

CASE STUDY

Maximizing Energy Efficiency in Above Ground Storage Tanks

A sustainable approach for 16% annual operating cost savings with Milton Roy Side Entry Mixers

Our Client

Our client is a prominent player in the energy industry, known for their innovative approach to fuel storage and distribution. As part of their expansion into the industrial city, they required efficient tank homogenization solution for their gasoline and jet fuel storage tanks.

Requirements

Our client sought to optimize energy consumption and ensure consistent product quality in their storage tanks. They required a solution that could efficiently homogenize the contents of their tanks while minimizing energy consumption, costs involved, and reducing carbon emissions.

Our Approach to Solving the Problem

Milton Roy Mixing, a leader in fluid mixing technology, recognized the need for a tailored solution to meet client's requirements. Leveraging our expertise in propeller design and Computational Fluid Dynamics (CFD), we proposed a customized mixing solution to enhance homogenization efficiency and reduce energy consumption.

Solution

We introduced our advanced side entry mixers equipped with our proprietary SABRE® Propeller technology, designed specifically for industrial tank applications. These mixers with their innovative four-blade design, offered superior mixing performance compared to traditional marine propellers.

The mixers were tailored to meet the specific requirements of the tanks, optimizing flow patterns and minimizing energy consumption.

Why Milton Roy Mixers?



