

 **SCHEUERLE**

 **KAMAG**



 **K25**

*- A ground-breaking product emerges from combined know-how*

  
Members of Til Group

Courtesy of Crane.Market



**- A ground-breaking product emerges from combined know-how**

Alongside numerous special transporters, KAMAG and SCHEUERLE are now offering a wide range of vehicles for the transport on public roads as well as an extensive accessories programme. The K25 is an innovative vehicle concept based on the new universal development platform of the TII Group. As is the case with other TII Group products, components that have been in use for decades and thus have stood the test of time, form the basis of the new vehicle concept. The K25 is a completely new, autonomous platform trailer that distinguishes itself from previous TII Group platform trailers.

The modular design of the K25 facilitates an array of combination possibilities, adjusted to the requirements of almost any transport task. Whether on public roads or for in-plant tasks, the K25 is a reliable and cost-effective transport vehicle with its numerous special versions and accessories programme.

The K25 combines the long-term know-how of KAMAG and SCHEUERLE into an incomparable product and sets new standards in the heavy transport industry.



## **Advantages**

- highest bending moment on the market
- steering angle of +/- 60° (+/-140° on K25 SPE)
- largest oil volume in its class
- freely accessible steering rods
- special lashing eyes for optimal load securement
- wear-resistant design
- sturdy vehicle construction with extreme manoeuvrability
- for end-to-end and side-by-side coupling
- extensive accessories programme



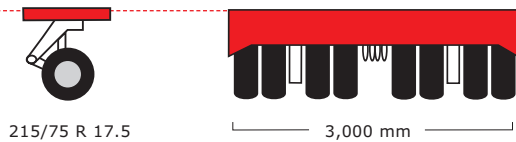


# The advantages of the new **K25**

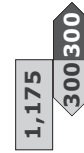
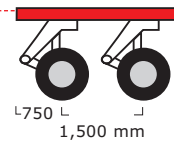
- *convincing arguments*

## Axle load

36,000 kg



## Axle base

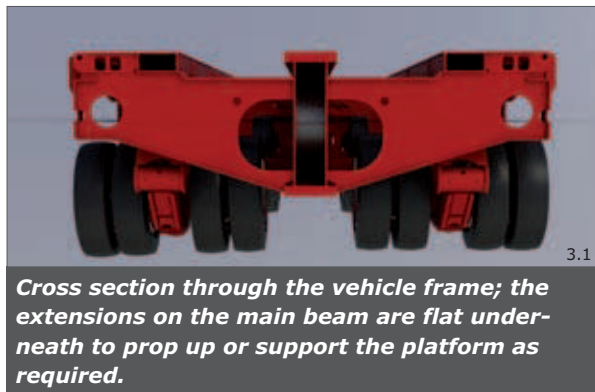


## Highest bending moment on the market

By reinforcing the main beam, the permissible bending moment has been increased by 16 %. Thus, the K25 offers the highest bending moment on the market for high load reserves. The height of the beams has been maximised so that the distance to the ground with lowered platform and minimum tyre size is just 20 mm.

## Reinforced lamellar coupling (40 mm)

The coupling fins on the K25 have been reinforced to 40 mm. This counters the often rapid wear of the fins, which arises from the steering movements of the vehicle combination in conjunction with a locked coupling cylinder. Furthermore, the reinforced fins of the K25 stabilise end-to-end coupled vehicle combinations when driving around bends.

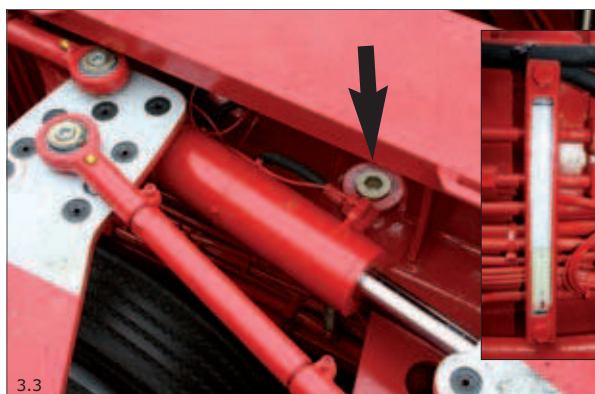


## Largest oil volume in its class

The K25 has an oil tank integrated into the vehicle frame. The speciality: this oil tank – on the example of a 6-axle unit – holds a usable oil volume of 220 litres, the largest oil volume in its class. This enables the operation of transport combinations of up to 25 axle lines without additional tank.

