

References

1. Products Tanker
“MATIPUNO / MALINGAP”

Prime Mover

2 x Mitsubishi S6R2-MPTK
530 kW each at 1,400 rpm

Reduction Gear Unit

2 x ZF W3310, 3.519:1

Propeller

1700mm x 4 blade, MnBr,
ABS class

Supplied to / Owner

Herma Shipping & Transport,
Philippines
2. 106 TEU Container Carrier
Vessel “CHOWGULE 7”

Propulsion

2 x ZF AT 3111 DM-FP
deck mounted azimuth thrusters
294 kW at 1,800 rpm

Supplied to / Owner

Chowgule & Co, India
3. 100 TEU Container Vessel
“KENDHAGA NUSANTARA 1”

Side Propulsion

1 x ZF TT 3001 FP
tunnel thruster
250 kW at 1,500 rpm

Supplied to

PT Bandar Abadi, Indonesia

Owner

Ministry of Transport, Indonesia
4. 2880T Heavy Fuel Tanker
“NORDEN”

Propulsion

2 x ZF AT 6111 WM
well mounted azimuth thrusters
746 kW each at 1,600 rpm

Side Propulsion

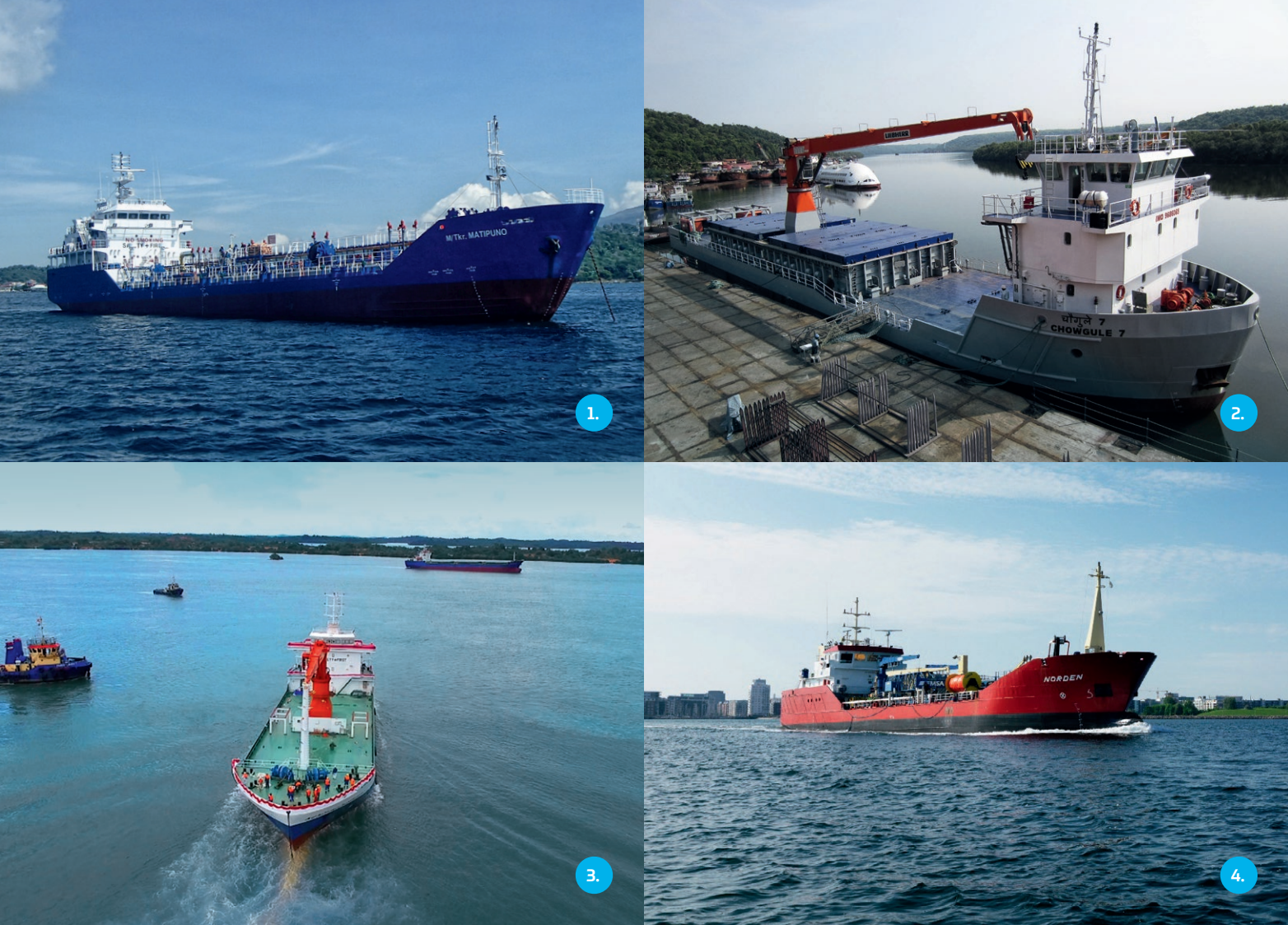
1 x ZF TT 3001 FP
tunnel thruster
250 kW at 1,500 rpm

