LASER TECH
SYSTEMS AND SOLUTIONS

SERVICE BEFORE SALES

Aircooled Weld Series

LASER TECH SYSTEMS AND SOLUTIONS
www.lasertechsystems.co.in

COMPANY PROFILE:

Laser Tech Systems and Solutions was founded by Mr. Rajiv Kumar with a group of Technocrats in 2021, with the idea of creating a large umbrella organization to assist and serve the growing Indian Laser Industry and to help the market with its years of experience in the field of Lasers and its applications.

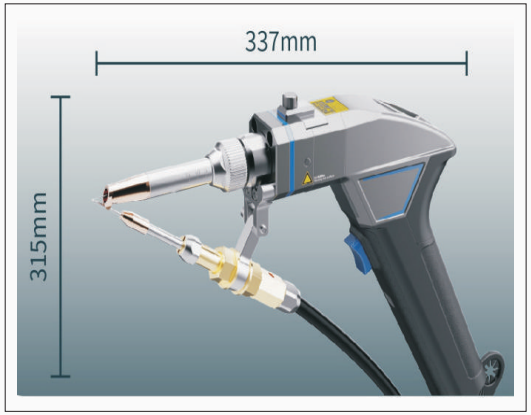
We represent many global manufactures, covering a wide range of solutions Laser Marking, Laser Welding, 2D Laser Cutting, 3D Laser Cutting, Laser Cladding, Laser Hardening. Our Laser Solutions can process a wide range of materials like Metal, Paper, Acrylic, Wood, Textile, Leather, Plastic and many more.

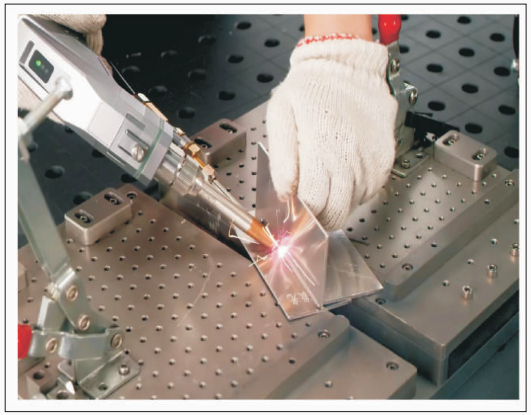
Our main aim is to serve our customers with cost effective and innovative solutions with our utmost know how of Applications and help them to fulfill their objectives.

Our aim is to provide the best solutions to all our customers with best systems and economical prices. We believe in **SERVICE BEFORE SALES**...We provide industrial solutions for Laser for Metals, non-metal laser cutting/engraving machines, Galvo based solutions, Laser Marking, Laser welding, 2D laser cutting, 3D laser cutting, Laser cladding etc.

LTSS Service and Support:

Laser Tech Systems and Solutions supports installation, commissioning, and training for its customers. Dedicated Laser Systems available for in-house demonstration, applications and software training. Specialized engineers are available to provide online and telephonic support.





We proudly say that because of our team's dedicated efforts and our motto " SERVICE BEFORE SALES " we have a chain of happy customers related to various industries using our laser machines in North India.

