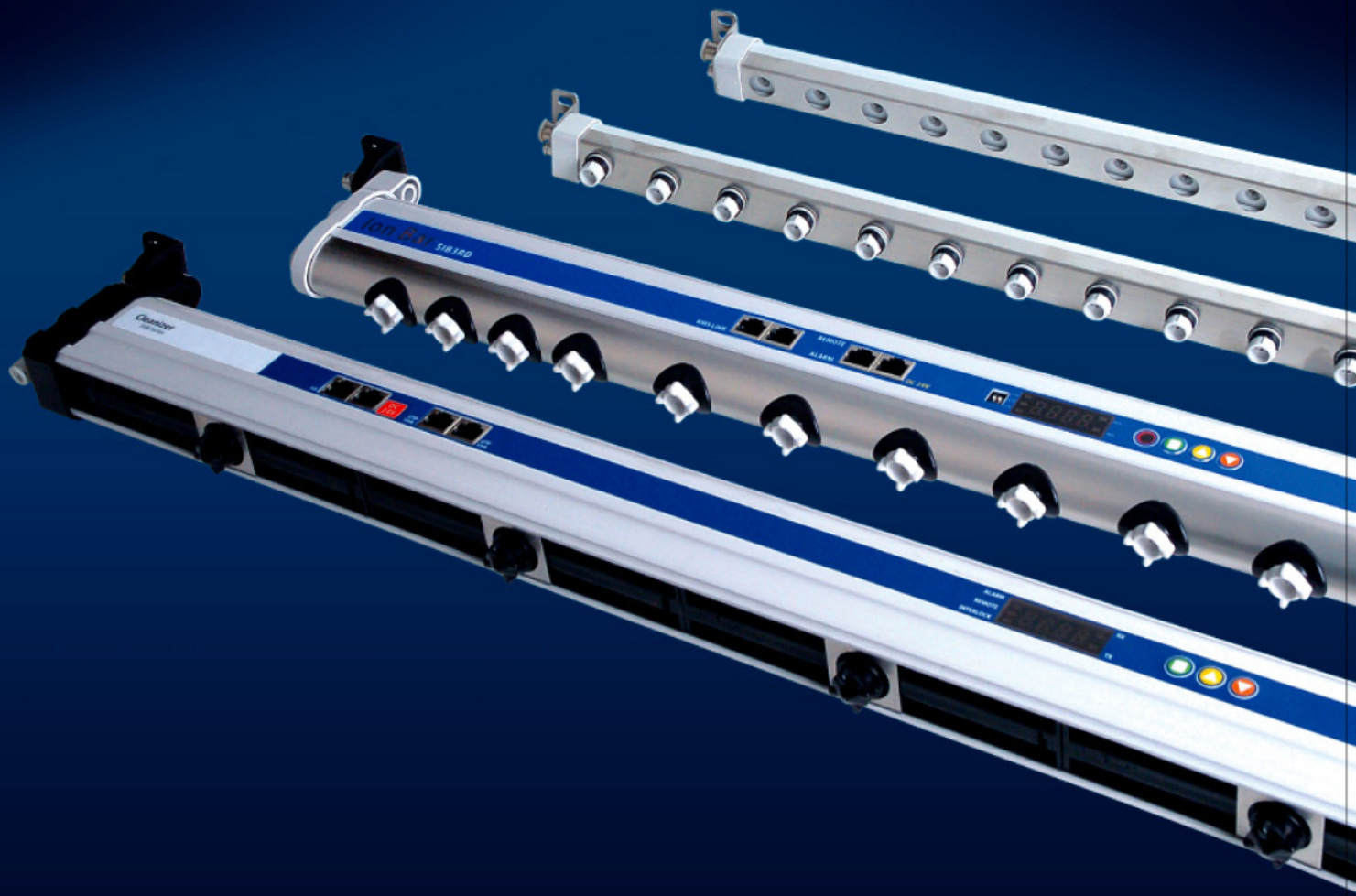


ION BAR SERIES



Ion Bar

Cleanizer *Piezo Type* **NEW**

- Stable ion balance by piezo electric device ($\pm 10V$ for 40 weeks)
- Low particle accumulating rate
- Discharging tip reduction (under $\approx 1/3$)
- Individual high voltage unit (low electrical trouble)



SNB Series
(DC24V 입력)



*** Cleanizer**
Good positions for Cleanizer



• **Ion Balance**

• **The processes needed severe ion-balance**

ex) P/R Coater, Edge Remover, Spacer Scattering, Smock Room, ODF Process, etc.

• **Particle**

• **The processes required Particle managing**

ex) Coating Process(P/R, PI, Array Process), etc.

• **Long stayed processes**

ex) The Cassette of Glasses and Wafer, Stocker, Smock Room , etc.

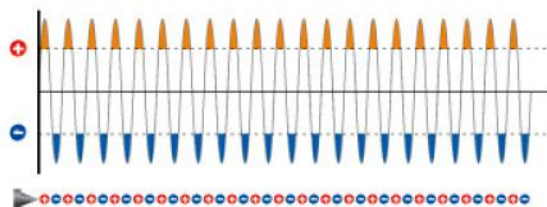
• **Ionizer**

• **The difficult processes to carry out maintenance of Ionizer**

ex) The Cassette of Glass and Wafer, Stocker, etc.



Piezo Type (Cleanizer)



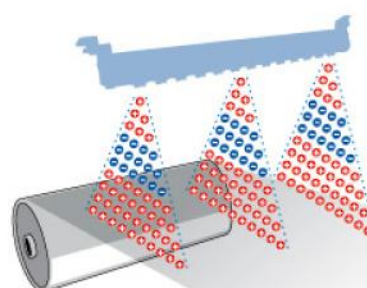
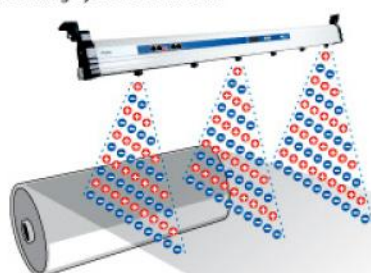
For long operating, the ion balance is very stable.

Pulse AC Type



It needs to be cleaned the tips on ionizer to stably maintain its ion balance by periods.

Piezoelectric Ceramic or Piezoelectric Device. High Frequency(72kHz) makes low particle accumulation on the tip, rich ion density, and fast decay time. The special features of Cleanizer are ion balance within $\pm 10V$ and long cleaning cycle of 40 weeks.

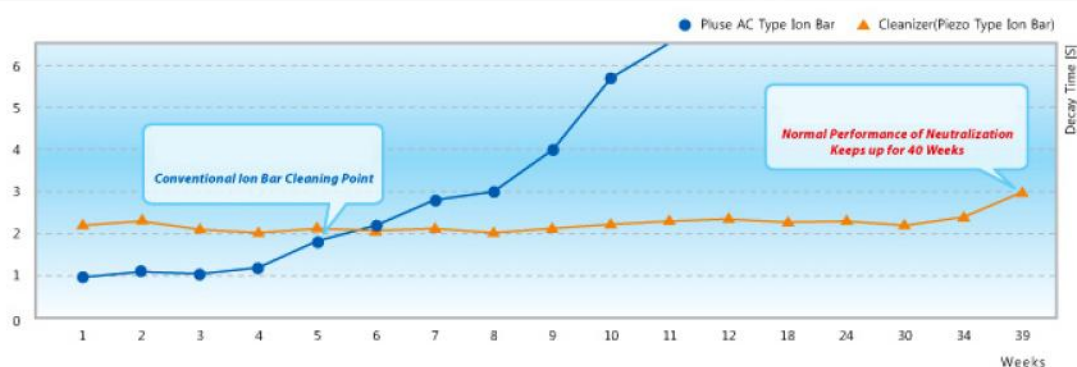


Decay Time Characteristics

※ We recommend that needles are regularly cleaned during P/M. (Condition Under Class 1,000)

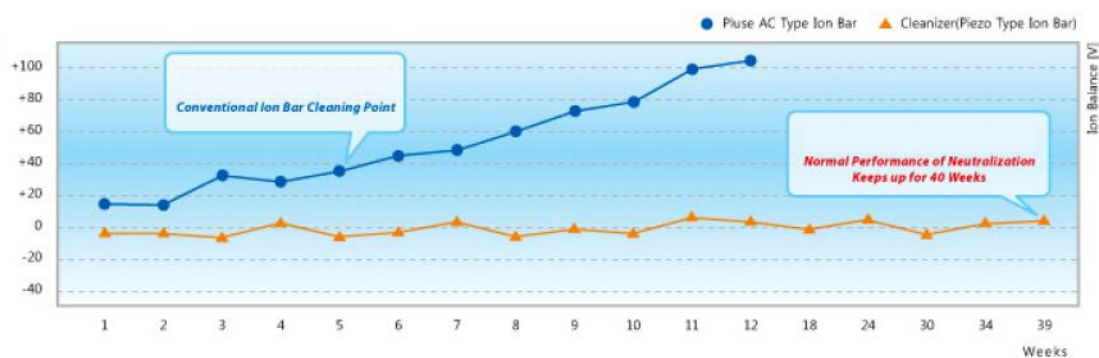
* Decay Time

[Distance
600mm]



* Ion Balance

[Distance
600mm]

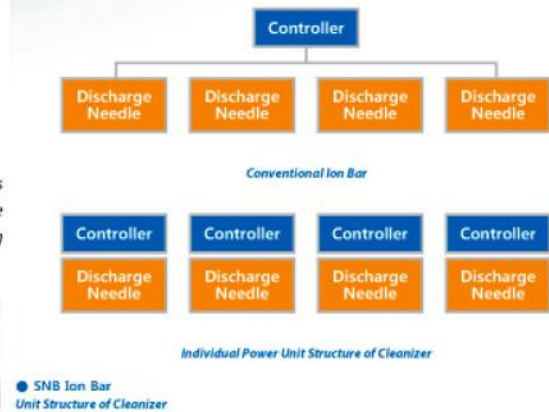


1:1

Individual Power Unit Structure

* Patent

The cleaner has an individual power unit at each emitter to generate ion. Even if it is some trouble in a power unit, the others will work to generate ion. It doesn't stop at the same time as a conventional ionizer bar. This will remarkably improve the operating reliability for the processes where ionizer defect should not be at all times.



One Touch Socket

Removable discharging socket by one touch type.



The zet-socket is adopted for long injection distance and wide area. The injection nozzle minimizing CDA & N₂ consumption by axis design of air(CDA) injection tubule has the effect not to accumulate particles on the discharging tip.



Photograph of Discharge Needle Surface

The photos of Cleaner needles according to time period (1~40 Weeks)

(According to installation conditions, the tip cleaning cycle can be changed.)

※ Generally tip change cycle is one time per 40 weeks. But, the cycle depends on operating circumstance.



The Cleaner has the needle quantity of $\approx 1/3$ comparing with conventional ion bar and it makes for convenient maintenance.



Interface



• **RMS(Real Monitoring System)**

Ion Bar RS-485

This is RS-485 communication terminal for remote monitoring.

• **Power(DC 24V)**

This is a UTP terminal for power input and the input voltage is DC24V.

• **Input / Output**

PLC(Programmable Logic Controller) Remote On/Off Run/Stop Alarm

Signal input terminal for remote On/Off and signal output terminal for alarm to PLC (Programmable Logic Controller)



Address Setting



Cleanizer(SNB Series Ion Bar) Address RMS

The Cleaner has an address setting function and can be controlled by RMS.

Address Setting Step

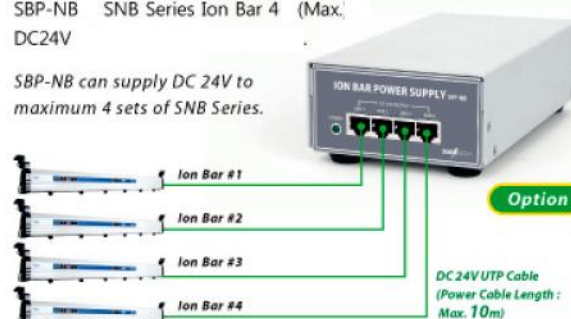
Push "Set Button()" until FND displays "A-XX".

The address of Ion bar can be changed by pushing UP() or DOWN Button() when "A-XX" is displayed on FND.

AC to DC Power Supply (SBP-NB)

SBP-NB SNB Series Ion Bar 4 (Max. DC24V)

SBP-NB can supply DC 24V to maximum 4 sets of SNB Series.



Option

DC 24V UTP Cable
(Power Cable Length:
Max. 10m)

※ Please use at conditions as following.

1. The difficult place to supply DC24V power source.
2. The place to need electric cable control by installing plural ionizers.

Alarm Mode



Normal Operating Mode



Alarm Mode

It gives the alarm signal to the terminal in following cases.

