

MAN Truck & Bus at Busworld Europe 2019: Driving the Future

At this year's Busworld in Brussels, MAN Truck & Bus is exhibiting a broad portfolio of city and intercity buses, coaches and minibuses, with buses from both the MAN and NEOPLAN brands. The company's premières include the Lion's City 19, the Lion's Intercity with a D15 engine, and the eTGE Combi and TGE City minibuses. Offered to the public for test-driving for the first time is the all-electric MAN Lion's City E.

MAN Truck & Bus at Busworld Europe 2019: Driving the Future.

- **Even more efficient and environmentally friendly: MAN city buses with diesel, natural gas and electric drives**
- **New 18.75-metre-long Lion's City model appeals to operators as a cost-efficient solution**
- **MAN Lion's Intercity with ultra-modern driveline**
- **Enhanced driver and turning assistance systems for all MAN and NEOPLAN models available from 2020**
- **NEOPLAN movingART is "On tour with the World of Hans Zimmer – A Symphonic Celebration"**
- **Two new minibuses première at Busworld**
- **Information about comprehensive consultations with MAN Transport Solutions and MAN services**

The lifestyle of the human race is changing from the ground up. These days, mobility has to be social, future-looking, ecological and economical. Buses play an important part in helping everyone to tackle the challenges relating to emissions, traffic volume and affordable mobility – whether in city, intercity or long-haul transportation. The vehicles of today also have to be able to meet the mobility requirements of tomorrow. In this regard, MAN Truck & Bus can provide the right solutions for a variety of purposes with its MAN and NEOPLAN buses, and the company will be showcasing a selection at the Busworld Europe 2019 trade fair in Brussels.

MAN Lion's City: ready for the future of urban transport

Offered to the public for test-driving for the first time is the all-electric MAN Lion's City E.

The answer to the current questions around urban mobility is the MAN Lion's City. With its new generation of city buses, MAN can offer efficient and environmentally friendly solutions for urban transport – tailored to the individual needs of every customer and to meet market requirements. At the trade fair in Brussels, MAN will be exhibiting a 12-metre solo version of its all-electric Lion's City E, which comes with 35 seats. The e-bus completes this new generation of city buses – also available with diesel, natural gas and hybrid propulsion – with its emissions-free drive. Its inimitable design elements highlight the unique quality of the electric drive, which visitors to Busworld can now experience for the first time live in the outside area. The most obvious differences are the absence of the engine tower, the position of the batteries on the roof and the 4 additional seating places that this creates in the rear. In the solo bus, the all-electric driveline can produce an output of between 160 kW and a maximum of 270 kW. As a result, the Lion's City E can be relied upon to provide a range of 200 km, or up to 270 km in good conditions, across the entire service life of the batteries.

The MAN Lion's City 19 EfficientHybrid spans 18.75 metres in length and sees MAN growing its new generation of city buses with an appealingly cost-efficient solution for inner-city transportation.

To be exhibited by MAN for the very first time is the Lion's City 19 EfficientHybrid – the new conventional brother within the family of city buses. The bus spans 18.75 metres in length and sees MAN growing its new generation of scheduled-service buses with an appealingly cost-efficient solution for inner-city transportation. In the three-axle trade fair display vehicle, there is space to seat 38 passengers – four more than in a Lions City 18 with a similar configuration. A highly efficient D1556 LOH diesel engine with 360 hp (265 kW) powers the vehicle and, like all internal combustion engines presented by MAN, meets the Euro 6d emissions standard that takes effect from 1 September 2019. If equipped with MAN EfficientHybrid, the bus becomes an even more economical and environmentally friendly solution. The stop-start function ensures that the vehicle is also near silent and emissions-free when it stops.

The exhibited Lion's City 19 will also set new standards in terms of safety. As an effective measure to prevent accidents caused by the blind spot, the articulated bus has an active turning assistance system with pedestrian detection, which MAN will present as a trade-fair first in Brussels. Cameras on both the front and the two sides of the vehicle monitor the traffic automatically, which helps take the pressure off the driver. The driver is actively alerted to prevent potential hazard situations or collisions, both visually, via two in-built displays in the driver's field of vision, and acoustically, via a warning signal. The system warns against potential collisions in

both the front area and when turning. Furthermore, the new driver and turning assistance systems improve safety, as they are reliable at detecting pedestrians, cyclists and motorcyclists in the blind spot and actively alert the driver to hazardous situations. The new systems are to be made available in the coming year for all MAN buses ex works and as a retrofit solution.

