

SCANIA

SPECIFICATION

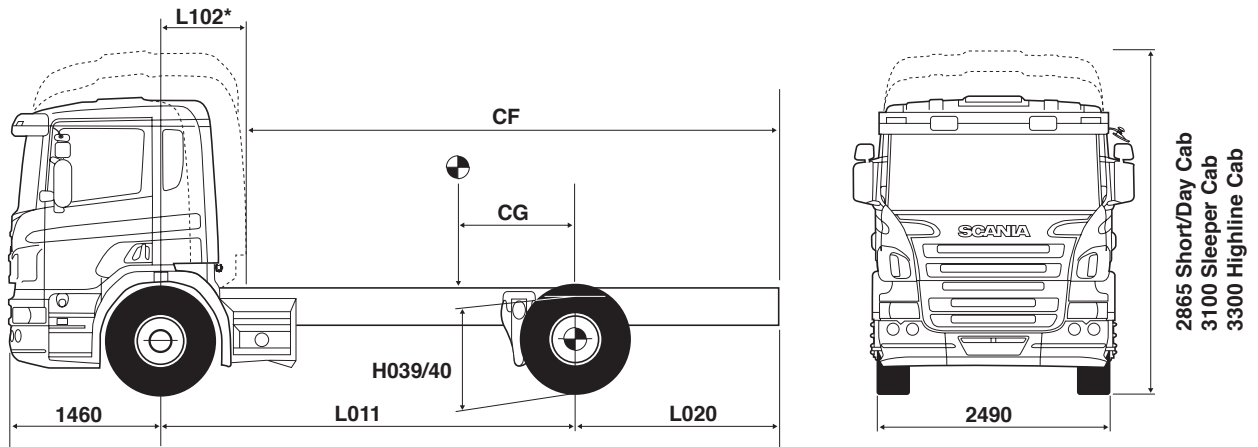
P-, G- and R-series

P 230 DB4x2MNA

19000Kg GVW

TWO AXLE RIGID/DRAWBAR

P



L102 (centreline of front axle to start of bodywork) Short – 450 Day – 610 Sleeper – 875

* Increases by 15mm with air deflectors

DIMENSIONS (mm)

L011		4500	4700	4900	5100	5300	5500	5700	5900	6300
L105	Day Cab	6240	6572	6910	7241	7578	7910	8246	8582	9295
	(feet)	(20.5)	(21.6)	(22.7)	(23.8)	(24.9)	(26.0)	(27.1)	(28.2)	(30.5)
	Sleeper	5786	6125	6462	6802	7140	7478	7816	8156	8877
	(feet)	(19.0)	(20.1)	(21.2)	(22.3)	(23.4)	(24.5)	(25.6)	(26.8)	(29.1)
CF	Day Cab	6240	6570	6910	7240	7570	7910	8240	8580	9290
	Sleeper	5785	6125	6455	6795	7135	7475	7815	8155	8875
L020	Day Cab	2350	2480	2620	2750	2880	3020	3150	3290	3600
	Sleeper	2160	2300	2430	2570	2710	2850	2990	3130	3450
L020 Max		4000	4000	4000	4000	4200	4400	4400	4400	4110
CG Max	Day Cab	998	1042	1086	1129	1173	1217	1261	1303	1371
	Sleeper	962	1004	1046	1087	1129	1171	1213	1254	1318
CG Min	Day Cab	771	804	837	869	902	935	968	999	1043
	Sleeper	732	763	794	825	856	887	918	948	987

H039 unladen	H040 laden	Frame Height
1000 mm	970 mm	Normal (N)
878 mm	854 mm	Low (L) ¹

L105 = Max. bodylength to suit weight distribution. CG dimension for body and payload calculated for standard model at standard GB plated weights. Height dimensions measured to top of frame at rear axle centreline. Rear overhang (L020) can be specified in 10 mm steps up to maximum – check legality.

¹Dimensions assume '60 series' tyre fitment

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 9000 kg available as option.

¶ Legal front axle capacity limited by tyres.

\$ GTW 28000kg design and GB when fitted with trailer brakes (N/A with G670 gearbox).

Increases to 40000kg with '280' or '320' engine and R660 rear axle gear. GR905 gearbox recommended as minimum.

Plated weights dependent on statutory tyre limitations.

CHASSIS/CAB WEIGHTS

(Tolerance +/- 2.5%)

Axle distance	Front	Rear	Total (kg)
4500	4264	1628	5892
4700	4269	1652	5921
4900	4274	1676	5950
5100	4279	1700	5979
5300	4284	1724	6008
5500	4289	1748	6037
5700	4294	1772	6066
5900	4300	1795	6095
6300	4362	1863	6225

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

Driver not included. See overleaf for option weights.

P 230 DB4x2MNA

SL5451091
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		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

(4) Type: Automatic six speed electronically controlled – R660 rear axle gear mandatory.