LASER TECH
SYSTEMS AND SOLUTIONS

Aircooled Weld

Handheld Laser Welding Machine

- Up to 4X Efficiency
- Truly Portable
- Environment Friendly

Smallest and lightest

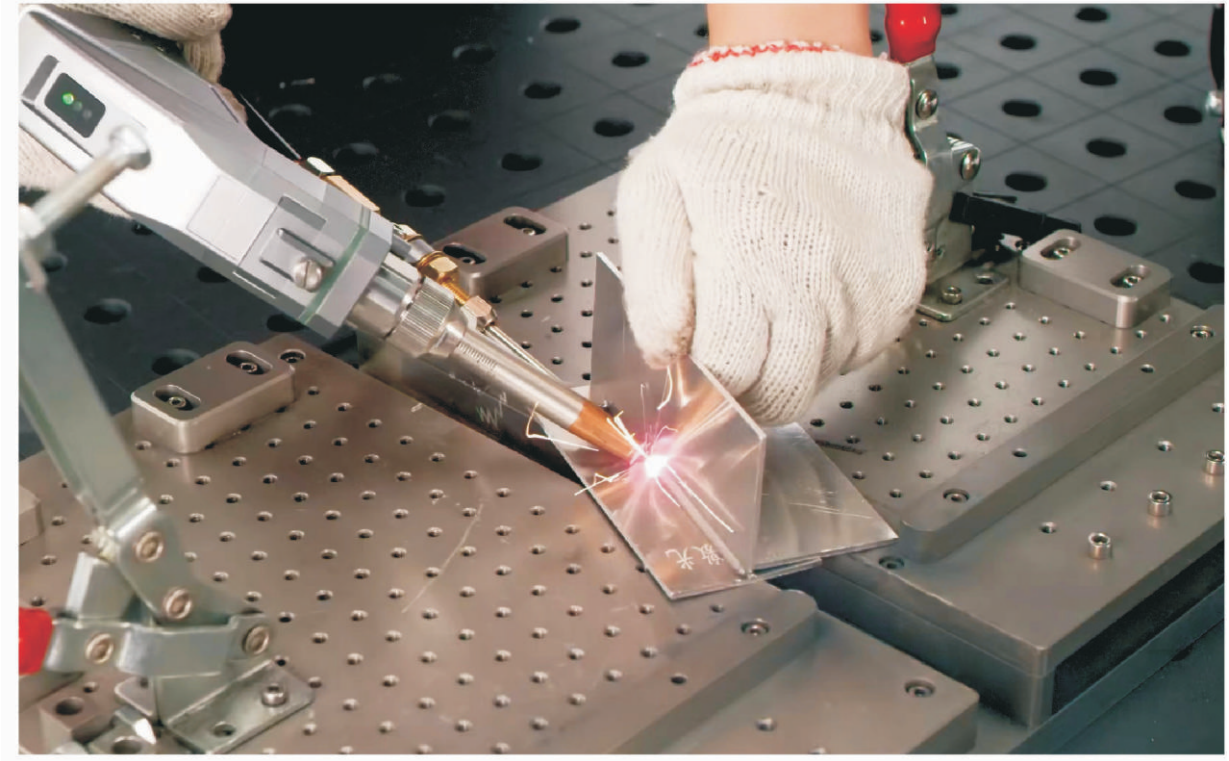
The one and only TRUELY Portable System

X1w-1500 is 100% developed by Maxphotonics with 18 years of experience in laser industry. it weighs only 39kg and the Volume is <0.1m^3. It is currently the lightest. and smallest handheld laser welding machine in the world. the feeder cable can be placed in the cable reel to make the machine more Compact to be stored or transported. thanks to the light weight and our unique cable sleeve locking mechanism, the feeder cable can be used to pull the machine to move around in the working area, which makes it more convenient to use during operations.

Only 39kg

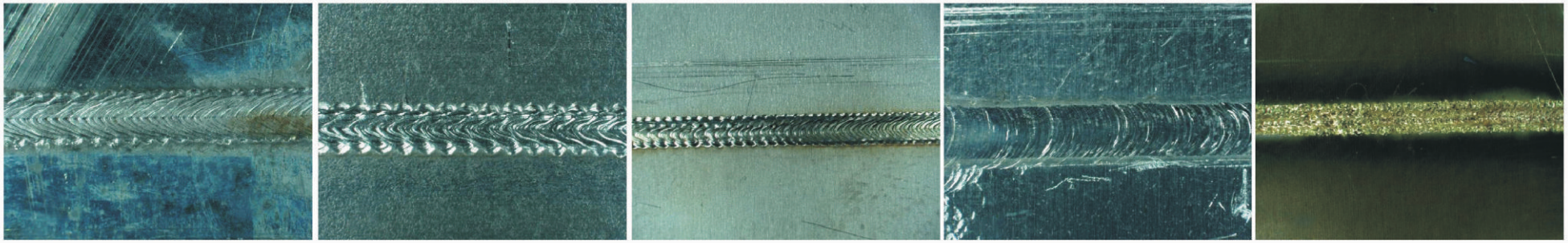
Volume <0.1m^3

Excellent welding performance energy saving and environment friendly



- **Up to 4 times** faster than traditional welding methods, which helps our customers to **Save 80% to 90% of electrical energy,** greatly improve production efficiency and reduce overall operational cost.
- State of art laser control system brings high beam stability, consistent and neat welding seam, improved welding strength and minimum deformation.
- Cooling system adopts phase change heat conduction technology with powerful self-adaptive fans fans, which ensures long-term stablity.

