

Retractable Thrusters



KONGSBERG

Kongsberg Maritime Azimuth Thrusters

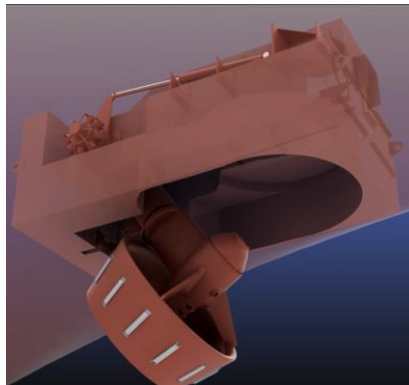
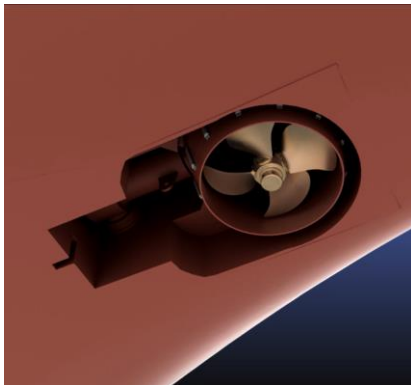
Azimuth thruster, type: TCNS/C

KONGSBERG is the most experienced manufacturer of retractable azimuth thrusters, having delivered hundreds of units since 1970. Our wide range of retractable thrusters provides effective solutions for all vessel types that require enhanced manoeuvrability and dynamic positioning.

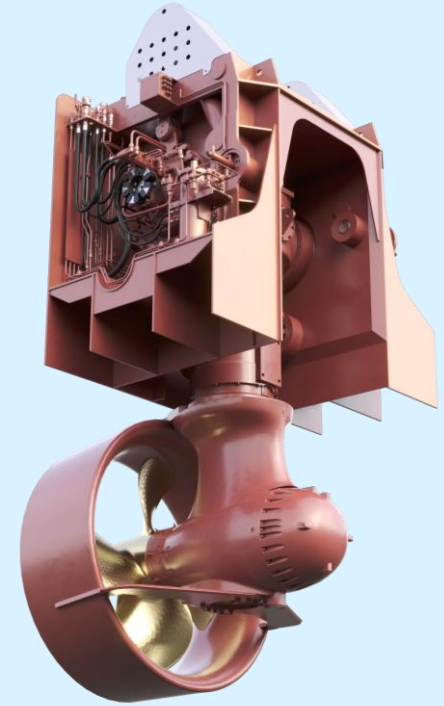
Azimuth Thruster Type: TCNS

The Kongsberg TCNS type azimuth thruster combines all the benefits of a retractable thruster in an extremely compact package. During operation, the thruster provides a high bollard pull allowing for efficient vessel positioning and manoeuvring. For transit and shallow water operations, the thruster swings above the bottom line into its housing.

Furthermore, the TCNS type azimuth thruster contributes significantly to the vessel's safety redundancy. If the main propulsion fails, the thruster's high thrust allows the vessel to maintain control and manoeuvrability while safely returning to port.



In the stowed position, the thruster does not protrude below the vessel's keel/baseline, which is important for shallow water operations. Additional azimuth thrusters are frequently located at the lowest possible position in the hull due to space envelope constraints, particularly for equipment mounted at the bow, and thrusters must be retracted into the hull when not in use.



Applications

- Dynamic positioning
- Advanced manoeuvring
- Redundancy and take me home
- Slow transit (with TCNS only)
- Increased bollard pull

Key advantages

- Advanced manoeuvring and dynamic positioning capability
- Minimal installation footprint and height requirement
- Easy installation.
- Delivered as a single weld on unit

TCNS/C Combi thruster

TCNS type thrusters are versatile and can be easily configured for use as a combi thruster. When retracted, the unit doubles as a tunnel thruster, increasing its functionality. This adaptability not only optimises space but also results in substantial cost savings.

TCNS/C product Range:

	TCNS/C 75	TCNS/C 100
Propeller size (mm)	1700	2200
Power (kW)	750-1000	1665-2000
Max thrust (kN)	120-160	265-320
Max input rpm (RPM)	1500-2000	1500-1800
Total dry weight (kg)	16200	29100
Ice-class	DNV ICE C	DNV ICE C

Configurations

The KONGSBERG retractable thrusters can be customised to meet specific customer needs such as redundancy, ice, noise, and shock specifications.

KONGSBERG azimuth thrusters can be configured to comply with the Vessel General Permit (VGP) and use environmentally acceptable EAL oils.

Hydrodynamic expertise

A good hydrodynamic interaction between the thruster and the vessel's hull is essential for efficiency and performance. KONGSBERG is the world's only thruster manufacturer with its own hydrodynamic research centre and cavitation tank. Our customers can take advantage of KONGSBERG's world class expertise in hydrodynamics, computational fluid dynamics and unique model testing capability to optimise vessel and propulsive system performance.

Global customer support

The global service network ensures high-level product execution throughout its lifecycle, providing all solutions in one place. We always have good availability of spare products in our warehouses.

Our global service ensures the availability of experienced service personnel and spare parts, allowing for smooth operation of the propulsion system from commissioning to the vessel's operational life.

Why to choose our TCNS type thruster

- Advanced manoeuvring and dynamic positioning capability
- Robust and proven design with hundreds of examples delivered to all vessel segments
- Minimal installation footprint and height requirement

