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 Germany / Vietnam / India / Portugal / Mexico / Hong-kong, etc.*
- GMD PARTNER** *SECHANG CORPORATION*



SUNJE PRODUCT CATALOG

All about electrostatics, our know-how is yours!

Company Introduction

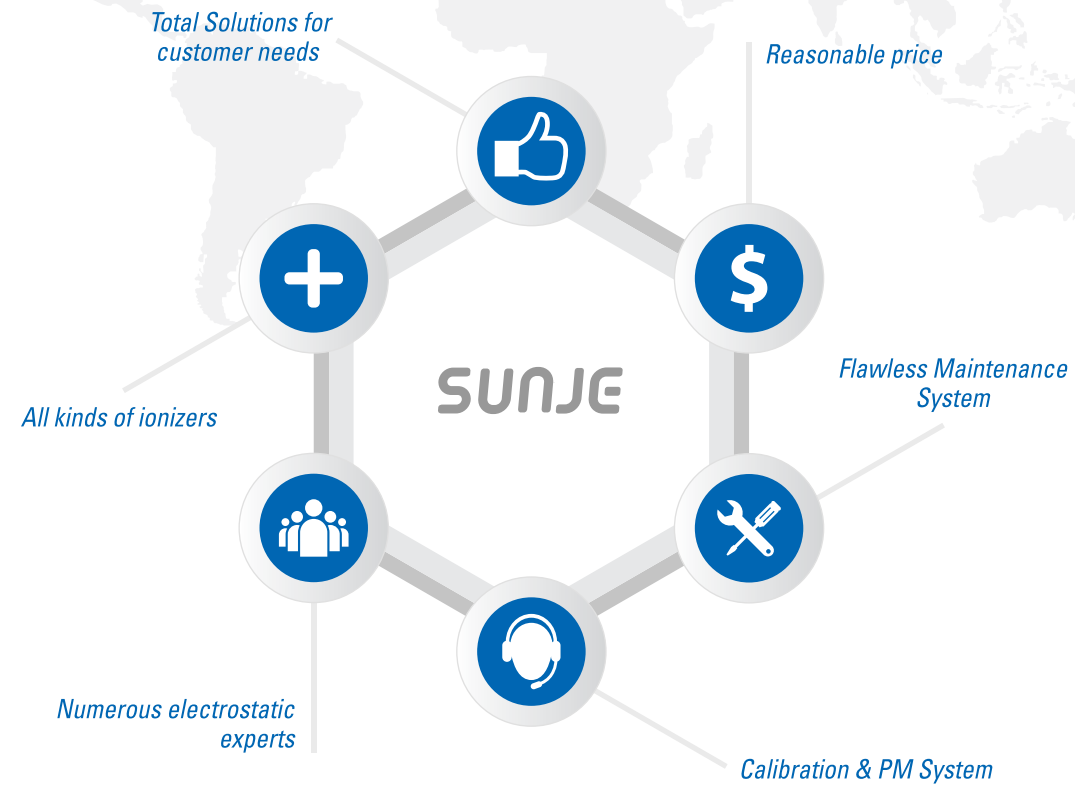
“ The excellent company tries best to satisfy customer needs! ”

Sunje has grown as an expert in Electrostatic field based on our accumulated know-how and technology. Since established in year 2000, we aim to be a world top company and keep developing our research and technology for better quality and reliability.

To get rid of electrostatic in FPD industry such as OLED, LCD, Semiconductor, Printing, Film, Extrusion, Process handling Electronic component, Sunje promise you to satisfy various demands with perfect product, excellent performance, optimum price, and prompt response.

Furthermore we are enlarging our field not only Electrostatic but also Plastic, Surface treatment and Medical industry to create higher satisfaction.

Sunje will do the best until the customer satisfies.



Company History

2011 ~ Present

- 2017.11 Established R&D center [Centum city, Busan]
- 2017.03 Launched Corona treater
- 2015.00 Launched ex-proof Ion bar
- 2015.12 Five Million Dollars Export Award
- 2015.05 The 15th anniversary of Sunje foundation
- 2012.08 Established China Corporation (SUNJE CHINA)

2006 ~ 2010

- 2010.05 The 10th anniversary of Sunje foundation
- 2009.01 Developed Dust Collector
- 2008.01 Established Japan Corporation (SUNJE JAPAN)
- 2007.05 Achieved Sales License for Radiation Equipment (Taiwan)
- 2007.03 Established Taiwan Corporation (SUNJE TAIWAN)

2000 ~ 2005

- 2005.10 2005 Venture Korea Award (President Award)
- 2005.02 Established Research Institute
- 2002.07 Achieved Clean Company Certificate
- 2000.05 Founded Sunje Co., Ltd.



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Soft X-Ray Ionizer



SXN series creates ion using X-ray.
Soft X-ray Ionizer does not generate any dust, electromagnetic wave,
ozone and no need for maintenance.

Bar Type

Pin Type

SXN-05U / SXN-05R / SXN-05N / SXN-05S

SXN-10N / SXN-10T / SXN-10S / SXN-10H / SXN-10F / SXN-10SD

SXN-15N / SXN-15U

Power Controller

Radiation Shielding method



Bar Type Soft X-Ray Ionizer

Compensates drawbacks of corona type ionizer (ex. particle issue, regular cleaning, using CDA requires extra cost to maintain). This product is effective to use in wide area and able to use in various environment with its slim size. In addition, easy to combine and separate module structure(tube replaceable) makes prompt replacement on the spot.

SXN-05/10BT, BL



[5kV]



▶ Bar type Soft X-Ray Ionizer (SXB-05 Series)

[10kV]



▶ Bar type Soft X-Ray Ionizer (SXB-10 Series)



▶ SXB-05/10 Series + SXC-10BT



▶ SXB-05/10 Series + SXC-10BL

Key Features

- Optimized for transporting section
- Possible to ionize on the rear side
- Prompt tube replacing on the spot **Patent**
- External controller type
- Possible to maintain long-term performance
- Particle Free, Ozone Free, No Air Flow, Perfect Ion Balance
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value	
Ion Generation Method	Soft X-ray	
Source	Soft X-ray Tube	
Beam Angle	150°	
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption (with Bar)	Max. 130W	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Alarm Function	H/V Abnormal, Communication error	
Interface	(Run, Alarm, Power, Over Time, Remote, Interlock) Remote On/Off, Interlock On/Off, Output State	
Controller Fuse	250V, 3A, 5X20 Glass Type Fuse	
Ion Bar Length	300 ~ 3700 mm	
Weight	Controller (SXC-10BT/BL)	1.05kg
	SXB-05 Series	1 year
	SXB-10 Series	1 year
Warranty	Controller (SXC-10BT/BL)	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXB-05/10W NEW

It is waterproof type and suitable to use air knife area. (achieved IPX 5th grade)



※ For improved quality product appearance can be changed without notice.

Key Features

- Possible to use in humid area (Waterproof structure)
- Prompt tube replacing on the spot **Patent**
- External controller type
- Possible to maintain long-term performance
- Particle Free, Ozone Free, No Air Flow, Perfect Ion Balance
- With RMS, possible to check operation status in real time (Option) **Patent**

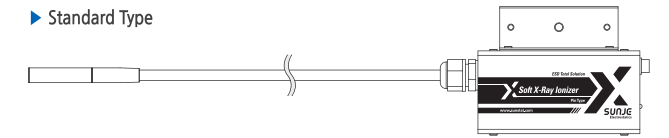
Pin Type Soft X-Ray Ionizer

By using mini-size X-ray tube, you can find the downsized tube module. This product is not only useful to install in narrow area but also able to install in the stage and at the bottom surface so that direct ionization shows better performance. Also purchasing individual part brings you cost saving.

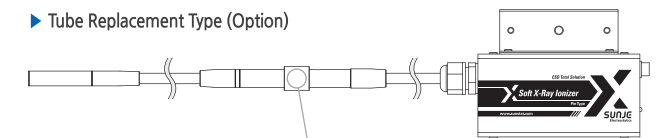
SXN-05/10SP1



▶ Standard Type

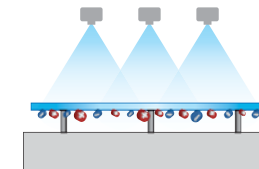


▶ Tube Replacement Type (Option)

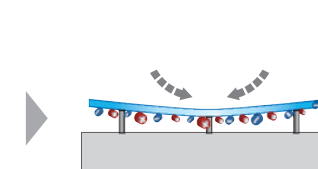


< Tube Replacement structure >

▶ Existing Products

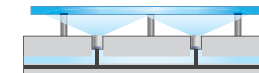


[The difficulty of rear side static removal]



[The difficulty of static detachment (Glass breakage occurrence)]

▶ SXN-05/10SP1

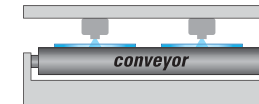


[Direct install to bottom part of the target object for ionization]

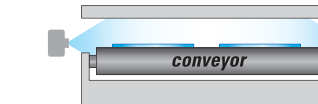


[Free from electrostatic detachment symptom(Protect glass breakage)]

▶ Existing Products



[The difficulty of installing in a narrow space]



[Limited static removal range]

▶ SXN-05/10SP1



[Easy to install in a narrow space]

Can be installed and applied in various environment.

Key Features

- Embodied downsized tube module with a mini-size X-ray tube
- Can be installed in a narrow area and applied for various environment
- It can deliver ionized air to rear side of the target directly by installing on the bottom surface
- Purchasing by the individual parts brings economic savings and easy replacement
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	Standard Type : 0.37kg Tube Replacement Type(Optional) : 0.46kg
Alarm Function	Head Fail, Head Communication error
Interface	(Run, Alarm, Power, Over Time, Remote, Interlock) Remote On/Off, Interlock On/Off, Output State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Soft X-Ray Ionizer [5kV]

Soft X-Ray Ionizer is a next generation model compare to other ionizers using corona discharge. It doesn't generate particles, electromagnetic waves and ozone and also no need of compressed air and any maintenance.

SXN-05U

All-in-one type (Power supply built-in)



SXN-05T

Separable Power controller



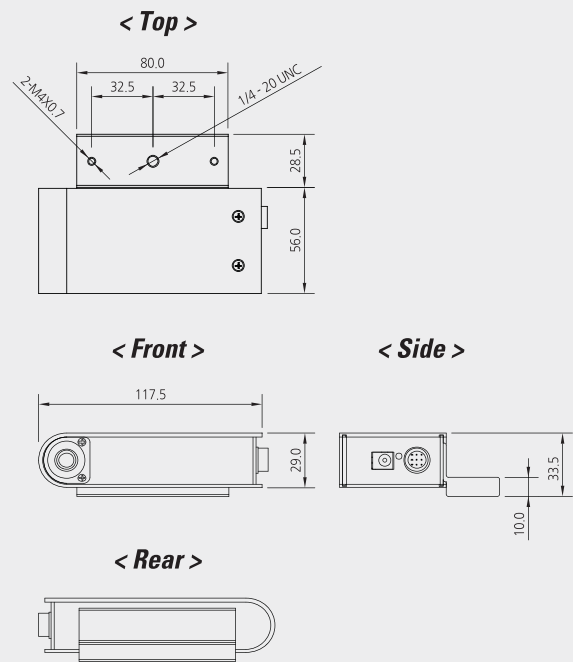
Key Features

- Applicable for ESD sensitive production line or semiconductor assembly
- Suitable for small and limited area
- With RMS, possible to check operation status in real time (Option) **Patent**
- SXN-05U : Using Adapter / SXN-05T : Using Power controller

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Mounting Method	Bolt Mounting with Bracket
Weight	SXN-05T : 0.29kg / SXN-05U : 0.4kg
Alarm Function	Head Fail
Warranty	1 year

* The appearance and specification of the product may be changed without prior notice for the improvement of the product.



SXN-05R

All-in-one type (Power supply built-in)



Key Features

- Suitable for robot taking out plastic injection molding
- Suitable for small and limited area
- With laser point application, the x-ray radiation angle can be viewed all time
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Power Consumption	9.6W
Current Consumption	Max. 400mA(DC 24V)
Mounting Method	Bolt Mounting with Bracket
Weight	0.28kg
Alarm Function	Head Fail
Warranty	1 year

* The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXN-05N



Key Features

- With wide LED, You can recognize operating status at various angles
- Suitable for small and limited area
- Serial Number of the Head is displayed on controller (SXC-104N connected)
- Identify 1-4 head location from controller (SXC-104N connected)
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Current Consumption	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.27kg
Alarm Function	Head Fail, Head Communication Error
Warranty	1 year

* The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXN-05S

Tube Replacement Type



Key Features

- Easy attachable/detachable Module structure **Patent**
- Suitable for small and limited area
- Cost saving due to individual Tube module purchase
- Prompt replacement is possible on the spot
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.28kg
Alarm Function	Head Fail, Head Communication error
Warranty	1 year

* The appearance and specification of the product may be changed without prior notice for the improvement of the product.



▶ Tube Module ▶ H/V Module & Main Body

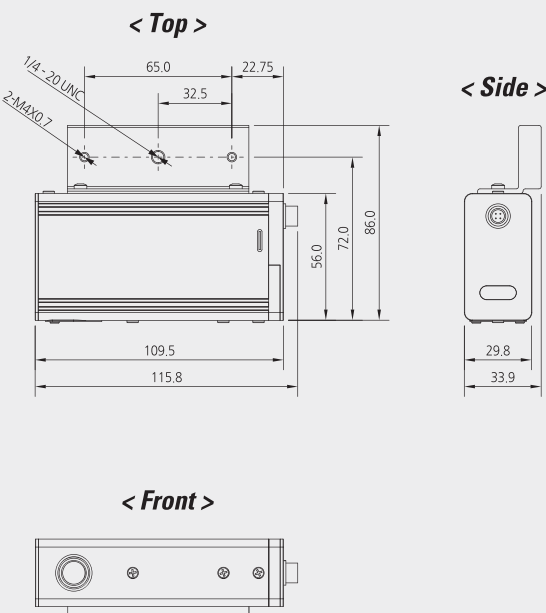
Soft X-Ray Ionizer [10kV]

Soft X-Ray Ionizer is a next generation model compare to other ionizers using corona discharge. It doesn't generate particles, electromagnetic waves and ozone and also no need of compressed air and any maintenance. Suitable for the process needed for high ion density, high ionizing capacity in super clean room.

SXN-10N

NEW

CE



Key Features

- With wide LED, You can recognize operating status at various angles
- Serial Number of the Head is displayed on controller (SXC-104N connected)
- Identify 1-4 head location from controller (SXC-104N connected)
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.27kg
Alarm Function	Head Fail, Head Communication Error
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXN-10T

CE

BEST SELLER



SXN-10S

CE

Tube Replacement Type



SXN-10H

CE



▶ SPG Series (Soft X-Ray Ionizer Gender Box)

Key Features

- Communication with RS-485, the information of the accumulated head usage time can be managed through PC
- Easy to install due to slim design

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.29kg
Alarm Function	Head Fail, Head Communication error
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Easy attachable/detachable Module structure **Patent**
- Cost saving due to individual Tube module purchase
- Prompt replacement is possible on the spot
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.28kg
Alarm Function	Head Fail, Head Communication error
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Compatible with other company's product and the performance and convenience is proved
- SPG Series (Soft X-ray Ionizer Gender Box)
We have a compatible gender with various signal system applicable for varied equipment and facility

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.36kg
Alarm Function	Head Fail
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXN-10F



BEST SELLER



Key Features

- X-ray radiating direction can be controlled with flexible arm (length:500mm) and this brings you easier, convenient installment condition **Patent**
- Downsized tube makes possible to install in limited area

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.75kg
Alarm Function	Head Fail
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Soft X-Ray Ionizer [15kV]

High performance with 15kV makes ionization more effective in wide area.

SXN-15N NEW



SXN-10SD NEW



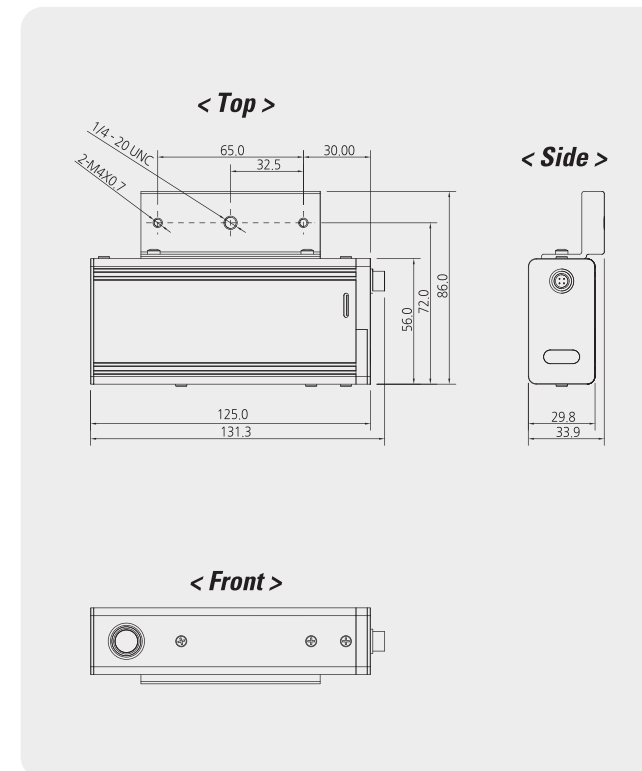
Key Features

- Due to replaceable dual tubes, better maintenance function is guaranteed (If one of the tubes has an error, the other tube automatically starts to run) **Patent**
- Easy attachable/detachable Module structure **Patent**
- Cost saving due to individual Tube module purchase
- Prompt replacement is possible on the spot
- With RMS, possible to check operation status in real time (Option) **Patent**
- This is optimized for automatic process as no need to stop the line

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.47kg
Alarm Function	Head Fail, Head Communication Error
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



Key Features

- With wide LED, you can recognize operating status at various angles
- With 15kV application, it is effective for wide area and long distance
- Serial Number of the Head is displayed on controller (SXC-104N connected)
- Identify 1-4 head location from controller (SXC-104N connected)
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Mounting Method	Bolt Mounting with Bracket
Weight	0.31kg
Alarm Function	Head Fail, Head Communication Error
Interface	(Run, Alarm, Power, Over Time, Remote, Interlock) Remote On/Off, Interlock On/Off, Output State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXN-15U



Power Controller Integrated type / Separated type is selectable

BEST SELLER



► **SXC-154L** (Power Controller)
SXN-15U Power Controller separate type (1:4 Type / Option)

Key Features

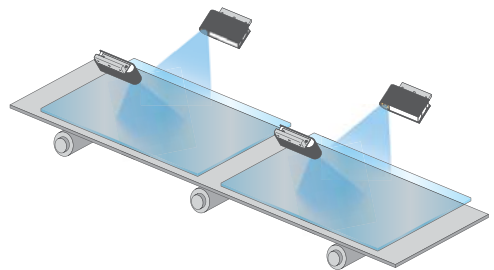
- X-ray radiating direction can be controlled with flexible arm (length:300mm) and this brings you easier, convenient installment condition **Patent**
- With 15kV application, it is effective for wide area and long distance
- Downsized tube makes possible to install in limited area
- All-in-one type(Power supply built-in) & Easy installation (Power Controller separate type : Option)
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

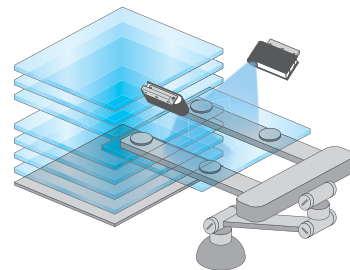
Parameter	Description / Value
Ion Generation Method	Soft X-ray
Source	Soft X-ray Tube
Beam Angle	150°
Input Power	AC 100V ~ 240V, 50/60Hz(Adaptor Input)
Power Consumption	13W
Operation Circumstance	Power : 0°C ~ +36.5°C / Head : 0°C ~ +52°C
Mounting Method	Bolt Mounting with Bracket
Weight	1.4kg
Alarm Function	Head Fail
Indicator	Alarm State, Over Time State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

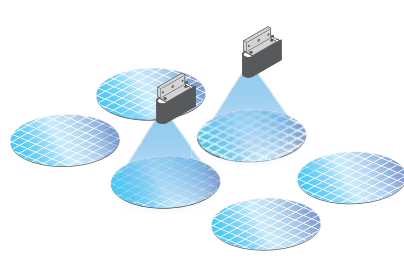
Soft X-Ray Ionizer [Application]



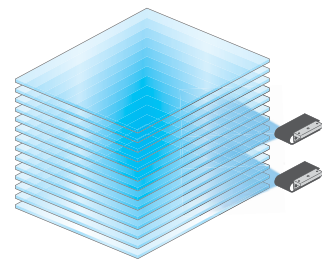
► PI Coating, Rubbing, PR Coating, Exposure, Curing & Baking, Glass Assembly, ODF, etc.



