

Thrust Bearings

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Rubber Design's Compact Thrustblock

Transmitting Thrust and Reduction of Vibrations and Noise

General / Applications

Rubber Design has developed a compact range of thrustblocks in combination with their ERD Marine Couplings for high performance operation in yachts and ships.

The advantage of using a thrustblock is that the propeller thrust load is not taken by the engine-gearbox, this enables an optimised flexible mounting system of engine-gearbox to be used. This gives the best results for vibration isolation and reduction of structure borne noise from engine-gearbox to the foundation (hull of the ship). Structure borne noise is transmitted quickly through the hull and causes disturbing noise (resonance) in areas outside of the engine room, this can cause problems or discomfort.

Features

To obtain the best results in the reduction of structure borne noise, the thrustblock has a further option to be flexible mounted with a minimum deflection in the longitudinal direction. An advantage of using the ERD marine coupling is that torsional vibrations and noise transmission from the engine-gearbox to the thrustblock will be reduced. During assembly the thrust shaft is accurately aligned and fixed with transit bolts before despatching to the customer. Due to this fixture and the four alignment bolts it is a very easy process to achieve an accurate alignment with the propeller shaft.



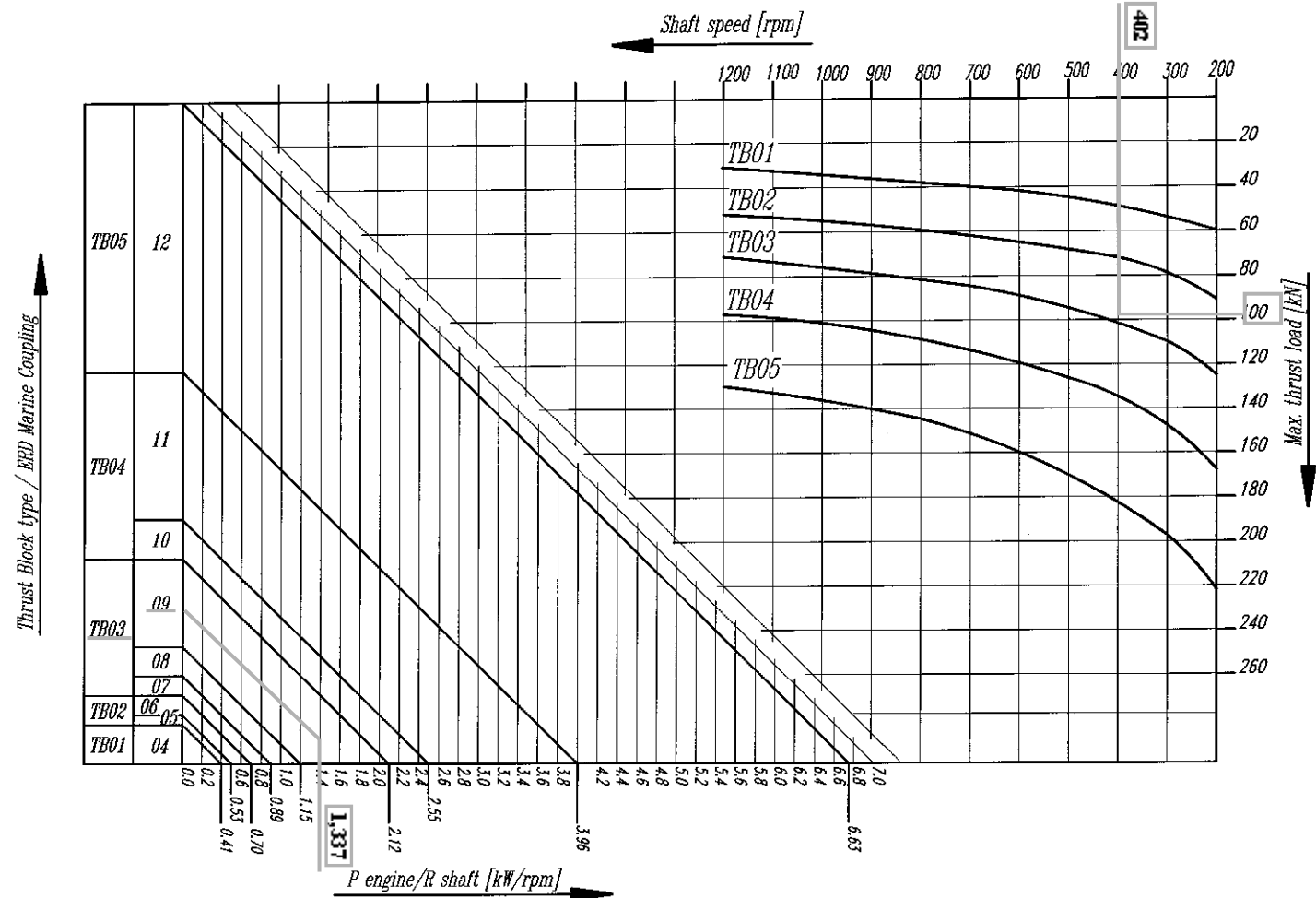
CAD drawings (2D/3D) of the thrustblocks and ERD marine couplings are available in different formats so that this geometry can be easily imported into the CAD drawing of the complete propeller shaft installation. All thrustblocks and ERD marine couplings can be delivered with the required classification approval.



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Selection Chart



Example : Selection TB and ERD coupling
Data : Power engine is 537 kW @ 1800 rpm , Reduction gearbox is 4,48 :1
 Max. propellers thrust is 75 kN

$$\frac{P}{R} = \frac{537 \cdot 4,48}{1800} = 1,337$$

Results : TB03 in combination with RD209 with max. thrust load of 100 kN at max. speed.

