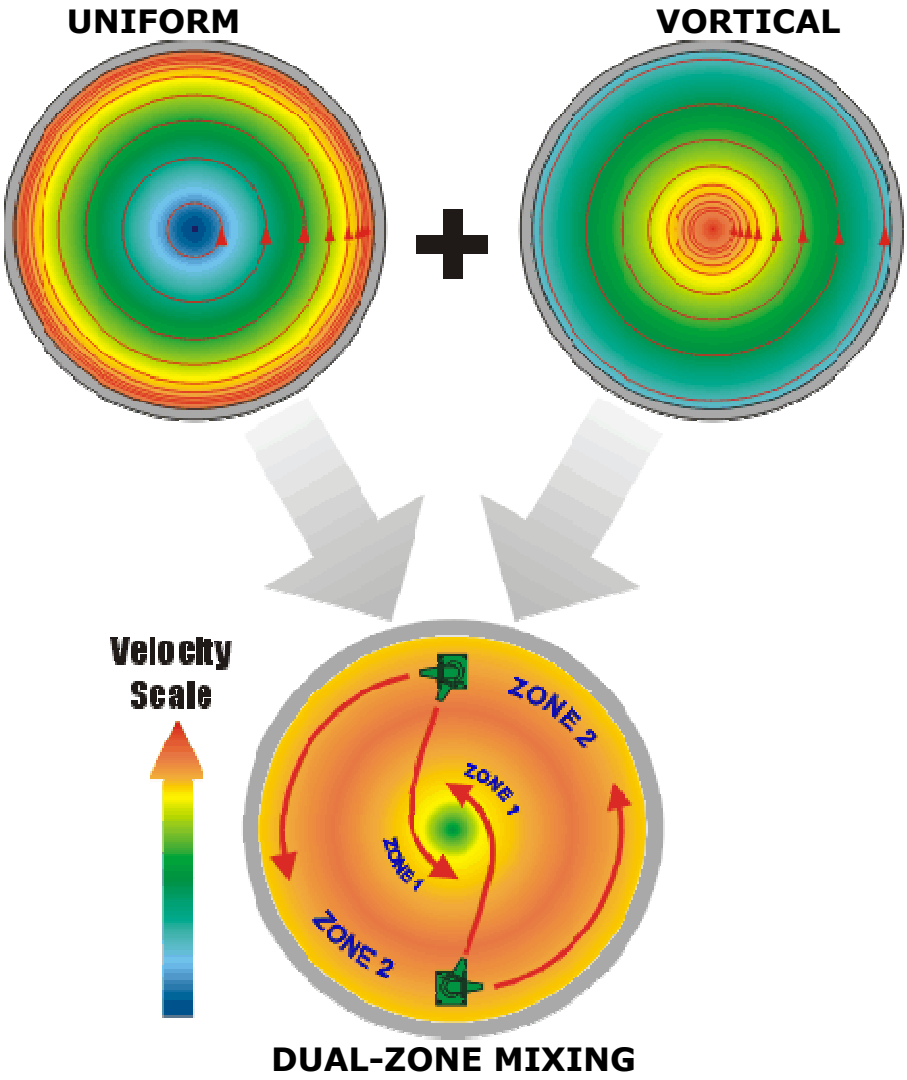
Rotamix Concept

Principles of Theory

The **Rotamix** system incorporates several basic principles of physics and hydraulics, including **uniform** and **vortical** fields of flow, **induced flow** and **surface contact**. Combined together, this unique mixing system optimizes solids contact due to the homogeneous state.

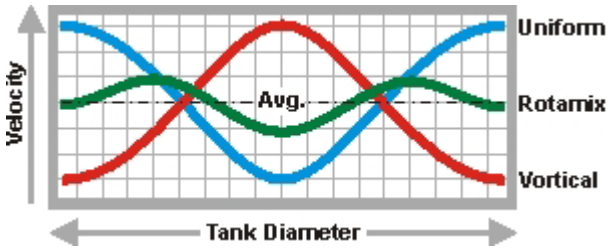
Dual-Zone Mixing

The **Rotamix** dual-zone mixing pattern is a combination of both uniform and vortical fields of flow. In a uniform field of flow, the entire contents rotates as a solid unit with the highest velocity at the outside. In a vortical field of flow, fluid velocities are the greatest at the center, thus creating a vertical-axis vortex. The Rotamix system combines both uniform rotation (ZONE 2), and a vertical-axis vortex (ZONE 1), creating unique dual-rotational zones.



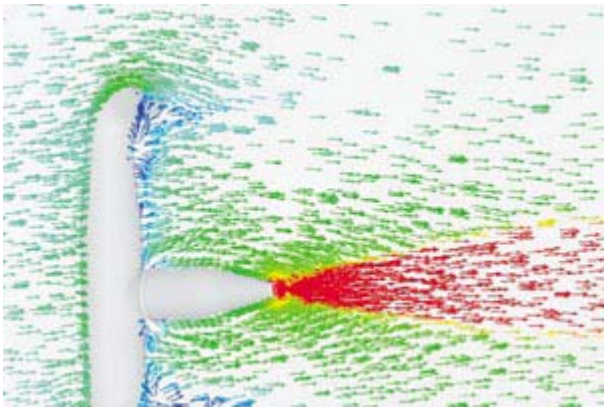
High Velocities

With dual-zone mixing, average velocities are higher and more steady. Solids are also prevented from settling in the center.



Induced Flow

High velocity nozzles also increase the effective mixing volume by inducing entrained fluid, thus significantly increasing the overall mixing effect (see Figure 2). High velocity nozzles induce flow over a long distance, thus generating an overall effect over a large volume.



Surface Contact

The Vaughan chopper pump not only eliminates nozzle clogging, but also optimizes surface contact by constantly reducing solids size, thus increasing total surface area.