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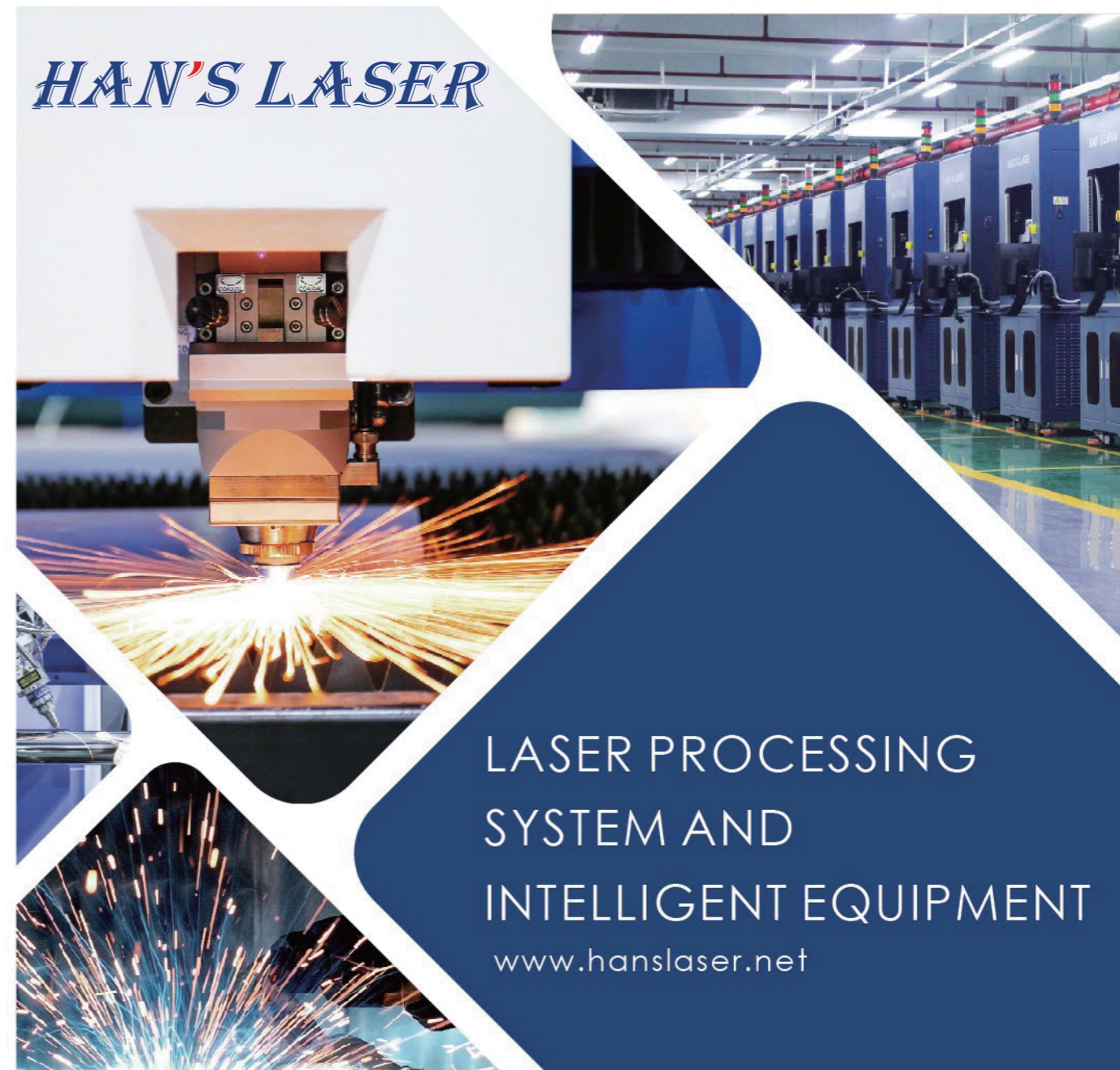


Han's Laser Mobile Official Website

# HAN'S LASER 大族激光

Stock Code: 002008

## HAN'S LASER



### LASER PROCESSING SYSTEM AND INTELLIGENT EQUIPMENT

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WE FOCUS  
ON LASER

# WORLD'S TOP LASER SYSTEM SUPPLIER



■ Han's laser

## Introduction

Han's Laser Technology Industry Group Co., Ltd, a public company which was established in 1996, has now become the flagship of Chinese national laser industry and the world's famous laser equipment manufacturer.

Han's Laser is committed to providing customers with the latest industrial laser machine technology to better suit their special needs.

Han's Laser went public in Shenzhen Stock Exchange Market in 2004. And as of today, its market value reaches more than 6 Billion USD.

### Product

Han's Laser supplies both domestic and international customers a whole set of laser processing solutions and related supporting facilities. Main product portfolio covers more than 200 models of industrial laser equipments including Laser Marker Series, Laser Welder Series, Laser Cutter Series, High Power Laser Cutter and Welder Equipment, Laser Display Series, PCB Laser Driller Series, Semi-conductor and Automation and Industrial Robot etc. They have been widely adopted in the production of rail transit, ships, IT manufacturing, electronic appliances, integrated circuits, instruments and meters, PCB, computers, communication equipments, automobile parts, precision machineries, building materials, hardware tool, garments and accessories, urban lighting, gold and silver jewellery, art and craft goods, food and medicine packaging, etc.

### R&D

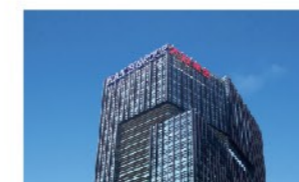
Han's Laser has strong R&D abilities and it has obtained more than 130 international patents for invention, More than 4500 national patents, including more than 990 patents for invention, and 206 copyrights for computer software. Multiple core technologies have reached international leading level.

### Quality

We have ISO9001: 2015 Quality Management Certificate and ISO 14001: 2015 Environment Management Certificate. There are many series of laser equipments certified with CE standard. Our QC engineers carefully check all the operations in the supply chain, ensuring high quality of Products.

### Service

Han's Laser owns 105 sales and after-sales center in China and has office in Korea, India, Thailand Vietnam, Malaysia, Japan, and China Taiwan. Qualified distributors are increasing every year in each continent. Industry application centers provide customers with laser processing solutions. It has established industry service group consisting of multiple industry application centers, which provides customers with laser processing technology analysis and comprehensive laser application solutions for realizing close connection of laser technology and various industry manufacturing technologies. Complete service and nationwide technicians can provide customers with considerate after-sales services.



Headquarter



Manufacturing Base



R&D Center



USA Branch San Jose



Intelligent Manufacturing Base



Innovation Center



Suzhou Industry Zone



Baublys Laser GmbH, Germany

# LASER MARKER SERIES

## FIBER LASER MARKING MACHINES

Samples

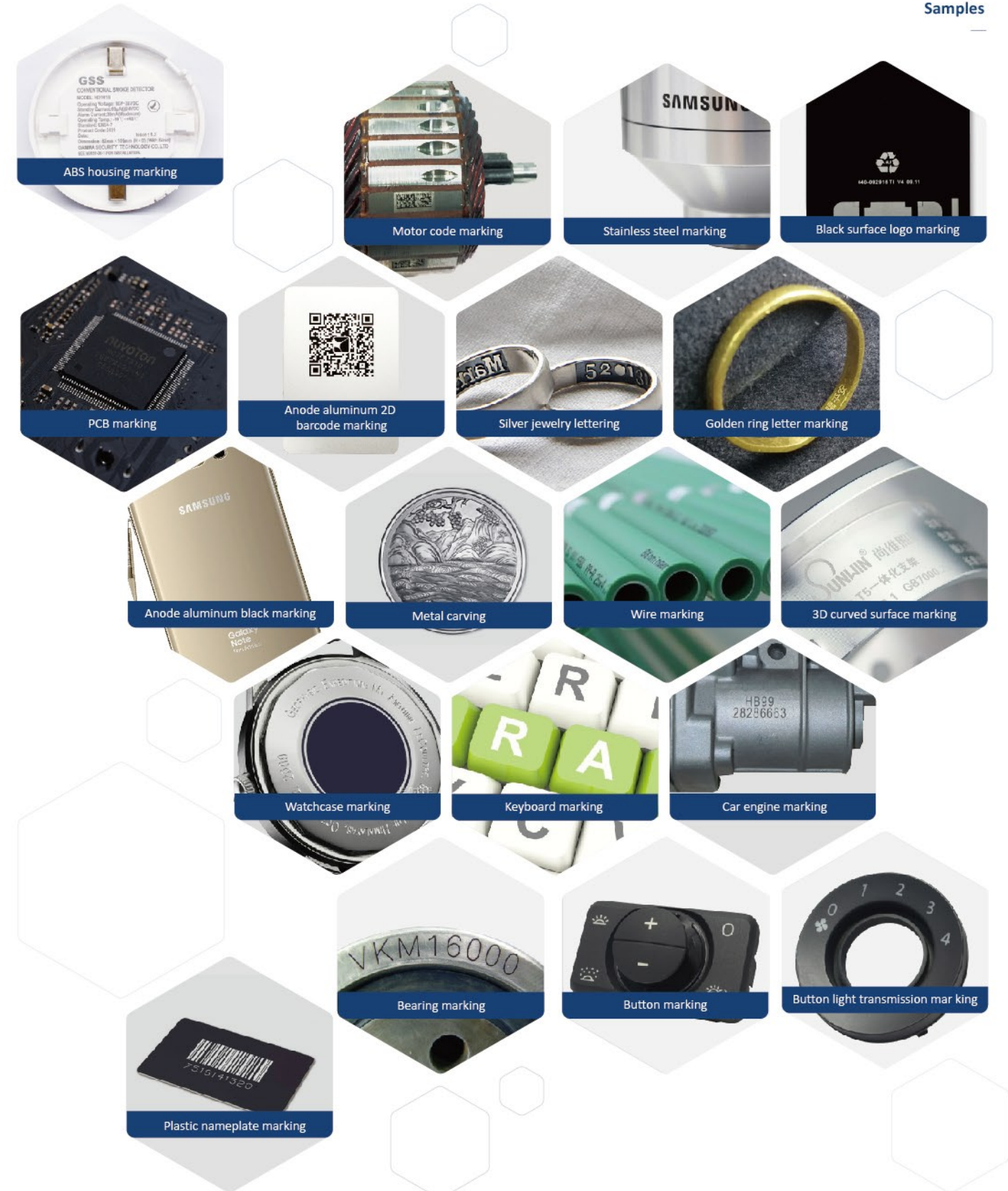
### Laser source

According to the absorption characteristic of material to laser, laser markers can be divided into two large series:  
1. Solid-state laser; 2. CO2 laser. Customers can choose different series of laser markers based on the materials characteristics.  
The following table lists the classification of commonly used materials.

Solid-state laser series (The followings are some materials applicable for solid-state laser)	
Material name	Application field
Common metal and alloy	All metals such as iron, copper, aluminum, magnesium and zinc.
Rare metal and alloy	Gold, silver, titanium and platinum
Metallic oxide	Various metallic oxides
Special surface	Phosphatizing, aluminum anodizing and plating surface
treatment Crystal	Crystal inside engraving
ABS material	ABS Electrical appliance housing and daily necessities
Ink	Transparent button and printed matter
Epoxy resin	Packaging of electronic components, insulating layer

CO2 series (The followings are some materials applicable for CO2 laser)	
Material name	Application field
Polyvinyl chloride	Tubular product, wire insulating layer and sealing element
ABS material	Electrical appliance housing and daily necessities
Acrylic	Transparent material and instrument and meters housing
Polycarbonates pc	Transparent product with high impact resistance requirement
Unsaturated polyester	Coating, decoration, sheet material and button
Polyurethane	Shoe sole, artificial leather and oil paint
Epoxy resin	Packaging of electronic components, insulating layer
Glass	Glass surface



## Fiber laser marker

### Product appearance



HM20/ 30/ 50/ 100

YLP-F10/ 20/ 30/ 50/ 100/ 200

YLP-MDS 3D surface marker

### Specifications

Machine model	HM20/ 30/ 50/ 100	YLP-F10/ 20/ 30/ 50/ 100/ 200	YLP-MDS 3D surface marker
Laser Wavelength	1064nm		
Laser Power	20W/ 30W/ 50W/ 100W	10W/ 20W/ 30W/ 50W/ 100W/ 200W	10W/ 20W/ 30W/ 50W (SPI)
Repeating Frequency	1.5 -1000KHz	20-500KHz	1-1000KHz
Marking Field..	100mm×100mm (F160)	100mm*100mm (F160)	160mm*160mm (F254)
Light Focal Length	197mm	197mm/ 298mm	290mm
Beam quality M <sup>2</sup>	≤ 1.3	≤ 2	≤ 1.3
Marking Speed	≤7000mm/s		
Repeat Accuracy	±0.003mm		
Min. Character Size.....	0.1mm	0.5mm	0.5mm
Marking Line Width	10μm	30μm	30μm
System Weight	120KG	260KG	240KG
Power Supply	AC220V/ 50Hz/ 2.5A		
Overall Dimension	760mm×610mm×1494mm	840mm×800mm×1420mm	840mm×800mm×1400mm
Operation environment temperature	15℃-35℃		

### Product appearance



MARS with CE certification

LMS-100

### Specifications

Machine model	MARS with CE certification	LMS-100
Laser Wavelength	1064nm	1064nm
Laser Power	20W/ 30W/ 50W	20W
Repeating Frequency	20-200KHz	1-1000KHz
Marking Field	100mm×100mm(Optional)	100mm×100mm(Optional)
Light Focal Length	197mm	185mm
Beam quality M <sup>2</sup>	≤ 1.3	≤ 1.3
Marking Speed	≤7000mm/s	≤4000mm/s
Repeat Accuracy	±0.003mm	±0.001mm
Min. Character Size	0.5mm	0.1mm
Marking Line Width	30μm	20μm
System Weight	100kg	300kg
Power Supply	220V/ Single Phase/ 50Hz/ 2.5A	220V/ Single Phase/ 50Hz/ 2.5A
Overall Dimension	572mm×177 mm×440mm 590 mm×125 mm×140 mm	1000x800x1600mm
Operation environment temperature	15℃-35℃	

## G20 Laser Marking Machine

### Features

- Small and compact size, air-cooling system.
- Fiber output, easy to make 3D processing system.
- Install backward reflecting isolator, which uses the particularity of wavelength and direction of laser, and the special structure inside the backward reflecting isolator, to block the laser reflected by work piece, in order to avoid the laser enter the laser oscillator again to damage the laser oscillator.

