



SCANIA FENCER



SCANIA



DESIGNED FOR SUSTAINABLE AND EFFICIENT MOBILITY

Based on solid engineering experience, our new generation of buses has been developed to meet the demands of today's and tomorrow's cities. Energy efficient and available in a wide range of powertrains, it offers the latest technology in everything from safety systems to reduced emission and noise levels. And through excellent uptime and fuel economy, the Scania Fencer allows sustainable mobility to go hand-in-hand with operating economy.

For a better city environment

Having the right vehicle for the operation, and using it efficiently, is the best way to minimise environmental impact. We offer fully electric as well as hybrid-electric buses and engines running on all commercially viable renewable fuels – biodiesel/FAME, HVO and biogas powertrains, in order to meet the requirements of all urban operations. Through high quality vehicles and innovative technical solutions, maintenance, and a range of driver services, we address fuel efficiency from all angles, helping operators to reduce emissions and fuel costs.

To create a positive passenger experience, our buses have independent front suspension that makes the ride more comfortable. Design materials used in the buses create a bright and welcoming passenger environment.

To help prevent accidents and create a safer city environment, our buses have built-in state-of-the-art safety systems and features. These help the driver by increasing their awareness of other road users, and even help to control the vehicle when required.

Energy efficiency lowers operating cost

Public transport operators know the importance of keeping operating costs to a minimum, and fuel consumption is one of the main contributors to cost. An energy efficient powertrain can therefore offer significant savings in fuel. We develop and offer highly energy efficient powertrains, both traditional and electrified. Compared to previous models, our new generation of buses can potentially save up to 21% in fuel and emissions, without compromising on performance. This is achieved through a number of factors, with the most significant savings coming from improved engine and gearbox efficiency, weight reductions and the addition of a start/stop function. Beyond the powertrain, driving style has a major impact on fuel consumption. The drivability of our vehicles and our driver assistance systems, as well as our driver services, can potentially contribute to further fuel savings of up to 10%.



Ensuring availability through reliable solutions

To make urban operations cost-effective, it is important to reduce downtime and increase usage. Our buses are based on proven technology and components, which results in chassis and drivelines that are reliable, durable and robust. That reliability is the key to minimising the time in the workshop and maximising the use of the vehicle. Our buses are designed and engineered to ensure that sensitive and expensive components are protected in the event of a collision. Limiting damage and avoiding deformation of components such as the steering, aftertreatment system, and batteries is critical for minimising costs and reducing complex and time-consuming repairs. In addition, our buses are designed to facilitate maintenance and make it as efficient as possible. Here, Scania, in close collaboration with Higer, takes full responsibility for excellent spare parts availability.

Excellent passenger capacity

Our buses allow operators to keep costs down by minimising the number of vehicles required during peak hours; high axle load capacity, reduced chassis and body weight, and new interior layout options mean vehicle weight can be kept down while increasing passenger capacity.

A first-class driver area

A bus operating in urban traffic is constantly exposed to the risk of external damage and the work environment for the driver can be very demanding. A quality driver environment can therefore play a crucial role in reducing the risk of collisions, downtime and sick-leave, while increasing employee retention. The driver area in our buses is simply first-class and can even be said to be industry leading. A great turning radius, good visibility, and an overall well-balanced vehicle makes for excellent driveability, while advanced driver assistance systems give the driver good control of the vehicle through improved assisted handling, steering and braking. This increases safety and helps minimise accidents and the associated costs. Due to the demanding work environment, operators also face challenges when it comes to sick leave and employee retention; that's why we've designed the best possible work environment for drivers in terms of ergonomics, reachability, climate control, safety features and an overall quality feel.

Powertrains

The Scania Fencer offers a wide range of energy efficient and reliable powertrains optimised for inner-city and suburban traffic.

Fully electric	Output	Torque	Energy consumption	Battery capacity
Electric motor	300 kW peak 250 kW continuous	2100 Nm	0.75–1.5 kWh/km	254 kWh or 330 kWh, 8 or 10 battery packs resp.
Hybrid electric (Euro 6)	Output	Torque	Emissions control	Fuel options
9-litre engine Electric motor	320 hp (235 kW) 130 kW	1600 Nm 1030 Nm	SCR	Biodiesel, HVO, diesel
Euro 6	Output	Torque	Emissions control	Fuel options
7-litre	280 hp (206 kW)	1200 Nm	SCR	Biodiesel, HVO, diesel
9-litre	280 hp (206 kW)	1400 Nm	SCR	HVO, diesel
9-litre	320 hp (235 kW)	1600 Nm	SCR	Biodiesel, HVO, diesel
9-litre	360 hp (265 kW)	1700 Nm	SCR	Biodiesel, HVO, diesel
13-litre	370 hp (272 kW)	1900 Nm	SCR	HVO, diesel

