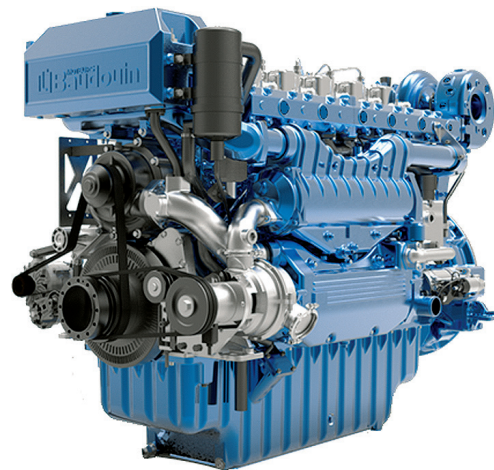


Marine Engines

6 M33.2

4 Stroke diesel engine, direct injection

Bore and stroke	150 x 185 mm
Number of cylinders	6 in line
Total displacement	19,6 litres
Compression ratio	15/1
Engine rotation (ISO 1204 standard)	counterclockwise
Idle speed	650 rpm
Flywheel housing	SAE 1
Flywheel	SAE 14"



Customer benefits

Continuous compact power with reference torque performance in its category

Global environment care with low exhaust emissions and controlled fuel consumption at any running cycle

Simple technology with mechanical injection

Life cycle cost efficiency with extended mean time between overhauls (MBTO)

Rated power - Fuel consumption

Duty	kW	hp	rpm	Fuel consumption g/kWh	Peak torque / speed (N.m / rpm)	l/h	IMO
P1	478	650	1600	204	3400 / 1000	116	II
P1	478	650	1800	211	3056 / 1300	120	II
P2	515	700	1800	209	3085 / 1300	128	II
P2	551	750	1800	214	3684 / 1400	141	II

	P1	P2
Application	unrestricted continuous	continuous
Engine load variations	very little or none	Numerous
Average engine load factor	80 to 100 %	30 to 80 %
Annual working time	5000 hr +	3000 to 5000 h
Time at full load	unlimited	8 h each 12 h

Power definition

Standard ISO 3046/1

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	0 ± 5%
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



Standard equipment

Cooling system

Fresh / raw water heat exchanger with integrated thermostatic valves and expansion tank
Cast iron centrifugal fresh water pump, mechanically driven
Bronze self-priming raw water pump, mechanically driven

Lubrication system

Full flow screwable oil filters
Fresh water cooled lube oil cooler
Lube oil purifier with replaceable cartridge
Manual prelubricating oil pump

Fuel system

In-line injection pump with flanged mechanical governor
Double wall injection bundle with leakage collector
Duplex fuel filters replaceable while engine running

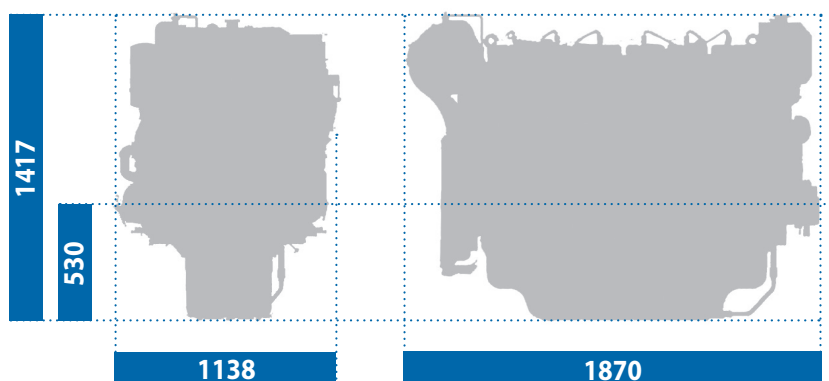
Intake air and exhaust system

Fresh water cooled turbo blower
Fresh water cooled exhaust gas manifold

Electrical system

Voltage: 24VDC
Electrical starter on flywheel crown
175A battery charger
Engine room and bridge panels

