

Press release

Successful launch: Knorr-Bremse rolls out latest generation of iTEBS X® electronic trailer braking system

- **Knorr-Bremse announces market launch of cutting-edge iTEBS X system**
- **Major product innovations in trailer's air suspension system (POM & CSM)**
- **Trailer brake and chassis control system features very smart, modular design**

Munich, December 19, 2023 – Knorr-Bremse has just announced the successful start of volume deliveries of the new iTEBS X system, the latest generation of the smart, electronic trailer braking system. The iTEBS X system will be progressively rolled out over the next few months. Buyers of the new electronic braking system include the world's leading trailer manufacturers.

Bernd Spies, Member of the Executive Board of Knorr-Bremse AG and responsible for the Commercial Vehicle Systems division, explains: "Knorr-Bremse has decades of experience of developing electronic braking systems for trailers. And now we're continuing this long history of success with the barnstorming launch of our smart iTEBS X system. The latest generation further refines the range of functions on offer and simplifies the connectivity of the individual braking system components, including the parking and maneuvering valve and air suspension. The iTEBS X system combines the electronic control unit, sensor technology and pneumatic brake control unit, as well as braking functions such as ABS and load-dependent braking, in a single, compact assembly – while remaining, as ever, a top-quality, ultra-reliable product. And of course the latest TEBS generation retains all the positive features that already characterized previous generations including, for example, the highly efficient pneumatic coupling design that makes factory installation and maintenance easier, as well as best-in-class harmonization of tractor and trailer brake control functions."

Andreas Wimmer, Member of the Management Board of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, adds that: "Knorr-Bremse is offering three versions of the iTEBS X system with different levels of integrated functionality, because not all vehicles need every possible function. Instead, customers will find that the system's modular design has many positive advantages, resulting in an optimized cost-benefit ratio tailored to their individual needs. The iTEBS X ECO variant is the perfect solution for the cost-sensitive volume market, while the iTEBS X PLUS model has even more electronic and pneumatic connectors. The iTEBS X LAC version takes this up another level, featuring an integrated lift axle valve for simplifying trailer layouts and saving on system costs."

The iTEBS X system can be installed on all common trailer and semitrailer types and used for any conceivable application. For the iTEBS X modulator, Knorr-Bremse uses the highly popular HDSCS connector system while offering a modular, plug-in design that distributes functions previously controlled via a single connector over multiple ports and sockets. This gives vehicle manufacturers even greater flexibility when selecting functions, because they can assign them more precisely but with minimal wiring differences.

New modular design of air suspension control system (POM & CSM)

As part of the new iTEBS X system, Knorr-Bremse has also redesigned the parking and maneuvering valve. The lift/lower controller has been integrated into the new "POM" parking and maneuvering valve, saving space and making the user interface more consistent. At the same time, the POM essentially keeps the tried and tested two-button design for engaging

and releasing the parking brake. A lever is used to control the air suspension's lift/lower function, with variants that can be locked into specific positions while lifting and/or lowering. Together with the Chassis Suspension Module (CSM) – another new feature – the POM can also be used with conventional air suspension; it is already compatible with Knorr-Bremse's proven iLvl system for electropneumatic air suspension.

The CSM also harmonizes the piping between conventional and electropneumatic iLvl air suspension in the trailer. This additional harmonization makes it much easier to design vehicle layouts and streamlines the manufacturing process. Moving the relief valve from the parking and maneuvering valve to the iTEBS X modulator helps to simplify the piping system. The iTEBS X system also supports the broad range of benefits associated with iLvl air suspension, such as the user-friendly implementation of a second ride height.

Alongside a smart service concept for workshops, the latest generation of iTEBS X products includes a new, cloud-based configuration platform that supports a future-proof diagnostics strategy while taking new cybersecurity requirements into account. Finally, vehicle manufacturers who adopt the new Knorr-Bremse iTEBS X system can be sure of complying with upcoming legal requirements for trailers.

About Knorr-Bremse

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.

Media contact:

Simon Basler | Spokesperson Truck Mobility | Knorr-Bremse AG
T +49 (0)89 3547 1498; E simon.basler@knorr-bremse.com