



# Bremspunkt



THE CUSTOMER MAGAZINE OF KNORR-BREMSE  
COMMERCIAL VEHICLE SYSTEMS  
ISSUE 2 | SEPTEMBER 2018

## IAA AND AUTOMECHANIKA

Knorr-Bremse at the major trade fairs

## INTERVIEW WITH DR. PETER LAIER

"We are mechanical and digital technology systems suppliers"

## TRAILER MANUFACTURER D-TEC

An interesting change of perspective

**KNORR-BREMSE**



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**Bernd Spies,**  
Chairman of the Management Board  
of Knorr-Bremse Systeme  
für Nutzfahrzeuge GmbH

## EDITORIAL

Dear Reader,

Along with traffic safety, the four megatrends in the commercial vehicles sector are connectivity, emissions reduction, electric mobility and automated driving. These are the key challenges facing our industry. By addressing them, we can move closer to the vision of highly efficient, accident-free transportation. As a leading innovator in these areas, Knorr-Bremse will be showcasing its future-oriented products and service concepts at 2018's major trade fairs – Automechanika in Frankfurt and IAA Commercial Vehicles in Hanover.

At Automechanika, our aftermarket specialists from Knorr-Bremse TruckServices will be presenting new service solutions for original Knorr-Bremse products such as the SN7 HP disc brake. In addition, they will share an interactive vision of the future of commercial vehicle aftermarket services. They will also show how our remanufactured EconX® products can help to reduce CO<sub>2</sub> emissions.

At the IAA in Hanover, our booth in Hall 17 will devote a separate section to each of the four megatrends. A combination of exhibits and interactive animations will provide visitors with a varied and in-depth insight into how our systems work. In the IAA demonstration area, we will be showcasing a prototype truck capable of fully autonomous freeway driving – including overtaking maneuvers – in a demonstration that really brings the technology to life. In addition, at our outdoor area D107, a D-tec CC 2030 container trailer tilted to one side will give a striking demonstration of how our products work together in a vehicle. You can read more about D-tec in this issue's customer feature.

Back in the present, our current product range is also earning the highest acclaim. Knorr-Bremse won the best brake brand award for the 13th time in a row in the ETM Verlag readers' poll – a major accolade within the industry.

I hope you enjoy both the trade fairs and this issue of Bremspunkt.

Yours sincerely,

A handwritten signature in blue ink that reads "Bernd Spies". The signature is written in a cursive, flowing style.

Bernd Spies



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## STEFFI HALM AND JOCHEN HAHN ARE CURRENTLY GERMANY'S TOP TRUCK RACERS.

The two drivers got together in Jochen Hahn's workshop to chat about the current season, why truck racing is so fascinating, and being a woman in a man's world.



Steffi Halm came fourth in the overall standings in 2016 and 2017.

### **Steffi, we're halfway through the season. How has it gone for you so far?**

There have been ups and downs (*laughs*). Unfortunately, this year we haven't yet managed to perform consistently through an entire race weekend. Obviously, the highlight for me was my victory at the Nürburgring Truck Grand Prix.

### **And how have things been for you, Jochen?**

I'm incredibly happy. We prepared really well for this season – we did a huge amount of testing. We received outstanding support from all our partners, including Knorr-Bremse. And it paid off from the very start when I took pole position and won the race in Misano. The Nürburgring was the only venue where I unfortunately couldn't perform to the level I hoped.

### **Was the Nürburgring still the highlight of the season so far for you?**

For me, the highlight is always the race weekend where I pick up the most points (*laughs*). But the Nürburgring is obviously the biggest event of the season. It's my home Grand Prix, and you can even hear the fans from inside the driver's cab. It's an absolutely huge event.

### **Steffi, you also race in other motorsport events. What are the differences between truck racing and other types of motor racing?**

One key difference is the size of the trucks. The feel of the vehicle is completely different – your sitting position, your height off the ground, the lack of a hood. When I started, I was often reluctant to take the bends fast because I thought the truck was bound to tip over.

