SCHEUERLE

KAMAG

K25 H

- An innovative vehicle concept from SCHEUERLE and KAMAG

TII GROUP

GB

Courtesy of Crane.Market

K25 H

- 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 choice of accessories. The K25 H is an innovative vehicle concept based on the new universal development platform of the TII Group. The basis of the new vehicle concept is formed of components that have been used for decades, just the same than in other products of the TII Group. The K25 H is a completely new, autonomous platform trailer which is different to all the previous TII Group vehicles.

The modular design of the K25 H offers a multitude of combination possibilities, adjustable to the requirements of almost any transportation task. With its numerous special versions and choice of accessories, the K25 H is a reliable and cost- effective transport vehicle on public roads and for in-plant tasks.

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

2.1

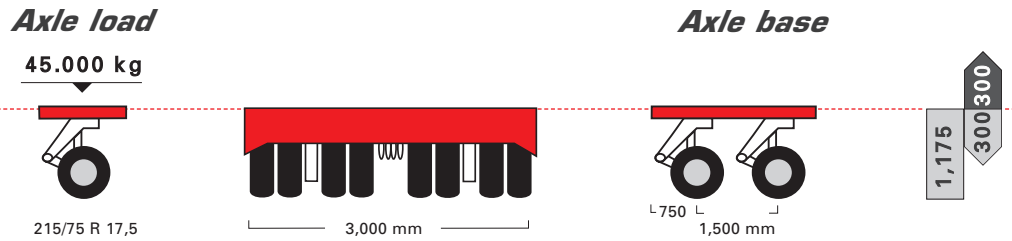
Advantages

- **Highest bending moment on the market**
- **Steering angle of +/- 60° (+/- 140° on K25 H SPE)**
- **Highest oil volume in its class**
- **Freely accessible track rods**
- **Special lashing eyes for optimal load protection**
- **Wear-resistant design**
- **Strong vehicle construction with extreme manoeuvrability**
- **For end-to-end and side-by-side coupling**
- **Extensive choice of accessories**


2.2

Courtesy of Crane.Market

The advantages of the K25 H
- Convincing arguments



Highest bending moment on the market

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


3.1

Cross section through the vehicle frame; the extensions on the main beam are flat under-neath to prop up or support the platform as required.

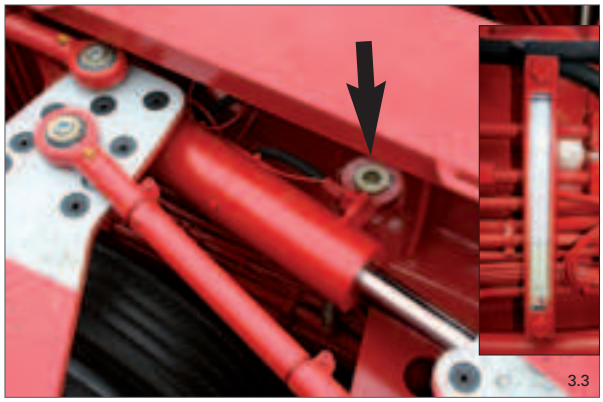
Reinforced lamellar coupling (40 mm)

The coupling fins on the K25 H have been reinforced to 40 mm. This counteracts the usual rapid wear of the fins, which is originated by the steering movements of the vehicle combination in combination with a locked coupling cylinder. Furthermore, the reinforced fins of the K25 H stabilise end-to-end coupled vehicle combinations when driving around bends.


3.2

Highest oil volume in its class

The K25 H has an oil tank integrated into the vehicle frame. The oil tank of, e.g. a 6-axle unit, has a oil volume of 220 litres- the highest volume in its class. This enables the operation of transport combinations of up to 25 axle lines without an additional tank.


3.3

Easy accessible track rods

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


3.4

Courtesy of Crane.Market

Further advantages of the K25 H
- Convincing arguments

Standard compressed air vessel
The compressed air vessels for the brake system are not integrated in the frame. They are standardized products, so that authorities testing for pressure vessels is no longer required, thus resulting in minimized repair and maintenance costs.


4.1

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


4.2

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


4.3

Pendulum axles and tyres
The K25 H is equipped with BPW pendulum axles. Due to their long service life and high quality, they keep maintenance costs down. The standard tyres for the dual formation (twin tyres) are 215/75 R 17.5 Continental, other options are Michelin, Goodyear and Bridgestone. The pendulum axles with drum brakes are equipped with ABS, which increase the service life of the tyres and the safety of the whole combination (optional).


4.4

Steering technology/steering angle
With a steering angle of +/- 60°, the K25 H not only reaches high manoeuvrability, but it is also a reliable transporter for heavy loads: the steering forces of the 2-circuit steering are generated by means of cylinders and mechanically transferred via track rods.