Up to 20% higher flow rate



Less HP



Increased flow stabilization



Higher velocity



Better tank penetration



Helical Flow



Minimized vibrations



Smaller diameter blades

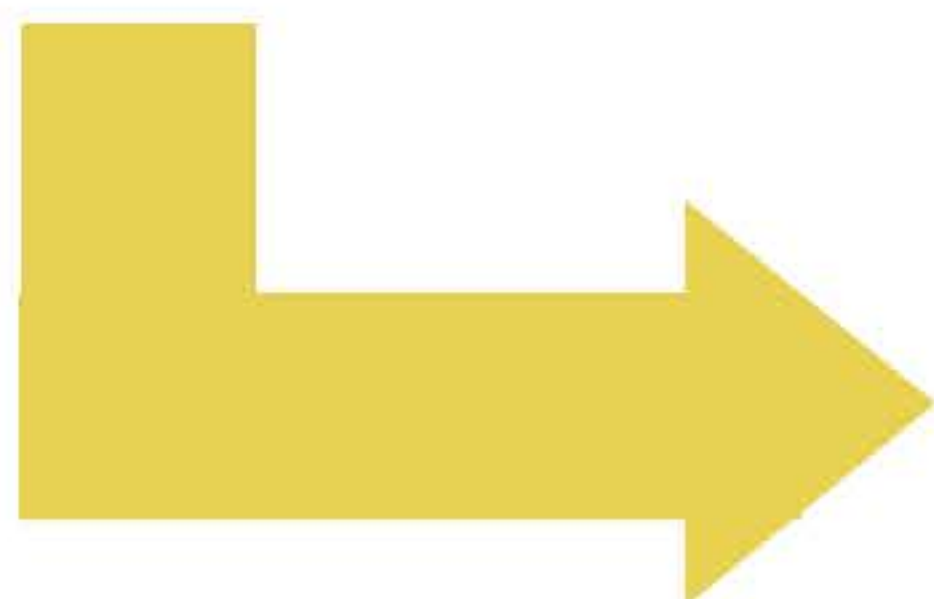
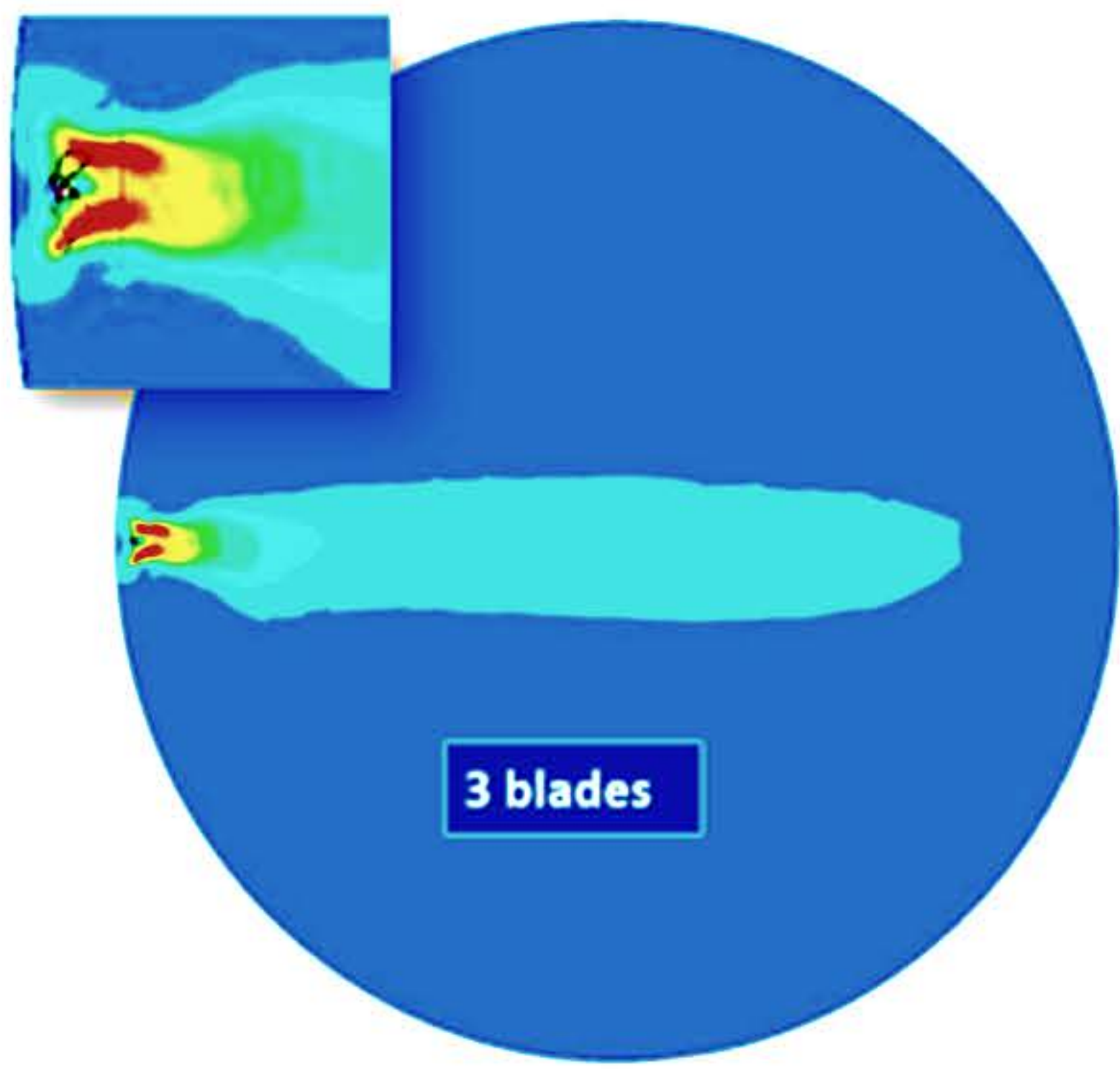
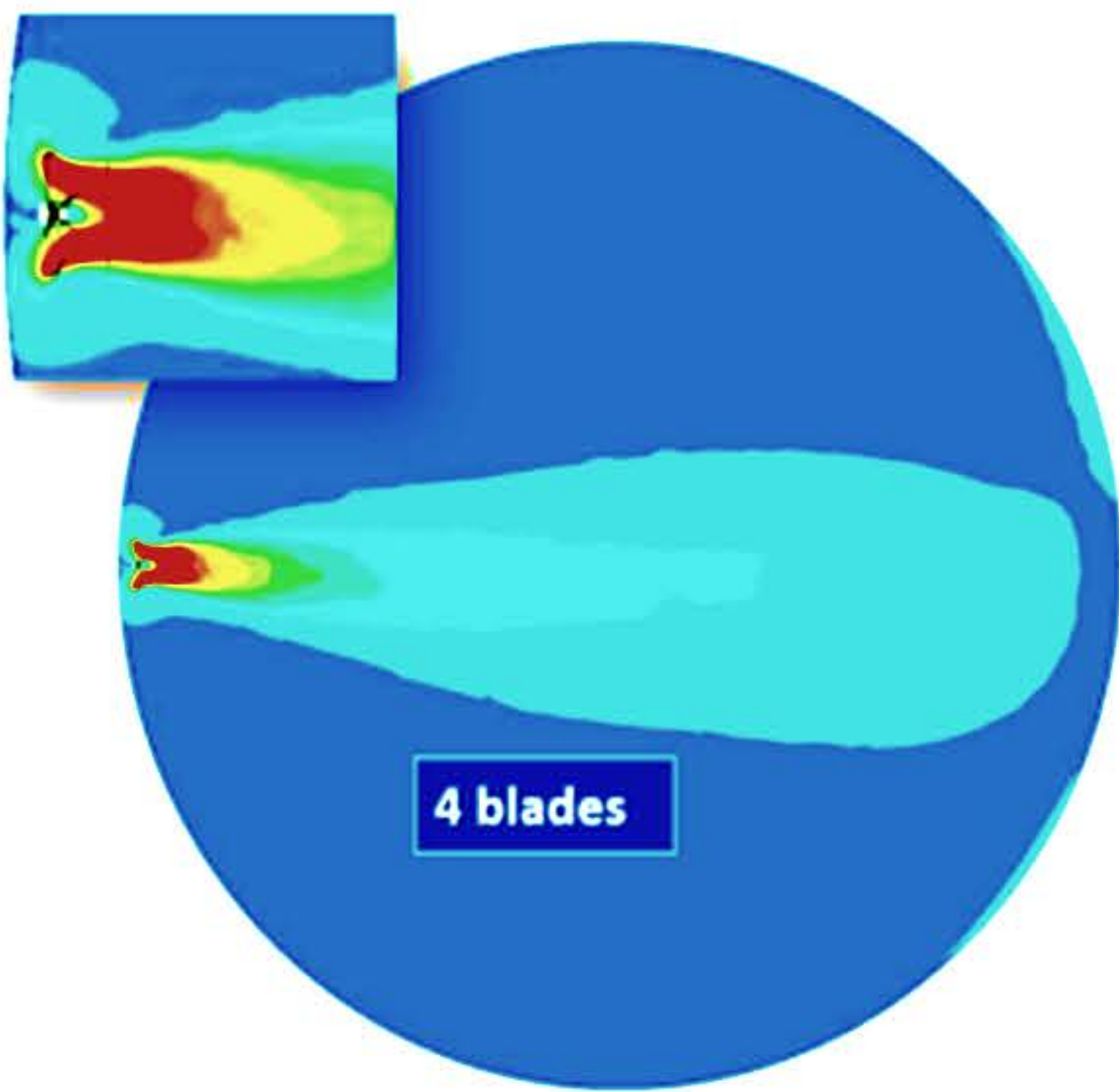