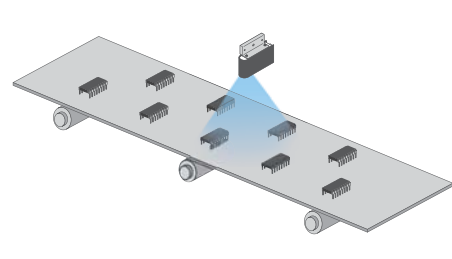
► Glass & Wafer Cassette Buffer, Conveyor Robot, ODF, CVD, Cleaner, Wet & Dry Etch, etc.



► Wafer Oxidation, Exposure, Etching, Ion Implant, Glass & Wafer Dry, etc.



► Glass Cassette, Wafer Cassette, Polarizer Separating, Film Attachment, etc.



► Semiconductor Die-Bonding, Wire Bonding, Chip Molding, Trimming & Forming Testing, etc.

Power Controller

SXC-104N



Controller for SXH-05N, SXH-10N, SXH-10SD



Head Unit 1

Head Unit 3

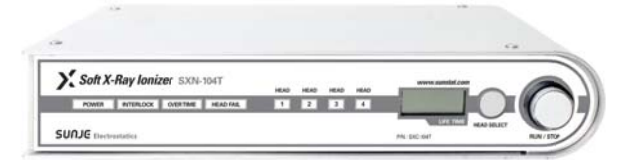
Head Unit 2

Head Unit 4

SXC-104T



Controller for SXH-05T, SXH-10T



Head Unit 1

Head Unit 3

Head Unit 2

Head Unit 4

Key Features

- Controller for Head Unit SXH-05N, SXH-10N, SXH-10SD
Compatible with SXH-05/10S, SXH-05/10T, SXH-05/10SP1
- Displaying head unit serial number and identifying head unit location function
- Communication with RS-485, the information of the accumulated head usage time can be managed through PC
- Various output - Alarm, Interlock, Remote, Power, Life Time Over **Patent**
- Convenient function - D-Sub Output, Head Unit Life Time Alarm Function **Patent**
- Max. 4 Head installation makes effective for a large quantity installation **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Input Power	AC 100~240V, 50/60Hz
Power Consumption (with Head)	Max. 50W
Controller Fuse	250V, 3A, 5X20 Glass Type Fuse
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Weight	0.62kg
Alarm Function	Head Fail, Head Communication Error
Indicator	Power State, Remote State, Interlock State, Run State, Alarm State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Controller for Head Unit SXH-05T(1:4 only), SXH-10T
- Communication with RS-485, the information of the accumulated head usage time can be managed through PC
- Various output - Alarm, Interlock, Remote, Power, Life Time Over **Patent**
- Convenient function - D-Sub Output, Head Unit Life Time Alarm Function **Patent**
- Max. 4 Head installation makes effective for a large quantity installation **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

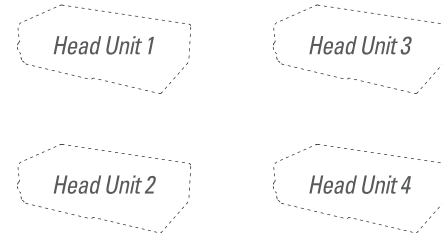
Parameter	Description / Value
Input Power	AC 100V ~ 240V, 50/60Hz
Power Consumption (with Head)	Max. 50W
Controller Fuse	250V, 3A, 5X20 Glass Type Fuse
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Weight	0.88kg
Alarm Function	Head Fail, Head Communication error
Indicator	Power State, Remote State, Interlock State, Run State, Alarm State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SXC-104S



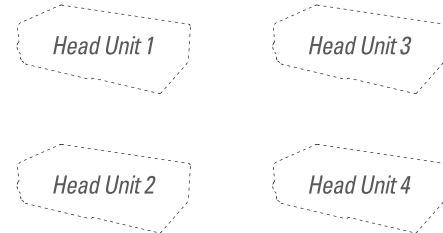
Controller for tube replaceable type (SXH-05/10SP1, SXH-05/10S)



SXC-104



Controller for SXH-10H, SXH-10F



Key Features

- Controller for Head Unit SXH-05/10SP1, SXH-05/10S
- After replacement of the Tube, You can reset controller (Usage time, Alarm information)
- Communication with RS-485, the information of the accumulated head usage time can be managed through PC
- Various output - Alarm, Interlock, Remote, Power, Life Time Over **Patent**
- Convenient function - D-Sub Output, Head Unit Life Time Alarm Function **Patent**
- Max. 4 Head installation makes effective for a large quantity installation **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

Specifications

Parameter	Description / Value
Input Power	AC 100V ~ 240V, 50/60Hz
Power Consumption (with Head)	Max. 50W
Controller Fuse	250V, 3A, 5X20 Glass Type Fuse
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Weight	0.63kg
Alarm Function	Head Fail, Head Communication error
Indicator	Power State, Remote State, Interlock State, Run State, Alarm State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Controller for Head Unit SXH-10H, SXH-10F
- Max. 4 Head installation makes effective for a large quantity installation **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

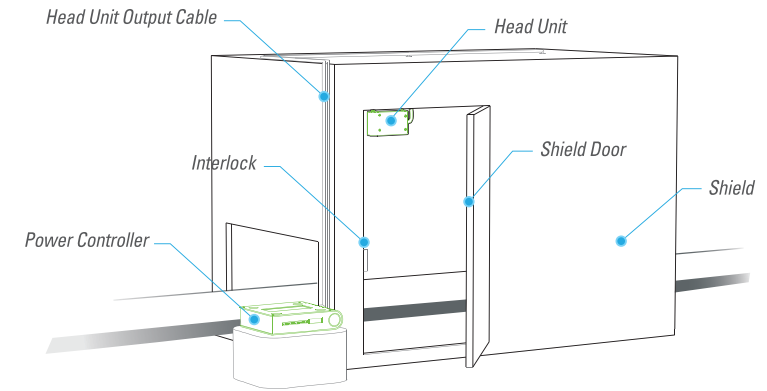
Specifications

Parameter	Description / Value
Input Power	AC 100V ~ 240V, 50/60Hz
Power Consumption (with Head)	Max. 56W
Controller Fuse	250V, 3A, 5X20 Glass Type Fuse
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH
Weight	1.22kg
Alarm Function	Head Fail, Head Abnormal
Indicator	Power State, Remote State, Interlock State, Run State, Alarm State
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Radiation Shielding Method

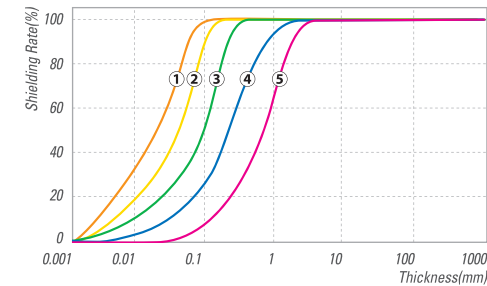
For Soft X-Ray Ionizer



- Please be careful to avoid direct exposure from the soft X-ray, since it may cause any skin problems. Therefore, you need to shield the area where X-ray emits in order to protect yourself. Check your Soft X-Ray Ionizer circumstance first and then apply interlocking system before using X-ray Ionizer. Please keep in mind that allowed leakage level for radiation dose is 10μSv/hr or under, So keep your area under the mentioned level all the time. (The leakage level of radiation dose might differ in countries. e.g. South Korea : 10μSv/hr)
- Please refer to the below chart for possible materials of shielding and its acceptable thickness.

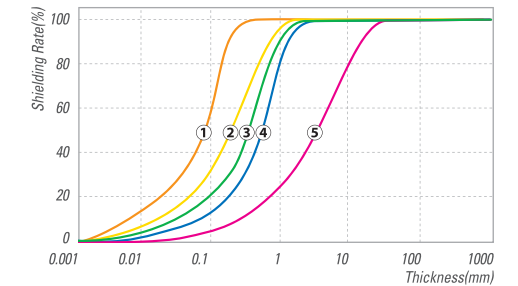
Material Shielding Rate

▶ Soft X-Ray Ionizer [5kV]



Material	Thickness(mm)
① Copper	Over 0.1
② Aluminum	Over 0.25
③ Glass	Over 0.5
④ PVC (Static-free)	Over 3.0
⑤ Acryl (Static-free)	Over 5.0

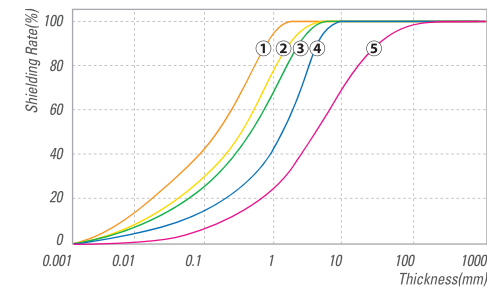
▶ Soft X-Ray Ionizer [10kV]



Material	Thickness(mm)
① Copper	Over 0.4
② Aluminum	Over 2.0
③ Glass	Over 3.0
④ PVC (Static-free)	Over 5.0
⑤ Acryl (Static-free)	Over 40.0

※ In order to shield perfectly, we suggest you to use Static-free PVC panel with at least 5mm thickness or above.

▶ Soft X-Ray Ionizer [15kV]



Material	Thickness(mm)
① Copper	Over 3.5
② Aluminum	Over 6.0
③ Glass	Over 7.0
④ PVC (Static-free)	Over 8.0
⑤ Acryl (Static-free)	Over 120.0

※ In order to shield perfectly, we suggest you to use Static-free PVC panel with at least 8mm thickness or above.

Radiation

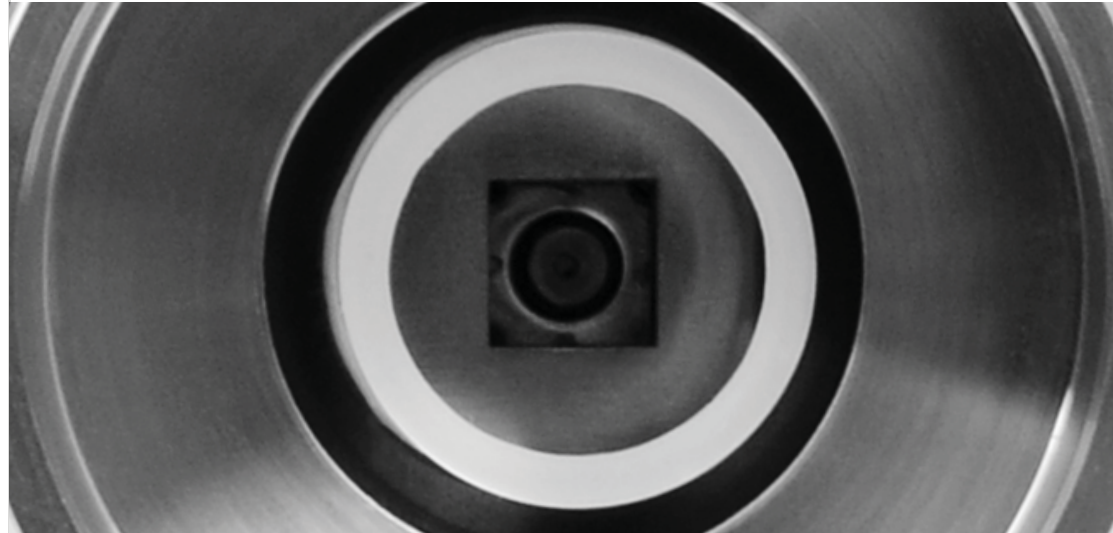
With radiation You can ionize some substance, Energy flow that radiated substance generates

Radioactivity

The intensity of radiation

Radiation is neither accumulated nor contaminated. Due to uncertainty that human cannot judge by five senses, its danger is exaggerated than the actual. Radiation can be made intentionally, but also stays in the nature at all times just like other energy flow.

VUV Ionizer



This is an ionizer using Vacuum Ultra Violet ray at decompressed or inert gas circumstance.

SUH-101A

SUC-101A

VUV Ionizer

This is an ionizer using Vacuum Ultra Violet ray at decompressed or inert gas circumstance.

SUH-101A / SUC-101A NEW



Decay Time Characteristics

▶ **Measurement condition**

- Charged plate : 150mm X 150mm, 20pF
- Decay time : $\pm 300V \rightarrow \pm 30V$
- Distance between light source output window and charged plate : 300mm

Pressure (Torr)	10	1	0.1	0.01	0.001
Decay Time (sec)	0.1	Under 0.1	Under 0.1	Under 0.1	Under 0.1

Key Features

- Eliminates electrostatic at inert gas such as N₂, Ar
- Under the decompression, maximum performance comes out
- Eliminates static without additional clean dry air supply
- No particle, No noise. In N₂ circumstance, eliminating static is possible under atmospheric pressure

Specifications

• **Head (SUH-101A)**

Parameter	Description / Value
Radiant Wavelength Range [Nm]	130nm to 400nm
Window Material	MgF ₂
Cooling Method	Air cooling by cooling fan
Guaranteed Service Life	2000 hours

• **Controller (SUC-101A)**

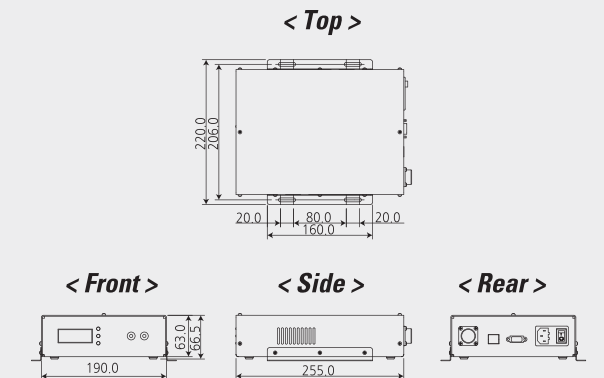
Parameter	Description / Value
Line Voltage	100V to 240V
Power Consumption	105W
Rated Frequency	50Hz / 60Hz
Preheat Time	Within 15 seconds
External Control Function	ON/OFF control, Lamp ON status signal, RS485, Alarm status

• **Ambient temperature and humidity**

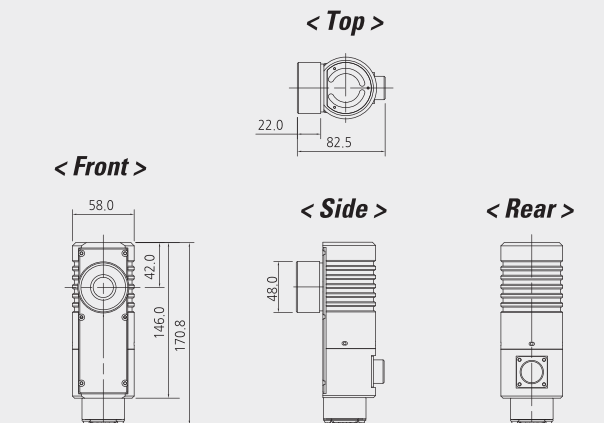
Parameter	Description / Value	
Operation	Temperature	1°C to 40°C
	Humidity	20% to 90% RH
Storage	Temperature	-40°C to 70°C
	Humidity	90% RH

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

< Controller (SUC-101A) >



< Head (SUH-101A) >





Ion Bar



Bar type static eliminator with minimized corona discharge loss.

SIB5S Series

Eco Powerful Nozzle Socket

- SIB1 Series
- SIB4 Series
- SIB7 Series

- SRB Series
- SSB1 Series
- SKB Series

SIB-ex Series

SAB Series (Antistatic Brush)

Power Controller

Ion Bar

! Regular maintenance is required for normal performance and managing process. If maintenance is insufficient, it can affect process and cause abnormal operation.

SIB5S Series NEW

It is the product that shows stable performance by high frequency, keeps stable ion balance during long term period. By various product specification and digital control systems, corona discharge loss is minimized. Also wide range of removing static is possible through optimum design for ion generation.



