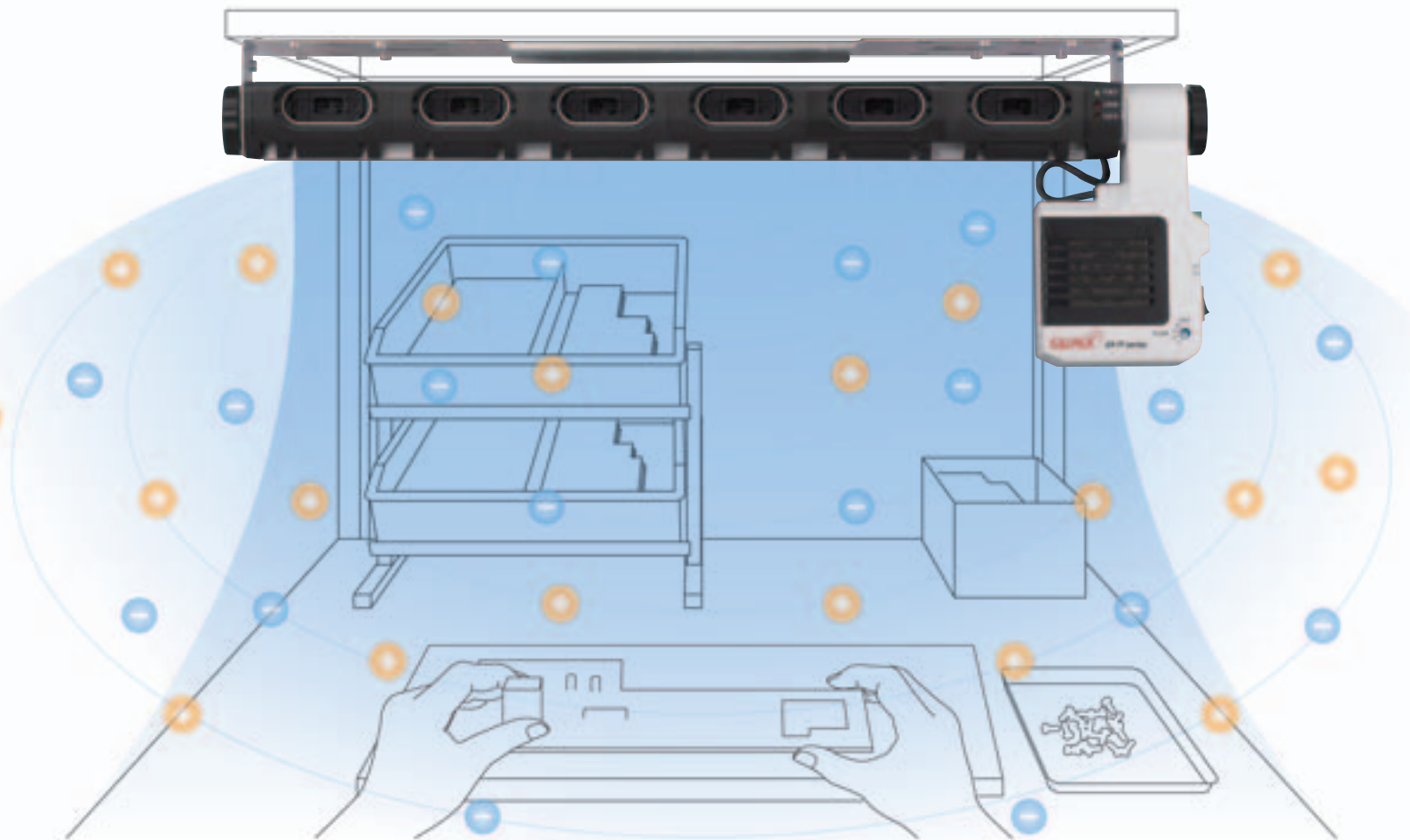
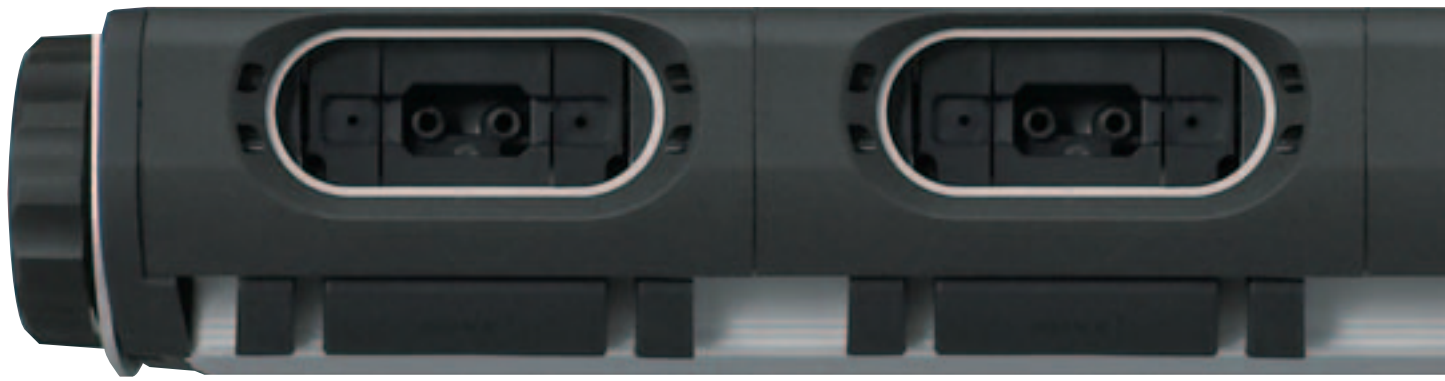


