

CODAD for Megayacht Predator



Based on the excellent experience with low noise gear boxes for Megayachts RENK was awarded a double stage CODAD gear box system RENK type BSL 2 x 130/140. The Yacht was built at De Vries ship yard in Aalsmer, the Netherlands, one of the Megayacht builders.

The gear arrangement is manufactured in accordance with the latest results in gear technology, suitable for two diesel engines each with a power of 4.320 kW at 1.800 rpm. The vessel is operated with two CPP shaft lines, independently by one or two diesel engines.

Thrust bearing that isolates structure-borne sound for Megayacht.

By means of integrated elastomer elements this thrust bearing isolates the structure-borne noise to prevent a transmission through the thrust shaft, the bearing casing and further into the ship's foundation. Moreover, it is able to compensate for a radial offset of ± 3 mm and thanks to an integrated hydraulic system an angular offset of $\pm 0,1^\circ$. It also offers a propeller thrust measurement.

All main gear meshes are double helical designed resulting in high overlapping ratios, reducing the noise excitation to minimum. Based on RENK standard, all main shafts are supported in sleeve bearings.

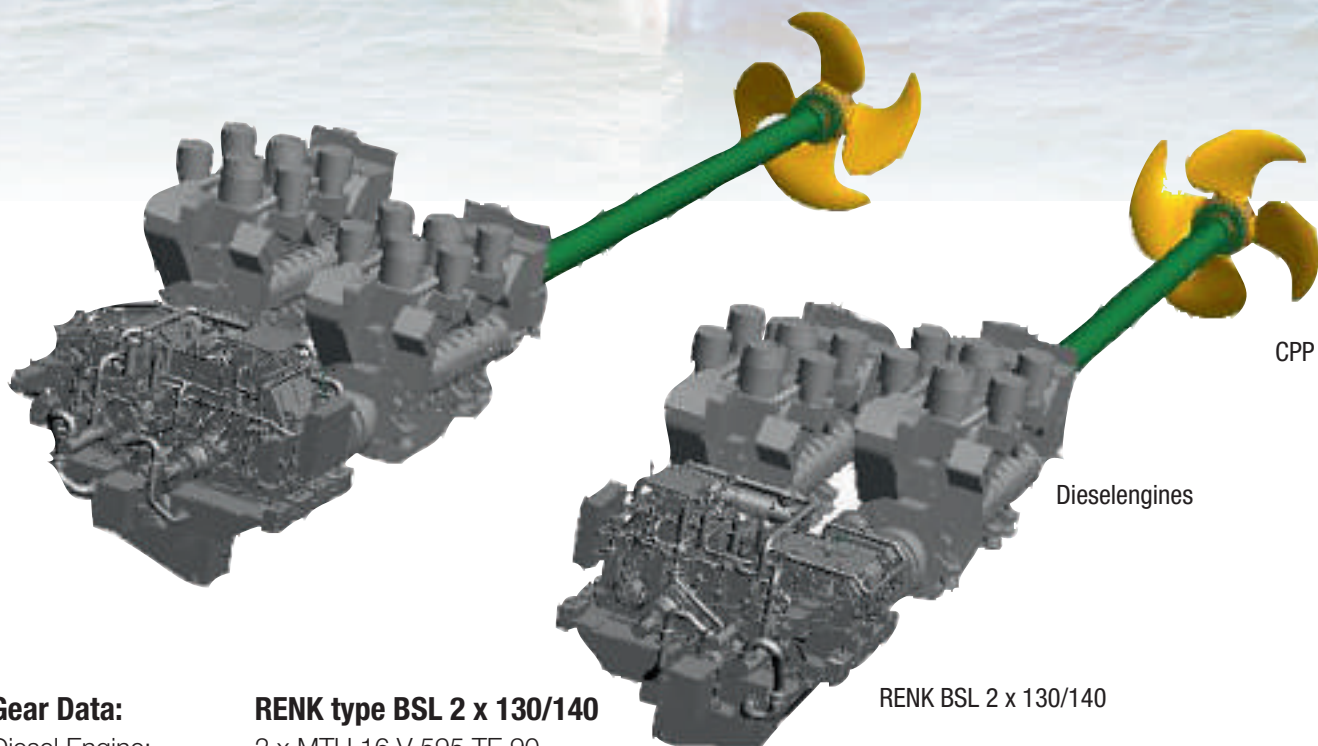
Additionally, the gear boxes are mounted on special RENK double hard elastic mounts which reduce the structure borne noise.

The CODAD gears are equipped with a cyclo gear for slow speed turning operation of the shaft line used as a turning device. Together with the turning gear coupling a shaft locking device is provided. An integrated hydraulic system, where all components are attached to the gear box casing, provides lube oil to the gear and control oil for the clutches.

A secondary driven PTO is connected to the gear box by a multi disc clutch suitable for power of 320 kW.

The gear box is built according to Lloyds rules. Each input shaft is equipped with a RENK multi disc clutch which guarantees for a smooth and safely acceleration of the CPP shaft line.

RENK developed a special thrust bearing (RENK patented ATB type) which is equipped with a separate lube oil system. The thrust bearing is rigidly compensating mounted for displacements of the elastically mounted gear box in form of hydraulically supported thrust pads, following a maximum design thrust of 645 kN.



Gear Data:

Diesel Engine: 2 x MTU 16 V 595 TE 90
 Input Power: 2 x 4.320 kW
 Input Speed: 1.800 rpm
 Output speed: 275 rpm
 Weight per gear unit: 23,1 t

RENK type BSL 2 x 130/140

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