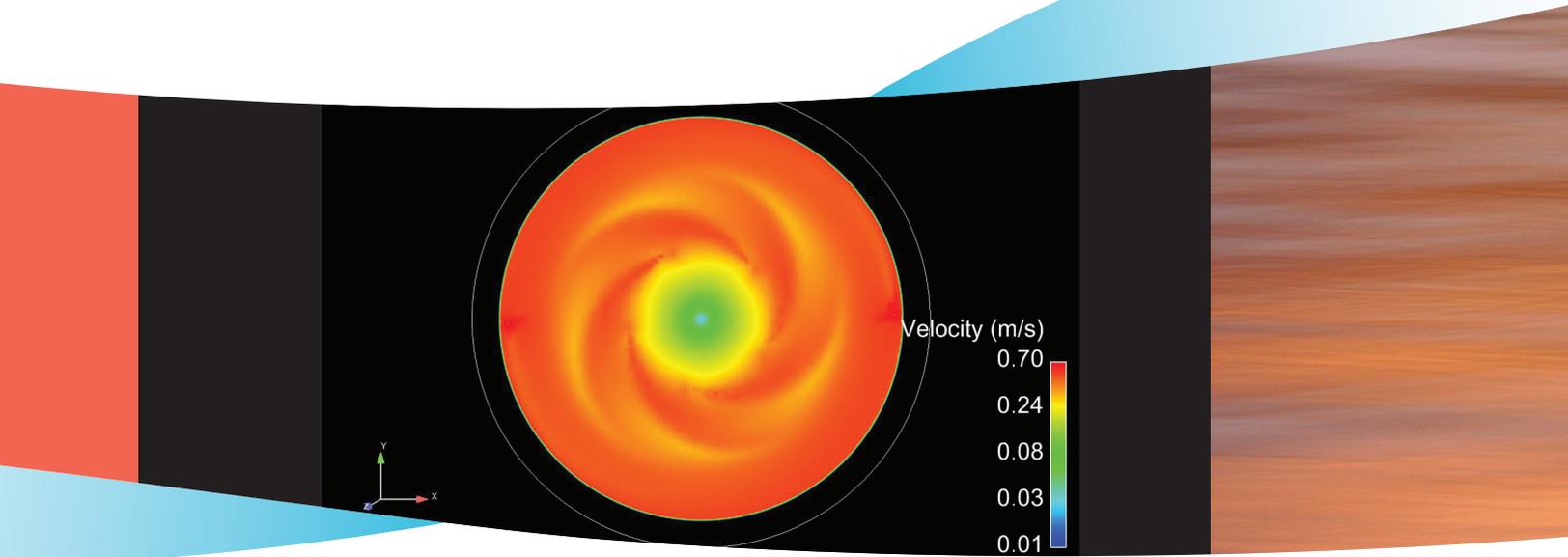


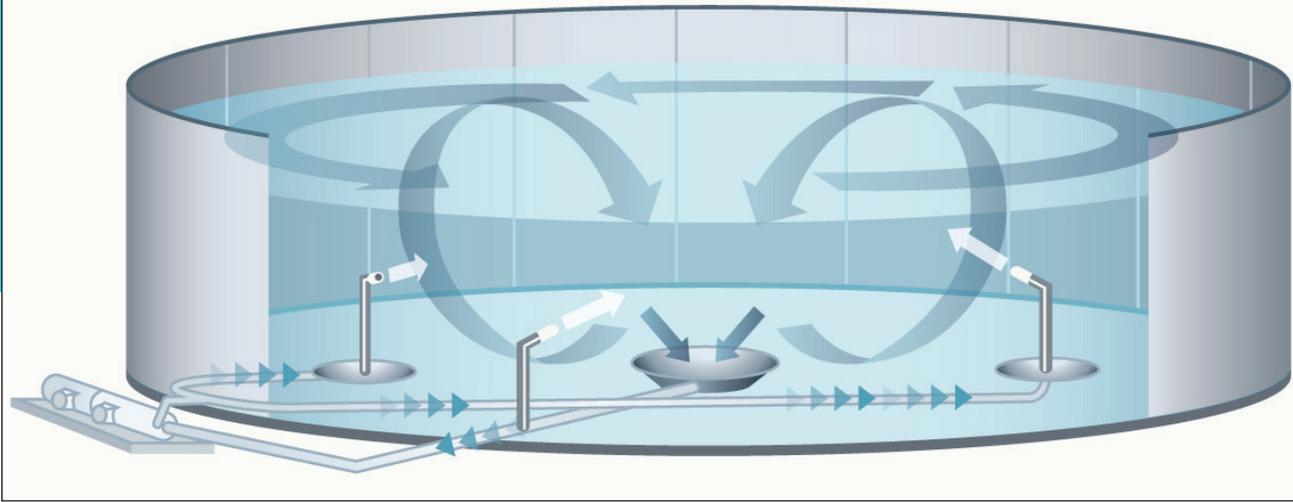


evoqua
WATER TECHNOLOGIES



JETMIX™ VORTEX MIXING SYSTEM

BETTER MIXING WITH LESS ENERGY DEMAND



The JetMix™ mixing system creates a very efficient mixing pattern as shown above and demonstrated on the cover graphic.

GETTING THE RIGHT MIX

The Anaerobic Digestion process uses bacteria to break down waste into biogas. Mixing is an important part of the process because it maximizes reaction rates, increasing the amount of biogas produced.

The JetMix™ Vortex Mixing System provides better mixing with less energy demand for optimal performance. Its innovative, proprietary nozzle design provides unmatched mixing and energy efficiency. In addition, the system is easy to install, operate and maintain.