### **Jochen, you've been truck racing for 18 years now and have never finished a season lower than sixth. What do you think your strengths are as a racing driver?**

Over the years, I've gained a vast amount of experience in truck racing and I'm sure that gives me an edge over my rivals. I've



Jochen Hahn has been in truck racing for 18 years.



simply developed an instinct for doing the right thing in different race situations. Anticipating what's going to happen next but still being aggressive when you need to is hugely important in our sport.

**What do you find particularly fascinating about truck racing?**

Making a huge race truck go fast. Knowing that sometimes I need to go slow in order to be faster in the end. That's what fascinates me. I also love the whole scene, the sense of being one big family, the friendship, the sincerity, despite the rivalries and duels when we're behind the wheel.

**Motor racing is regarded as a man's world. Have you encountered a lot of prejudice, Steffi?**

Not directly. Others have borne the brunt of it. Particularly when I was a teenager, my father would sometimes be told he shouldn't waste all that money on me, as it would never come to anything anyway. It became less common once I was a bit older and had established myself in the different racing categories thanks to my performances. I haven't had any more problems with that sort of thing in the past few years.

**Jochen, Steffi finished tenth in 2014, eighth in 2015 and fourth in 2016 and 2017. How long before she finishes the season above you?**

Steffi is really fast. But we still work together closely, here in the workshop too, and push each other to do better. I just need to keep improving every year, so I can maybe keep my nose in front. The day will come when Steffi finishes ahead of me, I just hope it's not till 20 years from now, when I retire (laughs).

## EconX® products help the environment

In the first six months of 2018 alone, Knorr-Bremse saved **945** tonnes of CO<sub>2</sub>-equivalent emissions through the production of industrially remanufactured vehicle components.

**120** That equates to the average annual CO<sub>2</sub> emissions produced by people in Germany.

We also saved almost **3.25** million kilowatt-hours of electricity, the same as the average annual consumption of more than **1,000** two-person households.

In addition, we were able to reduce the amount of material needed to make these products by **222** tonnes.

**40** That's the weight of around male African elephants.

### ALLTRUCKS POWERTRAIN GUARANTEE

Your truck's transmission gives up the ghost even though the vehicle is barely four years old and hasn't even done 300,000 kilometers. This everyday scenario for freight companies is no longer a problem thanks to the Alltrucks Protect powertrain guarantee from the Alltrucks workshop network. Alltrucks Protect cover can even be taken out after the standard warranty period and service contract have expired. It covers the entire powertrain for all applications for the big seven truck brands (and Fuso trucks of 7.49 tonnes and over). Eligible vehicles can be up to seven years old and have a mileage of up to 1,050,000 kilometers. The product will initially be offered on the German market jointly by Alltrucks and Europ Assistance. Companies can take out cover for as little as 0.83 cents per kilometer or 69.25 euros per vehicle per month. Further product information is available at [www.alltrucks-protect.com](http://www.alltrucks-protect.com).



# "WE ARE MECHANICAL AND DIGITAL

DR. PETER LAIER, EXECUTIVE BOARD MEMBER OF KNORR-BREMSE AG, responsible for the Commercial Vehicle Systems division.

**Dr. Laier, what are Knorr-Bremse's highlights at this year's IAA?**

We will be unveiling our new SYNACT® and NEXTT air disc brakes to the public this year – that is a definite highlight. They feature a modular design, completely new internal mechanics, and the

mechanical ACR Active Caliper Release system for the brake pads that saves up to one percent on fuel – as confirmed by tests carried out by the TÜV. Optional sensors are also available. Our next-generation Global Scalable Brake Control (GSBC) system is another milestone that will be

on show at IAA Commercial Vehicles. GSBC will form the integration platform for a whole array of driver assistance and automated driving functions. Together with our steering systems, GSBC is a key module for the realization of automated driving in the commercial vehicle sector. We will be showcasing all our current capabilities in this field in the New Mobility World Live outdoor arena. Following on from our groundbreaking autonomous yard maneuvering demonstration at IAA 2016, this year we will be demonstrating the Highway Pilot function.

