



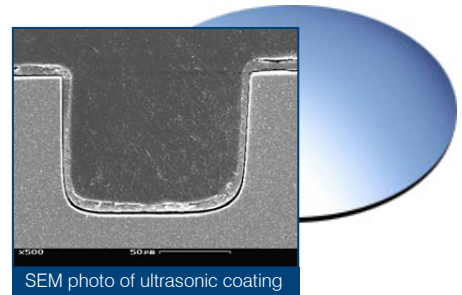
## Ultrasonic Coating System for Photoresist Applications

A fully enclosed standalone ultrasonic coating system for precision semiconductor manufacturing such as MEMs and deep well topographies, SPT200 is a full coating solution for 100, 150, 200, or 300mm semiconductor wafer processing.



SPT200 is typically configured with Vortex or AccuMist spray shaping nozzles, depending upon coating requirements.

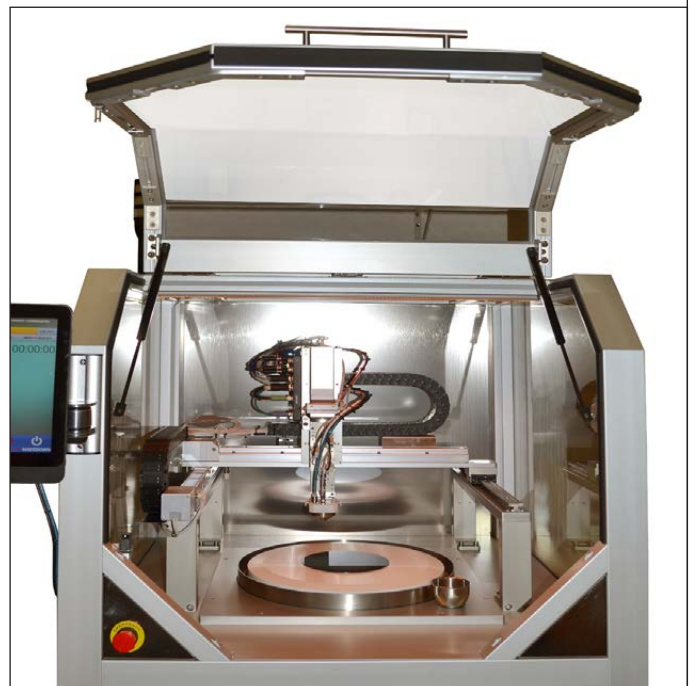
All ultrasonic nozzles feature up to 90% reduction in material consumption, non-clogging performance, and precise, targeted spray patterns at ultra low flow rates.



Designed for photoresist and protective coating processes where high precision is required, such as deep well topographies and small scale MEMs. SPT200 features include:

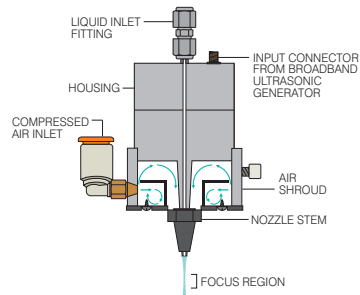
- High uniformity 100, 150, 200 or 300mm heated vacuum wafer chuck
- Automatic wafer lift pins
- Highly repeatable syringe pump with auto refill
- 2-position nozzle rotate
- Integrated 360° bottom-draw wafer exhaust quickly and efficiently removes any atmospheric overspray
- HEPA filtered air intake
- Auto nozzle cleaning purge
- Cleaning liquid and overspray containment ring system
- Integrated photoresist level sensor

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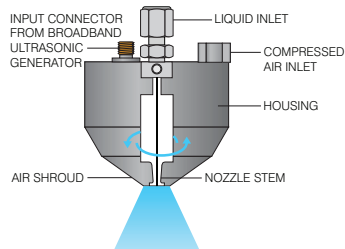


## Nozzles for Photoresist Applications

The AccuMist™ nozzle creates a narrow, slightly bow-shaped spray pattern 2 - 6.5 mm (0.080 - 0.250 inches) in diameter.

