



# HSG GX3015 FIBER LASER CUTTING MACHINE

Alpha CNC Group Pty Ltd

21/2-4 Picrite Close, Pemulwuy NSW 2145

Felix Yan

Mobile: 0420 206 745

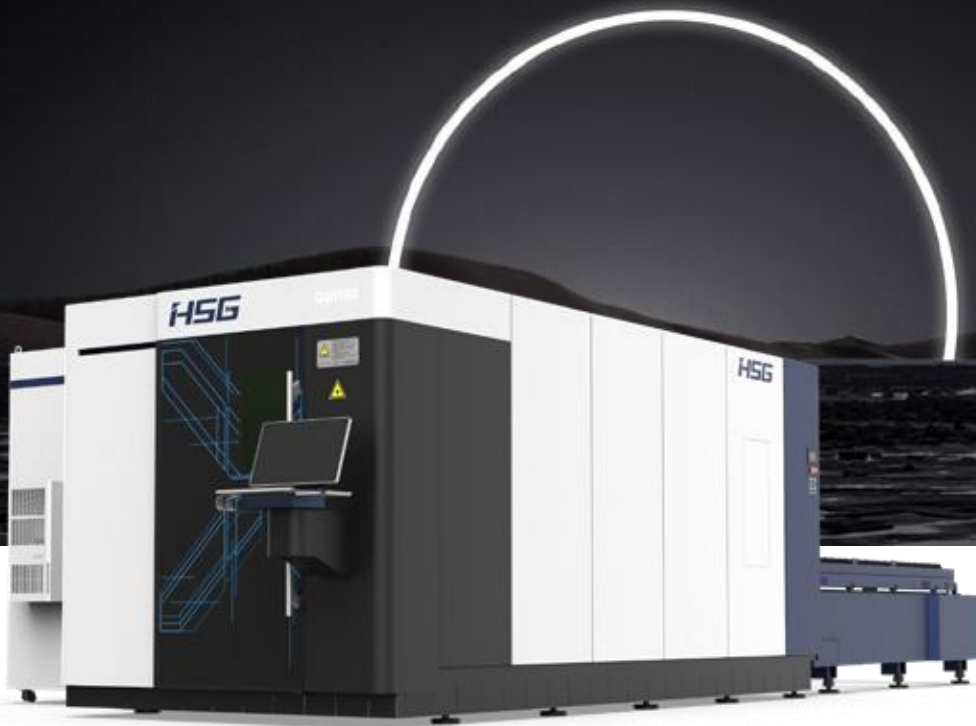
Email: felix\_yan@alphacnc.com.au



## GX

### Medium-to-low-power Sheet Metal Laser Cutting Machine

Technical Parameter	GX	
Processing Format	3048*1524mm	1300*900mm
Power	1500-6000W	1500W-4000W
X/Y Axis Positioning Accuracy	±0.03mm/m	
X/Y Axis Repositioning Accuracy	±0.03mm	
Max. Acceleration	1.5G	1.2G
Max. No-load Speed	140m/min	100m/min
Max. Loading Weight	800Kg	100kg
Overall Dimensions (L*W)	8900*2260*2200mm	2260*2000*2200mm



## THE BEST PERFORMER IN COST PERFORMANCE

GX is a top-selling model among machines with double exchange platforms in laser cutting industry. It is easily packed in 40HQ standard container. The full-protective design is EU CE-compliant. Cutting safety, machine details and environmental protection are highly valued. GX II, based on first generation, is regarded as the best performer in cost performance by its speed increase and configuration upgrade.





## ZONING VENTILATION SYSTEM



Almost smoke-free  
in an instant



Low noise



Environmental and  
pollution-free



Long-life  
components

### STRONG SUCTION AND NOISELESS

Ventilation area, divided by left and right zone, is generally controlled by butterfly valve and has intensive suction. The above butterfly valve damper is almost noiseless while opening or closing due to its good sealing performance.

### GOOD VENTILATION EFFECTS

300\*300mm full-hollow air ducts can maximize opening and airflow, as thus, good ventilation and almost smoke-free effects are made possible. Moreover, air damper and cylinder elements will also be protected from being damaged by cutting sparks.



More solid in  
entire structure



Keep high precision  
and stability for  
50+ years



Much safer in  
cutting



Long service life

## HIGH-QUALITY CARBON STEEL WELDED SEMI-HOLLOW MACHINE BED

### MADE OF HIGH-QUALITY CARBON STEEL

Compared with general carbon steel, the high-quality material is relatively pure with less impurity and has good mechanical properties and rigidity. Due to thermal treatment, it is featured by less heat absorption, rapid heat dissipation and deformation prevention, which will remain stable even after long-term working at high speed.

### FIRM IN STRUCTURE, HIGH PRECISION, MORE STABLE

The machine bed is covered with 6mm anti-burning manganese steel plate to prevent thermal deformation. Due to 500Mpa tensile strength and welding stress elimination by lonnealing and vibration aging, the machine bed will keep high precision and stability for over 50 years.

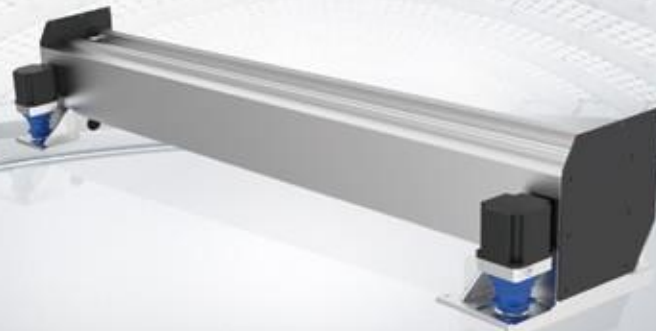
### SEMI-HOLLOW MACHINE BED

Our machine bed is designed as semi-hollow to lessen the area heated by laser and keep the bed unchanged. The built-in butterfly valve damper can protect air ducts from scorching and prolong the service life of machine bed.





