

# SCANIA

SPECIFICATION

**P-, G- and R-series**

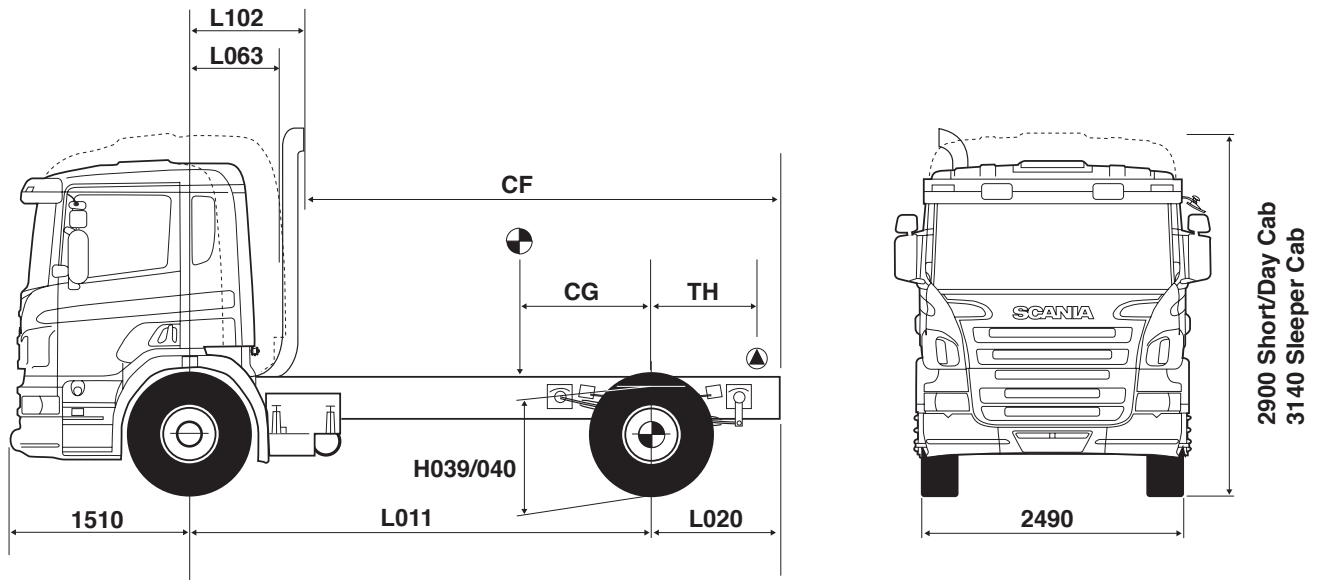
**P 250 DB4x2HNZ**

**Euro 6**

19000Kg GVW

TWO AXLE TIPPER

**P**



L063 (centreline of front axle to back of cab) Short – 295 Day – 590 Sleeper – 860  
 L102 (centreline of front axle to front of body) Short – 710 Day – 830 Sleeper – 1130

**DIMENSIONS (mm)**

<b>L011</b>		3900	4300	4500	4700
<b>L100</b>	<b>Day Cab</b>	4585	5181	5486*	5791*
	<b>(feet)</b>	(15.0)	(17.0)	(18.0)	(19.0)
<b>CF</b>		4190	4590	4790	4990
<b>L020</b>		1200	1200	1200	1200
<b>L020 Max</b>		3600	4000	4000	4000
<b>CG Max</b>		802	879	915	956
<b>CG Min</b>		600	654	680	710
<b>TH</b>		1030	1030	1030	1030

H039 unladen = 1073mm H040 laden = 958mm.

L100 = Tipper bodylength to suit weight distribution.\*=Subframe requirements subject to application. CG dimension for body and payload calculated for standard model at standard GB plated weights. TH = Tipper hinge. Height dimensions measured to top of frame at rear axle centreline. Rear overhang (L020) can be specified in 10mm steps up to maximum – check legality.

**PLATED WEIGHTS – AWR**

		Front Axle	Rear Axle	GVW	GTW\$
Design Gross	Kg	7500†	11500	19000	22500
Legal Max in GB	Kg	7100*	11500	18000	21500

†Front axle capacity up to a maximum of 9000kg available as option.