## Freely accessible steering rods

Unrestricted access to the steering rods ensures easy removal and coupling, without the need for laborious threading of the steering rods. Depending on the configuration, only one end of the steering rod needs to be loosened for relinking in a loaded state.



# The advantages of the new **K25**

## - *convincing arguments*

### Standard compressed air reservoirs

The compressed air reservoirs for the brake system are not integrated into the frame. They are standard products, so authorities testing for pressure reservoirs is no longer required, thus resulting in reduced repair and maintenance costs.



### Corrosion and wear resistant suspension cylinders

The suspension cylinders are corrosion and wear resistant – and are suitable for use in highly corrosive atmospheres, even if the piston rod is not retracted in parking position.



### Approved wheel bogies

The K25 is equipped with standard wheel bogies of SCHEUERLE, which are known for their high load-bearing capacity. The wheel bogies are designed with angular roller bearings in the steering head, which can be easily re-tensioned as needed. This minimises maintenance costs and increases service life.



### Pendulum axles and tyres

The K25 is equipped with BPW pendulum axles, which keep maintenance costs down thanks to their long service life and high quality. The twin tyres come with 215/75 R 17.5 Continental, or optionally with Michelin, Goodyear or Bridgestone tyres. The pendulum axles with drum brakes are equipped with ABS, which increases the service life of the tyres, as well as safety.



### Steering technology / steering angle

With a steering angle of  $\pm 60^\circ$ , the K25 not only achieves high mobility, but is also a reliable means of transport for heavy loads: the steering forces of the 2-circuit steering are generated by means of cylinders and mechanically transferred via steering links. The steering cylinders are equipped with a ventilation system, which is easily accessible from outside.

The steering hydraulics are secured via a pressure-relief valve. This prevents damage when steering against resistance, e.g. a kerbstone. All the wheel bogies can be aligned in one direction thanks to the new, improved steering geometry. This eliminates the need to turn the rear chassis. The wheel bogies travel universally in the same direction, counteracting a possible increasing wear.





### Tested attachments and lashings

The K25 features attachments and lashings that have been tested and accepted by official authorities. The lashing rings can be used for load securing and also for crane loading of the vehicle. The hole pattern for the cross-coupling elements is unchanged, which facilitates use of existing equipment.

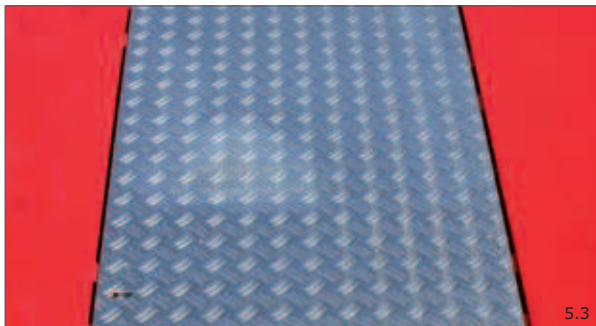


### Axle lock

The 3rd and 4th centre lines (on the example of a 6-axle unit) can be mechanically locked from above. The recessed grip is easily accessible and the locking pin is stored away with pin retainer on the bogie.



The platform trailer can be equipped with corrugated sheet aluminium covers over the steering links if and when required. This significantly increases operational safety when entering the platform. Furthermore, it prevents spray water or dirt from hitting the load.



Mechanical coupling blocks for coupling two vehicles "side-by-side".



The entire electrical system (24V) is merged in a switchbox, thus making it easy to maintain.