**HSG**



- Lighter in weight
- More solid in structure
- Uniform textures
- Higher in strength

## WHY WE CHOOSE THE ► 4TH GENERATION EXTRUDED AVIATION ALUMINUM BEAM?

### REASONS FOR PREFERRING EXTRUDED ALUMINUM TO CAST ALUMINUM

- \* To address the complex structure and heavy weight of beam, HSG decides to choose aluminum featuring lower density, lighter weight and higher toughness for our beam.
- \* Compared with cast aluminum, our beam is made by extrusion forming technology, which is good for the improvement of deformation capacity, plasticity utilization and the enlargement of deformation amount. Compared with other technologies, the extruded aluminum beam is more uniform in textures, smoother in surface and higher in strength without air or sand hole.
- \* The 6 series aviation aluminum alloy is light-weight and corrosion-resistant, which gets good rigidity and toughness after vibration aging and finish machining, therefore, high-speed working, good dynamic performance, high precision and speedy cutting come true. Our beam is designed as honeycomb anti-compression structure in accordance with aerospacecraft criteria.

### INTEGRATED BEAM

Our beam is integrated with its column, hence, its mechanical properties are more stable than that of split-type beam. With such beam, the machine bed will keep high precision for 50+ years.



**HSG**



- ⇒ Autofocus
- ⇒ Cool down automatically for long-term cutting
- ⇒ Automatic obstacle avoidance
- ⇒ Automatic dust prevention
- ⇒ Automatic abnormal warning
- ⇒ Simple to replace and maintain

## KLINGE AUTOFOCUS LASER CUTTING HEAD

### ▶ P06 (6-8KW) FOR SELECTION

An Ultra-compact Intelligent Autofocus Cutting Head for Medium Power

- \* Balance medium-to-thin and medium-to-thick sheets cutting well
- \* Monitor temperature of protective lens, focusing lens and collimating lens
- \* Laser beam reshaping lens, improve stability drastically while cutting thick sheets
- \* Full-protective optical structure, dual protective lens, easy and quick to maintain



#### ATTENTION FOR USING CUTTING HEAD:

- \* To ensure personal safety, please wear our optical fiber protective glasses while working on laser cutting machines.
- \* You need to take protective measures and handle with care to protect your cutting head and laser nozzle.
- \* You need to keep cutting head clean and prevent cooling liquid, condensate water or other foreign objects from sensor.



PIERCING AT  
MILLISECOND LEVEL



PIERCING WITH  
HIGH PRECISION



LOW POPPING RATE



CLEAN AND SLAGLESS



IMPROVE PRODUCTION  
EFFICIENCY



SAVE CUTTING GAS  
AND COSTS



## LIGHTNING-FAST PIERCING

- Because of our autofocus cutting head, international first-class laser device and other gas control components, we only take 0.5s to pierce 20mm iron sheet.
- The pierced holes will remain unchanged in shape, be smooth in cutting surface, high in precision and almost slagless. Never worry about popping rate because it is nearly negligible.



# HSG-X2000S CNC CONTROL SYSTEM



4.0

Keep up with industry 4.0

FSCUT  
2000

Compatible with MES system,  
based on FSCUT2000



Further upgrade in functions

## ☰ SIMPLER IN CUTTING

Further developed based on FSCUT2000 system, combine with our PLC and cutting database, further optimization in film removal pattern

## ☰ MORE INTELLIGENT IN CUTTING

Push processing files remotely and import the files only by scanning a QR code

## ☰ MORE EFFICIENT IN CUTTING

- \* New function of intelligent leapfrog judgment and flying cutting micro-connection
- \* Increase in platforms exchange speed

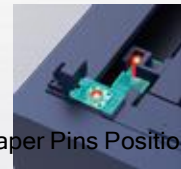
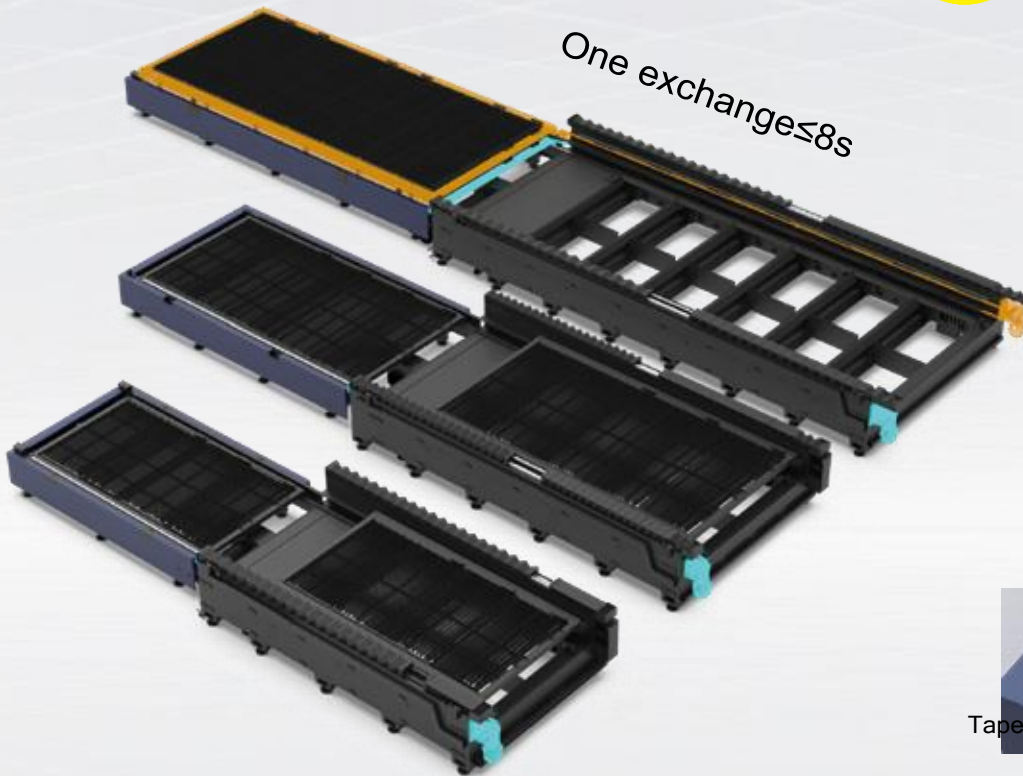
## ☰ MORE PRECISE IN CUTTING

