

# HEROLASER

## LASER WELDING MACHINE

# HEROLASER

### 01 SHENZHEN HEROLASER EQUIPMENT CO., LTD (Headquarters)

Address : Buliding B&C, No.2, Lixin North Road, Qiaotou Community,  
Fuyong Town, Bao'an District, Shenzhen City, P.R.China  
Tel : 0762-8838666 Fax: +86-755-29191100  
Email : international@herolaser.net  
Phone : +86-139 2345 4670

### 02 HEROLASER EQUIPMENT (THAILAND) CO., LTD (Thailand Branch)

Address : 88/3 Moo 23, Bang Phli Yai, Bang Phli, Samut Prakan,  
Bangkok, Thailand 10540  
Tel : +86-923677737  
Email : sammydaiyu@gmail.com

### 03 HEYUAN HEROLASER CO., LTD (Production Base)

Address : Phase II Industrial Park of Hudieling Xiantang Town,  
Dongyuan County Heyuan City, Guangdong, China.  
Phone : +86-0755-29191116-812  
Fax : +86-0755-29191100

### 04 HEROLASER TAIWAN CO., LTD (Taiwan Branch)

Address : 3F. No 5, Andong Rd., Chungli District, Taoyuan  
City 32063, Taiwan Region  
Tel : +86-03-462-3125

### 05 HEROLASER CO., LTD (Japanese Branch)

Add : No1222 Zakuzaicho Kishiwadashi Osaka Japan  
Tel : 81-072-4477-8818  
Fax : 81-072-4477-8819



## Company Profile

Shenzhen Herolaser Equipment Co., Ltd is a national high-tech group company who engaged in the research and development, production and marketing of a complete series of industrial laser equipment.

Since 2005, Herolaser has established branches in Jiangsu, Zhejiang, Shandong, Chongqing and other regions in China, exported to 60 countries, had overseas agents in 10 countries, and built a modern manufacturing base of 150,000 square meters which was equipped with advanced processing machine tools from Germany and Japan. Herolaser production is based on ISO 19001 quality control system and ISO14001 environmental management system. All aspects of the goods are strictly checked to ensure the performance and quality of the products shipped. Several series of products have obtained EU CE certification, FDA certification and ETL certification (from a certification point of view, CSA, ETL and UL are interchangeable and there is no difference when it comes to compliance with the safety standards they are certifying to).

Our main products are Laser Cleaning Machine, Laser Marking Machine, Laser Welding Machine and Laser Cutting Machine. Products are widely used in electrical appliances, mobile communications, hardware products, tool accessories, precision equipment, jewelry, glasses and watches, integrated circuits, craft gifts, plastic molds, medical equipment, new energy and other industries.

Herolaser has a professional independent core R&D team of more than 100 people, accounting for over 30% of the total employees, including software engineers, mechanical engineers, electrical engineers, industrial designers and other professional teams, our company has established long-term cooperation with Foxconn, Gree, BYD, CSIC, IPG, MAX and other international enterprises.

Through all these years, Herolaser has insisted on the business philosophy of "providing customers with the most suitable products and solutions" all along. We will continue to provide full pre-sale, in-sale and after-sale service for users all over the world.

2005  
FOUNDED IN 2005

800+  
COMPANY STAFF

150000+  
TOTAL AREA 150000m<sup>2</sup>

100+  
CORE R&D TEAM

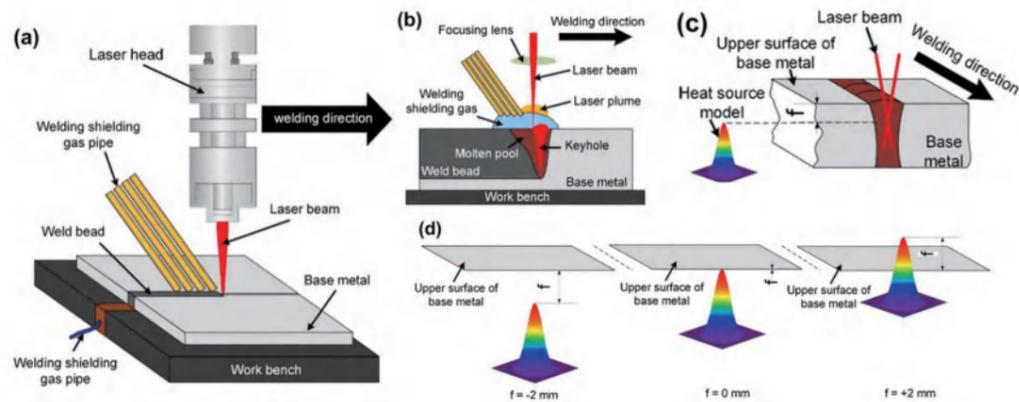
### Member enterprises:

