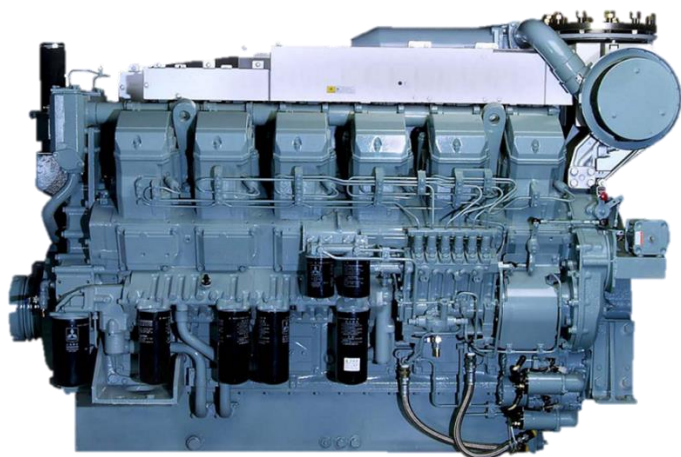


Marine Diesel Propulsion units of "PM" series are designed to drive the main propulsion system as well as auxiliary thrusters of all types of vessels. The propulsion units are equally applicable on the sea as well as river-based vessels. The production of the RD units implies usage of up-to-date gearboxes of worldwide known brands, such as TWIN DISC, ZF and others, as well as application of such couplings as VULKAN, CENTA and STROMAG. The propulsion units are equipped with monitoring and management systems, developed in-house by the technical department of RIGAS DIZELIS plant, in accordance with target customer needs and requirements of the classification societies.



Description & Key Scope

- Keel or heat exchanger cooling system
- Engine heater
- 24V starter, engine-driven charging alternator
- Flexible compensator and silencer
- Gearbox (ZF, TwinDisc, etc.) with different ratio available
- Flexible coupling between engine and gearbox
- Local and remote control panels
- Vibration isolators
- Drawing & Manual package
- Factory Test Report
- Certificates from major IACS members are available
- EIAPP certificate with Technical File
- Torsional Vibration Calculation

Engine type	Gross power, full load*, kW	Gross power, full load*, HP	Engine speed (rpm)	Power rating**	Preliminary dimensions in mm LxWxH / weight in kg	Emission***
S12A2-MPTAW	701/776	953/1055	1940/2000	HD / MD	1948x1654x1596 / 3380	IMO Tier II
S12R-MPTAW	588-940/1040	800-1278/1414	1400-1600/1650	HD / MD	2416x1513x1742 / 5320	IMO Tier II

Description & Key Scope

* Power rated in accordance with ISO 3046-1 at ambient temperature of 45°C and sea water temperature 32°C.

** Power rating:

- HD (Heavy Duty): Overload operation- not possible; Allowable average load factor- 100% or lower; Allowable average speed- 100% or lower; Allowable continuous operation with over 90% load- unlimited; Recommend Operating hour per year- unlimited.
- MD (Medium Duty): Overload operation- not possible; Allowable average load factor- 83% or lower; Allowable average speed- 94% or lower; Allowable continuous operation with over 90% load- up to 8 hr per 24 hr; Recommend Operating hour per year- 6000 hr.
- LD (Light Duty): Overload operation- not possible; Allowable average load factor- 75% or lower; Allowable average speed- 91% or lower; Allowable continuous operation with over 90% load- up to 1 hr per 6 hr; Recommend Operating hour per year- 3000 hr.

***IMO Tier III emission compliance is available on request.

Engine General Data*

Maker	MITSUBISHI	
Model	S12A2-MPTAW	S12R-MPTAW
No of cylinders	V-12	V-12
Working principle	4-stroke	4-stroke
Displacement, L	33.93	49.03
Bore x stroke, mm	150 x 160	170 x 180
Compression ratio	15.3:1	14.5:1
Aspiration	Turbocharged, Inter Cooler	Turbocharged, Inter Cooler
Rotation	Counter clockwise (seen from flywheel end)	Counter clockwise (seen from flywheel end)
Flywheel	SAE 18"	SAE 21"
Injection pump	Bosch P Type x 2	Mitsubishi PS6 Type x 2
Governor type	Hydraulic	Hydraulic
Oil capacity, liters	92-120	158-200
Starter type	2-pole, 24V, DC	2-pole, 24V, DC

* Other engine parameters are available on request.

Available Key Options (other options are available on request)

Engine

- Radiator cooling system
- Manual or electric lub oil drain pump
- Starting batteries
- Static battery charger
- Air, spring or hydraulic starter
- Electronic governor

Gearbox

- Nonstandard ratios
- Trolling valves
- Power take off (PTO)
- Power take in (PTI)
- etc.

Other

- Special tools and spare parts
- Commissioning and start-up
- Extended warranty
- Propulsion lines (shafts, propellers, nozzles, thrusters, etc.)
- Deck mounted systems with Z-type azimuth thrusters



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