



# SELF-PROPELLED TRANSPORTERS

## MODULAR TRANSPORT SOLUTIONS AND ACCESSORIES







# THE TII GROUP

## YOUR POWERFUL GLOBAL PARTNER

The TII Group moves the world: Seventy percent of all transports over 3,000 tons and ninety percent of all transports over 5,000 tons are performed using vehicles by the TII Group.

With its brands SCHEUERLE, NICOLAS, KAMAG and TIIGER, the group of companies has production sites in Germany, France and India as well as a production cooperation in North America (Florida). It assists and advises its customers with a globally active sales and service organization. Heavy-duty vehicles by the TII Group transport entire industrial plants, ships, submarines, oil and offshore platforms, turbine, construction machinery but also slag pots and ladles in the remotest corners of the world.

*"For our customers, we bring around 400 years of experience in heavy-duty transport, accumulated by four companies, into play, thus securing their future economic success of tomorrow today."*

**Senator E. h. Otto Rettenmaier,**  
multi-entrepreneur and  
founder of the TII Group







# **TII GROUP AT A GLANCE**

## **PRODUCTS AND MARKETS**

As a full-range supplier, the TII Group offers a wide range of vehicles to move loads of all kinds, from the modular, self-propelled transporter (SPMT) to transport loads of 15,000 tons and more all the way to vehicles for stock handling in yard logistics.



**HEAVY DUTY TRANSPORTATION ON PUBLIC ROADS**



**WIND ENERGY**



**PLANT CONSTRUCTION**



**BRIDGE & TUNNEL CONSTRUCTION**



**SHIPYARD INDUSTRY**



**STEEL INDUSTRY**



**MINING**



**TERMINAL LOGISTICS**



**AEROSPACE INDUSTRY**



**SPECIAL VEHICLES**





# **SELF-PROPELLED MODULAR TRANSPORTERS**

## **OVERVIEW**

### **SCHEUERLE SPMT**

SCHEUERLE SPMT _____	<b>10</b>
Model types & accessories ____	<b>12</b>
Coupling variations _____	<b>14</b>
Combination illustration _____	<b>16</b>
Axle load _____	<b>18</b>
Control technology _____	<b>20</b>
Variations _____	<b>22</b>
Accessories _____	<b>24</b>
SPMT Light _____	<b>26</b>
Power Pack Units _____	<b>28</b>

### **KAMAG K24**

KAMAG K24 _____	<b>30</b>
Model types & accessories ____	<b>32</b>
Coupling variations _____	<b>34</b>
Combination illustration _____	<b>36</b>
Axle load _____	<b>38</b>
Control technology _____	<b>40</b>
Accessories _____	<b>42</b>
Power Pack Units _____	<b>46</b>

### **FULL RANGE SELF-PROPELLED VEHICLES**

Full Range Self-propelled Vehicles _____	<b>48</b>
SCHEUERLE-KAMAG K25 SP/SPE _____	<b>50</b>
SCHEUERLE InterCombi SP/SPE _____	<b>52</b>
PowerBooster _____	<b>54</b>
NICOLAS MHD SPE _____	<b>56</b>
NICOLAS Modular Lift Master _____	<b>58</b>
Shipyards transporters _____	<b>60</b>
Coupling capability _____	<b>62</b>







# **SELF-PROPELLED MODULAR TRANSPORTERS**

**EFFICIENT, RELIABLE, VERSATILE**

In the second half of the 20th century, a trend began that would forever change the entire transportation industry. With the first self-propelled transport modules used in shipbuilding and the SPMT (self-propelled modular transporter) invented by SCHEUERLE in the nineteen-eighties, the potential payloads suddenly increased and are basically unlimited today.

Today, seventy percent of all transports over 3,000 tons and ninety percent of all transports over 5,000 tons are performed on modular, self-propelled vehicles by the TII Group. Thus, modular manufacturing has gained a foothold in the oil and gas industry, shipbuilding and many other sectors. Unit weights of 15,000 tons – world record – have already been transported with SPMT by the TII Group. You as a customer will benefit from the extensive experience of the TII Group, whether you will opt for a SCHEUERLE SPMT, a KAMAG K24, a NICOLAS MHD or another vehicle from the wide range of models offered by the TII Group.





# **SCHEUERLE SPMT**

***PLANNING CERTAINTY AND PROCESS RELIABILITY WORLDWIDE***

In 1983, SCHEUERLE – today part of the TII Group – developed a vehicle that would fundamentally revolutionize the heavy haulage sector. The SCHEUERLE SPMT in container dimension (2.43 m) found its way into the industry and changed more than just the way loads are transported. The production concepts for the modular construction of industrial plants, conveyor systems or infrastructure projects were reinvented for the future. Today, modules can weigh up to 15,000 tons; the sky is the limit. They can be handled by using SPMT. You as a customer will benefit from the unparalleled global coverage of SPMT vehicles. Due to the vehicle fleets available all over the world, you may rent additional axles (cross hire rental) as required, cost-effectively move them around the globe on container flat racks, all the while managing your projects with flexibility. This even applies when more axles are required than are available in your own fleet. We allow you to deliver profitable projects and provide you with a competitive edge in terms of flexibility and planning reliability.

SPMT of the TII Group can be coupled from the second generation on and loaded onto container flat racks, making them easy to transport. Continuous technological developments and innovations, such as the SPMT Widening Solutions or the SPMT F with its increased top speed, ensure the technological leadership of the TII Group in this segment today.