- Drop of high voltage level
- Abnormal induced level from tip to sensing plate
- Abnormal discharging by excessive particle attached on the tip

SBP-3R RS-232 / 485 Converter Multi Port (2Port, 4Port, 8Port, 16Port) 1Port

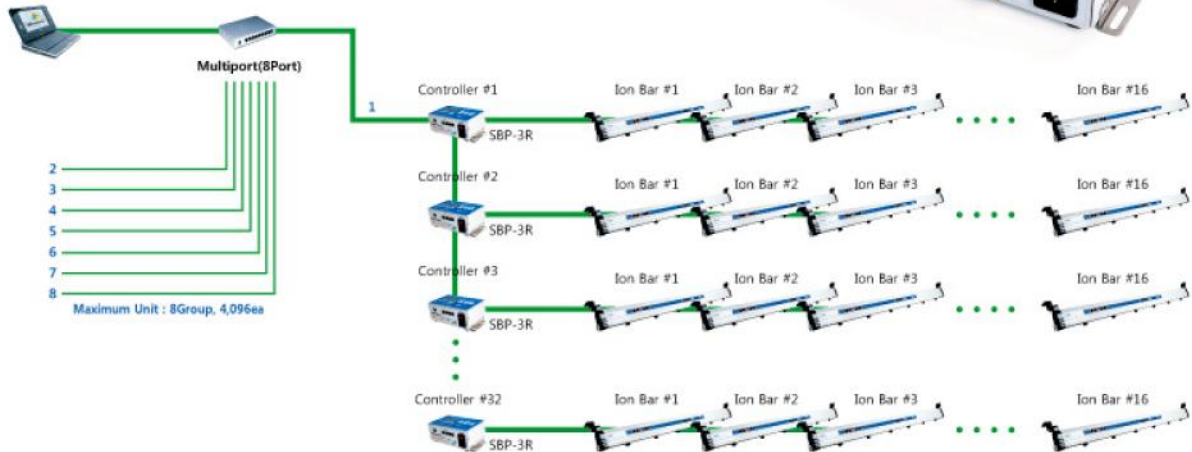
Option

By using SBP-3R & RS-232/485 converters or multi-ports(2, 4, 8, 16 port), Max. 512 ion bars can be monitored on a host computer.

But, this system configuration can be changed under customer's request or install place condition.



SBP-3R

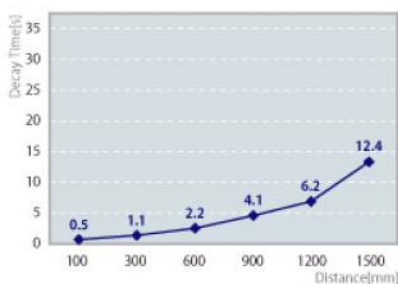


Decay Time Characteristics

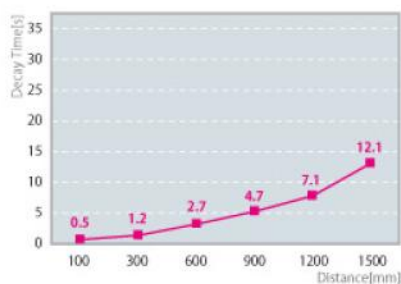
- Model : SNB-800
- Air Pressure : 0.3MPa
- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Temperature & Humidity : $24^{\circ}C \pm 1^{\circ}C$, $40\% \pm 2\%RH$
- Charge Plate Capacitance : $20pF \pm 2pF$ (150 X 150mm)

• Frequency: 72kHz

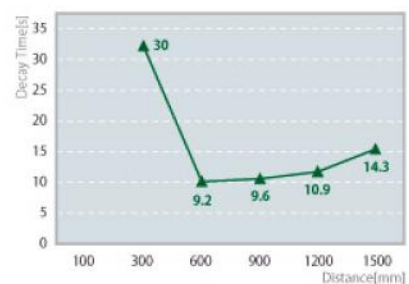
● Center



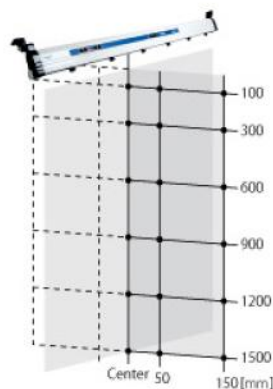
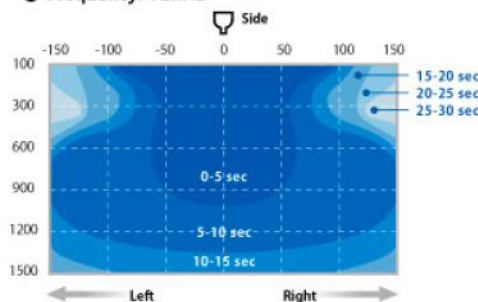
● Left / Right 50mm



● Left / Right 150mm



● Frequency: 72kHz



Specifications

● SNB Series

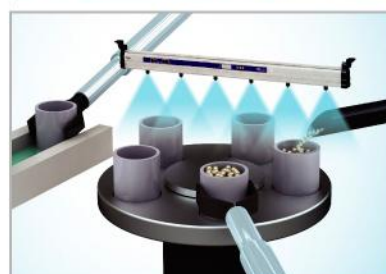
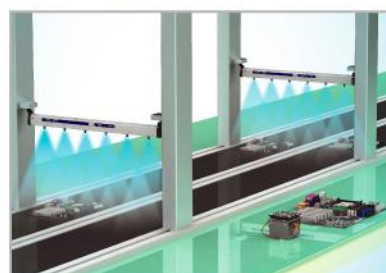
Category	Descriptions	Remark
Model	SNB Series	
Input Power	DC24V (±5%)	RJ45
Power Consumption	Max. 23W	SNB-3000
Ion-Generation Method	High Frequency AC Corona Discharge	
Air Purge Supply Pressure	1~5kgf/cm ² (0.5Mpa)	CDA(Clean Dry Air), N ₂
Air Purge Connection Port	Pipe Tap 1/8"	
Ion Balance	Within ±10V	1,000mm
Ozone(O ₃) Concentration	≤0.005ppm	
Decay Time Characteristics	See the Accompanying Test Document	
Main Body Material	Non-Flammable ABS	Level V0
Cover Material	Non-Flammable ABS	Level V0
Electrode Material	Tungsten / Titanium / X-Material	
Emitter Replacement	One Touch Type	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Dimensions	See the Accompanying Drawing Page	
Mounting Method	Ceiling	
Alarm Function	H/V Abnormal Alarm	
Interface	Run State, Remote, Interlock, RS485, Alarm(H/V Abnormal)	RJ45
Operating Distance	50~2,000mm	
Option	RMS (Real Monitoring System)	
Warranty	1 Year	

※ On request, the customer can choose a socket of two types according to operation object.

● SBP-NB

Category	Descriptions	Remark
Model	SBP-NB	
Input Power	AC100~240V, 50/60Hz	
Power Consumptions	Max. 150W	
Weight	1.85kg	
Main Body Material	Aluminium	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Output Voltage	DC 24V Max. 6A	
Output Port	4 Ports	RJ45
Warranty	1 Year	

Applications



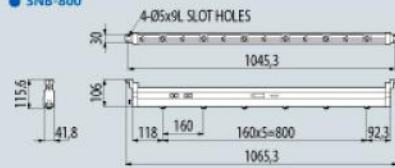
Compositions

● SNB Series

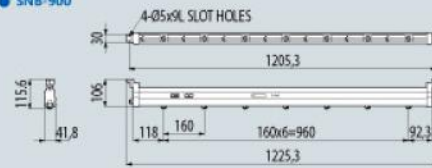
Model	SNB Series	Middle Bracket SBR-NB-2-001	Tip Scket	Cable & Controller
SNB-800			6ea	
SNB-900			7ea	
SNB-1000			8ea	
SNB-1200			9ea	
SNB-1400		1ea	10ea	 Power Cable SUC-3R-3-001 10m / 1ea
SNB-1600		1ea	11ea	
SNB-1700		1ea	12ea	 Signal Cable SUC-MT-2-001 10m / 1ea
SNB-1900		1ea	13ea	
SNB-2000		2ea	14ea	 Power Supply (Option) SBP-NB
SNB-2200		2ea	15ea	
SNB-2400		2ea	16ea	
SNB-2500		3ea	17ea	
SNB-2700		3ea	18ea	
SNB-2900		3ea	19ea	
SNB-3000		3ea	20ea	
SNB-3200		3ea	21ea	

External Dimension

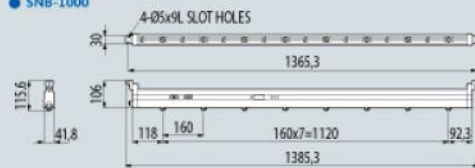
● SNB-800



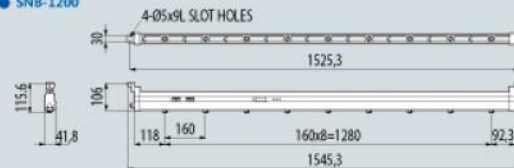
● SNB-900



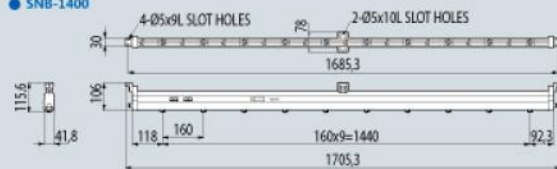
● SNB-1000



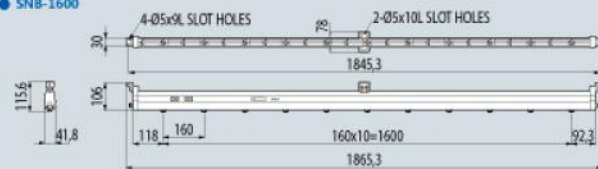
● SNB-1200



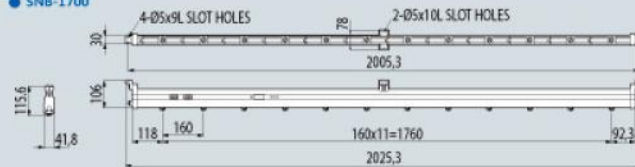
● SNB-1400



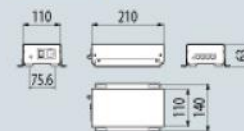
● SNB-1600



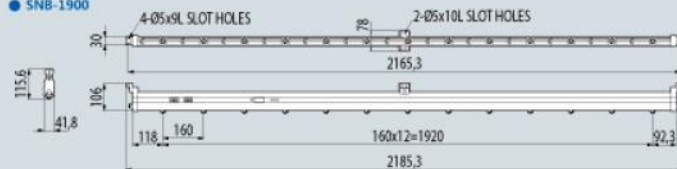
● SNB-1700



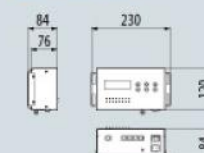
● SBP-NB (Option)



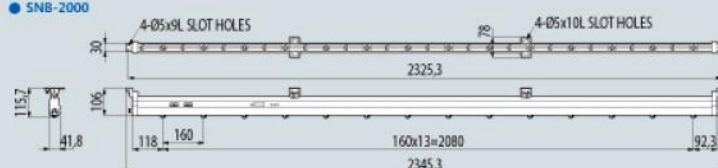
● SNB-1900



● SBP-3R (Option)

