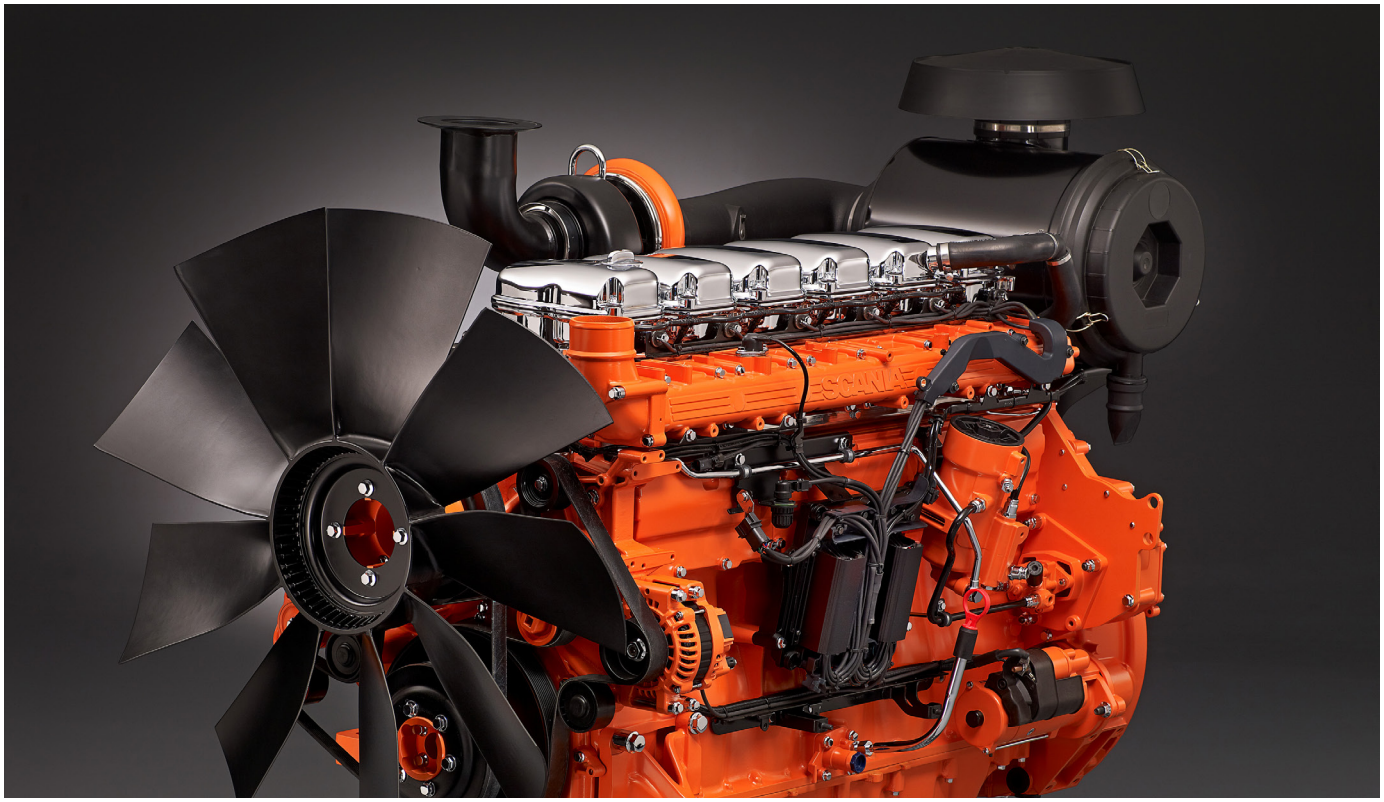
SCANIA POWER GENERATION ENGINE: FUEL OPTIMIZED

# 13-LITRE ENGINE



## Engine description

DC13 093A. 499-549 kW (566-625 kVA)

| | |
|---|---|
| **Engine speed** | 1,800 rpm |
| **Emission compliance** | Fuel optimized |
| **Rating** | PRP/ESP |
| **No of cylinders** | 6 in-line |
| **Working principle** | 4-stroke |
| **Displacement** | 12.7 litres |
| **Weight** | 1,050 kg (excluding oil and coolant) |
| **Oil capacity** | 30-36 litres (standard oil sump) |
| **Electrical system** | 1-pole 24 V DC |

