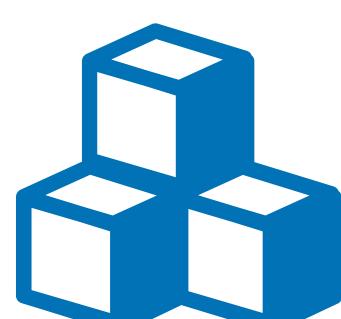




# ***Handheld Laser Welding Machine Series***



Time-Saving



Modular Control



Easy Operation



# Handheld Laser Welding Machine



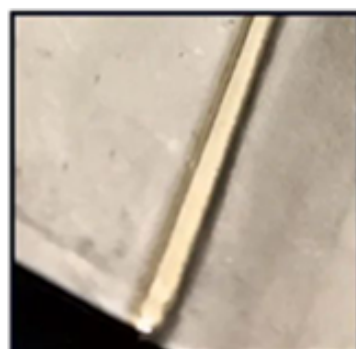
## Working Principle

The light from the laser is transmitted through the optical fiber to the handheld laser welding gun, where it emits the laser. The laser transforms into heat, which is then transferred to the surface of the workpiece, causing it to melt or the welding wire to melt. This, aided by an inert gas for cooling, results in the formation of a welded joint, firmly bonding the two objects together.



## Characteristics Advantages

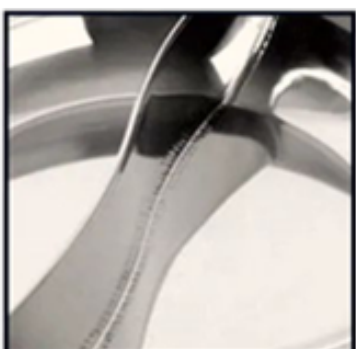
- ◆ Simple and easy to learn, no welding certificate required, no need for professional welders
- ◆ No need for a face shield, no arc radiation
- ◆ Smooth and aesthetically pleasing welds, minimal or no need for grinding
- ◆ By controlling laser energy, welds remain non-deformed or have minimal deformation
- ◆ Low operating cost, low consumption of electricity, gas, and consumables like lenses
- ◆ Fiber optic cable extends up to 10 meters,extendable to 15 meters as require
- ◆ Multiple welding processes available, fillet welding, groove welding, circular welding, and more



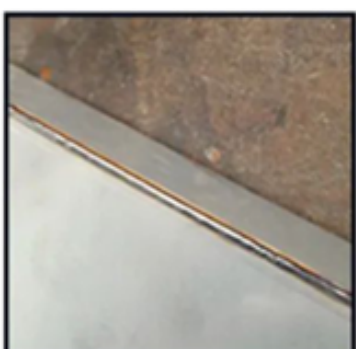
Butt Welding



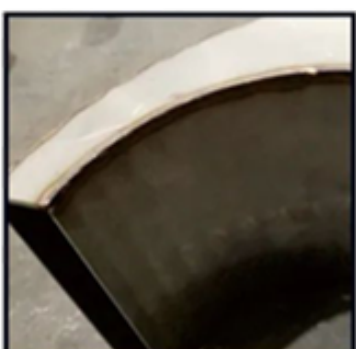
Seam Welding



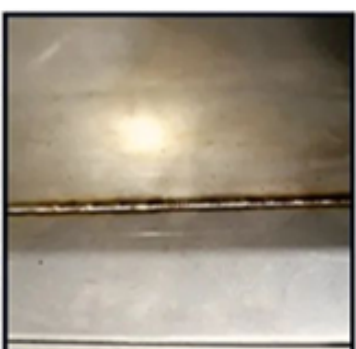
Overlay Welding



Vertical Welding



External Corner Welding



Internal Corner Welding

- ◆ The welding speed for metals such as stainless steel, mild steel, and galvanized sheet
- ◆ For aluminum alloy welding with aluminum wire, the welding speed is 1.2 - 2 meters per minute

## Comparison of Argon Arc Welding and Laser Welding

<i>Method</i> <i>Project</i>	<i>Argon Arc Welding</i>	<i>Laser Welding</i>
Heat	High heat	Low heat
Deformation	Prone to deformation	Minimal or no deformation
Weld Bead	Large weld bead	Smaller weld bead, adjustable spots
Aesthetics	Requires processing, high grinding costs	No need for post-processing or low processing costs
Penetration	Susceptible to perforation	Not prone to perforation, controllable
Shielding Gas	Requires Argon gas	Requires Argon/Nitrogen gas
Precision	Average	High precision
Efficiency	Average	2-5 times faster
Safety	Intense ultraviolet radiation	Safe irradiation, almost no harm
Skill Requirements	Skilled welders	No technical requirements



