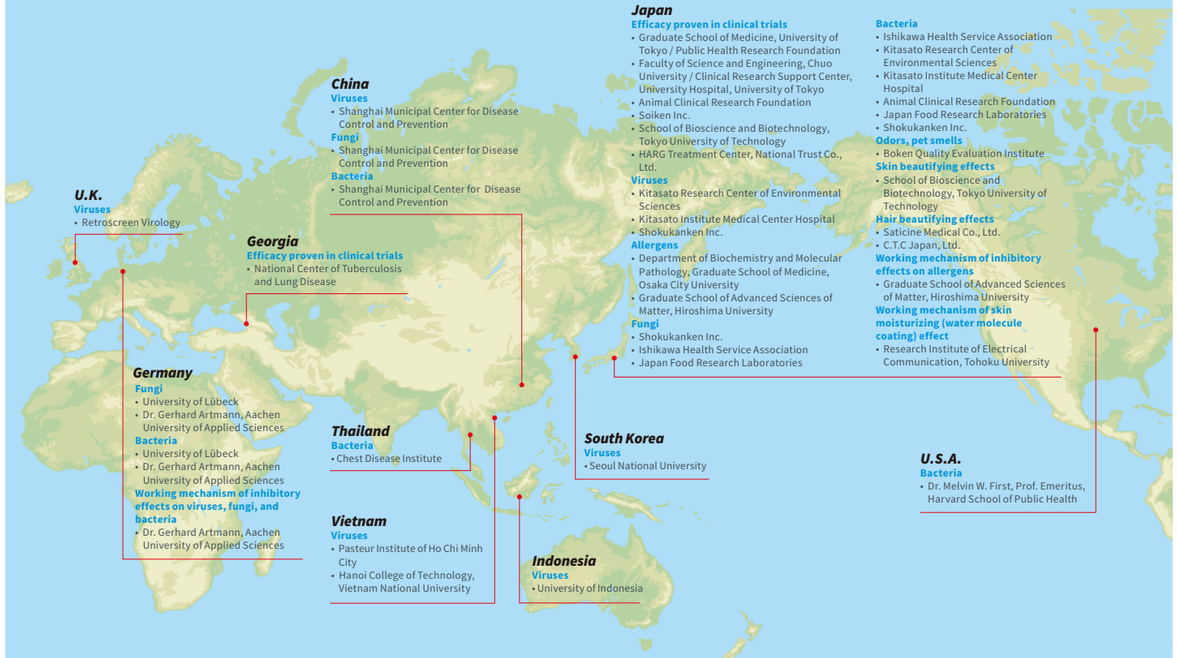
High-Density Plasmacluster Ions Remove Airborne Mold and Viruses

Plasma discharge generates and emits the same positive and negative ions that occur in nature. Plasmacluster technology is Sharp's original air purifying technology that removes airborne mold and viruses. The benefits have been proven by official test institutions in Japan and around the world.

Certified 28 Institutes and Organizations

CERTIFIED WORLDWIDE

PLASMACLUSTER—GAINING TRUST AND NEW CUSTOMERS AROUND THE WORLD
(TESTED BY 28 INSTITUTES AND ORGANIZATIONS)



- Sharp does not guarantee the test results can be replicated in actual user situations.
- Plasmacluster Ion effectiveness will vary depending on ion density and product used.
- Plasmacluster and the Plasmacluster logo are trademarks or registered trademarks of Sharp Corporation.

Used in a variety of industries

You Never Have to Be without It

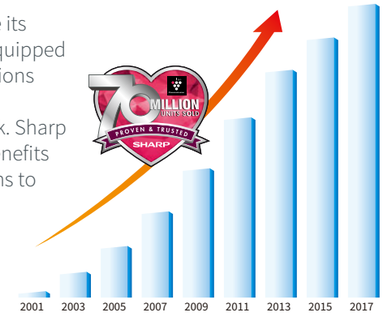
For home

For vehicle

For building

Used in over 70 million products in 17 years

In the 17 years since its release, products equipped with Plasmacluster ions have exceeded the 70-million-unit mark. Sharp aims to bring the benefits of Plasmacluster ions to every air space.



- Total number of products equipped with a Sharp Plamacluster device and of Plasmacluster ion generating devices shipped in Japan and abroad from October 2000 to the end of February 2017.

* Design and specifications are current as of Jan. 2017, but are subject to change without prior notice.

SHARP

SHARP CORPORATION OSAKA, JAPAN

SHARP

Be Original.

AIR PURIFIER and ION GENERATOR

For internal use only

2017

Plasmacluster

Naturally Fresh and Safe Air

JAPAN TECHNOLOGY

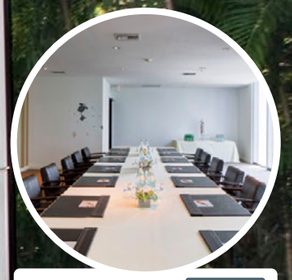
KC-G60

Purify Air with the Same Ions As in Nature

Plasmacluster – Only from SHARP

Plasmacluster ions are positive and negative ions that occur in nature.
Plasmacluster is air-purifying technology. Its effectiveness has been supported by test data, and Plasmacluster is thus increasingly finding applications in various areas of activity, such as in businesses, in addition to household use.
Plasmacluster provides you with natural and safe air. This unique technology from Sharp applies the power of nature.

for HOME use p1 – p23



for BUSIBESS use p24 – p34

SHARP's Original Technology

Plasma discharge generates and emits the same positive and negative ions that occur in nature. Plasmacluster technology is Sharp's original air purifying technology that removes airborne mold and viruses.

Winner of the 2008 Invention Prize
National Invention Awards Ceremony held by the Japan Institute of Invention and Innovation (JIII)
Patented by Sharp (patent number 3680121)

Assured Safety

GLP*-compliant test facilities have gathered highly reliable safety data on Sharp's Plasmacluster technology.

* GLP (good laboratory practice) is a system of management controls for test facilities and test procedures designed to ensure the reliability of chemical safety assessment tests.

Purpose	Test name (abbreviation)	Ion density setting
Skin irritancy (general condition)	Acute skin irritation/ corrosion	Approx. 1,000,000 ions/cm³
Eye irritancy (general condition)	Acute eye irritation/ corrosion	Approx. 13,000,000 ions/cm³
Gene toxicity (general condition)	Inhalation toxicity (evaluation of genetic effect on pulmonary tissue)	Approx. 7,000,000 ions/cm³
Body and organ toxicity (general condition)	Inhalation toxicity	Approx. 7,000,000 ions/cm³
Pregnant woman and fetus toxicity (general condition)	Inhalation toxicity	Approx. 7,000,000 ions/cm³

Testing institution: LSI Medience Corporation

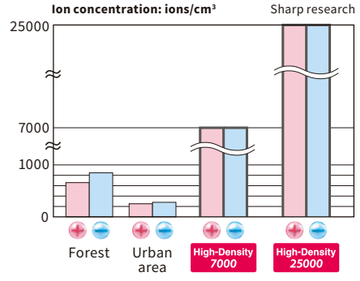
The Same Safe Ions As in Nature

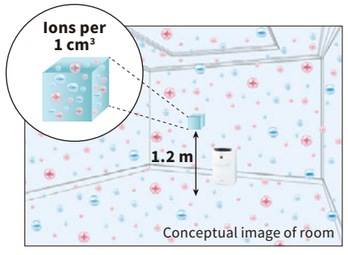
The safety of Plasmacluster ions has been verified, and so a high density of ions can be used. With more positive and negative ions in a room than even in a forest, Plasmacluster provides an environment of even greater effectiveness.

Numbers of ⊕ and ⊖ ions per 1 cm³ when measured near the center of a room (at a height of 1.2 m from the floor) with the product placed at a wall:

Plasmacluster High-Density 25000
⊕⊖ ions each
25,000 or more

Plasmacluster High-Density 7000
⊕⊖ ions each
7,000 or more





Plasmacluster Air Purifiers Provide Solutions for Air-quality Concerns

Plasmacluster High-Density *7000* | Plasmacluster High-Density *25000*

The number in this technology mark indicates the approximate number of ions supplied into 1 cm^3 of air, measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area and at the maximum airflow when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

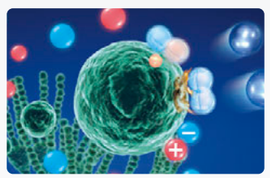
Plasmacluster Ions Clean the Room Air

Removal of Airborne Mold

Result after approx. 49 minutes in a testing space of approx. 25 m^3.

High-Density *25000* | High-Density *7000*

- Tested by: Japan Food Research Laboratories
- Test result certificate: No. 15061723001-0101
- Test method: Performance evaluation test according to voluntary standard HD-131 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m^2.
- Object tested: One type of airborne mold.
- Test result: 99% reduction in approx. 49 minutes. Tested with an FP-F30 operating at the High airflow setting.



Reducing Growth of Adhering Mold

Result after approx. three days (one day as 24 hours) in a testing space of approx. 20 m^3.

High-Density *25000*

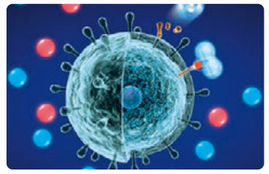
- Tested by: Shokukanken Inc.
- Test method: Emission of Plasmacluster ions with vinyl chloride plate with adhering mold placed in testing space. Comparison of mold growth area with reference to JIS Z 2911.
- Test result: Limitation of growth after 3 days. Tested with a KI-A60 operating at the High airflow setting.

Suppressing the Activity of Airborne Viruses

Result after approx. 18 minutes in an airtight testing space of approx. 25 m^3.

High-Density *25000* | High-Density *7000*

- Tested by: Pasteur Institute in Ho Chi Minh City, Vietnam
- Test method: Performance evaluation test according to voluntary standard JEM 1467 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m^3.
- Object tested: One type of airborne virus.
- Test result: 99% reduction in approx. 18 minutes. Tested with an FP-F30 operating at the High airflow setting.



Suppressing the Activity of Adhering Viruses

Result after approx. 10 hours in an airtight testing space of approx. 25 m^3.

High-Density *25000*

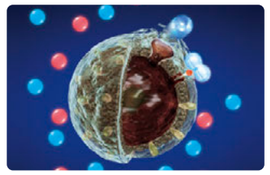
- Tested by: Shokukanken Inc.
- Test method: Performance evaluation test according to voluntary standard JEM 1467 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m^3.
- Object tested: One type of adhering virus.
- Test result: 99% reduction in approx. 10 hours. Tested with a KI-A60 operating at the High airflow setting.

Suppressing the Activity of Airborne Microbe

Result after approx. 51 minutes in a testing space of approx. 25 m^3.

High-Density *25000* | High-Density *7000*

- Tested by: Japan Food Research Laboratories
- Test result certificate: No.15061721001-0101
- Test method: Performance evaluation test according to voluntary standard HD-131 of the Japan Electrical Manufacturers' Association in a testing space of approx. 25 m^3.
- Object tested: One type of airborne microbe.
- Test result: 99% reduction in approx. 51 minutes. Tested with an FP-F30 operating at the High airflow setting.



Suppressing the Activity of Airborne Allergens from Dust Mite Feces and Remains

Result after approx. 51 minutes in a testing space of approx. 25 m^3.

High-Density *25000* | High-Density *7000*

- Tested by: ITEA Inc.
- Test method: Allergens from dust mite feces and remains were suspended in the air in a testing space of approx. 25 m^3 and measured using the ELISA method.
- Test result: 99% reduction in approx. 51 minutes. Tested with an FP-F30 operating at the High airflow setting.

Plasmacluster Ions and Air-Purification Technology Remove Haze

It Was Proved that Sharp's Plasmacluster Ion and Air Purifying Technology Has the Effect on a Haze in Collaboration with University Putra Malaysia

The study found that a harmful substance such as toluene, pentanone is included organic chemicals in HAZE.

Plasmacluster Ions Reduce 98% of Toluene and 70% of Pentanone

- Tested by: Sumika Chemical Analysis Service, Ltd.
- Test method: A 20-liter volume was irradiated with ions at a density of 2 million ions per cm^3. Air treated with Plasmacluster ions was compared to air without Plasmacluster ions, and the removal rates of toluene and pentanone were measured.
- Test result: After 24 hours, 91% of toluene and 44% of pentanone were removed, increasing to 98% and 70% after 48 hours.

Air-Purification Technology Removes 99% of Haze Particles as Small as 0.06 µm in Size

- Tested by: Sharp
- Test method: A KC-D60 and KC-D40 were each installed in a separate 25.6 m^3 space and set to Haze Mode.
- Test result: The air purifiers each required approx. 30 minutes to remove 99% of haze particles 0.06 µm or larger in size.

Reduction of Static Electricity

Reducing Static Electricity

Result after approx. 2.7 minutes for the KI-A60 and approx. 13 minutes for the FP-F30 in a testing space of approx. 41 m^3.

High-Density *25000* | High-Density *7000*

- Tested by: Sharp
- Test method: Measurement of time required for a metal sensing plate charged to 5 kV to decrease in charge to 0.5 kV when irradiated with Plasmacluster ions (tested with reference to JIS TR C 0027-1).
- Test result: As described above.

Removing Stubborn Odors with Plasmacluster

Breakdown and Elimination of Clinging Odors

Breakdown and Removal of Clinging Cigarette Odor

Result after approx. 55 minutes for the KI-A60 and approx. 90 minutes for the FP-F30 in a testing space of approx. 41 m^3.

High-Density *25000* | High-Density *7000*

The effectiveness of deodorization depends on factors such as the odor type and intensity, as well as the materials of the objects to be deodorized.

- Tested by: Sharp
- Test method: The effectiveness of deodorizing a cloth swatch impregnated with cigarette odor components and irradiated with Plasmacluster ions was evaluated by using the six-level odor intensity indication method.
- Test result: Deodorized to unnoticeable levels in the times stated above.

Spot Deodorization of Sweat Odor Clinging to Clothing in Approx. Six Hours

- Tested by: Sharp
- Test method: The effectiveness of deodorizing a cloth swatch impregnated with sweat odor components and irradiated with Plasmacluster was evaluated by using the six-level odor intensity indication method.
- Test result: Deodorized to unnoticeable level in about six hours. Tested with an FP-F30 operating at the Low airflow setting.