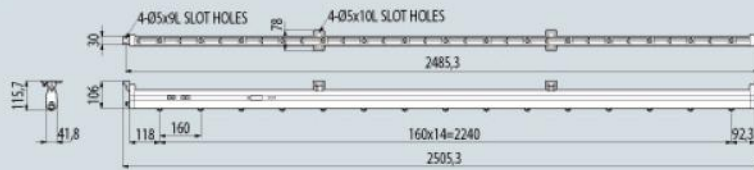


● SNB-2000

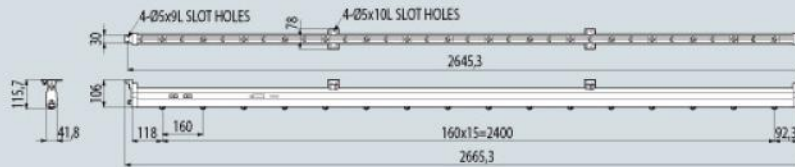


External Dimension

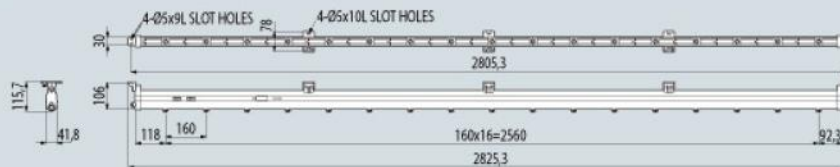
● SNB-2200



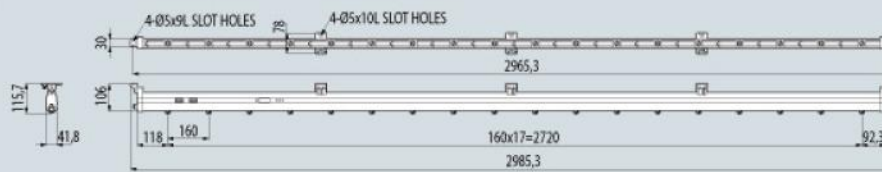
● SNB-2400



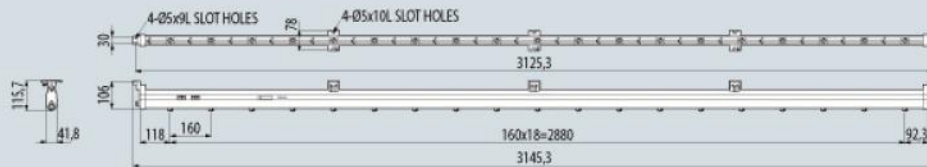
● SNB-2500



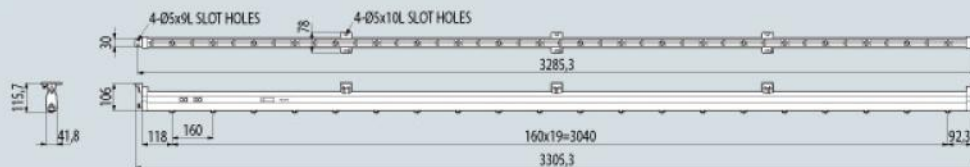
● SNB-2700



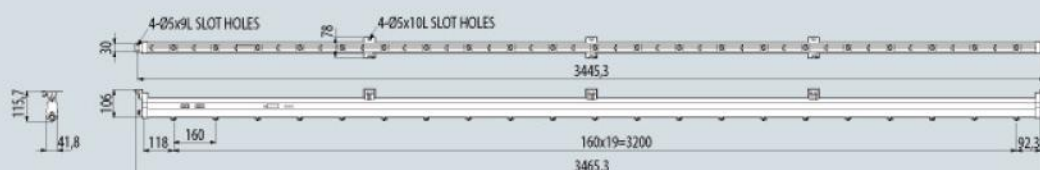
● SNB-2900



● SNB-3000



● SNB-3200



Aero-Body Ion Bar

SIB3RD Series *Pulse AC Type* **NEW**

- $\pm Pk$ Voltage control function
- Various nozzle sockets suited to user's operating condition
- Wide ionizing area
- Ion balance control function
- Anti-particle nozzle shape to prevent particle attachment
- low air consumption



Running Cost & Powerful



2Ways

Wide & Fast



4Ways

According to the process circumstances, please choose one of 2 types(2Way, 4Way).

SIB3RD Series (DC24V 입력)



● SIB3-330RD

● SIB3-250RD



SIB3-250/330RD (DC24V 입력)



Power Controller for SIB3-250/330RD

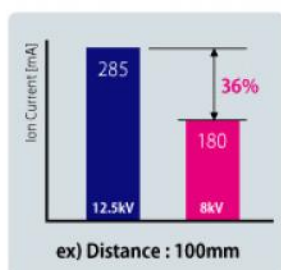
● SIBP-2R

Pk Voltage Control Function

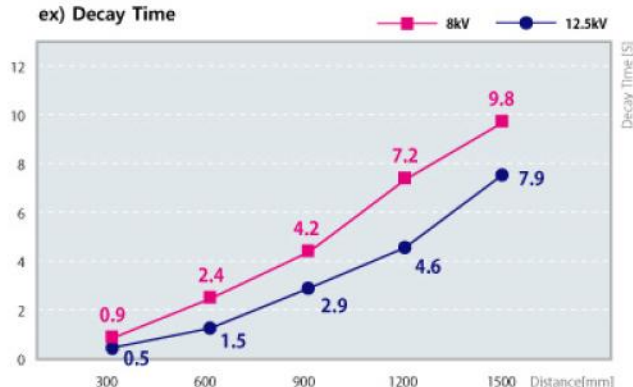
* Patent

1. The operator can control the pulse AC voltage which is supplied in the discharge needle from 8.0kVpp to 12.5kVpp. (0.5kV step)
2. The operator can decrease induced $\pm Pk$ voltage until $\pm 40[V]$ as controlling the pulse AC voltage.
3. If the pulse AC voltage rises, ion current, that is, ion density will be raised. It can make high speed objects with static charge the suitable ionizing condition, but $\pm Pk$ voltage can be risen.
4. If the pulse AC voltage decreases, ion density for neutralizing of static charged object decreases, and there can be a problem about ion balance control. but, in case of small electrostatic capacity or low static charge object, it makes optimum condition for static charge neutralization

When the distance from target object is 100mm, the ion current when $\pm Pk$ voltage is 12.5kV is increased 36% bigger than 8kV and according to closing the distance, the ion current is exponentially increased. When high pulse AC voltage is supplied in the discharge needle, on the conditions of short distance and high speed object with static charge, the neutralization efficiency remarkably rises.



ex) Decay Time



Nozzle Socket Anti-Particle & Optimum Ion Nozzle Socket

The Ion nozzles having micro-air socket to attain injection angle and shape have anti-particle function to interrupt dust attachment on the ion generating tips, minimum air saving function, and anti-noise function.

	2Ways	4Ways
Nozzle Socket		
Part Number	SIS-RS-0-001	SIS-RC-0-001
Straight injection		
+150mm Side direction		
Air consumption		
Particle attachment		
Color	Gray	Beige



The Photograph Of Discharge Needle Surface

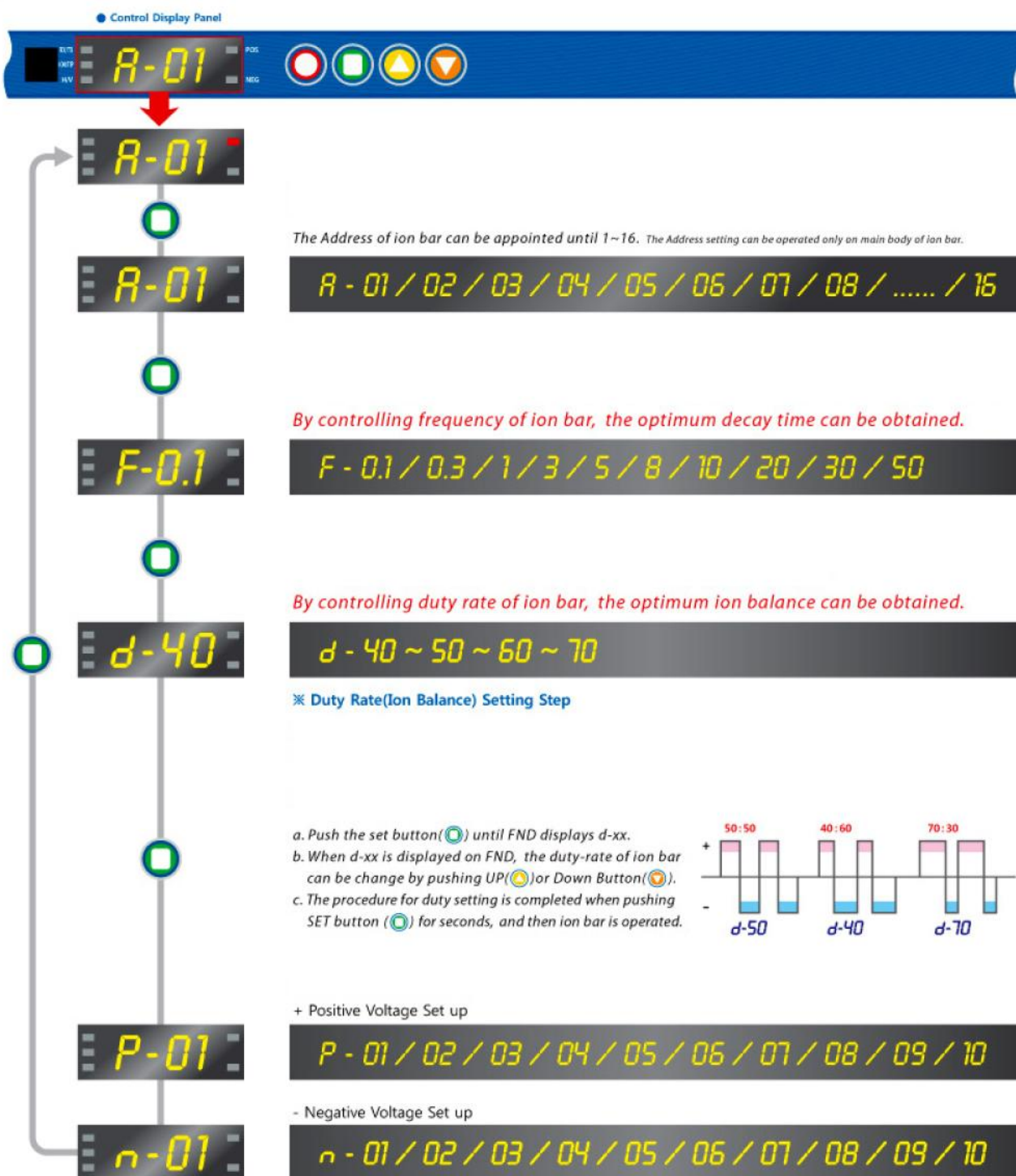
The photos of SIB3RD needles according to time period (1~20 Weeks)

On operating places, it can be chosen a type between 2 way and 4way. (According to installation conditions, the tip cleaning cycle can be changed.)





Control Diagram

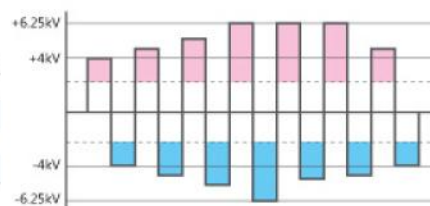


● Positive & Negative voltage level setting

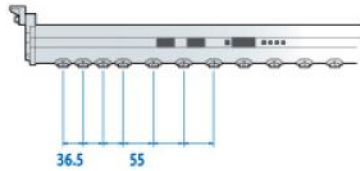
Please refer to this part for setting up high voltage level properly on installation condition.

Level	1	2	3	4	5	6	7	8	9	10
Positive Voltage	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
Negative Voltage	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
Positive-Negative Vpp	8.0	8.5	9.0	9.5	10	10.5	11	11.5	12	12.5

The Voltage setting can be operated only on main body of ion bar.

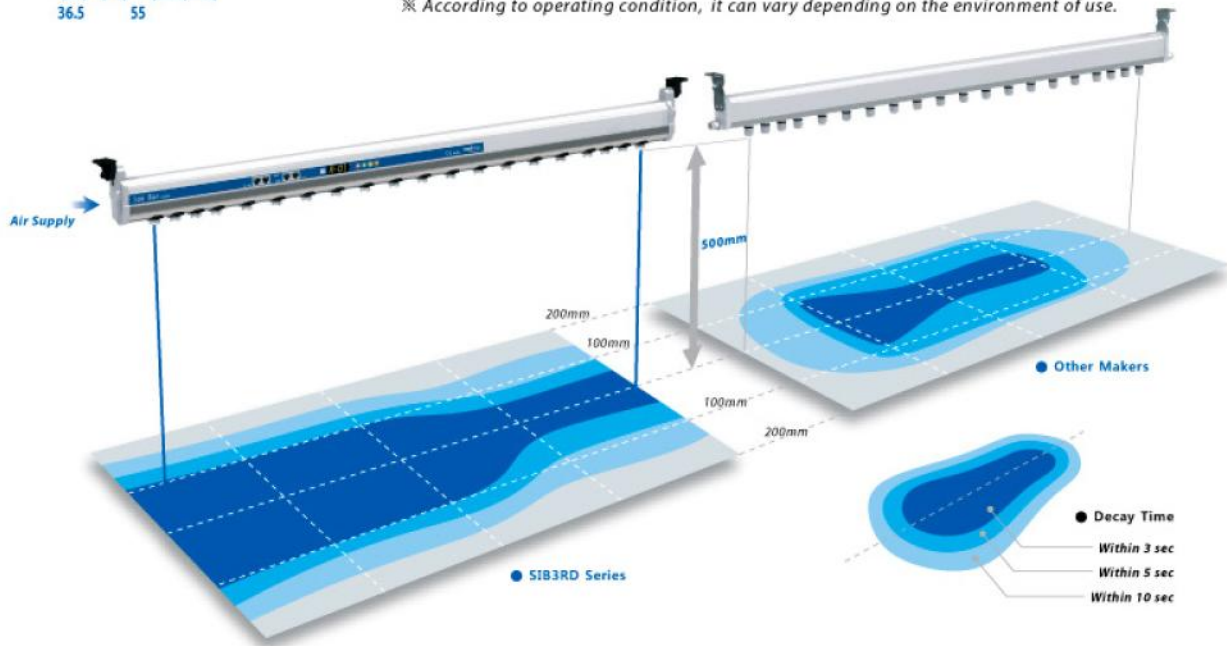


Wide Static Neutralization Area



To increase static elimination ability of both end of ion bar, we have increased the number of discharge needle about 23% compare with other company models.

※ According to operating condition, it can vary depending on the environment of use.