**It sounds like the main emphasis is on enhanced traffic safety and a plethora of automated functions. What do you see as the key trends?**

Along with traffic safety, the megatrends of emissions reduction, electric mobility, automated driving and connectivity are the defining factors of all our product ranges. All of these trends are geared towards the vision of completely accident-free transportation of passengers and goods, as well as helping to promote more efficient transportation. We are working closely with our customers to drive progress in these areas. At the IAA, we will be showcasing our latest solutions under the motto "Shaping tomorrow's transportation. Together."

**Automation is primarily about software and digital systems expertise. Is that one of Knorr-Bremse's core competencies?**

Absolutely! You can't have highly automated vehicles without integrated hardware and software. We can supply the braking and steering systems and provide the relevant systems expertise for automated driving – in other words, we



# TECHNOLOGY SYSTEMS SUPPLIERS"

have everything that determines the vehicle's direction.

As for electronic systems, we have a long track record of success. Since 2000, Knorr-Bremse has sold over two million ESP systems that ensure vehicle dynamic stability. Knorr-Bremse is the undisputed market leader for assistance systems in the US, and its solutions are also used by customers in Europe and Asia. In China, we are working with two of the world's largest commercial vehicle manufacturers to adapt these systems to local requirements. In short, we are mechanical and digital technology systems suppliers.

## **Who is Knorr-Bremse collaborating with in the field of automation?**

We are working on environment detection sensors with partners from the automobile supplier industry, for example. In order to deliver the most cost-efficient solution for our commercial vehicle customers, we are establishing development partnerships in this area and buying in any other fully functional systems we may require. We provide the specialist commercial vehicle know-how and adapt the systems accordingly. We also take care of integrating them in the vehicle and are responsible for the overall system.

## **How do you make sure that an automated 40-tonne truck doesn't go out of control if one of its digital control systems fails while it is traveling at full speed?**

Indeed, the real challenge is to develop intelligent redundancy concepts to back up all these exciting automated functions. These redundancy concepts are vital if a safety-related component fails while a truck is driving in automated mode. If this happens, it is essential to ensure that the vehicle can still be operated safely. It would be prohibitively expensive to duplicate all the safety-related components in case one of them fails. At the IAA, we will be showing how a modern braking system can even take over the function of a commercial vehicle's electronic steering system reliably. Our redundancy concepts combine cost-efficiency and excellent performance. Both are absolutely key to the successful development of highly automated vehicles.

## **What do you have in store for trailer manufacturers and aftermarket customers at the IAA?**

For the first time, we will be presenting everything to do with trailers and the aftermarket in a single display area. In the outdoor area, we will be inviting our

guests to join us on a tour of our product and service world. The focus will be on brake control and chassis management and our disc brakes – throughout a vehicle's entire life cycle.

## **What will you be focusing on at autumn's second major trade fair, Automechanika?**

We are systematically expanding our aftermarket business with Knorr-Bremse TruckServices. For instance, we will be presenting new service concepts for cost-efficient maintenance. We are also expanding our offering for wear parts to cover the entire life cycle of commercial vehicles. This includes both, our new original spare parts and our original remanufactured EconX® products. We are thus able to provide operators with what for them are the most cost-efficient spare parts solutions throughout the lives of their commercial vehicles. We call this Lifetime Efficiency. This is complemented by the Alltrucks full-service workshop concept. Established by leading automotive and commercial vehicle suppliers Bosch, ZF and Knorr-Bremse, the Alltrucks network now comprises some 500 workshops throughout Europe. We will be telling people about its service portfolio at our Automechanika booth.

