 (N2)
	10				0.5-0.8 (N2)	1.2-1.6 (N2)	1.8-2.5 (N2)
	12				0.4-0.6 (N2)	0.6-1.1 (N2)	1.2-2 (N2)
	14						0.8-1.2 (N2)
	16						0.6-0.8 (N2)
Carbon Steel	1	15-18 (N2)	15-20 (O2)	25-35 (N2)	15-35 (N2)	18-35 (N2)	20-45 (N2)
	2	5.0-7.0 (O2)	6.2-8.5 (O2)	6.0-7.5 (O2)	7.0-9.0 (O2)	8-13(O2)	13-18 (O2)
	3	3.0-4.0 (O2)	3.5-5.0 (O2)	4.5-5.0 (O2)	4.5-5.0 (O2)	7.0-9.0(O2)	10-15 (O2)
	4	2.0-3.5 (O2)	3.5-4.0 (O2)	3.0-3.5 (O2)	2.8-3.5 (O2)	3.5-4.5(O2)	3.9-5.2 (O2)
	5	1.8-2.5 (O2)					
	6	1.5-2.2 (O2)	2.0-2.5 (O2)	2.3-3.0 (O2)	2.8-3.5 (O2)	3.0-3.5(O2)	3.0-4.0 (O2)
	8	1.0-1.5 (O2)	1.4-1.8 (O2)	1.4-1.7 (O2)	2.3-2.7 (O2)	2.0-3.0(O2)	2.5-3.5 (O2)
	10	0.8-1.0 (O2)	1.0-1.3 (O2)	1.0-1.6 (O2)	1.8-2.1 (O2)	1.8-2.5(O2)	2.0-2.6 (O2)
	12	0.6-0.8 (O2)	0.8-1.2 (O2)	0.8-1.4 (O2)	1.0-1.4 (O2)	1.5-1.7(O2)	1.8-2.2 (O2)
	14		0.6-0.8 (O2)	0.8-1.2 (O2)	0.8-1.2 (O2)	1.0-1.4(O2)	1.4-1.7 (O2)
	16		0.5-0.6 (O2)	0.7-1.0 (O2)	0.8-1.0 (O2)	1.0-1.2(O2)	1.2-1.4 (O2)
	18			0.5-0.6 (O2)			
	20				0.4-0.7 (O2)	0.6-0.8(O2)	0.8-1.0 (O2)
	22						
25					0.4-0.6(O2)	0.5-0.7 (O2)	
Brass	1	10.0-12.0 (N2)	12.0-13.0 (N2)	15-25 (N2)	25-35 (N2)	35-40 (N2)	45-55 (N2)
	2	4.5-5.0 (N2)	5.0-6.0 (N2)	9.0-10 (N2)	10-15 (N2)	12 (N2)	25-35 (N2)
	3	1.0-1.2 (N2)	1.5-2.0 (N2)	4.5-5.5 (N2)	6.0-8.0 (N2)	8.0-12 (N2)	12-15 (N2)
	4			2.0-2.7 (N2)	4.0-5.0 (N2)		
	5		0.5-0.7 (N2)			6.0-7.0 (N2)	5.0-6.0 (N2)
	6			1.0-1.3 (N2)	1.8-2.0 (N2)	2.0-2.5 (N2)	3.5-4.5 (N2)
	7						
	8				0.8-1.0 (N2)	1.0-1.6 (N2)	1.5-2.0 (N2)

