
MAX
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Company Introduction

Maxphotonics

Established in 2004, Maxphotonics emerged as one of China's pioneering fiber laser manufacturers, offering an extensive range of products. With nearly two decades of unwavering commitment to research and development in core optical technology, Maxphotonics has evolved into a prominent global laser enterprise, providing high-performance fiber laser sources, systems, and solutions to clients across diverse industries and applications.

- China’s No.1 brand in the global fiber laser market.
- Almost 20 Years of R&D and manufacturing experience in fiber lasers and optical components.
- Fully vertically integrated fiber laser manufacturer:
  we develop and manufacture most key optical components in-house (more than 90%).
- Production Capacity of >200,000 units per year.
- We hold ISO 9001:2015 certification, guaranteeing our customers that our processes are thoroughly documented and adhere to globally recognized quality standards.

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Maxphotonics in numbers

>5,000

Employees

20 Years

Experience.
Founded in 2004 in Shenzhen

1,000

customers in over 80 countries

37.5%

Compound Annual Growth Rate
(2017-2023）

12,000W

Maximum
Single Module Output

85,000W

Maximum
Multi Module Output

6.5%

Annual R&D Investment as
The Percentage of Revenue

550+

Patents
at Home and Abroad

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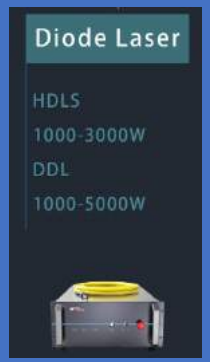
Our Products

Pulsed Laser

CW Laser

Handheld Laser Welding

Diode Laser



QCW Laser

Laser Marking Machines

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Global Sales & Service Network

8 Global Sales and Service Hubs

- Distribution Hubs for quick delivery
- Spare Parts and Spare lasers
- Process fiber and electronics parts exchange
- Product Service & Trouble Shooting
- Onsite visit within 72 hours

24/7 Online Service Center

- On average, solution provided in < 24 hours
- Remote technical support
- Online fault declaration
- 24/7 telephone support lines
- 24/7 email remote support lines with response time < 6 hours

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Service in Europe

Located 20km west of Munich, nested in the vibrant technology center of Gilching, stands our new **European Global Business and Innovation Center**. More than just office space, this contemporary facility is a dynamic hub for professionals and partners. It serves as a focal point for collaboration, innovation, and cutting-edge advantages in laser technology, underscoring our strong dedication to our customers and partners throughout Europe.

European Direct Sales Center: Direct laser products purchasing & shipment
Product Service Center: Expert maintenance and support for your laser products.
Application Lab: Advanced laser applications testing, evaluation and research.
Training Center: Specialized laser welder training for professionals.
Warehouse and Logistics: Efficient EU-wide delivery of products and consumables

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LASER WELDING

Introduction

	Traditional welding method	Maxphotonics handheld laser welding machine
Physical Hazard	Occupational hazard, increased risk of skin and eye damage	**Low indirect radiation, environmentally friendly**---Need to wear proper certified PPE to eliminate hazard
Welding Speed	Average	**Up to 4 times faster than TIG and MIG**
Welding Quality	**Highly dependent on user experience** Welding seams can be rough, irregular and require rework and polishing	**Consistent high-quality results.** Beautiful and neat welding seams, deep molten pool and high strength.
Training & Learning Curve	Difficult to learn	**Easy** Train in less than one hour. Proficiency in 1-2 weeks.
Heat affected zone	Large	**Small**
Distortion & Deformation	High	**Low**
Welding Seam Damage	Potential for Porosity, lack of consistency	**Uniform melt pool and great consistency**
Wobble Welding	No	**Up to 4 mm width**
Welding materials	Limited by changes in consumables Limited with consumable changes	**Wide range of materials – no setup**
Energy Consumption	High	**Low** up to 80% reduction in electricity costs
Consumables	High welding wire consumption	Precise wire consumptions supported by wired feeding system.

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The future of welding: Laser Welding Advantages

Maxphotonics MA1 series. Unparalleled speed, precision, and versatility for a new generation of welding professionals. Compact, easy-to-use, and environmentally friendly handheld laser welder.