REAR AXLE

Type:	Scania ADA1100
Capacity:	11500 Kg

Pressed steel housing with magnetic oil drain plug.

REAR AXLE GEAR

Type: Scania R560
Single reduction hypoid. Crown wheel and pinion matched during manufacture.

Options:-

(1) Type: Scania R660 with differential lock

FRONT AXLE

Type: Scania AM740 I section rigid beam - AMA740 with air suspension.

Capacity: 7500Kg

Options:-

(1) Scania AM950 - capacity 9000kg

(2) Scania AMA860 - air only - capacity 8000kg

STEERING

Type: Recirculating ball. Hydraulically assisted power steering

Steering wheel: Diameter 450mm. Lock to lock 4.9 turns

Turning circle: Kerb to kerb

4.5m A/D	16.4m	4.7m A/D	17.1m	4.9m A/D	17.8m
5.1m A/D	18.5m	5.3m A/D	19.2m	5.5m A/D	19.8m
5.7m A/D	20.6m	5.9m A/D	21.4m	6.3m A/D	22.8m

SUSPENSION

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

Type Rear: Quarter elliptic with air bellows (A). Chassis height may be raised or lowered to assist loading. Double acting telescopic shock absorbers are fitted to both axles.

Options:-

(1) Front anti-roll bar

SPRING SIZE

	Front
Length:	1820mm
No. of leaves	2 x 32mm
Design Capacity	7500Kg

Options:-

(1) Air suspension on front axle – design capacity 7500 or 8000 kg.

(2) 3 x 29mm leaves – design capacity 8500 kg.

(3) 4 x 28mm leaves – design capacity 9000 kg.

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

(5) Tyre Pressure Monitoring - TPM

FRAME

Type: F700 – 50
F800 – 50 With front axle design > 8000 kg
With air suspension front and rear
With 'Low' chassis height
F950 – 50 With axle distance 6300mm and for all 'H' duty class
Flat top constant depth 'U' channel with riveted crossmembers.

Sidemember Dimensions:

F700 – 270 x 90 x 7mm

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: Aerodynamic incorporating FUP

Options:- (1) Steel bumper – increases front overhang to 1510mm.

(2) Centre tow pin – steel bumper only.

BRAKE SYSTEM

Type: Ventilated disc brakes on all axles. Dual circuit, full air, EC brake system incorporating Category 1 ABS and Traction Control. Electronic signalling with pneumatic back-up. Pad wear indicator. 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) 2 line EC trailer brake pipes to rear of chassis.
(2) Scania Hydraulic Retarder.

BRAKE DIMENSIONS

Pad lining area: 2 x 190cm² on all axles

Swept area of each disc: 2 x 940cm²

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 300 litre aluminium RHS

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

	RH Side	LH Side	RH Side	LH Side
Steel - G	150	150	Aluminium - W	200
	200	200		200
	300	300		300
	450	450		400
				500
				600
				700

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

Front tow pin

Options:-

- (1) Vertical exhaust outlet – N/A with ADR to EXIII/EXIII or FL.
(2) ADR to EXIII/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
(3) CP19 Highline Cab

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.

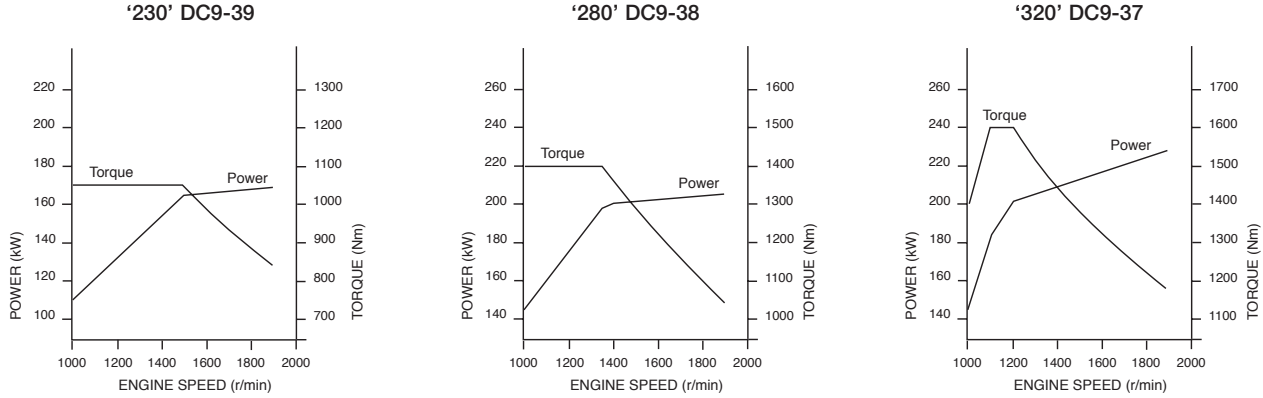
Flange output rear mount N/A on 6x2/4 or 6x2/2 chassis