*Dr. Peter Laier: "At the IAA, we will be showing how a modern braking system can even take over the function of the electronic steering system."*





## SHAPING TOMORROW'S TRANSPORTATION

**BIG CHANGES ARE COMING TO THE COMMERCIAL VEHICLES INDUSTRY.** Four megatrends are driving change within the sector. At IAA Commercial Vehicles in Hanover, Knorr-Bremse will be showcasing practical solutions and offering visitors a glimpse of the future.

Along with traffic safety, the four megatrends that will shape the transportation sector over the next few years are connectivity, emissions reduction, electric mobility and automated driving. In Hanover, Knorr-Bremse will be devoting a separate section to its new solutions for each of these four megatrends. Christoph Günter, Vice President Sales & Marketing for Trailers, Special OE & Agricultural Vehicles, is responsible for Knorr-Bremse's presence at the trade fair. "We will be bringing these themes to life in the four sections of our booth in Hall 17. Each section will feature its own mix

of hardware exhibits and animations. This means that for the theme of connectivity, for example, visitors will be able to choose their own application scenarios so that they can gain a comprehensive insight into how our systems work that is tailored to their particular requirements."

### **WE ENHANCE TRAFFIC SAFETY**

The "traffic safety" section will feature a range of products including two new generations of disc brakes for tractor vehicles

and trailers: the SYNACT® two-piston brake for trucks and the NEXTT single-piston brake for trailers and tractor vehicles with low axle loads. The mechanical ACR Active Caliper Release system that saves up to one percent on fuel, along with the modular design and completely new internal mechanics, is a particular highlight. The next-generation Global Scalable Brake Control (GSBC) will also be on show. Together with Knorr-Bremse's portfolio of steering systems, GSBC is a key module for the realization of automated driving.

**IAA**  
**Commercial Vehicles**  
Hanover, Sept. 20–27, 2018,  
Hall 17, booth A30 and  
outdoor area D107



**WE DRIVE  
CONNECTIVITY**

This section focuses on Knorr-Bremse's modular, cross-brand ProFleet Connect telematics system. The iTAP trailer remote control will also be on display, featuring a variety of different functions. One novel feature is that functions can now be individually programmed for customers, allowing the system to be tailored to the end user's applications.

**WE TARGET  
MINIMAL EMISSIONS**

With tighter statutory regulations on the horizon and the accompanying trend towards zero-emission drives, the electrification of individual components is of critical importance. Knorr-Bremse's portfolio spans everything from high-precision electric actuators to intelligent control systems and high-performance electric traction and on-board power supply systems for electric buses.

**WE PAVE THE ROAD  
TO AUTOMATED DRIVING**

Along with the components and system solutions required for driver assistance systems and automated driving, we will also be presenting redundancy concepts for highly automated driving that deliver the ideal mix of functionality, safety and cost-efficiency.

In the New Mobility World Live outdoor arena, Knorr-Bremse will also be showcasing a prototype truck equipped with the "Highway Pilot," capable of fully autonomous freeway driving, including overtaking maneuvers. Following on from the demonstration of a vehicle capable of fully autonomous yard maneuvering in closed yards in 2016, the 2018 prototype constitutes another milestone for Knorr-Bremse on the road to highly automated driving.

**TRAILERS AND AFTER  
MARKET GET THEIR OWN  
OUTDOOR AREA**

This year, for the first time, Knorr-Bremse will be presenting everything to do with trailers and the Knorr-Bremse Truck Services aftermarket business in a single display area. According to Günter, "There are three different ways in which we will provide visitors to our outdoor area D107 with an insight into the technological advances: a direct comparison between our different brake and control system product generations, a container chassis tilted to one side so you can see all the latest components, and a series of iPad animations that offer a glimpse into the internal workings of individual components." The relevant aftermarket solutions will also be presented.



*Christoph Günter and his team are presenting a range of products at the IAA, including the NEXTT trailer brake.*



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# OEM, VISIONARY, AND MUCH MORE BESIDES

THIS YEAR, AUTOMECHANIKA CELEBRATES ITS 25TH ANNIVERSARY IN FRANKFURT. Knorr-Bremse TruckServices will be showcasing new product and service solutions and presenting a vision of the service market of the future.