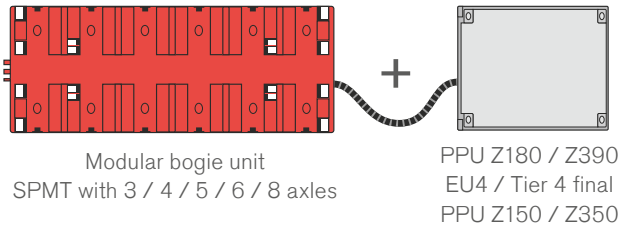




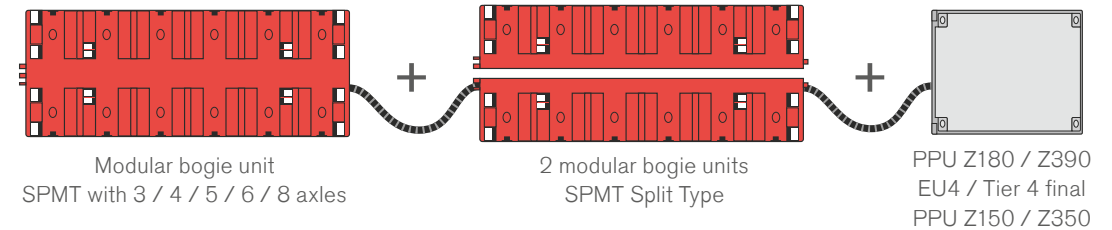
# MODEL TYPES AND BASIC ACCESSORIES

**YOUR MODULAR SYSTEM FOR PROFITABLE HEAVY-DUTY TRANSPORT**

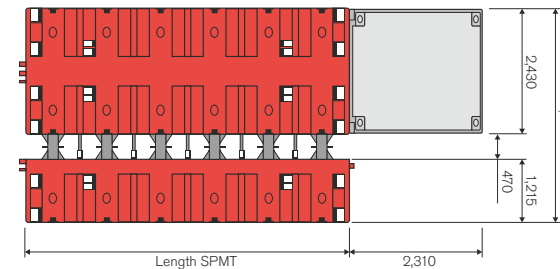
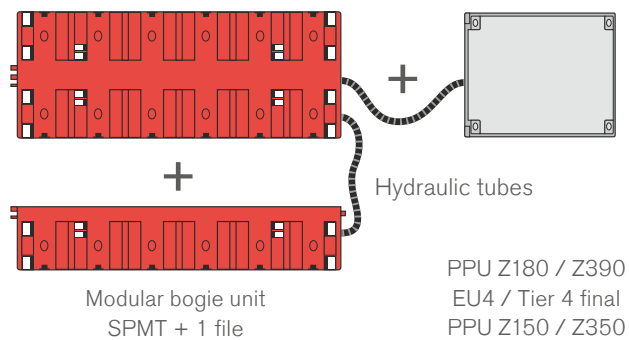
## Combination SPMT + PPU



## Combination SPMT + 2x SPMT Split Type + PPU



## Combination „3-File“

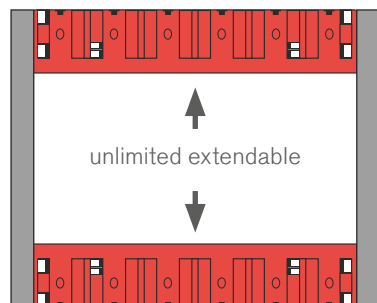


“3-file” – three adjacent split files

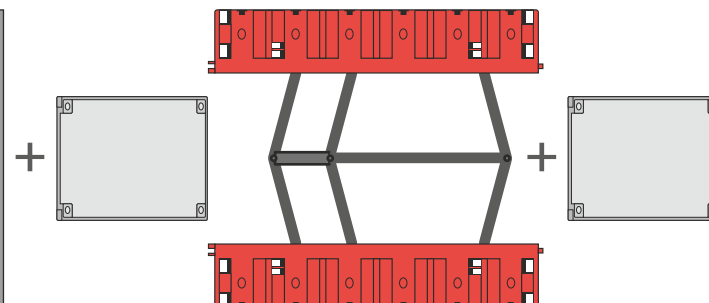
Axles	Length SPMT
3	4,530 mm
4	5,930 mm
5	7,330 mm
6	8,730 mm
8	11,530 mm

