

# ULTRASONIC SPRAY COATING SYSTEM

Our POLOS® UC360c Ultrasonic Spray Coating System is used for precision coating in the fields of R&D and pilot scale manufacturing. Typical applications include thin film solar cell, fuel cell, glass coating, stent coating, balloon catheter coating, ultrasonic spray pyrolysis, and more!



Our systems allow highly precision nano-particle coating with more efficient photoresist consumption compared to standard photoresist application techniques. On our Ultrasonic Spray Coating Systems the material usage ratio exceeds 95%, this will allow our users to reduce costs of photoresist consumption and improve their process efficiency.

Listening to the needs of our customers, we designed a compact system with easy-to-use software controls, the ability to choose from the wide range of Ultrasonic Nozzles and complimentary options will allow our customers to find the perfect match for their process application.

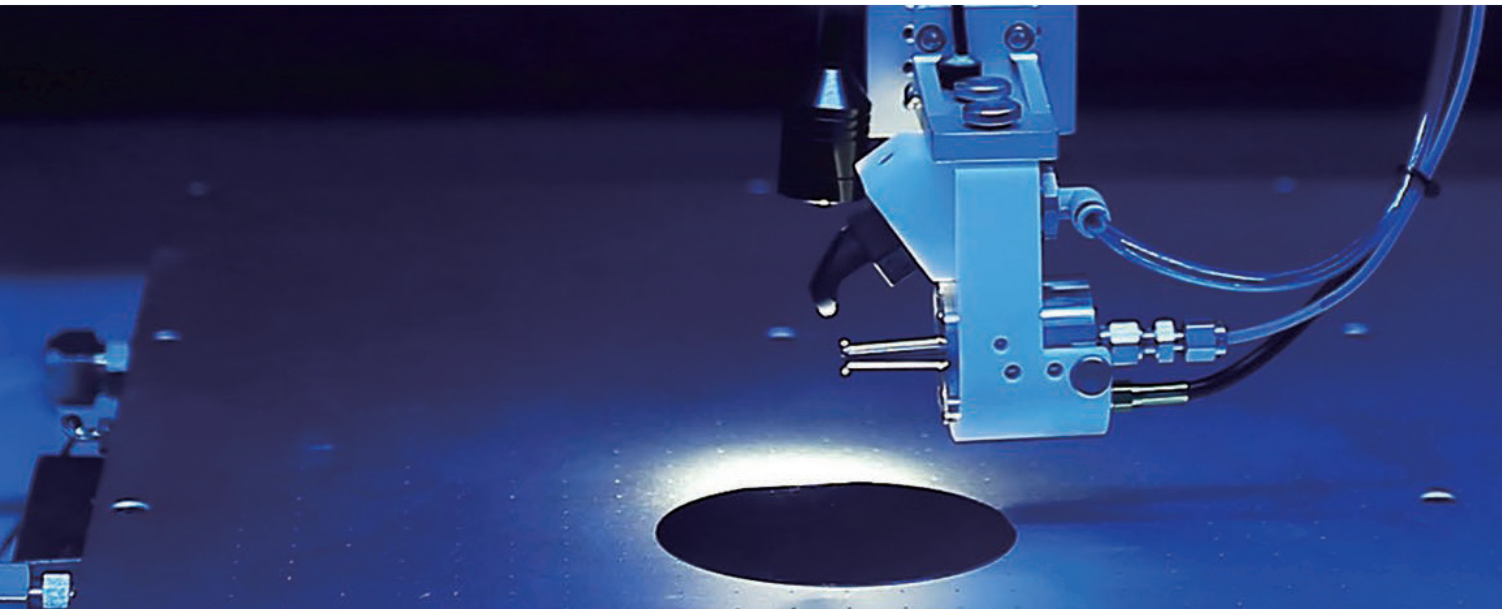
The POLOS® UC360c is standard supplied with integrated syringe pump, carrier gas regulation, ultrasonic generator and controllable motion system. With patented ultrasonic spray technology, the system can provide highly uniform nano-scale thin film coatings, such as fuel cell, solar cell, glass coating, TCO, electronics, and more.

## HIGHLIGHTS

- Stand-alone System
- High precision nanoparticle coating due to Ultrasonic Nozzle, material consumption ratio > 95% (Optional Nozzles Available)
- Compatible with all series of POLOS® by Siansonic® nozzles; Spray width from 1 mm to 100 mm and flow rate of 0.001 ml/min - 50 ml/min
- Max. spray area: 600 mm x 600 mm
- Patented full digital ultrasonic generator, Control step size: 0.01W
- Uniformity: >95%
- Liquid viscosity: <30 cps
- Thickness of coating: 20 nm - 100 micron (depending on material)
- XYZ servo motion system
- Continuous syringe pump
- Exhaust system
- Laser light for positioning of nozzle

## OPTIONS

- Vacuum heating plate with maximum temperature of 150°C.
- Ultrasonic bath: used to pre-disperse the coating liquid.
- Ultrasonic syringe: Used to provide nano particle dispersion during the liquid delivery process and to avoid the solid settlement during spray coating.



SPECIFICATIONS

Parts	Value	Remark
System dimension	1720 (w) x 1390 (d) x 2190 (h) mm	
Weight	650 kg	
Power input/supply	220VAC 50/60 Hz	
Nozzle	Droplet Size: 10 - 40 $\mu$ m; Spray Width: < 100 mm; Flow Rate: < 50 ml/min	Optional nozzles available: Specification of the nozzles could be reviewed on nozzle datasheet.
Ultrasonic Generator	Digital ultrasonic generator with power, control step size: 0.01W	
Motion system	XYZ servo motor system; Max. spray area: 600 mm x 600 mm	
Liquid delivery (syringe pump)	Continuous syringe pump system, constant liquid delivery in 24/7	
Vacuum heating plate (optional)	< 150°C	
Nozzle position	Laser light for positioning of nozzle	
Control	Motion controller & touch screen	
Exhaust system	Including fan and ready for connecting to exhaust system	
Ultrasonic dispersion	Ultrasonic Bath: for pre-dispersion of the suspensions (Optional) Ultrasonic dispersion liquid delivery technology can provide Nano particles dispersion during liquid delivery (Optional)	

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