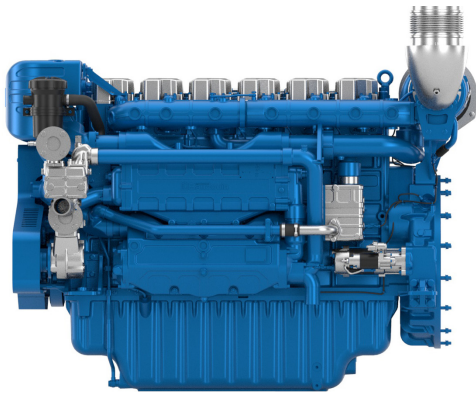


6M33.3

Common rail diesel engine



Number of cylinders	6 in line
Bore and stroke (mm)	150 x 185
Total displacement (L)	19.8
Engine rotation	counter clockwise
Idle speed (rpm)	700
Flywheel housing	SAE 0
Flywheel	SAE 18"

Customer benefits

Genuine marine design with simple solutions and routine maintenance accessibility

Continuous compact power with top-tier performance in category

Global environmental care: low exhaust emissions, noise reduction, and controlled fuel consumption

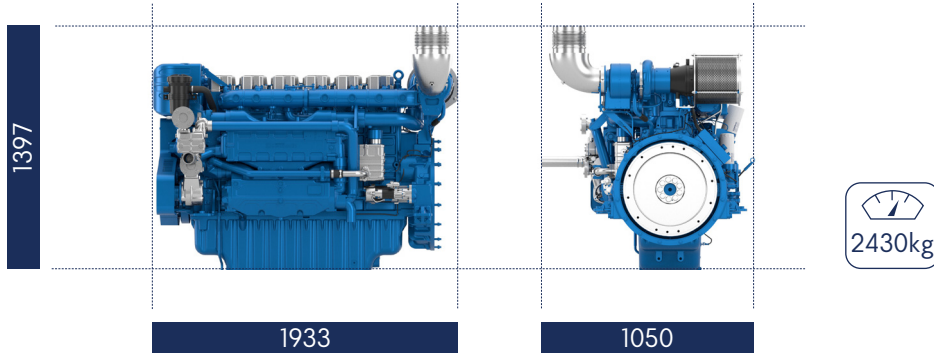
Latest safe technology integration: electronic injection dynamic redundancy, high-efficiency ball bearing turbocharger

Emphasis on life cycle cost efficiency with extended MTBO and modular design reducing components and interfaces

Rated power - Fuel consumption

Duty	kW	HP	RPM	Fuel consumption			IMO
				Optimum value	Rated power		
				g/kWh	g/kWh	l/h	
P1	552	720	1600	198	135	198	II
	552	780	1800	201	136	201	II
P2	574	800	1600	198	139	198	II
	574	850	1800	200	141	200	II
P3	670	911	1900	205	179	206	II
P4	750	1020	2000	201	203	201	II

Dimensions and dry weight (mm/kg)



	P1	P2	P3	P4
Application	Unrestricted	Continuous (Heavy)	Intermittent	Light
Engine load variations	Not important	Important	Important	Very important
Average Engine load factor	80-100%	30-80%	60%	60%
Annual working time	5000 - 7000h	3000-5000h	1000-3000h	Less than 1500h
Time at full load	12h each 12h	8h each 12h	2h each 12h	1h each 12h

P1 Continuous Duty

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

P2 Heavy Duty

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

P3 Intermittent Duty

- Seasonal passenger vessels
- Fishing boats
- Pilot boats
- Commercial pleasure boats
- Pump boats
- Displacement sailboats
- Trawlers
- Bow thrusters

P4 Light Duty

- Private pleasure boats
- Multi-hull pleasure boats
- Survey or rescue fast vessels
- Military fast vessels.

P5 High performance Duty

- Private pleasure boats
- Multi-hull pleasure boats

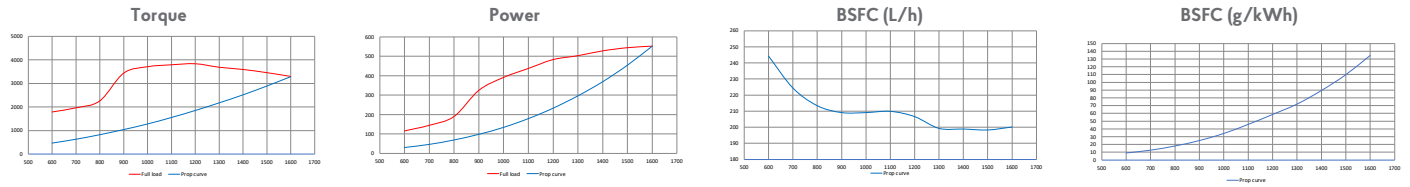
Standard equipment

Engine & Block	Cast iron cylinder block, with replaceable cylinder liners Separate cast iron cylinder heads Replaceable valves guides and seats Steel forged crankshaft with 7 bearings Lube oil cooled light steel piston with 3 high performance piston rings
Cooling System	Two - stage cooling circuit with built - in HT thermostatic valve Integrated fresh water expansion tank High efficiency tubular heat exchanger Gear driven centrifugal raw water pump Self priming raw water pump with bronze impeller
Lubrication System	Full flow lube oil filters duplex type Fresh water cooled lube oil heat exchanger
Fuel System	Common-rail electronic injection High pressure pump with shielded high pressure injection rail and pipes Fuel oil filter duplex type External fuel pre-filter with water separator
Intake Air and Exhaust System	Double flow raw water cooled intake air heat exchanger module High efficiency dry turbocharger with ball bearing technology
Electrical System	Voltage: 24V DC insulated Electrical starter 190A battery alternator

