



ADVANTAGES OF JET MIXERS

The Eddy Jet Mixer is superior to conventional rotating turbine type agitators for many reasons.

NO IN-BASIN MOVING PARTS

The eddy jet mixer has no in-basin moving parts. The jet mixer is typically installed in the center approximately 18-inches from the tank bottom. A centrifugal pump installed outside the tank is the only mechanical component of the system. This system is very reliable and requires little maintenance. The normal life and maintenance on a standard centrifugal pump is well known within the industry.

A rotating agitator has a large rotating impeller and a long shaft inside the tank. The gear reducers, mechanical seals, bearings, and shafts require significant maintenance, often meaning down time and loss of production. The rotating agitator system is expected to last half as long as the eddy jet mixing system.

IDEAL WHEN LIQUID LEVEL FLUCTUATES

The jet mixing system is ideal for tanks where the liquid level fluctuates. This system is installed near the bottom of the tank allowing the liquid level to vary from three feet to full.

For efficient operation, a rotating agitator is normally installed so the impeller is submerged under 67% of the liquid level. Mixing action stops when the liquid falls below this level because the impeller would be mixing only air above the liquid level.

CONTROL OF MIXING INTENSITY

The jet mixing system offers a great deal of control within the mixing tank. By turning the valve on the pump, the mixing intensity within the tank can be controlled. This is ideal for situations where a higher degree of mixing is required during the initial stages of chemical reactions and lower mixing intensity is required during the latter stages.

NO STRUCTURAL SUPPORTS REQUIRED

The eddy jet mixer can be installed in open or closed tanks. No structural supports are required to stabilize the unit.

NO LONG SHAFTS OR SUBMERGED BEARINGS

In deep tanks, no long shafts or submerged steady bearings are required with the eddy jet mixer. Steady bearings can cause shaft binding. Long shafts can cause excessive shaft deflections and shaft bending.

EFFECTIVE IN BOTH LARGE TANKS AND DEEP TANKS

In large diameter and deep tanks where turbines are ineffective, multiple eddy jet mixers can be used to mix tanks with capacities as small as a few hundred gallons to as large as several million gallons.

NO SPECIAL BAFFLES REQUIRED

No baffles are required with the eddy jet mixing system. The radial flow pattern eliminates vortex formation. However, the jet mixer can be installed in a tank with existing baffles and will result in good mixing.

CORROSION RESISTANT

The jet mixers are available in fiberglass reinforced plastic (FRP) and alloy construction. FRP is ideal for corrosive environments. With rotating agitators, expensive alloys are required in corrosive environments.

INSTALLED CLOSE TO THE TANK BOTTOM

For solids suspension applications the jet mixer is installed 18-inches from the bottom of the tank and maximum mixing energy is provided to the solids that settle at the bottom. With a rotating agitator, placing the impeller very close to the bottom will starve the impeller flow and will result in increased power consumption.

MAY BE USED TO INTRODUCE CHEMICALS

For high mass transfer applications, the chemicals can be introduced within the jet mixer. The high shear within the jet mixer provides instantaneous mixing and intimate contacting between the streams.

FINE BUBBLE DIFFUSION

For gas/liquid mass transfer applications, low pressure gas is introduced through the jet mixer which can produce gas bubbles of less than one millimeter diameter.