

## The Marine Thruster & Propulsion Specialists

### Key Features:

- High reliability, Rugged Design
- Unique Sealing Technology
- Dynamically Balanced – No Vibration
- With or Without Kort Type Nozzles
- Ten (10) Models from 200 upto 3000Kw
- Prop Diameters 1100 upto 3450 mm
- Direct Drive Reliability (no gearbox)
- Full Monitoring Systems
- Fully Azimuthing
- Dynamic Positioning Interfaces



## Marine Propulsion Solutions Propulsion Group

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## Azimuthing Electric Podded Propulsion Drives

**PT. Marine Propulsion Solutions**, is recognized as one of the world's leading Electric Podded Thruster and Propulsion Systems Manufacturer. It 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
- Increased propulsion system efficiency
- Increased propulsion system redundancy and power availability
- Reduced total installed power generation
- Reduced noise & vibration levels

### Shipyard & Construction benefits:

- Flexible machinery arrangement
- Modularized design
- Simpler vessel machinery installation
- Simpler hull form and structure

MPS Propulsion Systems 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.

***Silent.... Dynamically Balanced.... and free of Vibration...***



Azimuthing Electric Podded Propulsion Systems



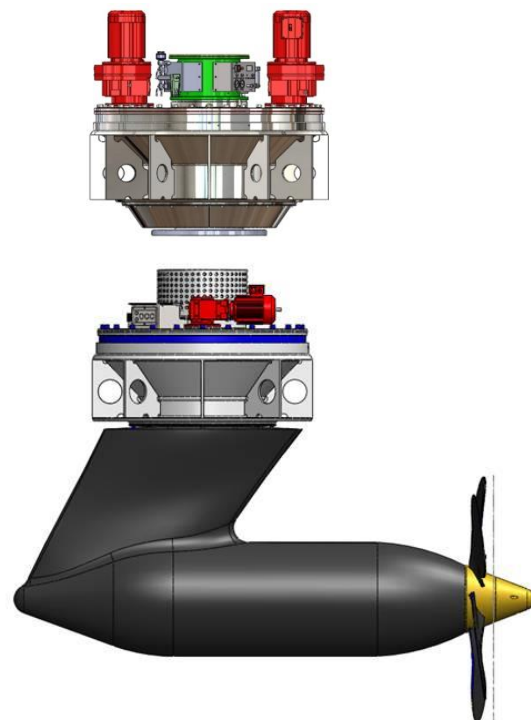
## Marine Propulsion Solutions – Propulsion Group

### Azimuthing Electric Podded Propulsion Drives

#### Integrated Propulsion Packages:

- Dual Azimuthing Propulsion Drives
- Water or Air Cooled Variable Speed Drives
- Diesel Generator Sets (Tier 2 & 3 – IP44)
- Main Switchboards with built-in Power Management System
- Integrated Bridge Controls with full system monitoring
- Fully Classed Systems (ABS, B.V., Lloyds and other available)

The Electric Podded Drive is designed for installation in wells. The wells (shipyard furnished) are large enough to allow top-side installation and removal of the completely assembled thruster unit. Installation and removal takes place through soft patches in the main deck. If practical, the top flange of the well is at an elevation slightly above waterline in light ship condition. This allows removal and installation of the Propulsion Drive while the vessel remains in the water, i.e., without dry docking. The thruster mount is provided with a top flange for bolting to the well flange. The well flange is also provided, along with the flange gasket and bolting, allowing easy and accurate installation without the need for any machining on the vessel well structure.



Azimuthing Electric Podded Propulsion System - Specifications											
Model	Units	A200E	A275E	A350E	A500E	A850E	A1000E	A1200E	A1500E	A2100E	A3000E
Cont torque	MdaN	200	300	480	860	1950	3400	4100	7000	9000	13300
Continuous Power	Kw	200	275	350	500	850	1000	1200	1500	2100	3000
	Hp	268	368	470	670	1140	1340	1610	2010	2815	4021
Prop Dia Rev speed	MM	1100	1175	1250	1400	1750	1925	2300	2475	2800	3450
	RPM	580	540	500	450	360	325	265	250	215	180

#### 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.

