

SCANIA

SPECIFICATION

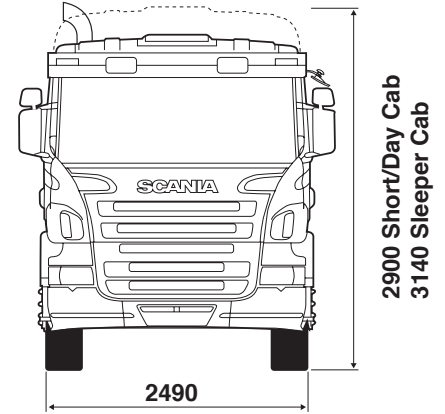
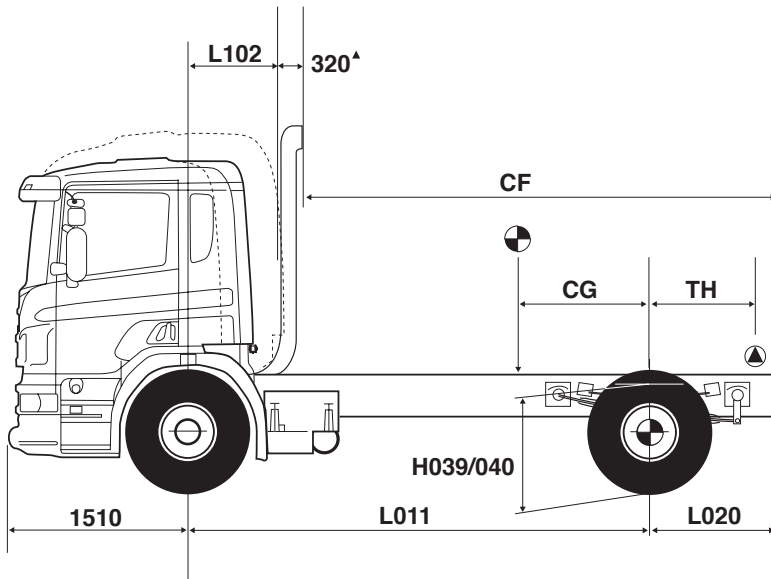
P-, G- and R-series

P 230 DB4x2HNZ

19000Kg GVW

TWO AXLE TIPPER

P



L102 (centreline of front axle to back of cab) Short – 300 Day – 590 Sleeper – 860

*Reduces to 250mm with sleeper cab

DIMENSIONS (mm)

L011		3900	4300	4500	4700
L100	Day Cab	4585	5181	5486*	5791*
	(feet)	(15.0)	(17.0)	(18.0)	(19.0)
CF		4190	4590	4790	4990
L020		1200	1200	1200	1200
L020 Max		3600	4000	4000	4000
CG Max		824	907	947	988
CG Min		626	687	717	747
TH		1030	1030	1030	1030

H039 unladen = 1086mm

H040 laden = 960mm.

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' or '320' 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	4460	1580	6040
4300	4465	1600	6065
4500	4473	1620	6093
4700	4480	1640	6120

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

Driver not included. See overleaf for option weights.

P 230 DB4x2HNZ

SL5451097
July 09

ENGINE (EURO 5)

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

'230'

Type: DC9-39
Swept Volume: 9.3 litres
Bore: 130 mm
Stroke: 140 mm
Compression Ratio: 17:1
***Max. Power:** 169kW (230 h.p.) at 1900 rev/min
***Max. Torque:** 1050 Nm (774 lbf.ft) between 1000 and 1500 rev/min

Engine Management System: EMS incorporating Cruise Control and speed limiter

Emission Control: Scania EGR

Cooling: Water cooled with rubber mounted 2 row radiator and electronically regulated fan

Coolant Capacity: 42 litres

Oil Capacity: 31 litres

Air Cleaner: Dry replaceable paper element

Engine driven PTO provision: ED120

Options:-

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

'280'

Type: DC9-38
***Max. Power:** 206kW (280 h.p.) at 1900 rev/min
***Max. Torque:** 1400 Nm (1033 lbf.ft) between 1000 and 1350 rev/min

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

'320'

