

# SCANIA

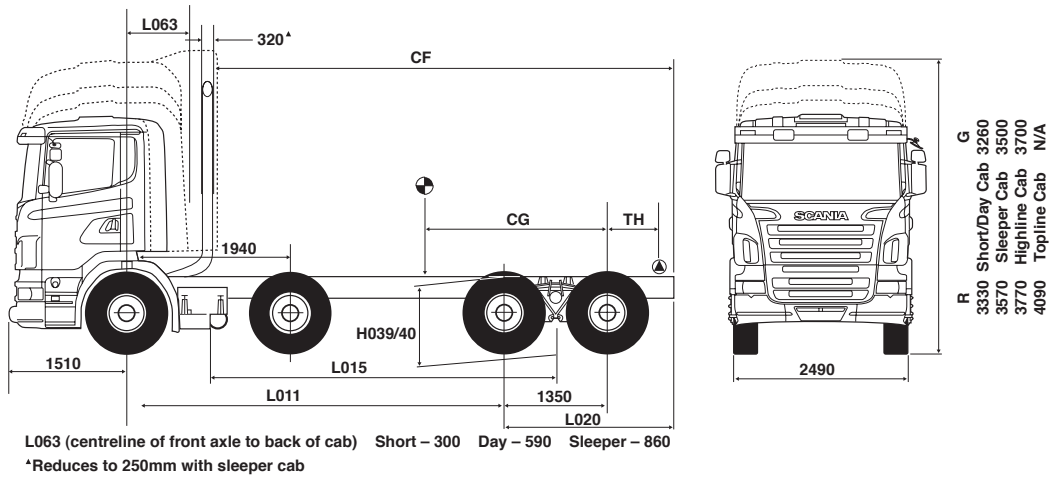
SPECIFICATION

P-, G- and R-series

## R/G 400 CB8x4MHZ

34000Kg GVW

FOUR AXLE TIPPER



### DIMENSIONS (mm)

<b>L011</b>		5100	5300	5500	5700	5900
<b>L100</b>	Short Cab	6858	7088	7315	7620	7925
	(feet)	(22.5)	(23.25)	(24.0)	(25.0)	(26.0)
	Day	6630	6858	7088	7315	7620
	(feet)	(21.75)	(22.5)	(23.25)	(24.0)	(25.0)
	Sleeper	N/A	6248	6630	6858	7087
	(feet)		(20.5)	(21.75)	(22.5)	(23.25)
<b>CF</b>	Short Cab	6640	6840	7040	7240	7440
	Day	6350	6550	6750	6950	7150
	Sleeper	6150	6350	6550	6750	6950
<b>L020</b>		2160	2160	2160	2160	2160
<b>CG Max</b>	Short Cab	2316	2383	2450	2517	2584
	Day	2313	2379	2445	2513	2579
	Sleeper	2299	2365	2430	2498	2563
<b>CG Min</b>	Short Cab	2062	2119	2175	2231	2287
	Day	2059	2115	2170	2227	2282
	Sleeper	2044	2099	2154	2210	2264
<b>TH</b>		730	730	730	730	730

Frame Height	H039 unladen	H040 laden
'H'	1110mm	1062mm
'N'	1060mm	1012mm

L015 (Theoretical wheelbase) = L011 - 295mm.

L100 = Nominal tipper bodylength to suit weight distribution. 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 bogie centreline. 5.9m axle distance model designed for bulk tipping operations with free flowing loads.

### PLATED WEIGHTS – AWR

		Front Bogie	Rear Bogie	GVW	GTW†
Design					
Gross	Kg	15000*	21000	34000	37500
Legal					
Max in GB	Kg	14200	19000	32000	35500

† With trailer brakes design = 60000 kg. Max. in GB = 44000 kg.  
Rear bogie load in GB (with trailer attached) = 17000 kg  
\* 14200Kg with 2x32mm front springs.  
Plated weights dependent on statutory tyre limitations.

