

VESSEL®



Static Control Product Catalog

STAT·CLEAN

<http://www.vessel.co.jp/english/staticelectric/>



VESSEL,

Three Particular Reasons people choose VESSEL

1

We have the best selection

Vessel's lineup covers a wide range from fan, gun and bar-type air blow ionizers, EPA mats and wrist straps that prevent static discharge, to adhesive mats that prevent the scattering of dust. Our products provide solutions to your static removal and dust removal problems.

2

Our product development aims for user friendliness

To provide optimum products for production sites, our designs aim for ease of use. VESSEL aims for user convenience with our product lineup for various applications.

3

Our static removal and dust removal specialists improve your quality problems

Our static removal and dust removal specialists will visit your production site to propose the best available products. Customization is also available upon request.

the ionizing and dust elimination expert, helps solve your quality problems.

Product quality is an important determination at manufacturing sites.

VESSEL has focused on countermeasures against static electricity and dust in relation to quality.

Since 2000, we have provided products to remove static and dust.










All to help improve our customer's quality.

Let VESSEL, the ionizing and dust elimination experts,

help you improve your product quality.



Realize ionizing and clean control from your VESSEL's lineup of reliable and wide ranged

Fan Type	Nozzle Type	Gun Type	Bar Type
<p>Mount on a cell workbench, part shelf or belt conveyor. Handle close to far distances by switching the speed.</p> <div>  <p><Mini> F6CL-E F6ST-E →P06</p> </div> <hr/> <div>  <p><Standard> SFQ9-E →P07 F120-E F120S-E →P08</p> </div> <hr/> <div>  <p><Wide width> CF-30-E →P09 3F-12-E →P09</p> </div>	<p>Assemble into manufacturing devices for pinpoint neutralization and dust-elimination within a confined space. Just replace the nozzle to use with various applications.</p> <div>  <p>N-1 N-2 →P12</p> </div> <hr/>	<p>Ideal for air washing and neutralization after part acceptance and before part assembly, as well as for neutralization and dust elimination from resin formed products before painting.</p> <div>  <p>G7R-E →P14 BBZ-E →P14</p> </div> <hr/>	<p>Suitable for neutralizing clean rooms, and preventing static buildup on film moving at high speeds.</p> <div>  <p><Built-in power supply> C-series →P17</p> </div> <hr/> <div>  <p><Built-in power supply> B-series →P19</p> </div> <hr/> <div>  <p><Separate power supply> SH-series →P21</p> <div>  <p>SG-H3 →P22</p> </div> </div>

→P05




→P11

→P13

→P15

fingertips to your toes.

static electricity countermeasure products.

Ion Parts Cleaner	EPA Working Mat	Clean Walker	Options
<p>Perform air washing within static electricity removal area. Scattered dust is collected with the dust collector to maintain a clean environment.</p> <div>  <p><Gel Dust Collection Type> IPC-A4 IPC-A3 →P24</p> </div> <hr/> <div>  <p><Dust Collection Chamber built-in Type> IPC20-E →P25</p> </div> <hr/> <div>  <p><Separate Dust Collector Type> IPC40-E →P25 IPC-60 →P26</p> </div>	<p>ESD control mats for use in areas where parts are handled, assembled, repaired and tested. Available in ESD control mats and wrist straps.</p> <div>  <p>Conductive Rubber Mat →P28</p> </div> <hr/> <div>  <p><ESD Countermeasure Wrist Straps> EPS-01/01G EPS-03M/S EPS-02M/S EPS-04/B →P29</p> </div> <hr/> <div>  <p><Electrostatic Field Meter> EYE-01 SDL-01 EYE-02 →P30</p> </div>	<p>Adhesive mat, set before a clean room, collects dust off soles of work shoes. Non-peeling, washable type.</p> <div>  <p><Clean Walker> CW-900B →P32</p> </div> <hr/> <div>  <p><Clean Walker Easy> CW-900EZ →P32</p> </div> <hr/> <div>  <p><Tray> CW-T900 →P32</p> </div>	<p>Options and replacement parts.</p> <div>   <p>Electrode Needle Unit Electrode Needle Unit</p> </div> <hr/> <div>   <p>AC Adapter Filter</p> </div> <hr/> <div>   <p>Standard Nozzle Branch Box</p> </div> <hr/> <div>   <p>Brush Branch Adapter</p> </div> <hr/> <div>   <p>Speed Controller Flared Nozzle</p> </div> <hr/> <div>   <p>Adhesive Gel Sheet Electrode Needle</p> </div>

→P23

→P27

→P31

→P33

Measurement Conditions

Ion balance : 300 mm from the front of the device at maximum airflow setting
Decay time : 300 mm from the front of the device at maximum airflow setting
(given as the time required for the voltage to attenuate from ±1,000 V to ±100V)(Charged plate monitor: 150 mm × 150 mm square, 20 pF)
Noise level : 1 m from the front of the device at maximum airflow setting

※Measurement values given in this catalog are typical values from a sample unit, and do not guarantee the performance.

Fan Type



F6CL-E/F6ST-E

Compact and free installation
Pinpoint neutralization

Decay time **3.0 sec or less**



SFQ9-E

Dual piezoelectric transformer attains
fastest neutralization in this class

Decay time **1.2 sec or less**



F120-E/F120S-E **NEW**

Butterfly louver realizes
high-speed neutralization

Decay time **1.3 sec or less**



CF-30-E

High-efficiency cross fan
neutralizes over wide range of areas

Decay time **1.4 sec or less**



3F-12-E

Providing wide-range static-erasing
on workbench or conveyors

Decay time **1.8 sec or less**

1

High neutralization performance through efficient ion generation

The high frequency piezoelectric transformer
generates large volumes of ions, and
eliminates losses caused by recoupling.

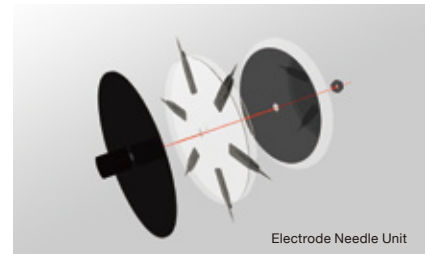


High-frequency piezoelectric transformer [Piezo]

2

Advanced control technology with steady ion balance

The capacity coupling type electrode needle
ensures a stable ion balance, and prevents
static destruction of the semiconductor.



Electrode Needle Unit

3

Louver cover improves serviceability

The cover can be easily removed allowing the
electrode needle to be cleaned where it will
not contaminate the work environment.



Ionizing Mini Fan with clip

Clip onto workbench or pillar
for pinpoint neutralization

F6CL-E



Low
noise
Fan

EDP No. 621632

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	3.0 sec or less	CE RoHS
Power supply DC24V	Fan Speed HI/LOW	LED illumination	INCLUDED TRANSFORMER 100-240VAC
		Electrode needle unit replacement	ALARM FAN LOCKUP
		ALARM H.V.	External grounding terminal

- Install anywhere
- Easily remove louvers
- Confirm operation status and electrode tip contamination with built-in light.



Remove clip when not needed

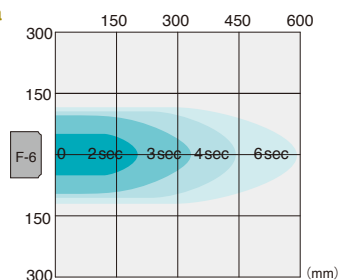
Easy removal

Built-in light

Specifications

Model No.	F6CL-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 3.5kV
Power supply and current consumption	DC24V $\pm 5\%$ / 253mA(typ.)
Ion balance	within ± 10 V
Decay time	3.0 sec or less
Operating range	150 mm to 600 mm
HxWxDmm	H254xW77xD108mm(clip included)
Weight	514g
Fan speed	0.78m ³ /min (max.)
Noise level	HI 58.5 dBA / LO 39.5 dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITF6-E, AC cable (1.8m)

Decay area



Accessories



AC Adapter

AD24-ITF6-E

EDP No. 806096

I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A

Ionizing Mini Fan with stand

Compact fan can be installed
anywhere for pinpoint neutralization

F6ST-E



Low
noise
Fan

EDP No. 621631

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	3.0 sec or less	CE RoHS
Power supply DC24V	Fan Speed HI/LOW	LED illumination	INCLUDED TRANSFORMER 100-240VAC
		Electrode needle unit replacement	ALARM FAN LOCKUP
		ALARM H.V.	External grounding terminal

- Install anywhere
- Easily remove louvers
- Confirm operation status and electrode tip contamination with built-in light.



Remove clip when not needed

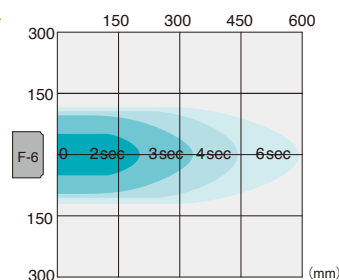
Easy removal

Built-in light

Specifications

Model No.	F6ST-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 3.5kV
Power supply and current consumption	DC24V $\pm 5\%$ / 220mA(typ.)
Ion balance	within ± 10 V
Decay time	3.0 sec or less
Operating range	150 mm to 600 mm
HxWxDmm	H142xW90xD82mm(stand included)
Weight	460g
Fan speed	0.78m ³ /min (max.)
Noise level	HI 58.5 dBA / LO 39.5 dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITF6-E, AC cable (1.8m)

Decay area



Accessories



AC Adapter

AD24-ITF6-E

EDP No. 806096

I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A

Fan-type Ionizer with Integrated Sensor

Ion balance is monitored by a sensor
and adjusted automatically

SFQ9-E



EDP No. 621626

High Voltage Transformer	Ion balance	Decay time	Directive
Dual piezoelectric high-frequency AC corona discharge	within ± 5 V	1.2 sec or less	CE RoHS
Power supply DC24V	Fan Speed HI/MD/LO	LED illumination	INCLUDED TRANSFORMER 100-240VAC
		Electrode needle unit replacement	ALARM FAN LOCKUP
			ALARM H.V.
			External grounding terminal

- Our original feedback sensor controls the ion balance to within ± 5 V.
- Dual piezoelectric transformers and high-speed fan provide double the neutralization speed.
- Indicator shows the maintenance timing and fluctuations in ion balance.



Dual piezo



Ion balance indicator

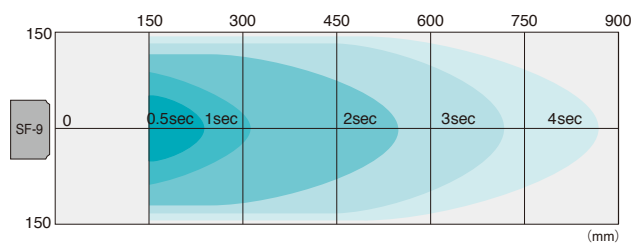


Interior LED light

Specifications

Model No.	SFQ9-E
Ionizing method/Applied voltage	Piezoelectric high-frequency DC corona discharge/DC±4 to ±8kV
Power supply and current consumption	DC24V±5%/340mA (typ.)
Ion balance	within ± 5 V
Decay time	1.2 sec or less
Operating range	150 mm to 900 mm
H×W×Dmm	H205×W141×D80mm(stand included)
Weight	966g
Fan speed	1.8m³/min (max.)
Noise level	HI 49.6 dBA / LO 38.8dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT-EX AC cable (1.8m)

Decay area



Accessories



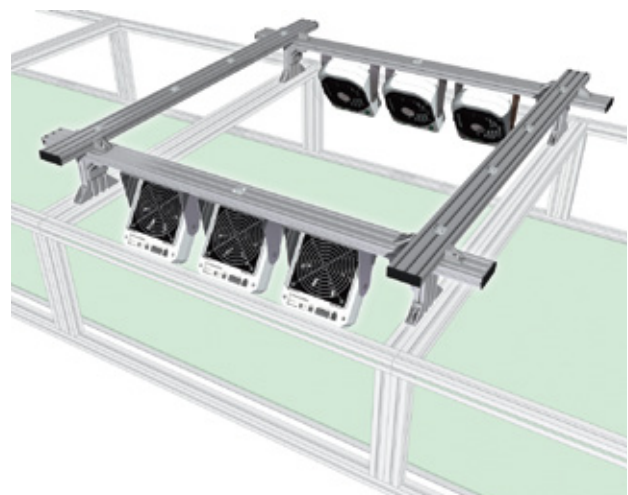
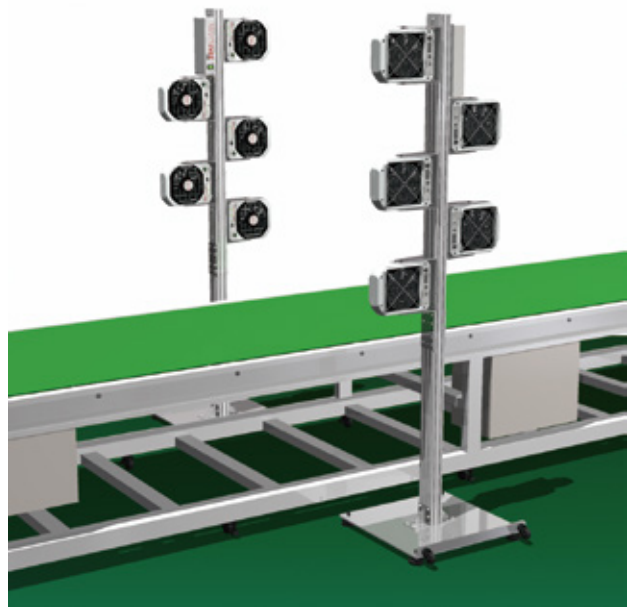
AC Adapter

AD24-IT-EX

EDP No. 806050

I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A

Applications (F120-E)



Fan-type Ionizer

Butterfly Louver !
for wider and far reach static erasing area

F120-E

NEW



EDP No. 621642

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	1.3 sec or less (F-120) 2.5 sec or less (F-120S)	CE RoHS
Power supply DC24V	Fan Speed HI/MD/LO	LED Illumination	INCLUDED TRANSFORMER 100-240VAC
		Electrode needle unit replacement	ALARM FAN LOCKUP
			ALARM H.V.
			External grounding terminal

- ▶ Butterfly Louver. Press outer side to disperse air. Press center to let air out straight.
- ▶ Apparent operation status indication. The new alarm function uses a 2-color LED. The red light indicates various errors.
- ▶ Easy maintenance. The electrode needle unit is set into the front cover.



