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PLENTY OF SPACE FOR YOUR CARGO. THE RIGHT TRAILER FOR EVERY CHALLENGE.

We offer you optimal solutions for all transport requirements. Discover our products which set real standards in terms of innovation and quality. A range of practical, user-friendly trailers which ensures long term value.

Always a good solution – the right vehicle for every application: From the Profi Liner, an all-rounder, to specialist vehicles such as the Paper Liner or Coil Liner, we offer you semi-trailers for every situation and with different specifications. Furthermore, we offer maximum volume in our Mega Liner, special load securing equipment for our Paper or Coil Liner. KRONE knows what transport professionals need and therefore takes practical details into account.

The van-type semi-trailers from KRONE are designed and built by professionals for professionals. With our Dry Liner and Cool Liner, you are ideally prepared for all refrigerated, fresh or dry goods transport. From transporting flowers, through meat hanging and double-deck, to multi-temperature insulating partitions, there are also numerous variants to choose from. Sturdy and multi-functional – these are the characteristics of KRONE's container chassis and swap bodies. Practical, versatile and easy to use – these criteria are found in both the chassis and the swap-bodies. And last, but not least, aerodynamics feature in each KRONE trailer design.

Trailers and superstructures round off the diverse product range of KRONE. Simple and safe handling, tested components, first-class manufacturing as well as the long-term protection provided by the cathodic dip and powder coating make KRONE vehicles an investment which pays off in every case.









THEY REALLY HAVE LOTS OF EXTRA TALENT. THE REFRIGERATED SEMI-TRAILER FROM KRONE.

The KRONE Cool Liner Duoplex Steel is the simplest and best way to transport pharmaceutical products, sensitive flowers or frozen goods. Along with its exemplary and practical equipment, its enormous flexibility stands out.

Thanks to its efficient fittings, such as the KRONE Isowall movable bulkhead, it is possible to transport different cargos in various temperature zones with no problems at all.









A HOT TIP FOR THE HIGHEST DEMANDS. THE COOL LINER.

It does not matter what they are used for – our refrigerated semi-trailers provide the right answer for every transport task. They stand out with their sturdiness and high levels of efficiency down to the smallest detail.

Details that you will love

You find particularly hard conditions in temperature-controlled goods transport – the KRONE Cool Liner is particularly well equipped to meet them. The chassis, body and general equipment are well-conceived and practical. From the flexible air duct, through the leak-proof floor tray to the stainless steel rear closures – the Cool Liner can cope with the highest demands thanks to the many solutions developed in conjunction with our customers.

Transport to suit your taste

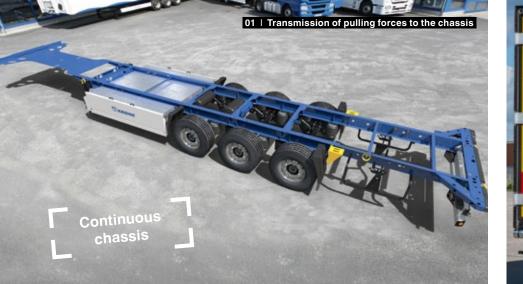
Be it vegetables, meat or frozen goods – all food transported in our refrigerated trailers is in the best of hands. The Cool Liner is HACCP compliant in the special equipment version that you want. Furthermore, thanks to KRONE Telematics, you can always keep an eye on the position, status and temperature of your transport.

Everything under control

Safety is also written large with the Cool Liner. With its intelligent functions, you are informed about your transport around the clock. Alongside the telematics functions, you benefit from a tyre-pressure monitoring system and a ramp approach aid. You also get special protection from the comprehensive security systems like, for instance, the KRONE Door Protect door locking system.











(D) KRONE

02 | Stainless steel rear gantry

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COOL LINER



03 | Space for 36 Europallets





COOL LINER. XL STANDARD EQUIPMENT.

01 Continuous chassis. The Cool Liner is equipped with a continuous chassis. Tensile forces are transferred to the chassis, which protects the superstructure during vehicle coupling and uncoupling.