Spot Deodorization of Damp-dry Odor on Clothes Drying Indoors in Approx. Three Hours

- Tested by: Sharp
- Test method: The effectiveness of deodorizing a cloth swatch impregnated with damp-dry odor components on clothes drying indoors and intensively irradiated with Plasmacluster ions was evaluated by using the six-level odor intensity indication method.
- Test result: Deodorized to unnoticeable level in approx. three hours. Tested with an FP-F30 operating at the Low airflow setting.

Odors at portions not directly subjected to the airflow cannot be removed.
Note: This effect is provided when KI-series models operate at the Med setting and when FU-series models operate at the High setting. The effectiveness of deodorization depends on factors such as the odor type and strength, as well as the materials of the objects to be deodorized.

Skin-Beautifying Effects of High-Density Plasmacluster Ions

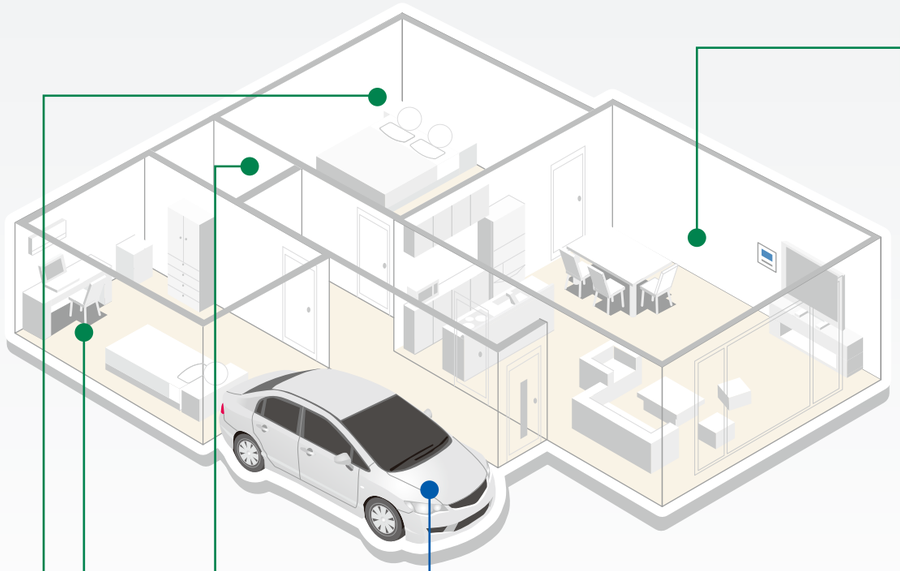
Beautifying Skin with a Lustrous Sheen

Result after approx. 20 minutes in a testing space of approx. 41 m^3.

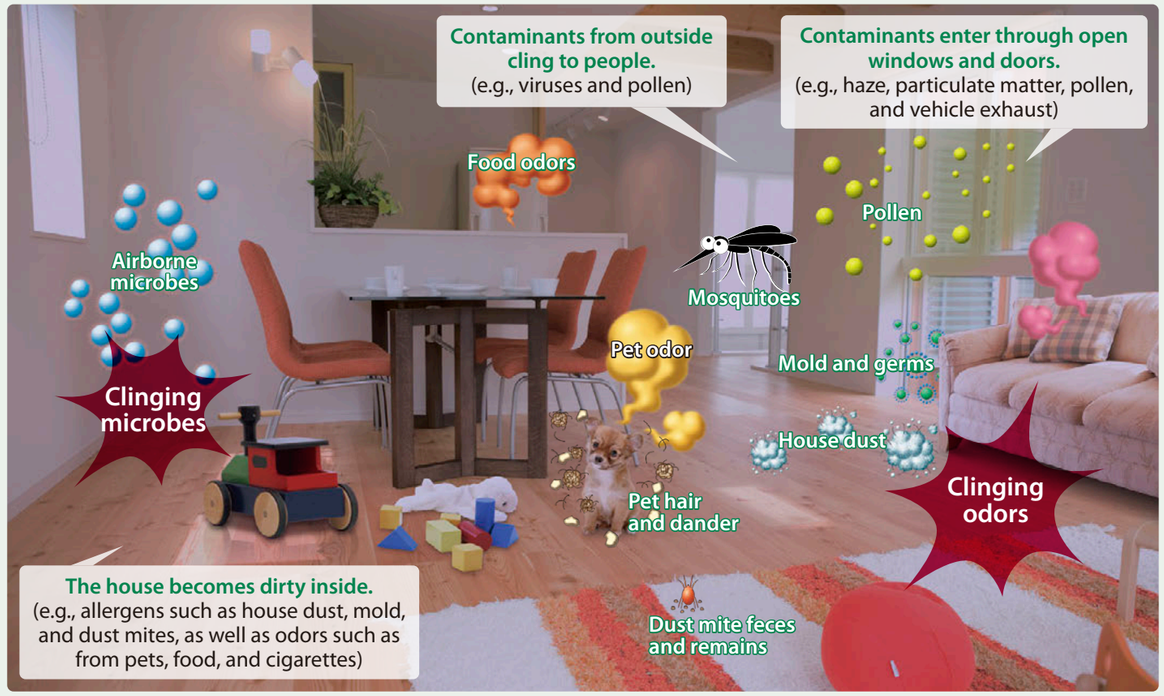
High-Density *25000*

- Tested by: Soiken Inc.
- Subjects tested: 21 women, ages 36 to 63
- Temperature: Approx. 25°C, Humidity: Approx. 45%
- Test method: Measurement of skin moisture levels at the corners of the eyes of subjects at rest.
- Test result: An effect of providing luster to skin after 20 minutes of operation was verified. Tested with a KI-A60 operating with humidifying air purification at the Med setting.

A Wide Variety of Concerns Are Lurking in the Air of Your Living Environment



Living Rooms



The whole family, from children to the elderly, gather in the living room. Hidden in the living room air remain a wide variety of invisible contaminants, such as viruses, pollen, and haze invading from the outside, as well as odors and dust mite feces and remains that emerge inside.

Plasmacluster Air Purifier with Humidifier

or

Plasmacluster Air Purifier with Humidifier

or

Plasmacluster Air Purifier with Mosquito Catcher

Bedrooms

We spend more than a quarter of each day in bed. Lingering odors of sweat, lurking dust mites, and the irritating allergens of dust mite feces and remains prevent comfortable sleeping.

Plasmacluster Air Purifier

or

Plasmacluster Air Purifier with Humidifier

or

Plasmacluster Air Purifier with Mosquito Catcher

Small Rooms
(for children or pets)

Because children have a weaker immune system than do adults, it is important to provide a clean air environment.
In addition to visible contaminants such as dust and pet hair, impurities such as viruses and dust mites remain hidden.

Plasmacluster Air Purifier

or

Plasmacluster Air Purifier with Humidifier

or

Plasmacluster Air Purifier with Mosquito Catcher

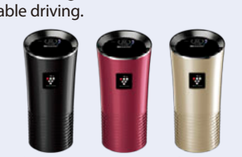
Closets

The air in a closet can easily become stagnant, making closets a place in the house where mold easily grows.
Also, because a lot of clothes are kept in a small space in a closet, clinging sweat odors linger.

Plasmacluster Air Purifier

Use in Cars

Because the air inside a car lingers, odors from eating food or smoking cigarettes easily cling to the inside.
The odor of mold that emerges inside the car air conditioner prevents you from comfortable driving.



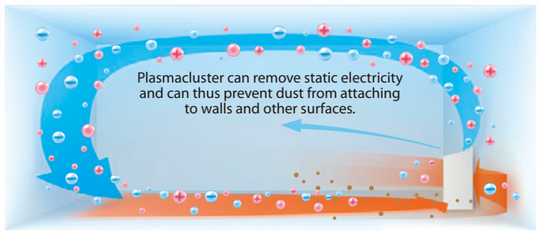
Plasmacluster Ion Generators for Car Use

Plasmacluster Air Purifier Three-step Dust Collection System

1 REMOVE
Plasmacluster Ions Can Remove Mold*1, Viruses*2, Allergens*3, Odors*4, and Static Electricity

2 COLLECT
Powerful Air Suction and Unique Airflow Quickly and Efficiently Collect Dust and Other Particles

Faster airflow at a 20° angle collects dust at lower levels in the room for more effective cleaning.



3 CAPTURE
High-Performance Filters Capture Airborne Dust Particles

Removal of Micron-Size Dust Particles Including 0.3-Micron Viruses and Dust Allergens

Dust-Collecting HEPA-Filter*5

No need for replacement for 10 years*6

High Performance of Capturing Odor Particles Maintained

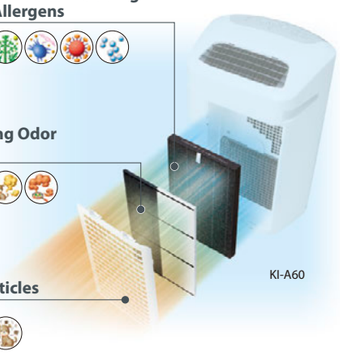
High-Performance Double Deodorizing Filter

No need for cleaning for 10 years*7
Easy maintenance by simply wiping.

Capture Microscopic Dust Particles

Anti-microbial*8, Anti-mold*9 Micron Mesh Pre-filter on Rear Panel

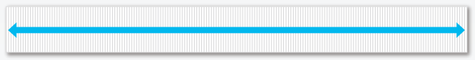
No need for replacement
Easy maintenance by simply wiping the filter without detaching it.



KI-A60

HEPA Filter*5

Enlargement of HEPA Filter*5
The larger the surface area of the filter, the more dust and other harmful particles are captured.



The filter measures as long as approx. **8 m** when fully extended.

Simulated image of the KI-A60

What the HEPA Filter*5 Captures

99.97%*10 capture and removal of 0.3-micron dust particles

Tree pollen	Cedar, cypress, birch, alder, beech, red cedar, oak, pine
Grass pollen	Ragweed, wormwood, hop, orchard grass, vernal grass, timothy grass
Allergens	Dust mite feces, dust mite remains, dog dander, cat dander, hamster dander, mold
Viruses	Airborne microbes
Airborne mold	Black mold, Stachybotrys, Aspergillus niger, Penicillium
Dust	Dust, pet hair, pet dander, cigarette smoke, cooking fumes, mite dust, diesel exhaust particles, Asian dust
Odors	Cigarette odor, pet odor, cooking odor, kitchen food waste odor, toilet odor, body odor, mold odor, ammonia odor

*1 99% of airborne mold was removed in a test space of 31 m³ after 195 min. of use. (tested by Ishikawa Health Services Association)
*2 99% of airborne viruses were removed in a closed test space of 25 m³ after 18 min. of use. (tested by Pasteur Institute, Ho Chi Minh City)
*3 Effectiveness in a test space of 31 m³ after four weeks of use (one day: 24 hours). (tested by Hiroshima University Graduate School of Advanced Sciences of Matter)
*4 Effectiveness in a test space of 41 m³ after 80 min. of use. The effectiveness depends on the odor type, odor intensity, and material of object measured. (tested by Sharp)
*5 The filter captures more than 99.97% of 0.3-micron dust particles.
*6 When smoking five cigarettes a day. Depending on the usage conditions, filter replacement may be required.
*7 Deodorizing performance depends on the room conditions.
*8 Tested by the Boken Quality Evaluation Institute. Test method: JIS Z 2801 standard test. Anti-microbial method: Infusing filter with anti-bacterial agents. Test result: 99% removal. Object tested: Microbes adhering to rear panel filter.
*9 Tested by the Boken Quality Evaluation Institute. Test method: Mold resistance test according to the JIS Z 2911 standard. Mold prevention method: Infusing filter with anti-mold agents. Test result: No mold growth.
*10 This value applies to filter removal performance, not to removal for the entire room.

Dust removing and deodorizing performance of air purifiers
• Not all harmful substances in cigarette smoke, e.g., carbon monoxide, can be removed.
• Not all commonly occurring odors, e.g., building material odors and pet odors, can be removed.
* The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat. Use the air purifier in combination with room ventilation if it is used for strong odors.

Air Purifiers with Humidifying
(KI-A60, KC-G60/G50/G40, KC-D60/D50/D40)

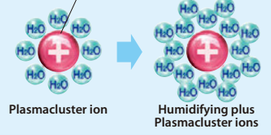
Automatically Rotating Humidifying Structure Creates Clean Humidity Conditions

Comfortable Humidity Indoors Keeps Your Skin and Throat Moisturized and Healthy

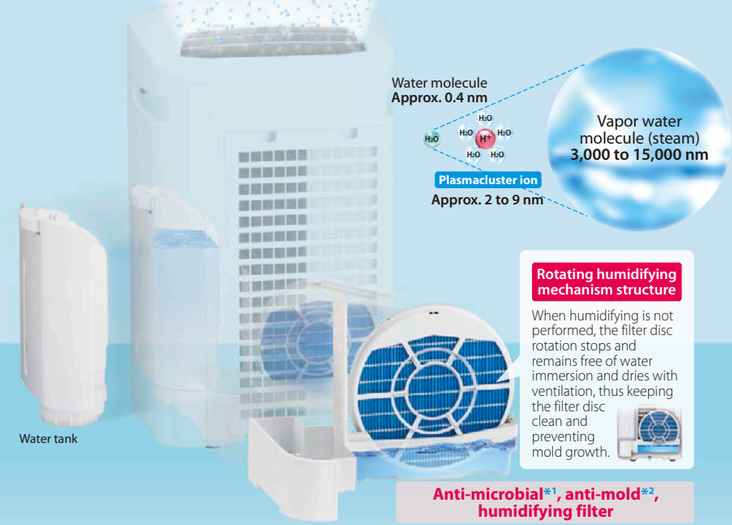
Minute water molecules from moisture delivered by vapor humidifying prevent nose and throat dryness.