Fuel capacity: 140–360 litres (2-axle) for high floor 140–275 litres, 140–360 litres (3-axle), 180–360 litres (low articulation), 180–560 litres (high articulation)

9-litre	280 hp (206 kW)	1350 Nm	EGR	Biogas, natural gas
9-litre	340 hp (250 kW)	1600 Nm	EGR	Biogas, natural gas

Fuel capacity: 1260–1875 litres

Euro 5	Output	Torque	Emissions control	Fuel options
9-litre	280 hp (206 kW)	1400 Nm	SCR	Biodiesel, HVO, diesel
9-litre	320 hp (235 kW)	1550 Nm	SCR	Biodiesel, HVO, diesel
9-litre	360 hp (265 kW)	1700 Nm	SCR	Biodiesel, HVO, diesel

Euro 3	Output	Torque	Fuel options
9-litre	250 hp (184 kW)	1250 Nm	Biodiesel, HVO, diesel
9-litre	310 hp (228 kW)	1550 Nm	Biodiesel, HVO, diesel

Axles, doors, lengths

The Scania Fencer is available in different versions and several options for door configurations to be able to meet the different demands of passenger capacity and flow.

2-axles, 10.8 m, 12.0 m, 12.5 m, 13.0 m



1-1-0

1-2-0

2-2-0

3-axles, 13.0 m, 15.0 m



1-1-0

1-2-0

2-2-0

3-axles, 18.0 m (articulated)



1-2-1-0

1-2-2-0

2-2-2-0

Heights

The height of the Scania Fencer 1 is dependent on the choice of propulsion, with gas tanks and electric components positioned on the roof. Scania Fencer 6 has a height of 3.4 m.

3.3 m (hybrid/BEV)

3.2 m (diesel)

3.3 m (gas)

PRODUCT DESIGN FEATURES

The Scania Fencer is designed and produced in a partnership between Scania and Higer. Everything from the chassis construction to the powertrain and the body has been developed and thoroughly tested with a focus on reliability and performance without compromising on energy efficiency. The modular process for constructing the Scania Fencer body reduces production lead time and provides high serviceability through the generalization of spare parts.

Battery packs

The battery packs for hybrids and fully electric buses are placed on the roof, creating a well-balanced bus with excellent driveability and ride comfort.

Battery temperature control

Battery pack temperature is controlled by a closed water-cooling system. In very cold or very hot ambient temperatures, the water cooling is assisted by an electric heater or a A/C cooling respectively.

Powertrain technology

The highly dependable, durable, and robust powertrains enable fuel savings, achieved through a number of factors such as; engine efficiency (-6%), improved gearbox (-3%), weight reduction (-3%) and the addition of a start/stop function (-6%).

Articulation control

Scania has an industry-leading control system for articulated variants that uses wheelspin control, traction control, an articulation damping system and patented sway control. This prevents instability and jack-knifing while also facilitating handling, manoeuvrability, and safe driving in slippery conditions and during lane changes at high speeds.

Chassis frame construction

The strengthened front axle, in combination with the ability to now use wider tyres, means that load capacity is increased from 7.1 to 8.2 tonnes. This allows higher passenger capacity. It also enables optimised weight distribution between the front and rear axles – especially important for gas and electric vehicles.

Additionally, chassis weight has been reduced by 2% (>100 kg) without compromising robustness, contributing to lower fuel consumption.

Fuel tanks

Available in several volume options suitable for urban operations. The shape of the 140–360 litre (usable volumes) fuel tanks is optimised for the inner layout to enable seat mounting closer to the wheelhouses.

The 450 or 535 litre (usable volumes) tanks can, in high articulation buses, be placed by the centre axle.





Exterior design

Buses are a natural part of the cityscape, and the new styling with an attractive appearance, minimalistic design and high flatness contributes to a good passenger experience and accessibility for all passengers.

Additionally, the use of materials such as fiberglass along with anti-corrosion treatments have a positive impact on weight, quality and maintenance.

Interior design

The interior facilitates maintenance and daily cleaning thanks to its modular front roof with a wide access port and a reversible electrical cabinet, long-life LED lighting in the ceiling and a sloping floor for easy cleaning.

In addition, there is a hidden lock button for the air duct structure, which enables easy installation and maintenance.