The steering cylinders are equipped with a ventilation system, which is easily accessible from outside.
The hydraulic oil for steering is secured via a pressure relief valve. This prevents damage when steering against resistance, e.g. a kerbstone.

Furthermore, the steering system is pre-tensioned for a higher stability during operation.


4.5

Further advantages of the K25 H
- Convincing arguments

Tested fixing and lashing material
The K25 H comes with fixing and lashing material which has been tested and accepted by official authorities. The lashing rings can be used for load securing and crane loading of the vehicle. The hole pattern for the side-by-side coupling elements has not been changed, therefore existing equipment can still be used.


5.1

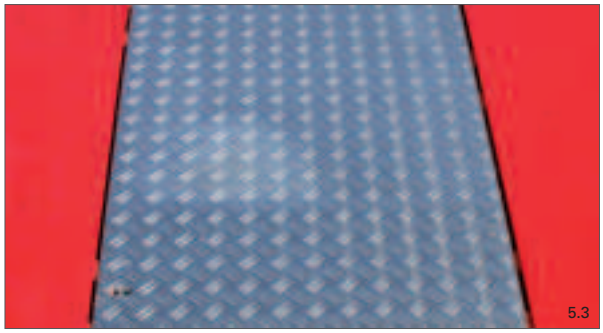
Axle lock
The 3rd and 4th axle lines (on the example of a 6-axle unit) can be mechanically locked from above. The grip recess is easily accessible and the locking pin is stored with bolt lock on the bogie.


5.2

Cover plates
The platform trailer can be equipped with serrated aluminium plates to cover the track rods. Hereby the safety of work on top of the platform is significantly increased. Furthermore, it protects the load against splashing water and dirtiness.


5.4

Mechanical coupling blocks for „side-by-side“ coupling.


5.3


5.5

Electrical system
The entire electrical system (24 V) is merged in a switch-box and is therefore easy to maintain.

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


5.6


5.7

K25 H PB *(PowerBooster)*

- The 5-in-1 solution with PowerBooster

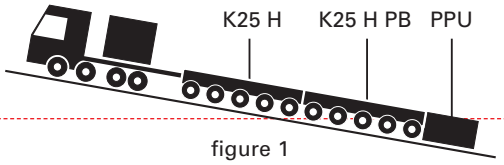


figure 1

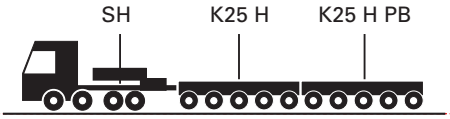


figure 2

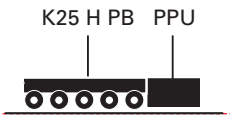


figure 3

The new K25 H 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 and thrust force without using an additional thrust machine on transport routes with ascending slope. Furthermore, the K25 H can be operated as a self-propelled unit or be coupled to other K25 H platform trailers.

1. As thrust machine: Before driving on a critical ascending slope, the driver starts the PPU with a performance of 150 kW. As soon as the tractor has insufficient power to manage the ascending slope, i.e. speed drops below 9 miles/h, the driving gear starts automatically, thus providing sufficient thrust. Once the slope has been overcome, the additional driving gear shuts off automatically and speed can be increased again in accordance with the road conditions (see fig. 1).

2. As trailer combination in regular traffic: Once the driving gear is switched off, the drive unit can reach a speed of 50 miles/h in the vehicle combination. The K25 H PB also is different to other types of vehicles because of its strong frame construction, axle compensation of +/- 325 mm and 60° steering angle (see fig. 2).

3. For in-plant transports: During in-plant tasks, the drive unit with PPU – with or without K25 H 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 the electrical power supply. Short, manoeuvrable and extremely flexible (see fig. 3)!

4. Mechanical "side-by-side" coupling: A further possibility for the in-house transport is the mechanically coupled side-by-side combination. Due to the wide supporting base, payloads with a high centre of gravity can be transported.

5. Mechanical "end-to-end" coupling: The PowerBooster can be used as a traction unit at the front or as a thrust machine at the rear part of extremely long combinations (with or without decks). With all these different kind of possible combinations the PowerBooster is an all-rounder of the heavy duty transport.

Courtesy of Crane.Market

K25 H SP *(self-propelled)*
- The self-propelled heavy load combination

The K25 H SP series is also available as self-propelled heavy load combination. The hydrostatic drive, the steering and the lifting hydraulics in the pendulum axles are powered by a PowerPackUnit (PPU). Naturally, the K25 H SP can be coupled to the drawn platform trailers K25 H.
The energy for the hydrostatic drive, the steering and the lifting hydraulics in the pendulum axles is provided by SCHEUERLE and KAMAG PPUs of various performance levels.
The K25 H SP with PPU can be operated by only one person with a 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 slewed up by 12°, this makes overriding ramps much easier than before.