### CHASSIS/CAB WEIGHTS

(Tolerance +/- 2.5%)

Axle distance	Front Bogie	Rear Bogie	Total (kg)
5100	6292	2793	9085
5300	6300	2800	9100
5500	6305	2805	9110
5700	6310	2810	9120
5900	6315	2815	9130

Chassis cab weight includes 20 litres of fuel, oil and water.  
Driver not included. See overleaf for option weights.

## R/G 400 CB8x4MHZ

SL5451102  
September 09

## ENGINE (EURO 5)

Scania '13 litre' vertical six cylinder in-line turbocharged intercooled direct injection diesel with Scania XPI.

	<b>'400'</b>
<b>Type:</b>	<b>DC 13-05</b>
<b>Swept Volume:</b>	12.74 litres
<b>Bore:</b>	130 mm
<b>Stroke:</b>	160 mm
<b>Compression Ratio:</b>	17:1
<b>*Max. Power:</b>	294kW (400 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	2100 Nm (1549 lbf.ft) between 1000 & 1300 rev/min
<b>Engine Management System:</b>	EMS incorporating Cruise Control and speed limiter
<b>Emission Control:</b>	Scania EGR
<b>Cooling:</b>	Water cooled with rubber mounted 2 row radiator and electronically regulated fan
<b>Coolant Capacity:</b>	55 litres
<b>Oil Capacity:</b>	40 litres
<b>Air Cleaner:</b>	Dry replaceable paper element
<b>Engine Driven P.T.O. provision:</b>	ED120

### Options:-

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

	<b>'440'</b>
<b>Type:</b>	<b>DC13-10</b>
<b>*Max. Power:</b>	324kW (440 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	2300 Nm (1696 lbf.ft) between 1000 & 1300 rev/min

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

	<b>'480'</b>
<b>Type:</b>	<b>DC13-07</b>
<b>*Max. Power:</b>	353kW (480 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	2500 Nm (1844 lbf.ft) between 1000 & 1300 rev/min

\*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 GR905 eight speed synchromesh (four speed main fitted with two speed planetary range unit), plus one crawler gear.
<b>Oil Capacity:</b>	15.6 litres

## GEAR RATIOS

Crawler 16.41:1

### Low Range

1st	10.34:1
2nd	7.19:1
3rd	5.08:1
4th	3.75:1

### High Range

5th	2.76:1
6th	1.92:1
7th	1.35:1
8th	1.00:1

Reverse 14.78:1

### Options:-

**(1) Type:** Scania GRS905 fourteen speed range change/splitter including two crawler gears.

**(2) Type:** Scania GRS0905 fourteen speed range change/splitter including 2 crawler gears and overdrive top gear.

**(3) Opticruise:** Gearchange management system. Only with GRS gearboxes and Traction Control.

## REAR AXLES

<b>Type:</b>	Both Scania AD1300
<b>Capacity:</b>	26000 Kg

Pressed steel housing with magnetic oil drain plugs.

### Option:-

**(1) Type:** Both Scania AD1101P for hub reduction axles.

Capacity: 23000Kg

## REAR AXLE GEAR

**Type:** Scania RB662 - first axle / R660 - second axle

Single reduction hypoid in both axles. Crown wheels and pinions matched during manufacture. Pneumatically operated inter-axle and cross axle differential locks.

### Option:-

**(1) Type:** Scania RBP735 - first axle  
RP735 - second axle

Single reduction spiral bevel plus epicyclic hub reduction.  
Overall ratios - 3.67 / 3.93 / 4.22

## FRONT AXLES

**Type:** Scania AM900 | section rigid beam - 'H' chassis.  
Scania AM920 | section rigid beam - 'S' chassis

**Capacity:** 9000Kg each

## STEERING

**Type:** Recirculating ball. Hydraulically assisted power steering

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

**Turning circle:** Kerb to kerb  
5.1m A/D 21.4m 5.3m A/D 22.2m 5.5m A/D 22.9m 5.7m A/D 23.6m 5.9m A/D 24.4m

## SUSPENSION

**Type Front:** Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins damped by double acting telescopic shock absorbers.