Decay Time Characteristics

※ We recommend that needles are regularly cleaned during P/M. (condition under class 1,000)

* Decay Time

[Distance
600mm]



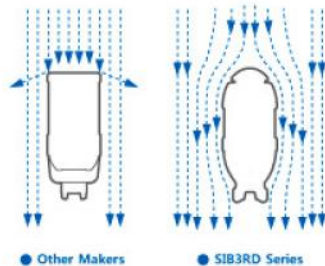
* Ion Balance

[Distance
600mm]



Aero Body Design

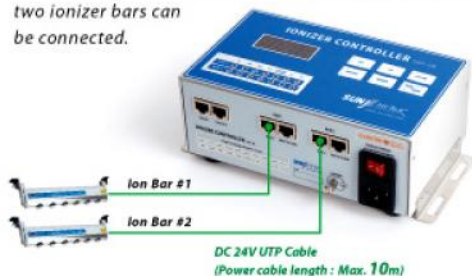
It has streamlined structure not to disturb down flow in cleanroom, so very useful in clean room and clean bench.



For SIB3-250/330RD

Power Controller (SBP-2R)

SBP-2R is a power controller for SIB3-250/330RD and two ionizer bars can be connected.



Easy Maintenance

Changing and cleaning the discharge needle with one touch are very simple.



※ Tip Changing Cycle

1. When the discharge needle is broken or damaged seriously, it must be exchanged immediately.
2. The general cycle of needle replacement is one year. However, it can vary depending on the environment of use.

Minimum Air Consumption

It can do operated maximum static elimination ability with minimum air consumption.

Unit: l/min

Model	SIB3-800RD		Other Makers	
	2Way (0.22 x 0.22 mm)	4Way (0.18 x 0.18 mm)	SX-XX 1000 (K사)	IZXXX 780 (S사)
0.1MPa	28	42	160	63
0.2MPa	44	68	220	96
0.3MPa	60	92	320	130
0.4MPa	76	116	410	170
0.5MPa	92	140	480	190

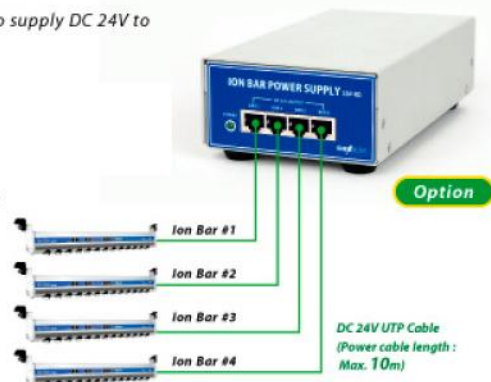
For SIB3-600RD~3200RD

AC to DC Power Supply (SBP-RD)

SBP-RD is a power supplier to supply DC 24V to SIB3RD series.

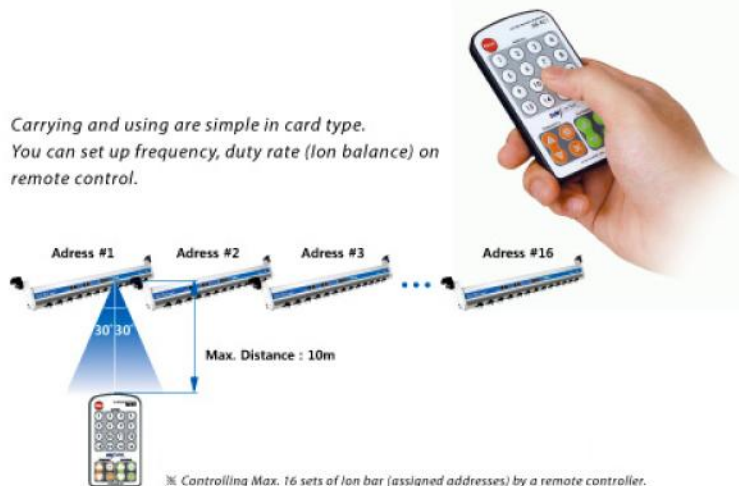
※ Please use at conditions as following.

1. The difficult place to supply DC24V power source.
2. The place to need electric cable control by installin plural ionizers.



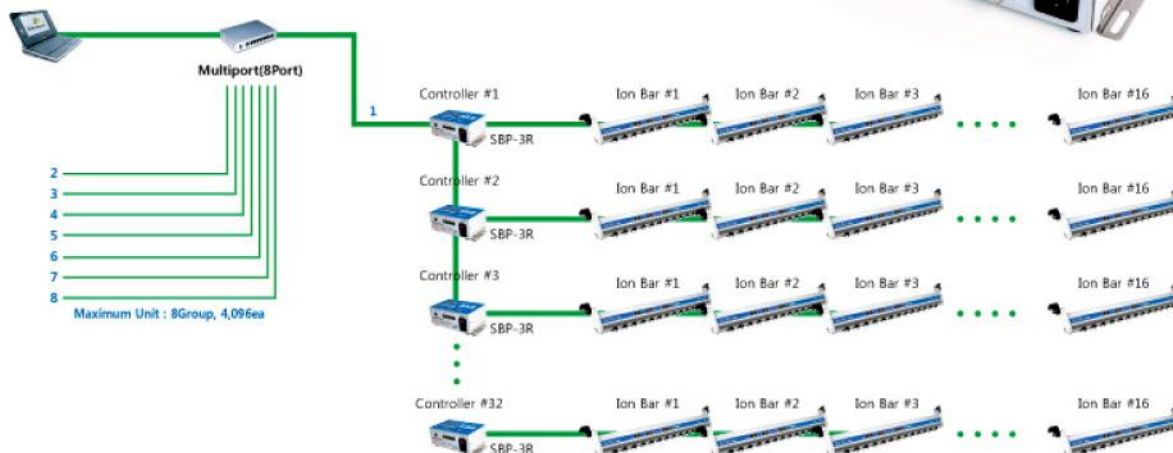
Remote Controller (SIB-RC1)

Carrying and using are simple in card type. You can set up frequency, duty rate (Ion balance) on remote control.



By using SBP-3R & RS-232/485 converters or multi-ports(2, 4, 8, 16 port), Max. 512 ion bars can be monitored on a host computer.

But, this system configuration can be changed under customer's request or install place condition.



Decay Time Characteristics

- Model : SIB3-1600RD
- Duty Rate : 50%
- Air Pressure : 0.3MPa

- Decay Time : $\pm 1,000V$ to $\pm 100V$
- Temperature & Humidity : $24^{\circ}C \pm 1^{\circ}C$, $40\% \pm 2\%RH$
- Charge Plate Capacitance : $20pF \pm 2pF$ (150 X 150mm)

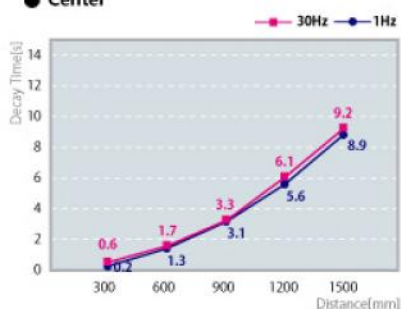
• High Voltage: 10.5kV (P-06, N-06)

• Frequency: 1Hz / 30Hz

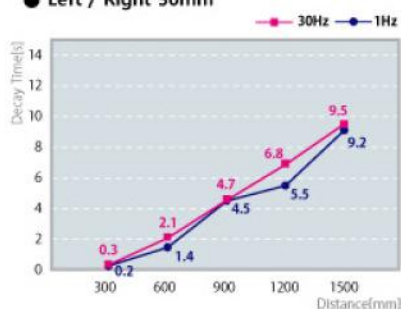
2Ways Needle Scket



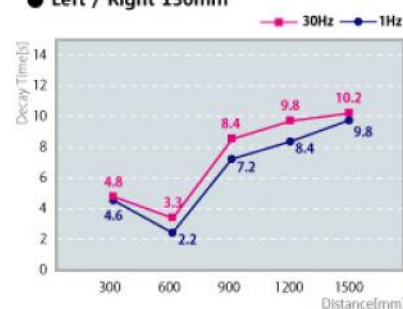
● Center



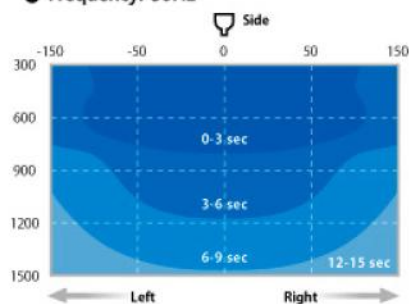
● Left / Right 50mm



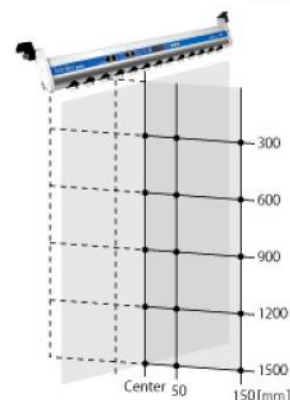
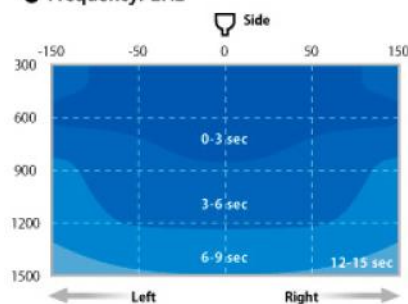
● Left / Right 150mm



● Frequency: 30Hz



● Frequency: 1Hz



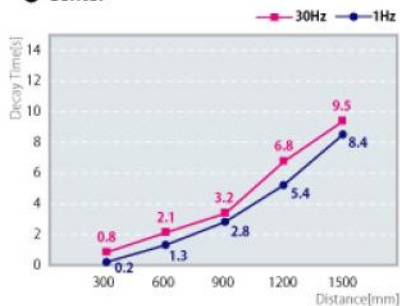
Decay Time Characteristics

- High Voltage: 10.5kV (P-06, N-06)
- Frequency: 1Hz / 30Hz

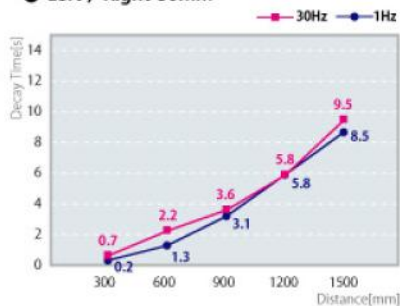
4Ways Needle Soket



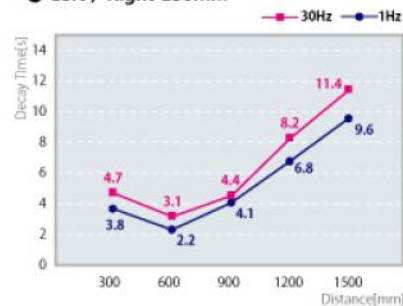
● Center



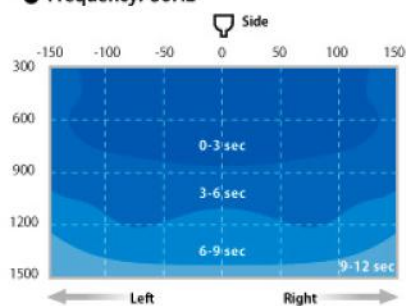
● Left / Right 50mm



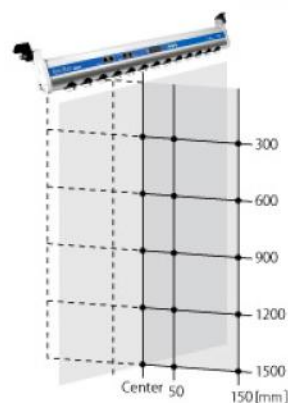
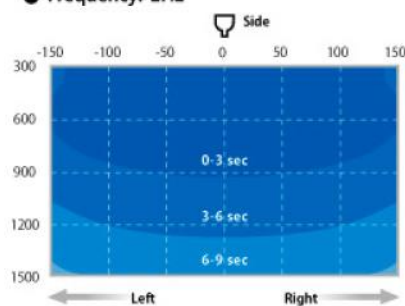
● Left / Right 150mm



