

Laser Welding Glovebox Systems



Based on the industry-leading Benchmark® AX5000, AMADA WELD TECH's laser glovebox systems offer precise control of moisture, pressure, and gas composition in the processing environment. Capable of coordinated motion and laser weld firing in up to 5 axes of both linear and rotary motion, the systems ensure reliable weld spot overlap and superior hermeticity. Tooling, optimized stage configuration, and innovative focus head mounting add value to system functionality. These laser welding machines are perfectly suited for assembling sensitive electronic packages such as implantable medical devices and semiconductors

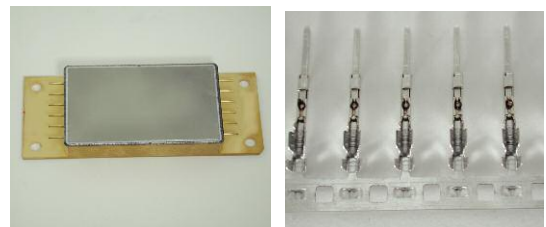
KEY FEATURES

- Integrated welding station and glovebox provide non-reactive environment by controlling moisture, oxygen, nitrogen or other gas levels yielding higher quality welds and improved material finishes
- Precise environmental control maintains selected gas composition for reliable, repeatable welding and sealing processes
- Programmable laser power confirmation provides automatic laser power measurement and data-logging at user-specified intervals
- Real-time power feedback for optimal process control
- Historical and real-time graphical display of glovebox operating parameters and status
- Advanced motion control software for welding 2D and 3D contours, including position-based-firing, normal production and rework modes
- Integrated motion control / laser / vision user interface simplifies automation
- Controlled-access user interface and data-logging meets FDA requirements
- CDRH, Class 1, eyesafe enclosure

TYPICAL APPLICATIONS



Medical devices



Electronic devices



Industrial components

SYSTEM OPTIONS:

- Vision-directed motion
- Barcode / 2D matrix code job control
- Auto-vision alignment and calibration
- Seam-tracking on contour welds
- Standard or galvo beam delivery
- Gas analyzers
- Gas mixers
- Soot filtration
- Gas purification
- CCD camera viewing system
- Antechambers and ovens
- Vacuum pumps
- Laser light curtain
- Status light towers

TECHNICAL SPECIFICATIONS

	Features
Antechambers and ovens	
Configuration options	End, front, rear loading
Heating	Wall heating or heated shelves
Temperature	0 - 200° C std., higher available
Vacuum pumps	Rotary vane, dry, or turbo pumps
Analysis and monitoring capabilities	
Oxygen detection range	0-1000 PPM or %
Moisture detection range	0 - 150 PPM or ° C dewpoint
Helium monitoring	%
Argon monitoring	%
Gas Purification	
Single column	30 CFM (51 m3/hr) Moisture and/or oxygen removal
Dual column	
Automatic dual column	
Gas Mixers	
Manual set mixers	Two and three gas versions
Automatic closed loop mixer	Two gases
Others	
Soot removal systems	30 CFM (51 m3/hr) or 100 CFM (170 m3/hr)
CDRH Class 1 eyesafe window	Wavelength based on application
Light tower	Indicates glovebox or process status
Tool Interchange	Floor access, front loading
Safety	Light curtain, interlocks

WEIGHT & DIMENSIONS

	AX5000 - 48	AX5000 - 56
Dimensions (L x W x H)	39 in x 48 in x 36 in (991 mm x 1219 mm x 915 mm)	39 in x 56 in x 36 in (991 mm x 1423 mm x 915 mm)
Number of glove ports	2	4
Weight	Will vary with selected options	Will vary with selected options

Other configurations and custom sizes available

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