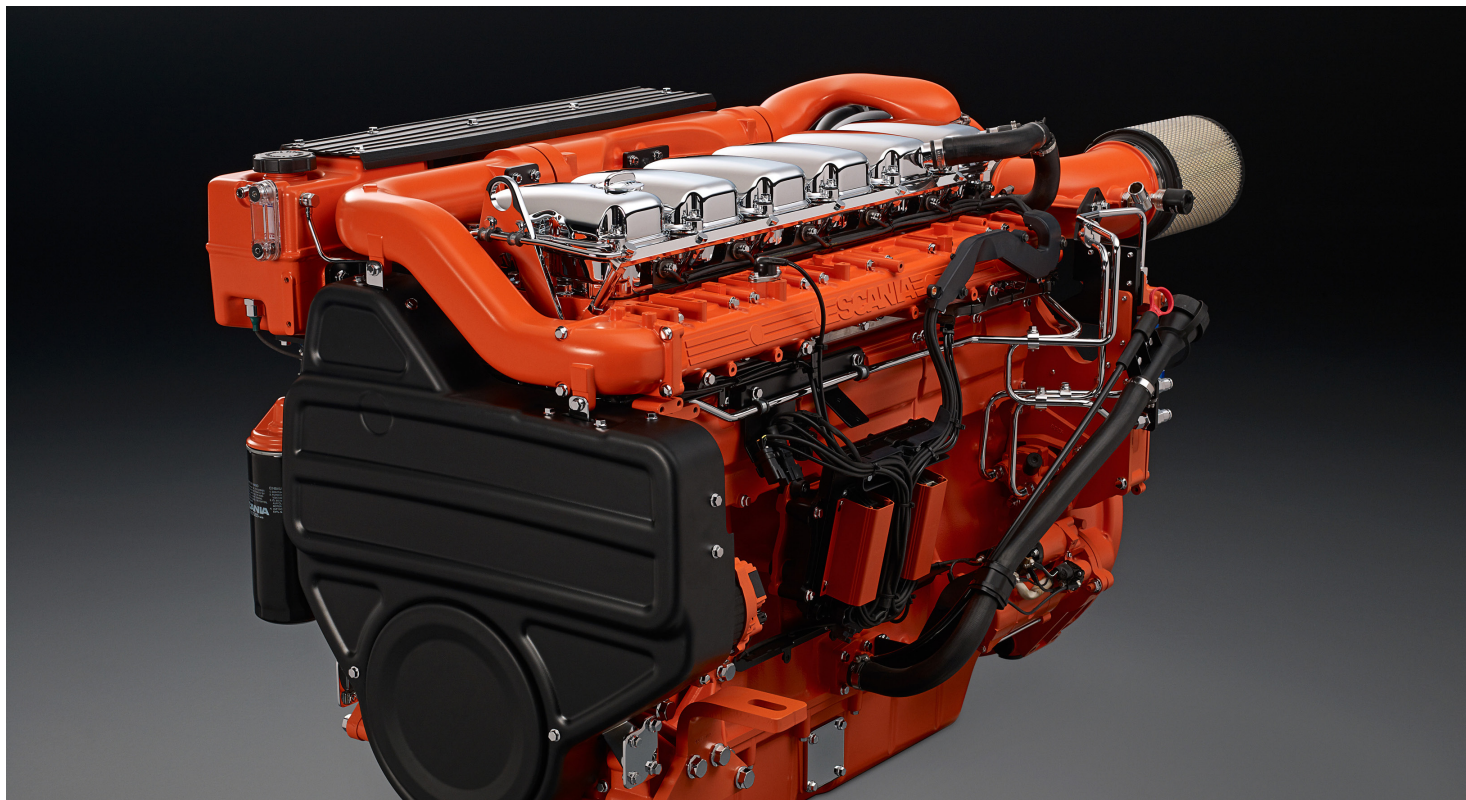


SCANIA MARINE ENGINE: IMO TIER II, US TIER 2, EU STAGE IIIA

13-LITRE ENGINE



Engine description

DI13 072M. 478 kW (650 hp)

Engine speed	2,300 rpm
Emission compliance	IMO Tier II, US Tier 2, EU Stage IIIA
Rating	Patrol craft long
No of cylinders	6 in-line
Working principle	4-stroke
Displacement	12.7 litres
Weight	1,285 kg (excl. oil and coolant)
Oil capacity	39-45 litres (standard oil sump)
Electrical system	2-pole, 24 V DC

The marine engines from Scania are based on a robust design with a strength optimized cylinder block containing wet cylinder liners that can easily be exchanged. Individual cylinder heads with 4 valves per cylinder promotes reparability and fuel economy.

The engine is equipped with a Scania developed Engine Management System, EMS, to ensure the control of all aspects related to engine performance. The injection system is based on electronically controlled unit injectors, which gives low exhaust emissions with good fuel economy and a high torque already at low revs.

The engine can be equipped with many accessories such as air cleaners, PTOs, transmissions and instrumentation, to suit a variety of installations.

