

# ACCLAIMED ROBUSTNESS & HIGH FUNCTIONALITY

# **BOX & REEFER SEMI-TRAILERS**



Kässbohrer



# SAFE TRANSPORTATION OF

### **VARIETY & SENSITIVE GOODS**

#### K.SBT & K.SBT C

### **Dry Freight Plywood Box Series**

Kässbohrer provides robust Dry Freight Plywood Box vehicles for versatile operations in Standard, City, and Intermodal product groups.

Kässbohrer Dry Freight Plywood Box K.SBT, Dry Freight Forced Steering Plywood Box K.SBT C and Dry Freight City Plywood Box K.SBT CS, and Dry Freight Intermodal Plywood Box K.SBT T are ready to take your operations to the next level.

Kässbohrer box vehicles are designed for the safety and efficiency of your operations while its many options meet your specific needs. Box vehicles are specially designed with their durable high-strength S460MC steel full chassis for challenging conditions. Moreover, the vehicle stands for robustness with its 20 mm thick smooth plywood walls, 7.2-ton forklift capacity phenol resin-coated plywood floor as standard, EN 12642 Code XL certificated upper structure and KTL Coated Steel Front Panel.

Kässbohrer offers two vehicles developed specially for inner-city operations: Dry Freight City Plywood Box K.SBT CS and Dry Freight Forced Steering Plywood Box K.SBT C. Kässbohrer K.SBT CS with 1 or 2 axles is engineered to conquer the city roads with a length of only 11.115 mm and a mechanical steering axle.

In order to strengthen its customers intermodal operations, Kässbohrer developed Dry Freight Intermodal Plywood Box K.SBT T that is equipped with crane pockets and is suitable for e, f, g and i type railway wagons according with IRS 50596-6 as standard.



#### K.SRI C, K.SRI P & K.SRI F

#### **New Reefer Series**

Kässbohrer's new reefer series combines Kässbohrer's acclaimed robust chassis and top class insulation GRP panel technology. Developed and tested in the Kässbohrer R&D Center for 1 000 000 km of road test to assure long life, the new reefer series comes manufactured with S700 MC steel, a KTL-coated gooseneck chassis, integrated strong one-piece kingpin structure, optimized wheelbase width for maneuverability and stability, and reinforced floor with 7.2 ton forklift axle load capacity featuring anti-slip aluminum cover complying with EN 283 norm.

The new reefer series offers improved box robustness. The box connection reinforcements are protected with anodized aluminum one-piece and rivetless moldings and the rear frame consists of one piece stainless steel, increasing overall stability. The rear frame is protected with high-capacity rubber ramp buffers along all edges, while the bumper is equipped with vertical rubbers and innovative cylindrical single roll shock absorbers made of galvanized stainless steel. With four aluminum alloy hinges, the rear door provides robustness and is customs-compliant, preventing cargo theft securely.

Starting from 7200 kg tare weight, the new reefer series are offered with the inner widths of 2460 mm and 2500 mm, with optional recessed load securing rails and with internal height up to 2900 mm. The double-deck reefer allows for 10 tons load rating on the upper deck and up to 66 euro-pallets overall capacity.

Kässbohrer's new reefer series are offered in three different product groups: standard, double-deck and flower, ready for the efficient and safe transportation of frozen goods, pharma and flowers in accordance with FRC, PHARMA, HACCP and CODE XL certifications, and suited for intermodal transport.





# TOP CLASS INSULATION

### WITH HOMOGENEOUS AIR FLOW

#### Precisely constructed with

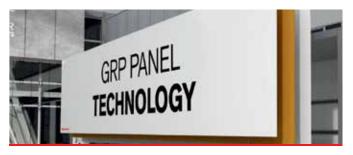
#### **GRP Panel Technology**

A result of Kässbohrer engineering excellence: The new reefer series are constructed with GRP panel technology, featuring the thermal transmission coefficient (K-value) of only 0.31 W/(m²-K). Kässbohrer top class insulation significantly reduces the running time of your refrigeration unit, saving up to 9300 Euro in fuel in five years compared to metal covered side panels.\* [Fuel price 1.80 Euro per Liter as of March 2024]

Kässbohrer GRP panels consist of UV-resistant glassreinforced polyester with no maintenance required when scratched, layered with optimum density polyurethane to guarantee maximum insulation performance. The panels are tested for layer adhesion at more than 11.53 kN force for durability.

