

## **GENERAL SPECIFICATION FOR NORGEAR MARINE GEARBOXES AND CLUTCH UNITS**

Make:	NORGEAR PRODUCTS MADE BY KUMERA AS, NORWAY
Direction of rotation:	Both directions of rotations are available
Performance:	Powers up to 5000 kW can be supplied Torques up to 1000 kNm on one shaft can be supplied.
Design types available:	Co-axial Horizontal offset Vertical offset Horizontal and vertical offset Angular offset sidewise, upwards or downwards
Materials:	Casing in cast iron Shafts St 52.3 or better Gears 17CrNiMo6 or similar Hydraulic Clutch – Kumera design – heavy duty marine clutches and DnV Type Approved
Bearings:	Heavy duty oil lubricated roller bearings – SKF or FAG
Coating:	Precision ground and top coated
Instrumentation and equipment:	Mechanically driven lube oil pump Optional: Electrically driven stand by pump Oil cooler Oil pressure filter Oil dip stick Breather Lube oil pressure switches with digital pressure gauge Clutch oil pressure switches with digital pressure gauge Oil temperature gauge High oil temperature alarm switch Built in hydraulically operated clutch Solenoid valve with 220VAC/24VDC for the clutch engagement
Oil cooler:	Max. 32°C as standard supply, any other request can be met including fresh water cooling.
Lubrication:	Large capacity oil sump combined with positive displacement oil pump. All bearings and gear meshes are lubricated by pressurized lube oil.
Spares and tools:	
Classification requirement:	No requirements
Two years on board spares:	2 off filter inserts
Tools:	No special tools are required for any of the equipment supplied by Kumera AS.

Following documentation will be provided:

- \* User manual in 3 fold (English language)
- \* Dimensional drawing
- \* J-scheme for TVC (torsional vibration calculations)
- \* Instrumentation diagram
- \* Certificates by: Any surveying company

Documentation:           3 of Installation- and maintenance manuals in paper copies  
                                  1 of Manual on CD-roam  
                                  Work Shop Test Certificate  
                                  DnV Type Approval on Clutch

Optional:                 Class Survey Certificates from the worlds largest Class Societies