

# PRISM 100

## PROGRAMMABLE COATING SYSTEM



The PRISM Ultra-Coat Series 100 is a programmable system designed to coat the entire surface of a circuit board or other substrate, quickly and efficiently. The system features USI's patented Ultra-Spray ultrasonic spray technology, coupled with a unique system design that uses the conveyor to index the substrate - providing the X-axis motion and a precision ball screw to traverse the spray head - providing the Y-axis motion.

### Coating Process

The circuit board or substrate is transported under the spray head by an indexing conveyor system. The conveyor moves in defined increments (X-axis) while the spray head moves transversely (Y-axis) to apply the coating. The stroke of the Y-axis motion is adjusted to match the width of the substrate. The resulting coating thickness is proportional to the traversing speed and the coating flow rate to the spray head. The spray can be turned on and off during a "spray stroke" to apply coating to selected areas of the substrate. All parameters are programmable including the X-axis index increment, Y-axis stroke, traversing speed and coating flow rate.

### Coating Application Technologies

The PRISM 100 can be configured with USI's patented ultrasonic spray head as well as air-atomizing spray valves.

## FEATURES:

### Cost Competitive Design

- coat entire substrate
- coat selected areas
- fast coating application
- small footprint

### Multiple Coating Technologies

- ultrasonic spray
- air atomizing spray

## APPLICATIONS:

### Conformal Coating

### Fuel Cells

### Semiconductor Wafers

### Solar Cells

### Flat Panels



The ultimate coverage in coating systems!

## PRISM 100 SPECIFICATIONS

Footprint (LxWxH)	91cm x 126cm x 163cm (36" x 50" x 64")
X/Y Motion	X-Axis conveyor – brushless DC stepper motor Y-Axis precision lead screw – brushless DC stepper motor
Z Positioning	Air actuated cylinder, adjustable stop (optional)
Coating Technologies	- Ultra-Spray head (configured for application) - Air atomizing spray valve
Application Area	450mm x 450mm (18" x 18")
Payload Capacity	11.4 kg (25 pounds)
Conveyor Speed	100 mm/sec (20 ft/min) – max.
Head Speed	380 mm/sec (15 in/sec) – max. Optional drive package required for higher speeds.
Control System	16 bit microcontroller
Operator interface	Keypad with menus for easy entry of set up parameters and recipe selection
Liquid Delivery	- Pressurized 6 liter reservoir (standard) - Pressurized cartridge (optional) - Pressurized 5 gallon "paint pot" (optional)
Conveyor	- 91 cm (36") pin chain – front fixed rail - 51mm to 460 mm (2" to 18") board width - Hand crank width adjust - Height 813mm to 965mm (32" to 38") - 89 mm (3.5") component clearance top and bottom
Machine Weight	228 kg (500 pounds)
Power Requirements	120 VAC, 50/60 Hz, 20 amps 220/240 VAC, 50/60 Hz, 10 amps 480 VAC, 50/60 Hz, 5 amps
Pneumatic Requirements:	60 PSI, clean, dry air at 5 SCFM 300 SCFM Exhaust in 5" duct @ 1.1 to 1.5 in H <sub>2</sub> O static pressure 60 PSI, Nitrogen for moisture sensitive materials
Standards Compliance:	SMEMA CE (optional)

Prism Ultra-Coat is a Trademark and Ultra-Spray is a registered Trademark of Ultrasonic Systems, Inc.

This product is covered by one or more of the following U.S. Patents: 5,540,834; 5,622,752; 5,582,348; 5,469,163. Additional patents pending.

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