Aluminum	1	13-17 (N2)	15-25 (N2)	25-30 (N2)	30-35 (N2)	35-40 (N2)	55 (N2)
	2	4.8-5.2 (N2)	6.0-9.0 (N2)	10-15 (N2)	15-23 (N2)	20-25 (N2)	25-30 (N2)
	3	1.2-1.8 (N2)	2.0-4.5 (N2)	4.0-6.0 (N2)	8-10 (N2)	9-10 (N2)	13-18 (N2)
	4		1.0-1.7 (N2)	2.5-3.0 (N2)	5.0-7.0 (N2)	5.0-7.0 (N2)	10-13 (N2)
	5			1.5-2.3 (N2)			
	6		0.6-0.9 (N2)	1.0-1.5 (N2)	2.5-3.0 (N2)	3.0-4.0 (N2)	4.0-5.0 (N2)
	8			0.5-0.8 (N2)	1.0-1.3 (N2)	2.0-2.5 (N2)	3.0-3.5 (N2)
	10				0.4-0.7 (N2)	1.0-1.2 (N2)	1.5-2.0 (N2)
	12					0.4--0.6(N2)	1.3-1.8 (N2)

V. Main Features

Precision manufactured High strength machine bed

The high strength machine bed is manufactured with high-quality steel .

After welding, the bed is subjected to 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. This allows the table to withstand higher acceleration and ensures long term reliability.

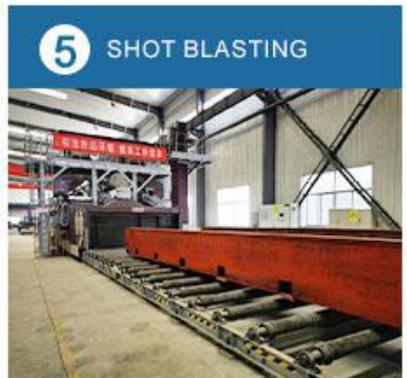
The high quality manufacturing process ensure the reliability and longevity of the bed and offer a longer service life with no deformation.



➔ [Bed body processing process](#)