Type: DC9-37
***Max. Power:** 235kW (320 h.p.) at 1900 rev/min
***Max. Torque:** 1600 Nm (1180 lbf.ft) between 1100 and 1200 rev/min

*With fan at max. slip

CLUTCH

Type: Single dry plate
Operation: Air assisted with clutch wear protection

GEARBOX

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

GEAR RATIOS

Low Range

1st 9.17:1
 2nd 6.26:1
 3rd 4.65:1
 4th 3.75:1
 Reverse 11.00:1

High Range

5th 2.45:1
 6th 1.67:1
 7th 1.24:1
 8th 1.00:1

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

Type: Scania AD1300
Capacity: 13000 Kg
 Pressed steel housing with magnetic oil drain plug.

REAR AXLE GEAR

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

FRONT AXLE

Type: Scania AM740 I section rigid beam
Capacity: 7500Kg

Options:-

(1) Scania AM950 - capacity 9000kg

STEERING

Type: Recirculating ball. Hydraulically assisted power steering
Steering wheel: Diameter 450mm. Lock to lock 4.9 turns
Turning circle: 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

Type Front: Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins.

Type Rear: 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	Auxiliary
Length:	1820mm	1780mm	1460mm
No. of leaves:	3 x 29mm	3 x 26mm	2 x 26mm
Design Capacity:	8500Kg	13000Kg	

Options:-

(1) Multi-leaf springs at rear – 7 x 15mm + 6 x 14mm

(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

Type: F800-50
 F950-50 where front axle capacity ≥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

Type:	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
Service Circuit:	Actuates all truck brakes
Secondary Circuit:	First position of park brake lever actuates spring chambers on both axles
Parking Brake:	Actuates spring chambers on both axles
Exhaust Brake:	Air actuated operated by brake pedal
Brake Antifreeze Protection:	Air dryer
Brake Wear Adjusters:	Automatic
Options:- (1)	Traction Control anti-slip device – Std. with Opticruise
(2)	Scania Hydraulic Retarder

BRAKE DIMENSIONS

Front Axle: Size	413 x 203mm	Rear Axle: Size	413 x 203mm
Area	1880cm ²	Area	1880cm ²
Total Area: Service	3760cm ²		
Parking	3760cm ²		

ELECTRICAL SYSTEM

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

Options:-
(1) 180Ah batteries, **(2)** 225Ah batteries,
(3) Bodywork electrical preparation – see separate document.

FUEL TANK

1 x 200 litre steel RHS

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

	RH Side	LH Side	RH Side	LH Side
Steel - G	150	150	200	200
	200	200	300	300
	300	300	350	350
	450	450 (4500Z)	500	500 (4300Z)
			600	600 (4500Z)

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 Check gearbox availability

	Rear Mount	GR875 / GRS895 / GR/S905	GRS0905
	Pump	Flange	
¹ EG640P		¹ EG640F	1.65 / 2.04H
¹ EG641P		¹ EG641F	1.33 / 1.67H
EG650P		EG660F	1.00 / 1.24H
¹ EG651P		¹ EG661F	1.28 / 1.58H
EG652P		EG662F	0.82 / 1.03H
¹ EG653P		¹ EG663F	1.03 / 1.29H
	Side Mount		
EG500P		EG500F	1.33 / 1.65H
EG501P		EG501F	1.78 / 2.22H
² EG502P		² EG502F	1.33 / 1.65H
² EG503P		² EG503F	1.78 / 2.22H
	Sandwich		
EK730	EK740	1.00	1.00

¹ = Not in combination with side mounted P.T.O.

² = Not in combination with rear mounted P.T.O.

H= High on 'S' splitter gearboxes only.