- \* Increase in round hole precision, keep sharp corners qualified and interface smooth by applying independent control to round hole and sharp corners of thick sheets
- \* Early open of gas and gas flushing, keep cutting stable

## ☰ SAFER IN CUTTING

- \* New function of safety, incl. pre-collision detection and collision prevention during moving
- \* New function of laser monitoring, cutting gas pressure correction and control precision optimization
- \* Vibration abatement and thin sheet vibration prevention
- \* New function of automatic maintenance reminder for the finished machine





Taper Pins Positioning

## INTELLIGENT BREAKNECK EXCHANGE PLATFORMS TAPER PINS POSITIONING



Quality above industry criteria



3 times faster than hydraulic lifting platforms



Exchange platform positioning precision  $\leq 0.5\text{mm}$



Exchange process is shown on PLC touch screen

- 16A chains, 4mm wider than industry criteria
- Heat-resisting guide sleeve and wear-resisting chain wheel, only 8s required once at the soonest
- Locked by hexagonal guide rails and taper pins to prevent vibration and ensure its positioning precision within 0.5mm
- High-precision CNC system, protect machine and operators well



EU CE-compliant



Complete safety measures



A wide selection of optional spare parts

## FULL-PROTECTIVE DESIGN SAFETY AND MACHINE DETAILS

### MORE HUMANISTIC IN DESIGN

GX is designed as full-protective to put the whole cutting area in a sealed space, in this way, noise reduction and pollution prevention come true.

### SAFER IN OPERATION

- \* Innovative independent electric cabinet, where weak current is separated from strong current area. In combination with air conditioning, electromagnetic interference, dust entry, short circuit, overload and ignition will not occur.
- \* Pneumatic components are equipped with low-pressure detection. 19mm wear-resisting rubber hose adopted makes gas pressure and flow more stable.
- \* Oxygen channel is put outside, as thus, fire hazard arising from oxygen leakage or high oxygen concentration is generally evitable.
- \* With intelligent safety locks, the machine will stop automatically if protective door opens.
- \* Guide rail on Z axis is sealed by flame-retarded cover and has positive-pressure dust removal to protect cutting head from dust and metal particles.

### OPTIONAL SPARE PARTS

- \* 6mm (thickness) anti-burning manganese steel plate available for machine bed
- \* Safety grating. GX will stop if any intruder sets foot in warning area
- \* Two CCD cameras that can monitor whole cutting area and external platform in real time
- \* Large OD6 laser-proof glass that prevents laser harm and keeps cutting process visual



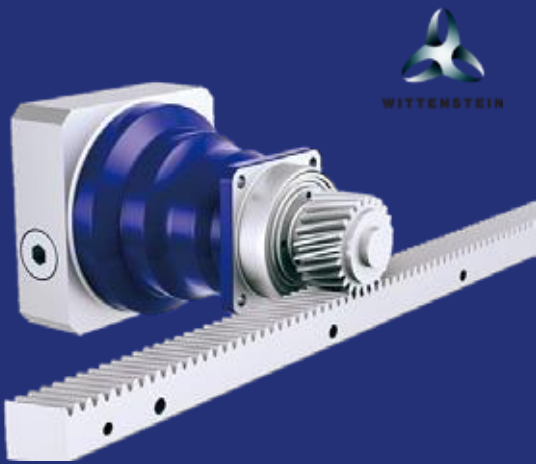
## STANDARD CONTAINER TRANSPORT MODEL SAVE FREIGHT

GX, as a long-tested model launched in 2015, accepts repeated technical upgrades now. 7000+ sets have been sold in total. This small machine is easily put in standard 40HQ container to reduce cost of transportation and make the most of workshops.