02 Practical rear gantry. The stainless steel rear gantry has been designed to be suitable for both docks and ramps. Door hinges are recessed at the sides to allow an optimal door opening angle. Low set handles make it easier to open and close the doors.

03 Large pallet box. The pallet box has room for 36 Euro pallets. It has an innovative cover guide system. With a coupling height of 1,150 mm, the ground clearance is approximately 350 mm.

04 Protected fuel tank. The plastic fuel tank has been installed in a protected position between the landing legs. The open construction provides for easy filling and checking of the fuel level.

05 Good coupling protection. Diagonal trussing of the rear guides ensures efficient protection of the trailer against compressive strains.

06 Reliably secured. Hinges are customs-compliant.

07 Sliding step ladder. Sturdy sliding step with generously sized top step and easily accessible handle on the rear frame.

08 Protected lighting brackets. Underrun protection and the lighting brackets are fitted in a protected position and can be separately replaced. Robust ram protection elements protect the rear when docking.



Optimum air guidance. Stable aluminium profiles ensure the best front wall protection and optimal air flow with their large profile cross section.

10 Screwed-on rebound plate. Screwed-on rebound plate for maintenance and cleaning, HACCP-compliant.

11 Flexible air channel. The flexible, ceiling-mounted air ducts evenly distribute cold air in the trailer and are also suitable for both double deck loading and using a cross partition.

12 Smooth facings. The smooth panel top layer with narrow connecting joints is ideal for fitting decals, easy to clean and easy and quick to repair, where needed.

13 Intelligent door electronics. The contour brake lights at the top of the rear gantry significantly increase road safety. The door contact switch for the internal lighting responds without contact and can be combined with both the temperature recorder and the KRONE Telematics.

14 LED internal lights. The internal lighting of the superstructure is provided by four bright LED lights under the roof.

15 Water-tight kick strips. The aluminium kick strip is welded to the side walls and sealed water-tight with the one-piece low noise aluminium floor.

16 Optimised seal. Simplified operation.

17 Practical door restraint. The spring-loaded door stop prevents door movement.









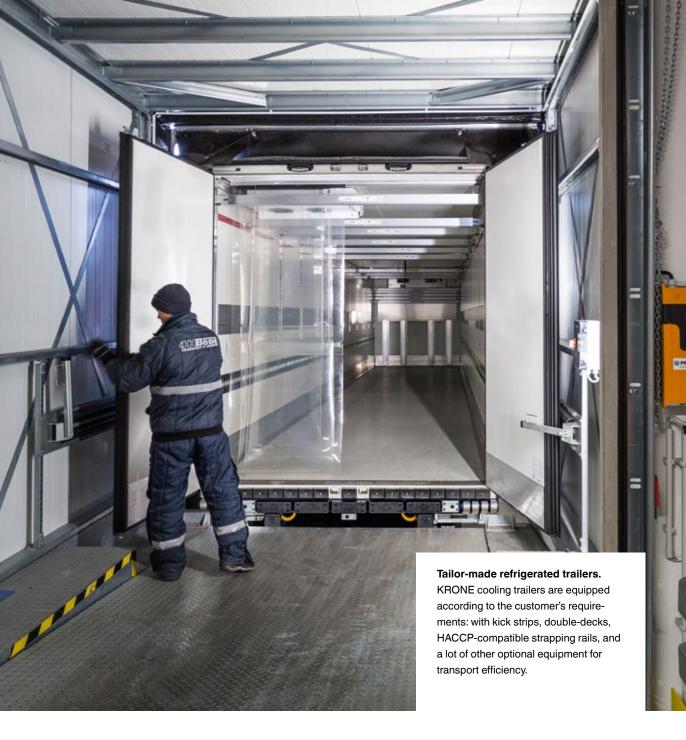




















Description Ferry rings. Rings are bolted to the chassis for secure lashing during ferry transit. Suitable lashing points are integrated in the floor in the flat neck area.

C2 Roll compression buffer. Four stainless steel rollers with shock absorbing cores protect the rear of the vehicle when docking. They also compensate for variable loading dock heights.

Butt Rolls. Butt rolls as an alternative collision protection. Combined here with a Delta ram profile and 2 large rear buffers for optimum protection.