\*Legal front axle capacity limited by tyres.

\$ GTW 28000kg design and GB when fitted with trailer brakes.

Increases to 40000kg with '280', '320' or '360' engine.

GR905 gearbox recommended as minimum.

Plated weights dependent on statutory tyre limitations.

**CHASSIS/CAB WEIGHTS**

(Tolerance +/- 2.5%)

Axle distance	Front	Rear	Total (kg)
3900	4576	1706	6282
4300	4599	1743	6342
4500	4609	1748	6357
4700	4609	1758	6367

Chassis cab weight includes 20 litres of fuel, oil and water.

Driver not included. See overleaf for option weights.

**P 250 DB4x2HNZ**

SL5451293  
September 13

## ENGINE (EURO 6)

Scania '9 litre' vertical five cylinder in-line turbocharged intercooled direct injection diesel with Scania XPI.

'250'

<b>Type:</b>	<b>DC09-111</b>
<b>Swept Volume:</b>	9.3 litres
<b>Bore:</b>	130 mm
<b>Stroke:</b>	140 mm
<b>Compression Ratio:</b>	18:1
<b>*Max. Power:</b>	184kW (250 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	1250 Nm (922 lbf.ft) between 1000 and 1350 rev/min
<b>Engine Management System:</b>	EMS incorporating Cruise Control and speed limiter
<b>Emission Control:</b>	Scania EGR/SCR
<b>Cooling:</b>	Water cooled with rubber mounted 2 row radiator and electronically regulated fan
<b>Coolant Capacity:</b>	42 litres
<b>Oil Capacity:</b>	31 litres
<b>Air Cleaner:</b>	Dry replaceable paper element
<b>Engine driven PTO provision:</b>	ED120

### Options:-

**(1) Details as above except for the following:-**

'280'

<b>Type:</b>	<b>DC09-113</b>
<b>*Max. Power:</b>	206kW (280 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	1400 Nm (1033 lbf.ft) between 1000 and 1350 rev/min

**(2) Details as above except for the following:-**

'320'

<b>Type:</b>	<b>DC09-108</b>
<b>*Max. Power:</b>	235kW (320 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	1600 Nm (1180 lbf.ft) between 1050 and 1300 rev/min

**Emission Control:** Scania SCR

**(3) Details as above except for the following:-**

'360'

<b>Type:</b>	<b>DC09-112</b>
<b>*Max. Power:</b>	265kW (360 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	1700 Nm (1254 lbf.ft) between 1100 and 1350 rev/min

**Emission Control:** Scania SCR

\*With fan at max. slip

## CLUTCH

<b>Type:</b>	Single dry plate
<b>Operation:</b>	Air assisted with clutch wear protection

## GEARBOX

<b>Type:</b>	Scania GR875 eight speed synchromesh (four speed main fitted with two speed planetary range unit)
<b>Oil Capacity:</b>	11.1 litres

## GEAR RATIOS

Low Range		High Range	
1st	9.17:1	5th	2.45:1
2nd	6.26:1	6th	1.67:1
3rd	4.65:1	7th	1.24:1
4th	3.75:1	8th	1.00:1
Reverse	11.00:1		

### Options:-

**(1) Type:** Scania GR905 - eight speed synchromesh (four speed main fitted with two speed planetary range unit) plus one crawler gear.

**(2) Type:** Scania GRS895 twelve speed synchromesh (three speed main fitted with two speed planetary range unit plus splitter).

**(3) Opticruise:** Gearchange management system - all engines with GR875 - or GRS895 - Traction Control mandatory.

## REAR AXLE

<b>Type:</b>	Scania AD1300
<b>Capacity:</b>	13000 Kg

Pressed steel housing with magnetic oil drain plug.

## REAR AXLE GEAR

<b>Type:</b>	Scania R660
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Single reduction hypoid.Crown wheel and pinion matched during manufacture.Pneumatically operated differential lock.

