

BIOSOLIDS | BIOGAS

LM™ MIXER

EFFICIENT LOW ENERGY SLUDGE MIXING



Bringing water to life

LM™ MIXER WHEN LESS IS MORE

Designed for powerful mixing of viscous fats, oils, and greases. With a ragless, low-maintenance design, it cuts energy use and reduces installation and capital costs. Ideal for new or existing tanks.

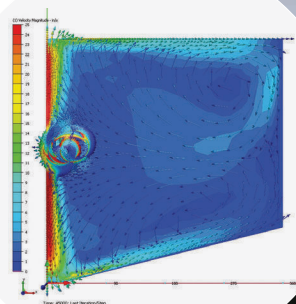
HOW IT WORKS

UNIFORM MIXING

The LM (Linear Motion) mixer is designed to mix the viscous slurries in order to achieve a homogeneous mixture in the tank while using less energy at the same time. The LM mixer offers solutions to the challenges of mixing wastewater in both thin and thick sludge applications.

The frequency, stroke and size of the hydro-disk control the force and velocity of the liquid core. The LM mixer's oscillating motion produces a flow pattern that approaches nearly isotropic (uniform) mixing and does not display the turbulence intensity or vortices of rotary mixers. Additionally, LM mixers operate by using pulsating pressure waves in conjunction with the oscillating velocity. In this type of concurrent action the oscillating pressure wave and velocity are coupled together to enhance mass transfer and produce a uniform mixture of the tank's contents.

Each tank configuration is different and therefore the LM mixer is custom designed to meet a variety of mixing demands by varying the frequency, stroke and disk size. Utilizing the power of Computational Fluid Dynamics (CFD), tanks can be modeled and analyzed for proper mixer sizing.

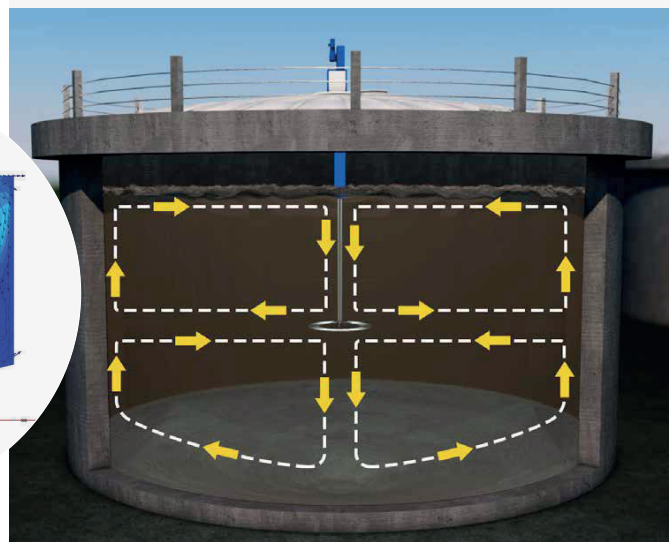


ANAEROBIC DIGESTION

Anaerobic Digestion is highly dependent upon effective sludge mixing. When tank content is inadequately mixed, stratification occurs and the tank volume is not properly utilized. Most wastewater treatment facilities require thorough and complete mixing to ensure uniform temperature, solids distribution and microorganism contact with incoming sludge, to increase gas production and maximize the solids destruction.

MAJOR ENERGY SAVINGS

- Efficient mixing is critical; therefore, the goal is to achieve the optimal mixing efficiency with the least amount of power.
- Achieving a unique mixing pattern allows for efficient mixing while keeping the energy requirements lower (allowing for the amount saved to be used elsewhere at the plant).
- Independent full scale testing has proven the lower energy needs compared to conventional mixing systems.



KEY BENEFITS

EFFICIENT MIXING TO HELP IMPROVE THE DIGESTION PROCESS

- Only 1 mixer required for a 100 ft. diameter tank.
- Does not rely on induced flow to create the necessary mixing.
- Rags do not build up on disk
- Uniform mixing throughout the tank

PROVEN TECHNOLOGY

- Multiple LiCl tests performed by third parties demonstrate an active volume of 90% or greater.

INSTALLATION COST SAVINGS

- Installation of a single mixer can be completed in a day or less.
- No additional piping needed.
- No core drilling necessary

SUITABLE FOR BOTH NEW AND EXISTING TANKS

- Little to no changes are needed on existing structures

THE OVIVO DIFFERENCE

Anaerobic Digestion is highly dependent upon effective sludge mixing. Ovivo sludge mixers are designed to provide powerful mixing, without accumulating stringy or fibrous material. Highly efficient and featuring low maintenance requirements, they can be used for existing or new digesters. Their configuration is adapted to suit best the specific tank design and application.

ANCILLARY EQUIPMENT

Ovivo can supply all plant required equipment for a complete Sludge Treatment / Anaerobic Digestion plant, including but not limited to:

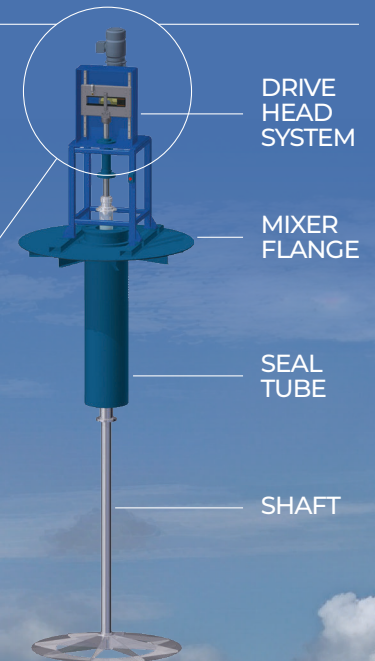
- Ultrastore™ Membrane Gasholder
- Eimix® Mechanical Sludge Mixer
- Ovivo® Anaerobic Digester Steel Cover
- Sonolyzer™ Ultrasound Sludge Disintegrator



LESS HP — MORE SAVINGS

Motor Size	1 Year	5 Years	10 Years	20 Years
10HP	\$4,409	\$25,558	\$59,258	\$159,275
90HP	\$39,684	\$230,023	\$533,319	\$1,433,471
Difference	\$35,275	\$204,465	\$474,061	\$1,274,197

DESIGNED FOR PERFORMANCE



MAIN CONFIGURATIONS FOR THE LM™ MIXER

- **OPERATING SPEED:** 30 CPM (cycles per minute)
- **STROKE LENGTH:** 12 inches, 16 inches or 20 inches
- **DISK SIZE:** 72 inches, 84 inches or 96 inches

**OVER
100**
NORTH AMERICAN
INSTALLATIONS



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Bringing water to life