

Marine Propulsion Solutions Group

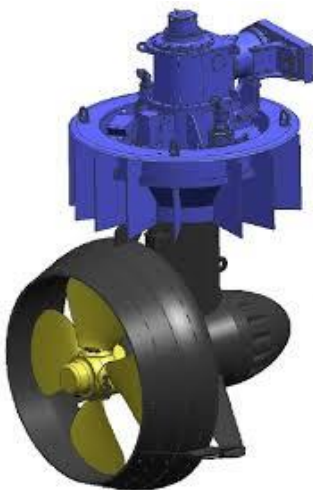
Rotatable Propeller Systems

Z-Drives

Mechanical and Electric Podded Drives

A full Series of Azimuthing Mechanical and Electric Podded Propeller Drives ranging from 100 to 3200 Kw providing full 360 degree Capabilities.

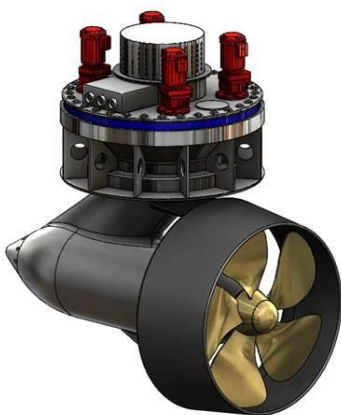
Marine Propulsion Solutions Group is recognized as one of the world's leading Z-Drive Propulsion Systems Manufacturer and introduces its unique Direct Engine Drive and Electric Podded Rotatable Propulsion Units for all types of Marine vessels.



Direct Diesel Mechanical Type Z-Drives

The Z-Dives are driven direct by a diesel engine installation and 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.



Electric Podded Permanent Magnet Azimuthing Drives

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.



Using Permanent Magnet direct propeller shaft drives eliminates any reductions gears required reducing vibration with rugged and quiet drives..... Full Torque at all speeds.....

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Solutions Group**

**One Source
Solution**

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Model Selection

PT. Marine Propulsion Solutions Z-Drives								
Mechanical Z-Drives Model No	Continuous Power		Developed Thrust with Kort Type Nozzles		Engine Input Rpm	Prop Rpm	Prop Dia.	
	Kw	Hp	Kgs-F	Tonnes				
			Based on two units					
ZM100	100	134	3,410	3.4	2400	575	1050	
ZM200	200	268	6,822	6.8		525	1175	
ZM300	300	402	10,233	10.2		475	1250	
ZM450	450	603	15,350	15.3		450	1285	
ZM700	675	905	22,314	22.2	2000	340	1425	
ZM1000	900	1206	29,600	29.6	750 1000 1500 1800	348	1600	
	1050	1408	35,840	35.8			1800	
ZM1200	1150	1542	39,250	39.2		320		1800
	1275	1709	43,502	43.5				1900
	1350	1810	46,072	46.0				2000
ZM1500	1400	1877	47,780	47.8		277		2000
	1600	2145	54,600	54.6				2200
ZM1800	1700	2280	58,040	58.0		255		2200
	1800	2413	62,520	62.5				2400
ZM2100	2050	2750	70,000	70.0		243		2400
	2100	2815	72,935	72.9				2600
ZM2400	2400	3217	80,425	80.4		225		2600
	2400	3217	83,350	83.4				2800
ZM2800	2800	3753	93,825	93.8	720 1000 1200	218	2800	
	2800	3753	97,405	97.4			3000	
ZM3200	3200	4290	107,250	107.2		200	3000	
	3200	4290	111,150	111.0			3200	
Electric Podded Permanent Magnet Z-Drives Model No	Continuous Power		Developed Thrust with Kort Type Nozzle		Current Amps	Prop Rpm	Prop Dia mm	
	Kw	Hp	Kgs-F	Ton				
				Based on two units				
A100E	100	134	3,410	3.4	Varies with Input Voltage	670	950	
A150E	150	201	5,116	5.1		600	1075	
A200E	200	268	6,822	6.8		580	1100	
A275E	275	368	9,367	9.4		540	1175	
A350E	350	470	11,965	12.0	400Vac to 690Vac	500	1250	
A500E	500	670	17,055	17.0		450	1400	
A850E	850	1140	29,020	29.0		360	1750	
A1000E	1000	1340	34,110	34.1		325	1925	
A1200E	1200	1610	40,982	41.0	50/60	265	2300	
A1500E	1500	2010	51,165	51.1		250	2475	
A1800E	1800	2,413	61,420	61.4		225	2675	
A2100E	2100	2815	71,655	71.6		215	2800	
A2500E	2500	3,351	85,300	85.3	3 Phase	200	3100	
A3000E	3000	4021	102,355	102.3		180	3450	

