

Press Release

Lightweight Integrated Type “Distancing-Free Mask” A Solution That Eliminates Lockdown

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NPO e-JIKEI Network Promotion Institute

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Latest file (PDF file) is available here:

http://www.e-ikei.org/site/Press_Distancing-Free_AllinOne.htm



【Time and Place】

Time: 10:30-11:30, Wednesday 26th August 2020

Place: The Lecture Hall, Gunma University, Kiryu 376-8515, Japan

【Overview】

As a solution to eliminate the lockdown, we developed the forth "Distancing-Free Mask" prototype and propose new social infrastructure and lifestyles.

This mask simultaneously achieves the four items, (1) complete screening of viruses, (2) lightweight body, (3) easy breathing, and (4) inexpensive manufacturing costs, at a high level by precise control of pressure and flow rate inside the helmet. The wearer of this mask, just like the antibody carrier, cannot be infected himself/herself with the virus, nor infect others with the virus. (Japanese Patent Application 2020-113097)

Currently, a combination of "new lifestyle" and "Lockdown (= going out control, behavior control, business control, economic regulation)" is being taken around the world. Since there is no prospect of developing a vaccine or treatment, there is no prospect of leaving the current situation.

Distributing the "Distancing-Free Mask" to each citizen means having an easy and reliable means of converging the infection.

Even under the worst infection spread situation, people can go out as long as they wear "Distancing-Free Mask". Organizers of events such as the Tokyo Olympics need only take measures in anticipation of situations where masks are mandatory.

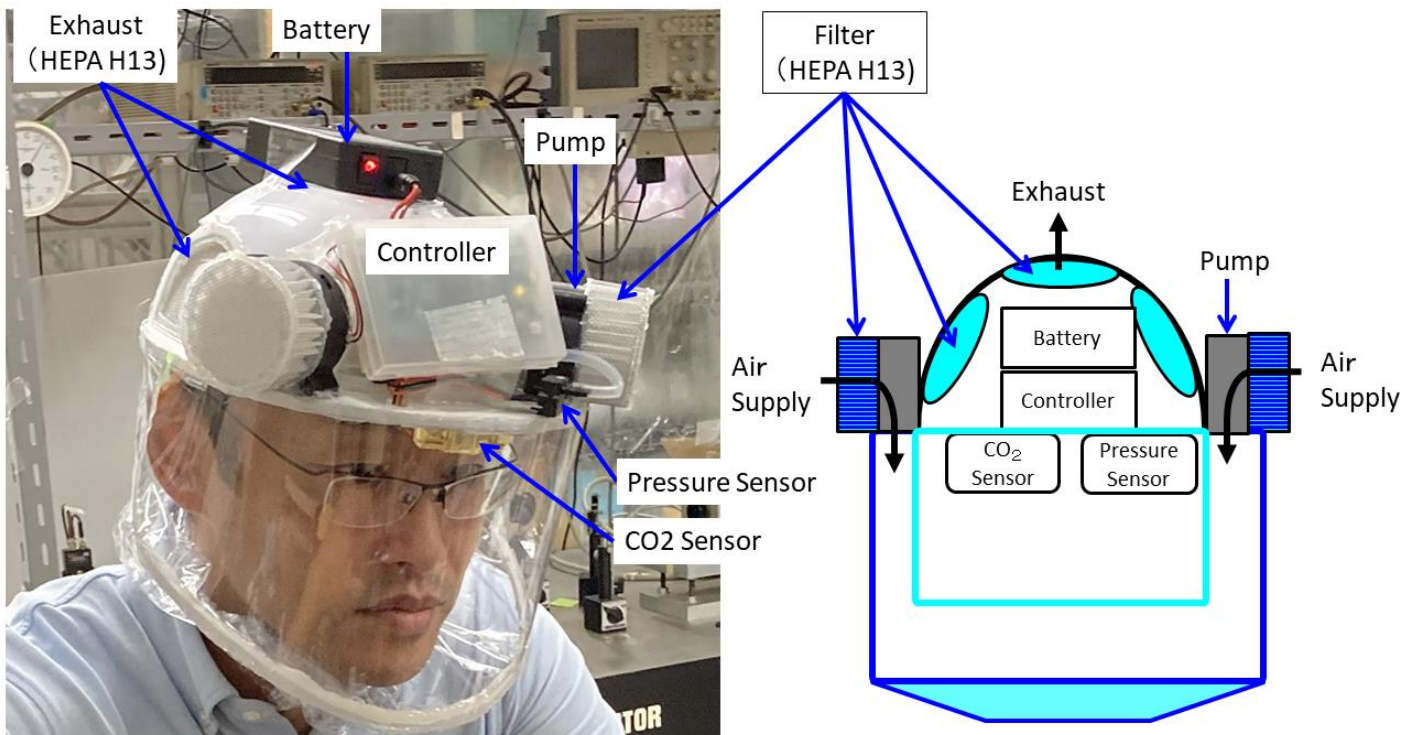


Figure 1. Appearance and schematic diagram of “Distancing-Free Mask”

【Features of the 4th prototype of “Distancing-Free Mask”】

Figure 1 shows a photograph of the 4th prototype of "Distancing-Free Mask", and the mechanism for supplying and exhausting purified air. Figure 2 shows examples of wearing “Distancing-Free Mask”. The features of the 4th prototype of "Distancing-Free Mask" are the following three points.

[1] **A high-performance filter (HEPA H13)** with large flow resistance is inserted, and the forced air supply and exhaust are realized by a pump. It is possible to equip with virus killing devices (UV irradiator, plasma cluster generator, etc.) and an air-conditioning unit.

→ Nonwoven fabric filter (HEPA H13 standard, 99.97% adsorption of particles up to 0.3 μm) is used on the air supply side and exhaust side. It has the same performance as the highest performance (N100/R100/P100) of the fine particle mask standard, which is defined by the National Institute of Occupational Safety and Health (NIOSH) as "Performance capable of removing 99.97% or more of 0.1 to 0.3 μm fine particles".

[2] **A constant flow of purified air** is realized. This allows fresh air to be breathed without adding extra load to the lungs.

[3] **By controlling the inside of the helmet to a slight positive pressure**, it is possible to completely block the entry of outside air from the seal part of the neck. Invasion of virus can be blocked 100%. The virus emission depends on the air tightness of the neck seal, but it can be reduced to a minimum.

Size : Approx.38cm (width)× Approx.26cm (Depth) × Approx.29cm (Height)

Weight : 約 664g (約 0.7kg)

* Including battery (Approx.180g) which enable continuous operation for approx.7 hours)



Figure 2. The 4th prototype of “Distancing-Free Mask”

【Manufacturing cost of standard model】

We propose to the Japanese government to distribute the basic model of “Distancing-Free Mask” **to every citizen by the end of 2020**. The cost will be 20USD/piece if mass-production of 120 million pieces is conducted.

【Social States of the Corona Era】

We believe that the "mask" based on the present invention and its peripheral systems (provision of service air supply/exhaust ports in vehicles and facilities, home airlock systems, etc.) will become an indispensable social foundation in the corona era.

【Contact points】

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