**Type Rear:** Two spring balance beam bogie fitted with rubber mounted radius arms and double acting telescopic shock absorbers.

### Options:-

**(1) Rear or front and rear anti-roll bar(s) – rear N/A with tipper specification.**

## SPRING SIZE

	Front 1	Front 2	Rear
<b>Length:</b>	1820mm	1820mm	1530mm
<b>No. of leaves:</b>	3 x 29mm	3 x 29mm	4 x 41mm
<b>Design Capacity:</b>	8500Kg	8500Kg	21000Kg

### Options:-

**(1) Semi-elliptic parabolic springs (Z) front (2 x 32mm) – design capacity 7500Kg**

## WHEELS & TYRES

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

**Rear:** 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 tyres – front axles only.**

**(3) Aluminium wheels – machined or polished surface finish.**

**(4) Front wheel embellishers.**

## FRAME

**Type:** F950-50 for 'M' class  
F958-50 for 'H' class

Flat top constant depth 'U' channel with riveted crossmembers

### Sidemember Dimensions:

F950-50	– 270 x 90 x 9.5mm
F958-50	– 270 x 90 x 9.5mm External member 247 x 78 x 8mm Internal member

Rear of chassis prepared for tipper hinge – 5.1 to 5.9m axle distance and F950-50 frame only. Width over parallel section of frame = 770mm

**Bumper:** Pressed steel

**Options:- (1) Brackets for front end tipping ram - N/A with F958 frame or sleeper cab. (2) F958 frame. (N/A with preparation for tipper hinge). (3) Aerodynamic bumper incorporating FUP – reduces front overhang to 1460mm. (4) Centre tow-pin – steel bumper only.**

## BRAKE SYSTEM

<b>Type:</b>	Dual circuit, full air, EC brake system incorporating 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 second front and first rear axle.
<b>Parking Brake:</b>	Actuates spring chambers on second front and first rear axle.
<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>	(1) 2 line EC trailer brake pipes to rear section of chassis. (2) Scania hydraulic retarder (3) Traction control – Anti-slip device

## BRAKE DIMENSIONS

<b>Front Axle 1:</b>	Size 413 x 178mm Area 1640cm <sup>2</sup>	<b>Front Axle 2:</b>	Size 413 x 178mm Area 1640cm <sup>2</sup>
<b>Rear Axle 1:</b>	Size 413 x 203mm Area 1880cm <sup>2</sup>	<b>Rear Axle 2:</b>	Size 413 x 203mm Area 1880cm <sup>2</sup>
<b>Total Area:</b>	Service 7040cm <sup>2</sup> Parking 3520cm <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.		
<b>Options:-</b>	(1) 180Ah batteries. (2) Bodywork electrical preparation – see separate document.		

## FUEL TANK

1 x 300 litre steel RHS

**Options:-** (Minimum axle distance in brackets)

	RH Side	LH Side		RH Side	LH Side
<b>Steel – G 200</b>		200(5300)	<b>Aluminium – W 300</b>	300	300(5300)
	300	300(5700)		350	350(5500)
	450(5300)			500	500(5900)
				600(5300)	