O4 Sturdy underrun protection. A underrun protection with reinforced skid shoes is available for tough every day transport.

Compression buffer. Tough to break: that is the compression buffer. Extremely robust steel impact protection at the tail end with impact-absorbing rubber blocks for damping docking forces.

Of Buffer strip. A buffer strip under the rear frame offers additional protection. The buffer strip consists of rubber profiles, each of which can be individually replaced.

OT Additional docking protection. Two solid rubber rear buffers transfer the docking forces directly to the main chassis main beams.































COOL LINER. OPTIONAL EQUIPMENT.

OI CELSINEO cooling system. The perfect solution through modularity. With Celsineo, the cooling power is distributed among three plug & play cooling modules constructed in the same way, each containing an independent, hermetically sealed refrigerant circuit with just a few components. You will find further information at www.celsineo.com

02 Fridge unit protection bars. Heavy duty galvanised steel tubes are used to protect the refrigeration system.

KRONE temperature recorder TR.

By using the certified KRONE temperature recorder TR via Telematics, the conventional temperature recorder on the front wall of the temperature recorder is no longer required. Using the KRONE Telematics Portal, you are able to send the respective verification temperatures directly to your customer in a PDF by email or fax, even before the load arrives at your customer's location.

This does away with costly waiting times for the driver as the temperature verification can already be checked before the vehicle arrives. KRONE Telematics including the KRONE temperature recorder therefore serves as a multi-functional device. In addition to the classic telematics data, the temperature data in the superstructure is also recorded, saved and transmitted on request. The KRONE TR temperature recorder thus saves time and money, while protecting the environment at the same time. **O3** Venting shutters. Optional equipment: ventilation flaps in the front and rear walls.

Q4 Refrigeration systems and telematic temperature recorders. Refrigeration systems and telematic temperature recorders from all leading manufacturers are available to suit your preference. An optional LED tank display informs the driver about the fuel supply for the refrigeration system.

DE LED tank display. A capacitive tank sensor, in conjunction with a clearly visible LED tank display on the front wall, provides information about the remaining fuel supply in the diesel tank of the refrigeration unit. Can also be combined with KRONE Telematics.

06 Double lock rods. For additional stability and security, the container door is also available with double lock rods.

OT Insulated roller shutter door. An insulated rolling door, certified according to Code XL, saves you time and makes handling on the ramp easier.

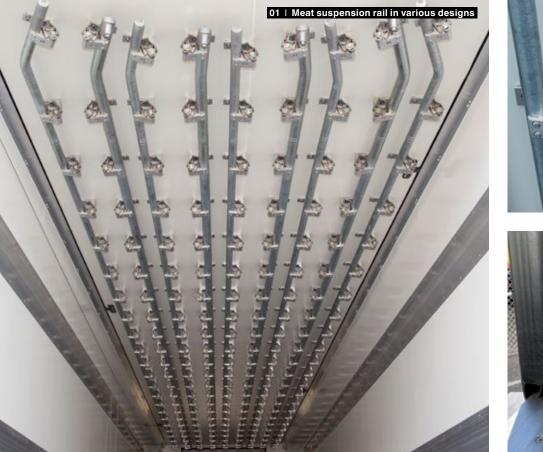
OB Optional side door. The optional side door is the ideal solution when partial shipments must be loaded or unloaded in one temperature zone.

OP Practical door restraint cord. As an alternative to the metal version, cord door restraints are available.













COOL LINER. OPTIONAL EQUIPMENT.

Meat-hanger application. Various models for suspension of meat are available that comply with country-specific requirements. Available are meat suspension rails with 60 mm or 45 mm diameter. Hook catch and Hook separation guard as standard equipment. On request, with hook parking rail or rack.

D2 Fish drain. For transporting fresh fish, a specially designed water gutter is embedded transversely in the floor in front of the rear doors. With an optimised capacity and central water drain, it enables controlled disposal of incurring leakage water and, thanks to the integrated removable revision covers, it can be easily cleaned without too much effort. A spacious stainless steel tank is used to collect the liquids.

