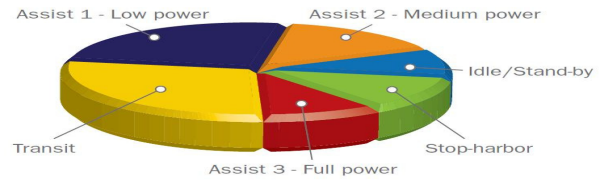


Kumera Norgear Hybrid Solutions

Operating modes for hybrid drive concepts

The operating modes for the tug or the workboat decide the fuel and emission reductions which can be expected. A harbor tug is used for a large variety of tasks with various speeds and bollard pull. Depending on the vessels operating pattern considerable fuel savings can be achieved. In some cases fuel savings up to a level of 40-50 % can be obtained with hybrid drives.

The classic operating modes for a harbor tugs are; stop-harbor, idle/standby, transit, with loads from low, medium and up to full load. A study of operations over time will indicate the vessels operating profile.



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Skrevet: 19.05.2011 Av: Kumera AS

Kumera Power Transmissions is the manufacturer of the well-known NORGEAR PTO Gearboxes and Hydraulic Clutches, used for driving Fi-Fi and deck machinery pumps, shaft alternators and other pump drives.

Late 2009, Kumera re-designed the smallest gearbox to handle both freestanding Fi-Fi pumps as well as integrated pumps. Also the existing NORGEAR Clutch units has been through an upgrade to meet today's market requirements, from the smallest at 1,25 kNm up to the largest at 63,0 kNm. These units handle applications from stand-alone units to integrated Fi-Fi pumps, enabling compact installation dimensions.

This year Kumera AS introduced the NORGEAR HYBRID Green Gear, where our gearbox is placed in the shaft line, guiding both diesel- and electrical power to the propulsion. This will enable fuel and maintenance savings and reduced NOx / CO2 when in standby- or transit mode. The NORGEAR HYBRID gear box comes with a well proven soft clutch, which secures a smooth engagement / disengagement of the propulsion units, and optional integrated Fi-Fi pumps, deck machinery pumps and shaft alternators. As a typical standard Kumera Power Transmission product it is available in both vertical and horizontal shaft offsets, suitable for various design of engine room installations.