\* Vehicle length - 330 mm  
= length of loading area

## Telescopic Widening System



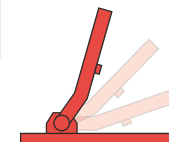
## Scissor Widening System



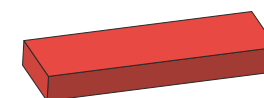
## Spacer



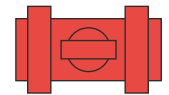
## Tilting device



## Load distributor

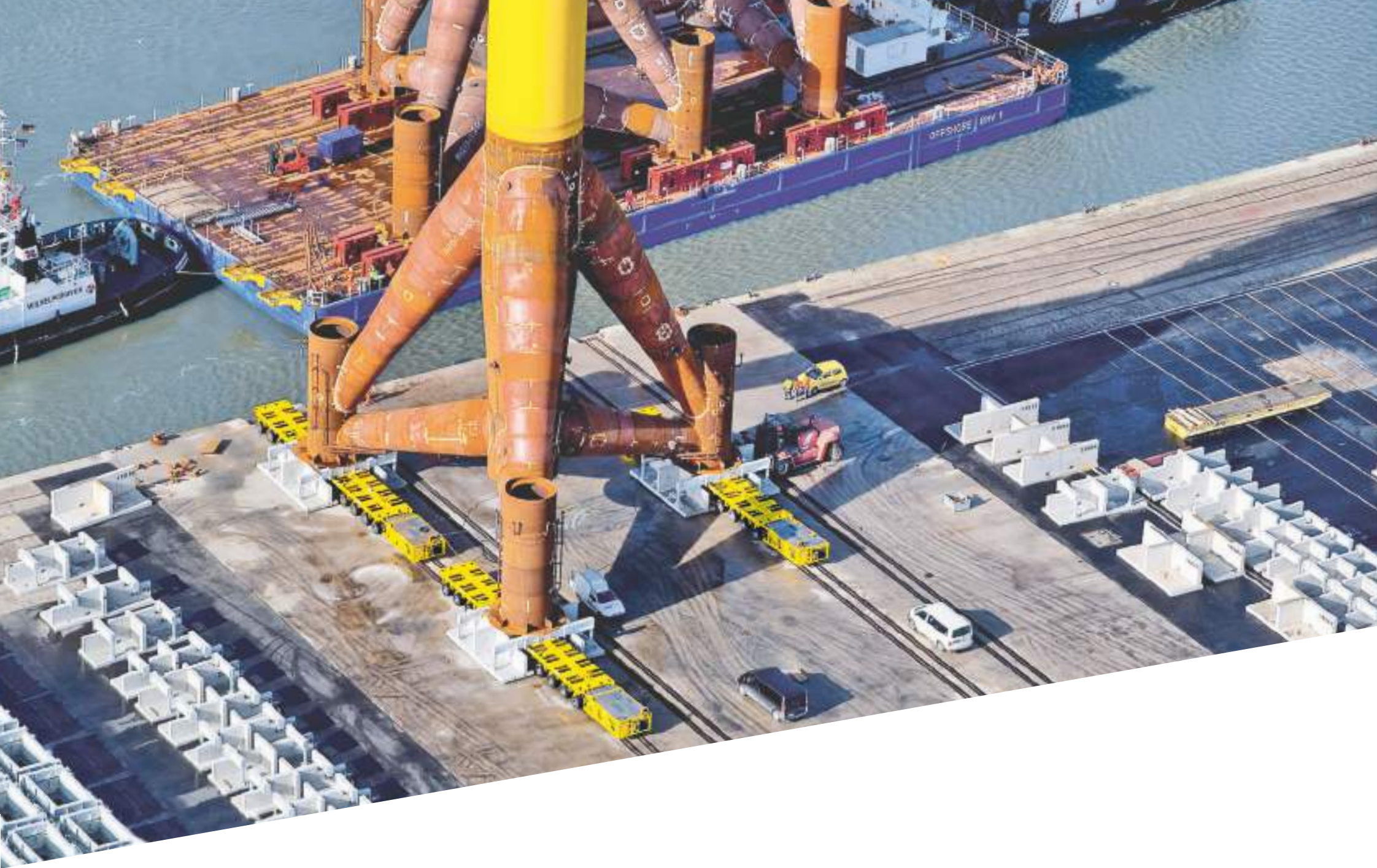


## Bolster



## Cabin



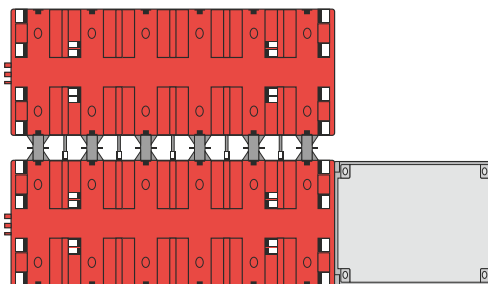




# COUPLING VARIATIONS

## UNLIMITED POSSIBILITIES

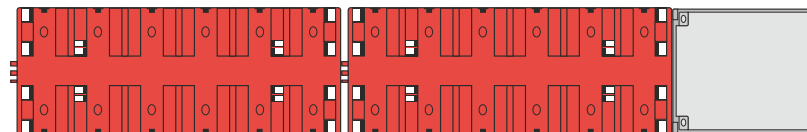
### Mechanically coupled "side-by-side"



2 modular bogie units  
SPMT with 3 / 4 / 5 / 6 / 8 axles

PPU Z180 / Z390  
EU4 / Tier 4 final  
PPU Z150 / Z350

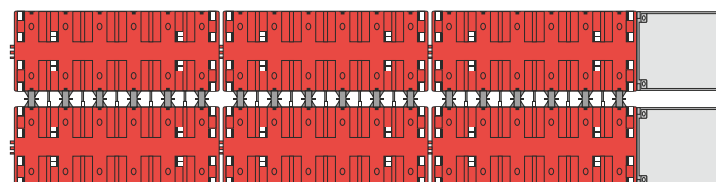
### Mechanically coupled "end-to-end"



2 modular bogie units  
SPMT with 3 / 4 / 5 / 6 / 8 axles

PPU Z180 / Z390  
EU4 / Tier 4 final  
PPU Z150 / Z350

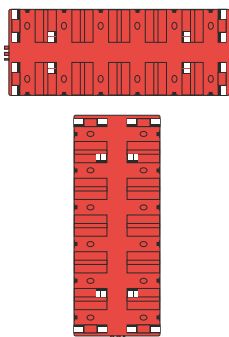
### Mechanically coupled in large combinations



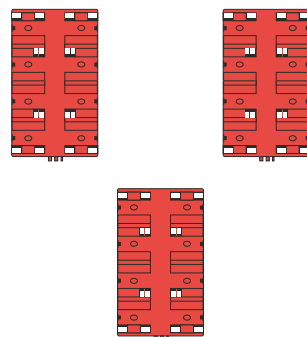
PPU	max. AL (48 t/60 t)	driven axlelines
Z180	20/16	16
Z390	40/34	26
Z150	20/16	16
Z350	40/34	26