53 Functional water drainage. An optional water drain embedded in the floor ensures controlled draining of liquid load residues or cleaning liquids.







04 Equipment acc. to HACCP. Cooler tailored to customer dimensions: with recessed, HACCP-certified lashing, double-deck rails and kick strip.

05 Split strapping rails. In practical use, the advantages of the split strapping rails in combination with doubledeck loading can be clearly seen.

06 Practical guide rails. Double-deck guide rails installed flush in the wall in accordance with HACCP. Horizontal markings on the guide rails make it easier to adjust the height of the double-deck beams.

07 Load securing. Barrier beams for rear load securing.

08 Optional protection. The folding rebound plate is made of temperature-resistant plastic for effortless access to the cooling system and optimised service.

09 Flexible load securing. Vario Lock load securing system with perforated rails integrated in the floor and under the roof. Optimum equipment for securing flower containers.









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05 | Various combination options

























COOL LINER. OPTIONAL EQUIPMENT.

Good air flow. If the load compartment is full, everything depends on good air flow: optional venting ducts are integrated into the rear doors for optimum air circulation. The evaporators are available in different versions.

02 Evaporation protection. A stainless steel frame protects the evaporator while loading and unloading.

Cooling zone arrangement. The partition, which can be moved throughout the whole length of the superstructure to create different temperature zones, is very well insulated and tested according to ATP. The upper lock unit, using innovative balancer technology provides extremely easy operation. As an option, a partition fan can be integrated in the lock unit. The control unit for the partition fan is located on the left outer front wall.

Multiple chamber systems. KRONE offers a multi-variable cooling zone arrangement with a partition in the longitudinal direction. This multi-temp solution offers up to three individual controllable chambers for transporting fresh and frozen goods. The transverse partitions can be positioned as desired along the length.

O5 Strip curtain. The insulation strip curtain is in three parts. It can either attach to the rear or slide along the length of the trailer.

Of Optional control panel. The cooling device can optionally also be controlled with a control unit that is embedded in the inner rear side wall.

O7 Rear upper ambient lighting. Strong ambient lighting at the top of the rear frame ensures optimised handling, not only in the dark winter months.

D3 Flashing side position lamps. Flashing side position lamps are available to prevent accidents when turning. It becomes much easier for pedestrians and cyclists to see when the HGV is about to turn.

O9 Operation of the ambient lighting. The ambient lighting can be conveniently switched on and off from the loading area using a button.

10 Ramp adjustment. As an option, the lifting and lowering device of the trailer can also be operated using two buttons to adjust to the ramp.

Rear light versions

- 11 4-chamber rear lights. Part LED
- 12 4-chamber rear lights. Full LED
- 13 Double, round. Light bulb

14 Double, round. Part LED









OUNLIFY I CONFERCE I BAG





















COOL LINER. OPTIONAL EQUIPMENT.

O1 Secure docking. The latest sensors help to avoid damage while docking at the loading ramp.

O2 Contour/brake & indicator light. Optional rear upper contour/brake & indicator lights to increase road safety and to protect road users travelling behind.

OB Reversing camera. An optional reversing camera ensures increased safety when manoeuvring. KRONE provides camera systems from many renowned manufacturers.

COOL LINER HUCKEPACK

Simple railway transport. Cool Liner Duoplex Steel are also be supplied with crane pockets and suitable equipment for combined traffic.

05 Retractable spray suppression. The spray suppressors can be stowed during rail transport.

06 Robust equipment. High strength loading points ensure secure and safe handling for cranes and fork-lift trucks.



KRONE DWC - Main functions:

- Starting assistance improved traction of the truck (combined with the lifting axle).
- Maneuvering system reffectively reduces the trailer wheel base.
- Wheel Base Control to avoid overloading the tractor drive axle.

