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News Release

Konica Minolta Jointly Develops an Affordable Ozone Generator with Tamura TECO, a Leading Company of Ozone-related Products

Planning to Replace Existing Ozone Generators in 2,700 Ambulances across Japan

Tokyo (January 30, 2023) – Konica Minolta, Inc. (Konica Minolta) today announced that the Company has jointly developed the second ozone generator with Tamura TECO Co., Ltd. (Tamura TECO), a leading company of ozone-related products, and has started to mass-produce BACTECTOR 2.0SC, a high-cost-performance, affordable product with proprietary powerful functions that effectively disinfect and suppress bacteria and viruses, to help create a clean and safe living environment, at DMC*¹-MIKAWA, a smart factory in Japan (Toyokawa City, Aichi Prefecture).

BACTECTOR 2.0SC is a fully redesigned product of the BACTECTOR O3 series, the main product manufactured by Tamura TECO which has been used in various facilities including schools, hospitals, long-term care and healthcare facilities for senior citizens, and railway terminals. It has also been used in 2,700 ambulances across Japan and delivered in large numbers to public institutions. BACTECTOR 2.0SC features a safe and high-value-added design, as exemplified by a sensor-based high-concentration ozone control, which is a unique feature in its class,*² by utilizing Konica Minolta's technologies for multi-functional peripherals (MFPs) and its rigorous commercialization process for healthcare products equivalent to that for medical equipment. High quality and reliability have been achieved based on Konica Minolta's production technology. This is an affordable version of BACTECTOR 2.0MD, the first jointly developed product for professional use released in March 2022. BACTECTOR 2.0SC creates a clean and safe environment for people at various locations in daily life, including leisure facilities and restaurants, in response to the need to live with Covid-19 and its prolonged effects. This product will be sold through the sales channels of the Konica Minolta Group in addition to Tamura TECO's distributors.

Konica Minolta will jointly develop new products for medical use with Tamura TECO and also aims to use FORXAI, its imaging IoT platform. Konica Minolta offers a seamless process involving design and development, production technology, quality assurance, and procurement of parts as an engineering service with the aim of co-creating value through collaboration with companies of various sizes and types by harnessing Japan's manufacturing capabilities to resolve social issues. This joint development with Tamura TECO is a model case for Konica Minolta to co-create value into the future. Konica Minolta will expand collaboration based on engineering services.

*1: Digital Manufacturing Center

*2: For a small ozone generator expected to be used in a manned environment



Features of BACTECTOR 2.0SC

The BACTECTOR 2.0SC disinfects viruses and bacteria adhering to indoor surfaces by using low-concentration ozone gas. Among small ozone generators that are expected to be used in a manned environment, this is the only product*³ capable of disinfecting viruses and bacteria using ozone gas of 0.09 ppm, which is a relatively high concentration, by controlling the ozone concentration. The reliability of parts, including the power source, has been improved from the predecessor BACTECTOR O3 series to reduce failures. Adjustment functions for service engineers have also been added to shorten downtime in the event of a failure. The main functions of the BACTECTOR 2.0SC are as follows.

- An ozone concentration sensor which keeps the ozone concentration at a safe and constant level (0.05 ppm/0.09 ppm)
- A reliable occupancy sensor which automatically stops generating ozone when a person or animal gets close to the generator and restarts generation when the person or animal moves away

*3: As of December 2022 in the Japanese market, based on a survey conducted by Konica Minolta.

Creating a Clean and Safe Living Environment for People at Various Locations in Daily Life

Ozone generators can disinfect both viruses and bacteria in the air and those adhering to surfaces in a manned environment. They are widely used in society because they effectively deodorize air, break down pollens, and reduce mites and house dust, without using chemicals that may have health risks, and are cost-effective. The BACTECTOR O3 series, which are the main products manufactured by Tamura TECO, have been installed in 2,700 ambulances nationwide, as well as social facilities used in daily lives in various situations such as reception desks, waiting rooms and nurse stations at hospitals; lobbies and guest rooms at hotels; 24-hour stores such as convenience stores, classrooms and teachers' rooms at schools; lobbies and rooms at long-term care and healthcare facilities for senior citizens; and benches and locker rooms at stadiums. In order to live with Covid-19 in daily life, these facilities are expected to introduce new ozone generators or replace existing ones, while restaurants are also expected to introduce ozone generators. All the existing ozone generators of the BACTECTOR O3 series installed in ambulances will be replaced by 2025.

Using Technologies for MFPs and Healthcare Products

Ozone is generated by applying a high voltage to a generator, generating electromagnetic waves, or "noise." This noise is harmful to electronic devices nearby and could cause them to malfunction. Konica Minolta has technology for suppressing noise, because MFPs use a high-voltage power source during printing. This technology was used in the ozone generation process. The product was seamlessly commercialized through a rigorous process, including assessment, ranging from product planning to design and manufacture, based on the model of Konica Minolta's healthcare products.

Overview of DMC-MIKAWA

DMC-MIKAWA, the global mother plant of the Konica Minolta Group, is committed to the production of diverse products in variable quantities in Japan, stable supply to Tamura TECO, and the security and safety of new products. It can handle mixed production efficiently and manufactures main parts in-house through integrated production, starting

from dies and molds, allowing various products to be produced in smaller quantities for the supply chain.

Background of the Collaboration

Faced with surging demand for ozone disinfection systems due to the Covid-19 pandemic, Tamura TECO struggled to supply products, including procurement of parts and production. In December 2020 Tamura TECO and Konica Minolta started to work as partners in procuring necessary parts to increase their capacity to manufacture ozone-related products. The two companies have also collaborated to sell Tamura TECO's existing ozone-related products, which are suitable for offices and nursing care facilities, in Japan through the sales channels of the Konica Minolta Group. In March 2022, mass production of BACTECTOR 2.0MD for professional use started at DMC-MIKAWA as the first step of joint development.

Konica Minolta is committed to improving its corporate value by addressing social challenges toward 2030 and beyond, such as improving fulfillment in work and corporate dynamism, supporting healthy, high-quality living, ensuring the security and safety of society, effectively utilizing limited resources, and addressing climate change, by increasing intangible assets and business competitiveness through digital transformation (DX) and by constantly offering value to customers and society. In its unique value creation process, Konica Minolta aims to attain "people-centric pursuit of motivation and satisfaction in life" and "realization of a sustainable society" at the highest level.

Related Link

About the effectiveness of low-concentration ozone for inactivating Covid-19 (Tamura TECO)

<https://teco.co.jp/wp/topix/9035>

(in Japanese)

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