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

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

Axle Distance	51	53	55	57	59
GRS905/GRS0905	+6 +3 +9	+6 +3 +9	+6 +3 +9	+6 +3 +9	+6 +3 +9
AD1101P R/Axles	0 +64 +64	0 +64 +64	0 +64 +64	0 +64 +64	0 +64 +64
Anti-roll bars	+50 +48 +98	+50 +48 +98	+50 +48 +98	+50 +48 +98	+50 +48 +98
2 x 32mm F/Springs	-84 0 -84	-84 0 -84	-84 0 -84	-84 0 -84	-84 0 -84
315/80 tyres/9.00 rims	+36 +72 +108	+36 +72 +108	+36 +72 +108	+36 +72 +108	+36 +72 +108
385/65 tyres/11.75 rims	+92 N/A +92	+92 N/A +92	+92 N/A +92	+92 N/A +92	+92 N/A +92
Aluminium wheels					
8.25 x 22.5	-48 -96 -144	-48 -96 -144	-48 -96 -144	-48 -96 -144	-48 -96 -144
9.00 x 22.5	-60 -120 -180	-60 -120 -180	-60 -120 -180	-60 -120 -180	-60 -120 -180
11.75 x 22.5	-88 N/A -88	-88 N/A -88	-88 N/A -88	-88 N/A -88	-88 N/A -88
F/E ram brkts	+51 -3 +48	+51 -3 +48	+51 -3 +48	+51 -3 +48	+51 -3 +48
Delete tipper hinge prep.	+24 -99 -75	+24 -99 -75	+24 -99 -75	+24 -99 -75	+24 -99 -75
F958 frame	+116 +182 +298	+122 +187 +309	+128 +192 +320	+133 +192 +325	+140 +198 +338
Aerodynamic bumper	-19 +2 -17	-19 +2 -17	-19 +2 -17	-19 +2 -17	-19 +2 -17
Centre tow pin	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24
Retarder	+102 +20 +122	+102 +20 +122	+103 +19 +122	+104 +18 +122	+105 +17 +122
180 Ah Batteries	+17 0 +17	+17 0 +17	+17 0 +17	+17 0 +17	+17 0 +17
Std Tank Full	+120 +104 +224	+124 +100 +224	+128 +96 +224	+132 +92 +224	+135 +89 +224
*1 x 450l G	N/A	+54 +87 +141	+57 +84 +141	+60 +81 +141	+63 +78 +141
CR19 Sleeper cab	+99 +6 +105	+99 +6 +105	+99 +6 +105	+99 +6 +105	+99 +6 +105
CR19 Highline cab	+126 +8 +134	+126 +8 +134	+126 +8 +134	+126 +8 +134	+126 +8 +134
CR19 Topline inc. defl	+220 +26 +246	+220 +26 +246	+220 +26 +246	+220 +26 +246	+220 +26 +246
CG14 short cab	-30 -13 -43	-30 -13 -43	-30 -13 -43	-30 -13 -43	-30 -13 -43
CG16 day cab	-15 -2 -17	-15 -2 -17	-15 -2 -17	-15 -2 -17	-15 -2 -17
CG19 Sleeper cab	+64 +12 +76	+64 +12 +76	+64 +12 +76	+64 +12 +76	+64 +12 +76
CG19 Highline cab	+84 +18 +102	+84 +18 +102	+84 +18 +102	+84 +18 +102	+84 +18 +102
EG Series PTOs	+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

\* Additional to standard tank full of fuel.

## GENERAL EQUIPMENT

Vertical exhaust outlet – N/A with ADR to EXII/EXIII or FL  
Front tow pin

**Options:-**

(1) ADR to EXII/EXIII, FL, OX or AT

## INSTRUMENTS & CONTROLS

Two man, 1 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 intermittent wipe and 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

**CR16 Day Cab**

Please see separate specification – ‘Scania Cabs’ for equipment levels.

**Options:-**

(1) CR19 Sleeper, (2) CR19 Highline, (3) CR19 Topline,  
(4) CG14 Short Cab, (5) CG16 Day Cab, (6) CG19 Sleeper,  
(7) CG19 Highline.

## P.T.O. OPTIONS Check gearbox availability

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

<sup>1</sup> = Not in combination with side mounted P.T.O.