Automatic activation:

- Wheel Base Control through using air bag pressure control.
- Maneuvering system system for corner control.
- Starting aid (activated by driver)

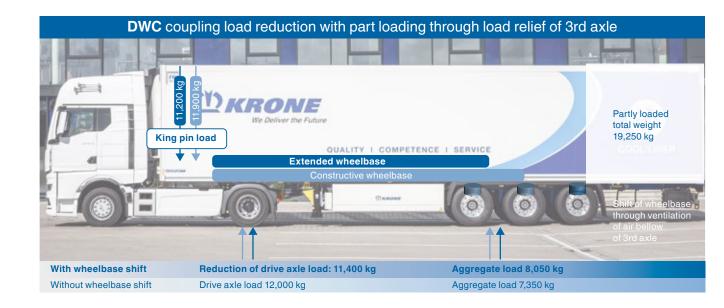
KRONE DWC - The Advantages:

For Truck:

- Relieving the load on the drive axle when the trailer is partially loaded.
- Reduction in damage to tyres and driving axle.

For trailer:

- Reduction in damage to tyre on first and third axles.
- Optimized maneuverability and movement around corners.
- Alternative to steering axle.



Practical relief of the drive axle.

The DWC unit allows a three-axle semitrailer the use of almost the same functions which would otherwise require integration of an axle lift and / or rear steer axles.

Automatic dynamic Wheel Base Control.

The wheel base is reduced by easing the pressure of the air bag on the last axle. The resultant theoretical extended rear overhang provides a counterweight for loading over the 5th wheel. Thereby, the 5th wheel is relieved so that the semitrailer can now be further loaded. The dynamic Wheel Base Control automatically checks the load on the first and the second axle up to the permissible axle load and dynamically checks the load of the third axle thereafter. The system can be turned off using Wabco Smartboard.

Automatic maneuvering system.

A reduction of pressure in the air bags at the rear axle of the semitrailer causes the center of movement of the total axle assembly to move towards the truck. Thereby reducing the wheel base in the speed range from 1.8 to 30 km/h. Thereby the trailer's cornering is improved. The system can be turned off through Wabco Smartboard.









The German Medicinal Products Act has specific requirements concerning storage and transport of pharmaceutical products. The following passage can be found in Article 7 of the regulation: " Raw materials, compounds and end products as well as samples must be stored in such a way that quality is not adversely affected and that mix-ups are avoided. Critical parameters concerning the storage and transportation must be checked and recorded so that compliance with the requirements can be confirmed. [...] The storage containers and the internal transport containers must be designed so that the quality of their contents is not affected."

The Cool Liner Pharma provides an exact model of how these legal requirements can be met. This is verified by Pharmaserv GmbH & Co. KG as well as the European Institute for Pharma Logistics GmbH. Pharmaserv certifies the KRONE trailer at the Lübtheen production plant. In functional tests carried out over several days, the Cool Liner equipped with KRONE telematics is tested under the toughest conditions. Numerous data loggers are placed in pre-defined positions in the vehicle superstructure to provide continuous monitoring of the temperature data and thereby a homogeneous temperature distribution in the superstructure. In addition, there is permanent, external monitoring via the KRONE Telematics-Portal. The result: The values required by the pharmaceutical industry, such as high insulation value, homogeneous temperature distribution, along with stringent hygienic requirements are all easily met using a combination of high grade materials and expert workmanship.

In addition, KRONE has also received the EIPL certificate for the Cool Liner. This certificate is issued by the European Institute for Pharma Logistics GmbH which specialises in knowledge transfer and services at the interface between the pharmaceutical and the logistics industries. KRONE offers the Pharmaceuticals-certified Cool Liner with a variety of equipment options. The fridge units can be installed for single or multi-temperature operation.

Door Protect High Security. Best possible antitheft protection with the KRONE Door Protect; the rear door is automatically locked when it is closed and it can only be opened again when the dispatcher has released the door using the KRONE Telematics and the driver has entered the corresponding security code. In addition to the rear door, an electronic internal roof and side wall monitoring system is available as an option. If someone tries to open the rear door without the code, an optional acoustic alarm can be triggered.

The most important advantages of the KRONE Pharma qualification:

- Expense for IQ (installation qualification) and OQ (operational qualification) is not required (Although in practice, it is required for all vehicles)
- Safety and the pharmaceutical suitability of the trailer
- Savings in time and costs
- Where required, assistance with PQ (service qualification)



Pharma certificate.

