

PRISM-400

Benchtop XYZ Coating System

The PRISM-400 Benchtop is a high performance coating system with programmable X-Y-Z motion and positioning for USI's proprietary nozzle-less ultrasonic spray head technology. The system delivers a thin, uniform application of a wide variety of coatings more precisely than other coating application techniques. This benchtop platform is ideal for lab scale operations.

FEATURES & BENEFITS

Proprietary Ultrasonic Spray Technology

- Thin, defect-free coating application
- Thickness down to sub-micron
- 95-99% transfer efficiency

Fully Programmable X-Y-Z Platform

- Precision ball screw actuators
- Bench-top platform for R&D
- Windows 7 graphical user interface

OPTIONS

- Precision metering pump liquid delivery
- Integrated liquid stirring or agitation
- 590 ml reservoir with stirring for PMP refill
- Substrate heater with vacuum
- 90-degree pneumatic head rotation
- Tilt and rotate for spray head
- Electronic air flow control for spray head



system shown with optional stand

ultraspray.com



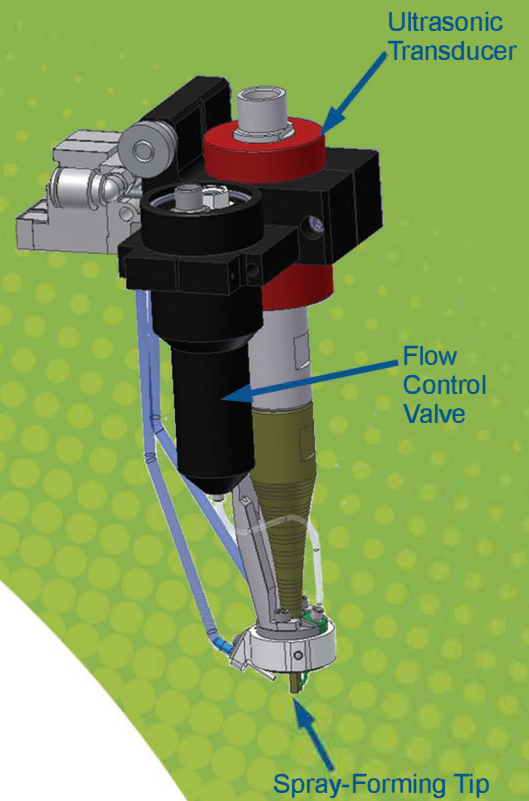
MARKETS

Semiconductor Packaging
Display Fuel Cell

Electronics Assembly
Solar Medical

Nozzle-less Ultrasonic Spray Head Technology

USI's core technology consists of proprietary nozzle-less ultrasonic spray head technology for the thin, uniform application of a variety of low viscosity materials. The spray head consists of an ultrasonic transducer with a spray-forming tip, an ultrasonic generator, an external liquid applicator, and air directors. Spray is produced with ultrasonic energy and shaped with low pressure air for a more precise and controlled coating application.



PRISM COATING SYSTEM SPECIFICATIONS

COATING TECHNOLOGY	ULTRA-SPRAY CAT HEAD ASSEMBLY <ul style="list-style-type: none"> • Ultrasonic frequency - 35 kHz, 45 kHz or 60 kHz • Ultrasonic generator • Electronic controls for liquid flow w/ PMP LDS • Manual setting of air flow • Single head operation 	PROGRAMMING <ul style="list-style-type: none"> • Teach mode with laser pointer • Teach camera (optional)
APPLICATION AREA (X, Y, Z)	<ul style="list-style-type: none"> • 410x410x100 mm (16x16x4 in) range of motion • 390x360x100 mm (15.5x14.2x4 in) max coating area 	CONTROL SYSTEM <ul style="list-style-type: none"> • PC with Windows 7 • Ethernet motion controller
GANTRY MECHANISM (X, Y)	<ul style="list-style-type: none"> • Precision ball screw actuators • Brushless servo motor drive 	LIQUID DELIVERY (OPTION) PRECISION METERING PUMP <ul style="list-style-type: none"> • 100 ml capacity glass syringe (PMP-100) • 50 ml capacity disposable syringe (PMP-50) • Stepper motor drive • Liquid stirring option for suspended materials • Graphical User Interface for ease of use • Data logging for traceability
Z-AXIS	<ul style="list-style-type: none"> • Lead screw actuator • Stepper motor drive • 100 mm travel & above substrate clearance 	STANDARDS <ul style="list-style-type: none"> • CE • NFPA 79 • NRTL Certification (optional)
Θ MOTION (OPTIONAL)	<ul style="list-style-type: none"> • 90-degree pneumatic rotate • Pneumatic tilt & rotate 	FOOTPRINT <p>99 x 86 x 84 cm (39 x 34 x 33 in)</p>
GANTRY SPEED (X-Y)	<ul style="list-style-type: none"> • 500 mm/sec (19.7 in/sec) maximum 	WEIGHT <p>181 kg (400 lbs)</p>
GANTRY SPEED CONTROL	<ul style="list-style-type: none"> • Closed-loop servo drive tuned for uniform speed 	POWER REQUIREMENTS <ul style="list-style-type: none"> • 120 VAC, 50/60 Hz, 2KVA • 220/240 VAC, 50/60 Hz, 2KVA
APPLIED COATING CONTROL	<ul style="list-style-type: none"> • Total applied amount varies less than +/- 0.1 %* *with PMP-100 liquid delivery system 	PNEUMATIC REQUIREMENTS <ul style="list-style-type: none"> • Clean, dry compressed air at 5.5 bar (80 psi) @ 142 l/min (5 SCFM) • 2,850 l/min (100 SCFM) exhaust in a 127 mm (5 in) duct • Compressed nitrogen at 5.5 bar (80 psi)
OTHER OPTIONS	<ul style="list-style-type: none"> • Pressurized liquid delivery systems • Substrate heater with vacuum hold • USI dual mode, air-atomizing spray valve • Micro-Line digital dispensing head • USI dispensing valve w/ assorted needles • Electronic air flow rate to spray head 	

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