Humidifying doubles the Plasmacluster ion endurance and air purifying speed.*

Improved air purification



* Tested by Japan Food Research Laboratories.
Test method: Plasmacluster ions were discharged into a test chamber with a floor area of about 8 m², airborne mold was measured with an air sampler, and the approximate values for the condition with humidifying and the condition without humidifying were compared.



Rotating humidifying mechanism structure
When humidifying is not performed, the filter disc rotation stops and remains free of water immersion and dries with ventilation, thus keeping the filter disc clean and preventing mold growth.

Anti-microbial*1, anti-mold*2, humidifying filter
No need of replacement for 10 years*3

*3 Time for the humidifying performance to decrease by 50% relative to the rated humdifying performance assuming eight hours of operation per day. The filter service life depends on the room conditions and usage. Periodic cleaning is required.

KI-A60 simulated image

Simple Operation for Easy Everyday Use

Water Tank Enables Easy Cleaning and Convenient Water Supply

Handle for easy carrying in one hand

Self-standing tank prevents tipping over when refilling

Convenient height for refilling.

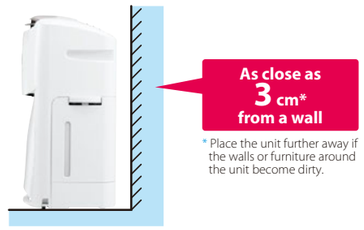
Large-diameter cap enables tank cleaning by hand.

Casters

Easily move the unit to the left and right by rolling it on casters.

Unit Placed Close to a Wall

The unit can be placed as close as 3 cm from a wall. Rear suction performance is not hindered.



* Place the unit further away if the walls or furniture around the unit become dirty.

Approved by the British Allergy Foundation

The British Allergy Foundation has tested KI, KC, and FU-series Sharp Plasmacluster air purifiers and verified that airborne allergens including dust mite feces and remains, as well as pollen, are removed.

*1 Tested by the Boken Quality Evaluation Institute
Test method: JIX Z2801 standard test
Anti-microbial method: Infusing filter with anti-bacterial agents
Test result: 99% removal
*2 Tested by the Boken Quality Evaluation Institute
Test method: Mold resistance test according to the JIS Z 2911 standard
Mold prevention method: Infusing filter with anti-mold agents
Test result: No mold growth
* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

Air Purifiers with Humidifying

KI-A60

High-Density Plasmacluster Ions Double Air-Purifying Power with Triple Filters, Delivering Comfort to Your Family's Living Room

KI-A60

Recommended Room Size: 50 m²*1
(34 m² for humidifying*2)

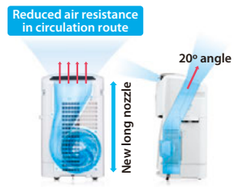
-W (White)

Powerful Air Suction
402 m³/hour*3

Plasmacluster | 20° Airflow Angle | Rotating Humidifying Filter | Ion Shower Operation | Dust, Odor, Temperature and Humidity Sensor | Child Lock | HEPA Filter | Double Deodorizing Filter | Anti-Microbial, Anti-Mold Rear Panel

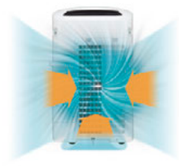
Fast Airflow and Circulation from Unique Aerodynamic Structure

Quick Collection
New long nozzle for efficient airflow



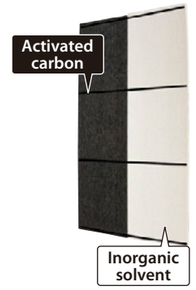
Designed with Smooth Airflow Guide
The airflow guides help to direct collected airborne dust smoothly into the back suction panel.

Powerful Suction
Dust drawn in from the room is collected through suction by the large surface area of the entire back of the unit.



High-Performance Double Deodorizing Filters

With an inorganic solvent added to the conventional deodorizer of activated carbon, the absorption volume increased approx. three times*6 in comparison to Sharp data. Also, use of synthetic enzymes and a chemical solvent enables decomposition of odor sources into small components, which are then absorbed. A wide variety of odors are deodorized by using these three substances, resulting in no need for filter replacement for 10 years*7.



Absorption Approx. 3 times*6 in Sharp comparison	+	Decomposition by synthetic enzymes	+	Change by chemical solvent
Physisorption of activated carbon and inorganic solvent		Odor substances are reduced into small components and absorbed.		Odor substances are changed into other substances and absorbed.

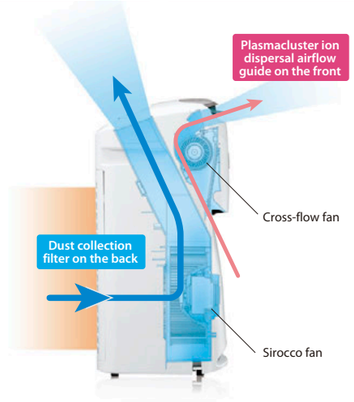
High-Density 25000 Plasmacluster and Filter Purification

Hybrid-Controlled Air Purification

The hybrid-controlled air purification system has a front ion dispersal airflow guide and a sensor-controlled back suction panel with filter. The front guide continuously disperses high-density Plasmacluster ions into the room, while the dust collection filter with sensor on the back suction panel detects the room air condition, providing excellent air purification.

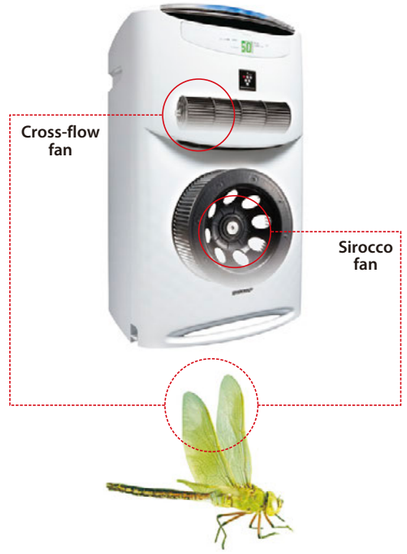
Speed of Suppressing the Activity of Airborne Microbes:
Approx. 1.5 Times Faster*4
Than the Speed of High-Density 7000 Plasmacluster

Speed of Deodorizing Clinging Odors:
Approx. 1.3 Times Faster*5
Than the Speed of High-Density 7000 Plasmacluster

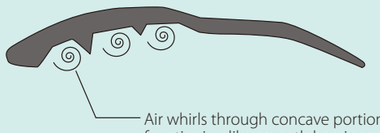


Nature Wing Fan for Quiet Operation

Use of fans shaped like dragonfly wings provides smooth airflow delivery as well as low fan noise.



Fan section with dragonfly wings



*1 Recommended room size is measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.
*2 Measurement conditions: 20°C, 30% humidity (JEM1426).
*3 Measured based on the JEMM 1467 standard of the Japan Electrical Manufacturers' Association.
*4 Airborne microbes: The times until microbes in a 1-m³ airtight box are reduced to 99.9% are compared. The results of these experiments do not ensure the same effects in actual room conditions.
Tested by Kitasato Institute Medical Center Hospital, Kitasato Institute
Test method: Viruses were suspended in the air inside a 1-m³ box, and the percentage of airborne viruses removed was measured on the release of Plasmacluster ions.
Test results: Removal of 99.9% in approx. 20 minutes (Plasmacluster ion density: 25,000 ions/cm³)
Removal of 99.9% in approx. 30 minutes (Plasmacluster ion density: 7,000 ions/cm³).
These experiments were performed using one type of virus.
*5 Clinging cigarette smoke odor: Comparison of times until Plasmacluster ions break down and remove cigarette smoke odor components to unnoticeable level.
Tested by the Boken Quality Evaluation Institute
Test method: The effectiveness of deodorizing a cloth swatch impregnated with cigarette smoke odor components was evaluated by using the six-grade odor intensity measurement method.
Test result: Deodorization to an unnoticeable level in about 60 minutes for Plasmacluster ion density of 20,000 ions/cm³.
Deodorization to an unnoticeable level in about 80 minutes for Plasmacluster ion density of 10,000 ions/cm³.
*6 Comparison with washable deodorizing filter of the KC-A60E/A50E
*7 When smoking five cigarettes a day. Depending on the usage conditions, filter replacement may be required.

Air Purifiers with Humidifying

KC-G60/G50/G40

Optimal Operation with One Button.
Sensor Monitoring of Room Conditions Automatically Provides Humidifying and Purification.

KC-G60

Recommended Room Size: 50 m²*1
(XX m² for humidifying*2)

7 DETECTION INTELLIGENT AUTOMATIC OPERATION

* HAZE Mode (E/L/M) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (TA) | SAND Mode (SA)

20° Airflow Angle	Intelligent Auto Operation	HAZE Mode*	Sleep Mode	Plasmacluster Ion Spot	Dust, Odor, Temperature and Humidity Sensor	Light Sensor	Motion Sensor	Child Lock	Timer (ON/OFF)	Rotating Humidifying Filter	HEPA Filter	Double Deodorizing Filter	Anti Microbial/Mold Fine Meshed Rear Panel
	NEW!			NEW!		NEW!	NEW!						NEW!

KC-G50

Recommended Room Size: 38 m²*1
(XX m² for humidifying*2)

7 DETECTION INTELLIGENT AUTOMATIC OPERATION

* HAZE Mode (E/L/M) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (TA) | SAND Mode (SA)

20° Airflow Angle	Auto Operation	HAZE Mode*	Sleep Mode	Plasmacluster Ion Spot	Dust, Temperature and Humidity Sensor	Light Sensor	Child Lock	Timer (ON/OFF)	Rotating Humidifying Filter	HEPA Filter	Double Deodorizing Filter	Anti Microbial/Mold Fine Meshed Rear Panel
				NEW!		NEW!						NEW!

KC-G40

Recommended Room Size: 28 m²*1
(XX m² for humidifying*2)

-W (White)

-H (Gray)

* HAZE Mode (E/L/M) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (TA) | SAND Mode (SA)

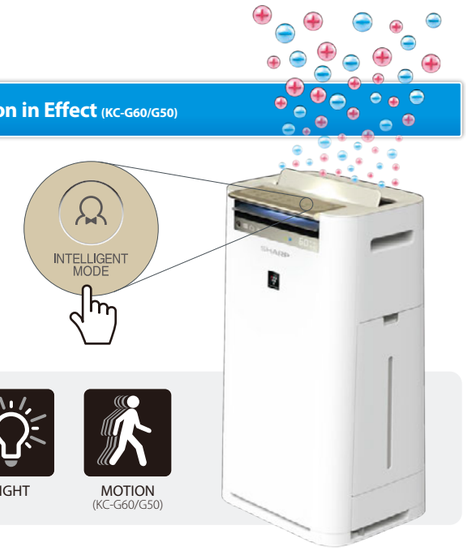
20° Airflow Angle	Auto Operation	HAZE Mode*	Sleep Mode	Plasmacluster Ion Spot	Dust, Temperature and Humidity Sensor	Light Sensor	Child Lock	Timer (ON/OFF)	Rotating Humidifying Filter	HEPA Filter	Double Deodorizing Filter	Anti Microbial/Mold Fine Meshed Rear Panel
				NEW!		NEW!						NEW!

*1 Measured based on the JEMM 1467 standard of the Japan Electrical Manufacturers' Association.
*2 Recommended room size is measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.

Intelligent Mode with 7 Types of Detection in Effect (KC-G60/G50)

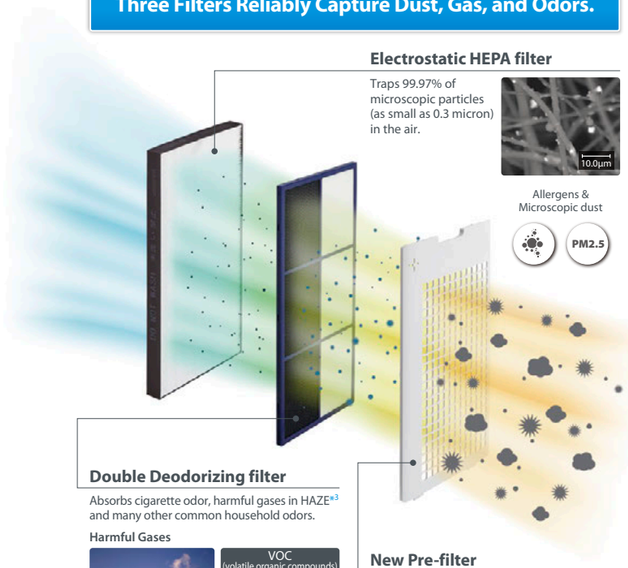
Once you press the button, everything operates automatically. Humidifying and air purification are controlled according to the impurities, odors, temperature, and humidity of the air in the room. Also, a motion sensor detects whether people are present, working in coordination with a light sensor to automatically switch to energy-saving operation.

7 DETECTION INTELLIGENT AUTOMATIC OPERATION



PM2.5 | USUAL DUST | ODOR (KC-G60/G50) | TEMPERATURE | HUMIDITY | LIGHT | MOTION (KC-G60/G50)

Three Filters Reliably Capture Dust, Gas, and Odors.



Electrostatic HEPA filter

Traps 99.97% of microscopic particles (as small as 0.3 micron) in the air.

Allergens & Microscopic dust | PM2.5

Double Deodorizing filter

Absorbs cigarette odor, harmful gases in HAZE*3 and many other common household odors.

Harmful Gases

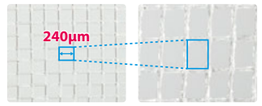
VOC (volatile organic compounds)
NOx (nitrous oxides)
SOx (sulfur oxides)

Cigarette odor/General odor in house/ Harmful gases in HAZE.*3

*3 Toluene, Ethylbenzene, xylene etc. The deodorizing performance for a single component odors substance in a 1m³ test container may be different than the deodorizing performance in actual use.

New Pre-filter

Captures larger than approx. 240 micron dust particles, washable.



Pet hair/Large dust particle

Plasmacluster Spot Mode

A high-density concentration of Plasmacluster ions are discharged forward. This is effective in removing odors, bacteria, and viruses clinging in remote areas of the room.

