



16. August 2022

Krone: “Mission Beyond Zero”

Sustainability, digitalization, automation, electrification – IAA première for the Krone eTrailer At the IAA Transportation 2022 in Hanover (20/09/22–25/09/2022), Krone will be presenting a total of eleven exhibits. Innovative prototypes connected to the megatrends of “digitalization, automation, sustainability and electrification” can be seen at the Krone trade fair stand C40 in Hall 27 as well as right next door at the Krone stands in the outdoor area (N41, Q41, P43). The trade fair exhibit will be supplemented with fully equipped Krone trailers that are ready for the rough conditions of the transport business, such as the all-round Profi Liner flatbed semitrailer and the Dry Liner STG dry freight box body semitrailer – packed with sophisticated technology. **eTrailer: save 20 to 40 percent CO2 while driving**

“Mission beyond zero”: through their concept presented at the IAA, Krone is going one step further, proposing the motto “Zero emission”. The sustainable trailer technology from Krone is even capable of reducing fuel consumption and therefore also the CO2 emissions of semitrailer tractors by 20 to 40 percent. Krone demonstrates the extent to which electrified trailers can influence the sustainability of fleets at stand C40, with the eCool Liner and eMega Liner prototypes, developed by Krone in collaboration with the start-up company Trailer Dynamics. A powerful e-axle is at the heart of the innovative technology, which supports the drive of the semitrailer tractor and also recovers braking energy through recuperation. The energy carried in the eTrailer is also enough for long hauls of more than 500 km. The Krone eTrailers can be used with any conventional semitrailer tractor with a plug-and-play process. Moreover, the eLiner technology in conjunction with BEV tractor units contributes to increasing the range of a fully electrified semitrailer on long hauls of more than 500 km.

Thanks to the eCool Liner with Celsineo unit, Krone is taking another step towards sustainability: In the innovative refrigerated semitrailer, the fully electric Celsineo cooling system ensures that the sensitive cargo is cooled without emissions in closely coordinated collaboration with the electrified drive. Celsineo, a joint brand from Krone and Liebherr, created an entirely new class of cooling systems based on the principle of three plug-and-play cooling modules with the same design, which is now also available in a fully electric version. The 800 V high voltage system in the Krone eCool Liner not only supplies the fully electric Celsineo cooling system, which has an average power requirement of 15 kW in

the freezing range, it also supplies the electric drive train of the eTrailer. The Krone eCool Liner represents another version for sustainable refrigerated transport with the fully electric Carrier Vector HE 19 cooling system. Here, the second trailer axle in the form of a recuperation axle supplies the battery pack installed longitudinally. Through intelligent control electronics, it supplies a fully electric cooling system, so that this Cool Liner runs entirely without a diesel unit and the cooling system emits no CO₂ or particulate matter. Another sustainable effect is the lower noise emissions of the purely electrically run cooling system, which also enables night-time deliveries. **Digitalization at Krone: from “Smart Capacity Management” to “Self Service”**

When it comes to the “Digitalization” megatrend, Krone is presenting the “Krone Intelligent Transport Solutions” (KITS) at the IAA Transportation 2022 with a series of new technologies and services. KITS introduces new standards and highlights its strategy, as a manufacturer-independent platform, to easily manage different telematic systems through only one portal solution. The new standard interface is open to all systems, both incoming and outgoing – e.g. for third-party providers such as real-time visibility platforms (RTV), fleet management and transport management systems (TMS). With the practical “self-service” function, simple and transparent data transmission to all connected systems is even more convenient.

