Elegant and maneuverable – the AutoTram® Extra Grand at the IAA Commercial Vehicles

The AutoTram® Extra Grand currently does its laps on the DEKRA test track at the EuroSpeedway Lausitz, working through the testing procedure to obtain a single vehicle approval. In past weeks, an increasing number of journalists and press representatives have been expressing their interest in this impressive vehicle. They are fascinated by its length, which raises several questions: How can a vehicle of this enormous size cope with the tight bends of city traffic? Is it a hazard to other traffic participants? How can the AutoTram® be maneuvered forward and reverse?

Scientists at the Fraunhofer Institute for Transportation and Infrastructure Systems IVI took up the challenge to make extra-long vehicles maneuverable in city traffic. This was achieved by equipping the vehicle with four steered axles in addition to the fixed main drive axle. A multi-axle steering system, developed and tested at the Fraunhofer IVI, has been implemented in the AutoTram® Extra Grand for the first time.

With this steering system, the vehicle has the maneuverability of a 12-meter city bus and can be operated by any licensed bus driver in the traffic network, forward and reverse. The AutoTram® Extra Grand was developed and constructed by seven partners within the »Innovative Regionale Wachstumskerne« research program, initiated by the German Federal Ministry of Research and Education (BMBF). The vehicle’s maneuverability is an important requirement for obtaining an approval. The German regulations for the operation of vehicles in passenger transport (BÖKraft) require a turning radius of 12.5 meters, which is kept by the vehicle. As the AutoTram® Extra Grand has a tram-like swept path, the hazard to cyclists and pedestrians is smaller than with an 18-meter articulated bus.
Press Release

Richard Kiemer, who has been employed at the AutoTram® Extra Grand’s manufacturer Göppel Bus for many years, steered the giant vehicle through Dresden’s narrow roads when it was first presented to the public this August. The well-experienced expert concludes: »I have been driving 24-meter buses with passenger trailers for several years. Now it is 6 meters more, which is again a challenge for me. But with this vehicle, I will be able to manage bends just the same«.

Liu Xiaoming, director of Beijing’s public transport, also had the pleasure of sitting behind the wheel and taking a test drive in the AutoTram® Extra Grand. His comment on the ride: »This bus has the look of a ship and drives like a car – quite comfortable«. The vehicle’s length obviously does not scare him. He ought to know – Liu Xiaoming manages a fleet of 220,000 vehicles.

From 20th to 27th September 2012, visitors can take a look at the AutoTram® Extra Grand, which will be exhibited on the innovation stage at the IAA Commercial Vehicles (International Motor Show) in Hannover.

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