



**OZONE  
WATER  
TREATMENT  
SYSTEMS**

The Best  
Performance  
in Water  
Treatment



Get the most  
from your ozone  
system with  
Mazzei/GDT  
Contacting

## The More You Know

In the industrial and municipal water treatment industry, the true value and total cost of ownership of a treatment system or a retrofitted system depends on a number of factors. How reliably and efficiently will it perform? Not just on Day 1, but on Day 1000? What will be the frequency and cost of maintenance and repair? How compatible is the proposed system with your current operation? What is the cost of alternative treatment systems? How will effectiveness be measured? What is the size of the overall footprint?

The more you know about Mazzei's ozone water treatment solutions, the more you'll appreciate why Mazzei is becoming the choice of designers, engineers, operators and C level managers including CFOs. Our systems work the way a system should: efficiently, effectively and reliably with minimal oversight and maintenance.

## Benefits of Ozone Transfer

Effectively dissolve ozone into solution. Take advantage of a technology industrial water users and municipalities have been employing for years: ozone treatment. When ozone (O<sub>3</sub>) is dissolved into water in the proper amount, it rapidly reacts with contaminants and readily inactivates organisms, leaving behind pure, clean water. It greatly reduces or eliminates the need for chemicals such as chlorine that are not only environmentally problematic but also unpleasant tasting.



## MAZZEI OZONE TRANSFER SYSTEMS

Mazzei has been developing ozone transfer systems for the industrial and municipal water industries for more than two decades. From rural water purveyors treating a few gallons per minute to large municipal plants treating millions of gallons per day, Mazzei provides proven, cost-effective solutions.

### Patented Mazzei® Injectors – The Heart of the System

Mazzei systems begin with our patented venturi-type injectors with internal mixing vanes. Mazzei Injectors are so efficient that they operate effectively with only a minimal pressure differential between the inlet and outlet sides to initiate a vacuum at the suction port. The injectors are made of strong, ozone-resistant NSF Certified PVDF or stainless steel. Mazzei Injectors deliver proven performance. With no moving parts, they offer years of trouble-free operation.

### Designing Your System

Every system is unique and requires focused engineering and planning. Mazzei's broad spectrum of equipment and experience allows for system development that is cost effective, efficient, and application specific. While the equipment size and configuration may vary from one system to the next, they all maximize system efficiency.

### Mass Transfer Multiplier (MTM) Nozzle

The MTM Nozzle forces dissolved ozone to thoroughly mix with untreated water in a pipeline or basin. When used in conjunction with the injector, the nozzle dramatically expands a system's contacting ability for dissolving treatment gases.

### Mazzei Nozzle Manifold

With a Mazzei nozzle manifold retrofitted to an ozone contact basin, municipal water treatment plants can greatly increase ozone transfer efficiency and eliminate the high maintenance cost of fine bubble diffusers.

### Flash Reactor

The Flash Reactor provides high-velocity mixing and re-shearing to increase ozone mass transfer.

### Pipeline Flash Reactor

By providing high ozone transfer within the raw water pipeline, the Pipeline Flash Reactor reduces size requirements of municipal ozone contact basins and rapidly attains a homogeneous mix of dissolved ozone to increase CT credits.

### Degas Separator

Using centrifugal force, the separator provides additional gas mixing and extracts 97% of undissolved, entrained gas bubbles.

### GDT Process

One of the fastest, most effective ozone transfer systems available, this small footprint/high efficiency combination of injectors, flash reactors, and degas separators is ideal for preoxidation in water treatment installations with limited space for a contact basin. It reduces distribution system corrosion and helps eliminate consumer complaints about milky water so final air sparging is not required. Plus, the installation cost and required maintenance are both extremely low.



**Pipeline Flash Reactor®**  
Customized for each application



**Mazzei® Injectors**  
Various sizes and models to meet performance requirements



**Mass Transfer Multiplier™ Nozzles**  
Various sizes to match the application



**Ozone Transfer Skids**  
Complete and portable

## Just What You Need

Why settle for a pre-packaged “one-fits-all” system? Whatever your water treatment needs, Mazzei’s computerized system design and experienced representatives can quickly recommend the system you need for specific ozone water treatment applications, including:

- ▶ Clean-in-place disinfection
- ▶ Mobile trailer-mounted water main disinfection
- ▶ Mobile surface sanitation
- ▶ Pre-filter oxidation of metals such as iron and manganese
- ▶ Pre-filter microflocculation to reduce polymer consumption
- ▶ Oxidation of taste and odor compounds such as H<sub>2</sub>S, Geosmin and MIB
- ▶ Water system disinfection
- ▶ Advanced oxidation for waste stream clean up
- ▶ Aquarium life support
- ▶ Disinfection of processes water



## Total Cost of Ownership

When weighing your options, the capital cost of design and implementation is just one of the criteria. Engineers and C level managers also consider:

### *Performance*

Mazzei systems provide time-tested reliability in high-efficiency ozone mass transfer and off-gas control in a small footprint design.

### *Maintenance*

Fewer moving parts and superior technology mean minimal fouling and down time.

### *System Integration*

Flexible and application-specific installations can be retrofitted to any system.

### *Support*

Whether you have a question during installation or long after the sale, our experienced and responsive support team is ready to help.



### **Why Mazzei**

Since 1978, Mazzei has distinguished itself by an ability to evaluate problems and develop innovative solutions in the water treatment industry. When you need a system and a supplier that both deliver long-lasting service and value, there's only one name you need to remember: Mazzei.



Contact us today.

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