



6M21.3 IMO III

Marine propulsion engine





Number of cylinders	L6
Bore and stroke (mm)	127 X 165
Displacement (L)	12.54
Engine rotation	Counterclockwise
Idle speed (rpm)	650
Flywheel	14"
Flywheel housing	SAE 1

Rated power - Fuel consumption

Duty	kW	rpm	HP	Fuel consumption (IMO)			IMO	EPA
				Optimum value	Rated power			
				g/kWh	g/kWh	l/h		
P1	368	1800	500	189	194	85	III	N/A
P2	405	1800	550	189	196	94.5	III	N/A
P3	441	2100	600	192	205	107.6	III	N/A

P1 - CONTINUOUS DUTY - Severe continuous application with little or no engine speed / load variations.

Displacement hull:

- Engine mean load factor: 100%.
- Annual duration of use: Unrestricted.
- Use under full load: unlimited (100%).

Application examples: Deep Sea vessels and shrimp trawlers, high sea or river tugboats, towboats, cargos, cargo boats, dredgers, ferries.

P2 - HEAVY DUTY - Continuous application with frequent variations in engine speed and load.

Displacement or semi-displacement hull:

- Engine mean load factor: 80%.
- Annual duration of use: 5,000 hours.
- Use under full load: 8 hours in a 12-hours period (66%).

Application examples: Annual passenger vessels, harbour tugs, self-propellers, coasters, fast fishing boats such as tuna boats, seiners, pot vessels or liners, buoying vessels, oceanographic research vessels.

P3 - INTERMITTENT DUTY - Intermittent application with significant variations in engine speed and load.

Planning or semi-planning hull:

- Engine mean load factor: 70%.
- Annual duration of use: 3,000 hours.
- Use under full load: 2 hours in a 12-hours period (16%).
- Cruising speed is less than 90% of nominal engine speed.

Application examples: Seasonal passenger vessels, fishing launches, pilot boats, pump boats, displacement sailboats, trawlers, bow thrusters.

P4 - LIGHT DUTY - Light application with significant variations in engine speed and load.

Planning hull:

- Engine mean load factor: 90%.
- Annual duration of use: less than 1,500 hours.
- Use under full load: 1 hour in a 12-hours period (8%).
- Cruising speed is less than 80% of nominal engine speed.

Application examples: Survey or rescue fast vessels, military fast vessels, patrol boats, commercial pleasure craft.

P5 - HIGH PERFORMANCE DUTY - High performance application with significant variations in engine speed and load:

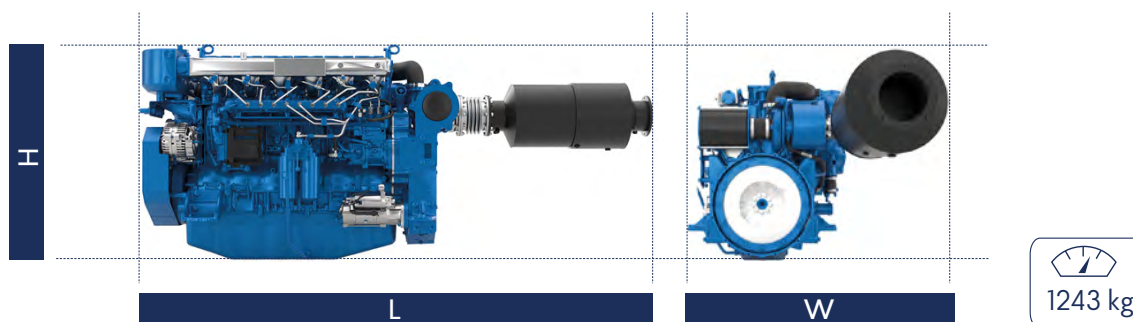
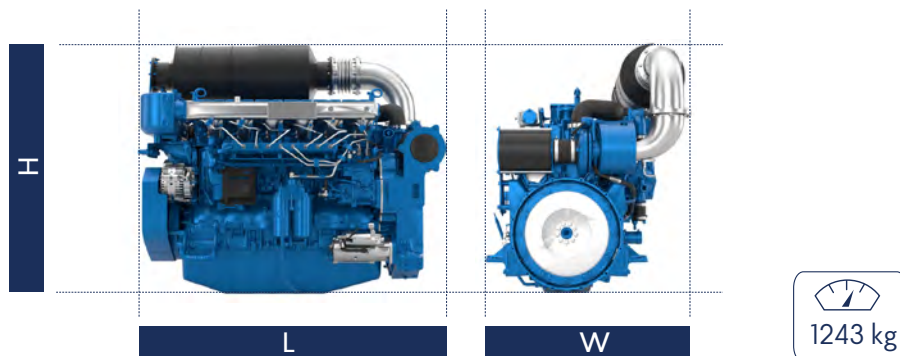
- Engine mean load factor : 60%.
- Annual duration for use: 500 hours.
- Use under full load: 1 hour in a 12-hours period (8%).

Application examples: Private pleasure boats, multi-hull pleasure boats.

WARRANTY DISCLAIMER

Warranty does not apply whenever the engine operation conditions differ from the initial duty class - P1, P2, P3, P4 and P5 - operational conditions. The operator must therefore modify the duty class accordingly, to benefit from SIMB warranty coverage.

Dimensions and dry weight (mm/kg)



Model	L (mm)	W (mm)	H (mm)	Weight (Kg)***
Engine alone	1552* - 1422**	1000	1100	1200
SCR alone	1040	367	367	43
+SCR over-engine	1555	1000	1480	+43
+SCR over-gearbox	1810	1000	1100	+43

*total **from flywheel

***Weight with 5% tolerance

Standard equipment

Cooling System

Two-stage cooling circuit with integrated HT thermostatic valve
High efficiency heat exchanger (Tube Type) with integrated fresh water expansion tank
Gear-driven self-priming raw water pump with rubber impeller
Belt driven centrifugal freshwater pump

Lubrication System

Duplex full-flow spin-on lube oil filters
Freshwater-cooled lube oil cooler

Fuel System

Electronically controlled common-rail fuel injection system
Double-wall fuel injection pipe with leakage detection system
Duplex fuel filters, replaceable while engine is running
Simplex fuel prefilter with water separator
Electric fuel priming pump

Intake Air and Exhaust System

Fresh water cooled exhaust gas manifold
High efficiency dry-type turbocharger with heat insulation
Raw water cooled charge air cooler

Electrical System

24V DC system, Insulated
Electrical Starter
Battery Charger 120A

Optional Equipment

Keel Cooling configuration	Fresh water pre-heater
Front PTO with elastic coupling	Cabin heating connections
Elastic pads	Additional displays
Air starter	

Power definition

(Standard ISO 3046-1:2002)

Reference conditions

Ambient temperature	25°C / 77°F
Barometric pressure	100 kPa
Relative humidity	30%R
Raw water temperature	25°C / 77°F

Fuel oil

Relative density	0,840 ± 0,005
Lower calorific power	42 700 kJ/kg
Consumption tolerances	+ 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°C / 113°F
Raw water temperature	32°C / 90°F