Butterfly Louver

RUN lamp LED

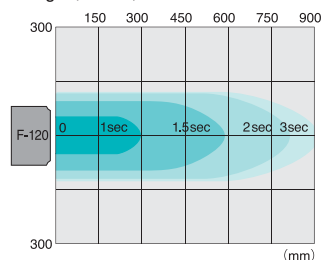
Electrode Needle Unit

Specifications

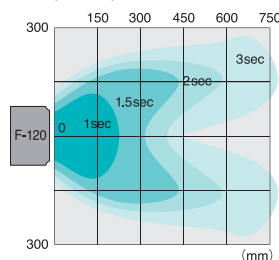
Model No.	F120-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 10kV (p-p)
Power supply and current consumption	DC24V $\pm 5\%$ / 700mA(max.)
Ion balance	within ± 10 V
Decay time	1.3 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H198xW162xD70mm
Weight	0.9kg
Fan speed	3.66m ³ /min (max.)
Noise level	HI 62.1 dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT-EX AC cable (1.8m)

Decay area

Straight (F120-E)



Wide (F120-E)



Accessories



AC Adapter
AD24-IT-EX
EDP No. 806050

I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A

Fan-type Ionizer

Silent fan model
with mild airflow

F120S-E

NEW



EDP No. 621646

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	1.3 sec or less (F-120) 2.5 sec or less (F-120S)	CE RoHS
Power supply DC24V	Fan Speed HI/MD/LO	LED Illumination	INCLUDED TRANSFORMER 100-240VAC
		Electrode needle unit replacement	ALARM FAN LOCKUP
			ALARM H.V.
			External grounding terminal

- ▶ Butterfly Louver. Press outer side to disperse air. Press center to let air out straight.
- ▶ Apparent operation status indication. The new alarm function uses a 2-color LED. The red light indicates various errors.
- ▶ Easy maintenance. The electrode needle unit is set into the front cover.



Butterfly Louver

RUN lamp LED

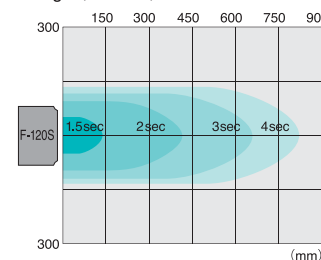
Electrode Needle Unit

Specifications

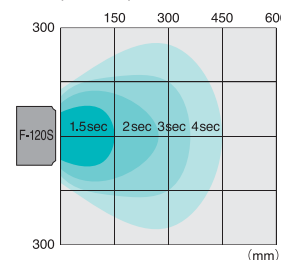
Model No.	F120S-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 10kV (p-p)
Power supply and current consumption	DC24V $\pm 5\%$ / 700mA(max.)
Ion balance	within ± 10 V
Decay time	2.5 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H198xW162xD69.5mm
Weight	0.9kg
Fan speed	2.21m ³ /min (max.)
Noise level	HI 50.7dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT-EX AC cable (1.8m)

Decay area

Straight (F120S-E)



Wide (F120S-E)



Accessories



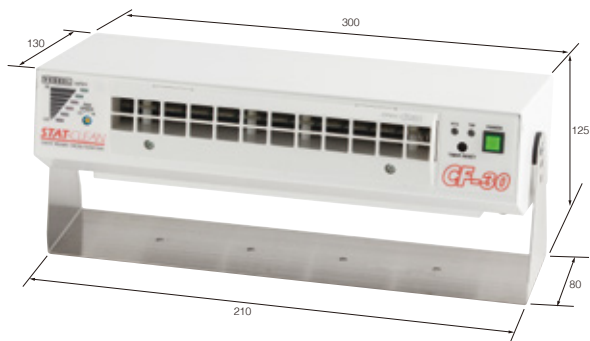
AC Adapter
AD24-IT-EX
EDP No. 806050

I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A

Wide-type Ionizer with Cross-flow Fan

Compact, low-profile design
saves space

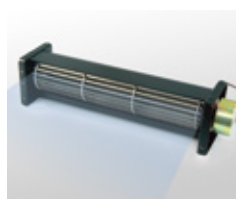
CF-30-E



EDP No. 621375

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 5 V	1.4 sec or less	CE RoHS
Power supply DC24V	No-step airflow volume changeover	LED illumination	INCLUDED TRANSFORMER 100-240VAC
Electrode needle unit replacement	ALARM FAN LOCKUP	ALARM H.V.	External grounding terminal

- Maintains an ion balance of ± 5 V using capacitive-coupled electrode needles.
- LED indicator lights up progressively to indicate airflow.
- LEDs all flash after 200 hours of operation to indicate cleaning time.



High-efficiency cross-flow fan built in



LED display and airflow volume adjustment knob

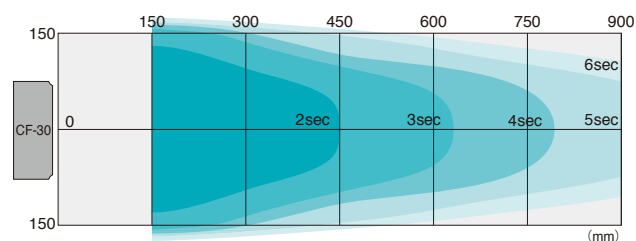


Capacitive-coupled electrode needles

Specifications

Model No.	CF-30-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC p-p9kV()
Power supply and current consumption	DC24V $\pm 5\%$ / 650mA (max.)
Ion balance	within ± 5 V
Decay time	1.4 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H125xW310xD130mm
Weight	2.1kg
Fan speed	1.58m ³ /min (max.)
Noise level	HI 51.2 dBA / LO 42.5dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITCF-EX AC cable (1.8m)

Decay area



Accessories

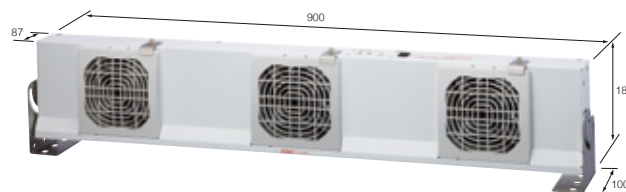


AC Adapter
AD24-ITCF-EX I/P : AC100V~240V 1.2A
O/P : DC24V 1.5A
EDP No. 806074

Overhead Triple-fan Ionizer

Erases static electricity over a large area by
installing above your work bench or conveyor belt

3F-12-E



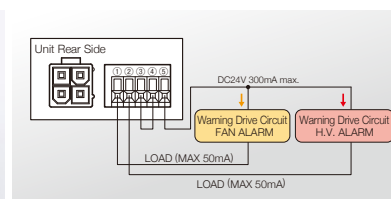
EDP No. 621378

High Voltage Transformer	Ion balance	Decay time
Piezoelectric high-frequency AC corona discharge	within ± 5 V	1.8 sec or less
Power supply DC24V	No-step airflow volume changeover	LED illumination
INCLUDED TRANSFORMER 100-240VAC	Electrode needle unit replacement	ALARM FAN LOCKUP
ALARM H.V.	External grounding terminal	

- Disk-shaped capacity coupled electrode realizes ± 5 V ion balance.
- Equipped with 24 VDC service power (300 mA).
- Error signal output terminal provided to facilitate assembly into systems.



Electrode Needle Plate

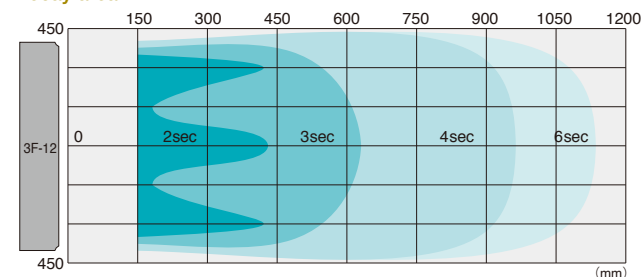


Alarm Output Connection

Specifications

Model No.	3F-12-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 2.4kV
Power supply and current consumption	DC24V $\pm 5\%$ / 1200mA (max.)
Ion balance	within ± 5 V
Decay time	1.8 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H182xW913xD100mm(stand included)
Weight	5.3 kg
Fan speed	3.4m ³ /min (max.)
Noise level	HI 54.9 dBA / LO 45.3dBA
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT19 AC cable (1.8m)

Decay area



Accessories

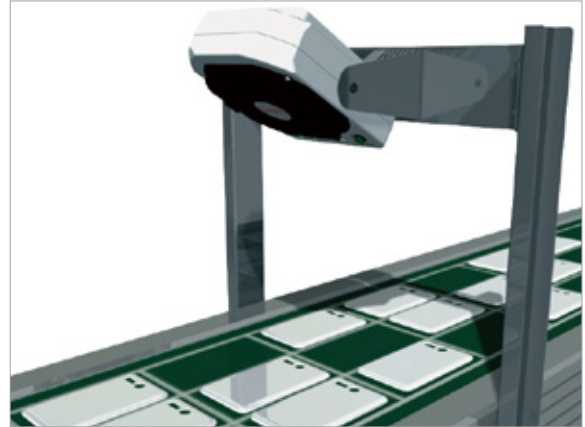


AC Adapter
AD24-IT19 I/P : AC100V~240V 1.2A
O/P : DC24V 1.9A
EDP No. 806080

VESSEL ionizers for a variety of applications.



Inspection process



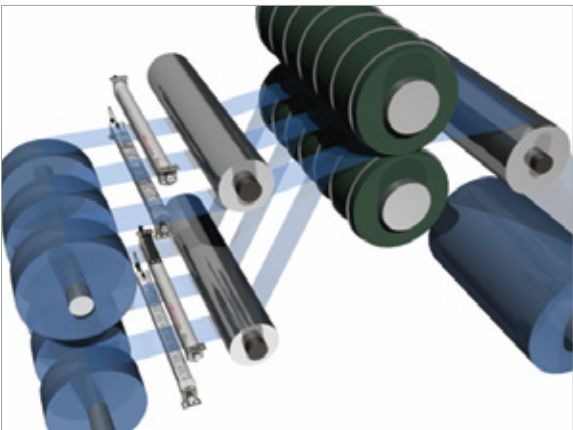
Dust prevention on molded parts



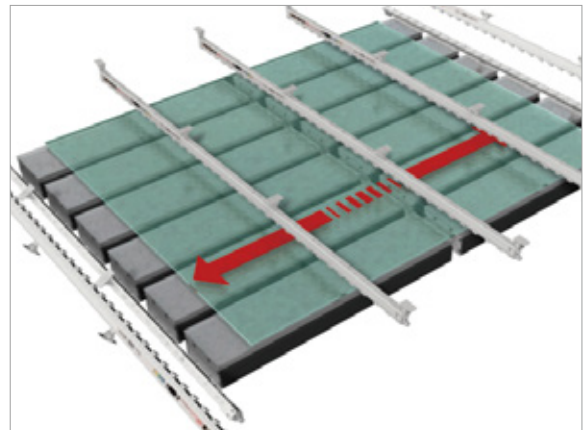
Static electricity removal in a bottle



Dust and/or static electricity removal from large resin parts



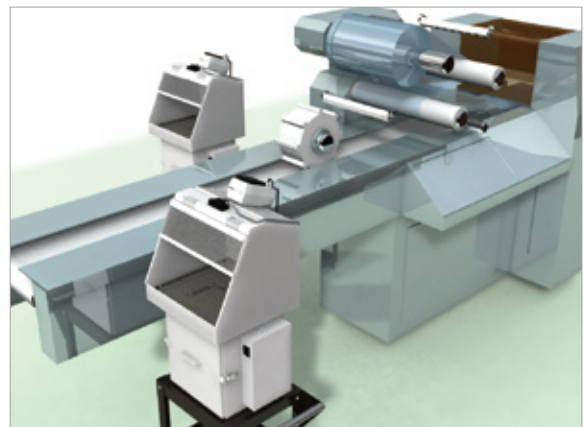
Film unwinding and winding



Glass substrate transfer



Transforming an assembly desk into a simplified clean booth



Static electricity removal from films and/or products

Nozzle Type



N-1 NEW

Ultra-compact slim body
Rotary nozzle increases
installation choices

Decay time 0.7 sec or less



N-2

Operation status displayed on LED lamps
Interchangeable nozzle increases
suitable applications

Decay time 0.7 sec or less

1

LED indicators clearly
indicate the operating status

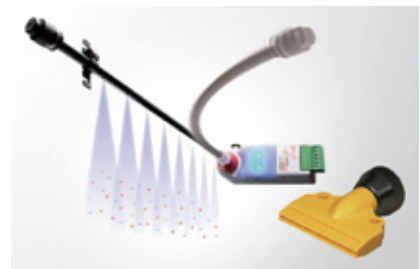
The bright LED lamps show the operating
state even when installing in dark systems.



2

Diverse lineup of optional nozzles
support various applications

Use the optional shower nozzle or silent nozzle.



3

Daisy-chain the power cables to
keep high-voltage cables inside
and ensure safety

Power can be supplied to multiple units by
daisy-chaining them. 24 VDC wiring enhances
safe connection.