## Cost Comparison

**Argon  
Arc Welding**

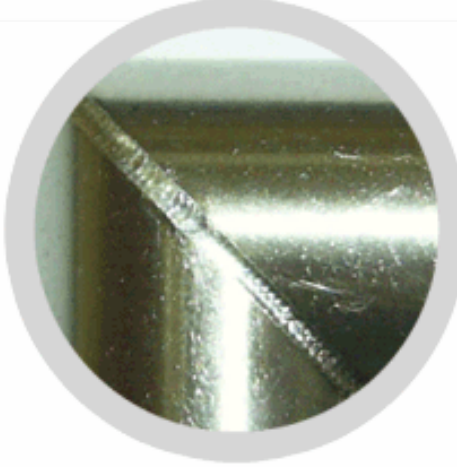
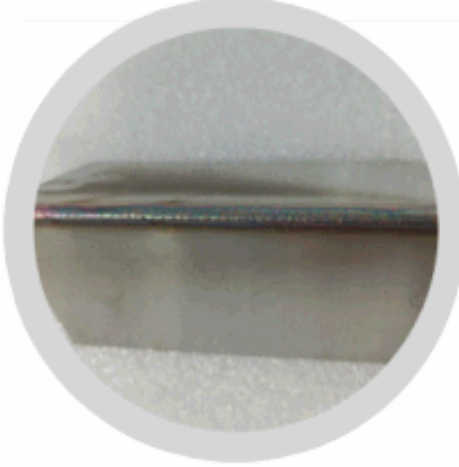


**VS**



**Laser  
Welding**

<i>Types</i>	<i>Argon Arc Welding</i>	<i>Laser Welding</i>
Number of Employees	5	1
Salaries	1,097.36 USD	548.68 USD
Number of Grinding Employees	1	0 - 1
Salaries	960.19 USD	548.68 USD
Total Annual Wages	77,364.16 USD	987.63 USD

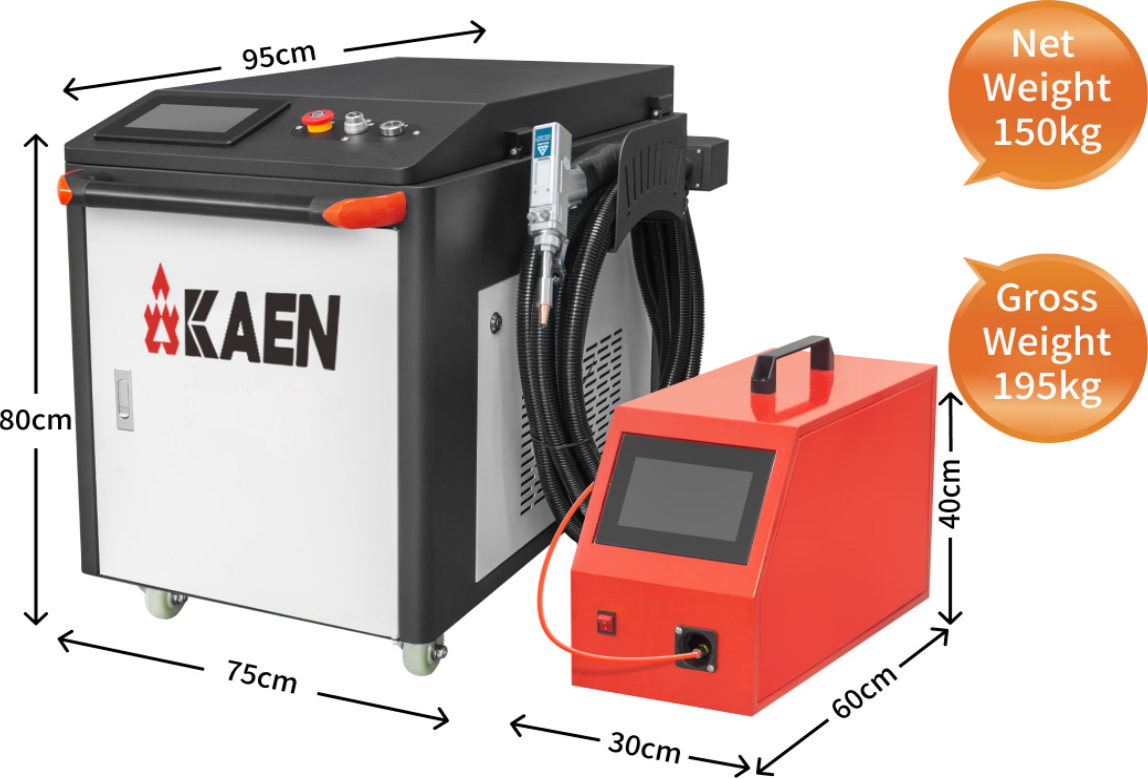


- Non-professionals can get started within 2 hours
- Low heat input, minimal deformation
- Efficiency is 2 to 10 times higher, no need for welding certification
- Smooth weld seam
- No need for post-welding grinding of the surface



