

IONIZER

The Electrostatic Total Solutions

ION NOZZLE SERIES



Spot Ionizer

Innovative Piezo, Piezo High Frequency

Spot Ionizer Ion Nozzle

Ion Nozzle used Piezo transformer reduces the contamination on the tips of nozzle, and works good performance to eliminate the static charge at the small space.

This Ionizer can be transformed into various forms and shapes such as miniature size, the type with optics sensor for distance detecting and Gun Type. It can be attached with air filter for clean air supply. (Option)

● SNC-04



● SPN-11

Ion Nozzle



● SPN-11S



Ion Gun

● SIG-11

novative Piezo



*Fitting
Tubes*



SPN-11 Ion Nozzle

- Miniature size Ion Nozzle
- Ceramic made nozzle for durability against ozone
- Ion Balance within $\pm 15V$ (at 300mm Distance)
- Extended maintenance cycle of tip-cleaning (High Frequency AC Type)
- Low Input Voltage (DC24V)
- Various Fitting Tubes can be taken (Option)
- Air Filter for cleaning can be adapted (Option)



Piezo High Frequency (72kHz)

Piezo high frequency minimizes the contamination on the tip.

Fine Ceramic Nozzle

Fine Ceramic Nozzle를 채택하여 O_3 에 대한 내성을 강화 하였습니다.
The Piezo Nozzle has been adapted a fine ceramic nozzle socket to have durability against ozone.

Power Controller (SNC-04)

4 sets of SPN-11 can be connected to one SNC-04 for combined controlling.



Control Panel (SNC-04)



Fine Ceramic Nozzle



SPN-11S Ion Nozzle with Detecting Eye (Sensor)

- The photoelectric sensor can be controlled to work only in case of necessity
- Ceramic made nozzle for durability against ozone
- Ion Balance within $\pm 15V$ (at 300mm Distance)
- Sensitivity and running time of the sensor can be adjusted
- The bracket for special space and equipment



Infrared Rays Sensor

The sensitivity and running time of Infrared Rays Sensor can be controlled is for the use environment.



• Angle Stand (Option)

• Flexible Stand (Option)

SIG-11 Ion Gun



- Gun type ion nozzle
- Ion Balance within $\pm 15V$ (at 300mm Distance)
- Extended maintenance cycle of tip-cleaning (High Frequency AC Type)
- Low Input Voltage (DC24V)
- Various Fitting Tubes can be taken (Option)
- Air Filter for cleaning can be adapted (Option)



Piezo High Frequency (72kHz)

Piezo high frequency minimizes the contamination on the tip.

Air Regulator

Air Regulator to controll air volume.

One-Touch Air Joint

One-Touch Air Joint
One-Touch Air Joint to easy connect.



Air Regulator



Powerful Air Jet



• Air Fitting-Kit is not included.

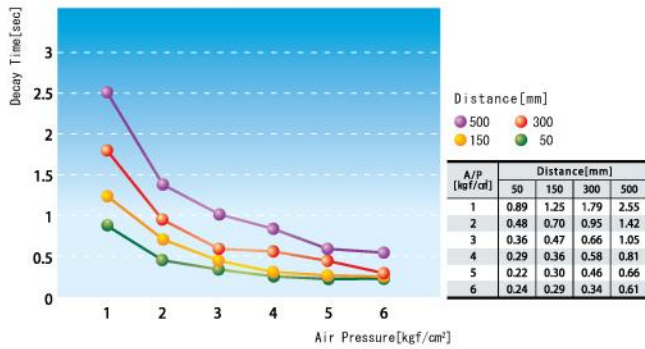
Fitting Tubes

- Optional item of Ion Nozzle and Ion Gun
- For optimized performance in special environment conditions
- If customers need a customized type, please contact us with your demands