### Application

- Various metal materials, part of non-metal materials.
- The fiber optic laser oscillator marker has advantage of high beam quality and high reliability. It is suitable for processing fields that need high marking depth, smoothness and accuracy.

Electronic components industry

Medical device industry

Glasses, watch and clock

IC card industry

Kitchen and bathroom appliance

Plastic tool industry

### Product appearance



### Specifications

Model	G20	
Laser output power	20W	
Focus lens	F160 (standard)	F254(optional)
Marking area	100mmx100mm	160mmx160mm
Marking speed	300 characters/sec, height=0.039"	
Min. character size	0.3mm	0.5mm
Min. line width	50μm	90μm
Wave length	1064nm	1064nm
Beam quality M2	< 1.6	
Power stability(8h)	< ±1% rms	
Pulse repetition frequency	1.6kHz-1000kHz	
Marking depth	≤0.4mm	
Marking speed	≤7000mm/s	
Repetition accuracy	±0.003mm	
Power consumption	500W	
Indication light	Red light wavelength=650nm	
Cooling mode	Air cooling	
Running temperature	15℃-35℃	
Electrical source requirement	110-220V/ 50Hz (60Hz) / 4A	
Dimensions (L*W*H)	1560mmx800mmx756mm	
Weight	121kg	



### General radium carving machine for smoke alarm

#### Characteristics

It is a general automatic equipment developed for various specifications of smoke alarm.

- Equipped with 4 laser heads, can do marking on both front and side for two products at the same time, greatly improve the production efficiency.
- Good versatility, compatible with a variety of different specifications of products.
- Able to clip round, square, oval and other shapes of products.
- Automatically feeding and unloading material, reduce labor cost

#### Applications



## Fiber laser marker

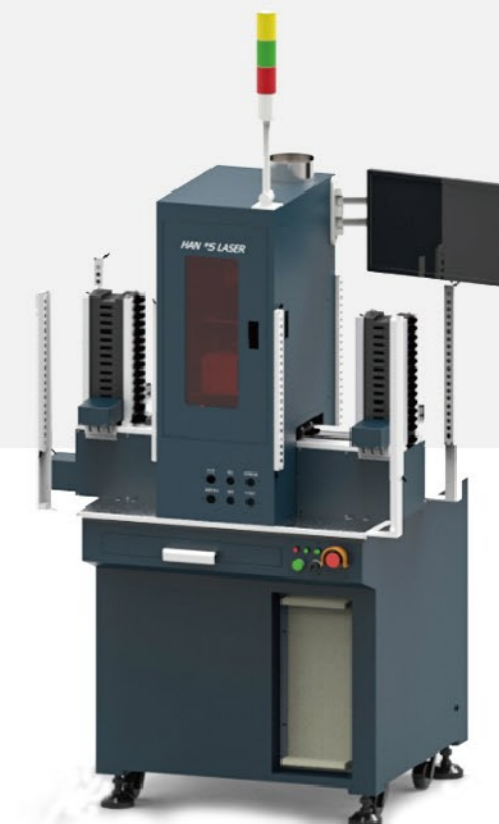
### Product appearance

### Radium engraving transcoding mass production equipment

- Steel radium engraving transcoding machine is an automation equipment mainly for marking QR code on steel. By reading the QR code on the side, the server will regenerate a new QR code and finish radium engraving after visual orientation.
- Working principle: Use the stackable tray with the function of automatically rising up and descending down to feed, transfer the material from the stack to the track by unloading device. The tray moves forward along with the platform, meanwhile, barcode reading & CCD positioning & marking will separately be completed. Then the platform keeps moving and automatically lift up the tray to unload the material.

#### Characteristics

- Double stack frames, automatically feeding and unloading material, CCD visual positioning system and barcode gun, which help realize the rapid operation and ensures the marking speed and accuracy.
- High automaticity, reduce the manipulation mistake and greatly improve the yield rate.
- Exquisite design and mature technology.



# DIODE END-PUMPED LASER MARKING MACHINES

## Principle of diode end-pumped laser marker

Diode end-pumped laser marker adopts internationally most advanced laser pump technology. Light(808nm) pumps directly through the end face of the crystal and output the laser through optic lens module. The laser pump technology makes optical-optical conversion efficiency of laser greatly improved and the conversion efficiency can be up to 45%. Besides, power consumption of pump source will decrease accordingly, which makes power consumption of water chiller and total power of the machine greatly decreased. Compared with side-pumped laser, end-pumped laser has better beam quality and higher peak power.

## Samples



## Infrared laser marker

Product appearance



## Specifications

Machine model	EP- 10A	EP- 15A	EP- 25	EP- 12	EP- 25 - Twin
Laser wavelength	1064nm				
Laser power	10W	15W	25W	12W	25W
Min. marking line width	50μm-70μm	50μm-70μm	50μm-70μm	30μm-50μm	50μm-70μm
Marking speed	300 characters/sec	300 characters/sec	300 characters/sec	250 characters/s	600 characters/s
Marking scope	160mm*160mm	160mm*160mm	160mm*160mm	100mm*100mm	160mm*160mm
Standard lens	F254	F254	F254	F160	F254
Pulse repetition frequency	10-200kHz				
Cooling mode	Air cooling	Air cooling	Water cooling	Water cooling	Water cooling
Power supply	AC 220V, 5A	AC 220V, 5A	AC 220V, 16A	AC 220V, 16A	AC 220V, 16A
Total power consumption	≤500W	≤500W	≤1.5kW	≤1.5kW	≤1.5kW
Overall dimension	700mm*950mm*1428mm			1000mm*1200mm*1400mm	

## UV laser and green laser marker

### Product appearance



Dual Station UV/green laser marker

Single station UV/green laser marker



### Specifications

Machine model	EP-15/25/30-THG-S/D	UV-3C	EP-20A/20-SHG-S/D	EP-25/30/40-SHG-S/D
Laser wavelength	355nm			
Laser power	4W/7W/10W/15W/25W	3W	10W	15W / 20W / 30W
Min. marking line width	10μm-15μm	10μm-15μm	30μm-50μm	30μm-50μm
Marking speed	250 characters/sec			
Marking scope	100*100mm			
Standard lens	F160			
Pulse repetition frequency	10-200kHz			
Cooling mode	Water cooling	Water cooling	Air cooling / Water cooling	Water cooling
Power supply	AC 220V, 50Hz, 16A	AC 220V, 50Hz, 10A	AC 220V, 50Hz, 10A	AC 220V, 50Hz, 16A
Total power consumption	≤1.5kW	≤1kW	≤1kW	≤1.5kW
Overall dimension	Single-station: 800*950*1630mm double-station: 800*1025*1500mm	800mm*950mm*1630mm	Single-station: 800mm*950mm*1630mm; double-station: 800mm*1025mm*1500mm	

## IC Marking Series

### Product appearance



HDZ-SIC100  
IC laser marking system

HDZ-SIC200  
IC laser marking system



### Specifications

Machine model	HDZ-SIC100/200
Marking scope	320mm*160mm
Product specification	L: 160-320mm; W: 30-80mm
Font	TFT and SHX; with font library module modification program
Final processing repeated positioning precision	±0.1mm
UPH	1200 pieces/h (idle)
Power supply	AC 220V, 50/60Hz
Air source	0.6-0.8 MPa
Overall dimension	2525mm*1665mm*2000mm/ 2515mm*1420mm*2000mm



### Fully automatic wafer laser marking machine

Product appearance



Specifications

Machine model	HDZ-WAF500	HDZ-WAF600
Laser type	Fiber laser, CO2 (optional)	UV, green light (optional)
Laser power (customized according to the customer's actual marking need)	Fiber 20W, CO2 10W	UV 7W, green light 10W
Cooling mode	Air cooling	Water cooling
Final processing repeated positioning precision	±0.2mm	±0.05mm
Processing product type	2 inch, 4 inch, 6 inch wafer	6 inch, 8 inch, 12 inch wafer
Power supply	220V, 50Hz	220V, 50Hz
Overall dimension (for reference)	900mm*1150mm*1700mm	1950mm*1650mm*1635mm

### Subsurface engraving machines

Product appearance



Specifications

Machine model	PHANTOM III	SUPER JET II	GLASS 3D
Max. crystal size (W*L*H)	240mm*240mm*120mm	750mm*450mm*30mm	180mm*180mm*120mm
Max. sub-surface engraving area (W*L*H)	100mm*100mm*100mm	700mm*400mm*30mm	100mm*100mm*100mm
Real max. sub-surface engraving speed	3000 points /s	3000~5000 points /s	3000 points /s
Crystal interior point size	40~90µm	50~90µm	40~90µm
Laser type	DRICO SERIES LASER sub-surface engraving green laser		
Cooling mode	Air cooling		Air cooling
Laser wavelength	Wavelength 532nm (green light)		Wavelength 532nm (green light)
Max. laser pulse energy	2.5mJ		2.5mJ
Max. laser output power	5W		5W
Laser class of laser	4		4
Main machine size (W*L*H)	1100mm*600mm*1250mm	1200mm*800mm*950mm	800mm*600mm*640mm
Main machine weight	100kg	200kg	80kg
Power demand	110~220V/50~60Hz		110~220V/50~60Hz
Total power consumption	1KW		1KW
3D camera	●		●

### 3D printer

#### Product appearance



Ray-everlasting series 3D printer DLP800D and DLP1080D

DLP top illuminating 3D printer DLP1080T

Laser metal powder 3D printer SLM150

#### Specifications

Machine model	DLP800D/ DLP1080D	DLP1080T	Machine model	SLM150
Molding size	96×60×200mm/ 144×80×200mm	285×160×400mm	Molding size	200 ×200 ×170mm(W×D×H)
XY pixel resolution	75μm	150μm	Laser type	The speed reaches 7m/s and the precision reaches 8 micrometer
Size deviation	±20μm	±20μm	High speed galvanometer	20-100 micrometer (adjustable), 50μm
Layer thickness	10~100μm optional	100μm	Layer thickness, spot	220V, current 32A/ 50-60Hz
Vertical shaping speed	20mm/hour	10mm/hour	Power supply parameter	Power supply parameter
Control system& software	PC+Win7+ touch screen, Slice&Control		Nitrogen generation system	Nitrogen module 0.3m <sup>3</sup> /min, the user can choose nitrogen making machine based on needs
Compatible file format	STL	STL	Argon supply	4~5bar, 0.6m <sup>3</sup> /H
Light source type	UV LED	UV LED	Compressed air supply	7bar, 20m <sup>3</sup> /H
Material type	Photosensitive resin	Photosensitive resin	System size weight	1500×1250×2000mm(W×D×H), net weight 1300KG
Power supply parameter	AC220V/5A/50~60Hz	AC220V/5A/50~60Hz	Printable powder type	Titanium alloy, aluminum alloy, nickel-gold high temperature alloy, Cobalt-chrome alloy, stainless steel/ iron-base alloy powder
Size	500×475×730mm/ 500×475×1000mm	1210×1128×2000mm	Installation site requirement	3500×2500×2000mm( WxDxH); Working temperature: 20-25 °C, 40-60% relative humidity;noises<70Db; ground bearing>265N/m <sup>2</sup>
Weight	40Kg	800Kg		
Optional configuration	Smart equipment/ remote control			

## Picosecond/ Femtosecond laser marking machine



#### Infrared Picosecond Laser

Item	Description
Equipment description	Infrared femtosecond laser
Model	DRACO-FSFL-807
Laser type	Fiber
Wavelength (nm)	1064nm
Average power (W)	20W
Pulse duration (width)	600fs
Dimension	800×440×180



#### Infrared Femtosecond Laser

Item	Description
Equipment description	Infrared picosecond laser
Model	DRACO-PS-30W-IR
Laser type	Fiber
Wavelength (nm)	1064nm
Average power (W)	30W
Pulse duration (width)	<10ps
Dimensions	700×400×163



# CO2 LASER MARKING MACHINES

## CO2 laser marker principle

CO2 laser is a gas laser and its wavelength is 10.6μm, belonging to mid-infrared frequency range. CO2 laser has larger power and higher photoelectric conversion efficiency and it is the laser with largest power at present.

CO2 laser takes CO2 as its working substance. Fill discharge tube with CO2 and other assistant gas. When high voltage is applied to electrodes, the discharge tube will generate flame and discharge, which can make gas molecular release laser. The released laser energy, after being amplified, can do laser processing.