Shenzhen Herolaser Equipment Co., Ltd. (Headquarter)  
Heyuan Herolaser Co., Ltd. (Manufacturing and R&D base)  
Herolaser Taiwan Co., Ltd.  
Herolaser Equipment (Thailand) Co., Ltd  
Herolaser Equipment (Japan) Co., Ltd



# How Does Laser Welding Work?

Lasers produce a highly concentrated heat source, capable of creating a keyhole. Consequently, laser welding produces a small volume of weld metal, and transmits only a limited amount of heat into the surrounding material, and consequently samples distort less than those welded with many other processes.



## Features

- 01 Speedy and flexible
- 02 Deep, narrow welds
- 03 Low distortion and low heat input;
- 04 Suitable for wide range of materials and thicknesses
- 05 Performed out of vacuum;
- 06 Non-contact, single-sided process;
- 07 Pulse output mode and continuous output mode available;

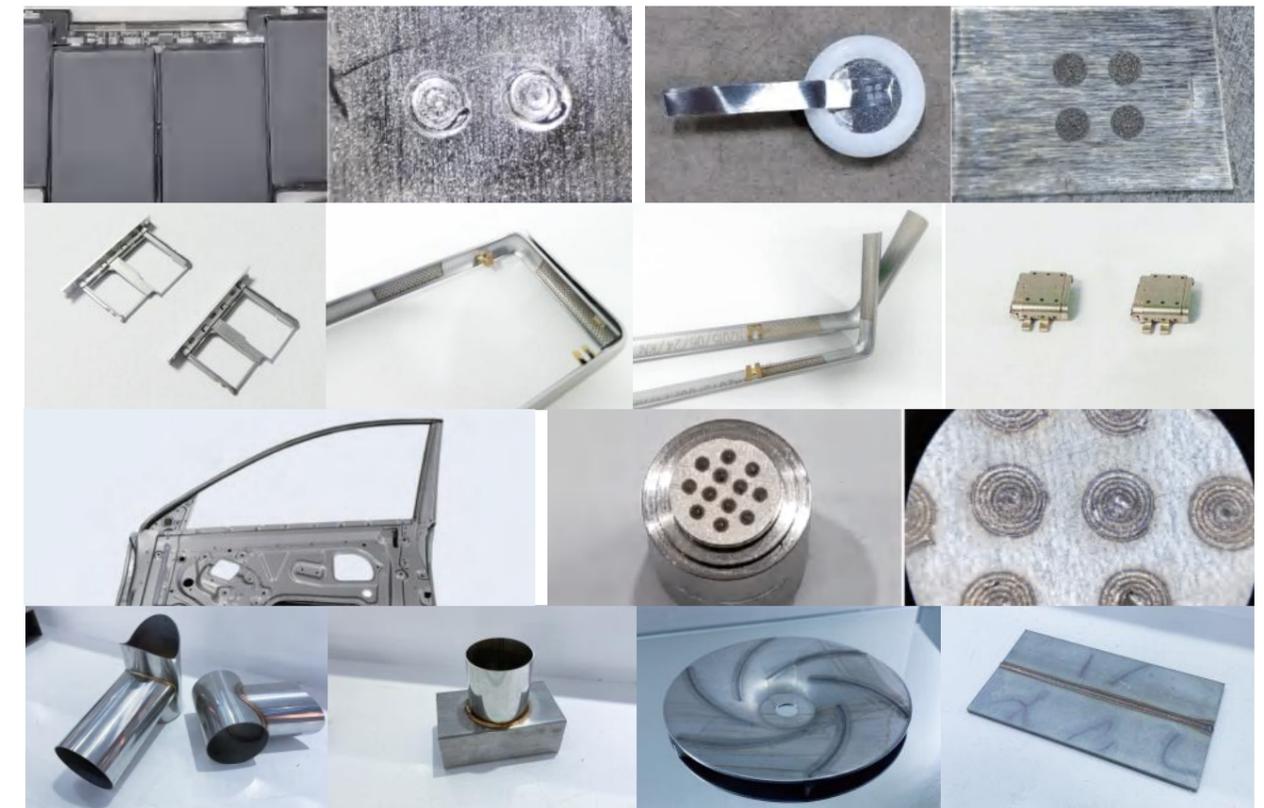
## Different Types of Laser Welding

Laser type	Wavelength	Output mode	Application
CW fiber laser	1070nm	Continuous	Intermittent/continuous welding of the same metal Modulated pulse spot welding
YAG laser	1064nm	Pulse	Spot welding/weld seam applications of the same metal
QCW fiber laser	1070nm	Pulse/continuous	Metal Spot Welding / Continuous Seal Welding
Semiconductor laser	808nm,915nm,980nm	Pulse/continuous	Plastic Welding/Laser Soldering

# Industrial Application



## Sample Display



# Manual Laser Welding Machine



## Model Profile

Herolaser handheld laser welding machines use the latest generation of laser sources, including continuous wave and pulse output modes. Wobble welding technology, adjustable focal length, and operation with the highest process consistency, ensure high quality products for the laser industry. The laser beam provides a concentrated heat source, allowing for narrow, deep welding and high welding rates.