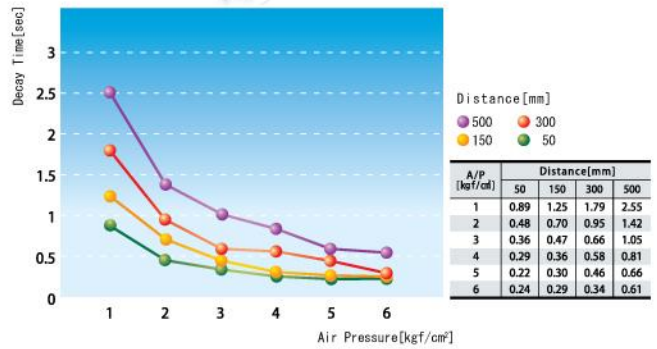


Decay Time Characteristics

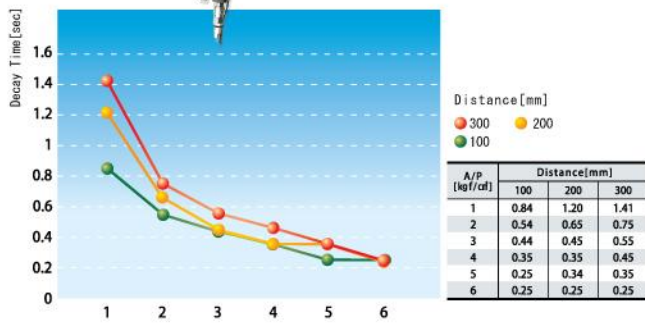
● SPN-11



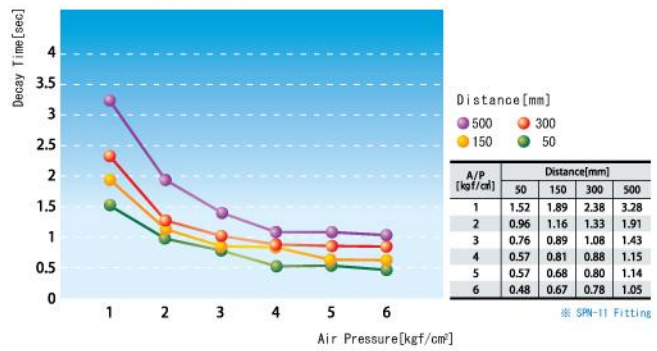
● SPN-11S



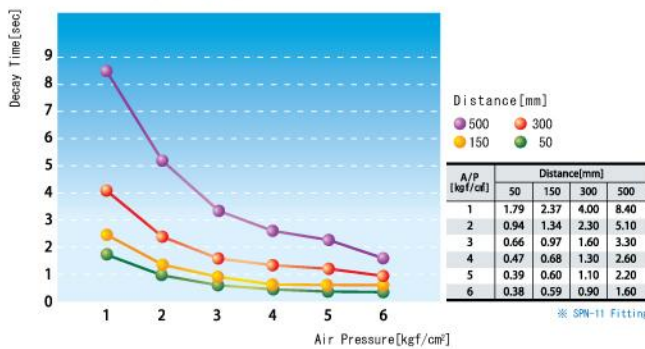
● SIG-11