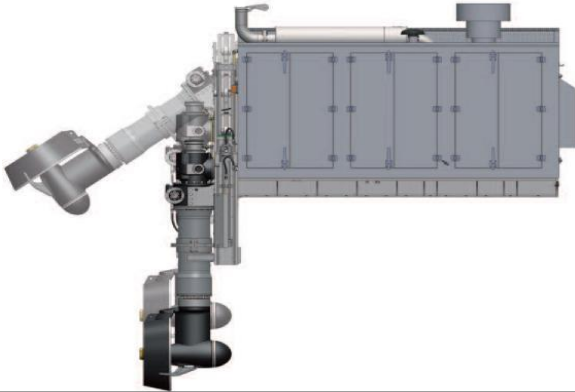


Application for Tug Boats

“One Source Solution”

Marine Propulsion Solutions Group

Optional Drive Configurations:



Deck Mounted – Direct Engine Drives complete with Diesel Engine, Clutch and Azimuthing and Retractable Drive

Deck Mounted – Electric Podded Drives complete with Optional Power Containers and Azimuthing and Retractable Drive

Integrated Propulsion Packages:

The MPS-Marine Thruster Systems Deck Mounted, Rotatable Propeller Drives units are of a very heavy duty construction, offering full 360 degree continuous steering in either rotation, right angle lower gear drive with diesel driven hydraulic pump system offers high thrust performance in a very compact drive package. The hydraulic transmission is (vertical height adjustment + unit raised positions) diesel engine driven through the PTO.

The diesel engine offers full rpm control with high quality cardan drive shaft in the stem into the heavy duty transmission and fitted with a high thrust propeller.

Advantages:

- Self-contained propulsion package
- Compact unit
- For virtually any watercraft
- Fast installation
- Easy maintenance
- 360° maneuverability
- Powerful unit

Integrated Propulsion Packages:

- Dual/Quad 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)

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

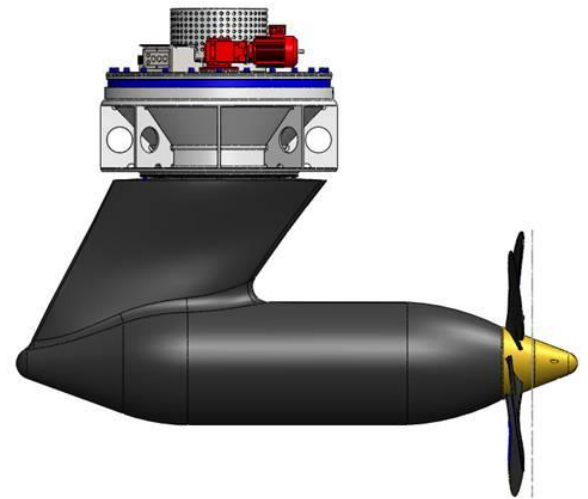
Coal/Sand Barges – Cable and Pipe Laying Barges – Wind Turbine Installation Barges



Application for Barges

“One Source Solution”

Application for Yachts



Integrated Bridge Controls are inclusive of Navigation Screens, Electric Pod Status Screens, Diesel Gen-Set Status Screens, Emergency Gen-set and Switchboard Screens, Main Switchboard functions, AFE functions and all required alarm functions.



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