



LASER TECH
SYSTEMS AND SOLUTIONS

SERVICE BEFORE SALES

QuickWeld Series

Jewellery 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.

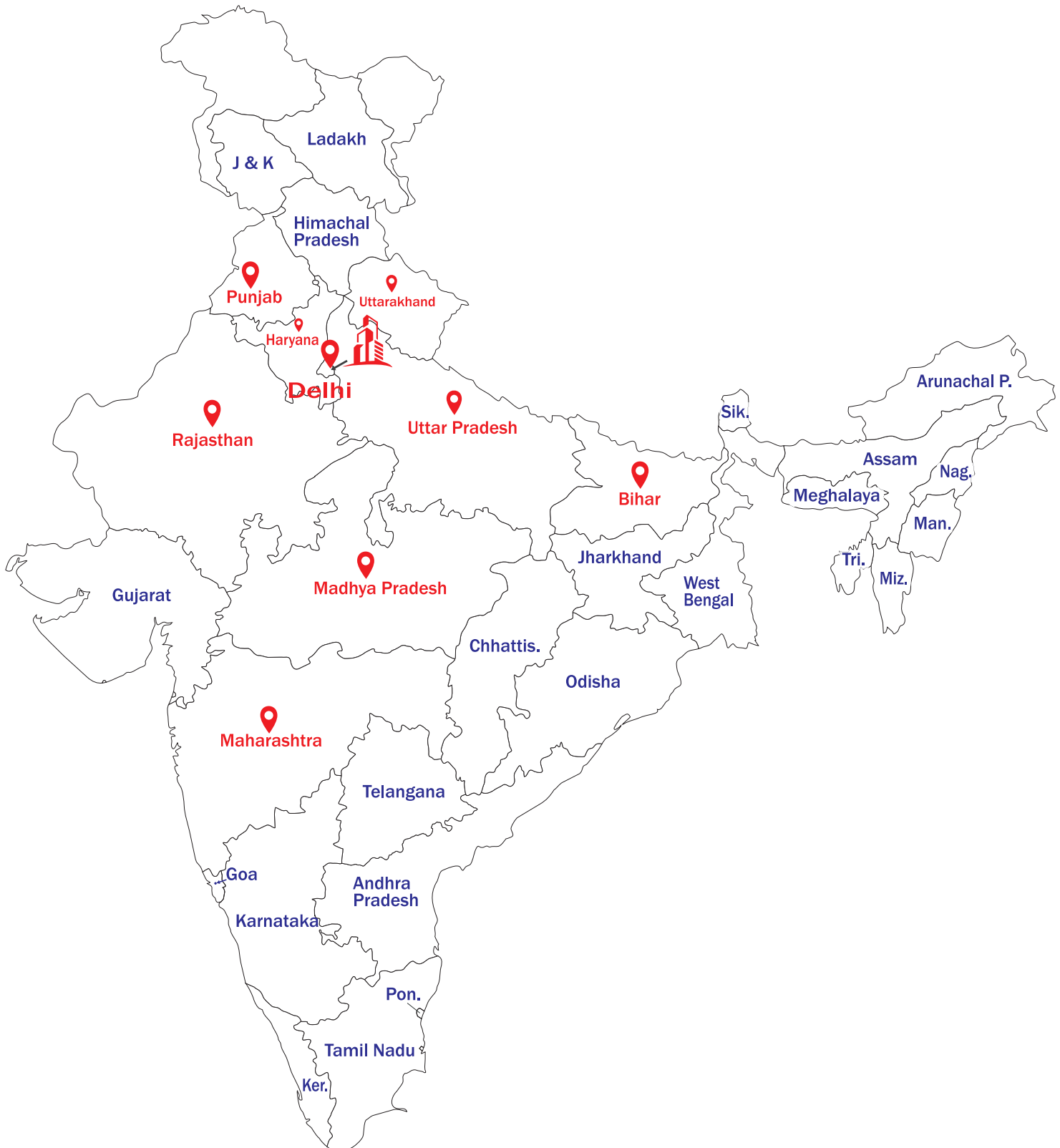
Our main aim is to serve our customers with cost effective and innovative solutions with our utmost know how of Applications and help them to fulfill their objectives.

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.*



Jewellery Laser Welding Machine



Description of jewellery Laser Welding Machines

The jewelry laser welder is mainly used for repair welding of gold and silver jewelry and spot welding. The jewelry laser welding machine is one of the important aspects of the laser material processing technology. The welding process of the laser spot welding machine is a heat conduction type.