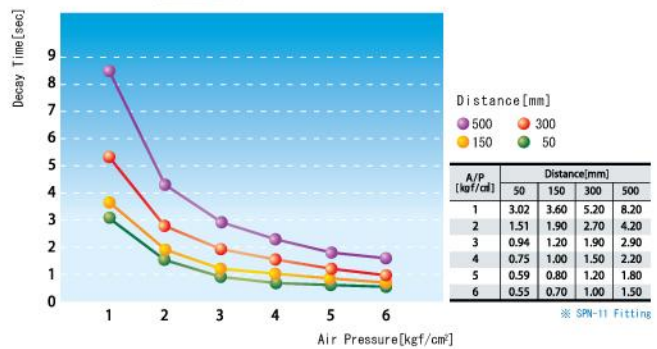
● BI-N100



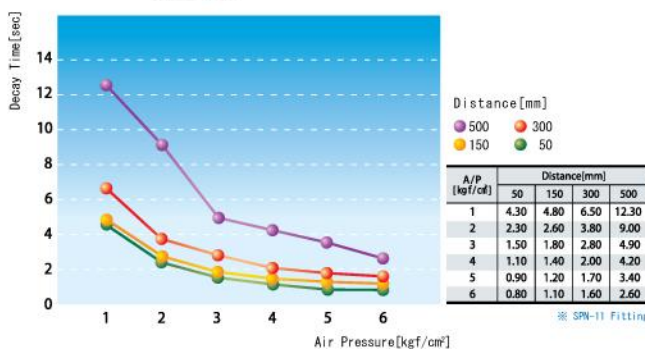
● BI-N200



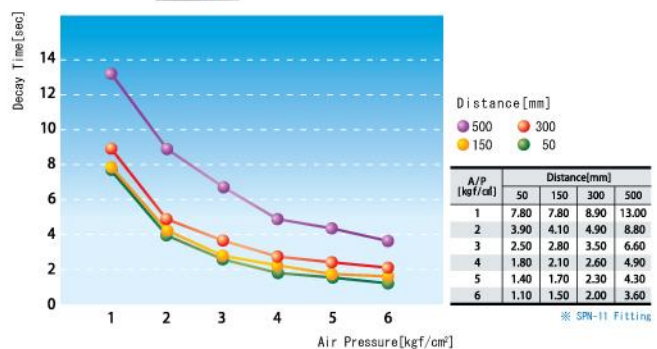
● BI-N300



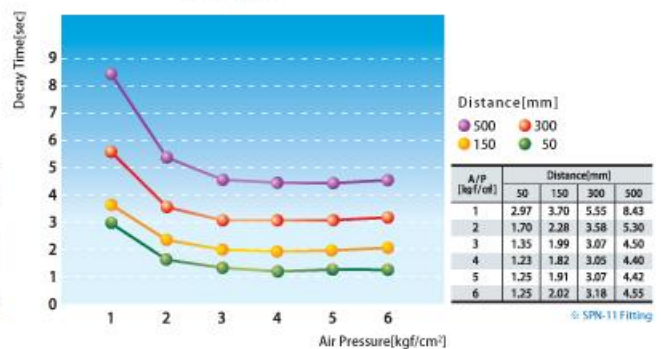
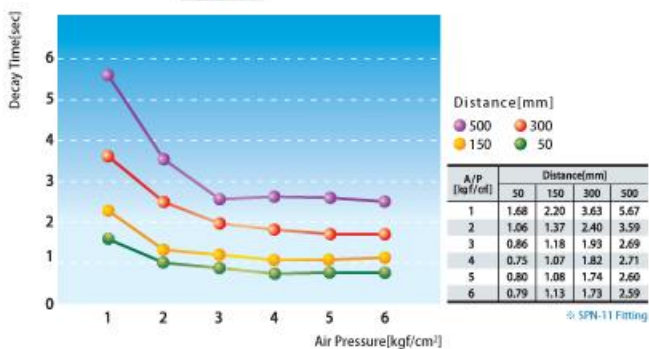
