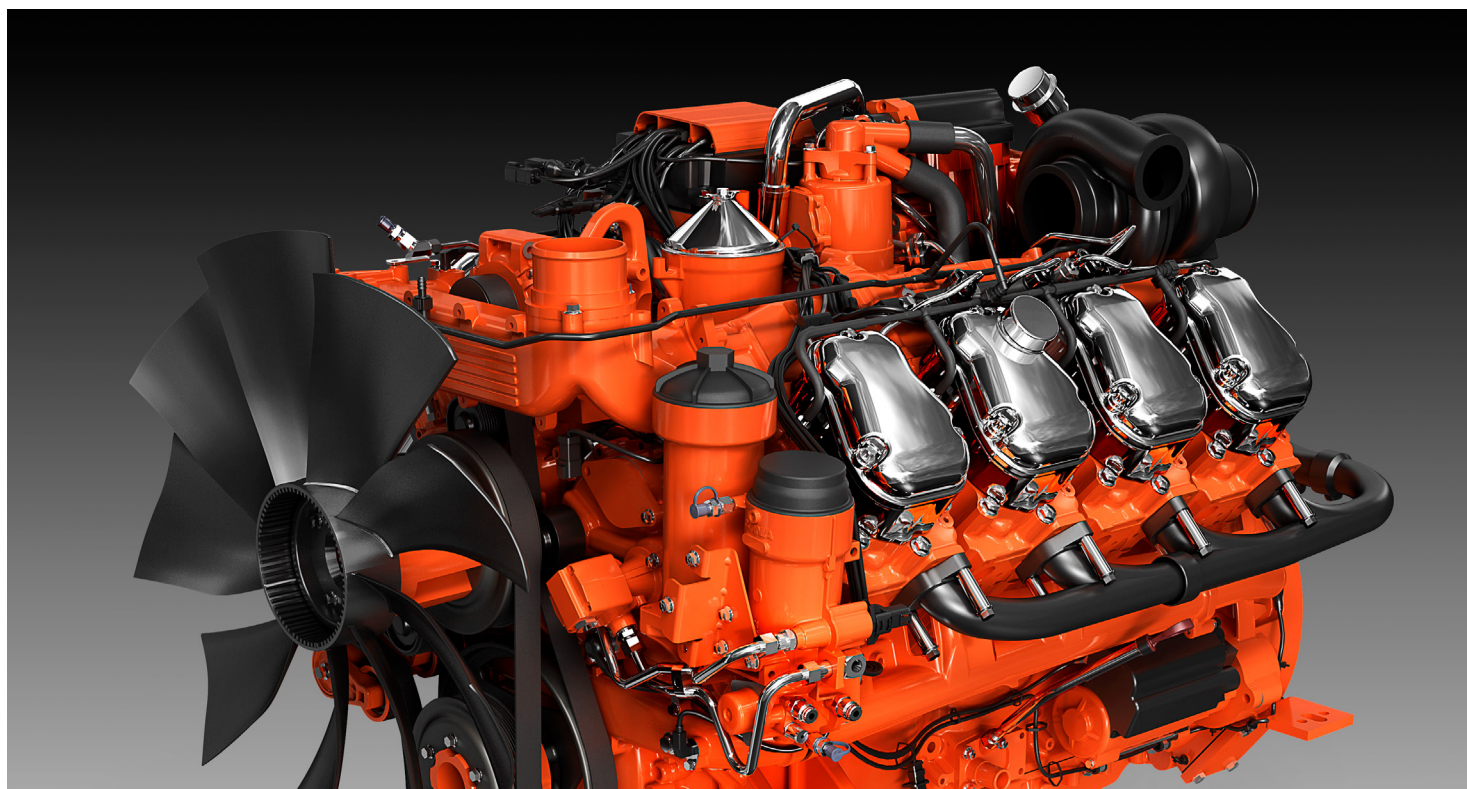


SCANIA INDUSTRIAL ENGINE: EU STAGE V FOR LOCOMOTIVES (RLL-V/C-1)

# 16-LITRE ENGINE



## Engine description

DC16 092A. 555 kW

Engine speed	2,000 rpm
Emission compliance	EU Stage V
Rating	IFN
No of cylinders	90° V8
Working principle	4-stroke
Displacement	16.4 litres
Weight	1,340 kg (excluding oil and coolant)
Oil capacity	40-48 litres (standard oil sump)
Electrical system	1-pole 24 V

Scania's industrial engines are based on a robust design for superior operating economy and reliability. With their modular design, the engines offer easy installation for the producer of the equipment as well as easy access to daily checks and service for the operator. The engines can be fitted with many accessories such as air cleaners, PTOs, exhaust fittings and flywheels to suit a variety of installations.