# GERMANY AND JAPAN-IMPORTED CORE COMPONENTS

---



**GERMAN WITTENSTEIN ALPHA:**  
complete set of speed reducer,  
gear wheel and racks

**JAPANESE SMC**  
**GERMANY LANNY OR AVENTICS :**  
gas precision control valve





# CLASSY MACHINE APPEARANCE

---

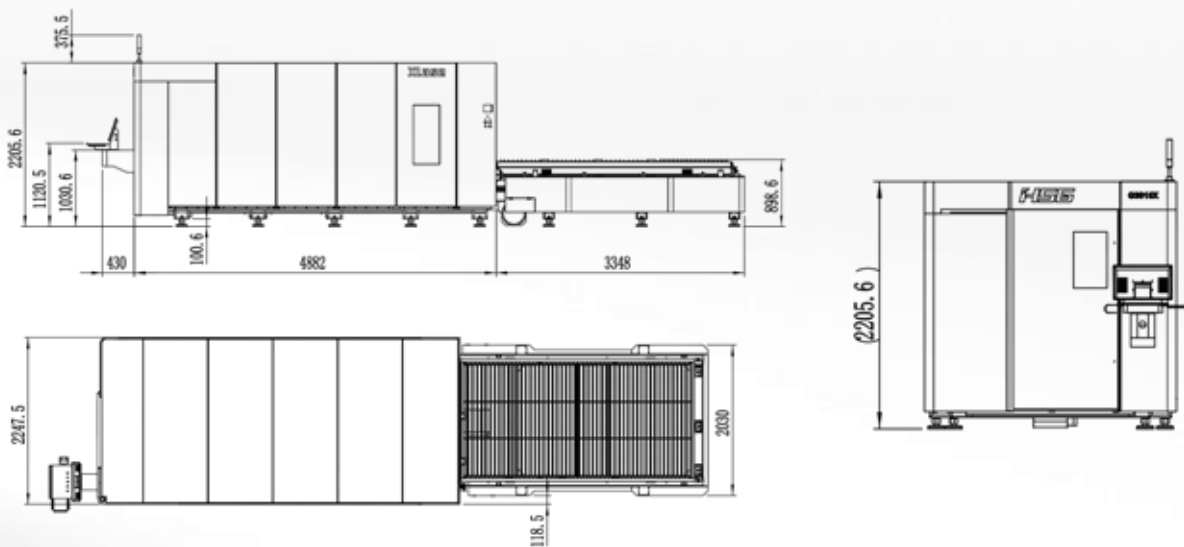


- ☰ In strict accordance with European design standards, HSG Laser adopts humanized console, suspension lamp and stainless steel edging for our machines.
- ☰ GX is in blue and white, which will don't look dirty compared with the first generation's gray machine bed and rear floorstand.
- ☰ We prefer sliding door to folding door, which avoids door from getting stuck and offers satisfactory sealing effect.
- ☰ 21-inch operating screen and electric console. Our console will lift or fall only by pressing a button, which is friendly to all users of different heights and in different postures.

# CUTTING SAMPLES



# MACHINE FOUNDATION



An aerial photograph of a modern industrial building with large glass windows and a parking lot. The building is surrounded by a paved road and some landscaping. The sky is clear and blue.

## WHY HSG LASER IS THE BEST CHOICE FOR YOU?

### TECHNICAL R&D

Persist in technology-driven, pay attention to independent R&D and adhere to unceasing upgrades. Until now, we have mastered many core technologies, incl. Alpha T bus control system, P series laser cutting heads, semi- or full-hollow machine bed, intelligent digital four chucks with real zero tailing, 3D five-axis 45° bevel cutting, HSG-X series cutting control systems, AD1835 independent capacitance height controller.





# MACHINES



## Complete

We have the most complete types of laser machines, incl. sheet metal laser cutting machines, sheet & tube laser cutting machines, tube metal laser cutting machines, welding machines, bending machine, automatic loading & unloading system.



## Wide

Range of machine power, 1.5-30kW, wide range of cutting dimensions,  $\Phi$ 10-426mm, 50kg-1500kg, 6000-12000mm sheets or tubes are easily processed.



## High

Our machine bed, beam, platforms, operating system, chucks, ventilation system and others are above industry criteria. Cutting is higher, faster, more stable and better in cutting effects. It is easy to get bright surface cutting with no need for subsequent polishing.



## Intelligent

HSG cloud intelligent system works with our Alpha T bus control system to enable remote repair, maintenance and working guidance. Users will get a full understanding of production and workers.



## Save

Our automatic loading & unloading system and intelligent operating system will free you from inefficient and time-consuming manual operation and help you to save labor forces and production costs.







# SAFETY ENVIRONMENT PROTECTION AND MACHINE DETAILS

---



## SAFETY

Our machines are designed as full-protective and equipped with laser-proof glass in line with international standards. Safety grating will protect workers effectively and our cutting heads are anti-collision.



## ENVIRONMENTAL PROTECTION

Zoning hurricane-force ventilation system, under the control of butterfly valve, can realize almost smoke-free effects in combination with positive-pressure dust removal.



## MACHINE DETAILS

The front-placed electric cabinet will not be collided during loading or unloading. In this CE-compliant cabinet, weak current is separated from strong current area. The fail-safe wiring terminals and distributed wiring duct can prevent signal interference and frictional loss among lines.



# CUSTOMERS



**4**  
Subsidiaries

**80000m<sup>2</sup> +**  
Production Area

**5000+**  
Annual Productivity

**3000+**  
Global Sales in 2020

**1600+**  
Strivers

**180+**  
R&D Personnel

**100+**  
Countries & Regions Served

**30+**  
Global Service Outlets

## Save Costs



Hammer at cost reduction for users. Our laser machines, especially high-power machines can improve cutting efficiency and save labor forces & production costs for you. For all machines, air cutting is practicable to bring faster speed and lower costs. Such as, air cutting is 2-3 times faster than oxygen under 6kW and 40% costs will be saved. If 12kW, the former is 3-6 times faster than the latter. Low-pressure air cutting at lower costs is suitable for 6kW+ machines. They will perform well in cost reduction.

## Strong Production Capacity and Intimate After-sales Service



HSG has established wholly-owned subsidiaries in Germany and Japan. Our production area in China is over 80000m<sup>2</sup>, where 5000+ machines will be put on the market every year. 30+ operation service outlets have been founded worldwide to serve over 100 countries and regions. The warranty period of all machines will last for 1 year. We also provide technical training, installation and software upgrades for free.

## QUALITY COMPONENTS

We import international first-class spare parts. HSG is the world's largest cooperative partner of IPG. The speed reducer, gear wheel and racks of many machines are completely imported from German Alpha. We also develop extensive cooperation with Japanese SMC, Panasonic, German Lanny and Aventics, French Schneider, etc.



## STRICT IN QUALITY CONTROL FLOW



## PROFESSIONAL AFTER-SALES SERVICE



After signing for receiving, you will enjoy one-year warranty period (except for vulnerable parts like conductive optical fiber and lens, consumables, force majeure incl. natural disaster and war, unprofessional operations, man-made destroy). We will help all users to enjoy after-sales service. Our specially trained after-sales engineers will offer global users technical supports and services via phone (+86 400 8229 288) or network, or provide some necessary field service. You will be responded within 2h if phone or network is used.



You may also dial above phone number to report machine failure and ask for consultation services concerning technology, spare parts, extension of warranty period or maintenance.