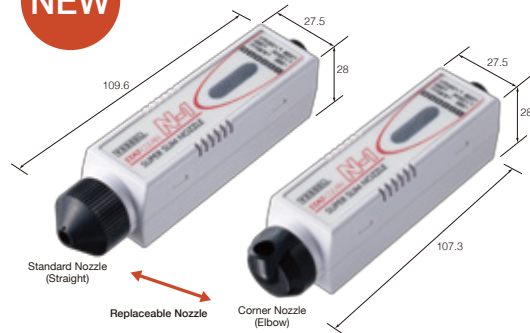


Super Slim Nozzle-Type Ionizer

Super Compact Slim Body.
A rotating nozzle enables to ionize anywhere

NEW

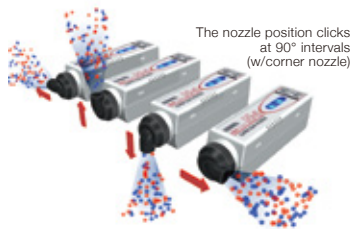
N-1



EDP No. 621639

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	0.7 sec or less	CE RoHS
Power supply: DC24V	Power supply: AIR/N2 max 0.6MPa	LED illumination	AC Adapter (Option)
		Screw-type needle electrode	"ON" lamp
		ALARM H.V.	External grounding terminal

- ▶ Super slim and compact design enabling to be installed at any place for any direction. 27.5mmx28mm.
- ▶ Change the blow direction by turning the rotary corner nozzle.

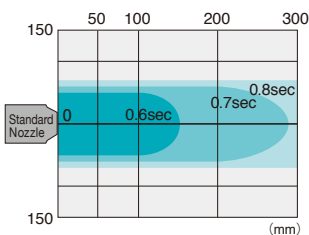


Specifications

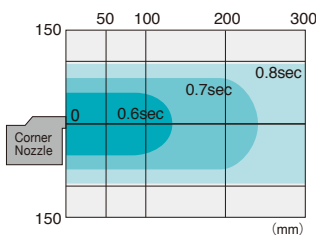
Model No.	N-1
Ionizing method/Applied voltage	Piezo high-frequency AC Corona discharge method/AC10kV (p-p)
Power supply and current consumption	DC24V $\pm 5\%$ /58mA(typ.)
Ion balance	within ± 10 V (standard nozzle-0.3MPa, 150mm) (measured values)
Decay time	0.7 sec or less (standard nozzle-0.3MPa, 150mm) (measured values)
Operating range	50 mm to 600 mm
HxWxDmm	L109.6xW27.5xH28mm (with standard nozzle mounted)
Weight	62 g (with standard nozzle mounted)
Air supply hose diameter	tube fitting $\Phi 6$ mm
Operating fluid	Clean dry air (0.1MPa to 0.3MPa), nitrogen N2 (0.1MPa to 0.3MPa)
Airflow	181ℓ/min(With standard nozzle mounted at 0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	Standard Nozzle (included with device), Corner Nozzle

Decay area Air Pressure : 0.3MPa

<with Standard Nozzle installed>



<with Corner Nozzle installed>



Accessories



Standard Nozzle
N-1SN
EDP No. 806120

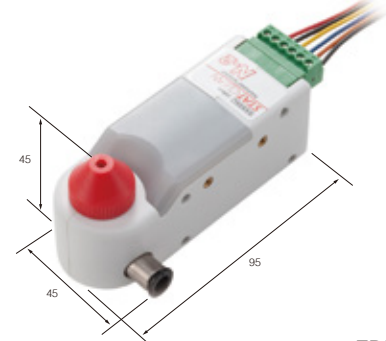


Corner Nozzle
N-1CN
EDP No. 806121

Pinpoint Nozzle Ionizer

Featuring an LED indicator that communicates the device's operating status at a glance

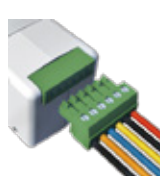
N-2



EDP No. 621615

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	0.7 sec or less	CE RoHS
Power supply: DC24V	Power supply: AIR/N2 max 0.6MPa	LED illumination	AC Adapter (Option)
		Screw-type needle electrode	"ON" lamp
		ALARM H.V.	External grounding terminal

- ▶ Easy to wire with connector terminals.
- ▶ Diverse nozzles support various applications.

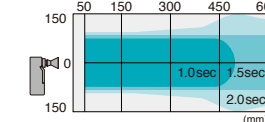


Specifications

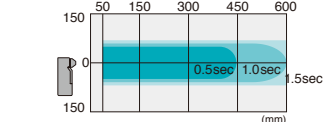
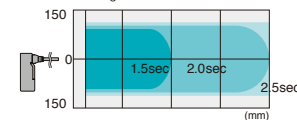
Model No.	N-2
Ionizing method/Applied voltage	Piezo high-frequency AC Corona discharge method/AC6kV (p-p)
Power supply and current consumption	DC24V $\pm 5\%$ /100mA(typ.)
Ion balance	within ± 10 V (standard nozzle-0.3MPa, 150mm) (measured values)
Decay time	0.7 sec or less (standard nozzle-0.3MPa, 150mm) (measured values)
Operating range	50 mm to 600 mm
HxWxDmm	L95xW45xH45mm
Weight	106 g (with standard nozzle mounted)
Air supply hose diameter	tube fitting $\Phi 6$ mm
Operating fluid	Clean dry air (0.1MPa to 0.6MPa), nitrogen N2 (0.1MPa to 0.6MPa)
Airflow	217ℓ/min(With standard nozzle mounted at 0.3MPa)
Noise level	92dBA(With standard nozzle mounted at 0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	Standard Nozzle (included with device), Flared Nozzle (N-2FN), Tube-fitting Nozzle (N-2TN), Power supply harness

Decay area Air Pressure : 0.3MPa

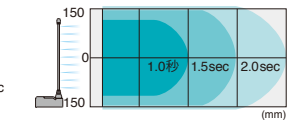
<with Flare Nozzle installed>



<with Standard Nozzle installed>

<Tube fitting Nozzle installed>
(Tube 300mm long installed)

<Tube fitting Nozzle and Shower Tube installed>



Accessories



Flared Nozzle
N-2FN
EDP No. 806086



Tube-fitting Nozzle
N-2TN
EDP No. 806085



Electrode Needle Replacement Screwdriver (separately sold)
G-7DR
EDP No. 806061

Gun Type



G7R-E

Compact and lightweight
High discharge air blow ionizer

Decay time 0.5 sec or less



BBZ-E

Eliminate dust and static electricity
for wide area.
Silent and highly durable

Decay time 0.5 sec or less

1

The bright white LED lamp makes dust visible

Use the LED lamp to check dust that has
adhered on the workpiece.



2

Piezoelectric transformer enhances safety with no need to expose high-voltage cables

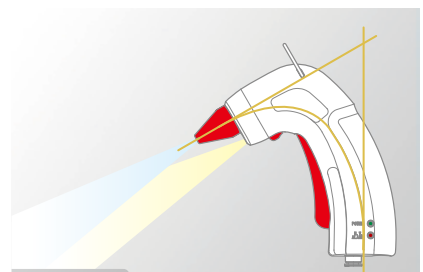
The high-voltage cable is not exposed, so
there's no need to worry about current leaks or
electric shock caused by wire breakage.



3

Ergonomically designed grip is easy to hold and adjusted to the optimum angle

The nozzle direction faces the optimum
direction when the grip is held, allowing work to
be started right away.



Gun-type Ionizer

Our most popular ionizing air gun is compact, lightweight and user-friendly

G7R-E

EDP No. 621621

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	0.5 sec or less	CE RoHS
Power supply DC24V	Air Pressure max 0.6MPa	LED illumination	INCLUDED TRANSFORMER 100-240VAC
		Screw-type needle electrode	"ON" lamp
		ALARM H.V.	External grounding terminal

- ▶ Ideal for neutralization and dust elimination of precision parts at hand, for example, in cell production.
- ▶ Our diverse lineup of options supports various applications.
- ▶ Our tough 2.5 m robot cable withstands up to 150,000 bends.



Attach a brush to blow out dust

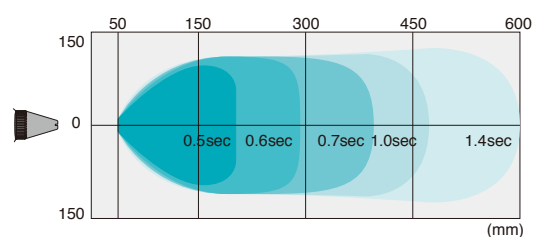


Operating and malfunction alarm LEDs are provided on both sides of the grip

Specifications

Model No.	G7R-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 2kV
Power supply and current consumption	DC24V $\pm 5\%$ /74mA (max.)
Ion balance	within ± 10 V (standard nozzle: measured 150mm from device at 0.3 MPa)
Decay time	0.5 sec or less (standard nozzle: measured 150mm from device at 0.3 MPa)
Operating range	50 mm to 600 mm
HxWxDmm	L105xH150xD36mm
Weight	198g
Air supply hose diameter	tube fitting $\phi 6$ mm
Operating fluid	Clean dry air (0.1MPa to 0.6MPa)
Airflow	200 ℓ /min (0.3MPa)
Noise level	90dBA (0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITC-E AC cable (1.8m) / Standard Nozzle (included with device)

Decay area Air Pressure : 0.3MPa (with Standard Nozzle installed)



Accessories

Standard Nozzle
G-7SN
EDP No. 806057Tube fitting Nozzle
G-7B
EDP No. 806059Brush: 60 mm bristles
G-7B
EDP No. 806059Electrode Needle Replacement Screwdriver
G-7DR
EDP No. 806061AC Adapter
AD24-ITC-E
EDP No. 806067

Gun-type Ionizer

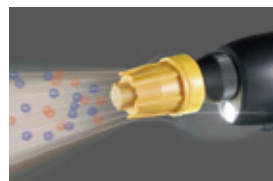
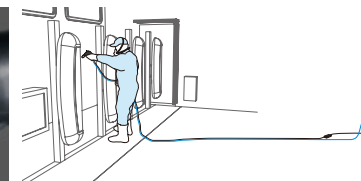
Silent and high durability model ideal for air blowing in wide areas

BBZ-E

EDP No. 621615

High Voltage Transformer	Ion balance	Decay time	Directive
Piezoelectric high-frequency AC corona discharge	within ± 10 V	0.5 sec or less	CE RoHS
Power supply DC24V	Air Pressure max 0.6MPa	LED illumination	INCLUDED TRANSFORMER 100-240VAC
		Screw-type needle electrode	"ON" lamp
		ALARM H.V.	External grounding terminal

- ▶ Ideal for standing work such as neutralization and dust elimination of large plastic products.
- ▶ Silent nozzle reduces work environment noise.
- ▶ 5m robot cable withstands up to 150,000 bends & screw-in connector withstands vibration

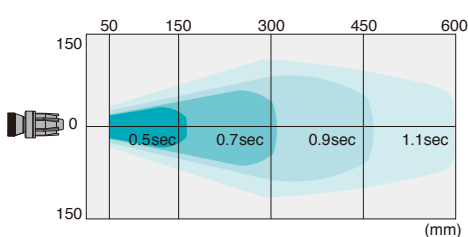
Silent, high-discharge air nozzle reduces wind noise
Long cable allows work in wide range

The long power cable (5m) allows work in a widespread area

Specifications

Model No.	BBZ-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 2kV
Power supply and current consumption	DC24V $\pm 5\%$ /74mA (max.)
Ion balance	within ± 10 V (standard nozzle: measured 150mm from device at 0.3 MPa)
Decay time	0.5 sec or less (standard nozzle: measured 150mm from device at 0.3 MPa)
Operating range	50 mm to 600 mm
HxWxDmm	L132xH152xD36mm
Weight	198g
Air supply hose diameter	tube fitting $\phi 6$ mm
Operating fluid	Clean dry air (0.1MPa to 0.6MPa)
Airflow	200 ℓ /min (0.3MPa)
Noise level	77.3dBA (0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITB-E AC cable (1.8m)

Decay area Air Pressure : 0.6MPa



Accessories

Nozzle
BB-ZSN
EDP No. 621708AC Adapter
AD24-ITB-E
EDP No. 806076

Bar Type



C-series NEW

Compact and clean design
Super-high speed ionizer

Ion balance within $\pm 30V$
(Distance 1000mm)



B-series

Extensive variations
from 60 cm up to 3 m

Ion balance within $\pm 30V$
(Distance 1000mm)



SH-series NEW

Slim and high-speed ionizer
High-voltage power standalone type

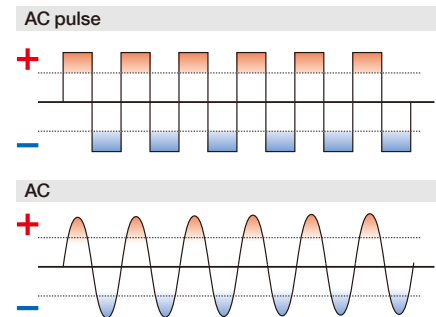
Ion balance within $\pm 50V$
(Distance 1000mm)

1

Super Fast Static Electricity Removal

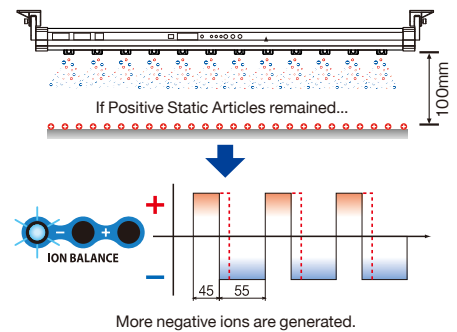
AC pulse method

Generating alternately positive ions and negative ions from each electrode. Since ions are generated at the maximum width of each positive and negative electrode cycle, the ion volume is high and static electricity can be removed quickly.



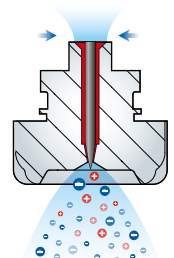
Auto Balance Mode

The C series are equipped with a mode to optimally adjust the ion balance automatically according to the polarity of the charged matter. (Target distance: 50 to 100 mm)



Air purge function

With air purged toward the needle electrode tip. This not only prevents contamination at the tip of the electrode needle, but also carries the generated ions quickly to the charged object and removes static electricity.



2

Usability

Easy maintenance design

One-touch needle replacement. A socket type needle can be easily replaced.

*The electrode needle cannot be removed from the SH- series.