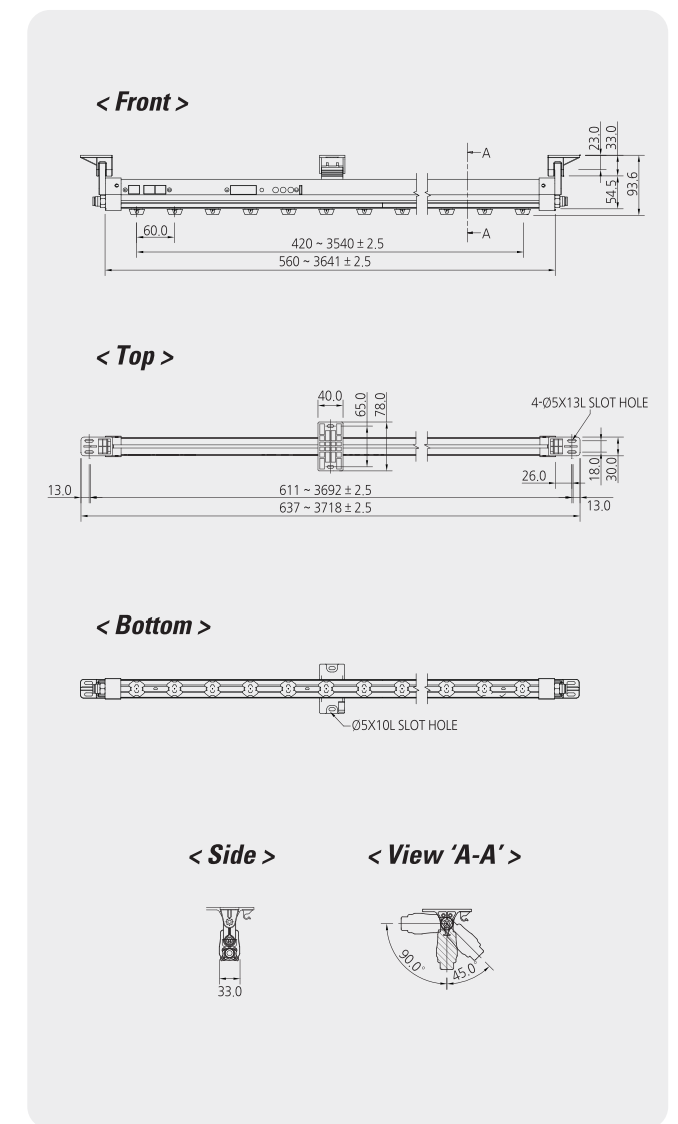
Key Features

- Stable ion balance during long term usage
- Stable performance from high frequency (100hz)
- Able to apply in various conditions with slim appearance and various length
- Increase ion generation by reducing corona discharge loss
- Tip cleaning alarm (You can set tip cleaning period with timer)
- Output voltage control(8~12.5kVp-p) for optimizing electrostatic
- Fluid dynamic nozzle socket for preventing tip contamination
- One touch type for easy tip replacement and cleaning Patent
- Minimum air consumption
(innovative socket design embodies minimum flux and maximum voltage)

Specifications

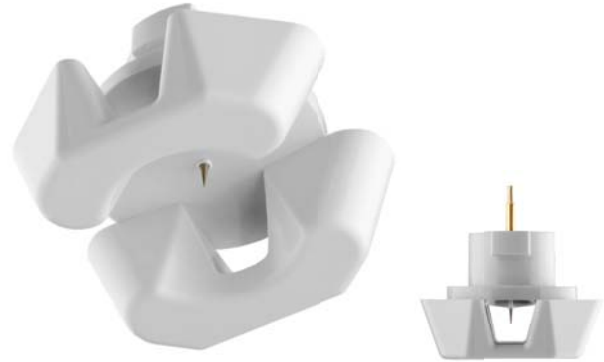
Parameter	Description / Value	Remark
Input Power	DC 24V (±5%)	
Power Consumption	Max. 12W	
Current Consumption	Max. 500mA	DC 24V
Ion-Generation Method	Corona Discharge Pulse AC	
Air Purge Supply Pressure	0.1 ~ 0.5MPa	CDA(Clean Dry Air), N2
Air Purge Connection Port	Pipe Thread 1/8"	
Ion Balance	Within ±30V	1,000mm
Ozone(O₃) Concentration	≤0.05ppm	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Standard Tungsten Option Poly Silicon / Titanium	SIE-4
Electrode Replacement	Cartridge type	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	No Condensation
Mounting Method	Bolt Mounting with Bracket	
Ion Bar Length	637mm ~ 3,718mm	
Function	Remote Control	
Adjust Function	Frequency [Hz] 1, 3, 5, 8, 10, 20, 30~100 (by 5Hz unit) Voltage [Level] 1 ~ 10	
Alarm Function	High Voltage Abnormal Alarm, Tip Cleaning Alarm(Setting)	
Interface	Run State, Remote, RS485, Alarm(High Voltage Abnormal, Tip Cleaning)	
Operating Distance	50~2,000mm	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



Eco Powerful Nozzle Socket


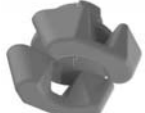

Nozzle socket for SIB5S, SIB4, SIB7 Series. With new Eco Powerful Nozzle Socket, You can find the upgraded performance from less air consumption. (e.g. only using 30% of air)



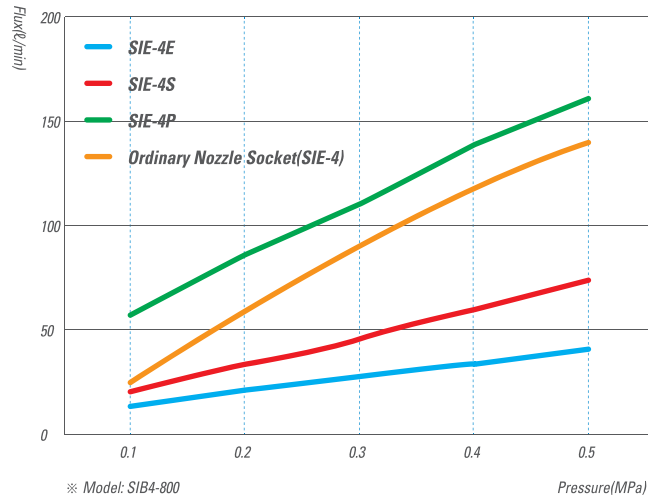
Key Features

- Newly designed Air Injector structure minimized the air consumption but maximized the air pressure
- Available 3 different nozzle socket types depending on numerous applications
 - SIE-4E** : Energy saving type that uses the least amount of air consumption (70% less air consumption)
 - SIE-4S** : Standard type for general environment
 - SIE-4P** : Powerful type that the user expects powerful ionization with a large amount of air consumption

Performance

Division	Low Flow (SIE-4E)	Middle Flow (SIE-4S)	High Flow (SIE-4P)
Shape of socket			
	Light Gray	Dark Gray	Black

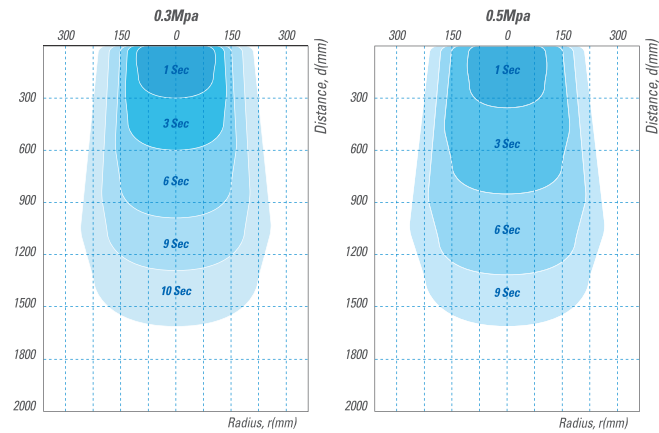
Comparison of air consumption level per each Nozzle Socket



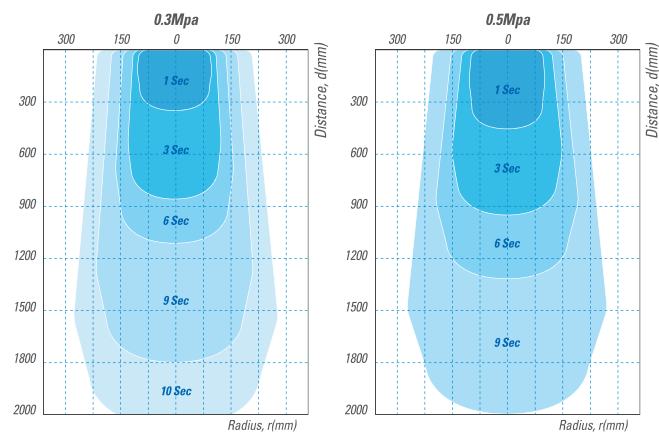
Decay Time Characteristics

- ▶ Test Conditions
- Model: SIB4-800
 - Decay Time : ±1,000V to ±100V
 - Down Flow : No Down Flow
 - Air Pressure : 0.3MPa / 0.5MPa

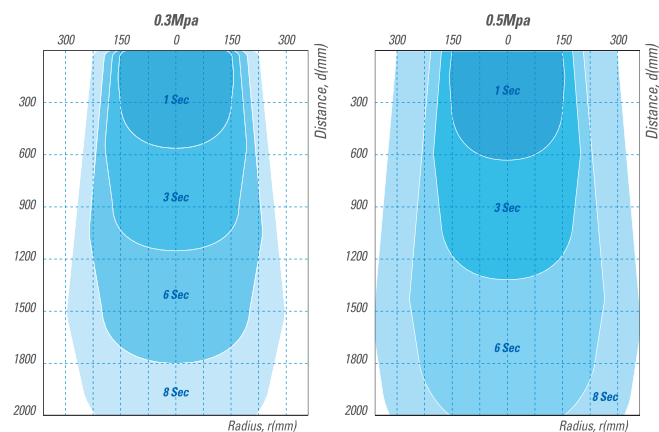
Low Flow (SIE-4E)



Middle Flow (SIE-4S)



High Flow (SIE-4P)



SIB1 Series

SIB1 Series is the external controller type ion bar. Due to small and slim body, it can be installed in a narrow space easily. We provide diverse lengths. Its maintenance is simple, by replacing emitter socket.



Key Features

- External Controller Type Ion Bar **Patent**
- Max. 4ea connections using external controller (SBP-14J4) (SBP-07A2, SBP-11/11N : Max. 2ea / SBP-06 : Max. 1ea) **Patent**
- Small / Slim body → Easy to install in a narrow space
- Various length of ion bar for numerous installing environment

SIB4 Series

Corona discharge loss is minimized through various specification and digital control system and this product provides high performance, low ion balance. Also, wide range of ionization is possible through optimum ion generating design.

BEST SELLER



Key Features

- Depending on the polarity, ion generation amount is automatically controlled. - Auto, Duty **Patent**
- With its slim body, diverse installation is possible
- Maximized the ion creation via reducing loss of corona discharging
- Tip Cleaning Alarm (internal timer installed → possible to set tip cleaning period)
- Output voltage control (8~12.5kVp-p)
- Power jumping function among ion bars (Max. 4 ion bar links) **Patent**
- Aerodynamic design nozzle socket reduces tip contamination
- One-touch in/out socket application **Patent**
- Tip cleaning device (Option)
- Design for minimum air consumption (Newly designed socket minimized the air consumption but maximized the air pressure)

Specifications

Parameter	Description / Value	Remark
Ion-Generation Method	Corona Discharge Pulse AC	
Air Purge Supply Pressure	≤ 0.3MPa	CDA (Clean Dry Air), N ₂
Air Purge Connection Port	Pipe Thread 1/8"	Ø6 Under 1,000mm Ø8 Over 1,000mm
Ion Balance	within ±50V	1,000mm
Operating Distance	50mm ~ 2,000mm	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O ₃) Concentration	≤ 0.05ppm	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Standard : Tungsten / Option : Poly Silicon, Titanium	
Electrode Replacement	Cartridge type	
Mounting Method	Bolt Mounting with Bracket	
Ion Bar Length	208mm ~ 2,608mm	
High Voltage Cable	Insulation Cable 4m (UL3239_20kV - 1007AWG18)	Standard
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



Specifications

Parameter	Description / Value	Remark
Input Power	DC 24V (±5%)	
Power Consumption	Max. 14.4W	
Current Consumption	Max. 500mA	DC 24V
Ion-Generation Method	Corona Discharge Pulse AC	
Air Purge Supply Pressure	0.1MPa ~ 0.5 MPa	CDA (Clean Dry Air), N ₂
Air Purge Connection Port	Pipe Thread 1/8"	
Ion Balance	within ±30V	1,000mm
Operating Distance	50mm ~ 2,000mm	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O ₃) Concentration	≤ 0.05ppm	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Standard : Tungsten / Option : Poly Silicon, Titanium	
Electrode Replacement	Cartridge type	
Mounting Method	Bolt Mounting with Bracket	
Ion Bar Length	877mm ~ 3,478mm	
Adjust Function	Frequency [Hz]	0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 35, 40, 45, 50
	Duty Ratio [%]	40 ~ 70
	Voltage [Level]	1 ~ 10
	Auto Duty	Mode Set
Alarm Function	High Voltage Abnormal Alarm, Tip Cleaning Alarm (Setting)	
Interface	Run State, Remote, RS485, Alarm State	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SIB7 Series



SIB7 Series is the all-in-one type mini size ion bar. Corona discharge loss is minimized through various specification and digital control system and this product provides high performance, low ion balance. Also, wide range of ionization is possible through optimum ion generating design.



Specifications

Parameter	Description / Value	Remark
Input Power	DC 24V (±5%)	
Power Consumption	Max. 7.8W	
Current Consumption	Max. 325mA	DC 24V
Ion-Generation Method	Corona Discharge Pulse AC	
Air Purge Supply Pressure	0.1MPa ~ 0.5 MPa	CDA(Clean Dry Air), N2
Air Purge Connection Port	Pipe Thread 1/8"	
Ion Balance	within ±30V	1,000mm
Operating Distance	50mm ~ 2,000mm	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Standard : Tungsten / Option : Poly Silicon, Titanium	
Electrode Replacement	Cartridge type	
Mounting Method	Bolt Mounting with Bracket	
Ion Bar Length	422mm ~ 962mm	
Adjust Function	Frequency [Hz]	0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 50
	Duty Ratio [%]	40 ~ 70
	Voltage [Level]	1 ~ 10
Alarm Function	High Voltage Abnormal Alarm	
Interface	Input : Remote / Output : Run State, Alarm State	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

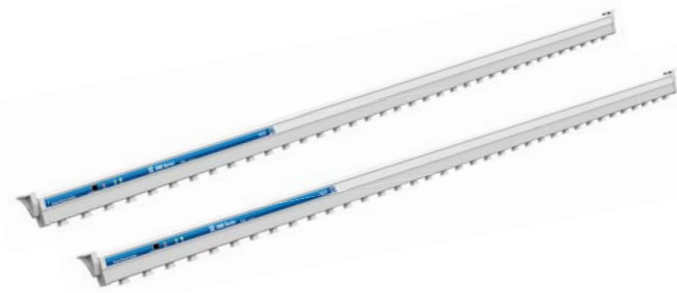
Key Features

- All-in-one type mini size ion bar. (eg. controller internally installed)
- Maximized the ion creation via reducing loss of corona discharging
- Power jumping function among ion bars (Max. 4 ion bar links) **Patent**
- Aerodynamic design nozzle socket reduces tip contamination
- One-touch in/out socket application **Patent**
- Design for minimum air consumption

(Newly designed socket minimized the air consumption but maximized the air pressure)

SRB Series

SRB Series is an ionizer that promptly ionizes the area for ESD control. Since the particle from the ionized area becomes inactive condition, there are no particle attraction at all. This device allows you to drop the failure rate caused by the particle on the material.



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100 ~ 240V, 50/60Hz	
Power Consumption	Max. 15W	
Current Consumption	Max. 68mA	AC 220V
Ion-Generation Method	Corona Discharge Pulse AC	Pair Type
Operating Distance	50mm ~ 2,000mm	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Tungsten	
Mounting Method	Bolt Mounting with Bracket	
Ion Bar Length	1,180mm ~ 3,640mm	
Function	Remote Control	
Adjust Function	Period [Sec.]	Positive 1 ~ 10 Sec. / Negative 1 ~ 10 Sec.
	Voltage [kV]	Positive 4 ~ 11kV / Negative 4 ~ 11kV
Alarm Function	High Voltage Abnormal	
Interface	Remote, Run/Alarm State	RJ45
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Wide range eliminating static ion Bar
- Various length of ion bar for numerous installing environment
- Cost saving due to no need of the compressed air (e.g. Non-air system)
- With RMS, possible to check operation status in real time (Option) **Patent**

SSB1 Series

Possible to use not only in general environment but also high temperature environment (130°C). In addition, it is possible to select Pulsed AC type and DC type depending on a controller type. You can apply this ionizer to various working environment.



Specifications

Parameter	Description / Value	Remark
Ion-Generation Method	Corona Discharge	
Rated Voltage	Pulsed AC 10kVpp ±7%(Max.) DC ±9kV ±7%(Max.)	AC : SBP-14J4/SBP-06 DC : SBC-2PN
Structure	Direct-Coupled	
Ion Balance	Within ±50V at pulsed AC	100mm
Operating Distance	10mm ~ 250mm	Non Air
Operation Circumstance	0°C ~ +130°C(32°F ~ 266°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Epoxy, MC Nylon	Level HB
Cover Material	Aluminum	
Electrode Material	Tungsten (Pitch : 30mm)	
Cable Insulator Material	Silicon	
Ion Bar Length	90mm ~ 2,708mm	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Possible to use in high temperature environment (130°C)
- Possible to apply to various working environment
- Small / Slim body → Easy to install in a narrow space
- Various length of ion bar for numerous installing environment
- Tip cleaning device (Option)

SKB Series

Capacitive coupling type that is shockless and waterproof. You can use with air knife without any problem. With slim structure and varied length, it can be installed in all working space.