To ensure the structural uniformity of the box for longer product life, Kässbohrer maximized the adhesion surface in all side panel connections. Adhesion is applied on two axes at the all-panel junctions to make sure the box is firm, but able to adjust to the road conditions along with the chassis.

Generally, Kässbohrer reefers have been designed with no maintenance and easiest and most economical repairs in mind, with the GRP panel technology as a choice of construction. UV resistant GRP panels require no maintenance in case of minor scratching and damage, as GRP cannot corrode, unlike metal-covered side panels. And in cases of bigger damage, GRP panels allow for localized and repeatable repair, hence saving time and resources.



#### Permeating The Entire Volume

### **Ventilation Tunnel System**

For superior air circulation and optimum cooling unit performance, Kässbohrer engineers designed the ventilation cover, compatible with all premium cooler units. The holes on the ventilation cover are designed for homogenous air flow in the whole box starting from the first exit point of the air. The double-tube ventilation tunnel system ensures homogeneous airflow inside the box by evenly cooling every area within the vehicle in single-deck or double-deck configuration, in a multi-temperature setting for fresh and frozen goods, flowers, or pharma transportation.

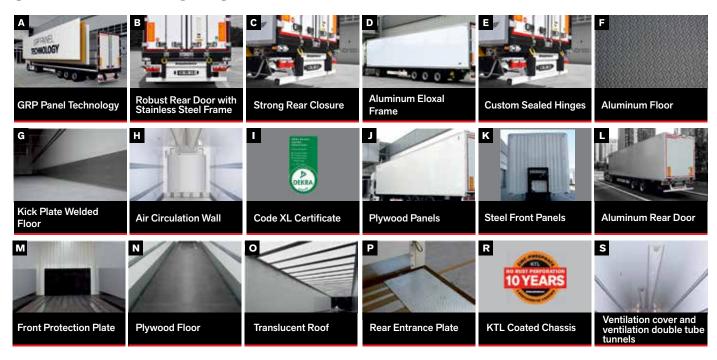
To ensure continuous air circulation and to protect the cooling unit, Kässbohrer also offers the patented foldable air circulation wall. Whereas the air circulation wall can be opened for fast cleaning, it simultaneously protects the goods loaded close to the refrigeration unit from frosting.

The optional partition wall is offered with a movement range equal to 10 520 mm along the vehicle and enables transportation at two different temperatures for frozen and fresh goods.

