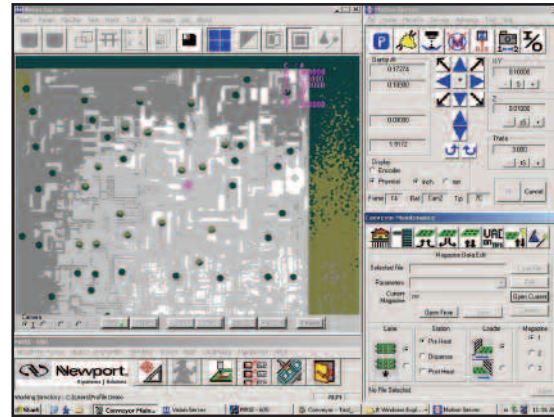


Material Handling

The MRSI-175Ag operates in line, cassette-to-cassette or stand alone. The system's conveyor handles boards, fixture trays, boats and lead frames. Tooling is easily changed and the system has a large work area.

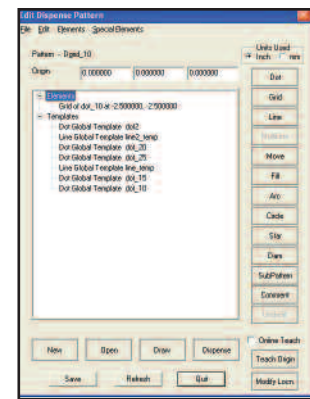


Easy to use Windows software interface

Dual Real Time Video

Available with dual real time video monitoring, the MRSI-175Ag's color monitor displays the image of the active dispense tip for in-process review. This feature is critical for process development.

Newport Windows Workcell Software



Fast setup from the software dispense pattern library

The intuitive graphical user interface runs on Windows™ and simplifies the set-up and production process. The dispenser's software includes a pre-programmed library of dots, lines, area fills, spirals, arcs and star patterns, which are easily customized to fit the application. Once taught, dispense programs are quickly optimized. Calibration routines, offline programming and CAD download mean programming is quick and easy.

The MRSI-175Ag is the perfect companion to Newport's assembly equipment since it shares the same software user interface.

Turnkey Integrated Production Lines

Newport offers a complete solution for advanced packaging, including our family of high-speed precision die bonders and epoxy dispensers. SMEMA compatibility allows integration of our systems with a wide range of compatible process equipment such as in-line ovens for a turnkey solution. Newport's reliable systems combined with our worldwide service and support commitment means you system will always be available for production.



Newport can configure a world class turnkey production line to satisfy your applications requirements

Specifications

Applications	Silver-filled epoxy, underfill, encapsulation, solder paste
Z Axis Accuracy	0.0005"
X-Y Axis Accuracy	0.001"
Number of Heads	Two; two pumps or one pump and one interchangeable stamping tool
Stamping Tips	13 stamp tools with automatic tip change; epoxy well with multiple material capability
Pump Types	Servo rotary positive displacement pumps, linear pumps and time pressure
Vision System	Edge detection and pattern recognition
Lighting	Programmable intensity ring and collimated; red, green and blue tri-color lighting
Software	Newport Windows workcell software

TURNKEY SYSTEMS



Newport®
Experience | Solutions



Newport Corporation, 1791 Deere Avenue, Irvine, CA 92606
Newport Corporation, Irvine, California, has been certified compliant with ISO 9001 by the British Standards Institution.

North America
Telephone: 978-667-9449
Facsimile: 978-667-6109
sales@na.newport.com

Asia Pacific
Telephone: +65 63108990
Facsimile: +65 62199584
sales@ap.newport.com

