

VESSEL®

Black and White for your application



NEW

BBZ-E

CE RoHS

STAT-CLEAN

G7R-E BBZ-E PAC-8

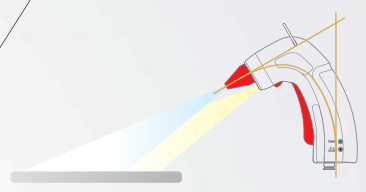
Gun-type Ionizers

Made in Japan

“Top Sell” model for general applications



Tilted designed body; operator can work without bending his wrist.



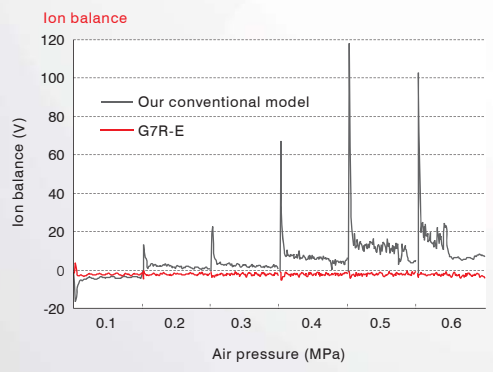
Non-slip grip suitable even for clean room gloves.

LED lamps on both sides of grip to check operating status.

10,000,000-cycle tested Robotic cable adopted.

Highly-efficient neutralization in excellent ion balance

The unique-design nozzle keeps ion balance stable and avoids the opposite-charging at the moment the trigger is pulled. Suitable for neutralization and dust elimination for static-sensitive components.



Easy maintenance

Screw type interchangeable nozzle. Easy replacement and cleaning of electrode. (Image shows the G7R-E)



Various options available

Nozzles; e.g., Standard Nozzle, Silent Nozzle, and Brush are replaceable depending on the work. (Image shows Silent Nozzle N-2WN)



Low voltage 24 V DC power supply

24VDC low voltage input. Safe with no high voltage wires exposed.



An industry first LED light

Super luminosity LED lamp illuminating dust particles. (Image shows the G7R-E)



RoHS / CE

Comply with the directive RoHS. Certified CE marking.



Ergonomic and powerful at hand!

G7R-E



EDP No. 621621

A C Piezzo AC	Ion Balance within ± 10 V	Air Pressure max 0.6MPa
Decay Time within 0.5 sec	Directive CE RoHS	ALARM H.V.
		LED light

Robotic cable
2.5m



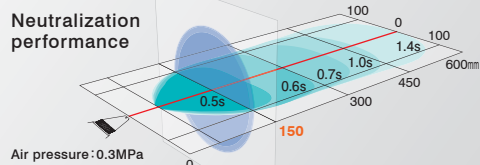
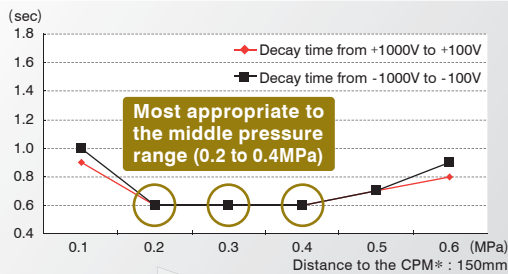
AC Adapter

Ideal for neutralization and dust elimination of precision parts at hand, for example, in cell production.

- LED light integrated to make dust visible.
- Ergonomic grip enabling operator to hold it at a right angle.
- Non-slip grip suitable even for clean room gloves.
- Lightweight and less fatigue of operators.



Accurate ionizing at hand



* CPM stands for Charged Plate Monitor.

Specifications

Model	G7R-E
Ion generation method	Piezoelectric high-frequency AC corona discharge
Applied voltage	2.0 kVAC
Power supply	24 VDC $\pm 5\%$
Current consumption	74 mA (typ. When using LED light)
Ion balance (measured at 150mm)	within ± 10 V (at 0.3MPa)
Decay time (measured at 150mm)	within 0.5 sec (at 0.3MPa)
Neutralization area	50 mm ~ 600 mm
Dimensions (H x W x D)	150x36x105 mm
Weight	198 g
Air supply pressure	0.1~0.6MPa
Air supply hose diameter	$\Phi 6 \times \Phi 4$ mm
Air flow	184 ℓ /min (at 0.3MPa) / 336 ℓ /min (at 0.6MPa)
Noise level (measured at 1m)	89.1dBA (at 0.3MPa) / 97dBA (at 0.6MPa)
Ozone production (measured at 50mm)	0.05 ppm or less (at 0.3MPa)
Operating temperature	5~40°C
Humidity	35~65% RH (non-condensing, non-freezing)
Accessories	AC Adapter AD24-ITC-E Input voltage: 100 VAC~240VAC (50/60 Hz) 0.4 A Output voltage: 24 VDC 0.75 A Standard Nozzle G-7SN, Instruction manual

