

**P2 Duty
1100 bhp - 1900 rpm****CHARACTERISTICS**

Diesel engine, 4 stroke, direct injection, turbocharged with charged intercooling.

Bore and stroke (mm)	150 x 150
Number of cylinders	12 in Vee
Total displacement (dm ³)	31.8
Compression ratio	14/1
Number of valves per cylinder	4
Engine rotation to ISO 1204 Standard	CCW
Idle speed (min ⁻¹)	650
Weight without water and oil (kg)	3180
Flywheel housing	SAE 0
Flywheel	SAE 18"

TECHNICAL DESCRIPTION

Cast iron cylinder block, highly ribbed, with strengthened seating face

Main bearing caps fully imbedded with vertical and horizontal attachments

One inspection door per cylinder enabling an easy access to the connecting rod fixations

Cast iron liners, wet type, extremely rigid

Separate cylinder heads with large water circulation sections ensuring a maximised cooling mainly for the nozzle holder copper housing

Attachment of each cylinder head in eight points by high strength bolts with spherical seating washers under the bolts located between two cylinder heads

4 valves per cylinder head, with special steel thick head, with built up guides and seats, and rotators on exhaust valves

Special forged hardened steel crankshaft, with induction hardened journals, crankpins and connecting radius

Camshaft with polynomial profiled cams

Distribution system with tempered, hardened and surface corrected helicoïdal type gears

Chrome - molybdenum steel connecting rods

Light alloy pistons cooled by continuous oil jet from fixed nozzles ensuring also the lubrication of connecting rod foot shells

High performance piston rings

Raw water/fresh water heat exchanger with integrated expansion tank and regulation thermostatic valves (Adaptation for keel cooling as an option with integrated thermostatic valves)

Cast iron centrifugal cooling liquid circulation pump, mechanically driven

Bronze sea water circulation pump driven by 2 belts with tensioner

2 banks of three oil filters with full flow screwable cartridges

2 by-pass centrifugal oil filters with replaceable cartridge

2 tube type oil coolers on engine cooling liquid circuit

In line monobloc injection pump with integrated "all speed" mechanical governor

Exhaust manifolds cooled by cooling liquid

High efficiency turbo-blowers with turbine housing cooled by cooling liquid

Double flow high efficiency air intercoolers on sea water circuit



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POWER DEFINITION

Standard ISO 3046/1 - 1986 (F)

Reference conditions

Ambiant : 25 °C
 Barometric pressure : 100 kPa
 Relative humidity : 30 %
 Sea water temperature : 25 °C

Fuel oil

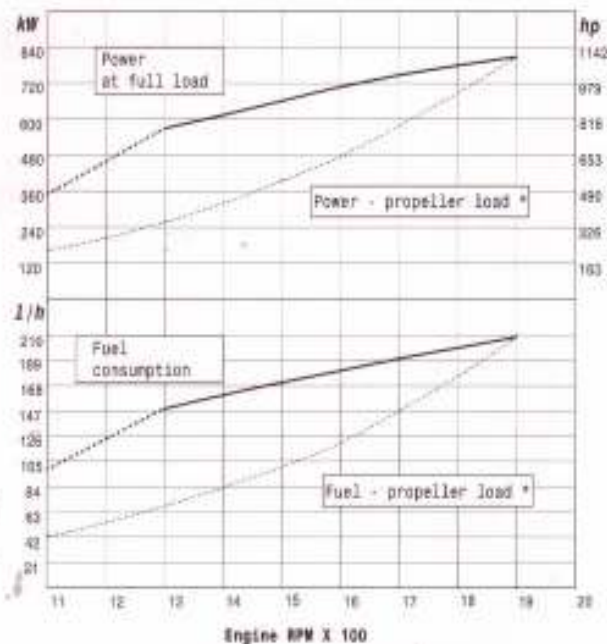
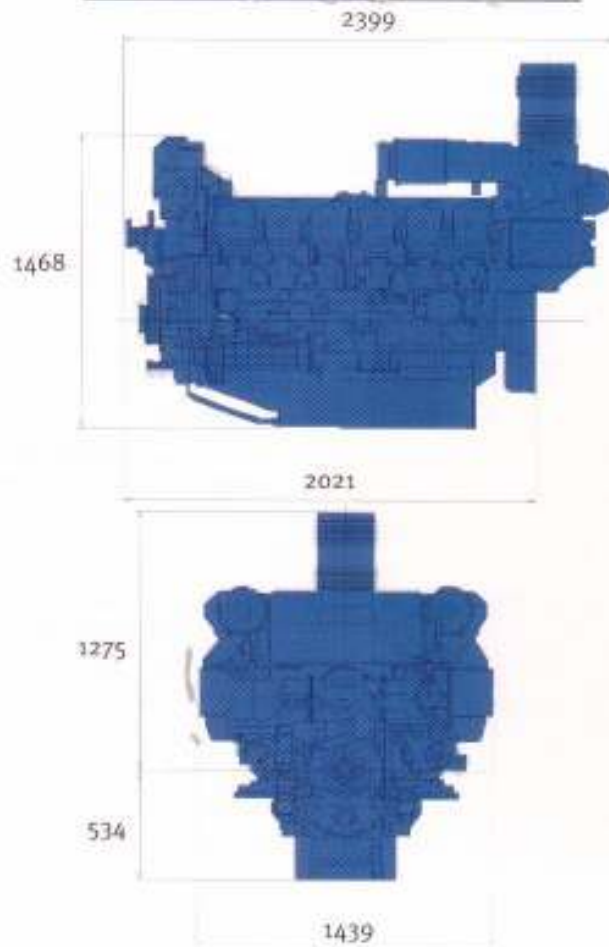
Relative density : 0,840 ± 0,005
 Lower calorific power : 42700 Kj/Kg
 Consumption tolerances : + 0 , + 5 %

P2 DUTY DEFINITION

Application : continuous
 Engine load variation : numerous
 Mean engine load factor : 30 to 80 %
 Annual working time : 3000 to 5000 h
 Time at full load : 8 h each 12 h

Typical applications : passengers vessels, harbour tug boats, motorbarges, coastal freighters, tuna boats, seiners, netters, potting boats, longliners, buoyers, supply vessels, oceanographic research vessels, commercial pleasure crafts

MAIN DIMENSIONS



* Power - propeller load P=Kd²

Engine RPM tr/min	Power - propeller load kW	Power - propeller load hp	Fuel - propeller load l/h
1100	164	223	42.5
1200	202	275	54.5
1300	238	324	68.5
1400	321	437	84
1500	395	537	101.5
1600	461	627	122
1700	579	787.5	148.5
1800	682	928	170
1900	800	1100	211

OPTIONAL EQUIPMENTS (extract)

- Adaptation for cooling by keel cooler
- Emergency circuits connections
- Bilge pump
- Double skin injection pipes
- Batteries charging alternator 175 A
- Pneumatic starter with air receivers and compressor
- Exhaust silencer
- Engine room control panel
- Overspeed safety device
- Front Power Take Off
- Resilient mounting
- Elastic coupling with reverse reduction gearbox
- Survey by main Classification Societies