

Marine Engines

6 MI9.3

4 Stroke diesel engine, direct injection

Bore and stroke	126 x 155 mm
Number of cylinders	6 in line
Total displacement	11,60 litres
Compression ratio	18/1
Engine rotation (ISO 1204 standard)	counterclockwise
Idle speed	600 rpm
Flywheel housing	SAE 1
Flywheel	SAE 11,5"

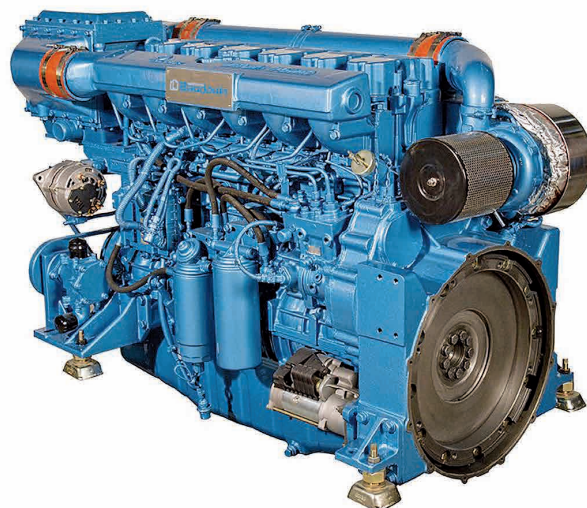
Customer benefits

Continuous compact power with reference performances in its category

Global environment care with low exhaust emissions

Best in Class fuel consumption at any load profile

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



Rated power - Fuel consumption

Duty	kW	hp	rpm	Fuel consumption g/kWh	l/h	IMO	CCNR	CE97/68
P1	331	450	1800	199	78	II	II	IIIA
P2	368	500	2100	205	90	II	II	IIIA
P3	404	550	2100	209	101	II	II	IIIA
P4	425	578	2200	218	110	II	II	-

	P1 duty	P2 duty	P3 duty	P4 duty
Application	unrestricted continuous	continuous	intermittent	high performance
Engine load variations	very little or none	continuous	important	very important
Average engine load factor	80 to 100 %	30 to 80 %	50 %	30 %
Annual working time	more than 5000 h	3000 to 5000 h	1000 to 3000 h	less than 1000 h
Time at full load	unlimited	8 h each 12 h	2 h each 12 h	1 h each 12 h

Power definition

Standard ISO 3046/1 - 1995 (F)

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

Engine and block

Cast iron cylinder block, with replaceable cylinder liners
 Separate cast iron cylinder heads equipped with 4 valves
 Replaceable valves guides and seats
 Steel forged crankshaft with 7 bearings
 Lube oil cooled light alloy piston with 3 high performance piston rings

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 duplex type oil filters
 Fresh water cooled lube oil cooler plate type

Fuel system

Electronic common-rail injection
 Double wall injection bundle with alarm and leakage collector
 Duplex fuel filters replaceable engine running
 Water separator

Intake air and exhaust system

Exhaust gas manifold cooled by the engine fresh water
 Dry turbo blower insulated
 Low water temperature cooled intake air cooler

Electrical system

Voltage: 24Vcc
 Electrical starter on flywheel crown
 35A battery charger
 Wheelhouse control panel

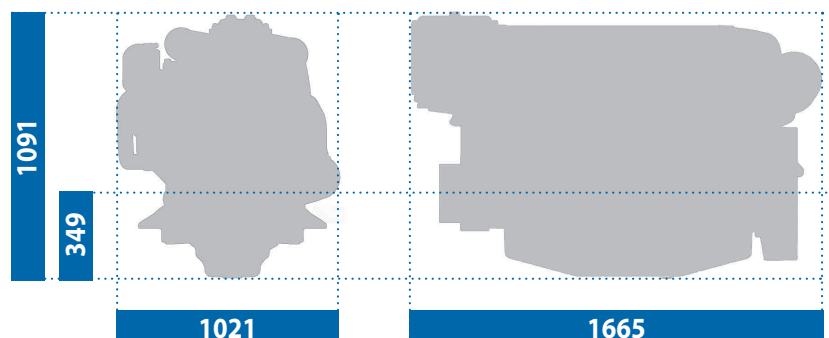
Optional equipment

Cooling system adapted for box / keel cooling
 Connection for emergency raw water circuit
 Bilge pump
 Air starter
 Promachined free end PTO