### Open compound: The alternative to mechanical coupling

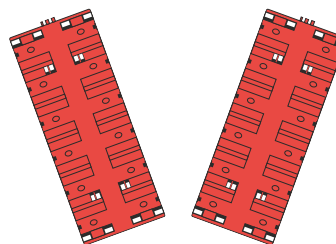
#### T-combination



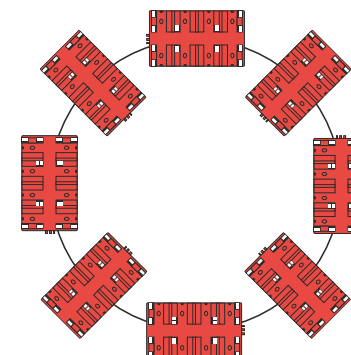
#### Y-combination



#### V-combination



#### Circle-combination







# SKY IS THE LIMIT

TRANSPORT ANY PAYLOAD WITH THE SCHEUERLE SPMT



\*with 60 t axle load and Polyfill tires, minus dead weight and PPU

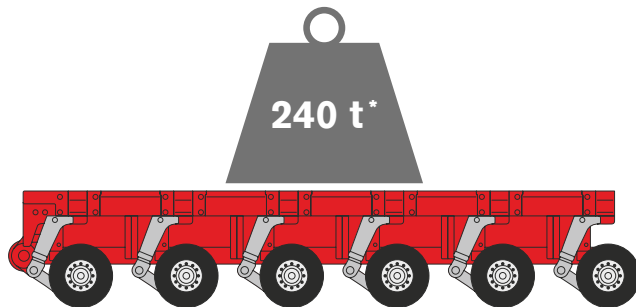




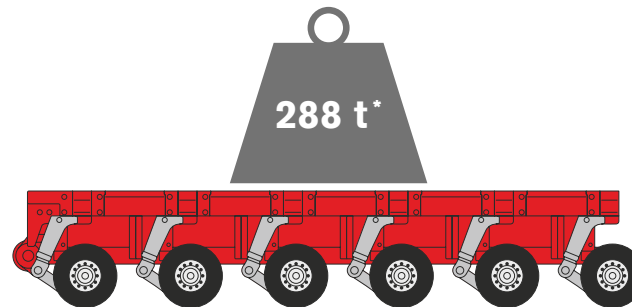
## AXLE LOAD

*VARIABLE AXLE LOADS, PERFECTLY ADAPTABLE TO LOAD AND SURFACE*

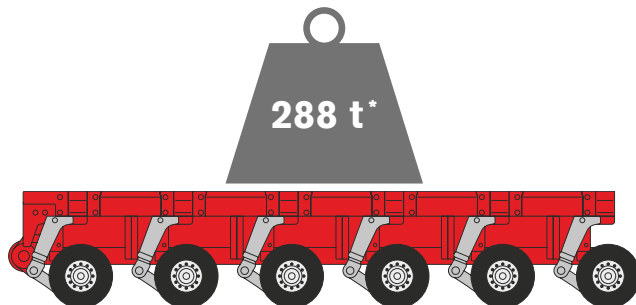
Pneumatic tires 40 t



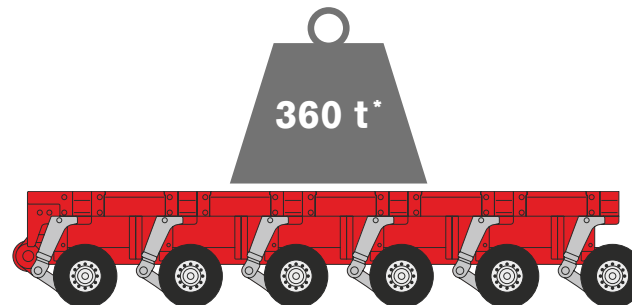
Pneumatic tires 48 t



Polyfill tires 48 t



Polyfill tires 60 t



\*minus dead weight

### AVAILABLE VARIATIONS

- / 40 t axle load with pneumatic tires
- / 48 t axle load with pneumatic tires
- / 48 t axle load with polyfill tires
- / 60 t axle load with polyfill tires

### ADVANTAGES OF PNEUMATIC TIRES

- / Lower dead weight
- / Economic
- / Increased self-damping
- / Lower ground pressure

### ADVANTAGES OF POLYFILL TIRES

- / Increased failure safety
- / Higher axle load possible
- / More tip-resistant due to increased tire rigidity



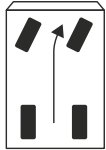


# CONTROL TECHNOLOGY

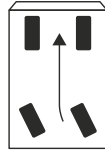
**PRECISION-POSITIONING – MECHANICALLY COUPLED OR AS AN OPEN COMBINATION**

The sophisticated steering technology of the SPMT by the TII Group allows precision-positioning of the heaviest of loads. The individual module transporters can be coupled in any combination, either mechanically or in open combinations. The steering technology guarantees the synchronized control of all module transporters integrated in the coupling mode. Electronic all-wheel steering makes the module transporters extremely maneuverable. This makes them suitable to transport almost any load and provides precision-positioning of  $\pm 2$  mm.

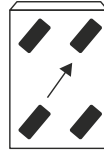
## Steering programs



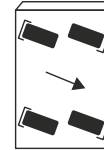
Front-wheel  
steering  
lengthwise



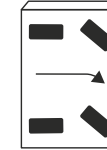
Rear-wheel  
steering  
lengthwise



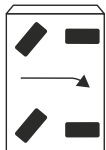
Diagonal  
steering  
lengthwise



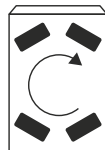
Diagonal  
steering  
crosswise



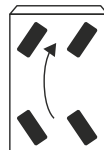
Front-wheel  
steering  
crosswise



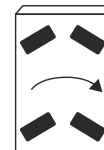
Rear-wheel  
steering  
crosswise



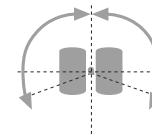
Circle  
steering



All-wheel  
steering  
lengthwise



All-wheel  
steering  
crosswise



+130°/-100°  
Steering angle

SPMT AC - DOWN TO -40° F



SPMT F - UP TO 12 MPH, LOADED



TELESCOPIC WIDENING SYSTEM



SCISSOR WIDENING SYSTEM



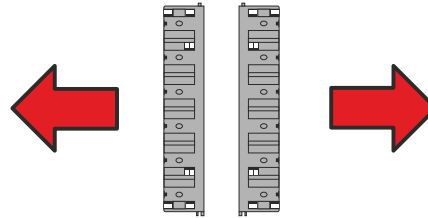
# VARIATIONS

## THE ALLROUNDER



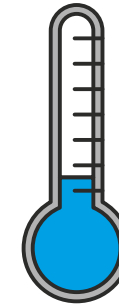
### SPMT SL (split type)

If two SPMT are too wide and one is too narrow for any given load, the SPMT SL can provide the solution to the problem. The SPMT SL (split type) can be divided in the middle and connected to create the so-called 3-file combinations.



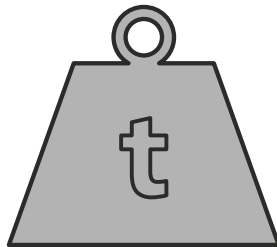
### SPMT SL with widening system

When flexible width is needed for higher tilting stability or fast changing loads with different sizes the SPMT Widening Solutions are the answer. Available as scissor or telescopic type the SPMT Widening Solutions offer flexible vehicle solutions that can be changed in minutes.



### SMPT AC for use down to -40°F

Especially in the oil and gas industry weather conditions are often harsh. The SPMT AC, equipped with an optional pre-heating unit, can be used without performance loss in temperatures as low as -40°F.



