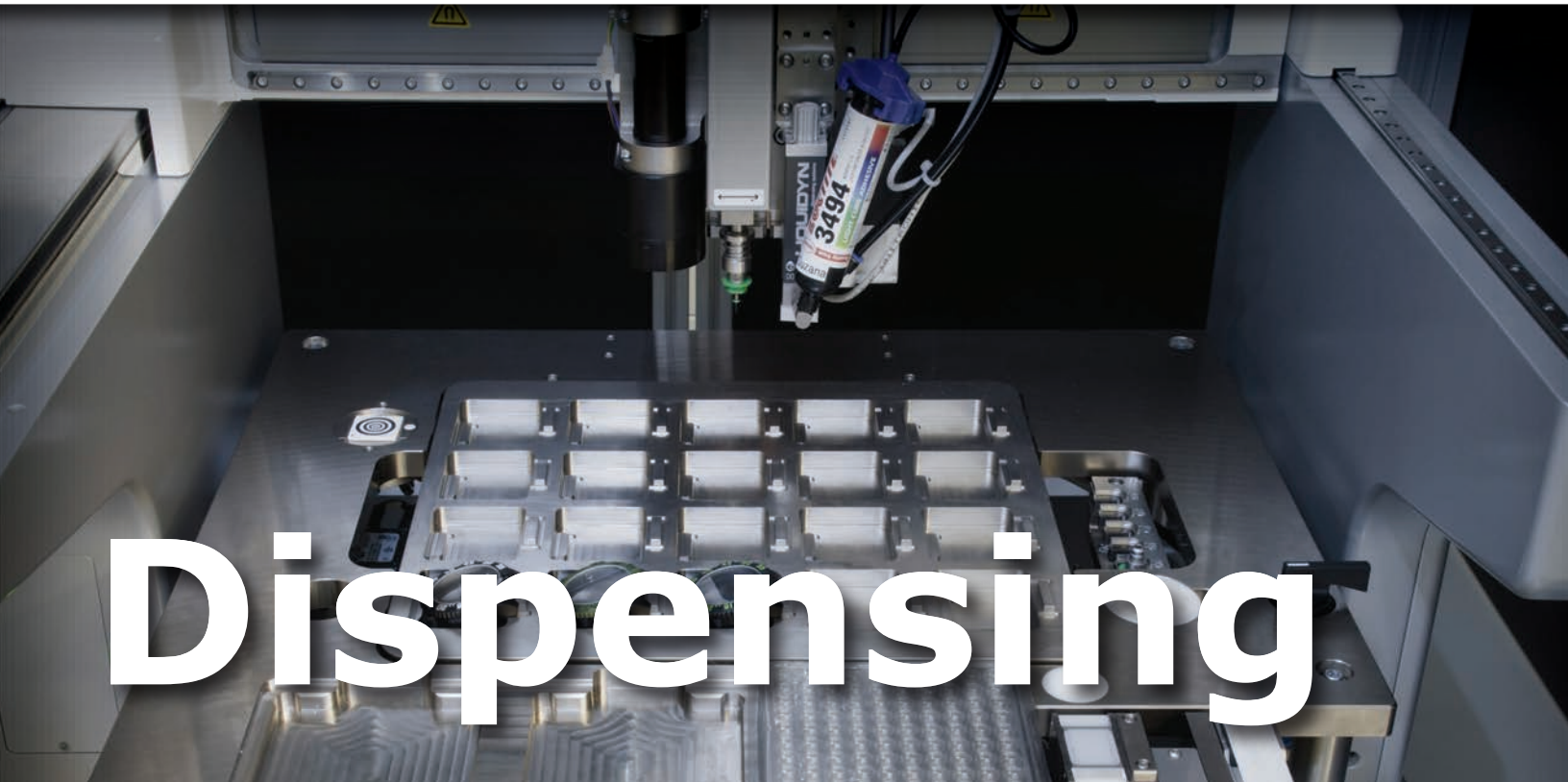




AIR-VAC AUTOMATION
air-vac-automation.com
info@air-vac-automation.com



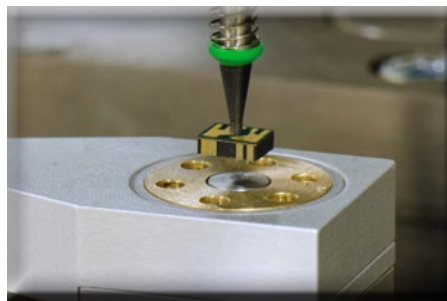
Dispensing

Systems

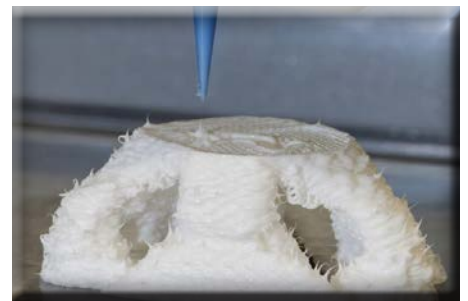
AIR-VAC AUTOMATION
Proud Partners with Infotech AG.
Unparalleled Performance and Flexibility.