Specifications

Parameter	Description / Value	Remark
Compliant Standards	Technical Recommendations of the Research Institute of Industrial Safety	
Rated Voltage	AC 7.5kV ±7% (Max.), 50/60Hz	
Structure	Capacitive-Coupled	Shockless Type
Operating Distance	10mm ~ 250mm	Non Air
Operating Temperature	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	PBT (Polybutylene Terephthalate)	Level V0
Cover Material	Aluminum	
Electrode Material	Stainless Steel	
Cable Insulator Material	PVC (Polyvinyl Chloride)	
Flexible Tube Material	PA (Polyamide)	Level V0
Weight	About 0.6kg/m	without H/V Cable
Mounting Method	Ceiling & Wall Mount	
Ion Bar Length	90mm ~ 3,742mm	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Applicable in high humid circumstance
- Small / Slim body → Easy to install in a narrow space
- Capacity coupling protects electric shock (shockless type)
- Stop function if abnormal high voltage occurs **Patent**
- You can adjust input voltage depending on the installation environment (When connecting SBP-07A2) **Patent**

SIB-ex Series



Explosion-proof Ion Bar that achieved explosion-proof certification in both ATEX (Europe) and KGS (Korea). Safe design from electric accident and flame retardant is suitable to use for particular environment.
KGS certificate (SIB-900ex, SIB-1600ex, SIB-1800ex, SIB-2000ex)



Specifications

Parameter	Description / Value	Remark
Ion-Generation Method	Corona Discharge AC	Capacity coupled
Applied Voltage	AC 8kV(±7%), 50/60Hz	
Max. Current	5nA (from emitter point earth)	
Operating Distance	50mm ~ 200mm	Non Air Pressure
Operating Temperature	0°C ≤ Tamb ≤ +40°C	
Main Body Material	Aluminum, PVC, PA	
Bracket Material	SUS	
Electrode Material	SUS	
Cable Insulator Material	PE, PVC	
Ion Bar Length	100mm ~ 3,000mm	Step 100mm
Cable Length	Max. 10m	Ion Bar to Controller
Mounting Method	Ceiling & Wall Mount	
Warranty	1 year	
Atmospheric Pressure	80kPa ~ 110kPa	
Certification Standard	EN 60079-0: 2009(KGS) EN 60079-18: 2009(KGS) EN 1127-1: 2007(ATEX)	
Type of Protection	II 2 G Ex mb IIB T6(KGS) II 3 G IIB T(ATEX)	
Certi Number	15-GA2B0-0748X (KGS) INERIS 15ATEX3018X (ATEX)	

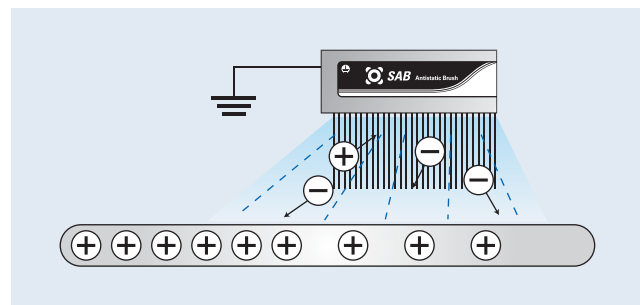
※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- The explosion-proof ionizer with ATEX certification for Europe and KGS certification for Korea
- Usable at explosion proof area
- No risk of explosion with low ignition energy
- No firing potential with using flame retardant material
- Aluminum and stainless steel frame structure

SAB Series

Bar type antistatic brush. By brushing, it can eliminate static and the dust.



• From the end of the brush, ion generates and eliminates static from the electrified object.

Specifications

Parameter	Description / Value	Remark
Body Material	Aluminum	
Brush Material	Stainless Fiber	
Diameter	12μm	
Filament	1000f	
Specific Gravity	7.98	
Electric Resistance	0.0072Ω/cm	
Length	100 ~ 3,000mm	

※ using bracket you can apply it with various sizes.

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Power Controller

SBP-07A2

Variable output voltage type controller for SIB1 Series, SSB Series, SSB1 Series, SKB Series, SIB-ex Series (1:2type)



SBP-08A3

Controller for SIB-ex Series. (1:3 type)



SBP-08A1ex

Certified Ex-proof controller for SIB-ex series (1:1 type)



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption	33W	
Output Voltage	AC 4kV ~ 7.5kV(±7%), 55Hz(±5Hz), below 5mA Ion Balance(Offset) : DC -150V ~ +550V	100V Digital step adj. Analog volume adj.
Output Port	2 Ports	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 10% ~ 90% RH	No Condensation
Main Body Material	EGI	
Size	207.0 x 180.4 x 118.8 mm	
Weight	5kg	
Mounting Method	Desk Top or Wall Mount	
Alarm Function	High Voltage Abnormal Alarm	
Interface	Remote, Run/Alarm State	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Specifications

Parameter	Description / Value	Remark
Input Power	AC 110V or AC 220V, 50/60Hz	
Power Consumption	110V : Max. 24.2VA(220mA) / 220V : Max. 24.2VA(110mA)	
Output Voltage	AC 8kV ±7%(Max.)	
Output Port	3 Ports	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Main Body Material	EGI	
Size	290.0 x 378.0 x 141.5 mm	
Weight	8.1kg	
Mounting Method	Desk Top or Wall Mount	
Installation Location	To be installed at a non hazardous place	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Specifications

Parameter	Description / Value	Remark
Input Power	AC 220V, 50/60Hz	
Power Consumption	Max 24.2VA (110mA)	
Output Voltage	AC 8kV ±10%(Max)	
Short Circuit Current	≤ 5mA	
Output Port	1 Port	
Material	Cover	Aluminum 6061 T6
	Cable Gland	Aluminum and Stainless Steel 316(L)
	Inner Plate	Aluminum 5051
Weight	10kg	
Mounting Method	Desk Top or Wall Mount	
Ground Method	"0"-Rug(4mm ²), Overall Wiring	
Protection	Circuit Breaker enabled	
Warranty	1 year	
Installation Standards	KS C IEC 60079-14	
Type of Protection	Ex d IIB T6	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SBP-14J4

Controller for SIB1 Series, SSB1 Series. (1:4 type)



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption	18W	
Current Consumption	80mA	AC 220V
Output Voltage	Pulse AC 14 kVp-p(Max.)	
Output Port	4 Ports	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Main Body Material	EGI	
Size	197.0 x 260.0 x 118.0 mm	
Weight	2.9kg	
Mounting Method	Bolt Mounting with Bracket	
Adjust Function	Frequency [Hz]	0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 50 (10Steps)
	Duty Ratio [%]	40 ~ 70
	Voltage [Level]	H : 1 ~ 10
Interface	Remote, Run/Alarm State, RS485	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SBP-11/11N

Controller for SIB1 Series, SSB1 Series. (1:2 type)



Specifications

Parameter	Description / Value		Remark
	SBP-11	SBP-11N	
Input Power	AC 100V ~ 240V, 50/60Hz		
Power Consumption	22W	23W	
Current Consumption	100mA	104mA	AC 220V
Output Port	2 Ports		
Main Body Material	EGI	Stainless Steel	
Size	187.4 x 200.0 x 108.7 mm		
Weight	2.46kg	2.48kg	
Mounting Method	Bolt Mounting with Bracket		
Adjust Function	Frequency [Hz]	1, 3, 5, 8, 10, 20, 30	
	Duty Ratio [%]	40 ~ 60	UTP(SBP-11N)
Alarm Function	High Voltage Abnormal Alarm		
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SBP-06

Controller for SIB1 Series, SSB1 Series. (1:1 type)



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption	16W	
Current Consumption	72mA	AC 220V
Output Port	1 Port (1P), 2 Ports (2P)	
Main Body Material	EGI	
Size	168.0 x 210.0 x 71.2 mm	
Weight	1.42kg	
Mounting Method	Bolt Mounting with Bracket	
Adjust Function	Duty Ratio [%] : 40 ~ 60	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SRC-2P

Controller for SRB Series. (1:2 type)



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption	Max. 15W	AC 220V
Current Consumption	Max. 68mA	
Output Voltage	Adj. Pulse Power	
Output Port	2 Ports	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Main Body Material	EGI	
Size	190.0 x 122.5 x 81.0 mm	
Weight	4.5kg	
Mounting Method	Bolt Mounting with Bracket	
Function	Period [Sec]	Positive 1 ~ 10 Sec. / Negative 1 ~ 10 Sec.
	Voltage [Level]	Positive 4 ~ 11kV / Negative 4 ~ 11kV
Alarm Function	High Voltage Abnormal / Low Performance Alarm	
Interface	Remote, RS-485, Alarm	
Warranty	1 year	

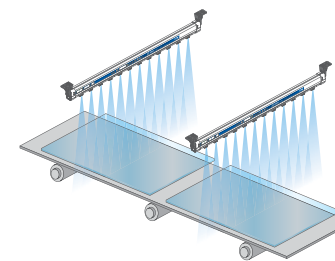
※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Connectable Products

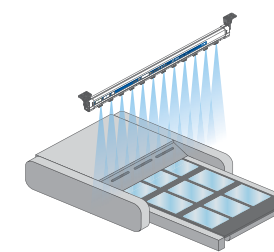
This table shows applicable Ion Bars to the controller by model.

Controller	Ion Bar							
	SIB5S Series	SIB-ex Series	SIB4 Series	SIB7 Series	SIB1 Series	SSB1 Series	SKB Series	SRB Series
SBP-07A2	All-in-one type	●	All-in-one type	All-in-one type	●	●	●	
SBP-08A3		●						
SBP-08A1ex		●						
SBP-14J4					●	●		
SBP-11/11N					●	●		
SBP-06					●	●		
SRC-2P								●

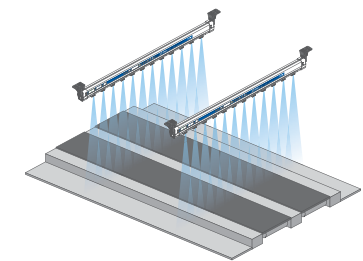
Ion Bar [Application]



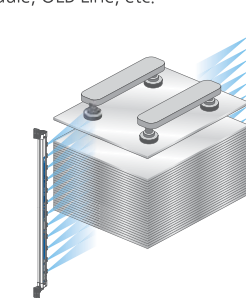
▶ LCD Glass Wafer, BLU ASSY, Camera Module, OLB Line, etc.



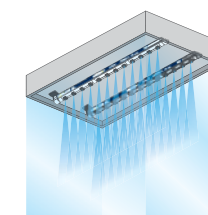
▶ Wet Cleaner, P/R Coater, Air Knife, Adhesive Roll Cleaner, etc.



▶ Belt Conveyor, Module Assembly, Wafer Assembly, Panel Assembly, Sheet Film, PCB Assembly, etc.



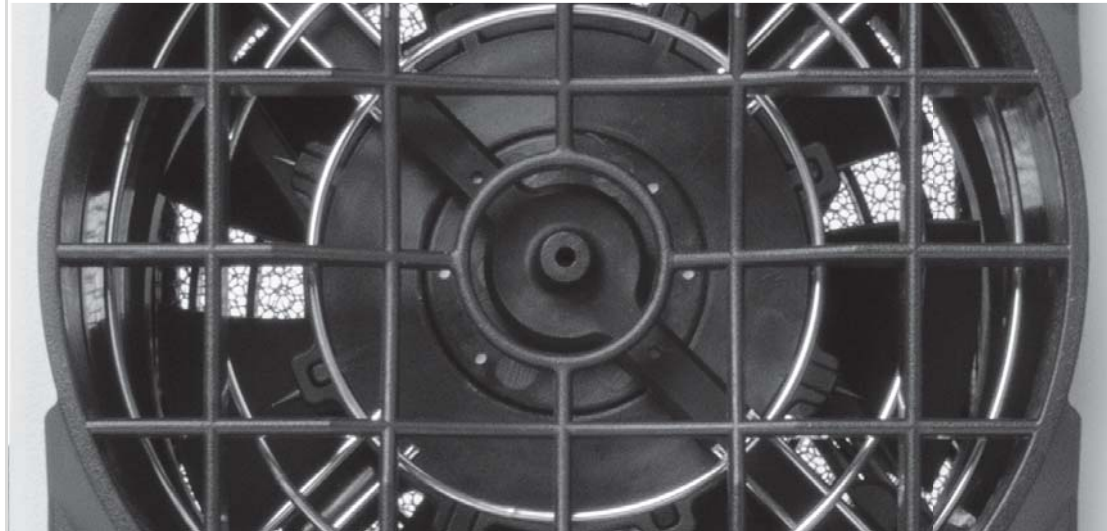
▶ Sheet Separator, Glass Cassette, Polarizer Attachment, Sheet Supplier, etc.



▶ Clean Booth, Room Ionizing System, Fan Filter Unit, Bio Industry, etc.



Ion Blower



Fan type ionizer with optimum aerodynamic design and fan speed control.

SBL-12A/B

SBL-20W
SBL-30W

SBL-15S

SOB-S Series

SBL-18/108
SMB-60

Ion Blower

SBL-12A/B

With optimized aerodynamic design and fan speed control device, It is effective to ionize short/middle distance. Due to small size and light-weight, the installation access is easier. Easy maintenance by discharge needle cleaning brush and a detachable rubber cover.

! Regular maintenance is required for normal performance and managing process. If maintenance is insufficient, it can affect process and cause abnormal operation.



▶ SBL-12A



▶ SBL-12B

Key Features

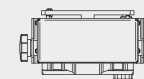
- Medium and small size Ion Blower
- Easy maintenance via automatic tip cleaning function (SBL-12A) **Patent**
- Easy separable one-touch rubber cover
- Fan speed control
- Automatic ion balance control **Patent**
- LED on when ion balance/Fan is abnormal (SBL-12A)
- With RMS, You can control up to 128 devices (Option : SBL-12A) **Patent**

Specifications

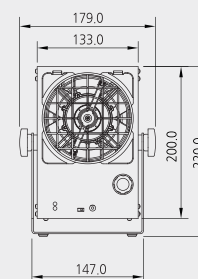
Parameter	Description / Value		Remark
	SBL-12A	SBL-12B	
Input Power	DC 24V		Adaptor(AC 110~220V, 50/60Hz, DC 24V)
Power Consumption	7.7W	7.3W	Fan Speed Max.
Current Consumption	320mA	300mA	
Ion-Generation Method	Steady-State DC		
Air Flow	4.25m ³ /min		Fan Speed Max.
Noise Level	62dB		1,000mm, Fan Speed Max.
Ion Balance	within ±5V		600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		
Ozone(O3) Concentration	≤0.05ppm		
Main Body Material	EGI		
Electrode Material	Tungsten		
Mounting Method	Desk Top		
Weight	1.42kg		
Function	Tip Cleaning, Auto Tip Cleaning	-	
Alarm Function	Ion Unbalance Alarm, Fan Alarm	-	
Interface	Remote On/Off, Run State, Alarm, Tip Cleaning, RS 485	-	
Option	RMS (Real Monitoring System)	-	
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

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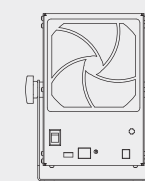
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SBL-20W



With optimized aerodynamic design and fan speed control device, It is effective to ionize middle/long distance. Due to slim and light-weight, the installation access is easier. Easy maintenance by discharge needle cleaning brush and a detachable rubber cover.



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100 ~ 240V, 50/60Hz	
Power Consumption	37W	Fan Speed Max.
Current Consumption	168mA	AC 220V
Ion-Generation Method	Steady-State DC	
Air Flow	8.5m ³ /min	Fan Speed Max.
Noise Level	63dB	1,000mm, Fan Speed Max.
Ion Balance	within ±5V	600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Aluminum	
Electrode Material	Tungsten	
Mounting Method	Desk Top	
Weight	3.4kg	
Function	4 Step Fan Speed, Tip Cleaning, Auto Tip Cleaning	
Alarm Function	Ion Unbalance Alarm, Fan Alarm	
Interface	Remote On/Off, Run State, Alarm, Tip Cleaning, RS 485	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Medium and large size Ion Blower
- Automatic ion balance control **Patent**
- Slim size, Light-weight, Low-noise
- Easy maintenance via automatic tip cleaning function **Patent**
- Fan speed control (4Steps)
- Interface available with automation (PLC) **Patent**
- Ion unbalance / Fan abnormal buzzer alarm **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

SBL-30W



It is effective to ionize long distance. Easy maintenance using a discharge needle cleaning brush.



Specifications

Parameter	Description / Value	Remark
Input Power	AC 100 ~ 240V, 50/60Hz	
Power Consumption	50W	Fan Speed Max.
Current Consumption	227mA	AC 220V
Ion-Generation Method	Steady-State DC	
Air Flow	12.4m ³ /min	Fan Speed Max.
Noise Level	68dB	1,000mm, Fan Speed Max.
Ion Balance	within ±5V	600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Aluminum	
Electrode Material	Tungsten	
Mounting Method	Desk Top	
Weight	6.2kg	
Function	4 Step Fan Speed, Tip Cleaning, Auto Tip Cleaning	
Alarm Function	Ion Unbalance Alarm, Fan Alarm	
Interface	Remote On/Off, Run State, Alarm, Tip Cleaning, RS 485	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Large size Ion Blower
- Automatic ion balance control **Patent**
- Easy maintenance via automatic tip cleaning function **Patent**
- Fan speed control (4Steps)
- Interface compatibility with automation (PLC) **Patent**
- Ion unbalance / Fan abnormal buzzer alarm **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

SBL-15S



You can eliminate static from short to mid range. Small sized and light weight can be easily used in various circumstance and installed in various way.

BEST SELLER



Specifications

Parameter	Description / Value	Remark
Input Power	DC 24V	Adaptor(AC110~240V, 50/60Hz, DC24V, 2.5A)
Power Consumption	35W	
Current Consumption	159mA	AC 220V
Ion-Generation Method	Steady-State DC	Piezo
Air Blow Volume	4.84m ³ /min	
Noise Level	62dB	
Ion Balance	Within ±5V	600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	EGL	
Electrode Material	Standard : Tungsten / Option : Titanium	
Mounting Method	Desk Top	
Weight	2.8kg	
Function	Tip Cleaning, 2Steps Fan Speed, Ion Balance Display	
Alarm Function	Ion Unbalance Alarm	
Interface	Remote On/Off, Run State, RS485, Alarm(Ion Unbalance), Tip Cleaning	
Option	RMS(Real Monitoring System)	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- The safety is secured with low voltage (DC24V)
- Automatic ion balance control **Patent**
- Convenient tip cleaning and replacing by using sliding type of back cover
- LED alarm when ion balance has problem
- Simple tip cleaning function
- Fan speed control (2Steps)
- With RMS, You can control up to 128 devices (Option : SBL-12A) **Patent**

SOB-S Series



It is possible to ionize whole closed space through upper installation. Due to slim and light-weight, the installation access is easier. Easy maintenance using a discharge needle cleaning brush and a detachable rubber cover.