**automechanika**  
FRANKFURT

“Our goal is to provide efficient service solutions for all vehicles – new and old, standard and special vehicles,” says Alexander Wagner, Knorr-Bremse’s Vice President of Sales & Marketing Aftermarket EMEA. “We will continue to expand our brake and powertrain portfolio with products that live up to our familiar OE quality standards.” Knorr-Bremse TruckServices will be presenting new solutions for all four parts of its business: Genu-

ine New, EconX®, Service Parts and Services.

## **GENUINE NEW – NEW SERVICE CONCEPTS FOR COST-EFFICIENT MAINTENANCE**

TruckServices will be unveiling service products for the high-performance version of the latest disc brake for heavy-

**automechanika**

Frankfurt, Sept. 11–15, 2018,  
Hall 3.0, booths E91 and G98



### **ECONX®: GENUINE-ECONOMICAL-SUSTAINABLE**

In the EconX® display area, the new radial version of the SB7 disc brake will be of particular interest to urban bus fleet operators. In addition, the EconX® TEBS4 now provides an additional service solution for trailers. What makes this special is that the complex mechatronic remanufacturing process delivers a value-based solution for older trailers, as this system has no longer been used in original equipment for several years. TruckServices will be demonstrating sustainability by giving visitors an insight into their lifecycle analysis, showing how they reduce these products' CO<sub>2</sub> emissions, for example.

Knorr-Bremse TruckServices will be showcasing its special industrial remanufacturing expertise not only in its own products but, for the first time, also in compressor and electronic clutch actuator products from other market players.

### **SERVICE PARTS: EVERYTHING YOU NEED FOR COST-EFFICIENT MAINTENANCE AND REPAIR**

For the first time drum brake linings, disc brake pads and brake discs for systems where the original equipment is made by companies other than Knorr-Bremse will be presented. This underlines Knorr-Bremse

TruckServices' goal of offering customers a comprehensive range of brake and powertrain solutions that live up to the usual Knorr-Bremse quality standards.

### **SERVICES: FLEET MANAGEMENT SOLUTION, TOOL KITS AND MUCH MORE**

Visitors to the "service box" will learn about Knorr-Bremse's multi-brand Profleet Connect telematics system. For workshop mechanics, new tool kits for disc brakes and compressors with clutch, together with a range of new helpful tools will be shown.

### **SERVICE VISION: TODAY, TOMORROW & BEYOND**

TruckServices will take visitors on a digital journey through time. Using an interactive large-screen projection, the on-site staff will provide visitors with a visionary insight into the future development of the Knorr-Bremse TruckServices business. This year, the TruckServices booth will once again be hosting the Alltrucks full-service workshop system. Alltrucks will be telling people about the expanded service portfolio of this network comprising some 500 workshops throughout Europe.



*Special tool with bayonet ring for the maintenance of air dryer cartridges, in operation.*

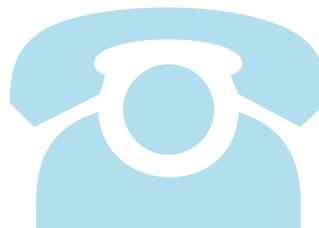
duty commercial vehicles, the SN7 HP, as well as for the EL 40 mechatronic transmission control module. From hardware and tool kits to wear material and repair documentation, visitors will be able to gain a detailed insight into how TruckServices can assist workshops with vehicle servicing.

## NEW HOTLINE NUMBERS

The new telephone number for Knorr-Bremse TruckServices' Technical Hotline is 00800 1905 2222.

The hotline is open Monday to Friday from 8 a.m. to 5 p.m. for expert support covering our entire product portfolio. If your provider doesn't support toll-free numbers, you can also call the hotline on +49 (0) 3362 9437 012. Prompt support is also available via e-mail. Contact us at [technic.d@knorr-bremse.com](mailto:technic.d@knorr-bremse.com).

