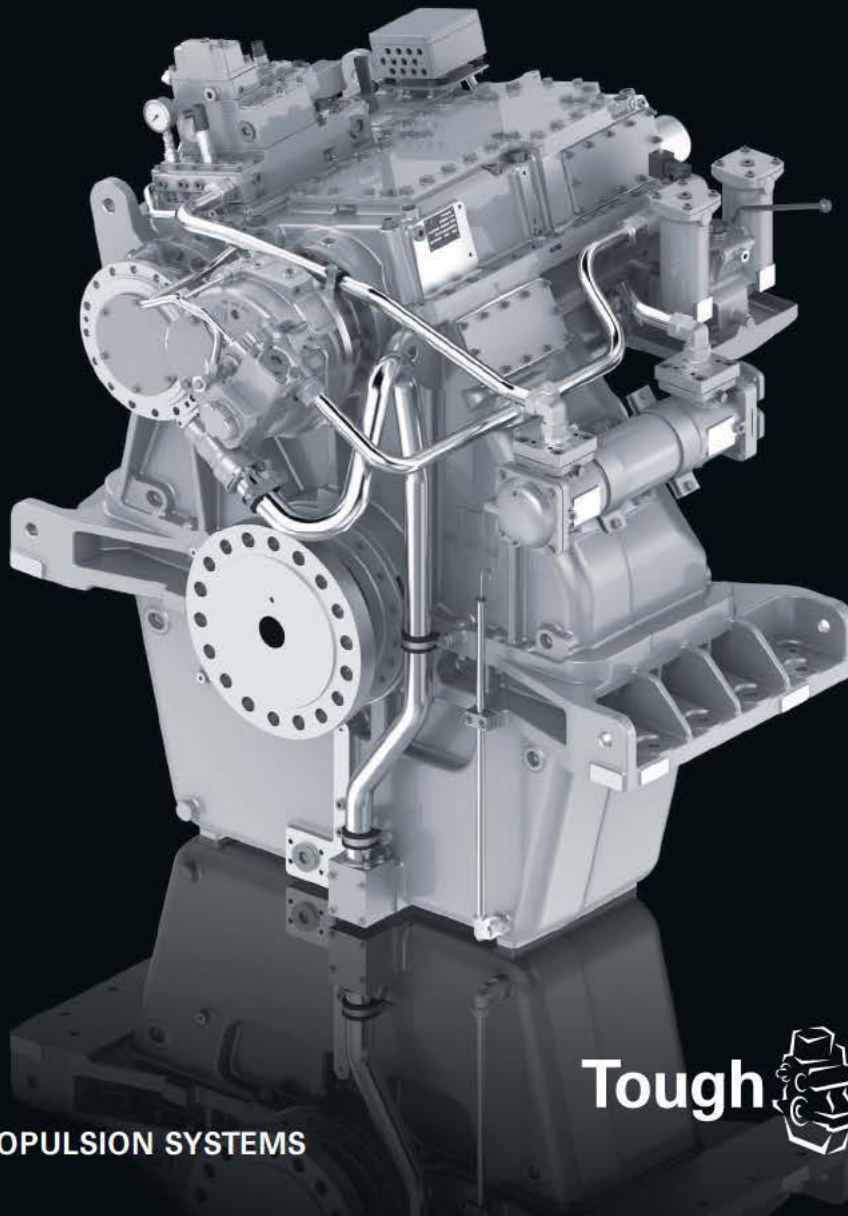


ToughGear SERIES TRANSMISSIONS



MARINE PROPULSION SYSTEMS

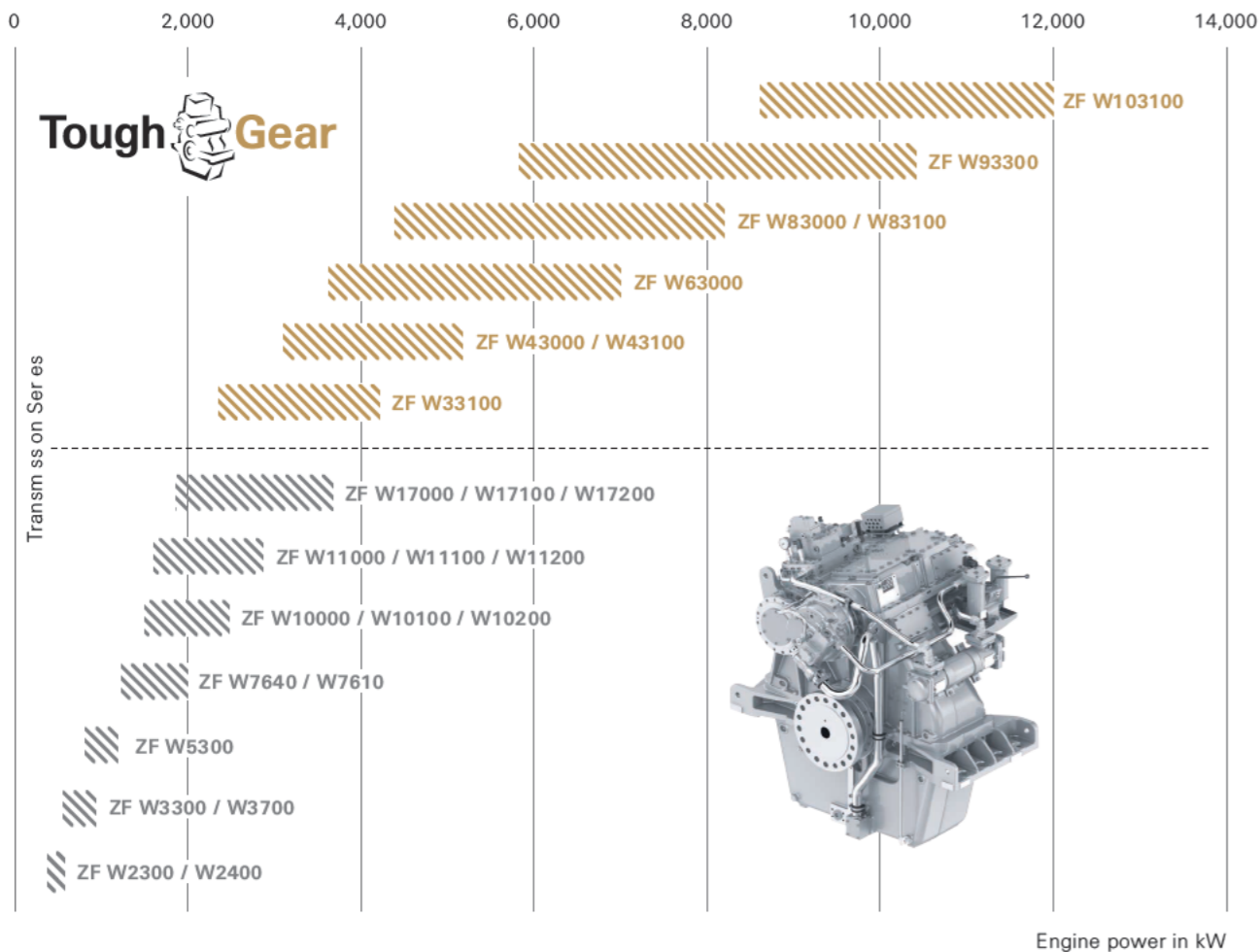
Tough  Gear



ToughGear SERIES

ZF's ToughGear brand is reserved for a selected group of transmissions. Only transmissions designed and built for the most rigorous duty cycles have earned the ToughGear name. For over 75 years ZF has built and sold transmissions for commercial vessel applications. We understand the demands that are placed on a vessel's propulsion system. We know that maximum uptime is paramount in your business. Your success is our success. If you need us, ZF Marine's global service network is only a phone call away.

The ZF Group's vast R&D resources are at our fingertips, contributing to the best engineered components and systems in every ToughGear transmission. Our modern cast iron reduction gearboxes utilize state of the art tooth design to accommodate high load capacities for extended operating cycles all with a very low noise signature. Our steel gears are created from ZF's own industry leading steel composition, one that is accepted by classification societies around the world. For power systems from 450 kW to 12,000 kW there's only one gear, ToughGear.



CONFIGURATIONS