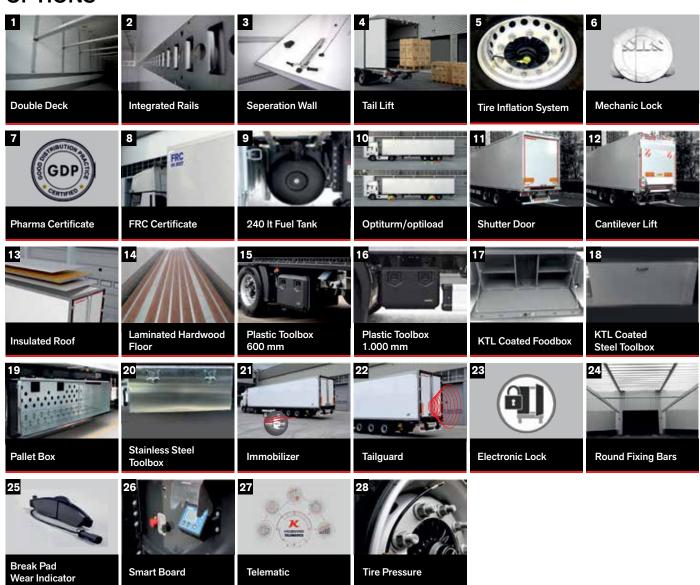


	STANDARD REEFER	FLOWER REEFER	DOUBLE-DECK REEFER	DRY FREIGHT PLYWOOD	вох					
PRODUCT	K.SRI C / 10 - 12 / 27	K.SRI F / 10 - 12 / 27	K.SRI P / 10 - 12 / 27	K.SBT / 20 - 12 / 27	K.SBT / 20 - 12 / 18	K.SBT C / 20 - 12 / 18	K.SBT C / 20 - 12 -27	K.SBT CS / 20 - 12 / 10	K.SBT CS / 20 - 12 / 18	K.SBT T / 20 - 12 / 27
PRODUCT TYPE	Standart Reefer	Flower Reefer	Double-deck Reefer	Plywood Box	Plywood Box	Forced Steering Plywood Box	Forced Steering Plywood Box	City Plywood Box Trailer	City Plywood Box Trailer	Intermodal Plywood Box
INTERNAL HEIGHT	2.650 mm	2.700 mm	2.800 mm	2.725 mm	2.725 mm	2.675 mm	2.675 mm	2.715 mm	2.715 mm	2.725 mm
TOTAL HEIGHT	4.030 mm	4.030 mm	4.030 mm	4.020 mm	4.020 mm	4.040 mm	4.040 mm	4.030 mm	4.030 mm	4.020 mm
COUPLING HEIGHT	1.150 mm	1.100 mm	1.000 mm	1.150 mm	1.150 mm	1.150 mm	1.150 mm	1.150 mm	1.150 mm	1.150 mm
REAR LOADING HEIGHT	2.643 mm	2.693 mm	2.793 mm	2.685 mm	2.685 mm	2.635 mm	2.635 mm	2.675 mm	2.675 mm	2.685 mm
INNER WIDTH	2.460 mm	2.500 mm	2.460 mm	2.490 mm	2.490 mm	2.490 mm	2.490 mm	2.490 mm	2.490 mm	2.490 mm
TOTAL WIDTH	2.600 mm	2.600 mm	2.600 mm	2.550 mm	2.550 mm	2.550 mm	2.550 mm	2.550 mm	2.550 mm	2.550 mm
TOTAL LENGHT	13.600 mm	13.600 mm	13.600 mm	13.700 mm	13.700 mm	13.700 mm	13.700 mm	11.115 mm	11.115 mm	13.700 mm
INTERNAL LENGTH	13.385 mm	13.385 mm	13.385 mm	13.620 mm	13.620 mm	13.620 mm	13.620 mm	11.025 mm	11.075 mm	13.620 mm
PALLET CAPACITY	33 Euro Pallets	33 Euro Pallets	66 Euro Pallets	34 Euro Pallets	34 Euro Pallets	34 Euro Pallets	34 Euro Pallets	27 Euro pallets	27 Euro pallets	34 Euro pallets
KING-PIN CAPACITY	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg	12.000 kg
AXLE LOAD	27.000 kg	27.000 kg	27.000 kg	27.000 kg	18.000 kg	18.000 kg	27.000 kg	10.000 kg	18.000 kg	27.000 kg
GROSS WEIGHT	39.000 kg	39.000 kg	39.000 kg	39.000 kg	30.000 kg	30.000 kg	39.000 kg	22.000 kg	30.000 kg	39.000 kg
WHEELBASE	7.450 mm	7.450 mm	7.450 mm	7.455 mm	8.110 mm	7.210 mm	7.455 mm	7.400 mm	6.000 mm	7.700 mm
GOOSENECK HEIGHT	10 mm	10 mm	10 mm	100 mm	100 mm	180 mm	180 mm	130 mm	130 mm	100 mm
TARE WEIGHT	7.204 kg	7.314 kg	7.960 kg	7.400 kg	6.900 kg	7.700 kg	8.230 kg	6.620 kg	6.800 kg	7.700 kg
CHASSIS MATERIAL	S700MC	S700MC	S700MC	S460MC Steel	S460MC Steel	S460MC Steel				
ANTI-CORROSION	KTL Coated	KTL Coated	KTL Coated	KTL Coated  Made of two welded longitudinal	KTL Coated  Made of two welded longitudinal	KTL Coated  Made of two welded longitudinal				
CHASSIS TYPE	Double "I" beam	Double "I" beam	Double "I" beam	beams in "I" form	beams in "I" form	beams in "I" form				
AXLES	3x9 tons capacity BPW dics brake axles	3x9 tons capacity BPW dics brake axles	3x9 tons capacity BPW dics brake axles	BPW brand disc brakes axle with pneumatic suspension system.	BPW brand disc brakes axle with pneumatic suspension system.	Pneumatic assembly with BPW dics brakes, second axle mechanic forced steering	Pneumatic assembly with BPW dics brakes, third axle mechanic forced steering	Pneumatic assembly with BPW disc brakes, axle me- chanic forced steering	Pneumatic assembly with BPW disc brakes, second axle mechanic forced steering	Pneumatic assembly with BPW disc brakes and 9t load capacity
TYRE SIZE	385 / 65 R 22,5	385 / 65 R 22,5	385 / 55 R 22,5	385 / 65 R 22,5	385 / 65 R 22,5	385 / 65 R 22,5		275/70 R22.5	385/55 R22,5	385/65 R22,5
RIM TYPE	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset	Steel offset
