



PRESS RELEASE
For Immediate Release
Media Contact:
Jim Lauria 661.808.1005

The Next Generation in Ozone Transfer Technology

BAKERSFIELD, Calif. (June 20, 2019) —Mazzei has utilized their expertise in mixing, contacting and multiphase computational fluid dynamics (CFD) modeling to develop the new Pipeline Flash Reactor™ PLUS (PFR+) to address the challenges facing water treatment facilities today. The high ozone dosage required in many water treatment systems, such as those required by water reuse projects, places extraordinary energy and mixing demands on ozone mass transfer. By folding, blending, and mixing—without obstructing the flow—the PFR+ can handle the challenging conditions of higher rates of ozone at large turndowns and in low-velocity situations, without requiring a significant pressure drop through the system. The result is a mixing design that makes more efficient use of ozone while also decreasing the energy demand related to maintaining pressure in the pipeline—the economic savings of maintaining pressure is significant.

The PFR+ is used with a Mazzei sidestream gas injection skid for a complete ozone dissolution system for disinfection and advanced oxidation. In these systems, a small portion of the water flow from the main pipe is diverted into a sidestream. Using Mazzei venturi injectors, ozone gas is injected into this sidestream. This two-phase flow is then sent to the PFR+ which then utilizes high velocity mixing to transfer the ozone enriched sidestream into the bulk water flow. Ozone mass transfer occurs within seconds and eliminates the need for additional basin gas contacting. The PFR+ optimizes turbulent mixing for maximum mass transfer in the most efficient way possible.

To get a better understanding of how the PFR+ works, check out the [Mazzei PFR+ animation](#) on YouTube.

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About Mazzei

Mazzei Injector Company, a leader in the design and manufacture of fluid mixing and contacting technologies, provides systems and components for ozone, aeration and chemical treatment for the industrial and municipal water and wastewater sectors. For more information, visit www.mazzei.net or contact Mazzei at 661.363.6500.