“Wide-area Ionizer” is the choice for your production site





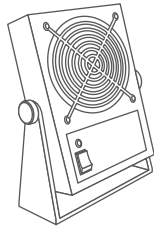
ER-TF04-EX

Slim in shape Wide in charge removal area An evolutionary form in expression

Problems with cell production lines

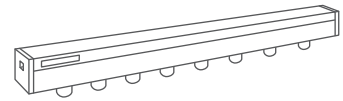
Ionizers up until now had not been able to fully meet the needs for on-site work.

Fan type



- One unit is not enough to cover the working area.
- Must be located near your hands for effective static removal.
- Two units take up too much space on the workbench.

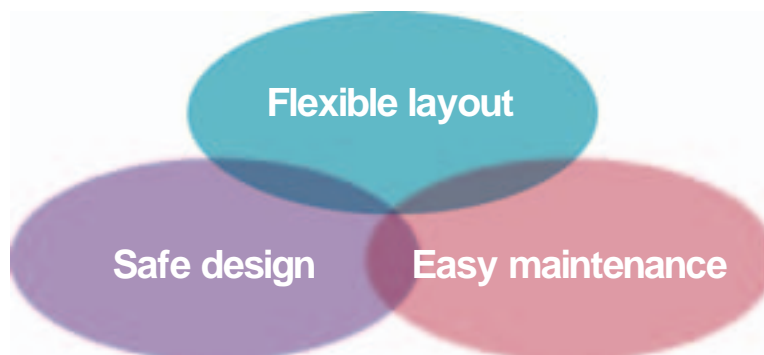
Bar type

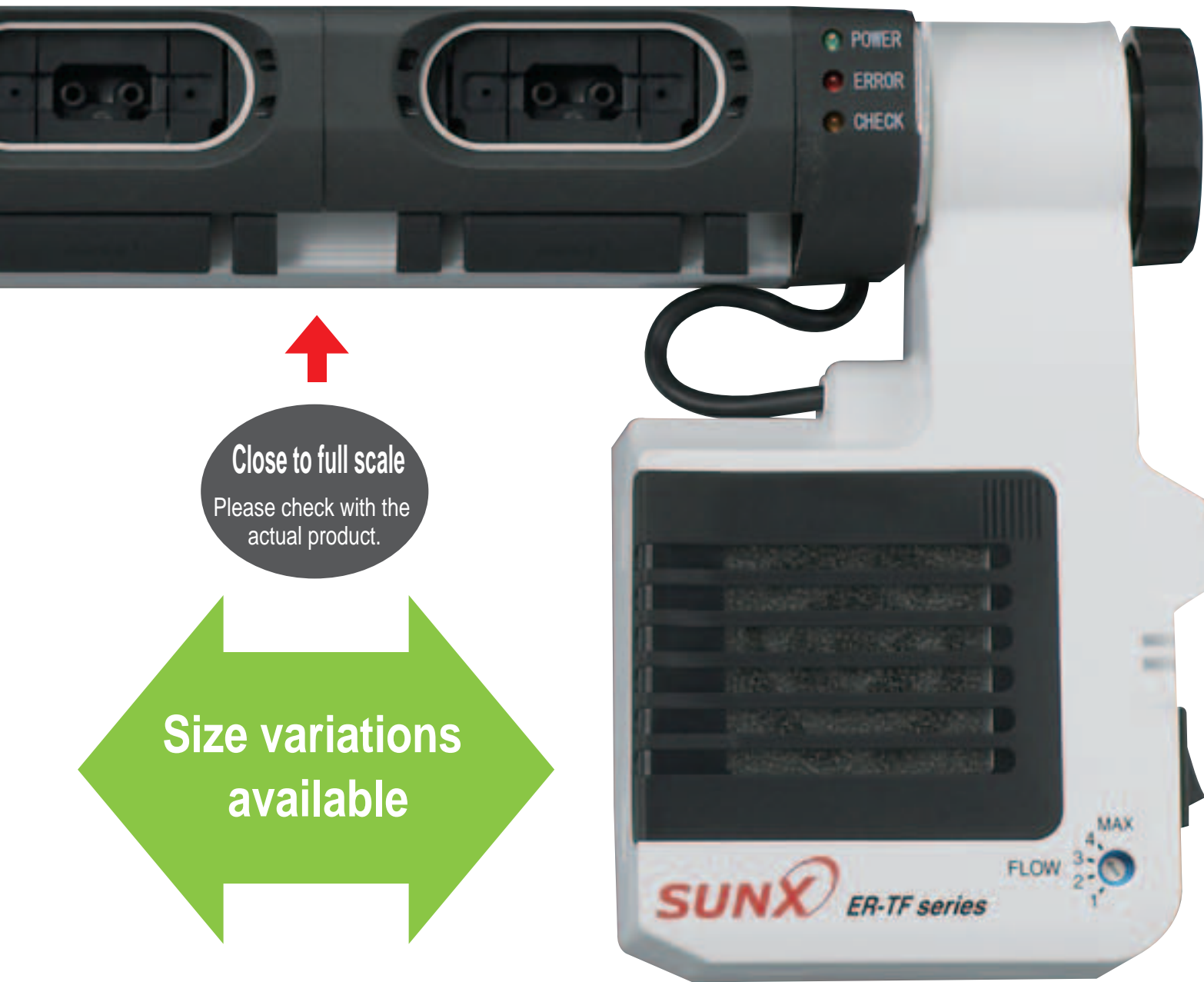


- Compressed air is costly.
- Complicated piping makes layout change troublesome.
