DP LASER

大鵬激光
DA PENG LASER
400-900-9228

Handheld Laser Welding Machine Series

Time-Saving

Modular Control

Easy Operation

Experienced Manufacturer, Quality Assurance

Why choose us

R&D Capability

Shenzhen Dapeng Laser Technology Co., LTD., founded in 2011, is a national high-tech laser equipment enterprise integrating research and development, manufacturing, sales and service. The four main product lines include more than 150 equipment and solutions including laser marking, laser cutting, laser welding, and laser cleaning machines widely used in auto manufacturing, printing and packaging, electronic components, hardware industry, jewelry hclothing leather, medical equipment, craft gifts and more industries.

Quality Control

In accordance with the ISO 9001 quality control system, we rigorously monitors eachstage including materials, manufacturing processes, assembly, and shipping.

Efficient and Effective Support

We have developed a comprehensive system for production, sales, and after-sales service.

We havea laser industry park in Nantong, Jiangsu, andproduction bases in Shenzhen, Wenzhou, and Suzhou. Additionally, we have a large laser cutting machine production base in Dongguan.

We havealso set up over 20 branch offices in key industrialcities and regions across the country.

Diverse Products

Laser Cutting Machine

Capable of cutting various metal sheets and tubes (additional tube cutting device required), primarily suitable for rapid cutting of materials such as stainless steel, carbon steel, galvanized sheet, electrolytic plate, brass sheet, aluminum sheet, manganese steel, various alloy sheets, and rare metals.

Laser Marking Machine

Widely used for marking graphics and text in various fields including integrated circuit chips, computer components, industrial bearings, watches, electronics and communication products, aerospace components, household appliances, hardware tools, molds, wires and cables, food packaging, jewelry, tobacco, and military applications.

Laser Welding Machine

Suitable for a wide range of industries including aviation, aerospace, automotive, power batteries, machinery manufacturing, shipbuilding, chemical industry, and consumergoods.
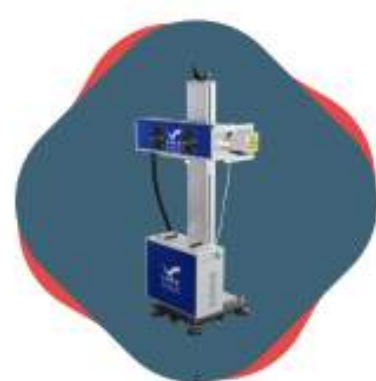
Laser Coding Machine

This product is primarily designed for real-time coding of products. It can adapt to various manufacturers, including liquor bottling lines, wine bottling lines, beverage filling lines, pharmaceutical packaging lines, tobacco sorting lines, and more.

Precision Micro-additive Equipment

With a diverse range of products, we offer customized configurations of precision laser marking machines, laser welding machines, and laser cutting machines based on customer requirements.

Non-standard Automation

With a diverse range of products, we specialize in customizing precision laser marking machines for our customers.

We provide a complete set of laser processing solutions and related facilities. Our main product lines include a variety of industrial laser equipment and their associated products, totaling over 200 types. These include laser marking machine series, laser welding machine series, laser cutting machine series, green laser demonstration series, PCB vlaser drilling machine series, linear motor series, and more.

Our products find extensive applications in industries such as electronics, integrated circuits, instruments, printed circuits, computer manufacturing, mobile communications, automotive components, precision instruments, building materials, clothing and accessories, urban lighting, jewelry, handicrafts, printing and plate-making, among others.

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
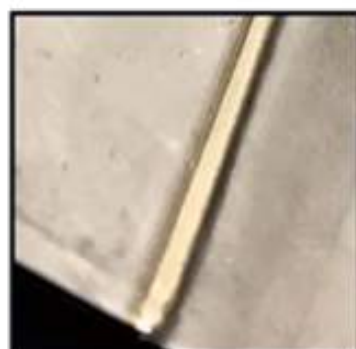
| Butt Welding | Seam Welding | Overlay Welding | Vertical Welding | External Corner Welding | Internal Corner Welding |

◆ 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

| Project / Method	Argon Arc Welding	Laser Welding
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**