As a matter of course, the K25 H SP can also be coupled to the electronically steered modular transporter K25 H SPE. The PPUs can be connected to each other using only one data line and, thus, can be operated using just one remote control.

7.1

K25 H SPE *(self-propelled, electronically steered)*
- The self-propelled, electronically steered heavy load combination

The "tractor" for the K25 H

The hydrostatically driven and electronically steered combination vehicle is available in 4- and 6-axle units. Energy is provided by a PowerPackUnit (PPU). 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 H SPE is +/-140°.

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

7.2

K25 H ES *(extra strong)*

- The Goliath among road vehicles

Made from high-strength fine-grained steel of grade S 960, the K25 H 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 H ES can naturally be coupled to the SCHEUERLE-KAMAG K25 H. It is available as 2-, 3-, 4-, 5- and 6-axle platform trailer.
To complement your fleet with K25 H ES platform trailers is of particular interest, since higher loads require additional axle lines which in turn result in higher bending moments.


8.1

K25 H SL *(Split Type)*

The K25 H 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 4,000 mm can be realised.
The K25 H SL with spacer is the optimum solution to reach a higher stability for special transports, for instance when the load has a high centre of gravity and the road does not allow a 4-file combination.


8.2

K25 3.2

- The special solution for the North American market; also available as K25 SL 3.2

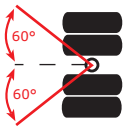
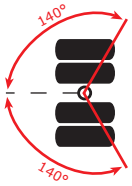
The K25 3.2 is 3.200 mm width and the K25 SL 3.2 even can be extended up to 4,870 mm. Both type of vehicles have bigger tyres (245/70R 17.5).
Due to the easy mounting/ dismounting of the wheel bogies, a variable distance of the axles is possible.

The K25 3.2 as well as the K25 SL 3.2 can be coupled to the standard vehicle K25 H.


8.3

Courtesy of Crane.Market

Technical data

All comparative data is in reference to a K25 (H) 6-axle unit									
		3.2	**SL 3.2**	**Standard**	**ES**	**SL**	**PB**	**SP**	**SPE**
Axle load	approx. kg	36,000	36,000	45,000	45,000	45,000	45,000	45,000	45,000
Dead weight	approx. kg	20,400	21,400	20,000	20,000	21,000	21,000	21,000	24,200
Additional load	approx. kg	195,600	194,600	250,000	250,000	249,000	249,000	249,000	245,800
Total weight	approx. kg	216,000	216,000	270,000	270,000	270,000	270,000	270,000	270,000
Platform height, minimum	approx. mm	950	950	875	875	875	875	875	920
Platform height, driving position	approx. mm	1,250	1,250	1,175	1,175	1,175	1,175	1,175	1,220
Axle compensation	approx. mm	+/- 300							
Total lifting	approx. mm	600							
Length	approx. mm	9,000							
Width	approx. mm	3,200	3,200	3,000	3,000	3,000	3,000	3,000	3,000
Axle base	approx. mm	1,500							
Tyre size		245/70 R17,5		215/75 R17,5					
Number of tyres per AL		8							
Oil volume in vehicle	approx. l	220	75	220	220	75	0	0	0
Steering		hydraulic/mechanical forced steering							electronic
Steering angle	+/-	60°	60°	60°	60°	60°	60°	60°	140°
									

Approved pendulum axle technology / axle compensation

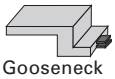
9.1

9.2

The hydraulic axle compensation ensures safe travel over uneven terrain.

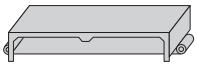
K25 H Equipment

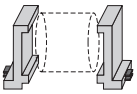
- The accessories programme of the K25 H series

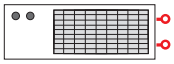

Gooseneck

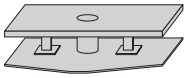

Slab deck

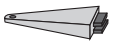

Portal deck


Spacer

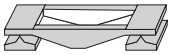

Adapter for tower sections


PowerPackUnit (PPU)

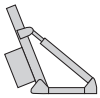

Swivel bolster

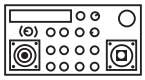

Drawbar

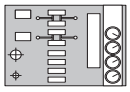

Excavator deck


Side girder deck


Lift lever deck


Adapter for rotor blades


Remote Control


Mobile control unit

The extensive K25 H choice of accessories offers the right solution for even the most difficult transport tasks.

Together with customers around the world, the TII Group has developed a choice of accessories that is suitable for every application. Individually configurable equipment is available to have the adequate transport solution for each type of load: portal decks, flatbed decks or excavator decks in rigid or telescoping design, special decks built as the customer requires and even adapters for transport of windmill equipment are available as accessory.