- Disturbance of airflow or contact with discharger decreases work efficiency.

Characteristics of ER-TF series

A style not seen before that pursues performance in cell production lines and resolves dissatisfaction with existing ionizers.

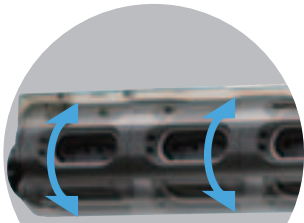




Close to full scale
Please check with the actual product.

Size variations available

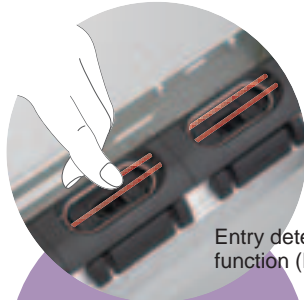
A new way of charge removal from SUNX



Blowing direction adjustment mechanism

Flexible layout

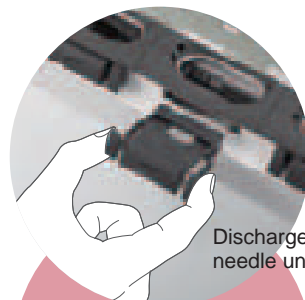
The air blowing direction can be easily adjusted even after installation



Entry detection function (Image)

Safe design

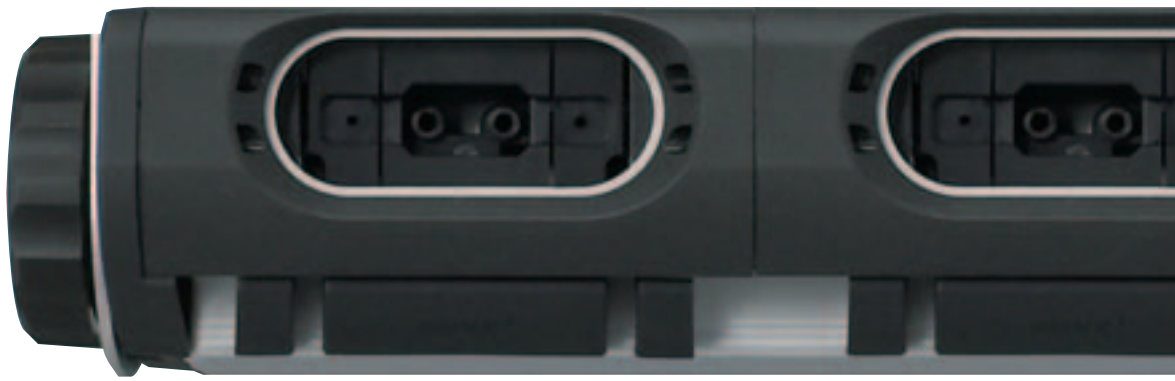
Detection of entry to the discharger interrupts the high voltage circuit