Scania's Stage V engines are equipped with a Scania developed extra high pressure fuel injection system based on common rail technology, and a turbocharger optimized for operation in combination with the exhaust gas aftertreatment system. Together with Scania's Engine Management System, the result is an engine that fulfils the strictest exhaust emission requirements with low fuel consumption and a high torque.

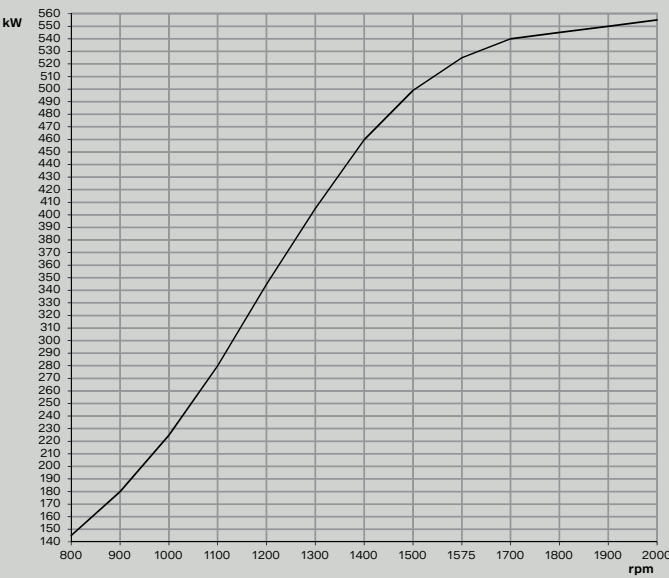
### Standard equipment

- Scania Engine Management System, EMS
- Extra high pressure fuel injection system, XPI
- Waste-gate controlled turbocharger
- Saver ring in cylinder liner
- Fuel filter and extra pre-filter with water separator
- Fuel heater
- 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, for use with friction clutch
- Silumin flywheel housing, SAE 1 flange
- Front-mounted engine suspension
- SCR system
- Open crankcase ventilation

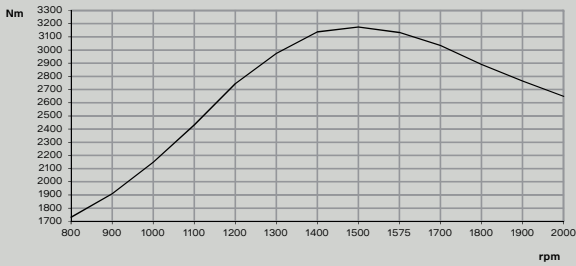
**IFN - Intermittent service:** Rated output available for 1 h/6 h period. Unlimited h/year service time at a load factor of 80%.