Clean design

Needle cleaning time notified

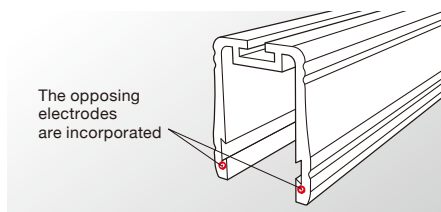
The cleaning interval can be set between one and 60 days, in one-day units. When the time elapses, the needle-cleaning lamp lights up and an alarm displays. *C-series

The ion current is detected. When the ion generation drops, the ION/TIP lamp turns ON and an alarm displays. *B-series



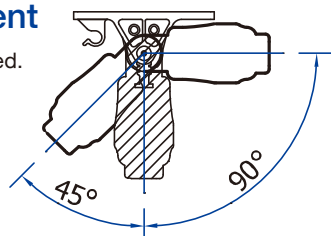
Body contamination prevention

Opposing electrodes are incorporated in the body. The induced voltage prevents particles from sticking to the outer side of the body, and limits the losses in applied voltage to improve the ion generation efficiency. *C-series



Angle adjustment

The angle can be adjusted.



3

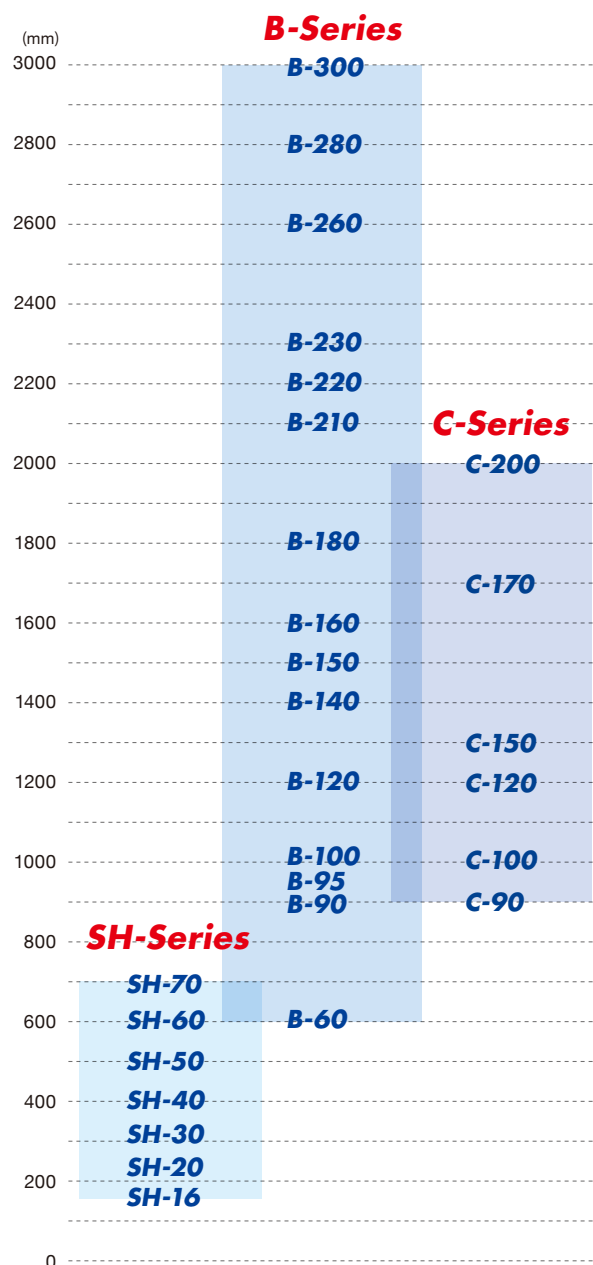
Line-up at a glance

Sizes to match various working environments

Ionizing bars are available in a variety of sizes for assembly into small electronic part manufacturing systems to neutralization of large workpieces such as film and liquid crystal glass.



All bar type series lineup



Clean & Compact.

Newly designed high-precision and high-speed ionizer applying a new technology

C-series

NEW

- C-90** EDP No. 621851
- C-100** EDP No. 621852
- C-120** EDP No. 621853
- C-150** EDP No. 621854
- C-170** EDP No. 621855
- C-200** EDP No. 621856

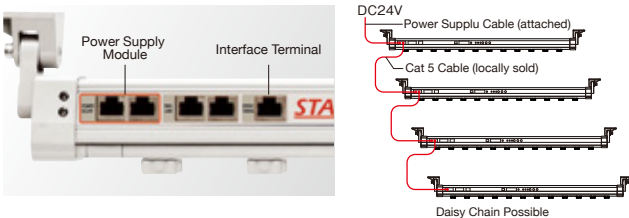
High Voltage Transformer	Ion balance	Directive
Pulse AC corona discharge	within ± 30 V (measured 1000 mm)	CE RoHS
Power supply DC 24V $\pm 5\%$	Air Pressure max 0.3MPa	LCD Display
	Electrode needle unit replacement	Adjustable Ion Balance
	Needle Cleaning Timer (1 to 60 days)	ALARM H.V.
		External output LAN Terminal

Common Specifications

Model No.	C-90~C-200
Ionizing method/Applied voltage	Pulse AC Corona discharge / AC8~12.5kV (p-p)
frequency	0.1 to 50Hz (Select from ten steps)
pulse ratio	Positive ion 40 to 70 %, negative ion 60 to 30%
Power supply and current consumption	DC24V $\pm 5\%$ / 600mA (max.)
Ion balance	within ± 30 V (Distance 1000mm)
Decay time	See below
Operating range	50 to 2000mm
HxWxDmm	Refer to the figure on the right
Weight	Refer to the figure on the right
Air supply hose diameter	PT1/8
Operating fluid	Clean dry air or nitrogen (N2) (0.3 MPa or less)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 85% RH (with no dew condensation or freezing)
Accessories	Remote controller / Power cable (5m) / End brackets (included with device) / Middle bracket (included with device / C-90 is excluded)

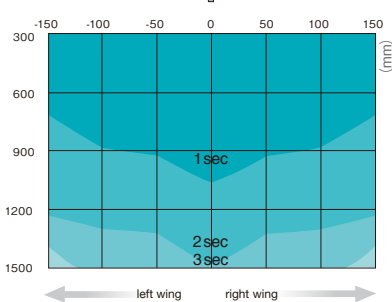
*Silicon discharge needles also available. For more detail please contact us.

- ▶ Newly designed super-fast ionizing air discharge port
- ▶ Auto Balance Mode (Target distance: 50 to 100 mm)
- ▶ Terminals grouped on one side. Enabling a daisy-chain connection.

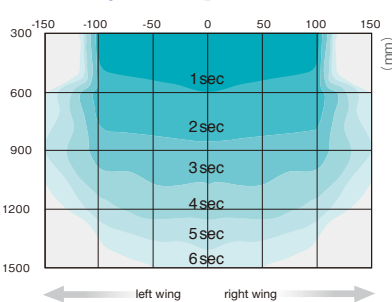


Decay area Measurement conditions •Product : C-150 •Voltage : 10.5kV(P-06 N-06) •Air pressure : 0.3MPa •Temperature : 24°C $\pm 1^\circ$ C
•Humidity : 40% $\pm 2\%$ RH •Decay time : ± 1000 V \rightarrow ± 100 V •CPM : 20pF ± 2 pF(150x150mm)

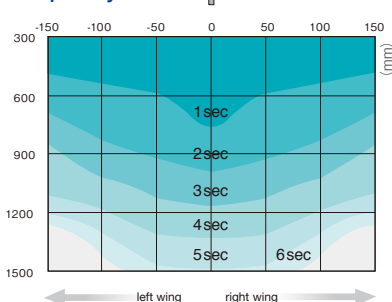
Frequency: 0.1Hz



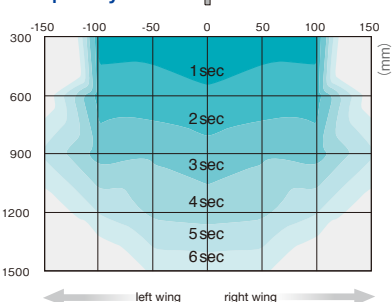
Frequency: 30Hz



Frequency: 1Hz



Frequency: 50Hz



Options



AC Adapter AD24-IT-EX

(Operatable with One Bar type IONIZER only)
I / P : AC100V~240V 0.4A
O / P : DC24V 0.75A
EDP No. 806050



AC Adapter AD24-ITCF-EX

(Operatable with Two Bar type IONIZERS only)
I / P : AC100V~240V 1.2A
O / P : DC24V 1.5A
EDP No. 806074



AC Adapter AD24-ITCF-EX

(Operatable with Three Bar type IONIZERS only)
I / P : AC100V~240V 1.2A
O / P : DC24V 1.9A
EDP No. 806080



Remote Control RMC-01

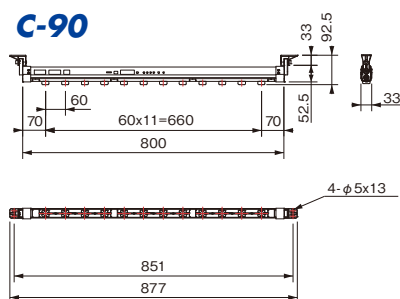
EDP No. 806104



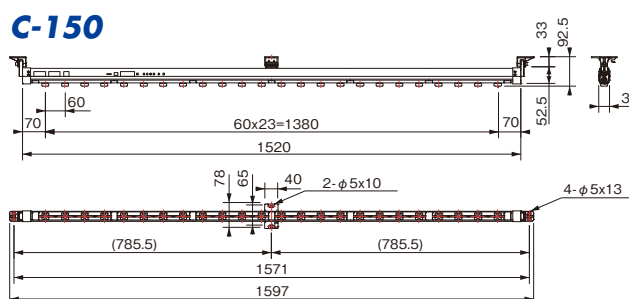
Power Supply Cable (5m) CT-5

EDP No. 621533

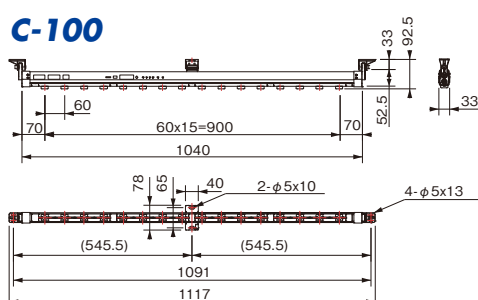
(Unit:mm)

C-90

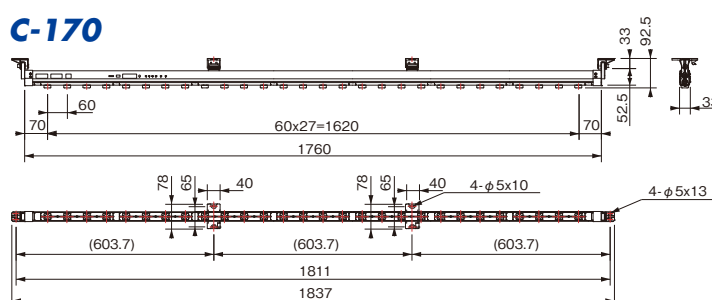
Electrode needles : 12pcs.
Middle bracket : No
Weight : 1.8kg

C-150

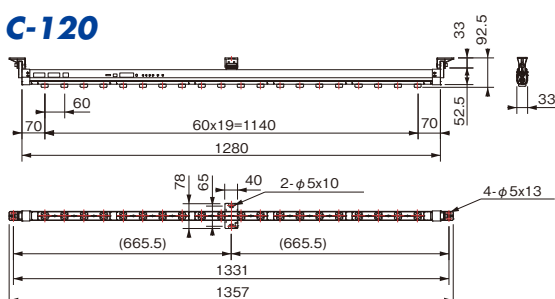
Electrode needles : 12pcs.
Middle bracket : 1
Weight : 1.4kg

C-100

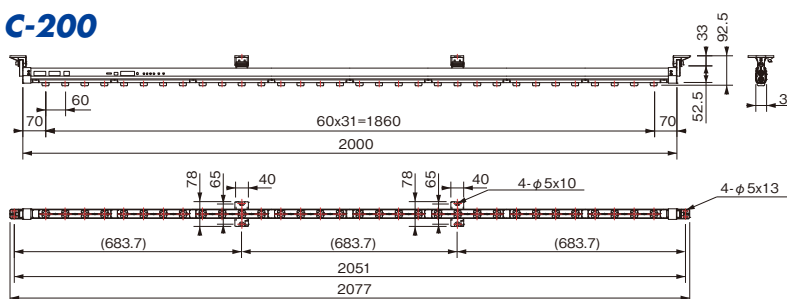
Electrode needles : 16pcs.
Middle bracket : 1
Weight : 1.0kg

C-170

Electrode needles : 28pcs.
Middle bracket : 2
Weight : 1.6kg

C-120

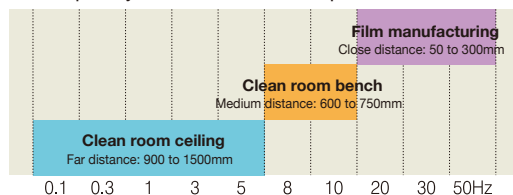
Electrode needles : 20pcs.
Middle bracket : 1
Weight : 1.2kg

C-200

Electrode needles : 32pcs.
Middle bracket : 2
Weight : 1.8kg

Frequency

The frequency can be set in ten steps (0.1 to 50 Hz).

**Pulse Ratio**

The ion balance can be adjusted by changing the pulse ratio.

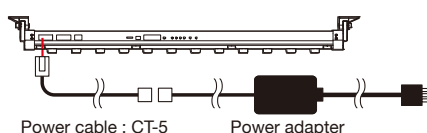
Address

When using multiple units, an address allocation (1 to 16) can be set to identify each device.

