Machine Model:	HSG C3015	Origin:	CHINA
Description:	FIBER LASER MACHINE 3KW, 3000X1500 mm		

Technical Data

Working area	mm	*1524*3048*
X/Y/Z Axis Route	mm	*1524/3048/70*
Max Accelation	G	*1.5*
Max Speed	m/min	*120*
Positioning Accuracy	mm/m	*±0.05*
Loading Weight	kg	*≤3KW About 600kg;*
Dimension	mm	*About 4800×2500×1650*

Operation Requirement

Electricity

Voltage: 380V,3phase

Frequency: 60Hz

Voltage stability: ±5%

Voltage regulation: <2%

Assist gas Supply Cutting

Purified dry compressed air and high purity,Discharge Oil Content : ≤0.01ppm.Solid ≤0.01um .Dew point：-20 ℃ ~ - 40 ℃

Oxygen (O_2) and nitrogen (N_2) purity not less than 99.9% Air ,Oxygen and nitrogen pressure not less than 1.6 MPa

Sheet metal

Homogeneous

Smooth

Clean

Compressed Air Supply Device

Pressure: 0.6 - 0.8MPa

Volume: ≥ 0.4m ³

Discharge Oil Content : ≤0.01ppm.Solid ≤0.01um .

Dew point：-20 ℃ ~ - 40 ℃

Configuration List

Optical	*Laser Source*	*Raycus*
	Laser Head	*Kingle-NC30*
Transmission	*Servo Motor*	*leadshine*
	Reducer	*Motoreducer*
	Rack	*LEITESEN/J&T*
	Rail	*LAPPING/DTX*
Mechanical	*Machine Body*	*Carbon Structural Steel Welded*
	Cross Beam	*Aluminum Beam*
Control	*Operating System*	*AlphaT2.0 Bus Control System*

	Nesting Software	*Standard*
	Gas Control Proportional Valve	MOOXEE(≤3KW)
External	*Water Chiller*	*Standard*
	Installation Kits	*Standard*

Main Configurations

Laser source

The fiber lasers developed by IPG/Raycus is characterized by high power conversion efficiency, high-quality light beam, high energetic density, wide modulation frequency, high reliability, long life span and maintenance free. Fiber length can be customized, depending on the demand of customers.

Laser Cutting Head

Applied motor servos, the cutting head can achieve ±0.01mm focusing accuracy and the time of focusing response less than 100 microsecond.

The internal of cutting head is designed as water-cooling structure with fully sealed structure, which satisfies IP65 protection level.

Carbon Structural Steel Welded Machine Bed

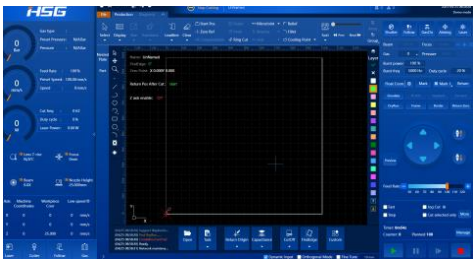
The machine bed applied the entirely welded and is processed after eliminating the internal stress. The processing flow: weld→eliminating the internal stress→rough machining→vibratory stress relief→finish machining.

The machine bed can eliminate the strain during welding and improve the stability of machine bed obviously for long-term precision of the machine bed.

Brand-new Fifth Generation 6 series Aluminium Beam

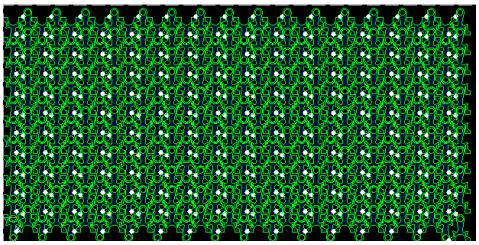
Compared with the last generation, the weight of new beam decreases 20% and the torsioal behavior improves 15%. The lightweight beam can play highly dynamic role in machines and improve processing efficiency.

Intelligent Control System



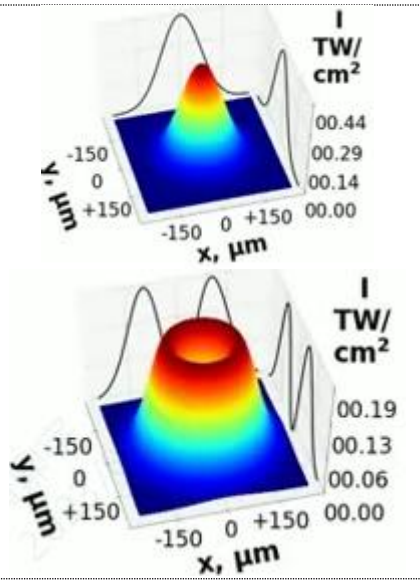
With less than 100 microseconds processing response time, the bus control system can monitor real-time machine bed, lasers, water-cooling machine and cutting head, and satisfy the demand of specific functions from customers. Standard nesting software can improve utility of materials and has functions of light shaped algorithm, focus compensation algorithm, flight cutting, film removal cutting, following cutting, intelligent leapfrog obstacle avoidance, automatic edge finding and others.

