

# UltraSonic Atomizer or Nozzle (초음파노즐)



## UltraSonic Atomizer

### Features :

초음파분무기는 초음파 분산기와 동일한 원리로 압전세라믹에 의한 전기에너지를 수직진동의 기계적인 힘으로 변환시켜, 흐르는 유체를 미립화해 Nozzle 을 통과하면서 Micro Size로 시료를 분무해 주는 장치입니다.



프론트 패널에 5개의 아이콘으로 구성된 디지털방식의 초음파 발생기.

- LCD 디스플레이
- Intensity 제어 및 Nozzle 선택
- 구동시간 제어
- 전원 장치 및 대비 조정
- 20kHz~130kHz의 동작주파수 선택
- 분무입자 크기 시뮬레이션
- PLC 제어가능



### 3U Rack Mount Atomizer

한대의 Controller 로 최대 8개의 Nozzle을 작동 할 수 있으며 Software를 이용하여 자동으로 제어 할 수 있습니다.

## Robotic Coating Systems for Atomizer Nozzles



Sonaer's SONO-CELL<sup>®</sup> Thin Film Coating Systems integrate our ultrasonic atomizer nozzle for applying thin films on industrial substrates and medical devices. Uniform precision layers are accomplished with our robotic gantry and sequencing of spray material. Using our atomizer nozzle and accessories, spray droplets are easily formed with a narrow droplet distribution facilitating uniform film thickness. All our systems are fully programmable and easy to use.

## Narrow Spray Atomizer Nozzles



Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
NS40K50	40kHz	NS40K50S316	NS40K50S304	NS40K50	0~40( ml/min)
NS60K50	60 kHz	NS60K50S316	NS60K50S304	NS60K50	0~40( ml/min)
NS130K50	130 kHz	NS130K50S316	NS130K50S304	NS130K50	0~20( ml/min)

Wide Spray Atomizer Nozzles



Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
WS20K50	20kHz	WS20K50S316	WS20K50S304	WS20K50	0~100( ml/min)
WS40K50	40 kHz	WS40K50S316	WS40K50S304	WS40K50	0~50 ( ml/min)
WS60K50	60 kHz	WS60K50S316	WS60K50S304	WS60K50	0~40 ( ml/min)
WS130K50	130kHz	WS130K50S316	WS60K50S304	WS130K50	0~20( ml/min)

Wide Spray Atomizer Nozzle with Extension



Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
WS20K50	20kHz	WS20K50S316	WS20K50S304	WS20K50	0~100( ml/min)
WS40K50	40 kHz	WS40K50S316	WS40K50S304	WS40K50	0~50 ( ml/min)
WS60K50	60 kHz	WS60K50S316	WS60K50S304	WS60K50	0~40 ( ml/min)
WS130K50	130kHz	WS130K50S316	WS60K50S304	WS130K50	0~20( ml/min)

High Temperature Atomizer Nozzle



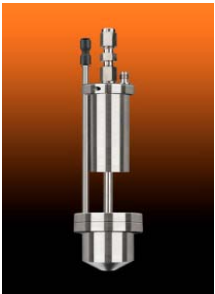
Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
HTWS30K50	30kHz	HWS30K50S316	HTWS30K50S304	HTWS30K50	0~100( ml/min)
HTNS40K50	40 kHz	HTNS40K50S316	HTNS40K50S304	HTNS40K50	0~50 ( ml/min)
HTNS40K50 E	40 kHz	HTNS40K50ES316	HTNS40K50E304	HTNS40K50E	0~50 ( ml/min)

Radial Spray Atomizer Nozzle



Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
CF40K50	40kHz	CF40K50S316	CF40K50S304	CF40K50	0~10( ml/min)

High Temperature Atomizer Nozzle with Spray Shapers



Model	Frequency	Type 316SS	Type 304SS	Type 6061	Flow Rate
PPSAHTNS40K	40kHz	PPSAHTNS40K	Not Available	Not Available	0~50( ml/min)
WVSAHTNS40K	40 kHz	WVSAHTNS40K	Not Available	Not Available	0~50 ( ml/min)

Fluoropolymer Atomizer Nozzle for Corrosive Environments



FREQUENC Y	TYPE FLUOROP OLYMER	TYPE 6061	FLOW RATE (ml/min)	2D DWG	3D DWG	MASS (g)
60kHz	FLUORO60K	Not Available	0 - 5	<a href="#">FLUORO60K</a>	<a href="#">FLUORO60.</a>	115
60kHz	PPFLUORO60K	Not Available	0 - 5			145
60kHz	WVFLUORO60K	Not Available	0 - 5		<a href="#">WVFLUORO</a>	155

