OVERVIEW

HPMs is the most effective and economical mixing system, which uses a chopper pump and nozzles to improve the efficiency of existing digesters.

FEATURES

1. Maximize mixing efficiency
   - Analyze with 4 factors: velocity, vector, streamline and surface
   - Mixing efficiency is maximized by the quantity and location of nozzles
2. Higher digestion rate
   - Digestion efficiency is maximized through stable and simple operation
   - No blockings due to crushed solids and higher digestion rate and increased surface area of the crushed solids.
   - 60 ~ 80% reduction of VSS
3. Increase gas generation
   - Gas separation is easy due to the powerful mixing force of jets
   - 20 ~ 40% higher bio-gas generation compared to conventional mixing methods
4. Reduce maintenance costs
   - 50 ~ 70% reduction in operation costs due to intermittent operation

PROCESS

![Diagram showing HPM mixing effects and process](Diagram.png)

- **HPM combines uniform flow and vortical flow to form a double zone, enable uniform mixing in the tank, and prevent solids from becoming settled.**
- **Ideal uniform mixing in the tank with powerful mixing force.**
- **Solids are crushed before injection to prevent blocking of the pump and pipes.**

**Comparison of HPM Mixing Effects**

- Uniform
- Vertical

**Velocity**