● Frequency: 30Hz



● Frequency: 1Hz

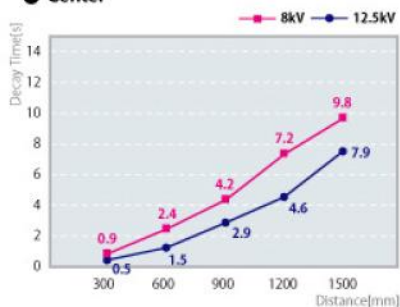


- High Voltage: 8kV (P-01, N-01) / 12.5kV (P-10, N-10)
- Frequency: 30Hz

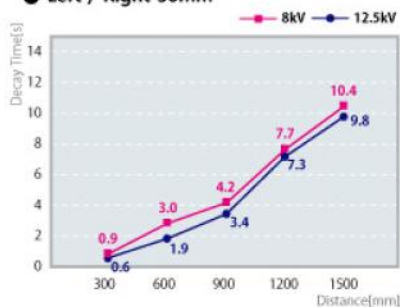
2Ways Needle Soket



● Center



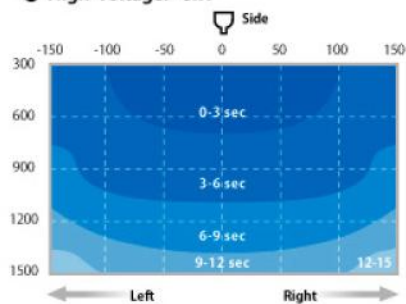
● Left / Right 50mm



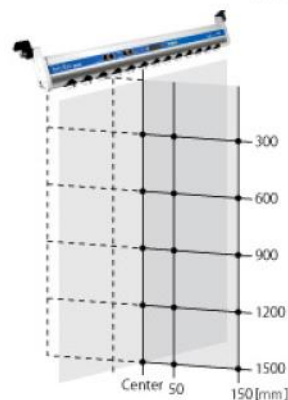
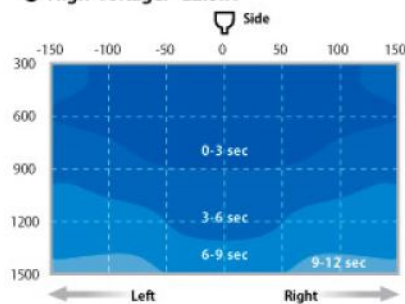
● Left / Right 150mm



● High Voltage: 8kV



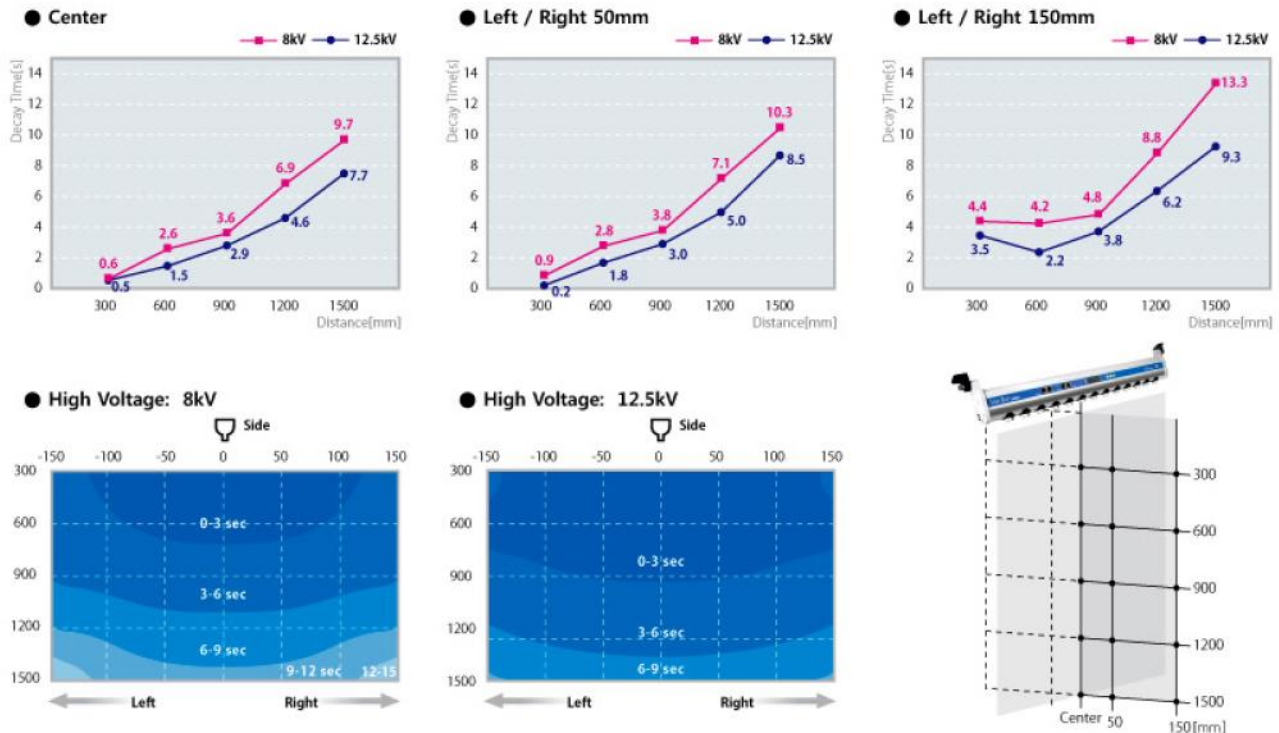
● High Voltage: 12.5kV



Decay Time Characteristics

- High Voltage: 8kV (P-01, N-01) / 12.5kV (P-10, N-10)
- Frequency: 30Hz

4Ways Needle Scket



Specifications

● SIB3RD Series

Category	Descriptions	Remark
Model	SIB3RD Series	
Input Power	DC24V (±5%)	RJ45
Power Consumption	Max. 12W	
Ion-Generation Method	Corona Discharge Pulse AC	
Air Purge Supply Pressure	1~5kgf/cm ² (0.5Mpa)	CDA (Clean Dry Air), N ₂
Air Purge Connection Port	Pipe Tap 1/8"	
Ion Balance	Within ±30V	1000mm
Ozone(O ₃) Concentration	≤0.005ppm	
Decay Time Characteristics	See the Accompanying Test Document	
Main Body Material	Non-Flammable ABS	Level V0
Electrode Material	Tungsten / Titanium / X-Material	
Emitter Replacement	Cartridge Type	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Dimensions	See the Accompanying Drawing Paper	
Mounting Method	Ceiling	
Function	Remote Control	
Adjust Function	Frequency [Hz] 0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 50 Duty Ratio [%] 40 ~ 70 Voltage [Level] Positive 1 ~ 10, Negative 1 ~ 10	
Alarm Function	H/V Abnormal Alarm, Low Ion Alarm, Tip Cleaning Alarm	
Interface	Run State, Remote, Interlock, RS485, Alarm (H/V Abnormal, Low Ion, Tip Cleaning)	RJ45
Operating Distance	50~2,000mm	
Option	RMS (Real Monitoring System)	
Warranty	1 Year	

※ On request, the customer can choose a socket of two types according to operation object.

● SBP-RD

Category	Descriptions	Remark
Model	SBP-RD	
Input Power	AC100~240V, 50/60Hz	
Power Consumption	Max. 60W	
Weight	1.85kg	
Main Body Material	Aluminium	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Output Voltage	DC 24V Max. 2.5A	
Output Port	4 Ports	RJ45
Warranty	1 Year	

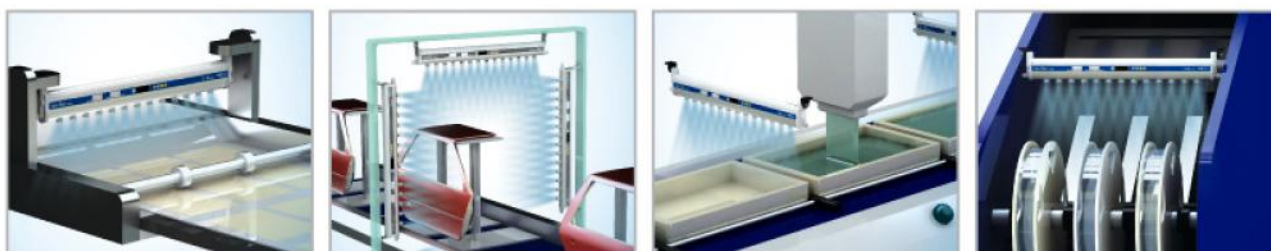
● SBP-2R

Category	Descriptions	Remark
Model	SBP-2R	
Input Power	AC100~240V, 50/60Hz	
Power Consumption	10W	
Weight	1.5kg	
Main Body Material	EGI	
Ion Bar Number Connectable	2Set	
Adjust Function	Frequency [Hz] 0.1, 0.3, 1, 3, 5, 8, 10, 20, 30, 50 Duty Ratio [%] 40 ~ 70 Voltage [Level] Positive 1 ~ 10, Negative 1 ~ 10	
Alarm	H/V Abnormal, Low Ion Alarm, Tip Cleaning Alarm	
Interface	Run State, Remote, Interlock, Alarm (H/V Abnormal, Low Ion, Tip Cleaning)	
Communication	RS-485 Communication (For RMS)	
Warranty	1 Year	

● SBP-3R

Category	Descriptions	Remark
Model	SBP-3R	
Input Power	AC100~240V, 50/60Hz	
Power Consumption	11W	
Weight	1.5kg	
Main Body Material	EGI	
Operation Circumstance	0°C ~ +50°C (32°F ~ 122°F), 35% ~ 85% RH	
Ion Bar	See the Communication Spec	
Communication	RS485 (For RMS) Protocol to Ion Bar & Computer	
UTP Connector	RJ45 Module Jack	2m, 5m, 10m
Model	SBP-3R Communication	
Distance	1.2km	
Communication Configuration	1:N (PC-SBP-3R) 1:N (SBP-3R-SIB-3RD Series)	N : Max. 32 N : Max. 16
RS485 Communications Set	Baud Rate : 9600bps / Data Bit : 8Bit / Stop Bit : 1Bit / Parity Bit : None	
Warranty	1 Year	

Applications

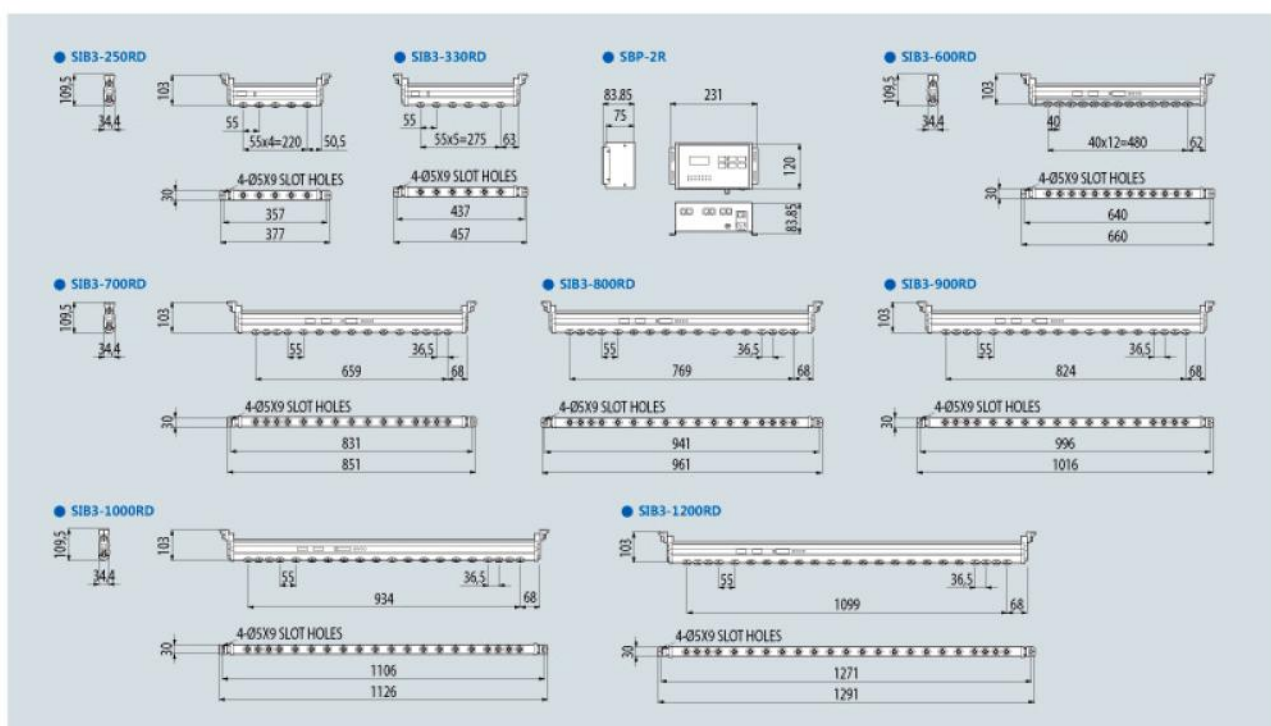


Compositions

● SIB3RD Seires

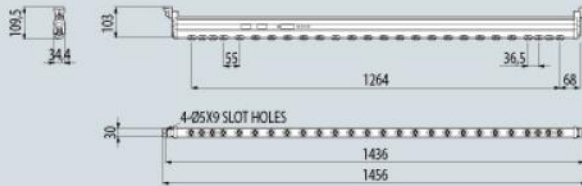
Model	SIB3RD Series	Controller	Middle Bracket SBR-NB-2-001	Tip Soket	Cable
SIB3-250RD		 Power Controller SBP-2R		5ea	
SIB3-330RD				6ea	
SIB3-600RD				11ea	
SIB3-700RD				15ea	
SIB3-800RD		 Power Supply (Option) SBP-4D		17ea	 Power Cable SUC-3R-3-001 10m / 1ea
SIB3-900RD				18ea	
SIB3-1000RD				20ea	
SIB3-1200RD				23ea	
SIB3-1300RD		 Remote Controller SRC-4B-1-001		26ea	 Signal Cable SUC-4B-2-001 10m / 1ea
SIB3-1500RD			1ea	28ea	
SIB3-1600RD			1ea	30ea	
SIB3-1800RD			1ea	34ea	
SIB3-2100RD			2ea	40ea	
SIB3-2200RD			2ea	42ea	
SIB3-2300RD			2ea	44ea	
SIB3-2500RD			3ea	48ea	
SIB3-3000RD			3ea	56ea	
SIB3-3200RD			3ea	59ea	