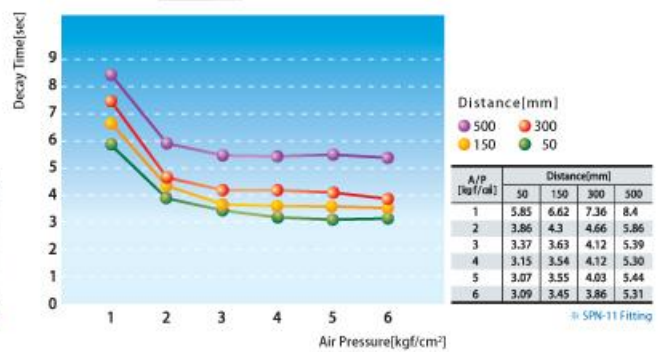
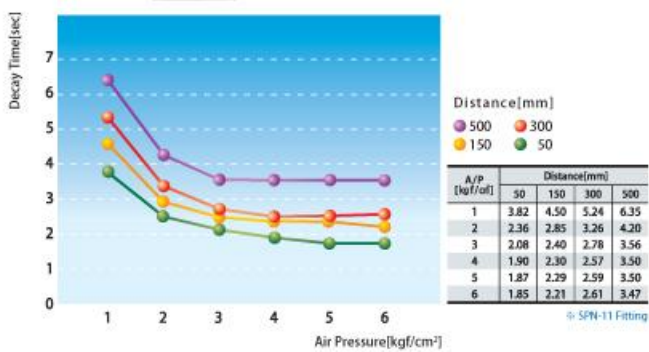
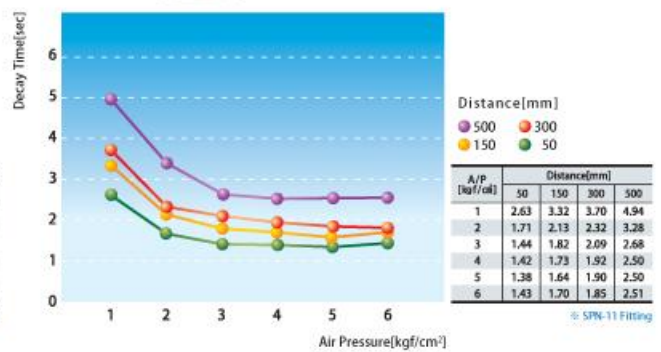
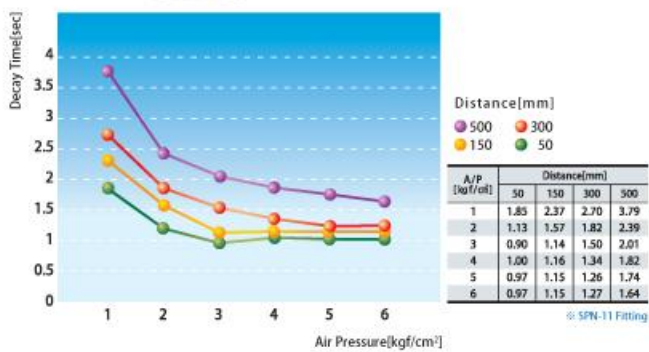
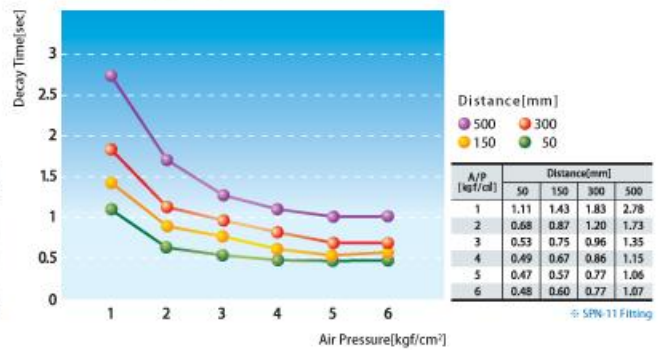
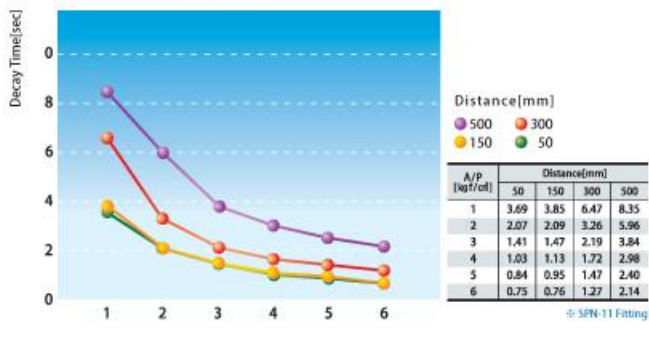
● BI-N400