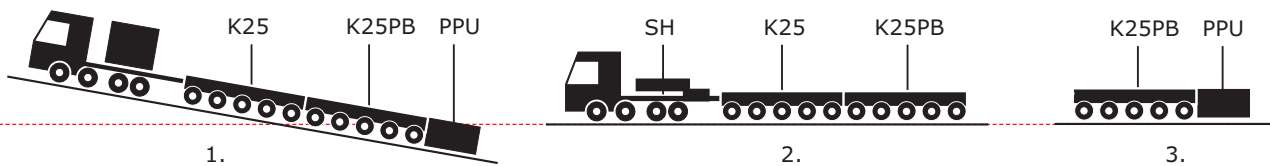


The mechanical end-to-end coupling of two vehicles is performed via a hydraulically lockable lamellar coupling.



# [K25 PB (Power Booster)

- the 3-in-1 solution with Power Booster



The new K25 PB is equipped with shiftable drive axles and can be towed at 50 miles/h or even be propelled by an equally shiftable PowerPackUnit (PPU), as needed. This development offers additional traction (thrust) without using an additional thrust machine on transport routes with inclines. The K25 PB can also be operated as a self-propelled unit or be coupled to other K25 platform trailers.

**1. As thrust machine:** before driving on a critical incline, the driver starts the powerful 150 kW PPU. As soon as the tractor no longer has sufficient power to manage the incline, i.e. the speed drops below 9 miles/h, the driving gear starts automatically, thus providing sufficient thrust. Once the incline has been overcome, the additional driving gear shuts off automatically and speed can be increased again in accordance with the road conditions (see graph 1).

**2. In regular traffic as trailer combination:** after the driving gear is switched off, the drive unit can achieve a speed of 50 miles/h in the transport combination. The K25 PB also distinguishes itself through its sturdy chassis construction, +/- 325 mm axle compensation and 60° steering angle (see graph 2).

**3. For in-plant transports:** during in-plant tasks, the drive unit with PPU – with or without K25 platform trailer – can be uncoupled from the tractor and controlled as self-propelled transport combination via a mobile operating panel. This operating panel controls the hydrostatic drive, lifting and lowering functions, hydraulic steering, brake system as well as electrical power supply. Short, manoeuvrable and extremely flexible (see graph 3)!



# [K25 SL

- the "Split Type"

The K25 SL has longitudinal pitch and, as a result, can be extended into a 3-file combination with the K25 series. Using additional spacers between the vehicle halves, for example, means that vehicle widths of 4000 mm can be realised.

The K25 SL with spacer is the optimum solution in special cases, for instance when the load requires better stability due to a high centre of gravity and the road does not allow a 4-file combination.



# **[K25 SP** *(Self-Propelled)*

**- the self-propelled heavy load combination**

The K25 series is also available as a self-propelled heavy load combination. The hydrostatic drive, the steering and the lift hydraulics in the pendulum axles are powered by a PPU (PowerPackUnit). The K25 SP can naturally be coupled to the drawn platform trailers K25.

SCHEUERLE and KAMAG supply PPUs (PowerPackUnit) of various performance levels to provide the energy for the hydrostatic drive, the steering and the lifting hydraulics in the pendulum axles.

The K25 with PPU can be operated by one person by remote control. Manoeuvring also requires considerably less space than with comparable tractor combinations. This is a decisive advantage, particularly when space is tight and for in-house transports. The PPU can be swivelled upward by 12°, which makes climbing ramps extremely easy.

Of course, the K25 SP can also be coupled to the electronically steered modular transporter K25 SPE. The PPUs can be connected using one data line and, thus, can be operated using just one remote control.



