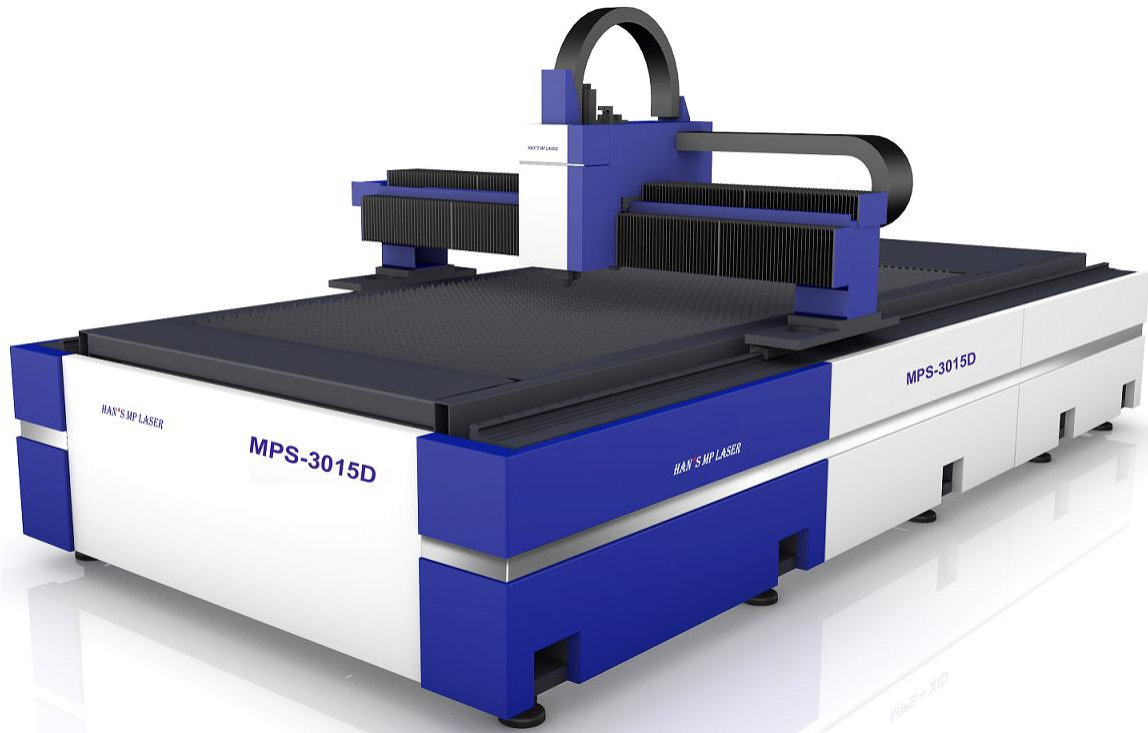




**N A R E X**

## FIBER LASER CUTTING MACHINE

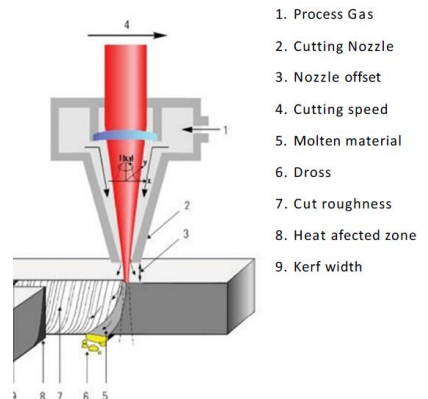


### LASER CUTTING PRINCIPLE

Laser beam passes through fiber and focusing lens to focus on the workpiece surface. Laser beam spot is high energy density, with instant high-temperature to melt or vaporize the material. Under the control of the computer, the laser will cut workpiece into the desired shape.

The basic principle of laser cutting: the laser focus on the material, the material will heat until more than the melting point of the metal, and then use the coaxial nozzle high pressure gas to blow off molten metal, along with the beam and the material relative linear movement, the holes are formed continuously very narrow kerf width.