Jewelry Spot Welding Machine

The method of soldering jewelry involves utilizing filler metal and heat to connect two or more metal parts. By putting many metal pieces together, the soldering technique may be utilized to make elaborate designs, such as the necklaces, bracelets, and other jewelry items that are made. For a finished result that is of excellent quality and durability, soldering calls for expertise, endurance, and attention to detail.

QuickWeld

Jewellery Laser Welding Machine

Precision Welding

Jewelry laser welding machines provide highly precise and controlled welding, allowing jewelers to perform intricate repairs and delicate soldering with accuracy. The focused laser beam enables pinpoint accuracy, ensuring that only the desired areas are welded without affecting adjacent components or gemstones.

Minimized Heat Damage

Laser welding generates minimal heat input compared to traditional soldering methods, reducing the risk of heat damage to sensitive gemstones or delicate jewelry components.

Versatility in Material Compatibility

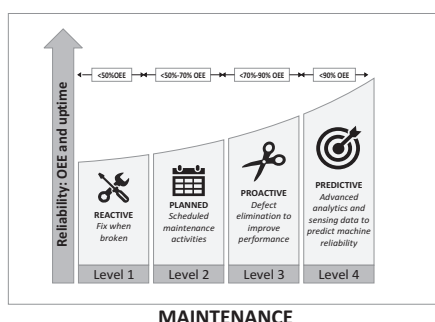
Jewelry laser welding machines can weld a wide range of precious metals commonly used in jewelry making, including gold, silver, platinum, and palladium. They can also weld dissimilar metals and alloys, enabling jewelers to create intricate designs and repair multi-metal pieces with ease.

Enhanced Efficiency

Jewelry laser welding machines offer fast and efficient welding capabilities, allowing jewelers to complete repairs and manufacturing tasks quickly and accurately. The high-speed welding process reduces production time and increases throughput, enabling jewelers to meet customer demands and deadlines more effectively.

Clean and Precise Welds

Laser welding produces clean and precise welds with minimal distortion or discoloration, resulting in aesthetically pleasing and high-quality jewelry pieces. This clean welding process reduces the need for post-welding finishing or polishing, saving time and labor costs for jewelers.



HIGH SPEED



Welding Display

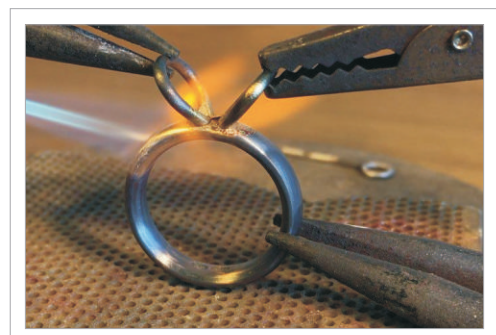
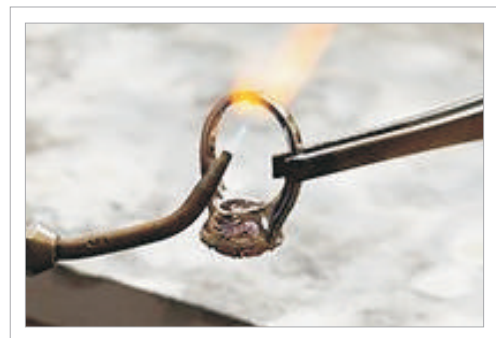
QuickWeld Series

Automatic Jewellery Laser Welding

Automatic Laser Welder offers a compact and space-saving design, comprising essential components such as a laser, power supply and control system, chiller, beam delivery and focusing system, and a binocular stereo microscope. Its advanced features include a coaxial micro-coordinate indicator, enabling effortless workpiece positioning without the need for specialized fixtures. With adjustable laser power, pulse frequency, and pulse width settings accessible through the user-friendly control panel, precise customization is at your fingertips.

This versatile machine finds its primary application in the jewelry industry, specifically for tasks like spot welding sand holes, hole filling, seam repairing, and welding claw positions in gold and silver jewelry. The welding spot size can be easily adjusted to meet specific requirements. Notably, it boasts a minimal heat-affected zone, resulting in meticulously crafted and aesthetically pleasing weld spots. Furthermore, the Automatic Laser Welder minimizes the need for extensive post-welding treatments.

With its exceptional precision and accuracy, this advanced welding solution ensures precise positioning without causing any damage to the surrounding jewelry during the welding process. Experience the efficiency and effectiveness of the Automatic Laser Welder, designed to elevate your jewelry manufacturing and repair capabilities.



Working Principle of Automatic Fiber Laser Welding Machine

The material at the weld junction melts under the tremendous heat produced by the laser beam, creating a molten pool. The molten pool solidifies as the laser beam travels along the weld path, producing a reliable and accurate weld.

