



JetMix™ System

The Vortex Mixing System

SIEMENS



JetMix™ Vortex nozzles mounted to tank floor.



JetMix™ Vortex Mixing System arranged for optimum mixing efficiency.

JetMix™ System – Over ten years of innovative tank mixing success

The Right Mix

The JetMix™ Vortex Mixing System has been successfully proven in over 250 installations in five countries. The JetMix™ System is easy to install, operate and maintain. With a proprietary nozzle design, the JetMix™ System provides unmatched mixing efficiency.

The many benefits the JetMix™ System delivers are applicable to a wide range of applications. We carefully engineer each installation to take full advantage of the tank's natural hydraulic characteristics in order to achieve optimum mixing, especially of solids. The payoff is that the JetMix™ System consistently:

- Suspends organic and inorganic solids with intermittent mixing, making possible power savings of up to 50 percent or more
- Maintains mixing efficiency regardless of tank level
- Slashes capital and operating expenses
- Minimizes dead spots due to mixing pattern
- Installs easily, new or retrofit, and 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 efficiently using one central pumping facility; JetMix™ equipment can even be used to load application vehicles
- Requires no scheduled maintenance inside the tank
- Reduces or eliminates the need for operators to enter tank, minimizing safety concerns
- Eliminates nozzle maintenance

JetMix™ System is Not Limited to Fixed Nozzle Systems

No alternative mixing technology measures up to JetMix™ System in efficiency or economy. That is most evident when comparing the JetMix™ System to other nozzle systems, especially in applications that require periodic tank cleaning. With conventional mixing systems, draining, cleaning and refilling the tank, then restarting the mixer, is costly, time-consuming and disruptive. With the JetMix™ System, this process is completely unnecessary. Optional rotatable gearboxes eliminate the need for tank draining and represent less than ten percent of the cost of a single cleaning. Using plant utility water, the JetMix™ System can even clean tank bottoms, a huge savings over the other cleaning methods. Other areas where the JetMix™ System outperforms other nozzle systems include:

- During start-up, JetMix™ nozzles can be rotated to fine-tune the mixing pattern
- In sludge applications, when unexpected changes occur, it is easy to rotate JetMix™ nozzles to regain the pattern
- To reduce total sludge volume in long-term storage, the JetMix™ System can resuspend solids into a homogenous mass after long idle periods, which allows the operator to decant supernatant on a regular basis under quiescent conditions
- Power failures result in solids settling to the tank floor; rotatable nozzles are an effective way to redirect nozzle plumes to sweep the settled solids and continue mixing
- Optimal Top Nozzle minimizes floating foam and scum



Optional top nozzle for breaking surface crust.



Optional rotatable mixer nozzle.

Efficiency Through Simplicity

JetMix™ Systems are carefully tailored to precisely meet your mixing needs. System components include: mixer nozzles, optional top nozzle, mixer pumps and an optional rotatable nozzle kit. Components and materials of construction vary by application.

Mixer Nozzles

JetMix™ nozzles are mounted at the bottom of the tank to create a flow pattern that maximizes mixing efficiency. Nozzle location, velocity and direction of discharge are chosen to achieve the flow pattern that best answers your needs. Optional rotatable nozzles allow adjustments to the flow pattern to optimize mixing efficiency and/or clean specific parts of the tank. Piping to the nozzles is usually located under the tank floor to reduce obstructions; however, internal piping has proven to be effective without significantly affecting the flow pattern in an existing tank.

Optional Top Nozzle

For applications where floating scum or surface crust is a potential concern, a JetMix™ System equipped with an optional over-the-top nozzle can help break up surface crust as needed. The unit can be locked in place or it can be manually directed to washdown the side walls. This proven solution has been successfully applied to control anaerobic digester foaming.

Mixer Pump

Where coarse solids are not a factor, pump selection can be varied to match existing pump types. In applications such as municipal biosolids (where rags or long fibrous masses are present), chopper pumps are needed. Their use prevents fiber masses from reforming and plugging the system or causing maintenance problems. A single JetMix™ pump can be used to mix multiple tanks, especially where infrequent mixing is practiced (such as in long-term biosolids storage, leachate storage and certain batch processes).

Rotatable Nozzle Kit (Optional)

For applications where there is a need to periodically rotate the nozzles, an operation station with hand wheel is provided on the tank exterior for manual rotation and full 360 degree adjustment of the interior mixer nozzles located on the floor of the tank. The wheel is connected to the mixer and its rotation permits total optimization of the tank's mixing pattern. A gearbox attached to each nozzle is factory sealed, so that no scheduled maintenance will be required inside the tank. The station has a direct-reading indicator that allows the operator to monitor nozzle position. The nozzle operator station also permits easy cleaning of the tank. Rotatable nozzles are the best answer to rectangular tank applications.

Name Your Application

The proprietary JetMix™ System is specially designed to handle solids and slurries, and has been successfully applied in a wide range of both municipal and industrial applications.

Municipal

- Biosolids Storage
- Anaerobic Digesters
- Aerobic Digesters
- Flow Equalization Tanks
- Blend Tanks
- Leachate
- Backwash Tanks
- Potable Water
- Anoxic Zones

Industrial

- Paint Waste
- Solvents
- Pretreatment Storage
- Chemical Waste
- Chemical Blending
- Biosolids

Share your tank mixing needs with us. We'll provide a detailed quotation for a customized JetMix™ System that will solve specific problems, deliver the mixing efficiency you require and pass along significant cost savings to make it all worthwhile. It's the right mix. It's the right choice.

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