Hypodermic Needle Delivery of Solutions

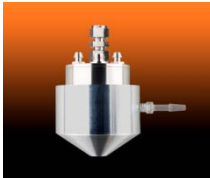


FREQUENCY	TYPE 316 SS	TYPE ACETAL	TYPE 6061	FLOW RATE (pl/ min - ml/min)	DWG	MASS (g)
For 40,60 & 1 30kHz	HYPOSASS	HYPOSAACET AL	HYPOSAAL	0 - 10ml/min	<a href="#">HYPOSA</a>	34 (ACETAL) 83 (AL) 247 (SS)

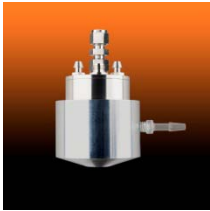
Gas Assisted Spray Shapers



**Flat Spray Shaper** for making square or rectangular spray coatings. Using a small gas pressure the FLSA will cause droplets to coat a substrate in a square, rectangular or flat spray area. Adjusting the height from the work surface and the gas pressure various size patterns can be made using the Sonaer atomizer nozzle. Technical data for the flat spray shaper can be found at the link [FLSA](#)



**Pin Point Spray Shaper** interconnects with our NS series 60kHz or 130kHz atomizer nozzles. Along the side of the spray shaper is an air inlet port. Introducing a small gas or air into the the inlet port causes the droplets to be focused into a pin point spray pattern down to 250 microns at the focal point. Moving away from the part being sprayed will increase the spray width.



**Wide Vortex Spray Shaper** connects to the body of either our NS series 60kHz or 130kHz atomizer nozzle. With a small air or gas injected into the side port of the shaper, the gas will circulate inside and force the droplets to spread outward. Adjusting the gas flow, liquid flow rate and probe tip amplitude, wide spray patterns can be obtained up to 100 degrees.



**Dove Tail Spray Shaper** is used with both NS and WS series atomizer nozzles. Nozzles are slipped into the shaper housing and the tip is positioned just below the bent portion of the dove tail. As the atomizer nozzle sprays the liquid, the air from the dove tail will spread the droplets over a greater area than the wide vortex type. By changing the position of the dove tail the spray diameter can be made oval. This shaper is ideal for large areas and flux coating printed circuit boards.



**Hypodermic Spray** Attachment is used for low volume of solutions deposited on the tip of the atomizer nozzle. As solutions are injected, droplets are formed on the tip of the atomizer nozzle and a small air or gas flow focuses the droplets onto small objects as medical stents, catheters, balloons. Hypo delivery can be made with up to 20 hypo needles surrounding the tip. For use with a single atomizer nozzle and multiple solutions.

# UltraSonic Particle Generator (초음파 입자 발생기)



## 241PG & PGT

### Features :

초음파 입자 발생기는 압전소자에서 만들어진 초음파를 진동자에 가해 용기에 채워진 용액을 진동, 유체를 미립화하여 입자를 만들어주는 장치입니다.

## 241 PG Particle Generator

### Specification :

Input Power : 110/120VAC US @ 1.6Amps

Ultrasonic Power : 12~15Watts

Frequency : 2.4MHz

Particle Output with water : 0 ml/hr @33°F

70~100 ml/hr @70 °F

200~250 ml/hr @150°F

Fan : variable 0~2cfm

Height : 8 7/8inches(22.54cm)

Width : 6inches(15.24cm)

Depth : 7 inches(17.78cm)

Weight : 5.01 lbs(2275 grams)

Wetted Materials : Container-PFA Teflon Coated over 6061 Aluminum

Vessel : PFA Teflon Coated over 6061 Aluminum

Seals : PTFE Teflon

Piezo Element : PZT Gold Plated

Optical Sensor : PFA Teflon

Valve : PTFE Teflon

Tubing : PTFE Teflon

Fittings : PTFE Teflon

Volumes : Container 75ml, Vessel 25ml



## 241 PGT Particle Generator



### Specification :

Input Power : 110/120VAC US @ 1.6Amps

Ultrasonic Power : 12~15Watts

Frequency : 2.4MHz

Particle Output with water : 0 ml/hr @33°F

60~80 ml/hr @70 °F

100~175 ml/hr @150°F

Fan : variable 0~2cfm

Height : 8 7/8inches(22.54cm)

Width : 6inches(15.24cm)

Depth : 7 inches(17.78cm)

Weight : 5.01 lbs(2275 grams)