MAN Lion's Intercity: now with D15 engine and MAN TipMatic Coach

With the Lion's Intercity, MAN will be exhibiting the ideal solution for intercity and school bus transportation. Boasting up to 53 "Intercity Lite" seats, the bus on show will have plenty of room for passengers. Beyond its outstanding spaciousness, the Lion's Intercity now impresses with an even more powerful and comfortable drive. At Busworld, MAN will be presenting the intercity bus for the first time with a new D1556 LOH engine – the vehicle on show will have 360 hp (265 kW). The highly efficient 9-litre engine – which is available for the Lion's Intercity alongside the tried-and-tested D08 – comes with 280, 330 and 360 hp power levels. Furthermore, MAN is expanding its gearbox portfolio for its intercity bus with the automated 12-speed gearbox from the new MAN TipMatic Coach generation. The new gearbox features, which were presented at the IAA, include improved moving-off and an improved gearbox control unit with MAN's proprietary gearshift strategy. As a result, the Lion's Intercity will take to the roads with deliveries from spring 2020 with an ultra-modern driveline – meaning it will be able to service the multifarious intercity transportation requirements even more efficiently. Practical equipment options, such as the convenient service sets that will be showcased at Busworld, will open up even more possibilities for customers to adapt the vehicle exactly to their intended use.

Cost-efficient, reliable and popular: MAN Lion's Coach

Rounding off MAN's exhibits at the trade fair stand will be an MAN Lion's Coach – a veritable champion amongst coaches, providing travel safety and comfort for top teams such as FC Bayern Munich, Paris Saint-Germain and, since this spring, the German national team, as well. Visitors to the stand will be treated to a long-distance model of the Lion's Coach C, 13 metres in length and with 48 seats, a lift and two wheelchair spaces. The two-axle vehicle on show will combine maximum cost efficiency with a large luggage compartment. The coach is powered by an incredibly efficient 470 hp (346 kW) D2676 LOH engine, with a maximum torque of 2,400 Nm. The bus also has the 12-speed gearbox MAN TipMatic Coach.

NEOPLAN: exclusive travel combined with innovative safety

The NEOPLAN Skyliner perfectly meets the demand for exclusivity and relaxation whilst travelling. At the trade fair, visitors will be treated to a version of the luxurious double-decker coach with comfortable space for 76 passengers.

The Tourliner L on show will give visitors a glimpse into the world of NEOPLAN. And what a sight it will be! This year, two NEOPLAN Tourliners are on tour with "The World of Hans Zimmer", transporting fantastic music to the whole of Europe. With their unique movingART design, the tour buses and bus on show at the trade fair will be turning heads left and right. Both the bus and musicians will also delight visitors to Busworld with exclusive staging. A notable aspect of the exterior design on the Tourliner display vehicle is the optimised position of the B-pillar, giving front-row passengers a better view. Inside, NEOPLAN has conceived an innovative office-like space, thus demonstrating the perfect way of combining comfortable travel with efficient working. Passengers will be guaranteed an exclusive travel experience thanks to the 2+1 VIP seating and warm ambient lighting. And the office infrastructure, complete with on-board WiFi, 230-volt and USB sockets, and two tables with seats facing each other, offers a relaxing space to work in when travelling. Overall, this unique interior design by the Bus Modification Center provides a luxurious working environment for 35 passengers. The Tourliner is powered by an ultra-modern D26 engine, with 470 hp (346 kW) and a maximum torque of 2,400 Nm, and an automated MAN TipMatic Coach gearbox.

Another bus that perfectly meets the demand for exclusivity and relaxation whilst travelling is the NEOPLAN Skyliner – also on display. At the trade fair, visitors will be treated to a passenger-friendly version of the luxurious double-decker coach, with the front steps on the right side of the vehicle. This optimises the flow of passengers and increases the seating capacity. The double-decker has room to provide a comfortable space for 76 passengers on one of the new generation of Exclussivo seats. New service sets with integrated ambient lighting and an exclusive but equally practical kitchenette on the lower deck (separately installed by the specialists at the Bus Modification Center in Plauen) will round off the unique travel experience in the NEOPLAN Skyliner display vehicle. To ensure a pleasant ride, the coach comes with a 510 hp (375 kW) D2676 LOH diesel engine with a maximum torque of 2,600 Nm, the 12-speed automated MAN TipMatic Coach gearbox and electronically controlled shock absorbers (CDS).

