



LASER TECH

SYSTEMS AND SOLUTIONS

SERVICE BEFORE SALES

QuickWeld Series

3IN1 Laser Welding Machine

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.

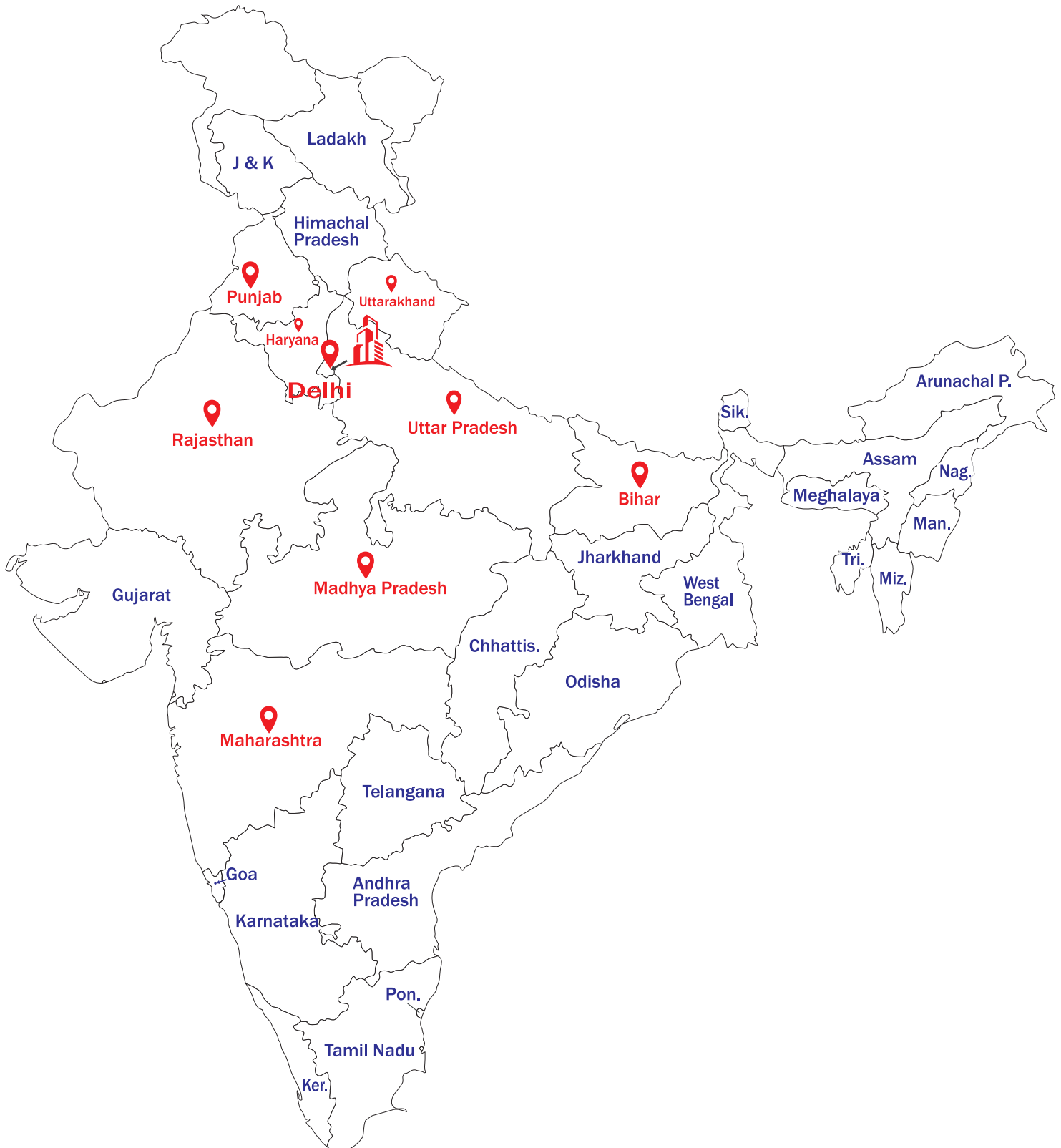
Our main aim is to serve our customers with cost effective and innovative solutions with our utmost know how of Applications and help them to fulfill their objectives.