A powerful fibre laser serves as the machine's energy source for automated fibre laser welding. The laser beam is produced and sent to the welding head through an optical fibre. A highly concentrated heat source is produced when the laser beam is directed onto the workpiece at the welding head.

Advanced control systems that enable exact control of variables including laser power, pulse frequency, and welding speed are installed in the autonomous fibre laser welding equipment. This guarantees top-notch weld quality and excellent welding performance.

Due to its great effectiveness, precision, and adaptability, the fibre laser welding machine is extensively employed in a variety of sectors, including the production of jewellery, automotive, aerospace, and electronics.



Configuration

Brand	QuickWeld _ QW 200W
Maximum output power	200W
Maximum pulse energy	80J
Laser Wavelength	1064nm
Pump source	Single lamp
Pulse width	0.1-20ms
Pulse frequency	≤ 50Hz
Aiming and positioning	Microscope + camera system
Application	Welding and repairing various precious metal trinkets
Host power consumption	≤ 7KW
Electricity demand	AC220V±5%/50Hz
Cooling system	Water cooling

Table Top Jewellery Laser Welding Machine

New generation touch screen
Record and export videos and pictures in USB Devices
Video playback on external monitor through HDMI
Video tutorial library

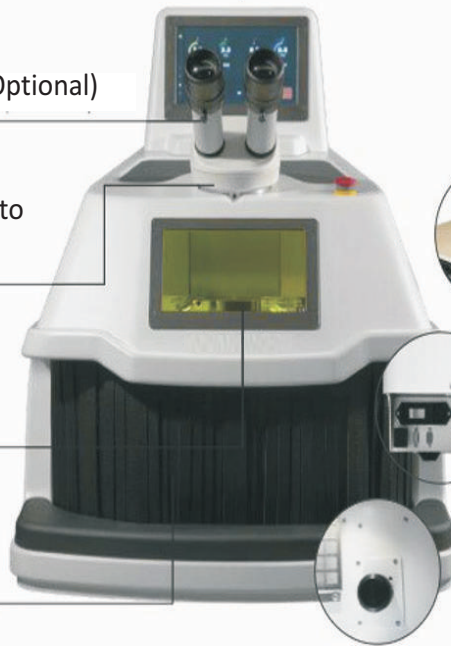
Dynamic choice of working parameters
Option to save own parameters
pictures / Video / Music playback on screen
Remote connection for diagnosis and update

Stero microscope Leica 10x or LYNX (Optional)

Mechanic and electronic safety shutters to guarantee maximum protection

Led lighting system with dimmer

Wide welding chamber ergonomic forearm supports



LYNX visor system as an option instead of the stereo microscope and front touch screen display



Wi-Fi and Ethernet to real time diagnosis and remote connection.
USB pendrive for save / import Parameters and video



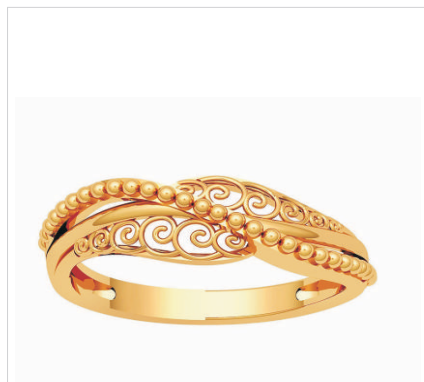
Argon, Nitrogen or Air independent coaxial supply or they can be supplied through a nozzle in the welding chamber

Parameters can be set via encoder inside the welding chamber

Configuration

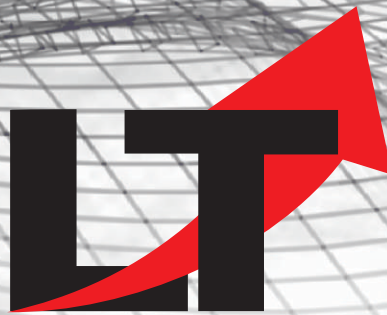
Brand	QuickWeld _ QW 150W
Maximum output power	150W
Laser Wavelength: 1064nm	1064nm
Condenser reflector	Imported ceramic condensing cavity
Voltage	220V 1Phase
Laser frequency	0-50Hz
Spot adjustment range	0.2-2mm
Cooling system	air cooling
Power demand	standard three-phase 380V+-5% / 50Hz / 20A Optional single-phase 220V
Rated Power	4kw
Usage environment temperature	10-25OC
Packaging size (mm)	1000*600*700

Jewellery Laser Welding Samples



Laser Tech Systems and Solutions

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