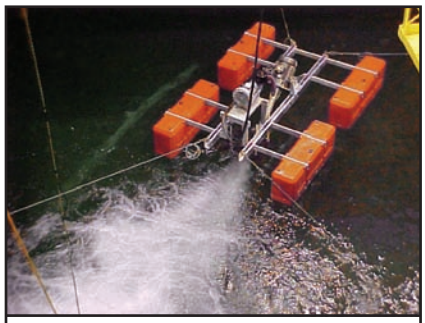
RAPTOR™

Directional Mixing and Aeration System

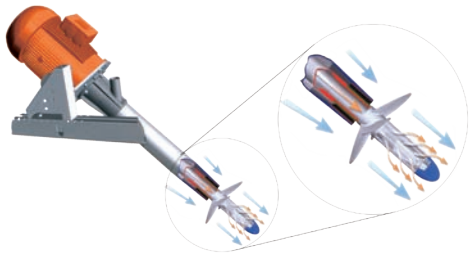
Developed especially for wastewater treatment, the RAPTOR aerator is extremely efficient at delivering oxygen (25% more than competitve offerings and 75-100% more than donuts) with the potential to provide up to 50% electrical savings.



Combining conventional aspirator technology with blower assisted aeration only fine bubbles (< 2.2mm) are created significantly improving oxygen transfer.

RAPTOR aerator operates in two modes to perform three operational functions.

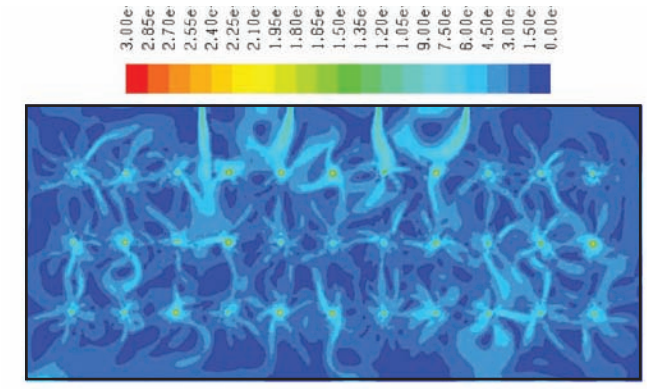
- Nitrification mode: combines aeration and mixing.
- De-nitrification mode: combines mixing and BNR (Biological Nutrient Removal).



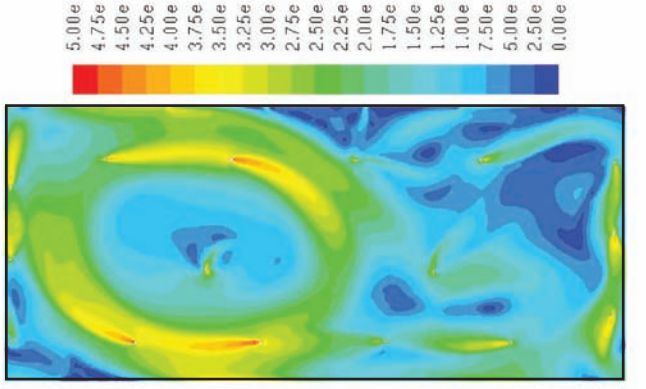
Key to the system's effectiveness is the propeller and patented double shear Venturi diffuser mounted below the propeller, providing rotation. The unique diffuser generates much smaller bubbles and subsequently much higher surface area per unit volume resulting in enhanced oxygen transfer potential.

Neither vertical aerators nor aerators that rely solely on diffuser technology can create an entire lagoon rotation.

Linking the flow from properly aligned RAPTOR aerators minimizes solids deposition, reduces odor and mixes influent containing high levels of dissolved oxygen (DO) with influent containing low levels of DO.



Velocity profiles in lagoon with vertical aerators. Light blue represents approx. 0.2 ft/sec. Aerators are clearly seen as light spots. Long ribbons at top represent inlet flow. Mixing is very zonal with a lot of deposit at the bottom due to low velocity.



Velocity profiles in lagoon with directional aerators. Circular flow induced and is very high; most of lagoon is in motion. Velocity resolution is 1.8 ft/sec.

CALL TODAY

1-800-95-MIXER

(1-800-956-4937)

PHILADELPHIA MIXING SOLUTIONS

108B (T0907)