Newly developed
Enormous power over big plastic products

BBZ-E



(Compared to the G7R-E)

EDP No. 621638

A C Piezzo AC	Ion Balance within ± 10 V	Air Pressure max 0.6MPa
Decay Time within 0.5 sec	Directive CE RoHS	ALARM H.V.
		LED light

Robotic cable
5m



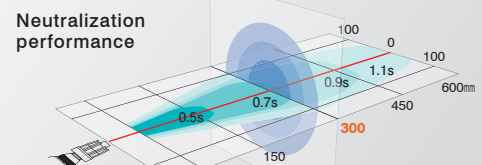
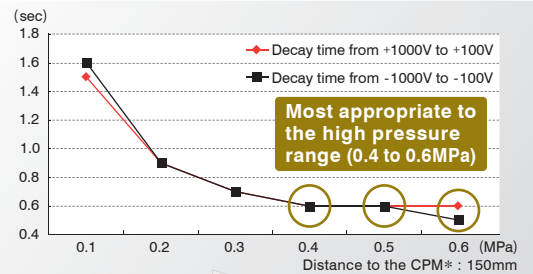
AC Adapter

Ideal for neutralization and dust elimination of big plastic products made, for example, by standing up.

- LED light integrated to make dust visible.
- Vibration resistant screw-in connector.
- Intensive neutralization with a silent and high discharge air nozzle.
- Less noticeable black color from dirt.
- The long power cable (5 m) allows work in a widespread area.
- Lightweight and less fatigue of operators.



Unique performance by high pressure blow-off for such big products



* CPM stands for Charged Plate Monitor.

Specifications

Model	BBZ-E
Ion generation method	Piezoelectric high-frequency AC corona discharge
Applied voltage	2.0 kVAC
Power supply	24 VDC $\pm 5\%$
Current consumption	74 mA (typ. When using LED light)
Ion balance (measured at 150mm)	within ± 10 V (at 0.6MPa)
Decay time (measured at 150mm)	within 0.5 sec (at 0.6MPa)
Neutralization area	50 mm ~ 600 mm
Dimensions (H x W x D)	152x36x132 mm
Weight	198 g
Air supply pressure	0.1~0.6MPa
Air supply hose diameter	$\Phi 6 \times \Phi 4$ mm
Air flow	194 ℓ /min (at 0.3MPa) / 344 ℓ /min (at 0.6MPa)
Noise level (measured at 1m)	77.3dBA (at 0.3MPa) / 85.5dBA (at 0.6MPa)
Ozone production (measured at 50mm)	0.05 ppm or less (at 0.3MPa)
Operating temperature	5~40°C
Humidity	35~65% RH (non-condensing, non-freezing)
Accessories	AC Adapter AD24-ITB-E Input voltage: 100 VAC~240VAC (50/60 Hz) 0.4 A Output voltage: 24 VDC 0.75 A Instruction manual

Slash your air consumption by 60% !*
Ecological solution for neutralization
with **pulse air**

PAC-8



EDP No. 621618

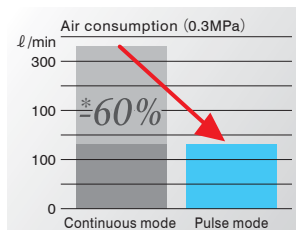
- Air Pressure**
max 0.6MPa
- Directive**
CE RoHS
- Eco-friendly**
Eco-friendly product

Specifications

Model	PAC-8
Power supply	24 V DC±5%
Current consumption	70 mA (PAC-8 only)
Dimensions (H × W × D)	85.5×162×56.2 mm
Weight	610 g
Air supply hose diameter	Φ8×Φ6mm
Air flow	See chart to right
Output power supply	24 VDC±5% 680 mA (when connected to separately available AD24-ITC-E)
Operating temperature	5~40°C
Humidity	35~65 % (non-condensing, non-freezing)
Accessories	Instruction manual, 8 mm/6 mm conversion plug, 8 mm air hose (100mm)

Energy-saving

Pulse mode cuts down 60%* of air consumption, compared to continuous mode.