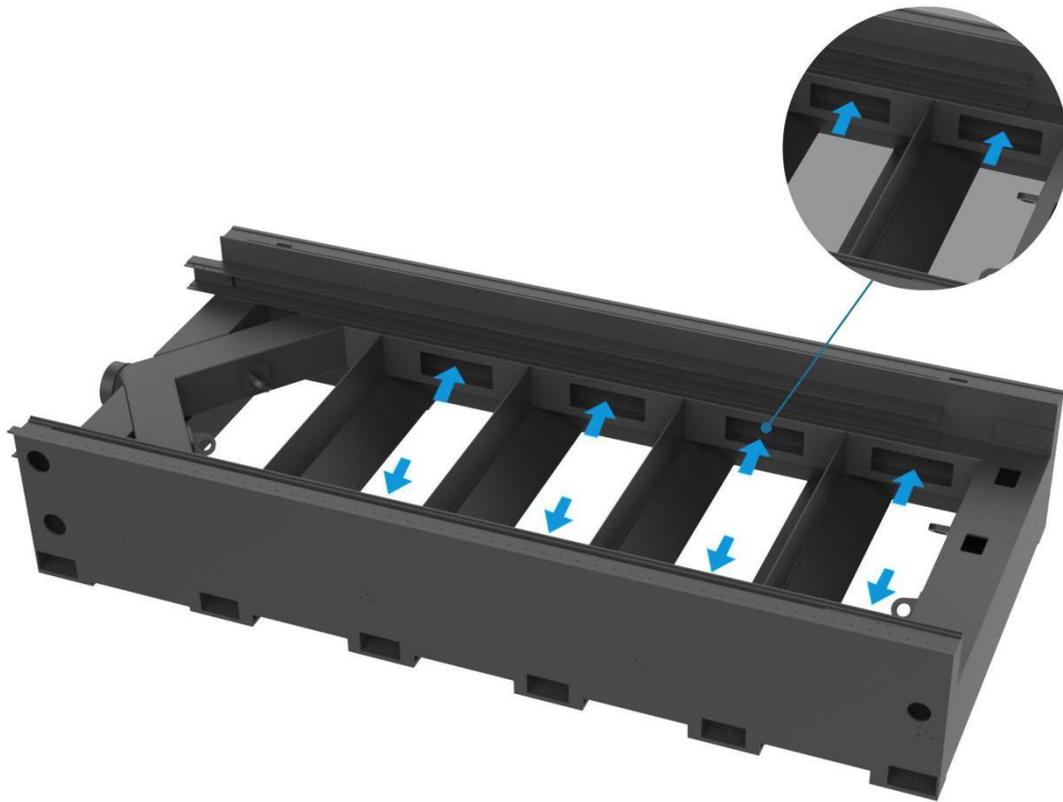


Senfeng Leiming has an independent bed production workshop. Many important processes such as bed welding, heat treatment, shot blasting, cleaning, and painting are all carried out in a state of the art workshop, to strictly control the quality of the bed.



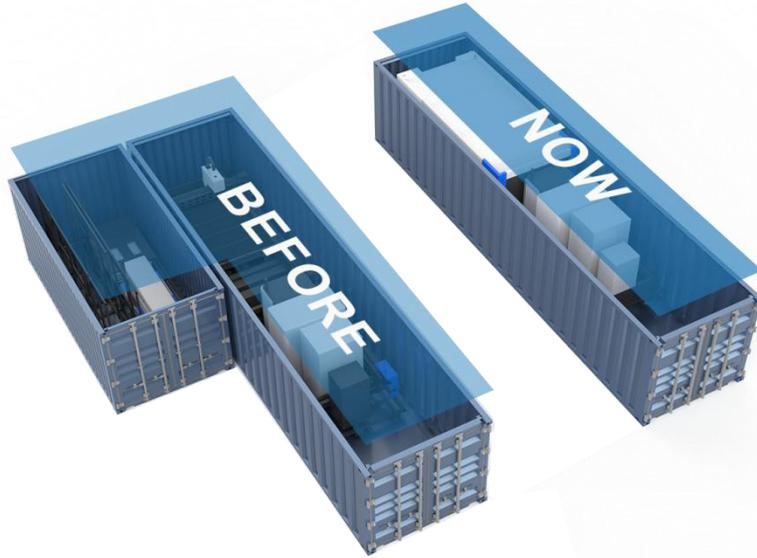
· Intelligent surrounding spiral negative pressure dust removal

Intelligent surrounding spiral negative pressure partition dust removal system, this extraction system intelligently switches the air outlet, time-sharing, partition, and sectional air exhaust, within the base relative to the cutting head, to minimize smoke while cutting.



· Convenient Sizing

The complete machine also fits within a 40ft hq shipping container, which saves freight costs and decreases the machine setup time as the machine comes almost completely assembled.



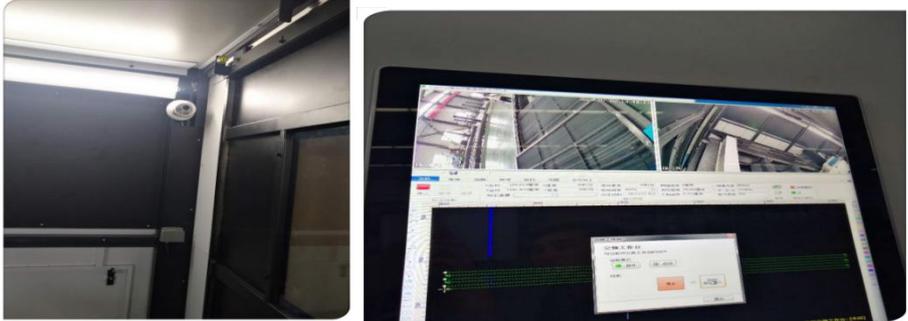
· Strong Aviation Aluminium Beam

The use of aviation-grade high-strength aluminum alloy beams offer 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**

With the included camera system, 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 equipment software terminal is configured to select the auxiliary gas function automatically .The type and pressure of the auxiliary gas can be automatically set and selected through the control program, without the need for manual intervention. 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.

