



SCANIA

PRESS info

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500, 560, 620 and 730 hp

New Scania V8 truck range with exceptional performance and style

With 3500 Nm and 730 hp, Scania's new top-of-the-line V8 has the highest torque and power ratings of any truck engine. New styling traits make all of Scania's prestigious V8 trucks immediately recognisable on the road. Four engine outputs are offered, 500, 560, 620 and 730 hp. Scania XPI and a host of other innovations on the new 730 hp engine raise heavy truck productivity to a new level.

In conjunction with the launch of the new top-output engine, Scania's range of V8 truck models – based on the new Scania R-series, International Truck of the Year 2010 – are given a unique identity that reflects the strong position these models enjoy on the market, among drivers as well as operators.

“Scania's V8 trucks have built a niche of their own in the truck market,” says Henrik Henriksson, Senior Vice President Trucks at Scania. “The vast majority of Scania's V8 customers buy for rational reasons. They need the performance, dependability and availability to get their job done as efficiently as possible.

“This unique combination of performance, transport efficiency, fuel economy, durability and driver appeal means high productivity in all respects. As a result, Scania V8 truck models have the highest resale value in the market. The new styling further builds on this image.

“The sheer power of the new R 730 is important, but even more so is the torque rating. Having 3500 Nm of torque on tap makes a joy out of any transport task and is bound to put a smile on every driver's face,” concludes Mr Henriksson.

Scania V8 trucks are dominating the high-output end of the truck market, accounting for more than half of the total sales volume around 600 hp and above. With four power ratings to choose from, Scania's demanding V8 customers now have a wide choice that nobody can match.

The combination of 3500 Nm and 730 hp is more than any competitor can muster. Scania's powertrain has been adapted to handle this with ease. A reinforced Scania gearbox is used fitted as standard with the new Scania Opticruise automated gear-changing system. Thanks to the smooth power delivery inherent in a V8 engine, other powertrain components remain largely unchanged.

The new V8 is fully integrated in Scania's modular engine range. The engine is based on the modular engine platform and technologies used on Scania's newest inline engines, while also sharing numerous features and components with the existing V8s. Scania's principle of step-by-step developments that always fit together with other parts and components minimises the hassle for customers. Professional servicing and parts supply are readily available.

Pictures and descriptions are available on the media site at www.scania.com/media/V8.

SCANIA V8 TRUCK RANGE

STYLING AND FEATURES

Special V8 identity

Scania V8 owners and drivers are generally proud of their vehicles and want to show it in various ways, often with embellishments and accents inside and out. From September 2010, all Scania V8 trucks will have styling traits that distinguish them from other Scania trucks, creating a new visual base for operators to build their image on.

Exterior

- Scania, model and V8 badges in chrome finish at the front and chrome trim around the fresh air intakes
- V8 symbol on sideskirts
- Distinct front grille in Black Brilliant with special mesh pattern
- Xenon headlights (option) with dark surrounds
- Specially-styled exhaust tailpipe with chrome-finish cover plate on left-hand side (with low-drag sideskirts)

Interior V8 features

Interior

- Specially-styled metal pedals with rubber pads
- V8 symbol on dashboard and door-sill rubbing strip
- V8 symbol on remote control for central locking
- V8 symbol in central instrument when idle
- Black steering wheel in wood and stitched leather with light grey seams (option)
- Fluted black leather seats with light grey stitched seams and embossed V8 symbol (option)
- V8 symbol, leather trim, black stitched leather armrest and Scania Griffin on door panel (options)
- Fluted V8 black leather floor mat with light grey stitching in centre of cab (option)

TECHNOLOGY

Extended V8 truck range with outstanding driveability

Scania's V8 truck engines now span outputs from 500 hp all the way to 730 hp. Torque ratings go from 2400 or 2500 Nm up to a remarkable 3500 Nm, giving torque-to-power ratios between 4.8 and 5.0 and typical Scania driveability.

- Euro 3: 500 hp 2400 Nm, 580 hp 2700 Nm
- Euro 4: 500 hp 2400 Nm, 560 hp 2700 Nm, 620 hp 3000 Nm
- Euro 5: 500 hp 2500 Nm, 560 hp 2700 Nm, 620 hp 3000 Nm, 730 hp 3500 Nm
- EEV ¹: 730 hp 3500 Nm

Scania V8 engines are renowned for being fuel-efficient when working hard, yet remarkably frugal at a light load. High torque at low revs opens the potential to save additional fuel by specifying a fast rear axle. Scania also offers operators the possibility of running their trucks on up to 100% biodiesel to reduce the carbon footprint.

The engines are tuned to give plenty of torque already at idling speed to facilitate starting. Maximum torque is produced from 1000 r/min. The slope of the torque curve at higher revs carefully matches the rise of the power curve to provide 'hanging power' uphill – the engine feels stronger as the revs drop, resulting in outstanding driveability. Power delivery is smooth throughout the useful rev range.

