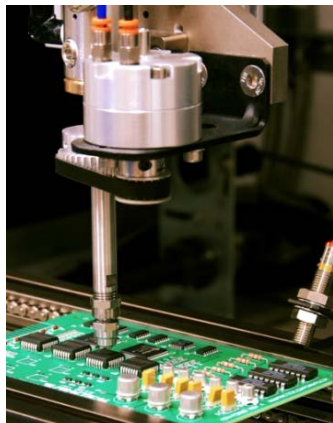
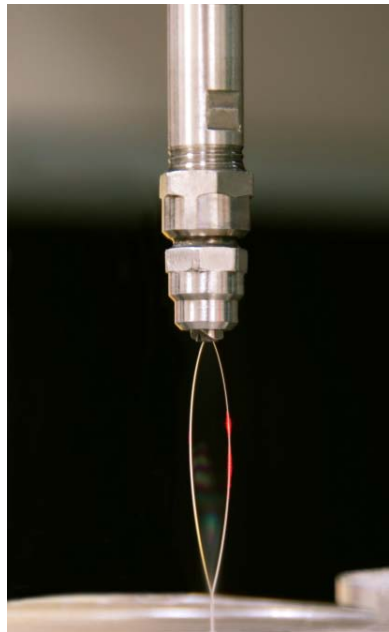


Conformal Coating Platform Options



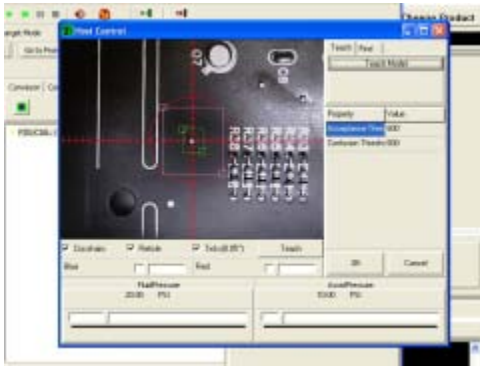
Conformal Coating Platform Options

MACHINE VISION OPTIONS

Vision System (Teach Camera)

Conformal Coating recipes can be quickly and accurately created using the Teach Camera option. A live image of the substrate is displayed on the computer screen which allows the operator easy identification and programming of the start/stop points for each coating instruction with minimal keyboard entry. This option can also be used to manually locate the starting point for each fixture/part in low tolerance fixtures.

The Vision System includes a digital 640 x 480 pixel camera and laptop computer designed specifically for industrial imaging applications. The camera is based on high quality, highly sensitive CCD and CMOS sensors and communicates bi-directionally to the host computer via Gigabit Ethernet. (Factory configured at time of system manufacture.)



Pattern Recognition System

In conjunction with the Teach Camera option, the Pattern Recognition System is designed to automatically correct for work-piece misalignment. It is also used to teach coating locations on the substrate including the definition of both global and local fiducials. Global fiducials compensate for low-tolerance fixtures. Local fiducials compensate for skew on individual parts within the fixture. The Vision System (Teach Camera) is required.

PROCESS CONTROL OPTIONS



Viscosity Control System

The Viscosity Control System (VCS) provides closed-loop temperature control of the heater and applicator within ± 1 degree C. It includes a heated recirculating fluid circuit that minimizes viscosity changes.

VCS uses a pump to siphon material from the reservoir. Solvent materials will have quicker tack times since the material is preheated prior to oven cure. Temperatures can be displayed on the computer screen for real-time monitoring.

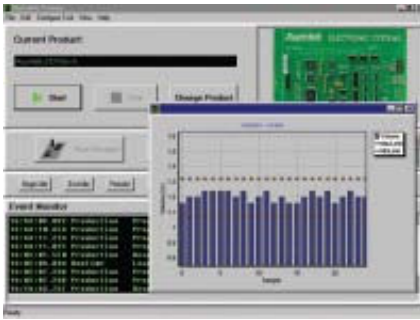
(Factory configured at time of system manufacture.)

Laser Fan Width Control

Laser Fan Width Control aids in closing the dispensing loop for conformal coating for repeatable pass widths. Through the use of a laser sensor, the system measures the fan pattern and automatically adjusts the fluid pressure to maintain a consistent spray pattern width, thus adjusting for changes in viscosity. The system offers programmable width verification and correction as a function of unit count or time. Width and fluid pressures are logged into a database for statistical process control.



Conformal Coating Platform Options



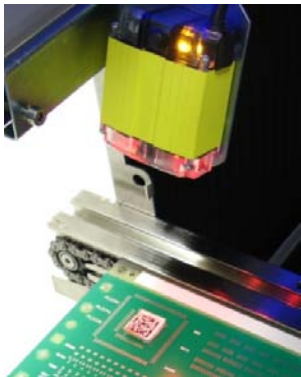
Flow Monitoring System

The Flow Monitoring System helps to control the conformal coating process by tracking the dispensed volume of material. It monitors the volume of material dispensed against a programmed upper/lower pre-set limit.

ECXP software logs data (amount of material dispensed) to a log file and database. The data can also be displayed on the computer screen in bar graph format with time history.

Needle Finder

The Needle Finder uses a fiber optic sensor to automatically detect XYZ changes in the needle tip and makes automatic adjustments if required. The user can include a “Needle Check” instruction in the coating program to quickly check whether the tip is within the specified tolerance. A further instruction can be added to perform a “Needle Find” to re-ach the needle offset if required. Inspection frequency is set in the ECXP program as a function of unit count or time.