### *principle of laser cutting*



## SYSTEM INTRODUCTION

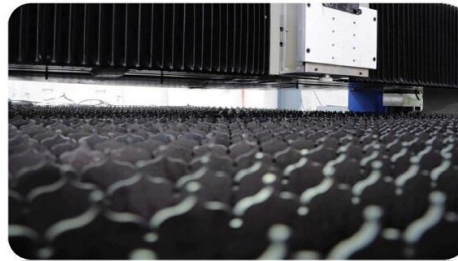
Laser cutting machine consists by laser generator, control system, motion system, optical system, cooling system, exhaust system and protection air blow system. The system commonly used in carbon steel, stainless steel, spring steel, alloy steel, galvanized sheet, aluminum and other metal sheet, The maximum cutting thickness is less than or equal to 6mm. (cutting depth may differ for different materials)

## TYPICAL APPLICATIONS

- Kitchenware (the whole cabinet)
- Various cabinets (such as electrical cabinets)
- Office furniture (such as a file cabinet)
- Motor plate
- Lamp housing, advertising signs
- White household appliances, home Furnishing appliance
- Metal doors and windows
- Auto Parts
- Electronic components, mobile phone, MP3

<b>Performance parameters</b>	<b>MPS-3015D</b>
<b>Laser source</b>	<b>IPG: 2000W</b>
Processing Area (X x Y)	3000mm x 1500mm
Dimension (L x W x H)	5000mm x 2600mm x 1850mm
The max. positioning speed	100m/min
Acceleration	1G
X axis	3000mm
Y axis	1500mm
Z axis	250mm
X/Y positioning accuracy	±0.05mm
X/Y repeat positioning accuracy	±0.03mm
Power Parameter	3 phase 380V 50/60HZ
Max. Loading Weight	750kg
Machine Tool Weight	4000kg
<b>Brand New</b>	<b>Made In China</b>

High Speed  
Stability



## FEATURE

Thick structure, lower center of gravity, high-speed stability, plate auto-change, dual-drive. The bed adopts the whole welding structure, roughing after annealing to eliminate stress.

After finishing secondary vibration treatment, the method makes a better solution to the stress generated due to welding and machining, thus greatly improving the machine stability. X, Y, Z axis. Servo motors are imported from Japan, with a high precise ball screw, high precision linear ball guide rail, high precision disc gear, and high precision helical gear rack, effectively ensure the transmission accuracy; the machine is equipped with automatic lubrication system.

The cutting area with dust exhaust system at the bottom of the cutting area equipped with scrap car that is pulled out to clean up waste regularly.

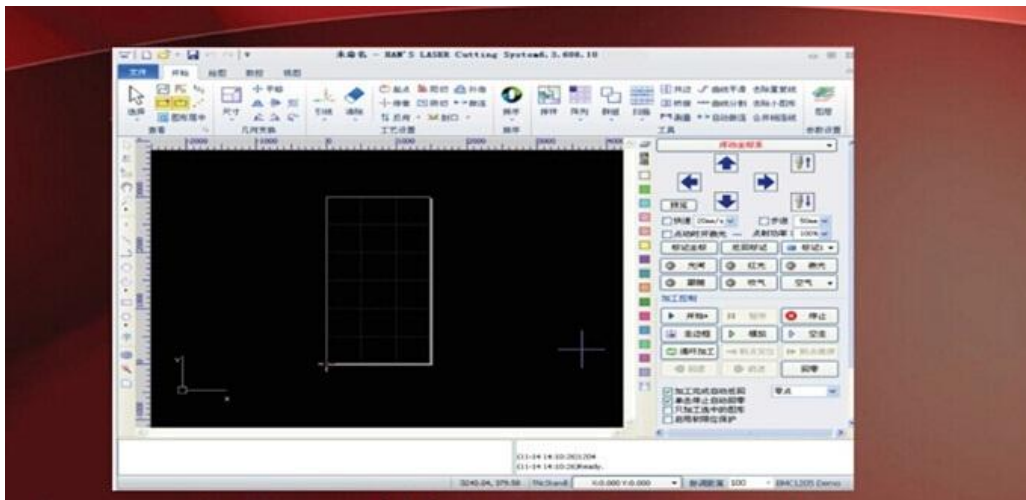
## EQUIPMENT CHARACTERISTICS

- Low cost, high photoelectric conversion efficiency; it can blow air cutting all kinds of metal sheet;
- High performance, import the original fiber laser generator, stable performance, service life of up to more than 100,000hours;
- High speed, high efficiency, cutting speed up to 10+ meters/minute;
- The cutting edge is good quality, less deformation, very smooth;
- Uses the imported oriented transmission mechanism and servo motor, high precision cutting;
- Be optional design and graphic or text instant cutting, the operation is simple, flexible, convenient.



