

TABLE-TOP ULTRASONIC SPRAY COATING SYSTEM

Our POLOS® UC340 ultrasonic spray coater is a compact, benchtop system designed for advanced R&D applications requiring precise and uniform thin film deposition. Equipped with a high-accuracy XYZ servo motion system, integrated liquid delivery, and a vacuum heating plate, it delivers consistent, repeatable coating results across a wide range of substrates.



Using advanced ultrasonic spray technology, the POLOS® UC340 enables highly uniform nano-scale coatings with excellent thickness control. The system can be configured with up to two ultrasonic nozzles, allowing either simultaneous multi-liquid processing or increased throughput with a single material.

Engineered for efficiency, the UC340 achieves a material usage rate exceeding 95%, significantly reducing photoresist consumption compared to conventional coating methods while improving overall process performance.

Designed with flexibility in mind, the system features intuitive software controls and supports a broad selection of ultrasonic nozzles and options, making it easy to tailor the configuration to specific application requirements.

KEY FEATURES

- Bench-top system
- Patented ultrasonic spray nozzles (optional nozzles available)
- Can be equipped with 2 nozzles (optional)
- Patented full digital ultrasonic generator, control step size: 0.01 W
- Max. spray area: 400 mm x 400 mm
- Uniformity: >95%
- Liquid viscosity: <50 cps
- Transfer efficiency: >95%
- Thickness of coating: 20 nm - 100 micron (depending on material and nozzle)
- XYZ servo motion system
- Precision syringe pump
- Liquid refilling function (optional)
- Laser light for positioning of nozzle
- Exhaust system

OPTIONS

- Plate: Vacuum heating plate
 - High temperature heating plate
 - Ceramic micro heating plate
- Ultrasonic or magnetic dispersion liquid delivery
- Ultrasonic bath
- Standard/Magnetic stirring/Cooling magnetic stirring reservoir

SPECIFICATIONS

Parts	Items	Value
Nozzle	Droplet size	10 - 40 µm
	Spray width	< 100 mm
	Flow rate	< 50 ml/min
Ultrasonic generator		Digital ultrasonic generator with power
	Control step size	0.01 W
Motion system	Max. spray area	400 × 400 mm
	Motion	XYZ servo system
	Motion precision	± 0.02 mm
	Max. velocity	XY axis: 300 mm/sec; Z axis: 30 mm/sec
	Control method	PLC
Liquid delivery		Precision syringe pump
		Liquid refilling function, could achieve automatic liquid extraction function (optional)
Nozzle positioning		Laser light for positioning of nozzle
Plate	Vacuum heating plate	max. 150°C
	High temperature heating plate	max. 500°C (optional)
	Ceramic micro heating plate	max. 150°C (optional)
Exhaust system		Including fan and ready for connecting to exhaust system
Ultrasonic dispersion		Ultrasonic or magnetic dispersion liquid delivery technology can provide nano particles dispersion during liquid delivery (optional)
		Ultrasonic bath: for pre-dispersion of the suspensions (optional)
Reservoir	Standard reservoir	500 ml / 1000 ml / 2000 ml (optional)
	Magnetic stirring reservoir	500 ml / 1000 ml / 2000 ml (optional)
	Cooling magnetic stirring reservoir	500 ml (optional)
Basic specifications	System dimensions (mm)	1300 (w) x 1030 (d) x 1040 (h)
	Weight	220 kg
	Power Input	220 VAC 50/60 Hz