



Tested to the limit: MAN Lion's Coach E defies snow and ice in harsh winter trials

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- **MAN eCoach passes winter test in northern Sweden and Erzurum, Turkey**
- **Battery system, charging performance, and thermal management prove themselves even in freezing temperatures**
- **Interaction of all systems reliably tested under extreme winter conditions**
- **Nine vehicles, including four Lion's Coach E models, took part in the bus winter test and successfully covered thousands of test kilometers**

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Extreme cold, snow, ice, and challenging topography: the fully electric MAN Lion's Coach E has impressively demonstrated its performance under these conditions and successfully completed its first winter test. It thus continues the tradition of MAN Truck & Bus engineers deliberately pushing their vehicles to their limits every year. As part of the traditional winter testing program, current models are tested under extreme climatic conditions – with the clear aim of making them even more reliable, efficient, and economical for customers. “There are high expectations for our new fully electric coach, which celebrated its world premiere at Busworld Europe last fall – and we want to fully meet these expectations thanks to such intensive testing,” said Barbaros Oktay, Head of Bus at MAN Truck & Bus.

Thousands of test kilometers in ice and snow

The Lion's Coach E was tested in northern Sweden near the Arctic Circle and in Erzurum, Turkey, regions known for their harsh winters. A total of four electric coaches covered thousands of test kilometers under the most demanding conditions, including snowy and icy roads and temperatures as low as minus 30 degrees Celsius. The engineers focused in particular on the behavior of the high-voltage battery system at extremely low temperatures, energy management including preconditioning and charging performance, the powertrain with electric motor, and the thermal management of the

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and providers of transport solutions with an annual sales revenue of around 14.1 billion euros (2025). The company's product portfolio includes trucks, buses and coaches with diesel and zero-emission drives, vans, diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of TRATON GROUP and employs some 32,000 people worldwide.



interior. Cold weather poses a particular challenge for electric coaches, as they must not only deliver a stable range but also ensure efficient and reliable heating of the passenger compartment. "But even in these freezing temperatures, the Lion's Coach E fully met our expectations. All components and systems functioned reliably despite the cold," says Oktay.

eCoach proves its suitability for practical use

As with all MAN tests, not only were all individual components tested, but above all the interaction of the entire vehicle under the most difficult conditions. Hundreds of sensors continuously recorded data on temperatures, pressure values, energy flows, and system statuses during the trips. This enabled the developers to gain valuable insights and validate optimizations directly. The successful winter test is thus another milestone on the road to series production of the Lion's Coach E and underlines its suitability for year-round use in international travel – whether to the south or the far north.

A total of nine vehicles took part in the 2026 bus winter test. In addition to the four Lion's Coach E vehicles, conventional coaches as well as city and intercity models with electric or hybrid drives were also tested. MAN has been conducting winter testing in northern Sweden for more than 30 years. "The combination of double-digit sub-zero temperatures, snow, and ice provides the ideal conditions for putting vehicles through their paces in the overall system. The successful debut of the Lion's Coach E shows that electric mobility in passenger transport is reliable and economically feasible even under extreme conditions," explains Roland Scharl, Head of Engineering Bus at MAN Truck & Bus.

MAN's first fully electric coach

With the Lion's Coach 14 E, MAN is launching its first battery-electric coach, underscoring its consistent transformation toward sustainable mobility. The coach features the proven drive technology from the successfully mass-produced eTruck as well as innovative NMC battery packs. These are manufactured in large series at the Nuremberg plant. The Lion's Coach E has a usable energy capacity of 320 to 480 kWh. Under optimal conditions, it can achieve ranges of up to 650 kilometers – a distance that allows many typical travel routes to be covered without recharging. In addition to the technology, the smart design concept, which significantly reduces the drag coefficient (C_w value), is also impressive. At the same time, the eCoach



offers space for up to 63 passengers without any restrictions on luggage volume compared to the diesel version. Following its successful world premiere last fall, extensive testing and trial cycles are currently underway, and preparations for production in Ankara are in full swing. The first vehicles are scheduled to roll out to selected customers before the end of this year.