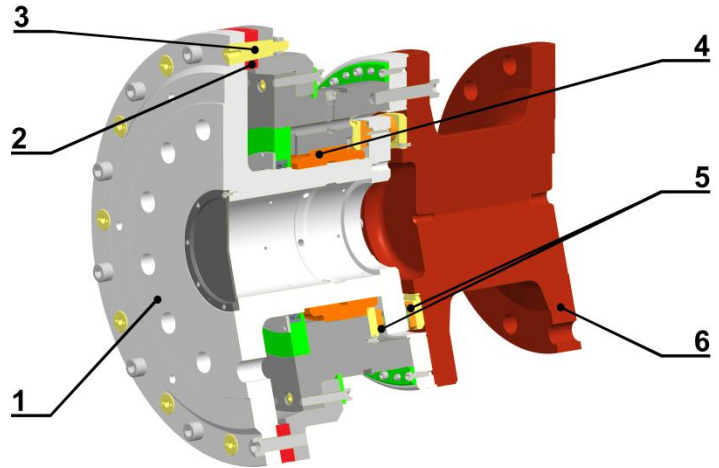


Customized Shaft Disconnecting Device For High Availability and Increased On-Board Safety

Key components:

- 1 Propeller shaft flange
- 2 Spacer ring
- 3 Taper pin
- 4 Radial bearing
- 5 Axial bearing
- 6 Engine-mounted flange



Functional Description

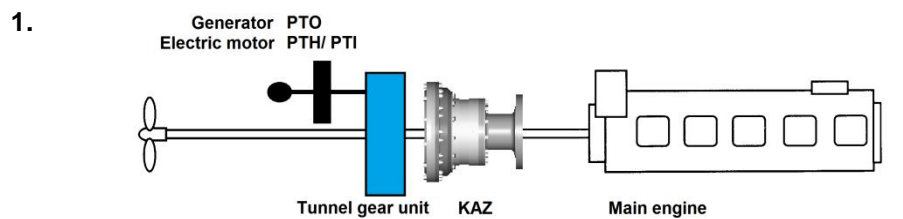
The **KAZ** is a shaft disconnecting device designed to connect or separate the main engine from the propeller. The torque will be transmitted slip-free via tapered pins. The shifting is performed mechanically by removing the spacer ring. When the clutch is engaged the propeller thrust is transmitted directly through the exterior elements.

The axial and radial bearings are only in operation if the **KAZ** is disconnected.

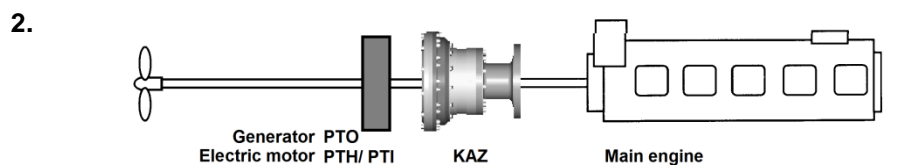
Benefits

- Very compact design
- Low weight
- Wear - free
- Installation requires no foundation
- Torque transmission via taper pins
- No oil supply required
- Axial and radial bearings in operation only if the **KAZ** is disengaged

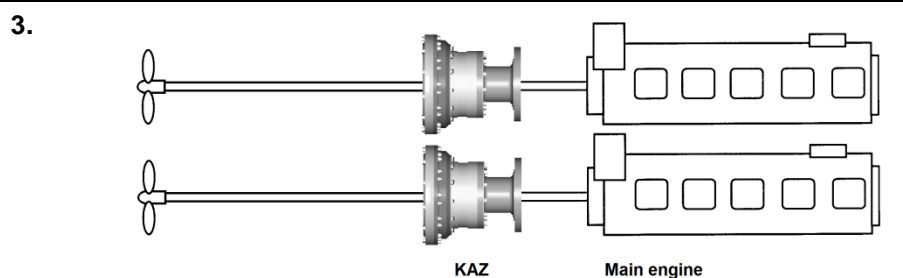
Possible Marine Applications



Auxiliary drive via PTH/ PTI in case of main engine failure. The vessel remains manoeuvrable.



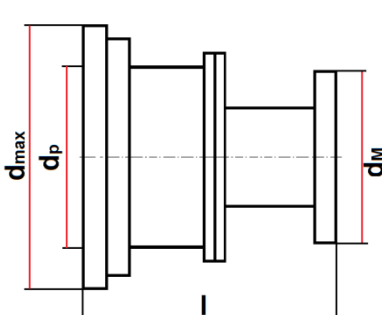
When the **KAZ** is disengaged, the shaft generator can be used as PTH/ PTI for back-up propulsion of the vessel.



If only one engine of a twin-propeller drive is in operation the **KAZ** can absorb the loads of the non-driven propeller (wind milling-effect). This alternative may be used for maintenance operations on the engine which is out of service.

Quickinfo	Time for		PT Modes	Axial thrust
	Engagement	Disengagement		
KAZ 45-450	12 min	8 min	PTO, PTI, PTH	ON via engine. OFF via integrated thrust bearing

Dimensions

KAZ	Size	T _{nenn} kNm	l mm	d _{max} mm	Engine side	Propeller side	Weight kg
					d _M mm	d _p mm	
	28	220	600	745	730	500	1600
	32	400	900	880	600	600	1900
	36	580	1050	980	670	670	2600
	40	830	1130	1100	750	750	3500
	45	1150	1230	1250	880	880	4600
	50	1600	1350	1400	950	950	6100
	56	2250	1520	1570	1050	1050	8600
	63	3200	1700	1750	1120	1120	14000
	71	4500	1920	1950	1250	1250	17600

The **KAZ** Disconnecting Device is protected by **RENK** patents.

References

Quantity	Builder/ Customer	Yard No.	KAZ		Power/ speed per shaft	Class	Ship			
			Size	Thrust			Owner	Name	Type	Engine
12	Brodosplit	441, 442, 443, 444, 445, 446	KAZ 45-450	72kN windmilling, (930 kN max.)	2 x 7.860 kW, 129 rpm	DNV	Stena Line	Stena Paris, Provence, Primorsk, Performance, President, Perros	Product tanker	Diesel
6	INP Heavy Ind., Korea/ Alpha Diesel	1147,1148 1149,1150 1151,1152	KAZ 32-340	190 kN PTH mode, (610 kN max.)	1 x 5.920 kW, 173 rpm	BV	Lauritzen, Denmark	Hull 1147-1152	LPG Carrier	Diesel
2	INP Heavy Ind., Korea/ Alpha Diesel	1171, 1172	KAZ 32-340	190 kN PTH mode, (610 kN max.)	1 x 5.920 kW, 173 rpm	BV	Lauritzen, Denmark	Hull 1171-1172	LPG Carrier	Diesel
8	Brodosplit	462, 463, 464, 465	KAZ 45-450	72kN windmilling, (930 kN max.)	2 x 7.860 kW, 129 rpm	DNV	Stena Line	Stena Progress, Prosperity, Preference, Premium	Product tanker	Diesel
2	INP Heavy Ind., Korea/ Alpha Diesel	1173, 1174	KAZ 32-340	190 kN PTH mode, (610 kN max.)	1 x 5.920 kW, 173 rpm	BV	Lauritzen, Denmark	Hull 1173-1174	LPG Carrier	Diesel
2	Se-Kwang, Korea/ Alpha Diesel	1215, 1216	KAZ 32-340	190 kN PTH mode, (610 kN max.)	1 x 5.920 kW, 173 rpm	BV	Lauritzen, Denmark	Hull 1215, 1216	LPG Carrier	Diesel

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