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Fiber laser welder ▪ Handheld

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## 6 working modes



Five laser R&D and produced handheld fiber laser welding machine, it has faster welding speed, better welding performance, lower operating cost. More and more buyer are using it to replace the MIG/TIG welder and solid YAG laser welder

The welding speed for our handheld fiber laser welder is 2-10 times faster than traditional argon arc welder, which can reduce the numbers of welding worker and labour cost. Inexperienced operators can do the job by one day learning

No professional welder? The welding seam can be still beautiful. Commonly no need the polish process and polish workers after welding by fiber laser welder



### Dual-wobble technology welding head

Dual-scanning motor (Dual-wobble) welding head can get more laser working mode for meeting more different welding requirement. Compared with the single wobble welding head models in the market, our welding head can do firmer welding and more beautiful welding seam

# Different welding technology

Different welding equipment		Traditional machine	YAG laser welding	Fiber laser welding
Welding quality	Thermal input	High	Low	Low
	Workpiece deformation/undercut	High	Low	Low
	Welding quality	Fish-scale pattern	Fish-scale pattern	Smooth
	Post-processing	Polish	Polish	None
Operation	Welding speed	Slow	Medium	Fast
	Operation difficulty	High	Low	Low
Environmental protection and safety	Personal harm	High	Low	Low
	Environmental pollution	High	Low	Low
Running cost	Materials consumed	Welding rod	Laser crystal /Xenon lamp	None
	Energy consumed	Low	High	Low
	Personnel requirements	High	Normal	Low
	Size (Area)	Small	Large	Small

## Comparison

The fiber laser welding machine have obvious advantage in welding quality such as low thermal input, low workpiece deformation & undercut, smooth welding seam and low requirement in post-processing (no need extra polish after welding)

In Environmental protection and safety, the argon-arc welder have high harm on operator because of strong arc ultraviolet rays, also the big welding spatter is harm on Environmental pollution

Faster speed means higher efficiency. Fiber laser welder have unique advantage in efficiency, less consumable parts, lower much running cost

## Comparison

Fiber laser welder VS YAG laser welder		
Different welding machine	Solid YAG laser welding	Continuous fiber laser welding
Laser power	600w	1000w
Electro-optical conversion efficiency	3%	40%
Energy consumption	20KW	3.5KW
Electricity fee/hour (0.3usd per kilowatt hour)	20*1*0.3=6USD	3.5*1*0.3=1.05USD
Xenon lamp cost /year	923USD	0
Laser crystal /year	1,846USD	0
Comprehensive usage fee/year (22 days per month, 8 hours per day)	15,441USD	2,217USD

Fiber laser welder VS Argon arc welder		
Different welding machine	Argon arc welding	Continuous fiber laser welding
Number of welders	2 welders (High requirement)	1 welder (Low requirement)
Welder's monthly salary/per welder	2000USD	1500USD
Number of polishing workers	1 worker	0
Polish workers' monthly salary	1500USD	0
Total monthly wages of workers	5500USD	1000USD
Total annual wages of workers	66000USD	18000USD

