



WL-300A

Precision Laser Welding Workstation

AMADA's WL-300A Precision Laser Welding Workstation is designed to enhance productivity for small and medium production volume manufacturing processes including those for medical devices, sensors, electronic devices, and small battery modules.

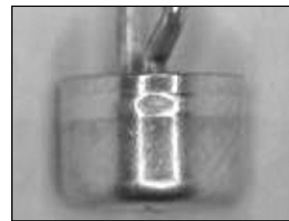
The WL-300A comes standard with a laser, galvo scanning beam delivery optics, Z-axis motion, camera observation, and CDRH Class 1 enclosure.

Options include a choice of laser to best suit the application, optics to achieve desired spot and field size, XY or rotary motion, cover gas or air knife, and laser selection for precision laser welding applications.

KEY FEATURES

- Robust, CDRH Class 1 enclosure with wide opening for easy load/unload of parts.
- Choice of CW or QCW fiber lasers
 - Up to 500 W built into base
 - >1000 W in LF package
- Optional process monitor (MM-L400A) for real-time process observation and judgement
- High-speed rotary for circumferential welds around a tube
- XY motion for step and repeat applications for a tray of parts
- Standard off-axis camera for weld zone viewing, optional on-axis camera for close up view of weld area
- Tooling plate with M6 threaded holes, easy design and exchange
- Internal metal fume exhaust ducting

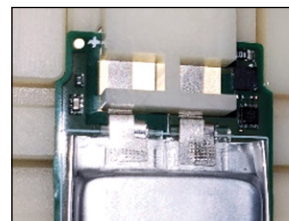
TYPICAL APPLICATIONS



Automotive electronics



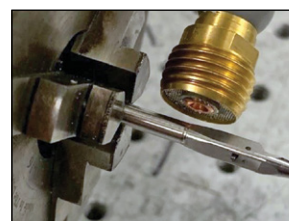
Pressure sensors



Battery connections



Medical devices - cap on tube



Medical devices - tool to tube

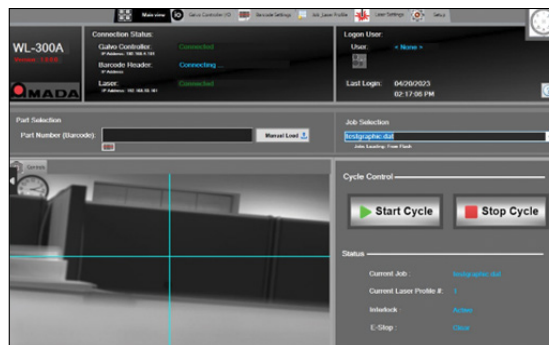


Electronic terminals

SOFTWARE FEATURES

- Production helper software to facilitate manufacturing
- Tool path programming is through GUI
- Windows® 11 compatible
- Password protected security lockout
- Easily import common vector files CAD

Windows is a trademark of the Microsoft group of companies



TECHNICAL SPECIFICATIONS

Enclosure	Floor standing, CDRH Class 1, motorized door	
Integrated Laser Options*	CW: 100 W, 300 W, 500 W QCW : 150/1500 W, 300/3000 W, 450/4500 W	
Beam Quality	Single mode or multi-mode (50 μ core)	
Beam Delivery	Galvo scanning head	
F-theta Lens Options	163 mm (70 x 70 mm field size) 330 mm (188 x 188 mm field size)	
Motion Options**	Programmable Z, High-speed rotary, 150 mm x 150 mm XY table	
Software	Production software and programming software included	
Camera viewing	Off-axis wide-angle view of weld zone – Standard On-axis view of weld spot - Optional	
Advanced Options	Cover gas and air-knife Process monitoring with MM-L400A Power/energy measurement	Barcode scanner for job load Fume extractor unit (internal ducting included)

*The LF CW fiber laser up to 1kW can be used. The LF chassis will be located next to the enclosure.

**WL-300A system comes standard with programmable Z. All other motion is optional.

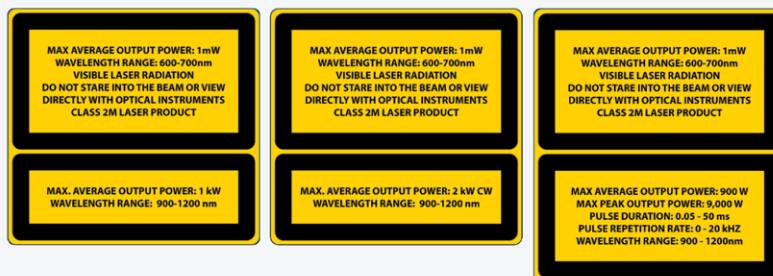
WORK PIECE SPECIFICATIONS	WL-300A	
Size* (W x D x H)	Part size with XY table configuration 163 mm lens - 12 in x 12 in x 10.3 in (300 mm x 300 mm x 261 mm) 330 mm lens - 12 in x 12 in x 6.7 in (300 mm x 300 mm x 171 mm)	Part size without XY table configuration 163 mm lens - 12 in x 12 in x 13.2 in (300 mm x 300 mm x 337 mm) 330 mm lens - 12 in x 12 in x 4.7 in (300 mm x 300 mm x 247 mm)
Rotary	DD Rotary - 3 jaw chuck, 2.5 in max part diameter, no through hole, 1500 rpm max. 1:1 Belt Drive Rotary - ER16 spindle - 10 mm / 0.393 in through hole, 1500 rpm max. 3 jaw chuck, 3.1 in diameter ER16 collet up to 3/8 in	
Weight of parts	Max weight on XY table is 15 lb (6.8 kg)	Rotary with 3 jaw chuck - max weight is 1.5 lb (0.7 kg)

*Depends on lens selection and motion configuration

WEIGHT & DIMENSIONS

Dimensions (W x D x H)	Enclosure only
Enclosure closed	42.75 in x 34.50 in x 74 in (1086 mm x 876 mm x 1880 mm)
Enclosure open	42.75 in x 34.50 in x 90.75 in (1086 mm x 876 mm x 2305 mm)
Weight	880 lb (400 kg)

Dimensions do not include ergo arm with 38" radius.



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