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

Axle Distance	45	47	49	51	53	55	57	59	63
GR905	+34 +8 +42	+34 +8 +42	+34 +8 +42	35 +7 +42	35 +7 +42	35 +7 +42	35 +7 +42	+36 +6 +42	+36 +6 +42
GRS895	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+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	+13 0 +13	+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	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33
Air suspension front	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55
3 x 29mm f/springs	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44
4 x 28mm f/springs	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73
315/80 tyres/ 9.00 rims	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+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	+46 N/A +46	+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	+54 N/A +54	+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	-24 -48 -72	-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	-30 -60 -90	-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	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44
F800 frame	+32 +48 +80	+32 +51 +83	+32 +54 +86	+33 +56 +89	+34 +58 +92	+34 +62 +96	+34 +65 +99	+35 +67 +102	N/A
F950 frame	+62 +93 +155	+63 +98 +161	+63 +104 +167	+64 +109 +173	+66 +112 +178	+66 +120 +186	+67 +125 +192	+68 +130 +198	Std
Retarder	+74 +15 +89	+75 +14 +89	+75 +14 +89	+76 +13 +89	+77 +12 +89	+78 +11 +89	+78 +11 +89	+78 +11 +89	+79 +10 +89
180Ah Batteries	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+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	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56
Std. Tank Full	+140 +84 +224	+143 +81 +224	+146 +78 +224	+149 +75 +224	+152 +72 +224	+155 +69 +224	+157 +67 +224	+160 +64 +224	+164 +60 +224
*1 x 450l G	+72 +99 +171	+76 +95 +171	+80 +91 +171	+84 +87 +171	+87 +84 +171	+90 +81 +171	+93 +78 +171	+96 +75 +171	+100 +71 +171
Vertical exh outlet	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57
CP14 cab	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-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	+65 +15 +80	+65 +15 +80	+65 +15 +80	+65 +15 +80	+65 +15 +80
CP19 Highline cab	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110	+89 +21 +110
Air deflectors-CP14	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42
-CP16/19/19H	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+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	+15 +3 +18	+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	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47

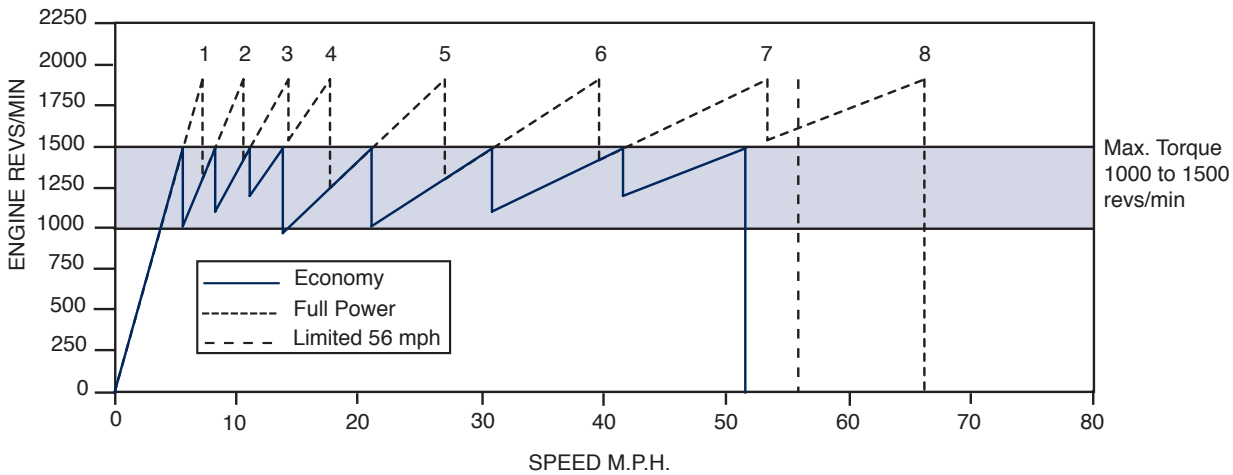
* Additional to standard tank full of fuel.

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		DC9-38		DC9-37			
		18T	28T	18T	28T 40T\$	18T	28T 40T\$		
R 560/660 2.92*	40 – 53	32.3	19.9	>35	25.8	>35	>35	27.5	>35
R 560/660 3.07	43 – 56	29.7	18.4	>35	23.8	32.5	>35	25.3	>35
R 560/660 3.42 std.	39 – 51	33.5	20.6	>35	26.7	>35	>35	28.5	>35
R 560/660 3.80	35 – 46	>35	23.1	>35	30.0	>35	>35	32.1	>35
R 560/660 4.22	32 – 42	>35	25.9	>35	33.8	>35	>35	>35	>35
R 560/660 4.88	27 – 36	>35	30.4	>35	>35	>35	>35	>35	>35

\$40T calculations shown with GR905 gearbox. *2.92 only available with low profile tyres – calculations based on 295/60R22.5 rear tyres. Remaining 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.