

# UltraSonic Nozzle & Coating System (초음파노즐 & 코팅 시스템)



## UltraSonic Atomizer

### Features :

초음파분무기는 초음파 분산기와 같은 원리로 압전 세라믹에 의해 전기에너지를 수직진동의 기계적인 힘으로 변환된 초음파 진동이 흐르는 유체를 미립화해 초음파 분무기 nozzle을 통과하면서 마이크로 크기의 droplet 방식으로 분무되는 분무해 주는 장비입니다.



프론트 패널에 5개의 아이콘으로 구성된 디지털방식의 초음파 발생기.

- LCD 디스플레이
- 가변 전력 제어 및 프로브 선택
- 초음파 런타임
- 전원 장치 및 대비 조정
- 20kHz~130kHz의 동작주파수 선택
- 50/60Hz의 110/220VAC 에서 작동
- On/Off 전원 스위치



### 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 makes our standard robot coating system for production or product research and development. The robot used is our gantry type configured with any atomizer nozzles with or without [spray shaping](#) attachments, pumps of any type can be used and gas attachments with pressure regulator. For customers who want to coat products with solutions, Sonaer engineers will help specify and help the customer with the required application. Sonaer will program the software routines into the robot for complex spray patterns for either coating single or multiple array components. Robots come in several sizes with and without conveyors for production coating. Robot sizes and specifications can be found at the link [ROBOTS](#)

## 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) |
| HTNS40K50E | 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



| Model     | Frequency | Type 316SS | Type 304SS | Type 6061 | Flow Rate     |
|-----------|-----------|------------|------------|-----------|---------------|
| FLUORO60K | 60kHz     |            |            |           | 0~10( ml/min) |

Hypodermic Needle Delivery of Solutions

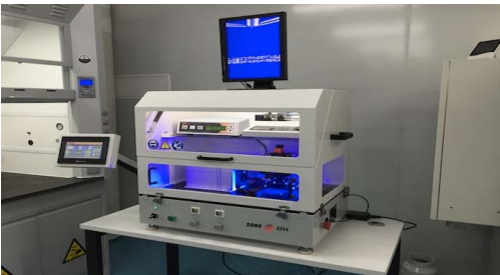


| Model  | Frequency    | Type 316SS | Type ACETAL   | Type 6061 | Flow Rate     |
|--------|--------------|------------|---------------|-----------|---------------|
| HYPOSA | 40,60,130kHz | HYPOSASS   | HYPOSA ACETAL | HYPOSAAL  | 0~10( ml/min) |

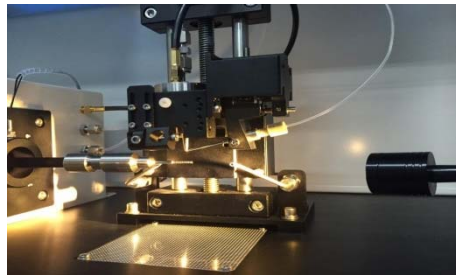
Thin Flim Coating Equipment and Systems



Bench Top Coating System



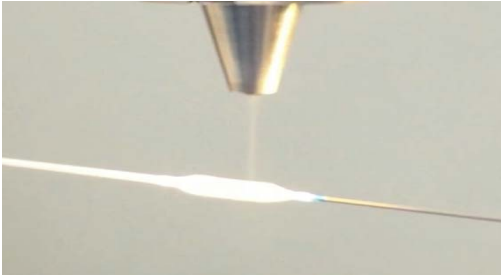
Medical Stent Thin Film Coating System



Stent Holder and Coating



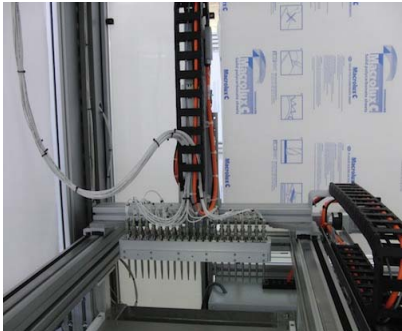
Medical Balloon Catheter Coating Machine



Balloon Coating Process



Ultrasonic Spray Coating System



Blood Collection Tube Thin Film Coating System



# UltraSonic Particle Generator (초음파 입자 발생기)



## 241PG & PGT

### Features :

초음파 입자 발생기는 전자 회로에서 만들어진 초음파 신호를 초음파 진동자에 가해 이것이 진동하여 물질을 흔드는 효과를 가지는데, 이때 중력에 의해 채워진 용액을 진동하여 표면에 있는 분자들이 떨어져 나가게 되며, 이러한 원리를 이용하여 유체를 미립화하여 입자를 만들어주는 장비입니다.