▶ SOB-3S

Specifications

Parameter	Description / Value				Remark
	SOB-2S	SOB-3S	SOB-4S	SOB-5S	
Input Power	AC 100 ~ 240V, 50/60Hz				
Power Consumption	37W	47W	60W	75W	Fan Speed Max.
Current Consumption	168mA	213mA	272mA	341mA	AC 220V
Ion-Generation Method	Steady-State DC				
Air Flow	8.5m ³ /min	12.75m ³ /min	17.0m ³ /min	21.25m ³ /min	Fan Speed Max.
Noise Level	63dB	64dB	65dB	67dB	1,000mm, Fan Speed Max.
Ion Balance	within ±5V				600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH				
Ozone(O3) Concentration	≤0.05ppm				
Main Body Material	Aluminum				
Electrode Material	Tungsten				
Mounting Method	Ceiling or Wall Mount				
Weight	3.1kg	4.1kg	5.2kg	6.2kg	
Function	4 Step Fan Speed, Tip Cleaning, Auto Tip Cleaning				
Alarm Function	Ion Unbalance Alarm, Fan Alarm				
Interface	Remote On/Off, Run State, Alarm, Tip Cleaning, RS 485				
Warranty	1 year				

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Key Features

- Ionizing whole closed space through upper installation
- 2Fan(SOB-2S), 3Fan(SOB-3S), 4Fan(SOB-4S), 5Fan(SOB-5S) available for customer needs
- Automatic ion balance control **Patent**
- Slim size, Light-weight, Low-noise
- Easy maintenance via automatic tip cleaning function **Patent**
- Fan speed control (4Steps)
- Interface available with Automation (PLC) **Patent**
- Ion unbalance / Fan abnormal buzzer alarm **Patent**
- With RMS, possible to check operation status in real time (Option) **Patent**

SBL-18/108

It is effective to ionize short/middle distance. Due to small size and light-weight, the installation access is easier.



▶ SBL-18 ▶ SBL-108

Key Features

- Small size Ion Blower
- Ion Balance within $\pm 10V$ (SBL-108), within $\pm 30V$ (SBL-18)(300mm)
- Small and light-weight Ion Blower that can be installed in numerous areas
- Interface available with Automation(PLC, Computer) (SBL-108) **Patent**
- With RMS, possible to check operation status in real time
(Option : SBL-108) **Patent**

Specifications

Parameter	Description / Value		Remark
	SBL-18	SBL-108	
Input Power	AC 110 ~ 220V, 50/60Hz	DC 24V	SBL-108 : Adaptor (AC 110~220V, 50/60Hz, DC 24V)
Power Consumption	18W	22W	Fan Speed Max.
Current Consumption	81mA	100mA	
Ion-Generation Method	DC Type	Steady-State DC	
Air Flow	1.9m ³ /min		Fan Speed Max.
Noise Level	54dB		1,000mm, Fan Speed Max.
Ion Balance	within $\pm 30V$	within $\pm 10V$	600mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		
Ozone(O3) Concentration	$\leq 0.05ppm$		
Main Body Material	Non-Flammable ABS		
Electrode Material	Tungsten		
Mounting Method	Desk Top		
Weight	0.8kg		
Function	2 Step Fan Speed		
Alarm Function	-	Ion Unbalance Alarm	
Interface	-	Remote On/Off, Run State, Alarm, RS 485, Alarm(Ion Unbalance), Power Input	
Option	-	RMS (Real Monitoring System)	
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



SMB-60

By using high frequency this product satisfies Ion balance($\pm 20V$) which is suitable for IEC international standard. The sliding back cover makes maintenance easier and more convenient.



Key Features

- Mini size Ion Blower
- Mini size and light-weight Ion Blower that can be installed in numerous area
- Ion balance within $\pm 20V$
- Tip cleaning term can be extended by high frequency AC
- The safety is secured with low voltage (DC24V)

Specifications

Parameter	Description / Value	Remark
Input Power	DC 24V	Adaptor(AC 110~220V, 50/60Hz, DC 24V)
Power Consumption	18W	Fan Speed Max.
Current Consumption	81mA	AC 220V
Ion-Generation Method	High-Frequency AC	Piezo
Air Flow	1.1m ³ /min	
Noise Level	51dB	
Ion Balance	within $\pm 20V$	200mm, Maximum Air flow
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	$\leq 0.05ppm$	
Main Body Material	EGI	
Electrode Material	Tungsten	
Mounting Method	Desk Top	
Weight	0.5kg	
Function	Volume Fan Speed	
Alarm Function	High Voltage Abnormal Alarm	
Interface	Alarm (High Voltage Abnormal)	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



Ion Nozzle



By accepting high frequency type, this nozzle type shows stable ion balance and is suitable for air cleaning to get rid of contaminants and static from the surface.

SPN-12/12S
Fitting Tubes

SPN-21

SIG-30

SIC-150

Ion Nozzle

SPN-12/12S



Subminiature Ion Nozzle can reduce contamination of tip by adopting high frequency mode(Piezo:72kHz). Available for various working environment with different fitting tubes(Option) and angle adjustable bracket, and it brings quick ionization in narrow space. Also, contamination caused by air can be prevented by adjusting Air filter.(Option)

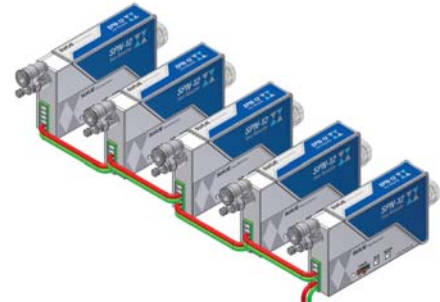
▶ SPN-12



▶ SPN-12S



[Infrared rays Sensor]



[Daisy Chain]



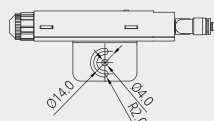
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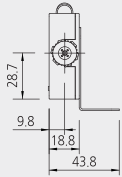
[Easy to adjust spray angle]

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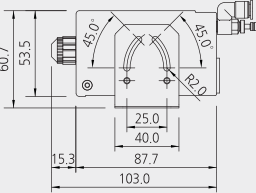
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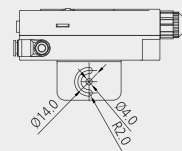


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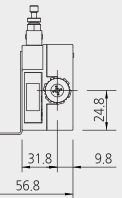


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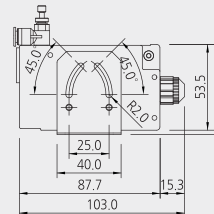
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Specifications

Parameter	Description / Value		Remark
	SPN-12	SPN-12S	
Input Power	DC 24V		
Adaptor	Input	AC 100~240V, 50/60Hz, 1.7A	
	Output	DC 24CV, 2.5A, 60W	
Power Consumption	1.2W	3.6W	
Current Consumption	50mA	150mA	AC 220V
Ion-Generation Method	High Frequency AC		Piezo
Air Purge Supply Pressure	0.1MPa ~ 0.6MPa		CDA(Clean Dry Air), N2
Air Inlet	Ø6		
Ion Balance	Within ±15V		300mm
Operation Circumstance	0°C ~ +130°C(32°F ~ 266°F), 35% ~ 85% RH		
Main Body Material	Non-Flammable ABS		
Nozzle Material	Teflon		
Electrode Material	Tungsten		
Mounting Method	Bolt Mounting with Bracket		
Weight	80g	130g	
Sensor	-	Photoelectric Sensor	
Alarm Function	High Voltage Abnormal Alarm		
Interface	Alarm(High Voltage Abnormal)		
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Fitting Tube

This is an optional item for SPN-12/12S for special area to increase the convenience of operation. We can customize any size upon your request.



Key Features

- SPN-12/12S Option Items
- Optimized performance of Ion Nozzle
- Easy to use in special environment condition
- Custom build is available

※ You can find different ionizing performance if you use fitting tube.

SPN-21

Micro-sized pin type ion nozzle for inserting in Stage. Depending on the install environment, 5m cable can be provided.



Key Features

- Subminiature Pin type Ion Nozzle
- Suitable for installing in narrow area
- Possible to connect up to 4ea of SPN-21 by using external controller (SBP-14J4), (In the case of SBP-06-S21 : max.1ea)
- Cable length can be customized up to 5m

Specifications

Parameter	Description / Value	Remark
Ion-Generation Method	Corona Discharge AC	
Air Purge Supply Pressure	0.05MPa ~ 0.5MPa	CDA(Clean Dry Air)
Air Tube Diameter	Ø6	
Ion Balance	Within ±15V	50mm
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Ozone(O3) Concentration	≤0.05ppm	
Main Body Material	Aluminum, Stainless steel	
Electrode Material	Standard : Tungsten / Option : Poly Silicon, Titanium	
Electrode Replacement	Cartridge type	
Mounting Method	Bolt Mounting with Bracket	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



▶ Power Controller (SBP-14J4)



▶ Power Controller (SBP-06-S21)

※ We cannot guarantee normal ion balance under N2 circumstance.

SIG-30

AC corona discharge Ion Gun which has stable ion balance and makes lots of ion for eliminating electricity rapidly also blowing adhered dust. In addition, it is effective that the LED light on the device can visualize the particle in the area of pointing.



Key Features

- Small size Gun type Ion Nozzle
- Ion balance within $\pm 10V$ (300mm)
- Ergonomically designed Ion Gun
- Identifying the particle/dust through LED light
- Durable cable that was tested more than 150,000times of three-point-flexure test
- Easy to disassemble the nozzle, simple/easy tip cleaning

Specifications

Parameter	Description / Value	Remark
Input Power	DC 24V	$\pm 5\%$
Power Consumption	1.8W	Lighting LED On
Current Consumption	75mA	DC 24V
Ion-Generation Method	High Frequency AC	
Air Purge Supply Pressure	0.1MPa ~ 0.6MPa(0.4MPa Recommendation)	CDA(Clean Dry Air), N2
Ion Balance	Within $\pm 10V$	0.3MPa, 150mm
Operating Distance	50mm ~	Non-Hazardous Locations
Operation Circumstance	5°C ~ +40°C(41°F ~ 104°F), 35% ~ 65% RH	No dewing
Ozone(O3) Concentration	$\leq 0.05ppm$	50mm
Main Body Material	ABS	
Electrode Material	Tungsten	
Hook Material	Stainless Steel	
Weight	198g	
Alarm Function	High Voltage Abnormal Alarm	
Accessory	AC Adaptor	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SIC-150

SIC-150 shows excellent performance for removing static and dust from semiconductor and small electronic device. SIC-150 has an infrared ray sensor and produces ion automatically when the electrified body is in the chamber. Also, collecting device attaches/removes fine dust floating in the process, decreases defect rate remarkably, and is effective for cost saving on maintenance.



▶ Infrared ray sensor applied



▶ Air filter installed(0.3 μm)

Key Features

- Chamber type Ion Nozzle
- Ion balance within $\pm 20V$
- Suitable for small parts and products static ionization
- Infrared ray sensor detects material inside the chamber and operates SIC-150
- Air filter applied(0.3 μm)
- Secondary contamination can be prevented via dust collecting unit **Patent**
- Solves the problems of Small/narrow space cleanliness & static elimination at the same time

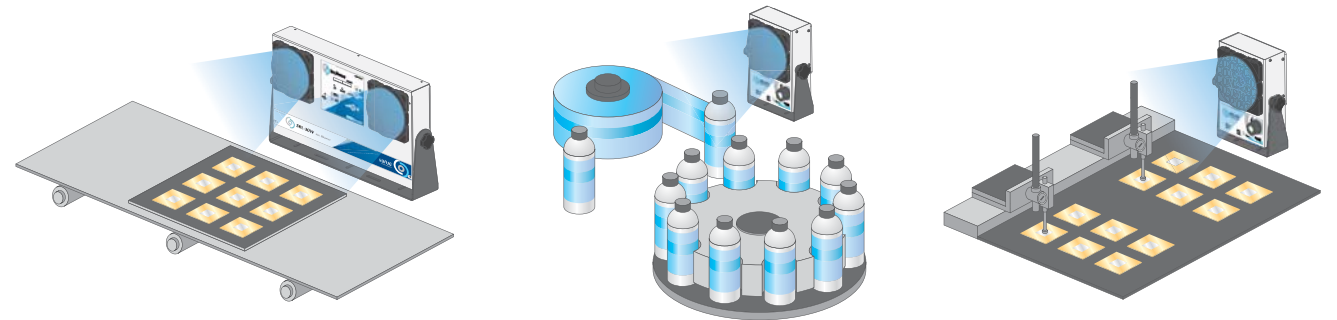
Specifications

Parameter	Description / Value	Remark
Input Power	AC 100 ~ 240V, 50/60Hz	
Power Consumption	20W	
Current Consumption	90mA	AC 220V
Ion-Generation Method	High Frequency AC	Piezo
Air Purge Supply Pressure	0.1MPa ~ 0.5MPa	CDA(Clean Dry Air), N2
Air Inlet	$\varnothing 6$	
Maximum Air Flow	2.499m ³ /min	
Ion Balance	Within $\pm 20V$	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Main Body Material	SUS 304	
Electrode Material	Tungsten / Titanium	
Weight	3.3kg	
Sensor	Photoelectric Sensor	
Alarm Function	High Voltage Abnormal Alarm	
Warranty	1 year	

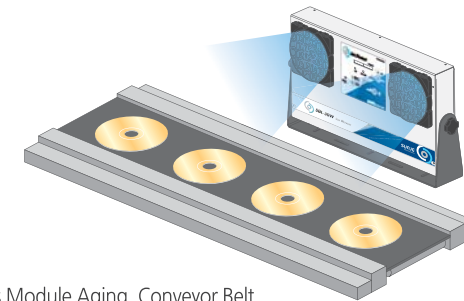
※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

Ion Blower & Nozzle

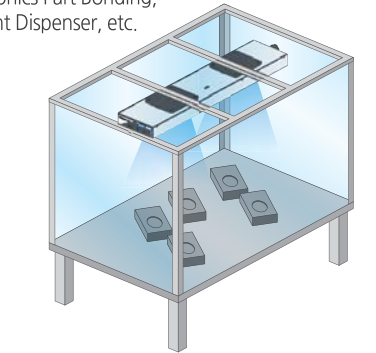
Ion Blower [Application]



- ▶ Chip Mount, SMD, LCD Cell Scribe, Electronics Device Repair, Electronics Module Assembly, etc.



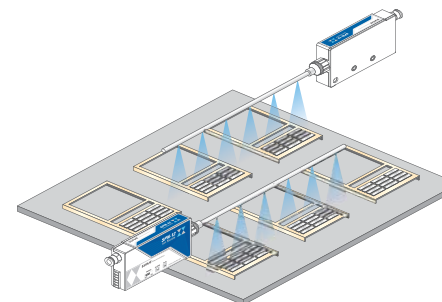
- ▶ Electronics Module Aging, Conveyor Belt, Part Feeder, Clean Booth & Chamber, Protective Film Attachment, LCD Assembly, etc.



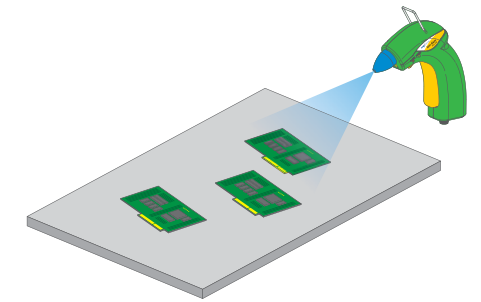
- ▶ Electronics Part Repair & Assembly, Electronics Part Bonding, Sealant Dispenser, etc.

- ▶ HDD Assembly, CD&DVD Manufacturing, Electronics Part & Module Assembly, Plastic Panel & Sheet Handling, LCD Module, Cell Phone Assembly, Optical Device Assembly, SMD, etc.

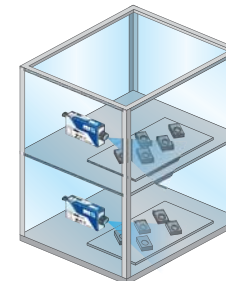
Ion Nozzle [Application]



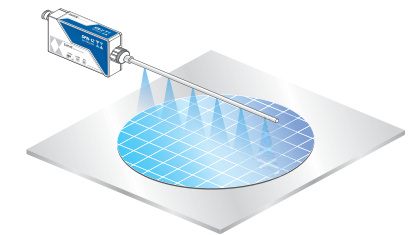
- ▶ LCD Panel Assembly, PCB Module Assembly, Plastic Sheet Cutting & Handling, Mobile Phone Assembly, etc.



- ▶ PCB Module Handling, Protective Film Attachment, Electronics Device Assembly, Electronics Part Overhaul, Painting Preparation, etc.



- ▶ Product Part · Jig Stocker, Aging Chamber, OLB Line, Curing System, etc.

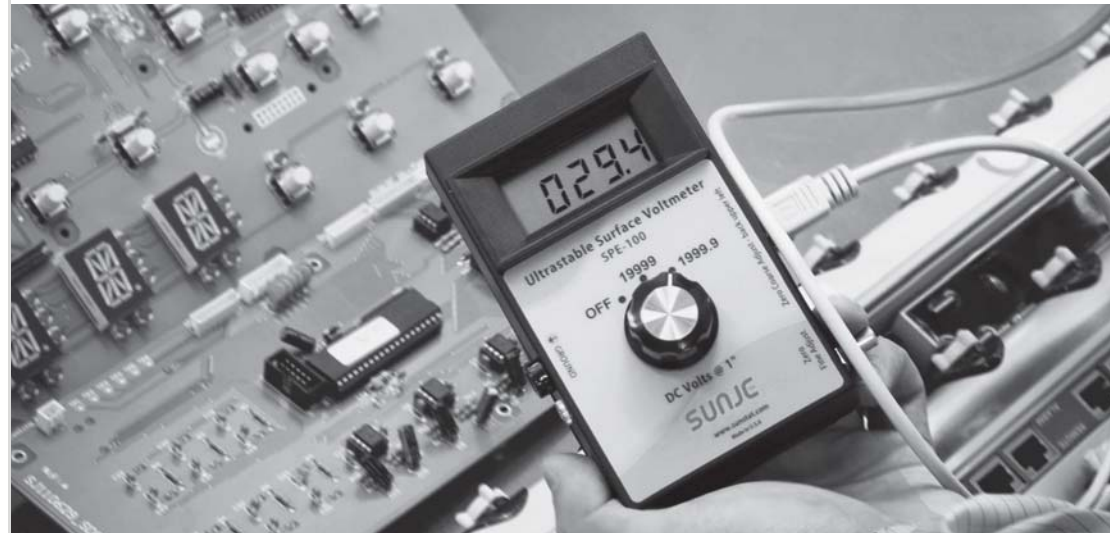


- ▶ Wafer Sawing, Chip Molding, Chip Marking, Chip Testing, Die-Banding, Wire Bonding, etc.



MMS / RMS

Measuring Monitoring System / Real Monitoring System



MMS Simple static voltage monitoring system for all place where static occurs such as OLED, LCD, Semiconductor manufacture process, Part assembly process, Printing process, Film process etc.

RMS This advanced managing system senses operating status of ionizers in real time and detects error/defect in the beginning so that prompt action can be carried out.

EVM-302/308

SM-30

SM-10

SICA-2

SPE-200

Measuring Monitoring System Block-Diagram

RMS&RMSU

MMS / RMS

EVM-302/308

It is a monitoring device for electric voltage sensor that can be possibly installed in OLED, LCD, PDP, Semiconductor, Parts assembly line, Printing, Filmming, and many other industries.



