

6M21.3

**Propulsion Diesel Engine** 





# Propulsion Diesel Engine



Number of cylinders 6
Bore and stroke (mm) 127 X 165
Total displacement (L) 12.54
Cylinders L6

Engine rotation counter clockwise

Idle speed 700 Flywheel 14" Flywheel housing SAE 1

# **Customer benefits**

**Genuine marine design,** our engine is designed specifically for Marine applications with Marine components, such as individual cylinder heads that make maintenance easier even in the smallest of engine rooms **Global environment care** with low exhaust emissions at any running cycle

Continuous compact power with reference performances in its category

**Life cycle cost efficiency** with extended maintenance intervals

### Rated power

				Fuel co	nsumption		
Duty	kW	HP	RPM	Optimum value	Rated power		IMO
				g/kWh	g/kWh	l/h	
P1	368	500	1800	194	207	91	II
P2	405	550	1800	194	207	100	II
Р3	441	600	2100	203	213	112	II

	P1	P2	P3
Application	Unrestricted Continuous	Heavy	Intermittent
Engine load variations	Very Little To None	Continuous	Important
Average Engine load factor	80-100%	30-80%	50%
Annual working time	More Than 5000 H	3000 -5000 H	1000 - 3000 H
Time at full load	Unlimited	8h Each 12h	2h Each 12h

### P1 Continuous Duty

- · Deep sea trawlers
- Shrimps trawlers
- · Sea going tug boats
- River tug boats
- Push boats
- FreightersDredges
- · LCT
- Ferries

### P2 Heavy Duty

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- · River tug boats
- · Push boats
- Freighters
- Dredges
- · LCT
- Ferries

### P3 Intermittent Duty

- · Seasonal passenger vessels
- Fishing boats
- Pilot boats
- Commercial pleasure boats
- · Pump boats
- Displacement sailboats
- Trawlers
- Bow thrusters

### P4 Light Duty

- Private pleasure boats
- Multi-hull pleasure boats
- Survey or rescue fast vessels
- Military fast vessels.

### P5 High performance Duty

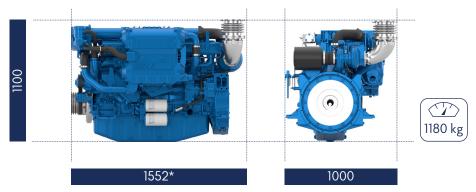
- Private pleasure boats
- Multi-hull pleasure boats

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# Dimensions and dry weight (mm/kg)



<sup>\* 1442</sup> from flywheel

# Standard equipment

Cooling System Two - stage cooling circuit with built - in HT thermostatic valve

Integrated fresh water expansion tank High efficiency tubestack heat exchanger Belt driven centrifugal fresh water pump

Self priming raw water pump with rubber impeller

**Lubrication System** Full flow lube oil filters duplex type

Fresh water cooled lube oil cooler intergrated in cylinder block

**Fuel System** High pressure pump with double walled high pressure pipes

External fuel pre-filter with water separator

Fuel Oil filter duplex type Common-rail electronic injection

Intake Air and Exhaust System Double flow raw water cooled intake air heat exchanger module

High efficiency dry turbocharger Water cooled exhaust manifold

**Electrical System** 

Voltage: 24 V DC insulated

**Electrical Starter** 

120A battery Alternator



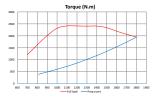


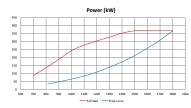
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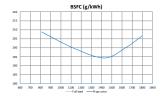
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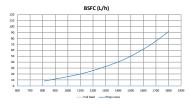
# **Performance**

# P1 - 368 kW - 1800 rpm

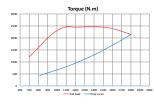


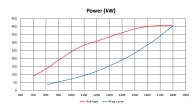


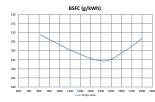


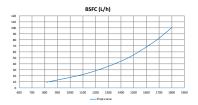


P2 - 405 kW - 1800 rpm

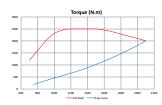


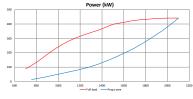


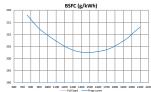


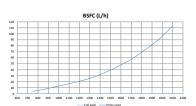


P3 - 441 kW - 2100 rpm









# **Power definition**

(Standard ISO 3046/1 - 1995 (F))

# **Reference conditions**

 $\begin{array}{lll} \mbox{Ambient temperature} & 25^{\circ}\mbox{C} \slash 77^{\circ}\mbox{F} \\ \mbox{Barometric pressure} & 100 \mbox{ kPa} \\ \mbox{Relative humidity} & 30\%\mbox{R} \\ \mbox{Raw water temperature} & 25^{\circ}\mbox{C} \slash 77^{\circ}\mbox{F} \\ \end{array}$ 

# Fuel oil

Relative density Lower calorific power Consumption tolerances 0,840 ± 0,005 42 700 kJ/kg + 5%

(DIN ISO 3046-1)

Inlet limit temperature 35°C /95°F

Our ratings also comply with classification societies maximum temperature definition without power derating.

Ambient temperature  $45^{\circ}\text{C} / 113^{\circ}\text{F}$ Raw water temperature  $32^{\circ}\text{C} / 90^{\circ}\text{F}$