

KAZ – Customized Shaft Disconnecting Device. Safe-Return-to-Port Applications.

Ensures the safety-critical functionality of an electric PTH (power take home) drive system

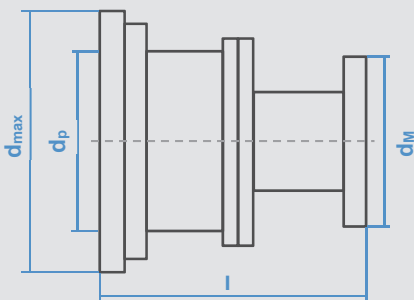
RENK clutches of the KAZ type ensures the safety-critical functionality of an electric PTH (power take home) drive system for conventionally powered ships with a diesel, gas, or electric motor.

In the event of damage of the main machine, the KAZ can disengage the main machine from the rest of the shaft line system.

The electric machine, which otherwise serves as a shaft generator (power take out) or booster (power take in), then overtake the function of maneuvering the ship at lower speed, enabling the vessel and its crew to reach safe next harbour.

The KAZ clutch works in an opened state as a combined supporting and axial bearing. The propeller thrust is led into the stationary thrust bearing of the motor. In the closed state, the KAZ rotates without friction or wear as a rigid component of the shaft line system.

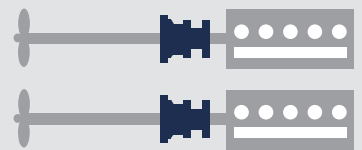
The KAZ can also be used in vessels with twin or multiple main propulsion systems. In this case, the KAZ prevents a defective drive from rotating with the rest of the shaft line system as the result of the propeller being towed through the water, thereby enabling a free “wind milling” with reduced resistance.



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



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).

Size	T _{nom} [kNm]	l [mm]	d _{max} [mm]	d _M [mm]	d _p [mm]	Weight [kg]
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



Low complexity

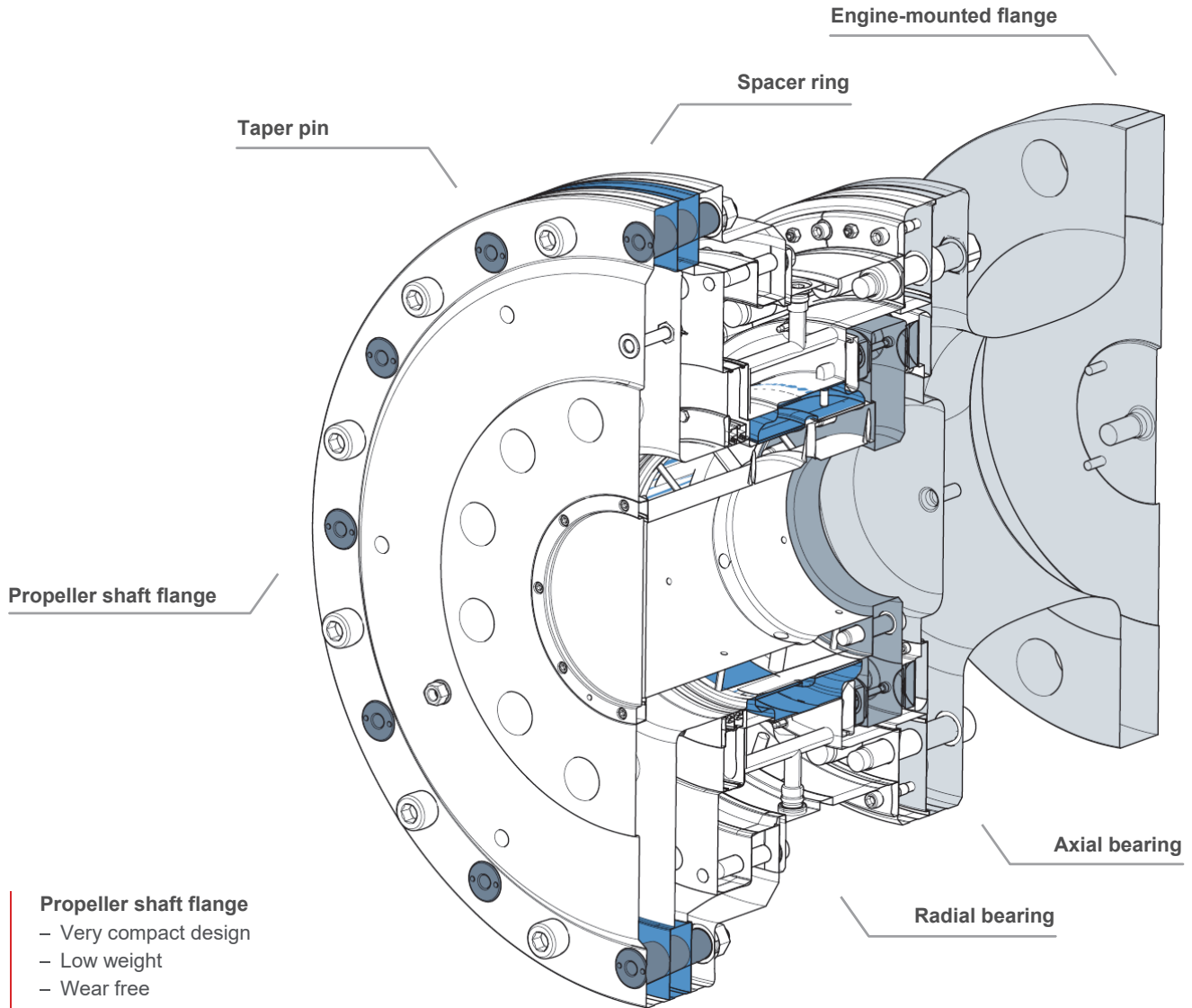
of components with compact construction

Wear free

Simple connected parts

Self-lubrication

Despite highly inclined positions



Propeller shaft flange

- Very compact design
- Low weight
- Wear free
- No foundation required
- Torque transmission via taper pins
- No lubricant supply required

Qty.	Builder	KAZ size	Power/Propeller speed	Owner	Class	Type of vessel
12	Brodosplit, Croatia	KAZ 45-450*	2 x 7860 kW, 129 rpm	Stena Line, Sweden	DNV	Product tanker
6	INP Heavy Ind., Korea	KAZ 32-340	1 x 5920 kW, 173 rpm	Lauritzen, Denmark	BV	LPG carrier
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8	Brodosplit, Croatia	KAZ 45-450*	2 x 7860 kW, 129 rpm	Stena Line, Sweden	DNV	Product tanker
2	INP Heavy Ind., Korea	KAZ 32-340	1 x 5920 kW, 173 rpm	Lauritzen, Denmark	BV	LPG carrier
2	Sekwang SY, Korea	KAZ 32-340	1 x 5920 kW, 173 rpm	Lauritzen, Denmark	BV	LPG carrier
3	Chinese SY, China	KAZ 45-330	1 x 5850 kW, 102 rpm	European owner	BV	Product tanker
4	Chinese SY, China	KAZ 50-535	1 x 14280 kW, 105 rpm	Overseas owner	BV	Container vessel
2	Chinese SY, China	KAZ 45-450	1 x 5850 kW, 102 rpm	European owner	BV	Product tanker

* Shaft brake included.