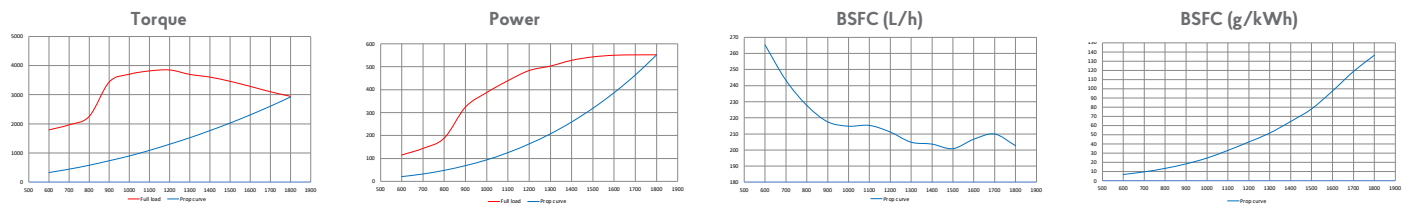
Optional Equipment	Wet exhaust PTO elastic coupling Additional pulley Electric drain system Standard PTO for hydraulic pump Different alternators possible - including 12V Electrical rotary actuator
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Performance

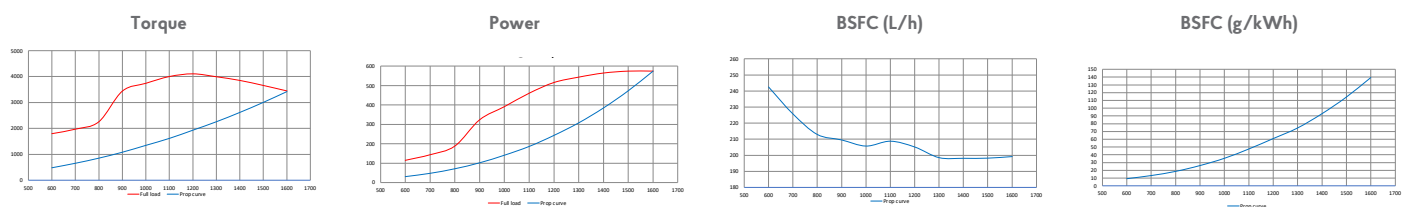
P1 552@1600rpm



P1 552@1800rpm

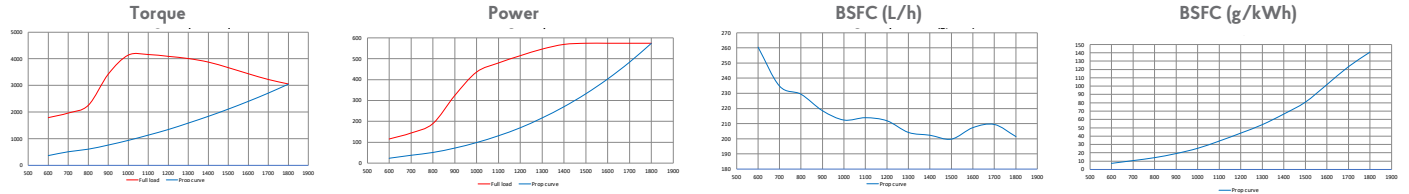


P2 574@1600rpm

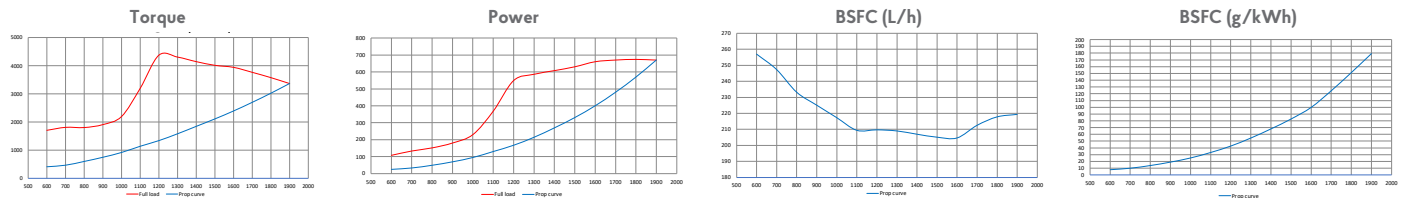


Performance

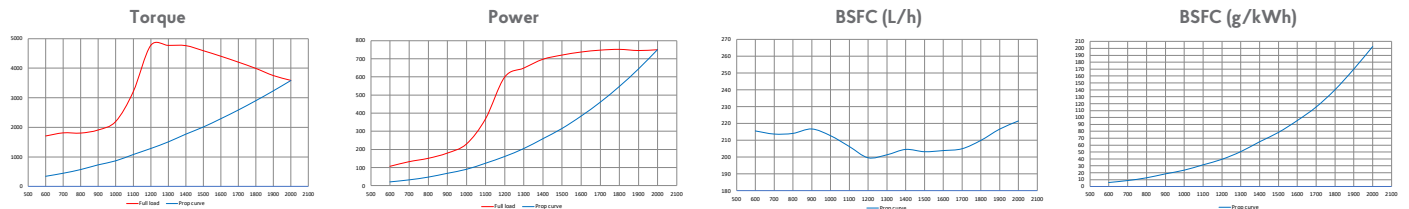
P2 574@1800rpm



P3 670@1900rpm



P4 750@2000rpm



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	+ 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