Traditional Welding

- Highly trained welders required
- Technically difficult processes
- Poor working environment
- Low efficiency
- Unsuitable for special metals and thin sheets
- High welding wire consumption
- Pre-cleaning and joint preparation needed
- Difficult vertical welding
- Large heat affected zone

Laser Welding

- 4X faster welding speed
- Simple to learn and operate
- Environmentally friendly
- Stable beam quality
- Wide range of materials compatible
- High welding efficiency
- Simple and convenient operation
- Consistent high-quality welding results
- Better working environment: Less Fume, less dust

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Problems we solve for our buyers

- Labour Shortage >> Quick training of new operators
- Competition >> Increased Efficiency
- Energy Crisis >> Reduced Energy Consumption
- Health Concerns >> Better working environment: Less Fume, Less Dust

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PRODUCT INTRODUCTIUON

MA1 Series

MA1 Handheld Laser Welding System

Experience effortless welding like never before with the MA1 Series – *making welding simpler than you ever thought possible!*

Industry's Lightest Compact Handheld Laser Welding System

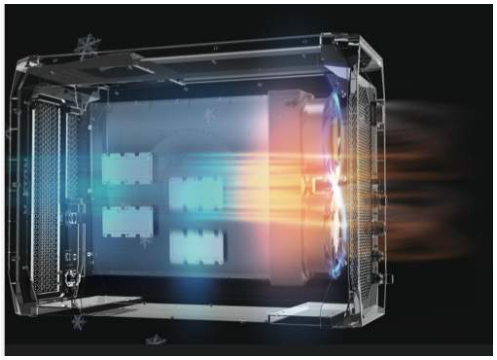
Truly Compact & Portable Design

Maxphotonics' new generation handheld laser welder is designed to be lightweight and provides the needed portability for mobile welding projects.

Depending on your welding needs and performance, 28kg~39kg (55-86- pounds) of different products can be selected.

The lightest and smallest handheld laser machine in the world.

- Compact Design
- Durable aviation level magnesium-aluminum allow body
- From 28kg
- Size from (576x265x425mm – 22.7x10.4x16.7in)
- 680g Welding Torch
- Can be operated on 220V (1.5kW)
- Feeder Cable Reel for convenient cable storage and transport
- Highly stable feeder cable connection



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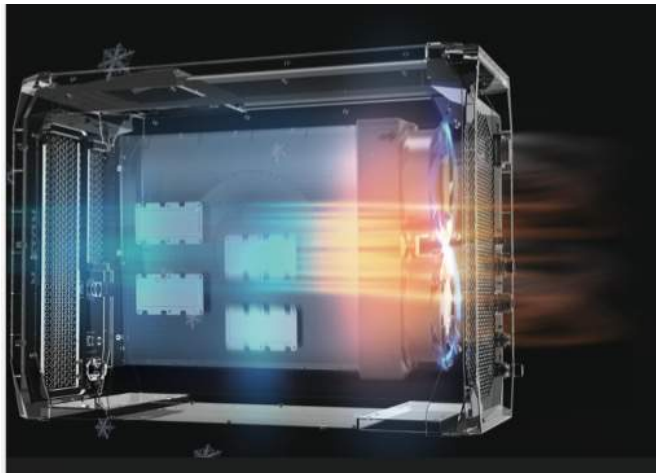
Air Cooled System Design

Air-cooled laser welding machines offer significant advantages over their water-cooled counterparts. These systems require low maintenance, eliminating the need for frequent upkeep and reducing downtime. Their design allows for enhanced portability, making it easier to transport and set up the equipment as needed. Additionally, air-cooled machines are considerably lighter than water-cooled systems, further contributing to their ease of use. Lastly, the absence of water in the cooling process eliminates the risk of water leaks, ensuring a more reliable and hassle-free welding experience. Choose air-cooled laser welding machines for a superior, efficient, and user-friendly solution.

- Low Maintenance and reduce downtime
- Light weight, compact portable product than water cooled systems
- Air cooled design removes water leak issue.