Supplied to

Bodewes Shipyards,
The Netherlands

Owner

OljOla AB, Sweden



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Coastal and River-Going Merchant Applications

Marine Propulsion Systems

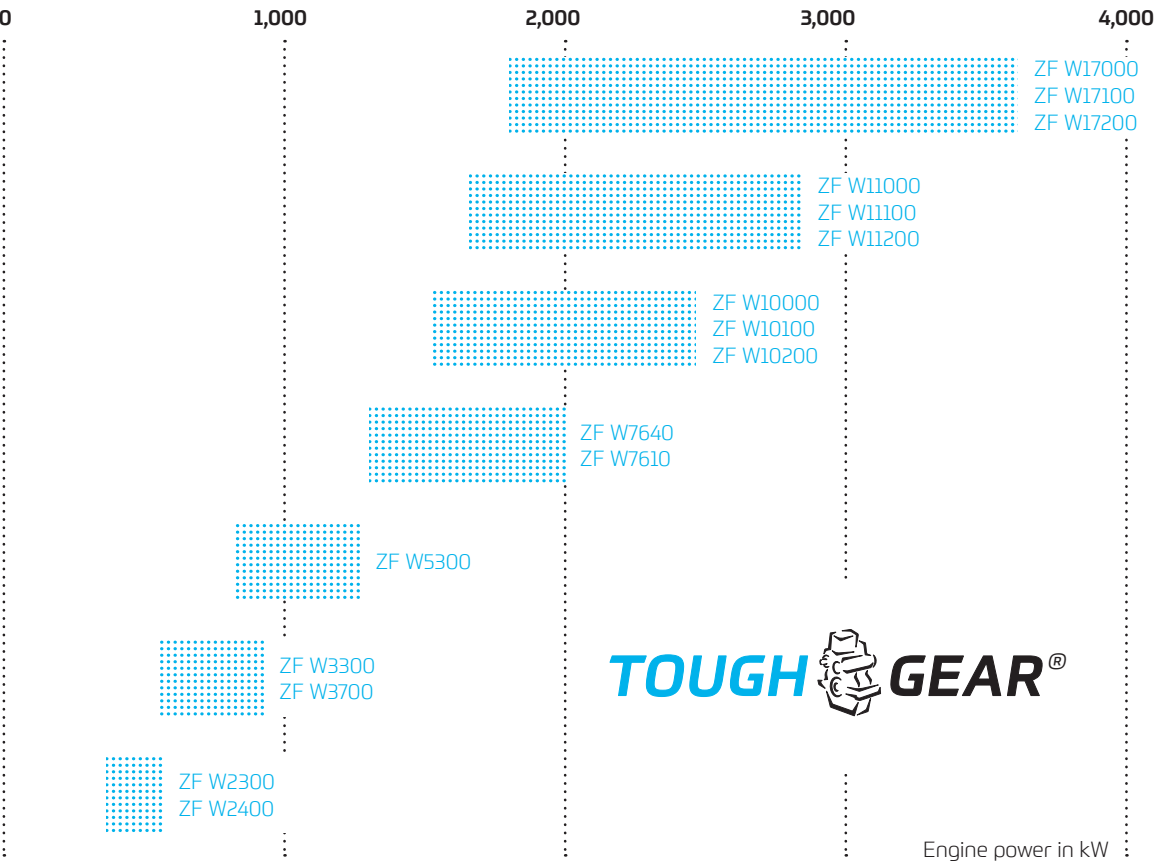