- Various gear housing configurations (shallow / semi deep / deep case) for selected gear types
- Shaft Rotation engine wise (EW) and counter engine wise (CEW) for reversing and non-reversing gears
- Various vertical offset versions
- Power Take Home (PTH) options
- Hybrid-ready variants / Power Take In (PTI)
- Standardized interfaces for PTO / PTI drives and accessories
- Multiple reduction gear ratios (standard ratios & special ratios) for reversing gears
- Optional gear functionalities (e.g. ZF AUTOTROLL®, DYNAMIC POSITIONING capability) for various gear types
- monitoring set configurations and monitoring device connections complying with classification standards

	Shallow Case	Semi Deep Case	Deep Case	NR	NC	PTI	PTO	PTH	Shaft Brake	AUTO-TROLL
SERIES										
ZF W103100		x			CEW		x	x		
ZF W93300		x			CEW		x	x		
ZF W83000	x	x		CEW	CEW		x	x		
ZF W63000	x			CEW			x			
ZF W43000	x	x		CEW	CEW		x	x		
ZF W33100		x		CEW	CEW		x			
ZF W17000	x	x	x	CEW/EW		x	x		x	x
ZF W11000	x	x	x	CEW/EW	CEW/EW	x	x		x	x
ZF W10000	x	x	x	CEW/EW		x	x		x	x
ZF W7600		x	x	CEW/EW	CEW/EW				x	x
ZF W5300		x		CEW/EW	CEW/EW				x	x
ZF W3000		x	x	CEW/EW	CEW/EW				x	x
ZF W2000		x	x	CEW/EW	CEW/EW					x

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MOTION AND MOBILITY