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:

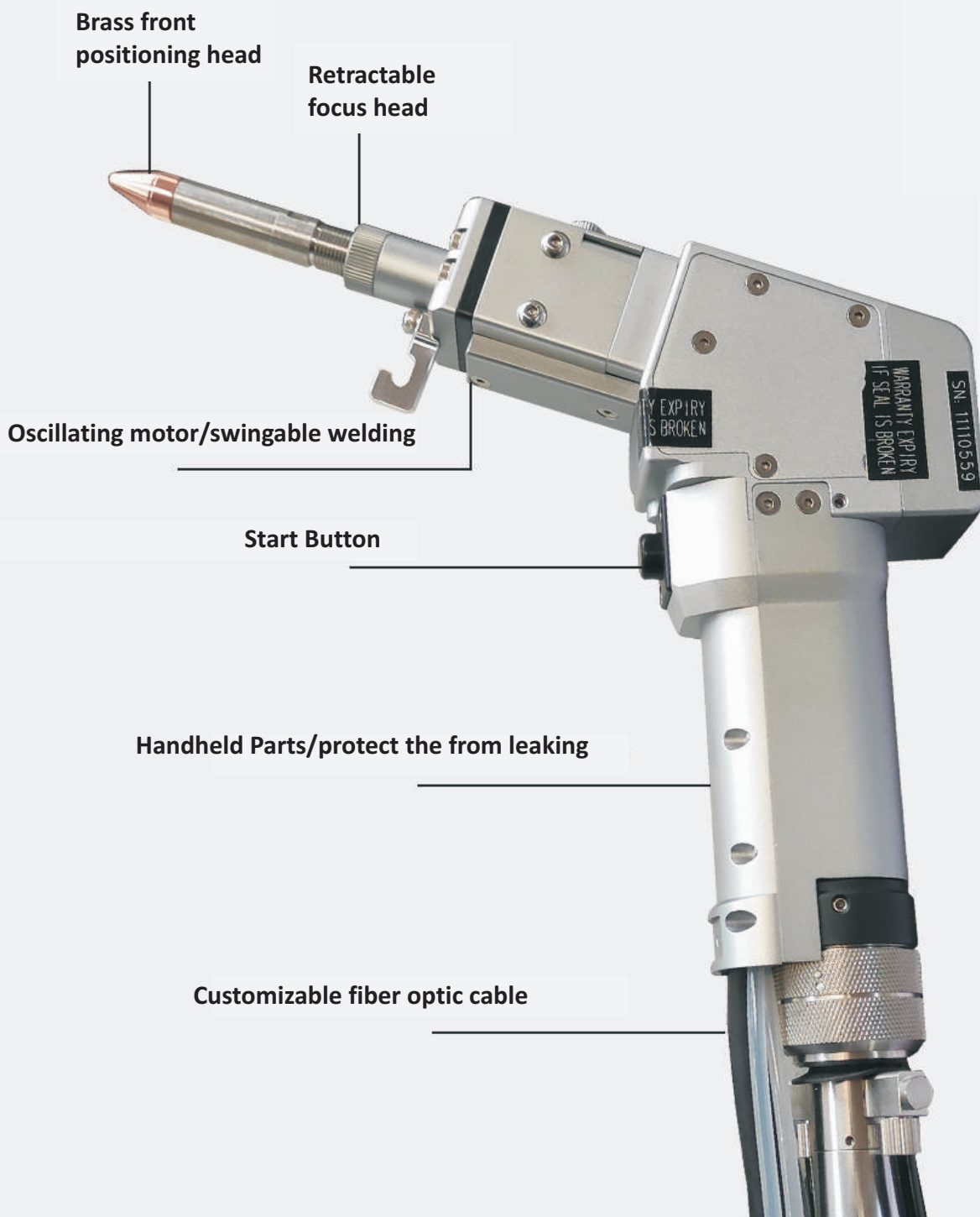
Laser Tech Systems and Solutions supports installation, commissioning, and training for its customers. Dedicated Laser Systems available for in-house demonstration, applications and software training. Specialized engineers are available to provide online and telephonic support.

*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 India.*



Laser Head

Multi-purpose machine with multiple welding nozzles



3IN1 Laser Welding Machine



It's easy to operate even for unskilled operator wobble technology; weld without deformation

MACHINE DESCRIPTION:

A 3-in-1 laser welding machine is a cutting-edge and multi functional Industrial tool that integrates three essential laser processes into a single, cohesive platform. This versatile machine encompasses laser welding, laser cleaning, and laser cutting functionalities, providing manufacturers with a comprehensive solution for various production needs. In the realm of laser welding, the machine employs a focused laser beam to precisely melt and fuse materials together, creating strong and intricate welds on metals and alloys. The laser cleaning capability involves non-contact surface cleaning, where the laser beam effectively removes contaminants, rust, paint, and undesired layers without the use of chemicals or abrasive materials. The laser cutting feature utilizes a focused laser beam to make precise cuts on metals offering high-speed and accurate profiling without the need for physical tools. The machine's precision and efficiency make it a valuable asset across diverse industries such as automotive, aerospace, electronics, and more, where intricate and high-quality laser processes are integral to manufacturing operations.