## **[K25 SPE** *(Self-Propelled, Electronically Steered)*

**- the self-propelled, electronically steered heavy load combination**

### **The "tractor" for the K25**

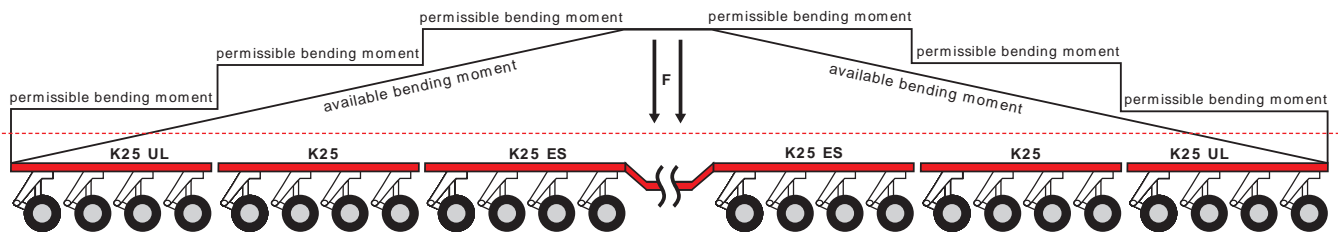
The hydrostatically driven and electronically steered combination vehicle is available in 4- and 6-axle units. Energy is provided by a PPU (PowerPackUnit). The different steering programmes, such as all-wheel steering along and crosswise, diagonal steering along and crosswise, front-wheel and rear-wheel steering as well as circular steering of a single vehicle or a coupled combination, make the vehicle extremely manoeuvrable. The steering angle of the K25 SPE is +/-140°.

The K25 SPE is compatible with the entire K25 series. The highlight: the K25 SPE can be coupled side-by-side to the electronically steered SPMT3000 modular transporter from SCHEUERLE.



# [K25 ES (Extra Strong)

- the Goliath among road vehicles



Made from high-strength fine-grained steel of grade S 960, the K25 ES has a significantly higher bending moment in the main beam. This higher bending moment allows additional coupling of a platform trailer with up to 3 axles after a deck.

In the process, the permissible axle loads are still observed, thus demonstrating its quality as a giant among road vehicles. The K25 ES can naturally be coupled to the SCHEUERLE-KAMAG K25. It is available as 2-, 3-, 4-, 5- and 6-axle platform trailer.

To complement your fleet with K25 ES platform trailers is of particular interest, since higher loads require additional axle lines which in turn result in higher bending moments. The combination of types K25 ES, K25 and K25 UL allows you to create the optimal vehicle combination, in accordance with the requirements of the bending line (refer to pictogram above). Thus, the two models ES and UL become the ace for all carriers.



8.1

## [K25 UL (Ultra Light)

The K25 UL is the light-weight of the K25 series. Weight and price-optimised, the K25 UL is the ideal model for configuring a combination in the dead weight-payload ratio. With a dead weight well below 10 tons (4-axle), the K25 UL is 850 kg lighter per axle line than the standard K25. It can be coupled to the K25 as well as to the K25 ES because the hydraulic system in the axles is the same.

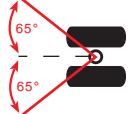
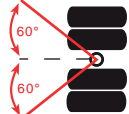
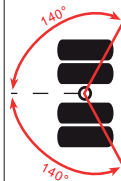
In combination with the K25 and the K25 ES, moment-optimised combinations with reduced dead weight are possible at increased payload. This reduces the number of axle lines required, shortens the overall combination and, thus, increases profitability.



