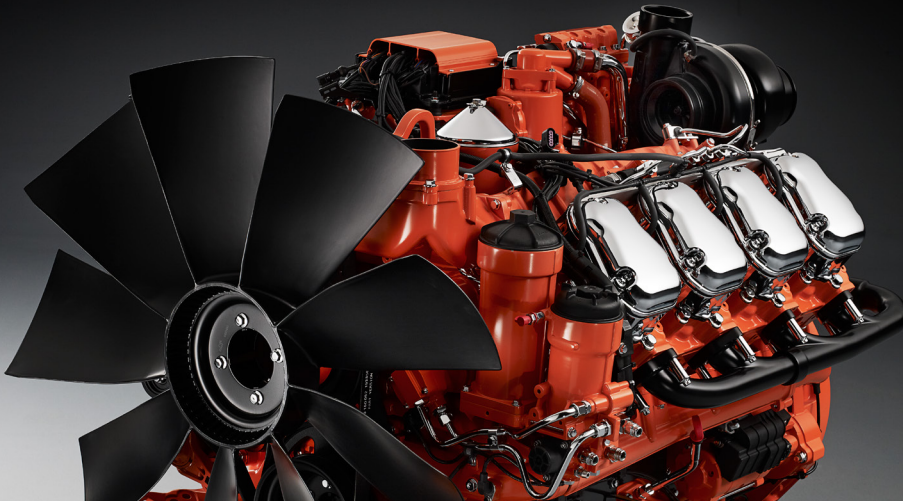


DC16 072A. 578-678 kW (651-770 kVA)

Fuel optimized



The engines for power generation 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 reparability and fuel economy.

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 Scania's XPI (Extra High Pressure Injection), a common rail system that gives low exhaust emissions with good fuel economy and a high torque. The engine can be fitted with many accessories such as air cleaners, radiators and PTOs in order to suit a variety of installations.

	Engine speed (rpm)			
	1500 rpm (50 Hz)		1800 rpm (60 Hz)	
	PRP	ESP	PRP	ESP
Gross power (kW)	578	634	619	678
Gross power (kVA)	650	715	695	765
Spec fuel consumption. Full load (g/kWh)	193	193	199	199
Spec fuel consumption. 3/4 load (g/kWh)	191	191	195	196
Spec fuel consumption. 1/2 load (g/kWh)	195	194	202	201
Heat rejection to coolant (kW)	218	236	235	255

PRP – Prime power: For continuous operation at varying load. Max mean load factor of 70% of rated power over 24 h of operation. 1 hour/12 hours 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 h of operation. Not for applications intended for more than 200 h/year.

Standard equipment

- Scania Engine Management System, EMS
- Extra high pressure fuel injection system, XPI
- Turbocharger
- Fuel filter and extra pre-filter with water separator
- Fuel heater
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in block
- Oil filler, in valve cover
- Deep front oil sump
- Oil dipstick, in block
- Magnetic drain plug for oil draining
- Starter, 1-pole 7.0 kW
- Alternator, 1-pole 100A
- Flywheel, SAE 14
- Cast iron flywheel housing, SAE 1 flange
- Front-mounted engine brackets
- Open crankcase ventilation
- Operator's manual

Optional equipment

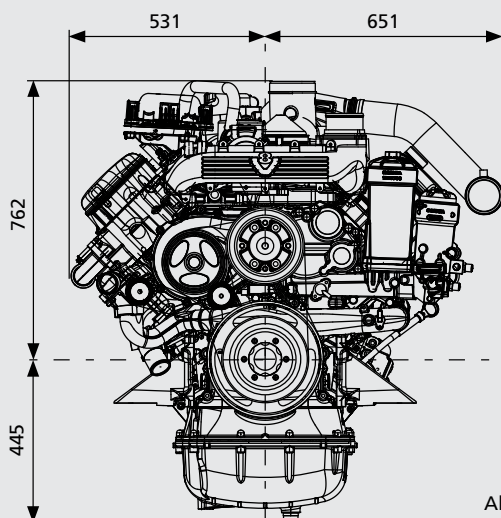
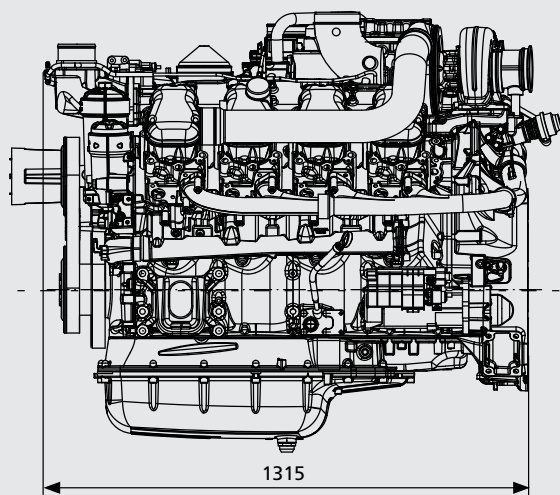
- Cooling package
- Fans
- Side-mounted PTO
- Exhaust connections
- Instrument kit
- Engine heater
- Stiff rubber engine suspension
- Air cleaner
- Closed crankcase ventilation
- Studs in flywheel housing
- Low coolant level reaction
- Fine tune potentiometer
- Ramp start delay
- Ramp up rate