# Power charts

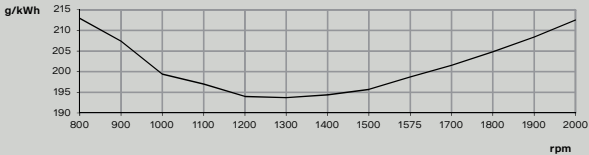
Power



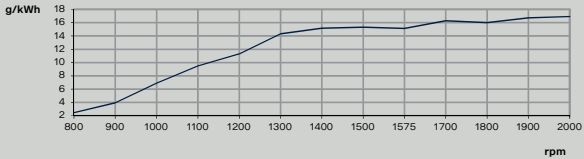
Torque



Fuel consumption



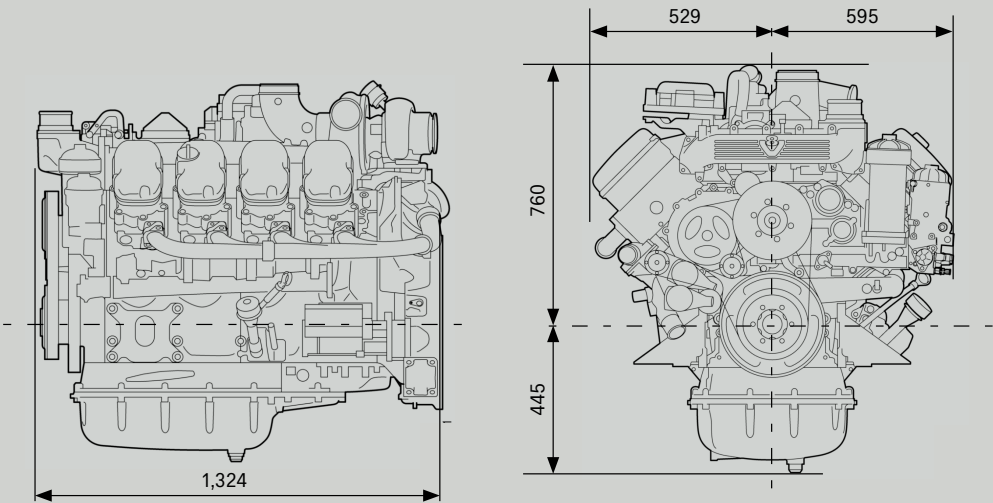
Reductant consumption



**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. Engergy value 42,700 kJ/kg. **Power test code** ISO 3046. Power and fuel values +/-3%.

# Dimensions

All dimensions indicated in mm.



# Technical data

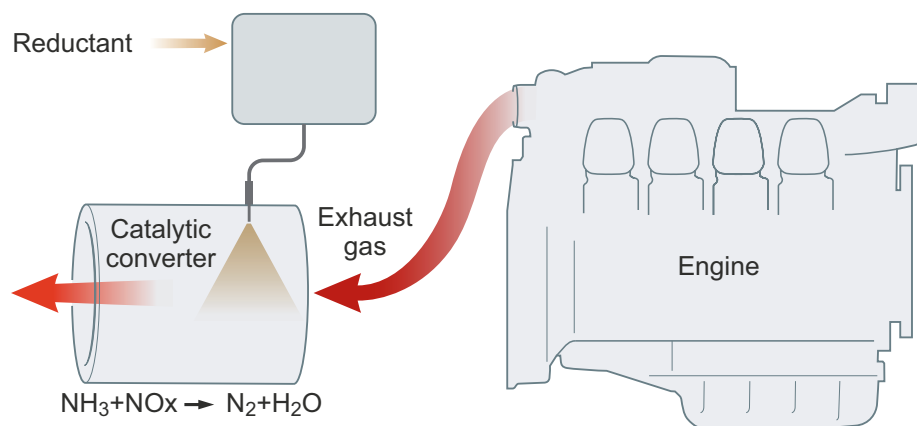
	Engine speed (rpm)			
	1,200	1,500	1,800	2,000
Gross power (kW)	345	499	545	555
Gross power (hp, metric)	469	678	741	755
Gross torque (Nm)	2,745	3,175	2,891	2,648
Fuel consumption at full load (g/kWh)	194	196	205	213
Reductant consumption at full load (g/kWh)	11	15	16	17
Heat rejection to coolant (kW)	157	188	201	216

This specification may be revised without notice.

Edition 03

EMISSION COMPLIANCE EU STAGE V FOR LOCOMOTIVES (RLL-V/C-1)

## EXHAUST GAS AFTERTREATMENT SYSTEM

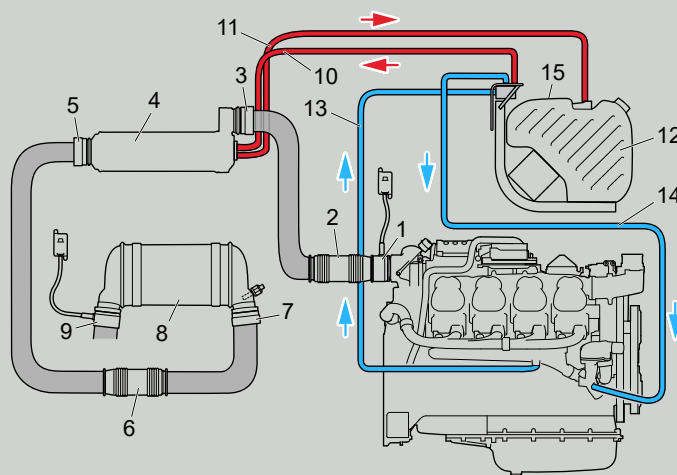


A chemical process is started when reductant, a urea and water mixture, is injected into the exhaust gas stream. During injection, the water evaporates and the urea breaks down to form ammonia. The ammonia then reacts with the nitrogen oxide gases in the catalytic converter and forms harmless products such as nitrogen gas and water.