Types	Argon Arc Welding	Laser Welding
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
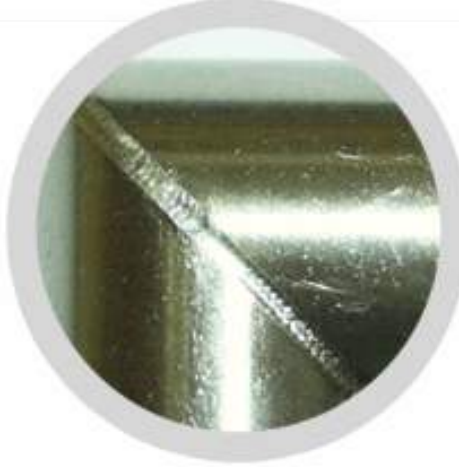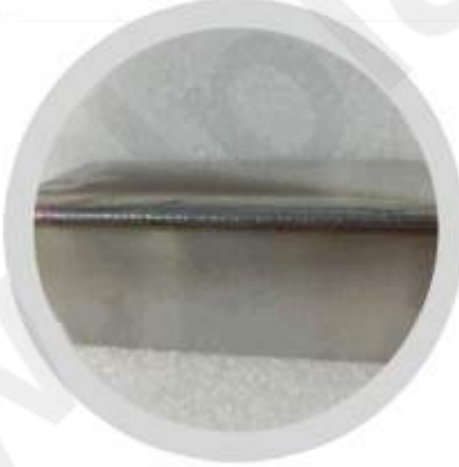
● Non-professionals can get started within 2 hours

● 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

● Modular control ensures safety

Handheld Welding Machine Series

Portable (1000W/1500W)

95cm
80cm
75cm
30cm
60cm
40cm

Net Weight 150kg
Gross Weight 195kg

Standard (2000W)

95cm
103cm
75cm
30cm
60cm
40cm

Net Weight 180kg
Gross Weight 240kg

High-Power (3000W)

126cm
126cm
75cm
30cm
60cm
80cm

Net Weight 200kg
Gross Weight 310kg

Structure of the Machine

- Handheld Laser Head
- Laser Control System
- Handle
- Chiller
- Drainage Outlet
- Mobile Casters

- Emergency Stop
- Laser/Power Button
- Temperature Display
- Water Injection Port
- Liquid Level Display
- Laser Device

16L

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	Machine Dimensions: L 126 *W 75 * H 126 Wire Feeder: L 60* W 30 * H 80

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)	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

Industrial Applications

Metal Processing
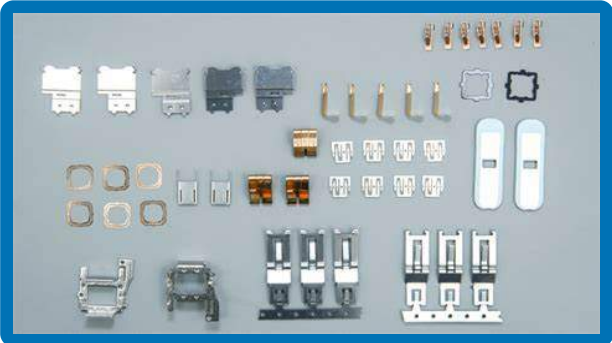
Electronics

Construction Industry
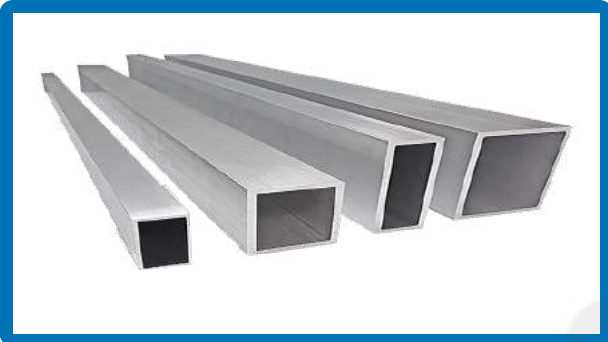
New Energy Industry