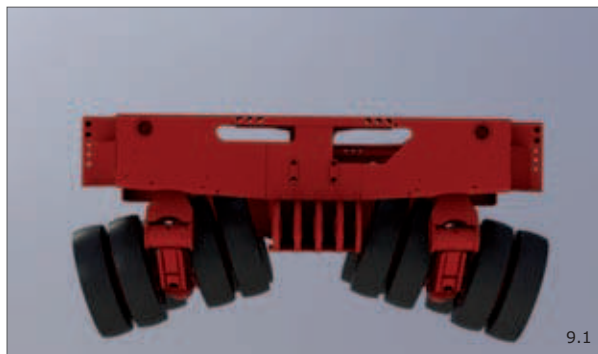
8.2



# Technical data

All comparative data is in reference to a K25 6-axle unit								
		UL	Standard	ES	SL	PB	SP	SPE
axle load	approx. kg	12,000	36,000	36,000	36,000	36,000	36,000	40,000
dead weight	approx. kg	14,700	20,000	20,000	20,600	21,000	20,800	24,200
additional load	approx. kg	57,300	196,000	196,000	195,400	194,000	194,200	215,800
total weight	approx. kg	72,000	216,000	216,000	216,000	216,000	216,000	240,000
platform height, minimum	approx. mm	875	875	875	875	875	875	920
platform height, driving position	approx. mm	1,175	1,175	1,175	1,175	1,175	1,175	1,220
axle compensation	approx. mm	+/-300	+/-300	+/-300	+/-300	+/-300	+/-300	+/-300
total lifting	approx. mm	600	600	600	600	600	600	600
length	approx. mm	9,000						
width	approx. mm	3,000						
axle base	approx. mm	1,500						
tyre size		245/70 R17.5	215/75 R17.5					
number of tyres per AL		4	8	8	8	8	8	8
oil volume in vehicle	approx. l	220	220	220	75	0	0	0
steering		hydraulic/mechanical forced steering						electronic
steering angle	+/-	65°	60°	60°	60°	60°	60°	140°
								

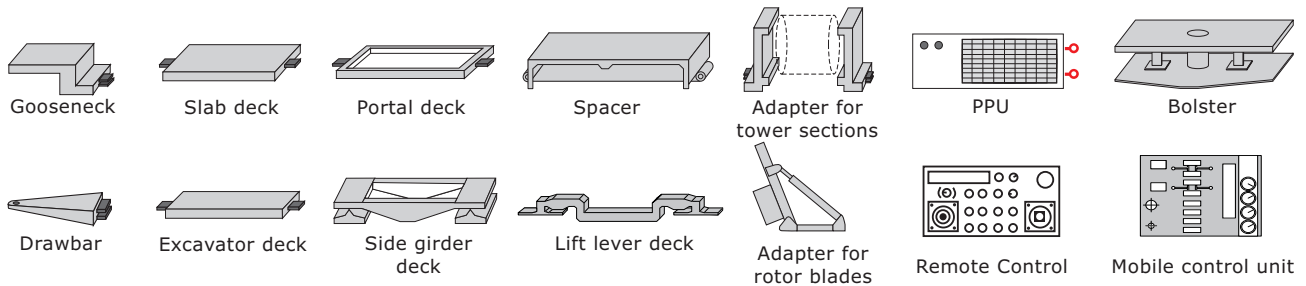
## Approved pendulum axle technology/axle compensation



**The hydraulic axle compensation ensures safe travel over uneven terrain.**

# **K25** Equipment

- the accessories programme of the K25 series



The extensive K25 accessories programme offers the right solution for even the most difficult transport tasks.

Together with customers around the world, the TII Group has developed an accessories programme that is suitable for every application. Individually configurable equipment is available to match each transport task at hand: from portal deck, flatbed deck or excavator deck in rigid or telescoping design, special decks

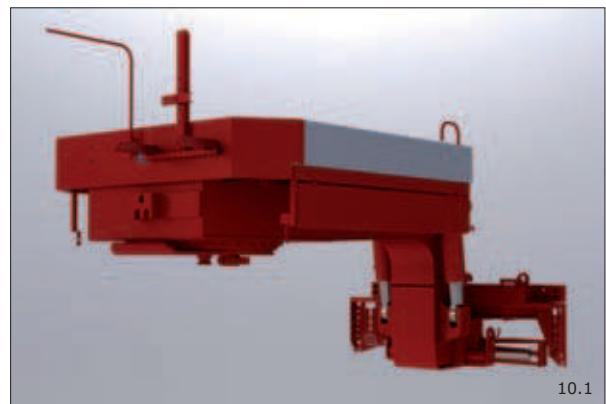
built to customer requirements, all the way to the adapters for transport of windmill equipment.