MAN Service is expanding its network: there are now around 100 workshops offering MAN BusTopService in Europe.

The Skyliner coach on show at the fair will also impress when it comes to safety, with innovative solutions. The double-decker comes with OptiView, the first mirror replacement system for coaches, which celebrated its world première at the last IAA, and will be available for all NEOPLAN models from 2020. Cameras on both sides of the vehicle provide real-time imaging on two displays that are easy for the driver to see, and thus eliminate the blind spot. The camera technology used enables a high-resolution display of the

surroundings, regardless of how much daylight there is. In contrast to the mirror, this also reduces the limitations caused by windows fogging up, dirt or sun glare. This increases safety and simultaneously reduces the probability of driving into something somewhere, thus decreasing overall repair costs. The new driver and turning assistance systems provide for additional safety in the NEOPLAN buses. MAN is also set to introduce these systems for its premium coaches ex works and as a retrofit solution from 2020. A turn assist system with active warning and pedestrian detection, a speed limitation display and automatic traffic sign recognition are setting new standards when it comes to safety and are making the travel experience even more convenient.

Two trade fair premières: MAN Truck & Bus expands minibus range

The new MAN minibus TGE City premières at the Busworld stand and is based on the TGE van.

As well as the MAN TGE Intercity intended for intercity transportation, which premiered at the IAA 2018, MAN will be exhibiting two new minibus designs at Busworld: the MAN eTGE Combi and the MAN TGE City. The eTGE Combi is the first fully electrically powered minibus amongst MAN's range of buses. The e-minibus is based on the series-produced MAN eTGE electric van and has been approved for a passenger capacity of up to eight people. Hence, this new minibus is particularly suited for inner-city transportation in low-emissions zones and in residential and health resort/healthcare areas where there is a focus on keeping noise to a minimum. To save space, the batteries of the fully electrically powered eTGE Combi are built in underneath the slightly raised floor. In theory, they should enable a range of up to 173 kilometres (NEDC), or 114 kilometres (WLTP).

The MAN TGE City, a further highlight at the trade fair stand, is also based on the TGE van. The low-floor platform with its city-friendly door concept, especially developed for the TGE City, can be equipped as needed with fold-up seats, wheelchair and pushchair spaces, standing places or fixed seating places. The slightly raised rear has additional seating places available. The large side windows provide all passengers with unhampered views. Additional optional features include destination displays on the front and side windows, a rear-view camera and a roof-mounted air-conditioning system.

MAN services, MAN Transport Solutions, MAN DigitalServices

New MAN DigitalServices for buses and coaches are now available from MAN Truck & Bus. These services rely on the RIO Box, which has been installed as a standard feature in all MAN and NEOPLAN buses and coaches since October 2019.

Beyond the products, you can, of course, also learn about MAN's extensive range of services at the MAN trade fair stand, such as maintenance management, repair services, Genuine parts and accessories and financial services. MAN will be dedicating an entire area to the challenges relating to the switch to e-mobility. The specialists from MAN Transport Solutions will provide bus fleet operators with comprehensive advice and suggest tailored solutions for operations, infrastructure, service and maintenance all around e-mobility. What is the exact energy requirement, where can the vehicle be charged, and using which method? The team at MAN Transport Solutions simulates routes and creates business cases and fully-fledged operating concepts. The aim is to offer the customer a customised transport solution with maximum economic value, and thus, provide them with the best support when they enter the e-mobility market.

With immediate effect, MAN and NEOPLAN customers will also benefit from the many advantages of digitalisation. From the autumn, new buses will be rolled out with a RIO Box as standard. In this way, MAN is providing the foundation for the use of MAN DigitalServices and RIO ex works. These support customers by providing an ever-increasing range of tailored digital services for MAN vehicles. MAN DigitalServices is designed to help keep track of and optimise all the cost factors that feed into the TCO (Total Cost of Ownership) – starting with seamless trip planning through to maintenance management. The result for the bus customers: higher cost efficiency and reliability when it comes to fleet management.

MAN Truck & Bus at Busworld 2019 at the MAN Stand 422 in Hall 4:

 <https://www.bus.man.eu/de/en/man-world/man-experience/fairs-and-events-/busworld-2019/busworld.html>