

# Hybrid Solutions



Y O U R P A R T N E R F O R T H E F U T U R E



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## The Idea – The Solution

Ever increasing environmental restrictions require an alternative drive solution.

REINTJES developed a new, electrically driven hybrid solution system for gearboxes that provides vessels with an alternative of proceeding at reduced speed.

These hybrid systems enable a much more efficient operation, because they allow for riding in a slow speed below the main engine idle speed.

The electric drive is aimed at achieving smooth running, less noise and low energy consumption and will gain still more importance.

To enable easy installation, the combined electric motor and generator are already flanged to the gearbox and supplied with a frequency converter.

## Advantages

- One source solution
- Reduced CO<sub>2</sub> and NO<sub>x</sub> emissions (green areas)
- Quiet and comfortable slow speed ride
- Manoeuvring operations in the harbour with reduced or without emissions

The complete package comprises the gearbox and a combined electric motor and generator as well as a frequency converter.

The hybrid systems are suitable for yachts and other fixed pitch propeller applications. From 2011 they will be available for electric motors from 60 kW up to 100 kW and for diesel engines up to 1,500 kW.

## The hybrid solution system offers various application possibilities:

Standard operation – diesel engine drives propeller

Power Take In (PTI) operation – powered by genset

Power Take In (PTI) operation – powered by battery

Power Take Off (PTO) operation – diesel engine supplies battery and/or ship grid