Ion density Approx. 10 times or higher (compared with airflow at the Medium setting)

Effect of Plamacluster Spot Mode Deodorization and Bacteria Removal

Removal of Clinging Odors					Removal of clinging bacteria
Cigarette odor	Pet odor	Odor of wet clothes drying indoors	Sweat odor	Cooking odor	Clinging bacteria
Approx. 30 minutes	Approx. 6 hours	Approx. 3 hours	Approx. 6 hours	Approx. 2 hours	Approx. 8 hours

• Effect after the above times at a position approx. 70 cm from the floor and 50 cm from the front discharge outlet.

Rotating humidifying mechanism structure

Air Purifiers with Humidifying

KC-D60/D50/D40

Plasmacluster Air Purifiers with Special Features Meeting Local Needs

KC-D60

Recommended Room Size: 48 m²*1
(30 m² for humidifying*2)

* HAZE Mode (E) / Clean Ion Shower Mode (Y/TA)
** Rainy Mode (E/Y) / Advanced Auto Mode (TA)

20° Airflow Angle | Auto Operation | HAZE Mode* | Rainy Mode** | Dust, Odor, Temperature and Humidity Sensor | Child Lock | Timer (ON/OFF) | Rotating Humidifying Filter | HEPA Filter | Deodorizing Filter | Anti-Microbial, Anti-Mold Rear Panel

KC-D50

Recommended Room Size: 38 m²*1
(27 m² for humidifying*2)

20° Airflow Angle | Auto Operation | Clean Ion Shower Mode | Advanced Auto Mode | Dust, Odor, Temperature and Humidity Sensor | Child Lock | Timer (ON/OFF) | Rotating Humidifying Filter | HEPA Filter | Deodorizing Filter | Anti-Microbial, Anti-Mold Rear Panel

KC-D40

Recommended Room Size: 26 m²*1
(21 m² for humidifying*2)

-W (White)

-B (Black)

* HAZE Mode (E) / Clean Ion Shower Mode (Y/TA)
** Rainy Mode (E/Y) / Advanced Auto Mode (TA)

20° Airflow Angle | Auto Operation | HAZE Mode* | Rainy Mode** | Dust, Temperature and Humidity Sensor | Child Lock | Timer (ON/OFF) | Rotating Humidifying Filter | HEPA Filter | Deodorizing Filter | Anti-Microbial, Anti-Mold Rear Panel

Haze Mode (KC-D60E/40E) and High-Density Plamacluster Ion Shower Mode (KC-D60Y/40Y and KC-D60TA/50TA/40TA)

The KC-D60E/40E has a new Haze Mode. When it starts in Haze Mode, operation is at maximum airflow for the first 10 minutes, and then switches to a higher airflow for the next 50 minutes. After that, operation repeatedly alternates between normal and high airflow every 20 minutes. With a stronger airflow for the first 60 minutes, a high density of Plasmacluster ions is dispersed into the entire room, which reduces static electricity, making it easy to capture haze particles.

The KC-D60Y/40Y and KC-D60TA/50TA/40TA have an Ion Shower Mode. With just a press of the shower operation button, the air purifier starts high-density Plasmacluster shower with a stronger airflow for 60 minutes, dispersing a high density of Plasmacluster ions into the entire room.

Rainy Mode (KC-D60E/40E and KC-D60Y/40Y) or Advanced Auto Mode (KC-D60TA/50TA/40TA)

In the rainy season, the increased humidity levels allow rapid mold growth. When the humidity is high, the Rainy Mode or the Advanced Auto Mode delivers a stronger airflow than in the Auto Mode. The dispersed Plasmacluster ions remove airborne mold, as well as reducing the growth of clinging mold on surfaces.

For the KC-D60E/40E, the Rainy Mode starts operation when the humidity is above 80%.
For the KC-D60Y/40Y and the KC-D60TA50TA/40TA, the Rainy Mode or the Advanced Auto Mode starts operation when the humidity is above 70%.

KC-D60E/D40E | KC-D60Y/D40Y | KC-D60TA/D50TA/D40TA

*1 Recommended room size is measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.
*2 Measurement conditions: 20°C, 30% humidity (JEM1426).
*3 Measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.

Auto Louver for Clean and Efficient Air Circulation

The new KC-D series of air purifiers are equipped with an auto louver. When the purifier turns on, the louver opens automatically, and when the purifier turns off, the louver closes to prevent dust from getting inside.

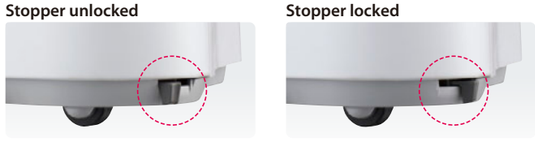
Auto Louver OFF **Auto Louver ON**

Simple Operation for Easy Everyday Use

Casters with Stoppers

Easily move the unit to the left and right by rolling it on casters. To secure the unit, lock the casters with stoppers.

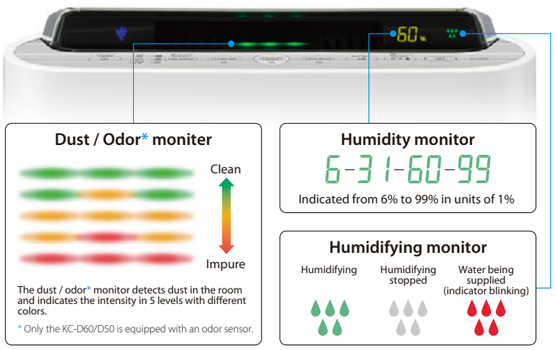
Stopper unlocked **Stopper locked**



On/Off Timer for Convenient Use

The On timer can be set to up to 14 hours in increments of 2 hours, and the Off timer can be set to 1, 2, 4 and 8 hours.

Monitors for Dust and Odor*, Humidity, and Humidifying Indicate the Conditions of the Room Air



Air Purifiers with Humidifying

KC-F30

Entry-level Air Purifier Model with Genuine Humidifying and HEPA Filter

KC-F30

Recommended Room Size: 21 m²*1
(16 m² for humidifying*2)

-W (White)

* HAZE Mode (E/L) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (TA)

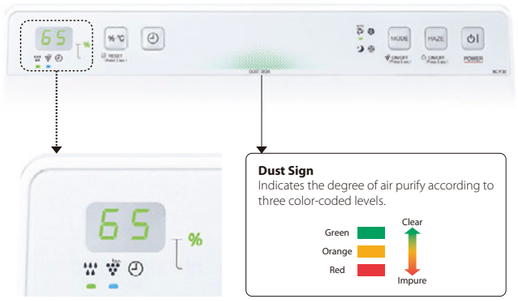
20° Airflow Angle | Auto Operation | HAZE Mode* | Sleep Mode | Timer (OFF) | Dust Sensor | HEPA Filter | Deodorizing Filter

- Humidity and temperature display
- Off timer (1, 2, 4, 8 hours)
- Dust indication monitor
- Auto restart

Simple Operation

Off Timer for Convenient Use
The off timer can be set to 1, 2, 4, and 8 hours.

Monitor for Dust and Displays for Humidity and Temperature



Floating Humidification System with Humidifying Filter Floating on Water

Fill the Humidifying Tray Directly with Tap Water
The humidifying filter operates according to the water level, and so the the humidifying level is kept constant, with humidity controlled through adjustment of the airflow by sensors detecting the temperature and humidity levels in the room.

Air Purifiers

FP-G50

Recommended Room Size: 40 m²

-W (White)

20° Airflow Angle | Auto Operation | HAZE Mode*1 | Sleep Mode | Timer (OFF) | Dust & Odor Sensor | HEPA Filter | Deodorizing Filter

- Off Timer (2, 4, 8 hours)
- Dust and Odor Indication Monitor
- Auto Restart

*1 Haze Mode (FP-G50E/L), Clean Ion Shower Mode (FP-G50TA) or Anti-Dust Mode (FP-G50Y)

High-Performance Filters Capture Airborne Dust Particles

Removal of Micron-Size Dust Particles Including 0.3-Micron Viruses and Dust Allergens

Dust-Collecting HEPA Filter

No need for replacement for 2 years*
* When smoking five cigarettes a day

Removal of Odors

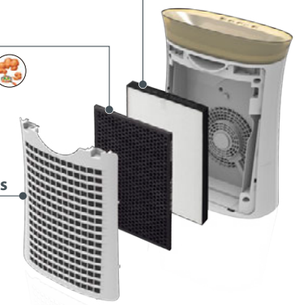
Deodorizing Filter

No need for replacement for 2 years**
Easy maintenance by simply wiping.
** Deodorizing performance depends on the room conditions.

Capture Microscopic Dust Particles

Micron-Mesh Pre-filter on Rear Panel

No need for replacement
Easy maintenance by simply wiping the filter without detaching it.



Convenient Features for Everyday Comfort

Sleep Mode
When Sleep Mode is turned on, the fan automatically switches to low speed* and fan operation becomes quiet. Also, the Indication Monitor turns off so that your sleep is undisturbed.

* The fan speed automatically switches depending on the amount of impurities in the air.

FU-A80

Recommended Room Size: 62 m²

-W (White) -S (Silver) -N (Gold)

20° Airflow Angle | Auto Operation | Ion Shower Operation | Child Lock | Dust Sensor | HEPA Filter | Deodorizing Filter

- Dust Indication monitor
- Quiet Operation for Nighttime (23 dB)
- Auto Restart (Not Default)

FP-F40

Recommended Room Size: 30 m²

-W (White) -T (Brown)

20° Airflow Angle | HAZE Mode*2 | Sleep Mode | Timer (OFF) | Dust Sensor | HEPA Filter | Deodorizing Filter

- Off Timer (2, 4, 8 hours)
- Dust Indication Monitor
- Auto Restart

*2 Haze Mode (FP-F40E/L), Clean Ion Shower Mode (FP-F40TA) or Anti-Dust Mode (FP-F40Y)

FP-F30

Recommended Room Size: 21 m²

-C (Beige) -A (Blue) -H (Gray)

HAZE Mode*3 | Sleep Mode | HEPA Filter

- Auto Restart

*3 Haze Mode (FP-F30E/L), Clean Ion Shower Mode (FP-F30TA) or Anti-Dust Mode (FP-F30Y)

Air Purifier with Mosquito Catcher

High-Density 7000

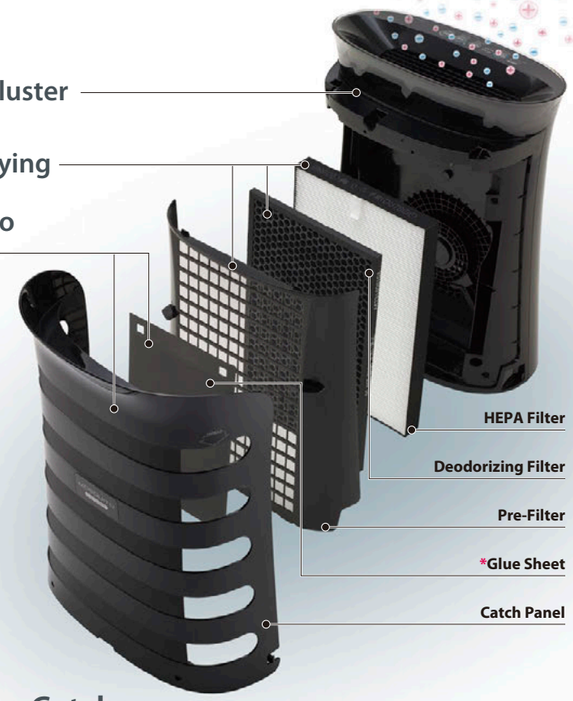
World First! Air Purifier with Mosquito Catcher

3 in 1 Removing Threats from Your Daily Life to Provide You with a Comfortable and Safe Environment

1 Plasmacluster

2 Air Purifying

3 Mosquito Catcher



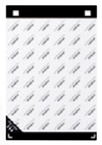
***Glue Sheet**
(FZ-40STS, FZ-STS2M)

1 Insecticide-Free Glue Sheet
2 Strong Catching Power
The strong glue sheet catches mosquitoes.
3 Easy Disposal without Dirtying Your Hands

FZ-40STS

3 Months Usage* Exchangeable 3-layer Glue Sheet
(1-layer : for one month*)

FZ-STS2M



2 Months Usage*

* Depending on room conditions.

These sheets can be used for all air purifiers with mosquito catcher.

Mosquito Catcher

Capture and Protect from Mosquitoes with 100% Harmless 5 Effective Steps*2 of Mosquito Catcher

Reduce up to 91% of Culex , 73% of Aedes, and 72% of Housefly*3

Effective mechanism based on mosquito behaviour

1 UV light attracts mosquitoes
2 Enticing black color
3 Ideal entrance design
4 Powerful airflow and suction
5 Strong glue sheet

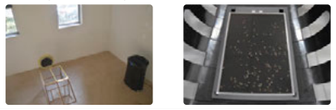
*1 Sharp developed the world's first air purifiers with mosquito catcher using UV light, a black panel catching mosquitos, and a sticky sheet. The first model, the FP-FM40, was released in September 2015.
*2 The mechanism of the mosquito catcher is studied in collaboration with the Institute for Medical Research, Malaysia.
*3 Result of 24-hour laboratory test in collaboration with the Institute for Medical Research, Malaysia, with Culex quinquefasciatus, Aedes albopictus and aegypti, and Musca domestica.
The efficacy of the mosquito catcher function was tested in a laboratory setting; actual conditions may vary. Continuous usage will improve capture efficacy.

Safe and Sound Mosquito Capture System

By using non-toxic mechanisms which are harmless to people and furniture, the FP-GM50, FP-FM40 and FP-GM30 safely capture mosquitoes even for households with small children.
Also, because the mosquitoes are captured on a glue sheet, the floor remains free of mosquitoes, and so cleaning is easier.

100% harmless safe and sound protection

Laboratory Test
24 hours test was conducted by releasing mosquitoes and flies.
Number of captured mosquitoes and flies was counted.