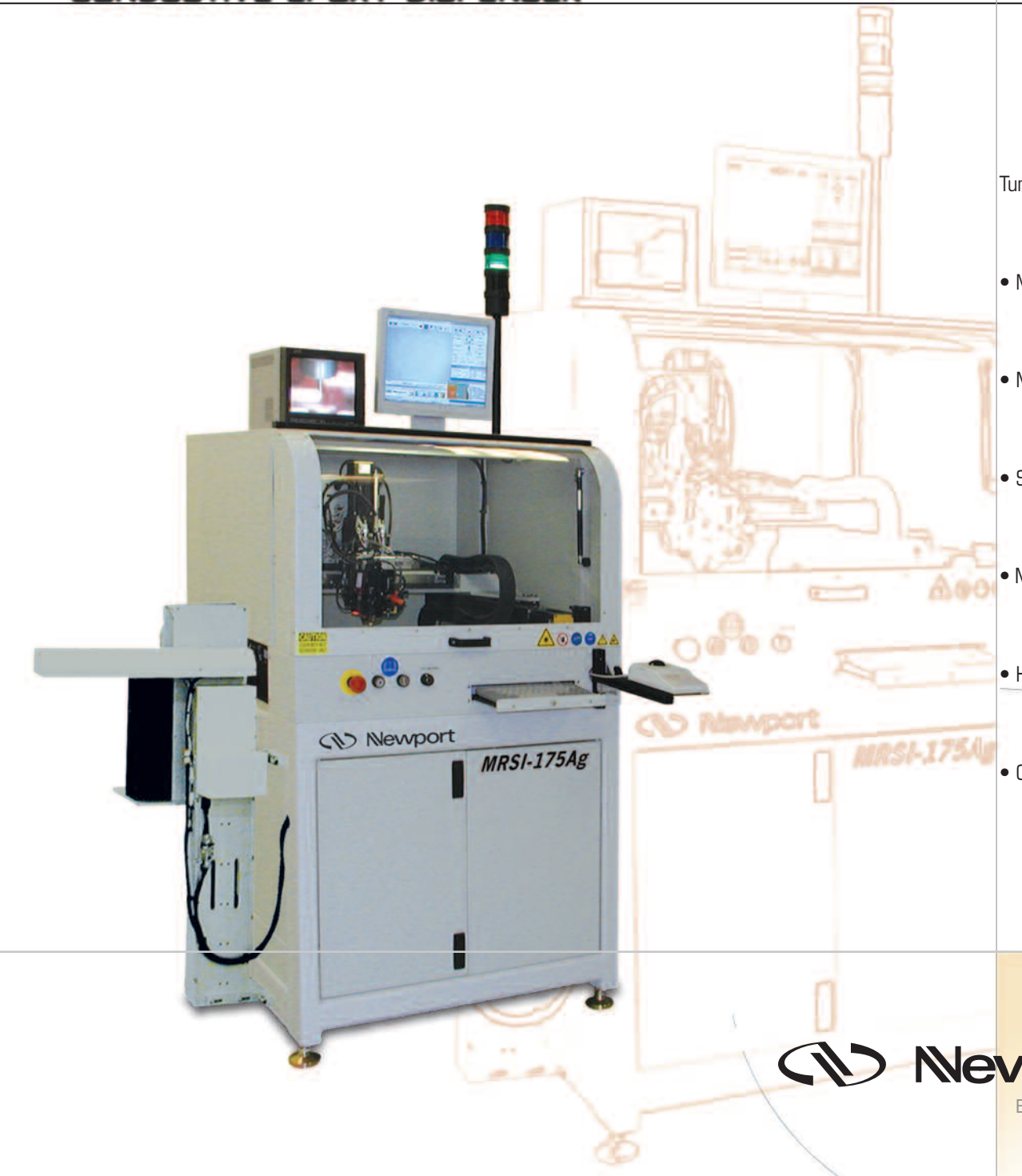
Europe
Telephone: (31)71 5791899
Facsimile: (31)71 5791897
sales@nl.newport.com

Visit Newport Online at www.newport.com

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MRSI-175Ag CONDUCTIVE EPOXY DISPENSER



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- MEMS
- Semiconductor Packaging
- Multi-Chip Modules
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THE ULTIMATE CONDUCTIVE EPOXY DISPENSER

ULTIMATE CONDUCTIVE DISPENSER

The Highest Level of Process Control

Interchangeable Configurations:

- Dual Heads
- Dispensing
- Stamping
- Multiple Dispense Pump Technologies

Newport takes silver epoxy dispensing to its most advanced level with the MRSI-175Ag Conductive Epoxy Dispenser. Because of its accuracy, versatility, and speed, the MRSI-175Ag is the number one dispenser relied on by leading manufacturers worldwide.

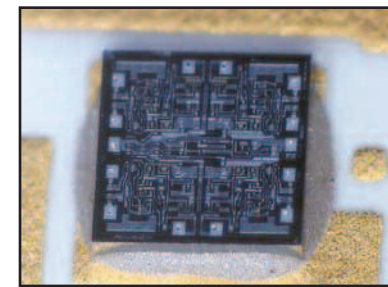
The MRSI-175Ag uses a servo-controlled, high speed X, Y, Z platform. The system's two heads can be configured with two positive displacement dispense pumps or one positive displacement dispense pump and one stamp head. It is capable of repeatedly producing dots as small as 0.005". The system's positive displacement pumps repeatedly dispense individual dots, lines and areas in a production capacity.