## FRONT AXLE

<b>Type:</b>	Scania AM740 I section rigid beam
<b>Capacity:</b>	7500Kg

**Options:- (1) Scania AM950 - capacity 9000kg**

## STEERING

<b>Type:</b>	Recirculating ball. Hydraulically assisted power steering				
<b>Steering wheel:</b>	Diameter 450mm. Lock to lock 4.9 turns				
<b>Turning circle:</b>	Kerb to kerb				
3.9m A/D	14.2m	4.3m A/D	15.6m	4.5m A/D	16.4m
4.7m A/D	17.1m				

## SUSPENSION

<b>Type Front:</b>	Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins.
<b>Type Rear:</b>	Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins. Anti-roll bar. Double acting telescopic shock absorbers are fitted to both axles.

**Options:- (1) Front anti-roll bar**

## SPRING SIZE

	Front	Rear
<b>Length:</b>	1820mm	1780mm
<b>No. of leaves:</b>	3 x 29mm	3 x 24mm + 1 x 41mm
<b>Design Capacity:</b>	8500Kg	13000Kg

**Options:- (1) Multi-leaf springs at rear - 5 x 16mm + 2 x 27mm - 11500Kg design capacity**

**(2) 4 x 28mm front springs - design capacity 9000kg**

## WHEELS & TYRES

8.25 x 22.5 ten stud spigot mounted disc wheels fitted with 295/80R22.5 radial tubeless tyres.

**Options:- (1) 9.00 x 22.5 wheels with 315/80R22.5 tyres**  
**(2) 11.75 x 22.5 wheels with 385/65R22.5 or 385/55R22.5 tyres - front axle only, (3) Aluminium wheels - machined or polished surface finish**  
**(4) Front wheel embellishers**

## FRAME

<b>Type:</b>	F800-50
	F950-50 where front axle capacity $\geq$ 8000kg

Flat top constant depth 'U' channel with riveted crossmembers

### Sidemember Dimensions:

F800 -	270 x 90 x 8mm
F950 -	270 x 90 x 9.5mm

Pre-drilled for bodywork mounting brackets  
Width over parallel section of frame = 770mm

**Bumper:** Pressed steel with FUP

**Options:- (1) Aerodynamic incorporating FUP - reduces front overhang to 1460mm.**

**(2) Centre tow-pin - steel bumper only**

## BRAKE SYSTEM

<b>Type:</b>	Dual circuit, full air, EC brake system incorporating load sensing and category 1 ABS. Brake pipes manufactured from either rust protected steel or high impact synthetics
<b>Service Circuit:</b>	Actuates all truck brakes
<b>Secondary Circuit:</b>	First position of park brake lever actuates spring chambers on both axles
<b>Parking Brake:</b>	Actuates spring chambers on both axles
<b>Exhaust Brake:</b>	Air actuated operated by brake pedal
<b>Brake Antifreeze Protection:</b>	Air dryer
<b>Brake Wear Adjusters:</b>	Automatic
<b>Options:-</b>	<b>(1)</b> Traction Control anti-slip device – Std. with Opticruise <b>(2)</b> Scania Hydraulic Retarder

## BRAKE DIMENSIONS

<b>Front Axle:</b>	Size 413 x 203mm	<b>Rear Axle:</b>	Size 413 x 203mm
	Area 1880cm <sup>2</sup>		Area 1880cm <sup>2</sup>
<b>Total Area:</b>	Service 3760cm <sup>2</sup>		
	Parking 3760cm <sup>2</sup>		

## ELECTRICAL SYSTEM

<b>Type:</b>	24V neg (-ve) earth	<b>Alternator:</b>	100A
<b>Batteries:</b>	Twin 140Ah		
	Rear H.I. lamps, Reversing lights, Battery connection – 200A		

**Options:-**  
**(1)** 180Ah batteries, **(2)** 225Ah batteries, **(3)** 150A alternator, **(4)** Dual battery system, **(5)** Bodywork electrical preparation – see separate document.