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Remarkably Easy to Learn & Operate

- Easy Operation
- Only half hour training needed for beginners to operate the welding system
- Quick learning in 2 or 3 days
- Embedded with 32 pre-set modes for various materials
- Wobbling mechanism simplifies welding

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Welding Torch

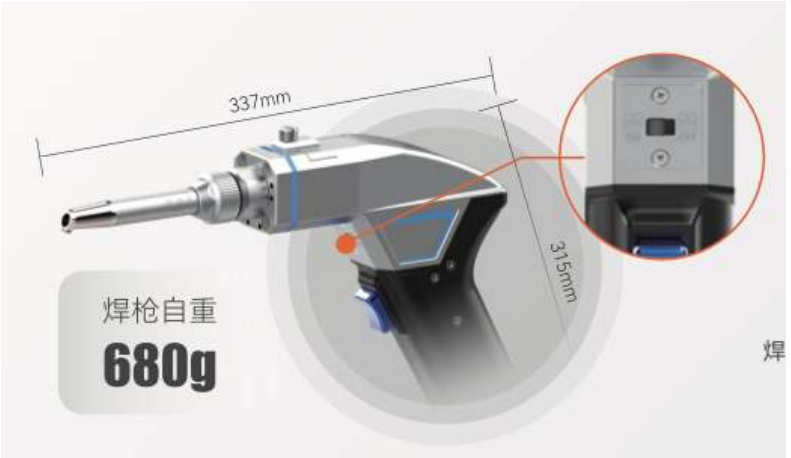
With a collimated QCS interface, it greatly reduced the volume and weight of the welding torch to **only 680g (1.5pounds).**

The optical design and QCS output head match perfectly, with high transmission efficiency and a calorific value.

The welding torch has been ergonomically designed for user comfort and ease of operational use.

We also provide a built-in wobble function, that allows the operator to safely work throughout the day continually producing high quality welds.

- Lightest Welding Torch in the industry 0,68kg



Outstanding Welding Results

The laser control system provides consistent control of wobble frequency and weld width, producing high-quality weld seams that are symmetric and smooth to the touch, requiring no further processing.

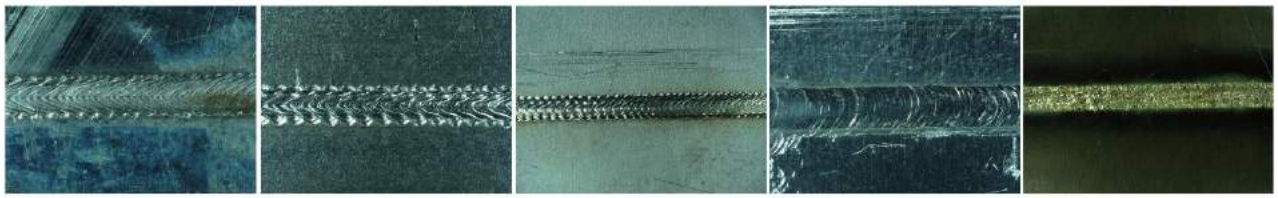
The MA1 series includes a wire feeder module for deeper penetration welding, filling gaps, and providing smooth, flush weld profiles. It supports a wide range of materials and thicknesses.

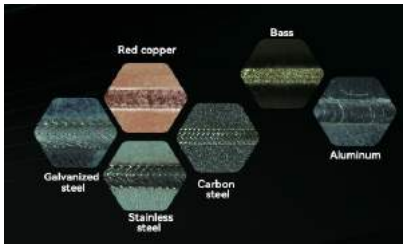
Stability

- High Speed Fans for Thermal dissipation
- Top Quality Pump Diodes
- Stable Long-Term User Performance

Aesthetics

- Excellent Welding Results
- Smooth and Even Welds
- No post processing required
- High Welding Strength
- No rework





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Safety First

The MA1 Series Handheld Welder is a class IV laser product with six key safety protection features, including air pressure detection, control switch and security alarm, warning lamp safety key switch, emergency stop button, laser power switch, and LOOP safety lock.