Key Features

- Easy communication through PC, e.g. save and manage electric voltage data (S/W offers)
- EVM-302 : max. 2 sensors connection / EVM-308 : max. 8 sensors connection
- Use either SM-10 or SM-30 sensor
- Individual or multiple set-ups are available
- In display panel, user can see the actual data value in real time
- If there are any exceed voltage are detected, the alarm will be on

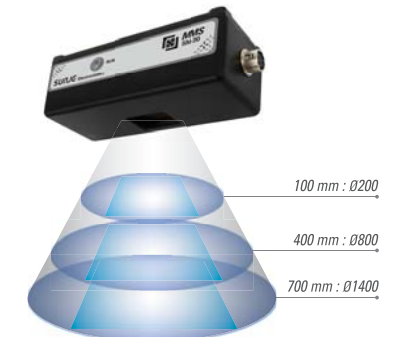
Specifications

Parameter	Description / Value		Remark
	EVM-302	EVM-308	
Input Power	AC 100V ~ 240V, 50/60Hz		
Power Consumption	15W	40W	
Current Consumption	68mA	181mA	AC 220V
Measuring Range	SM-10	Precision Mode : 0V ~ ±5kV / Wide Range Mode : 0V ~ ±40kV	
	SM-30	Precision Mode : 0V ~ ±20kV / Wide Range Mode : 0V ~ ±60kV	
Installation Distance for Sensor	SM-10	10mm ~ 100mm	
	SM-30	100mm ~ 700mm	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		Non-Condensing
Weight	2.48kg	5.5kg	
Output Signal	Alarm Output, RS-232 / RS-485 Communication (for EVM/EMSL, CC-Link (Option), Wireless (Option))		
Accuracy	±5%(F.S)		
Sensor	1 ~ 2ea	1 ~ 8ea	Option
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SM-30

This electric voltage detecting sensor is designed to compact structure with touchless type of sensing. The world's longest coverage measuring sensor that can detect the electric voltage from 100 to 700mm precisely. It can easily detect the voltage level from ±20kV to ±60kV.



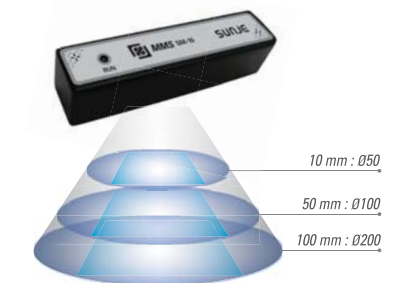
Performing coverage depending on installing distance

Key Features

- The most accurate and reliable electric voltage sensor
- Compact & contactless type sensor
- The world's first long-distance range measuring sensor (Max. 700mm)
- Measuring Range : ±20kV (Wide Range Mode ±60kV)

SM-10

SM-10 is compact and contactless type electric voltage sensor and easy to install. SM-10 can measure from min. ±5kV to max. ±40kV depending on the installation distance(10-100mm).



Performing coverage depending on installing distance

Key Features

- Compact & contactless type sensor
- Possible to measure up to 100mm
- Measuring Range : ±5kV(Wide Range Mode ±40kV)

Specifications

Parameter	Description / Value		Remark
	SM-10	SM-30	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		Non-Condensing
Weight	60g	150g	
Warranty	1 year		

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SPE-100 (New) NEW

It is a contactless type electric voltage sensor that can measure the target object. Within the range of ±19,999kV, user can measure the target by 0.1V level in detail SPE-100 (New) is very precise and highly sensitive unit in measurement.



Key Features

- Contactless type electric voltage measuring device
- Measuring Range : 0V ~ ±19,999.9V
- No need of drift or zeroing
- By getting rid of error from charged air molecule/ion
- Offering reliable data with high sensitivity sensor

Specifications

Parameter	Description / Value
Range at 1"	0 to +/- 19,999.9 V
Resolution at 1"	0.1 Volt
Accuracy	+/- 2% of the reading
Outputs	Analog Output
Environmental	-1 C to 43 C (30°F to 110°F), 0-90% RH non-condensing
Meter Size	115 x 72 x 30 mm
Probe Size	31 x 63.5 mm
Probe Cable Length	74 cm (detachable 6 pin mini din connector)
Weight	156g
Power	1. Battery 9 Volt Alkaline ~6 hour life (included) 2. External 9VDC Power adapter (included)
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

SICA-2

SICA-2 measures this number separately for positive and negative ions without any contact. (+ and - ions are usually present simultaneously) SICA-2 is a Gerdien condenser meter that can measure ions in air up to 200million ions/cc.



Key Features

- Measures positive and negative air ions up to 200million ions/cc
- Meter Calibration/Re-zeroing functions are built-in
- Small and Light weight (6V alkaline battery)
- Measurement up to 15 continuous hours
- Peak hold mode displays the highest positive or negative value
- Power saving through the standby function
- Measuring positive and negative ions by selecting the polarity

Specifications

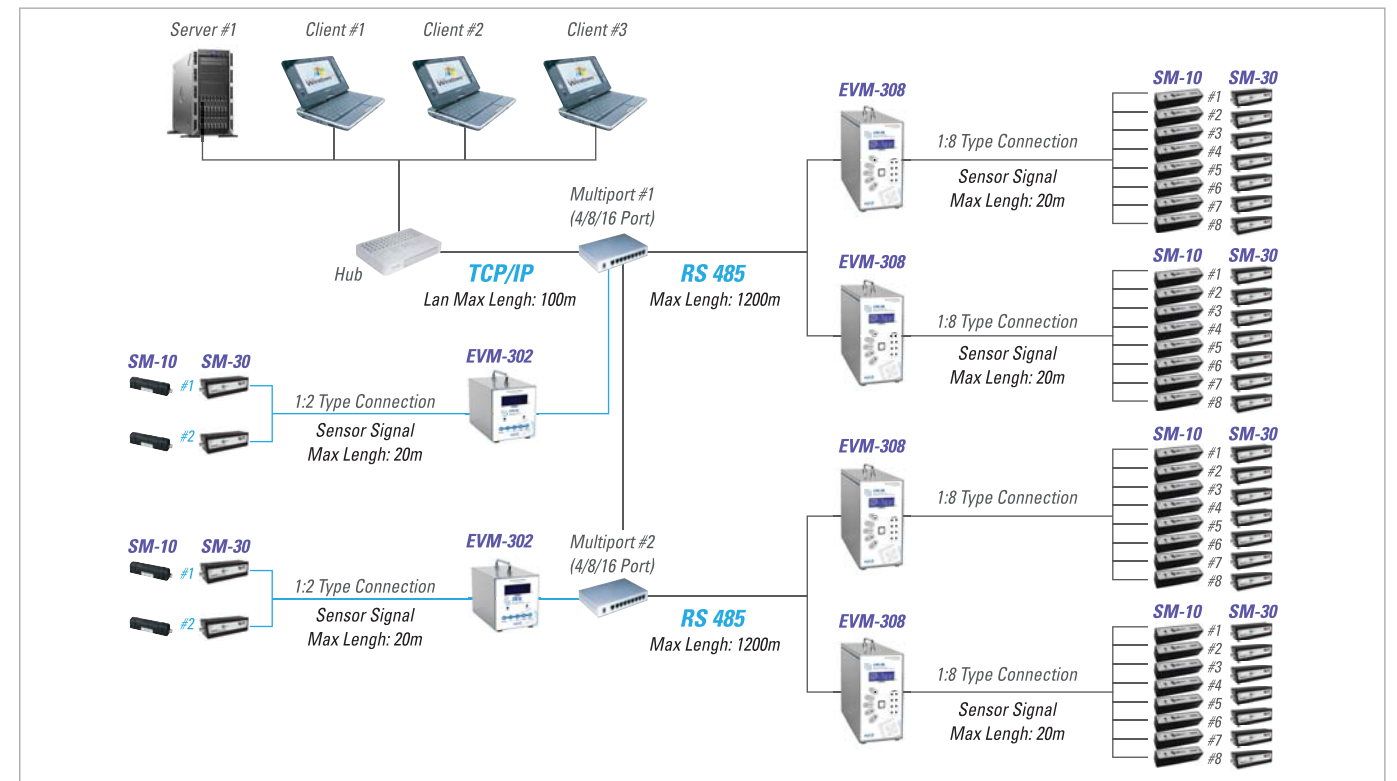
Parameter	Description / Value
Range / Resolution	2million or 200million Selectable Scales / 10(ions per cc)
Accuracy	+/- 20% with a repeatability 5%
Noise	20 ions / cc(1 second averaging)
Meter Size	197 x 102 x 45 mm
Weight	567g
Power	AA Alkaline Battery 4ea(~10 hour life) or AD Adapter
Warranty	1 year

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

MMS

Simple static voltage Monitoring system for all place where static occurs such as OLED, LCD, Semiconductor manufacture process, part Assembly process, printing process, film process etc.

Measuring Monitoring System Block-Diagram

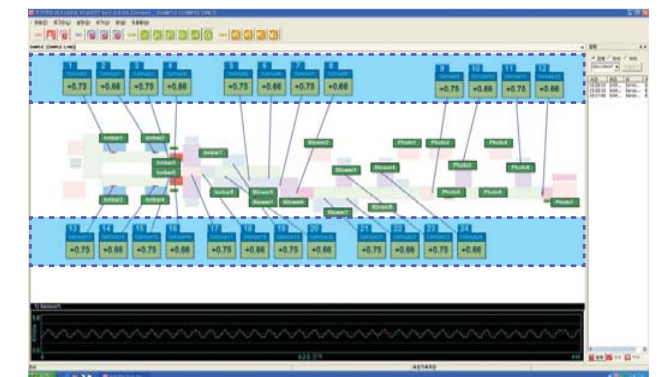


What's the MMS Program?

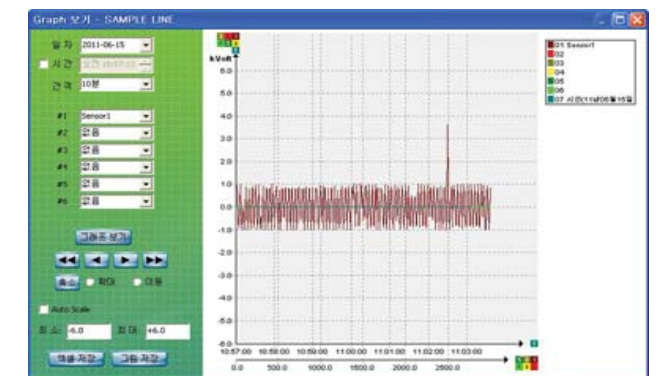
- EVM Series(e.g. Electro-voltage Measuring Device) can be connected to PC network in order to retrieve/analyze data in real time
- This system is suitable to be used in the area of FPD(OLED, LCD), semiconductor related, assembly line, printing, flimming, and etc. where any static problems are occurred
- Static management on the spot or in the office, identifying problem occurred point, long term data analysis etc. can be easily checked and managed

MMS Program Key Features

- Displaying the measured value in real-time
- Save data in Excel file
- Generate graphs via saved data loading
- Communication speed setup(at least 200ms)
- 1 server to 3 clients connection
- Data history management (Automatic file creation or deletion & Standard setup period : 30days)
- Categorized/visualized by product lines and machinery partitions
- Display Sensor & controller position
- Alarm history available by sensor
- When it alarms, data from 3 sec before alarm to 3 sec after alarm is separately saved
- When alarming, various external indicators will be on (e.g. LED, Beep, and Display)
- Daily report will be created automatically



▶ MMS Program Main View

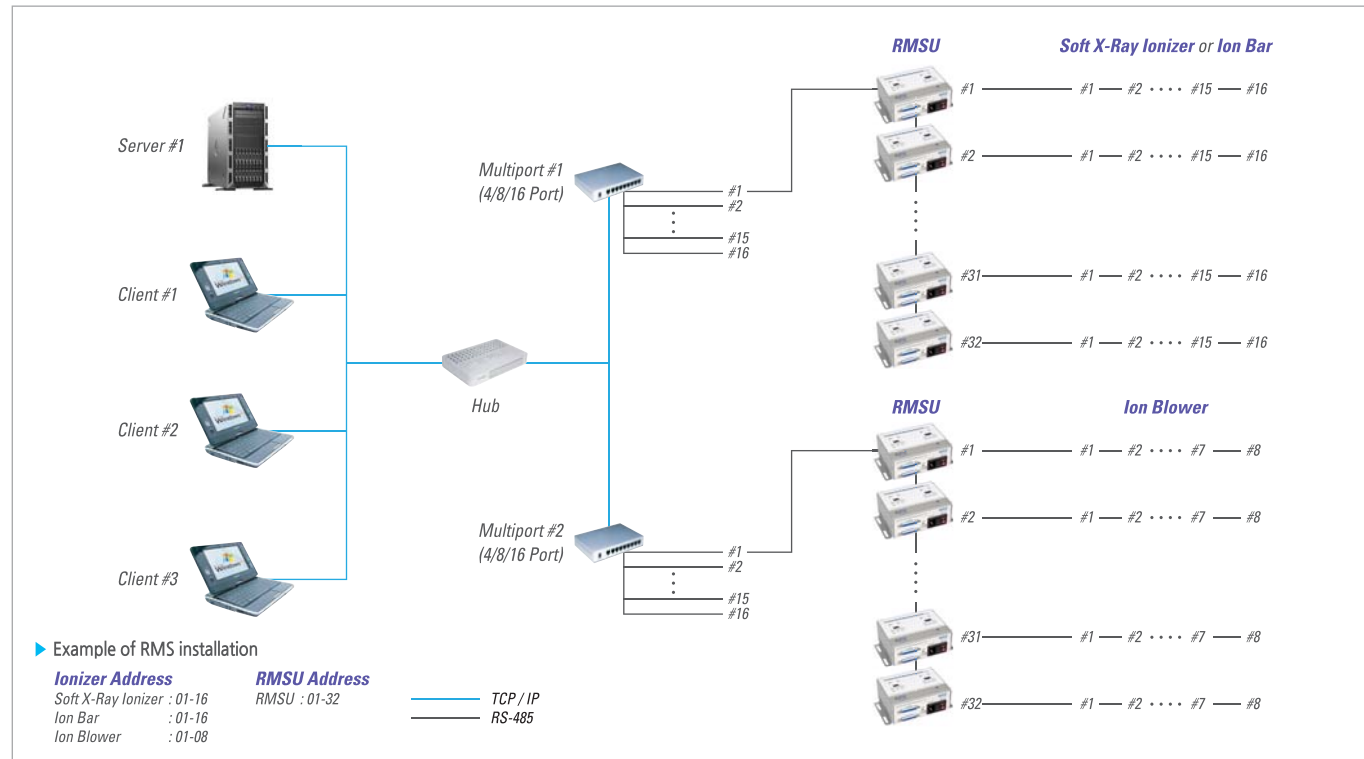


▶ Window of Measured Data

RMS

By monitoring ionizers in real time, RMS finds out abnormal symptom in the beginning so that prompt action can be carried out. RMS is an advanced ionizer managing tool for complete automation process.

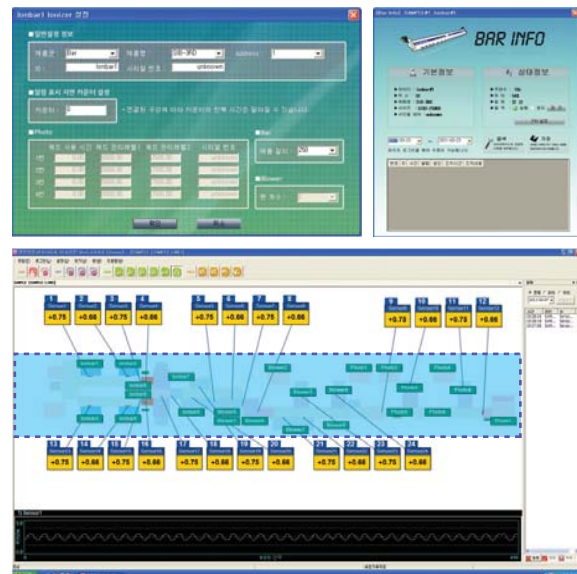
Real Monitoring System Diagram Example



※ Depending on the installing circumstances, the actual installation might vary.

Key Features

- Identifying communication status between ionizers and PC
- Monitoring ionizers in real time (checking every 1 minute or less)
- Reporting ionizer operation status (e.g. Alarming)
- Real time report will be created either the period of time or group of ionizers
- Input (Detailed) individual information & search
- 1 server to 3 clients connection



▶ RMS Program Main View

RMS Controller (RMSU)

RMS (Real Monitoring System) is a network controlling device that works only with ionizers



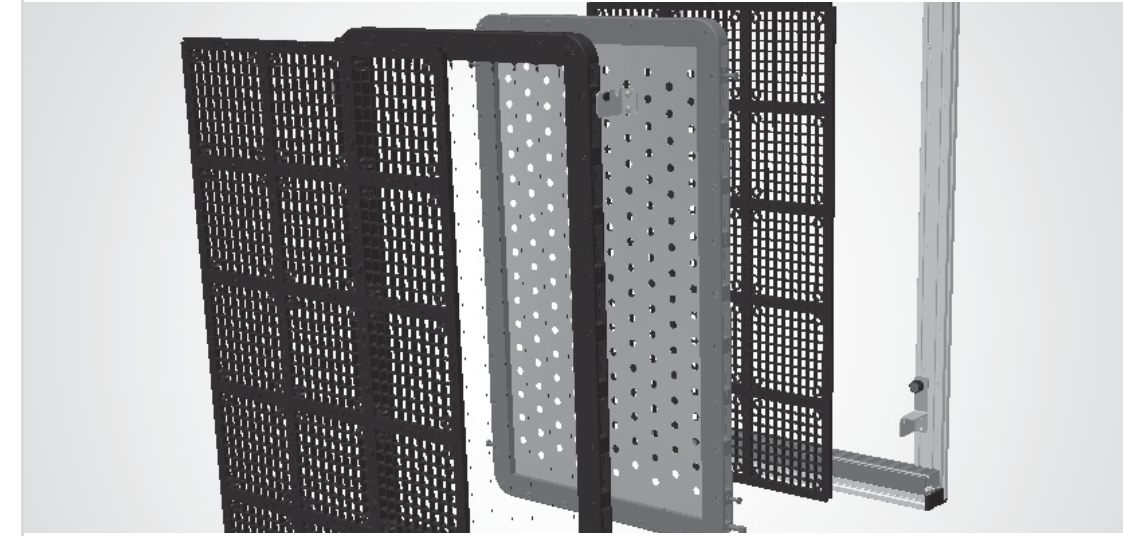
Specifications

Parameter	Description / Value	Remark
Input Power	AC 100V ~ 240V, 50/60Hz	
Power Consumption	Max. 5.5W	
Current Consumption	Max. 25mA	AC 220V
Communication Mode	RS-485	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Main Body Material	EGI	
Mounting Method	Bolt Mounting with Bracket	
Weight	1kg	
Interface	Remote On/Off, Alarm State, Interlock	
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.