# Handheld Welding Machine Series

## Portable (1000W/1500W)



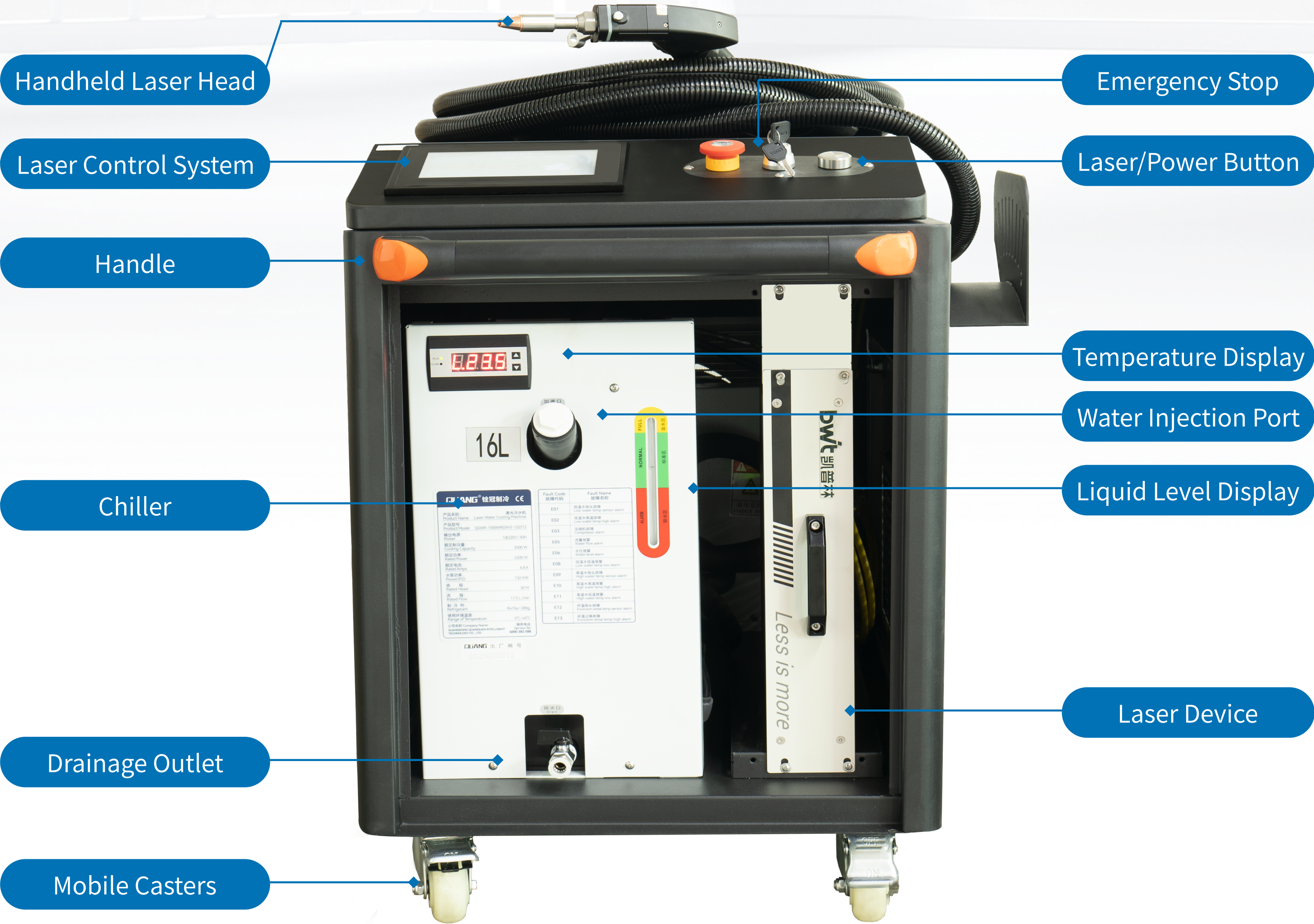
## Standard (2000W)



## High-Power (3000W)



## Structure of the Machine



## Front View

## Machine Parameters

Model	DPH-1000SC	DPH-1500SC	DPH-2000SC	DPH-3000SC
Laser Power (W)	1000	1500	2000	3000
Operating Mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Central Emission Wavelength (nm)	1070-1090	1070-1090	1070-1090	1070-1090
Pulse Frequency (Hz)	50-5000	50-5000	50-5000	50-5000
Cooling Method	Water Cooling	Water Cooling	Water Cooling	Water Cooling
Output Fiber Length(m)	10 (Exposed 8)	10 (Exposed 8)	10 (Exposed 8)	10 (Exposed 8)
Output Power Stability	<3%	<3%	<3%	<3%
Power Requirements	AC 200-240V (Single Phase)	AC 200-240V (Single Phase)	AC 200-240V (Single Phase)	380v
Beam Quality	1.1	1.1	1.1	1.1
Focused Beam Diameter (mm)	0.3-1.5 (Adjustable)	0.3-1.5 (Adjustable)	0.3-1.5 (Adjustable)	0.3-1.5 (Adjustable)
Weight (kg)	Net weight 150 (with wooden frame), 195 including wire feeder	Net weight 150 (with wooden frame), 195 including wire feeder	Net weight 180 (with wooden frame), 240 including wire feeder	Net weight 200 (with wooden frame), 310 including wire feeder
Dimensions (cm)	1000/1500w Machine Dimensions: L 95 * W 75 * H 80 Wire Feeder:L 60 * W 30 * H 40		Machine Dimensions: L 95 * W 75 * H 103 Wire Feeder: L 60 * W 30 * H 40	z