Scania's V8 heritage

In-house design and technology

True to tradition, Scania is securing control of all strategic steps in development and performance control. Engine development and manufacturing, as well as the design of the engine management, fuel injection and emission control systems are all carried out in-house.

This is a strategic decision to guarantee that all demands and targets for performance and fuel economy are met. All powertrain components are carefully matched, while ensuring consistent environmental performance, robustness and convenience of operation.

CGI cylinder block

Key characteristics of the new high-output V8 engine

- Part of Scania's modular engine range, sharing components with Scania's inline and other V8 engines, facilitating service and parts supply, as well as mechanics training.
- Traditional easy-to-service engine architecture with individual cylinder heads
- CGI (compacted graphite iron) cylinder block to cope with higher combustion pressures without weight penalty

¹ Enhanced environmentally friendly vehicle.

- Increased bore and swept volume (modularised with other engines)
- Scania XPI (extra high-pressure injection) common-rail fuel injection enabling individual as well as multiple injections independently of camshaft position
- Max. fuel injection pressure up to 2400 bar, typical operating pressure 1800 bar
- Cylinder heads with jet cooling
- Scania VGT (variable-geometry turbocharger) via an electric actuator allows boost pressure and turbine speed to be varied largely independently of engine speed, providing e.g. better engine response at low revs and faster gearchanges with Scania Opticruise
- Scania engine management controls all engine-related systems on the vehicle, including emission control, while interacting with all other control systems on the vehicle
- Scania SCR exhaust aftertreatment
- Euro 5 and EEV compliance

Scania XPI on V8 engine

Modular engine platform

The new 730 hp V8 is part of Scania's new engine platform with common-rail fuel injection, introduced in 2007 on inline engines. It is a completely new design, stronger to permit higher combustion pressures, yet it retains traditional Scania characteristics like individual cylinder heads, camshaft located high in the block and rear-mounted timing gears, as well as the familiar centrifugal oil cleaner. Although a new design, it shares a great deal of the architecture and many components with the other Euro 5 V8s, as well as with the inline engines.

The angle between the banks of the V8 remains 90 degrees. This provides equilibrium within the engine, with even power pulses, perfect balance and ultra-smooth power delivery, smoother than an inline six of similar size.

The stroke is unchanged, leaving the geometry untouched in the bottom part of the engine and enabling many components to be shared with the other Scania V8s and inline engines. The bore has been increased by 3 mm, raising the swept volume by 0.8 litres. The bore is shared with the new inline engines, meaning that the same pistons, cylinder liners, cylinder heads, etc., can be used for all 9.3-, 12.7- and 16.4-litre common-rail engines.

The camshafts are mounted in the same positions as before, i.e. high in the cylinder block to enable the use of short, stable pushrods. New camshafts are used and the valve train has been simplified since with common-rail fuel injection, the injectors are electronically controlled, eradicating the need for separate pushrods for the fuel injectors. Other components in the upper part of the engine, i.e. the cylinder heads and valve train, are largely unchanged and shared with the inline engines.

Transmission features

The smooth power delivery of the V8 enables Scania to make full use of its modular product system also in the top-output segment. The fact that the same components are used throughout the truck range opens up for almost unlimited scope for operators to tailor vehicles precisely to their needs.

Trucks with the new high-output V8 have a single-disc clutch with higher clamp force. A reinforced overdrive version of Scania's range-splitter gearbox is used (12-speed with two crawlers), featuring gearwheels with double shot-peening and revised gear geometry. Maximum torque is available in the top three gear ratios, giving maximum driveability at road speed. Torque is reduced 5-6% in the lower gears, but still higher than anything else in the market.

*Fully automated Scania Opticruise
with electro-hydraulic clutch control*

The new V8 engine is offered only in combination with Scania Opticruise, either the fully automated version or with a clutch pedal, both featuring the re-designed software introduced recently. The Scania Retarder is an option.

Despite the high power rating of the new V8, as with the inline engines, an efficient single-reduction rear axle can be used for many applications to minimise power loss and maximise fuel economy.

TECHNICAL DATA

V8 truck range (Euro 5/EEV)

	R 500	R 560	R 620	R 730
<i>Cabs</i>	Day cab Low-roof sleeper Normal sleeper Highline Topline	Day cab Low-roof sleeper Normal sleeper Highline Topline	Day cab Low-roof sleeper Normal sleeper Highline Topline	– Low-roof sleeper Normal sleeper Highline Topline
<i>Tractor units</i>	4x2 6x2 6x4	4x2 6x2 6x4	4x2 6x2 6x4	4x2 6x2 6x4
<i>Rigids</i>	4x2 6x2 8x2 6x4 8x4	4x2 6x2 8x2 6x4 8x4	4x2 6x2 8x2 6x4 8x4	4x2 6x2 8x2 6x4 8x4
<i>Heavy-haulage</i>	6x4 8x4	6x4 8x4	6x4 8x4	6x4 8x4