Wetted Materials : Container-PTFE Teflon

Vessel : PTFE Teflon

Seals : PTFE Teflon

Piezo Element : PZT Gold Plated

Optical Sensor : PFA Teflon

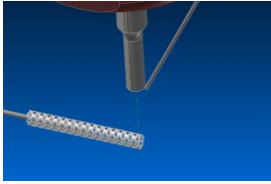
Valve : PTFE Teflon

Tubing : PTFE Teflon

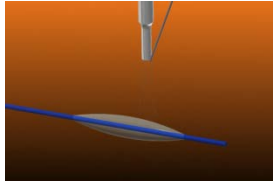
Fittings : PTFE Teflon

Volumes : Container 70ml Vessel 20ml

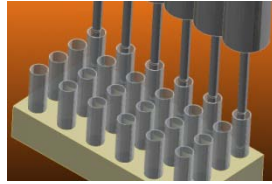
# Applications



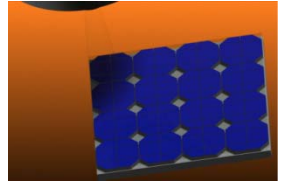
Medical Stent Coating



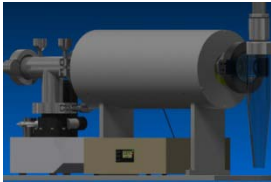
Medical Balloon Catheter Coating



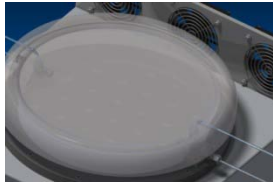
Blood Collection Tube Coating



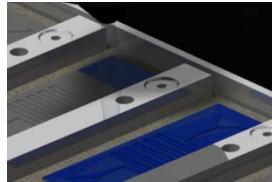
Solar Cell Coating



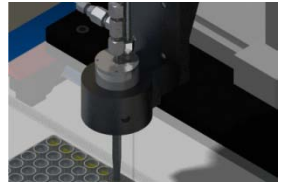
Spray Drying



Disinfecting Rooms Sterilization



Diagnostic Device Coating



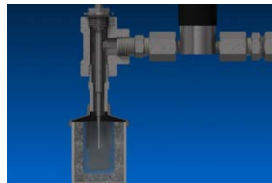
Protein Enzyme Reagent Coating



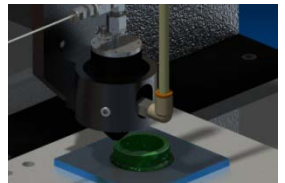
Pharmaceutical Spray Drying



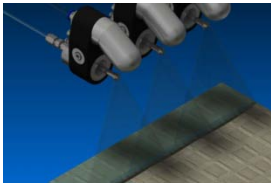
Substance Coating



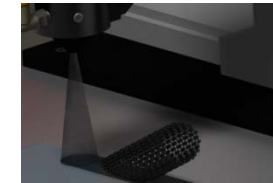
Spray Freeze Drying



Hydrogel Spraying



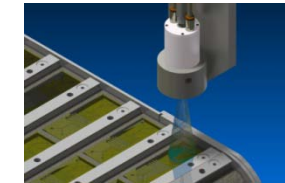
Fabric Coating



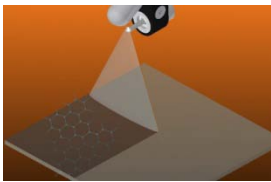
Carbon Nanotube Coating



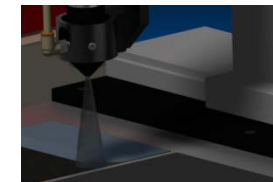
Microbead Production



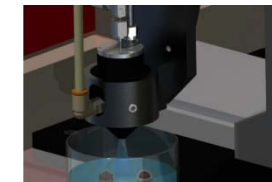
Micro Etching Glass



Graphene Coating



Fuel Cell Coating



Microencapsulation

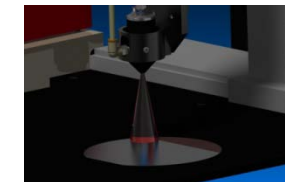


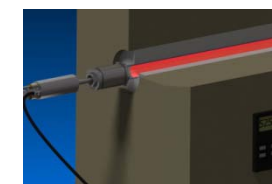
Photo Resist Coating



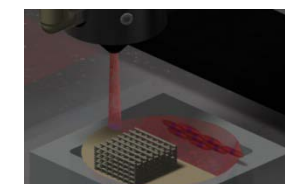
Spray Pyrolysis



Aerosol Assisted CVD



High TEMP Spraying



Bio Printing