## FUEL TANK

1 x 200 litre steel RHS

**Options:-** (Minimum axle distance and suspension type in brackets)

	LH Side	RH Side	LH Side	RH Side
<b>Steel - G</b>	150	150	200	200
	200	200	300	300
	300	300	350	350
	450 (4300)	450 (4300)	500	500
			600 (4300)	600 (4300)

Tank sizes can be supplied in LH + RH combinations of the above but steel and aluminium cannot be mixed. Sides viewed from rear.

## GENERAL EQUIPMENT

Rear light brackets  
Vertical exhaust outlet – N/A with ADR to EXII/EXIII or FL.

**Options:-**  
**(1)** ADR to EXII/EXIII, FL, OX or AT

## INSTRUMENTS & CONTROLS

Two man, one day, EC digital tachograph, rev-counter and gauges for coolant temperature and fuel. Central display for vehicle information and warning messages. Six speed wipers with four jet integral screen wash. Halogen headlamps adjustable from cab for correction of beam height. Warning lights for all major systems grouped within easy vision.  
Instrument panel of modular design with switches and controls grouped according to usage. All instruments are back-lit and non-reflective. Impact absorbing, adjustable steering wheel with column lock.

## CAB

**CP16** Day Cab  
Please see separate specification – 'Scania Cabs' for equipment levels.

**Options:-**  
**(1)** CP19 Sleeper Cab  
**(2)** CP14

## P.T.O. OPTIONS

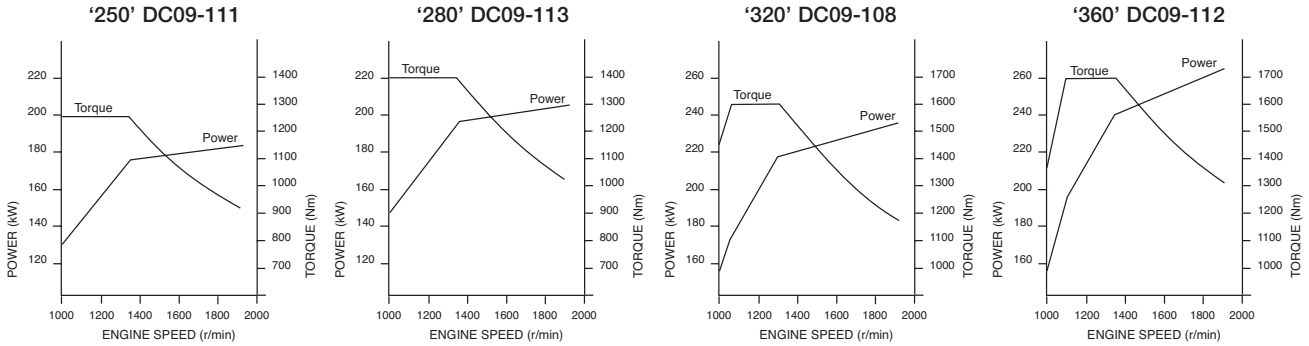
For applicability and specification information please visit :-  
[www.scania.co.uk/trucks/](http://www.scania.co.uk/trucks/) > Bodybuilder > Bodywork Information > Power take-offs and hydraulics.