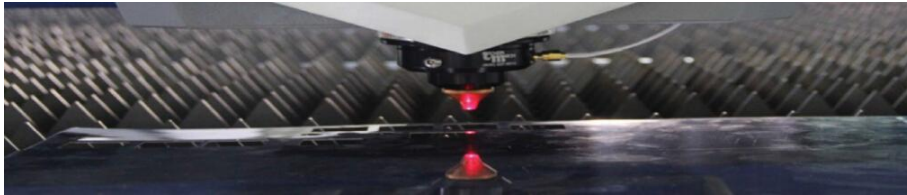
## SOFTWARE

- Fully support AI, DXF, PLT, Gerber and other graphics data format of G code, to accept the international standard Mater Cam, Type3, Wentai and software generation.
- Be open / import DXF external file, automatic optimization, including: remove duplicate lines, with connected line, remove small graphics, automatically distinguish between inner and outer mold and sorting. The automatic optimization process can be defined
- Fully supports the common editing and typesetting function, including scaling, rotating, alignment, replication, combination, smooth, merger etc..
- Be in WYSIWYG mode setting into pinout, cutting gap compensation, micro even, bridging, undercutting, keep the gap etc..
- The distinction between internal and external mode is automatic, and according to the internal and external mold to determine the direction of cutting gap compensation, lead wire inspection etc.
- Fully support curve segmentation, merging, curve smoothing, text to curves, with scattered parts, etc..
- Automatic sorting and manual sorting function is flexible, supported by the group part of fixed processing order.
  - The processing order is unique browsing, than the simulation more interactive view processing order.
  - Fully support segment perforation, perforation, gradual pre perforation, support for the perforation process and cutting process setting laser power, single frequency, laser, gas type, pressure form, follow the height.
  - Fully support adjusted with the speed power, may be provided separately introduced pinout speed.
  - Be strong material base function, allows all parameters stored for the same material used again.
  - Is breakpoint memory breakpoint processing, forward backward traceability; allow part of graphics processing.
  - Fully support the stop and pause to any point in the process of localization, processing starting from an arbitrary position.
  - Exactly the same set of software support for cutting pipe cutting and plane, programming in exactly the same way; support of intersecting line cutting.
  - Fully support fixed high cutting, automatic edge searching and board outside the knife.
  - Expansion ability is strong, up to 15 PLC editing, more than 30 programmable process.

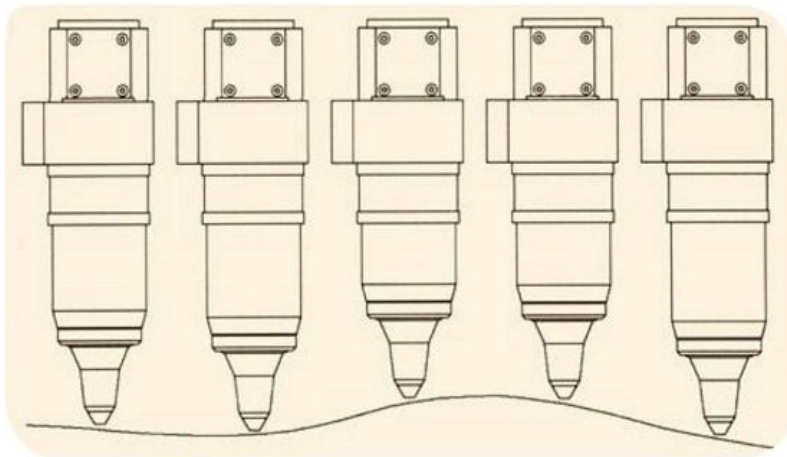


## PROFESSIONAL LASER CUTTING HEAD –RAYTOOLS (SWITZERLAND)

The laser head is professional for imported source, and professional to work with non-contact capacitive highly automated tracking system. According to physical characteristics of the fiber laser, the 5 inch focal length lens of laser head can be used for cutting sheet metal with different thicknesses, without the trouble to replace the different focusing lens.