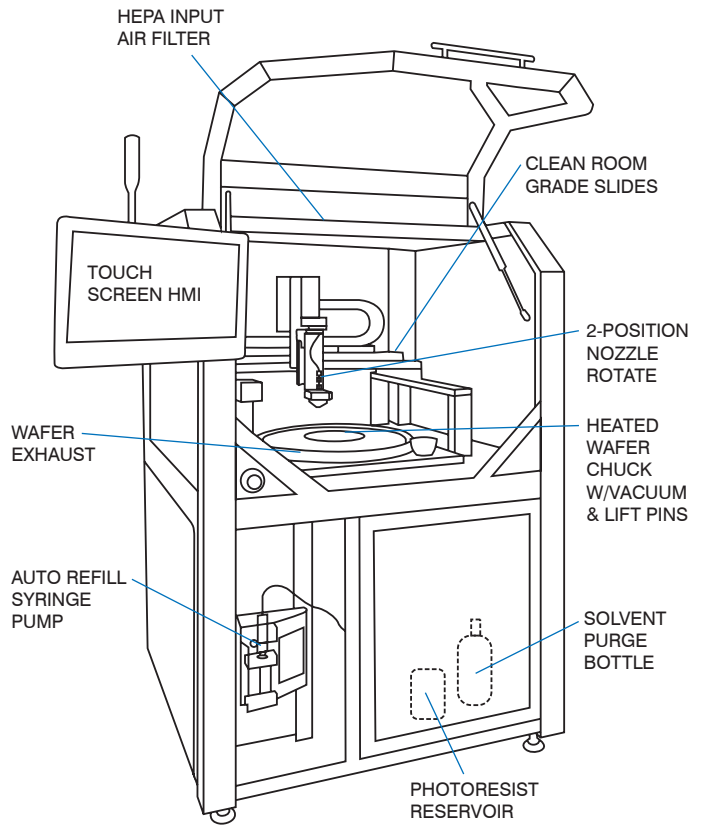


The Vortex nozzle produces a wide, conical spray pattern 40 - 70 mm (1.50 - 2.75 inches) in diameter.



### Ultrasonic spray offers significant advantages over spin coating or other photoresist deposition methods:

- Highly uniform thin film coverage, even on difficult to coat high aspect ratio trenches.
- Low velocity spray with reliable, consistent results.
- Controllable drop size depending on nozzle frequency. Fully automated programmable XYZ motion system.
- Ultrasonic nozzle systems can be easily integrated into production scale equipment.



## ULTRASONIC COATING SYSTEM SPECIFICATIONS

### SPT200 Specifications

Work Area	465 x 465 x 100 mm* (19.7 x 19.7 x 3.9 in)
Spray Width Range*	2 mm - 70 mm (0.080-2.75") <i>*Nozzle configuration dependent</i>
Flow Rate Range	1 µl/min - 30 ml/min
Deposition Uniformity	± 2% (application dependent)
Deposition Repeatability	± 2%
Repeatability	0.025 mm (0.001 in)
Resolution	0.015 mm (0.0006 in)
Motor	Brushless DC servo
Drive Mechanism	Cleanroom rated enclosed ball screw drive
Work Payload	4.5 kg (10 lbs)
Inputs/Outputs	Expandable as needed
Software Control	Windows®-based (PC included) 19-inch touch screen interface
Photosensitive Lighting	590nm UV safe lighting
Heated Wafer Chuck	200mm standard (with wafer chuck holding) 100, 150 and 300 mm options

Power	208-240 VAC, 16A max, 50/60 Hz 1 phase (L,N,G) or (L1,L2, G)
Compressed Gas	0.55 MPa (80 psi) 1 compressed air 1 nitrogen
Certification	CE certified
Standard Features	ISO Class 5 work area with HEPA enclosure filter Heat plate temp Up to 130°C Nozzle Rotate 2-position (90°)
System Status	3-position light tower
Enclosure	1060mm (W) x 1765 mm (H) x 1095 mm (D)
Dimensions	42" (W) x 70" (H) x 43" (D)

### Sono-Tek Laboratory Services

Sono-Tek's in-house laboratory services offer the expertise of our engineering and technical staff in resolving process issues and tailoring our technology to meet the needs of our customers.



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