### SPMT ES

With its increased axle load of 60 t and bending moment the SPMT ES (Extra Strong) is the benchmark amongst self-propelled modular transporters.



### SPMT F with increased velocity

Increasing maximum speed means decreasing necessities to transport SPMT modules on trailers if they have to be relocated for transportation jobs. Growing oil and gas field sizes made this improvement necessary and the TII Group engineers delivered the solution.





# ACCESSORIES

THE RIGHT TOOL FOR ANY APPLICATION



## Swivel bolsters

Swivel bolsters with payloads of 150 to 600 tons allow the transport of self-supporting long loads.



## Vehicle lighting

The optionally available vehicle lighting system is mounted directly above the axles, provides increased safety and facilitates maintenance.



## Driver's cabin

In particular high-speed vehicles such as the SPMT F are often equipped with a driver's cabin.



## Remote control

Wireless or cable remote controls with an ergonomic design facilitate precise control of the vehicles.



## Spacers

Spacers are used to mechanically connect multiple vehicle modules. Available lengths: 2.80 m - 8.40 m

## Other available accessories

- / Chalwyn valve for emergency shutdown
- / Remote receiver
- / Lashing hook
- / T-media carrier for side-by-side coupling
- / Cable retaining plate for sorted connection cables
- / Additional oil cooler for operation at high temperatures
- / Several lifting devices
- / Arctic remote control with heatable gloves
- / heating/pre-heating unit



SCHEUERLE SPMT

# SPMT LIGHT

THE COMPACT TYPE

## Compact allrounder – electric- or diesel-hydraulic drive

The SCHEUERLE SPMT Light with two or four axles is a compact allrounder, guaranteeing full flexibility for smaller transportation tasks, e. g. in production halls. Payloads of up to 86 / 176 tons are possible with two or four axles. Naturally, the SPMT Light also offers the known benefits of the conventional SCHEUERLE SPMT, such as the robust design of the chassis and the electronic multi-directional steering complete with all known steering programs. Fixing points on the topside of the platform allow the mounting of cargo control posts for the transportation of long materials.

## AREAS OF USE

/ On-site, global

## VEHICLE TYPES

/ 2-axle SPMT

/ 4-axle SPMT

/ Diesel engine and electric drive

## ADVANTAGES

/ Available with an integrated diesel aggregate or emission-free as an electrically powered variation

/ Coupled mechanically (side-by-side) or electronically in an open combination

/ Proven serial technology from the SPMT series for steering, chassis, drive and braking system

/ Steering programs of the well-known SPMT series

/ Optionally available with hydraulic equal lifting system

/ Steering angle: +130°/-100°

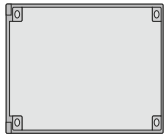




# POWER PACK UNITS

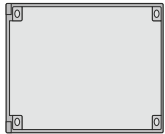
## DRIVING UNITS FOR MODULE TRANSPORTERS AND COMBINATIONS

Modular vehicles by the TII Group are powered by special driving units, the so-called PPU (Power Pack Units). These comply with the latest emission standards (EU 4/Tier 4 final). Today, vehicles of the TII Group are powered by PPU with combustion engines, electric and hybrid drives and are used under most difficult conditions around the world. The standard for SCHEUERLE SPMT are the models Z390 and Z180 with low-emission diesel engine. The PPU are normally mounted at the rear of the vehicle or combination but can also be carried along on top of the vehicle or even on the side of the vehicle.



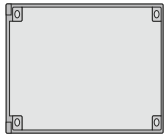
### **PPU Z390**

Emission standard EU4 / Tier 4 final



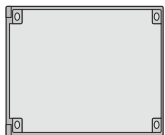
### **PPU Z180**

Emission standard EU4 / Tier 4 final



### **PPU Z350**

Emission standard EU3A / Tier 3A



### **PPU Z150**

Emission standard EU3A / Tier 3A







# **KAMAG K24**

## ***THE ROBUST ALLROUNDER***

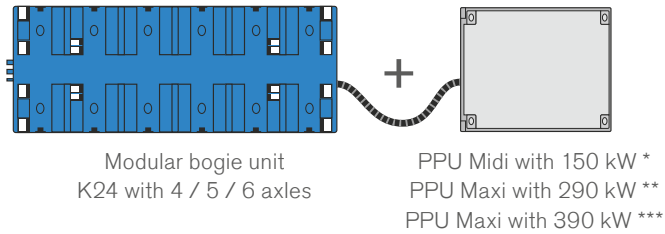
With the KAMAG K24, KAMAG Transporttechnik manufactures a proven and globally used modular, self-propelled transporter. Its hydraulic steering system has been proven for decades. Due to an extensive accessories program, the main components are rounded out to a multi-functional transport system for heavy loads of almost any shape and size. The KAMAG K24 can be loaded on container flat racks, making it an economical solution around the world. It can be coupled mechanically "side-by-side" or "end-to-end" as well as used in open combinations. It comes with a wireless or cable remote control.



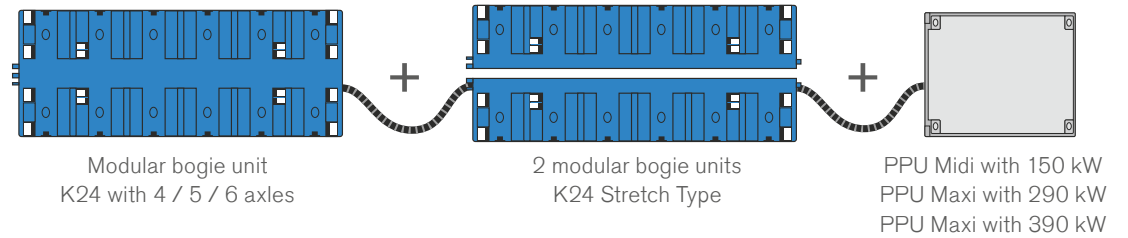
# MODEL TYPES AND BASIC ACCESSORIES

**YOUR MODULAR SYSTEM FOR PROFITABLE HEAVY-DUTY TRANSPORT**

## Combination K24 + PPU

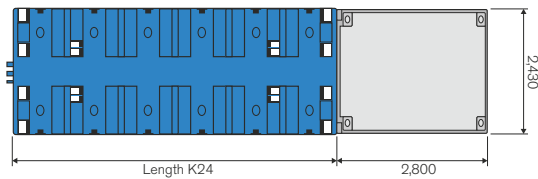


## Combination K24 + 2x K24 Stretch Type + PPU



\* PPU Midi with 150 kW, Deutz with emission standard 3a \*\* PPU Maxi with 290 kW, CAT with emission standard 3a \*\*\* PPU Maxi with 390 kW, MTU with emission standard Tier 4 final

