



Benchmark AF8500 / AF1250 Autoflow Lid Placement, Tack and Seam Sealing Systems

key features

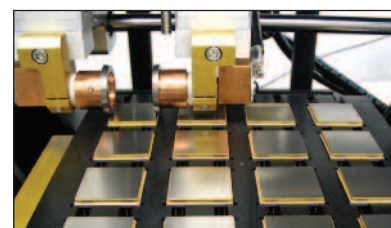
- **Programmable electrode force and weld current** – Optimize both force and weld current setting using a Windows-based MUC proprietary Autoflow software.
- **Closed-loop HF25 Miyachi Unitek high frequency inverter power supply** – Constant current weld control features low sealing temperatures and power feedback, increasing yields and productivity for the sealing process.
- **Current control mode** – Advanced dual loop digital PID control program optimized for superior seam sealing results.
- **Position-based weld pulses** – Ensures consistent spot spacing; optimizes spot density at corners, reducing leaks; eliminates acceleration/deceleration problems.
- **Auto-Trak™ software** – Indexes electrodes ensuring extending electrode life and more even wear.
- **Automated lid alignment and placement vision system option** – Easy-to-program vision software. Exclusive lid placement tool holds lid in place during tacking, preventing misalignment. Easy to program vision software.
- **Electrode roll-back feature** – Assists in electrode release from lightweight parts.
- **Automated magazine loader option** – Standard or custom part boat/magazine loads from either top or bottom for a fully or semi-automated part handling system.

The automated seam sealer provides users with the flexibility to meet the increasing demands of lid placement and seam sealing. It works either as a stand-alone unit or as part of a fully integrated glovebox or automated manufacturing line. The computer controlled precision tacking and seam-sealing mechanism is combined with a high frequency inverter power supply, and an optional high resolution vision system to provide a robust and repeatable process.

The Windows®-based system can also be easily incorporated into atmospheric enclosures to provide an integrated seam sealing glovebox system, ensuring high yield hermetic sealing results. The easy-to-use Graphical User Interface (GUI) along with industry leading electronic controls yield a reliable and simple-to-maintain system.



typical applications



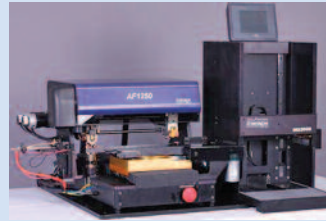


AF Series Configurations and Options

- AF8500-S: Seam sealing
- AF8500-PST: Lid placement and tacking
- AF8500-VPST: Lid placement, tacking, and sealing
- AF1250-S or AF1250-VPST: Automated part handling with lid placement, tacking, and seam sealing
 - For use with industry standard magazines or part of automated production process

Lid Placement Features and Options (PST and VPST)

- High resolution "EDGE FIND" vision system
- Lid presentation: pallet pickup or lid magazine
- Vision based automated placement with X, Y, and theta adjustment for 3mm to 110mm wide lids
- Automatic 2 corner vision search for part size greater than camera's field of view
- Adjustable tack electrode assemblies for manual adjustment; small 3mm to 16mm with optional tack head assemblies for large lids up to 110mm



Model AF1250-ST, shown with optional magazine handler for automated pallet loading and unloading.



Wide Range of Part Processing Capabilities

- Operates as tacker only, sealer only, or combined tacker-sealer
- Four-pass welding feature starts weld from center and welds to the part corner – best for large part sealing
- Set different energy levels for each axis welded for higher yields on rectangular parts
- Single or double side tack options
- Real time monitoring of weld inhibit inputs such as moisture, oxygen, and helium levels
- Unlimited weld schedule storage
- Lid hold down feature assists tacking process
- Chain or link multiple schedules together

higher yields with advanced HF25 inverter power supply

- 25 kHz feedback rate for closed loop electrical current control
- Automatically compensates for variations in materials, lid to part dimensions and electrical properties
- Weld pulse shaping feature ramps energy up or down to reduce material cracking and leaks
- Conditioning weld pulse brings each part to same resistance prior to application of welding current
- Energy output is independent of input line voltage fluctuations

physical characteristics

<i>AF8500 Mechanism</i>	55 kg 120 lbs	712mm W x 712mm L x 432mm H (28" X 28" X 17")
<i>AF1250 Mechanism with control box</i>	66kg 145lbs	Mechanism – 712mm x 762mm x 432mm (28" x 30" x 17") Control box – 381mm x 280mm x 356mm (15"x11"x14")
<i>HF25 Power Supply</i>	24.5kg 54 lbs	235mm W x 413mm L x 331mm H (10" x 17" x 13")

specifications

<i>Part size with vision, pick-place and tack:</i>	3mm -110mm(0.118"-4.3")	<i>Input Power –</i>	192-264VAC (240V nominal), 3 Ph, 50/60 Hz, 25 amps
<i>Part size without vision and pick-place:</i>	3mm -203mm(0.118"-8")	<i>HF25 Power Supply:</i>	320-440VAC (400V nominal), 3 Ph, 50/60 Hz, 20 amps 384-528VAC (480V nominal), 3 Ph, 50/60 Hz, 13 amps
<i>Lid Placement Accuracy:</i>	+/-0.08mm (+/-0.003")	<i>Mechanism Input Power:</i>	Autovolt 110 to 240VAC 50/60Hz single phase 15amp
<i>Weld Force (Programmable):</i>	500 to 3000 grams (1g increment)	<i>Compressed Gas</i>	60 psi minimum
<i>Linear Weld Speed:</i>	0.01 to 1.5 in/sec (0.01 increment)	<i>Requirements:</i>	
<i>HF25 Current Output:</i>	100 to 2400 amps, ±2 amps	<i>Calibration:</i>	To NIST standards
<i>HF25 Pulse Width:</i>	0.10 to 99.00 milliseconds 0.01 increment)		CE Certified



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