Discharge needle unit

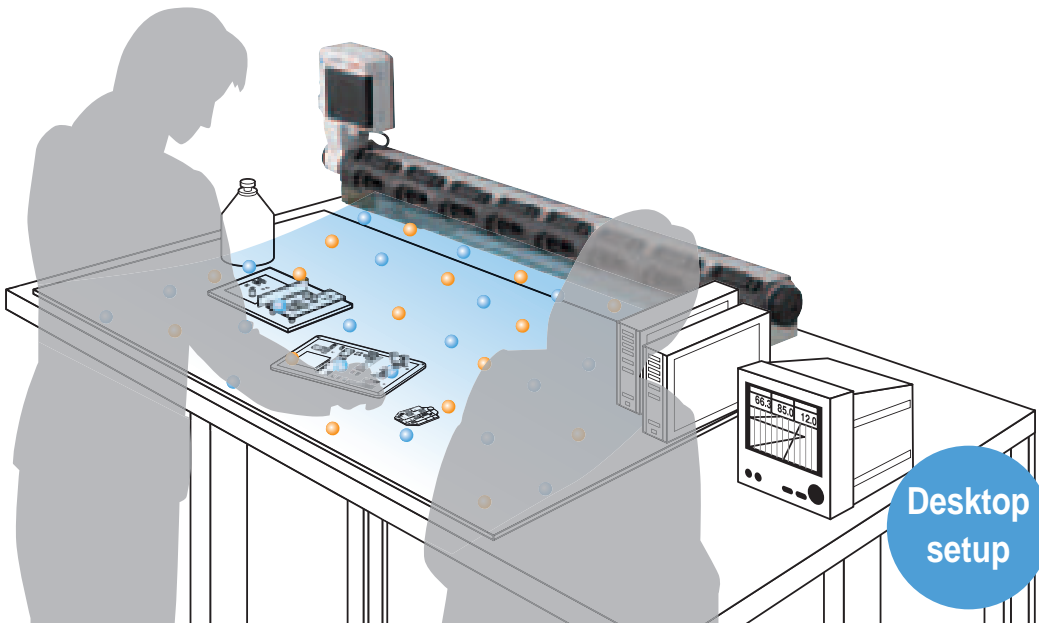
Easy maintenance

Discharge needle units can be detached or attached quickly

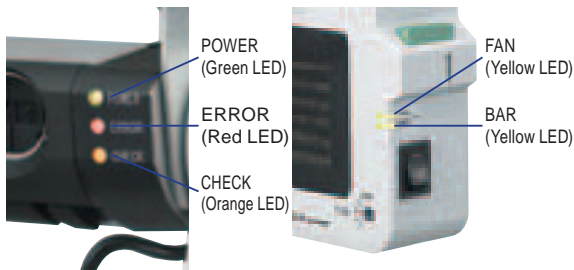


ER-TF06-EX

800 mm 31.496 in type to accomodate wide workbench



Indicators showing operation conditions



■ **ERROR indicator:**

Lights up when an intrusion of a foreign object into the discharger is detected by the entry detection function, or when an abnormal discharge, air intake constraint caused by clogged filter, or any other abnormality of the fan is detected.

■ **CHECK indicator:**

Lights up when it is time for maintenance of the discharge needle unit, or when a drop in the fan speed resulting from filter clogging is detected.

■ **FAN indicator:**

Lights up when a fan error or a fan check is detected.

■ **BAR indicator:**

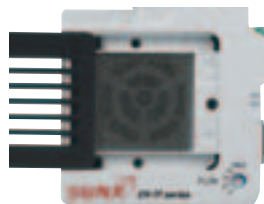
Lights up when a discharger error or a discharger check is detected.