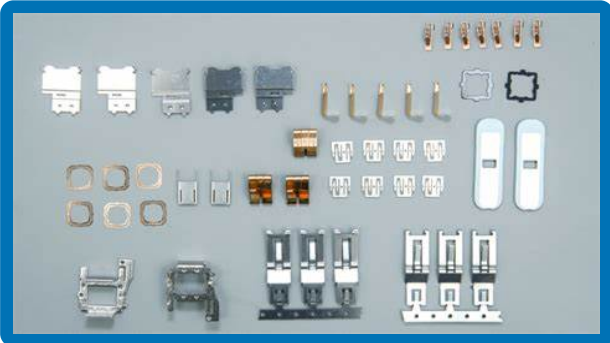
Welding Parameters

Material	Gas	Welding Thickness (nm)	Laser Power (W)	Wire Diameter (mm)	Wire Feeding Speed (nm/s)	Scanning Material (mm/s)	Scanning Width (mm)	Welding Frequency (Hz)	Duty Cycle (%)	Air Pressure (bar)	Welding Method
Stainless Steel	Argon Gas (Ar)	1	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		1.5	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		2	1500	1.2	75	300	3.0	1000Hz	100	10	Flat Welding
		2.5	2000	1.2	75	300	3.0	1000Hz	100	10	Flat Welding
		3	2000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding
		4	3000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding
Carbon Steel	Argon Gas (Ar)	1	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		1.5	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		2	1500	1.2	75	300	3.0	1000Hz	100	10	Flat Welding
		2.5	2000	1.2	75	300	3.0	1000Hz	100	10	Flat Welding
		3	2000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding
		4	3000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding
Galvanized Steel	Argon Gas (Ar)	1	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		1.5	1500	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		2	2000	1.2	75	300	2.5	1000Hz	100	10	Flat Welding
		2.5	2000	1.6	60	300	3.0	1000Hz	100	10	Flat Welding
		3	3000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding
Aluminum (Requires specialized wire feeder and wire guide wheel; Please provide remarks when placing an order)	Nitrogen Gas (N2)	1	1000	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		1.5	1500	1.0	90	300	2.5	1000Hz	100	10	Flat Welding
		2	2000	1.2	75	300	2.5	1000Hz	100	10	Flat Welding
		2.5	2000	1.6	60	300	3.0	1000Hz	100	10	Flat Welding
		3	3000	1.6	60	300	3.5	1000Hz	100	10	Flat Welding