Voltage Level

The applied voltage can be changed individually for the positive and Film negative side. The amount of ions can be changed by different output steps. (Ten steps: 8.0 to 12.5 kVp-p)

Voltage level	1	2	3	4	5	6	7	8	9	10
Positive voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
Negative voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
kV p-p	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5

Example of power connection

AC pulse bar with various setting functions to support your application

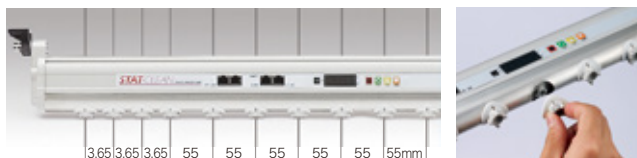
B-series



B-60	EDP No. 621511	B-180	EDP No. 621519
B-90	EDP No. 621512	B-210	EDP No. 621520
B-95	EDP No. 621513	B-220	EDP No. 621521
B-100	EDP No. 621514	B-230	EDP No. 621522
B-120	EDP No. 621515	B-260	EDP No. 621523
B-140	EDP No. 621516	B-280	EDP No. 621524
B-150	EDP No. 621517	B-300	EDP No. 621525
B-160	EDP No. 621518	※ B-260/280/300 are made-to-order items.	

High Voltage Transformer	Ion balance	Directive
Pulse AC corona discharge	within ± 30 V (measured 1000 mm)	RoHS
Power supply DC 24V $\pm 5\%$	Air Pressure max 0.3MPa	LCD Display
	Electrode needle unit replacement	Adjustable Ion Balance
	Needle Cleaning Timer	ALARM H.V.
		External output LAN Terminal

- ▶ Possible to eliminate electricity equally by changing the intervals between needle electrodes.
- ▶ The ion balance adjustment function enables use of the device in a variety of applications.
- ▶ Electrode needle units twist off for easy replacement.

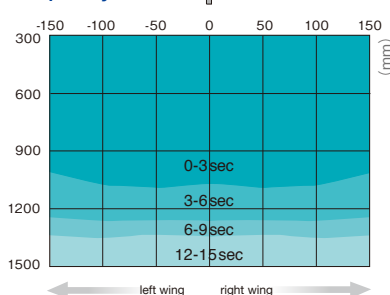


Common Specifications

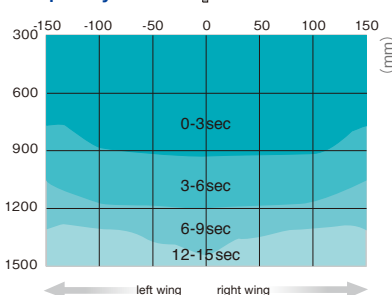
Model No.	B-60~B-300
Ionizing method/Applied voltage	Pulse AC Corona discharge / AC8~12.5kV (p-p)
frequency	0.1 to 50Hz (Select from ten steps)
pulse ratio	Positive ion 40 to 70 %, negative ion 60 to 30%
Power supply and current consumption	DC24V $\pm 5\%$ / 600mA (max.)
Ion balance	within ± 30 V (Distance 1000mm)
Decay time	See below
Operating range	50 to 2000mm
HxWxDmm	Refer to the figure on the right
Weight	Refer to the figure on the right
Air supply hose diameter	PT1/8
Operating fluid	Clean dry air or nitrogen (N ₂) (0.3 MPa or less)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 50°C/35% to 85% RH (with no dew condensation or freezing)
Accessories	Remote controller / Power cable (5m) / End brackets (included with device) / Middle bracket (included with device) / B-60 to B-140 is excluded

Decay area Measurement conditions • Product : B-100 • Air pressure : 0.3MPa

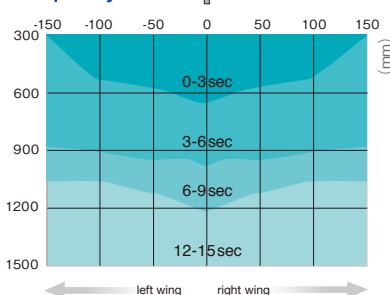
Frequency: 0.1Hz



Frequency: 0.3Hz



Frequency: 50Hz



Options



AC Adapter
AD24-IT-EX
(Operatable with One Bar type IONIZER only)
I/P : AC100V~240V 0.4A
O/P : DC24V 0.75A
EDP No. 806050



AC Adapter
AD24-ITCF-EX
(Operatable with Two Bar type IONIZERS only)
I/P : AC100V~240V 1.2A
O/P : DC24V 1.5A
EDP No. 806074



AC Adapter
AD24-ITCF-EX
(Operatable with Three Bar type IONIZERS only)
I/P : AC100V~240V 1.2A
O/P : DC24V 1.9A
EDP No. 806080



Power cable (5m)
CT-5
EDP No. 621533



Branch Adapter
B-SP2
EDP No. 621531

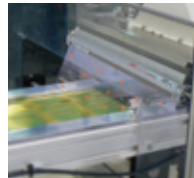


Power Supply Separator
B-SP3
EDP No. 621532

Slim & High-speed Neutralization.
Compact bar type ionizer with separate power supply for easy installation.

SH-series

NEW



SH-16 EDP No. 621541
SH-20 EDP No. 621542
SH-30 EDP No. 621543
SH-40 EDP No. 621544
SH-50 EDP No. 621545
SH-60 EDP No. 621546
SH-70 EDP No. 621547

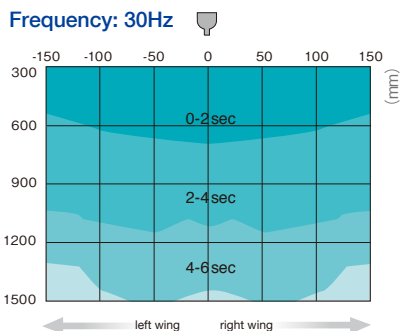
High Voltage Transformer	Ion balance	Directive
Pulse AC corona discharge	within ± 50 V (measured 1000 mm)	CE RoHS
Power supply DC 24V $\pm 5\%$	Positive and negative ion	Needle Cleaning Timer
Air Pressure max 0.3MPa	Electrode needle unit replacement	ALARM H.V.
	Adjustable Ion Balance	External output LAN Terminal

- ▶ Air purging functions.
- ▶ Safe Design. Flexible silicone sheath cable.
- ▶ Up to three bars can be branched and wired using the branch box (SH-SP2).

Common Specifications

Model No.	SH-16~SH-70
Ionizing method/Applied voltage	Pulse AC Corona discharge / AC10.5kV (p-p)
frequency	30Hz
pulse ratio	Positive ion 40 to 70 %, negative ion 60 to 30%
Power supply and current consumption	AC100V~AC240V / 10W (SH-G3)
Ion balance	within ± 50 V (Distance 1000mm)
Decay time	See below
Operating range	50 to 2000mm
HxWxDmm	Refer to the figure on the right
Weight	Refer to the figure on the right
Air supply hose diameter	tube fitting $\Phi 6$ mm
Operating fluid	Clean dry air or nitrogen (N ₂) (0.5 MPa or less)
Ozone production	0.05ppm or less
Operating environment temperature and humidity	5°C to 55°C/25% to 85% RH (with no dew condensation or freezing)
Accessories	High-voltage cable 2.3m (included with device)

Decay area Measurement conditions *Product : SH-50 *Air pressure : 0.3MPa



Options



branch box
SH-SP2
EDP No. 621552



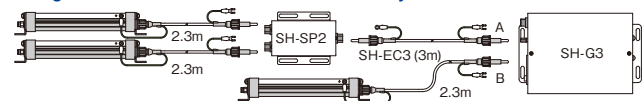
Relay Cable (3m)
SH-EC3
EDP No. 621553

Relay Cable (5m)
SH-EC5
EDP No. 621554

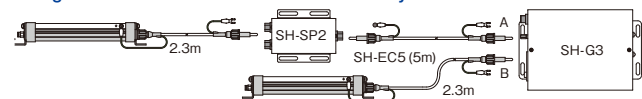
Wiring example

Connecting 1 or 3 pulse ionizing bars to the power supply unit

Using an SH-SP2 branch box and SH-EC3 relay cable

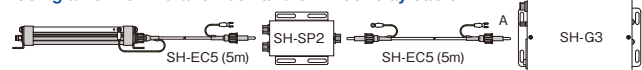


Using an SH-SP2 branch box and SH-EC5 relay cable

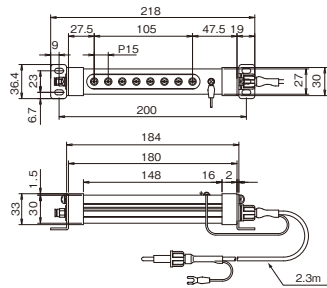


Power cable:CT-5

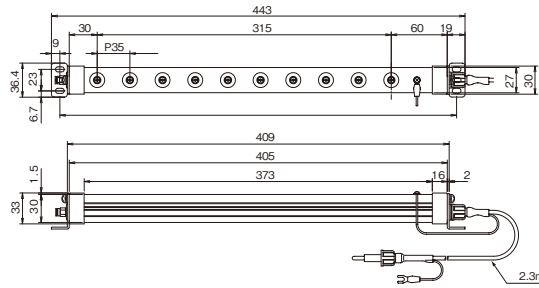
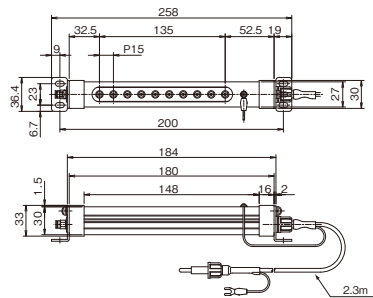
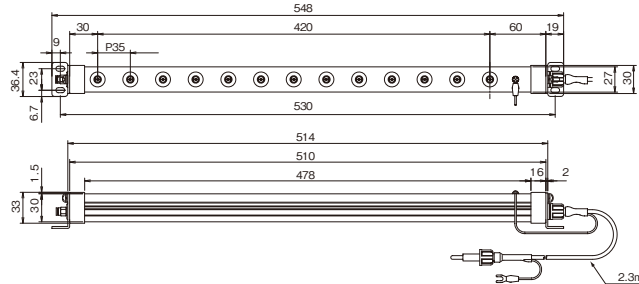
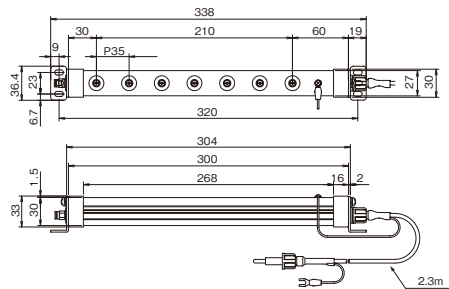
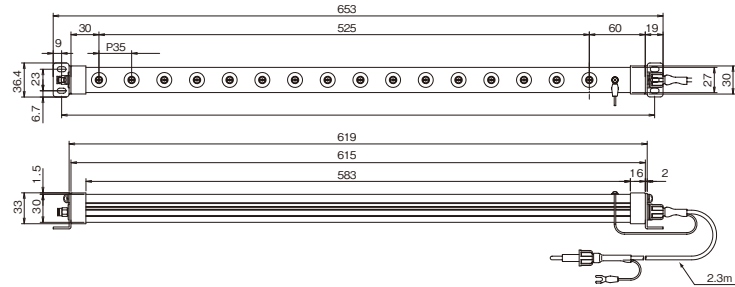
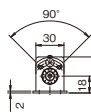
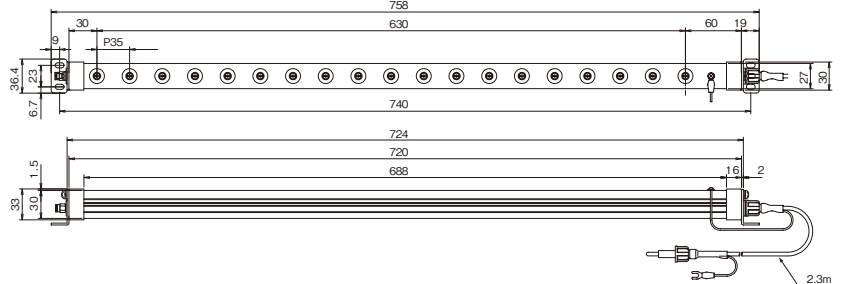
Using an SH-SP2 branch box and SH-EC3 relay cable



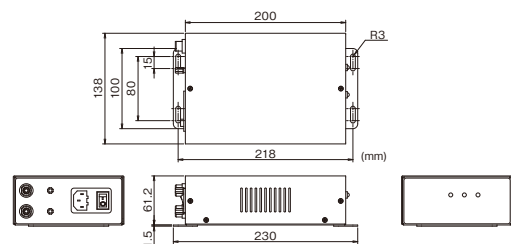
*Power supply cable (relay cable) length cannot exceed a total of 10 m to the two high-voltage sockets (A, B).
*Up to three SH bars can be connected from a single power supply unit (SH-G3).

SH-16 Electrode needles : 8pcs.
Weight : 0.36kg**SH-40** Electrode needles : 10pcs.
Weight : 0.50kg

(Unit:mm)

**SH-20** Electrode needles : 10pcs.
Weight : 0.40kg**SH-50** Electrode needles : 13pcs.
Weight : 0.57kg**SH-30** Electrode needles : 7pcs.
Weight : 0.42kg**SH-60** Electrode needles : 16pcs.
Weight : 0.63kg**SH-70** Electrode needles : 19pcs.
Weight : 0.70kg**Power supply units**

Power supply units supporting 100 to 240 VAC

SH-G3**Specifications**

EDP No. 621555

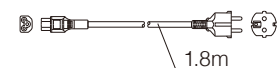
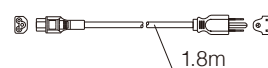


Model No.	SH-G3
HxWxDmm	L230xW138xH62.7mm
Power supply and current consumption	AC100V~AC240V / 10W (SH-G3)
Weight	1.5kg
Accessories	AC power cable 1.8m (for 100 VAC and 240 VAC input) 2 cables

AC power cable

For AC100V

For AC200V



Ion Parts Cleaner



IPC-A4

Ideal A4 size
for cell workbenches



IPC-A3 **NEW**

Ideal A3 size
for cell workbenches



IPC20-E

Integrated ionizer
and dust collector



IPC40-E

Separated hood
and dust collector



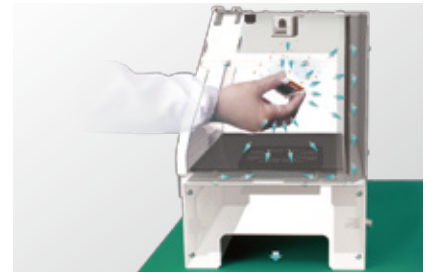
IPC-60

600mm wide hood
for large workpieces

1

Neutralization and dust elimination inside hoods

Dust adhered with static electricity is neutralized inside the ionized hood and eliminated with automatic powerful air blow.