Dust Collector



Dust collector for special managing area in clean room.

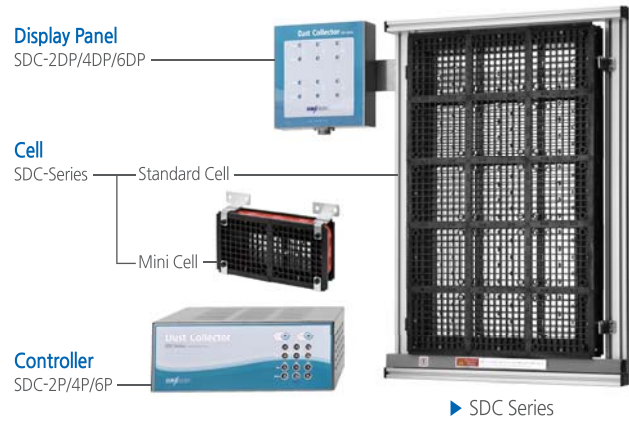
SDC Series



Dust Collector

In display, semiconductor, and IT related business fields, the enforcement of particle management level has increased. Our SDC Series, is called Dust Collector, suits those circumstances to collect any floating particle/dusts around the area. Using electrostatic forces to eliminate/absorb floating particles around the production process, it significantly reduces the failure rate of maintaining the Clean-process of the atmosphere and optimized the product completion that is effective in reducing maintenance costs.

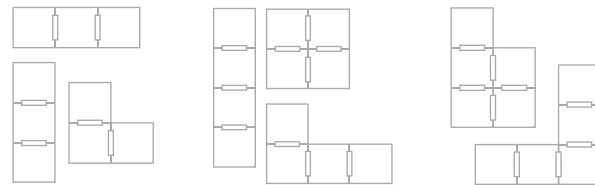
SDC Series



Key Features

- Dust collector for special management area in the clean room
- The system is combined with 7mini cell and 17standard cell in order to serve various working areas
- Various layout composition by using cell connecting bracket
- With 1controller(SDC-2P/4P/6P), it can be connected with 2, 4, 6 Cells(SDC Series) at once
- Provide cover for user safety (detachable) **Patent**
- When any direct human or conducting material contacts are detected, it will alarm and the power will be shut down **Patent**
- Display panel is available(Optional)
- Dust/particle collector in clean room **Patent**

Cell Layout



Particle Counting Test Report

• Model : Mini Cell SDC-1296

[% : The Rate of Dust Collection]

Particle Size [μm]	0.3 ~ 0.5		0.5 ~ 1.0		1.0 ~ 2.0	
	X	O	X	O	X	O
30	34%	28%	44%	37%	51%	46%
50	23%	16%	29%	19%	33%	22%
70	15%	10%	19%	12%	21%	16%
100	10%	10%	14%	13%	18%	15%

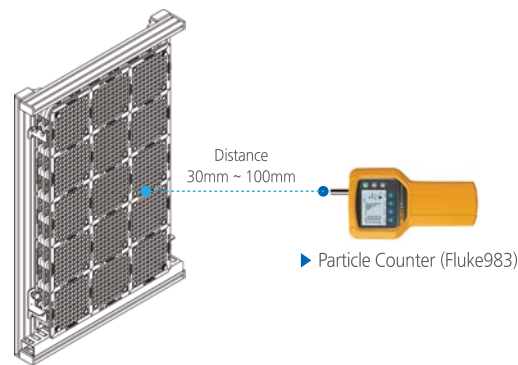
※ X : Cell without Safety Cover / O : Cell with Safety Cover

• Model : Standard Cell SDC-4668

[% : The Rate of Dust Collection]

Particle Size [μm]	0.3 ~ 0.5		0.5 ~ 1.0		1.0 ~ 2.0	
	X	O	X	O	X	O
30	56%	48%	62%	52%	66%	59%
50	47%	38%	50%	46%	51%	49%
70	43%	32%	48%	39%	51%	41%
100	32%	22%	26%	24%	24%	21%

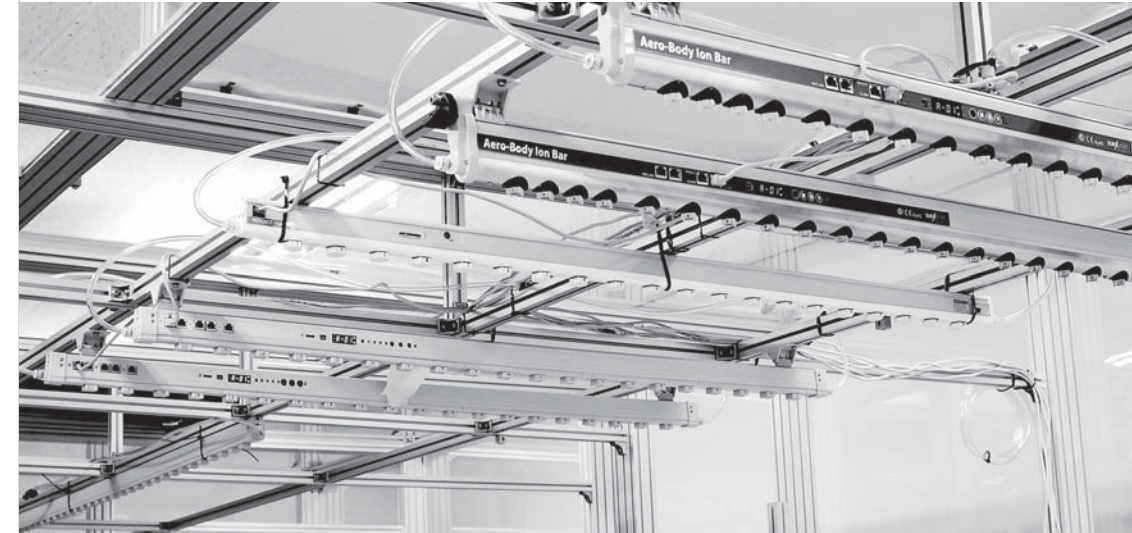
※ X : Cell without Safety Cover / O : Cell with Safety Cover



※ See the above chart for the result of Dust Collector Comparison Test.(Before & After)
We have tested using particle counting device.

※ It can be different depending on the temperature, humidity, and air flow in applied environment.

Decay Time Characteristics



Following graph shows each product's performance.

Soft X-Ray Ionizer

Ion Bar

Ion Blower

Ion Nozzle

Specifications

• Cell

Parameter	Description / Value	Remark
Input Voltage	Collector : DC +5kV / Emitter : DC -5kV	±10% H/V Connector
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Dust Collecting Rate	Mini	Distance : 30 ~ 70mm Dust : 0.3 ~ 2.0μm Without Safety Cover
	Standard	
Main Body Material	Aluminum	
Cover Material	Self-extinguishing PC	
Electrode Material	Stainless Steel	
Mounting Method	Wall	
Weight	Mini	1kg ~ 2.8kg
	Standard	2.5kg ~ 5.5kg
Option	Emitter Electrode, Cable Duct	
Maintenance	Electrode Cleaning : 1 month	Ultrasonic Cleaning
	Electrode Replacement Cycle : 1 year	Emitter
Warranty	1 year	

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

• Display Panel [SDC-2DP / SDC-4DP / SDC-6DP]

Parameter	Description / Value			Remark
	SDC-2DP	SDC-4DP	SDC-6DP	
Output Port	Run : 2 Ports	Run : 4 Ports	Run : 6 Ports	
	Alarm : 2 Ports	Alarm : 4 Ports	Alarm : 6 Ports	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 65% RH			Non-Condensing
Cover Material	Stainless Steel			
Mounting Method	Wall			
Weight	1.5kg			
Function	Run / Alarm LED			
Warranty	1 year			

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

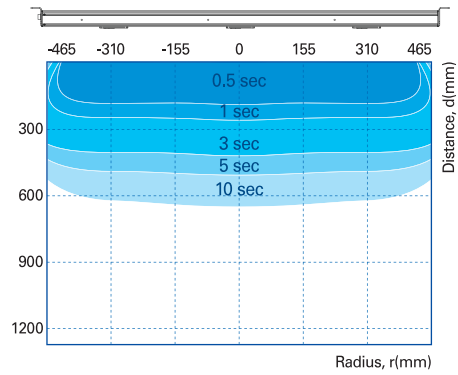
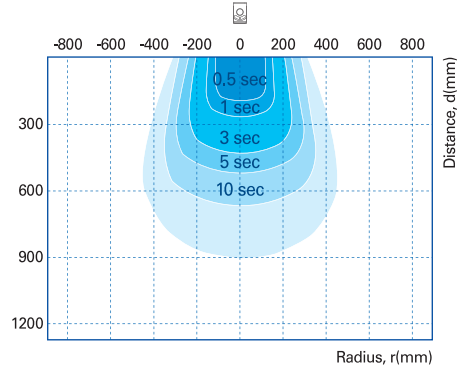
Decay Time Characteristics

[Soft X-Ray Ionizer]

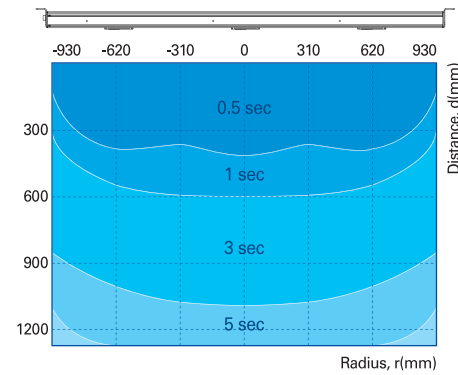
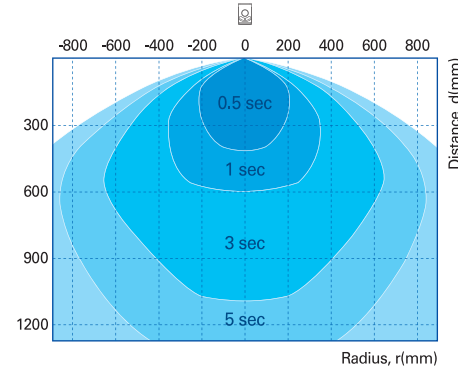
Bar Type

Test Conditions

- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH
- Model : SXB-05-900-3



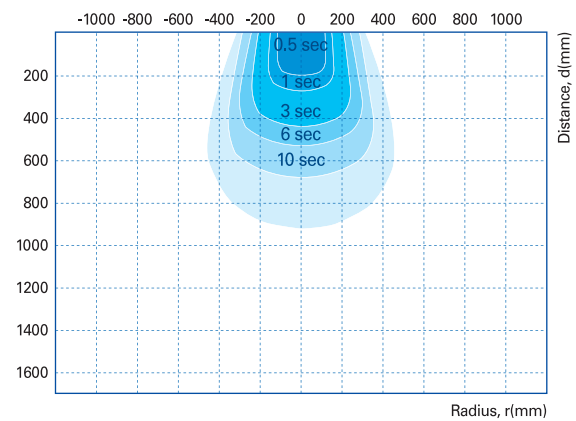
- Model : SXB-10-1500-3



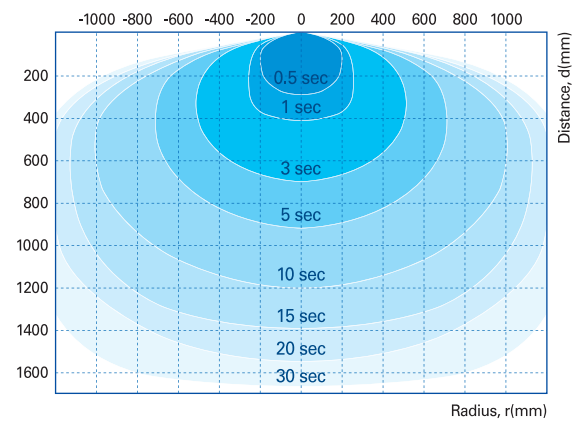
Pin Type

Test Conditions

- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH
- Model : SXN-05SP1



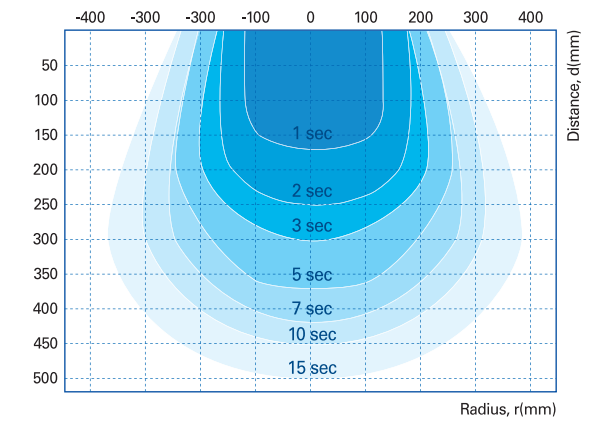
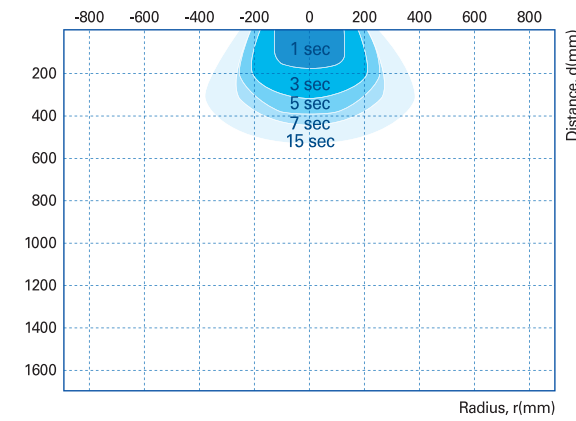
- Model : SXN-10SP1



5kV

Test Conditions

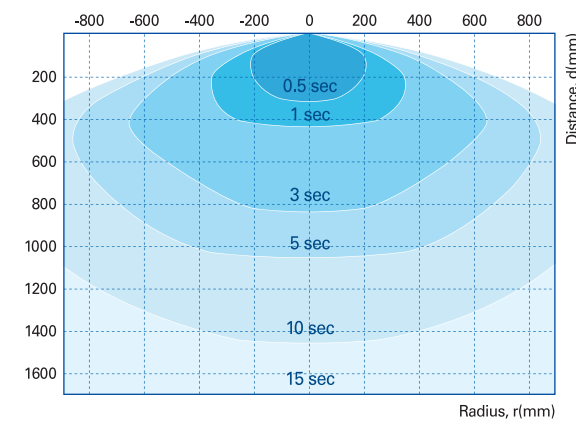
- Model : SXN-05U
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



10kV

Test Conditions

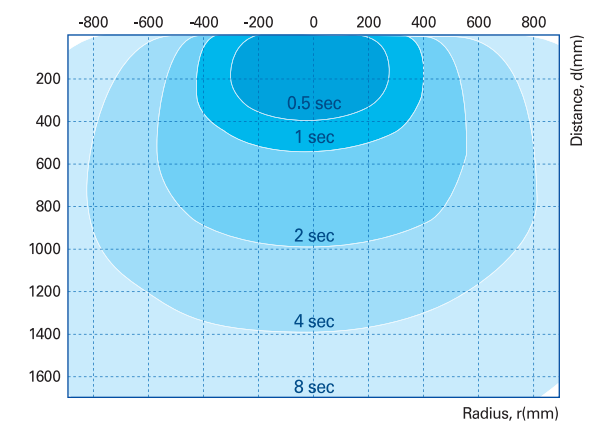
- Model : SXN-10T
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



15kV

Test Conditions

- Model : SXH-15U
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH

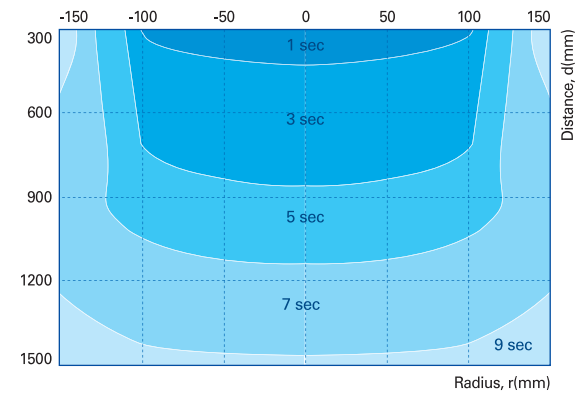
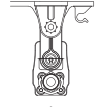


Decay Time Characteristics [Ion Bar]

SIB5S

Test Conditions

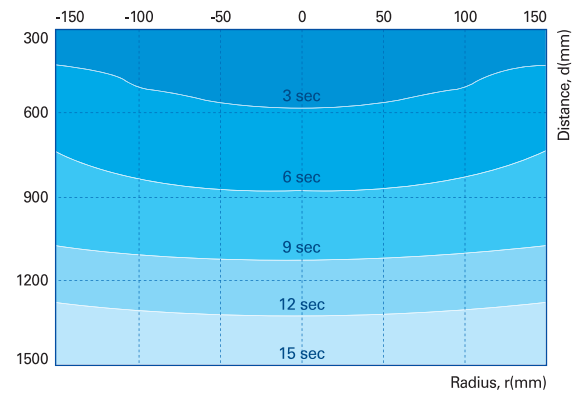
- Model : SIB5-1500S
- Socket : SIE-4E
- Output Voltage : Pulse AC ± 10.5 kVp-p
- Air Pressure : 0.3MPa
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 X 150mm)
- Frequency : 50Hz



SIB1

Test Conditions

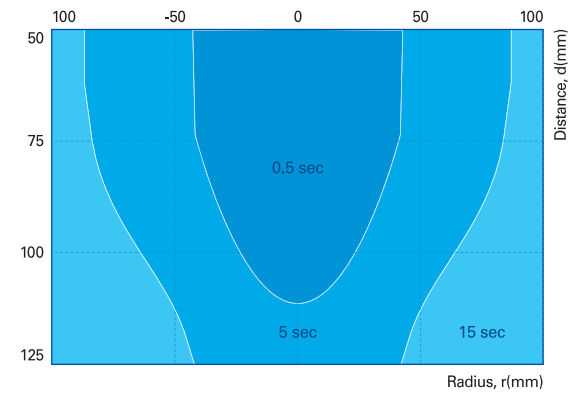
- Model : SIB1-160A / SBP-11N
- Socket : SIE-1
- Output Voltage : AC 10.5kVp-p(P-06, N-06)
- Air Pressure : 0.3MPa
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 X 150mm)
- Frequency : 30Hz



