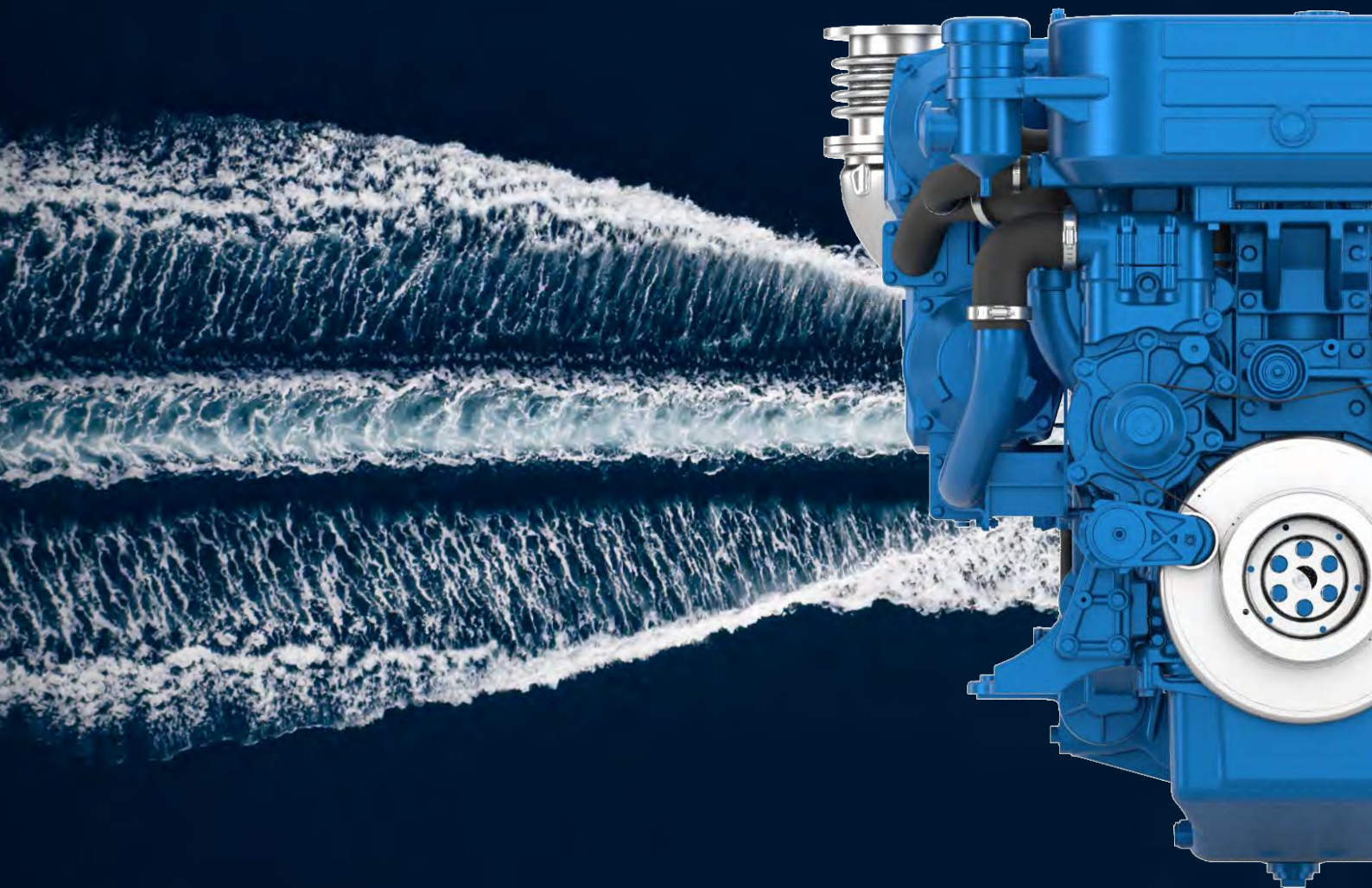
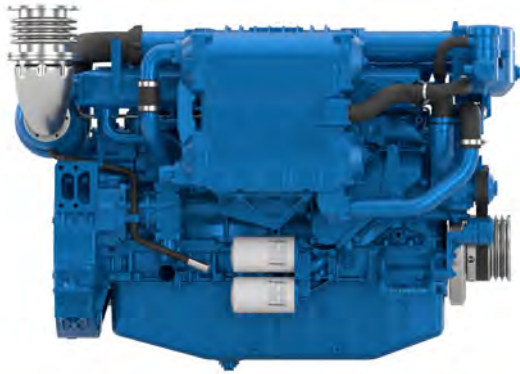




6M21.3 IMO II

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

Rating	kW	rpm	HP	Fuel consumption			IMO
				Optimum value	Rated power		
				g/kWh	g/kWh	l/h	
P1	368	1800	500	193	203	88.9	II
P2	405	1800	550	193	205	98.8	II
P3	441	2100	600	196	215	112.9	II

NB: IMO III versions are also available with ATS

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:

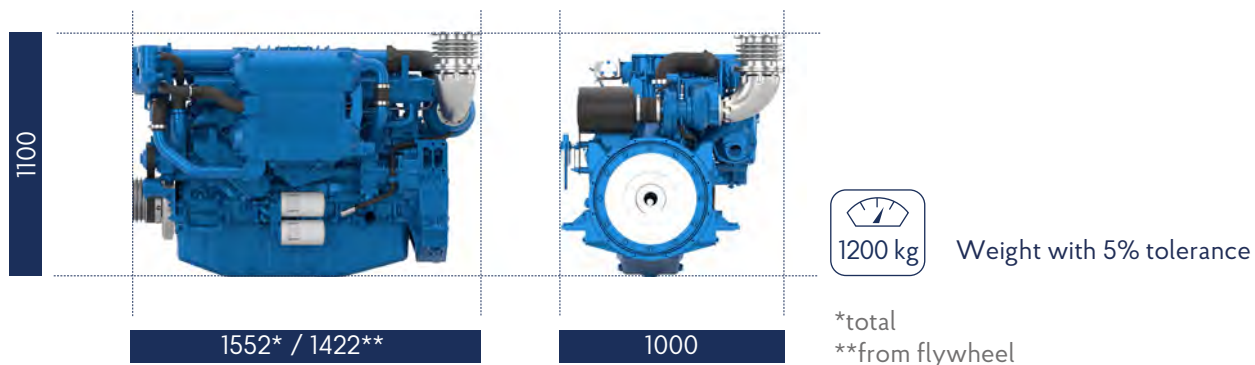
- Engine mean load factor : 60%.
- Annual duration for use: 500 hours.
- Use under full load: 1 hour in a 12-hours period (8%).

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)



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

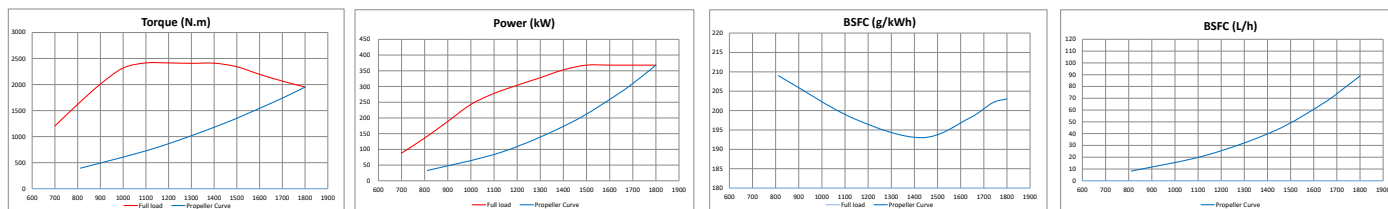
24V DC system, Insulated
 Electrical Starter
 Battery Charger 120A

Optional Equipment

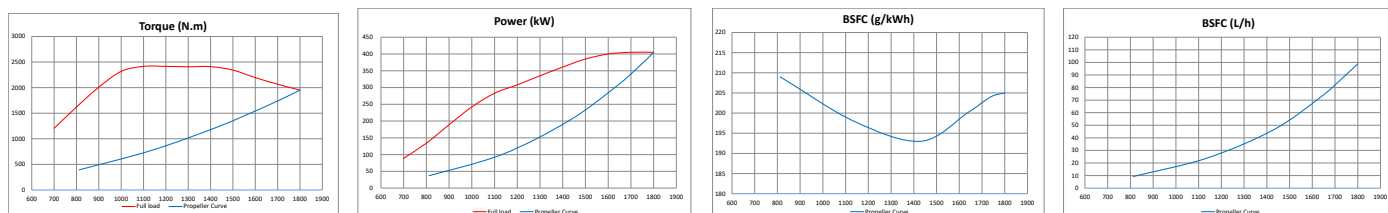
Keel Cooling configuration	Fresh water pre-heater
Front PTO with elastic coupling	Cabin heating connections
Elastic pads	Additional displays
Air starter	

Performance

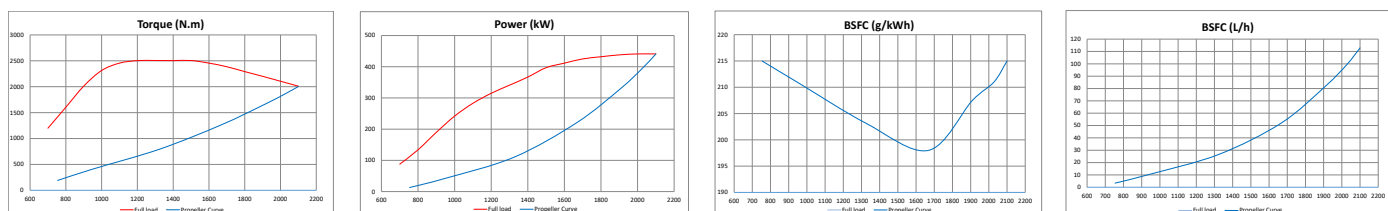
P1 - 368 kW - 1800 rpm



P2 - 405 kW - 1800 rpm



P3 - 441 kW - 2100 rpm



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