FP-GM50

Recommended Room Size: 40 m²

-B (Black)

* HAZE Mode (E/L) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (B)

Plasmacluster | 20° Airflow Angle | Auto Operation | HAZE Mode* | Sleep Mode | Mosquito Catcher | Dust, Odor Sensor | HEPA Filter | Deodorizing Filter

● Dust and Odor Indication Monitor ● Auto Restart

FP-FM40

Recommended Room Size: 30 m²

-B (Black)

* HAZE Mode (E/L) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (B)

Plasmacluster | HAZE Mode* | Sleep Mode | Mosquito Catcher | HEPA Filter | Dust Sensor | Deodorizing Filter

● Dust Indication Monitor ● Auto Restart

FP-GM30

Recommended Room Size: 21 m²

-B (Black)

* HAZE Mode (E/L) | ANTI-Dust Mode (Y) | Clean Ion Shower Mode (B)

Plasmacluster | HAZE Mode* | Sleep Mode | Mosquito Catcher | HEPA Filter

Specifications: Air Purifiers with Humidifying

Models		KI-A60	KC-G60	KC-G50	KC-G40
Color		– W (white)	– W (white)	– W (white)	– W (white), – H (charcoal gray)
Humidifying	Humidifying system	Natural vaporization	Natural vaporization	Natural vaporization	Natural vaporization
	Tank capacity	4.0 L	3.0 L	2.5 L	2.5 L
	Humidifying capacity*2	730 mL/hour	630 mL/hour	450 ml/hour	400 ml/hour
Recommended area	Air purifying*1	50 m²	50 m²	38 m²	28 m²
	Humidifying*2	34 m²	30 m²	21 m²	18 m²
Recommended area for high-density Plasmacluster ions*3		35 m²	35 m²	28 m²	21 m²
Operation modes		Max / Med / Low / Eco / Auto / Pollen	Max / Med / Low / Pollen / Sleep	Max / Med / Low / Pollen / Sleep	Max / Med / Low / Pollen / Sleep
Voltage/frequency (V, Hz)		220-240, 50-60	220-240, 50-60	220-240, 50-60	220-240, 50-60
Power input (W)	Without humidifying	53 / 32 / 6.6	72 / 38 / 5.0	53 / 26 / 5.0	31 / 12 / 5.0
(Max / Med / Low)	With humidifying	53 / 33 / 10	55 / 40 / 6.5	33 / 14 / 6.5	24 / 14 / 6.5
Standby power (W)		0.6	1.2	1.2	1.2
Inverter operation		Yes	Yes	Yes	Yes
Airflow	Without humidifying	402 / 294 / 90	408 / 240 / 72	306 / 180 / 60	240 / 120 / 60
(Max / Med / Low) (m³/hour)	With humidifying	402 / 294 / 132	342 / 240 / 72	240 / 120 / 60	210 / 120 / 60
Noise level	Without humidifying	49 / 44 / 20	53 / 48 / 24	52 / 47 / 19	46 / 41 / 19
(Max / Med / Low) (dB)	With humidifying	49 / 44 / 26	49 / 48 / 24	46 / 40 / 20	43 / 40 / 20
Special program mode		Clean ion shower*4	Intelligent, Haze (E) / Anti-dust (Y) / Clean ion shower (TA) / Sand (SA)	Intelligent, Haze (E) / Anti-dust (Y) / Clean ion shower (TA) / Sand (SA)	Auto, Haze (E) / Anti-dust (Y) / Clean ion shower (TA) / Sand (SA)
Auto restart		Yes*5	Yes*5	Yes*5	Yes*5
Child lock		Yes*6	Yes*6	Yes*6	Yes*6
Timer		Yes (off)	Yes (on / off)	Yes (on / off)	Yes (on / off)
Filter type	Dust collection	HEPA*7	HEPA*7	HEPA*7	HEPA*7
	Deodorization	Double deodrization	Double deodrization	Double deodrization	Double deodrization
	Pre-filter	Yes	fine-meshed	fine-meshed	fine-meshed
	Humidifying	Yes	Yes	Yes	Yes
Filter life	Dust collection	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8
	Deodorizing filter	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8
	Humidifying filter	Up to 10 years	Up to 10 years	Up to 10 years	Up to 10 years
Sensor	Odor	Yes	Yes	Yes	No
	Dust	Yes	Yes	Yes	Yes
	Temperature and humidity	Yes	Yes	Yes	Yes
	Light	No	Yes	Yes	Yes
	Motion	No	Yes	Yes	No
Clean sign indicator		Yes (Dust: 5 steps, Odor: 3 steps)	Yes (7 steps)	Yes (7 steps)	Yes (7 steps)
Light control button		Yes (bright / dim / off)	Yes (bright / dim / off)	Yes (bright / dim / off)	Yes (bright / dim / off)
Power cord length (m)		2.0	2.0	2.0	2.0
		Type C (2-pin)	Type C (2-pin)	Type C (2-pin)	Type C (2-pin)
Dimensions (W x H x D) (mm)		410 x 684 x 340	370 x 660 x 293	345 x 631 x 262	345 x 631 x 262
Net weight (kg)		13.0	10.5	9.2	9.2
Replacement filter	HEPA filter	FZ-AX6HFE	FZ-D60HFE	FZ-D40HFE	FZ-D40HFE
	Deodorizing filter	FZ-AX6DFE	FZ-G60DFE	FZ-G40DFE	FZ-G40DFE
	Humidifying filter	FZ-AX6MFE	FZ-G60MFE	FZ-G60MFE	FZ-G60MFE
Replacement unit		IZ-C75SE	—	—	—
Plasmacluster ion purification	Airborne microbes	Airborne mold, Airborne microbes, Airborne viruses, Dust mite remain allergens, Dust mite feces allergens, Ammonia odor			
	Clinging odors	Cigarette odor, Body odor			
Filter purification	Capture and reduction of growth	Airborne microbes, Viruses, Tree pollen, Dust mite remains, Dust mite feces			
	Deodorizing	Cigarette odor, Pet odor, Body odor, Mold odor, Ammonia odor, Cooking odor, Kitchen garbage odor, Toilet odor, VOC, NOx, SOx*9, HAZE gases*10			
	Capture	Airborne mold, Plant pollen, Tree pollen, Pet dander, Pet hair, Dust, Cigarette smoke, Mite dust, Diesel exhaust			

*1 Recommended room size: Measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association. *2 Measurement conditions: 20°C, 30% humidity (JEM1426) *3 Size of a room in which approximately 7,000 ions can be measured per cm³ in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and operated at the maximum operation position. *4 Ion density about 1.5 times higher for 60 minutes in the applicable room size. *5 The air purifier automatically resumes operation when power returns, even after a sudden power interruption, such as due to a circuit breaker. *6 By pressing the Child Lock button for more than three seconds, the operation buttons are locked to help prevent inadvertent operation by children or pets. *7 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles. *8 At a smoking rate of five cigarettes per day. *9 Volatile organic compound (VOC), Nitrous oxides (NOx), Sulfur oxides (SOx). The effectiveness of reducing three volatile organic compounds (formaldehyde, toluene, and ethyl acetate) was tested by Sharp. *10 Toluene, Ethylbenzene, xylene etc. The deodorizing performance for a single component odors substance in a 1m³ test container may be different than the deodorizing performance in actual use.

* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

● The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat. ● Use the air purifier in combination with room ventilation if it is used for strong odors. ● Not all harmful substances in cigarette smoke (e.g., carbon monoxide) can be removed. ● Not all commonly occurring odors (e.g., pet odors) can be removed. ● Heat from air drawn in is lost when water evaporates from the humidifier filter, so the temperature of the outgoing airflow is lower than the room temperature. ● Use tap water to fill the water tank.

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Models		KC-D60	KC-D50TA	KC-D40	KC-F30
Color		– W (white)	– W (white)	– W (white), – B (black)	– W (white)
Humidifying	Humidifying system	Natural vaporization	Natural vaporization	Natural vaporization	Natural vaporization
	Tank capacity	3.0 L	2.5 L	2.5 L	1.8 L
	Humidifying capacity*2	660 mL/hour	600 mL/hour	440 mL/hour	350 mL/hour
Recommended area	Air purifying*1	48 m²	38 m²	26 m²	21 m²
	Humidifying*2	30 m²	27 m²	21 m²	16 m²
Recommended area for high-density Plasmacluster ions*3		35 m²	28 m²	21 m²	17 m²
Operation modes		Max / Med / Low / Auto / Pollen / Rainy mode (E)(Y) / Advanced auto mode (TA)	Max / Med / Low / Auto / Pollen / Advanced auto mode	Max / Med / Low / Auto / Pollen / Rainy mode (E)(Y) / Advanced auto mode (TA)	Max / Med / Auto / Sleep
Voltage/frequency (V, Hz)		220-240, 50-60	220, 50	220-240, 50-60	220-240, 50-60
Power input (W)	Without humidifying	80 / 24 / 5.5	54 / 17 / 5	25 / 12 / 5	27 / 12 / 4.1
(Max / Med / Low)	With humidifying	70 / 26 / 7	49 / 20 / 7	19 / 14 / 7	27 / 12 / 4.1
Standby power (W)		0.9	0.9	0.9	0.9
Inverter operation		Yes	Yes	Yes	Yes
Airflow	Without humidifying	396 / 240 / 90	306 / 186 / 60	216 / 144 / 60	180 / 125 / 52
(Max / Med / Low) (m³/hour)	With humidifying	366 / 240 / 90	288 / 186 / 60	180 / 144 / 60	180 / 125 / 52
Noise level	Without humidifying	55 / 45 / 25	55 / 43 / 23	47 / 37 / 23	48 / 38 / 21
(Max / Med / Low) (dB)	With humidifying	54 / 45 / 25	54 / 43 / 23	43 / 37 / 23	48 / 38 / 21
Special program mode		HAZE (E) / Clean ion shower (Y)(TA)	Clean ion shower	Haze (E) / Clean ion shower (Y)(TA)	Haze (E) / Anti-dust (Y) / Clean ion shower (TA)
Auto restart		Yes*5	Yes*5	Yes*5	Yes*5
Child lock		Yes*6	Yes*6	Yes*6	No
Timer		Yes (on / off)	Yes (on / off)	Yes (on / off)	Yes (off)
Filter type	Dust collection	HEPA*7	HEPA*7	HEPA*7	HEPA*7
	Deodorization	Yes	Yes	Yes	Yes
	Pre-filter	Yes	Yes	Yes	Yes
	Humidifying	Yes	Yes	Yes	Yes
Filter life	Dust collection	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8	Up to 2 years*8
	Deodorizing filter	Up to 10 years*8	Up to 10 years*8	Up to 10 years*8	Up to 2 years*8
	Humidifying filter	Up to 10 years	Up to 10 years	Up to 10 years	Up to 5 years
Sensor	Odor	Yes	Yes	No	No
	Dust	Yes	Yes	Yes	Yes
	Temperature and humidity	Yes	Yes	Yes	Yes
	Light	No	No	No	No
	Motion	No	No	No	No
Clean sign indicator		Yes (5 steps)	Yes (5 steps)	Yes (5 steps)	Yes (3 steps)
Light control button		Yes (bright / dim / off)	Yes (bright / dim / off)	Yes (bright / dim / off)	Yes (bright / off)
Power cord length (m)		2.0	2.0	2.0	2.0
		Type C (2-pin)	TIS	Type C (2-pin)	Type C (2-pin)
Dimensions (W x H x D) (mm)		420 x 637 x 242	399 x 615 x 230	399 x 615 x 230	380 x 570 x 197
Net weight (kg)		8.6	7.9	7.9	7.2
Replacement filter	HEPA filter	FZ-D60HFE	FZ-D40HFE	FZ-D40HFE	FZ-F30HFE
	Deodorizing filter	FZ-D60DFE	FZ-D40DFE	FZ-D40DFE	FZ-F30DFE
	Humidifying filter	FZ-A60MFE	FZ-A60MFE	FZ-A60MFE	FZ-F30MFE
Replacement unit		—	—	—	—
Plasmacluster ion purification	Airborne microbes	Airborne mold, Airborne microbes, Airborne viruses, Dust mite remain allergens, Dust mite feces allergens, Ammonia odor			
	Clinging odors	Cigarette odor, Body odor			
Filter purification	Capture and reduction of growth	Airborne microbes, Viruses, Tree pollen, Dust mite remains, Dust mite feces			
	Deodorizing	Cigarette odor, Pet odor, Body odor, Mold odor, Ammonia odor, Cooking odor, Kitchen garbage odor, Toilet odor, VOC*9			
	Capture	Airborne mold, Plant pollen, Tree pollen, Pet dander, Pet hair, Dust, Cigarette smoke, Mite dust, Diesel exhaust			

*1 Recommended room size: Measured based on the JEM1467 standard of the Japan Electrical Manufacturers' Association. *2 Measurement conditions: 20°C, 30% humidity (JEM1426) *3 Size of a room in which approximately 25,000 ions (KI-A60 only) or 7,000 ions (models except the KI-A60) can be measured per cm³ in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and operated at the maximum operation position. *4 Ion density about 1.5 times higher for 60 minutes in the applicable room size. *5 The air purifier automatically resumes operation when power returns, even after a sudden power interruption, such as due to a circuit breaker. *6 By pressing the Child Lock button for more than three seconds, the operation buttons are locked to help prevent inadvertent operation by children or pets. *7 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles. *8 At a smoking rate of five cigarettes per day. *9 Volatile organic compound (VOC). The effectiveness of reducing three volatile organic compounds (formaldehyde, toluene, and ethyl acetate) was tested by Sharp.

* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

● The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat. ● Use the air purifier in combination with room ventilation if it is used for strong odors. ● Not all harmful substances in cigarette smoke (e.g., carbon monoxide) can be removed. ● Not all commonly occurring odors (e.g., pet odors) can be removed. ● Heat from air drawn in is lost when water evaporates from the humidifier filter, so the temperature of the outgoing airflow is lower than the room temperature. ● Use tap water to fill the water tank.

