



## Mobile Laser Hand-Welding Unit 1000W, 1500W, 2000W or 3000W

Increased speed, maximum user friendliness and a wide scope of application belong to the major benefits of laser hand-welding method which is currently revolutionizing the industrial market. Compared to well-known TIG welding, it exceeds the process speed by factor 4. Users become quickly familiar with the method and are able to deliver good results within short time. Positioning of the laser gun does not give rise to difficulties, even in locations hard to reach. This extends the scope to highly complex assemblies.

Besides practical points of view, the excellent quality of the resulting seam itself proves to be an advantage of this method: Warping is considerably reduced -compared to seams produced by TIG welding-, and the optical appearance of fillet welds is enhanced without any negative impact on mechanical properties.

### Industrial Branches:

- Tank construction and equipment engineering.
- Mechanical engineering.
- Plant engineering.
- Metal and sheet metal processing.
- Pipe production and processing.

### Features:

- Adequate laser power for every application: 1000W, 1500W, 2000W or 3000W.
- Mini Wobble Head: Optimum for better gap bridging.
- Models with single or double wobble welding head available.
- Flexible adjustment of laser spot diameter between 2 and 5mm.
- Precision - software for wire feed under automatic control.
- Simple operation via touch screen.
- Sixfold lifetime of protective glasses by rotation.
- CW-Fiber laser with water cooling for permanent use.
- Lightweight handgun for welding: Only 0.5KG.
- Length of flexible fiber optic cable: 7m, up to 15m as an option.
- High efficiency, low space requirement, high flexibility.
- Outstanding price / performance ratio.
- Menu language selectable.
- Manufacturer's warranty: 1 year.



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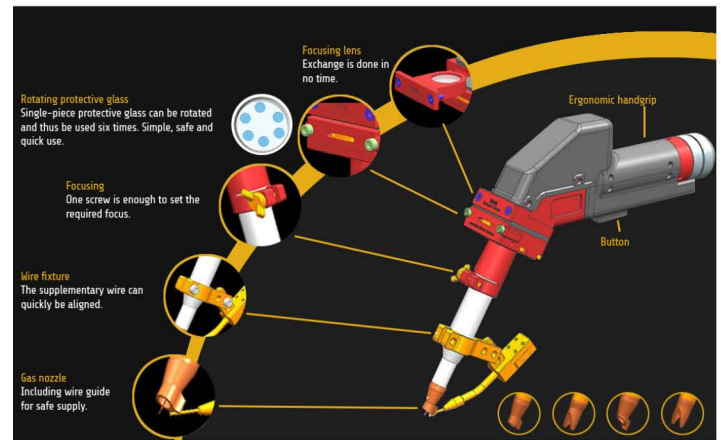




Simple Operation by Touch-Screen (Selectable Language):



Innovative Laser Hand Gun:

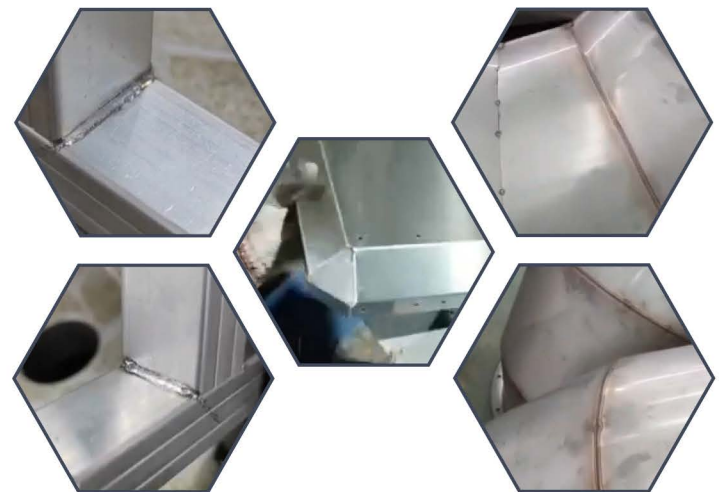


We will be happy to advise you on selecting the appropriate machine type that meets your requirements. Individual designs are tailored to your needs and manufactured by our mechanical engineering team according to your wishes. Contact us and ask for a non-binding price and delivery time. We would be happy to rent you one of our machines until your own is ready.