Standard equipment

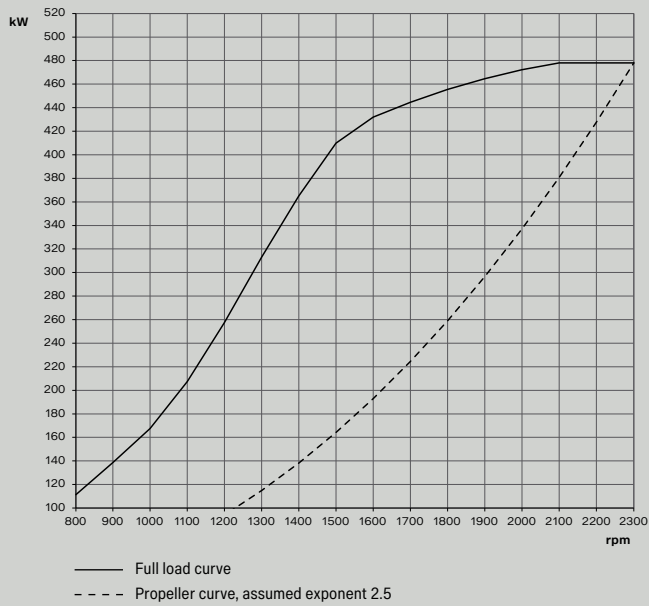
- Scania Engine Management System, EMS
- Unit injectors, PDE
- Turbocharger
- Saver ring in cylinder liner
- Fuel filter and extra pre-filter with water separator
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in cylinder block
- Oil filler, in cylinder block
- Deep front oil sump with ladder frame
- Oil dipstick, in cylinder block
- Starter motor, 2-pole 7.0 kW
- Alternator, 2-pole 100 A
- Flywheel SAE 14
- Silumin flywheel housing, SAE 1 flange
- Front-mounted engine suspension
- Closed crankcase ventilation
- Protection covers
- Sea water pump
- Heat exchanger with expansion tank
- Sea water-cooled charge air cooler

Patrol craft long: Intended for intermittent use where rated power is available 1 h/6 h.

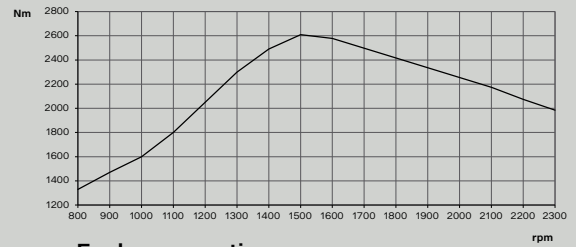
Between full load operations engine rpm must be reduced at least 10% from max. obtained rpm. Accumulated total service time max. 2000 h/year.

Power charts

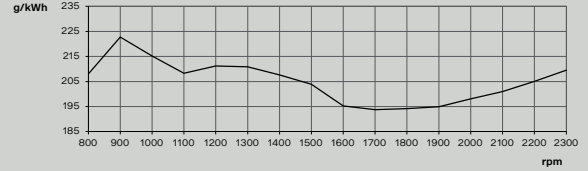
Power



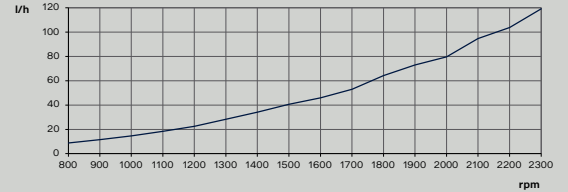
Torque



Fuel consumption



Fuel consumption, propeller curve



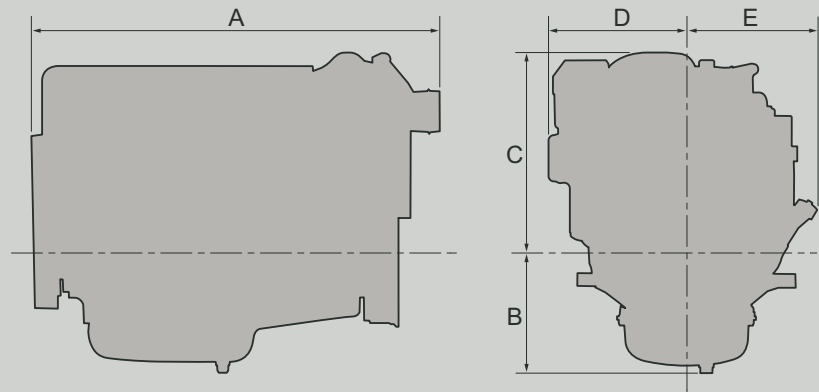
Test conditions: Air temperature 25°C. Barometric pressure 100 kPa (750 mmHg). Humidity 30%. Diesel fuel according to ECE R 24 Annex 6. Density of fuel 0.840 kg/dm³. Viscosity of fuel 3.0 cSt at 40°C. Energy value 42,700 kJ/kg. **Power test code:** ISO 3046. Power and fuel values ±3%.

Dimensions

A Overall length	1,536
B Centre of crankshaft to bottom	448
C Centre of crankshaft to top	725
D Centre of crankshaft to right-hand side	502
E Centre of crankshaft to left-hand side	472

Engine with heat exchanger.

All dimensions indicated in mm.



Technical data

	Engine speed (rpm)				
	1,200	1,500	1,800	2,100	2,300
Gross power (kW)	258	410	455	478	478
Gross power (hp, metric)	350	558	619	650	650
Gross power, propeller curve (kW)	94	164	259	381	478
Gross power, propeller curve (hp, metric)	128	223	352	518	650
Gross torque (Nm)	748	1,045	1,374	1,731	1,985
Spec. fuel consumption at full load (g/kWh)	211	204	194	201	210
Spec. fuel consumption, propeller curve (l/h)	23	41	64	95	119
Heat rejection to coolant (kW)	192	274	281	323	350