For expert support regarding your order, call the Knorr-Bremse TruckServices Sales Hotline during the same hours now on 00800 1905 1111 or +49 (0)3362 9437 011.



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## BRAKE ACTUATORS FOR BPW AXLES WITH DISC BRAKES

Knorr-Bremse TruckServices is expanding its range of brake actuators with a series suitable for BPW axles with disc brakes. Eight reliable and durable models are available, comprising four OBC-type brake chambers and four NG4+-type spring brakes.

Knorr-Bremse's brake actuators have been ensuring safe braking in all kinds of vehicle types for decades, and we are still continuously developing them today. The spring brakes and brake chambers are available for a range of truck, bus and trailer applications, and for both disc and drum brake systems.

One of the outstanding features of the OBC and NG4+ spring brake is the closed air system which prevents contamination of the spring mechanism. An internal bellows also enhances the interface

between brake actuator and disc brake. Lastly, the extremely durable parking brake impresses with the high level and long-term stability of its output force.

We are already planning to extend the range to other applications, such as including a compressed air connection extension.



*One for all: the NG4+ diaphragm brake cylinder (similar to pictured unit).*

# THE TRANSMISSION NERVE CENTER



*The EL 40 transmission control module comprises three easily replaceable modules.*

The EL 40 mechatronic transmission control module for medium-duty and heavy-duty truck and bus applications features a modular design that makes it easy to repair. This mechatronic transmission control module is available for commercial vehicle brands including MAN, Iveco and DAF.

Knorr-Bremse's mechatronic transmission control module features a modular design comprising electronics, valve and sensor modules. This modular approach enables easy and selective maintenance of the individual modules, since the functional units can be swapped as required.

One particular highlight is the electronics module. Its connectors are fully integrated in the two-piece housing cover, with no need for an external cable harness. For servicing purposes, the integrated connec-

tors release and engage automatically, allowing the modules to be replaced quickly and easily without any special tools, thereby minimizing the amount of time spent in the workshop. The valve module integrates all the solenoid valves needed to control the clutch and shift actuators. An integrated sensor provides the transmission control unit with information about the supply pressure. The sensor module contains sensors for recording the key shift cylinder positions, as well as oil temperature and countershaft speed.

## NEW ECONX® PRODUCTS

Knorr-Bremse's EconX® portfolio continues to grow. Before the end of the year, we will be bringing out our first industrially remanufactured 2-cylinder compressors for DAF (442 cm<sup>3</sup>) and Volvo (704 cm<sup>3</sup>). And there is even more to come. We will subsequently