OUR  
HEADQUARTERS



SUZHOU  
SUBSIDIARY



GERMAN  
SUBSIDIARY



JINAN  
SUBSIDIARY



JAPANESE  
SUBSIDIARY





## TABLE OF SHEET THICKNESS AND CUTTING SPEED

Material name	Thickness (mm)	IPG CUTTING SPEED (m/min)							RAYCUS CUTTING SPEED (m/min)									
		3000W 7.0-12.0	6000W 8.0-12.0	8000W 8.0-12.0	10000W 8.0-12.0	12000W 8.0-12.0	15000W 8.0-12.0	20000W 8.0-12.0	1000W 5.5-10.0	4000W 8.0-12.0	6000W 8.0-12.0	8000W 8.0-12.0	10000W 8.0-12.0	12000W 8.0-12.0				
Carbon steel (O2)	2	5.0-7.0	5.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	5.0-6.0	5.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	
	3	3.5-5.0	3.8-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	2.5-3.3	3.8-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	
	4	3.0-4.2	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	2.0-3.0	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	3.5-4.5	
	5	2.5-3.6	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	1.4-1.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	3.0-3.8	
	6	2.4-3.0	2.6-3.2	2.6-3.5	2.6-3.5	2.6-3.5	2.6-3.5	2.6-3.5	1.2-1.5	2.6-3.2	2.6-3.2	2.6-3.2	2.6-3.5	2.6-3.5	2.6-3.5	2.6-3.5	2.6-3.5	
	8	1.8-2.4	2.0-2.5	2.0-2.7	2.0-2.7	2.0-2.7	2.0-2.7	2.0-2.7	0.9-1.2	2.0-2.6	2.0-2.6	2.0-2.6	2.0-2.7	2.0-2.7	2.0-2.7	2.0-2.7	2.0-2.7	
	10	1.2-1.8	1.8-2.1	1.8-2.3	1.8-2.3	1.8-4.0	1.8-4.5	1.8-5.0	0.6-0.8	1.8-2.1	1.8-2.1	1.8-2.1	1.8-2.3	1.8-2.3	1.8-2.3	1.8-4.0	1.8-4.0	
	12	1.0-1.5	1.0-1.5	1.8-2.0	1.8-2.0	1.8-3.5	1.8-3.8	1.8-4.0	0.4-0.6	1.0-1.5	1.0-1.5	1.8-2.0	1.8-2.0	1.8-2.0	1.8-2.0	1.8-3.5	1.8-3.5	
	16	0.7-0.85	0.7-0.85	1.0-1.4	1.0-1.4	1.0-2.8	1.2-3.0	1.4-3.3		0.7-0.85	0.7-0.85	1.0-1.4	1.0-1.4	1.0-1.4	1.0-1.4	1.0-2.8	1.0-2.8	
	20	0.6-0.75	0.6-0.75	0.8-1.2	0.8-1.2	0.8-2.2	1.1-2.4	1.2-3.0		0.6-0.75	0.6-0.75	0.8-1.2	0.8-1.2	0.8-1.2	0.8-1.2	0.8-2.2	0.8-2.2	
	22		0.55-0.65	0.7-0.9	0.7-0.9	0.7-2.0	0.8-2.2	0.8-2.8			0.55-0.65	0.7-0.9	0.7-0.9	0.7-0.9	0.7-0.9	0.7-2.0	0.7-2.0	
	25		0.3-0.6	0.6-0.8	0.6-0.8	0.6-1.5	0.5-1.8	0.6-2.6			0.4-0.6	0.6-0.8	0.6-0.8	0.6-0.8	0.6-0.8	0.6-1.5	0.6-1.5	
	30		0.1-0.2	0.1-0.3	0.2-0.5	0.3-1.0	0.3-1.2	0.4-1.2						0.2-0.3	0.2-0.3	0.3-1.0	0.3-1.0	
	35			0.1-0.2	0.1-0.3	0.1-0.3	0.2-0.3	0.3-1.1								0.1-0.3	0.1-0.3	
	40					0.1-0.2	0.1-0.2	0.2-1.0								0.1-0.2	0.1-0.2	
	45							0.2-0.3										
	50							0.1-0.3										
60							0.1-0.2											
Carbon steel (N2)	1	37.0-57.0	38.0-50.0	40.0-52.0	60.0-74.0	65.0-80.0	70.0-85.0	60.0-90.0	12.0-16.0	30.0-40.0	38.0-50.0	40.0-52.0	60.0-74.0	65.0-80.0	60.0-74.0	65.0-80.0	65.0-80.0	
	2	12.0-20.0	18.0-32.0	25.0-33.0	38.0-46.0	40.0-47.0	45.0-50.0	40.0-55.0	4.0-5.0	13.0-16.0	18.0-32.0	25.0-33.0	38.0-46.0	40.0-47.0	38.0-46.0	40.0-47.0	40.0-47.0	
	3	8.0-13.0	13.0-19.0	18.0-23.1	20.0-27.8	25.0-33.0	30.0-40.0	30.0-45.0	8.0-13.0	13.0-19.0	15.0-22.0	20.0-27.8	20.0-27.8	25.0-33.0	20.0-27.8	25.0-33.0	25.0-33.0	
	4		8.5-12.0	12.0-16.0	15.0-20.7	20.0-27.0	22.0-33.0	22.0-40.0			8.5-12.0	12.0-16.0	15.0-20.7	20.0-27.0	15.0-20.7	20.0-27.0	20.0-27.0	
	5		7.0-8.0	8.0-11.0	10.0-15.3	12.0-18.0	14.0-22.0	17.0-30.0			7.0-8.0	8.0-10.0	10.0-15.3	12.0-18.0	10.0-15.3	12.0-18.0	12.0-18.0	
	6		5.0-6.0	6.0-8.8	8.0-11.7	10.0-15.5	13.0-20.5	15.0-25			5.0-6.0	6.0-8.0	8.0-11.7	10.0-15.5	8.0-11.7	10.0-15.5	10.0-15.5	
	8		2.5-3.8	4.0-5.6	6.0-7.0	7.0-11.0	8.0-15.0	10.0-20.0			2.5-3.8	3.0-5.0	6.0-7.0	7.0-11.0	6.0-7.0	7.0-11.0	7.0-11.0	
	10			2.5-3.4	3.5-4.7	4.0-7.5	4.5-9.5	7.0-13.0				2.0-3.0	3.5-4.7	4.0-7.5	3.5-4.7	4.0-7.5	4.0-7.5	
	12			1.8-2.1	2.0-3.0	3.0-5.0	4.0-6.0	5.0-9.0				1.5-2.0	2.0-3.0	3.0-5.0	2.0-3.0	3.0-5.0	3.0-5.0	