For large format laser cutting machine, processing of different local height is slightly different, so that the material surface deviates from the focal length, this is not the same in different place of the focused spot size, power density is not the same, different cutting position of laser cutting quality is not consistent, did not reach the quality requirement of laser cutting. The cutting head with the dynamic system can ensure uniform height of cutting head and cutting materials, thus ensuring the cutting effect.



## CONFIGURATION

Model	Name	Origin	Features
<b>Laser</b>	Fiber laser	IPG	2000W
PC control system		CYCUT	<ul style="list-style-type: none"> <li>● Four cores CPU i3, Memory 4G, Hardware 500G</li> <li>● Graphic functions</li> <li>● Computer communication interface: Ethernet, USB etc.</li> <li>● OS:WINDOWS</li> <li>● 19" LED displayer</li> </ul>
Pneumatic system	Valve	Airtac	Throttle valve One-way valve Pressure sensor Cylinder solenoid valve Electric proportional Valve
Drive system	Servo motor	YASKAWA	Japan
	High precision Heralical Rack & pinion	YYC/APEC	Taiwan
	High precision Gear box	NEUGART/ST OBER	Germany
	Linear ball guide rail	HIWIN/ROUS T	Taiwan/Germany
Capacitive vertical tracking system	Capacitive sensor	Han's Laser	Han's Laser
	Adjustment box	Han's Laser	Han's Laser
	Amplifier(built-in)	Han's Laser	Han's Laser
Electric system	Contactora, air switch	Weidmuller/Schneider	Germany/France
<b>Software</b>	Nesting Software	CYCUT	CYCUT

### LASER SOURCE-IPG YLS 2000W

***Han's Laser is IPG's first and biggest fiber laser integrator in the world.***

- High laser power with quality beam
- Low electric power consumption, Compared with CO2 laser, it save 1/3 running cost.
- High stability in applications, the life time is more than 100,000 hours.
- Easy operation & free maintenance, based on diode module, its single emitter structure, plug and play style, redundancy design keep the whole system in high stability and efficiency.
- Compact, flexible to move around, high resistance to humidity, turbulence, pollution and bad temperature and environment



Operating Mode	CW, QCW
Wavelength	1070 - 1080nm
Standard Output Power	2000W
Laser Beam Quality	≤4 mm*mrad
Adjustable Frequency	5 KHz
Transmission Fiber Diameter	≥50 μm
Stability of Output Power	±2%
Power Supply	400-460V/3P+PE
Power Consumption	5.8KW
Cooling Water Flow Rate	0.6M3/h
Dimension	1004mmx804mmx556mm
Weight	170kg

## 2000W

Cutting Ability (Max. and Mass production)	
Carbon	14mm
Stainless Steel	8mm
Aluminum	6mm
Brass	4mm

**Note:** Our cutting ability numbers are based on actual tests and are production actual capabilities, cutting ability can go higher based on only piercing.

## LASER CUTTING SYSTEM CONFIGURATION

No.	Name
1	Laser Cutting machine tool (Provided by Han's Laser)
2	Fiber Laser Source - (Provided by Han's Laser)
3	Screw Air Compressor with built-in filter and dryer (Provided by customer)
4	Controller System (Provided by Han's Laser)
5	Water Chiller (Provided by Han's Laser)
6	Power Stabilizer (Provided by Han's Laser)
7	Programming & Nesting Software (Provided by Han's Laser)
8	Dust extractor (Provided by Han's Laser)

# INDUSTRY APPLICATION

## Kitchen Equipment

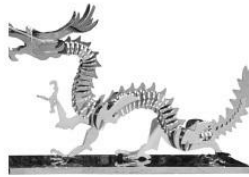


## Ventilation





## Art Ware



## Automobile



## Metals



## Logos



## Sheet Metal



## Lampshade