List of Certifications:

- EN 60204-1
- EN 60825-1
- ISO 11553-2
- ISO 12100
- EN IEC 61000-6-2
- EN IEC 61000-6-4
- PLD

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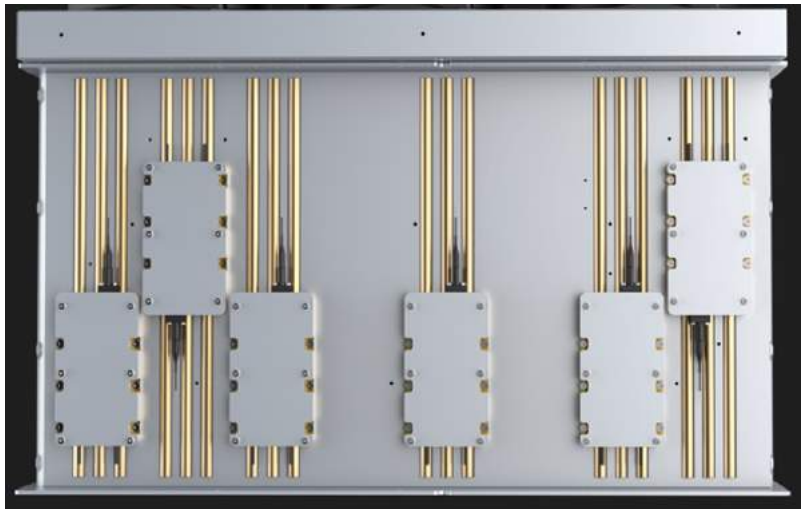
Extended Lifetime & Easy Maintenance

Before leaving the factory, each handheld laser product passes a 500 hours high and low-temperature cycling power test, and a 12-hour continuous welding test with 99% power stability. Typical lifetime of the laser power source is approximately 10 years.

- Typical Lifetime up to 10 years for laser
- Isolated Electrical and Optical Components
- Easy trouble shooting and maintenance.
- UI screen Software guided trouble shooting.
- Remote function for trouble shooting.



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Easy Installation

- Clearly marked rear panel for easy installation
- User guide videos for beginners' convenience
- Standard 220V AC power plug required
- Connect to industrial shielding gas (argon/nitrogen)
- Attach ground clamp to workpiece
- 7" LED touch screen with multilingual, intelligent operating system
- Select preset welding parameters or user-defined settings

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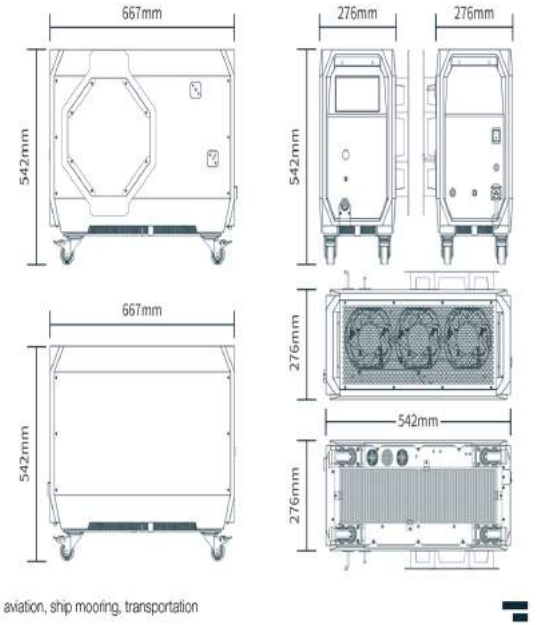
Specifications & Product Schematics

		MA1-65	MA1-45	MA1-35
Weld Thichness* (mm)	Stainless Steel	6.5	4.5	3.5
	Carbon Steel/Iron	6.5	4.5	3.5
	Aluminium	5.5	4	3
	Galvanized Sheet	5.5	4	3
	Brass	4.5	3.5	2.5
	Copper	3	1.5	--
Wobble (mm)		0–4	0–4	0–6
Operating Temperature (°C)		~0–40°C	~0–40°C	~0–40°C
Operating Temperature (°F)		~0–104	~0–104	~0–104
Weight (kg)		39kg	38kg	28kg
Weight (pounds)		86 lb.	84 lb.	20,6 lb.
Dimensions (LxWxH in cm)		667 x 276 x 542	667 x 276 x 542	576 x 265 x425
Dimensions (LxWxH in in)		26.3 x 10.9 x 21.3	26.3 x 10.9 x 21.3	22.7 x 10.4 x 16.7



