
Taikisha Develops “**Barrier Cube**” Evacuation Shelter Designed to Reduce the Risk of Novel Coronavirus Infection

--Realizing both Enhancement of Privacy and Reduction of the Risk of Novel Coronavirus Infection--

Taikisha Ltd. (Head Office: Shinjuku-ku, Tokyo, Japan; Representative Director, President: Koji Kato) has developed “**Barrier Cube**,” an emergency shelter that can reduce the risk of novel coronavirus infection, for use at indoor evacuation centers in times of disaster. Installing “**Barrier Cube**” at evacuation centers in times of disaster, where people tend to be in close contact with each other, can reduce the risk of novel coronavirus infection while securing a high degree of privacy.

■ Background and Aim of Development

At indoor evacuation centers, which tend to have many people staying together, the important issue is to reduce the risk of novel coronavirus infection while securing private space. Conventional evacuation shelters typically use curtains and cardboard as partitions to create private spaces. Meanwhile, Taikisha has developed a closed-off private shelter room with a high degree of privacy that can effectively reduce the risk of novel coronavirus infection by maintaining air cleanliness within the shelter through incorporating its proprietary air-conditioning technology.

■ Features and Overview of Barrier Cube

As its biggest feature, Barrier Cube is equipped with a High Efficiency Particulate Air (HEPA) Filter (an ultra-high-performance filter with a strong air cleaning function) with an air ventilation fan as a mechanism to maintain a high level of air cleanliness within the shelter. Being a closed-off private shelter room, Barrier Cube offers a function to significantly reduce the risk of novel coronavirus infection by preventing the infusion of outside air from the air supply opening where the filter is installed by maintaining positive pressure within the shelter. In addition, the shelter also comes with a filter on the air outlet opening to keep the outside air clean. By installing these shelters, the air within the entire building where the shelters are set up will be filtered through the filtration of air in individual shelters.

The shelter has a prefabricated structure made of plastic cardboard, allowing for quick setup. It only takes about three minutes for two persons to build a single shelter.

Plastic cardboard is highly durable and chemical and water resistant, and has properties such as being “suitable for repeated use” and “sterilizable (safe to apply sterilization spray on the surface)”. Further, the shelter has high daylighting availability, giving a sense of openness.

The shelter also comes with a foldable bed, which is easy to store. This bed has storage space underneath and is equipped with a portable battery with an AC110V outlet and USB port, allowing for the installation of an electric fan in the summer and an electric heater in the winter as necessary as well as charging of smartphones, etc. (Portable batteries are available in various power capacities and sizes and can be arranged. Installation of a backup battery can also be arranged.)

The standard capacity of the shelter is one adult; however, the shelter can accommodate two adults and one small child by changing the bed size.

■ Packing size

- Plastic cardboard casing: 1990mm x1080mm x270mm (approx. 35kg)
- Bed: 990mm x990mm x100mm (approx. 18kg)
- Fixings (electric fan, electric fan stand, battery, lighting (lantern), security alarm, mattress, storage box): 1040mm x1260mm x390mm (approx. 20kg)

[Disclaimer]

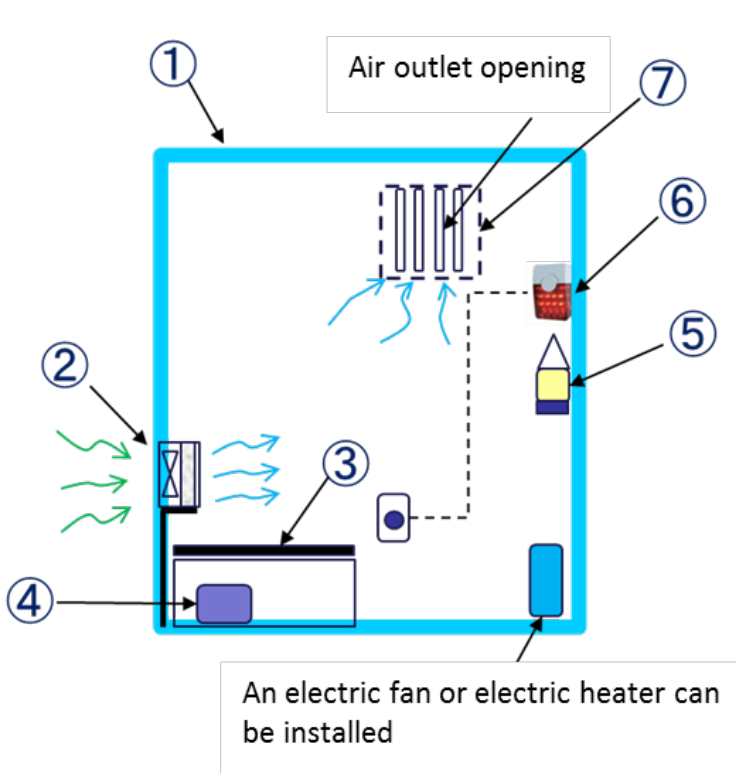
This product is designed to supply clean air through the HEPA filter and inhibit the inflow of outdoor air into the shelter from areas other than the air inlet opening and not to guarantee the complete elimination of the inflow of outdoor air or the prevention of novel coronavirus infection.

■ Exterior appearance / flow diagram



Exterior appearance

- 1700mmW
x 2100mmL
x 1910mmH



- ① Prefabricated shelter
Made of plastic cardboard
 - Good for repeated use
 - Safe to apply sterilization spray, etc. on the surface
 - Has high daylighting availability, giving a sense of openness
- ② Providing ventilation by supplying air filtered by the HEPA Filter (equipped with an air supply fan)
 - Maintains positive pressure within the shelter (preventing the infusion of outdoor air)
- ③ Portable foldable bed
- ④ Rechargeable battery
- ⑤ LED lighting (removable and portable)
- ⑥ Emergency warning flash lamp (with remote switch)
- ⑦ Exhaust filter

■ **About Taikisha Ltd.**

Taikisha is an engineering group that creates an optimal environment and space for people's lives and manufacturing based on its advanced technologies related to energy, air and water. Backed by its history dating back more than 100 years since its foundation, Taikisha contributes to solving environmental issues faced by customers and handing down the rich global environment to future generations by capitalizing on its solution technologies centering on energy saving and environmental load reduction technologies, as well as its global networks around the world.

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