2

Forcibly collecting blown dust with dust collector

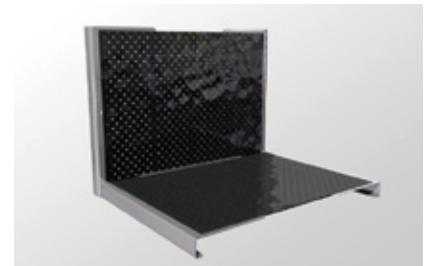
Maintain a clean environment by using air blow to remove foreign matter from pre-assembly parts, and prevent dust from scattering around the area.



3

Capture dust with self-adhesive urethane gel

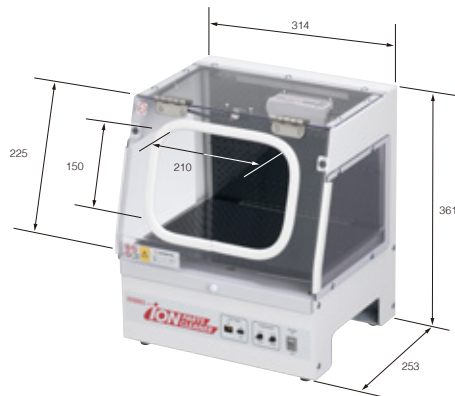
The urethane gel's adhesive surface catches any dust blown away by the ionized air blow. The washable gel sheet can be used repeatedly.



Ion Parts Cleaner

A4 size is ideal for capturing dust with adhesive urethane gel at cell workbench

IPC-A4

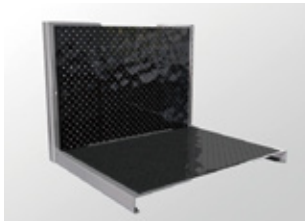


Eco-friendly product

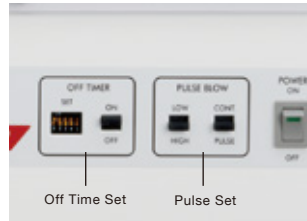
EDP No. 621610

Sensor	Air blow	Off delay timer	Directive
Diffused reflection type	Continuous/pulse blow selection	1 to 30 seconds (5 steps)	CE RoHS
Power supply DC24V	Air Pressure max 0.5MPa	Ionizer N-1x1pcs	Pinpoint L-shape corner nozzlex1pcs
AC adapter 100 to 240 V	Regulator Built-in	Self-adhesive polyurethane gel sheets and non-woven fabric filter	Integrated hood/dust collector

- ▶ With no built-in dust collector, its power consumption is substantially reduced.
- ▶ Dislodged dust will be collected by the adhesive gel sheets.
- ▶ Select continuous or pulse blow of ionizing dust collection air from nozzle-type ionizer



Self Adhesive GEL collects Dust



Off Time Set Pulse Set

Specifications

Model No.	IPC-A4
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 6kV
Power supply	DC24V±5%
Current consumption	700mA or less
Dust collection airflow	3.5 m³/min (Built-in fan)
Static pressure	105Pa (Built-in fan)
Dust collection filter	Self-adhesive polyurethane gel sheets and non-woven fabric filter
HxWxDmm	H361xW314xD253mm
Weight	6kg
Air supply hose diameter	tube fitting 8mm
Operating fluid	Clean dry air (0.1MPa to 0.5MPa)
Airflow	150 ℓ /min (0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5°C to 40°C/35% to 65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT19-EX Pinpoint L-shape corner nozzlex1pc Adhesive gel sheet plate (included with device)x2pcs

Replacement parts



Adhesive gel sheet (1pc)
IPC-A4G
EDP No. 806091



Electrode needle (1pc)
N-1H
EDP No. 806122

Ion Parts Cleaner

A3 size is ideal for capturing dust with adhesive urethane gel at cell workbench

IPC-A3

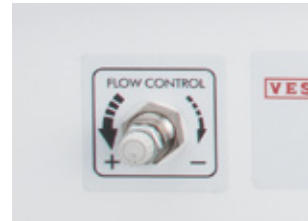


Eco-friendly product

EDP No. 621612

Sensor	Air blow	Off delay timer	Directive
Diffused reflection type	Continuous/pulse blow selection	1 to 30 seconds (5 steps)	CE RoHS
Power supply DC24V	Air Pressure max 0.7MPa	Ionizer N-1x2pcs	Pinpoint L-shape corner nozzlex2pcs
AC adapter 100 to 240 V	Regulator Built-in	Self-adhesive polyurethane gel sheets and paper pack filter	Integrated hood/dust collector

- ▶ With no built-in dust collector, its power consumption is substantially reduced.
- ▶ Dislodged dust will be collected by the adhesive gel sheets.
- ▶ A paper pack filter can be attached to the exhaust port on the rear side (standard).



Regulator Built-in



Filter to Duct Relaceable

Specifications

Model No.	IPCIPC-A3
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 6kV
Power supply	DC24V±5%
Current consumption	900mA or less
Dust collection airflow	1.13 m³/min (Built-in fan)
Static pressure	460Pa (Built-in fan)
Dust collection filter	Self-adhesive polyurethane gel sheets and paper pack filter
HxWxDmm	H411xW420xD300mm
Weight	9.5kg
Air supply hose diameter	tube fitting Ø8mm
Operating fluid	Clean dry air (0.1MPa to 0.7MPa)
Airflow	190 ℓ /min (0.3MPa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	0°C to 40°C/20% to 80% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT19-EX Pinpoint L-shape corner nozzlex1pc Adhesive gel sheet plate (included with device)x2pcs Duct flange (for Ø75mm) Paper pack filter (6pc.)

Replacement parts



Adhesive gel sheet (1pc)
IPC-A4G
EDP No. 806091



Electrode needle (1pc)
N-1H
EDP No. 806122

Paper pack filter (6pc.)
IPC-A3F

Ion Parts Cleaner

Compact, integrated design is ideal for use in a cell production setting or confined space

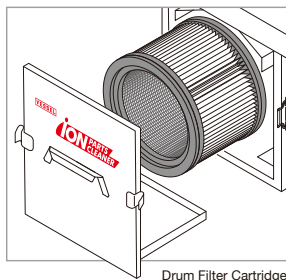
IPC20-E



EDP No. 621379

Sensor	Air blow	Off delay timer	Directive
Diffused reflection type	Continuous	3sec (0.1 to 5 sec)	CE RoHS
Power supply AC100V	Air Pressure max 0.7MPa	Ionizer F-6×1pc	Air Nozzle 2pcs
AC adapter	Thermal protector	Medium-efficiency filter	Integrated hood/dust collector

- ▶ Workpiece is detected with sensor, and dust eliminating air is sprayed.
- ▶ Cylindrical cartridge type medium-efficiency filter incorporated.
- ▶ Compact fan ionizer is ideal for spaces with no static inside the hood.



Drum Filter Cartridge

Specifications

Model No.	IPC20-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 3.5kV
Power supply	AC230V (50/60Hz)
Current consumption	0.42A (50Hz)/0.4A (60Hz)
Dust collection airflow	1.6 m³/min (50Hz)/2.0 m³/min (60Hz)
Static pressure	0.35kPa (50Hz)/0.50kPa (60Hz)
Table surface controlled air speed	0.8 m/sec (50Hz)/1.0 m/sec (60Hz)
Dust collection volume	0.5 L
Dust collector output	50W
Dust collection filter	Medium-efficiency filter (Cylindrical cartridge filter)
H×W×Dmm	H682×W358×D385mm
Weight	21kg
Air supply hose diameter	tube fitting Ø6mm
Operating fluid	Clean dry air (0.4MPa to 0.7MPa)
Airflow	355 l/min (0.7MPa)
Noise level	56dBA (50Hz)/58dBA (60Hz)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	0°C to 40°C/20% to 80% RH (with no dew condensation or freezing)
Accessories	Plastic adjusting screwdriver for sensor, hazardous use prohibited display sheet

Ion Parts Cleaner

Separate type features a dust collector and standalone hood to make effective use of limited space

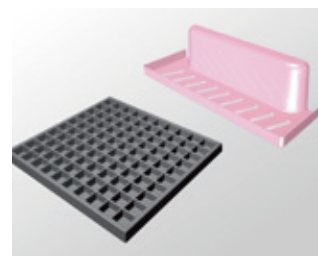
IPC40-E



EDP No. 621380

Sensor	Air blow	Off delay timer	Directive
Retroreflective	Continuous	3sec (0.1 to 5 sec)	CE RoHS
Power supply AC100V	Air Pressure max 0.7MPa	Ionizer F-6×1pc	Air Nozzle 2pcs
AC adapter	Thermal protector	Medium-efficiency filter	Separate hood/dust collector

- ▶ Flexible nozzle enables pinpoint dust removal from workplaces.
- ▶ Cylindrical cartridge type medium-efficiency filter incorporated.
- ▶ Compact fan ionizer is ideal for spaces with no static inside the hood.



Specifications

Model No.	IPC40-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 3.5kV
Power supply	AC230V (50/60Hz)
Current consumption	1.2A (50Hz)/1.4A (60Hz)
Dust collection airflow	3.3 m³/min (50Hz)/4.0 m³/min (60Hz)
Static pressure	0.88kPa (50Hz)/1.23kPa (60Hz)
Table surface controlled air speed	0.4 m/sec (50Hz)/0.5 m/sec (60Hz)
Dust collection volume	1.2L
Dust collector output	200 W
Dust collection filter	Medium-efficiency filter (Cylindrical cartridge filter)
H×W×Dmm	Hood:H400×W518×D462mm/dust collector:H416×W481×D354mm
Weight	Hood:12kg./dust collector:30kg
Air supply hose diameter	tube fitting Ø6mm
Operating fluid	Clean dry air (0.4MPa to 0.7MPa)
Airflow	355 l/min (0.7MPa)
Noise level	62dBA (50Hz)/65dBA (60Hz)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	0°C to 40°C/20% to 80% RH (with no dew condensation or freezing)
Accessories	Plastic adjusting screwdriver for sensor, hazardous use prohibited display sheet

Ion Parts Cleaner

Featuring a wide 600 mm hood capable
of accommodating large work

IPC-60



EDP No. 621607

Sensor	Air blow	Off delay timer	Directive
Retroreflective	Continuous	3sec (0.1 to 5 sec)	RoHS
Power supply AC100V	Air Pressure max 0.7MPa	Ionizer F-6x1pc	Air Nozzle 2pcs
		AC adapter	Thermal protector
		Medium- efficiency filter	Separate hood/dust collector

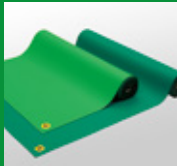
- ▶ Flexible nozzle enables pinpoint dust removal from workplaces.
- ▶ Cylindrical cartridge type medium-efficiency filter incorporated.
- ▶ Compact fan ionizer is ideal for spaces with no static inside the hood.



Specifications

Model No.	IPC-60
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/AC 3.5kV
Power supply	AC100V±5% (50/60Hz)
Current consumption	3.0A (50Hz)/3.0A (60Hz)
Dust collection airflow	3.3 m³/min (50Hz)/4.0 m³/min (60Hz)
Static pressure	0.88kPa (50Hz)/1.23kPa (60Hz)
Table surface controlled air speed	0.4 m/sec (50Hz)/0.5 m/sec (60Hz)
Dust collection volume	1.2L
Dust collector output	200 W
Dust collection filter	Medium-efficiency filter (Cylindrical cartridge filter)
H×W×Dmm	Hood:H400×W668×D462mm./dust collector:H416×W481×D354mm
Weight	Hood:147kg./dust collector:30kg
Air supply hose diameter	tube fitting Ø6mm
Operating fluid	Clean dry air (0.4MPa to 0.7MPa)
Airflow	355ℓ/min (0.7MPa)
Noise level	62dBA (50Hz)/65dBA (60Hz)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	0°C to 40°C/20% to 80% RH (with no dew condensation or freezing)
Accessories	Plastic adjusting screwdriver for sensor, hazardous use prohibited display sheet

EPA Working Mat



Mat

Ideal for workbenches needing static-erasing measures



Wrist Straps

Anti-ESD wrist band



Electrostatic Field Meter

Essential item for static electricity measures
Visual the static charge and discharge state

1

Creating an optimum EPA environment from work surface, floor to worker bodies with a one-stop solution

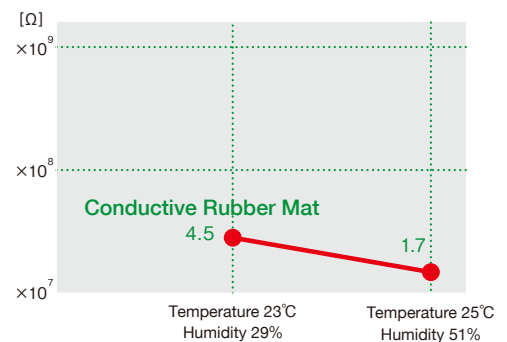
Our IEC61340-5-1 compliant products include ESD protection items, workbenches, storage shelves, EPA working mats for dolly surfaces, EPA flooring for vinyl floors and painted floors, and anti-ESD wrist straps.