## Samples



## Laser coding system

Product appearance



## Specifications

Machine model	HANS36K-T	HANS58K	HANS68K	Machine model	HANS600S-M
Laser type	CO2			Wavelength	355nm
Laser power	≥30W	≥55W	≥80W	Power	≥5W
Total power	≤1KW	≤2.5KW	≤2.5KW	Working Frequency	8-200KHz
Power demand	220V/ single phase/ 50HZ, 5A			Minimum Code Width	0.15mm
Cooling system	Air cooling	water cooling	water cooling	Minimum Character Size	0.40mm
Marking area	110x110mm			Repeatability Accuracy	±0.01mm
Main control cabinet	473x422x1208mm	680x525x869mm	680x525x869mm	Standard Marking Range	100mmx100mm
Laser optical girder	780x154x219mm	1049x154x171mm	1094x149x208mm	Standard Focal Length	186±2mm
Application	marking of white wine, medicine, bottled water and food third phase	tobacco, medicine, beer and barreled water	tobacco and beer	Optional Marking Range	60mmx60mm to 360mmx360 mm
				Nominal Line Speed	≥10000mm/s
				Printing Code	> 700 Chars/Sec
				Power Requirement	AC 220V/50HZ/10A
				Overall Power Consumption	Peak≤1.5KW, Averages0.75KW
				Cooling Mode	Thermostat water cooling
				Level of Protection	IP54
				Cable Length	3m
				Machine Size	main beam: 611.5mmx162mmx189mm lifting platform: 450mmx450mmx1100mm
				Application	Plastic, PE Bottle, package bag, PVC pipe line, etc. It is also used for data communication marking.

## CO2 laser marker

### Product appearance



### Specifications

Machine model	CO2-G10	CO2-D30	CO2-H55i	CO2-H30	CO2-S60XP	CO2-K120	CO2-H120		CO2-MP-G120	CO2-H180i	CO2-D200	CO2-HANS200	CO2-T300	CO2- MP- H320i	CO2- T400	CO2- T500	
Laser characteristics	CO2 laser	Wavelength: 10.6μm								Wavelength: 10.6μm							
	Highest power	10W	30W	55W	30W	60W	120W		120W	180W	200W		300W	320W	400W	500W	
	Power stability	±10%	±5%						±10%	8%	10%				5%		
Marking area	50mm×50mm	400mm×400mm			110mm×110mm	400mm×400mm		110mm x 110mm			600mm×600mm		650mm×650mm	110mm×110mm	650mm×650mm		
Engraving speed	≤3m/s									≤5m/s							
Min. line width	0.05mm	0.12mm							0.1mm			0.16mm		0.1mm	0.16mm		
Min. character	0.2mm	0.6mm							0.6mm			1mm		0.6mm	1mm		
Repeated position	±0.01mm									0.01mm							
Protection level	IP54									IP54							
Cooling mode	Air cooling				Water cooling					Water cooling							
Power supply voltage	220V/7A			220V/10A		220V/20A				Three phase AC 220V/20A			Three phase AC 220V/80A				
Power consumption	300W	900W	2kW	1.5kW	4.5kW				4kW			10kW			17kW		
Best using environment	Temperature	15℃~30℃									15℃~30℃						
	Humidity	45%~75%									45%~75%						
Dimension (L*W*H) / Weight	Optical system	1120×620×1370mm / 110kg			710×121×180mm / 30kg	1700×210×300mm / 55kg				1780×415×1190mm / 55kg		1770×200×245mm / 55kg		2115×730×1400mm / 350kg			
	Control system	Integrated machine			671×555×821mm / 95kg				671×555×821mm / 105kg				1020×570×960mm / 172kg				
	Cooling system	Air cooling			700×400×700mm / 58kg				700×400×700mm / 80kg				A800×555×1028mm / 105kg				

# LASER WELDER SERIES

## LASER WELDING MACHINES

Samples

### Laser welding classification

Laser welding is one of the important laser material processing technology applications. According to laser output energy mode, laser welding is divided into pulse laser welding and continuous laser welding; according to spot power intensity after laser focusing, laser welding is divided into heat conduction laser welding, laser deep penetration welding and hybrid laser micro welding.

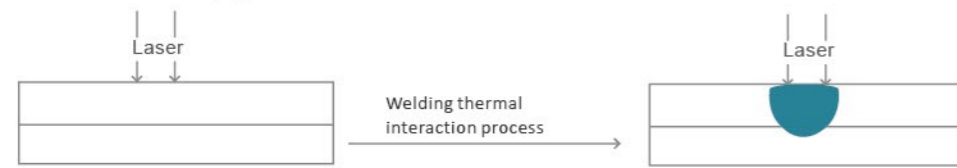
#### Continuous laser welding

Fiber laser or semiconductor laser continuously heats workpiece surface to realize welding. Fiber laser is widely used in new energy, machinery, automobile, and boat industries, while semiconductor laser is mainly used in plastics welding and laser braze welding.

#### Heat conduction laser welding

Laser radiation heats workpiece surface and then the surface heat expands to workpiece interior through heat conductor. Finally the workpiece will be melt and form into special welding pool through the controlling of width, energy, peak power, repeated power and other parameters of laser pulse.

as shown in the following figure:



#### Laser deep penetration welding

Generally, it adopts connection process of continuous laser beam. Metallurgical physical process is very similar to electron beam welding, and that is to say, energy transfer mechanism is finished through pore structure.

As shown in the following figure:



#### Laser classification

##### Lamp-pumped laser

Spot welding and seam welding of steel, aluminum, aluminum alloy, copper, copper alloy and others.

##### Special laser

High reflective material like cooper and gold, irregular metal material

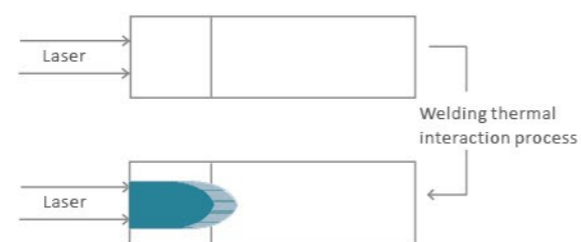
#### Pulse laser welding

It is mainly used for spot welding and seam welding. The welding process is heat conduction and that is: laser radiation heats workpiece surface and then expanded to material interior through heat conduction. Finally, through the controlling of waveform, width, peak power, repeated frequency and other parameters of laser pulse, good connection will be formed among workpieces.

The most advantages of pulse laser welding are small temperature rise, small heat-affected zone and small deformation. It is widely applied to 3C product housing, lithium battery, electronic component and mould repair welding industries.

#### Hybrid micro welding

As shown in the following figure:

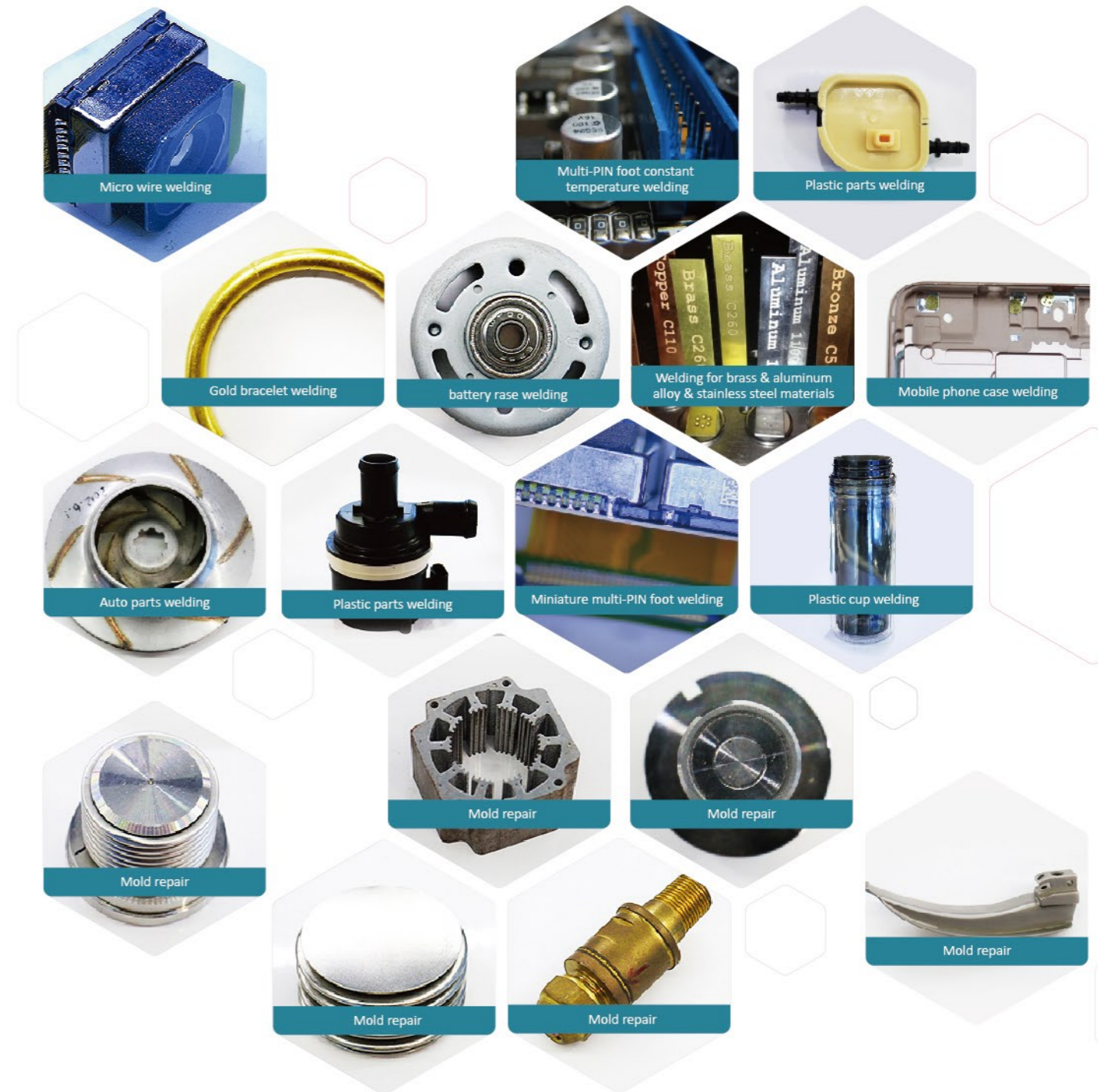


#### Continuous/pulse fiber laser

Seam welding, seal welding and spot welding of steel, aluminum, aluminum alloy, copper, copper alloy and others.

#### Semiconductor laser

Plastics welding and tin soldering



## YAG laser welding machine

### Product appearance



### Fiber transmission laser specifications

Machine model	WCF80	PB300CE	WF600
Laser type	YAG		
Laser wavelength	1064nm		
Laser output average power	80W	300W(standard configuration)	600W
Max. laser peak power	5kW	6kW (9kW, 12kW optional)	9kW (12kW optional)
Max. laser pulse energy	30J	30J(standard configuration)-60J/90J (optional)	50J/ (90J optional)
Pulse width	≤50ms		
Pulse frequency	≤100Hz		
Waveform number	50 groups		
Fiber output number	2 paths	1 path standard configuration, 4 paths at most	
Beam split mode	Time splitting	Energy splitting or time splitting	
Fiber core diameter	0.4mm	0.6mm (standard configuration) 0.3/0.4mm (optional figuration)	0.6mm
Closed-loop feedback mode	Laser power feedback		
Aiming positioning mode	Red light guide (CCD optional)		
Cooling mode	Internal air cooling	External water cooling	
Main machine power consumption	5kW	16.5kW	20kW
Power demand (voltage, frequency and current)	220V±10%/50Hz 25A	380V±10%/50Hz 40A	380V±10%/50Hz 42A
Main machine weight	350kg	450kg	500kg
Main machine dimension (L*W*H)	1280×550×1165mm	1480×620×1100mm	1518×700×1180mm
Water chiller dimension (L*W*H)	---	850×550×1158mm	1156×800×1430mm

Note: 1. For PB300CE、WF300、WF350 lasers, the user can choose high-capacity capacitance box to make the Max. single pulse laser energy of the laser reach 90J.  
2. When PB300CE、WF300、WF350 lasers continuously output beam under full power, the user should choose 5P integrated water chiller.  
3. When WF600 is used under full power, the user should choose 10P water chiller.

## Spot laser welding machine

### Specifications

Machine model	W150G
Laser type	YAG
Laser wavelength	1064nm
Average output power (w)	150W
Peak Pulse Power (KW)	9KW
Maximum Pulse Energy (J)	80J
Pulse width (ms)	0.1~20ms
Pulse frequency	0.1~20Hz
Spot diameter	0.2~2.0mm
Welding depth	0.05mm-3mm
Wave quantity	60 group
Aiming mode	Microscope coaxial viewing system
Power supply	220V/27A(50/60Hz)
Power consumption	6KW
Cooling method	Integrated water cycle heat exchange forced air cooling
Weight	200Kg
Dimension	1075×550×1190 (mm)

## W150G

### Application

W150G spot size can be adjusted, and the laser welding penetration ability and small deformation of the heat affected zone of the welding process make it very suitable for precision spot welding in the jewelry industry, including sand holes and seams of various metal ornaments. Repairing and welding of the claw parts of the inlay parts can also be used for precision spot welding and repair welding of dentures and small precision parts such as integrated circuit leads, clock and hairspring, welding, dental industry and other small products.

