

PHi-300 MIXER



Description: The PHi-300 series mixer is unique in that it utilizes large air bubbles which are sequentially injected in a liquid to create powerful mixing currents. The system is contained in an 18"x16"x81/2" NEMA-4X enclosure and consists of three major components:

1. An electro-pneumatic valve which has a high CV value allowing it to open and close in milliseconds which creates a well-formed bubble.
2. A pressure regulator/filter, with auto-drain, which controls the pressure of the mixing air (typically set at 50psi).
3. A 3-position switch sets the mixing at low, medium, or high settings. The position used is based on the viscosity of the liquid being mixed.
4. An optional touch screen O.I.T. is available.



Bubble Forming Plate: The only equipment installed in the vessel is the forming plate and piping. The forming plate is an 8" disk consisting of two 3/16" plates (either stainless steel or PVC depending on the product being mixed) which are separated by 3/16" and connected to a 1" NPT pipe. Piping is run from the enclosure and connected to the forming plate. The electro-pneumatic valve delivers the compressed air through the piping to the forming plates where it is squished between the two plates thus creating a large, relatively flat bubble. The mixing is created by the bubble rising to the top of the vessel, forcing a wave action to the sides of the vessel down the walls of the vessel, and back to the forming plate.

Applications: The PHi-300 is used in wastewater treatment plants to mix sludge holding tanks, aerobic digesters, lift stations, chemical tanks, polishing basins, anoxic basins and aeration basins to enhance the oxygen transfer, and any other liquid vessel which requires mixing.

The PHi-300 is also used to mix potable water tanks of any size or shape. Complete mixing is accomplished in minutes.

The system can mix almost any liquid and is used in wine blending, oil storage tanks, drilling mud, inks, paint, and distilled spirits.

Energy Savings: The PHi-300 uses substantially less energy than mechanical mixers.