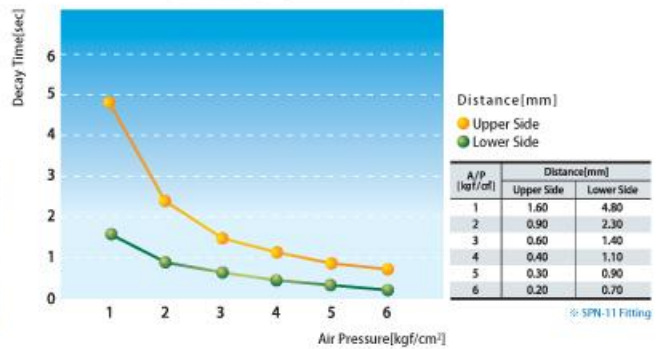
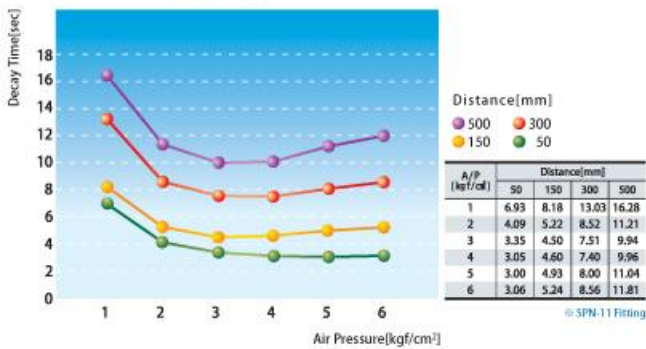
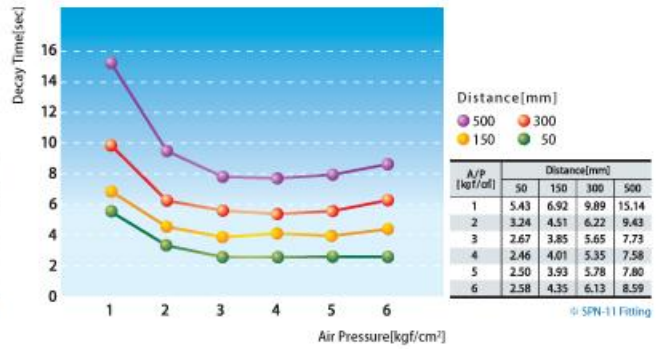
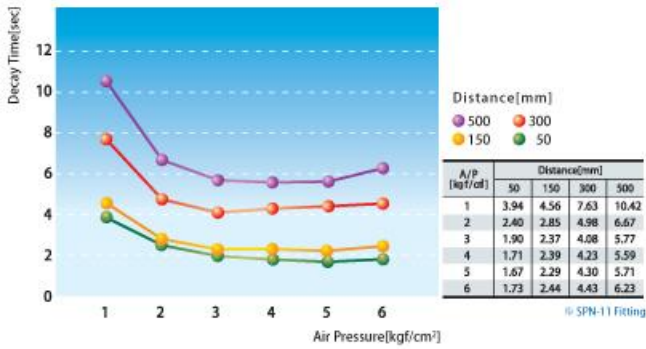
● BI-N500



Decay Time Characteristics



Decay Time Characteristics



Specification

※ We have various tip types such as W, Ti, Silicone and NTA Glass. According to customer request, It can be applied on Ion Nozzle. (For price information of each tip, Please contact us)

SPN-11, SNC-04

Category	Descriptions	Remark
Model	SPN-11	
Input Power	DC 24V	Adaptor (AC110/220V, 50/60Hz, DC24V)
Power Consumption	9W	
Ion-Generation Method	High Frequency AC	Piezo
Ion Balance	Within $\pm 15\%$	300mm Distance
Air purge supply pressure	1~5kgf/cm ² (0.5Mpa)	CDA(Clean Dry Air), N ₂
Air Inlet	6Φ	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Nozzle Material	Ceramic	Level V0
Electrode Material	Tungsten / Titanium	
Weight	130g	
Color	White	
Mounting Method	Stand Type	
Alarm Function	H/V abnormal	
Interface	Alarm(H/V abnormal)	
Model	SNC-04	Remark
Input Power	AC100~240V, 50/60Hz	
Power Consumption	7W	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Weight	800g	
Material	EGE	
Interface	Remote, Interlock, Run Stat, Alarm(H/V Abnormal)	Terminal
Warranty	1 year	

Specification

※ We have various tip types such as W, Ti, Silicone and NTA Glass. According to customer request, It can be applied on Ion Nozzle. (For price information of each tip, Please contact us)