Packing list

1	Handheld laser welding (including 5.6 meters fiber cable) / 1 set	10	Protective lens (φ20*3) /5 pieces
2	Welding torch/1	11	Lock ring wrench/1 pcs
3	Wire feeder (individually packaged) including wire feeding tube and wire feeding wheel/1 set	12	Wire nozzle assembly (0.8/1.0/1.2/1.6mm wire feed nozzle and wire feed frame)/1 set
4	Power cable (10 meters) / 1	13	Welding torch fixture (collimating focusing lens installation and removal)/1 set
5	Ground wire (10 meters) / 1	14	Cotton swabs 1 (25 pieces)/1 pack
6	Protective glasses (support OD6+) / 3 pairs	15	Cotton swabs 2 (25 pieces)/1 pack
7	Hanging welding torch frame (including 4pcs hexagonal countersunk head screws)/1 set	16	Noise-isolating earplugs (Brand: 3M) / 5 pairs
8	Hanging armored cable frame (including 8pcs hexagonal countersunk head screws)/1 set	17	Dust mask (premium dust-proof) / 2 pairs
9	Nozzles (1, 3, A, B and flat nozzles) / 2 sets	18	Screwdriver (hexagon socket) / 1 pcs

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Compared to competitors

Why Maxphototnics

- We are the top manufacturer of fiber laser source globally
- Our products are 100% developed by Maxphotonics
- 80% of the component are manufactured by us—All key optical components are made by us

Why not Cheaper companies?

- Technology Advantages in R&D
- Massive investment(equipment and process) to ensure product quality
- Safety—with PL-d performance to ensure product safety to end user
- Cooling Systems > Less Maintenance, Smaller
  Weakness where it's not needed to be small.
- After Sales Service

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Welding Performance

Items	Other Brand Water Cooling 1500W	IPG Brand Air Cooling 1500W	MAX MA1-65	MA1-45
Stainless Steel Welding Penetration	＜3mm	≤6.35mm	6.5mm	4.5mm
Carbon Steel Welding Penetration	＜3mm	≤6.35mm	6.5mm	4.5mm
3&5 series Aluminum Welding Penetration	＜3mm	≤6.35mm	5.5mm	4mm
Galvanized Sheet Welding Penetration	＜2.5mm	≤4mm	6.5mm	4.5mm
Brass Welding Penetration	-	≤2mm	≤4.5mm	3.5mm
Copper Welding Penetration	-	≤2mm	≤3mm	1.5mm

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MAX MA1 series VS Other Brands-Air Cooling Products

Items	IPG Hand Held Laser Welding	MAX Hand Held Laser Welding
Welding gun weight	Around 1.2KG	**680g**
Laser Cooling	Air cooling	**Air cooling with Intelligent phase control to reduce noise**
Fiber Length	5m，10m is optional	**5.6m**
BPP	2.1	**1.2**
Overall dimension	64.1*31.6*53.4cm	**66.7*54.2*27.6cm**
Power consumption	5.3KW	**6KW (Maximum)**
Weight	53kg	**39kg**
Volume	<0.2m3	**<0.1m3**
Recommended Welding Thickness	0.5mm-6.35mm	**0.2mm-6.5mm**

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MAX MA1 VS Other Brands of Water cooling products

Items	Brand 1 Water Cooling Laser Welding (1.5KW)	Brand 2 Water Cooling Laser Welding (1.5KW)	MAX Hand Held laser welding
Product Picture			
Laser Cooling	Water-cooling	Water-cooling	**Air Cooling**
Total Weight	180kg/Rough Weight 200kg	240kg	**39kg**
Welding Torch Weight	1500g	1500g	**680g**
Volume	0.5m³	0.7m³	**＜0.1m³**
Recommended Welding Thickness	0.5mm-2mm	0.5mm-3mm	**0.5mm-6.5mm**
Energy Consumption	7kw（20440kW·h/Year）	7kw（20440kW·h/Year）	**6kw（17520kW·h/Year）** for **MA1-65;** **4.5KW (13140kw.h/year)** for *MA1-45 Per day working 8 hours*
Routine Maintenance	Clean regularly with distilled water/antifreeze	Clean regularly with distilled water/antifreeze	**Maintenance free**

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Thank you