Industrial Applications



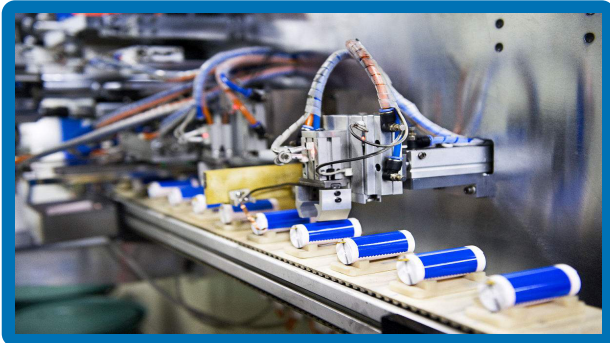
Metal Processing



Electronics



Construction Industry

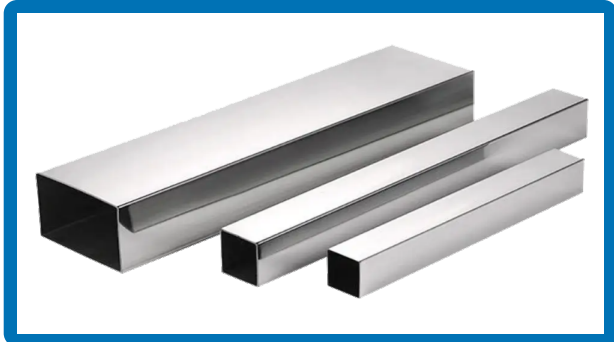


New Energy Industry

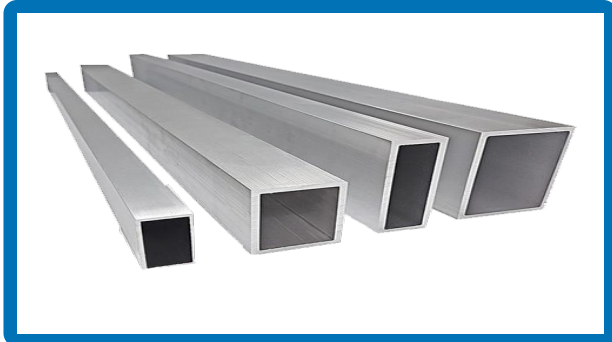


Automotive Manufacturing

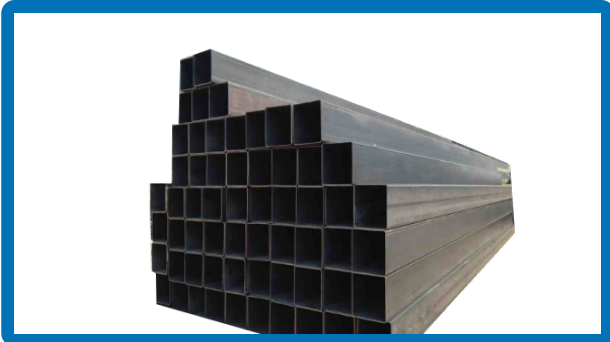
Welding Materials



Stainless Steel



Aluminum Alloy



Carbon Steel



Aluminum Sheet



Sheet Metal



# Mini Handheld Water-Cooled Laser Welding Machine



## Product Features

- Features a sleek and user-friendly design, making it easy to operate.
- Simple operation; non-professionals can be operational after just 2 hours of training.
- Use well-known brand electrical components.
- Welding speed is 2-5 times that of traditional welding.
- Long-lasting lifespan of up to 100,000 hours.
- Triple safety protection, modular control, and assured safety maintenance.

## Machine Parameters

Serial Number	Features	Description	Remarks
1	Wavelength (nm)	1060-1080	
2	Laser Power (W)	1500	
3	Fiber Length (m)	10	Exposed: 8m
4	Head Weight (kg)	0.7	
5	Cooling Method	Water Cooling	
6	Operating Environment	Temperature: 10-35°C, Relative Humidity: 30%≤RH≤85%	
7	Power Requirements	220V±5%, 50Hz	
8	Total Power	5	
9	Overall Dimensions (nm)	700*470*680	
10	Total Weight (kg) ±20	93	Mini All-in-One Machine
11	Safety Level	Class IV	
12	Total Power Protection Level	IP54	



# Handheld Air Cooling Laser Welding Machine



## Product Features

- The machine features a simple and user-friendly design, allowing for easy operation.
- Simple operation; non-professionals can be operational after just 2 hours of training.
- Equipped with electrical components from renowned brands.
- Welding speed is 2 to 5 times faster than traditional welding.
- Equipment boasts a long service life of up to 100,000 hours.
- Triple safety protection ensures modular control and secure maintenance.

## Machine Parameters

Serial Number	Features	Description	Remarks
1	Wavelength (nm)	1060-1080	
2	Laser Power (W)	1500	
3	Fiber Length (m)	10	Exposed: 8m
4	Head Weight (kg)	0.7	
5	Cooling Method	Air Cooling	
6	Operating Environment	Temperature: 10-35°C, Relative Humidity: 30%≤RH≤85%	
7	Power Requirements	220V±5%, 50Hz	
8	Total Power	5	
9	Overall Dimensions (nm)	790*376*623	
10	Total Weight (kg) ±20	65	Air Cooling All-in-One Machine
11	Safety Level	Class IV	
12	Total Power Protection Level	IP54	



Equipment Configuration

Components/ Power	H80	H80	H100	H120
Cabinet	Dapeng Customization (Red/White)			
Laser Source	MAX photonics MSFC-1000X /Raycus1000W/Bwt 1000W	MAX photonics MSFC-1500X /Raycus1500W/Bwt 1500W	MAX photonics MSFC-2000X /Raycus2000W/Bwt 2000W	MAX photonics MSFC-3000X /Raycus3000W/Bwt 3000W
Handheld Laser Head	SUP			
Laser Control System	Qi Lin \ SUP \ WSX			
Wire Feeder (Standard)	Dapeng Customization (Red/White)	Dapeng Customization (Red/White)	Dapeng Customization (Red/White)	Dapeng Customization(Red)
Chiller	Han Li SCH-1000 /QUANG-1000	Han Li SCH-1500 /QUANG-1500	Han Li SCH-2000 /QUANG-2000	Han Li-3000 /QUANG-3000

Note: (1) The welding head + control system + wire feeder are included in the standard configuration.

(2) The standard configuration includes 6 copper nozzles, 5 protective lenses, a pair of safety goggles, 1 data cable, and a 3-meter gas hose.