● SPN-11S

Category	Descriptions	Remark
Model	SPN-11S	
Input Power	DC 24V	Adaptor (AC110/220V, 50/60Hz, DC24V)
Power Consumption	15W	
Ion-Generation Method	High Frequency AC	Piezo
Ion Balance	Within $\pm 15V$	300mm Distance
Air Pressure	1~5kgf/cm ² (0.5Mpa)	CDA(Clean Dry Air), N ₂
Air Inlet	6Φ	
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Nozzle Material	Ceramic	
Electrode Material	Tungsten / Titanium	
Weight	250g	
Color	White	
Mounting Method	Flexible Type	
Sensor	Photoelectric Sensor	
Alarm Function	H/V abnormal	
Interface	Alarm(H/V abnormal)	
Warranty	1 year	
Model	PHOTOELECTRIC SENSOR(HP100-A1)	Remark
Detection system	Diffuse-scan	
Power supply	10 to 30Vdc (ripple 10% max.)	
Current consumption	16mA max.	
Scanning distance	1m	
Differential travel	20% max. (at rated scanning distance)	
Operation mode	Light-ON / Dark-ON selectable by switch	
Response time	500ms max. for both operation and recovery	
Emitter	Infrared LED	
Ambient light immunity	Incandescent lamp: 10,000 lux max. Sunlight: 40,000 lux max.	

● SIG-11

Category	Descriptions	Remark
Model	SIG-11	
Input Power	DC 24V	Adaptor (AC110/220V, 50/60Hz, DC24V)
Power Consumption	9W	
Ion-Generation Method	High Frequency AC	Piezo
Ion Balance	Within $\pm 15V$	300mm Distance
Air purge supply pressure	1~5kgf/cm ² (0.5Mpa)	CDA(Clean Dry Air), N ₂
Operation Circumstance	0°C ~ +50°C(32°F ~ 122°F), 35% ~ 85% RH	
Nozzle Material	Teflon	Level V0
Electrode Material	Tungsten / Titanium	
Weight	250g	
Color	White	
Alarm Function	H/V abnormal	
Interface	Alarm(H/V abnormal)	
Spring Air Cable Length	5m, 10m	Option
Warranty	1 year	

※ Air Kit is not include. Air Kit is Optional.

● Fitting Tubes

Category		Descriptions		Remark
Model	SIG-11	Full-length Cases [mm]	Air Hole [EA]	
Bar Type Injector (BI)	BI-N100	167.5	11	Pitch-10mm
	BI-N130	197.5	14	Pitch-10mm
	BI-N150-P5	217.5	31	Pitch-5mm
	BI-N150-P10	217.5	16	Pitch-10mm
	BI-N200	267.5	21	Pitch-10mm
	BI-N200-P5	267.5	41	Pitch-5mm
	BI-N300	367.5	31	Pitch-10mm
	BI-N400	467.5	41	Pitch-10mm
	BI-N500	567.5	51	Pitch-10mm
	BI-N600	667.5	61	Pitch-10mm
Bar Type Injector (BI-45)	BI-45-N150-P10	217.5	32	Pitch-10mm
	BI-45-N200-P10	267.5	42	Pitch-10mm
	BI-45-N200-P25	267.5	18	Pitch-25mm
	BI-45-N300-P30	367.5	18	Pitch-30mm
	BI-45-N400	467.5	18	Pitch-50mm

Category		Descriptions		Remark
Model	SIG-11	Full-length Cases [mm]	Air Hole [EA]	
Direct Injector-Φ4 (DI)	DI-N100	129	1(Direct)	-
	DI-N200	229	1(Direct)	-
	DI-N300	329	1(Direct)	-
	DI-N400	429	1(Direct)	-
	DI-N500	529	1(Direct)	-
	DI-90-N100	123	7(Direct)	-
	DI-90-N200	223	7(Direct)	-
	DI-90-N300	323	7(Direct)	-
	DI-90-N400	423	7(Direct)	-
	DI-90-N500	523	7(Direct)	-
U Type Injector (UI)	UI-N160	169	22	Pitch-10mm
Elbow Coupler (EC)	EC-N50	58	-	-
Warranty		1 year		

※ The Fitting Tubes are Optional. We can supply a customized Fitting Tubes.