BRAKE SYSTEM	Wabco double-circuited electro pneumatic brake system including EBS 2S/2M with premium modulator	Wabco double-circuited electro pneumatic brake system including EBS 2S/2M with premium modulator	Wabco double-circuited electro pneumatic brake system including EBS 2S/2M with premium modulator	Wabco EBS 2S/2M double circuit brake system with RSS with premi- um modulator	Wabco EBS 2S/2M double circuit brake system with RSS with premium modulator	Wabco EBS 2S/2M double circuit brake system with RSS with premium modulator	Wabco EBS 2S/2M double circuit brake system with RSS with premium modulator	Wabco EBS 2S/2M double circuit brake system with RSS	Wabco EBS 2S/2M double circuit brake system with RSS	Wabco EBS 2S/2M double circuit brake system with RSS
ELECTIC SYSTEM	24 Volt lighting installation with 2x7 + 15 pin plug socket, according to Directive 75 / 756 / EEC	24 Volt lighting installation with 2x7 + 15 pin plug socket, according to Directive 75 / 756 / EEC	24 Volt lighting installation with 2x7 + 15 pin plug socket, according to Directive 75 / 756 / EEC	Lighting installation with 24 V LED side position lamp and 2x7 and 1x15 pin sockets, in compliance with Regulation UN ECE R48	Lighting installation with 24 V LED side position lamp and 2x7 and 1x15 pin sockets, in compliance with Regulation UN ECE R48	Lighting installation with 24 V LED side position lamp and 2x7 and 1x15 pin sockets, in compliance with Regulation UN ECE R48	Lighting installation with 24 V LED side position lamp and 2x7 and 1x15 pin sockets, in compliance with Regulation UN ECE R48	Lightning installation with 24 V LED side position lamp and 2 x 7 and 1 x 15 pin sockets, in compliance with Regulation UN ECE R48	Lightning installation with 24 V LED side position lamp and 2 x 7 and 1 x 15 pin sockets, in compliance with Regulation UN ECE R48	Lightning installation with 24 V LED side position lamp and 2 x 7 and 1 x 15 pin sockets, in compliance with Regulation UN ECE R48
LANDING GEAR	Jost, 24 tons capacity	Jost, 24 tons capacity	Jost, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity	Kässbohrer landing gear, 24 tons capacity
SIDE PANELS	Highly-insulated 61 mm glass reainforced polyester sandwich side panel technology (A)	45 mm glass reinforced polyster sand- wich side panel technology (A)	Highly-insulated 61 mm glass reain- forced polyester sandwich side panel technology (A)	20 mm plywood side panels with 325 mm height kinking plate (J)	20 mm plywood side panels with 325 mm height kinking plate (J)	20 mm plywood side panels with 325 mm height kinking plate (J)	20 mm plywood side panels with 325 mm height kinking plate (J)	20 mm plywood side panels with 325 mm height kicking plate (J)	20 mm plywood side panels with 325 mm height kicking plate (J)	20 mm plywood side panels with 325 mm height kicking plate, Suitable for e-f-g-i type rail way wagon (J)
FLOOR	7.200 kg forklift axle load capacity Aluminum Floor (F)	7.200 kg forklift axle load capacity Aluminum Floor (F)	7.200 kg forklift axle load capacity Aluminum Floor (F)	Phenol resin coated, 30 mm thick and water resisant plywood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resisant ply- wood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resisant plywood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resisant plywood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resistant plywood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resistant plywood flooring that can support 7.200 kg forklift axle load (N)	Phenol resin coated, 30 mm thick and water resistant ply- wood flooring that can support 7.200 kg forklift axle load (N)