	14							3.0-6.0										
	16																	
	20																	
	Carbon steel (AIR)	1																
		2	38.0-57.0	39.0-52.0	42.0-53.0	62.0-74.0	66.0-80.0	70.0-85.0	62.0-90.0	12.0-16.0	30.0-40.0	38.0-50.0	40.0-52.0	60.0-74.0	65.0-80.0	60.0-74.0	65.0-80.0	65.0-80.0
		3	13.0-22.0	19.0-33.0	26.0-34.0	39.0-48.0	42.0-48.0	46.0-51.0	41.0-56.0	4.0-5.0	13.0-16.0	18.0-32.0	25.0-33.0	38.0-46.0	40.0-47.0	38.0-46.0	40.0-47.0	40.0-47.0
		4	9.0-15.0	14.0-20.0	19.0-24.1	22.0-28.8	26.0-34.0	32.0-42.0	31.0-46.0	8.0-13.0	13.0-19.0	15.0-22.0	20.0-27.8	20.0-27.8	25.0-33.0	20.0-27.8	25.0-33.0	25.0-33.0
		5		9.5-13.0	13.0-17.0	16.0-21.7	21.0-28.0	23.0-35.0	23.0-41.0			8.5-12.0	12.0-16.0	15.0-20.7	20.0-27.0	15.0-20.7	20.0-27.0	20.0-27.0
6			7.5-9.0	8.5-13.0	11.0-16.3	13.0-19.0	15.0-23.0	18.0-32.0			7.0-8.0	8.0-10.0	10.0-15.3	12.0-18.0	10.0-15.3	12.0-18.0	12.0-18.0	
8			5.5-6.5	6.5-9.8	9.0-12.7	11.0-16.5	14.0-21.5	16.0-27.0			5.0-6.0	6.0-8.0	8.0-11.7	10.0-15.5	8.0-11.7	10.0-15.5	10.0-15.5	
10			2.7-4.0	4.6-6.6	6.6-8.5	8.0-12.0	9.0-16.0	11.0-22.0			2.5-3.8	3.0-5.0	6.0-7.0	7.0-11.0	6.0-7.0	7.0-11.0	7.0-11.0	
12				2.7-3.9	3.8-5.5	4.5-8.5	4.6-10.4	7.5-13.5				2.0-3.0	3.5-4.7	4.0-7.5	3.5-4.7	4.0-7.5	4.0-7.5	
14				1.9-2.3	2.5-3.5	3.5-5.8	4.5-6.5	5.5-10.5				1.5-2.0	2.0-3.0	3.0-5.0	2.0-3.0	3.0-5.0	3.0-5.0	
16								3.4-6.8										
20																		
Stainless steel (N2)		1																
		2	42.0-62.0	45.0-55.0	55.0-68.0	60.0-72.0	65.0-80.0	70.0-85.0	75.0-90.0	15.0-18.0	45.0-55.0	45.0-60.0	50.0-65.0	60.0-72.0	65.0-80.0	60.0-72.0	65.0-80.0	65.0-80.0
		3	12.0-25.0	20.0-35.0	36.0-42.0	37.0-46.8	38.0-47.0	45.0-52.0	47.0-60.0	4.5-5.5	18.0-27.0	20.0-35.0	36.0-42.0	37.0-46.8	38.0-47.0	37.0-46.8	38.0-47.0	38.0-47.0
		4	7.0-12.0	21we	22.0-26.0	23.0-30.0	25.0-36.0	26.0-40.0	30.0-45.0	2.0-2.8	10.0-15.0	15.0-20.0	20.0-24.0	23.0-30.0	25.0-36.0	23.0-30.0	25.0-36.0	25.0-36.0
		5	4.0-6.5	10.0-14.0	14.0-18.0	15.0-22.0	17.0-28.0	20.0-35.0	25.0-40.0	1.0-1.5	5.0-7.5	10.0-14.0	14.0-17.0	15.0-22.0	17.0-28.0	15.0-22.0	17.0-28.0	17.0-28.0
	6	2.5-4.5	8.0-12.0	9.0-13.0	10.0-16.0	13.0-21.0	15.0-23.0	17.0-30.0	0.4-0.6	4.0-5.0	8.0-12.0	9.0-13.0	10.0-16.0	13.0-21.0	10.0-16.0	13.0-21.0	13.0-21.0	
	8	1.5-3.2	6.0-8.0	7.0-10.0	8.0-12.0	10.0-17.0	13.0-17.0	15.0-20.0	0.2-0.4	3.0-4.0	6.0-8.0	7.0-10.0	8.0-12.0	10.0-17.0	8.0-12.0	10.0-17.0	10.0-17.0	
	10	0.6-1.0	3.5-4.0	4.5-6.0	5.0-7.0	7.0-13.0	8.0-16.0	9.0-18.0	1.5-2.6	3.5-4.0	4.5-6.0	5.0-7.0	7.0-13.0	10.0-17.0	7.0-13.0	10.0-17.0	10.0-17.0	
	12	0.4-0.8	1.8-2.2	2.5-4.0	3.0-5.0	4.0-8.0	5.0-10.0	6.0-15.0	0.7-1.3	1.8-2.2	2.5-4.0	3.0-5.0	4.0-8.0	6.0-15.0	3.0-5.0	4.0-8.0	4.0-8.0	
	14		1.2-1.5	1.8-3.0	2.5-3.9	3.0-5.5	4.0-6.5	5.0-7.5			1.2-1.5	1.8-3.0	2.5-3.9	3.0-5.5	2.5-3.9	3.0-5.5	3.0-5.5	
	16		0.8-1.2	1.0-1.8	1.9-2.8	2.0-4.0	3.0-5.0	3.5-6.0			0.8-1.2	1.0-1.8	1.9-2.8	2.0-4.0	1.9-2.8	2.0-4.0	2.0-4.0	
	20		0.6-0.8	0.9-1.5	1.7-2.3	2.0-3.0	3.0-4.0	3.0-4.5			0.6-0.8	0.9-1.5	1.7-2.3	2.0-3.0	1.7-2.3	2.0-3.0	2.0-3.0	
	25		0.3-0.4	0.6-0.9	0.9-1.5	1.0-1.9	1.5-2.2	1.8-3.0			0.3-0.4	0.6-0.9	0.9-1.5	1.0-1.9	0.9-1.5	1.0-1.9	1.0-1.9	
	30			0.4-0.5	0.6-0.9	0.7-1.0	0.8-1.2	1.0-1.7				0.4-0.5	0.6-0.9	0.7-1.0	0.6-0.9	0.7-1.0	0.7-1.0	
	40				0.4-0.6	0.5-0.7	0.3-0.6	0.7-1.2					0.4-0.6	0.5-0.7	0.4-0.6	0.5-0.7	0.5-0.7	
	50					0.1-0.2	0.2-0.4	0.4-0.8						0.1-0.2		0.1-0.2	0.1-0.2	
	60							0.3-0.6										
70							0.2-0.3											
80							0.1-0.2											
Stainless steel (AIR)	1	42.0-63.0	45.0-56.0	55.0-68.0	60.0-72.0	66.0-80.0	70.0-85.0	75.0-90.0	15.0-18.0	45.0-55.0	45.0-60.0	50.0-65.0	60.0-72.0	65.0				

