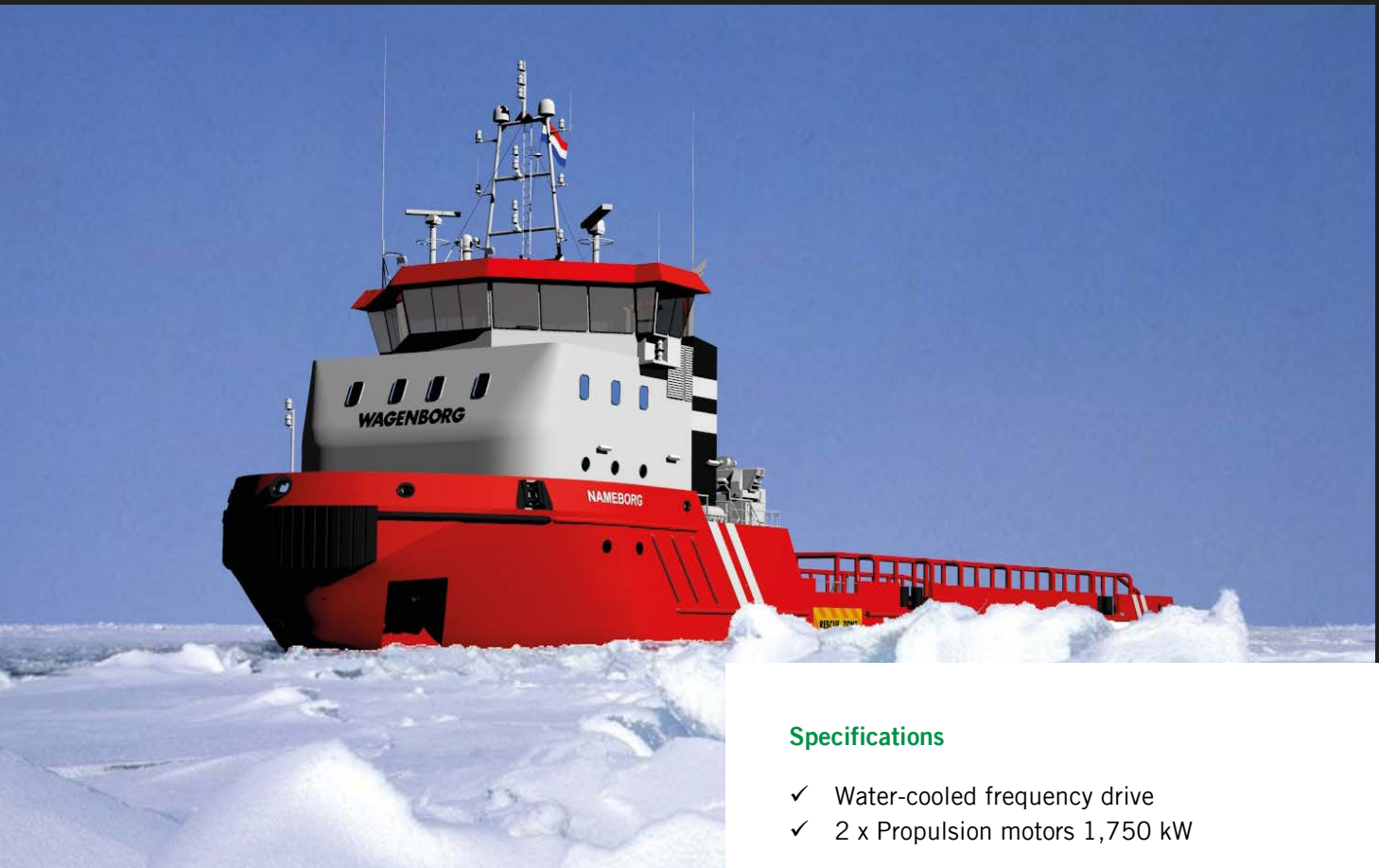


# Wagenborg Kazakhstan

## Sanaborg & Serkeborg innovative icebreakers - 2011

These two innovative icebreakers were built at the Royal Niestern Sander shipyard and are deployed by Wagenborg Kazakhstan.



### Specifications

- ✓ Water-cooled frequency drive
- ✓ 2 x Propulsion motors 1,750 kW

The twin propellers act as blades to crush the ice in an innovative way while sailing astern. Bakker designed and delivered the energy generation, the active front end frequency drives and propulsion motors.

The package delivery consists of 2 AFE (Active Front End) direct water-cooled frequency drives and 2 Indar propulsion motors 1,750 kW. Because of the ice-breaking mode the motors are specifically designed to withstand high torques on the motor shaft, rotor and bearings.

All equipment is delivered according Bureau Veritas MACH, Ice Breaker, Ice Class 1A Super, unrestricted navigation, Aut UMS, including certification.