

Monsal* advanced digestion technology (ADT) pump mixing

effective mixing for sludge storage tanks

overview

All organic waste treatment facilities utilize a significant number of buffer tanks to ensure continuous operation. Maintaining these tanks, minimizing deposition and ensuring mixing of tank contents can be a significant cost in terms of energy consumption and maintenance.

The Monsal ADT Pump Mixing system (Figures 1, 2 and 3) is designed to be a simple, robust and highly effective mixing system that can either be installed in new system or retrofitted to existing tanks.

Using the simple principle of drawing sludge from the tank and reinjecting it into the tank via a series of high velocity nozzles, a bulk flow pattern within the tank is created.

benefits

Monsal ADT Pump Mixing systems offer the following benefits:

- High active volumes >90%
- Fully mixed within 2 hours
- Dry solids concentrations up to 6%
- Simple and easy to maintain
- All maintenance external to tank
- Low mixing energies (5.0 W/m³ to 10.0 W/m³)
- Prevents build-up of volatile fatty acids (VFA) within digester.

- Low power consumption
- Smaller electrical infrastructure requirements
- No internal moving parts
- Easy maintenance and operation

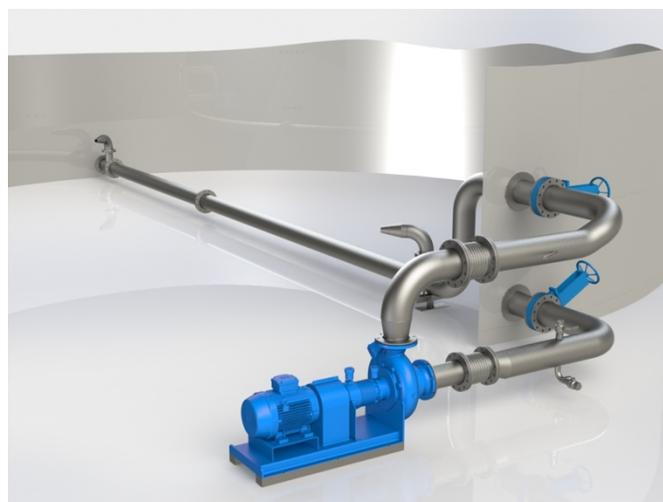


Figure 1: Monsal ADT Pump Mixing System

applications

The Monsal ADT Pump Mixing system is especially suited for:

- Tank depths from 1.5m upwards
- Any roof or tank configuration
- Ground mounted for easy access
- Simple and easy to maintain
- Retrofit applications

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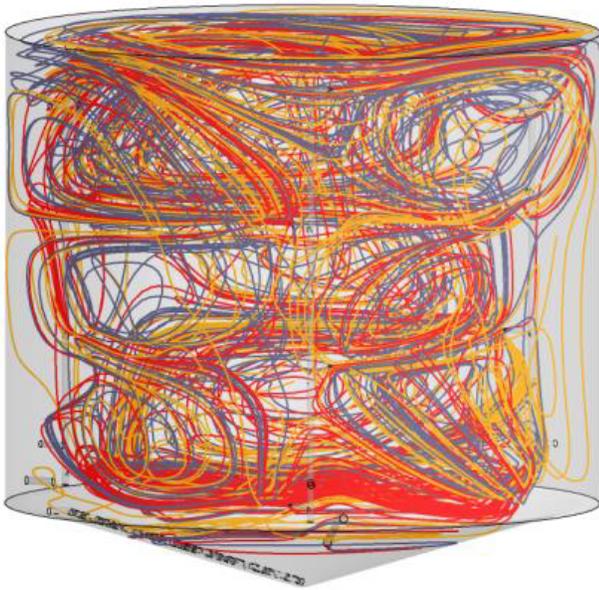


Figure 2: CFD Model of Pump Mixing System

robust mixing

Often preferred by operational staff for its familiarity and simplicity, Pump Mixing systems are especially suited for low aspect ratio tanks with solids concentrations up to 5% to 6% dry solids by weight.

Designed to achieve mixing in a short period, the Monsal ADT Pump Mixing system uses targeted mixing energies to maintain >90% active volume with short blend times – typically less than 30 minutes.



Figure 3: Monsal ADT Pump Mixing Installation

rapid mixing for sludge tanks

High mixing energies give a short blend time for sludge tanks, especially useful to re-suspend sludge tanks prior to discharge or where high energies are required to minimize grit deposition.

With designs based on extensive research on blending high viscosity sludge, each system is specifically designed for the application to maximize mixing effectiveness.

more information

If you would like to learn more about how SUEZ can provide effective mixing for your sludge storage tanks, contact your local SUEZ representative or visit us at our website www.suezwatertechnologies.com.