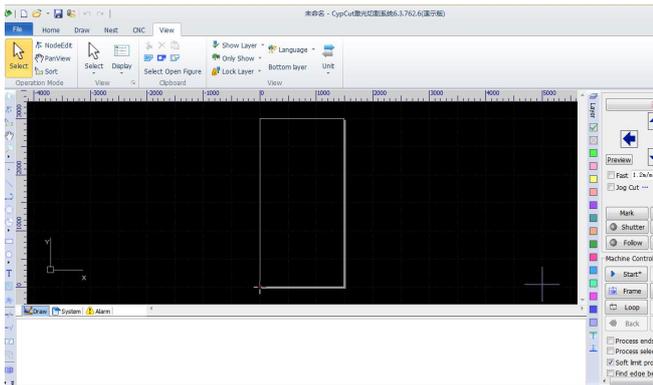
VI. More Details

	<p>Auto-Focusing Fiber Laser Cutting Head</p> <ol style="list-style-type: none"> 1.The auto focusing laser head offers a strong advantage on medium power, large format fiber laser cutting application. 2.Completely sealed internal structure of laser head can avoid the optical assembly being contaminated by dirt and debris. 3.Two point centering adjustment of laser head; Adjusting the focus is simple and quick and offers improved cutting performance. 4.Easy to access protective lens allows for quicker changeover and maintenance, to keep you cutting longer.
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Raycus Laser Device

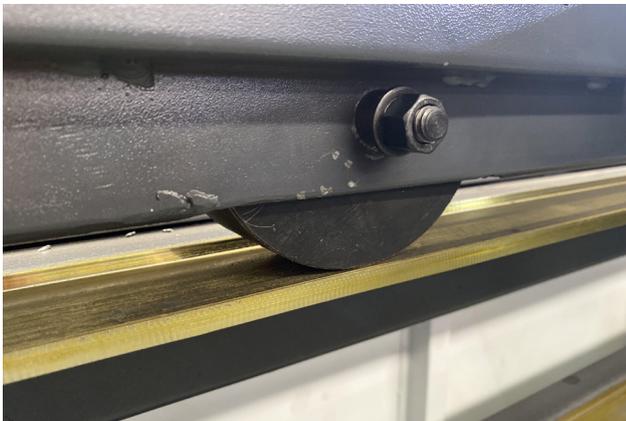
The Raycus power source offers the advantage of high electro-optical conversion efficiency (>40%), good beam quality, high energy density, wide modulation frequency, strong reliability, long life, and maintenance-free operation. It is widely used in welding, precision cutting, cladding, and surface treatment,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



FSCUT2000/CYPCUT medium and low power laser cutting system

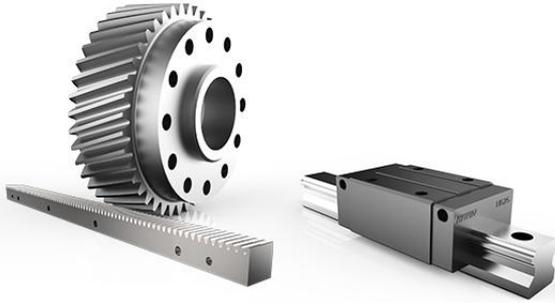
Convenient installation, easy debugging, excellent performance, complete solutions, stable and reliable, easy deployment, easy debugging, safe production, rich functions, excellent performance, etc.; support and provide modular, personalized, automated, and information solutions.

Memory cache, powerful cutting process database, all kinds of cutting parameters of different thicknesses and different plates, fast operation and efficient cutting.



Metal roller Exchange Table

Is More durable and stable, ensuring the fast exchanging time and easy loading/unloading



Transmission System

High precision, long life precision machined and Precision ground helical gears, offer a compact assembly that also decrease the required amount of torque to operate and reduces any backlash.



Circuit board



Water Cooling System

Large capacity cooler, offers stable performance, trouble-free cooling with excellent cooling properties to prolong the life of the laser head and with included flow switch , protects the laser head from damage.



