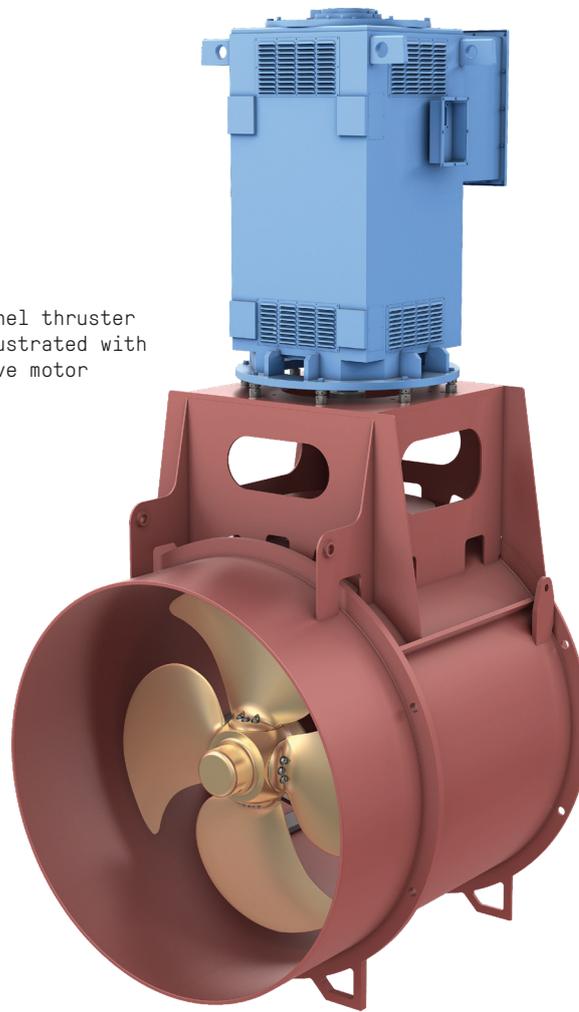


TUNNEL THRUSTER TYPE TTC CP



KONGSBERG

Tunnel thruster
illustrated with
drive motor



FUNCTIONAL FEATURES

- Propeller hub design based upon well proven TT-standard propeller hub.
- Hydraulically balanced propeller hub design.
- Propeller blade bolted from outside for easy blade seal change.
- Well proven blade seal solution.
- No need to remove intermediate shaft and drive motor for overhauling of thruster. All drive modules can be changed with access from tunnel side.
- Thruster available in "Thruster Support Pool" (TSP).
- Worldwide service network.
- Approved for use of EAL-oil.

KONGSBERG TUNNEL THRUSTERS

Type TTC CP

Key facts

The tunnel thruster is designed for giving max. sideforce to the ship in manoeuvring condition.

Application

Auxiliary use – limited hours/year lifetime

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

- Skew blades.
- Easy installation
- Less adjustment during installation (compared to standard TT-thruster).
- Interchange with TT-thruster
- Increased clearance between propeller blade tip and tunnel plating.
- Reduced noise and vibration.
- TT-tunnel can be delivered by yard according to our drawing
- Interchange with TT-thruster
- Simplified hydraulic.
- Less external piping for the yard during installation.
- Less complexity during commissioning and maintenance.