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Specifications: Air Purifiers




Models		FU-A80	FP-G50	FP-F40	FP-F30
Color		– W (white), – S (silver), – N (gold)	– W (white)	– W (white), – T (brown)	– H (gray), – A (blue), – C (beige)
Recommended area*1	Air purifying	62 m²	40 m²	30 m²	21 m²
Recommended area*2 for high-density Plasmacluster ions		31 m²	23 m²	23 m²	16 m²
Operation modes		Max / Med / Low / Auto	Max / Med / Sleep / Auto	Max / Med / Sleep / Auto	Max / Med / Sleep
Voltage/frequency (V, Hz)		220-240, 50-60	220-240, 50-60	220-240, 50-60	220-240, 50-60
Power input (Max / Med / Sleep) (W)		75 / 20 / 5	47 / 16 / 4.0-5.5	31 / 12 / 3.7-5.9	51 / 30 / 13
Standby power (W)		0.75	1.0	1.0	1.0
Inverter operation		Yes	Yes	Yes	No
Airflow (Max / Med / Sleep) (m³/hour)		480 / 300 / 120	306 / 186 / 48-90	240 / 150 / 48-90	180 / 120 / 60
Noise level (Max / Med / Sleep) (dB)		53 / 41 / 23	52 / 42 / 23-29	49 / 38 / 21-30	47 / 38 / 26
Special program mode		Clean ion shower*3	Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (TA)*3	Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (TA)*3	Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (TA)*3
Auto restart		Yes*4	Yes*4	Yes*4	Yes*4
Child lock		Yes*5	No	No	No
Timer		No	Yes (off)	Yes (off)	No
Filter type	Dust collection	HEPA*6	HEPA*6	HEPA*6	HEPA*6
	Deodorization	Yes (deodorizing pre-filter)	Yes	Yes	No
	Pre-filter		Yes	Yes	Yes
Filter life	Dust collection	Up to 2 years*7	Up to 2 years*7	Up to 2 years*7	Up to 2 years*7
	Deodorizing filter	Up to 2 years*7	Up to 2 years*7	Up to 2 years*7	No
Sensor	Odor	No	Yes	No	No
	Dust	Yes	Yes	Yes	No
Clean sign indicator		Yes (3 steps)	Yes (3 steps)	Yes (3 steps)	No
Mosquito trap function		No	No	No	No
Light control button		Yes (bright / off)	Yes (bright / off)	Yes (bright / off)	Yes (bright / off)
Power cord length (m) approx.		2.0	2.0	2.0	2.0
		Type C (2-pin)	Type C (2-pin)	Type C (2-pin)	Type C (2-pin)
Dimensions (W x H x D) (mm)		402 x 620 x 245	383 x 540 x 209	383 x 540 x 209	400 x 463 x 182
Net weight (kg)		8.1	5.1	4.7	4.0
Replacement filter		FZ-A80SFE	FZ-F50HFE / FZ-F50DFE	FZ-F40SFE	FZ-F30HFE
Replacement glue sheet		—	—	—	—
Plasmacluster ion purification	Airborne microbes	Airborne mold, Airborne microbes, Airborne viruses, Dust mite remain allergens, Dust mite feces allergens, Ammonia odor			
	Clinging odors	Cigarette odor, Body odor			
Filter purification	Capture and reduction of growth	Airborne microbes, Viruses, Tree pollen, Dust mite remains, Dust mite feces			
	Deodorizing	Pet odor, Body odor, Mold odor, Ammonia odor			
	Capture	Airborne mold, Plant pollen, Tree pollen, Pet dander, Pet hair, Dust, Cigarette smoke, Mite dust, Diesel exhaust			

*1 Recommended area: Calculated based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.
*2 The area in which approximately 7,000 ions can be measured per cm³ in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and run at the maximum setting.
*3 Ion density about 1.5 times higher for 60 minutes in the applicable room size.
*4 The air purifier automatically resumes operation when power returns, even after a sudden power interruption, such as due to a circuit breaker.
*5 By pressing the Child Lock button for more than three seconds, the operation buttons are locked to help prevent inadvertent operation by children or pets.
*6 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles.
*7 At a smoking rate of five cigarettes per day.

* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

- The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat.
- Use the air purifier in combination with room ventilation if it is used for strong odors.
- Not all harmful substances in cigarette smoke (e.g., carbon monoxide) can be removed.
- Not all commonly occurring odors (e.g., pet odors) can be removed.

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Air Purifier with Mosquito Catcher



Models		FP-GM50	FP-FM40	FP-GM30
Color		– B (black)	– B (black)	– B (black)
Recommended area*1	Air purifying	40 m²	30 m²	21 m²
Recommended area*2 for high-density Plasmacluster ions		23 m²	23 m²	16 m²
Operation modes		Max / Med / Sleep / Auto	Max / Med / Sleep / Auto	Max / Med / Sleep
Voltage/frequency (V, Hz)		220-240, 50-60	220-240, 50-60	220-240, 50-60
Power input (Max / Med / Sleep) (W)		51 / 17 / 4-6	33 / 14 / 3.7-6.2	53 / 33 / 19
Standby power (W)		1.0	1.0	1.0
Inverter operation		Yes	Yes	No
Airflow (Max / Med / Sleep) (m³/hour)		306 / 186 / 48-90	240 / 150 / 48-90	180 / 120 / 78
Noise level (Max / Med / Sleep) (dB)		51 / 41 / 20-29	48 / 38 / 20-29	47 / 40 / 33
Special program mode		Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (B)*3	Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (B)*3	Haze mode (E)(L) / Anti-dust mode (Y) / Clean ion shower (B)*3
Auto restart		Yes*4	Yes*4	Yes*4
Child lock		No	No	No
Timer		No	No	No
Filter type	Dust collection	HEPA*6	HEPA*6	HEPA*6
	Deodorization	Yes	Yes	No
	Pre-filter	Yes	Yes	Yes
Filter life	Dust collection	Up to 2 years*7	Up to 2 years*7	Up to 2 years*7
	Deodorizing filter	Up to 2 years*7	Up to 2 years*7	—
Sensor	Odor	Yes	No	No
	Dust	Yes	Yes	No
Clean sign indicator		Yes (3 steps)	Yes (3 steps)	No
Mosquito trap function		Yes	Yes	Yes
Light control button		Yes (bright / off)	Yes (bright / off)	Yes (bright / off)
Power cord length (m) approx.		2.0	2.0	2.0
		Type C (2-pin)	Type C (2-pin)	Type C (2-pin)
Dimensions (W x H x D) (mm)		394 x 540 x 281	391 x 540 x 281	409 x 466 x 259
Net weight (kg)		6.1	5.8	5.0
Replacement filter	HEPA filter	FZ-F50HFE	FZ-F40SFE	FZ-F30HFE
	Active Carbon Deodorizing Filter	FZ-F50DFE	—	—
Replacement glue sheet		FZ-STS2M	FZ-40STS	FZ-STS2M
Plasmacluster ion purification	Airborne microbes	Airborne mold, Airborne microbes, Airborne viruses, Dust mite remain allergens, Dust mite feces allergens, Ammonia odor		
	Clinging odors	Cigarette odor, Body odor		
Filter purification	Capture and reduction of growth	Airborne microbes, Viruses, Tree pollen, Dust mite remains, Dust mite feces		
	Deodorizing	Pet odor, Body odor, Mold odor, Ammonia odor		
	Capture	Airborne mold, Plant pollen, Tree pollen, Pet dander, Pet hair, Dust, Cigarette smoke, Mite dust, Diesel exhaust		

*1 Recommended area: Calculated based on the JEM1467 standard of the Japan Electrical Manufacturers' Association.
*2 The area in which approximately 7,000 ions can be measured per cm³ in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and run at the maximum setting.
*3 Ion density about 1.5 times higher for 60 minutes in the applicable room size.
*4 The air purifier automatically resumes operation when power returns, even after a sudden power interruption, such as due to a circuit breaker.
*5 By pressing the Child Lock button for more than three seconds, the operation buttons are locked to help prevent inadvertent operation by children or pets.
*6 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles.
*7 At a smoking rate of five cigarettes per day.

* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

- The filter itself may produce an odor and need to be replaced after several months if the air purifier is used to reduce strong odors, such as cigarette smoke or grilled meat.
- Use the air purifier in combination with room ventilation if it is used for strong odors.
- Not all harmful substances in cigarette smoke (e.g., carbon monoxide) can be removed.
- Not all commonly occurring odors (e.g., pet odors) can be removed.

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Plasmacluster Ion Generator

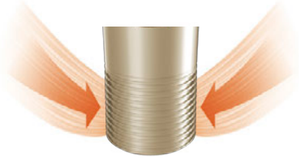
IG-GC2

Keep your personal space comfortable

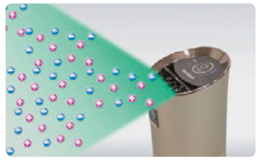
IG-GC2

Double-speed deodorizing with turbo mode
(In comparison with standard airflow)

For deodorization in a short period of time.



Twin air suction



Adjustable louver angle (2 steps)

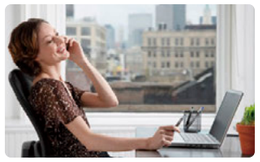
Mold odor from cars air conditioner

For smoking and food smell

Eliminates clinging mold odors in the car
- Tested by Sharp
- Test method: The effectiveness of deodorizing a cloth swatch impregnated with mold odor components through exposure to Plasmacluster ions was evaluated by using the pair test method in an approx. 3.6 m^3 car space.*

* Deodorization effectiveness may vary depending on the type, strength, attached material and other factors relating to the odor

Quiet operation



No interruption of phone conversations, work and study.

Quiet design
Standard airflow
23 dB
Quiet operation — barely audible even in a hybrid car

Turbo mode 36 dB

Tiny dust and pollen collection

PM10 filter collects tiny dust and pollen
With a PM10 dust filter on each side, the unit captures approximately 80% of pollen and fine dust particles (10 microns or larger in size).

Twin air suction

Model	IG-GC2
Power	Car adapter
Rated input	DC12V
Rated output	DC5V (Max. 2 A for 2 ports)
Operation mode	3 (Turbo/Med/Low)
Power consumption	1.8 W/0.7 W/0.5 W
Ion density (approx.)	75,000/25,000/7,000 ions/cm^3
Operating noise level	36 dB/23 dB/19 dB
Outer dimensions	Upper: 74 mm / Lower: 65 mm / Height: 162 mm
Weight	Approx. 265g (excluding accessories)
Capacity applicable for high-density Plasmacluster 25000*	Approx. 3. 6m^3

* It is the index of capacity that approximately 25,000 ions blown out to the air can be measured at the point near the center of the space (0.5m height from floor) when the air volume is "MED" by placing the unit in an appropriate place such as a cup holder beside the driver's seat.

SHARP

Business Solutions with Plasmacluster

Plasmacluster supports your business by solving a wide variety of issues.

Use of Plasmacluster is expanding in a variety of facilities, shops, restaurants, and workplaces in Japan requiring high standards and quality in their environment and sanitation.

Hospitals

Shigeo KAWAZU
Asset Management Department Manager

Healthcare Corporation Shinwakai, Shinyachiyo Hospital

- Plasmacluster provides a pleasant space for patients and their families by reducing the odors particular to hospitals.
- Because the unit is wall-mounted, it does not interfere with the movement of stretchers or wheel chairs.
- The unit's superior energy savings and ease of operation enable high cost-effectiveness.

Kindergartens

Atsuko ASANO
Kindergarten principal

Shinei Social Welfare Company, Ichibu Chidori Kindergarten

- Plasmacluster provides an environment with clean air by reducing laundry room and toilet odors.
- The unit is wall-mounted, and so children touching the unit is not a concern.
- Plasmacluster provides the kindergarten children with a comfortable environment that has clean air and low noise.

Schools

Kenji FURUKAWA
Principal

Nara Gakuen School Corporation

- The HEPA filter and Plasmacluster improve the learning environment by cleaning the air.
- Wall mounting enables the unit to be installed in a location out of reach of the students.
- The low-noise design lets the students concentrate disturbance-free even during lessons and tests.

Restaurants

Youji OGI

Shinsaibashi Mitsuya

- Smoking and non-smoking areas are effectively separated through the reduction of cigarette odors.
- When the restaurant is crowded, the Plasmacluster unit provides powerful air purifying in High mode operation with detection from odor sensors.
- Wall mounting allows the unit to be installed without limiting the installation place, and so the airflow does not directly come into contact with customers.

Sharp's Unique Plasmacluster Technology Supports Your Business

Plasmacluster Mechanism to Remove Microbes

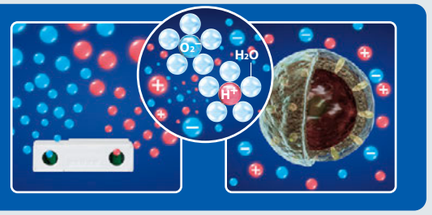
The ions are long-lasting* because they are surrounded by water molecules.

STEP 1

Ions are released.

Plasmacluster ions, the same positive and negative ions found in nature, are generated by plasma discharge and released into the air.

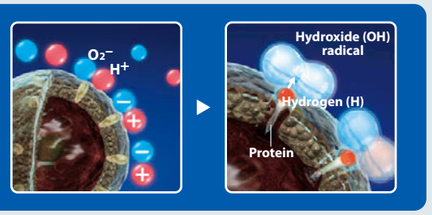
* Verified in Sharp test comparisons of ions not surrounded by water molecules.



STEP 2

The ions act on airborne microbes.

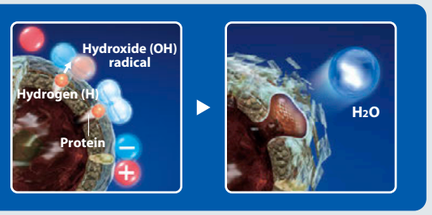
The ions form hydroxide (OH) radicals that are highly oxidizing only when they adhere to the surfaces of mold and viruses. They instantly remove the hydrogen from the surface proteins, breaking them down.



STEP 3

The broken-down components return to the air as water.

The hydroxide (OH) radicals combine with hydrogen (H) to form water (H_2O), which returns to the air.



- Air purifiers and ion generators with Plasmacluster technology can prevent the action of airborne viruses, as well as reducing the effects of suspended allergens generated by dust mite feces and dead mites by breaking them down, but Plasmacluster cannot create a completely sterile environment, or ensure prevention of infection.
- The actual number of ions and effectiveness of microbe removing*1 and purifying*2 depend on the room conditions and the operation methods, including room size or shape, whether air conditioning or ventilation is used, product placement, direction of ion discharge, and operation mode.

