



Handheld Laser Welding Machine **PRODUCT SOLUTION**

GH-LW

3 in 1 Handheld

Laser Welding Machine



1 Guohong Profile

Guohong Laser Group is a large-scale laser cutting machine manufacturer integrating R&D, production and sales, providing high-quality fiber laser cutting machines, metal cutting machines, laser pipe cutting machines, three chucks automatic pipe cutting machines, hand-held laser welding machine, casting machine bed design and development, non-standard laser cutting machine, high-power laser cutting machine, etc.

Guohong Group has a branch company which is called Guohong Laser Technology Hebei Co., Ltd., which covers an area of nearly 12,000 square meters, and Guohong Laser Technology (Jiangsu) Co., Ltd., which covers an area of 15,000 square meters. Guohong Group has won many titles such as Excellent Private Technology Enterprise, Hebei Excellent Enterprise, Jiangsu Star Enterprise, Contract-honoring and Promise-keeping Enterprise, etc.



- GUOHONG LASER -

Laser Manufacturer



Guohong Laser Group has a 12 tons electric furnace which allow us to have the machine bed casting and manufacturing capability. And Guohong Group has the large-scale processing capacity of multiple CNC gantry milling units. From product initial design and production to after-sales service, including product design, product installation, customer technician training, product maintenance, etc., We provide leading fiber laser cutting machine technology, reliable products and complete technical solutions for our customers. The pursuit of maximum customer satisfaction is our service tenet. Guohong Laser Group is adhering to the business philosophy of "Shape morality to prolong the business. Build quality product to continue the enterprise".

2 Product Introduction

Product type: GH-LW

- The product with a self-developed three-in-one control system can be flexibly switched the mode of welding, cleaning, and cutting. It sets up multiple security alarms and can be operated easily and flexibly.
- High quality, repeatability and strength of welds that do not require further processing
- Easier to create aesthetically pleasing, long joints in one motion
- Low operating costs and maintenance of the device
- Intuitive operation and high process cleanliness
- High welding speed While maintaining quality, The ability to Work in longer intervals, Relatively Low power consumption
- Handy head Allows 360-degree maneuverability
- Ability to clean and cut workpiece materials



3 Function Introduction

(1) Three-in-one control system

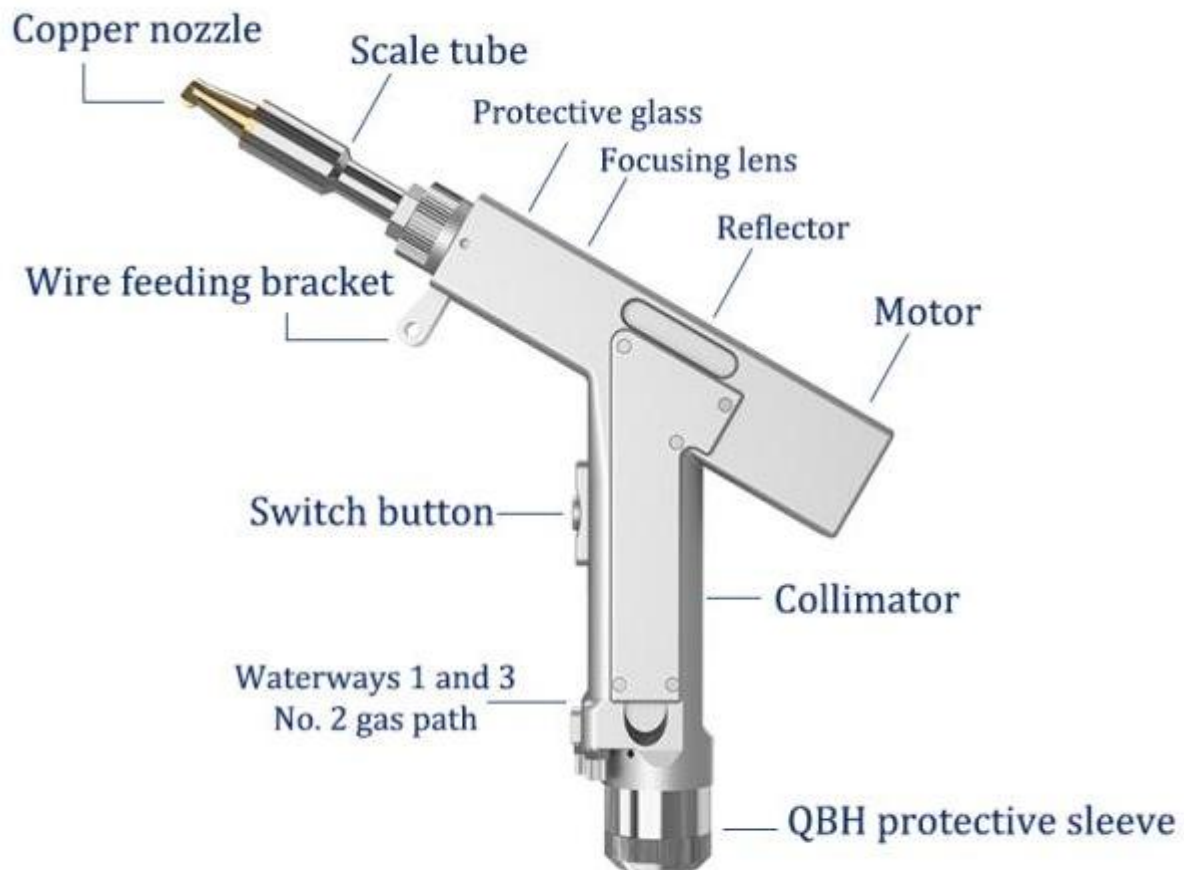
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High-performance, intuitive and easy-to-use operating system. Controls are placed on the color touch display, allowing you to set all necessary parameters according to user needs. The system can save a variety of craft modes, which can be quickly set up before work. The system supports multiple language versions.