## TABLE OF SHEET THICKNESS AND CUTTING SPEED

Material name	Thickness (mm)	IPG CUTTING SPEED (m/min)							RAYCUS CUTTING SPEED (m/min)					
		3000W 35.0-55.0	6000W 45.0-55.0	8000W 55.0-60.0	10000W 55.0-62.0	12000W 60.0-80.0	15000W 62.0-82.0	20000W 65.0-85.0	1000W 12.0-16.0	4000W 35.0-40.0	6000W 45.0-55.0	8000W 55.0-60.0	10000W 55.0-62.0	12000W 60.0-80.0
Aluminum alloy (N2)	1													
	2	12.0-20.0	20.0-30.0	38.0-42.0	40.0-46.0	40.0-47.0	43.0-50.0	45.0-55.0	2.5-4.0	13.0-22.0	20.0-30.0	38.0-42.0	40.0-46.0	40.0-47.0
	3	7.0-10.0	13.0-18.0	18.0-24.0	24.0-30.0	25.0-36.0	26.0-38.0	28.0-40.0		7.0-13.0	13.0-18.0	18.0-24.0	24.0-30.0	25.0-36.0
	4	3.7-5.0	10.0-12.0	12.0-16.0	15.0-23.0	17.0-28.0	18.0-30.0	20.0-35.0		4.0-5.5	10.0-12.0	12.0-16.0	15.0-23.0	17.0-28.0
	5	2.5-3.5	5.0-8.0	9.0-11.0	17.0-20.0	18.0-21.0	20.0-23.0	25.0-30.0		3.0-4.0	5.0-8.0	9.0-11.0	17.0-20.0	18.0-21.0
	6	1.5-2.5	4.0-6.0	6.5-7.3	10.0-12.1	12.0-17.0	13.0-20.0	18.0-26.0		2.2-3.5	4.0-6.0	6.5-7.3	10.0-12.1	12.0-17.0
	8	0.6-1.2	2.0-3.0	4.0-5.0	5.0-6.2	9.0-13.0	10.0-15.0	12.0-18.0			2.0-3.0	4.0-5.0	5.0-6.2	9.0-13.0
	10		1.0-1.9	2.0-2.7	2.8-3.5	3.5-7.0	4.0-7.5	5.0-9.5			1.0-1.9	2.0-2.7	2.8-3.5	3.5-7.0
	12		0.8-1.4	1.5-1.9	1.9-2.4	2.0-5.0	3.0-6.0	4.0-7.0				1.5-1.9	1.9-2.4	2.0-5.0
	16		0.6-0.9	1.0-1.3	1.1-1.7	1.3-2.5	1.5-3.0	1.8-4.0					1.1-1.7	1.3-2.5
	20			0.6-0.8	0.7-1.0	1.0-1.5	1.2-1.7	1.4-2.0						1.0-1.5
	25				0.4-0.6	0.6-0.8	0.7-1.0	0.8-1.1	1.0-1.5					
	30				0.3-0.5	0.4-0.6	0.5-0.7	0.6-0.8	0.7-1.0					
	40							0.5-0.8						
Aluminum alloy (AIR)	1		45.0-55.0											
	2		21.0-32.0											
	3		14.0-19.0											
	4		11.0-13.0											
	5		6.0-9.0											
	6		4.5-6.5											
	8		2.4-3.5											
	10		1.2-2.3											
Brass (N2)	1													
	2	28.0-55.0	45.0-55.0	50.0-60.0	55.0-60.0	55.0-65.0	58.0-70.0	62.0-75.0	10.0-12.0	25.0-32.0	45.0-55.0	50.0-60.0	55.0-60.0	55.0-65.0
	3	9.0-20.0	25.0-31.0	28.0-33.0	30.0-38.0	32.0-40.0	35.0-44.0	40.0-50.0	2.0-3.8	10.0-13.0	25.0-35.0	28.0-33.0	30.0-38.0	32.0-40.0
	4	4.5-10.0	12.0-18.0	13.0-19.0	15.0-23.0	16.0-26.0	18.0-30.0	25.0-35.0		5.0-6.5	12.0-18.0	13.0-19.0	15.0-23.0	16.0-26.0
	5	2.5-4.5	8.0-10.0	9.0-12.1	10.0-16.5	12.0-19.5	13.0-21.5	15.0-28.0		3.0-5.2	8.0-10.0	9.0-12.1	10.0-16.5	12.0-19.5
	6	1.2-2.5	4.5-6.0	7.5-8.8	9.0-12.8	10.0-14.8	11.0-15.8	13.0-17.0		2.0-3.0	4.5-6.0	7.5-8.8	9.0-12.8	10.0-14.8
	8	0.9-2.0	3.0-4.0	6.0-6.6	7.0-9.0	8.0-13.0	9.0-14.0	11.0-16.0		1.4-2.0	3.0-4.0	6.0-6.6	7.0-9.0	8.0-13.0
	10		1.6-2.2	3.5-4.7	4.5-5.7	5.5-7.7	6.0-8.0	7.0-10.0			1.6-2.2	3.5-4.7	4.5-5.7	5.5-7.7
Red cooper (O2)	1													
	2	18.0-38.0	30.0-40.0	50.0-59.4	52.0-59.4	54.0-60.0	55.0-64.0	60.0-70.0	6.0-8.0	25.0-35.0	30.0-40.0	50.0-59.4	52.0-59.4	54.0-60.0
	3	5.5-9.5	9.0-11.0	28.0-33.0	30.0-35.8	33.0-38.0	35.0-40.0	40.0-50.0		8.0-10.0	9.0-11.0	28.0-33.0	30.0-35.8	33.0-38.0
	4	1.7-3.8	7.0-9.8	12.0-17.6	14.0-21.1	16.0-23.0	18.0-25.0	20.0-30.0		2.5-3.5	7.0-9.8	12.0-17.6	14.0-21.1	16.0-23.0
	5		4.0-6.0	9.0-11.0	10.0-14.3	12.0-15.3	13.0-16.3	15.0-20.0		1.0-1.5	4.0-6.0	9.0-11.0	10.0-14.3	12.0-15.3
	6		1.3-2.0	6.0-7.9	8.0-10.3	9.0-12.0	10.0-14.0	12.0-18.0			1.3-2.0	6.0-7.9	8.0-10.3	9.0-12.0
	8		0.8-1.3	4.0-6.1	5.0-7.9	6.0-9.0	7.0-10.0	8.0-15.0			0.8-1.3	4.0-6.1	5.0-7.9	6.0-9.0
	10		0.6-1.0	2.2-3.2	2.8-4.2	3.3-5.2	3.7-6.0	5.0-7.0				2.2-3.2	2.8-4.2	3.3-5.2
Red cooper (O2)	12			1.2-1.7	1.4-2.1	1.8-2.5	2.0-2.8	3.5-4.5					1.4-2.1	1.8-2.5
	14			0.8-1.1	1.0-1.4	1.2-1.6	1.3-1.8	1.5-2.8						1.2-1.6
								1.0-2.0						