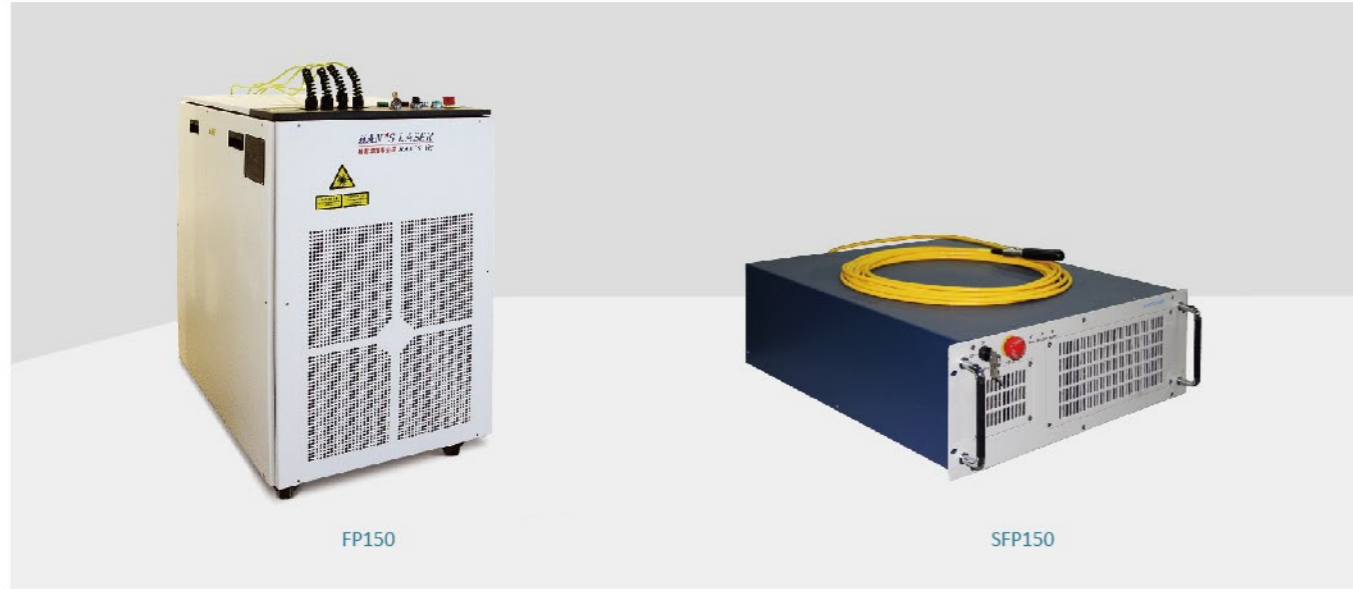


### Product appearance



## Pulse fiber welding machine

### Product appearance



### Product specifications

Machine model	FP150	SFP150	FP300	SFP300
Laser wavelength	1070nm			
Working mode	Continuous/pulse			
Max. laser average power	Pulse 150W/ continuous 250W		Pulse 300W/ continuous 300W	
Max. laser peak power	1500W		3000W	
Max. laser pulse energy	15J		30J	
Pulse width	Pulse 0.2-50ms			
Pulse frequency	≤5000Hz			
Waveform number	≤50 groups, each group ≤16 segments			
Fiber output number	2 paths standard, 4 paths at most	Single path	2 paths standard, 4 paths at most	Single path
Max. beam split frequency	80Hz	—	80Hz	—
Fiber core diameter	200um(standard)	50um	200um(standard)	50um
Aiming positioning mode	Red light guide (CCD and monitor, optional)			
Cooling mode	Forced air cooling (its own)			
Main machine power consumption	<1.5kW		<1.8kW	
Power demand	220V±10%, 50/60Hz			
Dimension	600×900×900mm	560×440×177mm	600×900×900mm	630×440×220mm

## Semiconductor laser welding machine

### Product appearance



### Product specifications

Machine model	WFD10	WFD50	WFD50- 2T	WFD100	WFD1000	WFD2500
Type/ model	Continuous/ modulate					
Laser average power	10W	50W		100W	1000W	2500W
Waveform width	0.1~80000ms					
Waveform number	16 groups x 16 segments			16 groups x 16 segments		31 groups x 16 segments
Wave length	915nm	915nm (808nm and 980nm, optional)		915nm		
Fiber output number	Single fiber	Single fiber	Two fibers	Single fiber		
Fiber core diamet	200um	200um	200um(two paths)	200um	300um	400um
Bend radius	>150mm	>150mm	>150mm	>150mm	>250mm	
Numerical aperture	0.22(Na value)					
Fiber length	5m	5m	5m	5m	5m	10m
Fiber plug	D80		D80		QBH	
Power consumption	≤200W	≤240W	≤400W	≤350W	≤2700W	≤8000W
Power demand	220V±10%/50Hz					380V±5%/50Hz/40A
Main dimension	560×440×177mm				677×440×177mm	1085×600×911mm
Cooling mode	Internal air cooling				External water cooling	

## Green laser welding machine

### Pulse YAG green laser PG3

#### Application

1. Applied to the welding of high reflective materials, such as copper, aluminum, gold and silver.
2. Applied to medical equipment electronics, mobile communication, electronic component, automobile, auto parts, crafts and gifts and other industries.



Stainless steel and aluminum alloy welding



Aluminum alloy with red copper welding

#### Product appearance



#### Special laser performance parameters

Machine model	PG3
Laser model	PG3
Laser type	YAG
Laser wavelength	532nm
Laser output average power	3W
Max. laser peak power	1kW
Max. laser pulse energy	3J
Pulse width	≤5ms
Pulse frequency	≤10Hz
Waveform number	50 groups
Fiber output number	1 path
Beam split mode	---
Fiber core diameter	0.2mm
Closed-loop feedback control mode	Laser power feedback
Aiming positioning mode	Red light guide (CCD and monitor are optional)
Cooling mode	Internal air cooling
Main machine power consumption	5kW
Power demand (voltage, frequency and current)	220V±10%/50Hz/25A
Main machine weight	350kg
Main machine dimension	1280×550×1165mm

## Robot laser welding system

#### System composition

It consists of laser, robot (with robot control cabinet) and water chiller. They can cooperate with various dedicated welding worktable to realize welding of different parts.

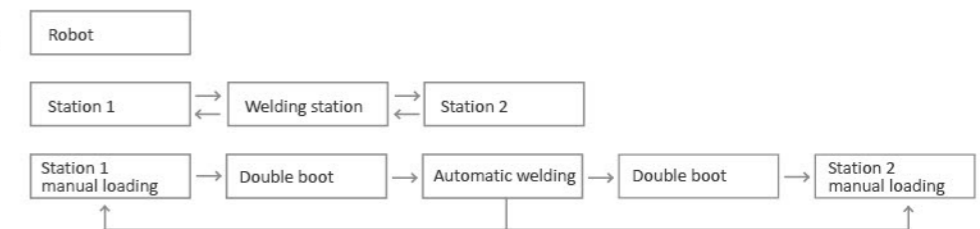
#### System feature

- It adopts the control system with completely independent IP, featuring powerful function and stable operation. The software is easy and convenient to use and it can customize welding pattern.
- High flexibility 6-axis coordinated motion of robot can finish the welding of any track and any posture in space.
- It can be equipped with visual system to realize pre-welding precision positioning.
- Its universality and extensibility are strong. And it can cooperate with different robots based on needs to satisfy different precision and load requirement
- It can cooperate with various dedicated welding worktable to do welding to workpiece.



#### Working flow

(take double-station robot welding worktable as example)



#### System parameters

#### Laser welding common robot performance parameters

Brand	S/N	Model	Robot/kg	Effective load/kg	Working distance/m	Repeated positioning precision/mm	
ABB	1	IRB 1410	225kg	5kg	1.44m	±0.025mm	
	2	IRB 2600	IRB 2600-20/ 1.65	272kg	20kg	1.65m	±0.04mm
	3		IRB 2600-12/ 1.65	272kg	12kg	1.65m	±0.04mm
	4	IRB 2600-12/ 1.85	284kg	12kg	1.85m	±0.04mm	
MOTOMAN	5	MH12	130kg	12kg	1.44m	±0.08mm	
	6	HP20D/HP20F	268kg	20kg	1.717m	±0.06mm	



## Mold repair welding system

### Features

Mold repair laser welder uses high heat energy produced by laser at moment to melt dedicated solder wire onto the damaged parts of mold and firmly connect with mold substrate. After welding, make it smooth through grinding and cutting so as to realize the repair function of mold.

Mold repair laser welder can effectively repair sand hole, crack, chip, damaged mold side, sealing strip and all micro parts.

### Application

It is commonly applied to mold manufacturing industries including mobile phone, digital product, automobile and motorbike.

And it can do repair welding to following substrates: various mold steel, stainless steel, beryllium copper, precious metal and extremely hard material (-HRC60).

### W100B

#### Product appearance



#### Fixed path laser welder specifications

Machine model	W100B
Laser wavelength	1064nm
Max. laser output power	100W
Max. laser pulse energy	50J/10ms
Min. spot diameter	0.15mm
Pulse width	0.1ms~50ms
Pulse frequency	1~20Hz
Total power consumption	4kW
Power demand	220V±5%/50Hz/30A
Worktable repeated positioning precision	0.02mm
Plane worktable effective stroke	100mm×100mm(electric)
Z-axis lifting effective stroke	500mm(electric)
Worktable load	120kg
Observing system	Microscope (CCD is optional)
Work drive	Motor drive
Manipulation device	Industrial control dedicated rocker
Cooling mode	Forced air cooling

#### Product appearance



#### Pulse YAG laser welder specifications

Machine model	MOLD301	MOLD302
Control mode	Single-chip microcomputer	Single-chip microcomputer
Manipulation device	Industrial control rocker	Industrial control rocker
XY axes stroke	100mm*100mm(step motor drive)	100mm*100mm (step motor drive)
Z axis lifting effective stroke	500mm(step motor drive)	500mm(step motor drive)
Worktable load	<80kg	<80kg
Observing system	Microscope (CCD monitor is optional)	Microscope (CCD monitor is optional)
Table size	600mm*800mm	600mm*800mm
Laser wavelength	1064nm	1064nm
Max. laser output power	300w	300w
Max. laser pulse energy	30J, 60J (optional), 90J (optional)	30J, 60J (optional), 90J (optional)
Min. spot diameter	—	—
Pulse width	≤50ms	≤50ms
Pulse frequency	≤200Hz	≤200Hz
Cooling mode	Water cooling	Water cooling
System power consumption	16.5kW	16.5kW
Power demand	220V/50Hz 3kW	220V/50Hz 3kW

## Work station

### Product appearance



Heavy load hardware

Precision small hardware

Light load hardware

Rotary double-station

Double-station slider (WJS8225T)

W-PCTLA421

W-SCN-SE welding worktable

W-SCN-SA welding worktable

### Model characteristics

Machine model	Heavy load hardware	Precision small hardware	Light load hardware	Rotary double-station	Double-station slider (WJS8225T)	W-PCTLA421	W-SCN-SE welding worktable	W-SCN-SA welding worktable
System composition	Laser, water chiller and W-PCTS433. The worktable can realize four-axis (X, Y, Z and R) coordinated motion and complete welding of multiple planes and 3d space tracks. If cooperated with CCD monitor, it can observe welding process in real time	Laser, water chiller and W-PCTS221. The worktable can be optionally configured with protective hood and use tri-axis (X, Y and Z) coordinated motion to drive welding head to move. If it is optionally configured with the forth axis (rotary R axis), it can realize welding of multiple panes and 3d tracks. If cooperated with CCD monitor, it can observe welding process in real time	Laser, water chiller and W-PCTS333SP. The worktable adopts marble base design that can increase equipment stability and realize four-axis coordinated motion, thus completing welding of multiple planes and 3d space tracks	Laser, water chiller and W-PCTSR322. The worktable adopts double-station design to improve productivity and realize four-axis coordinated motion, thus completing welding of point, line, circle, square or any plane figure track made of line and arc. It can be cooperated with visual system to realize precision positioning to workpiece.	Laser, water chiller and WJS82255T. The worktable adopts double-station slider design and uses tri-axis (X, Y and Z) coordinated motion to move. Two sets of welding fixtures are loaded in and out through the two sliders (Y1 and Y2) to realize two stations' consecutive work. It can be cooperated with visual system to realize precision positioning of workpiece.	Laser, water chiller and W-PCTLA421. The worktable tri-axis (X, Y and Z) coordinated motion drives welding head to move to realize fast welding of workpiece and complete welding of point, line, circle, square or any plane figure track welding made of line and arc. It can be cooperated with visual system to realize precision positioning of workpiece.	Single station slider worktable Supporting welding head: It can be configured with galvanometer scanner welding head and 1 set of visual system (optional configuration) Supporting laser: Various series fiber lasers	Single station worktable Supporting welding head: It can be configured with galvanometer scanner welding head and 1 set of visual system (optional configuration) Supporting laser: Various series fiber lasers
Control mode	Industrial PC + motion control card				Industrial PC + motion control card			
Drive mode	Servo drive (standard configuration)	Step/servo drive	Servo drive (standard configuration)	servo drive	Servo drive	Servo drive	servo drive (standard configuration)	—
Motion platform	Tri-axis (X, Y and Z) electric platform. The strokes of X, Y and Z axes are 400mm, 300mm and 300mm	Tri-axis (X, Y and Z) electric platform. The strokes of X, Y and Z axes are 200mm, 200mm and 100mm	Tri-axis (X, Y and Z) electric platform. The strokes of X, Y and Z axes are 300mm, 300mm and 300mm	tri-axis (X, Y and Z) electric platform. The strokes of X, Y and Z axes are 300mm, 200mm and 200mm	Tri-axis (X, Y and Z) electric platform. The strokes of X, Y and Z axes are 400mm, 200mm and 100mm	Five-axis (X, Y, Y1, Y2 and Z) electric platform. The strokes of X, Y, Y1, Y2 and Z axes are 800mm, 200mm, 500mm, 500mm and 200mm	double-axis (Y and Z) electric platform. The strokes of Y and Z axes are 300mm and 200mm	manual Z axis (200mm)
repeated positioning precision	≤±0.02mm. The forth axis (R rotary axis) can be optionally configured to realize four-axis coordinated motion	≤±0.02mm. The forth axis (R rotary axis) can be optionally configured to realize four-axis coordinated motion	≤±0.02mm. The forth axis (R rotary axis) can be optionally configured to realize four-axis coordinated motion	≤±0.02mm. The high precision splitter is adopted to realize two station consecutive work; repeated positioning precision: <±15 arc sec	≤±0.02mm. Max. moving speed ≤100mm/s	≤±0.02mm. Max. moving speed ≤100mm/s	≤±0.02mm	—
Max. load	80kg	50kg			50kg	50kg	20kg	—
Operation mode	Manual loading and unloading, automatic welding				Manual loading and unloading, automatic welding			
Control system	The control system with complete independent IP is adopted: Laser Welding System, powerful function, stable operation, convenient operation, easy learning and convenient maintenance				The control system with complete independent IP is adopted: Laser Welding System, powerful function, stable operation, convenient operation, easy learning and convenient maintenance			
Worktable power demand	220V/50Hz/2Kw	220V/50Hz/2Kw	220V/50Hz/2Kw	220V/50Hz/2Kw	220V/50Hz/2Kw	220V/50Hz/2Kw	Single phase AC220V, 2.5kW	single phase AC220V, 2kW
Worktable dimension	1700mm x 1100mm x 1500mm	800mm x 900mm x 1800mm	1650mm x 950mm x 1250mm	1000mm x 1700mm x 2300mm	860mm x 1050mm x 1700mm	1300mm x 1550mm x 1960mm	800mm x 790mm x 2000mm	790mm x 780mm x 1660mm