Airflow adjustable in 4 levels



Fan speed can be adjusted in 4 levels. By setting the fan speed to MAX, speedy static removal of wide area is possible.

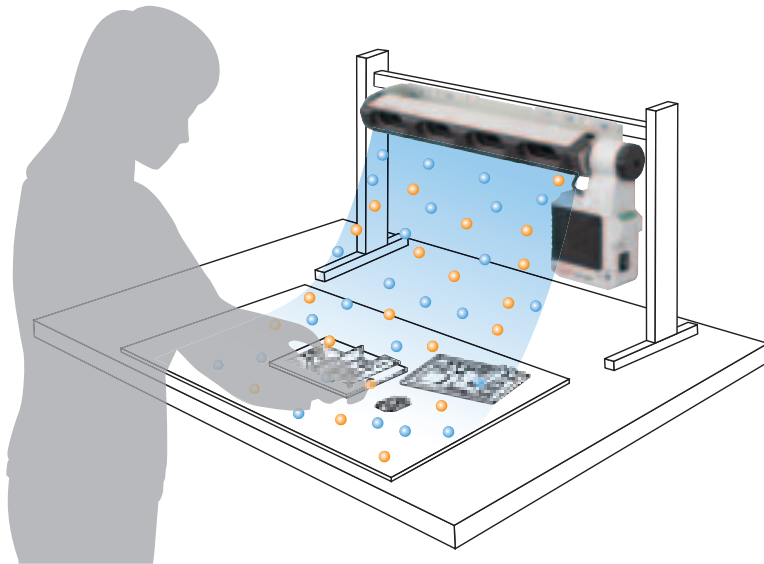
Easy filter cleaning



The fan air intake filter can be easily taken out by sliding open the cover. This greatly reduces the man-hour in cleaning.

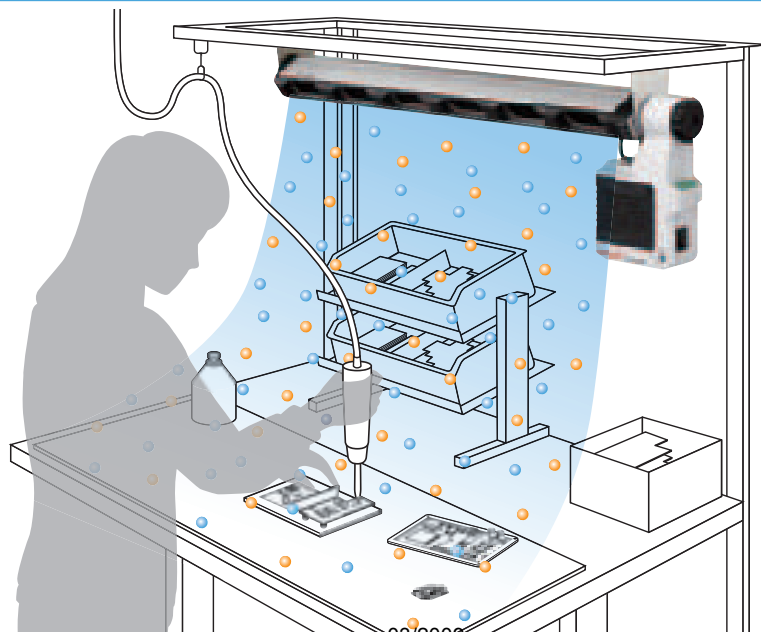
Introduction of the optimum static removal area from shoulder long to workbench wide.

