



PlasmaConnect™ 5

FULLY AUTOMATIC PLASMA OXIDATION SYSTEM (AOP) FOR WATER TREATMENT

PLASMACONNECT™ COMPACT OXIDATION SYSTEM

PlasmaConnect™ is a modular, ready-to-use oxidation system for drinking water and wastewater treatment based on innovative C-ION™ technology. It uses non-thermal plasma (NTP) for advanced oxidation of water pollution using ionised air. It is already being used successfully in wastewater and drinking water treatment as well as in water reuse applications. Thanks to its high efficiency, easy integration and broad effectiveness against a wide range of pollutants, C-ION™ sets new standards in modern water treatment.

The technology is based on the generation of reactive oxygen species (ROS) by dielectric barrier discharge (DBE) in ambient air – without the need for complex supply air treatment. These ROS have a high oxidation potential and enable the effective degradation of organic and inorganic pollutants. These include drug residues, hormones, pesticides, herbicides, dyes and humic substances, as well as metals such as iron, manganese and arsenic. The process also has a disinfecting effect.

The NTP is introduced into the water to be treated via an immersed turbine or via external blowers and a floor-mounted ventilation system (diffusers). The modular system design allows for easy retrofitting of existing systems – regardless of system size or application.

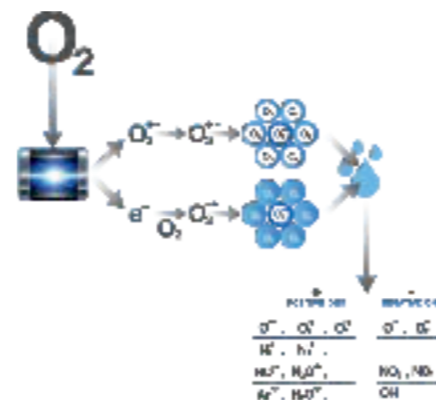
APPLICATIONS

DRINKING WATER

- For municipalities and water cooperatives
- Iron, manganese and arsenic removal
- Colour and humic substance removal

WASTEWATER REUSE

- Industrial wastewater: pre-treatment and post-treatment
- Removal of anthropogenic trace substances as a fourth treatment stage in municipal sewage treatment plants
- Optimisation of biological purification stages (reduction of bulking sludge)



C-ION™ NTP Process

PRODUCT HIGHLIGHTS

- Fully automatic operation with PLC control and touchscreen visualization
- Connection to building management system and remote maintenance possible
- No supply air treatment or external cooling required
- Very low energy consumption, very low operating costs
- No continuous addition of chemicals necessary
- Robust, low-maintenance system without precision mechanical components
- Compact design with low space requirements
- Significantly lower energy consumption compared to ozone and classic AOP processes

ADVANTAGES AT A GLANCE

- Modular, flexibly scalable and easy to retrofit
- Ready for immediate use (plug & play), no start-up time
- High oxidation potential through the formation of hydroxyl radicals (AOP)
- Environmentally friendly: low energy consumption and no hazardous oxidation chemicals
- Easy integration into existing infrastructure
- Durable components, low maintenance

TECHNICAL DATA

	Base unit	PlasmaConnect 5	PlasmaConnect 10
Plasma generation	Dielectric Barrier discharge	Dielectric Barrier discharge	Dielectric Barrier discharge
Plasma type	Non-thermal Plasma	Non-thermal Plasma	Non-thermal Plasma
Number of plasma units	1	5	10
Max. throughput*	up to 5 m ³ /h	up to 25 m ³ /h	up to 50 m ³ /h
Connected load	approx. 0.1 kW	approx. 2.0 kW	approx. 2.5 kW
Power supply	230 V / 50 Hz	400 V / 50 Hz	400 V / 50 Hz
Max. diffuser installation depth	1 m	2 m	2 m
Operating temperature	4-40°C	4-40°C	4-40°C

*depending on the application and water quality