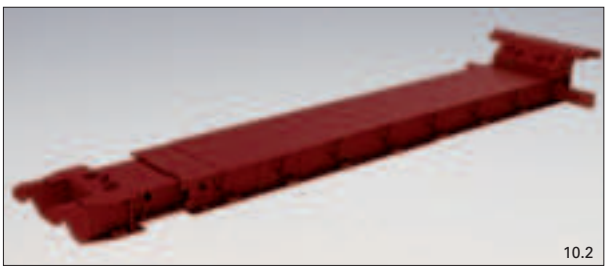
For special transport tasks, the TII development team with its many years of experience is available to meet the specific needs of its customers. Whether tower sections, excavators or transformers: combination vehicles of the TII Group are suitable for every transport task, in almost every climate, and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

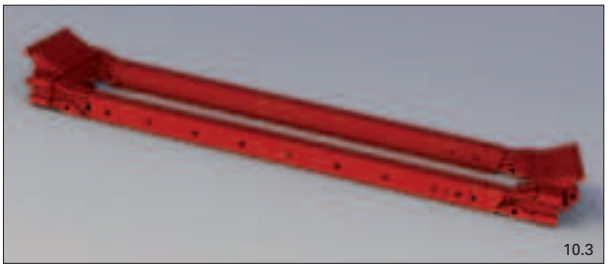

10.1

Gooseneck

- Adjustment of fifth-wheel loads to the dead weight of the truck by means of mechanical setting possibilities on the gooseneck (optionally continuously adjustable)
- Easily adaptable for all K25 H series
- Additional loading area of the gooseneck is removable
- Total width of 2,500 mm, which allows transportation on conventional trailers

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


10.2


10.3

Deck programmes

- 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.

Deck with lifting function

The maximum load is 100 tons (only in combination with a swivel bolster), the maximum lifting is at 400 mm and the length of the deck is approx. 4,500 mm, the advantage is that the load can be lowered while driving below a bridge or similar obstacles. Moreover, while the swivel bolsters are not used they can be lowered at all, so the load can be placed on top.

11.1

PowerPackUnit (PPU)

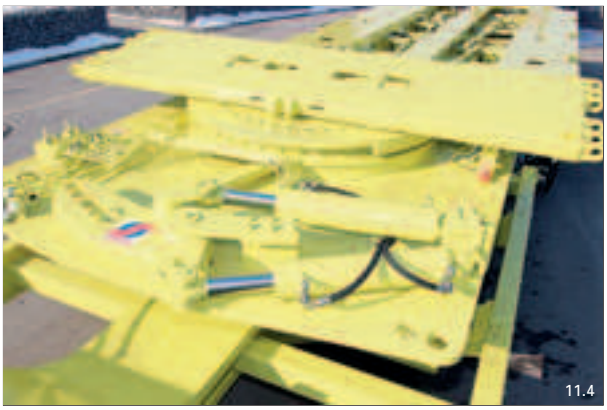
- Z 340 K01 (for K25 H SP – see fig. 11.2)
- Z 340 K02 (for K25 H SPE – see fig. 11.2)
- Z 150 (for K25 H PB – see fig. 11.3)


11.2


11.3

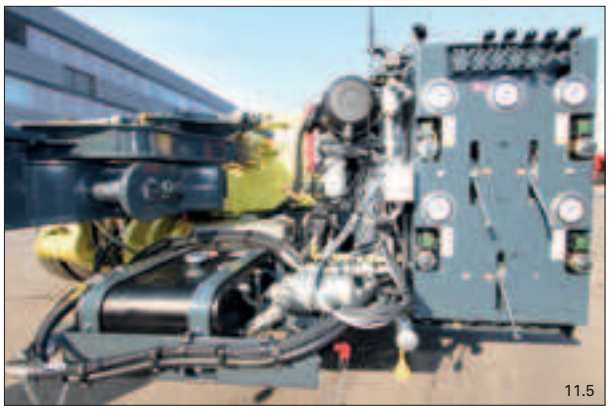
Swivel bolster

With a set of swivel bolsters, consisting of a bolster with steering and a hydraulic bolster without steering the K25 H series vehicles turn into transporters for long goods, e.g. concrete beams, wind towers etc.


11.4

PowerPackUnit (PPU)

- Z 22 with operating panel
  (optional with air compressor)


11.5

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.


11.6

Remote control

- Cable remote control
- Radio control


11.7

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 Construction


12.2
Shipyard Industry


12.3
Road Transport


12.4
Special Transport


12.5
Air & Space Industry


12.6
Road Transport/Industry


12.7
Metallurgy


12.8
Logistics


12.9
Bridge & Tunnel Construction

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