Driver area

Offers excellent ergonomics through all-angle step-less seat adjustments, adjustable instrument panel, flexible switch placement. A lower instrument panel increases visibility.

The buses have excellent drivability with a great turning radius, advanced driver assistance systems, and improved assisted handling, steering and braking. Also, they offer increased safety, a better climate system and good noise and vibration reduction.

Front suspension technology

Without compromising on passenger capacity, the new independent front suspension on buses with a width of 2.55 m, offers excellent passenger comfort and enables a wider aisle (900 mm) resulting in new layout possibilities, increased passenger flow, space and accessibility.

The new rigid front suspension also increases passenger capacity and offers good passenger comfort.

Electric system

The new power supply architecture comes with improved electronic control units (ECUs) and functions that improve performance and facilitate diagnostics for repair and maintenance. It also enables new functionality within ADAS, e-mobility and autonomous transport systems.

Safety features

Scania buses have advanced driver assistance systems (ADAS) including vulnerable road user collision warning, blind spot warning, adaptive cruise control, attention support, and advanced emergency brakes. Further electro-pneumatic parking brake technology avoids unintentional bus motion and thus potential accidents.

Through reinforced chassis construction, our buses are built to protect sensitive components.

Product specifications

General

Wheel configuration: 2-axle, 3-axle with steered tag axle, 3-axle articulated

Door configuration:

1-1-0, 1-2-0, 2-2-0 (2-axle)

1-1-0, 1-2-0, 2-2-0 (3-axle)

1-2-1-0, 1-2-2-0, 2-2-2-0 (articulated)

Dimensions

Length:

10.8 m, 12.0 m, 12.5 m, 13.0 m (2-axle)

13.0 m, 15.0 m (3-axle)

18.0 m (articulated)

Width: 2.50 m and 2.55 m

Height:

3.3 m (hybrid/BEV)

3.2 m (diesel)

3.3 m (gas)

Passenger area

Seating: Stear, Kiel seats or customer choice, wheelchair ramp at front or middle door, four priority seats with folding armrests, location for wheelchair or pram, folding seats, reading lamps and air nozzles

Equipment: Luggage rack, camera surveillance, infotainment system (Wi-Fi), USB charger, interior LED or fluorescent lighting

Roof hatches: Manual

Driver area

Seating: Driver seat ISRI

Instrument panel: Adjustable or fixed

Support systems: Scania Driver Support, electro-pneumatic parking brake, adaptive cruise control, vulnerable road user collision warning, blind spot warning, lane departure warning, hill-hold

Equipment: Audio system, announcement system, USB charger

Destinations signs

Placement: LED destination sign in front, side and rear

Climate system

Heating and cooling: Convector circuit in passenger area, auxiliary heater (diesel or gas), defroster, separate or combined air conditioning for the driver, temperature-controlled ventilation and AC for passengers

Powertrain – Fully electric

Electric motor 300 kW peak, torque 2100 Nm

250 kW continuous

Gearbox: 2-speed to optimise energy consumption

Powertrain – Hybrid electric (biodiesel, HVO, diesel)

9-litre engine 320 hp (235 kW), torque 1600 Nm

Electric motor 130 kW, torque 1030 Nm

Gearbox: 12-speed with Scania Opticruise

Powertrain – Combustion, Euro 6

Biodiesel, HVO, diesel:

7-litre 280 hp (206 kW), torque 1200 Nm

9-litre 320 hp (235 kW), torque 1600 Nm

9-litre 360 hp (265 kW), torque 1700 Nm

HVO, diesel:

9-litre 280 hp (206 kW), torque 1400 Nm

13-litre 370 hp (272 kW), torque 1900 Nm

Fuel capacity:

140–360 litres (2-axle) for high floor 140–275 litres

140–360 litres (3-axle)

180–360 litre (low articulation)

180–560 litre (high articulation)

Biogas, natural gas:

9-litre 280 hp (206 kW), torque 1350 Nm

9-litre 340 hp (250 kW), torque 1600 Nm

Fuel capacity: 1260–1875 litres

Gearbox:

12-speed with Scania Opticruise

6-speed fully automatic with acceleration control

Powertrain – Combustion, Euro 5

Biodiesel, HVO, diesel:

9-litre 280 hp (206 kW), torque 1400 Nm

9-litre 320 hp (235 kW), torque 1550 Nm

9-litre 360 hp (265 kW), torque 1700 Nm

Powertrain – Combustion, Euro 3

Biodiesel, HVO, diesel:

9-litre 250 hp (184 kW), torque 1250 Nm

9-litre 310 hp (228 kW), torque 1550 Nm

Electrical system

Equipment: LED headlights, LED daytime running, position and indicator lights, LED side and rear lights

Battery 150 Ah, 180 Ah, 230 Ah or dual battery system

Alternator 150 A, 180 A, 2x150 A or 2x180 A

Brake and safety equipment

Equipment: Disc brakes, electronic brake system (EBS), anti-lock brake system (ABS), traction control (TC), integrated retarder, bus stop brake, rear view camera, fire extinguishing equipment in the engine compartment

Suspension and wheels

Independent front suspension or rigid front axle, kneeling front door, whole front or whole side, automatic or manual control, total raising and lowering

Rims: Aluminium or steel

Tyres:

Low floor: 275/70, 275/80, 295/80, 305/70, 315/60, 315/70 (front)

275/70, 275/80, 295/80 (rear)

275/70, 275/80 (centre)

Low entry: 275/70, 275/80, 295/80, 305/70, 315/60, 315/70 (front)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80 (rear)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80 (centre)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80, 385/65 (tag)

High floor: 275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 385/65 (front)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80 (rear)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80 (centre)

275/70, 275/80, 295/80, 305/70, 315/60, 315/70, 315/80, 385/65 (tag)

Doors and windows

Optional: Tinted windows, single or double-glazed side windows, hopper window, double doors, inswing, outswing or sliding, pneumatic or electric operated doors at customer's choice



SERVICE OFFERING

Our offering consists of a number of services for minimising emissions, increasing safety, and improving operating economy, focusing on areas like fuel efficiency and uptime. These services allow us to provide solutions to each operators' individual challenges and needs.

Scania's data services generates insight and create business value through anything from position and speed to performance and driving style. Scania's data API's comply with the rFSM standards 1.x and 2.x.

Driver services

Enables drivers to drive safer and more efficient, and can reduce the need for maintenance.

Scania Driver Training

Combines theory and practice, covering topics such as safe and efficient driving, especially important when it comes to electrical vehicles, not only to save energy but even regenerate energy by optimal driving. Handles also other aspects of professional driving, always with a focus on profitability, fuel economy and reduced emissions.

Scania Driver Evaluation

An on-board device that assesses the driving style by comparing it to that of drivers operating in similar conditions. The result, which can be used to achieve long term improvements, is visible in the Scania Fleet Management Portal and Scania Fleet App.

Tachograph services

The fleet is monitored via the tachograph portal, facilitating compliance with EU regulations regarding driving and working time. A tool that provides in-depth insights into driver activities and vehicle use, thus helping operators maximise uptime, comply with laws and regulations and meet health and safety requirements for drivers.

Fleet management services

The data collected on board the buses provides valuable insight into driving styles, productivity and economy. This level of tracking and diagnostics can bring significant benefits in terms of increased uptime, improved safety and reduced operating costs. Through the Scania Fleet Management Portal and the Scania Fleet App, operators can gain access to valuable insights and reap the benefits.

Scania Zone

A position-based system for real-time vehicle adjustments in pre-defined zones. It allows operators to ensure that each vehicle stays within the set speed limits, increasing city safety and lowering fuel consumption. Scania Zone is an optional add-on in Scania's fleet management system.

Repair and maintenance services

Having access to professional workshops and quality spare parts is key to keeping the vehicles in prime condition. Scania offers a range of repair and maintenance services:

Scania Flexible Maintenance

Uses real-time vehicle data to produce maintenance plans tailored to each vehicle's actual operation. This is done by continually monitoring and analysing operational data to ensure maximum uptime and schedule maintenance customised to the operations, thus increasing productivity and decreasing disruptions.

Scania Fleet Care

The fleet operator receives a dedicated Fleet Manager from Scania equipped with advanced tools and systems, to optimise maintenance and prevent breakdowns based on operational data and vehicle data analysis.

Customer workshop services

A tailored collaboration service designed to facilitate for the operator by streamlining and quality assuring the workshop and workshop processes to meet Scania standards.

Scania Higer service team

In close cooperation, Scania and Higer offer comprehensive and high-quality services to keep the vehicles in peak condition, increase utilisation and improve operating economy. Well-established and trusted service networks offer technicians regular service training with training material developed in multiple languages, assuring professional technical support 24/7.

Scania and Higer are both suppliers operating on the global market, and provide spare parts through consignment stock, online ordering systems, and more.

Additionally, all buses carry a 24 month or 150,000 mileage warranty.