Composition

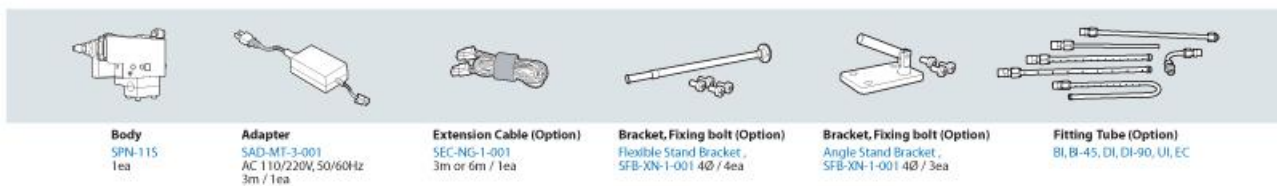
● SPN-11



● SNC-04



● SPN-11S

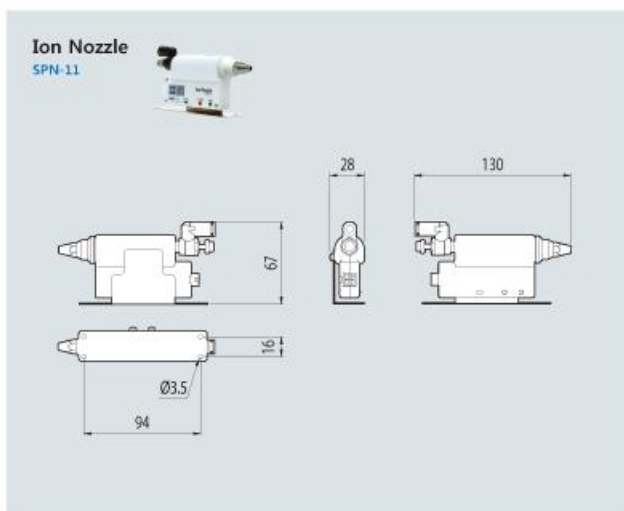


● SIG-11



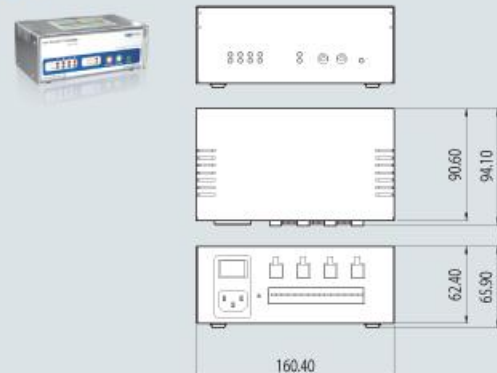
External Dimensions

● Ion Nozzle



Ion Nozzle Controller

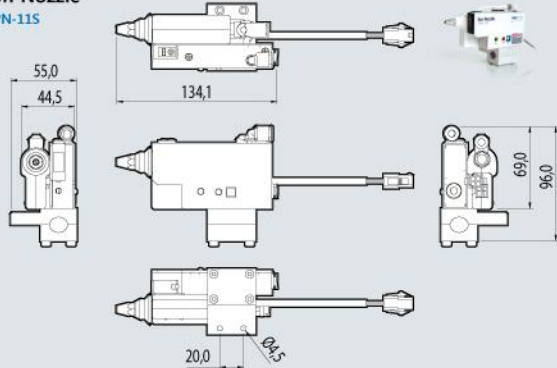
SNC-04



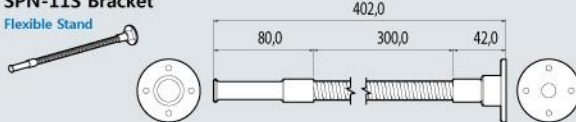
External Dimensions

● Ion Nozzle

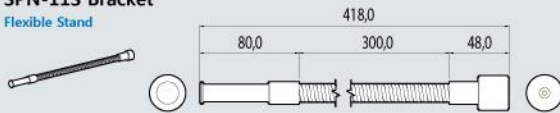
Ion Nozzle SPN-11S



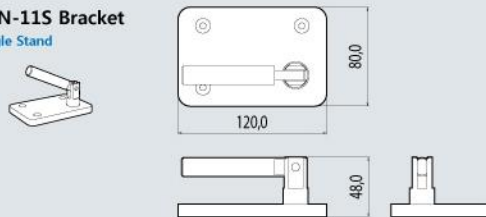
SPN-11S Bracket Flexible Stand



SPN-11S Bracket Flexible Stand

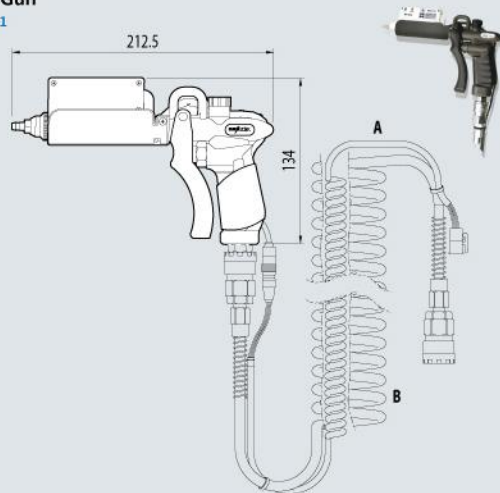


SPN-11S Bracket Angle Stand



● Ion Gun

Ion Gun SIG-11

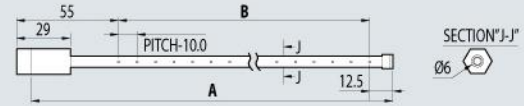


MODEL	DIMENSION	
	A(Spring Cable)	B(Air Hole)
SIG-11 5m	5,000mm	5,000mm
SIG-11 10m	10,000mm	10,000mm

● Fitting Tubes

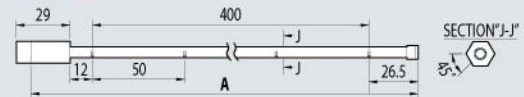
Bar Type Injector

BI(Single Holes)



Bar Type Injector

BI-45(Double Holes)



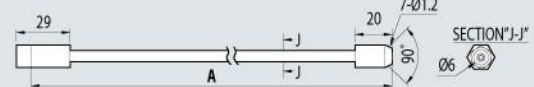