Accessories List

Number	Name	Specifications	Quantity (PCS)	Price (Consumables)	Recommended Usage	Remarks
1	Nozzle	Right Angle, Inside Angle, Outside Angele	6	40 yuan per piece	3 pieces	Each type, 3 pieces
2	Lens	D18nm*2nm/ D20nm*2nm	5	30 yuan per piece	1 piece	SUP is D18, Others are D20
3	Wire Feeder Wheel	Model1:(0.8 \ 1.0) Model2:(1.2 \ 1.6)	4	/	/	2 pieces for each model
4	Safety Goggles	/	1	/	/	/
5	Data Cable	3m	1	/	/	/
6	Hexagonal Wrench	/	1	/	/	Opening of the cabinet side rear door
7	Storage Box	/	1	/	/	Contains lenses and nozzles
8	Gas Hose	Diameter10*6.5	1	/	/	3m
9	Fiber Optic Protective Sleeve	/	1	/	/	Protecting the laser fiber head

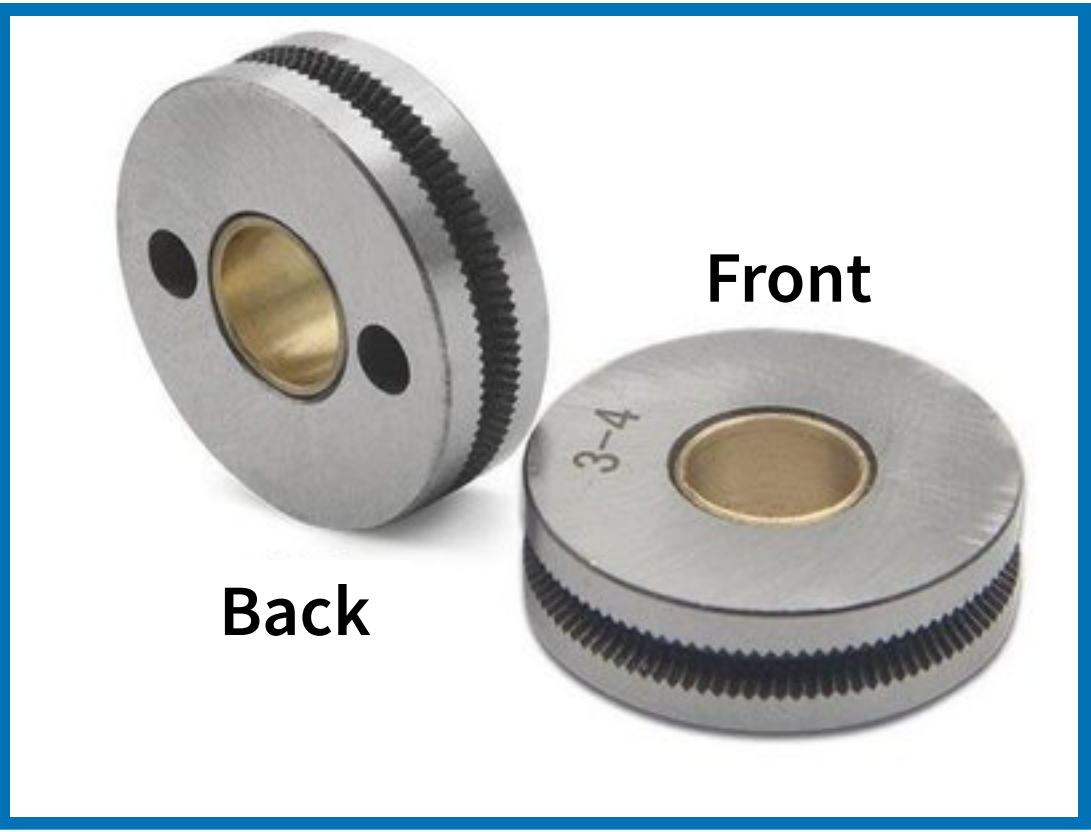
Image



Nozzle



Lens



Wire Feeder Wheel



Safety Goggles



Data Cable



Hexagonal Wrench



Storage Box



Gas Hose



Optic Protective Sleeve



Core Component – Laser



Image

Accessories List

- High-precision automatic mounter
  - Component and COS automatic wire bonding equipment
  - Automated component brightness testing system
- FAC, automatic coupling system for reflective mirrors
  - Component and COS automatic wire bonding equipment
  - High-reliability equipment with independent intellectual property rights

