

**Press release**

Düsseldorf 18. December 2023

## **Milestone in Gothenburg: Kiepe Electric and Alstom hand over the 40th M33 light rail vehicle to Göteborgs Spårvägar and Västtrafik**

- **The final from 40 M33 Light Rail Vehicles (LRV) entered revenue passenger service at Gothenburg's Transit Authority, Göteborgs Spårvägar and Västtrafik Transport Association**
- **Kiepe Electric, a consortium partner with Alstom, was responsible for the supply of innovative electrical drive technology and on-board systems, Knorr-Bremse supplied brakes, entrance and HVAC systems**
- **The successful partnership between Kiepe Electric and Alstom will continue with the production of 60 longer M34 LRVs, with delivery starting in 2024**

**Düsseldorf, 18. December 2023 - The final from 40 M33 Light Rail Vehicles (LRV) entered revenue passenger service at Gothenburg's Transit Authority [Göteborgs Spårvägar and the Västtrafik Transport Association] at the beginning of December 2023. The vehicles are equipped with innovative, and highly reliable electric drives supplied by Kiepe Electric. These LRVs will help strengthen the Swedish metropolis's sustainable transportation concept.**

Alexander Ketterl, Managing Director of Kiepe Electric: "Göteborgs Spårvägar and the Västtrafik transport association are pioneers in environmentally friendly public transport and have correspondingly high requirements in terms of comfort, energy efficiency, safety and capacity. We have found the right technological answers with our consortium partner Alstom. Together with our customers, we have also mastered the effects of crisis-hit supply chains in recent years. That speaks for a well-coordinated team and maximum efforts on all sides."

Ulrich Lauel, head of rail vehicles at Kiepe Electric: "The final M33 light rail vehicle is a milestone and at the same time an intermediate step in this project. With the rapid call-off of the second option of 60 longer M34 light rail vehicles, our customer has underlined his high level of trust in our technology. Production of the first M34 has already begun, and we are doing everything we can to ensure that the future collaboration is just as successful."

Johan Henriksson, M33 Project Manager at Göteborgs Spårvägar: „We have now reached this milestone for M33 thanks to the fantastic and enormously persistent efforts of the employees involved on both the supplier and buyer side. We are now working further to ensure all other deliverables according to the agreement and look forward to the delivery of the first M34.“

### **5 million driving kilometers completed**

The M33 LRVs have already accumulated 5 million kilometers in service since their delivery in 2020. The LRVs, equipped with 71 seats and room for 158 standees, were manufactured by Alstom in Bautzen (Germany). All vehicles are characterized by their high reliability and availability, and a Kiepe service team is on-site 24/7 to ensure comprehensive support is provided. All vehicles have completed their 20,000 km test run without any issues. The local ridership appreciates the accessibility, spaciousness and comfort that the M33 LRV fleet provides. The sustainable concept of reusing waste heat from the engine to heat the passenger compartment is one technical detail to reduce energy consumption and overall life cycle costs.

### **Superior technical support team**

The consortium and the customers are closely connected in their work, and this results in a high level of efficiency and project performance. The electrical concept of the vehicle with its space-saving hardware is highly innovative as the traction and on-board power converters are installed in a single, combined container on the roof of the LRVs. The Kiepe Fleet Management (KFM) system software supports the Agency in the maintenance and repair of the vehicle fleet with data from the subsystems, which the modular TCMS system combines into a functional overall electrical system. A close collaboration with experts at Knorr-Bremse has paid off; the subsystems are optimally coordinated during operation. Knorr-Bremse supplied braking, entrance, and air conditioning systems.

### **Production of 60 M34 light rail vehicles has already begun**

All those involved in the project are already working on the production of the first of 60 M34 LRVs with delivery will commence in 2024. These unidirectional low-floor trams are 45 meters long and increase passenger capacity by around 50% compared to the M33.

### **Captions:**

(M33 - 01 © Göteborgs Spårvägar) The M33 LRVs have already accumulated 5 million kilometers in service since their delivery in 2020. | © Göteborgs Spårvägar

(M33 - 02 @ Göteborgs Spårvägar) The 40th vehicle from Alstom and Kiepe Electric went into operation at Göteborgs Spårvägar at the beginning of December 2023. | © Göteborgs Spårvägar

(M33 - 03 Vasaplatsen © Göteborgs Spårvägar) The new M33 trams have become an integral part of Gothenburg's cityscape. | © Göteborgs Spårvägar

Knorr-Bremse's subsidiary Kiepe Electric, headquartered in Düsseldorf, Germany, is a global supplier of electrical systems for the leading rail vehicle and bus manufacturers. The company offers efficient solutions and ecologically sustainable concepts for low-emission public transport with environmentally friendly electrical equipment for trams, metros and regional trains as well as electric buses with In Motion Charging (IMC) and High Power Charging (HPC).

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