400 mm 15.748 in type to suit operation space



Front
setup

600 mm 23.622 in type to cover cell production desk



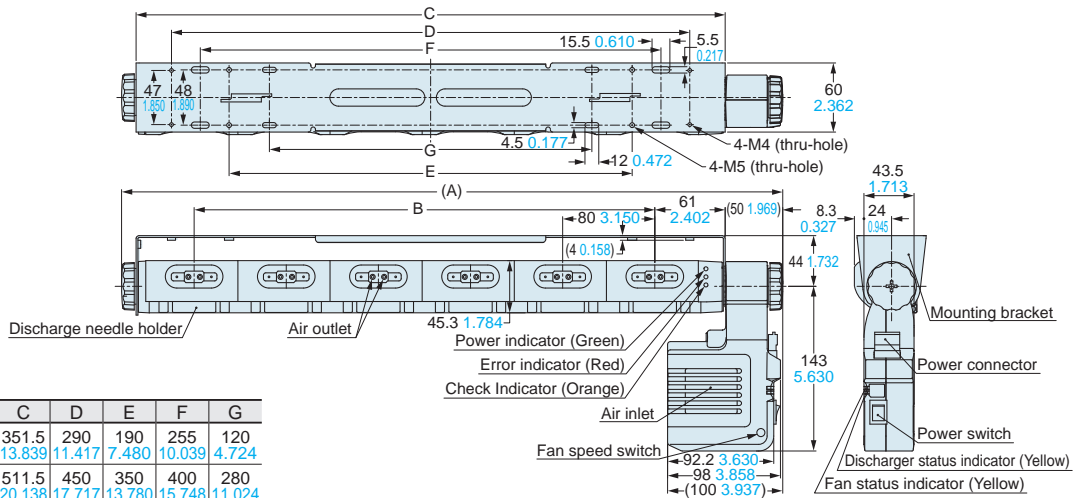
Overhead
setup



ER-TF08-EX

DIMENSIONS (Unit: mm in)

The CAD data in the dimensions can be downloaded from the SUNX website: <http://www.sunx.com>



Model No.	A	B	C	D	E	F	G
ER-TF04-EX	414 16.299	240 9.449	351.5 13.839	290 11.417	190 7.480	255 10.039	120 4.724
ER-TF06-EX	574 22.598	400 15.748	511.5 20.138	450 17.717	350 13.780	400 15.748	280 11.024
ER-TF08-EX	734 28.898	560 22.047	671.5 26.437	610 24.016	510 20.079	560 22.047	440 17.323

PRECAUTIONS FOR PROPER USE

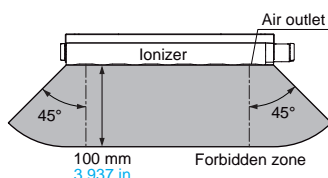
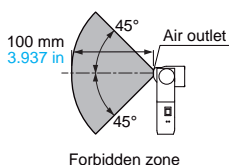
Be sure to read instruction manual attached to the product prior to its use.



- This product has been developed / produced for industrial use.
- This product is to remove static electricity for industrial use. Never use this product for medical equipment etc. relating to maintenance / supervision of human life or body, for prevention of accidents which damage a human life or properties, or for safety maintenance.
- Do not use this product near or around surroundings containing any dangerous materials, such as combustible material and flammable material.
- This product emits ozone. In order for this product to be used in an airtight room, be sure to keep the room ventilated.
- Do not place any objects that may obstruct the inflow of air within 10 mm 0.394 in of the front of the fan air intake part. Doing so may cause accident or product malfunction.
- Be sure to ground the main body of this product via ground terminal to ensure electrical shock prevention and reliable charge removal.
- Since the charge needle is applied with high voltage, never touch the discharge needle, or an electric shock may result.
- Since the tip of the discharge needle is sharp, take sufficient care in handling the discharge needle, or injuries may result.

Mounting

- Do not place any objects or any other charge removal equipment within 100 mm 3.937 in of the ionized air outlet front (refer to the illustration below), as they may affect operation and performance of the ionizer.



Maintenance

- Always be sure to turn off the power before carrying out any care and maintenance of the product.
- The tip of the discharge needle is sharp, so be careful not to touch it while cleaning.
- When the product is used for long periods of time, dust and other foreign particles may accumulate on the discharge needle, the area around it, and on the fan filter. Clean regularly (discharge needle: about once a week, air filter: about once every two months), otherwise their charge removal performance will drop and operating problems or accidents may occur.
- The discharge needle is a consumable part. If the charge removal performance is not restored after cleaning the discharge needle, the discharge needle unit should be replaced. All of the discharge needle units should be replaced at the same time.



SPECIFICATIONS

Item	Type	Wide-area fan type		
	Model No.	ER-TF04-EX	ER-TF06-EX	ER-TF08-EX
Charge removal time		Approx. 1 sec. (Note 1)		
Ion balance		± 10 V or less (Note 2)		
Power supply voltage		Accessory AC adapter input: 100 to 240 V AC ± 10 % 50/60 Hz (Output: 24 V DC)		
Power consumption		80 VA or less (at 100 V: 70 VA or less)		
Discharge method		Steady-state DC		
Ambient temperature		0 to + 50 °C + 32 to + 122 °F (No dew condensation), AC adapter: 0 to + 40 °C + 32 to + 104 °F		
Ambient humidity		35 to 65 % RH (No dew condensation)		
Material		Bar unit enclosure: ABS, Fan unit enclosure: ABS, Discharge needles: Tungsten, Mounting bracket: SPCC		
Weight		Net weight: 1.0 kg approx.	Net weight: 1.2 kg approx.	Net weight: 1.4 kg approx.
Accessories		AC adapter (Note 3), F.G. connection cable, spare replacement filters (5 pcs.), blindfold seals (2 sheets.)		