Smooth welding seam means beautiful looking  
and no need polish process

## Smooth welding seam



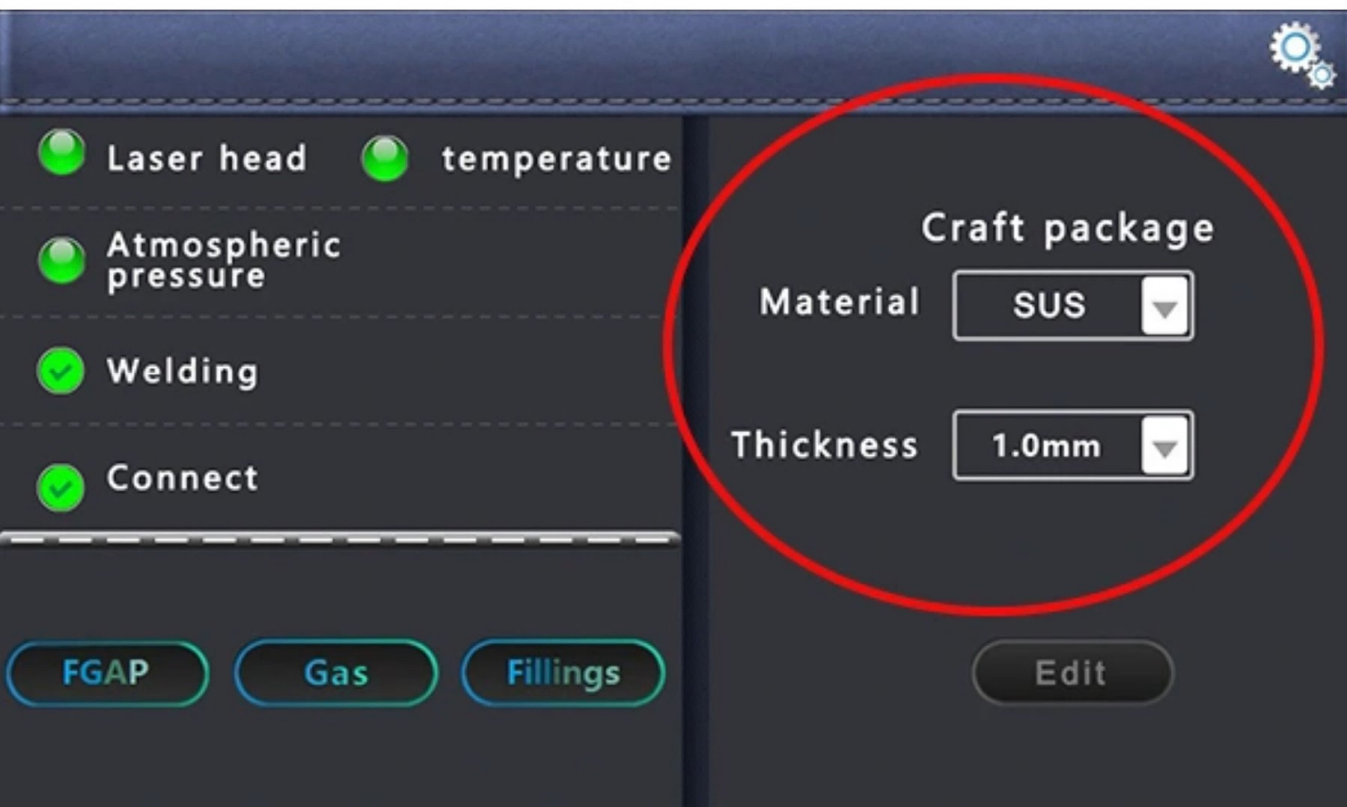
Adopts Raycus fiber laser source---Quality assurance