For special transport tasks, the TII development team with its many years of experience is available to meet the specific needs of its customers. Whether tower sections, excavators or transformers: combination vehicles of the TII Group are suitable for every transport task, in almost every climate, and in every terrain.

## **Gooseneck**

- adjustment of fifth-wheel loads to the dead weight of the truck by means of continuously variable mechanical setting possibilities on the gooseneck
- easily adaptable for all K25 series
- additional loading area of the gooseneck is removable
- total width of 2.5 m, which allows transport on conventional trailers

The modular gooseneck design, in connection with latest robotic welding technology, allows flexible implementation of customer requirements at best possible quality and precision.



## **Deck programme**

- excavator decks
- flatbed decks
- portal decks
- side girder decks
- lift lever decks
- special decks

With its comprehensive deck programme, the TII Group has the right solution for every application: Standardisation and modularisation of the decks and use of latest robotic welding technology ensure a fast production process, and thus shorter delivery times.

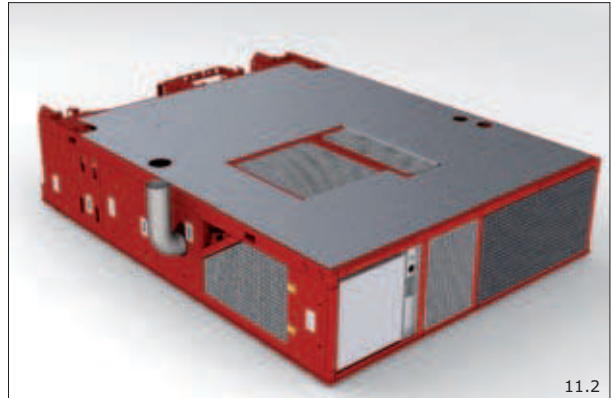
### **Bolster**

A set of bolsters, consisting of a front bolster and a hydraulic rear bolster, transforms the vehicles of the K25 series to transporters for long loads, e.g. concrete beams, wind towers, etc.



### **PPU**

- Z 341 (for K25 SP)
- Z 342 (for K25 SPE)



### **PPU**

- Z 150 (for K25 PB)



### **PPU**

- Mini PPU (23 kW)



### **Trailer equipment**

The 2-file trailer equipment consists of drawbar, drawbar-coupling element and mobile operating panel. By using additional components, 3-file and 4-file trailer combinations are possible as well.



### **Remote control**

- cable remote control
- radio control





# Competence

- The TII Group at a glance

SCHEUERLE, NICOLAS and KAMAG are subsidiaries of TII GmbH – Transporter Industry International. The TII Group is a global leader in developing and manufacturing top class heavy goods vehicles and is part of the group of companies owned by the Rettenmaier family from Heilbronn. The multi-entrepreneur Senator E.h. Otto Rettenmaier expressed his fascination with technology by acquiring SCHEUERLE Fahrzeugfabrik in 1987. NICOLAS Industrie was acquired in 1994, and ten years later the Ulm-based KAMAG Transporttechnik. Many years of technical know-how allow the TII Group to set international standards with its heavy goods vehicles. The heaviest transport of more than 15,000 tons earned

SCHEUERLE and KAMAG vehicles an impressive world record. Offshore and aerospace industries, shipyards, plant engineers, iron and steel works, as well as heavy load carriers, count on the transport technology of the TII Group, whose sales and service offer a global presence and comprehensive local support for its customers. All international sales activities for SCHEUERLE, NICOLAS and KAMAG products are handled by TII SALES - Transporter Industry International Sales GmbH & Co. KG.

## Examples of our product range



12.1  
**Offshore/plant engineering**



12.2  
**Shipbuilding industry**



12.3  
**Road transport**



12.4  
**Special transport**



12.5  
**Aerospace industry**



12.6  
**Street/industry**



12.7  
**Metallurgy**



12.8  
**Wind industry**



12.9  
**Bridge and tunnel construction**



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