

Select Coat® Applicator Series

SC-350 Select Spray and SC-300 Multi-Mode

Features and Benefits

- The Select Coat® Applicator Series:
 - Supports a wide range of conformal coating fluids and is ideal for solvent or solvent-less formulations
 - Features fast system on/off times to optimize start and stop movements
 - The optional Four-Position Tilt accessory and Dual-Simultaneous configuration deliver improved throughput and reduced process time
- The SC-350 Select Spray is specifically optimized to atomize coating fluids – delivering exceptional edge definition and thin, uniform coating thicknesses at increased speeds
- The versatile SC-300 Multi-Mode offers bead, monofilament, and swirl modes – all in a single applicator

The Select Coat® Applicator Series– which includes the SC-350 Select Spray and the SC-300 Multi-Mode – is a highly-versatile conformal coating applicator that supports a wide range of high-viscosity coating fluids from 30 to 3500 mPa-sec (30 to 3500 centipoise). Delivering uniform thicknesses and consistent pattern widths, it can be configured to meet a variety of application requirements including spot, line, area-coat, and optimized atomization. The high flow rate produces film builds quickly, and the air and fluid chamber are co-located to ensure rapid response to changes during operation – no long air-lines to delay applicator response. Minimal wetted parts, smooth internal surfaces, and exposed splines make it easy to clean and maintain, and it does not require special adjustment during re-assembly – enabling repeatable applicator response time.

EasyCoat® 6 software executes routines and validation steps to define the optimal start and stop positions for the applicator throughout production.

The SC-350 Select Spray is available in a Core and Prime fluid system configuration and offers additional flexibility within process parameters at the low and high end of the viscosity spectrum exclusively for atomized spray. It efficiently sprays solvent-based fluids while reducing solvent usage and the “cobwebbing effect” that occurs when coating fluids cure in-air. In the higher viscosity range, the applicator provides uniform pass coverage at faster speeds.

The SC-300 Multi-Mode is versatile and offers several modes of operation. It is also available in a Core or Prime fluid system configuration. The Core SC-300 fluid system includes one nozzle, one 1-gallon fluid reservoir, one dual-mode applicator, and two manual pressure regulators with gauges. The Prime SC-300 fluid system includes your choice of three nozzles, two fluid reservoirs of either 1- or 5-gallon capacity, and includes one tri-mode applicator and one fluid filter. Fluid pressure is controlled electronically through EasyCoat® 6 software.

The Select Coat® Applicator Series is intended for use with the Select Coat® SL-940 conformal coating system.



SC-350 Select Spray Specifications

Applicator Parameter	SC-350 Select Spray
Mode	Select Spray
Typical Pattern Width	4 to 11 mm (0.16 to 0.45 in.)
Fluid Viscosity	30 to 3500+ mPs (30-3500+ cPs)
Typical Application Thickness	13 to 75 μ m (0.50 to 3 mils)
Edge Tolerance	\pm 1.0 mm (0.040 in.)
Transfer Efficiency	95-99%
Coating Velocity	127 to 381 mm/sec (5 to 15 in./sec)

NOTE: This chart is for comparison purposes. Film thickness, edge tolerance, and coating velocity are dependent on the type of fluid. Application requirements and fluid properties affect results.

SC-350 Select Spray – Optimized to Atomize High-Viscosity Coating Fluids

With the SC-350, the air assist function is optimized to deliver significant edge tolerance, fluid viscosity, and coating velocity improvements.

The SC-350 applies less air pressure to achieve a tighter edge tolerance providing increased selectivity and control near keep out zones and reduced “cobwebbing” of solvent-based fluids. Lower air assist pressure improvements provide added flexibility within your process parameters – achieving thinner coating results at faster coating speeds for a wide range of fluid viscosities.