Precise Process Control - Automatic Needle Calibrations, Cleaning Stations, and Dispense Parameter Adjustments.



Jet Dispensers offer a non-contact method to apply adhesives, oils, and other media to both substrates and assembly components.



Infotech proprietary software allows for complex 2D and 3D patterns to be imported and dispensed - G-code, Gerber, DXF...

ROBOT SYSTEMS

Infotech designs, manufactures, and delivers high accuracy positioning systems for the automatic execution of precision processes in multiple markets. Featuring more than 1,000 peripheral options from the Infotech Component Matrix, Infotech systems offer unparalleled flexibility.



Fully automatic, open architecture desktop. R&D and Low Volume.



High Speed Production Cells; 3m/s axis speeds and form factors ranging from 900 mm up to 2,000 mm



Expansive machine component matrix featuring Time/Pressure, Jet, Auger Screw, 2-Part, and Piston Dispensers.

Key Features **Configuration Dependent*

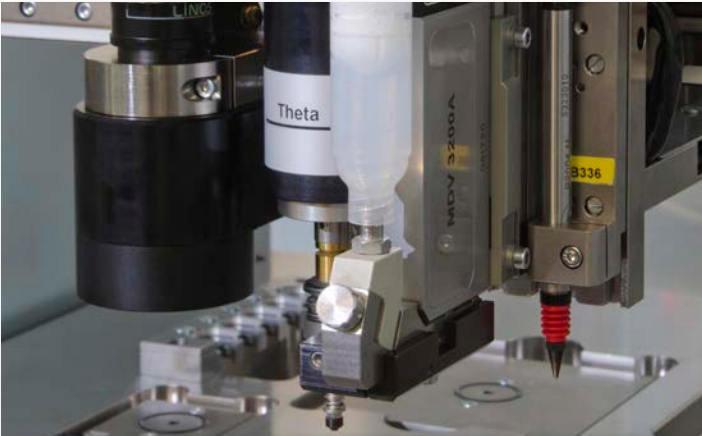
- Multi-functional Systems and Highly Flexible Software
- +/-10 µm @3sigma with possibility of <5 µm accuracy
- Complex 2D and 3D Dispensing Patterns
- Automatic Process Control & Parameter Adjustment
- Interchangeable Dispenser Mount for Jet, Auger, T/P
- Full Traceability & Logging
- Customizable Software & 3rd Party Integration
- SECS/GEM, Digital I/O, TCP/IP Protocols are possible

APPLICATIONS

- Assembly
- **Dispensing**
- Bonding
- Curing
- Inspection
- Electronics
- Semiconductor
- Automotive
- Micro-mechanics
- Optoelectronics
- Biotech & Pharma



- Pick, Place, Dispense, Cure (UV & Heat)
- Complex & High Accuracy Assemblies
- Dot & Line Dispensing
- 2D & 3D Pattern Dispensing
- Underfill
- Glob-Top
- Conformal Coatings
- Solder Paste Dispensing
- Micro-Dot Dispensing
- 2-Part Dispensing
- Greasing/Oiling



Jet Dispensers are electro-pneumatically operated and allow for both non-contact and contact dispensing. During production, Jet dispensers allow for higher throughput and faster production. Dots, beads, and lines can be dispensed onto surfaces from any direction with high repeatability.

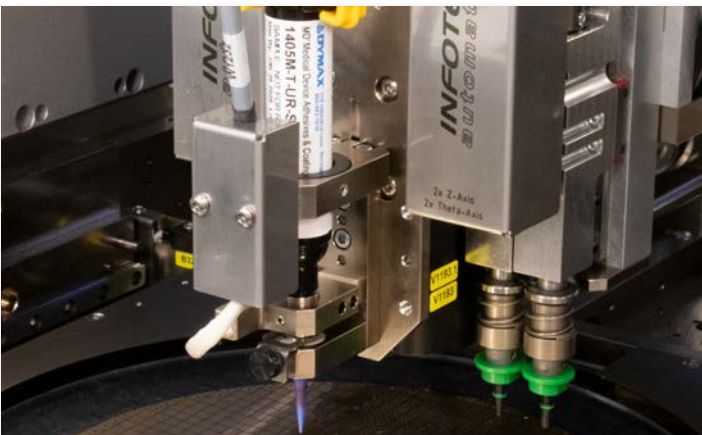
- Easy exchange of the valve with the syringe
- With nozzle heating for maintaining viscosity
- 3cc, 5cc, 10cc, or 30cc cartridges

Available models depending on the application: LIQUIDYN, PICODOS, PICOPULSE, VERMES, MUSASHI, DELO PN3...



Auger/Micro-Screw Dispensers use a precision lead screw to displace high viscose media with filler particles, i.e. solder paste, through the dispense needle. It is specifically designed for dispensing micro volumes of material in precise, repeatable patterns.