External Dimension

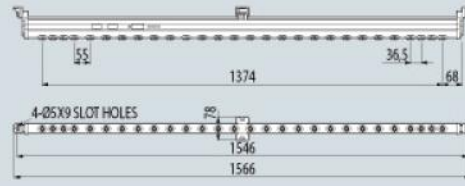


External Dimension

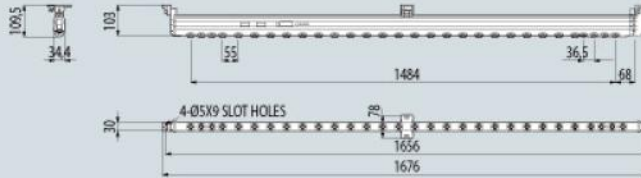
● SIB3-1300RD



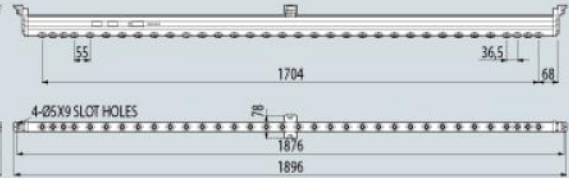
● SIB3-1500RD



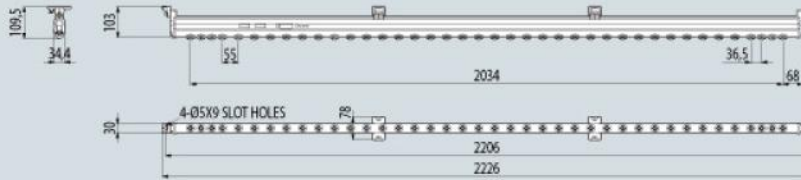
● SIB3-1600RD



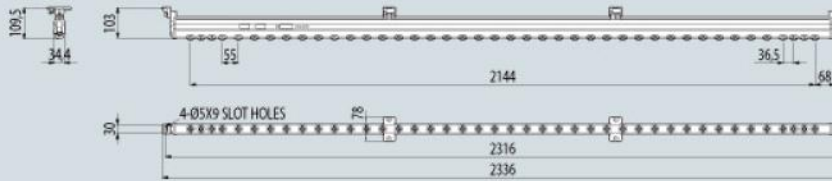
● SIB3-1800RD



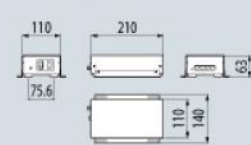
● SIB3-2100RD



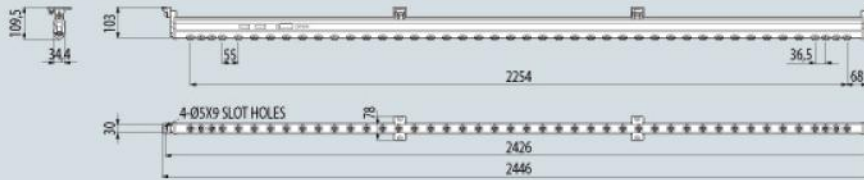
● SIB3-2200RD



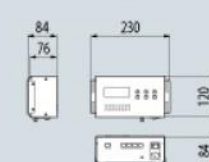
● SBP-RD (Option)



● SIB3-2300RD



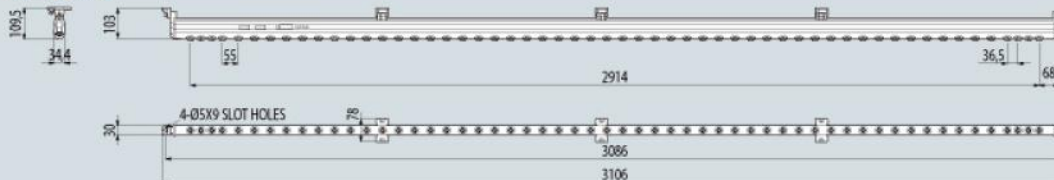
● SBP-3R (Option)



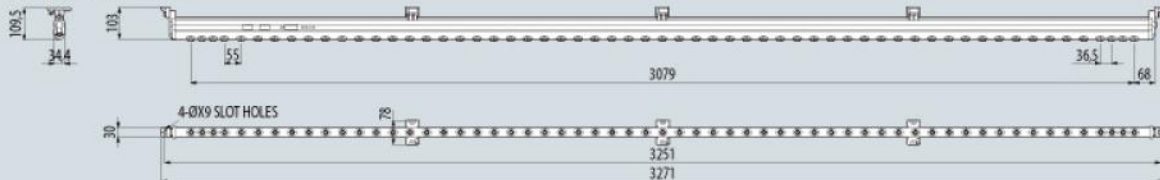
● SIB3-2500RD



● SIB3-3000RD



● SIB3-3200RD



Slim Ion Bar

SIB1/2 Series *Pulse AC Type*

- A separate controller type using pulse AC method
- This is suitable for the narrow and slim space
- The length of ion bar can be varied from 95mm to 2560mm maximum
- A separate controller (SBP-11N, SBP-11, SBP-06) can be connected with 4 ion bars maximum
- Simple maintenance, replacement, exchange of static charge (SIB1 Series)

SIB1 Series



SIB2 Series



Easy Maintenance

Changing and cleaning the discharge needle with one touch are very simple.



● SIB1 Series

● SIB2 Series

※ Tip Changing Cycle

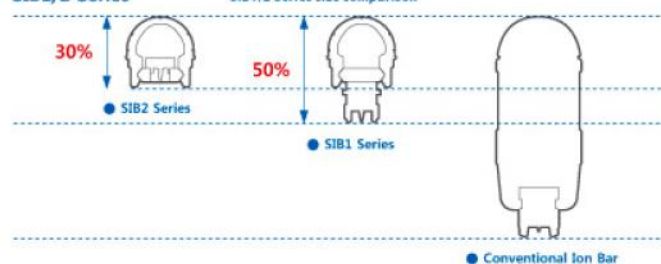
1. When the discharge needle is broken or damaged seriously, it must be exchanged immediately.
2. The general cycle of needle replacement is one year. However, it can vary depending on the environment of use.

Slim & High

When it compares with other built-in type ion bars, SIB1/2 series are high ion density ionizers suited to narrow space as slim size that SIB1 Series is about 50% and SIB2 Series is about 30%.

SIB1/2 Series

SIB1/2 Series size comparison



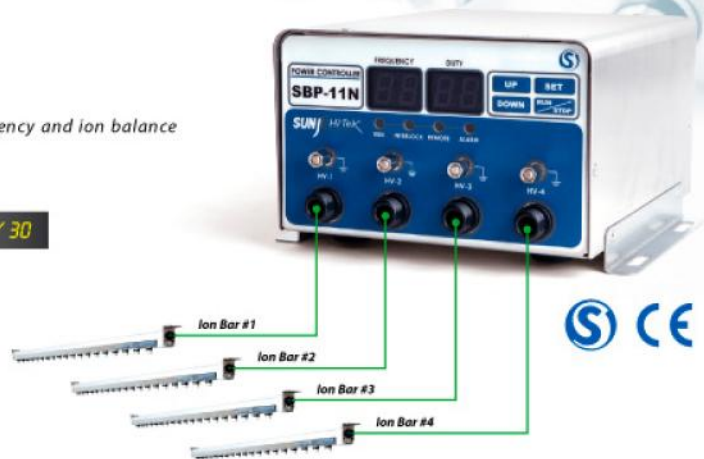
Power Controller **SBP-11N**

1 : 4 Type Connection

SBP-11N can be connected 4 SIB1/2 Series Ion Bars maximum.
High visibility and easy operation by touch panel having frequency and ion balance control functions with FND display.

Frequency Setting Range : F - 1 / 3 / 5 / 8 / 10 / 20 / 30

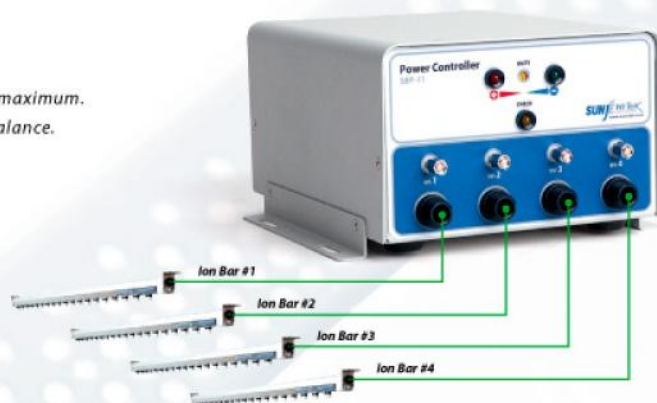
Ion Balance Setting Range : d - 40 ~ 50 ~ 60 ~ 70



Power Controller **SBP-11**

1 : 4 Type Connection

SBP-11 is low price type, it can be connected 4 SIB1/2 Series Ion Bars maximum.
The optimum frequency and duty ratio setting maintain stable ion balance.



Power Controller **SBP-06**

1 : 1 Type Connection

SBP-06 can be connected only a SIB1/2 Series Ion Bar.
It is suitable for narrow and slim space.
The optimum frequency and duty ratio setting maintain stable ion balance.



Specifications

● SIB1/2 Series

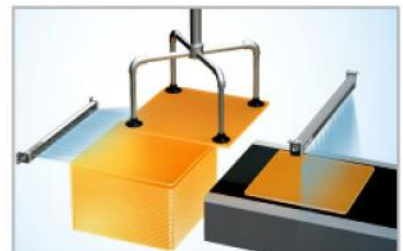
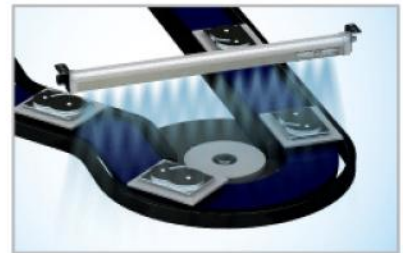
Category	Descriptions		Remark
Model	SIB1 Series	SIB2 Series	
Ion-Generation Method	Corona Discharge Pulse AC		
Air Purge Supply Pressure	1~5kgf/cm ² (0.5MPa)		CDA(Clean Dry Air), N ₂
Air Purge Connection Port	Pipe Tap 1/8"		
Ion Balance	Within ±50V		1,000mm
Ozone(O ₃) Concentration	≤0.005ppm		
Decay Time Characteristics	See the Accompanying Test Document		
Main Body Material	Non-Flammable ABS		Level V0
Electrode Material	Tungsten / Titanium		
Emitter Replacement	Cartridge Type	Pin Type	
Operating Distance	50~2,000mm		
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH		
Dimensions	See the Accompanying Drawing Paper		
High Voltage Cable	Shielding Wire 4m(UL3239_20kV - 1007AWG18)		Standard
Warranty	1 Year		

※ On request, the customer can choose a socket of two types according to operation object.