Advantages of 3IN1 Laser Welding Machine

Versatility

The machine combines three essential functions – laser welding, laser cleaning and laser cutting which provide manufacturers with a versatile solution for diverse production needs.

Cost Savings

Investing in a single machine that can perform multiple functions reduces capital expenditures and operational costs associated with maintaining separate systems for welding, cleaning, and cutting.



Precision and Accuracy

Leveraging advanced laser technology, the machine maintains high levels of precision and accuracy across all three functions, ensuring consistent and high-quality results in welding, cleaning, and cutting applications.

User-Friendly Operation

The machine is designed for user-friendly operation, with common control interfaces and software that make it easier for operators to switch between different processes and optimize settings for each operation.

Adaptability to Various Materials

The 3-in-1 machine can be used on a wide range of metals like Stainless Steel, Brass, Aluminium etc. making it suitable for diverse manufacturing applications.

Productivity Improving And Labour Saving

The high speed welding contributes to improvement in productivity. Easy maintenance saves labour. Production line can be easily automated.



A 3-in-1 laser welding machine is a versatile and integrated laser processing system that combines three essential functions within a single platform. The three primary functions include laser welding, laser cleaning, and laser cutting.

Laser Welding

Laser welding is a precision joining process that uses a focused laser beam to melt and fuse materials together. This process is widely used in various industries, including automotive, aerospace, and electronics, for creating high-strength and precise welds on metals and alloys.

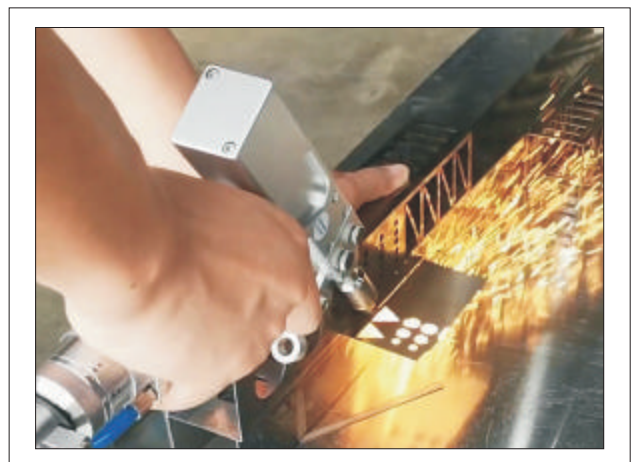


Laser Cleaning

Laser cleaning is a non-contact surface cleaning process that utilizes a laser beam to remove contaminants, rust, oxides, paint, or unwanted layers from a material's surface without changing the properties of base material. It is an environmentally friendly method that eliminates the need for chemicals or abrasive materials, making it suitable for delicate or sensitive surfaces.

Laser Cutting

Laser cutting involves using a laser beam to precisely cut through metals like Stainless Steel, Brass, Aluminium etc.. This process offers high accuracy, speed, and the ability to create intricate cuts without the need for physical tools. Laser cutting is widely employed in industries for shaping and profiling materials.



PARAMETERS FOR DETAILS

Item	Specifications
Name	Handheld Laser Welding Machine
Laser Power	1000W/1500W/2000W/3000W
Electric Power	<6kw
Cooling mode	Water Cooling
Laser pulse Frequency	1-20HZ
Welding gap requirement	≤0.5mm
Pulse width	0.1-20ms
Adjusted spot range	0.1-3.0mm
Spot size	0.2-5.0mm/1.5mm
Minimum welding pool	0.1mm
Machine dimension	120*60*90cm/120*60*115cm
Water tank	inbuilt model
Working Environment Temperature	15~35
Optical Fiber	25um,10M
Continuous Working Time	24 hours
Collimation Length	F=50mm
Suggested Welding Thickness	0.5-5mm (depends on the materials)
Grand weight	240KG
Working Voltage	220V/380V 50Hz

COMMON WELDING METHODS

The utility model has simple and reasonable structure, thereby being easy to operate, high welding efficiency and low energy consumption.