The Pharma certificate confirms that the Cool Liner uses exemplary technical equipment from the sector of refrigeration technology as well as insulation properties that permit optimal transportation under strict temperature requirements. In order to meet the stringent demands of the pharmaceutical industry, the Cool Liner "Pharma" is also equipped with an integrated telematics system that meets the future requirements of the EU GDP.











COOL LINER.

Inner city deliveries demand cargo transportation: what is needed here is a flexible, solid and, above all, versatile trailer that can be well handled, even if there is not much space.

The Cool Liner City is tailored to these requirements: a robust running gear with solid end beam for frequent docking at ramps, a low-maintenance, quick-reaction one-bar forced steering and a chassis with long-term value preservation due to cataphoretic painting and powder coating. The Cool Liner City also impresses overall with its proven KRONE quality. The City Chassis is available as single, dual or triple axle models for 27 or 33 euro pallets. The Cool Liner City can be used flexibly with a standard tractor unit and is more manoeuvrable than any solo HGV with the same load length.

The PIEK alternative: The future of inner-city distribution.

02 | Aluminium brink wedge

In the Netherlands, England, Italy and Germany statutory regulations about noise emissions during early morning and late night delivery are applicable. In order to meet the legal requirements, the company has been working on the development of noise-reduced vehicles and their components since 1999. The PIEK programme (PIEK = peak, to be understood as the permissible peak noise load) has led to development and launch of noise-reducing products. **OT** Extreme mobility. The forced steering is a proven one-bar system, integrated in the running gear with low maintenance. The steering angle of 25 degrees allows manoeuvring in very restricted space.

O2 Aluminium brink wedge. An aluminium brink wedge comes as standard with a fixed tail lift behind the rear doors. The brink wedge serves to close the gap between loading floor and platform.

O3 Lifting arm equipment. With loading board wall equipment, both the chassis and the lighting rack are provided with a cutout adapted to the lifting arms of the tail lift.

PIEK equipment. To meet the PIEK requirements for noise reduction, a PIEK design floor is optionally available. The side kick-strips in the lower area of the side walls are given a noise-reducing plastic coating. PIEK design tail lifts and cooling systems complete the supply range.











TRADITION AND INNOVATION. ROBUST VISIONS AND IDEAS SECURE THE COMPANY FOR THE FUTURE.

Quality and innovation have been the focus of KRONE corporate philosophy for 110 years. This approach continues to be systematically applied to this day. We always rely on robust, practical and efficient features for our product lines. We offer a comprehensive range of services so that you and your trailer are always on the safe side.

Sturdy and profitable

Our trailers are based on a solid welding process and reliable equipment. And our innovative practical transport solutions leave nothing to be desired in terms of their practicality and loading efficiency. The overall result: maximum efficiency at minimum cost.

"All in KRONE" - everything from a single source

Behind the "All in KRONE" .trailer concept resides, among other things, the complete KRONE trailer. All parts have a KRONE reference number, which means we are able to help you quicker in all matters relating to service, maintenance and spare parts.

First-class features, Europe-wide safety

You can opt for equipping with KRONE parts or the integration of components made by other manufacturers. In every case, you will get a trailer with first-class features and the security that comes from the ability to rely on a Europe-wide service network. Our quality requirements do not stop with our trailers. We see ourselves as being a service provider for everything to do with the trailers. This means that the accompanying services we offer are tailor-made to meet your requirements.













THE KRONE COATING CENTRE. BENCHMARK FOR CHASSIS COATING AND ENVIRON-MENTAL PROTECTION.

The KRONE quality offensive offers KTL-treated and powdercoated chassis to the level of automotive mass production quality – lasting value, durable and with excellent corrosion protection. Production in Werlte stands for responsible energy use and resource management