SSB1

Test Conditions

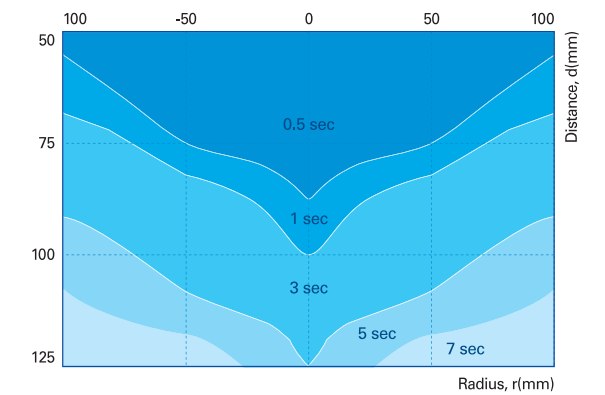
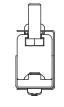
- Model: SSB1-2700 / SBP-14J4
- Socket : None(Corona Tip : Tungsten)
- Air Pressure : None Air Pressure
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 x 150mm)
- Frequency : 30Hz



SKB

Test Conditions

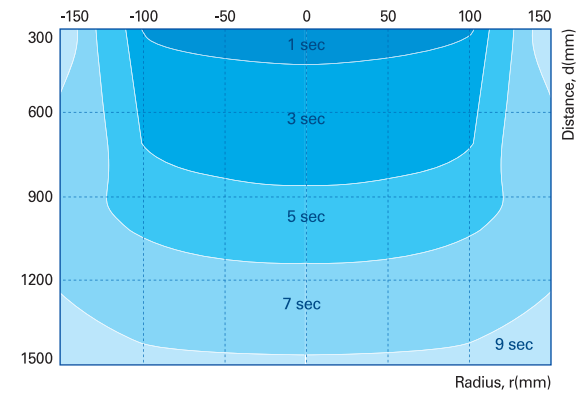
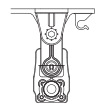
- Model: SKB-700 / SKP-101
- Socket : None (Corona Tip : SUS 304)
- Output Voltage : AC 5kV ~ 7kV $\pm 7\%$ (Max.)
- Air Pressure : None Air Pressure
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 X 150mm)
- Frequency : 60Hz



SIB4

Test Conditions

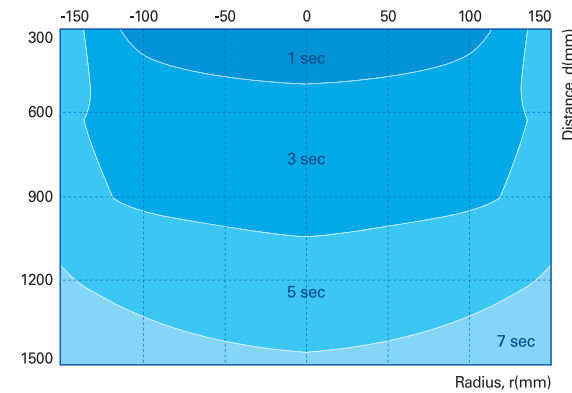
- Model : SIB4-1000
- Socket : SIE-4
- Output Voltage : Pulse AC ± 10.5 kVp-p
- Air Pressure : 0.3MPa
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 X 150mm)
- Frequency : 30Hz



SIB7

Test Conditions

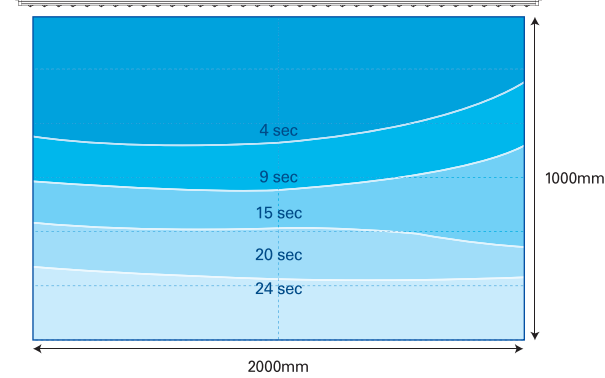
- Model : SIB7-540
- Socket : SIE-4
- Output Voltage : A10.5kVp-p
- Air Pressure : 0.3MPa
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $44\% \pm 2\%$ RH
- Charge Plate Capacitance : 20pF (150 X 150 mm)
- Frequency : 30Hz



SRB

Test Conditions

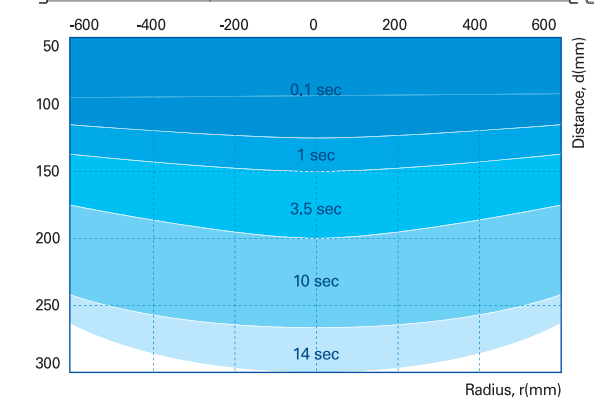
- Model: SRB-2100
- Socket : SIE-CS
- Output Voltage : Positive(+) 11kV, Negative(-) 7.5kV
- Air Pressure : None Air Pressure
- Decay Time : $\pm 1,000$ V to ± 100 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 X 150mm)
- Frequency : 0.1Hz



SIB-ex

Test Conditions

- Model: SIB-1600ex
- Socket : None(Corona Tip : SUS 304)
- Air Pressure : None Air Pressure
- Decay Time : $\pm 1,000$ V to ± 200 V
- Temperature & Humidity : $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$, $40\% \pm 2\%$ RH
- Charge Plate Capacitance : $20\text{pF} \pm 2\text{pF}$ (150 x 150mm)
- Frequency : 60Hz

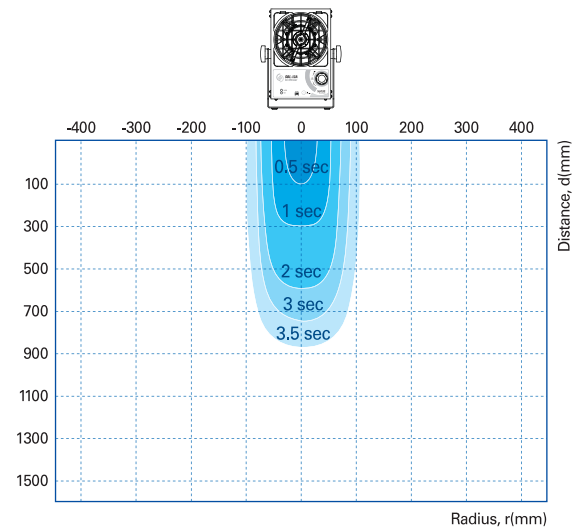


Decay Time Characteristics [Ion Blower]

SBL-12A/B

Test Conditions

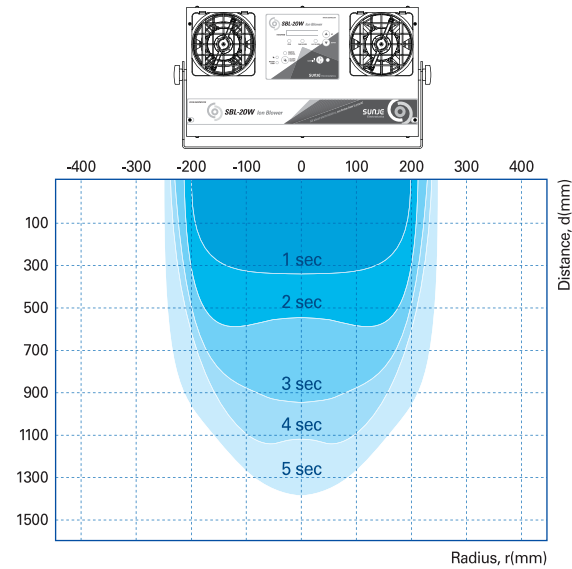
- Model : SBL-12A/B
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SBL-20W

Test Conditions

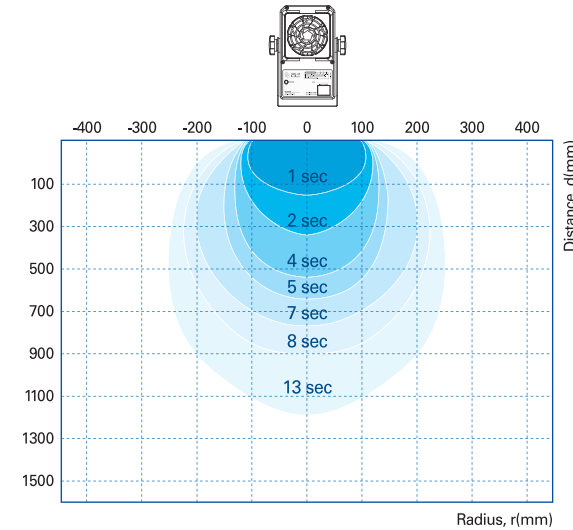
- Model : SBL-20W
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SBL-18

Test Conditions

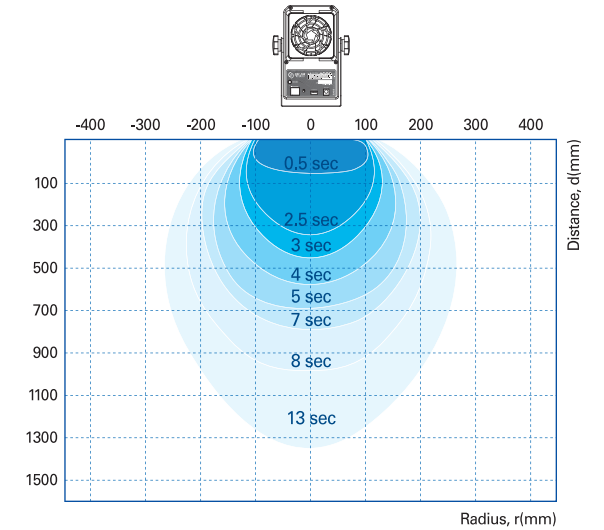
- Model : SBL-18
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SBL-108

Test Conditions

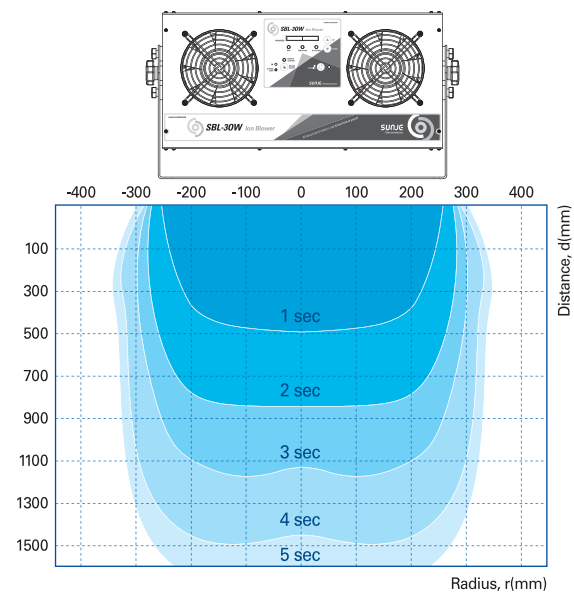
- Model : SBL-108
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SBL-30W

Test Conditions

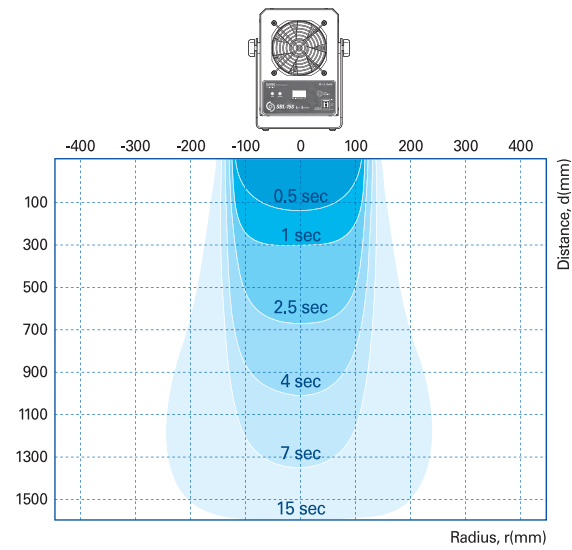
- Model : SBL-30W
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SBL-15S

Test Conditions

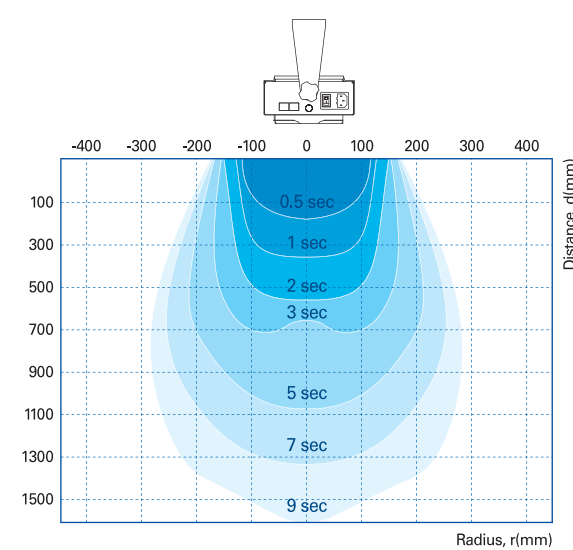
- Model : SBL-15S
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SOB-S Series

Test Conditions

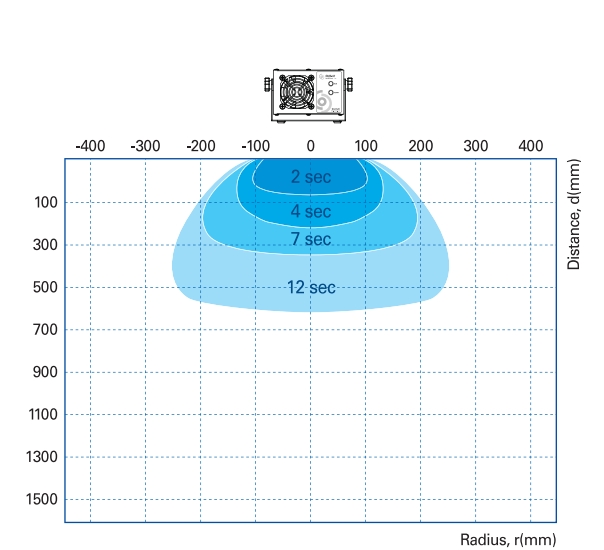
- Model : SOB-3S
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SMB-60

Test Conditions

- Model : SMB-60
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



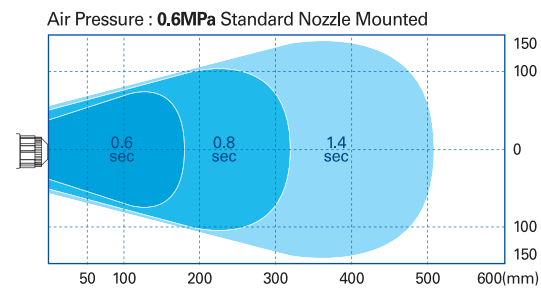
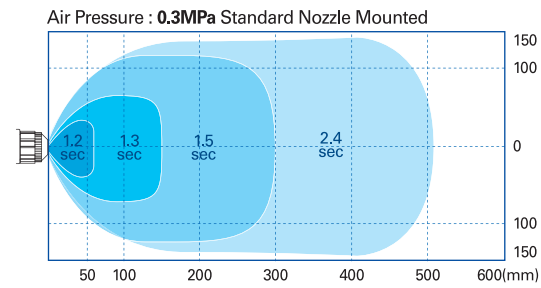
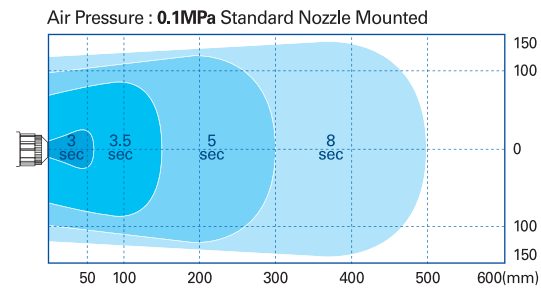
Decay Time Characteristics

[Ion Nozzle]

SPN-12/12S

Test Conditions

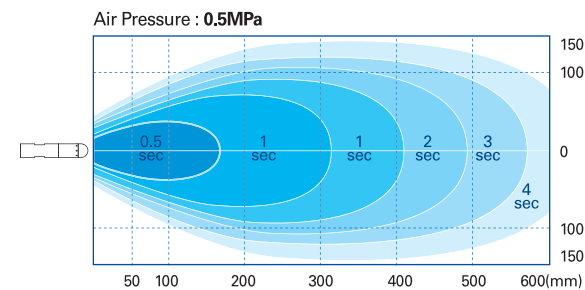
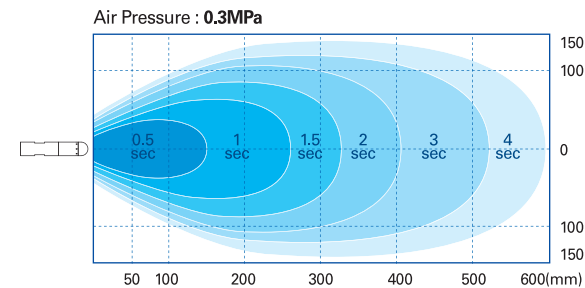
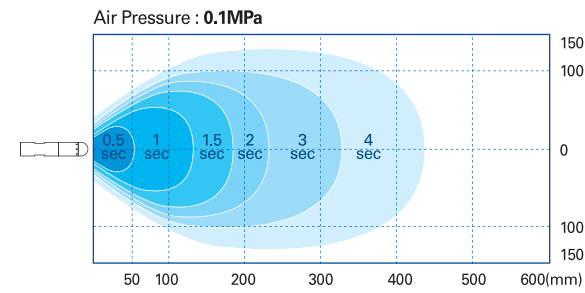
- Model : SPN-12/12S
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SPN-21

Test Conditions

- Model : SPN-21R/D
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH



SIG-30

Test Conditions

- Model : SIG-30
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF(150 X 150 mm)
- Temperature & Humidity : 24°C, 50%RH