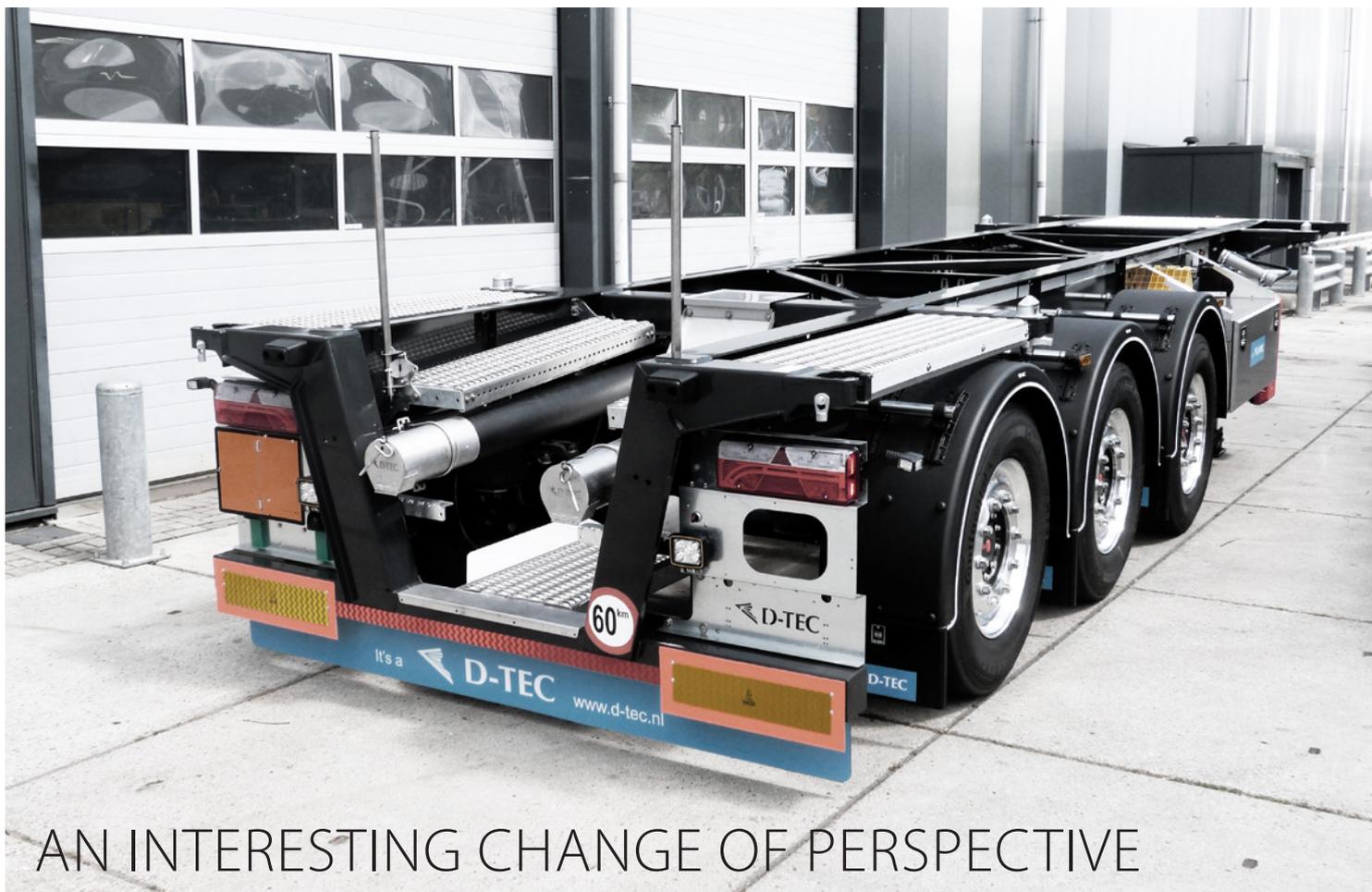
be expanding our portfolio still further, with a 2-cylinder compressor for DAF applications (352 cm<sup>3</sup>), plus three single-cylinder compressors (318 cm<sup>3</sup>/352 cm<sup>3</sup>) and three 2-cylinder compressors (636 cm<sup>3</sup>) for Volvo applications. In addition to the compressors, we will also be bringing out a new version of the EconX® clutch actuator. This industrially remanufactured product is a sustainable and cost-efficient service solution aimed predominantly at older Daimler vehicles (incl. the Actros family).

*The products in our EconX® portfolio are meticulously tested by Knorr-Bremse personnel.*

### UP2DATE:

- Brake Disc Measuring Gauge  
Doc. No.: Y306333
- Actuator Maintenance Gauge  
Doc. No.: Y306344
- NG4+ Double Diaphragm Spring Brake Actuators Trailer Applications  
Doc. No.: Y320199
- EconX® Brake Calipers  
Doc. No.: Y316572
- Brake Pads & Brake Discs  
Doc. No.: Y322241

The documents are available for download at [www.knorr-bremseCVS.com](http://www.knorr-bremseCVS.com).



## AN INTERESTING CHANGE OF PERSPECTIVE

AT THE 67TH IAA COMMERCIAL VEHICLES IN HANOVER, KNORR-BREMSE WILL BE WOWING THE CROWDS WITH AN UNUSUAL STAND DESIGN AT THE OUTDOOR AREA. A D-Tec trailer tilted on its side will provide visitors with an unobstructed view of the braking system and other products. This was no run-of-the-mill project.

