# 6-sensor intelligent air purifier and humidifier with Plasmacluster technology



# Main features and functions

- Intelligent purification and humidification mode based on input from 6 sensors: dust (also PM2.5) – sensitivity, odor, temperature, humidity, light and motion;
- Spot Mode
- Pollen Mode
- Ion Shower Mode
- Plasmacluster Technology
- Evaporation humidification
- Water filtration before humidification
- Water tank empty notification display
- Filter replacement or cleaning necessity notification
- Very silent operation 20 dB(A) (sleep mode)
- Low energy consumption average 40 W
- Filter life up to 10 years
- Casters with a lock for an easy relocation
- ON/OFF Timer
- Auto Restart
- Auto Louver
- Child Lock

# **Key parameters**

- 306 m³/h: purifying efficiency
- 450 ml/h: humidifying efficiency
- 2,5 l: water tank volume
- 20-46 dB(A): min. /max. noise level
- 9,2 kg: unit's weight
- Packing dimensions (W x D x H) (mm): 34.5 x 26.2 x 63.1

## Consumables

Models		
<b>FZ-D40HFE</b> HEPA filter		
FZ-G40DFE	Deodorizing Filter	
FZ-G60MFE	Humidifying Filter	





## 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.

# 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. Testing institution: LSI Medience Corporation

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

# The Same Safe Ions As in Nature

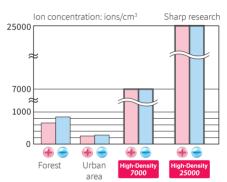
The safety of Plasmacluster ions has been verified, and so a high density of ions can be used. With more positive and negative ions in a room than even in a forest, Plasmacluster provides an environment of even greater effectiveness.

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:





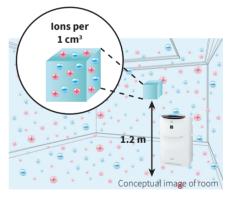


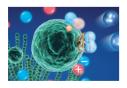






each of the ions **7,000** or more

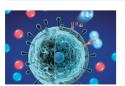




# Removal of Airborne Mold

Result after approx. 49 minutes in a testing space of approx. 25 m<sup>3</sup>.

High-Density 25000 High-Density 7000



## **Reducing Growth of Adhering Mold**

Result after approx. three days (one day as 24 hours) in a testing space of approx. 20 m³.

High-Density 25000 High-Density 7000



# Suppressing the Activity of Airborne Microbe

Result after approx. 51 minutes in a testing space of approx. 25 m<sup>3</sup>.

High-Density 25000 High-Density 7000

#### 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

# Reducing Growth of Adhering Mold

Result after approx. three days (one day as 24 hours) in a testing space of approx. 20 m³.

High-Density 25000

# Suppressing the Activity of Adhering

Result after approx. 10 minutes in a testing space of approx. 25 m<sup>3</sup>.



## **Plasmacluster Ions and Air-Purification Technology Remove Haze**

- It was proven in Collaboration with University Putra Malaysia that Sharp's Plasmacluster Ion and Air Purifying Technology has the effect on a haze.
- Plasmacluster Ions Reduce 98% of Toluene and 70% of Pentanone
- Air-Purification technology removes 99% of haze particles as small as 0.06 μm in size

# **Reduction of Static Electricity**

• Reduction of Static Electricity

## **Removing Stubborn Odors with Plasmacluster**

- Breakdown and Elimination of Clinging Odors
- · Breakdown and Removal of Clinging Cigarette Odor
- Spot Deodorization of Sweat Odor Clinging to Clothing in Approx. Six Hours
- Spot Deodorization of Damp-dry Odor on Clothes Drying Indoors in Approx. Three Hours

## **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<sup>3</sup>.

# Technology and unique solutions



**Plasmacluster** – certified method of generating heavy ions into the air (elimination of viruses, bacteria, allergens and fungi); a natural air purifying system. The effectiveness of this unique solution developed by Sharp in 2000 has been confirmed with over 90 patents.



**British Allergy Fundation (BAF)** – Allergy UK works with manufacturers throughout the world to test and promote products and devices that can benefit those suffering from allergies. All products labelled with the BAF logo have been scientifically tested. All product tests and evaluations are carried out by Allergy Research Limited.

Auto Louver - automatic closing of the shutter when the device is turned off to keep the inside of the device clean.

Auto Restart – once power has been restored after power failure, the device continues working in the latest mode.

Child lock - control panel can be locked.

**Monitor function** –during operation, the sensor detects if it is necessary to address the temperature and humidity in the room, signalling it with the indicator light. The monitoring function detects "low humidity and temperature" and "high humidity and temperature".

**Intelligent Mode** – intelligent purification and humidification mode based on information provided by 6 sensors - 7 indications: PM2.5, dust, unpleasant odour, temperature, humidity, light sensor, motion sensor.

Ion Shower - an intensive purifying programme that can be used for preparing the bedroom before going to sleep.

Pollen – anti-allergy mode based on high-density ion beams (Plasmacluster HD7000).

**Timer ON/OFF** – the device can be programmed to be temporarily switched on or off

**Spot Mode** – a separate horizontal and adjustable air exhaust can be used to remove unpleasant odors and bacteria from the closet.

# Intelligent Mode with 7 Types of Detection in Effect



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.















PM2.5

**USUAL DUST** 

ODOR TEMPERATURE

HUMIDITY

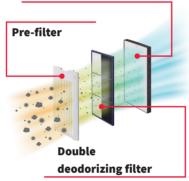
LIGHT

MOTION





# **Electrostatic HEPA filter**



Three filters remove dust, gas and odor efficiently



Turning humidifying system

# Unique design