*1 Airborne viruses are suspended in a $1m^3$ box, and the percentages of the viruses removed after 10 minutes are measured. Suspended microbes subjected to Plasmaclsuter air purification are measured after 38 minutes in a testing room of about 40 m^3. Test results may differ from results in actual room conditions.

*2 The effectiveness depends on the surrounding conditions (e.g., temperature, humidity and airflow), usage time and method.

Proven Safety of Plasmacluster Ions

Reliable Safety

GLP*-compliant test facilities have gathered highly reliable safety data on Sharp's Plasmacluster technology.

* GLP (good laboratory practice) is a system of management controls for test facilities and test procedures designed to ensure the reliability of chemical safety assessment tests.

Purpose	Test name (abbreviation)	Ion density setting
Skin irritancy (general condition)	Acute skin irritation/corrosion	Approx. 1,000,000 ions/cm^3
Eye irritancy (general condition)	Acute eye irritation/corrosion	Approx. 13,000,000 ions/cm^3
Gene toxicity (general condition)	Inhalation toxicity (evaluation of genetic effect on pulmonary tissue)	Approx. 7,000,000 ions/cm^3
Body and organ toxicity (general condition)	Inhalation toxicity	Approx. 7,000,000 ions/cm^3
Pregnant woman and fetus toxicity (general condition)	Inhalation toxicity	Approx. 7,000,000 ions/cm^3

Testing institution: LSI Medience Corporation

Air Purifying Mechanism

Plasmacluster ions react with the surface proteins on airborne mold and viruses but do not affect the internal cellular substances.

Same Ions As in Nature

Sharp has verified that Plasmacluster ions in the air are the same as they are in nature.

Used In Over 60 Million Products

In the 15 years since its release, products equipped with Plasmacluster ion generating devices have exceeded the 60 million-unit mark.

- Total number of products equipped with a Sharp Plamacluster device and of Plasmacluster ion generating devices shipped in Japan and abroad from October 2000 to the end of July 2015.

Three Solutions Achieved with Plasmacluster

1 Air Purification

- Removal of airborne mold
- Suppressing the activity of airborne viruses
- Suppressing the increase of dust mite allergens, including dust mite feces and dead mites
- Suppressing the activity of airborne microbes
- Reducing growth of adhering mold
- Suppressing the activity of adhering viruses

Examples:

At factories and food-processing facilities

- Improving the sanitary conditions of food
- Helping save electricity with the air-conditioning temperature*
- Enabling cost reductions by reducing detergents and disinfectants

Examples:

At offices, workplaces, and public facilities

- Improving air conditions and sanitary conditions

* With the effect of Plasmacluster, airborne microbes can be suppressed even if the air-donditioning temperature setting goes up by around 2 °C, which contributes to electricity-cost saving.

2 Removing Stubborn Odors

- Removal of cigarette smoke odor
- Suppressing the activity of airborne odor microbes

Examples:

At offices, workplaces, and public facilities

- Improving air conditions

Examples:

Restaurants and supermarkets

- Improving air conditions for eating and drinking
- Providing measures against lingering odors and spoiled-food odors with food ingredients

3 Eliminating Static Electricity

- Preventing dust from clinging to the ceiling and walls
- Removal of dust and pollen clinging to hair and clothing

Examples:

At factories and food-processing facilities

- Providing measures to prevent foreign matter from becoming mixed in
- Providing measures against airborne microbe and dust
- Contributing to reduction in rate of returned produces.

Wall-mount / Shelf-placement Plasmacluster Air Purifier

FU-551K

Approx. room size[*1]

Air purification	Approx. 40 m²

Approx. room size[*2]

High-density Plasmacluster ions	Approx. 25 m²

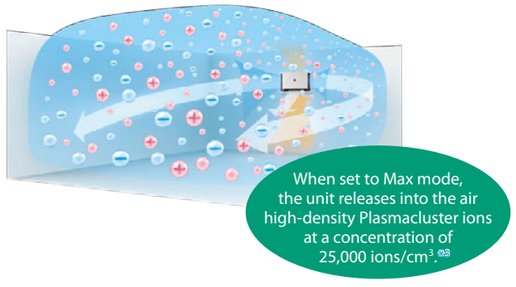
Plasmacluster ion density[*3]

Airflow: Max	Airflow: Low
Approx. 25,000 ions/cm³	Approx. 7,000 ions/cm³

Air Purification

Directing Airflow for Maximum Ion-Spreading Efficiency

The left and right air outlets release air current toward the neighboring walls to create an enveloping effect that allows Plasmacluster ions to be carried to every corner of the room. This makes the product highly suited to installation in places where people gather or where food is prepared.



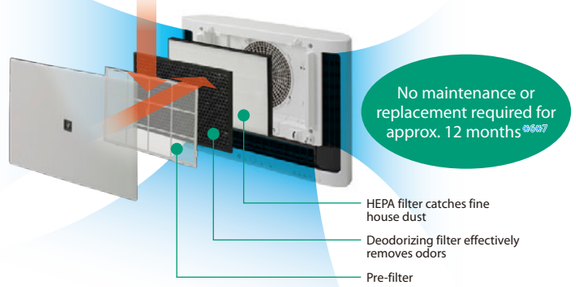
Airflow Direction Adjustable with Louvers

The FU-551K is equipped with vertical and horizontal louvers that allow users to make precise manual adjustments to the airflow direction according to the room layout and the installation position.

Filtering

HEPA Filter*4 Catches Fine House Dust

The FU-551K incorporates a high-performance HEPA filter that can collect 99.97%*5 of dust particles as small as 0.3 µm. Of every 10,000 house dust particles containing airborne viruses and allergens, only three escape this filter.



Plasmacluster Air Purifiers Protect against PM2.5 with 99% of Particles 0.1 to 2.5 µm in Size Captured*8

Entry of new particles from outside due to, for example, ventilation is not a concern.

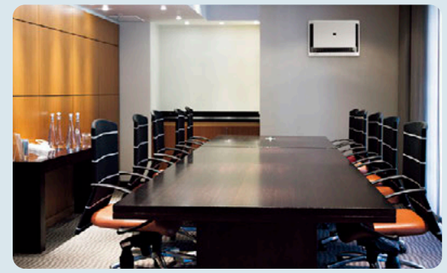
- "PM2.5" is a general term for particulate matter of 2.5 µm or less.
- Removal of particulate matter of less than 0.1 µm in size has not been confirmed with this air purifier. Also, the air purifier cannot remove all airborne hazardous substances.
- These results are for an airtight, 32 m³ space, not the results of use in an actual space.

*1 Approximate room size is a prescribed criterion under JIS (JEM 1467); it is the standard prescribed floor space when the air purifier can reduce air dust density of 1.25 mg/m³ down to 0.15 mg/m³ (the level under Japan's Building Administration Law) in 30 minutes when natural ventilation takes place once every hour.
*2 Estimate of room size when the product is installed in the center of the wall and 2 meters from the floor, airflow is high speed, and ion density is 25,000 ions/cm³ at a point in the center (and 1.2 m from the floor).
*3 Estimate of ion density for each operating mode, when product is installed in the prescribed location of the prescribed room size, and ion density measurement is taken at a point in the center (and 1.2 m from the floor). The ion density will vary depending on the room conditions and usage methods.
*4 To qualify for the HEPA (high-efficiency particulate air) standard, an air filter must be able to remove 99.97% of particles with a size of 0.3 µm.
*5 This figure refers to the dust-collection performance of the filter itself, not to the total amount of dust removed from a room.
*6 Approximate time for the dust collection ability to decrease to 50% of the original ability assuming suction of dust equivalent to the smoke of 10 cigarettes per day (according to standards of the Japan Electrical Manufacturers' Association (JEM1467)).
*7 Approximate time for the deodorization ability to decrease to 50% of the original ability assuming suction of dust equivalent to the smoke of 10 cigarettes per day (according to standards of the Japan Electrical Manufacturers' Association (JEM1467)).
*8 Test method: Judgment criteria of voluntary standard HD-128 by the Japan Electrical Manufacturers' Association: Time of 90 min. or less to remove 99% of particulate matter 0.1 to 2.5 µm in size in an airtight 32 m³ space. (This figure is converted for a testing space of 32 m³.)
* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.
• Ion density will vary depending on the state of the room.

Suggested Locations for Use

Meeting Rooms and Waiting Rooms

- Purify air in locations often used for purposes such as meetings with clients. Help maintain the health of clients, employees, and their families.
- Provide a measure against the risk of pandemics.



Hotels

- Provide a high-quality, welcoming atmosphere for customers by reducing unpleasant odors such as from food and cigarette smoke.
- Prevent dust and pollen from clinging to curtains and furniture by eliminating static electricity.

Kindergartens and Nursery Schools

- A comfortable space can be provided in which airborne allergens, viruses, and fungi are reduced.
- Wall-mounted installation in a game room or hallway is recommended to prevent children from colliding with the unit.

Eldery Care Facilities

- A comfortable space can be provided in which airborne allergens, viruses, and fungi are reduced.
- Wall-mounted installation is recommended so that the unit does not interfere with movement of people in the hallway.

Plasmacluster Ion Generator

IG-A40/A20

IG-A40

Approx. room size[*1]

High-density Plasmacluster ions	Approx. 50 m²

Plasmacluster ion density[*2]

Airflow: High	Airflow: Medium	Airflow: Low
Approx. 25,000 ions/cm³	Approx. 12,000 ions/cm³	Approx. 7,000 ions/cm³

IG-A20

Approx. room size[*1]

High-density Plasmacluster ions	Approx. 23 m²

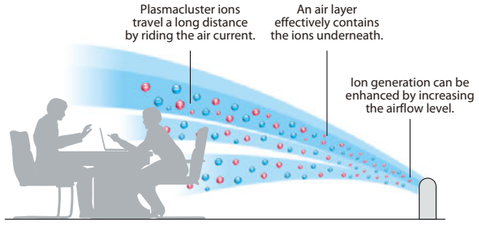
Plasmacluster ion density[*2]

Airflow: High	Airflow: Medium	Airflow: Low
Approx. 25,000 ions/cm³	Approx. 12,000 ions/cm³	Approx. 7,000 ions/cm³

Air Purification

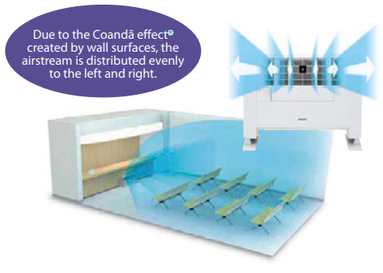
Discharging High-Density Ions Effectively into Large Spaces

The airstream released from the top louver forms an air layer that effectively contains the ion layers underneath, thereby allowing high-density ions to travel a long distance.



Massive Ion Discharge Enabled by Wide Louver Mechanism

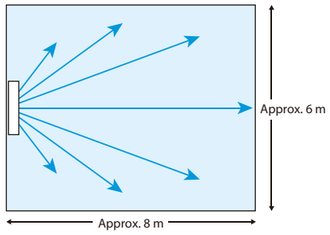
The wide louvers allow high-density Plasmacluster ions to be discharged efficiently into large spaces, such as lobbies and waiting rooms.



Delivery Range of High-Density Plasmacluster Ions

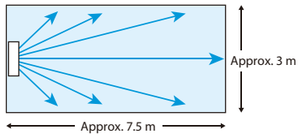
IG-A40

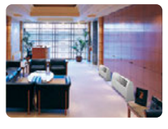
Applicable floor surface area: Approx. 50 m²



IG-A20

Applicable floor surface area: Approx. 23 m²





* The Coandă effect: When a fluid jet such as water or air is discharged near a flat or curved surface, it is attracted to that surface and tends to flow along it.

*1 Estimate of room size when the product is placed against the wall, and ion density generated is 25,000 ions/cm³ on high airflow in the center of the room (and 1.2 m from the floor).
*2 Estimate of ion density per cm³ measured in mid-air at a point in the center of the room (and 1.2 m from the floor) for each of the airflow speeds in each approximate room size when the product is placed against the wall.
* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

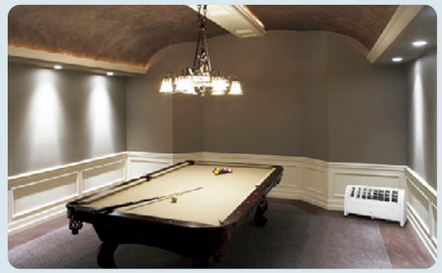
Suggested Locations for Use

Hospitals

- Reduce the odors particular to hospitals, which permeate waiting rooms and hallways.
- Reduce cleaning work by reducing the formation of mold.
- Improve sanitary conditions. Sanitary measures will result in patients selecting the hospital facility.

Amusement Facilities

- Provide a pleasant atmosphere by reducing odors, such as from sweat.
- Reducing static electricity creates a sanitary environment by making it difficult for dust to cling on amusement equipment.
- Emphasize to customers the attraction of an environment with clean air.



Child Day Care Centers

- Reduce toilet odors and odors from changing diapers.
- It is important that children are kept in an environment with sanitary air.
- Improving the air conditions will result in parents more highly evaluating the day care center.

Restaurants

- Decrease airborne bacteria and reduce lingering odors.
- Decrease odors that tend to linger at restaurants, such as cigarette and food odors.
- Emphasize to customers the attraction of a restaurant that cares about its air quality.

Plasmacluster Ion Generator Specialized for Static Elimination

IG-301JF

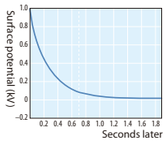
Fast Elimination of Static Electricity

Excellent Ion Balance and Fast Elimination of Static Electricity in Only 0.8 Seconds*

Static electricity is rapidly eliminated, producing an exceptional ion balance in which positive and negative ions are evenly distributed, both in the travel direction and width direction across the conveyor belt.