Kesteren in the Netherlands. Nestled between the Nederrijn and Waal rivers, this town of 5,000 inhabitants is best known for its fruit farms and tree nurseries. But tucked away on the east side of town is an industrial park that is home to the production facility of one of the trailer manufacturing industry's true innovators. D-Tec makes container, tank and tipper trailers, with a strong focus on cost-efficiency. "Our trailers are the lightest in the world. They are also low-maintenance and inexpensive to repair," says Cor van Bergen Bravenboer, Operational Manager of the company, which was founded almost 60 years ago.

It has some 300 employees building truck trailers on the production line at its 23,000 m<sup>2</sup> facility. And they do so almost entirely themselves. "We do everything in-house: the development, laser cutting, iron bending, welding, machining and finishing. We do it all ourselves – like a cottage industry, just

*Operational Manager Cor van Bergen Bravenboer is proud of the fact that D-Tec's production facility does almost everything in-house.*





Outside and inside D-Tec's new, state-of-the-art production facility that provides an ideal work environment for the company's employees.

on a slightly bigger scale," grins the company's boss. Over 70 percent of the company's output now goes to the export market, for a wide range of applications. The flexitrailers are especially innovative – sliding parts allow them to be adapted to a variety of different requirements. "We have patented this system, much to our competitors' dismay," says van Bergen Bravenboer.

## NEW PRODUCT FEATURING FULL COMPLEMENT OF KNORR-BREMSE EQUIPMENT ON SHOW AT IAA

Available from September, the CC 2030 Container Carrier is a completely new product suitable for 20 ft and 30 ft tank containers. This trailer was developed primarily for the chemical industry. One of the first CC 2030s will be on show at the IAA's outdoor area at Knorr-Bremse's Trailer Experience featuring TruckServices. Eric Fritzsche, Head of Sales & Marketing for Knorr-Bremse's Trailer & Special OE business in Northern Europe, decided to pay a visit in person in order to gain a first-hand impression. "We've been in touch with each other for around five years. It all began as a normal customer-supplier relationship," says Fritzsche. Both parties are now looking to strengthen their partnership.

"That's one of the reasons that we decided to feature a D-Tec trailer innovatively showcasing a full complement of our products at the IAA's outdoor area", explains Fritzsche. The unusual thing about the display is that the trailer is tilted on its side. "This gives you an interesting change of perspective, because it allows you to see the underside of the vehicle. It means we can show industry visitors exactly where our products are installed on an actual vehicle," he adds. The display will feature products such as the TEBS G2.2 Premium brake module, the iLvl electronically-

controlled pneumatic suspension, the ST7 air disc brake, Ramp-Docking-Control components and the TPMS tire pressure monitoring system.

## WORKBENCHES AND AUGMENTED REALITY

In addition to the side-tilted trailer, the outdoor area at the IAA will also feature workbenches with Knorr-Bremse products. This is where Knorr-Bremse TruckServices will be showcasing brake control and chassis management and disc brake solutions for the entire vehicle life cycle. Tablets running an augmented reality app will lay bare the inner workings of certain components. "It's a very modern form of presentation that promises to be a lot of fun," says a delighted Eric Fritzsche.



D-Tec's new flagship CC 2030 trailer – featuring Knorr-Bremse braking technology – will be on display at the IAA.



# Thirteen... lucky for some!

THANK YOU FOR VOTING US YOUR WINNER FOR THE 13TH YEAR IN A ROW. Ultimately, our high-quality braking systems must prove their worth on the road. That is why we are particularly delighted when we win an award from the people who use our systems every day – you! Knorr-Bremse was voted best commercial vehicle brake brand for the 13th year in succession. Thank you!

| [www.knorr-bremseCVS.com](http://www.knorr-bremseCVS.com) |



**KNORR-BREMSE**

