

RSX50 Series Automated Welding Machine

Finally, an affordable, semi-automated platform for low to medium volume reflow soldering, brazing and resistance spot welding applications in the medical device, aerospace and electronics industries.



Go online today to download the complete, 6 page brochure!

■ Features

■ Benefits

- Fully automatic micro/mini resistance, braze, or reflow solder welding platform
 - Gantry robot performs batch, parallel or series welds on multiple parts
 - *Patent Pending* weld head combines opposed electrode & parallel gap into one
 - Improve weld consistency & yields with optional electrode tip resurfacing
- Simultaneously weld multiple parts while operator loads/unloads machine
 - Dramatically increase throughput compared to stand-alone bench top system
 - Cut floor space, cut number of weld units and cut RSW direct labor costs by up to 50%
- Powerful WeldWorks Software runs on familiar Microsoft Windows XP®
 - Output data stored to Microsoft SQL server database
 - Web services allows easy integration with your MRP or MES system
 - Analyze weld data and view reports and graphs on any PC with a browser
- Flexible platform configured to your product requirements
 - Customize tooling, part fixturing, electrodes, and weld parameters to meet requirements
 - Preserve your late model, leading manufacturer temperature or weld controller investment by re-using it in the automated RSX50

RSX50 Specifications:

Hardware

- Precision servo controlled X, Y, and Z gantry robot with a work envelope of 400mm x 200mm x 100mm respectively and 12um positional repeatability – configured with 1, 2, or 3 axes for your application.
- Ultra-low stiction pneumatic weld head with a 12.5mm stroke
- *Patent Pending* parallel, step or opposed weld head with up to 100N force and ± 0.5N resolution
- Weld electrode displacement measured with optical linear gage with ±1um resolution (optional)
- Optional automatic electrode resurfacing and cleaning station
- Ergonomic load/unload station and 425mm diameter index table mounted on a pneumatic rotate stage
- Core 2 Duo computer equipped with a minimum of 1 GB RAM, 80 GB hard drive, CD-RW drive, 2 USB ports, 17" LCD monitor, 500 VA UPS and fast Ethernet card.
- Category 2 safety light curtain and controller
- Optional analog color CMOS camera monitor and macro zoom lens for ease of setup and operator feedback
- Customized part fixture(s) to hold your parts and provide quick change-over

Software

- Output data stored on Microsoft SQL Server 2005 Express relational database
- Windows® XP with WeldWorks™ Software Suite to control weld head, change and adjust weld recipes, perform motion, control all I/O, and view data on-line (via a web browser)
- Optional vision system to locate part features, position weld head, and take calibrated measurements
- Optional manufacturing execution system integration and/or custom reports

RSX Series Feature Matrix	RSX25/26	RSX50	RSX100	RSX200
WeldWorks™ Software Suite*				
Intuitive Windows based software for easy machine operation	●	●	●	●
Complete process control – Six Sigma Quality	●	●	●	●
Electronic records, data storage, web reports and on-line analysis	●	●	●	●
RSX Series™ Hardware				
Machine configuration	tabletop	tabletop	frame	frame
Automatic electrode tip redressing for consistent welds (std. option)	○	●	●	●
Retrofittable weld power supply/controls – preserve investment	●	●	●	●
Flexible and reconfigurable via fixtures, jigs, etc.	●	●	●	●
Weld heads – parallel gap, opposed, seam, thermode (reflow solder)	●	●	●	●
Precise and repeatable weld head positioning (work axes)	○	X-Y-Z gantry	X-Y-Z gantry	X-Y-Z gantry
Vision assisted feature finding	◐	◐	●	●
Part handling	○	○	◐	●
Production volume & approximate throughput (parts/hour)	25-100	50-200	100-400	350-700
Auxiliary Operations (e.g. press, test, visual inspection station)	○	○	●	●

○ Not applicable ◐ Partially fulfilled feature ● Fully available feature

*The WeldWorks Software Suite can be purchased and run on stand-alone weld controllers or weld benches that do not use RSX series hardware. Please contact techMatrix LLC sales for more details.

Founded in spring 2005, techMatrix LLC is a dynamic, growth stage company dedicated to designing, building, and assembling both custom and standard PC based resistance weld equipment for high technology companies.



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