Aircooled Weld



Galvanized	Carbon Steel	Stainless Steel	Aluminum	Copper

	Traditional welding method	iWeld Laser handheld Laser Welding Machine
Physical Hazard	Large radiation and smoke	**Low radiation, environmentally friendly**
Welding speed	Slow and ineffcient	**Up to 4 times faster than TIG and MIG**
Welding quality	welding seam are rough and irregular, need to be polished	**Beautiful and neat welding seam, deep molten pool and high strenght**
Learning difficulty	High	**Low**
Heat affected zone	Large	**Small**
Bending deformation	High	**Low**
Welding seam damage	with air holes, easy to weld through	**Uniform molten pool and good consistency**
Welding materials	Limited by changes in consumables	**Wide range of materials**

Simple to use, Easy to Weld, Excellent performance

Compared with traditional welding methods, Maxphotonics' Latest Generation of lightweight, compact, handheld laser welding products! Versatile, portable, simple to operate, and easy to use, with a wide range of materials, such as; stainless steel, carbon steel, aluminum, galvanized steel sheet, copper, and many other materials. Achieving significantly better quality, uniform welding results, excellent welding performance, 4X faster welding speed (MS), higher weld strength, reduced porosity, and minimal heat-affected zones. Ma1 series removes weld deformation, burn-through, and the need for post process grinding or polishing of the surface. Significantly improving efficiency and productivity, reducing consumable waste and cutting the cost per part while improving profitability.

Product Model		MA1-65	MA1-45	MA1-35
Weld Thickness* (mm)	Stainless steel	6.5	4.5	3.5
	Carbon steel/Iron	6.5	4.5	3.5
	Aluminum	5.5	4	3
	Galvanized sheet	6.5	4.5	3.5
	Brass	4.5	3.5	2.5
	Copper	3	1.5	--
Wobble (mm)		0-4	0-4	0-6
Operating Temperature (℃)		0~40	0~40	0~40
Operating Temperature (℃)		0~104	0~104	0~104
Weight (kg)		39	38	25
Weight (pounds)		86	84	55
Dimensions (mm*mm*mm)		667*276*542	667*276*542	576*265*425
Dimensions (in*in*in)		26.3*10.9*21.3	26.3*10.9*21.3	22.7*10.4*16.7
Volume (m^3)		<0.1	<0.1	0.06
Volume (cubic feet)		<3.5	<3.5	2.1

*Remarks: The data is extreme penetration depth base on lab test result, the penetration depth performance will be varied according to dierent setup and application.

LASER WELDING vs TIG/MIG WELDING

TIG welding may generate extreme heat that deforms thin materials, produces poor visul finishes, is difficult wen welding copper and limited weding metal of dissimilar thicknesses.

MIG welding requires consumable wire, material pre-cleaning and beveled joints for thick metals for full penetration. Travel and work angles are limited and vertical positions are extremely challenging.

Laser welding enables dramatically faster welding, is easier to learn and operate and provides higher-quality, consistent results across a wider range of materials and thicknesses than MIG or TIG with minimal distortion, deformation, undercut or burn-through.

COMPARE WITH OTHER WELDS

Item	Traditional Welding	Laser Welding	QuickWeld new generation laser welding
Heat input to the workpiece	Very High	Low	Low
Deformation of workpiece, undercut	Big	Small	Small
Bond Strength with base material	Common	Good	Excellent
Subsequent Processing	Polish	No or very little grinding	No or very little grinding
Welding speed	Common	Fast, very fast	
Applied materials	Stainless steel, Aluminium, Iron, Copper	Stainless steel, Aluminium, carbon steel, galvanized sheet	Stainless steel, Aluminium, Iron, Copper
Consumables	Many	Little	Little
Operation difficulty	Complicate	Common	Simple
Operator safety	Not Sale	Safe	Safe
Impact on the environment	Pollution	Environmental	Environmental
Welding fault tolerance	Good	Not good	Good
Pendular welding	No	No	Yes
Adjustable spot width	No	No	Yes
Welding quality contrast	Bad	Common	Excellent

