

Press Release

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IAA Commercial Vehicles 2018: Knorr-Bremse's strategy and product offensive on the industry's megatrends very well received by customers

- Broad range of market-led solutions to challenges facing commercial vehicle sector
- Island exhibits on market megatrends prove strong attractions
- Partnership with Continental on first cross-brand system solution for highly automated driving in commercial vehicles

Munich, October 17, 2018 – In line with the motto “Shaping tomorrow’s transportation. Together.” at the IAA in Hanover, Knorr-Bremse, the global market leader for braking systems and a leading supplier of other rail and commercial vehicle systems, showcased its product offensive for the transportation sector in an interactive and focused display of concrete answers to current and future challenges facing the commercial vehicle industry.

In the words of Dr. Peter Laier, Member of the Executive Board of Knorr-Bremse AG responsible for the Commercial Vehicle Systems division: “Our motto strikes to the heart of current developments. The transportation sector is caught up in rapid change. Traffic safety, connectivity, emissions reduction & electric mobility, as well as automated driving are the megatrends that are shaping our market. In each of these areas we presented the new system solutions that we are developing in close collaboration with our customers. As a systems partner we were able to demonstrate how we create our system solutions through the intelligent integration of components and subsystems, thereby generating added value for our customers. In this we take our lead very specifically from the different competitive conditions that exist in the various markets around the world. Summing up, Laier says: “For all the great opportunities that the latest technologies now offer us, in our line of business safety and efficiency take top priority and our development activities are focused accordingly. The high levels of interest and the feedback we receive from our customers tell us we are on the right track. All of which provides an outstanding foundation for our future business activities.”

At the heart of the company’s presentations was the island exhibit on the topic of **Traffic Safety** for trucks and trailers. The highlights here included the two new disc brake generations SYNACT® and NEXTT®, as well as the new Global Scalable Brake Control system (GSBC). All three systems attain a new level of efficiency, but that’s not all. GSBC also provides the platform for the many driver assistance systems of the future as well as for highly automated driving.

On the topic of **Connectivity**, visitors showed strong interest in the modular and cross-brand fleet management system ProFleet Connect; the trailer app iTAP and the event-based video system SafetyDirect. The remote diagnostics and predictive maintenance scenarios presented also drew a great deal of attention.

The **Emissions Reduction & Electric Mobility** island exhibit proved a magnet for many visitors. The large number of solutions presented by Knorr-Bremse underlined just how many different factors impact on achieving a marked reduction in emissions in the road transportation sector. These include components such as the new clutch actuator CCA Plus, with integrated all-mechanical wear adjuster and the electrically driven screw-type compressor. One solution that points the way forward is the In Motion Charging (IMC) con-

cept. With this technology, the vehicle charges the battery while traveling under overhead lines and covers sections of route without overhead lines in battery-powered mode like a battery electric vehicle (BEV). For urban bus operators, IMC combines the advantages of a small and thus relatively low-priced battery with balanced energy requirements across the day as a whole.

At the large-scale touchscreens on the **Highly Automated Driving** island display, visitors were able to experience the different challenges facing commercial vehicles and see how Knorr-Bremse is responding to them. Autonomous driving in commercial vehicles will be gradually brought to market based on current and future driver assistance systems.

Highway Pilot live: autonomous and fail-operational

In the outdoor area at the IAA, a pre-series vehicle from Knorr-Bremse demonstrated what an autonomous vehicle is already capable of today. Driving fully autonomously, the truck combined the Autonomous-Yard-Maneuvering solution first presented by Knorr-Bremse in 2016 with a Highway Pilot system, clearing the way for further automated freight transportation within and between individual hubs (hub-to-hub transport). The semitrailer rig featured 360-degree environment perception, providing the basis for automated evasive and overtaking maneuvers on multi-lane roads. The “fail-operational” architecture of the system as a whole ensures that the vehicle remains maneuverable even if critical components such as the steering were to fail. The New Mobility World live arena in Hanover hosted demonstrations of both automated evasive action and overtaking maneuvers, as well as of the backup role of the braking system in the event of a steering system failure. With the steering deactivated, the truck steered round an obstacle by selectively braking individual wheels and continued smoothly on its way.

Looking ahead, Dr. Laier says: “Above and beyond our concrete system solutions, we have provided impressive proof that we are ready to face the future. The partnership with Continental that we announced at the IAA met with an exceptional level of interest. It is the first partnership of this kind in the commercial vehicle sector that puts in place the prerequisites for complete systems for highly automated driving from a single source. The presentation of our first joint project, a platooning demonstrator with vehicles from different manufacturers, is planned for early 2019.”

Interactive, 3D and augmented presentation of solutions

With a combination of the latest system components, big touchscreens and interactive 3D animations, Knorr-Bremse set a benchmark at the IAA. One star location here was the pavilion in the outdoor area, where the focus was on the trailer and aftermarket sectors in line with the motto “The Trailer Experience – featuring TruckServices“. Visitors were able to compare three generations of trailer EBS systems, and click their way through multimedia presentations of various application scenarios. Animations provided rare insights into the hardware, while augmented reality enabled customers to dive deep into the future of trailer manufacturing.

Caption 1: The four megatrends of the commercial vehicle industry – safety, connectivity, emissions reduction & electric mobility, and automated driving – provided the framework for Knorr-Bremse’s presentations at the 2018 IAA. At the heart of things: the Traffic Safety island exhibit. | © Knorr-Bremse

Caption 2: Visitors benefited from informative multimedia presentations illustrating Knorr-Bremse’s strategy and solutions for the industry megatrends. | © Knorr-Bremse

Caption 3: The driverless truck: In the outdoor area, the Highway Pilot from Knorr-Bremse demonstrated just what an autonomous vehicle is already capable of. | © Knorr-Bremse

Knorr-Bremse is the global market leader for braking systems and a leading supplier of other safety-critical 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. For more than 110 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, eco-efficiency, digitization and automated driving.

Approximately 29,000 employees (per June 30, 2018) at over 100 sites in more than 30 countries use their competence and motivation to satisfy customers worldwide with products and services. Localization is a central focus of Knorr-Bremse's strategy. Knorr-Bremse delivers braking, entrance, control and auxiliary power supply systems, HVAC and driver assistance systems for rail vehicles, as well as braking, steering, powertrain and transmission control solutions, and driver assistance systems for commercial vehicles.

In 2017, Knorr-Bremse's two divisions together generated revenues of EUR 6.2 billion (IFRS). A comprehensive aftermarket & services business with high entry barriers gives these revenues increasingly cyclically independent stability. The company benefits from strong, entrepreneurial and experienced management. Technical excellence, reliability, passion and responsibility are deeply embedded in its corporate culture.

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