Why Mix?

Mixing maximizes reaction rates, maintains uniform conditions such as temperature and pH, and reduces the impact of toxic materials and shock loads. Mixing also minimizes the scum layer and maintains active digester volume by minimizing grit accumulation.

Why choose the JetMix System?

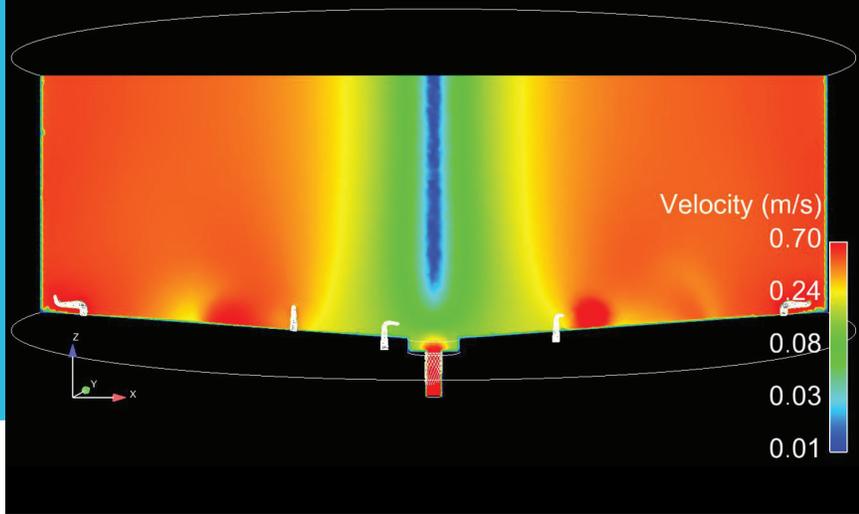
The JetMix Vortex Mixing System has been proven in over 250 installations in the U.S. and around the world. The benefits are applicable to a wide range of applications from anaerobic digestion and sludge storage tanks to food processing and mining waste. Evoqua provides custom engineered solutions for each application in order to maximize performance.

