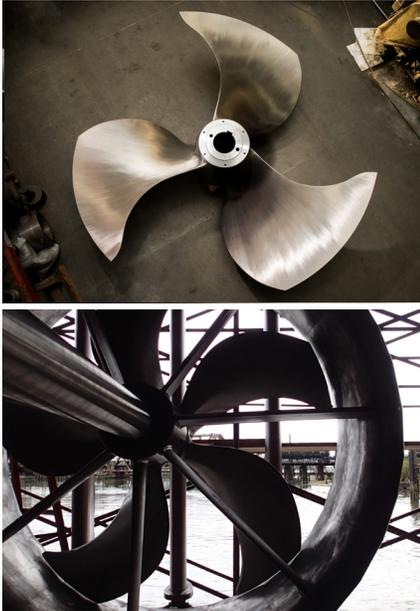


PROPELLERS

Improved Performance; Reduced Noise



Nautican propellers are specifically designed to work with the Nautican High Efficiency Nozzle for superior performance. The advanced airfoil design of the patented High Efficiency Nozzle has less resistance than a conventional 19a KORT nozzle. When Nautican nozzles and propellers are combined the flow distribution of the nozzle is enhanced, resulting in a system that delivers even greater power and efficiency.

Nautican pioneered the use of a skewed propeller with a nozzle, which not only improves performance but also reduces noise.

Nautican nozzles and propellers have improved performance of tugboats, ATBs, fishing vessels, cable ships and yachts.

As an example, when Northern Transportation Company Ltd. of Hay River, Canada conducted a major refit of a quad screw, pusher-towing tug, the *Edgar Kotokak*. They installed Nautican's integrated propulsion system combining High Efficiency Nozzles, Triple Rudders, Pre-Swirl Stators and Propellers. Originally the vessel had four open propellers in tunnels for propulsion with twin, transom hung rudders behind each prop for steering. During the refit, NTCL replaced all four engines and replaced 56" open propellers and each twin rudder with 48", Nautican High-Efficiency Nozzles—customized for this vessel—and triple rudders.

The figure below shows that the refit *Edgar Kotokak* gained considerable thrust at the same horsepower, almost 60 percent over the open propeller and 10 percent over Kort nozzles at 4400 hp.

Nautican's high-efficiency, integrated propulsion system offers performance improvements of up to 60 percent over open propellers, and a substantial improvement of 10 percent or more over Kort nozzles, even in a challenging river application.

BOLLARD PULL TRIALS



- Henry C - Open Propellers
- Kelly O. - "Kort" Nozzles
- Edgar K - Nautican Nozzles

REQUEST AN OPERATIONAL ANALYSIS

We are happy to partner with you to help you determine the best solution for optimizing performance and reducing fuel consumption. By analyzing your fleet's operational needs, we can help you identify vessels that are the best candidates and assist you in determining the return on investment. Please fill out a form at <http://nautican.com/operational-analysis/> for each vessel you would like us to analyze.