## 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

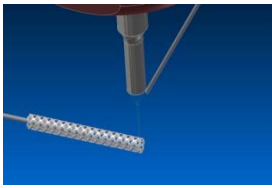
Valve : PTFE Teflon

Tubing : PTFE Teflon

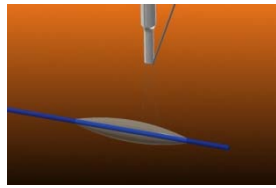
Fittings : PTFE Teflon

Volumes : Container 70ml Vessel 20ml

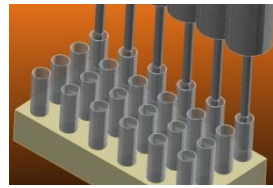
# Applications



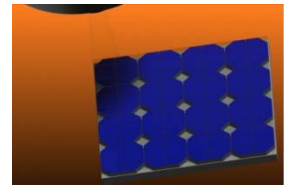
Medical Stent Coating



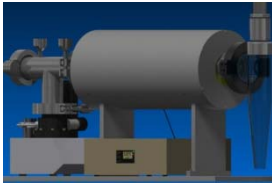
Medical Balloon Catheter Coating



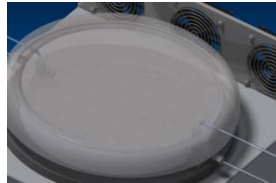
Blood Collection Tube Coating



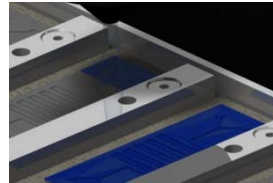
Solar Cell Coating



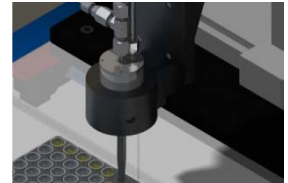
Spray Drying



Disinfecting Rooms Sterilization



Diagnostic Device Coating



Protein Enzyme Reagent Coating



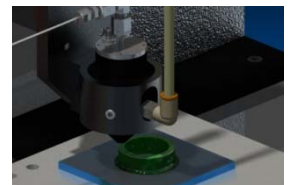
Pharmaceutical Spray Drying



Substance Coating



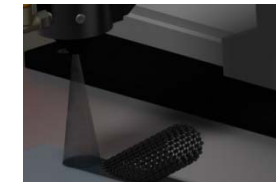
Spray Freeze Drying



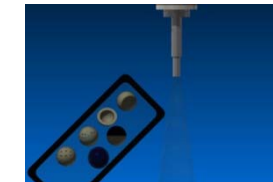
Hydrogel Spraying



Fabric Coating



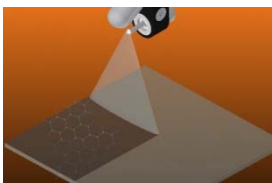
Carbon Nanotube Coating



Microbead Production



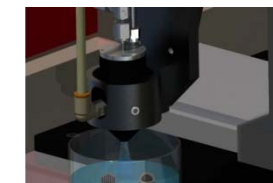
Micro Etching Glass



Graphene Coating



Fuel Cell Coating



Microencapsulation

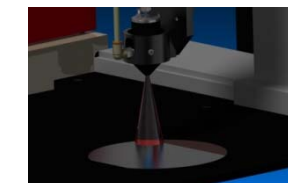


Photo Resist Coating



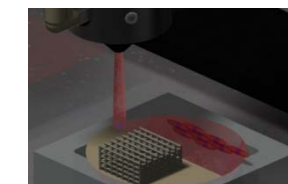
Spray Pyrolysis



Aerosol Assisted CVD



High TEMP Spraying



Bio Printing