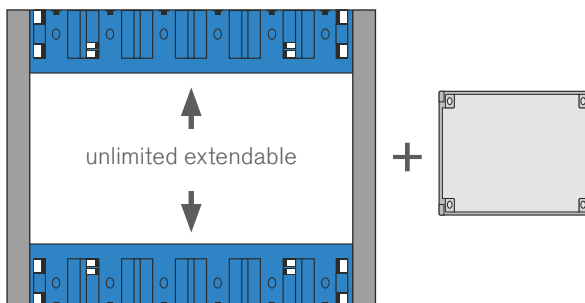
## Dimensions



### Axle lines Length K24

4	5,600 mm
5	7,000 mm
6	8,400 mm

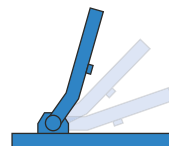
## K24 Stretch



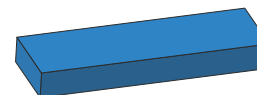
## Spacer



## Tilting device



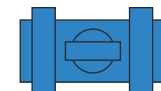
## Load distributor



## Cabin



## Bolster



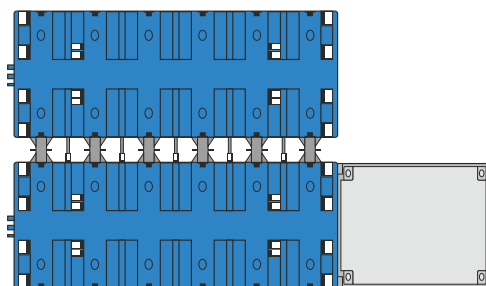




# COUPLING VARIATIONS

## UNLIMITED POSSIBILITIES

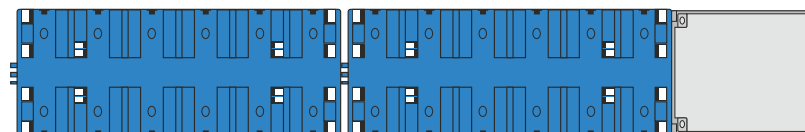
### Mechanically coupled “side-by-side”



2 modular bogie units  
K24 with 4 / 5 / 6 axles

PPU Midi with 150 kW  
PPU Maxi with 290 kW  
PPU Maxi with 390 kW

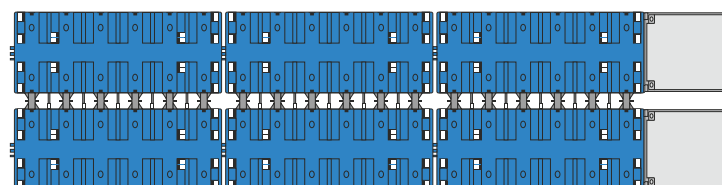
### Mechanically coupled “end-to-end”



2 modular bogie units  
K24 with 4 / 5 / 6 axles

PPU Midi with 150 kW  
PPU Maxi with 290 kW  
PPU Maxi with 390 kW

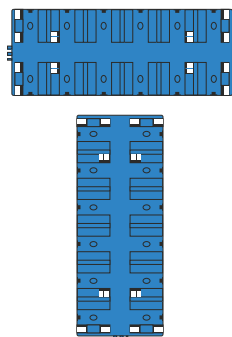
### Mechanically coupled in large combinations



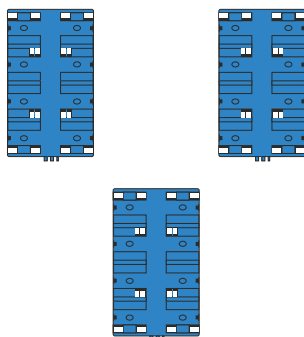
PPU	max. axle lines	driven axlelines
150 kW	18	12
290 kW	36	16
390 kW	36	16
2x37 kW electric	12	8