Product Technology

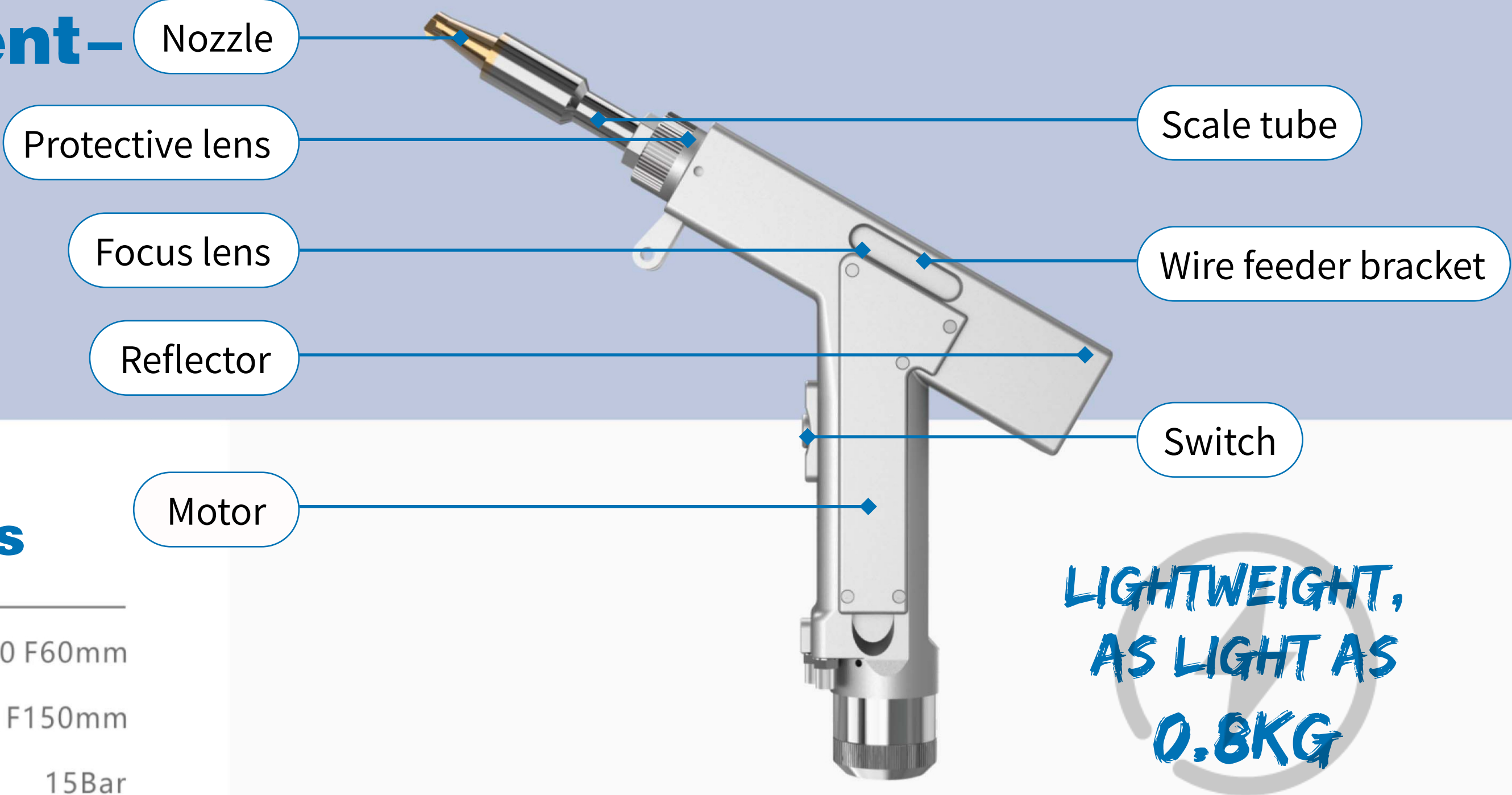
- Strict control of cladding and core alignment for both active and passive optical fibers to prevent optical leakage.
  - Optimize the coupling efficiency between pump lasers and beam combiners, and control the internal temperature of the beam combiners
  - High power durability of QBH end faces and meticulous design and production
- Multi-stage residual pump light filtering technology to prevent fiber and fiber bench heating.
  - Effective thermal dissipation of active optical fibers and temperature control of the overall structure.
  - Strict control of the output beam spot to ensure consistent product performance

Parameters

Model	BFL-CW1000	BFL-CW1500	BFL-CW2000	BFL-CW3000
Laser Power (W)	1000	1500	2000	3000
Fiber Core Diameter	14 ∼ 20 ∼ 25 ∼ 50um	14 ∼ 20 ∼ 25 ∼ 50um	14 ∼ 20 ∼ 25 ∼ 34 ∼ 50um	20 ∼ 25 ∼ 34 ∼ 50um
Output Connector	QBH	QBH	QBH	QBH
Modulation Frequency	0-50KHZ	0-50KHZ	0-50KHZ	0-50KHZ
Voltage(V)	220±20V, AC,PE,50/60HZ	220±20V, AC,PE,50/60HZ	220±20V, AC,PE,50/60HZ	380±20V, AC,PE,50/60HZ
Setting Temperature	25℃ (Laser Module) 30℃ (QBH)	25℃ (Laser Module) 30℃ (QBH)	25℃ (Laser Module) 30℃ (QBH)	25℃ (Laser Module) 30℃ (QBH)
Dimensions (mm)	80*402*296	80*402*346	80*402*346	80*482*521