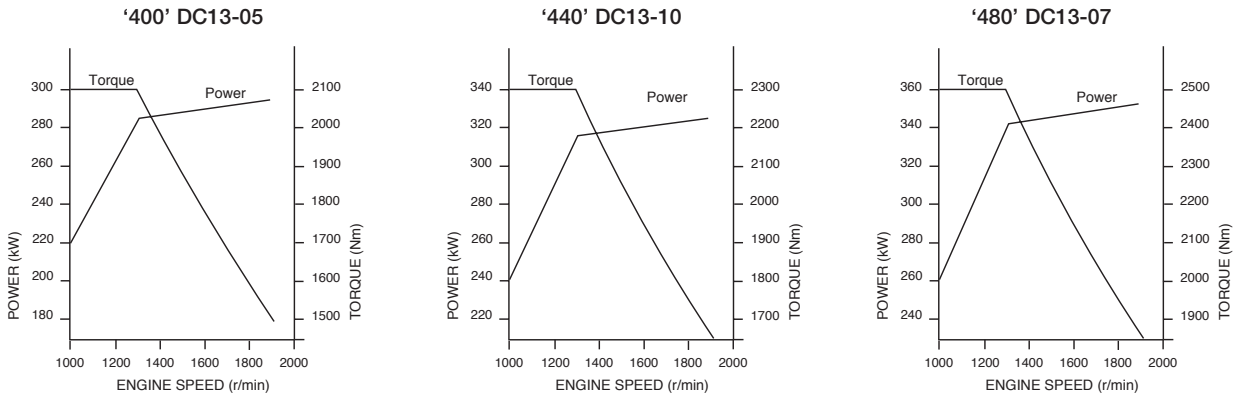
<sup>2</sup> = Not in combination with rear mounted P.T.O.

H= High on ‘S’ splitter gearboxes only.

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

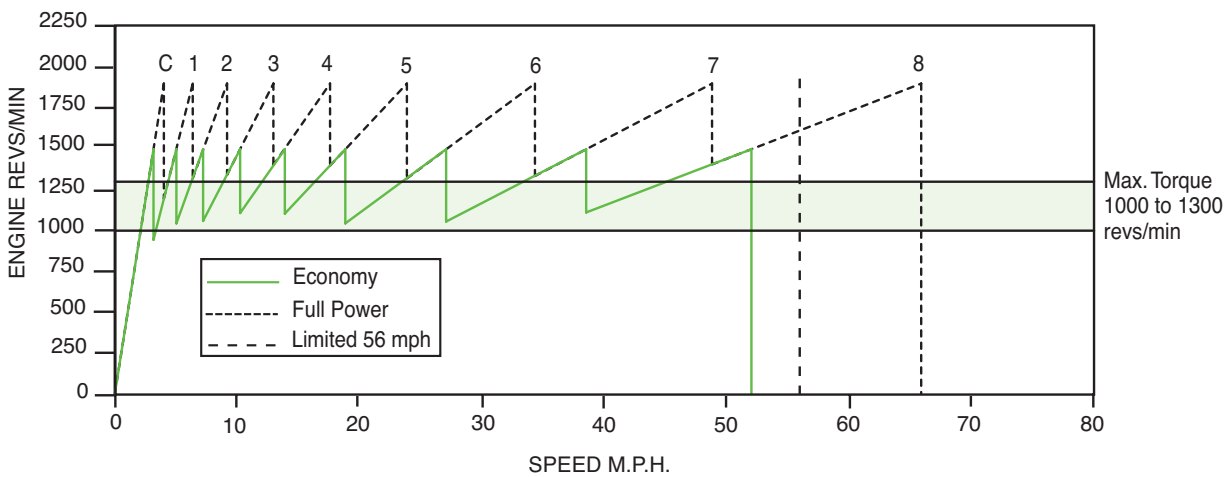
**R/G 400 CB8x4MHZ**

### 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					
		DC13-05		DC13-10		DC13-07	
		32T	44T	32T	44T	32T	44T
RB 662 3.07	43 - 56	>35	>35	>35	>35	>35	>35
RB 662 3.42 std.	39 - 51	>35	>35	>35	>35	>35	>35
RB 662 3.80	35 - 46	>35	>35	>35	>35	>35	>35
RB 662 4.22	32 - 42	>35	>35	>35	>35	>35	>35
RB 662 4.88	27 - 36	>35	>35	>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.