Notes: 1) Typical value at a distance of 200 mm 7.874 in from the front surface of the air outlet at the unit center at maximum fan speed.

2) Typical value at a distance of 300 mm 11.811 in from the front surface of the air outlet at the unit center at maximum fan speed.

3) Please prepare an AC cable separately as it is needed.

The following cables are available as optionals:

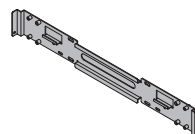
CN-ACCN-C2: AC cable for China, **CN-ACKR-C2**: AC cable for Korea

OPTIONS

Designation	Model No.	Description
AC cable	CN-ACCN-C2	Cable for China (conforming to CCC), Length: 2 m 6.562 ft
	CN-ACKR-C2	Cable for Korea (conforming to KTL), Length: 2 m 6.562 ft
Mounting unit	ER-TF06MS1	Mounting unit for ER-TF06-EX . Allows easy attachment or detachment of the main unit.
Air filter	ER-TFFx10	Air filter for fan air intake part (10 pcs. per set)
Discharge needle unit	ER-TFANT	Unit with tungsten needles (1 pc.)
Silent fan cover	ER-TFSC	To be mounted on the front part of the fan unit as a cover to reduce the fan blowing sound.

Mounting unit

- ER-TF06MS1



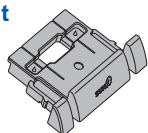
Air filter

- ER-TFFx10



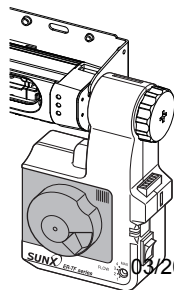
Discharge needle unit

- ER-TFANT



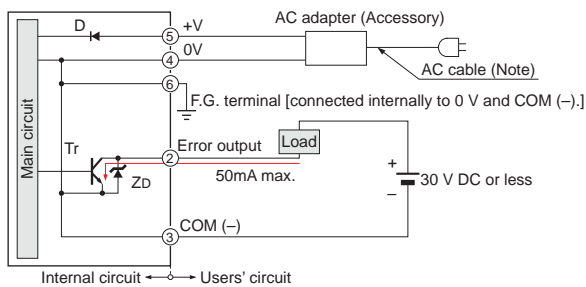
Silent fan cover

- ER-TFSC



I/O CIRCUIT DIAGRAM

I/O circuit diagram



Symbols ... D: Power supply reverse connection protection diode
Zd: Surge voltage absorption zener diode
Tr: NPN output transistor

Note: Please prepare an AC cable separately as it is needed.

The following cables are available as optionals:

CN-ACCN-C2: AC cable for China

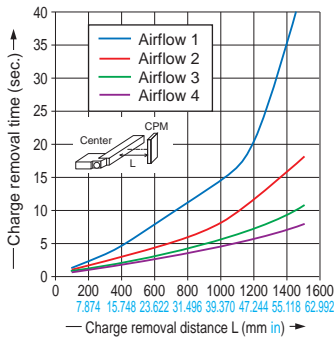
CN-ACKR-C2: AC cable for Korea

CHARGE REMOVAL CHARACTERISTICS (TYPICAL)

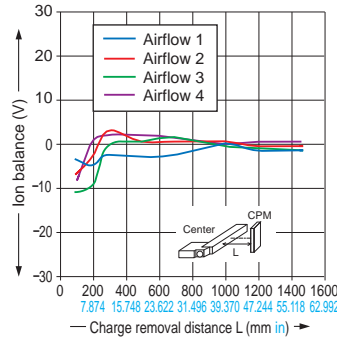
Measured using a □150 mm □5.906 in CPM (charge plate monitor). (At center of CPM)