Direct Injector

DI(Ø4)



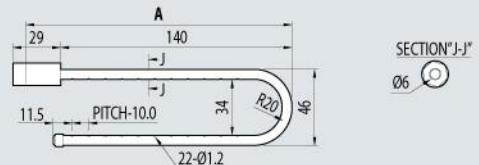
Direct Injector

DI-90(90°)



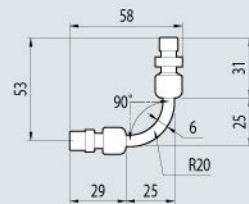
U Type Injector

UI



Elbow Coupler

EC-N50



MODEL	DIMENSION		
	A	B	AIR HOLE
BI-N 100	159.5	100	11
BI-N 200	259.5	200	21
BI-N 300	359.5	300	31
BI-N 400	459.5	400	41
BI-N 500	559.5	500	51
BI-45-N 400	459.5	-	18
DI-N 100	121	-	-
DI-N 200	221	-	-
DI-N 300	321	-	-
DI-N 400	421	-	-
DI-N 500	521	-	-
DI-90-N 100	115	-	-
DI-90-N 200	215	-	-
DI-90-N 300	315	-	-
DI-90-N 400	415	-	-
DI-90-N 500	515	-	-
UI-N 160	161	-	22

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(1month)
- 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
- Multipicity length



Power controller for Slim Ion Bar

SBP-11N/11/06

- Fine display(SBP-11N)
- 4 Ion bar connected(SBP-13N/11)

Ion Blower



Over Head Ion Blower

SOB-S 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 $10^7 \sim 10^{11} [\Omega/\square]$