Innovative and dependable propulsion systems

Transmissions

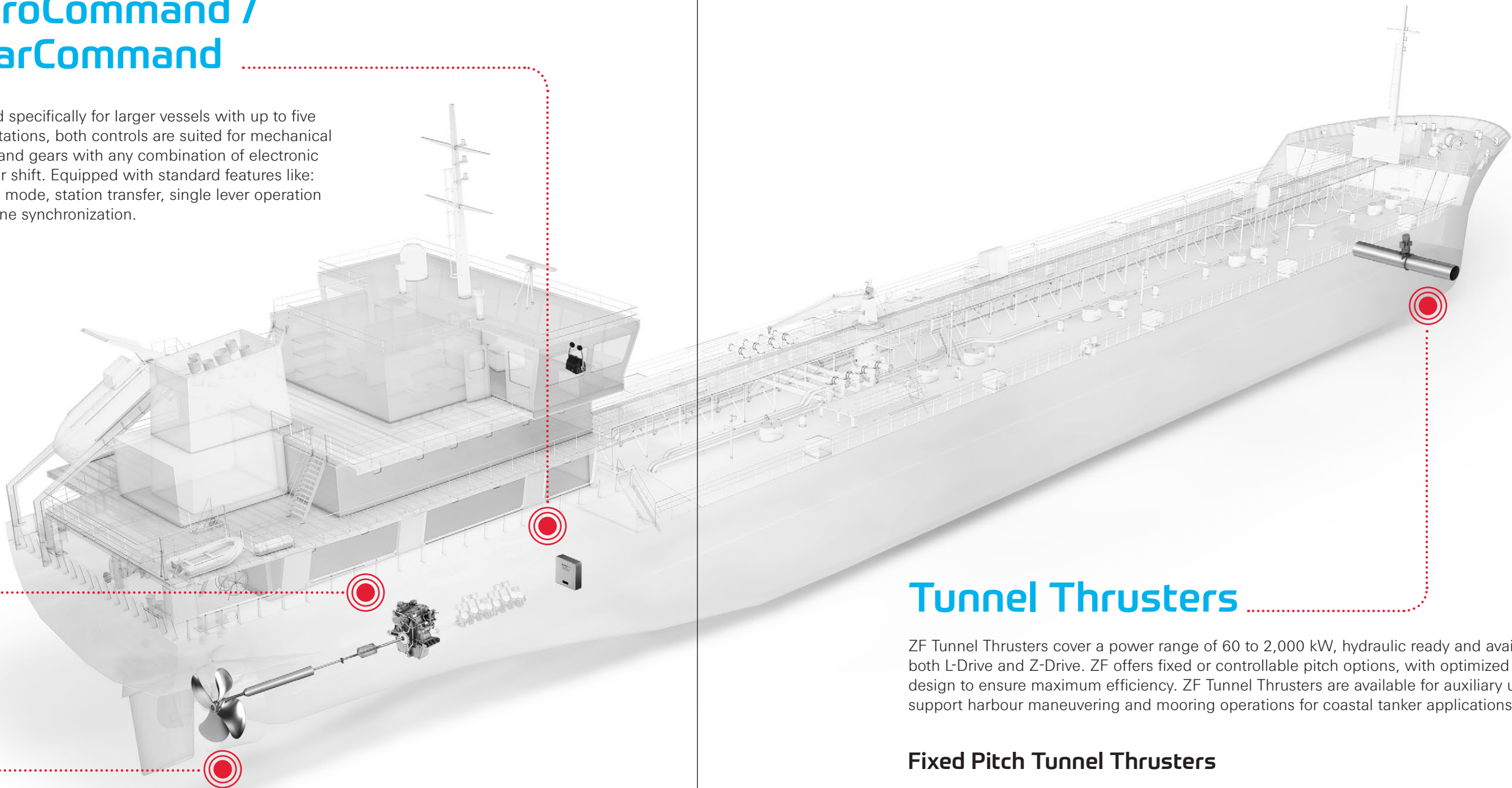
ZF ToughGear® earned its name for our transmissions designed and built for the most rigorous duty cycles, ensuring maximum uptime. Highlights include:

- Modular design for each transmission family offering large ratio spread
- Reversing and non-reversing gears, non-clutch version available on request. Reversing series is available up to 3,600 kW
- Amply sized integral thrust bearings transmitting total propeller thrust to the foundation
- Robust designed cast iron housings
- Latest design process, techniques and material specifications achieving high power density
- Variety of accessories such as shaft brake, PTOs, PTI, standby-pump troling
- Matching requirements of major classification societies, with existing type approvals



MicroCommand / ClearCommand

Designed specifically for larger vessels with up to five control stations, both controls are suited for mechanical engines and gears with any combination of electronic throttle or shift. Equipped with standard features like: warm up mode, station transfer, single lever operation and engine synchronization.



Fixed Pitch Propellers

ZF in-house naval architects collaborate with your project team to design and manufacture propellers unique to single application. The most in-demand models for tanker applications is our WorkMaster model.

Together with our well established partners, ZF delivers a customized and complete shafting package. Our expertise from transmission to propeller includes and extend beyond design, selection and manufacturing, providing you a worry-free one-stop solution.

Tunnel Thrusters

ZF Tunnel Thrusters cover a power range of 60 to 2,000 kW, hydraulic ready and available in both L-Drive and Z-Drive. ZF offers fixed or controllable pitch options, with optimized propeller design to ensure maximum efficiency. ZF Tunnel Thrusters are available for auxiliary usage, to support harbour maneuvering and mooring operations for coastal tanker applications.

Fixed Pitch Tunnel Thrusters

Model	Max. power*		Typical prop. dia.		Tunnel outer dia.		Tunnel wall thickness stand.		Tunnel length stand.	
	kW	hp	mm	inch	mm	inch	mm	inch	mm	inch
ZF TT 1000 FP	100	134	600	24	660	26	15	0.6	1000	39
ZF TT 2000 FP	200	268	700	28	760	30	15	0.6	1000	39
ZF TT 3000 FP	300	402	1050	41	1110	44	15	0.6	1000	39
ZF TT 400 FP	440	590	1150	45	1220	48	15	0.6	1000	39
ZF TT 4000 FP	525	703	1350	53	1420	60	16	0.6	1500	59
ZF TT 5000 FP	825	1105	1650	65	1730	70	18	0.7	2000	79
ZF TT 6000 FP	1200	1608	1900	75	1990	80	20	0.8	2000	79
ZF TT 7000 FP	1650	2211	2300	91	2400	90	22	0.9	2200	80
ZF TT 8000 FP	2000	2680	2450	97	2550	100	22	0.9	2550	100

* Rating subject to classification and application. Mentioned data for indication purposes only. Consult ZF Marine Krimpen's technical staff to determine applicable power for each specific use.