● Power Controller (SBP-11N, SBP-11, SBP-06)

Category	Descriptions			Remark
Model	SBP-11N	SBP-11	SBP-06	
Input Power	AC100~240V, 50/60Hz			
Power Consumptions	23W	22W	16W	
Alarm	H/V Abnormal Alarm			UTP Cable(SBP-11N)
Weight	2.48kg	2.46kg	1.42kg	
Main Body Material	SUS304	EGI	EGI	
Ion Bar Number Connectable	4 Sets (Max.)			1 Set
Function	Frequency [Hz]	1, 3, 5, 8, 10, 20, 30	-	
	Duty Ratio [%]	40 ~ 70 (100 Unit)	40 ~ 70	
Warranty	1 Year			

Applications



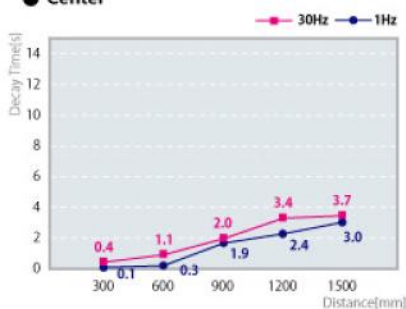
Decay Time Characteristics

- Model : SIB1/2 Series [SBP-11N]
- Duty Rate : 50%
- Air Pressure : 0.3MPa
- Decay Time : ±1,000V to ±100V
- Temperature & Humidity : 24°C ± 1°C, 40% ± 2%RH
- Charge Plate Capacitance : 20pF ± 2pF (150 X 150mm)

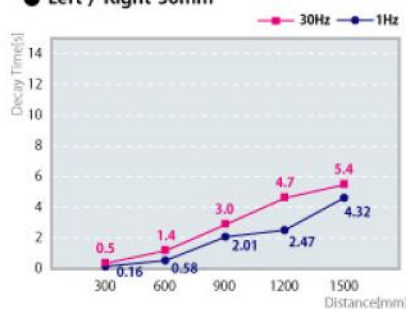
• High Voltage: 11kV (P-07, N-07) • Frequency: 1Hz / 30Hz

SIB1/2 Series [SBP-11N]

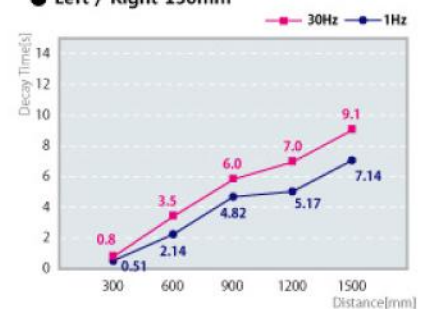
● Center



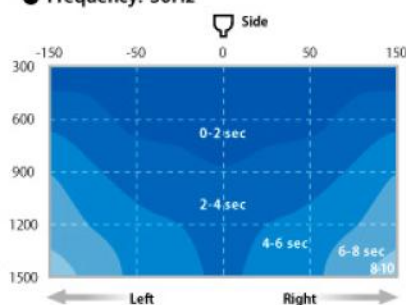
● Left / Right 50mm



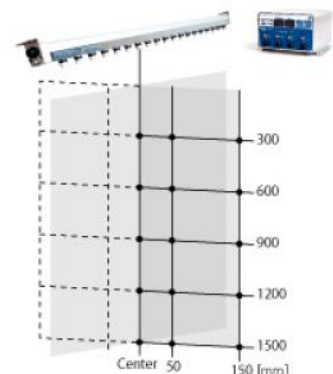
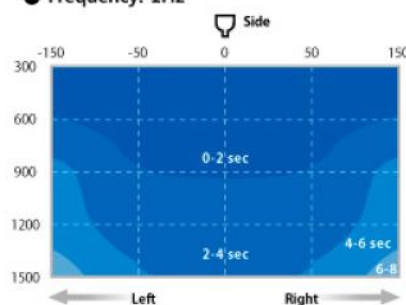
● Left / Right 150mm



● Frequency: 30Hz

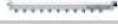


● Frequency: 1Hz



Compositions

● SIB1 Seires

Model	SIB1 Series	Tip Soket
SIB 1-16A		 3ea
SIB 1-32A		 7ea
SIB 1-48A		 11ea
SIB 1-64A		 15ea
SIB 1-80A		 19ea
SIB 1-96A		 23ea
SIB 1-112A		 27ea
SIB 1-128A		 31ea
SIB 1-144A		 35ea
SIB 1-160A		 39ea
SIB 1-176A		 43ea
SIB 1-192A		 47ea
SIB 1-208A		 51ea
SIB 1-224A		 55ea
SIB 1-240A		 59ea
SIB 1-256A		 63ea

● SIB2 Seires

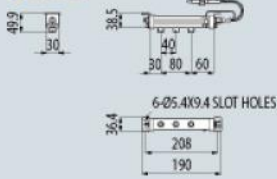
Model	SIB2 Series	Tip Soket
SIB2-07		 3ea
SIB2-10		 4ea
SIB2-16		 8ea
SIB2-20		 10ea
SIB2-30		 7ea
SIB2-40		 10ea
SIB2-50		 13ea
SIB2-60		 16ea
SIB2-70		 19ea
SIB2-80		 21ea
SIB2-100		 27ea
SIB2-120		 33ea
SIB2-130		 36ea
SIB2-150		 41ea
SIB2-160		 44ea
SIB2-180		 50ea
SIB2-190		 53ea
SIB2-210		 58ea
SIB2-220		 61ea
SIB2-230		 64ea
SIB2-250		 70ea

● Power Controller

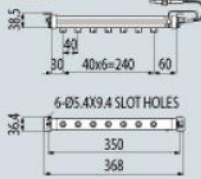
Model	SIB1/2 Series Power Controller	Power Cable	High Voltage Cable	Ground Cable	Signal Cable
SBP-11N		 SPC-MT-1-001 1.8m / 1ea	 SHC-12-1-001 4m / 4ea	 SGC-MT-1-003 1m / 40, 40 / 1ea	 SUC-3R-3-001 10m / 1ea
SBP-11		 SPC-MT-1-001 1.8m / 1ea	 SHC-12-1-001 4m / 4ea	 SGC-MT-1-003 1m / 40, 40 / 1ea	
SBP-06		 SPC-MT-1-001 1.8m / 1ea	 SHC-12-1-001 4m / 1ea	 SGC-MT-1-003 1m / 40, 40 / 1ea	