Automotive Manufacturing

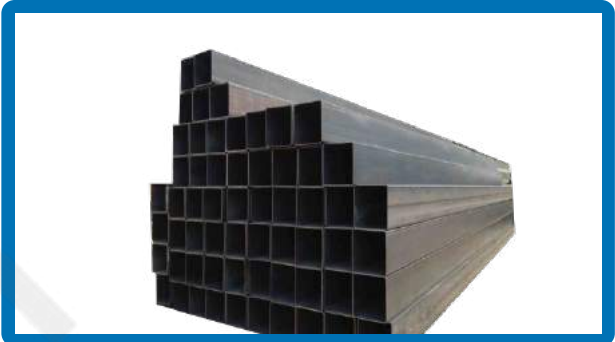# Welding Materials

Stainless Steel

Aluminum Alloy

Carbon Steel

Aluminum Sheet

Sheet Metal

Mini Handheld Water-Cooled Laser Welding Machine

1500W

70cm

68cm

47cm

30cm

60cm

40cm

Net Weight 93kg

Gross Weight 138kg

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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

1500W

Net Weight 65kg

Gross Weight 110kg

79cm

62.-3cm

37.6cm

30cm

60cm

40cm

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 Angle	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

Front
Back

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
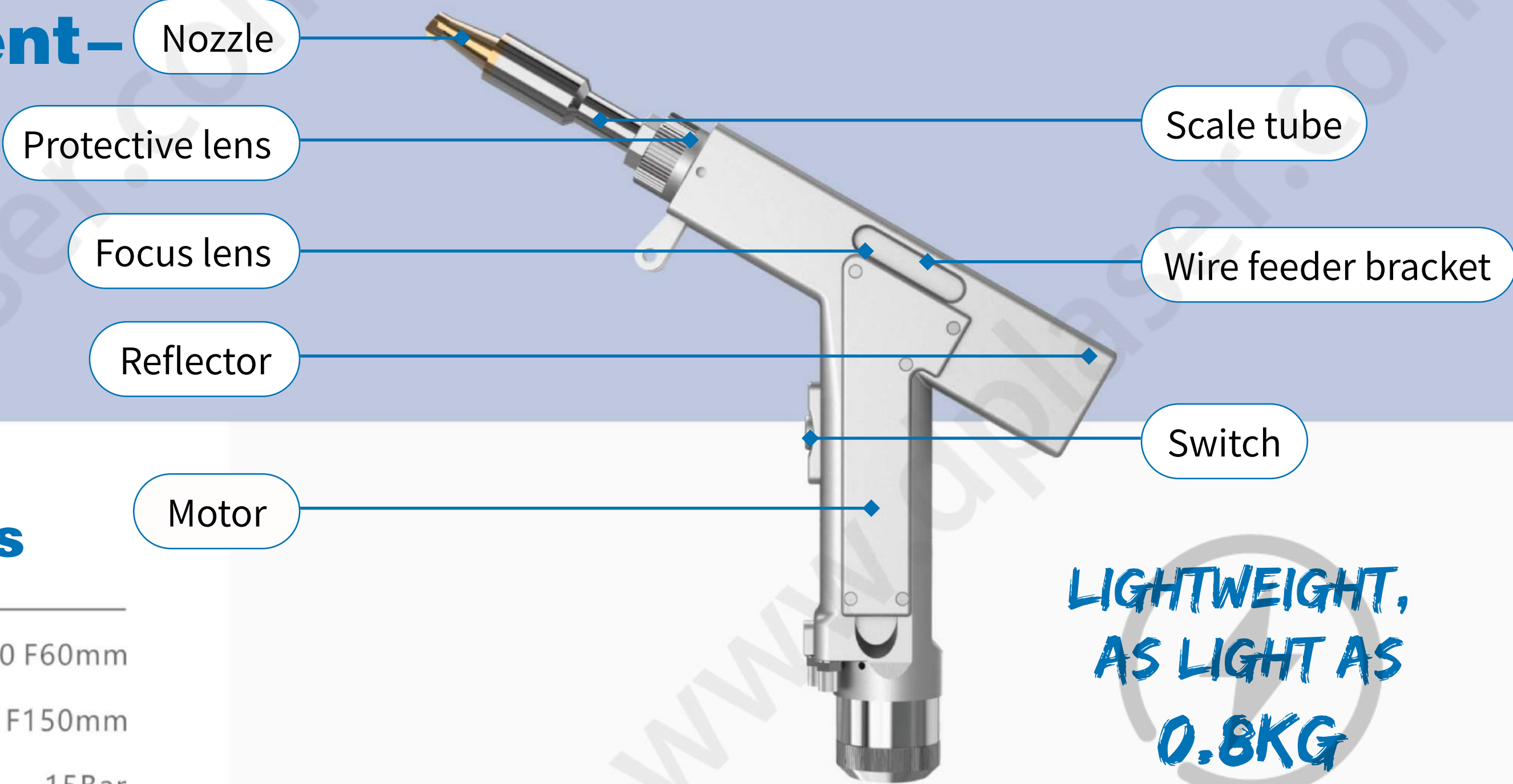
Product Technology