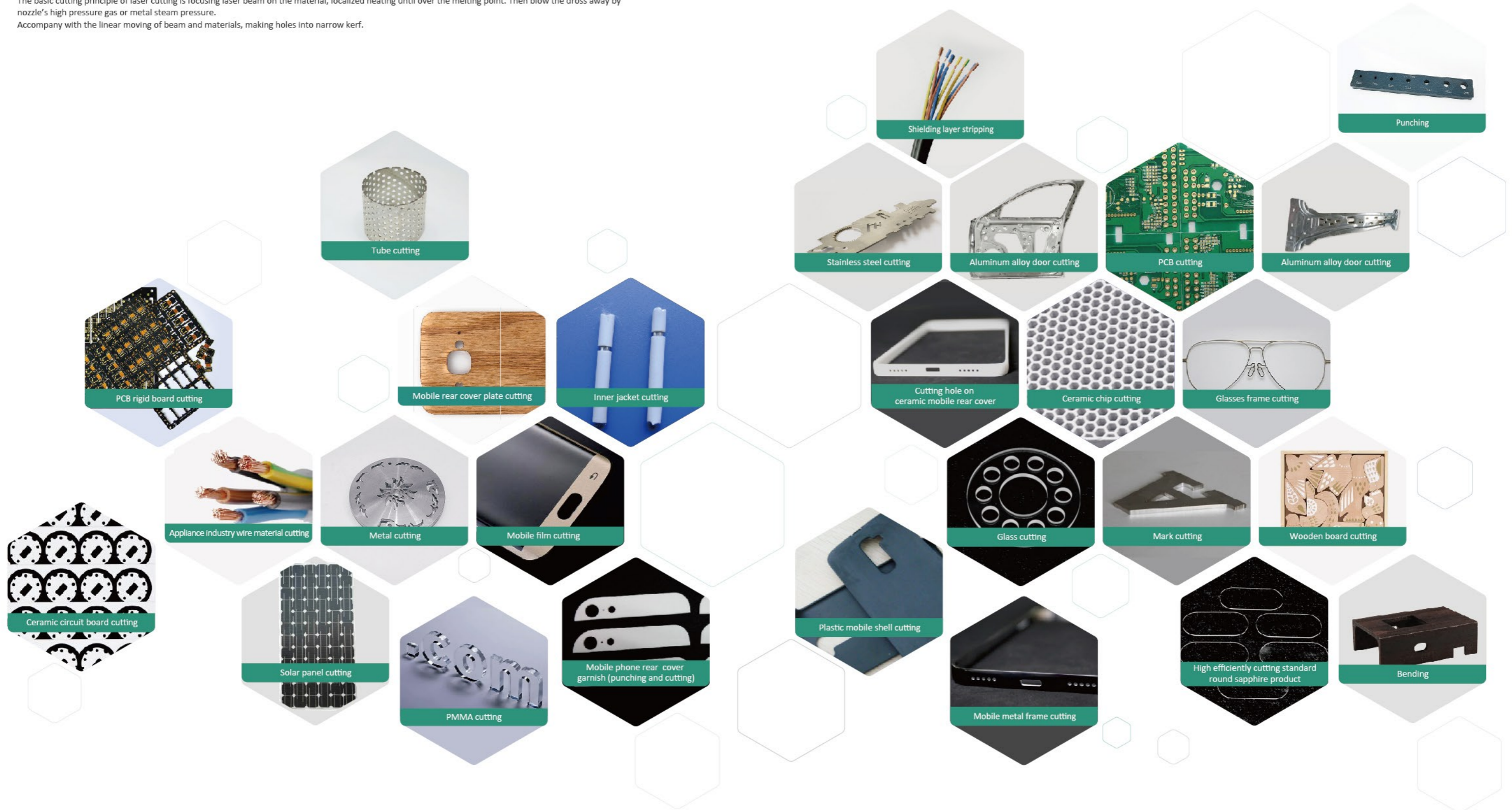
# LASER CUTTER SERIES

## LASER CUTTING MACHINES

Samples

### Application

The basic cutting principle of laser cutting is focusing laser beam on the material, localized heating until over the melting point. Then blow the dross away by nozzle's high pressure gas or metal steam pressure. Accompany with the linear moving of beam and materials, making holes into narrow kerf.



## Precise laser cutting machine

### Product appearance



CO2 double drive laser cutter  
PD5060 series

CO2 gantry linear motor laser cutter  
PL5060 series

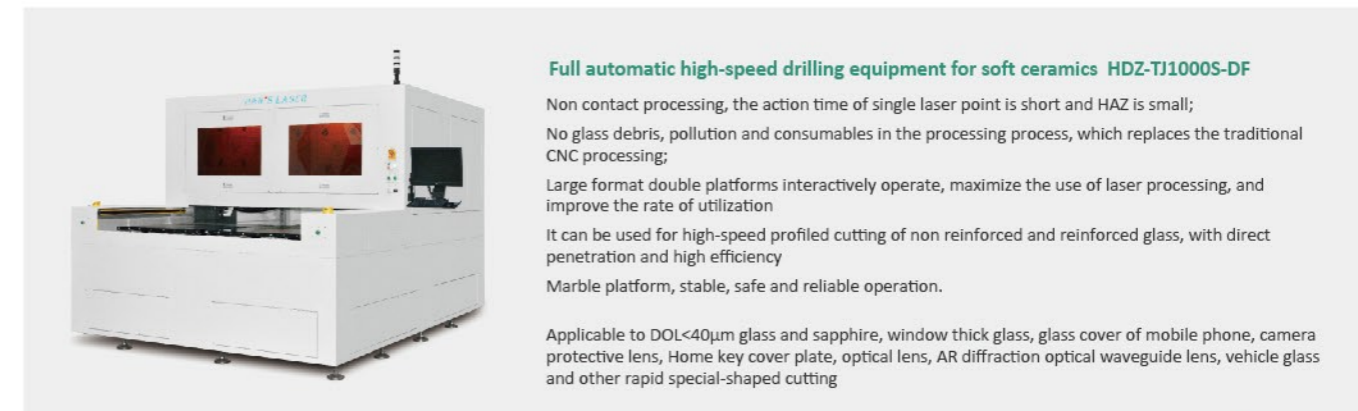
PD1206 / PD1212

### Specifications

Machine model		PD5060	PL5060	PD1206	PD1212
Stroke	X axis (mm)	600		1200	
	Y axis (mm)	500		600	1200
	Z axis (mm)	—		30	
Speed	Max. idle speed (mm/s)	1000		300 (X/Y axis)	
	Max. cutting speed (mm/s)	500	600	200 (X/Y axis)	
Precision	Machine tool positioning precision (mm)	±0.02	±0.004	±0.03 (X/Y axis)	
	Machine tool repeated positioning precision (mm)	±0.01	±0.002	±0.02 (X/Y axis)	
Laser type		CO2			
Configurable laser power (W)		30, 60, 100, 150		60, 100, 150, 250	
Machine net weight (kg)		1500	1000	About 2800	About 3000
Dimension (Lmm*Wmm*Hmm)		1600*1300*1800	1210*1200*1300	2200*2000*1800	
Using environment	Power demand (fluctuation <±5%)	Single phase 220VAC,50/60HZ,50A		Single phase 220VAC/ three phase 380V 50/60HZ,50A	
	Overall power (KW)	≤4.5kw (without exhaust fan)		7~15kw	
	Relative humidity	45%~75%			
	Ambient temperature	10 C~30 C			
	Air source demand (clean and dry)	0.1~0.8MPa, flow≥50L/min		0.8MPa	

## Precise laser cutting machine

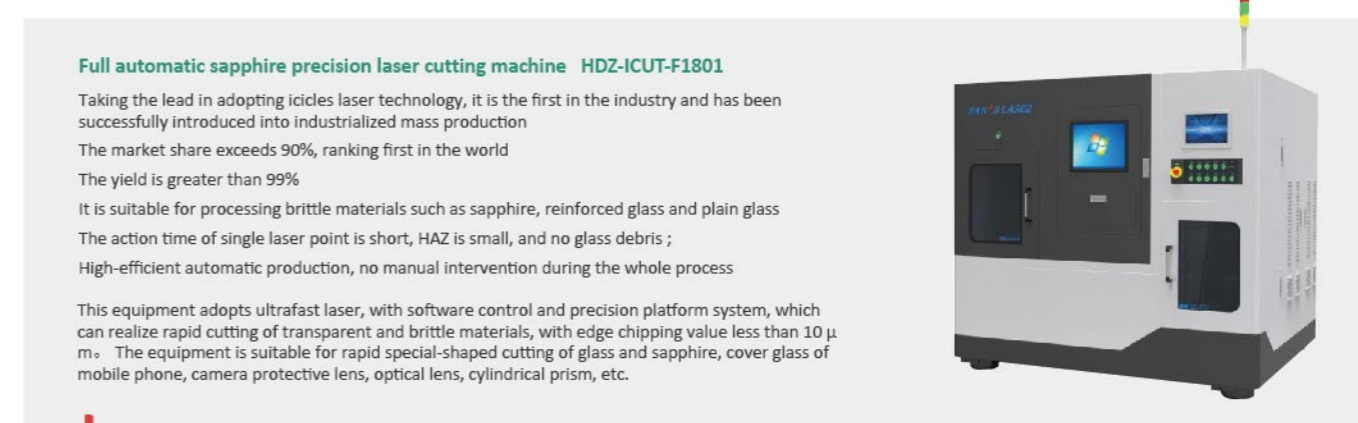
### Product appearance



#### Full automatic high-speed drilling equipment for soft ceramics HDZ-TJ1000S-DF

Non contact processing, the action time of single laser point is short and HAZ is small;  
No glass debris, pollution and consumables in the processing process, which replaces the traditional CNC processing;  
Large format double platforms interactively operate, maximize the use of laser processing, and improve the rate of utilization  
It can be used for high-speed profiled cutting of non reinforced and reinforced glass, with direct penetration and high efficiency  
Marble platform, stable, safe and reliable operation.

Applicable to DOL<40μm glass and sapphire, window thick glass, glass cover of mobile phone, camera protective lens, Home key cover plate, optical lens, AR diffraction optical waveguide lens, vehicle glass and other rapid special-shaped cutting



#### Full automatic sapphire precision laser cutting machine HDZ-ICUT-F1801

Taking the lead in adopting icicles laser technology, it is the first in the industry and has been successfully introduced into industrialized mass production  
The market share exceeds 90%, ranking first in the world  
The yield is greater than 99%  
It is suitable for processing brittle materials such as sapphire, reinforced glass and plain glass  
The action time of single laser point is short, HAZ is small, and no glass debris ;  
High-efficient automatic production, no manual intervention during the whole process

This equipment adopts ultrafast laser, with software control and precision platform system, which can realize rapid cutting of transparent and brittle materials, with edge chipping value less than 10 μm. The equipment is suitable for rapid special-shaped cutting of glass and sapphire, cover glass of mobile phone, camera protective lens, optical lens, cylindrical prism, etc.



#### Ultra fast laser glass drilling machine HDZ-G-HCT1000-A

Non contact processing, small edge chipping value (edge collapse < 20um), high accuracy;  
Vacuum adsorption, no damage

The equipment is equipped with double laser heads, automatic loading and unloading, high processing efficiency, and the production capacity is 6.5 seconds / hole (incoming t=0.4mm, 4-inch sapphire, 22 holes with a diameter of 4.7MM are cut for each large piece)

Marble base, with high-precision linear motor and visual positioning system, which can carry out high-efficiency and high-precision drilling processing for large format

Equipped with ultra fast laser, 3D optical module and high-precision two-dimensional linear platform, which can realize high-speed and efficient drilling of glass and sapphire

Can drill the glass of from Corning, Schott, AGC and other glass material, sapphire, vehicle glass, panel display glass, coated optical lenses, etc.