2

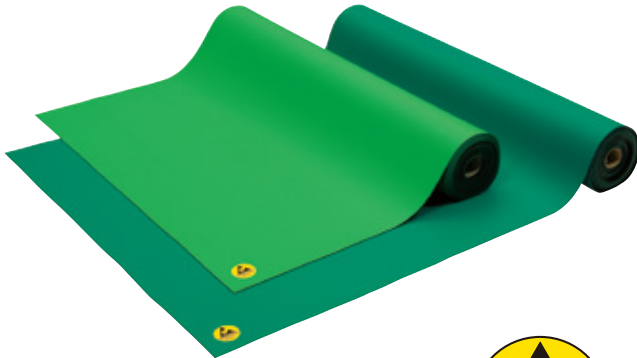
Steady conductivity performance

Conductivity rates fluctuate easily according to changes in the working environment's humidity. VESSEL's conductive rubber mats realize a "conductive performance" that complies with strict selection standards.



EPA Working Mat · Conductive Rubber Mat

Controlling electroconductivity to
 $10^6\Omega$ or more $10^7\Omega$ or less without
 influence from the working environment
 Ideal for workbenches requiring static electricity
 measures on backing

10m
ROLL

LG-100 EDP No. 621464
SG-100 EDP No. 621461

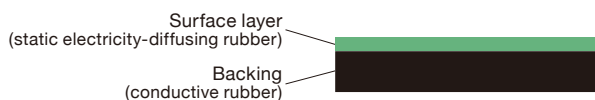


Applications	Conductivity	Material	Directive
Designed for use with work benches	$10^6 \leq R \leq 10^7 \Omega$	NBR+SBR	EPA RoHS

- Offers uniform, consistent conductive performance.
- Features a matte surface finish, reducing reflections and helping prevent eye fatigue prevention.
- Heat resistant to dropping solder.



Structure



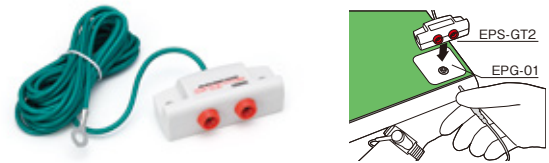
Common Specifications

Model No.	LG-100	SG-100
Color	Light green	Green
Size	W1.0m×L10m×t2.0mm	W1.0m×L10m×t2.0mm
Conductivity	$10^6 \leq R \leq 10^7 \Omega$	$10^6 \leq R \leq 10^7 \Omega$
Weight	31kg/roll	31kg/roll
Material	NBR+SBR	NBR+SBR

Grounding Tap

Neatly wire the grounding cords
 around your workbench

EPS-GT2



Specifications

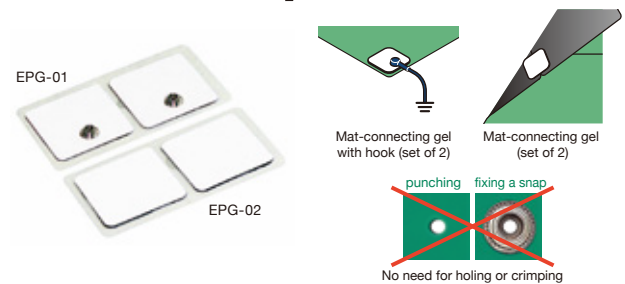
EDP No. 621402

Model No.	EPS-GT2
Size	Approx. 3.0 m (with round jack)
Resistance value	1MΩ
Material	ABS

Mat-connecting gel

Made from medical-grade conductive gel,
 with no need for time-consuming eyelet setting

EPG-01/EPG-02



EPG-01 EDP No. 621481
EPG-02 EDP No. 621482

Common Specifications

Model No.	EPG-01	EPG-02
Size	50×50mm	
Conductivity	104Ω or less	
Operating environment temperature and humidity	5°C to 30°C / 60% RH or less	
Material	Conductive polyurethane, SUS, carbon film, PET	Conductive polyurethane, carbon film, PET

Grounding Cord

Connect to mat-connecting gel
 with a single touch

EPC-18/EPC-30



Common Specifications

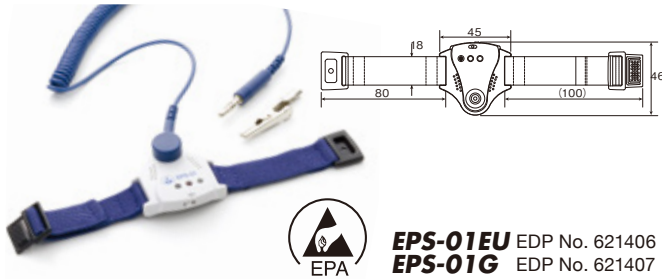
EPC-18 EDP No. 621393
EPC-30 EDP No. 631394

Model No.	EPC-18	EPG-02
Size	max. length of 1.8m (max. length 0.5m)	max. length of 3.0m (max. length 1.5m)
Resistance value	1MΩ	
Accessories	Alligator clip	

Grounding Sensor

Warns the operator with light and sound when a grounding problem is detected

EPS-01EU/EPS-01G



EPS-01EU EDP No. 621406
EPS-01G EDP No. 621407

Applications	Resistance value
EPS-01EU : For use in ESD protected areas and by device operators	2MΩ
EPS-01G : For use in general work environments and by device operators	Directive EPA RoHS

ANTI-METAL ALLERGY SUS316L	ALARM BAD GROUND	Washable	Battery Charge Alarm	Low dust
----------------------------	------------------	----------	----------------------	----------

- The strap warns the operator with light and sound when a grounding problem occurs.
- A LOW BATTERY LED lights up when the remaining battery charge falls to 20% or below.
- A sensitivity adjustment knob lets you fine-tune the detection range.

Common Specifications

Model No.	EPS-01	EPS-01G
Size	Strap length Approx. 180 mm	
Resistance value	Body 1MΩ / Grounding cord 1MΩ	
Material	ABS, SUS	
Accessories	Grounding cord 1.8m, Alligator clip, Test battery (already installed in CR1220)	

Metal Band

Fits the wrist comfortably and can be washed for repeated use

EPS-02S/EPS-02M



Ultra Sonic Cleaner
(Available on the market)



EPS-02S EDP No. 621409
EPS-02M EDP No. 621408

Applications	Resistance value	Directive
Ideal for use in clean rooms and in IT-related manufacturing	1 MΩ	EPA RoHS

ANTI-METAL ALLERGY SUS316L	Washable	Low dust
----------------------------	----------	----------

- Stretchable band is easy to put on and take off. Available in two sizes (small/medium).
- Can be easily cleaned using an ultrasonic cleaner, (available on the market) ensuring that the band is always clean and ready for use.

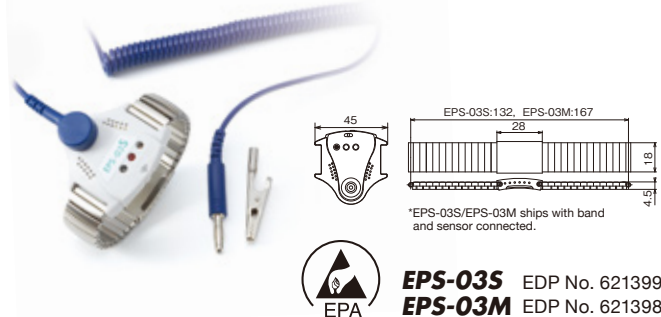
Common Specifications

Model No.	EPS-02S	EPS-02M
Size	Strap length Approx. 130 mm	Strap length Approx. 160 mm
Resistance value	Grounding cord 1MΩ	
Material	ABS, SUS	
Accessories	Grounding cord 1.8m, Alligator clip	

Ground Sensor (Metal Band)

Designed to minimize dust generation, this ground sensor can be used in clean rooms.

EPS-03S/EPS-03M



EPS-03S EDP No. 621399
EPS-03M EDP No. 621398

Applications	Resistance value	Directive
For use in clean rooms, general work environments, and by device operators	2MΩ	EPA RoHS

ANTI-METAL ALLERGY SUS316L	ALARM BAD GROUND	Washable	Battery Charge Alarm	Low dust
----------------------------	------------------	----------	----------------------	----------

- The strap warns the operator with light and sound when a grounding problem occurs.
- A LOW BATTERY LED lights up when the remaining battery charge falls to 20% or below.
- A sensitivity adjustment knob lets you fine-tune the detection status.

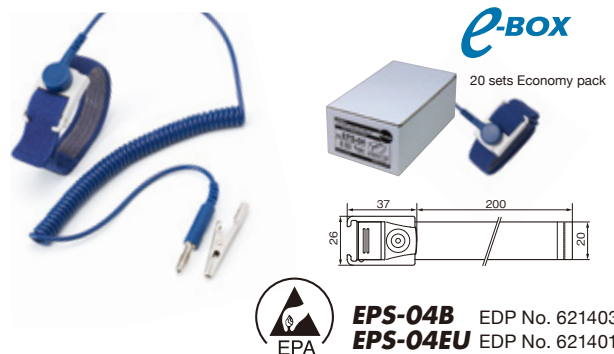
Common Specifications

Model No.	EPS-03S	EPS-03M
Size	Strap length Approx. 132 mm	Strap length Approx. 167 mm
Resistance value	Body 1MΩ / Grounding cord 1MΩ	
Material	ABS, SUS	
Accessories	Grounding cord 1.8m, Alligator clip	

Anti-ESD Wrist Strap

Complies with IEC 61340-5-1 for peace of mind

EPS-04B/EPS-04EU



e-BOX

20 sets Economy pack



EPS-04B EDP No. 621403
EPS-04EU EDP No. 621401

Applications	Resistance value	Directive
For use in general work environments; ideal for use in IT-related manufacturing settings with numerous temporary employees.	1 MΩ	EPA RoHS (EPS-04EU)

ANTI-METAL ALLERGY SUS316L	Washable	Low dust
----------------------------	----------	----------

- Adjustable strap fits the wrist comfortably.
- Safety-conscious design keeps the conductive area from being exposed on the surface of the wrist strap.
- Also Available as Easy Pack EPS-04EU (e-Box) .

Common Specifications

Model No.	EPS-04B	EPS-04EU (20 pcs/set)
Size	Strap length Approx. 200 mm	Strap length Approx. 200 mm
Resistance value	Grounding cord 1MΩ	
Material	PC, SUS	
Accessories	Grounding cord 1.8m, Alligator clip	

Electrostatic Field Meter

Compact measuring instrument for measuring ionizer's ion balance and product's static potential

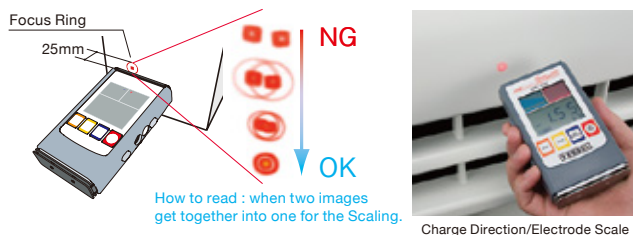
Eye-01



EDP No. 621602

Measurement	Measurement	LCD display	Directive
Charge potential	Ion balance	Bargraph + 3 digits	CE RoHS
One 9V battery	Ion balance measurement plate	Measuring distance 25 mm	Auto power off
		Out of measuring range alarm	Peak hold function
			Battery level display
			Anti-Drop strap

- ▶ Easily establish measurement distance with focus ring LED.
- ▶ Backlight enhances visibility in dark places.
- ▶ Color LCD clearly shows the polarity.



Charge Direction/Electrode Scale

Specifications

Model No.	EYE-01
Charge potential measurement	± 0 to ± 1.49 kV (LO range) / ± 1.0 to ± 20.0 kV (HI range)
Ion balance measurement	0 to ± 200 V
Response time	within 1sec
Accuracy	$\pm 10\%$
Power	One 9V battery (006P)
Charged potential measurement distance	25mm ± 0.5 mm
LxWxDmm	L115xW73xD25mm
Weight	140g / ion balance measurement plate 30g
Operating environment temperature and humidity	10°C to 40°C / 60% RH or less
Accessories	Ion balance measurement plate, Grounding cord, alligator clip, Battery (006P), Soft case

◆Complies with ISO 9000 traceability standards.

Calibration tables and certificates can be issued for this instrument. (Option)

Electrostatic Field Meter

Visualizing invisible static electricity
Peak hold supports long-time measurements

Eye-02

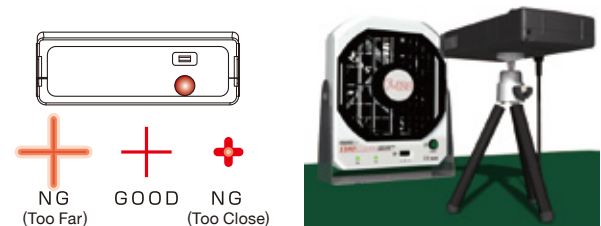
NEW



EDP No. 621603

Measurement	Measurement	LCD display	Directive
Charge potential	Ion balance	Bargraph + 3 digits	CE RoHS
One 9V battery	Ion balance measurement plate	Measuring distance 25 mm	Auto power off
		Out of measuring range alarm	Peak hold function
			Battery level display
			Anti-Drop strap

- ▶ Easily establish measurement distance with cross mark LED.
- ▶ Color LCD clearly shows the polarity.
- ▶ Mountable onto a tripod.



Specifications

Model No.	EYE-02
Charge potential measurement	± 0 to ± 1.50 kV (LO range) / ± 1.0 to ± 20.0 kV (HI range)
Ion balance measurement	0 to ± 200 V
Response time	within 1sec
Accuracy	$\pm 10\%$
Power	One 9V battery (006P)
Charged potential measurement distance	25mm ± 0.5 mm
LxWxDmm	L123xW70xD25mm
Weight	170 g / ion balance measurement plate 30g
Operating environment temperature and humidity	10°C to 50°C / 80% RH or less
Accessories	Ion balance measurement plate, Grounding cord, alligator clip, Battery (006P), Soft case

◆Complies with ISO 9000 traceability standards.