- 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°C（Laser Module）30°C（QBH）	25°C（Laser Module）30°C（QBH）	25°C（Laser Module）30°C（QBH）	25°C（Laser Module）30°C（QBH）
Dimensions (mm)	80*402*296	80*402*346	80*402*346	80*482*521

Core Component— Laser Gun

Nozzle

Protective lens

Focus lens

Reflector

Motor

Scale tube

Wire feeder bracket

Switch

LIGHTWEIGHT, AS LIGHT AS 0.8KG

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

Dimensions

273.01

37

167.04

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

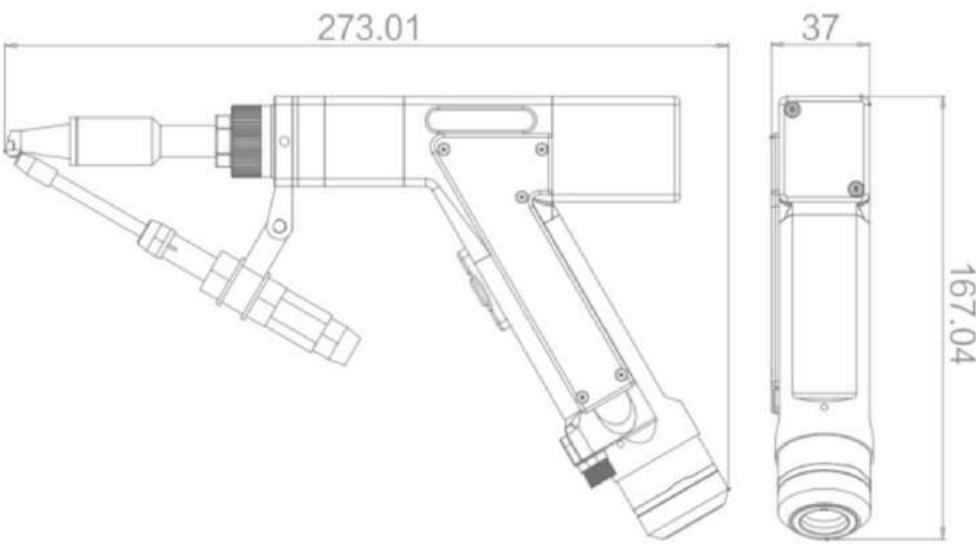### Time-saving
Drawer-style installation for focus lens and protective lens, making replacement convenient

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
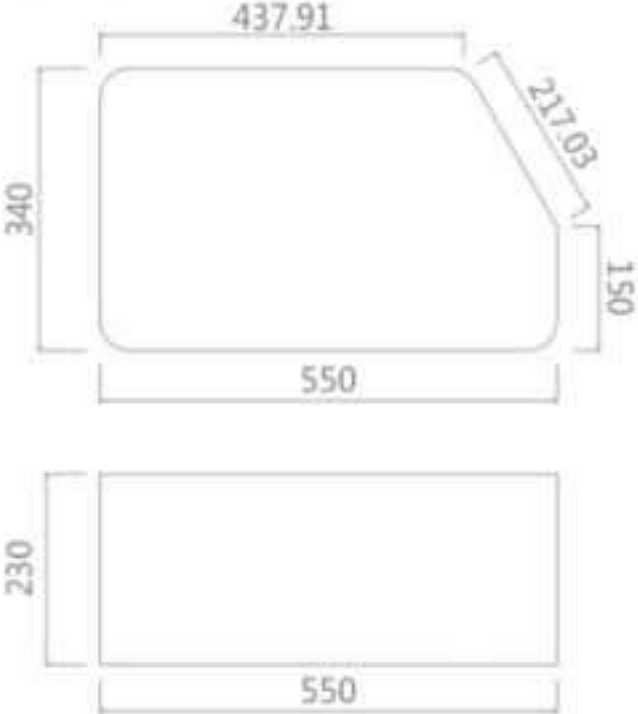## Multi-Function Automatic Wire Feeder

