

## Low Shear Agitator with a Superior Impeller Design

The Rotofoil is a low shear agitator for mixing miscible liquids and dissolving solids that do not form fisheyes. The Rotofoil is also used for mixing when the purpose is to prevent sedimentation, enhance heat transfer, maintain floc circulation and keep liquids homogeneous. It is ideal for viscosities up to 5,000 cps. The Rotofoil has been used for years across various industries including food and beverage, pharmaceutical, cosmetic, chemical/coatings, water treatment and fat in water emulsions.

## Low energy consumption high versatility

The design of the Rotofoil impeller blades makes a highly efficient mixer that provides uniform flow across the length of the impeller blade with low turbulence. Therefore, energy consumption is very low compared to the flow provided.

**Custom made:** Adapted to each application and environment

**Mixing products at high temperature/pressure:** Double mechanical seal and adaption of mounting flange

**Mixing corrosive products:** Parts in product contact can be Titanium, SAF or PTFE coated AISI 316 L

**Mixing in sterile environment:** Aseptic designed seals and electropolished surfaces

**Mixing in explosive environments:** Explosion proof gear motor, ATEX approved seal, etc.



## Hydrodynamics – the key to lower energy costs

Just like a wing of an airplane, a mixing impeller creates turbulence from the back of the impeller blades if their angle at the front is too steep. Turbulence provides no agitation but draws a lot of power and uses energy. The hydrodynamic Rotofoil transmits almost all consumed energy to move liquid, and only a minimum will be wasted on turbulence.

This table shows an example of an actual mixing job performed by a pitch blade turbine, a marine type propeller, and a Rotofoil.

	Pitch Blade Turbine	Marine Propeller	Rotofoil
RPM	300	300	300
Impeller Diameter	415 mm	450 mm	500 mm
Flow Rate	21.1 m <sup>3</sup> /min	21.5 m <sup>3</sup> /min	22.1 m <sup>3</sup> /min
Power consumption	2.03 kW	0.96 kW	0.69 kW
Required shaft length	2500 mm	2450 mm	1500 mm
Required shaft diam	55 mm	45 mm	30 mm
Agitator weight	148 kg	96 kg	43 kg
Agitator purchase price factor*	1.00	0.74	0.49
Flow per kilowatt	10.4 m <sup>3</sup> /min/kW	22.4 m <sup>3</sup> /min/kW	32.0 m <sup>3</sup> /min/kW

Batch size: 10 m<sup>3</sup> | Viscosity: 50 cps | Specific gravity: 1.1 | Required flow rate: About 21 m<sup>3</sup> per min

\* Purchase price comparison between different agitator models with the same performance

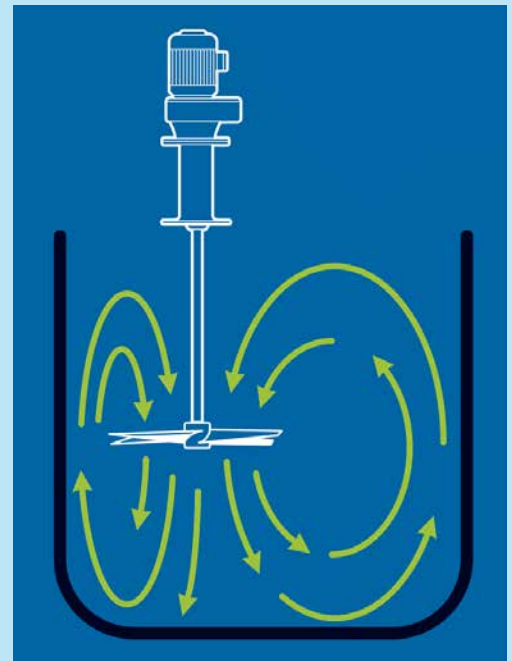
## Maintenance free – long lasting:

- Robust bearing frame with large distance between bearings giving very low vibrations and very little wear
- Bearings lubricated for life

*At Admix, we bring a unique perspective and attitude to servicing our customers. As a 100% employee owned company, we know that our success is completely dependent upon your satisfaction. We trust that when you communicate with us, you'll sense our enthusiasm and commitment to meet or exceed your expectations.*

## Axial Mixing with Energy Savings

The hydrodynamic design of the Rotofoil impeller ensures uniform flow combined with low power consumption, low turbulence and low shear. Most liquid-liquid blending and solids suspension applications require a controlled uniform flow pattern throughout the entire batch. The Rotofoil develops strong axial currents that flow downward towards the bottom of the tank. The flow continues to the outer edges of the tank, eliminating any dead zones. Even heavier particles are forced upward into the flow pattern. A 70% energy savings can be expected when compared to traditional 45° pitch turbines that spread the flow 45° or more resulting in a disrupted flow pattern.



## Impeller and Gear Motor Options

Rotofoil impellers are custom manufactured and range in size from 200mm – 3990mm. The Rotofoil's gear motors range in size from 0.25 to 22kW, 800rpm – 10rpm.

## Optional Customization

Let Admix create a customized solution for you. Our experienced applications experts are available to work with you and recommend an optimal configuration for you based your viscosities, densities, ingredients, and batch sizes. You are assured a solution that is neither too small nor too big for your application.