BENEFITS OF JETMIX SYSTEMS

- Highly efficient hydraulic mixing with significant energy savings
- Proprietary nozzle design for unmatched mixing performance
- Easily installed, new or retrofit, with no special structural needs
- Adapts to any size or type of tank, including very wide, buried, circular, square, rectangular, and flat floor tanks as well as channels
- Mixes multiple tanks using one central pumping facility
- Eliminates moving parts in the reactor and requires no scheduled maintenance inside the tank
- Customized to meet application needs



JetMix™ System proprietary nozzle placement.



CFD Model output of digester tank with JetMix™ System



JetMix™ Vortex Mixing System with internal piping.

THE JETMIX™ SYSTEM ADVANTAGES

High Performance Mixing

The JetMix™ system suspends organic and inorganic solids with intermittent mixing. This method uses less energy than alternative technologies. The system maintains efficiency regardless of tank level and can meet strict mixing specs:

- Volume mixed: > 95% in less than 1hr
- Tank profiles reveal: Temperature: $\pm 1^\circ$ C and Solids: ± 10 %

Innovative Nozzle Placement

The proprietary location of JetMix system nozzles is based on computer models and field experience to maximize mixing and minimize energy input. The nozzles are mounted at the bottom of the tank with piping typically located underneath the tank floor. Internal piping on the tank floor has also proven to be effective without significantly affecting the flow pattern in an existing tank.

The JetMix system nozzle design creates optimal mixing currents that sweep the tank floor and minimizes solid build-up. The nozzle discharge orifice is sized specifically for the application.

Robust Nozzle Construction

Nozzles are heavy duty, abrasion resistant and custom engineered as a single piece to minimize internal headloss. Manufactured of Type C Chrome-iron with 450/550 Brinell Hardness, the nozzles have smooth taper and straightening vanes which reduce headloss.

Pumps and Piping

Where coarse solids are not a factor, pump selection can be varied. In applications such as municipal biosolids, where rags or long fibrous masses are present, chopper pumps are needed to prevent system plugging and maintenance problems.

A single chopper pump can be used to mix multiple tanks, especially where infrequent mixing is practiced (such as in longterm biosolids storage, leachate storage and certain batch processes).

The proprietary JetMix system design uses less flow to mix the tank, resulting in smaller pump and pipe sizes and reduced capital costs.

Foam Control

The JetMix system eliminates unnecessary tank turbulence and minimizes foaming. An optional top nozzle is also available to break up floating foam and scum as needed



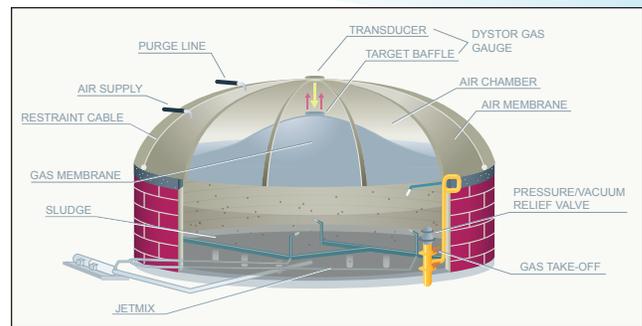
Optional top nozzle for breaking surface crust.



FLWSHEET SOLUTIONS: TECHNOLOGY COMBINATIONS CREATE GREATER VALUE

Evoqua draws on its leading wastewater portfolio and applications experts to support projects where multiple technologies can be combined into high performing, lowest cost solutions. The JetMix™ System for example can be combined with:

- The Dystor® gas holder system that holds up to six times as much gas as conventional covers to maximize the available energy benefits of anaerobic digestion
- The Captivator® System which generates up to 40% more biogas while reducing aeration energy up to 40%
- The Crown® Disintegration System that increases biogas yield up to 30% while reducing sludge disposal volume by up to 20%



Flowsheet Solutions from Evoqua provide expertise and project support across technologies. The JetMix System easily integrates into a Dystor gas holder system.

Visit www.evoqua.com/jetmix to connect with a JetMix expert.



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