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

Dimensions

437.91

217.03

340

150

550

230

550

Supports Wire Diameters
0.8/1.0/1.2/1.6mm, customizable for 2.0/2.5mm

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.
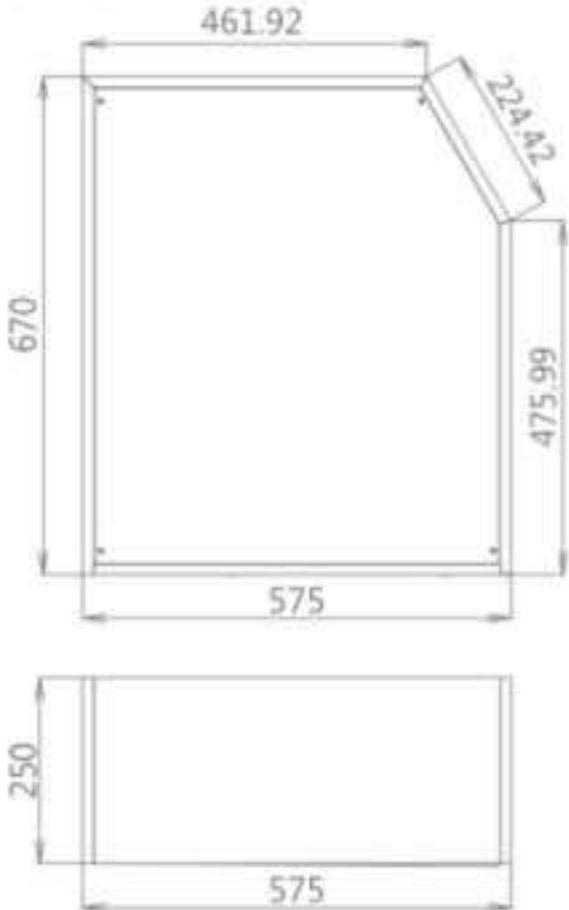
Dimensions

461.92

224.42

670

475.99

575

250

575

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

Core Component – Built-in Cabinet Laser Welding Water Cooler

Product Features

- Optional use of environmentally friendly refrigerants
- Laser chiller's intelligent temperature controller features two temperature control modes, suitable for different usage scenarios
- Optional heater and water purification configurations
- Temperature control accuracy up to ±0.5°C
- Dual-temperature dual-control mode, catering to different cooling needs of fiber laser and laser head
- Durable and easy to operate

Wooden Crate Shipping Packaging Dimensions

Type	H80Cabinet（1000W/1500W）	H100Cabinet(2000W)	H120Cabinet(W)
Net Weight (Cabinet)	150kg	180kg	200kg
Dimensions (Cabinet)	L 95cm * W 75cm * 80cm	L 95cm * W 75cm * H 103cm	L 126cm * W 75cm * H 126cm
Gross Weight (Including Wire Feeder and Wooden Crate)	195kg	240kg	310kg
Dimensions (Including Wire Feeder and Wooden Crate)	L 115cm * W 105cm * H 106cm	L 135cm * W 85cm * H 120cm	L 130cm * W 100cm * H 137cm

Note: The H120 (3000W) cabinet comes with dual wire feeders as standard, and the weight of a single wire feeder is 15kg

106cm   115cm   105cm   **H80**

120--cm   85cm   135cm   **H100**

137cm   100cm   130cm   **H120**