

Rolls-Royce tunnel thrusters

Type TT-SS

Key facts

Super Silent thruster is a tunnel thruster designed for low noise; with double walls in the full tunnel length, and flexible mounted inner tunnel.

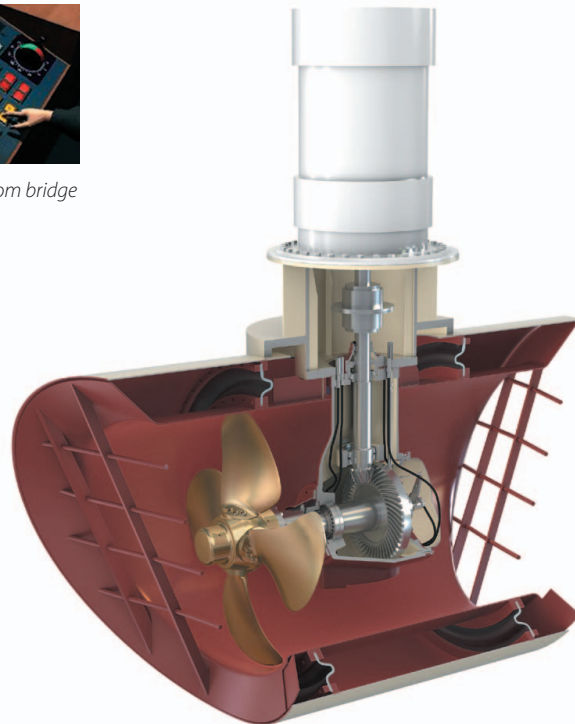
- Reduced tip speed.
- Noise reduction up to 15 dB compared to a normal design of tunnel thruster.
- Reduction up to 25 dB can be reached in combination with floating floors and other efforts by the shipbuilder.

The system normally contains of thruster unit with double mounted tunnel, hydraulic equipment, remote control and electrical drivemotor with starter.

- Available in CP and FP type.
- Skew blades.
- Drive shaft seal can be changed without removing electric motor.
- Heavy duty propeller in DP condition.
- Shaft seal pressure control with drain connection in DP condition.
- Mechanical locked bearings in DP condition



All control from bridge



Super Silent thruster with double mounted tunnel

Outer tunnel

The outer tunnel has built in foundation brackets for the inner tunnel suspension and supporting rings for the main and secondary rubber bellow sealings.

The outer tunnel with extension to fit the hull side shape.

Inner tunnel

The inner tunnel has built on a foundation ring for thruster and drive motor foundation, brackets for elastic suspension of the tunnel, and on each end supporting rings for the main rubber bellow seal.

The inner tunnel with extension to fit the hull side shape included grids.

Motor foundation

The motor foundation is bolted to the inner

tunnel and machined to fit the vertical drivemotor. The foundation incorporates a supporting ring for the secondary rubber bellow sealing.

Thrust element

Elements to obtain thrust forces from the thruster. The element housing is welded to the outer tunnel, and element is bolted to the inner tunnel.

Propeller

Propeller cast in one part, the blades are bolted to the hub mechanism by stainless bolts. The internal parts are working in oil under pressure from a gravity tank. Propeller blades of forward-skew design, machined, polished and balanced acc. to the requirements of ISO R 484 class II.

Gearhousing

Designed as a combined speed reduction and pitch actuating unit. The housing is of robust design, and provided with connecting flanges to the tunnel.

Hydraulic system

- Pitch servo oil pump with return filter built on
- Pitch control valve panels
- Expansion tank (pressurised)

Remote control

Based on analogue electronics. It may be configured in a variety of versions and may include several functions.

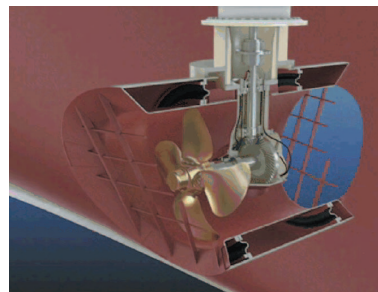
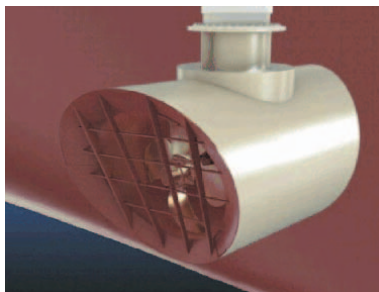
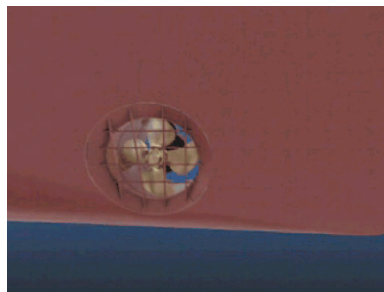
Drivemotor system

Electrical drivemotor shall be used for this application. Can be used with motor fixed RPM or frequency converter.

Fact Sheet

Super Silent thruster

Suitable for and installed in all types of vessels



Thruster type	Dia	Motor	Propeller	Tip speed	CP power	FP power	Frequency
	mm	rpm	rpm	m/s	kW	kW	Hz
TT2200 SS	2 200	1 190	276	32	1 355	880	60
		1 190	242	28	1 050	680	60
		980	228	26	1 115	730	50
TT2400 SS	2 400	1 190	257	32	1 720	1 320	60
		1 190	230	29	1 350	970	60
		980	211	27	1 420	1 100	50
TT2800 SS	2 800	880	199	29	2 140	1 450	60
		980	222	33	2 385	1 600	50

For further technical data and dimensions, please see Fact Sheet for TT CP and TT FP.