### Open compound: The alternative to mechanical coupling

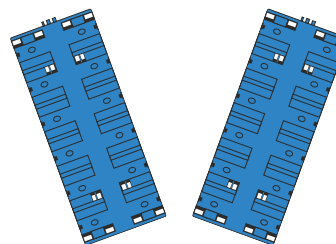
#### T-combination



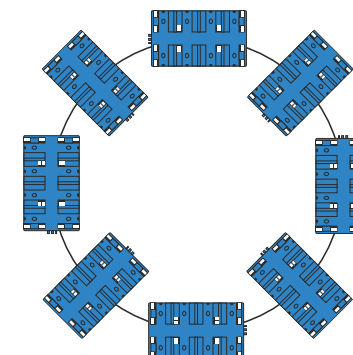
#### Y-combination



#### V-Combination



#### Circle-combination



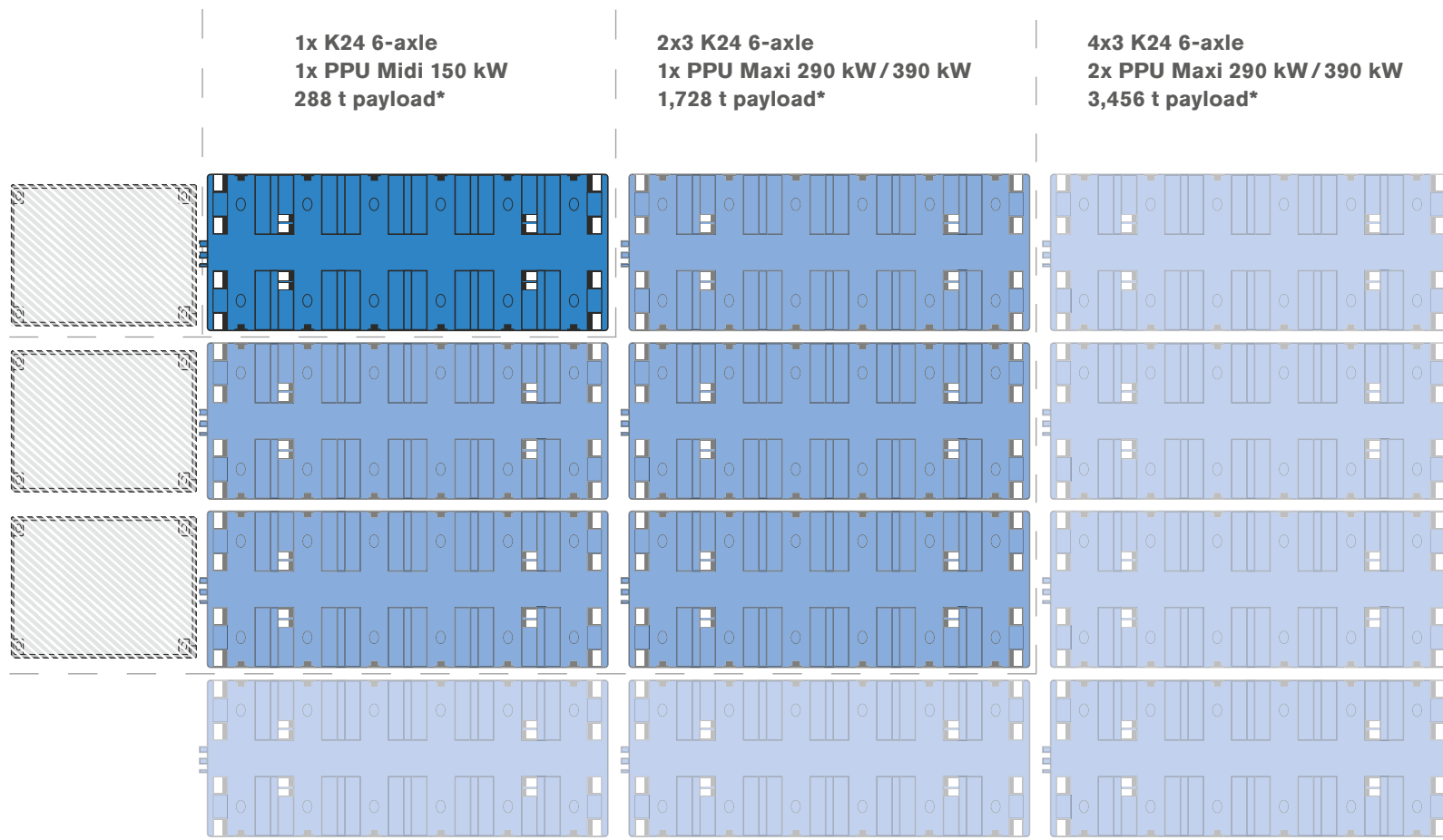






# SKY IS THE LIMIT

TRANSPORT ANY PAYLOAD WITH THE KAMAG K24



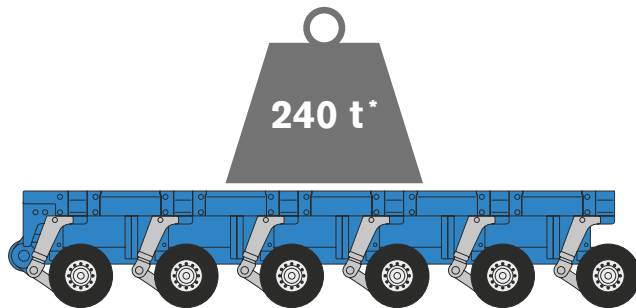
\*with 48 t axle load, minus dead weight and PPU



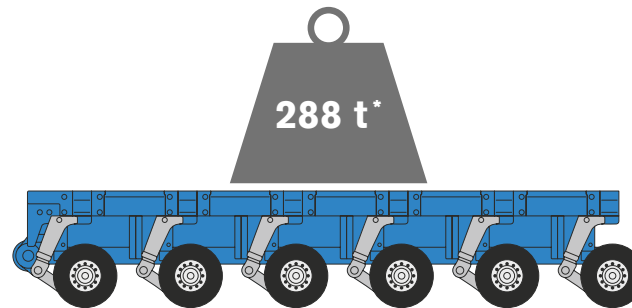
## AXLE LOAD

**VARIABLE AXLE LOADS, PERFECTLY ADAPTABLE TO LOAD AND SURFACE**

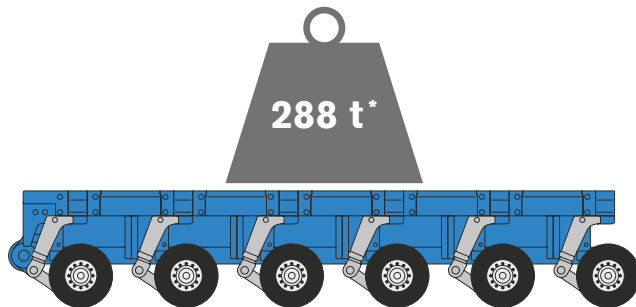
Pneumatic tires 40 t



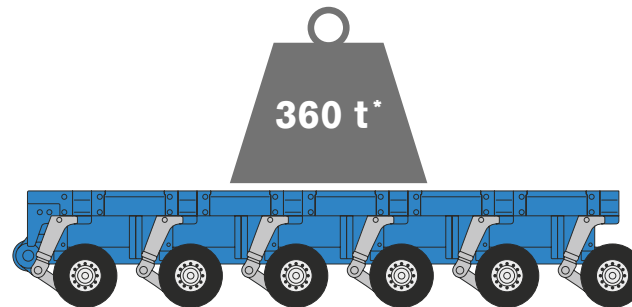
Pneumatic tires 48 t



Polyfill tires 48 t



Polyfill tires 60 t



\*minus dead weight

### AVAILABLE VARIATIONS

- / 40 t axle load with pneumatic tires
- / 48 t axle load with pneumatic tires
- / 48 t axle load with polyfill tires
- / 60 t axle load with polyfill tires

