CLEVELAND MIXER
EST. 1940

NEWSLETTER
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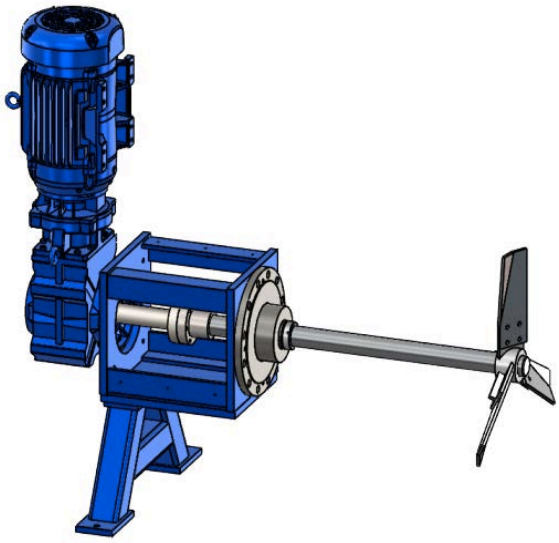

PRODUCTS

Cleveland Mixer is pleased to announce the addition of the new **Sidewinder GCD Mixer** to our Product Line.

* Product range from 1 to 30 HP, volumes from 10k gallons to 1m gallons
* Engineered to the customer's application and process goals
* More torque, more flow, less HP consumption and better process results
* Minimum service factor of 2.0 on gear reducer with L-10 bearing life in excess of 50,000 hours
* High efficiency, ultra robust gear reducer system with long service intervals
* Designed for ease of installation and maintenance
* C-face mounted motors for ease of maintenance
* Positive, in-tank seal shut off system

For more information, go to **https://my.clevelandmixer.com/assemblies/48**

IMPELLER SELECTION

To achieve the customer's desired process result, the impeller type selected is the determinative factor. Why? In simple terms, it is the impeller that does the work in the fluid. Why is a hydrofoil impeller sometimes selected over other impeller types?

The selection process for an impeller looks at the following 4 critical elements:

1. Tank Geometry & Liquid Levels
2. Fluid Properties
3. Reynolds Number Calculation
4. Process Goal(s) or Classification

From these 4 elements an impeller design is selected. Hydrofoils, Axial Flow Turbines (aka pitched blade turbines), Radial Flow Impellers, or Close Clearance Impellers such as anchors and ribbons.

Hydrofoil impellers consume less HP per rotation than other impeller types. They have a narrower blade width ratio than other impeller types, they weigh less and they have proven to be well suited in a host of applications such as low viscosity blending, thermal uniformity and in some solids suspension applications.
While the Hydrofoil impeller is well applied in a multitude of applications, it does have its limits. Hydrofoils operate best in turbulent and transitional flow regimes (high and medium Reynolds Number environments). They do not effectively mix in Newtonian fluids where the Reynolds number is below 200.

In our next newsletter, we will discuss the use of axial flow turbines and why they are selected instead of hydrofoils.