The equipment adopts integrated design, compact size, suitable for various working environments. Even less skilled operators can produce the same results. Manual laser welder is a perfect tool for metal fabrication, offering a fast and economical for welding. It is a killer of electric welding and argon arc welding.

## Technical Parameters

Item	Parameters			
Laser power	1000W	1500W	2000W	3000W
Laser wavelength	1070nm			
Fiber length	Standard 10M, maximum support 15M (need to customize)			
Working mode	Continuous / Modulation			
Weld speed range	0~120mm/s			
Cooling method	Water cooling (purified water or distilled water)			
Weld Thickness	Dual temperature control ( Refrigerant: R-410A)			
Temperature range	0.5-1.5mm	0.5-3mm	0.5-5mm	0.5~6mm
Protective gas	storage temperature: -20-60 C working temperature: 15~35 C			
Protective gas	Required (argon gas could meet most of the application)			
Power supply	220V	220V	220V/380V	380V
Current	23A	32A	41A/24A	34A
Total consumption	5KW	7KW	9KW	13KW

## Configuration

Pictures	Main parts	Specification
	Laser generator/laser source	Max/Reci (China brand); IPG (German brand) Up to 15m long fiber cable
	Water chiller (1kw~2kw: built-in type; 3kw: external type)	Dual temperature control with R-410A Refrigerant Standard: CE, REACH and RoHS
	Handheld welding head	1.15kg, Motor wobble ; focus length: 150mm
	Intelligent HMI (system for data setting)	One touch intelligent screen to adjust and observe welding parameter as per requirement.
	Automatic wire feeder (optional)	Suitable for 0.8mm, 1.0mm, 1.2mm and 1.6mm wire Dual wire feed is available

# Automatic Laser Welding Machine



Wobble Head



Collimating And Focusing Welding Head



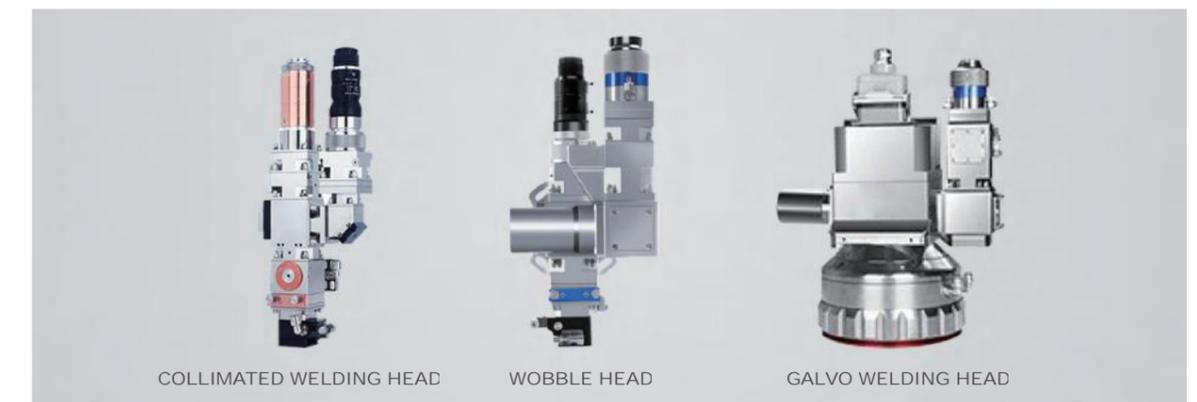
Galvanometer Welding Head

## Model Profile

Automatic laser welding machine is automatic welding equipment developed by Herolaser for industrial applications. It is often used in mobile communication, glasses and clocks, hardware products, precision instruments, auto parts and other industries. Using a platform laser welding machine can reduce the workload of users and reduce their fatigue; it is more convenient for large objects or plates with relatively large thickness, and the welding quality is relatively high. The welding platform is distributed with screw holes, and a rotary table can be flexibly added to weld cylindrical objects and other objects of various shapes, which greatly improve the welding accuracy, efficiency and weld quality. It is equipped with collimating and focusing welding head, wire feed head, wobble head and vibrating lens head to realize a variety of laser welding process applications