Maxphotonics Handheld Laser Welding Features

Stable Performance and Reliable Quality

Maxphotonics' new MA1 series handheld laser welder has been designed and manufactured with Maxphotonics world class laser technology. The laser control system is precise and beam quality is ver stable. Before leaving the factor each handheld laser product has passes 500 hours of high and low temperature (-10℃~45℃or-14'F-113"F) cycling power test, and 12-hour continuous welding with 99% power stability test. The lifetime of the laser power source is approximately 100,000 hours, all products pass the industr standard test on SGS, to ensure stable and durable beam output.

Portable Appearance

Maxphotonics' new generation handheld laser welder is designed to be lightweight and provides the needed porability for mobile welding projects. Depending on your welding needs and perormance, 25kg~39kg(55-86-pounds) of diferent products can be selected. The overall product volume is less than 0.1m' (3.5 cubic feet), making it ver porable.

Compact Handheld Welding Torch

With a collimated QCS interace, it greatly reduced the volume and weight of the welding torch to only 680g (1.5pounds). The optical design and QCS output head match perectly, with high transmission efciency and a calorifc value. The welding torch has been ergonomically designed for user comfor and ease of operational use. We also provide a built-in wobble function with a double safety laser on the button, that allows the operator to safely work throughout the day continually producing high quality welds.

Welding torch with wire feeder

Handheld welding torch

Simple Operating System, Intelligent Processing Mode

Maxphotonics' new generation of MA1 handheld laser welding products, has a 7" LED touch screen, intelligent operating system with multilanguage, simple operation modes, easy to learn, simple and quick to operate.

Even a novice with only 30 minutes of training they can master the welding the operation, thus saving expensive training and production costs.

It comes loaded with 32 sets of preset process parameters and suppors user customisation. Operators can quickly select welding parameters based on diferent materials and thicknesses. Novice welders can quickly produce high-quality and consistent welds as experienced welder.

Easy Installation and Operation

1.220V power supply

2.Gas: Argon/ Nitrogen

3.Grounding clamp-safety loop

The rear panel of the product is clearly marked, allowing a quick and simple product installation with the user guide videos, which is convenient for beginners. Only a standard plug with 220V AC power is required with connection to the industrial shielding gas (argon/nitrogen) and connect the ground clamp to the work piece, then you can star using the equipment. Through the 7" LED touch screen, intelligent operating system with multilanguage, you will access the operator interace where you can select preset welding parameters, or your own user-defned parameters.

Lightweight, Portable and High-performance

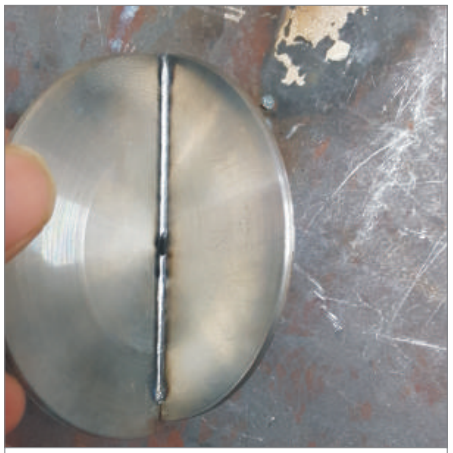
With traditional welding methods it is difcult to teach complex welding processes, efciency is low, and critically the weld quality depends to a greater extent on the welder's experience only. The new generation of Maxphotonic's MA1 handheld laser welding products brings with it high welding efciency, simple and convenient operation, easy to learn technology, anybody can be trained to achieve consistent high-quality welding results, in a range of diferent materials and thicknesses ver quickly.

Aircool Welding Machine Sample

Carbon Steel

MS

Aluminium



Titanium

Carbon Steel

SS to MS

Carbon Steel Pipe

Galvanized Iron

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