SCR (Selective Catalytic Reduction) technology is used to reduce the NOx content in the exhaust gases in the best possible way.

### Mechanical system

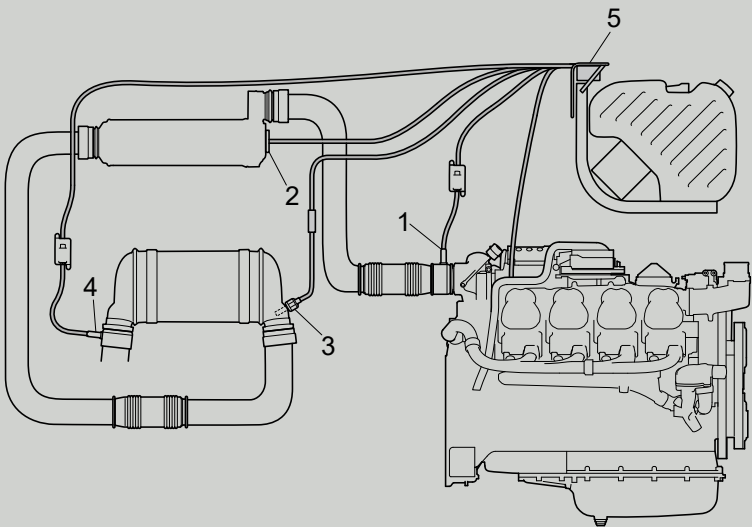
	Standard	Optional
1 NOx flange upstream	✓	-
2 Exhaust bellows	-	✓
3 Exhaust flange	-	Ø114, 130, 155 mm
4 Evaporator	without insulation	with insulation
5 Exhaust flange	-	Ø114, 130, 155 mm
6 Exhaust bellows SCR	-	✓
7 Exhaust flange	-	Ø114, 130, 155 mm
8 SCR catalytic converter	with 90° outlet	with straight outlet
9 NOx flange downstream	Ø127 mm, V-clamp	Ø114, 130, 155 mm
10 Reductant pressure hose	2.5 m	4, 5, 6.5 m
11 Reductant return hose	2.5 m	4, 5, 6.5 m
12 Reductant tank	38 l	45, 60, 63, 70 l
13 Coolant hose for heating of tank and pump	-	-
14 Coolant return hose	-	-
15 Reductant tank bleed hose	0.8 m	3.3 m



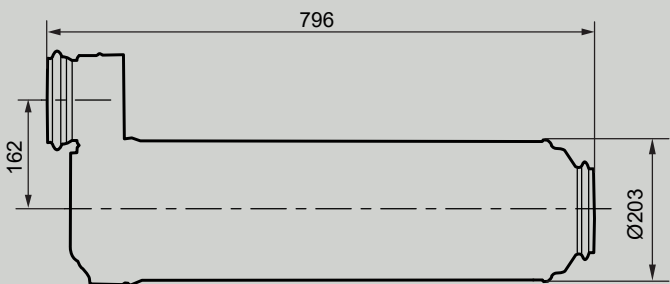
# Electrical system

- 1 NOx sensor upstream with control unit
- 2 Reductant doser
- 3 Exhaust gas temperature sensor
- 4 NOx sensor downstream with control unit
- 5 Electrical interface to exhaust gas aftertreatment system

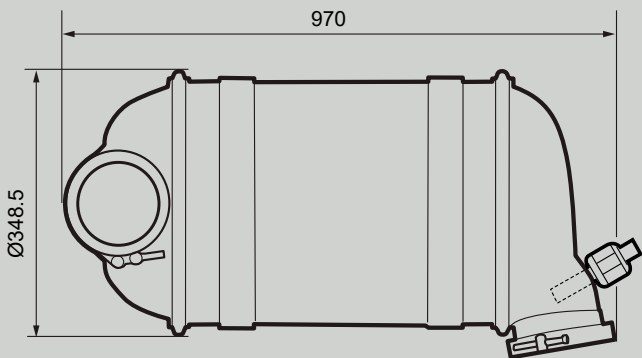
All components are standard equipment. Standard cable length 3.0 m; optional length 4.5 m, 6 m (9 m).



# Evaporator



# SCR catalytic converter



# Reductant tank, 38 litres

Available sizes	Total volume	Filling volume
38 litres	50 litres	38 litres
45 litres	60 litres	45 litres
60 litres	75 litres	60 litres
63 litres	80 litres	63 litres
70 litres	90 litres	70 litres