#### Full automatic high-speed drilling equipment for soft ceramics HDZ-LD2525

The integrated high-performance ultrafast laser provides long-term stable high-quality laser output performance, with little processing thermal effect and good drilling roundness;

Equipped with high-precision two-dimensional linear platform and loading and unloading manipulator to ensure the accurate positioning of processing

The fixture adopts vacuum adsorption, which will not damage the product surface

Double position and double laser drilling head, high production efficiency and good economic return

Suitable for the laser drilling of cast sheet, ceramic green embryo, ferrite and other materials

Closed processing, safe and reliable

Suitable for micro hole processing of ceramic green embryo, cast sheet, ferrite and other materials.

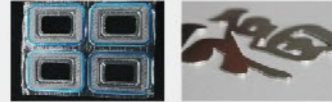
## Application of laser film processing industry

### Product appearance



#### LOGO film cutting machine

- Motion platform control: 500mm X 300mm;
- Cutting area: 300mmX300mm;
- Marking repeated positioning precision:  $\pm 0.1\text{mm}$ ;
- Can be customized



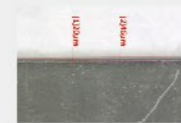
#### Earphone diaphragm laser processing machine

- Motion platform control : 200mm X 500mm
- Cutting area: 200mmX200mm
- Marking repeated positioning precision :  $\pm 0.1\text{mm}$
- Can be customized



#### PET film cutting machine

- Way of feeding: manually feeding, automatically positioning
- cutting, manually unloading
- Max width: 630mm (customizable)
- 1000w pixel camera



#### Laser drainage cutting equipment

- Equipped with high stability CO2 laser marking machine
- Add infrared preview and external infrared, focal length can be adjusted
- Applied for the drainage process of injection products with 3C
- Can be customized according to different demand



## Vehicle industry application

### Product appearance

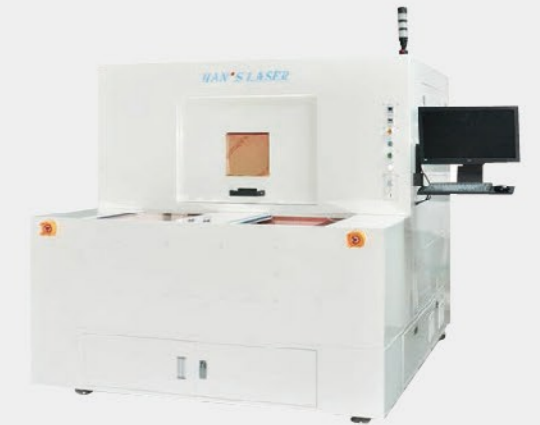


#### Car glass cutting and splitting machine HDZ-GCF2000S

- Can be used in irregular cutting for non-tempered and tempered glass
- The action time of single laser point is short, HAZ is small, no glass fragment
- Marble base accompanied with highly accurate linear motor platform, servo motor platform and Visual positioning system can process on big format with high efficiency and accuracy.
- Can cut and split the glass (DOL<30 $\mu\text{m}$ ) from Corning, Schott and AGC . Irregular shapes workable ,big range of compatible size, fast shape changing speed, excellent applicability and the trimming speed improved.

#### Vehicle explosion-proof film edge cutting machine HDZ-FC2000

- Equipped with self made high power UV picosecond laser, marble base, High precision linear motor platform, ensure accurate positioning and high stability of operation;
- Have precision galvanometer system, high cutting accuracy; Independent design for cutting software, the interface is simple and easy to operate
- High power exhaust fan can effectively remove the dust generated in the process
- Only for 2D products, applicable to high accurate cutting for vehicle explosion-proof film, can avoid the film accuracy error caused by screen printing and glass dimensional tolerance



#### Full automatic car glass drilling machine HDZ-GCA400

- Non-contact process, little damage to material ,high accuracy and yield;
- The drilling edges are good quality, the smallest drilling diameter is 0.15mm @T0.3mm
- Fully automatic feeding and unloading material, high efficiency and yield during the processing
- Large format platform combined with camera positioning can do high precision process on big plane.
- Process thick glass with small taper and high efficiency.
- Applied to car glass, display glass , coated optical lens. No shape limit, big range of compatible size, fast shape changing speed, excellent applicability.



## Precise mesh board processing system

### Product appearance



### Precision mesh board processing system

#### Applications

Suitable for silicon solar cell mesh board with different size,  
Suitable for the mesh board processing of electronic product, can be customized according to different requirement;  
Applied to other similar products' fine processing, such as etching and scribing

### Specifications

#### Characteristics

- Use super highly precise motor to steadily realize micron processing accuracy .
- High precision CCD positioning, image observation function, positioning precision  $\leq \pm 3\mu\text{m}$ .
- Marble base , high precision linear motion platform, repeated positioning precision  $\leq \pm 2\mu\text{m}$ .
- Dedicated software for mesh board industry , powerful function , easy to use and operate.
- For PV screen, it can realize PI film scribing, drawing and yarn removing; For no knot product, the machine can be customized according to customer's requirement.
- Unique suction device, filter smoke and dust effectively, realize green production.

Machine model	HIRB1410-PC
Processing scope	240mm*240mm
Positioning precision	$\leq \pm 3\mu\text{m}$
Splicing precision	$\leq \pm 3\mu\text{m}$
Line width scope	12-35 $\mu\text{m}$
PS discrepancy	$< 8\mu\text{m}$
Size precision	$< \pm 5\mu\text{m}$
Dimension	1620mm*1500mm*1900mm
Weight	1500kg
Power demand	220V/AC/50Hz/16A

## Chip unsealing system

### Product appearance



Chip unsealing system BL5500

Chip unsealing system(desktop) BL2500

### Specifications

Machine model	BL5500	BL2500
Laser wavelength	1064nm	1064nm
Laser power	20W(50W optional)	20W(50W optional)
Cooling mode	Air cooling	Air cooling
Pulse frequency	1.6kHz-1MHz	1.6kHz-1MHz
Pulse length	4-200ns	4-200ns
Processing scope	300mm*300mm	100mm*100mm (F160 camera lens)
Power demand	Three-phase/400V, 50/60Hz	Single phase/100-240V, 50/60Hz
Power consumption	1.8kW	1kW
Dimension	1493mm*860mm*1777mm	975mm*872mm*712mm
Applications	Applied to the unsealing detection for chip failure analysis.	

## Brittle material processing machine

### Product appearance



HDZ-GCC200  
Cover Plate Cutting

EP-GCT1000  
Ultrafast laser glass dicing machine

EP-GCA400  
Glass cutting and drilling machine

### Specifications

Machine model	HDZ-GCC200	Machine model	EP-GCT1000		Machine model	EP-Gca4000
Control system	(Imported from Germany) scan head + control card, Windows 7 (2 sets)	Processing scope	600mm*600mm		Laser wavelength	532nm
Final processing repeated positioning precision	±0.02mm	Platform repeated positioning precision	±2μm		Laser power (optional based on the actual situation)	20W/8W
Max. processing area	200mm*200mm	Platform dynamic positioning precision	±3μm		Pulse repetition frequency	10-200kHz
Camera positioning system	5MP	Max. moving speed of platform	500mm/s		Scanning area	40mm*40mm
Support file format	Dxf, plt and so on	CCD positioning precision	±0.01mm		Pulse width	10-60ns
Overall dimension (for reference)	1650mm*1250mm*1855mm	Machine weight	≤3T		Working distance	126±1mm
Power supply	3PH 380V, 50Hz, 32A, 12kW	Cutting thickness	0.1-3mm		Light spot diameter	≥25μm
Wavelength	1030nm	Edge breakage value	≤10μm		Power supply	1PH 220V, 50Hz, 15A, 1.5kW
Power	50W/100W	<b>Laser technical parameter</b>	<b>Dicing optical path</b>	<b>Cutting optical path</b>	Cooling mode	Air cooling/ water cooling
Min. line width	0.03mm	Laser type	Infrared picosecond	CO2	Cooling system power supply	1PH 220V, 50Hz, 10A, 0.5kW
F-θ lens	Box: 50*50mm (temporary)	Wavelength	1030nm	10.55μm-10.63μm	Processing scope	300mm*300mm
Cooling mode	Water cooling	Power	50W	55W	Platform repeated positioning precision	±2μm
Stroke	400mm*300mm	Pulse width	<10ps		Platform dynamic positioning precision	±3μm
Repeated positioning precision	±0.002mm	Beam quality M2	≤1.1	<1.2	Max. moving speed of platform	500mm/s
		Cooling mode	Water cooling	Water cooling	CCD positioning precision	±0.01mm
		Output light spot diameter	≤5mm		Machine weight	≤2T
		Cutting system power supply	3PH 380V, 32A, 12kW		Cutting thickness	0.1-4mm
		Laser power supply	3PH 380V, 2.5kW	48VDC, 20A	Min. drilling diameter	0.3mm

## Robot fiber laser cutter

### Product appearance



Robot fiber laser cutter

#### Application

It is configured with imported fiber laser, mainly applied to the cutting of thin metal sheet including carbon steel, stainless steel, spring steel, alloy steel, galvanized plate, copper plate and aluminum plate.

### Specifications

Machine model	HIRB1410-PC	HM-10IA-12-PC
Robot model	ABBIRB1410	FANUC M-10IA-12
Armspan radius (mm)	1400	2500
Robot installation mode	Vertical type	50
Applicable processing mode	Cutting	400
TCP max. speed	2100mm/s	200
Repeated positioning precision	±0.05mm	±0.03
Optionally configured laser power	500W/1KW	±0.02
Optional accessories	Robotmaster offline programming software	Robotmaster offline programming software
Power demand (fluctuation <±5%)	Single phase 220VAC, 50/60Hz, 50A	
Laser cooling water	Purified water	
Environment temperature	20-30 °C	
Relative humidity	45%~75%	
Protection level	Electric equipment is IP54, machinery equipment requires dry environment	
Noise level	Highest 70db (A)	
Radiation	EMC/EMI shielding	

## Laser stripping machine

### Product appearance



SP series

Double head high speed stripping machine

PCSP series

### Specifications

Machine model	SP0402	SP0201
X axis (mm)	400	200
Y axis (mm)	200	100
Max. positioning speed (mm/s)	350	
Max. processing speed (mm/s)	200	
Positioning precision (mm)	±0.05	
Repeated positioning precision (mm)	±0.02	
Total power consumption (KW) (without exhaust fan)	≤2	
Configurable laser power (W)	CO2:30,50 Fiber:20	
Clean and dry compressed air	0.3~0.5Mpa	
Dimension (Lmm*Wmm*Hmm)	1500*830*500	1350*630*500
Machine net weight (kg)	180	160

Machine model	Double head high speed stripping machine
Worktable stroke X*Y (mm)	400*200
Configurable laser power (W)	30*2
Laser frequency (HZ)	0~20K
Scanning area (mm)	100*100
Clean and dry compressed air (Mpa)	0.3~0.5
Dimension (Lmm*Wmm*Hmm)	1300*800*1500
Machine net weight (kg)	280

Machine model	PCSP series
Laser wavelength	10.6um (CO2 laser)
Laser power	30W (Optional)
Wire specification	0.1-16mm <sup>2</sup>
Stripping length	Based on wire
Cutting length	Based on wire
Cutting precision	0.002*Lmm
Dimension (Lmm*Wmm*Hmm)	1720*790*1330

# CNC MACHINE SERIES



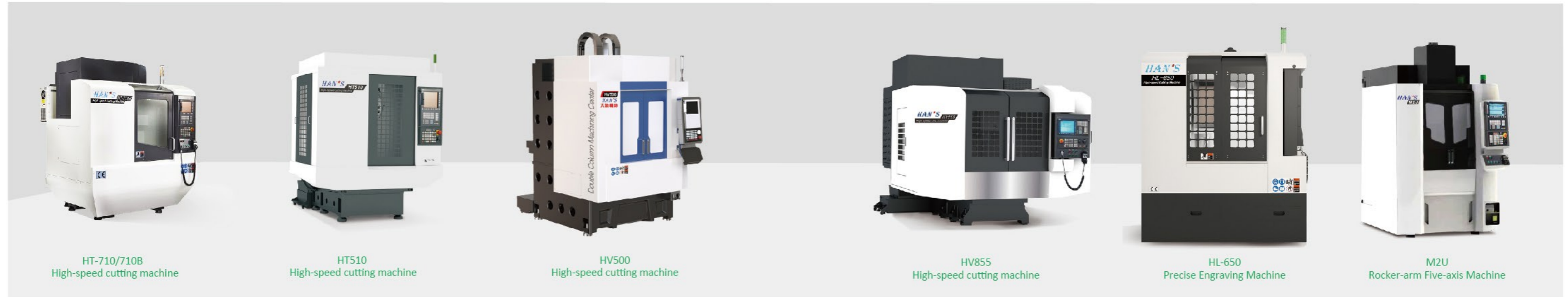
### Samples





CNC

Product appearance



Specifications

Machine model	Unit	HT-710	HT-710B	HT510	HV500
X/Y/Z axis stroke	mm	710/440/380	710/400/320	510/400/330	500/450/330
Distance from the spindle nose to the worktable	mm	150-530	160-480	150-480	150-480
Table size	mm	870*450	870*450	650*400	650*450
Max. load	kg	300	300	250	250
T-slot size	mm	3-14*125			
Max rotation speed	rpm	20000	20000	20000	24000 (36000*)
Max torque (S6 40% DC)	Nm	40	40	40	17.7
Rated torque (S1 100% DC)	Nm	19	19	19	7
Max power (S6 40% DC)	kW	19	19	19	3.7
Rated power (S1 100% DC)	kW	4.8	4.8	4.8	2.2
Tool type		BT30	BT30(BBT30*)	BT30	BBT30
Tool magazine (*means optional)	Pockets	20	21(30*)	21(30*)	21(30*)
Tool magazine form		Knife arm	Pre-servo tool magazine	Pre-servo tool magazine	Pre-servo tool magazine
Max tool diameter	mm	60/100	100/140	100/140	100/140
Max tool length	mm	250	200	200	200
Max tool weight	Kg	3			
Tool-tool change time (T to T)	sec	-	1.6	1.6	1.15
Cutting speed(X/Y/Z)	m/min	30/30/30			
Rapid moving speed(X/Y/Z)	m/min	48/48/48			
Positioning accuracy(X/Y/Z)	mm	0.005			
Repeated positioning accuracy(X/Y/Z)	mm	0.003			
Mechanical size (with water tank)	mm	1870*2400*2200	1870*2400*2200	1680*2320*2260	1550*2250*2550
Mechanical weight	kg	2900	2900	2400	3600