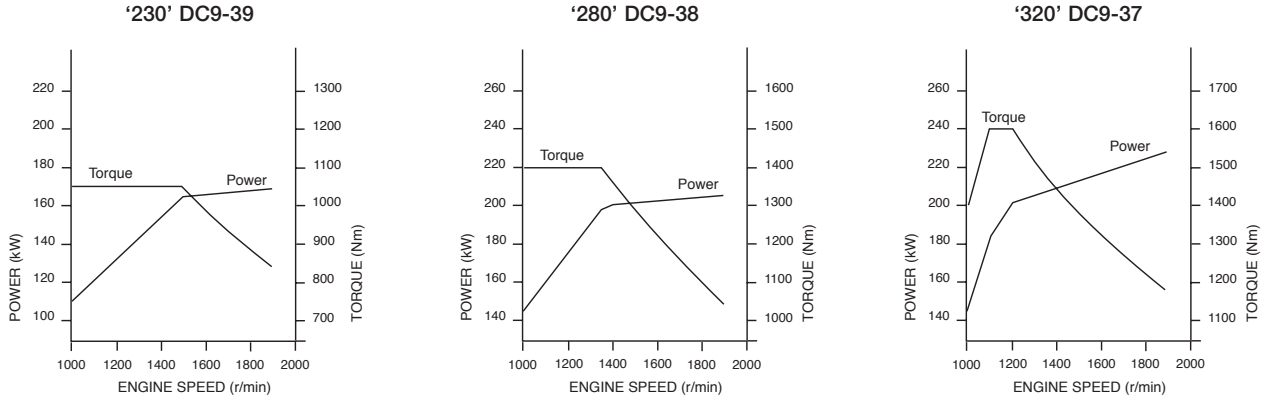
Flange output rear mount N/A on 6x2/4 or 6x2/2 chassis

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

Axle Distance	39	43	45	47
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 7x15+6x14	0 +54 +54	0 +54 +54	0 +54 +54	0 +54 +54
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
Std tank full	+81 +63 +144	+87 +57 +144	+90 +54 +144	+92 +52 +144
* 1x300l G	+46 +52 +98	+51 +47 +98	+53 +45 +98	+55 +43 +98
CP14 cab	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33
CP19 sleeper cab	+65 +15 +80	+65 +15 +80	+65 +15 +80	+65 +15 +80
Air deflectors – CP14	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42
– CP16/19	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42
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

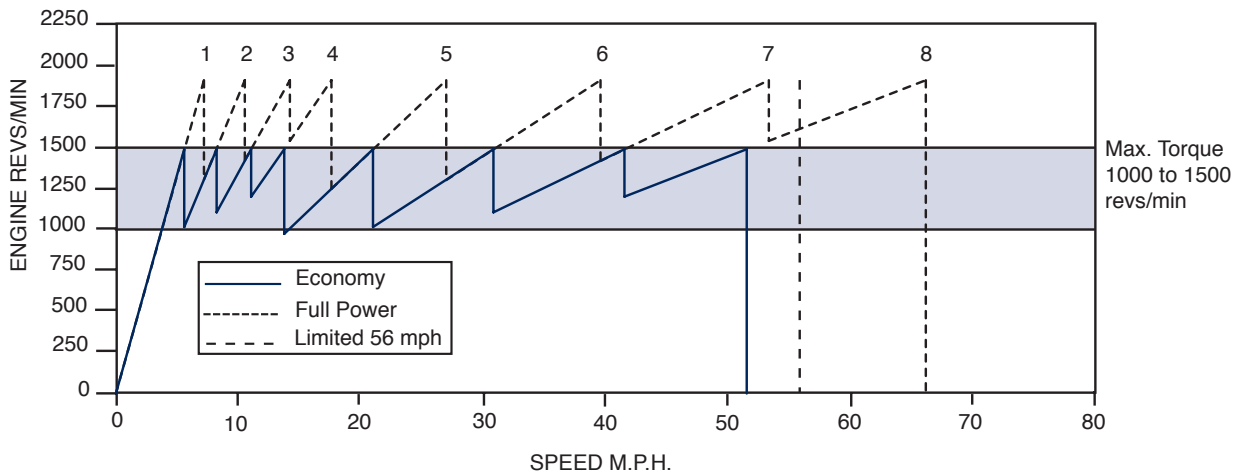
* Additional to standard tank full of fuel.

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		
		DC9-39 18T	DC9-38 18T	DC9-37 18T
R 660 3.07	43 - 56	29.7	>35	>35
R 660 3.42 std.	39 - 51	33.5	>35	>35
R 660 3.80	35 - 46	>35	>35	>35
R 660 4.22	32 - 42	>35	>35	>35
R 660 4.88	27 - 36	>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.