## WEIGHTS FOR OPTIONAL EQUIPMENT IN KILOGRAMS (Front – Rear – Total)

Axle Distance	39	43	45	47
DC09-108/112 engines	-39 +2 -37	-39 +2 -37	-39 +2 -37	-39 +2 -37
GR905	+33 +10 +43	+34 +9 +43	+34 +9 +43	+35 +8 +43
GRS895	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2
AM950 front axle	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13
Front anti-roll bar	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33
4x28mm front springs	+29 0 +29	+29 0 +29	+29 0 +29	+29 0 +29
Rear springs 5x16 + 2x27	0 +64 +64	0 +64 +64	0 +64 +64	0 +64 +64
315/80 tyres/9.00 rims	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54
385/55 tyres/11.75 rims	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46
385/65 tyres/11.75 rims	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54
Aluminium wheels				
8.25x22.5	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72
9.00x22.5	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90
11.75x22.5	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44
F950 frame	+28 +41 +69	+29 +43 +72	+30 +45 +75	+31 +47 +78
Retarder	+74 +15 +89	+75 +14 +89	+74 +15 +89	+75 +14 +89
180Ah batteries	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17
225Ah batteries	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56
Dual batteries	+35 +7 +42	+35 +7 +42	+35 +7 +42	+35 +7 +42
Std tank full	+81 +63 +144	+87 +67 +144	+90 +54 +144	+92 +52 +144
* 1x300l G	+46 +52 +98	+51 +47 +98	+53 +45 +98	+55 +43 +98
CP14 cab	-53 -2 -55	-53 -2 -55	-53 -2 -55	-53 -2 -55
CP19 sleeper cab	+73 +6 +79	+73 +6 +79	+73 +6 +79	+73 +6 +79
Air deflectors – CP14	+44 +2 +46	+44 +2 +46	+44 +2 +46	+44 +2 +46
– CP16/19	+43 +3 +46	+43 +3 +46	+43 +3 +46	+43 +3 +46
EG Series PTOs	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18
EK Series PTOs	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47

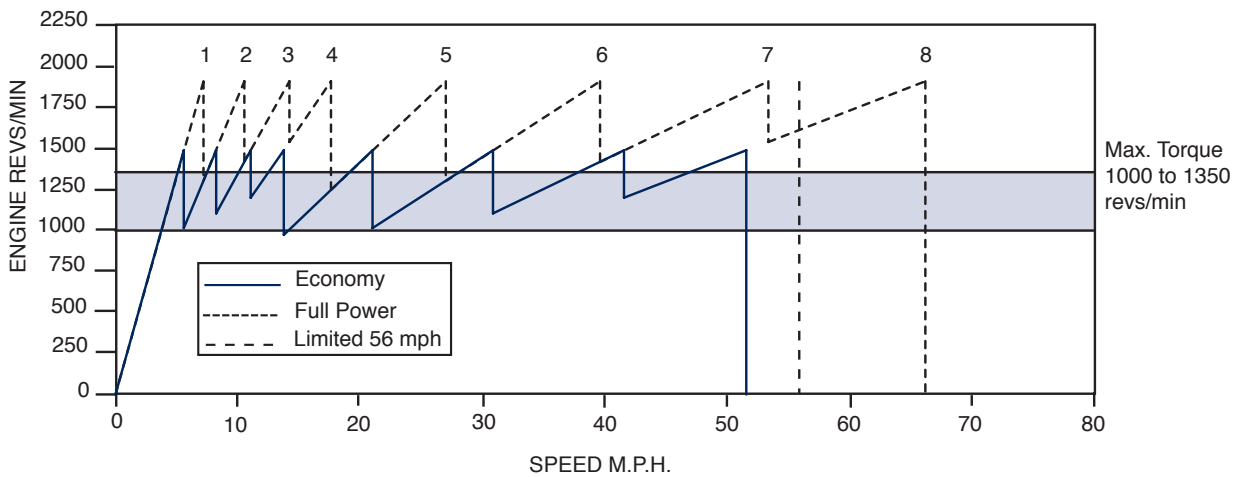
\* Additional to standard tank full of fuel.

#### ENGINE PERFORMANCE



Net engine performance to 80/1269\*1999/99EC

#### GEAR STEP DIAGRAM



#### SPEED/GRADEABILITY

Gradeability may be limited by tyre adhesion.

Axle gear/ Ratio	Optimum Cruising Speed M.P.H.	Gradeability - steady climb - in percent			
		DC09-111 18T	DC09-113 18T	DC09-108 18T	DC09-112 18T
R 660 3.07	44 – 56	>35	>35	>35	>35
R 660 3.42 std.	39 – 52	>35	>35	>35	>35
R 660 3.80	35 – 47	>35	>35	>35	>35
R 660 4.22	32 – 42	>35	>35	>35	>35
R 660 4.88	27 – 36	>35	>35	>35	>35

Calculations assume standard specifications. Performance achieved in operation will depend on conditions, bodywork, gear ratios and tyre specification.

The specifications contained in this publication are intended as a general guide, and not as representations as to the product described, nor as binding in detail.