- Easy and fast cleaning of pump
- 3cc, 5cc, 10cc, or 30cc cartridges
- 10mm Luer-Lok style needles (optional 1/4", 1/2", 1", or ceramic precision needles)
- Optional heater for maintaining viscosity
- Different Screw sizes and materials available



Time/Pressure Dispensers rely on an applied air pressure to the top of the syringe to apply material (epoxies, solder paste, and other media) to a substrate during an assembly process. The controller is internal to the system.

- Easy exchange of the cartridge
- Optional universal dispenser mount
- Optional heater for maintaining viscosity
- 3cc, 5cc, 10cc, or 30cc cartridges
- Built-in "suck-back" vacuum on the syringe



Pin Transfer/Stamping is an alternative method for transferring epoxies and pastes to a substrate. Either a stamp tool can "dip" and then "stamp" a substrate with a specific machined tool, or the component can be "dipped" directly into the media before placement.

- Extremely consistent, especially for dot sizes less than 200 μm diameter.
- Optional Automatic Linear or Rotary Fluxer
- Precision machined cavity depths
- Full control of all machine motions and delays

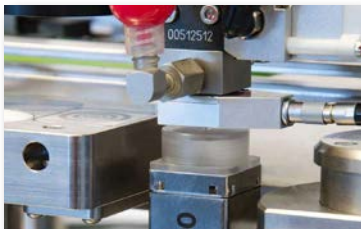
DISPENSING PROCESS CONTROL

Height Calibrations are a critical part of the dispensing process and allow dispense heights to be precisely maintained across large areas. Needle length is automatically calibrated with an up-looking touch probe, and the surface height can be taught with highly accurate contact probes or non-contact laser probes. The planes of angled substrates and wafers can also be measured and accommodated.



Automatic Purge & XY Calibrations can be executed first or mid-process. XY Needle Calibrations and Warm-up dispense patterns are highly configurable and rely on the vision result of dispensed dots or arrays. They can be performed on automatic tape units which provide a continual clean surface to the dispense head, or they can be performed on static black & white stations.

Automatic Cleaning Stations ensure that the needle tip is clean and free from material. Options include a strip-off wire, venturi air-cleaning station, fleece-cleaning station (wet or dry), and more. Additionally a "suck-back" vacuum can be applied to the dispense needle to prevent dripping of the media while the robot head is moving.



Inspection and Validation routines allow for full traceability and quality control. Depending on the machine configuration, a combination of camera vision, weight stations, height measurements, and more can be utilized. Furthermore, vision inspection of the dot/line size or weight measurements can be used to automatically adjust the dispense parameters during production.

Dispenser Heaters eliminate the effect of environment temperature on the dispense process and maintain the viscosity of the material during the production process. Optionally, a preheater or hotplate module can also be integrated into the application plate for setting a temperature on the circuit board, substrate, or other objects.

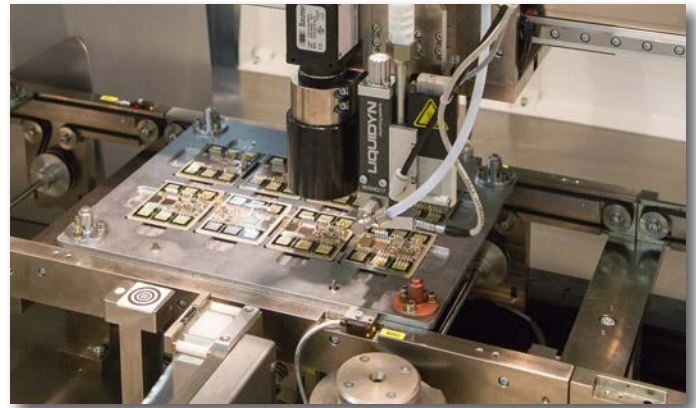


FLEXIBILITY & EASE OF USE

Hundreds of programs are easily created on the Infotech systems due to the flexible nature of the software. The user has full control of pressures, dispense times, speeds, delays, temperature, heights, and more. Create a library of parameter sets for different dispense materials, which are easily linked to the production programs. Create powerful inspection and alignment vision routines with the ability to add custom logic.

FURTHER OPTIONS

- Additional Third Party Dispensers
- Automated Material Handling Systems
- In-Line Conveyors
- Heaters & UV Curing
- Assembly and Heated Bond Heads
- Force Feedback
- Fluxer Stations for Pin Transfer/Stamping
- Up to 12" Wafer Chucks and Ejectors
- Substrate/Circuit board holder
- Custom Software and Hardware



Our Demo Lab in Seymour, CT is equipped for dispensing and assembly proof-of concept demonstrations. Please email us to inquire further!

Youtube Videos



AIR-VAC AUTOMATION

Proud Partners with Infotech AG.

East Coast HO:

30 Progress Avenue
Seymour, Ct USA
Tel: +1 203 888 9900
info@air-vac-automation.com

West Coast Office:

2131 Las Palmas Dr, Ste D
Carlsbad, CA USA
Tel: +1 760 438 9363
info@air-vac-automation.com