# Core Component– Laser Gun



## Parameters

Collimation Focal Length	D20 F60mm
Focusing Focal Length	D20 F150mm
Maximum Air Pressure	15Bar
Vertical Focusing Range	±10mm
Spot Adjustment Range	Line0-5mm
Applicable Wavelength	1070nm
Weight	0.8kg



## Safe

Independently developed safety inspection system, multiple safety alarms, ensuring safety and stability

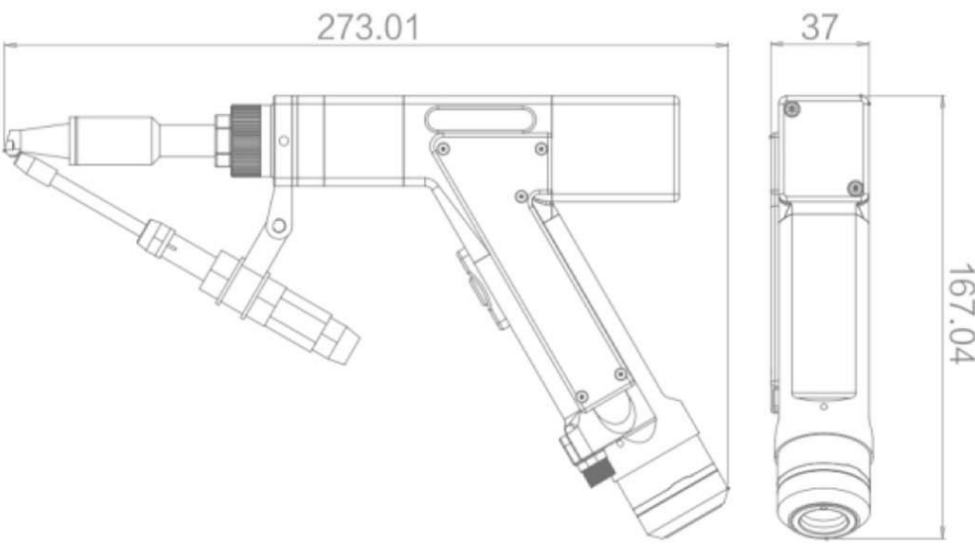


## Time-saving

Drawer-style installation for focus lens and protective lens, making replacement convenient



## Dimensions



## Compact

Small size, lighter weight, more flexible operation, easy to handle



## Parameters

High welding strength, minimal deformation, and deep penetration



## Multiple Functions

Supports handheld continuous welding, spot welding, cleaning, cutting; "Hand" and "Auto" modes, password authorization

# Core Component – Multi-Function Automatic Wire Feeder

## SUP-AMF-A

### Multi-Function Automatic Wire Feeder

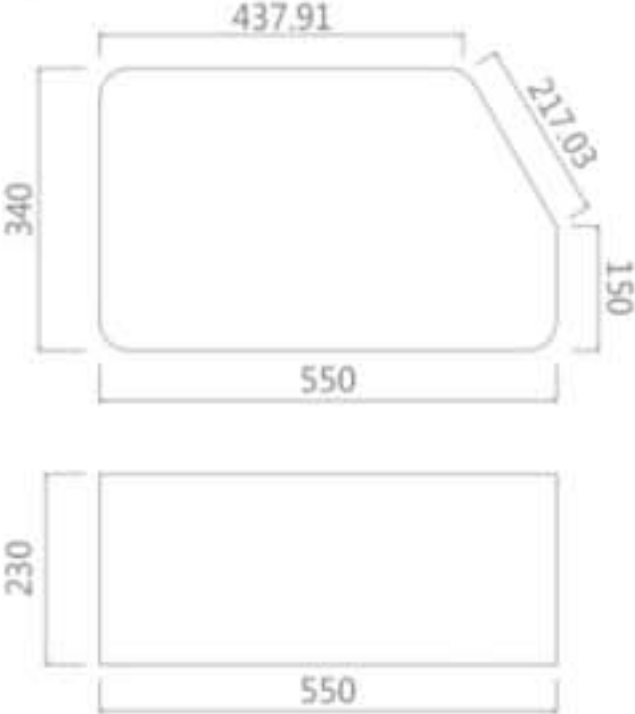
#### Features

Touchscreen display, four-wheel dual-drive wire feeding mechanism, wire feeding speed of 15-600cm/min, continuously adjustable, supports continuous wire feeding mode and pulse mode

#### Supports Wire Diameters

0.8/1.0/1.2/1.6mm, customizable for 2.0/2.5mm

#### Dimensions



## SUP-AMF-D

### Multi-Function Automatic Wire Feeder

#### Features

Touchscreen display, wire feeding speed adjustable from 15-600cm/min, supports continuous wire feeding mode, pulse mode, single wire mode, double wire mode, supports dual wire synchronization adjustment.

#### Supports Wire Diameters

0.8/1.0/1.2/1.6/2.0mm

#### For Dual Wire Setup Supports Wire Diameters

1.6/2.0mm, customizable for 2.5mm

#### Dimensions