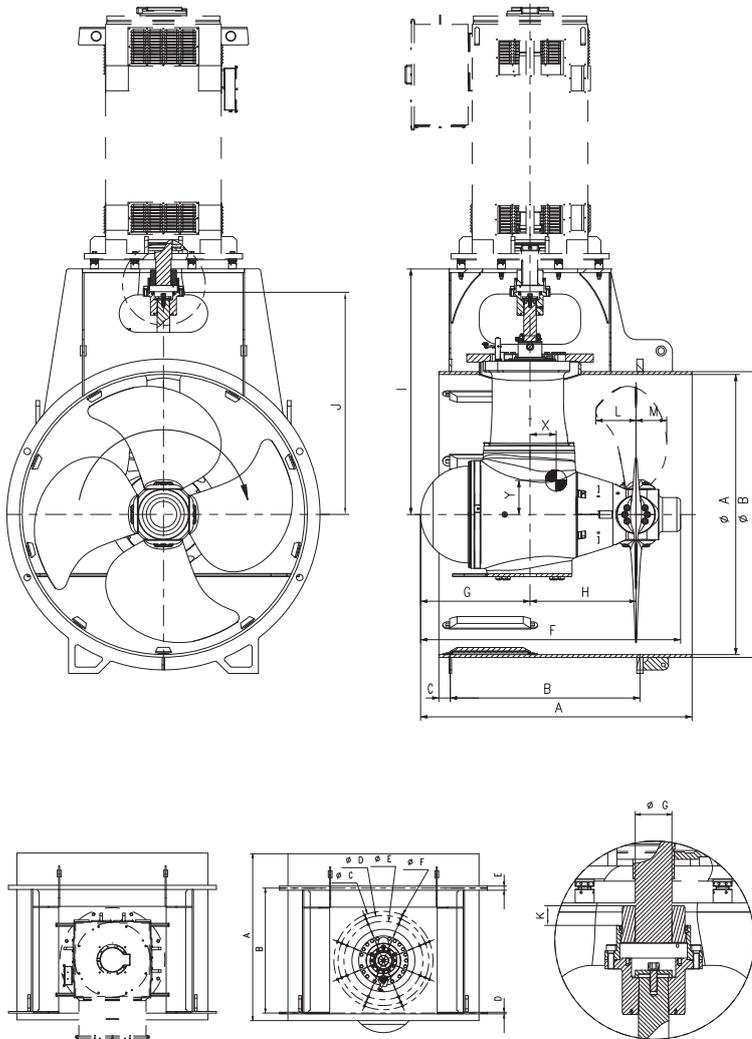
AVAILABLE GEAR-RATIO ON TTC

Design data

	TIP SPEED	MOTOR	PROPELLER	POWER	PRIME MOVER		TUNNEL DIA		THRUSTER/ SIDE FORCE
TTC-SIZE	m/s	RPM	RPM	(KW)	TYPE	HZ	NOMINAL	MAX	KN(*)
TTC 65 CP	34.6	1200	318	1500	El. motor	60	2200	2230	196
TTC 65 CP	35.2	1500	324	1500	El. motor	50	2200	2230	196
TTC 80 CP	35.0	1200	295	1900	El. motor	60	2400	2430	243
TTC 80 CP	32.2	1000	271	1900	El. motor	50	2400	2430	243
TTC 83 CP	31.9	900	244	2220	El. motor	60	2650	2680	285
TTC 83 CP	32.2	1000	246	2220	El. motor	50	2650	2680	285
TTC 85 CP	33.8	900	244	2500	El. motor	60	2800	2836	324
TTC 85 CP	34.1	1000	246	2500	El. motor	50	2800	2836	324

NOTES

*1) A steady force generated without operation of a nearby TT and ideally integrated with the hull with optimum inlet geometry, no grid and without any degradation effects from current and waves (ventilation).



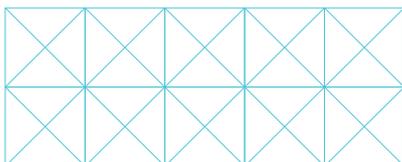
TTC RANGE

VARIANTS	TTC 65	TTC 80	TTC 83	TTC 85
Power (kW)	1500	1900	2200	2500
øA	2230	2453	2680	2896
øB	2274	2480	2730	2836
A	2145	2482	2492	2631
B	1498	1665.5	1811	1879
C	90	75	75	105
D	20	20	20	20
E	50	50	50	50
F	1702	2620	2620	2620
G	865	1082	1082	1082
H	837	1075	1075	1075
I	1955	2090	2283	2425
J	1708	1888	2032	2110
K	65	94	94	94
L	317	341	375	398
M	242	246	276	293
X	206	232	0	265
Y	270	341	0	382

Weight of standard tunnel and propeller unit, excl. oil.

NOTES

All data is subject to change without prior notice.



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