(2) Handheld Laser Welding Head

Welding, cutting, cleaning, and post-welding cleaning can be realized by replacing the laser head parts, one machine with multiple functions. Equipped with safety sensing function, laser light will be emitted after touching the metal, and the light will be automatically locked when it is removed. Spiral shaking function, the weld width can be adjusted, and the welding ability is significantly improved. A variety of tip components are included in the standard kit to complete cutting, welding and weld cleaning. Assembly for remote cleaning is optional.



(3) With a variety of welding methods

Compared with traditional welding techniques in production, laser welding is more environmentally friendly and easier to operate. Laser technology is more popular, bigger in your budget and is the most important and safer machine. With a variety of welding methods: spot welding, butt welding, lap welding, sealing welding, etc. can be realized. High aspect ratio, small weld width, small heat-affected zone, small deformation, fast welding speed, smooth and beautiful weld seam, no need or simple treatment after welding. High quality welding seam, no porosity, can be precisely controlled, small focal point, high positioning accuracy, easy to automate.



> Tailor welding



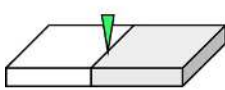
> Fillet welding



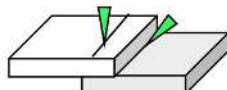
> Stitch welding



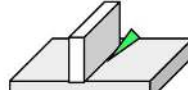
> Lap welding



Butt joint



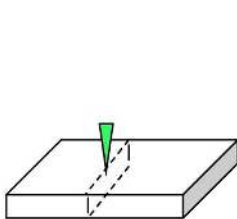
Lap joint



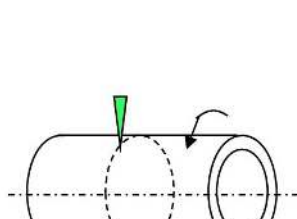
T-joint



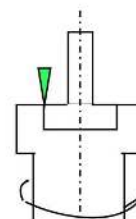
Flange joint



Linear weld



Circular radial weld



Circular axial weld

(4) Laser Source

Using first-class well-known brand fiber laser, like RAYCUS series, RECI series and other new advanced fiber lasers for industrial application of fiber lasers represent the trend of laser development, which are widely used in the processing of various plates and even non-ferrous metals processing. It has a wide range of operating wavelengths, high stability and long life of pump diode, etc., can be equipped with built-in or independent water cooler, and can be equipped with a variety of optical fiber terminals, collimating optical components and processing heads.



Advantage:

- ① Ultra-high electro-optical conversion efficiency (greater than 40%)
- ② Good laser beam quality and high energy density
- ③ Wide modulation frequency, strong reliability, long life, maintenance-free operation;
- ④ The laser beam quality is optimized for the application;
- ⑤ Semiconductor optical fiber is used as the laser generating medium, no laser generating gas is required, and it is green and environmentally friendly.
- ⑥ The speed is faster and the performance is more perfect.

(5) Cooling System



(HANLI water cooler)

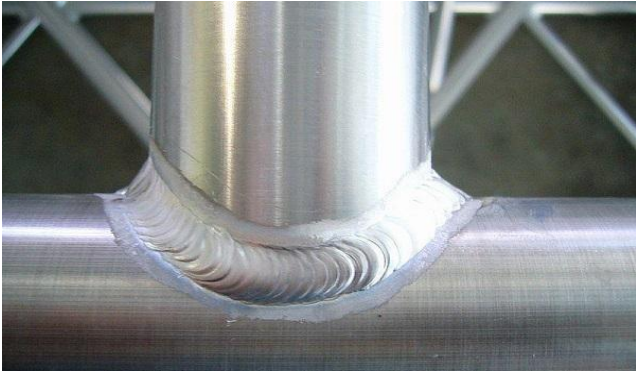
- ① High-efficiency cooling capacity, environmentally friendly refrigerant can be selected; temperature control accuracy can reach $\pm 0.5^{\circ}\text{C}$;
- ② It has two water temperature control modes of constant temperature and intelligent temperature control, which are suitable for different working situation; it has multiple settings and fault display functions;

(6) Automatic wire feeder (optional)

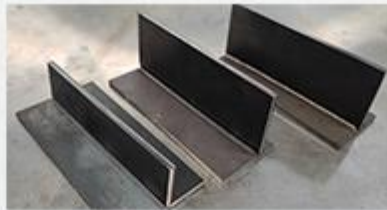
The automatic wire feeder is designed to combine simple operation and control of the machine with excellent wire feeding performance. Effectively fills the weld to make the weld stronger.



(7) Welding Sample



**LASER
WELDING**



**LASER
CLEANING**



**LASER
CUTTING**



4 Equipment Configuration and Specification

(1) GH-LW Configuration

No.	Supply voltage (V)	220V $\pm$ 10% AC 50/60Hz
1	Place the environment	Flat, no vibration and shock
2	Working environment temperature (°C)	10 ~ 40
3	Working environment humidity (%)	< 70
	Cooling method	Water cooling
	Applicable wavelength	1064nm ($\pm$ 10nm)
	Applicable power	$\leq$ 3000W
	Collimation	D20*5/F60
	Focus (handheld welding mode)	D20*4.5/F150
	Focus (cleaning mode)	D20*4.5/F400
	Reflection	30*14 T2
	Protective lens specifications	18*2
	Maximum supported air pressure	10Bar
4	Focus vertical adjustment range	$\pm$ 10mm
5	Spot adjustment range (handheld welding mode)	0 ~ 6mm
6	Spot adjustment range (cleaning mode)	0 ~ 50mm
7	Weight	0.8kg

Exhibition