ROOF	84 mm glass reinforced polyester sandwich roof with 4 LED lights	84 mm glass reinforced polyester sandwich roof with 4 LED lights	84 mm glass reinforced polyester sandwich roof with 4 LED lights	Transculent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (O)	Transculent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (0)	Transculent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (O)	Transculent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (0)	Translucent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (0)	Translucent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (O)	Translucent flor white GRP roof reinforced with galvanized coated omegas, with 4 LED lights (O)
FRONT PANEL	73 mm front panel suitable for cooling unit montage (H)	73 mm front panel suitable for cooling unit montage (H)	73 mm front panel suitable for cooling unit montage (H)	20 mm with 1,220 mm height Plywood Kick Plate (K)	20 mm with 1,220 mm height Plywood Kick Plate (K)	20 mm with 1,220 mm height Plywood Kick Plate (K)	20 mm with 1,220 mm height Plywood Kick Plate (K)	20 mm steel with 1220 height plywood kick plate (K)	20 mm steel with 1220 height plywood kick plate (K)	20 mm steel with 1220 height plywood kick plate (K)
REAR DOOR	84 mm double-winged and GRP covered insulated foor with reliably secured aluminum hinges (B)	84 mm double-winged and GRP covered insulated foor with reliably secured aluminum hinges (B)	84 mm double-winged and GRP covered insulated foor with reliably secured aluminum hinges (B)	Double hidden lock, aluminum pro- file door with 2 units of wings (L)	Double hidden lock, aluminum profile door with 2 units of wings (L)	Double hidden lock, aluminum profile door with 2 units of wings (L)	Double hidden lock, aluminum profile door with 2 units of wings (L)	Double hidden lock, aluminium profile door with 2 units of wings (L)	Double hidden lock, aluminium profile door with 2 units of wings (L)	Double hidden lock, aluminium profile door with 2 units of wings (L)
DOUBLE DECK		-	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 22 units double deck profiles and 1 unit release rod.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner widt will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.	Side walls equipped with 12 rows double deck rails which allows to make Euro pallet carrying. This options include 23 units double deck profiles and 1 unit release rod. Between the double deck rails, inner width will be reduced by 26 mm. Rail length is 1.975 mm. 33 units Euro pallet can be carried on the double deck profiles.
CODE XL CERTIFICATE	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)	Load security certificate according EN 12642 Code XL (I)
LOAD SECURITY RAILS	Non-integrated load security rails	Galvanized steel recessed into side walls load security rails	Galvanized steel recessed into side walls load security rails	Galvanized steel load security rails	Galvanized steel load security rails	Galvanized steel load security rails	Galvanized steel load security rails	Galvanised steel load security rails	Galvanised steel load security rails	Galvanised steel load security rails
FRC CERTIFICATE	Included	Included	Included	-		-	-	-	-	-
HACCP CERTIFICATE	Included	Included	Included	-		-	-	-	-	-
PHARMA CERTIFICATE	Available (7)	Available (7)	Available (7)							
_	Available (1)	Available (1)	Available (1)	13v0 lacking rings ambedded to #	13v0 laching rings are hadded to	13v9 laching rings on hadded to	13v9 Jaching rings ombodded to	11 v O loching rings ambadded to	11 v O laching rings ombaddad -	13 v O loching rings ambadd - 14-
LASHING RINGS	-	-	-	13x2 lashing rings embedded to floor according to DIN 75410	13x2 lashing rings embedded to floor according to DIN 75410	13x2 lashing rings embedded to floor according to DIN 75410	13x2 lashing rings embedded to floor according to DIN 75410	11 x 2 lashing rings embedded to floor according to DIN 75410	11 x 2 lashing rings embedded to floor according to DIN 75410	13 x 2 lashing rings embedded to floor according to DIN 75410