The design of the MRSI-175Ag provides unparalleled process control and dispensing capability for demanding microelectronic applications. For example, microwave circuit manufacturing requires maximum thermal heat transfer between the die and the substrate. The MRSI-175Ag precisely dispenses 100% coverage under the GaAs MMIC die while maintaining thin bondline control equal to one half of die thickness.

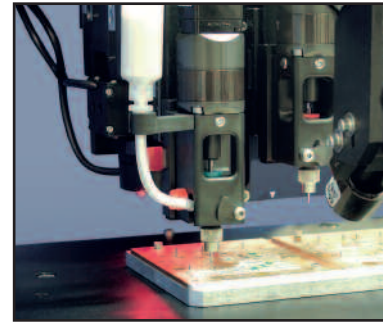
Increased miniaturization means smaller and smaller components. The MRSI-175Ag provides the resolution needed to dispense for the end terminations of the smallest of case size capacitors and for non-conductive epoxy staking in the center to avoid silver migration and add mechanical strength.



Sets the standard for precision conductive epoxy dispensing



Accurate dispense for bond line control



Servo-driven cartridge positive displacement pump

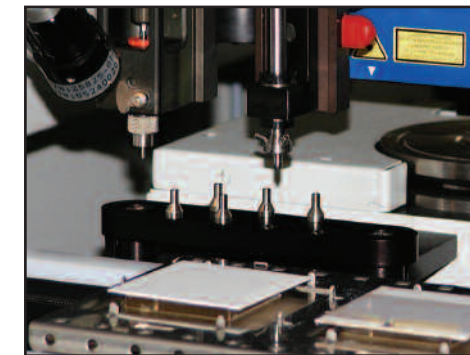
Advanced Dispense Pump Technology

The MRSI-175Ag features high-resolution, servo-driven cartridge style positive displacement pumps for the most accurate dispensing and versatility of dots, lines and areas. The pump encoder provides real time feedback for the highest accuracy dispensing. Choose from a variety of screw pitches, diameters and materials for a range of applications.

In addition, a wide variety of application-specific pumps are available, including linear positive displacement and time/pressure.

Epoxy Stamping

The MRSI-175Ag stamping option consists of a rotating well with a reservoir. A micrometer adjustable doctor blade sets a consistent thickness of epoxy. Various epoxies can be held within multiple reservoir grooves. 13 different stamping tips can be automatically interchanged for different dot sizes.

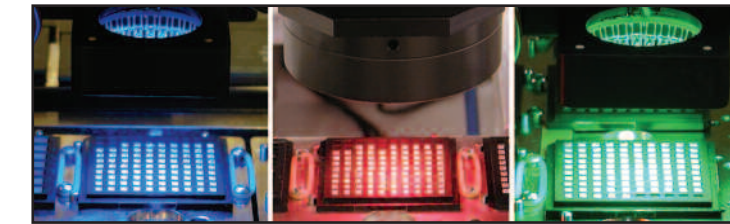


Dual heads with high accuracy pump and stamping tools

Height Sensing

Accurate height sensing is critical for achieving repeatable precision dispensing. Surface mapping enables precise gap control during dispensing. Newport offers multiple options for precision height sensing. Choose from non-contact laser height sensing or an active touch probe. The system senses heights in three locations in order to determine the tilt of the surface on which material will be dispensed. An unlimited number of surfaces can be mapped within a package enabling compensation of the Z axis automatically for irregular and multiple surface heights.

Vision Alignment



Red, green and blue programmable lighting for vision processing of challenging substrate materials

Robust machine vision combined with programmable and multi-color ring and collimated illumination and quality optics enables automatic vision processing of the most challenging substrate materials using both edge detection and pattern recognition. Global and local vision alignments are used for nested substrates and features, allowing fast, error-free processing of complex assemblies.

Calibration

Automatic needle calibration enables fast changeover between applications and ensures fully automatic operation.

Cleaning

Automatic needle cleaning eliminates material buildup on the dispense tip to ensure accurate dispensing. Needle cleaning is activated automatically during the dispense program to provide smooth transitions between area fills and small dots.

Priming

Automatic needle priming eliminates missed dots thus ensuring precision dispensing.

Dispense Needles

For process flexibility, choose from a broad range of application-specific needle sizes, materials and styles including tapered needles, polished needles, "showerheads" and "footed" needles.