DC16 19 500 Euro 5



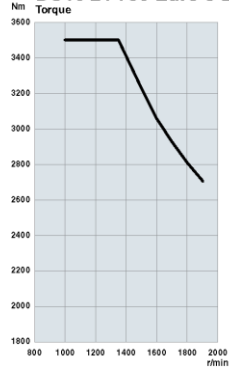
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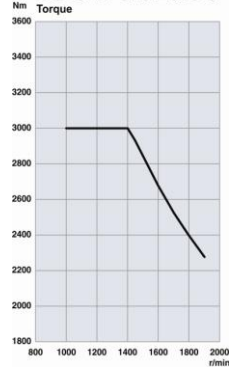
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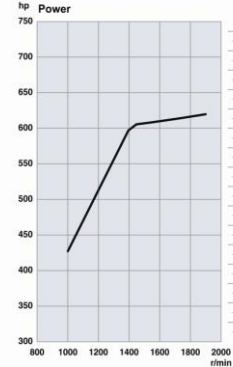
DC16 21 730 Euro 5 EEV



DC16 19 500 Euro 5



DC16 18 560 Euro 5



V8 engine data (Euro 5/EEV)

	R 500	R 560	R 620	R 730
<i>Engine type</i>	DC16 19 500	DC16 18 560	DC16 17 620	DC16 21 730
<i>Emission level</i>	Euro 5	Euro 5	Euro 5	Euro 5 and EEV
<i>Configuration</i>	90° V8	90° V8	90° V8	90° V8
<i>Swept volume</i>	15.6 litres	15.6 litres	15.6 litres	16.4 litres
<i>Firing order</i>	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8
<i>Cylinder heads</i>	8	8	8	8
<i>Valves/cylinder</i>	4	4	4	4
<i>Bore x stroke</i>	127x154 mm	127x154 mm	127x154 mm	130x154 mm
<i>Compression ratio</i>	18:1	17:1	17:1	17.4:1

	R 500	R 560	R 620	R 730
<i>Fuel injection</i>	Scania PDE	Scania PDE	Scania PDE	Scania XPI
<i>Emission control</i>	Scania SCR	Scania SCR	Scania SCR	Scania SCR
<i>Power</i>	500 hp (368 kW) at 1800 r/min	560 hp (412 kW) at 1900 r/min	620 hp (456 kW) at 1900 r/min	730 hp (537 kW) at 1900 r/min
<i>Torque</i>	2500 Nm at 1000-1350 r/min	2700 Nm at 1000-1400 r/min	3000 Nm at 1000-1400 r/min	3500 Nm at 1000-1350 r/min
<i>Max. engine braking</i>	304 kW at 2400 r/min	304 kW at 2400 r/min	304 kW at 2400 r/min	320 kW at 2400 r/min
<i>Oil capacity</i>	32 litres	32 litres	32 litres	48 litres

V8 transmission data (Euro 5/EEV)

	R 500	R 560	R 620	R 730
<i>Gearbox type (gears)</i>				
<i>Direct drive</i>	GRS905 (12+2)	GRS905 (12+2)	GRS905 (12+2)	GRS905 (12+2)
<i>Overdrive</i>	GRSO905 (12+2)	GRSO905 (12+2)	GRSO905 (12+2)	GRSO925 (12+2)
<i>Manual gearchange</i>	Standard	Standard	Standard	–
<i>Scania Opticruise</i>				
<i>Fully automated</i>	Option	Option	Option	Option
<i>With clutch pedal</i>	Option	Option	Option	Option
<i>Scania Retarder</i>	Option	Option	Option	Option
<i>Rear axles</i>				
<i>Single reduction</i>	R780 R782	R780 R782	R780 R782	R780 R782
<i>Hub reduction</i>	RP835	RP835	RP835	RP835
<i>Tandem bogies</i>				
<i>Single reduction</i>	RB662+R660	RB662+R660	RB662+R660	RB662+R660
<i>Hub reduction</i>	RBP735+RP735 RBP835+RP735	RBP735+RP735 RBP835+RP735	RBP735+RP735 RBP835+RP735	RBP735+RP735 RBP835+RP735

V8 trucks for Euro 4 and Euro 3

Euro 4	R 500	R 560	R 620
<i>Power</i>	500 hp (368 kW) at 1900 r/min	560 hp (412 kW) at 1900 r/min	620 hp (456 kW) at 1900 r/min
<i>Torque</i>	2400 Nm at 1100-1400 r/min	2700 Nm at 1100-1400 r/min	3000 Nm at 1100-1400 r/min
Euro 3	R 500	R 580	
<i>Power</i>	500 hp (368 kW) at 1900 r/min	580 hp (426 kW) at 1900 r/min	
<i>Torque</i>	2400 Nm at 1100-1300 r/min	2700 Nm at 1100-1300 r/min	