#### STANDARD FEATURES



#### **OPTIONS**





# WE KNOW YOUR KÄSSBOHRER

## AND WE WANT TO TAKE CARE OF IT

Kässbohrer develops vehicles that push the boundaries of innovation, and builds them to last. As our products are attuned to the needs of our customers worldwide, so are our services.

Taking care of your needs wherever your operations are in Europe, 95 % of our ever-growing competent after-sales service network is certified to serve the entire Kässbohrer product range. Kässbohrer's website is constantly updated with the latest information for your convenience.

With K-Advance Care Service packages tailored to each customer's operational needs, and with Europe's 4th largest after-sales network, 24 hour dispatch guarantee spare parts services from six centers as well as the 24/7 Kässbohrer Road Assistance hotline available in 41 countries and 12 languages, Kässbohrer after-sales services are attuned to meet the versatile requirements.





### **PRODUCTION WORLDWIDE**

Powered by its motto "Enginuity", Kässbohrer pushes the boundaries of vehicle engineering to meet the versatile needs of its customers worldwide. Winner of the prestigious Trailer Innovation Award six times and counting, Kässbohrer vehicles' long and useful product life is secured by the expertise of its production processes.

For now and in the future, Kässbohrer will continue developing products and services to take your business to the next level.



### Ulm Plant | Germany

In 2017, Kässbohrer returned back home by investing in a new production facility near Ulm. Operating on  $35,000 \, \text{m}^2$ , the Ulm plant serves as the main production facility for southern Germany and the neighboring countries. Fully offering and servicing Kässbohrer's incomparable product range as main sales and after-sales center, Ulm plant also serves as a spare parts warehouse.



### Goch Plant | Germany

Since 2002, Goch factory, operating on a total area of 108,000 m<sup>2</sup> is one of two production facilities in Germany. Serving as the main production, PDI and sales center for Northern Europe, the Goch facility also serves as main after-sales center for northern and western Germany and the Benelux region, comprising a spare parts warehouse expanded in 2021.



### Adapazarı Plant | Türkiye

Adapazarı is Kässbohrer's biggest production plant with a total production area of  $383,000 \,\mathrm{m}^2$  and has a total production capacity of  $20,000 \,\mathrm{units}$ . With rooftop solar power plant investment completed in 2023, providing 92 % of the plant's electricity needs from the sun, manufacturing in Adapazarı emits  $46 \,\%$  less  $\mathrm{CO}_2$  (ISO 14064-1 and 14064-2 certified).

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Kässbohrer semi-trailers are manufactured according to lean production and quality principles in consideration of total cost of ownership.

Kässbohrer reserves the right to alter the product specification. Visual and technical data subject to change according to vehicle configuration. v5 Sep 2024