Machine model	Unit	HV855	HL-650
X/Y/Z axis stroke	mm	800/550/550	520/600/280
Distance from the spindle nose to the worktable(Standard type)	mm	120-670	120*400
Table size	mm	1000*550	520*620
Max. load	kg	500	500
T-slot size	mm	5-18*90	6-14*100
Max rotation speed	rpm	12000	36000
Max torque (S6 40% DC)	Nm	72	5.8
Rated torque (S1 100% DC)	Nm	36	2.7
Max power (S6 40% DC)	kW	15	9
Rated power (S1 100% DC)	kW	7.5	6
Tool type		BT40	HSK-32
Tool magazine (*means optional)	Pockets	24	12
Tool magazine form		Knife arm	Semi-circular umbrella knife
Max tool diameter	mm	80/150	80
Max tool length	mm	300	150
Max tool weight	Kg	8	2
Cutting speed(X/Y/Z)	m/min	30/30/30	10/ 10/10
Rapid moving speed(X/Y/Z)	m/min	48/48/48	15/15/15
Positioning accuracy(X/Y/Z)	mm	0.008	0.008
Repeated positioning accuracy(X/Y/Z)	mm	0.005	0.005
Mechanical size (with water tank)	mm	3000*2530*2780	2040*1270*2220
Mechanical weight	kg	5200	4600

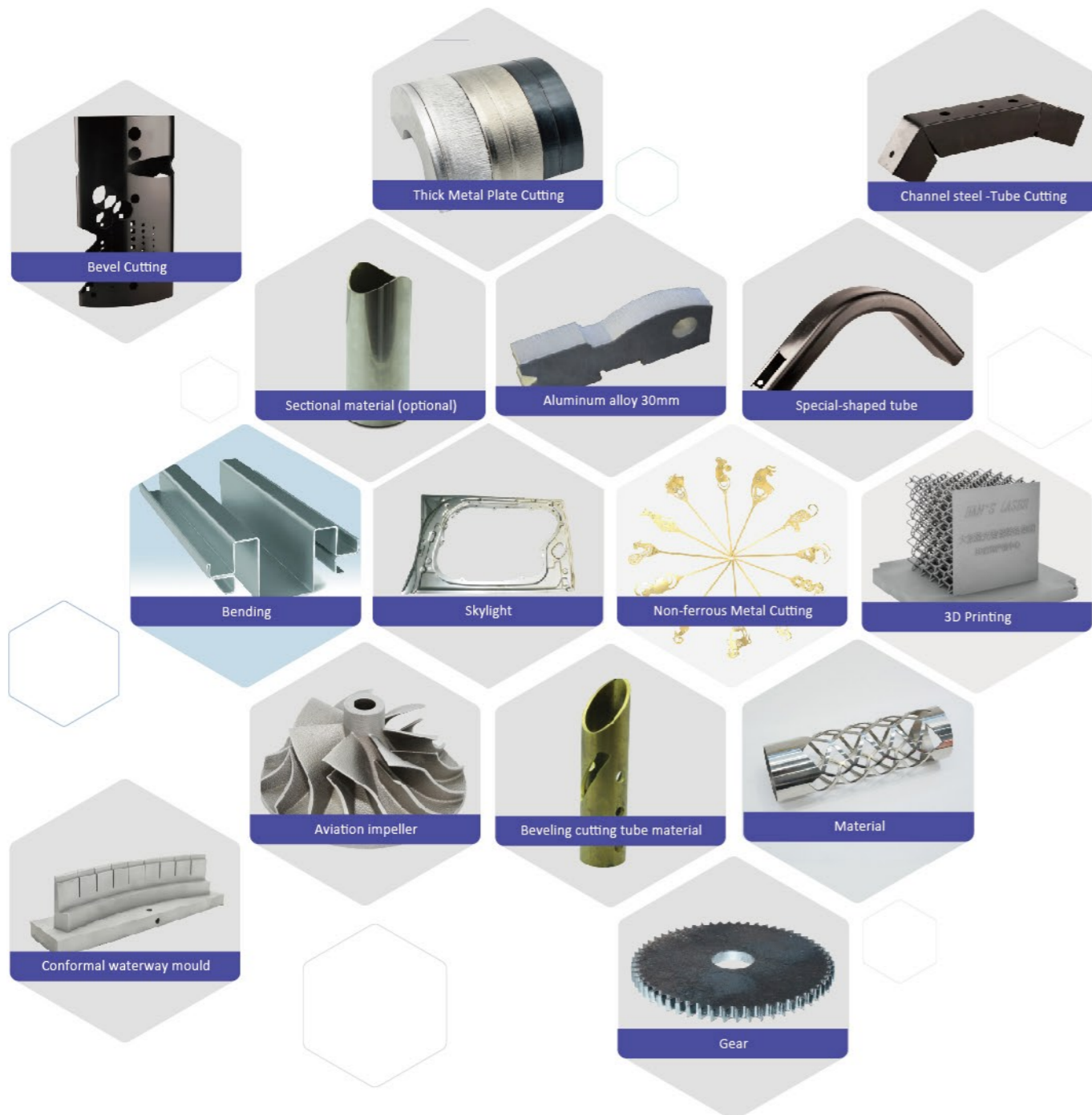
Machine model	Unit	M2U
X/Y/Z axis stroke	mm	400/400/400
B/C axis Rotation Angle	°	±120°/360°
Table panel size	mm	φ260
Clamping area of worktable	mm	φ260 x 280
Maximum number of workpieces	Kg	50
Driving mode	type	DDR
Spindle and Driving mode	type	Built in direct spindle
Spindle taper hole type	type	BBT30
Maximum revolution	rpm	15000
Rated revolution	rpm	3000
Rated torque	Nm	24
Rated Power	kw	7.5
Automatic tool change system		24(32*)
Tool Magazine type	type	Chain servo Tool Magazine
Maximum tool diameter	mm	80
Maximum tool length	mm	250
Cutting speed (X / Y / Z)	min	20/20/20
Cutting speed (B/C)	rpm	20/40
Fast forward speed (X/Y/Z)	m/min	30/30/30
Fast moving speed (B/C)	rpm	20/20
Positioning accuracy (X/Y/Z)	mm	0.004
Positioning accuracy (B/C)	second of arc	20
Mechanical size (with water tank)	mm	2500*1400*2350
Mechanical weight	kg	4200

# HIGH / MEDIUM POWER LASER SERIES

High power laser cutting machine

Product appearance 

Samples



 Specifications

Machine model	HF-PRO series	HF series	F series
Model	G3015HF-PRO, G4020HF-PRO, G6025HF-PRO	G3015HF, G4020HF, G6020HF, G6025HF, G8025HF	G3015F, G4020F, G6020F, G6025F, G8025F
Power range	8-20kw	8-20kw	3-8kw
Product positioning	highest configuration and efficiency	high configuration and efficiency	standard and classic
Size	3015, 4020, 6025	3015, 4020, 6020, 6025, 8025	3015, 4020, 6020, 6025, 8025
X, Y axis max. positioning speed	200m/min(3015/4020), 180m/min(6025)	200m/min(3015/4020), 180m/min(6020), 160m/min(6025/8025)	140m/min
Z axis max. positioning speed	100m/min	60m/min	60m/min
X, Y axis max. acceleration	3G(3015/4020), 2.5G(6025)	2.8G(3015/4020), 2.5G(6020), 2.1G(6025/8025)	2.5G(3015/4020/6020), 2.0G(6025/8025)
Z axis max. acceleration	4G	2G	2G
Resultant acceleration	5G	3.4G(3015/4020), 3.2G(6020), 2.9G(6025/8025)	3.2G(3015/4020/6020), 2.8G(6025/8025)
X, Y axis positioning accuracy	±0.03mm/m	±0.03mm/m	±0.03mm/m
X, Y axis re-positioning accuracy	±0.02mm	±0.02mm	±0.02mm

## Laser Cutting / Welding & 3D Printing

### Product appearance



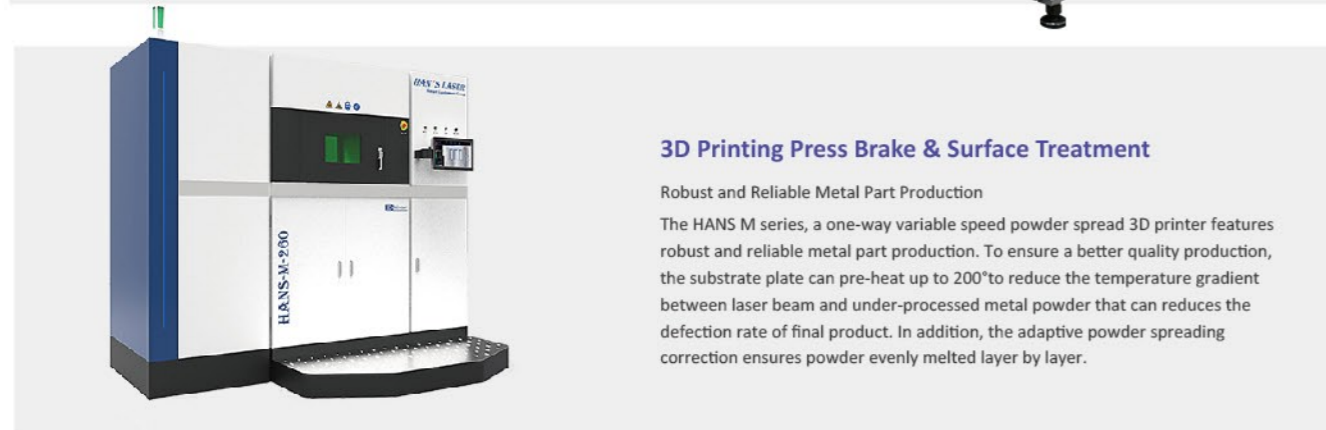
#### LION PRO 3015

This machine adopts gantry structure with high quality steel welding bed, aluminum alloy casting crossbeam. The design is guided by rigorous and science CAE finite element analysis data, Combined with excellent heat treatment and processing technology, it ensures not only the rigidity of machine but also the stability of long-term use



#### Automotive Parts Laser Welding Machine Laser Welding

Auto industry is the production enterprise that requires massive amount of processing and testing and also widely applied in Laser technology application. Excellent technology, high efficiency, good flexibility, 100% fulfill the demand for car sheet metal parts, new energy battery box, Laser welding test for steel plate and aluminum alloy plate.



#### 3D Printing Press Brake & Surface Treatment

**Robust and Reliable Metal Part Production**  
The HANS M series, a one-way variable speed powder spread 3D printer features robust and reliable metal part production. To ensure a better quality production, the substrate plate can pre-heat up to 200° to reduce the temperature gradient between laser beam and under-processed metal powder that can reduces the defection rate of final product. In addition, the adaptive powder spreading correction ensures powder evenly melted layer by layer.



#### 3D Laser Cutting Machine

MPS-R Series fiber laser cutting machine is provided for 3D cutting industry, equipped with specialized cutting head for fiber, high accuracy capacitive servo system, fiber laser and industrial robot system, achieving the multi dimension flexible cutting for 3D work-piece.

Widely used for auto accessories, thermoformed parts, explosion-proof safety, fitness equipment etc.