Resilient mounts under engine
 Exhaust water injection after turbocharger
 Fresh water electrically heated
 Cabin heating

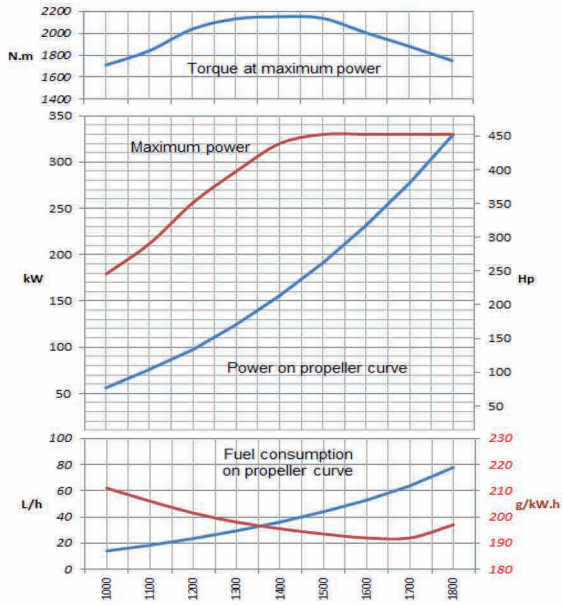
* contact us for further information regarding our options.

Dimensions and dry weight (mm / kg)

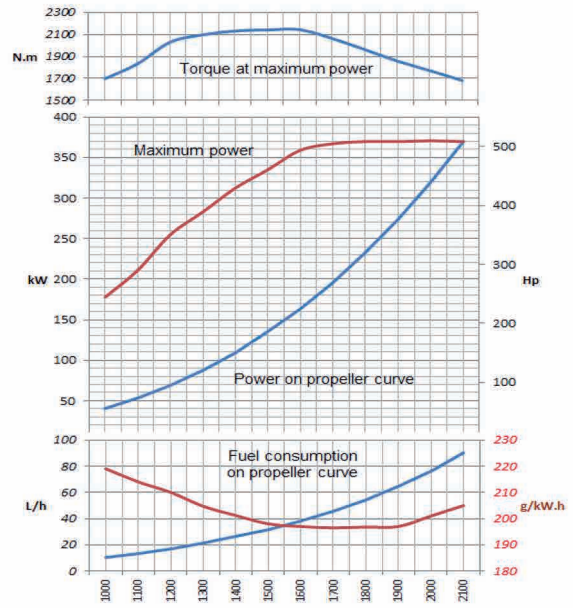


Performance

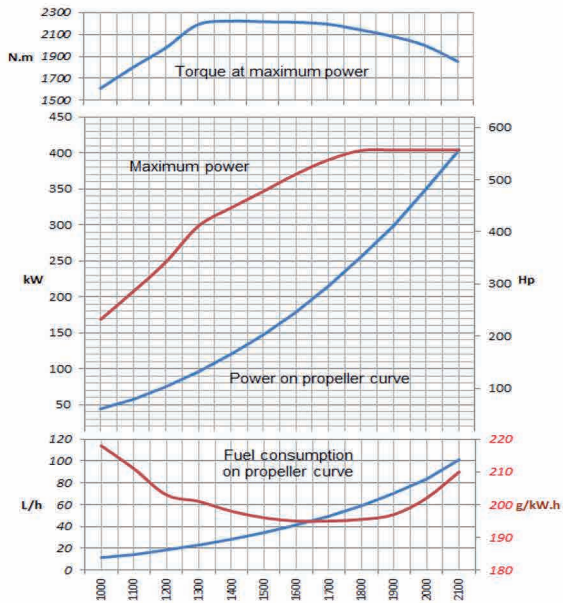
P1 - 331 kW - 450 hp @1800 rpm



P2 - 368 kW - 500 hp @2100 rpm



P3 - 404 kW - 550 hp @2100 rpm



P4 - 425 kW - 578 hp @2200 rpm

