

AquaBlend™-FT No-Shear Flocculation Tank Mixing

Maintenance-Friendly, Customized Compressed Gas Mixing Technology

Key Benefits

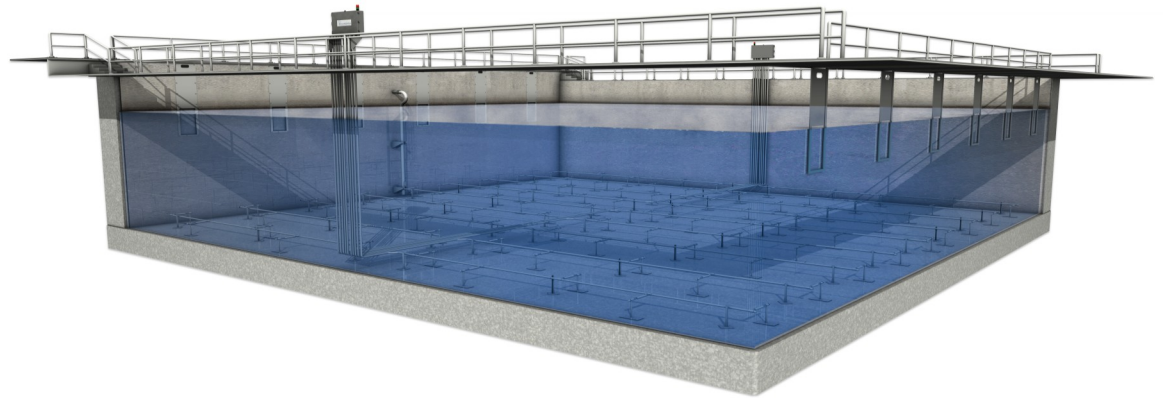
- Gentle, no-shear floc formation
- No mechanical or electrical components in the water
- Non-clogging, self-cleaning 316SS in-tank components
- Adjustable firing parameters for varying mixing requirements
- One AquaBlend-FT compressor may be used to efficiently mix over 40 tanks



Mixing Header with Nozzles

About EnviroMix

Headquartered in Charleston, SC, EnviroMix is a privately held corporation, which designs and manufactures treatment systems to lower energy and maintenance costs. Utilizing patented and proprietary technology, the Company provides both equipment and process control solutions to enhance plant performance in the water and wastewater markets.



The EnviroMix AquaBlend™-FT system provides mixing in water treatment flocculation tanks by firing programmed short bursts of compressed air through engineered patented nozzles. AquaBlend-FT controller air injection valves fire large (e.g., 4"Ø) gas volumes through a distributed nozzle array located across the tank floor. Compressed air is intermittently and sequentially fired in fractional second durations to mix a flocculation tank both vertically and horizontally.

The AquaBlend-FT control system utilizes four parameters (pressure, sequence, duration, and frequency) to control the firing of the air injection valves in order to match the different mixing requirements within multi-stage flocculation tank systems. Process probe data signals may also be interpreted by the AquaBlend-FT control system to vary mixing intensity in response to real-time conditions.

The firing parameters in combination with nozzle location respond to flocculator inlet and outlet locations and counter short-circuiting and floc-destructive energy.

Reduced Maintenance

Legacy mechanical flocculators contain an extensive assortment of maintenance components, such as motors, gearboxes, underwater bearings, chains, wooden materials, shafts and couplings—all of which may corrode and fail. These components usually require that the entire

treatment train be taken out of service, which may not be a viable option.

Instead, AquaBlend-FT underwater components consist only of stainless steel piping and nozzles that are durable, non-clogging and self-cleaning. The long-lived air injection valves, located in a control panel on the tank walkway, may be easily replaced within minutes. Mechanical flocculators require at least one motor per basin. However, AquaBlend-FT system power utilization is efficiently applied across multiple tanks, by using a single, optimally-sized and easily-maintained compressor.



Corroded Mechanical Flocculator

Response to the Future: Membrane Filtration

Controlling the flocculation process outcome is of greater importance at membrane filtration facilities, which are becoming increasingly-prevalent. AquaBlend-FT and its robust demand-response control systems answer as part of an effective solution to this trend.