SC-350 Select Spray

SC-300 Multi-Mode Specifications

Applicator Parameter	Bead Mode	Monofilament Mode	Swirl Mode
Typical Fluid Dispense Pressure	7.0-413 kPa (1.0-60 psi)	7.0-413 kPa (1.0-60 psi)	60-172 kPa (10-25 psi)
Air Pressure	No air	Low	High
Pattern Width	2.5 to 6.4 mm (0.10 to 0.25 in.)	6.4 to 13 mm (0.25 to 0.50 in.)	6.4 to 19 mm (0.25 to 0.75 in.)
Fluid Viscosity	30 to 3500+ mPs (30-3500+ cPs)	30 to 3500+ mPs (30-3500+ cPs)	30 to 3500+ mPs (30-3500+ cPs)
Application Thickness	125 to 500 μ m (5 to 20 mils)	100 to 300 μ m (4 to 12 mils)	13 to 75 μ m (0.50 to 3 mils)
Edge Tolerance	\pm 0.75 mm (0.030 in.)	\pm 1.0 mm (0.040 in.)	\pm 2.0 mm (0.080 in.)
Transfer Efficiency	100%	Up to 100%	95 – 99%
Coating Velocity	254 to 508 mm/sec (10 to 20 in./sec)	127 to 254 mm/sec (5 to 10 in./sec)	127 to 381 mm/sec (5 to 15 in./sec)

NOTE: This chart is for comparison purposes. Film thickness, edge tolerance, and coating velocity are dependent on the type of fluid. Application requirements and fluid properties affect results.

SC-300 Multi-Mode – Three Modes of Operation

Bead: A stream of fluid is applied to the circuit board in areas where components are very close to non-coating or keep-out areas, or extra fluid is required for protection of high-impedance areas. The bead may also be used as a spot command for single coating of a single test point or component.

Monofilament: This pattern is created by controlling the fluid pressure and fluid flow passing through the nozzle. Auxiliary air circulating through the air passage strikes the fluid at a precise angle, causing it to spin on its axis and form a conical, looping pattern. The monofilament pattern is ideal for dispensing broad pattern widths, while maintaining good edge definition, resulting in faster cycle times.

Swirl: The swirl pattern is achieved by increasing air pressure and lowering flow settings. Angled jets impinge air upon the pressurized fluid exiting the nozzle creating a conical, swirling pattern. The swirling action helps maintain pattern shape resulting in excellent width control. Because the air jets cause slight atomization of the fluid, extremely thin film builds are possible. The mode is ideal for applications where moderate selective coating and thin film builds are required.



Bead

Monofilament

Swirl

Select Coat® Applicator Options

Dual Simultaneous – Additional Benefits

With the dual-simultaneous configuration, the Select Coat® SL-940 system can coat two parts at the same time. Processing two parts in parallel significantly improves the throughput, while maintaining high yield. The conformal coating process time is reduced by 50%, allowing throughput performance to be significantly increased – especially when conducting a high takt time conformal coating process with few overhead movements.

Two of the same applicators are installed and operate simultaneously. When there is no need for simultaneous conformal coating, EasyCoat® 6 software allows the programmer to disable the second applicator.

- Coat two parts at once – reducing overall cycle time
- Enable the second applicator as needed
- Fully adjustable pitch



Dual-Simultaneous Programmable Pitch

Four-Position Tilt – Additional Benefits

Quick response time improves throughput – the Four-Position Tilt option features the standard vertical position and tilts the applicator at 30 degrees in four positions: right, left, forward, and backward in 90 degree increments.

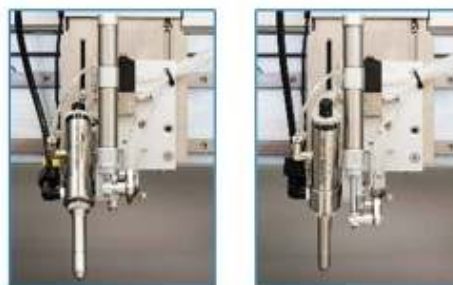
Through EasyCoat® 6 software, a programmer can set and modify specific tilt and rotate parameters for each coating element.



Vertical

Tilt Right

Tilt Left



Tilt Forward

Tilt Backward

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