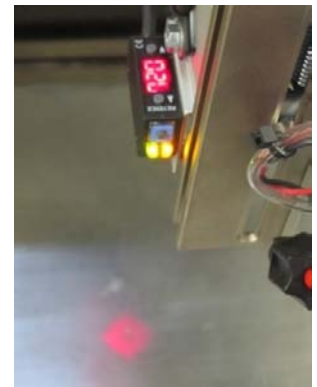


Bar Code and Data Matrix Recognition System

The Bar Code/Data Matrix Reader automates product changeover by scanning a bar code (or data matrix label) on the workpiece to initiate the associated ECXP coating program. It mounts upstream or at the entry point of the SL-940E platform and is compatible with a wide variety of Code and Data Matrix Standards.

Board Present Sensor

The Board Present Sensor registers the presence or absence of a workpiece prior to dispensing and initiates the coating sequence only when a workpiece is in place. The board presence sensor optimizes material usage and minimizes cleanup required for palletized processes. If a pallet is not fully loaded, the system will detect the empty space and not dispense at that location. (Factory configured at time of system manufacture.)



Low Fluid Level Sensor

The Low Fluid Level sensor maximizes production uptime by warning the operator of an approaching low-fluid level that could halt production. It works by direct sensor immersion in a clear fluid. It is designed to automatically detect when material in the reservoir is low. The software warning and/or sensor submersion level can be set to provide ample time to refill the reservoir before reaching an out-of-material condition. The light beacon alerts the operator of the low-level condition. The robust fiber optic sensor probe is resistant to the effects of conformal coating materials and associated solvents.

Conformal Coating Platform Options

PROCESS ENABLING OPTIONS

Brush Box

The Brush Box option mounts to the conveyor and is used to clean the dispense nozzle. It is primarily used when dispensing moisture-sensitive materials. At programmed intervals, the nozzle tip moves back and forth against the bristles to remove accumulated material.

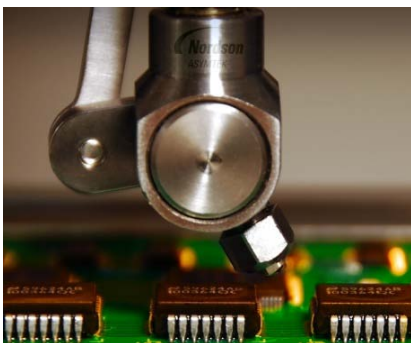


Dual-Action Bracket

The Dual-Action Bracket is designed for processes that require two coating applicators. The bracket can be used for both single-slide (one fixed, one slides up/down) and dual-slide (both applicators, left- and right-slide up/down) operations. The Bracket provides improved clearance over the substrate and makes it easy to switch from one applicator to the other within the same coating program.

Four-Position Tilt Accessory

The Four-Position Tilt Accessory enables the SC-300 Tri-Mode and SC-400 Precise Coat applicators to coat four sides of a part or other areas not accessible from the standard vertical approach. The four positions are ideal for coating component sides or underneath components on a printed circuit board. The mechanism can be tilted 30 degrees from vertical position to the left, right, front or back.



Fifth-Axis Tilt Accessory for Film Coater Applications

The Fifth-axis Tilt option provides tilt-and-rotate capability for conformal coating vertical surfaces and underneath components, enabling access to tight or hard-to-reach areas that may not otherwise be possible with the standard downward configuration.

Conformal Coating Platform Options

Light Curtain

The Light Curtain option replaces the standard interlock doors to provide operator safety with easy access to the work area. Machine motion is halted and the dispensing routine aborted when the protective field is interrupted by anything 19 mm (0.75 in.) or larger. When the machine is idle or in the pause mode, there is unrestricted access for workpiece placement, removal or system maintenance. The light curtain is deactivated by turning off the interlock switch. (Factory configured at the time of system manufacture.)



Material Changeover

This option offers self-contained material changeover for improved serviceability and maintenance, as well as quick changeover of air and fluid lines between reservoirs without physically disconnecting hoses and fittings. Fluid lines are easily flushed of conformal coating material with solvents by manually activating the valves. The system includes tubing, manually operated valves, controls, an extra reservoir and required fittings. (Factory configured at time of system manufacture.)

10 Gallon Reservoir

This option is required for applications using materials supplied in a bag-in-the-bucket material container (e.g., moisture-cure materials) and five-gallon containers.



Upstream and Downstream SMEMA Sensors

Required for manual load and/or unload of parts on a conveyerized system. The downstream sensor is also necessary if the downstream system is not SMEMA-compatible (often the case with oven modules).

Conformal Coating Platform Options

ANCILLARY EQUIPMENT

Inline Inverter Module

Nordson ASYMTEK's Inline Inverter Module for one or two-sided PCB coating maximizes productivity and yield, and reduces board-handling requirements.

For high-volume, two-sided coating applications the inverter module is placed between two conveyORIZED coating systems for processing two boards at once. The PCB or pallet is loaded into the first conformal coating system and side one is coated. The board is then conveyed into the inverter module, flipped and conveyed to the second coating system for coating side two.

The board is then sent to the curing module.



Call us to determine the option set that best meets the needs of your current and future conformal coating application requirements.

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