## Medium power laser cutting machine

### Product appearance



MPS-3015C/ 4015C/ 4020C  
Interactive optical fiber laser  
cutting machine

MPS-3015D/ 4015D/ 4020D/ 6020D  
open fiber cutting machine

MPS-3015DT/ 4015DT  
tube&sheet in one fiber laser  
cutting machine

### Specifications

Machine model	MPS-3015C	MPS-3015D	MPS-3015DT
Laser source power(optional)	1000/1200/1500/2000/2200/3000 (optional)	500/700/1000/1500/2000 (optional)	700/1000/1500 (optional)
process area	3000mm×1500mm	3000mm×1500mm	3000mm×1500mm
pipe clamping range (circum-circle diameter)	—	—	φ25-150mm
X/Y axis location accuracy	±0.05mm		
X/Y axis repeat location accuracy	±0.03mm		
Max location speed	120m/min	100m/min	
Max acceleration	1.2g	1g	
Worktable max load	800kg	800kg	
Pipe max load	—	—	60kg
Machine tool weight	6.5T	4.0T	6.0T
Dimension (L*W*H)	8700mm×2920mm×2000mm	5000mm×2600mm×1850mm	8200mm×3800mm×1900mm

## Medium power laser cutting machine

### Product appearance



## Medium power laser cutting machine

### Product appearance



### Specifications

Machine model	P6010D	
Available length of tube	6m	
Cutting capacity	Round tube	φ10-110
	Square tube	□10-110
Auto-loading capacity	Standard configuration	fully automatic loading
	Auto-loading diameter & weight	≤110mm & ≤150kg
Unloading capacity	Standard configuration	2m fixed unloading unit
	Optional configuration	2.5m/4m floating unloading unit
Accuracy and speed	X / Y axis positioning accuracy	±0.03mm/m
	X / Y axis repositioning accuracy	±0.03mm
	X / Y single axis max. positioning speed	120 m/min
	A axis max. positioning speed	150 rpm
Bevel cutting	N/A	

Machine model	W3013B	W3015B
Machine type	cantilever type	
X axis track	3000mm	
Y axis track	1300mm	1500mm
Z axis track	650mm	850mm
C axis track	n×360°	n×360°
A axis track	±135°	±135°
X, Y, Z axes positioning accuracy	±0.04mm/m	±0.04mm/m
X, Y, Z axes repositioning accuracy	±0.03mm	±0.03mm
X, Y, Z axes max. positioning speed	100m/min	60m/min
C, A axes max. positioning speed	90r/min	
C, A axes positioning accuracy	±0.015°	
C, A axes re-positioning accuracy	±0.005°	

Machine model	MPS-60PT
Laser source power(optional)	700/1000/1500 (optional)
process area	—
pipe clamping range (circum-circle diameter)	φ25-220mm
X/Y axis location accuracy	±0.05mm
X/Y axis repeat location accuracy	±0.03mm
Max location speed	80m/min
Max acceleration	0.8g
Worktable max load	80kg (chuck maximum)
Pipe max load	—
Machine tool weight	5.5T
Dimension (L*W*H)	9850mm×1850mm×1900mm

Machine model	MPS-0303L	MPS-1010D
process area	300mm×300mm	31000mm×1000mm
X/Y axis location accuracy	±0.01mm	±0.03mm/m
X/Y axis repeat location accuracy	±0.005mm	±0.02mm
Max location speed	60m/min	30m/min
Max acceleration	1.5G	0.3G
Voltage	380V	380V
Frequency	50Hz	50Hz
Worktable max load	25kg	50kg
Machine tool weight	1.5T	2.0T
Dimension (L*W*H) mm	1950×1310×2050	2000×3500×2000



# PLASMA CLEANING MACHINE

Plasma cleaning machine

Product appearance

## Samples



### PCB Plasma Vertical Plasma Cleaning Machine

- PCB's surface and holes clean / Bottom of HDI plate and holes clean
- FPC's surface and holes cleaning / PI' surface coarsening and cleaning
- Cover lay surface coarsening and cleaning
- Teflon Plate activation and holes clean
- Drilling dirt and surface cleaning in soft and hard board holes



### Rotary Spray Plasma Cleaning system

- Pre-treatment for printing, coating, dispensing, mobile phone cases in the electronics industry.
- Surface treatment of mobile phone screen.
- Cleaning for aerospace connector surfaces for the defense industry Screen printing.
- Transfer printing pre-processing, etc. for general industry



### Vacuum Plasma Cleaning Machine

- Applying into printed plate, semi-conduct field, silicone, plastic, Polymer, auto industry, aviation industry, and etc.
- Printed plate: The surface of the high-frequency board activation; the surface of the multi-layer board clean and de-smudged; the soft board activate before reinforcement.
- Semi-conduct fields: COB, COG, COF, ACF, applying into cleaning before the welding and wire bondSilicone, plastic, polymers: surface roughening, etching and activation of silicone, plastic, polymer.

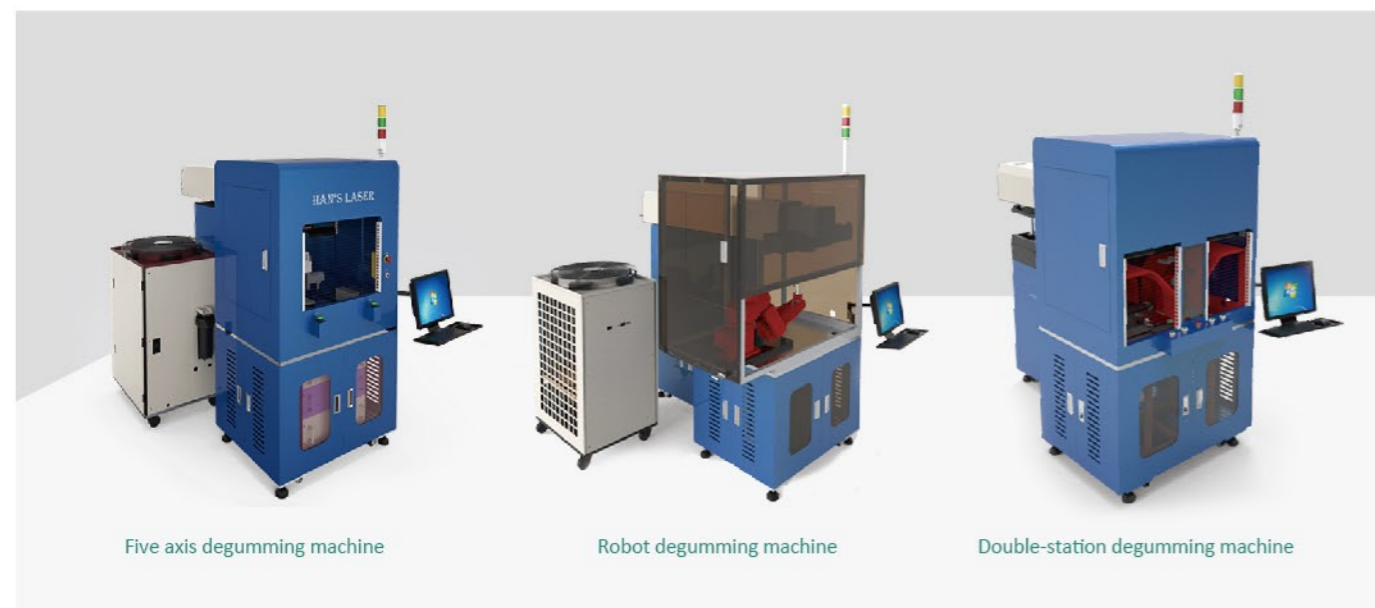


### Online Ar Plasma Cleaning Machine

- Temperature of plasma 38 °C, no damage to chip and its thin film
- Strong clean ability; comparable with vacuum plasma clean machine
- Self-made key component, highly cost-effective
- service life of plasma head is permanent

## Degumming / paint stripping machine

### Product appearance



Five axis degumming machine

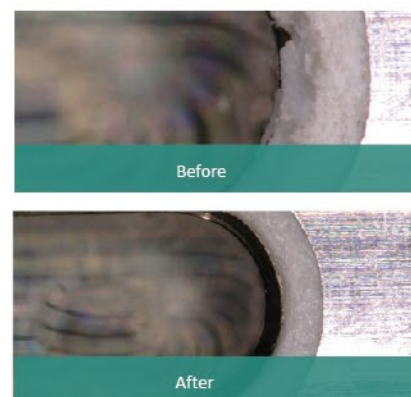
Robot degumming machine

Double-station degumming machine

### Specifications

Five axis degumming machine	Robot degumming machine	Double-station degumming machine
Equipped with high stability CO <sub>2</sub> laser marking machine		
Coaxial CCD system, reliable accuracy		
Five axis structure, processing on multi sides and stations;	Robot equipped, processing on multi sides and stations	Double stations working at the same time, efficiency improved
Add infrared preview and external infrared, focal length can be adjusted		
Can be customized according to different demand		

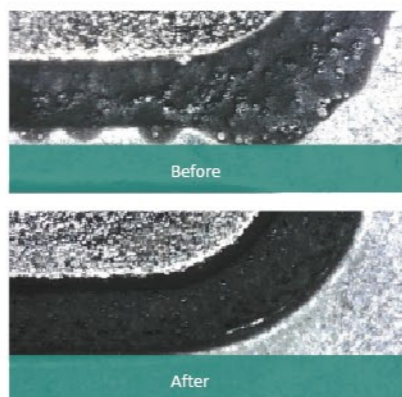
### Motor degumming



Before

After

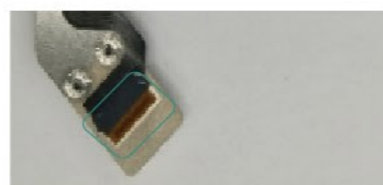
### Motor degumming



Before

After

### FPC degumming



Remove the overflowed glue at the joint of FPC and metal



### Direct injection/rotary spraying plasma cleaning machine

#### Characteristics

- Various nozzles are optional, can be used in different situations and environment for different products.
- Small and exquisite, easy to carry and move, save the space
- Can be In-Line installed in customer's production line, reduce the investment cost
- Low maintenance cost, easy for customer to control cost
- Mainly applied to phone shells' printing, coating, gluing in electronics industry; cleaning of phone screen surface; cleaning of aerospace connector surface in defense industry, screen printing in general industry, transfer printing pre-processing and so on.
- Microwave power supply / intermediate frequency power supply are optional
- Self-made key component of microwave power supply, highly cost-effective
- Air source : Compressed air (CDA)

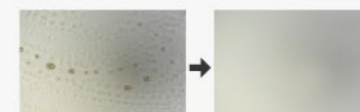
### Snowflake cleaning machine

#### Characteristics

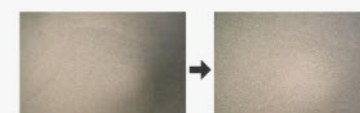
- Widely used in different environment, applicable for the surface cleaning of metal and plastic;
- Industrial CO<sub>2</sub> (purity99.5%), low cost for cleaning consumables;
- Snowflake size 1-3 um, no damage to the work piece;
- High utilization of CO<sub>2</sub> consumables, low consumption

#### Applications

Cleaning of oil stain on glass

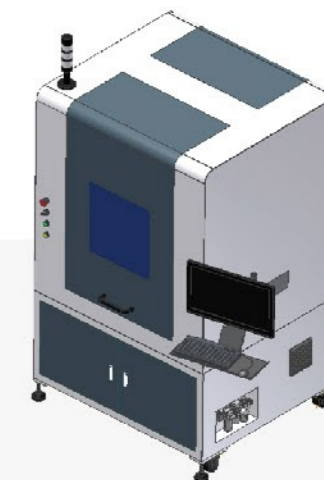


Cleaning of snowflake on wafer



## Snowflake cleaning machine

### Product appearance

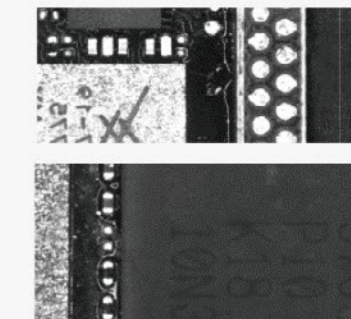


### IC Chip laser heating stripping equipment

#### Characteristics

- Heating range:160\*160mm
- Chip size: 3.2\*5.4mm~20.0\*13.5mm
- Spot diameter: 0.5~4mm adjustable
- Automatically set on / off the function of laser heating
- Heat the component without damaging the elements on the main board, which makes the soldering between the component and basilar plate reach the molten state.
- The surface temperature of the heated element can be feedback instantly and the laser power can be adjusted in time according to the temperature variation

#### Applications





# COLLABORATIVE ROBOT

## Elfin Collaborative Robot

Product appearance



E3 collaborative robot  
E5 collaborative robot  
E10 collaborative robot

Specifications

Machine model	E3	E5	E10
Weight	17KG	23KG	40KG
Load	3KG	5KG	10KG
Arm reach	590mm	800mm	1000mm
Power	100W in typical cycle	180W in typical cycle	350W in typical cycle

Machine model	E3 / E5 / E10
Joint range	±360°
Joint speed	90°/s
Tool speed	1m/s
Repeatability	±0.05 (in normal condition)
Degree of freedom	6
Control box size (W*H*D)	400*366*263mm
I/O port	digital input:4, digital output:4, analog input: 2
I/O source	24 V 2A

Machine model	E3 / E5 / E10
Communication	TCP/IP
Programming	graphical programming, remote process call
IP Level	IP54
Cooperative operation	10 advanced configurations for safety
Main material	aluminum alloy
Working temperature	0-50°C
Power input	100-240 AC, 50-60 Hz
Cable	"cable to connect control box: 5m cable to connect teach pendant: 5m "

## Multi-perceptual intelligent robot assistant

Product appearance



MAiRA  
multi-perceptual intelligent  
robot assistant

Specifications

Machine model	MAiRA
Payload	12-15kg
Working radius	1.4m
Degree of freedom	6/7
Machine net weight	48/51.5kg
Installation	Any angle
IP classification	IP65
Routing	Integral internal wiring harness and trachea
Status indicator	7 colorful LED indicators
Safety classification	Pld Cat.3/SIL3
Repeatability	±0.01mm

### Characteristics

- MAiRA is highly integrated with the latest sensor and is leading the collaborative robot to step into in the era of intelligence by the achievement of AI integration in control system and application.
- Durable and textured design combined with high end machine performance , easy editable function and infinite interaction possibilities, you can interact with it easy and freely as a beginner or expertise .
- MAiRA not only breaks the limitation between human and machine but also make the relationship closer.

## PARTNERS

We have accumulated 30,000 above-scale industrial customers, which is the value we depend on.



## HAN'S R&D