ER-TF04-EX

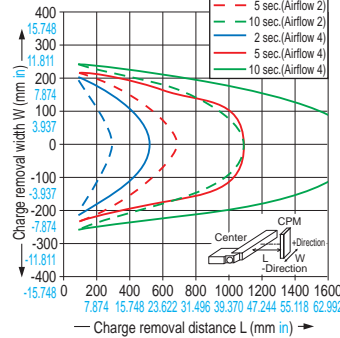
Charge removal time



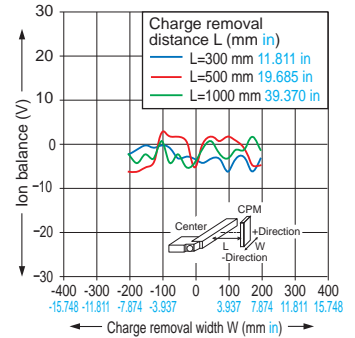
Correlation between charge removal distance and ion balance



Charge removal field (Horizontal direction)

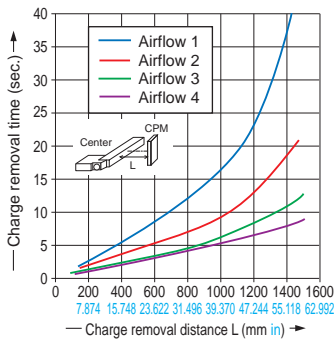


Ion balance (Horizontal direction) [Airflow 4]

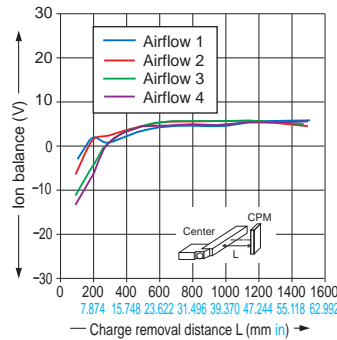


ER-TF06-EX

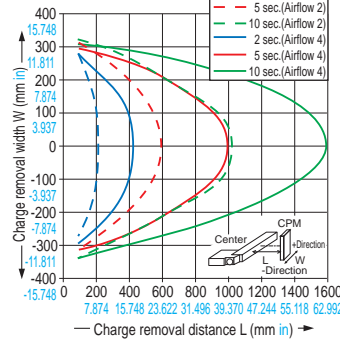
Charge removal time



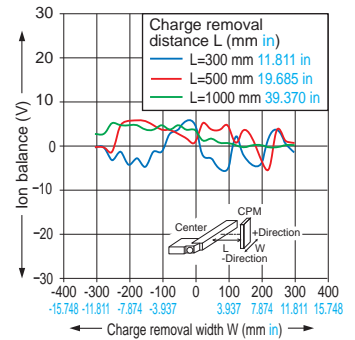
Correlation between charge removal distance and ion balance



Charge removal field (Horizontal direction)

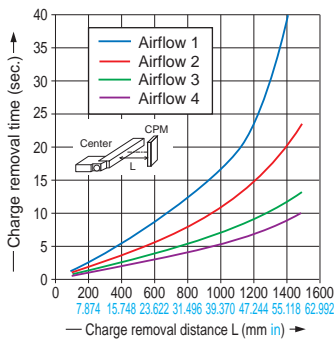


Ion balance (Horizontal direction) [Airflow 4]

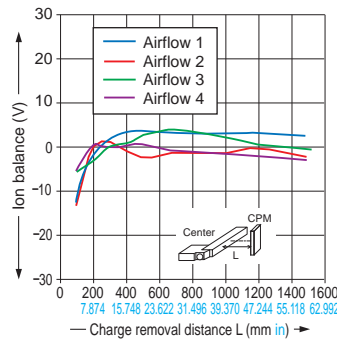


ER-TF08-EX

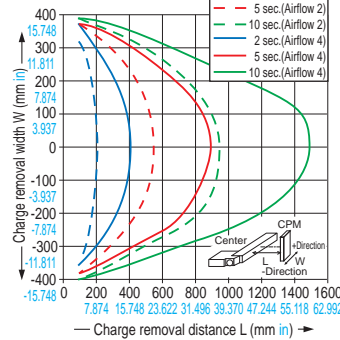
Charge removal time



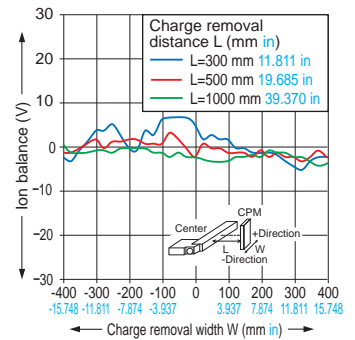
Correlation between charge removal distance and ion balance



Charge removal field (Horizontal direction)



Ion balance (Horizontal direction) [Airflow 4]



All information is subject to change without prior notice.



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