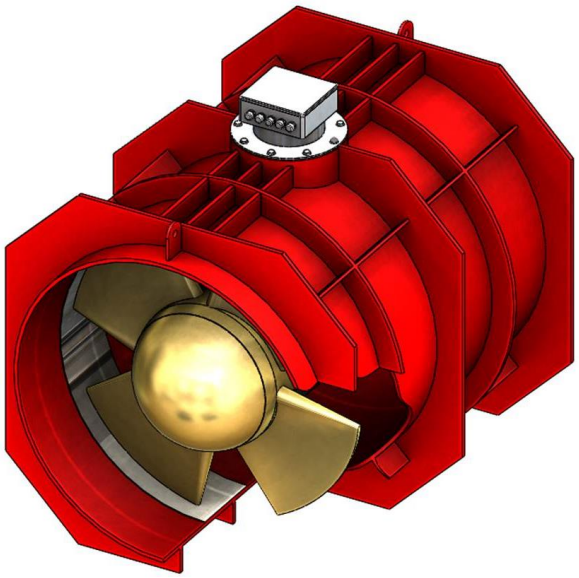
Electric Podded Tunnel Thruster Systems

PT. Marine Propulsion Solutions, is recognized as one of the world's leading Electric Podded Thruster and Propulsion Systems Manufacturer and introduces its unique Electric Podded Rotatable Propulsion Units for all types of Marine vessels.



Owner/Operator benefits:

- Propeller speed is independent of engine speed leading to better maneuverability
- Maximum system efficiency
- Reduced noise & vibration levels

Shipyard & Construction benefits:

- Flexible machinery arrangement
- Modularized design
- Simpler vessel machinery installation
- No alignments required

No oil/ lubrication systems required

Design:

PT. Marine Propulsion Solutions through-hull Electric Podded Drives are engineered products of European design based on the latest marine propulsion technologies, ANSYS Finite Element Analysis and the most modern manufacturing technologies available. They are of very heavy duty design and incorporate many unique features to optimize reliability, longevity and easy maintenance.

"One Source Solution"

Integrated Propulsion Packages:

- Bow/Stern Tunnel Thruster Systems with tunnel
- Water or Air Cooled Variable Speed Drives
- Bridge Controls with full system monitoring
- Fully Classed Systems (ABS, B.V., Lloyds and other available

380/400/440/690 Vac
50/60 Hz system
options available

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PT. Marine Propulsion Solutions introduces a series of transverse bow thruster systems designed using PM AC electric motor drives and variable speed frequency converter technology. They are designed to minimize noise and cavitation. The thruster system comes complete with a variable speed electric drive and full bridge controls. Available from 50 to 3000 Kw.

A "Unique" Series of Electric Thrusters, using *Electric Podded Thruster Technology* by incorporating the electric motor as an integral part of the thruster hub therefore eliminating reduction gear boxes and introducing "Silent Systems" that are, efficient, compact with low noise and vibration. The drives utilize variable speed motor controllers with simple installation saving the shipyard and owner cost.

Model Selection

Model	Unit	50BTE	75BTE	100BTE	150BTE	200BTE	275BTE	350BTE	500BTE	600BTE	850BTE
Tunnel Dia.	MM	635.0	711.2	812.8	966.0	1154.0	1220.0	1325.0	1490.0	1690	1895
O.D.	Inch	25.0	28.0	32.0	38.0	45.4	48.0	52.2	58.7	66.5	75.6
Continuous	Kw	50	75	100	150	200	275	350	500	600	850
Power	Hp	67	100	134	201	268	369	469	670	804	1140
Prop Dia.	MM	605.0	660.0	768.0	915.0	1100	1165	1270	1420	1625	1830
Rev speed	RPM	1050	950	800.0	675	586	540	500	440	390	335
Thrust	Kgs	761	1136	1522	2284	3045	4193	5330	7,615	9,135	12,955
	Lbs	1675	2500	3350	5025	6700	9225	11,725	16,750	20,100	28,500

Model	Unit	900BTE	1000BTE	1200BTE	1500BTE	1800BTE	2000BTE	2500BTE	3000BTE
Tunnel Dia	MM	1950.0	2056.0	2260.0	2510.0	2655.0	2680.0	2960.0	3340.0
O.D.	Inch	77.8	80.9	89.0	98.8	104.5	105.5	116.5	131.5
Continuous	Kw	900	1000	1200	1500	1800	2000	2500	3000
Power	Hp	1206	1340	1608	2,010	2,415	2680	3,351	4021
Prop Dia.	MM	1870	1980	2180	2430	2575	2700	2875	3400
Rev speed	RPM	320	300	290	250	240	230	215	180
Thrust	Kgs	13,710	15,010	18,272	22,850	27,420	30,500	38,080	45,700
	Lbs-F	30,160	33,500	40,200	50,270	132,705	67,025	83,780	100,540

Ease of Installation with reduced costs...

With the electric motor designed as part of the thruster pod and water cooled, there are no requirements for forced air ventilation of the electric motor, no shafting requirements with any couplings and alignments necessary.

Noise Suppression Technology...

Because the electric motor is designed as an integral part of the thruster hub and attached directly to the propeller shaft, there are no gears boxes or gear reductions providing maximum system efficiency with lower noise and vibration levels produced.

Application for Offshore Vessels

PT. Marine Propulsion Solutions

Marine Thruster & Propulsion Technologies

Full Follow Up Bridge Control Stations

Competence & experience in propulsion technology

We can offer a “One Source Solution’ providing complete control systems, Switchboards with Power management Systems and motor speed controllers (air and water cooled).

Special Features

The Tunnel Thruster Control System (TCS) fully automates from bridge the control of the tunnel thruster. The tunnel thruster is driven by the electric motor through the VFD (AFE).

The Tunnel Thruster ControlSystem fulfills the rules of the classification societies and includes remote control, safety, RPM/current indication and a back-up control system. The Tunnel Thruster Control System can be used in combination with a **Dynamic Positioning System**.

Operator Panels can be supplied for bridge fore, bridge aft and bridge wings. Operator panels are equipped with a power and/or RPM setting lever and a control display to select various operator modes and to indicate RPM and motor load or amperage.

Customer can easily execute commissioning as all parameters are selectable on the Operator Panels in a user friendly way.

RPM/LOAD setting lever including 5.7” TFT colour display equipped with RPM and load (current) indicators. In addition, the 5.7” TFT is equipped with 6 control pushbuttons and various other indicators including alarms. Back-up control of RPM Option: Emergency Stop pushbutton

Two or more bridge panels are supplied in case of bridge fore and bridge aft or in case of bridge wings. Bumpless take over control is realized with line-up indication lamps on the 5.7” TFT colour display can be supplied as an option.

Application for Offshore Vessels

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