

 **Volvo Bus Corporation**

Press Information

# New Volvo 7900

# Lighter and more fuel-efficient

Volvo Buses is now launching its new low-floor bus, the Volvo 7900. Among many other features, the new bus is lighter, which will generate lower fuel consumption and accommodate more passengers.

The new Volvo 7900 city bus has many similarities with the Volvo 8900, which was launched last year. They share the same body concept and up to 70% of the components are identical.

“This will be highly beneficial to our customers who have both the Volvo 7900 and the Volvo 8900 in their fleets,” says Stefan Guttman, Head of Business Development at Volvo Buses’ Europe Region.

“They will be able to use essentially the same routines for maintenance and repairs, fewer spare parts will be needed in stock and mechanics will be familiar with both bus models. This will contribute to shorter time in workshops and more time on the roads.”

As with the Volvo 8900, the body is a mixture of various materials. The company selected the materials that are best suited for various functions. The body structure comprises aluminum profiles that are screwed together and the roof is also made of aluminum.

The major advantage with aluminum is that it is a light and corrosion-free material. The front and back modules are manufactured from steel, which is easy to form into attractive designs.

The aluminum and the patented assembly method will make the bus significantly more resistant to corrosion. There is also an environmental benefit, since aluminum can be recycled by as much as 90%.

## Simpler maintenance

The side panels are manufactured from fiberglass and various plastic materials and are glued together. Fiberglass and plastics are light materials that produce smooth and attractive sides on the bus and the side panels are particularly easy to replace if they are damaged. The new design also means that many components are screwed on, making it possible to conduct repairs without needing to weld.

“Replacing such components that are frequently damaged, for example, the bumper corners and the area around the wheel housing, will be rapid and simple,” says Stefan Guttman.

The predecessor, the Volvo 7700, was manufactured in steel and the company was able to significantly reduce the weight with the new design. For example, the Volvo 7900 hybrid version is a full 550 kg lighter than the current version.

“When the buses become lighter, this generates space for our customers to accommodate more passengers and still fulfill weight requirements,” says Stefan Guttman. “For example, as a gas-engine articulated bus, the Volvo 7900 will be able to take 14 more passengers than its predecessor.”

## Lower fuel consumption

“In addition, less weight means that fuel consumption will decrease and this is one of the most key factors to achieving low lifecycle costs.”

For example, the already very low fuel consumption in Volvo’s hybrid bus will be even lower. Fuel consumption will be up to 37% lower than a diesel bus, compared with up to 35% in current hybrid buses.

Sales of Volvo’s hybrid buses are very successful. To date, the company has sold approximately 300 hybrid buses, both the Volvo 7700 Hybrid and the double-decker Volvo B5L Hybrid.

A large number of European cities have purchased hybrid buses from Volvo. They have also been sold in Brazil and successful tests have been conducted around South America and Mexico, in China and Israel.

“Customers are very satisfied with the reliability of our hybrid buses, which is on the same level as the diesel buses,” says Stefan Guttman. “In addition, fuel consumption is as low as we promised.”

However, the hybrid version is only one of the options with respect to the new Volvo 7900. The bus is offered with engines for diesel/biodiesel and CNG/biogas. It is available as 12-meter bus or 18-meter articulated bus.

## Diesel, gas, hybrid

The diesel engine is Volvo’s fuel-efficient Volvo D9B, with 260, 310 or 360 hp. The engine fulfills the Euro V requirements and an enhanced environmentally friendly vehicles (EEV) version is also available, with particle filter. The gas engine is the 300-hp Volvo G9B. It can operate on both CNG and biogas.

Customers are able to choose automatic transmission from either ZF or Voith. The Volvo 7900 Hybrid has the same efficient hybrid driveline as in the past, with a five-liter diesel engine, an electric motor and the Volvo I-shift transmission.

Major demands are placed on bus drivers who drive city and line traffic. They must focus fully on traffic in order to drive safely, while frequently following stressful schedules. At the same time, they must receive passengers in a friendly and positive manner.

The manner in which drivers perform their duties has an impact on the passenger experience, fuel consumption and the wear and tear of the bus and thus also on the lifecycle cost of the bus.

## Ergonomic driver’s seat

Accordingly, when developing the Volvo 7900 and Volvo 8900, Volvo Buses placed major emphasis on creating a driver’s seat that will provide the driver with the best possible prerequisites to do a good job, during long shifts.

The company interviewed many bus drivers, allowed them to test different designs, made computer simulations and mathematical calculations, all in an effort to find the most ergonomic solutions.

The driver’s seat on the Volvo 7900 has a large number of adjustment options for the seat and steering wheel to accommodate all drivers, tall or short. The controls are located where the drivers requested them.

Unobstructed vision is of utmost importance to a bus driver. The view from the Volvo 7900 is excellent with large window areas, three-way rearview mirrors and an optional rear camera. The driver’s seat has its own climate zone, with generous storage space for the driver’s personal belongings.

## Safety first

Safety is one of Volvo’s core values and permeates everything the company does. The Volvo 7900 is basically a stable design that complies with the EU’s R66 rollover requirement. The bus has electronically controlled brakes.

All seats can be equipped with two or three-point seatbelts. The engine compartment and the auxiliary heater are fitted with fire detectors and the engine compartment can be fitted with a sprinkler system.

To increase passenger safety, Volvo has developed an integrated surveillance camera that can be installed in all models of the Volvo 8700. Volvo Buses has also developed an alcohol safety interlock device specifically adapted for bus traffic. The engine can be started without a breathalyzer, but the brakes will remain locked if the breathalyzer reveals that the driver is intoxicated.

The Volvo 7700 was manufactured in the plant in Wroclaw, Poland. Initially, the Volvo 7900 will also be manufactured there, but since it shares the same body concept as the Volvo 8900, the Volvo 7900 may also be manufactured in the plant in Säffle, Sweden in the future.

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