Specification:

Laser power	1000W / 1500W / 2000W / 3000W
Laser wave length	1070-1090nm
Penetration depth	<5 mm (depending on laser power and material)
Laser source type	CW-Fiber laser
Humidity	<70%
Admissible room temperature	<40°C
Power supply	400V (32A)
Cooling method	Water cooling
Power consumption	5700W / 6800W / 7700W / 8900W
Length of fiber optic cable	7m, up to 15m as an option
Laser spot diameter	2-5mm
Laser head	Patented Mini-Wobble-Head
Alarm lamp	yes
Weight hand gun	0.5KG
Dimensions machine (WxHxD)	632 x 1106 x 1260mm
Gross weight machine	238KG (incl. cooling water)

Weld seam examples:



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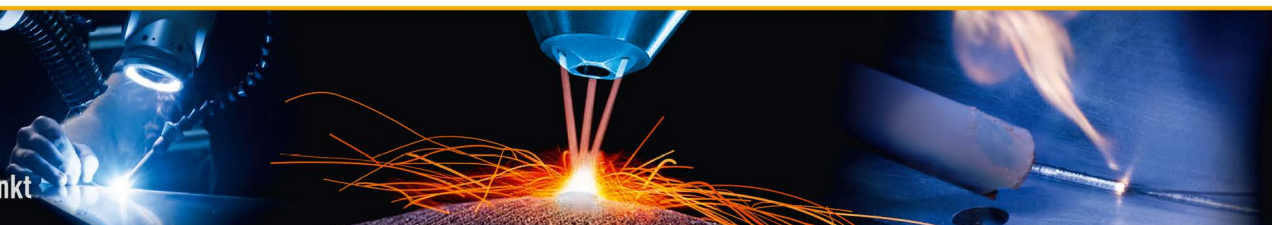
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## Laser Hand Welding

### Lower Warping thanks to Targeted Heat Input – Maximum Productivity

Only one quarter of the working time usual in a TIG – welding procedure is needed for comparable manual laser welding. Simply position the lightweight laser gun (0.5 kg) at the required place, no matter if it is difficult to reach. Welding nozzles are selected in conformity with the application: Fillet or butt welds, corner welds and outside seams. The concentrated energy input enables homogenous root seams to be produced.

Costs for preparation and rework, e.g. for grinding and polishing, are often no more necessary – this represents an economical advantage with respect to conventional methods. Furthermore, as the method manages without large energy input, reduced warping contributes to elimination of straightening work normally required.

For various materials and a wide thickness range, laser hand welding delivers valuable and reproducible results with excellent mechanical properties. Personnel can conveniently be trained without major effort.

Our factory service is looking forward to presenting the equipment in a live demonstration anytime.

### Innovative Highlight: Mini Wobble Welding Head

This specially developed wobble head delivers weld seam widths of 2 to 5mm, thus spanning also larger gap dimensions without any problem. Frequency and width of wobble welding can be set according to the application in question. This results in an increased variety of processing possibilities, as stable and visually appealing welding seams can be produced even in the case of difficult gap dimensions.

### Advantages of laser hand-welding:

- Process speed exceeds TIG welding by factor 4.
- Simple to learn and to practice.
- Narrow and durable welding seams, good optical appearance.
- Homogenous root seams are possible.
- Suitable also in positions difficult to access.
- Low heat input into material surface.
- For this reason: Considerably reduced warping.
- Neither spatters nor undercut.
- Treatment possible in precisely defined places.
- Appropriate for both thick plates and thin metal sheets.
- Low rework cost.
- Minimum maintenance.
- Low operating cost.



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