Easy and quick installation

The SABRE® Propeller technology enabled efficient mixing of hydrocarbon products within the tanks, ensuring uniformity and consistency in product quality.

The innovative four-blade design allowed for greater flow penetration and intensity, leading to improved homogenization and reduced energy consumption. Thus, Milton Roy Mixing solution addressed the client's need for cost-effective and environmentally sustainable tank homogenization.

SABRE® propeller



CFD - Flow comparison between competition 3 blade propeller and Milton Roy Mixing SABRE 4 blade propeller



The Results

The client experienced significant benefits from our mixers, including:



Substantial reduction in energy costs

The efficient mixing operation led to lower energy consumption, resulting in substantial CAPEX and OPEX cost savings



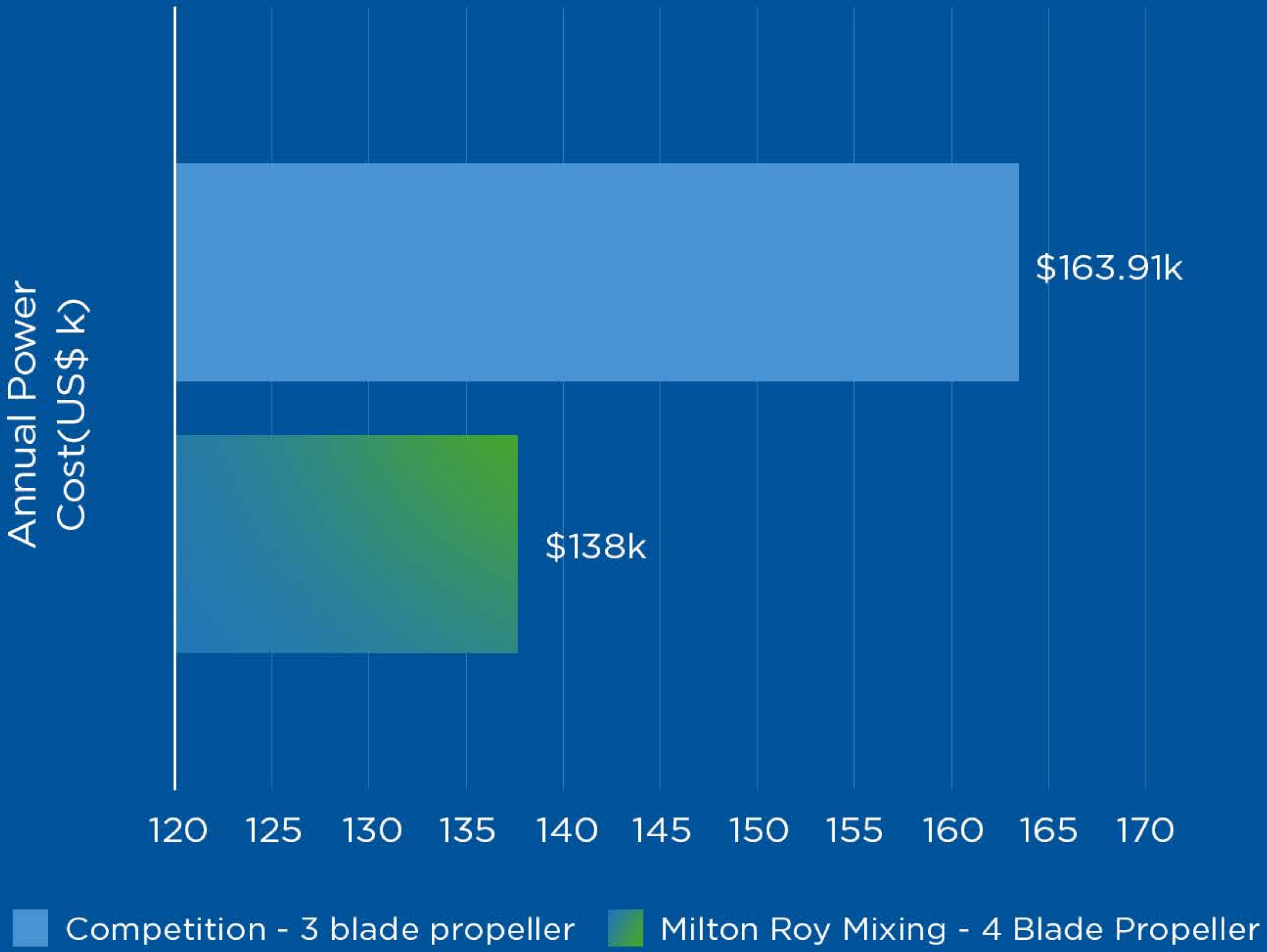
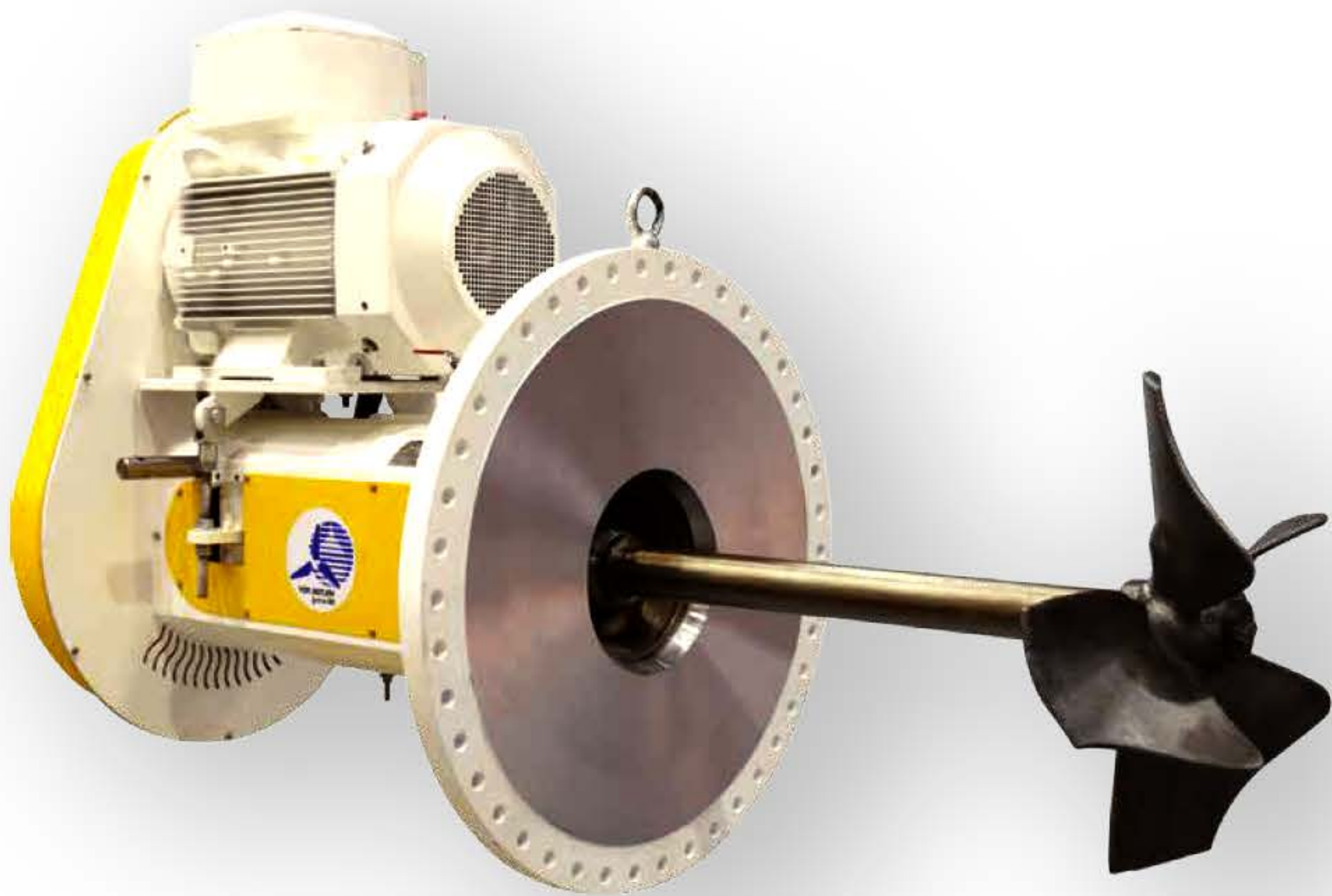
Enhanced product quality

The consistent and thorough mixing ensured uniformity in product composition, meeting quality standards, and customer expectations



Environmental sustainability

By reducing energy consumption and carbon emissions, our solution aligned with our client's sustainability goals and initiatives



A Bright Future

Milton Roy Mixing provided customized solutions to client's specific requirements, ensuring optimal performance and efficiency. The delivery and installation of the mixers were completed within the agreed timeframe, supported by comprehensive customer assistance and technical support. The monetary benefits of the solution were significant, with the client realizing substantial cost savings and operational efficiencies over a long term.



About Ingersoll Rand Inc.

Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity and efficiency.

For more information,
visit www.IRCO.com.