DC16 072A. 578-678 kW (651-770 kVA)

Fuel optimized

Engine description

No of cylinders	90° V8
Working principle	4-stroke
Firing order	1 - 5 - 4 - 2 - 6 - 3 - 7 - 8
Displacement	16.4 litres
Bore x stroke	130 x 154 mm
Compression ratio	16.7:1
Weight	1340 kg (excl oil and coolant)
Piston speed at 1500 rpm	7.7 m/s
Piston speed at 1800 rpm	9.24 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	35-45 dm ³
Electrical system	1-pole 24V



All dimensions in mm



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**Technical data****DC16 072A, 578-678 kW / 651-770 kVA (engine ref. 02-12)**

Emission compliance	Fuel injection system
Fuel optimized	XPI

	1500 rpm (50 Hz)		1800 rpm (60 Hz)		Unit
	PRP	ESP	PRP	ESP	
Gross power	578	634	619	678	kW
	651	716	700	770	kVA
Gross torque	3680	4036	3284	3597	Nm
Spec. fuel consumption					
full load	193	193	199	199	g/kWh
3/4 load	191	191	195	196	g/kWh
1/2 load	195	194	202	201	g/kWh
Heat rejection					
to coolant	218	236	235	255	kW
to exhaust gas	392	427	449	487	kW
to charge air	93	110	114	135	kW
to surrounding air	53	58	59	64	kW
Air consumption	37	40	44	47	kg/min
Air temperature					
before charge air cooler	193	209	200	221	°C
after charge air cooler	46	48	48	51	°C
Pressure in intake manifold	2.1	2.4	2.1	2.4	Bar
Fall of pressure, charge air cooler	0.10	0.10	0.15	0.15	Bar
Exhaust flow	39	42	46	49	kg/min
Exhaust temperature	563	565	552	557	°C
Step load performance					
(According to class G2. See section 2 for more information.)	60	56	66	61	%
	345	355	411	411	kW

6A**Cooling performance**Cooling package 1.5 m², fan Ø965, ratio 1500 rpm: 1:1.1, ratio 1800 rpm: 1:0.9

1500 rpm (50 Hz)						1800 rpm (60 Hz)					
PRP			ESP			PRP			ESP		
Air-on temp* (°C)	Airflow (kg/s)	Rest-riction (Pa)	Air-on temp* (°C)	Airflow (kg/s)	Rest-riction (Pa)	Air-on temp* (°C)	Airflow (kg/s)	Rest-riction (Pa)	Air-on temp* (°C)	Airflow (kg/s)	Rest-riction (Pa)
67	16	260	64	16	260	60	16	260	56	16	260
68	18	150	66	18	150	64	19	150	60	19	150
69	20	100	67	20	100	69	20	100	64	20	100

* Based on engine coolant temperature 110°C

Fan power losses (kW)

25	23
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Information für Aggregatebauer

Abgasdaten zum DC16 072/078A Scania Motor / Verbrauchsoptimiert ohne Abgaszertifikat

Die Werte zu Partikeln im Abgas liegen zu allen Leistungsstufen unter 0,02 g/nm³ / 20mg/nm³

Engine Specification	DC16 A						
	Engine type	DC16 72/78A	DC16 072/78A	DC16 072/78A	DC16 072/78A	DC16 072/78A	DC16 072/78A
Rated speed (rpm)		1500	1500	1500	1500	1500	1500
Rated power [kW]		536	578	621	587	634	680
Exhaust Emissions correct to 5% O ₂	HC g/nm ³	0,07	0,07	0,07	0,07	0,07	0,07
	CO g/nm ³	0,1	0,1	0,1	0,1	0,1	0,1
	NOx g/nm ³	15	14,8	14,7	14,8	14,7	13,7
	PM g/nm ³	< 0,02	< 0,02	< 0,02	< 0,02	< 0,02	< 0,02

Verwendung von Brennöl gemäß DIN 51603-1 für schwefelarmes Heizöl und ÖNORM C 1109

Scania single speed Motoren mit Abgasstufenzertifikat EU Stufe II und ohne Zertifikat (Verbrauchsoptimiert) dürfen vom technischen Standpunkt mit Brennöl gemäß DIN 51603-1 (schwefelarme Ausführung) und ÖNORM C 1109 betrieben werden.

Gültigkeit für Motortypen: DC09 072/073 – DC13 072/073- DC16 072/078

Die gesetzlichen Vorschriften zum Einsatz von Heizöl/Brennöl als Kraftstoff sind einzuhalten und stehen unter Verantwortung des Betreibers.

Scania Deutschland GmbH

Koblenz, 14.01.2016

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