Calibration tables and certificates can be issued for this instrument. (Option)

Static Locator

Check for static charges and test the effectiveness of ionizers.
Provides a simple digital readout of static electricity

SDL-01



EDP No. 621382

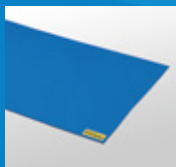
- ▶ Provides a digital readout of the potential of a charged object without making contact, making it easy to measure invisible static electricity.
- ▶ Convenient, lightweight design is extremely portable. Comes with a soft storage case.
- ▶ Low-power-consumption design can be used on 4 AA batteries.

Measurement	LCD display
Charge potential	3 digits
4 AA batteries	Ion balance measurement plate
	Measuring distance 50 mm
	Auto power off
	Out of measuring range alarm
	Peak hold function
	Battery level display
	Drop prevention strap

Specifications

Model No.	SDL-01
Charge potential measurement	0 to ± 19.9 kV (min. display increment of 0.1 kV)
Ion balance measurement	—
Response time	0.5 sec
Display range	Min. display increment of 0.1 kV
Supply voltage	6 VDC (4 AA batteries)
Device to charged object	50mm
LxWxDmm	L102xW51xD43mm
Weight	170 g (including battery)
Operating environment temperature and humidity	0°C to 40°C / 20% to 60%
Accessories	4 AA batteries, soft case

Clean Walker



CW-900B

5mm thick
Capture dust off shoe soles



CW-900EZ NEW

3mm thick
Strong and tear resistant even
under heavy objects



CW-T900 NEW

Inclined for easy trolley access

Why is VESSEL's Clean Walker our customer's top choice?

1

Non-peeling type adhesive mat

There's no need sacrifice cleanliness by limiting the number of sheets peeled to save costs.



2

Reliably catching dust

Self-adhesiveness of polyurethane resin is the key. The thick mat flexibly contacts against shoe treads and carefully catches dust between them.



Clean Walker

Conventional peel-off mats

3

Wash & dry to restore adhesiveness

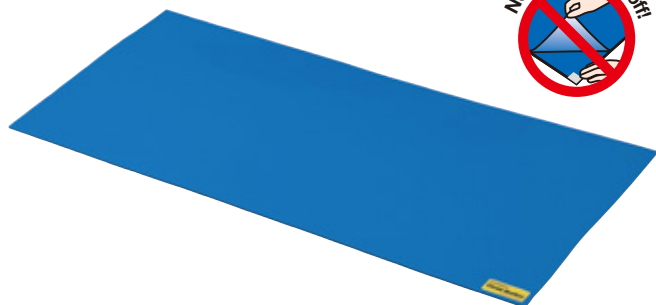
Wet the surface with water, alcohol or diluted household detergent, and the dirt will lift right up. Wash and dry the mat well to restore the original adhesiveness.



Clean Waker

High elasticity.
Outstanding dust collection performance

CW-900B

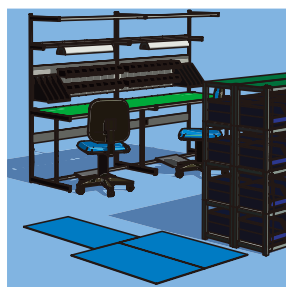
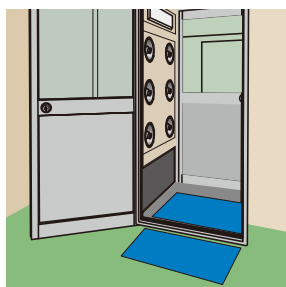


Eco-friendly product

EDP No. 621485

Applications	Material	Washable	Directive
For indoor use (especially in front of clean rooms)	Polyurethane	✓	RoHS

- ▶ The 5mm high elasticity mat.
- ▶ Powerfully catches dust from shoe soles.
- ▶ Collected dust can be easily wiped off with a wet cloth.



Specifications

Model No.	CW-900B
Color	Blue
Size	W900mm×L500mm×t5mm
Conductivity	Insulator
Weight	2.4kg
Material	Polyurethane

Clean Waker Eazy

Easy maintenance.
Just 3mm thickness

CW-900EZ

NEW

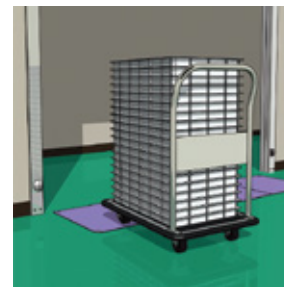


Eco-friendly product

EDP No. 621486

Applications	Material	Washable	Directive
For indoor use (especially in front of clean rooms)	Polyurethane, non-woven textiles	✓	RoHS

- ▶ Non-woven textiles are sandwiched with a 3mm thickness to attain a high strength
- ▶ Resist tears even under the pressure of trolleys.
- ▶ Take the mat out of the floor and wash it with water. Hang from hook holes to dry off.



Specifications

Model No.	CW-900EZ
Color	Light purple
Size	W450mm×L500mm×t3mm
Conductivity	Insulator
Weight	1.6 kg (2 pieces)
Material	Polyurethane, non-woven textiles

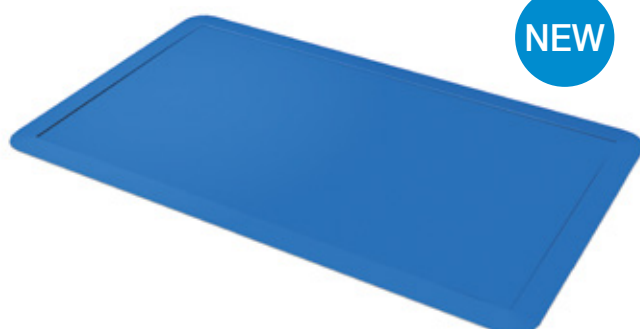
Clean Waker Tray

Inclined tray for easy trolley access

CW-T900

- ▶ This dedicated tray is perfect for the Clean Walker size.
- ▶ The inclination allows trolleys to pass over without catching.
- ▶ Clean Walker mats can be removed with a little pull.

NEW



Directive
RoHS

Specifications

Model No.	CW-T900
Color	Blue
Size	W1000mm×L600mm×t5mm
Conductivity	Insulator
Weight	2.45kg
Material	EPDM+SBR



Options and replacement parts

Electrode Needle Unit / Front Cover



Electrode Needle Unit
F-6H
EDP No. 806094
Use with: F6CLE, F6ST-E



Electrode Needle Unit
SF-9H
EDP No. 806053
Use with: SFQ9-E



Front cover w/needle electrode
F-120CH
EDP No.806127
Use with: F120-E



Electrode Needle Plate
F-12EH
EDP No. 806055
Use with: 3F-12-E



Front Cover with Integrated Electrode Needles
CF-30H
EDP No. 806071
Use with:CF-30-E



Front cover w/needle electrode
F-120SCH
EDP No.806128
Use with: F120S-E

Filter



SDJ-08F
EDP No. 806039
Use with: F6CLE, F6ST-E



SF-9F
EDP No. 806052
Use with: SFQ9-E



Filter Set
SF-Q9F
EDP No. 621707
Use with: SFQ9-E



Filter Set
F-120FS
EDP No. 806123
Use with: F120-E,F120S-E



F-120FF
EDP No. 806054
Use with: 3F-12-E,F120-E,F120S-E



CF-30F
EDP No. 806072
Use with: CF-30-E

AC Adapter



AD24-ITF6-E
EDP No. 806096
Use with:
F6CLE, F6ST-E
I / P : AC100V~240V 0.4A
O/P : DC24V 0.75A



AD24-IT-EX
EDP No. 806050
Use with: SFQ9-E,F120-E,
F120S-E
I / P : AC100V~240V 0.4A
O/P : DC24V 0.75A



AD24-ITCF
EDP No. 806074
Use with: CF-30-E
I / P : AC100V~240V 1.2A
O/P : DC24V 1.5A



AD24-IT19
EDP No. 806080
Use with: 3F-12-E
I / P : AC100V~240V 1.2A
O/P : DC24V 1.9A

For Gun / Nozzle Type



Standard Nozzle
G-7SN
EDP No. 806057
Use with: G7R-E



Tube-fitting Nozzle
N-2TN
EDP No. 806085
Use with: G7R-E, N-2, N-1



Shower Tube
N-2C6B
EDP No. 621706
Use with: N-2
(A combination of N-2TN)



Flared Nozzle
N-2FN
EDP No. 806086
Use with: G7R-E, BBZ-E,
N-2, N-1



Silent Nozzle
N-2WN
EDP No. 806087
Use with: G7R-E,
BBZ-E, N-2, N-1



Straight Silent Nozzle
BB-ZSN
EDP No. 621708
Use with: G7R-E, BBZ,
N-2, N-1



Standard Nozzle
N-1SN
EDP No. 806120
Use with: N-1



Corner Nozzle
N-1CN
EDP No. 806121
Use with: N-1



Brush: 60 mm bristles
G-7B
EDP No. 806059
Use with: G7R-E



Soft Brush: 60 mm bristles
G-7SB
EDP No. 806062
Use with: G7R-E



Electrode Needle
G-7H
EDP No. 806056
Use with: G7R-E, BBZ-E, N-2



Electrode Needle
N-1H
EDP No. 806122
Use with: N-1



Electrode Needle Replacement Screwdriver
G-7DR
EDP No. 806061
Use with: G7R-E, BBZ-E,
N-2, N-1



Speed Controller
G-7SC
EDP No. 621373
Use with: G7R-E, BBZ-E,
N-2, N-1



Microfilter
G-7F
EDP No. 621702
Use with: G7R-E, BBZ-E,
N-2, N-1

Filter eliminates at least 99% of particles with a diameter of 0.01 µm or greater. Install a 1 µm to 10 µm air filter and mist separator on your air compressor before using this item.



AC Adapter
AD24-ITC-E
EDP No. 806067
Use with: G7RE



AC Adapter
AD24-ITB-E
EDP No. 806076
Use with: BBZ-E



AC Adapter
AD24-IT-EX
EDP No. 806050
Use with: N-2, N-1



Relay Cable (5 m)
G-7EC5
EDP No. 621703
Use with: G7R-E,
(A combination of AD24-ITC)

Relay Cable (10 m)
G-7EC10
EDP No. 621704

Relay cables are used to connect the G7R-E to its dedicated power supply transformer (AD24-ITC-E).



Shielded Case
Use with: N-2,
Use this case when unstable
N-2 with Noise seen.

For PAC-8



AC Adapter
AD24-ITC-E
EDP No. 806067



G7R-E Connection Cable
G-7RC (2.5m)
EDP No. 621705
(A combination of G7R-E)

For C-series



Electrode Needle Unit
C-00H
EDP No. 806106



Remote Control
RMC-01
EDP No. 806104



Power Supply Cable
CT-5
EDP No. 621533
(A combination of AC Adapter)



AC Adapter
AD24-IT-EX
EDP No. 806050
I / P : AC100V~240V 0.4A
O/P : DC24V 0.75A
Operation : One bar



AC Adapter
AD24-ITCF
EDP No. 806074
I / P : AC100V~240V 1.2A
O/P : DC24V 1.5A
Operation : Two bars



AC Adapter
AD24-IT19
EDP No. 806080
I / P : AC100V~240V 1.2A
O/P : DC24V 1.9A
Operation : Three bars

For B-series



Electrode Needle Unit
B-00H
EDP No. 806101



End Brackets
(set of 2 with set screws)
B-EB
EDP No. 806102



Middle Bracket
(with set screws)
B-MB
EDP No. 806103



Remote Control
RMC-01
EDP No. 806104



Branch Adapter
B-SP2
EDP No. 621531



Power Supply Separator
B-SP3
EDP No. 621532



Power Supply Cable
CT-5
EDP No. 621533
(A combination of AC Adapter)



AC Adapter
AD24-IT-EX
EDP No. 806050
I / P : AC100V~240V 0.4A
O/P : DC24V 0.75A
Operation : One bar



AC Adapter
AD24-ITCF
EDP No. 806074
I / P : AC100V~240V 1.2A
O/P : DC24V 1.5A
Operation : Two bars



AC Adapter
AD24-IT19
EDP No. 806080
I / P : AC100V~240V 1.2A
O/P : DC24V 1.9A
Operation : Three bars

For SH-series



Branch Box
SH-SP2
EDP No. 621552



Relay Cable (3 m)
SH-EC3
EDP No. 621553

Relay Cable (5 m)
SH-EC5
EDP No. 621554

For Ion Parts Cleaner

HEPA filter Cartridge

(Collects 99.7% of the 0.3µm Particles or larger)
Use with: IPC20-E, IPC40-E, IPC60-E

Medium-efficiency filter Cartridge

Use with: IPC20-E, IPC40-E, IPC60-E

Unwoven fan filter (5pc.)

IPC-A4F

EDP No. 806092
Use with: IPC-A4

Paper pack filter (6pc.)

IPC-A3F

Use with: IPC-A3



Adhesive gel sheet (1pc)

IPC-A4G

EDP No. 806091
Use with: IPC-A3, IPC-A4
(two sheets required per unit)



Electrode Needle (For N-1)

N-1H

EDP No. 806122
Use with: IPC-A3, IPC-A4

For EPS-01



Replacement Bands
(5-piece set /one with a dedicated tool)

EPB-01

EDP No. 621395
Use with: EPS-01, EPS-01G

VESSEL CO., INC

17-25, Fukae-kita 2-chome, higashinari-ku, Osaka 537-0001 JAPAN
Tel : +81(0)6 6976 7778 Fax : +81(0)6 6972 9441

VESSEL EUROPE

6, avenue du 1er Mai, ZAE Les Glaises, 91120 Palaiseau FRANCE
Tel : +33(0)1 69 19 17 42 Fax : +33(0)1 69 19 42 20

E-mail : export@vessel.co.jp URL : <http://www.vessel.co.jp/english/>

- Product specifications, dimensions, pricing, and other information are subject to change without notice.
- Static electricity erasing capability values given in this catalog were obtained in our measurement environment.
Your results may differ depending on the operating environment.

Distributed by