Height Controller



Automatic Lubrication System

1. automatically Lubricates the guide rails of X axis, Y axis, Z axis, which helps to reduce wear, maintenance costs and manual effort.
2. Oiling time can be adjusted according to cutting volume to ensure the longevity of the machine.



VIII. Product Certification

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



IX. 5 Star Service

Gentronics offer;

In house qualified technicians totalling over 60years of real world experience with cnc systems.

Local backup and support based in WA

Large range of spares and consumables held in stock.

24hr response time (Perth CBD)

Industry leading support and after sales service.

We understand your business and the importance of backing up what we sell!

X. Customer Testimonials





XI. Company Strength

· Company Profile

SENFENG LEIMING LASER is a leading manufacturer engaged in the research, development, production, sale and service of fiber laser cutters, fiber laser cleaning machine, laser marking machine, laser welding machine, 3D robot, press brake bending machine, metal sander, etc. Products sold in more than 180 countries and regions.



120,000+
Factory area

60,000+
Customers

1,000+
Employees

300+
R&D personnel





◆ Product Line

Metal Sheet Cutting Machine



SF3015H
Full Cover Fiber Laser Cutter



SF3015G
Open Type Fiber Laser Cutter



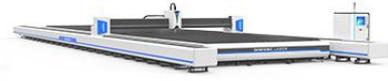
SF1530G
Security Protective Fiber Laser Cutter



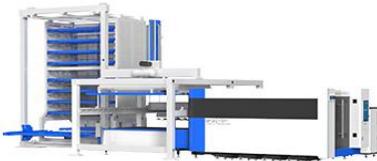
SF15015S
Fiber Laser Blanking System



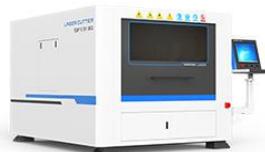
SF12030TX
Ultra Large Bevel Fiber Laser Cutter



SF20040R
Ultra Large Metal Laser Cutter

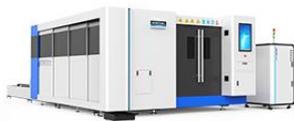


SF15MH
Automatic Laser Cutting Production Line



SF1313G
Full Protection Fiber Small Laser Cutter

Plate And Tube Cutting Machine



SF3015HM
Steel Sheet and Tube Laser Cutter



SF3015M3
Open Type Metal Sheet and Pipe Laser Cutter

Tube Laser Cutting Machine



SF6020GT
Bevel Tube Laser Cutting Machine



SF6020T
Professional Pipe Laser Cutter



SF6016T
Ultra High Speed Laser Tube Cutter

Fiber Laser Cleaning Machine



Handheld
Fiber Laser Cleaning Machine



3D Robot
Laser Cleaning Machine

Fiber Laser Welding Machine



Handheld
Fiber Laser Welding Machine



3D Robot
Fiber Laser Welding Machine

Laser Cladding Equipment



SFHS3050
Metal additive machine



Robot
Laser Cladding Workstation



SF-RF1500
Laser Cladding Machine

Metal sheet bending machine

DES-180
Servo Electric Press Brake





XII. Terms

Pricing includes :

Delivery and installation of laser.

Training onsite on the safe operation of the laser

Technical support

Commissioning of laser on completion of install and training.

Customer to supply,

Craneage and services for the laser , these include:

The customer is to supply labour to assist Gentronics in the unpacking and setup of the laser onsite.

Craneage to unload and setup the laser .

Material and services for the installation of the laser.(gas, material includes: steel, aluminium, stainless steel, copper sheeting etc) to test the operation and provide training on the operation of the laser.

Power and services to the laser (as per Gentronics instruction)

**for regional areas, customer to pay for technicians travel expenses

Payment terms

60% payment required on order

30% payment required on completion of build and prior to shipping ex factory

10% payment on completion of commissioning.