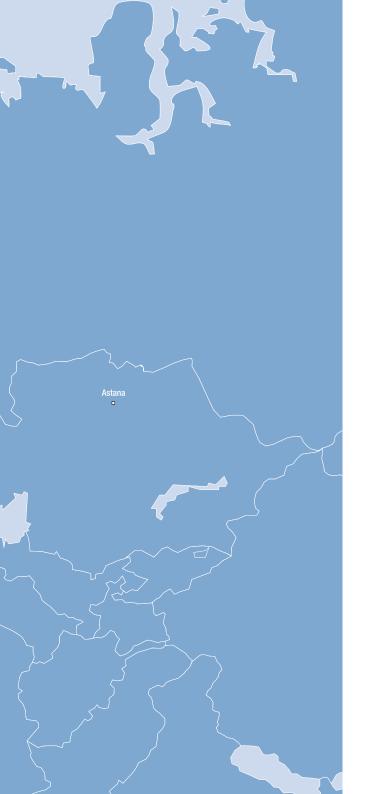
The new Coating Centre is at the heart of the KRONE quality offensive and at the same time, the biggest single investment of the corporate group. At the Werlte location, more than 40 Million euros were invested in a new facility with an area of 16,500 square metres and in the virtually fully automated systems engineering process. Here, the chassis are cathodic dip-painted and powder-coated.

Thanks to the state-of-the-art process, trailers are given maximum protection against environmental conditions and therefore offer excellent corrosion protection. The new surface sealing ensures long-lasting value and offers customers high investment protection. KRONE trailers are weather-resistant and durable against the most testing conditions. The technologies also meet the highest demands for energy efficiency and environmental protection.

Carbon dioxide emissions are reduced by more than 30 percent for each chassis produced. At the same time, 12.6 million kilowatt hours of electricity are saved annually. The environmental management system certified according to DIN ISO 50001 monitors compliance with strict requirements. The German Energy Agency (dena) designated the Coating Centre 2018 as an exemplary flagship project for energy-efficient use of waste heat.







UNLIMITED SERVICE. PRODUCTION LOCATIONS / SALES COMPANIES.

Sales:

KRONE national representations

Production sites:

Flatbed semi-trailers and trailers Fahrzeugwerk Bernard Krone GmbH & Co. KG Bernard-Krone-Straße 1 49757 Werlte, GERMANY

Swap systems Brüggen Oberflächen- und Systemlieferant GmbH Boschstraße 4 49770 Herzlake, GERMANY

Box body semi-trailers Brüggen Fahrzeugwerk und Service GmbH Geschwister-Scholl-Straße 15 19249 Lübtheen, GERMANY

Sliding floor trailer

Knapen Trailers BV Theo van Doesburgstraat 8 5753 DL Deurne, Niederlande

Trailer axles

Gigant GmbH Märschendorfer Straße 42 49413 Dinklage, GERMANY

D Flatbed semi-trailers

Krone Ticari Araçlar San. ve Tic. A.Ş. İbni Melek Mh. Organize Sanayi Bölgesi 2.Sk. No:1 / 35900 Tire / İzmir / TURKEY KRONE Sales International can be found here





TECHNICAL DATA

ТҮРЕ		COOL LINER DUOPLEX STEEL				COOL LINER CITY
	SERIES	DOUBLE DECK	MEAT HANG	MULTI TEMP	HUCKEPACK	SERIES
King pin load	12,000 kg	12,000 kg	12,000 kg	12,000 kg	14,000 kg	12,000 kg
Axle load (technically possible)	27,000 kg	27,000 kg	27,000 kg	27,000 kg	27,000 kg	10,000 kg
Allowable gross weight (technically possible)	39,000 kg	39,000 kg	39,000 kg	39,000 kg	41,000 kg	22,000 kg
Tare weight (without unit)	7,630 kg	7,840 kg	8,630 kg	7,830 kg	7,520 kg	6,130 kg
5th wheel height (unloaded)	1,150 mm	1,150 mm	1,130 mm	1,150 mm	1,170 mm	1,150 mm
Internal length	13,310 mm	13,310 mm	13,310 mm	13,310 mm	13,310 mm	11,010 mm
Internal width	2,460 mm	2,460 mm	2,460 mm	2,460 mm	2,460 mm	2,460 mm
Internal height	2,630 mm	2,630 mm	2,600 mm	2,630 mm	2,600 mm	2,500 mm
External width	2,600 mm	2,600 mm	2,600 mm	2,600 mm	2,600 mm	2,600 mm

Dimensions and weights for standard units













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