

DI13 077M. 515 kW (700 hp)

IMO Tier II, US Tier 2, EU Stage IIIA



The marine engines from Scania are based on a robust design with a strength optimised cylinder block containing wet cylinder liners that can easily be exchanged. Individual cylinder heads with 4 valves per cylinder promotes repairability and fuel economy. The engines are type approved in all major classification societies.

The engine is equipped with a Scania developed Engine Management System, EMS, in order to ensure the control of all aspects related to engine performance. The injection system is based on electronically controlled unit injectors that gives low exhaust emissions with good fuel economy and a high torque already at low revs. The engine can be fitted with many accessories such as air cleaners, PTOs, transmissions and type approved instrumentation in order to suit a variety of installations.

	Rating	Engine speed (rpm)			
		1200	1500	1900	2300
Gross power, full load (kW)	Patrol craft long	267	436	499	515
Gross power, full load (hp, metric)		363	593	679	700
Gross power, propeller curve (kW)		101	177	319	515
Gross power, propeller curve (hp, metric)		138	241	434	700
Gross torque (Nm)		2125	2776	2508	2138
Spec fuel consumption. Full load (g/kWh)		210	199	201	217
Spec fuel consumption. 3/4 load (g/kWh)		201	201	203	221
Spec fuel consumption. 1/2 load (g/kWh)		199	206	207	235
Spec fuel consumption. Propeller curve (l/h)		24	43	79	133
Optimum fuel consumption (g/kWh)		196			
Heat rejection to coolant (kW)		203	292	343	394

Patrol craft long: Intended for intermittent use where rated power is available 1 h/6 h. Between full load operations engine rpm must be reduced at least 10% from max. obtained rpm. Accumulated total service time max. 2000 h/year.

Standard equipment

- Scania Engine Management System, EMS
- Unit injectors, PDE
- Turbocharger
- Fuel pre-filter with water separator
- Fuel filter
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in block
- Oil filler, in engine block
- Oil dipstick, in block
- Starter, 2-pole 7.0 kW
- Alternator, 2-pole 100A
- Flywheel SAE 14
- Silumin flywheel housing, SAE 1 flange
- Front-mounted engine brackets
- Protection covers
- Sea water pump
- Heat exchanger with expansion tank
- Closed crankcase ventilation
- Operator's manual

Optional equipment

- Hydraulic pump
- Side-mounted PTO
- Front-mounted PTO
- Exhaust connections
- Electrical base system
- Control and instrument panels
- Accelerator position sensor
- Engine heater
- Power pack engine bracket
- Stiff rubber suspension
- Air cleaner
- Studs in flywheel housing
- Reversible fuel filter
- Low coolant level reaction
- Variable idle speed setting
- Low and extra low oil sump
- Long oil dipstick
- Oil level sensor
- Bilge pump

This specification may be revised without notice.

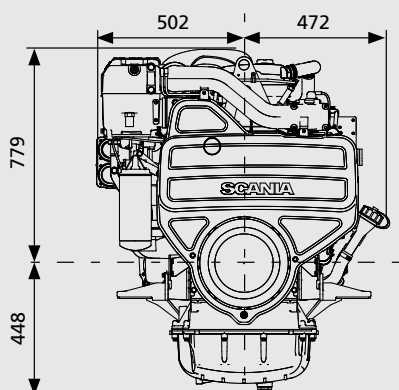
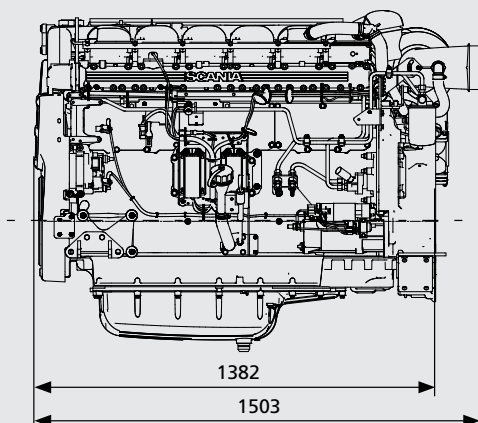


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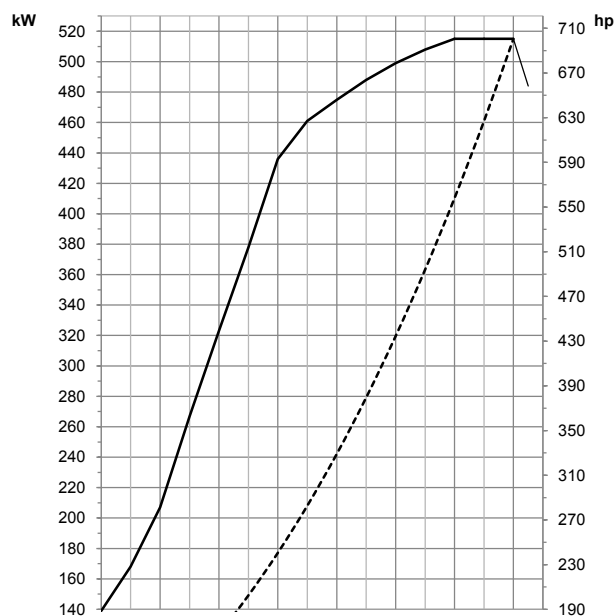
Engine description

No of cylinders	6 in-line
Working principle	4-stroke
Firing order	1 - 5 - 3 - 6 - 2 - 4
Displacement	12.7 litres
Bore x stroke	130 x 160 mm
Compression ratio	16.3:1
Weight	1285 kg (excl oil and coolant)
Piston speed at 1500 rpm	8.0 m/s
Piston speed at 1800 rpm	9.6 m/s
Camshaft	High position alloy steel
Pistons	Steel pistons
Connection rods	I-section press forgings of alloy steel
Crankshaft	Alloy steel with hardened and polished bearing surfaces
Oil capacity	28-34 dm ³ (standard oil sump)
Electrical system	2-pole 24V



All dimensions in mm

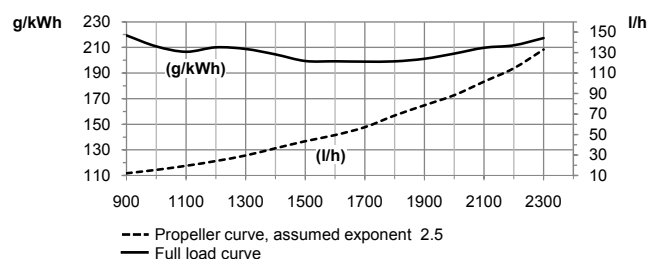
Output



Torque



Spec fuel consumption



Test conditions Air temperature +25°C. Barometric pressure 100 kPa (750 mmHg). Humidity 30%. Diesel fuel acc. to ECE R 24 Annex 6. Density of fuel 0.840 kg/dm³. Viscosity of fuel 3.0 cSt at 40°C. Energy value 42700 kJ/kg. Power test code ISO 3046. Power and fuel values +/-3%.



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