

# ozonia<sup>®</sup> XF<sup>™</sup>

## ozone generator systems



The **ozonia<sup>®</sup> XF<sup>™</sup>** range of ozone generators is our latest development that has set new standards for ozone production worldwide. Ozone production from **25 kg/h to over 250 kg/h** with a single ozone generator.

### applications

For applications where larger quantities of ozone are required such as:

- ▶ drinking water
- ▶ industrial & municipal wastewater
- ▶ pulp & paper
- ▶ water circulation system

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WATER TREATMENT SOLUTIONS

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ready for the resource revolution





ozone production from 24 kg/h to over 250 kg/h  
with a single generator unit

# ozone technology: ozonia<sup>®</sup> XF<sup>™</sup>

The SUEZ research team has developed a completely new dielectric technology that will replace the phenomenally successful AT<sup>™</sup> (Advanced Technology) in larger units.

The patented new technology - IGS<sup>™</sup> (Intelligent Gap System) - takes ozone generation to levels never before thought possible.

## how it works

IGS<sup>™</sup> ozone generation equipment offers users market-leading performance, and SUEZ's well-proven design technology for generating ozone from oxygen.

The major advance came when "AT" was commercialized. The adoption of non-glass dielectric material, combined with SUEZ's standard practices, revolutionized the ozone market. The latest development of the IGS<sup>™</sup> product has taken ozone generation technology to unparalleled levels.

The advantages are manifold, and many of these are unique to SUEZ:

- IGS<sup>™</sup> dielectrics are more robust than glass
- they offer the lowest specific power consumption available on the market
- the operating voltage of approximately 4000 V is lower than that of glass
- each dielectric element is tested at over twice the operating voltage before installation; glass cannot be tested in this manner
- the "Intelligent Gap System" (IGS) optimizes the ozone generator design, which enhances all aspects of the operating parameters
- SUEZ's system of individual fuses for each tube is employed, ensuring that a single dielectric failure does not shut down the generator. Without this protection, projected dielectric failure rates equate directly to generator downtime
- the generators are floor mounted allowing easy inspection and, if required, allow convenient access for maintenance

## a "green" chemical environment with ozone

ozone is not only useful for disinfection, it is equally useful for synthesis purposes, etc. The advantages that ozone offers are manifold:

- ▶ a high reaction yield
- ▶ no waste products

With these benefits, ozone has a considerable - but to date little used - potential as the "green" chemical for all applications involving an oxidation process.

## where can it be applied?



### pulp & paper industry

- ▶ ozone is extremely popular in the paper industry where one of its main uses is for the bleaching of the pulp, today especially for dissolving pulp. It is also used extensively for the treatment of the wastewater from pulp and paper plants.



### water circulation systems

- ▶ In industry, ozone in conjunction with filtration is an effective combination to treat many problems.



### industrial & municipal wastewater

- ▶ Legislative pressure is forcing industry and municipal bodies to improve the quality of the wastewater before discharging to the environment.



### drinking water plants

- ▶ The ozonia<sup>®</sup> XF<sup>™</sup> ozone generator units will be of special interest to clients operating drinking water installations such as those found on remote sites without a great deal of infra-structure.

# options & ancillary equipment



## technical data

- **design standards:** EN, IEC, ISO, SN, ASME, SELO (China)
- **conformity:** CE, ASME, China

## materials

- **ozonia® XF™ vessel:** stainless steel, special ceramic, Viton

## feed gas equipment

The **ozonia® XF™** range of ozone generators have been designed for oxygen or air feed gas. There are two main ways to obtain oxygen feed gas: from a liquid oxygen storage (LOX) or from an in situ oxygen production (PSA, VPSA or VSA).

## cooling water equipment

This equipment will be required when the specified amount or quality of cooling water is not available on-site. Depending on the site condition, SUEZ can supply and install a closed cooling water system with pump and heat exchanger or with pump and chiller (air cooled or water cooled).

## ancillary equipment

To give clients the best possible service, SUEZ also markets and manufactures ranges of ancillary equipment which has been especially selected or designed to match the service parameters of our ozone generators. This ancillary equipment includes: ozone contacting equipment (injectors, radial diffusers and porous diffusers), vent ozone destruct units (both thermal and catalytic versions), process control equipment, electrical plant control systems, analytic equipment, etc.

## installation/service

It is normal that ozone generators in the **ozonia® XF™** class are installed in secure rooms in a building. In many cases, clients do not have a convenient room and have to invest sums of money for a new building. In order to save such expenditure, and to simplify the installation and commissioning phases, SUEZ can offer clients the unique service of installing the complete ozone generation plant in containers which can be simply placed on a plinth, connected-up and commissioned.

## product highlights

- ▶ low power consumption
- ▶ high efficiency
- ▶ long service life
- ▶ low maintenance
- ▶ high availability
- ▶ small footprint

## main features

- ▶ this new range will cover ozone production capacities from 25 kg/h to over 250 kg/h with a single generator unit
- ▶ concentrations from 6 wt% to 14 wt%
- ▶ in the past, the capital expenditure and/or the operational costs have had a limiting effect on the use of ozone
- ▶ with SUEZ's new development, both the equipment cost and operational costs have been drastically reduced
- ▶ this equipment will be supplied in component-form for installation in a building on the client's site or as part of a fully assembled and tested containerized plant

SUEZ's **ozonia**® ozone technology portfolio includes products from the laboratory scale to the largest ozone systems ever built. Suez uses our extensive ozone technology experience to provide the industry's most reliable and robust products.

Our unique ability to deliver the most reliable and robust systems is why thousands of customers around the world have chosen **ozonia**® ozone systems.

We have been the ozone industry pioneer for over 25 years. Trust SUEZ to deliver the highest quality ozone solutions to meet your treatment challenges.

7  
product ranges  
certified to  
international  
standards

over  
10,000  
installations

over  
25  
years of  
experience



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