

August 4, 2025

Meidensha Corporation

Pure Ozonated Water Generator registered with WIPO GREEN

Meidensha Corporation has registered its Pure Ozonated Water Generator (hereinafter, “the Product”) with WIPO GREEN, the U.N. World Intellectual Property Organization’s international platform for environmental technologies ([Wipogreen Database](#)).

The Product, which was jointly developed by Meidensha, its subsidiary Meiden Nanoprocess Innovations, Inc., and EcoDesign, Inc., a manufacturer specializing in ozone-related products, generates ultrahigh-concentration, high-purity ozonated water. It incorporates three patented technologies (Patent Nos.: 7,567,959; 7,567,960 and one unexamined patent publication: 2024-090631).

Having endorsed the WIPO GREEN goals of promoting the use and spread of environmental technologies, Meidensha joined the platform in March 2022 as a partner company supporting its activities. It was the 6th time that Meidensha has registered a product with WIPO GREEN.

■ Product overview

The Product is built around Meiden’s proprietary Pure Ozone Generator (POG) technology, which produces ultrahigh-concentration, high-purity ozone gas. The POG technology refines ozone derived from oxygen using a specialized cooling method, safely delivering nearly 100% pure ozone. This technology enables generation of ultrahigh-concentration ozonated water (up to 400 mg/L*, one of the highest levels in the industry), providing strong cleaning and sterilizing performance. Also, used ozonated water decomposes back into harmless water and oxygen, offering an eco-friendly alternative to environmentally harmful chemical agents commonly used in semiconductor manufacturing and industrial cleaning.

*The concentration achievable under certain conditions.



Pure Ozonated Water Generator

■ Applicable fields

1. Semiconductor manufacturing: Removal of organic matter, including resist, by high-ion injection
2. Industrial cleaning: Degreasing of industrial products
3. Surface treatment: Improving surface quality of carbon fibers, such as those made from carbon resins
4. Powder treatment: Enhancing surface quality of powders, such as paint pigments
1. Environment: Conventional ozonated water uses, including virus sterilization, deodorization, and sewage treatment

■ Product features

1. Ultrahigh concentration, high purity
The water contains nearly 100% pure ozone gas with no impurities (e.g., oxygen, other gases, heavy metals), enabling extremely high-concentration, high-purity ozonated water.
2. Long retention of high concentration
Because ultrahigh-concentration, high-purity ozonated water is produced without injecting gas at high pressure, no gas escapes at atmospheric pressure, allowing the high ozone concentration to be maintained for an extended period.
3. High cleaning performance, reduced environmental impact
Proprietary processing technology enables removal of organic matter that previously required environmentally harmful chemicals.
4. Surface quality improvement
The strong oxidation reaction of ultrahigh-concentration ozonated water is expected to improve surface quality of treated materials, including hydrophilicity.

5. Powerful sterilization and disinfection

High ozone content provides strong oxidation, delivering effective sterilization and disinfection.

6. Safe design with automatic monitoring

Designed to SEMI* safety standards and equipped with automatic, 24/7 monitoring functions that can stop the system in response to ozonated-water or gas leaks.

*SEMI Standards: Voluntary technical standards for semiconductor equipment, materials, environment, health, and safety, developed by the international association Semiconductor Equipment and Materials International (SEMI) to promote the development and standardization of the semiconductor industry.

Meidensha's ozonated water

Theoretically does not contain impurities, such as heavy metals.

General ozonated water

Contains four times more other gases than ozone

Feature 1: Ultrahigh-concentration, high-purity ozonated water

Concentration curve of ozonated water in the atmosphere

Ozonated water concentration

Time elapsed (min)

Feature 2: Long-lasting concentration

Meidensha is dedicated to developing and promoting environmental technologies to help create a sustainable society.

■ Press releases for reference

• Dated March 28, 2022

Meiden participates in WIPO GREEN platform of environmental technologies as partner

https://www.meidensha.com/news/news_03/news_03_01/_icsFiles/afieldfile/2023/10/13/20220328EN.pdf

- Dated June 26, 2023
Meidensha starts selling Ultra-high concentration/High purity Ozone Water Generator
https://www.meidensha.com/news/news_03/news_03_01/_icsFiles/afieldfile/2023/10/13/20230626.pdf

■ List of technologies registered with WIPO GREEN (as of August 2025)

Registered month, year	Registered technology	Nos. of patents	WIPO GREEN Database	Meidensha product website
February 2022	Eco-Tank Type Vacuum Circuit-Breakers	5	Wipogreen Database	Eco-Tank Vacuum Circuit Breakers (Dry Air Insulated)/Vacuum Circuit Breakers/ Meidensha
December 2022	Ceramic Flat Sheet Membrane for Water Treatment Equipment	4	Wipogreen Database	Ceramic flat sheet membrane system/Industrial wastewater treatment systems/ Meidensha
February 2024	Charging/Discharging Battery Test Device	5	Wipogreen Database	
September 2024	Cubicle-type Dry Air Insulated Switchgear (Eco C-GIS)	2	Wipogreen Database	C-GIS for general electricity customers/High Voltage Switchgear (GIS)/ Meidensha

December 2024	Inverters for Battery Energy Storage System with Virtual Synchronous Generator Functions (VSG-PCS)	5	<u>Wipogreen</u> <u>Database</u>	
July 2025	Pure Ozonated Water Generator	3	<u>Wipogreen</u> <u>Database</u>	Pure Ozonated Water Generator (Ultra-high Concentration/High Purity) /Semiconductor manufacturing equipment/ Meidensha

■ Meidensha's initiatives regarding WIPO GREEN

<https://meidensha.disclosure.site/en/themes/88>