

**The World's  
First**

Elevator Plasmacluster™ Ion Generating System

# IONFUL

**For the creation of clean and  
hygienic elevators...**

In public elevators used by many people,  
the creation of a hygienic elevator with purified air is desired.  
Fujitec and Sharp Corporation have jointly developed IONFUL,  
a "Plasmacluster Ion Generating System" that purifies the air in elevators.  
The system discharges Plasmacluster Ions that inactivate airborne molds and  
viruses and deactivate airborne allergens,  
thereby creating a clean and comfortable elevator.

## **Inactivates Airborne Molds**

Plasmacluster Ions surround and inactivate airborne molds. This helps prevent the development of odors caused by propagation of mold.

## **Safe to Use**

Plasmacluster Ions consist of the positive and negative ions made from water and oxygen that exist normally in nature. These ions are safe and will not harm the human body.

## **Inactivates Airborne Viruses**

Plasmacluster Ions inactivate airborne viruses.

## **Replacing Parts or Cleaning Agents Unnecessary**

Plasmacluster Ions are discharged from the ventilation system. There is no need to change filters or refill cleaning agents.

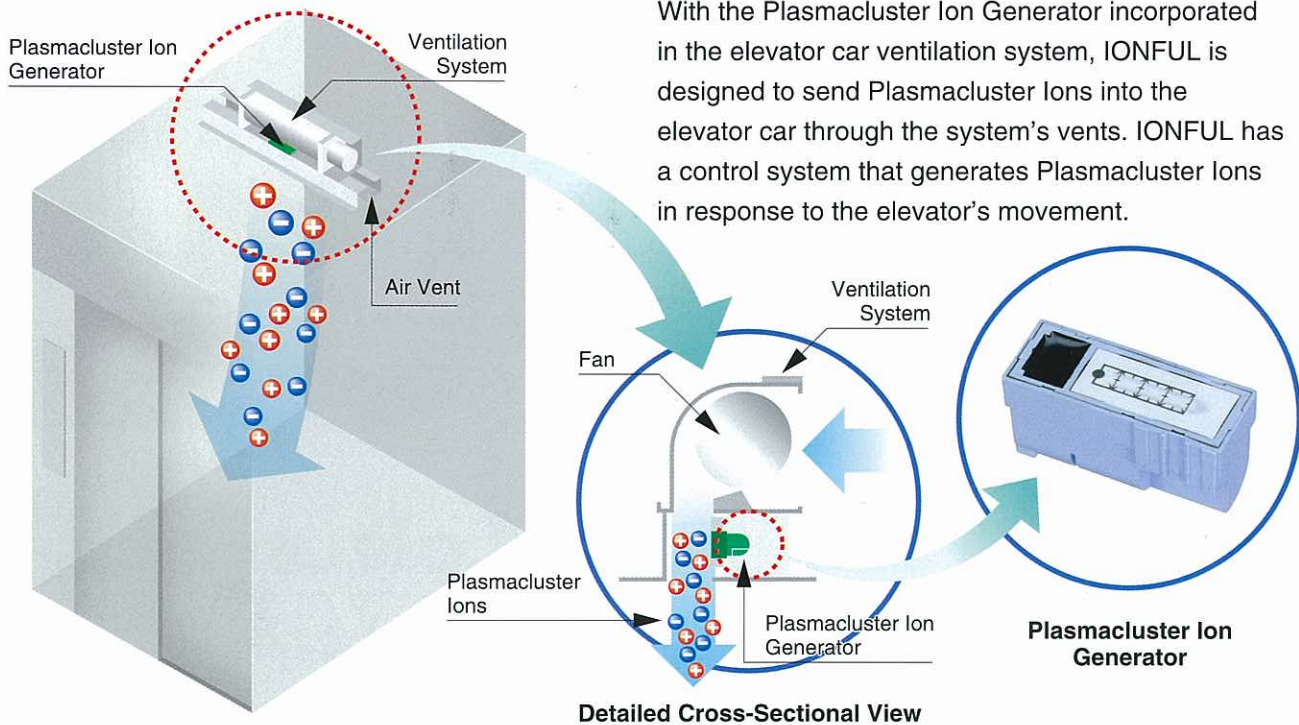
## **Deactivates Airborne Allergens**

Plasmacluster Ions wrap airborne allergens and deactivate them.

\* "Inactivate" refers to the deprivation of reproduction power. \* "Allergens" refers to the particles of mites and their waste.

\* "Deactivate" refers to the prevention of an allergic reaction from occurring by stopping the allergen(antigen) from combining with the IgE antibody.

# Structure of IONFUL



With the Plasmacluster Ion Generator incorporated in the elevator car ventilation system, IONFUL is designed to send Plasmacluster Ions into the elevator car through the system's vents. IONFUL has a control system that generates Plasmacluster Ions in response to the elevator's movement.

## Plasmacluster™ Ion Technology

The IONFUL system utilizes the Plasmacluster™ Ion technology independently developed by Sharp Corporation. Plasma discharge creates almost the same number of positive and negative ions from water and oxygen molecules. This large number of released ions greatly reduces mold, viruses and allergens. The innovative Plasmacluster Ion air-purifying technology has been verified by public health research organizations throughout the world.

### JAPAN

- Ishikawa Prefecture Preventive Medicine Association [Airborne Molds]
- Kitasato Research Center of Environmental Science [Airborne Viruses]
- The Graduate School of Advanced Sciences of Matter, Hiroshima University [Airborne Allergens]

### GERMANY

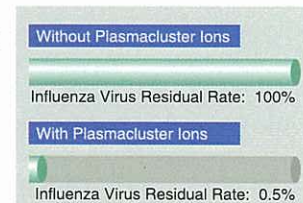
- The University of Lübeck [Airborne Molds]

### CHINA

- Shanghai Municipal Preventive Medicine Research Institute [Airborne Molds]

## Plasmacluster™ Ions Inactivating Performance on Airborne Influenza Viruses

- **Testing Method:** One-pass Test – By allowing influenza viruses (about 2,000 viruses per 300 liters of air) to pass at a speed of about 4 meters per second through a cylindrical container (5.5 cm in diameter and 20 cm in length) with the Plasmacluster Generator mounted, the residual rate was measured. The comparison is based on the residual rate of influenza viruses assumed to be 100% when there are no Plasmacluster Ions.
- **Viruses Subject to Test:** Influenza Viruses
- **Inactivating Method:** Plasmacluster Ions (200,000 ions per cm<sup>3</sup>) were discharged in the container.
- **Testing Institute:** Kitasato Research Center of Environmental Science



Actual inactivating performance depends on elevator operating status.  
No guarantee on curing/preventing people from certain illnesses and viruses should be claimed.



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