1. Product Description

Hand-held laser welding machine

Using the latest generation fiber laser source and independently developed , G.WEIKE hand-held laser welding machine filled in the blank of hand-held welding in laser equipment industry.

Its advantages are simple operation, perfect welding seam, fast welding speed and no consumables. Welding in thin stainless steel plates, iron plates, aluminum plates and other metal materials can perfectly replace the traditional argon arc welding and electric welding technology.

● Advantages:

1. Fast welding speed, 2~10 times faster than traditional welding.
2. Easy operation, need no training
3. Perfect smooth welding seam, without the need to polish, will save you time.
4. No deformation or welding scar, firm welding of the workpiece.
5. Laser welding has less consumables and long service life.
6. Safer and more environmentally friendly.

2. Parameter

NO.	Name	Parameter
1	Machine model	Hand-held fiber laser welding machine
2	laser power	1000-2000W
3	laser wave length	1070 NM
4	Fiber length	standard10M / Maximum 15M
5	operate mode	continuation/ modulate
6	Welding speed range	0~120 mm/s
7	Cooling chiller	Industrial water chiller
8	Working environment temperature range	15~35 ℃
9	Humidity range of working environment	< 70%No condensation
10	Welding thickness recommendations	0.5-7mm
11	Welding gap requirements	≤0.5mm
12	working voltage	220/ 380 V 3ph

3. Product Configuration List

Name		Unit	Quantity	Remarks
Laser Welding Joint		set	1	Hand-held swing welding mode, light and flexible
new generation fiber laser source		set	1	Interactive control system makes the light spot larger, and a better formed welding seam
Au3tech Interactive control system		set	1	Includes control software

4. Comparison With Other Welding Type

Comparative Project	Traditional Welding	Fiber Laser Welding	G.WEIKE New Generation Laser Welding
Weld heat input	very high	low	low
Work piece deformation	big	small	small
Bonding strength with base metal	general	good	very good
Subsequent processing	polish	no or few polish	no or few polish
Welding speed	general	2 times as traditional welding	More than 2 times as traditional welding
Applicable material	Stainless steel. Carbon steel. Galvanized sheet	Stainless steel. Carbon steel. Galvanized sheet	Stainless steel. Carbon steel. Galvanized sheet

Consumable material	high	low	low
Operation difficulty	complicated	average	simple
Safety of the operator	unsafe	safe	safe
Impact of Environmental protection	Not environmentally friendly	environmentally friendly	environmentally friendly
Welding fault tolerance	good	bad	good
Reliable	no	no	yes
Light spot width adjustable	no	no	yes
Welding quality	low	average	high

Welding parameters

1kW							
Material	thickness mm	melt thickness mm	output power	speed m/s	gas pressure	wobble speed	wire feeder gap
SUS/CS	0.6	0.2	16%	0.02	2bar	90	0.2mm
	0.8	0.2	20%	0.02	2bar	90	0.2mm
	1	0.3	25%	0.02	2bar	90	0.2mm
	1.2	0.3	30%	0.02	2bar	90	0.2mm
	1.8	0.3	40%	0.02	2bar	90	0.2mm
	2.5	0.5	40-45%	0.02	2.3bar	90-100	0.2mm
	3	0.7	60%	0.02	2.3bar	90-100	0.2mm
AL/Cu	0.5	0.3	70-80%	0.02	2.5bar	90-100	0.2mm
	1	0.5	80-90%	0.02	2.5bar	90-100	0.2mm
	1.5	0.6	85-95%	0.02	2.5bar	90-100	0.2mm

1.5kW							
Material	thickness mm	melt thickness mm	output power	speed m/s	gas pressure	wobble speed	wire feeder gap
SUS/CS	0.6	0.3	15%	0.02	2.0bar	90	0.2mm
	0.8	0.3	20%	0.02	2.0bar	90	0.2mm
	1	0.5	25%	0.02	2.0bar	90	0.2mm
	1.2	0.5	30%	0.02	2.0bar	90	0.2mm
	1.8	0.7	40%	0.02	2.0bar	90	0.2mm
	2.5	0.8	40-45%	0.02	2.3bar	90-100	0.2mm
	3	1.2	60%	0.02	2.3bar	90-100	0.2mm
	5	1.5	70-80%	0.02	2.3bar	90-100	0.2mm
AL/Cu	0.5	0.3	70-80%	0.02	2.0bar	90-100	0.2mm
	1	0.5	80-90%	0.02	2.0bar	90-100	0.2mm
	1.5	0.6	80-90%	0.02	2.3bar	90-100	0.2mm
	2	0.8	85-95%	0.02	2.3bar	90-100	0.2mm

2kW							
Material	thickness mm	melt thickness mm	output power	speed m/s	gas pressure	wobble speed	wire feeder gap
SUS/CS	0.6	0.3	10%	0.02	2.0bar	90	0.2mm
	0.8	0.4	15%	0.02	2.0bar	90	0.2mm
	1	0.5	20%	0.02	2.0bar	90	0.2mm
	1.2	0.6	25%	0.02	2.0bar	90	0.2mm
	1.8	0.8	35%	0.02	2.0bar	90	0.2mm
	2.5	1	35-45%	0.02	2.3bar	90-100	0.2mm
	3	1.4	50%	0.02	2.3bar	90-100	0.2mm
	5	2.1	70-80%	0.02	2.3bar	90-100	0.2mm
	6	2.5	80-90%	0.02	2.3bar	90-100	0.2mm
	7	3	80-90%	0.02	2.3bar	90-100	0.2mm
AL/Cu	0.5	0.4	60-80%	0.02	2.0bar	90-100	0.2mm
	1	0.8	80-90%	0.02	2.0bar	90-100	0.2mm
	1.5	0.8	80-90%	0.02	2.3bar	90-100	0.2mm
	2	1	85-95%	0.02	2.3bar	90-100	0.2mm
	4	2	90-100%	0.01	2.3bar	90-100	0.2mm

5. Applicable Industry

Can be widely used in many applications, including but not limited to cabinets, kitchen construction, staircases, shelves, ovens, stainless steel doors and window guardrails, distribution boxes, stainless steel structures and other complex industrial welding projects.

6. Samples

7. Warranty and After-Sale

7.1. Warranty

G.WEIKE promises to maintain products which are produced and sent according to a formal contract,and guarantees every repaired machine will function good if used properly.

G.WEIKE has the rights to repair or replace a product in warranty period if it has a material or technical problem. We will charge for the maintenance under normal circumstances. It will be free if the machine has specific problems.

7.2. Warranty Scope

G.WEIKE will not provide warranty service in following cases:product or parts (including fiber) are damaged because of modification, dismantlement, improvement with G permission; product or parts (including fiber) are damaged because of emergency or negligence;product or parts (including fiber) are damaged because of lack of preservation, customers have the responsibility to learn the directions on the user guide and operate the machine properly. Damages resulted in abnormal operation will not

get warranty services. Accessories are not in warranty.。

Customers should make a written request in 31 days as soon as they found a problem which is in the warranty range, no third party should be involved in the maintenance process.

7.3. Technical Support and Product Maintenance

Contact with G.WEIKE' engineer whatever problems occurs when using , and perform a troubleshooting under an engineer's direction.

All products waiting for repair or replacement should be placed in the original crates cases that G.WEIKE provides , otherwise G.WEIKE will charge for the damage it may cause.

When customers receive G.WEIKE products, please check if the product is damaged and whether accessories is complete or not.

Warranty and after-sale clauses above are for reference only, and are subject to the formal contract.