

## Press release

## Knorr-Bremse's eCUBATOR innovation unit pursues e-mobility mission with enhanced objectives

- eCUBATOR acts as a global, cross-system e-mobility hub for Knorr-Bremse's customers and core organization
- Innovative, efficient and scalable technologies will help boost the "zero emissions" trend
- Focus on new growth areas associated with ZEVs (zero-emission vehicles)

**Munich, October 13, 2023 –** Knorr-Bremse, the global market leader in braking systems and a leading supplier of other rail and commercial vehicle systems, has announced that the eCUBATOR innovation unit set up in 2020 will continue to operate beyond 2023.

Over the last three years, around 60 e-mobility experts have been developing innovative, intelligent solutions for electrically powered commercial vehicles, both in Knorr-Bremse's existing areas of business and in newly relevant ones. Many of the market-driven products created by the Air Supply, Brake Control and Wheel End departments can now be transferred to Knorr-Bremse's core organization. In the future, the innovation unit will focus even more intensively on new areas of business associated with zero-emission vehicles (ZEVs), which offer Knorr-Bremse excellent opportunities for growth. A key aspect of eCUBATOR's activity is a cross-product, systems-based approach: By optimizing air supply and brake control systems – including adaptive brake blending – as well as high-redundancy onboard power supply and smart wheel-brake concepts, Knorr-Bremse can make an important contribution to future commercial e-vehicles in terms of energy recovery, vehicle integration and sustainability.

Energy management for braking systems is a good example: The low energy consumption of the latest e-compressors enables annual savings of up to 0.3 tons of  $CO_2$  per truck compared with efficient "on-engine compressor" models in common use. Compact solutions are also available for the wheel end – solutions that extend the space available for installing systems on the axle between the brakes by up to half a meter compared with today's standard solutions. This gives customers much more freedom to integrate e-drives with axles or install additional battery capacity.

The eCUBATOR team of experts will be available to international customers and new players in the commercial e-vehicle sector, ready to find answers to issues surrounding new e-architectures. To ensure that customers' requirements are implemented as efficiently as possible, the experts already work hand in hand with Knorr-Bremse's series development department. As part of this strategic realignment, the unit will spend more time focusing on future braking system solutions, as well as other ZEV-specific products and services for enhancing the operation of these zero-emission commercial vehicles.



In the words of Bernd Spies, Member of the Executive Board of Knorr-Bremse AG and responsible for the Commercial Vehicle Systems division: "Since we set up our e-mobility innovation unit nearly three years ago, we've focused our product portfolio on e-mobility while at the same time exploring new areas of business in depth. This means we're already ideally positioned for tomorrow's e-mobility needs, and aim to focus on generating further growth in the ZEV segment. We're helping to shape the long-term future of e-mobility by developing safe, reliable systems that align with vehicle manufacturers' electrification roadmaps by maximizing energy efficiency and minimizing noise and brake-dust emissions. And now we're taking our eCUBATOR to another level. With new areas of strategic focus, coupled with a global setup that enables us to respond fast and efficiently to regional legislation and market needs, we're expecting eCUBATOR to enjoy continued success well beyond 2023."

Dr. Jürgen Steinberger, Chairman of the Management Board of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, adds that: "We're in the midst of a huge transformation process, and we're responding by focusing 100 percent on zero emissions. In the future, eCUBATOR will address not just our existing product portfolio, but also other e-mobility-related areas of potential growth. This means that eCUBATOR is evolving into a true e-mobility hub that will make an essential contribution to our 'Zero Emission' mission."

Knorr-Bremse (ISIN: DE000KBX1006, ticker symbol: KBX) is the global market leader for braking systems and a leading provider of other systems for rail and commercial vehicles. Knorr-Bremse's products make a decisive contribution to improving safety and energy efficiency on rail tracks and roads around the world. Some 32,600 employees at over 100 sites in more than 30 countries use their competence and motivation to satisfy customers worldwide with products and services. In 2022, Knorr-Bremse's two divisions together generated global revenues of EUR 7.1 billion. For more than 115 years, the company has been the industry innovator, driving developments 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, Digitalization and Mobility.

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