### Applicable materials

1. Stainless steel
2. Galvanized sheet
3. Aluminum
4. Titanium alloy
5. Carbon steel

### Popular applicable industry

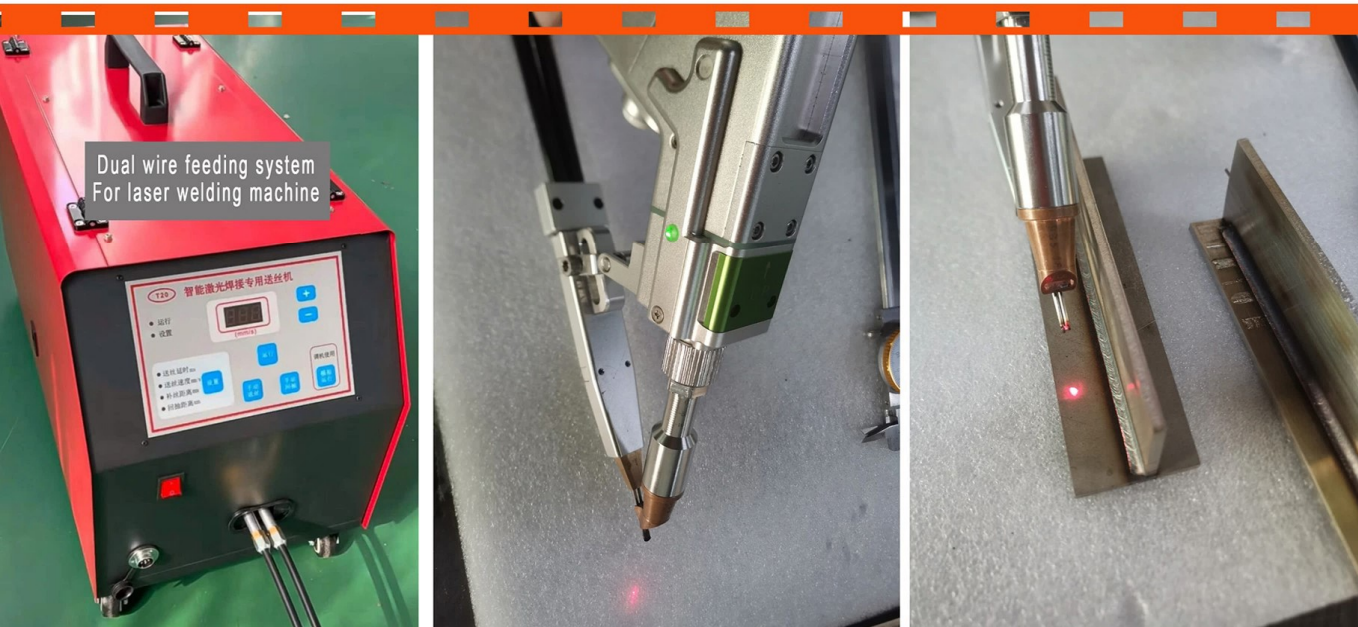
1. Hardware & hardware tools
2. Machine cabinet/body
3. Kitchenware equipment
4. Steel storage rack
5. Stainless steel advertising letter
6. Metal door & windows
7. Sheet metal welding



## Professional craft package

No need set laser power, laser frequency, welding width, motor frequency one by one. Only need to select which material and its thickness on touch screen, then parameter setting will be coming out automatically

More than 10-language for option such as English、deutsch、espanol、국인、italino、日本語、Русский、Polski and etc



Innovative dual-wire feeding system for optional, which can makes the welding seam more stronger, especially for thicker materials such as 5~10mm thickness, which is very suitable for 2000w & 3000w laser welder

## Models & specifications

FLW-1000H (1000w)      FLW-1500H (1500w)

FLW-2000H (2000w)      FLW-3000H (3000w)

Series: Handheld FLW series (Dual wobble)

Name: Fiber laser welder

Scanning technology: Dual wobble

Laser source: Raycus laser source

Laser source option: JPT、MAX、BWT

Cooling type: Water chiller cooling

Laser spot: 6 welding modes for option

Welding frequency: 2-46HZ (1HZ=8 loop/s)

Laser spot width: 0.2-5mm adjustable

White+blue color cabinet: 96\*49\*68cm

White+gray color cabinet: 98\*58\*105cm

White+red color cabinet: 118\*60\*121cm

Input power: 220V-Single phase-(1000w~2000w)

Input power: 380V-3 phase-(3000w machine)

### FLW-1000H

Commonly for 0.5~2.5mm stainless steel

### FLW-1500H

Commonly for 0.5~3.5mm stainless steel

### FLW-2000H

Commonly for 1-4.5mm stainless steel

### FLW-3000H

Commonly for 1-6mm stainless steel



A design: white+blue color  
For 1000w~1500w



B design: white+gray color  
For 1000w~1500w



C design: white+red color  
For 1000w~3000w



## Company brief

Five laser established in Dongguan city of China in year of 2017, and we set up a new factory in Guangzhou city in year of 2023. We focus on laser technology, R&D & produces handheld laser welding machine, automatic laser welding machine & robot laser welder, handheld laser cleaning machine, robot laser clenaing machine, fiber laser marker, CO2 laser marker, UV laser marker, online laser marker & 3D laser marking machine. Also we provide full laser solution & integrates laser system to other industry machines.