

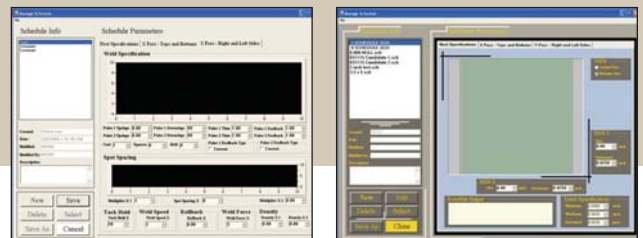
# hermetic sealing

# Benchmark SM8500

## Parallel Seam Sealing System

The Windows®-based SM8500, packed with advanced features, reliably performs welding, brazing, and soldering processes on a variety of metals, metal alloys, plated materials, and solder pre-forms. It can be operated as a stand-alone unit or fully integrated into an environmental enclosure for a complete closed loop hermetic sealing process.

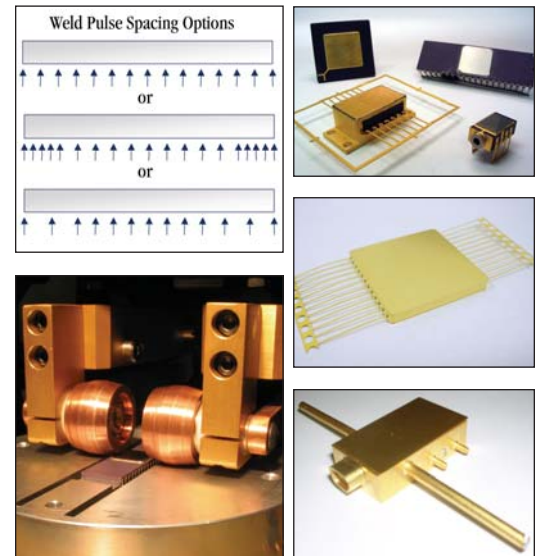
The easy-to-use SM8500 is effective for either production or research and development applications for linear, rectangular or circular part processing. Its Graphical User Interface (GUI) and one-up part tooling enable quick changeover. The robust design of the SM8500 mechanism along with industry leading electronic controls and internal ethernet communications yield a precise, reliable and simple to maintain system.



## Industry Leading Features and Benefits

- **Current control mode for sealing process**  
Advanced complex control program is optimized for industry's best seam sealing results.
- **Programmable electrode force**  
Enables user to optimize both the force and energy through programmable settings to achieve superior results. Five point force calibration for precise force control and consistency.
- **Most complete line of power supplies in the industry**  
Provides low sealing temperatures. Increases yields and productivity. Standard Inverter Power Supply with Capacitive Discharge or AC for specialty applications.
- **Extended electrode life with electrode Auto-Trak software**  
By indexing the electrodes we ensure extended and even wear, providing superior results.
- **Position-based weld pulses**  
Provides increased or decreased energy at part corners. Reduces corner leaks. Solves electrode deceleration and acceleration problems with precise weld pulse spacing.
- **Electrode roll-back feature**  
To assist electrode release from light weight parts.
- **Process inhibits**  
Communicates with glovebox to ensure parts are processed only when desired gas composition is present.

## TYPICAL APPLICATIONS



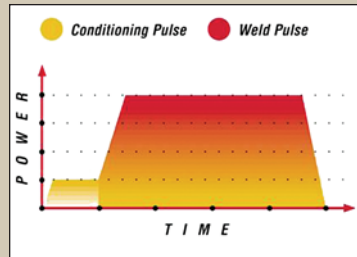
# Wide Range of Part Processing Capabilities

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



## Higher Yields With Advanced HF25 Inverter Power Supply

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



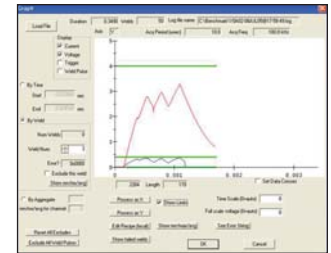
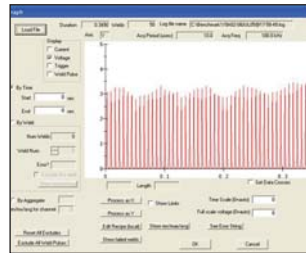
## Leading Edge Software Options

Batch Reporting Software option records lot number, operator, time, date, sealing schedule name, part serial number

- Provides process and part traceability
- Exportable via .CSV format

WM3000 Weld Monitor Software option provides real-time and historical process analysis

- Compares actual measurements to entered process setpoints
- Informative graphical analysis screens



## SPECIFICATIONS

<b>Part Size:</b>	3mm – 203mm (0.125 inches – 8 inches)	<b>HF25 Pulse Width:</b>	0.3 to 2000 milliseconds
<b>Positioning Accuracy:</b>	±0.038mm (±0.0015 inches)	<b>Input Power – HF25 Power Supply:</b>	192-264VAC (240V nominal), 3 Ph, 50/60 Hz, 25 amps 320-440VAC (400V nominal), 3 Ph, 50/60 Hz, 20 amps 384-528VAC (480V nominal), 3 Ph, 50/60 Hz, 13 amps
<b>Weld Force (Programmable):</b>	500 to 5000 grams 200-500 grams (option)	<b>Compressed Gas Requirements:</b>	60 psi minimum
<b>Weld Linear Speed:</b>	Up to 38mm (1.5 inches) per second	<b>Mechanism Input Power:</b>	115 VAC 50/60 Hz, 15 amps
<b>Rotary Speed:</b>	0 to 28.8°/second – 720° Max. rotation	<b>Calibration:</b>	To NIST standards
<b>HF25 Current Output:</b>	50 to 2400 amps, ±2 amps		

Your Local Representative

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