

Press release

Munich, December 14, 2021

Safe mobility: Knorr-Bremse equips 585 Barcelona Metro rail cars with clean[air] air-conditioning technology

- Knorr-Bremse subsidiary Merak equips 585 metro cars operated by Transports Metropolitans de Barcelona (TMB) with solutions for safe, clean in-train air
- The order includes upgrading the trains' air-conditioning systems with innovative clean[air] ventilation technology and highly efficient air filters (Merak Long Life Filter – MLLF)
- In addition, Merak Intense Field Discharge (MIFD) electrostatic active filters will be installed in the air-conditioning systems of parts of the fleet on a test basis; this will help further improve the elimination of aerosol-bound pathogens

Munich, December 14, 2021 – Knorr-Bremse and its subsidiary Merak, the global brand for integrated heating, ventilation and air-conditioning solutions for rail vehicles, are supplying large sections of the metro fleet in the Mediterranean city of Barcelona with innovative solutions for delivering clean, safe air to passenger compartments. Yet another major operator is putting its trust in Knorr-Bremse innovations to ensure maximum comfort for its passengers. With the upgrade of ventilation and plug-and-play filter technology already completed, Knorr-Bremse and TMB are contributing to the enhanced safety, health and wellbeing of rail passengers this winter.

“We are delighted that with TMB, another major rail operator has opted for our reliable and durable clean[air] climate control technologies,” comments Dr. Peter Radina, Member of the Management Board of Knorr-Bremse Rail Vehicle Systems and responsible for the global air-conditioning systems business. “TMB is thus taking a major step towards further improving air quality, safety and health for passengers.”

“Especially once passenger numbers start to rise again, air-conditioning systems in trains equipped with our air distribution, filtration and purification solutions will help restore confidence in the rail system,” adds Fernando Hazeu, Managing Director of Merak in Getafe, Spain. “We are pleased to be partners with a growing number of rail operators worldwide through our innovative technologies.”

Also included in the project scope is a two-year contract to supply additional long-life air filters (Merak Long Life Filter, MLLF) for the TMB metro fleet. Similarly, Merak will test prototypes of a digital feature for automatic air quality detection (Air Quality Index) in the trains, which will make it possible not only to monitor the real-time behavior of the climate control systems in operation, but also to react to specific situations by, for example, regulating the supply of fresh air to individual compartments. The extensive retrofit covers TMB's 5000, 6000 and 9000 vehicle series and is being carried out by Knorr-Bremse's RailServices unit in Spain. The total order value for the solutions already installed and the future supply contract is in the low single-digit million-euro range.

Caption 1: Knorr-Bremse's subsidiary Merak is equipping 585 metro cars operated by Transports Metropolitans de Barcelona (TMB) with solutions for safe, clean air. | © TMB

Knorr-Bremse (ISIN: DE000KBX1006, Tickersymbol: KBX) is the global market leader for braking systems and a leading supplier of other rail and commercial vehicle systems. Knorr-Bremse's products make a decisive contribution to greater safety and energy efficiency on rail tracks and roads around the world. About 29,500 employees at over 100 sites in more than 30 countries use their competence and motivation to satisfy customers worldwide with products and services. In 2020, Knorr-Bremse's two divisions together generated revenues of EUR 6.2 billion. For over 115 years, the company has

been the industry innovator, driving innovation in mobility and transportation technologies with an edge in connected system solutions. Knorr-Bremse is one of Germany's most successful industrial companies and profits from the key global megatrends: urbanization, sustainability, digitization and mobility.

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