SIB1 Series

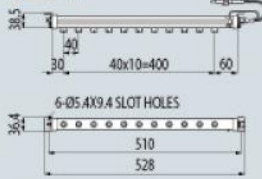
● SIB1-16A



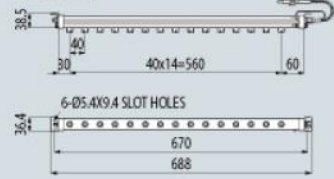
● SIB1-32A



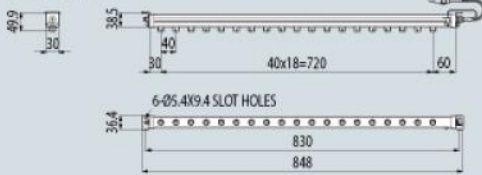
● SIB1-48A



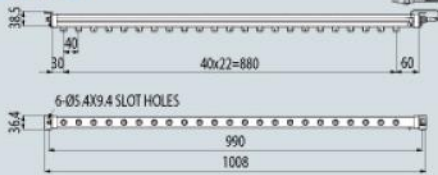
● SIB1-64A



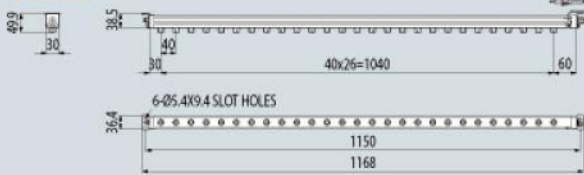
● SIB1-80A



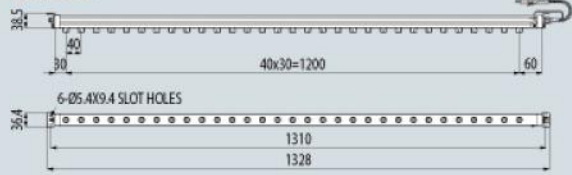
● SIB1-96A



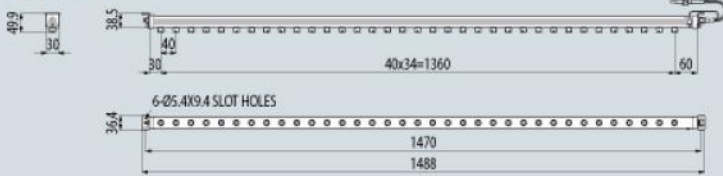
● SIB1-112A



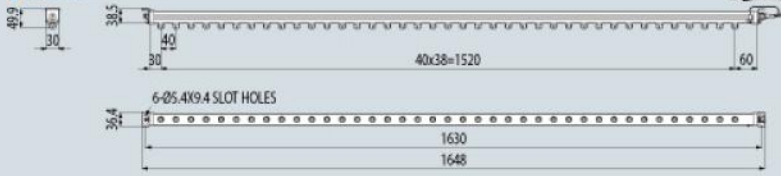
● SIB1-128A



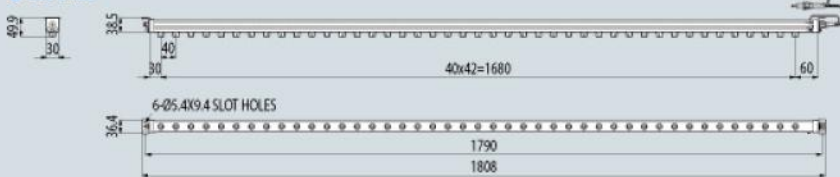
● SIB1-144A



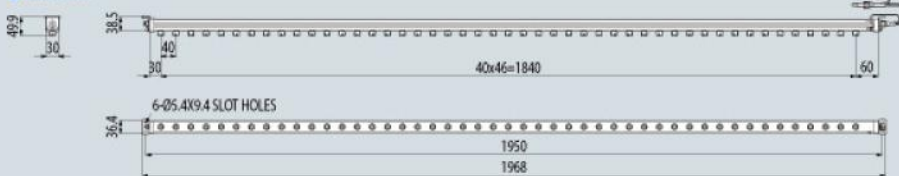
● SIB1-160A



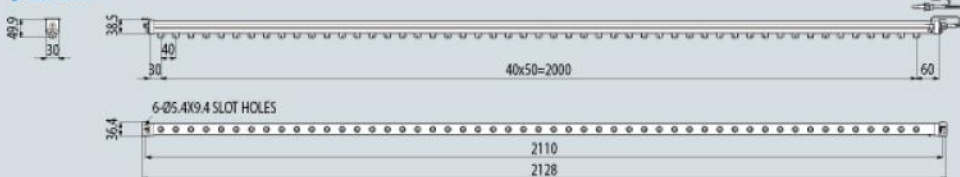
● SIB1-176A



● SIB1-192A

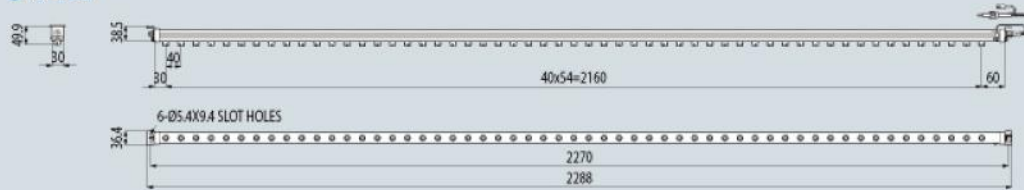


● SIB1-208A

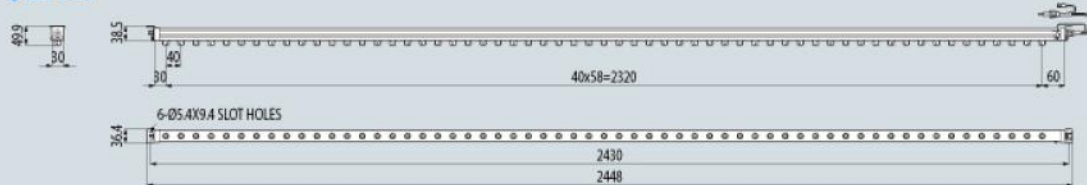


External Dimension

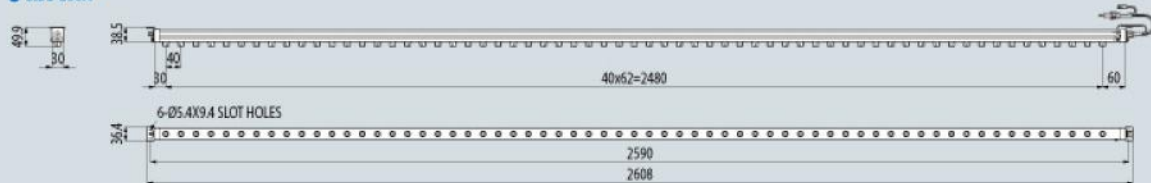
● SIB1-224A



● SIB1-240A

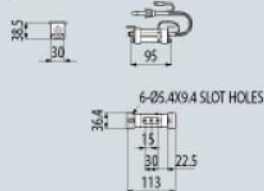


● SIB1-256A

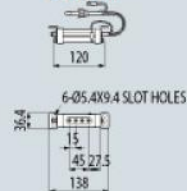


SIB2 Series

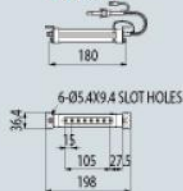
● SIB2-07



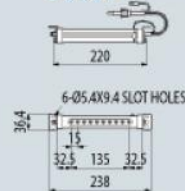
● SIB2-10



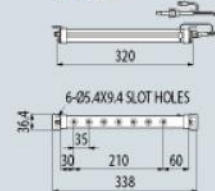
● SIB2-16



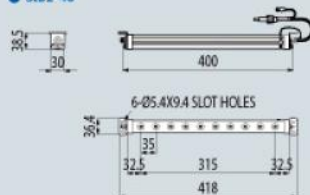
● SIB2-20



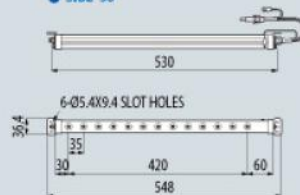
● SIB2-30



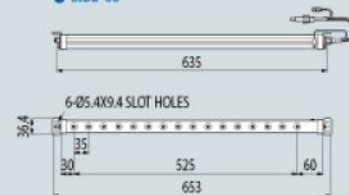
● SIB2-40



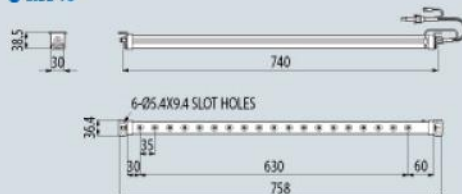
● SIB2-50



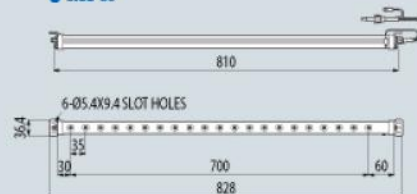
● SIB2-60



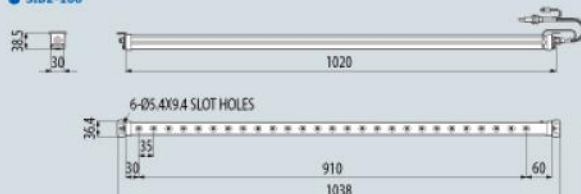
● SIB2-70



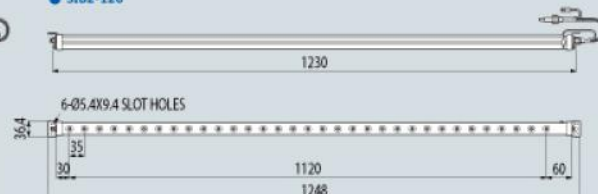
● SIB2-80



● SIB2-100

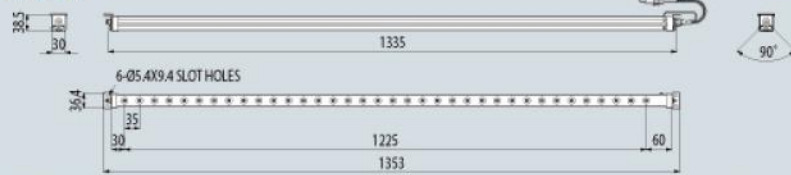


● SIB2-120

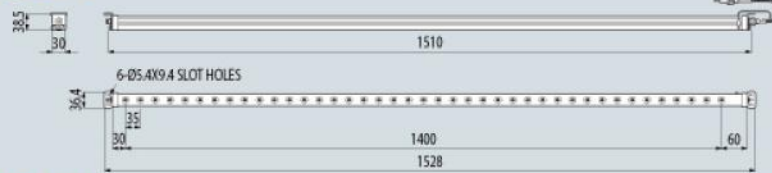


External Dimension

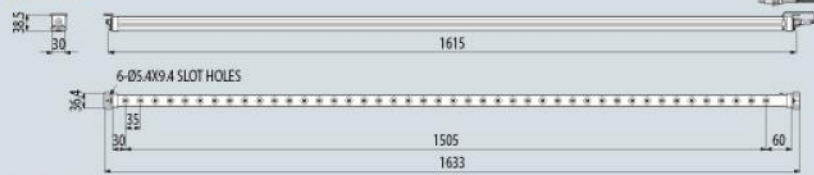
● SIB2-130



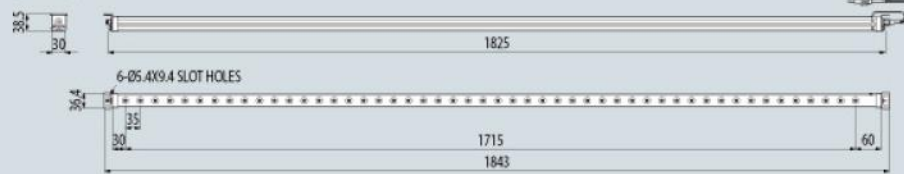
● SIB2-150



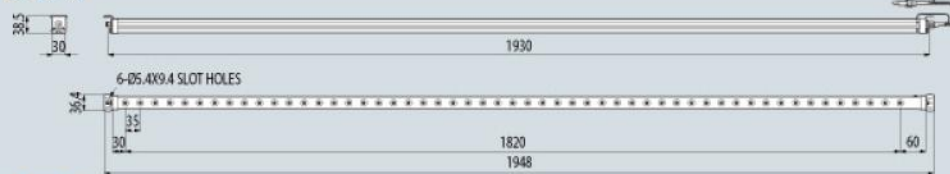
● SIB2-160



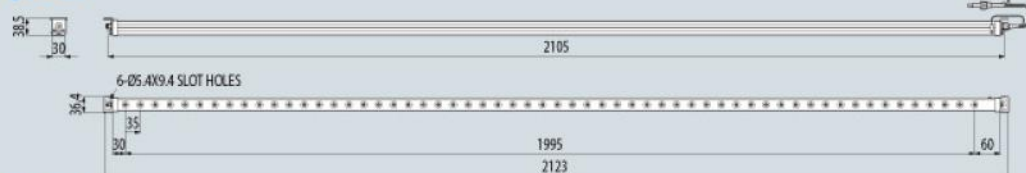
● SIB2-180



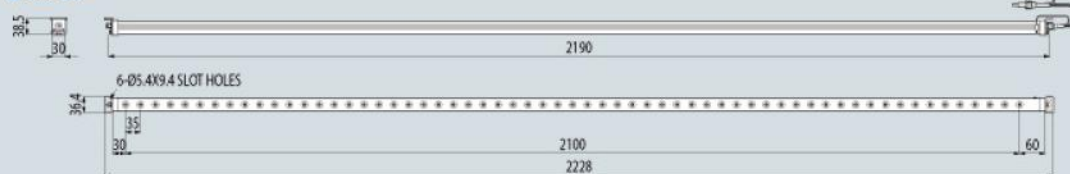
● SIB2-190



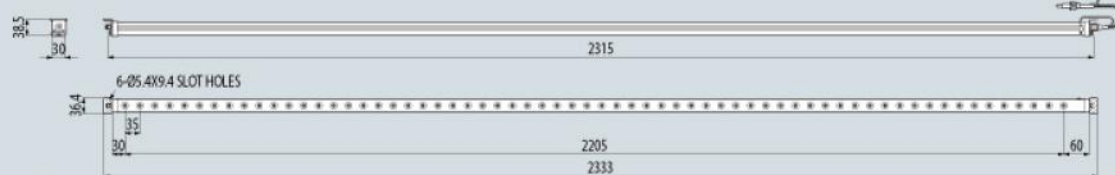
● SIB2-210



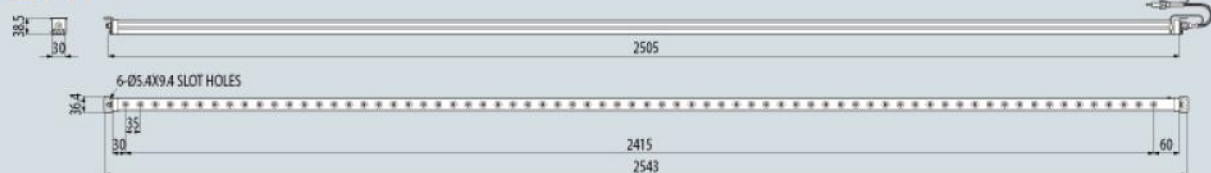
● SIB2-220



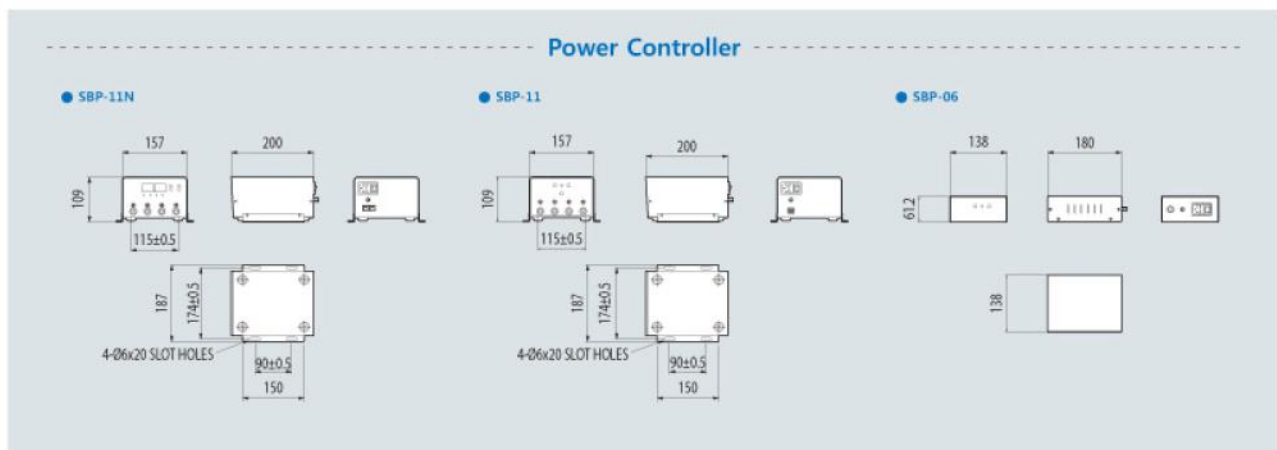
● SIB2-230



● SIB2-250



External Dimension



Every Product is made under Clean Condition(Class 1,000).

*Every Product is made under Clean Condition(Class 1,000).
We will serve high quality, best price and high performance for you.*



Advanced Production

Terminator (Soft X-ray Ionizer)



Soft X-Ray Ionizer

SXN-10T Series

- Multiple Output Function
- No CDA
- No Particle
- No Ozone
- Perfect Ion Balance
- High Ion Density
- 1:1/1.2/1.4 Type



Soft X-Ray Ionizer

SXN-10F Series

- Flexible Arm(300-2,000mm)
- No CDA
- No Particle
- No Ozone
- Perfect Ion Balance
- High Ion Density
- 1:1/1.2/1.4 Type

Ion Bar



Nozzle Bar (Cleanizer)

SNB Series

- Long maintenance Cycle(6month)
- Combined air nozzle
- Less particle on th tip
- Low input voltage DC 24V
- Easy maintenance
- High Frequency (72kHz)
- RMS(Real Monitoring System)



Aero-body Ion Bar

SIB3RD Series

- Aerobody shape
- Easy replaceable needle socket
- Fine Display
- Digital control function
- Remote control
- RMS(Real Monitoring System)



Slim Ion Bar

SIB1/2 Series

- Slim shape
- Easy replaceable needle socket
- Mini size
- Multiplicity length



Power controller for Slim Ion Bar

SBP-11N/11/06

- Fine display(SBP-11N)
- 4 Ion bar connected(SBP-11N/11)

Ion Blower



Over Head Ion Blower

SOB-5 Series(SOB2S/3S)

- Low Ion Balance $\pm 2V$
- EMI Protection
- Auto Cleaning Brush
- Remote Controller



Over Head Ion Blower

SOB Series(SOB-2/3/4/5)

- Auto Cleaning Brush
- Desk Space Saving Type
- Easy Tip Cleaning Front Cover
- Remote Controller



Storm Blower

SBL-30W

- Auto cleaning brush installed
- Ion balance within $\pm 2V$
- Protect EMI/EMS Protect
- Fine Display
- Powerful Air volume
- Remote control
- Alarm buzzer



Wide Blower

SBL-20W

- Perfect EMI/EMS protect
- Ion balance within $\pm 2V$
- Auto cleaning brush installed
- Wide air flow



Desk Type Ion Blower

SBL-15S

- Auto cleaning brush installed
- Ion balance within $\pm 2V$
- Perfect EMI protect
- RMS(Real Monitoring System)
- Auto ion balance
- Easy maintenance



Desk Type Ion Blower

SBL-15

- DC & AC 2Type
- Easy maintenance



Miniature Ion Blower

SBL-18/108

- Auto ion balance
- Low input voltage DC 24V
- RMS(Real Monitoring System)
- Easy maintenance



Miniature Ion Blower

SMB-60

- Ultra light weight & Ultra small size
- High Frequency(72kHz)
- Easy maintenance
- Low input voltage DC 24V

Ion Nozzle & Gun



Ion Nozzle

SPN-11

- High Frequency(72kHz)
- Low input voltage DC 24V
- Diverse one-touch fitting tube available



Ion Gun

SIG-11

- Powerful air jet
- Air regulator
- High Frequency(72kHz)
- Low input voltage DC 24V

Electrostatic Monitoring System



Electrostatic Monitoring System

EVM-10S/102, SM-20, SM-10

- RS232/485 Network
- Real time monitoring
- Measurement 0 to $\pm 50kV$
- Data saving and printing



Surface Resistivity Meter

SRM-10

- Mini probe type for surface resistivity
- Two point probe measuring
- Measuring range $10^4 - 10^{12.5} [\Omega/\square]$