Higher efficiency

In pulse mode, intermittent air vibrates dust particles and blows them off. Select either high-frequency pulse or low-frequency pulse in accordance with the application.

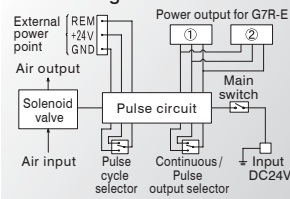


Wide connectivity

Can be used with other VESSEL ionizers such as G7R-E, N-2, and Bar types

The built-in solenoid valve is a consumable part. (Actual measured lifetime of the solenoid valve in a sample unit : 200 days in pulse mode HI or 500 days in pulse mode LOW, for 6-hour-operation. This is just referential, not guaranteed data.)

Circuit diagram



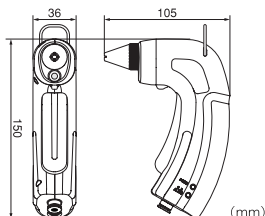
Air flow

Pressure (MPa)	0.1	0.2	0.3	0.4	0.5	0.6
Continuous mode (l/min)	125	232	330	461	567	572
Pulse mode (l/min)	50	92.8	132	184.4	226.8	228.8

* Air consumption figures in pulse mode are theoretical and do not include the losses that occur while the solenoid valve opens and closes.

Dimensions

G7R-E Gun-type Ionizer



Replacement parts

Standard Nozzle	G-7SN	(included)
Electrode Needle	G-7H	(included)
AC Adapter	AD24-ITC-E	(included)

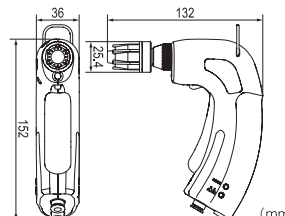
Optional parts

Tube-fitting Nozzle	N-2TN	(sold separately)
Brush: 60 mm bristles	G-7B	(sold separately)
Electrode Needle	G-7DR	(separately sold)
Replacement Screwdriver		
Flared Nozzle	N-2FN	(sold separately)
Silent Nozzle	N-2WN	(sold separately)
Soft Brush: 60 mm bristles	G-7SB	(sold separately)
Speed Controller	G-7SC	(separately sold)
Micro filter	G-7F	(separately sold) *1
Relay Cable (5 m)	G-7EC5	(separately sold) *2
Relay Cable (10 m)	G-7EC10	(separately sold) *2

*1 Micro filter avoids 99% or more of particles of a 0.01 μm diameter. Install a 1 μm to 10 μm air filter and mist separator on your air compressor before using this item.

*2 Relay Cable is used to connect the G7R-E to its dedicated AC Adapter (AD24-ITC-E).

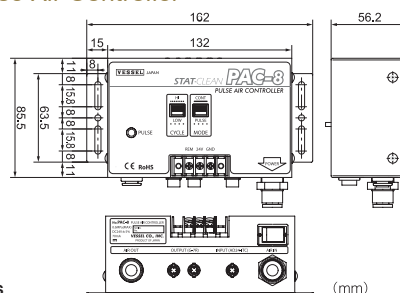
BBZ-E Gun-type Ionizer



Replacement parts

Silent Straight Nozzle	BB-ZSN	(included)
Electrode Needle	G-7H	(included)
AC Adapter	AD24-ITB-E	(included)

PAC-8 Pulse Air Controller



Optional parts

G7R-E Connection Cable	G-7RC (2.5m)	(sold separately)
AC Adapter	AD24-ITC-E	(sold separately)

WARNING

- Read the instruction manual carefully before using the unit.
- Do not use this unit in environments that require explosion-proofing.
- Do not wet with water, oil, solvent, etc. as this unit applies high voltage.
- Avoid dew condensation as it can cause electric shock and product breakage.
- Do not touch the electrode needles as they are applied with high voltage. Also keep your operation tools and wirings away from the unit.

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