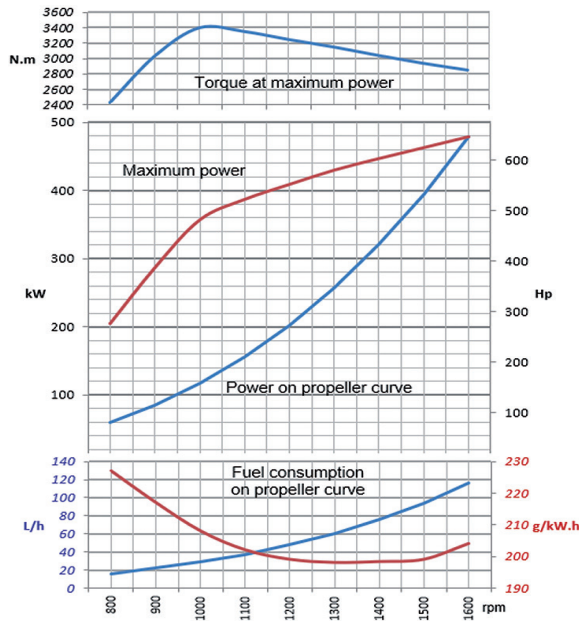
Dimensions and dry weight (mm / kg)



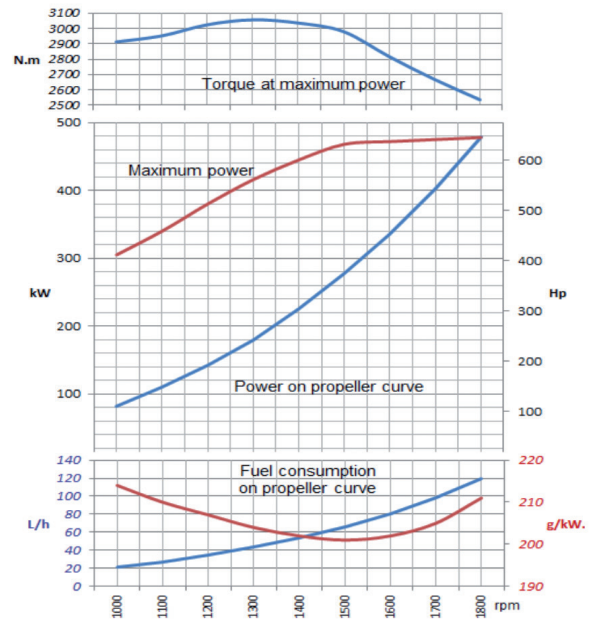


Performance

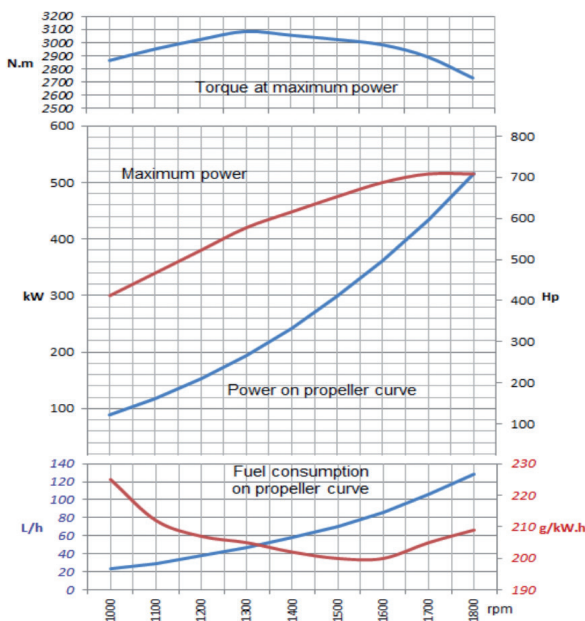
P1 - 478 kW - 650 hp @1600rpm



P1 - 478 kW - 650 hp @1800rpm



P1 - 515 kW - 700 hp @1800 rpm



P2 - 551 kW - 750 hp @1800 rpm