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

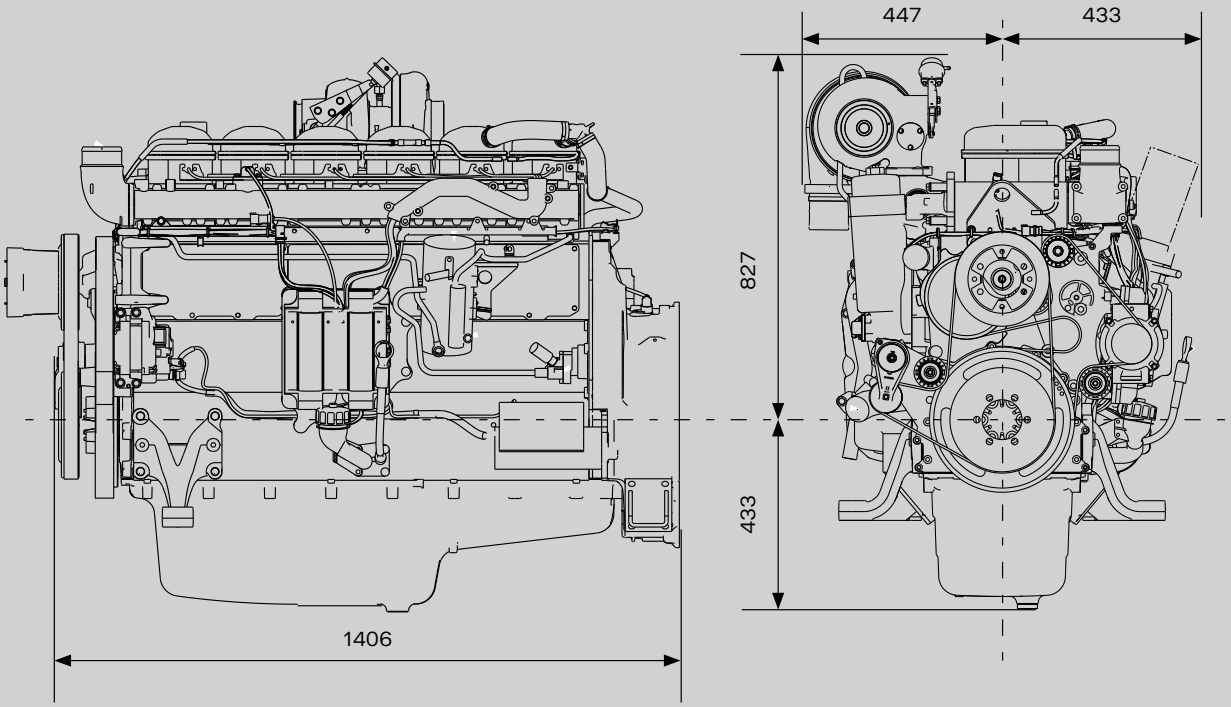
The engine is equipped with a Scania developed Engine Management System, EMS, to ensure control of all aspects related to engine performance.

The injection system is based on electronically controlled unit injectors, which provide good fuel economy and a high torque. The engine can be fitted with many options such as air cleaners, PTOs and cooling package, to suit a variety of installations. It is developed for 60 Hz applications.

**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 valve cover
- Deep front oil sump
- Oil dipstick, in cylinder block
- Magnetic drain plug for oil draining
- Starter motor, 1-pole 7.0 kW
- Alternator, 1-pole 100 A
- Flywheel, SAE 14
- Silumin flywheel housing, SAE 1 flange
- Front-mounted engine suspension
- Open crankcase ventilation

# Dimensions




Edition 02

# Technical data

| | 1800 rpm (60 Hz) | | |
|---|---|---|---|
| | PRP | ESP | Unit |
| Gross power | 499 | 549 | kW |
| | 566 | 625 | kVA |
| Gross torque | 2,647 | 2,913 | Nm |
| Fuel consumption at full load | 194 | 198 | g/kWh |
| Heat rejection | | | |
| to coolant | 130 | 150 | kW |
| to exhaust gas | 378 | 433 | kW |
| to charge air | 106 | 120 | kW |
| to surrounding air | 46 | 52 | kW |
| Air consumption | 40 | 42 | kg/min |
| Air temperature | | | |
| upstream of charge air cooler | 202 | 217 | °C |
| downstream of charge air cooler | 44 | 47 | °C |
| Pressure in intake manifold | 2.4 | 2.6 | bar |
| Pressure drop in charge air cooler | 0.10 | 0.10 | bar |
| Exhaust flow | 41 | 44 | kg/min |
| Exhaust temperature | 525 | 559 | °C |
| Step load performance (according to class G2) | 67 | 61 | % |
| | 335 | 335 | kW |

**PRP - Prime power:** For continuous operation at varying load. Max mean load factor of 70% of rated power over 24 hours of operation. 1 hour/12-hour period of accumulated peak overload to 110%.
**ESP - Stand-by power:** For operation under normal varying load during a power outage. Not overloadable. Max mean load factor of 70% of rated power over 24 hours of operation. Not for applications intended for more than 200 hours/year.