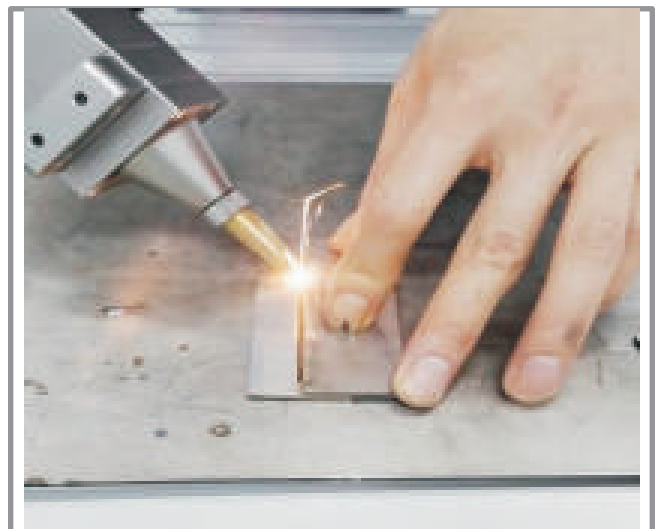
Tailor-Welding



Corner Welding



Stitch Welding



Overlap Welding

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 Safe	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

WELDING DEPTH REFERENCE DATA

1000W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	0.5-2mm	0.5-2mm	0.5-1.5mm	

1500W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤3.5mm	≤4mm	≤3mm	≤3mm

2000W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤5mm	≤6mm	≤4mm	≤4mm

3000W + WOBBLE HEAD

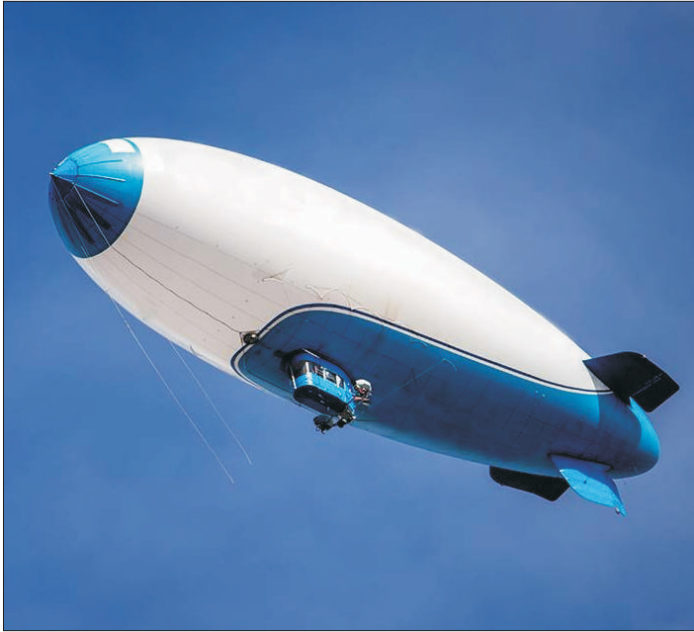
Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤7mm	≤8mm	≤5mm	≤6mm

The welding seam is smooth and beautiful, the welding workpiece has no deformation, no welding scar, the welding is firm, and the subsequent grinding process is reduced, saving time and cost.



APPLICABLE INDUSTRY

Applicable industry, railings of stairs and elevator, shelves oven stainless steel guardrail distribution box, stainless steel home supplies etc.



AIRSHIP



AUTO PARTS



ELEVATOR MANUFACTURING



HOUSEHOLD APPLIANCES



MACHINE MANUFACTURING



MEDICAL EQUIPMENT



METAL FABRICATION



CONTAINER MANUFACTURING

3IN1 Laser Welding Samples



Stainless Steel



Carbon Steel



Aluminium

3IN1 Laser Cleaning Samples



Before (Rust) After



Before (Paint) After



Before (Rust) After

3IN1 Laser Cutting Samples



Carbon Steel



MS



Stainless Steel

Laser Tech Systems and Solutions

SERVICE BEFORE SALES



LASER TECH
SYSTEMS AND SOLUTIONS

Office Address: B-3/280, Ground Floor, Sector-6, Rohini-110085,
New Delhi, India



+91 8851534795



+91 9013586621

www.lasertechsystems.co.in



info@lasertechsystems.co.in

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