## COMPARISON OF CUTTING GAS AND COSTS BETWEEN LOW AND HIGH POWER

		2000-3000W				8000-15000W			
Material Name	Thickness (mm)	Cutting pressure (Mpa)	Gas consumption (M <sup>3</sup> /H)	Weight of liquefied gas (kg/H)	In total (RMB)	Cutting pressure (Mpa)	Gas consumption (M <sup>3</sup> /H)	Weight of liquefied gas (kg/H)	In total (RMB)
Stainless Steel (N2)	0.5-1	1.2	14.625	13.16	13.16	1.2	14.625	13.1625	15.795
	1.1-2.0	1.3	15.75	14.17	14.17	1.3	15.75	14.175	17.01
	1.5-2.0	1.4	16.875	15.18	15.18	1.4	16.875	15.1875	18.225
	2.1-3.0	1.5	34	30.6	30.6	1.5	34	30.6	36.72
	3.1-4.0	1.6	53.125	47.81	47.81	1.6	53.125	47.8125	43.03125
	4.1-5.0	1.7	72	64.8	64.8	1.7	72	64.8	77.76
	5.1-6.0	1.9	90	81	81	1.9	90	81	97.2
	6.0-8.0	2.2	140.875	126.78	126.78	2.2	140.875	126.7875	152.145
	9.0-10.0	2.3	192	172.8	172.8	2.3	192	172.8	207.36
	10.1-12.0					2.4	200	180	216
	14.0-16.0					2.5	208	187.2	224.64
	18.0-22.0					2.5	208	187.2	224.64
	24.0-26.0					2.5	208	187.2	224.64
	30.0-50.0					2.5	208	187.2	224.64
Carbon Steel (O2)	0.5-1	0.5	6.75	6.07	7.29	0.5	6.75	6.075	7.29
	1.1-2.0	0.45	6.1875	5.56	6.68	0.45	6.1875	5.56875	6.6825
	2.1-3.0	0.4	5.625	5.06	6.07	0.4	5.625	5.0625	6.075
	3.1-6.0	0.2	3.375	3.03	3.64	0.2	3.375	3.0375	3.645
	6.1-8	0.15	5	4.5	5.4	0.15	5	4.5	5.4
	10.0-12.0	0.15	5	4.5	5.4	0.15	5	4.5	5.4
	12.1-14.0	0.15	7.815	7.03	8.44	0.15	7.815	7.0335	8.4402
	14.1-16.0	0.15	11.25	10.12	12.15	0.15	11.25	10.125	12.15
	16.1-20.0	0.15	20	1.8	21.6				
	16.1-50.0					0.15	20	1.8	21.6



# EXHIBITIONS

ALL OVER THE WORLD





# CUTTING SAMPLES

Sheet cutting



Tube cutting



High-precision cutting



Artistic decorations



Edition No.: 2021.06

All technical parameters shall be subject to the latest edition.