



Introducing Fibre Laser Welding – LightWELD

[Morgan Rushworth](#) has joined forces with [IPG Photonics](#) to sell the LightWELD xc fibre laser Welding Machines. Partnered with Morgan Rushworth, IPG Photonics is the world leader in fibre laser technology, with revolutionary laser solutions that enable greater precision, higher productivity and more flexible production for applications across any industry.

Handheld Laser Welding Technology

LightWELD™ hand-held laser welding and cleaning systems are fast, easy to learn and operate, and produce high quality, consistent results across a wide range of materials and

thickness's. Pre-weld and post-weld laser cleaning functionality optimises weld quality while increasing productivity.

LightWELD XC provides a cost effective solution for laser welding of steel, stainless steel and aluminium with the additional functionality of pre and post-weld cleaning. The XC can also be paired up with a wire feeding system for infill welding too.

Laser Welding Laser

High speed, low heat input, and a small HAZ (Heat Affected Zone) make laser welding thick, thin, reflective materials, and materials with dissimilar thickness's far less challenging for all skill levels.





Laser Pre-Cleaning

Pre-weld cleaning removes rust and other contaminants from materials and increases weld quality. This is much faster than manual cleaning and uses no chemicals or abrasives.

Laser Post-Cleaning

Post-weld cleaning removes heat discoloration and improves visual finishes without post-weld grinding.



LightWELD™ enables dramatically faster welding and is easier to learn and operate than MIG or TIG. LightWELD™ provides higher-quality, consistent results with minimal distortion or part deformation.

TIG welding can generate extreme heat that deforms thin materials and produces poor visual finishes. Welding copper is difficult and welding metals of dissimilar thickness's is limited. TIG welding is a highly skilled process, and experienced TIG welders are a scarce resource.

MIG welding requires consumable wire, material pre-cleaning, and bevelled joints for full penetration of thick metals. Travel and working angles are limited, and vertical

positions can be extremely challenging. MIG is a high-heat process that can cause part deformation.

LightWELD systems are easier to learn and operate and are **4x faster than TIG welding**. The low heat input and extensive material and thickness capabilities increase productivity, repeatability, and improve weld quality for operators of all skill levels.

Safety

When it comes to Laser welding, safety is of the up-most importance. Given that laser welders utilise Class 4 laser diodes, all welding should be completed in a laser-proof workspace.

Morgan Rushworth Laser Safe Enclosures can be built to suit any space due to their modular design. Simply measure your intended space, and you can build your enclosure to suit from assorted panels, including safety interlocked doors, solid panels, or windowed panels featuring laser safety glass to allow light into the enclosures for operator comfort.

For added security and flexibility, the booth can also be configured with a 2 or 4 camera CCTV system for monitoring and safety purposes.

As well as the protective space, PPE is vital to protect the health and well being of operators. To this extent specialist welding helmets are required that also feature Laser protection as well as laser-safe goggles to be worn underneath. Laser's operate on a specific electromagnetic

wavelength, and would cause permanent retina damage if they were to reflect back into your eyes.

For more information, check out our [full blog post on Laser Welding Safety](#).

Looking for a demonstration?

We're very excited to announce the launch of our Morgan Rushworth Demonstration Vans! You can request us to come out to your workshop, and see Laser Welding for yourself. Or you can come to our Herefordshire showroom and see the machine in action there, as well as exploring our two machinery showrooms.