Nesting Software

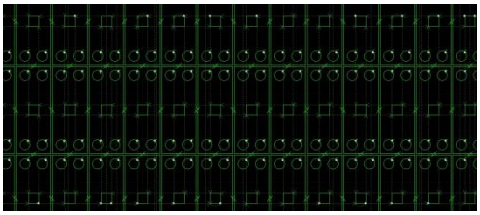


The software can read numerous data easily, support DXF,DWG formats papers. High-utilization nesting algorithm can reduce material waste, support automatic or manual nesting and generate multiple types of written instructions, quotations and other measurement tickets.

Light Beam Shaped

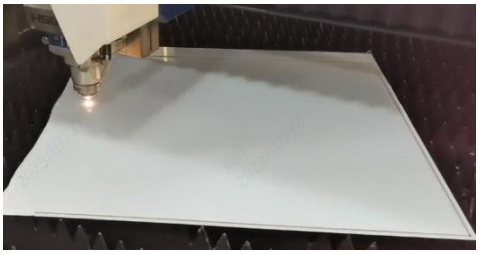


According to the material thickness, the machine can control the size of light spot accurately. The focus depth and the density of laser energy can adapt different types and thicknesses sheets to achieve high-speed cutting of thin sheets and stable cutting of thick sheets.



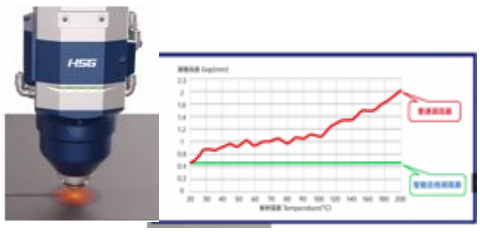
Fly Cutting

When the cutting graphics are regular graphics (such as square, rectangle, circular) and a certain regular arrangement, through the flight cutting function will be in the same direction of the line segments together for flight cutting, in the application process of laser, cutting auxiliary gas maintain enabling state, cutting head cutting height state operation, which will greatly improve the cutting speed, save cutting time.



Membrane Removal Cutting

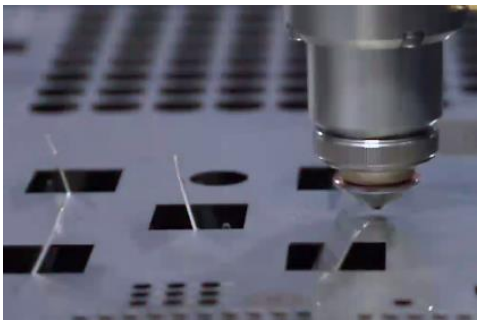
Perform a film removal along the cutting path using the film parameters, and then process normally according to the layer parameters. It can be used to remove the rust or protective film on the surface of the plate. This function can not only solve the problem of cutting stainless steel with film, but also solve the problem of cutting jitter on some rusty carbon steel sheets.



Height Automatic Adjustment System.

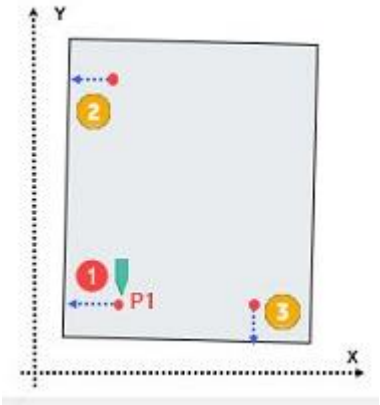
Non-contact height following function;

Adjusting the focal length precisely and automatically according to the height of metal plate.



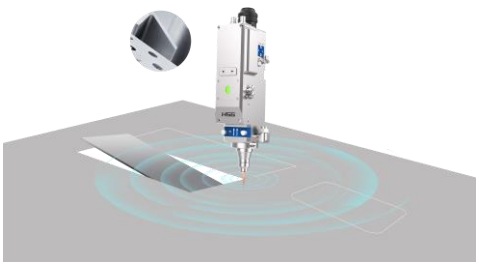
Intelligent Leapfrog Obstacle Avoidance

According to the size of the part, the height of the part is calculated to intelligently judge the starting height of the leapfrog. This function not only shortens the empty time of the cutting head, but also provides a more intelligent obstacle avoidance frog jump algorithm.



Automatic Edge Finding

Automatic calculation of the angle between the sheet and the machine tool coordinates, automatic rotation of the coordinate system for sheet processing, help users to save the traditional calibration process of the plate, save processing time for customers.



Common Edge of Cutting Line

Work-pieces with the same boundary are combined together to share a cutting line, which helps users save parts processing length and saves processing time for customers.

Cutting Thickness

Item	*Cutting Thickness*
Stainless steel (N2)	*10 mm*
Carbon Steel (N2)	*20 mm*
Galvanized Steel (N2)	*8 mm*
Aluminum (O2)	*8 mm*
Red copper (N2)	*3 mm*
Brass (N2)	*6 mm*