



Handheld Laser Welding. Introducing the LIGHTWELD™ 1500 handheld laser welding system.



- Package Includes:**
- Air-cooled base unit
 - 5 or 10 m (16 or 32') IPG gun cable
 - 5 or 10 m (16 or 32') IPG ground cable and clamp
 - User guide
 - Welding helmet with IR shield
 - (4) Welding nozzle tips
 - Laser safety glasses OD 6+
 - 3 m (10') CAT 6 ethernet cable
 - (5) Cover slides

The LIGHTWELD™ 1500 Handheld Laser Welding System

The LIGHTWELD™ 1500 handheld laser welding system enables dramatically faster welding, compared to MIG and TIG welding and is easier to learn and operate. The system provides higher-quality, consistent results across a wider range of materials and thicknesses than MIG or TIG, without distortion, undercut or burn-through. Additionally, the heat affected zone is dramatically minimized, as is the need for traditional postprocessing grinding or polishing for increased productivity, less scrap and lower cost-per-part.

- Applications**
- Metal fabrication shops
 - Auto body applications
 - Maintenance and repair
 - Construction and piping
 - Farm, furniture & appliances
 - Aerospace & transportation

- Quick Specifications**
- Laser power up to 1500 watts
 - Peak power up to 2500 watts
 - Single-side weld thickness up to 4 mm with steel, stainless steel aluminum
 - single-side weld thickness up to 1 mm with copper

LIGHTWELD Laser Welding Advantages

High Speed	Up to 4 times faster than traditional methods - improved productivity
High Quality	Consistent welding of thick, thin and reflective materials without distortion, undercut or burn-through, and a minimal heat affected zone
Easy to Use	Simple setup, easy to learn and operate for consistent, high-quality welds
Enhanced Material Capability	Metals with dissimilar thicknesses, ultra-thin parts, copper welding, materials with different electrical conductivity
Wobble Welding	Up to 5 mm of additional weld width - increases capability and highly aesthetic welds
Operator Safety	Multi-level sensors and interlocking safety features

Control Panel and Connections



- 1 Adjustable laser power up to 1500 watts
- 2 Preset and user-defined modes for material and thickness combinations
- 3 Wobble welding frequency control
- 4 Wobble length up to 5 mm for increased seam size



- 1 Ethernet
- 2 I/O controls & safety interlock
- 3 Gun in/out
- 4 Power
- 5 Ground cable connection
- 6 Laser output
- 7 Gas in/out

Control Panel

Laser power up to 1500 watts is easily adjusted with intuitive controls to quickly dial in optimum weld settings for various materials and thicknesses. With 74 stored preset and user-defined process parameters, novice welders can be trained and welding in a matter of hours. Select stored modes provide up to 2500 watts of high peak power for even greater welding capability.

Handheld Gun

The handheld welding gun is compact, ergonomic and proven to be comfortable, well balanced and easy to use. The light-weight and built-in wobble functionality enables operators to produce high-quality welds consistently and safely with its 2-step trigger.

The LIGHTWELD™ 1500 system is a Class IV laser system and routine precautions are required for the safe operation of the equipment.

Back Panel Connections

Clearly labeled rear connections make getting started fast and easy. Laser delivery, gas and gun control are prewired in a 5 meter (optional 10 meter) cable. Just plug in the power cord and gas connection, attach the clamp to your work surface and you are ready to go. An ethernet connection provides access to advanced parameter settings to fine tune and save process parameters.



Safety Features

Built-in Features Include:

- Key switch control of laser source and emergency-stop button ensure deliberate operation
- Fiber laser interlock verifies integrity of laser delivery to the welding gun
- 2-step weld gun trigger, enable and then fire, for intentional operation
- Part contact electrical interlock turns off the laser power if the welding head is not in contact with the welded parts.

Note: Operator protective equipment including welding gloves, welding shield and 1070 nm laser-safe glasses are required.

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