## Technical Parameters

Laser type	CW	QCW	YAG
Laser power	1KW, 1.5KW, 2KW, 3KW, 6KW, 12KW	100W, 150W, 300W	300W, 400W, 600W
Laser wavelength	1070nm	1070nm	1064nm
Module effective stroke	X*Y*Z axis (optional): 500*300*300mm/1000*600*500mm		
Fiber length	10~20m		
Operating mode	continuous/modulation	continuous/modulation	optical fiber transmission with energy feedback
Cooling method	water cooling	air cooling	water cooling
Targeting	red light indication and CCD observation system		
Power supply	AC 220V/380V; 50/60Hz		
Types of welding head (optional)	Wobble welding head, collimating and focusing welding head or vibrating lens head	Collimating and focusing welding head or vibrating lens head at options	Collimating and focusing welding head



COLLIMATED WELDING HEAD

WOBBLE HEAD

GALVO WELDING HEAD

# Robotic Fiber Laser Welding Machine



## Technical Parameters

Model	1000W	1500W	2000W	3000W	6000W
Repeatability	±0.05mm				
Laser wavelength	1070±10nm				
Operating mode	Continuous / Modulation				
Laser working life	> 100,000 hours				
cooling method	Circulating water cooling				
Positioning	Red light indication and CCD observation system				
Installation Environment	environment humidity	0~40°C			
	ambient temperature	20~80%(no condensation)			
power demand	AC 220V 50Hz/60Hz		AC220/380V 50Hz/60Hz	AC 380V 50Hz/60Hz	
Average power consumption	3.7KW	5.6KW	6.4KW	10.0KW	15.8KW

## Model Profile

Herolaser robotic fiber welding system integrates the high degree of flexibility and super precision 6-axis robot arm to meet wider range of welding and make laser welding workable for more complex application. It consists of fiber laser, robot control system, wobble welding head and cooling system. It is processing at a relatively high speed and precision rate during welding, which greatly result in its efficiency of welding, 2-10 times faster than traditional welding. Robotic laser welding is an accurate, clean and flexible option for a wide variety of welding applications.

## Configuration

Pictures	Main parts	Specification
	Laser generator/laser source	Max/Reci (China brand); IPG (German brand) Up to 15m long fiber cable
	Water chiller (1kw~2kw: built-in type; 3kw: external type)	Dual temperature control with R-410A Refrigerant Standard: CE, REACH and RoHS
	Wobble welding head	It adopts motor-driven X, Y-axis vibrating lens, with multiple wobble modes, and wobble welding allows workpiece to have irregular welding, larger gaps and other processing parameters.
	Robot arm (optional)	ABB/Fanuc/Yaskawa/Estun/Herolaser
	Automatic wire feeder (optional)	Suitable for 0.8mm, 1.0mm, 1.2mm and 1.6mm wire
	Laser vision seam tracking system (optional)	real-time processing of seam information, finding and tracking function can meet the needs of intelligent welding

## Other Types of Welding Machines

Handheld Laser Welding Machine - Water Cooled



Handheld Laser Welding Machine - Air Cooled



YAG Mold Welding Machine



Yag Conductive Fiber Laser Welding Machine



Precision Welding Machine For Plastic



12kw High Power Laser Welding Machine



# Other Types of Welding Machines

Battery module pack assembly line



Soft mold battery pack wire



Laser Welding Power Analysis

Laser Power		1000W	1500W	2000W	3000W	4000W	6000W	8000W	10000W	12000W
Material	Thickness									
Stainless Steel	1	√	√	√	√	√	√	√	√	√
	2	√	√	√	√	√	√	√	√	√
	3		√	√	√	√	√	√	√	√
	4			√	√	√	√	√	√	√
	5				√	√	√	√	√	√
	6				√	√	√	√	√	√
	8						√	√	√	√
	10							√	√	√
	12								√	√
Carbon Steel	1	√	√	√	√	√	√	√	√	√
	2		√	√	√	√	√	√	√	√
	3			√	√	√	√	√	√	√
	4				√	√	√	√	√	√
	5					√	√	√	√	√
	6						√	√	√	√
	8						√	√	√	√
	10							√	√	√
	12							√	√	√
Aluminum	1	√	√	√	√	√	√	√	√	√
	2		√	√	√	√	√	√	√	√
	3			√	√	√	√	√	√	√
	4				√	√	√	√	√	√
	5					√	√	√	√	√
	6						√	√	√	√
	8								√	√
	10									√

# Company Qualification



# Business Cooperative Partner