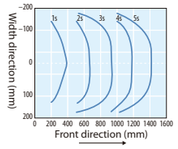
* Time to reduce static electricity from ±1000 V to ±100 V.

Static electricity elimination speed*1



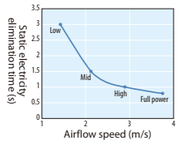
*1 Measurement conditions
- Installation distance: 300 mm, center of device
- Time to reduce static electricity from ±1000 V to ±100 V.
- Plate monitor: 150 mm × 150 mm (20pF)
- Airflow: Full power

Static electricity elimination area – Static electricity time characteristics*2



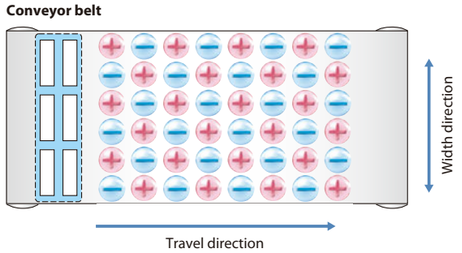
*2 Measurement conditions
- Time to reduce static electricity from ±1000 V to ±100 V.
- Plate monitor: 150 mm × 150 mm (20pF)
- Airflow: Full power

Static electricity elimination time x Airflow speed*3



*3 Measurement conditions
- Installation distance: 300 mm, center of device
- Time to reduce static electricity from ±1000 V to ±100 V.
- Plate monitor: 150 mm × 150 mm (20pF)

■ Distribution of ions on the surface of a conveyor belt (conceptual illustration)



Easy to Use

Reduced Maintenance Work

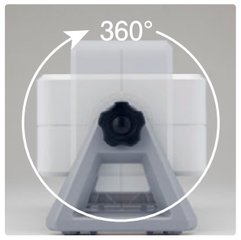
Long unit life of roughly 2 years and 2 months (19,000 hours)*

Easy to clean electrode needle

Plasmacluster ion generator unit can be replaced one-handed

* The Plasmacluster ion generation unit should be replaced regularly to enable stable emission of high-density Plasmacluster ions. Replacement is required after approx. 17,500 hours (two years) when operated continuously for 24 hours a day. The ion generator will stop operating after about 19,000 hours (two years and two months) if it is not replaced.

Ceiling Mounting Supported



Unit can be rotated 360°

■ Ceiling mounting

With legs (angle adjustable)

Directly attached to ceiling

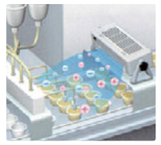
Note: The mount base must be reinforced when mounting the IG-301JF on a ceiling or wall to prevent it from falling.

Elimination of Bacteria and Viruses

Effective Suppression of Clinging Bacteria*

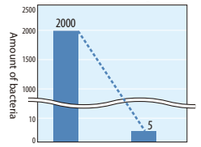
In addition to the elimination of static electricity, Plasmacluster ion generators also help make factories clean and safe by effectively suppressing the growth of adhering bacteria at locations of concern such as slicers and filling nozzles.

* These are results after 24 hours, not short-term results. (The results are also for stationary objects.)



(conceptual illustration)

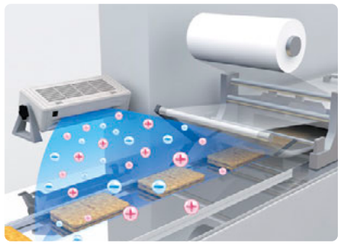
Suppression of adhering bacteria



Suggested Locations for Use

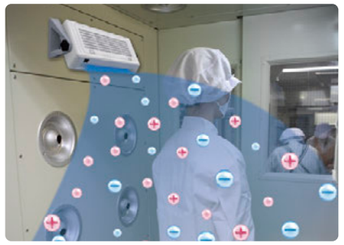
Packaging Rooms

Yield is improved by preventing foreign particles from entering products or adhering to packaging materials.



Sanitation

Dust and other particles are prevented from being brought into clean rooms.



Precision Devices

Precision device circuits are protected and dust impurities are prevented.

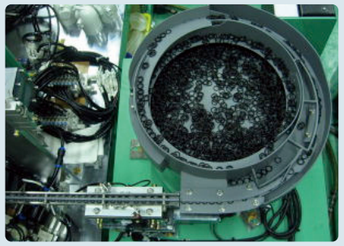
Electronic Part Industry

Air Shower Anterior Chambers

Limiting Adhesion of Foreign Matter

Eliminating static electricity in the anterior chamber before entering the clean room improves removal of foreign matter adhering to workers' bodies.

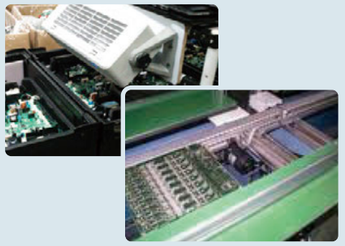
Part Feeders



Prevention of Clogging

Clogging may occur when parts rub together and become electrically charged. Eliminating static electricity allows parts to be conveyed smoothly.

Circuit Board Conveying Processes

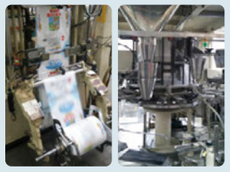


Prevention of Electrical Charge during Conveying

Electronic parts may become internally destroyed with an electrical charge due to factors such as vibration when the circuit boards are conveyed. Installing equipment to eliminate static electricity alleviates this problem.

Packaging Industry

Materials and Ingredients Filling Process



Improvement in Short Stoppage

When opening bags, some bags may not open because of electric charge due to peeling. This results in filling problems and stops the line. Eliminating static electricity improves such situation.

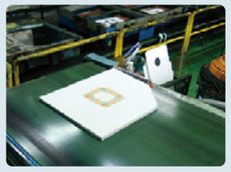
Pillow Packaging Process

Sticker Defects

Packaging film may become electrically charged due to peeling or friction. Also, fragments of baked snacks may stick to the film. These result in sticker defects. Eliminating static electricity on the packaging film improves the situation.

Molding Industry

Conveying Process for Molded Items



Limiting Adhesion of Foreign Matter

In conveying, foreign matter is easily attracted due to an electrical charge caused by rubbing from factors such as vibration between the conveyor and the workpiece. Eliminating static electricity limits adhesion of foreign matter.

Appearance Inspection Process

Limiting Adhesion of Foreign Matter

Workpieces may be electrically charged through friction with one another, thereby attracting foreign matter, and protrude from boxes. Eliminating static electricity alleviates these problems.

Specifications

Wall-mount / Shelf-placement Plasmacluster Air Purifier

Model		FU-551K
Color		White
Recommended air purifying area*1		40 m²
Recommended area for high-density Plasmacluster ions*2		25 m²
Operation modes		Full / Max / Med / Low
Ion density (Max / Low) (ions/cm³)*3		Approx. 25,000 / Approx. 7,000
Voltage / frequency		220 V-240 V, 50/60 Hz
Rated power (Full / Max / Med / Low) (W)		78 / 24 / 13 / 6.5
Clean Air (fan speed) (Full / Max / Med / Low) (m³/hour)		330 / 180 / 120 / 65
Noise level (Full / Max / Med / Low) (dB)		53 / 42 / 35 / 25
Filter type	Dust collection	HEPA*4
	Deodorization	Yes
	Pre-filter	Yes (front and bottom)
Filter life	Dust collection	Up to 2 years*5
	Deodorization	Up to 2 years*6
Sensor	Odor	Yes
	Dust	Yes
Clean sign indicator		Yes (3-step)
Power cord length (m)		2.0
Dimensions (W × H × D) (mm)		650 x 178 x 440
Weight (kg)		9.1

Options

Units for 1 Air Purifier (3 units included)

Name	Plasmacluster Ion Generating Unit	Dust Collection Filter	Deodorizing Filter	Stand for Self-Placement
Model	IZ-C75B3E	FZ-K51HFE	FZ-K51DFE	FZ-K51STE
Time for replacement	Approx. 2 years*7	Approx. 2 years*5	Approx. 2 years*6	—

Plasmacluster Ion Generator

Model	IG-A40	IG-A20
Color	White	White
Recommended area for high-density Plasmacluster ions*8	50 m²	23 m²
Operation modes	High / Med / Low	High / Med / Low
Ion density (High / Med / Low) (ions/cm³)	Approx. 25,000 / Approx. 12,000 / Approx. 7,000	Approx. 25,000 / Approx. 12,000 / Approx. 7,000
Voltage / frequency	220 V-240 V, 50/60 Hz	220 V-240 V, 50/60 Hz
Power consumption (High / Med / Low) (W)	39 / 20 / 10	22 / 14 / 9
Airflow volume (High / Med / Low) (m³/hour)	840 / 648 / 510	468 / 390 / 306
Noise level (High / Med / Low) (dB)	47 / 40 / 34	45 / 40 / 34
Power cord length (m)	2.0	2.0
Dimensions (W × H × D) (mm)	940 x 480 x 230	594 x 480 x 230
Weight (kg)	15.0	10.5
Optional replacement unit	IZ-CA40E (Time for replacement approx. 2 years*7)	IZ-CA20E (Time for replacement approx. 2 years*7)

*1 "Recommended area" is prescribed by the Japan Electrical Manufacturers' Association (JEMI 1467) as the standard size of a room in which air with a dust concentration of 1.25 mg/m³ can be purified to the concentration of 0.15 mg/m³ as stipulated by the Building Administration Law when using natural ventilation one time (one time per hour).
*2 Area in which an emitted airborne ion density of approx. 25,000 ions/cm³ can be measured near the center of the room at a height of 1.2 m from the floor during operation at the high airflow setting with the ion generator mounted at a height of 2 m from the floor and in the center of a room wall.
*3 Approximate figures for density of emitted airborne ions near the center of the room at a height of approx. 1.2 m from the floor during operation at the high airflow setting with the ion generator mounted at the height of 2 m from the floor and in the center of a room wall. The ion density will vary depending on the room conditions and usage methods.
*4 HEPA is defined by the JEM1467 standard of the Japan Electrical Manufacturers' Association Standard. The filter removes more than 99.97% of 0.3-micron dust particles.
*5 Approximate time for the dust collection ability to decrease to 50% of the original ability assuming suction of dust equivalent to the smoke of 10 cigarettes per day (according to standards of the Japan Electrical Manufacturers' Association (JEM1467)).
*6 Approximate time for the deodorization ability to decrease to 50% of the original ability assuming suction of dust equivalent to the smoke of 10 cigarettes per day (according to standards of the Japan Electrical Manufacturers' Association (JEM1467)).
*7 The Plasmacluster ion generation unit should be replaced regularly to enable stable emission of high-density Plasmacluster ions. Replacement is required after approx. 17,500 hours (two years) when operated continuously for 24 hours a day. The ion generator will stop operating after about 19,000 hours (two years and two months) if it is not replaced.
*8 The area in which an emitted airborne ion density of approx. 25,000 ions/cm³ can be measured near the center of the room at a height of approx. 1.2 m from the floor during operation at the high airflow setting when the ion generator is placed near the wall.
* The number in this technology mark indicates the approximate number of ions supplied into 1 cm³ of air, which is measured around the center of a room (at a height of 1.2 m above the floor) with the applicable floor area at the maximum airflow, when a Plasmacluster ion generator using a high-density Plasmacluster ion-generating device is placed close to a wall.

- These products produce a steady, high-density output of Plasmacluster ions, so the Plasmacluster ion generating units must be periodically replaced.
- Replacement may be required earlier, depending on the usage environment and location (areas with large amounts of airborne oil, such as cooking oil, areas with high levels of dust or humidity, areas where sprays or chemicals are used, etc.).

Specifications

Plasmacluster Ion Generator Specialized for Static Elimination

Model	IG-301JF
Power supply voltage	DC24 V ±10% / AC100 to 240 V (with adapter)
Consumption current	0.72 A (with DC 24 V power supply)
Static elimination time*1	0.8 sec.
Ion balance*1	±5 V
Operation modes	Full power / High / Med / Low
Airflow volume (Full power / High / Med / Low) (m³/min.)	2.9 / 2.2 / 1.5 / 0.7
Airflow speed (Full power / High / Med / Low) (m/sec.)	3.8 / 3.0 / 2.2 / 1.4
External input/output	Static elimination stop input, Alarm output, Warning output
Operating temperature	0 to 50°C
Operating humidity	10 to 85% RH (with no condensation)
Operating environment	Pollution level 2
Weight (kg)	Approx. 1.9
Attachments	Rubber feet, Ground cable, Error indication label

Options

Name	Plasmacluster Ion Generating Unit	AC Adapter (cord length: approx. 1.8 m)
Model	IZ-C301	IZ-JAC1
Time for replacement	Approx. 2 years*2	—

*1 Measurement conditions:
- Distance: 300 mm, center of device
- Static elimination time: ±1000V → ±100V
- Plate monitor: 150 min x 150 min (20pF)
- Airflow volume: Full power

Note: Measurement values are for reference and do not constitute guarantees.
*2 The Plasmacluster ion generation unit should be replaced regularly to enable stable emission of high-density Plasmacluster ions. Replacement is required after approx. 17,500 hours (two years) when operated continuously for 24 hours a day. The ion generator will stop operating after about 19,000 hours (two years and two months) if it is not replaced.

- The product produces a steady, high-density output of Plasmacluster ions, so the Plasmacluster ion generating unit must be periodically replaced.
- Replacement may be required earlier, depending on the usage environment and location (areas with large amounts of airborne oil, such as cooking oil, areas with high levels of dust or humidity, areas where sprays or chemicals are used, etc.).

Guide to Recommended Products According to Installation Area

	Air purifier/Ion generator			Static eliminator
	Wall-mount/shelf-placement dual-use model	Floor installation model		Model specialized for static elimination
	FU-551K	IG-A40	IG-A20	IG-301JF
				
Factory anterior chamber and sanitary rooms	●	●	●	●
Factory working rooms		●	●	
Factory packaging rooms and packaging process	●	●	●	●
Stores	●			
Kitchens and food preparation rooms	●			
Medical facilities and elderly care facilities	●	●	●	
Offices and event halls	●	●	●	
Customer rooms, individual rooms, changing rooms	●			
Hallways and toilets	●			