More and more sophisticated services from Krone Intelligent Transport Solutions pave the way for the additional “Automation” megatrend. Thanks to the collaboration with the partner Shippeo, Krone was the first trailer manufacturer to provide ETA predictions (Estimated Time of Arrival) in real-time, as part of the scope of their telematic solutions. Another example of progressive automation is the intelligent Krone Smart Capacity Management load compartment detection, now ready for series production, which detects the load capacity and enables more efficient use. The basic level SmartScan surveys the load compartment per camera. In the Krone Telematics Portal, both the algorithm and the camera image for each trailer, are shown for optimum control. As a result, the dispatcher can track the trailer in real-time and see how many parking spaces are currently occupied. The next expansion level of the “SmartLoad” smart capacity management evaluates the SmartScan images with artificial intelligence and thus automatically records the available cargo space. This prevents unladen trips and also improves the carbon footprint. The Krone Smart Capacity Management can also be integrated in transport management systems and supports fully automated filling of available capacities. Moreover, SmartLoad automatically detects insufficient load securing as well as shifted and possibly damaged loads. Another digital innovation is the autonomous “Krone Smart Collect Solar” telematics unit, which operates autonomously and maintenance-free thanks to solar energy. There are also new practical functions in the Krone TPMS (Tyre Pressure Monitoring System), in which different TPMS sensors, as they are found in mixed fleets, can be integrated. Furthermore, the new Krone TPMS takes account of extreme temperatures, as observed in midsummer and in very cold regions, for the alarm recommendations. This prevents unnecessary alarms from being triggered and disturbances in the transport process. **Automation: the intelligent “Box Liner Automatic” container Chassis**

With container trucking, it is often unclear ahead of time which container size must be carried. The driver is usually only given this information shortly before loading, and they must then adapt their container chassis accordingly, involving numerous steps, as quickly as possible. Under the “Automation” guiding theme, Krone is breaking new ground here with the innovative concept vehicle Box Liner eLTU 50 Traction Automatic – in an environment that is already increasingly characterised by automated container transporters, such as the port of Hamburg.

The key feature of the innovative Box Liner Automatic is the option of automated pre-settings. The driver can conveniently and safely initiate the setting of the container chassis for the container to be transported by pressing a button on the remote control from the truck cab. Compared to the standard procedure, the new Box Liner Automatic technology from Krone represents a quantum leap. All of the previously required manual activities performed by the driver to adjust the container chassis are now a thing of the past. For the driver, this not only represents physical relief, but also significantly improved safety. At the same time, faulty setting of the chassis is avoided. Last but not least, the new automatic function also positively influences the transshipment speed: For the port drayage, the efficiency is expected to increase by about ten percent. **The Krone ‘Denkfabrik’ (Think Tank) in Hanover: a platform for start-ups and discussion**

In addition to numerous innovations, visitors to the IAA Transportation can expect a varied and multi-

faceted programme with the “Krone Denkfabrik”. The Denkfabrik is part of the Krone stand in Hall 27. Within the Denkfabrik, Krone offers start-ups the opportunity to present and exchange their own ideas, therefore creating an innovation and communication platform. Every day of the trade fair, entertaining dialogue formats take place every hour: two- to three-minute start-up pitches with subsequent question and answer sessions, workshops or the “Tech-Talk” with discussion rounds on topics such as the eTrailer or Smart Capacity Management digital load compartment monitoring using cameras. Other formats include the “Deep Dive” with closer views on Krone products and the “Politics Talk” with well-known participants such as VDA president Hildegard Müller, BGL Chairman of the Board Prof. Dirk Engelhardt or Bernard Krone, Chairman of the Supervisory Board of the Krone Holding. Those who cannot visit the Krone trade fair stand in person in Hanover can still find out more via social media. Krone TV publishes posts from the IAA Transportation 2022 every day, and a daily podcast provides deeper insights into the Denkfabrik and the topics discussed there. Moreover, the www.krone-trailer.com website continuously provides current news during the trade fair. **Visit us at the Krone trade fair stand!**

IAA Transportation 2022 | 20.09.–25.09.2022 |

Hanover Fair | Hall 27 | Stand C40 | outdoor area N41, Q41, P43 Information for the media

Krone Tea Time, Monday, 19.09.2022, 2:00 - 4:00 pm | Press days: 19 + 20 September 2022



If you have any questions, please do not hesitate to contact me.:

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