### ADVANTAGES OF PNEUMATIC TIRES

- / Lower dead weight
- / Economic
- / Increased self-damping
- / Lower ground pressure

### ADVANTAGES OF POLYFILL TIRES

- / Increased failure safety
- / Higher axle load possible
- / More tip-resistant due to increased tire rigidity



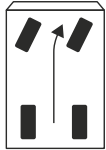


# CONTROL TECHNOLOGY

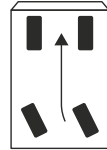
**PRECISION-POSITIONING – MECHANICALLY COUPLED OR AS AN OPEN COMBINATION**

The sophisticated steering technology of the KAMAG K24 allows precision-positioning of the heaviest of loads. The individual module transporters can be coupled in any combination, either mechanically or in open combinations. The steering technology guarantees the synchronized control of all module transporters integrated in the coupling mode. Electronic all-wheel steering makes the module transporters extremely maneuverable. This makes them suitable to transport almost any load.

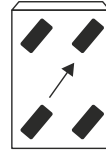
## Steering programs



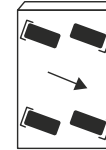
Front-wheel  
steering  
lengthwise



Rear-wheel  
steering  
lengthwise



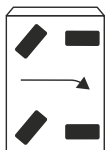
Diagonal  
steering  
lengthwise



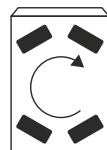
Diagonal  
steering  
crosswise



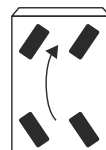
Front-wheel  
steering  
crosswise



Rear-wheel  
steering  
crosswise



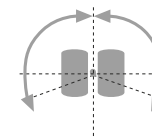
Circle  
steering



All-wheel  
steering  
lengthwise



All-wheel  
steering  
crosswise



+130°/- 100°  
Steering angle







# ACCESSORIES

*THE RIGHT TOOL FOR ANY APPLICATION*



## Swivel bolsters

Swivel bolsters with payloads of 300 to 600 tons allow the transport of self-supporting long loads.



## Spacers

Spacers are used to mechanically connect multiple vehicle modules. Available lengths: 2.80 m - 8.40 m



## Driver's cabin

The optional driver's cabin allows for safe and comfortable operation in bad weather or low outside temperatures.



## Remote control

Wireless or cable remote controls with an ergonomic design facilitate precise control of the vehicles.

## Other available accessories

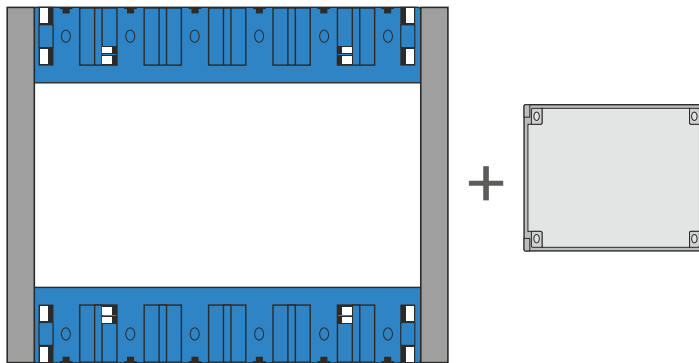
- / Lashing hook
- / T-media carrier
- / Lifting device



# K24 STRETCH

## FULL FLEXIBILITY

The K24 Stretch can be divided in the middle and thus enlarged by means of an added widening adapter. This helps you economize in multiple ways: on unnecessary modules, time and personnel. In addition, you increase the contact area of the load and thus its stability.



2 K24 stretch modules  
(4 / 5 / 6 axles)  
with widening adapter

PPU Midi with 150 kW \*  
PPU Maxi with 290 kW \*\*  
PPU Maxi with 390 kW \*\*\*

\* PPU Midi with 150 kW, Deutz with emission standard 3a

\*\* PPU Maxi with 290 kW, CAT with emission standard 3a

\*\*\* PPU Maxi with 390 kW, MTU with emission standard Tier 4 final

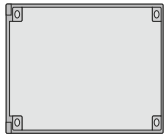




## POWER PACK UNITS

### DRIVING UNITS FOR MODULE TRANSPORTERS AND COMBINATIONS

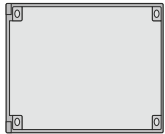
Modular vehicles by the TII Group are powered by special driving units, the so-called PPU (Power Pack Units). These comply with the latest emission standards (EU 4/Tier 4 final). Today, vehicles of the TII Group are powered by PPU with combustion engines, electric and hybrid drives and are used under most difficult conditions around the world. The standard for KAMAG K24 are the midi series with 150 kW and the maxi series with 290 to 390 kW. The PPU are normally mounted on the front of the vehicle or combination but can also be carried behind the vehicle or even on the side of the vehicle.



#### **PPU Midi mit 150 kW**

Deutz

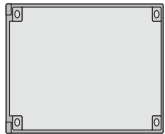
Emission standard 3a



#### **Maxi mit 290 kW**

CAT

Emission standard 3a



#### **PPU Maxi mit 390 kW**

MTU

Emission standard Tier 4 final





SELF-PROPELLED

## **TII GROUP**

***YOUR FULL-RANGE SUPPLIER OF SELF-PROPELLED MODULE TRANSPORTERS***

The TII Group is the world's uncontested market leader in the field of self-propelled vehicles with hydraulically-suspended pendulum axles. In addition to the globally available module vehicles SCHEUERLE SPMT and KAMAG K24, the TII Group offers a wide range of various self-propelled vehicles. These are available with electronic or mechanic steering, powered by diesel or electric units, depending on the application. The selection is wide and ranges from huge monobloc self-propelled vehicles with an electric drive for the production of nacelles all the way to Power-Booster vehicles to be used on public roads. Especially the option of covering transports on-site and on public roads with one vehicle provides operators with a high savings potential.

Self-propelled modular platform trailers by the TII Group such as the K25 H, the SCHEUERLE InterCombi and the NICOLAS MHD series are also available as a self-propelled heavy-duty combination. Hydrostatic drive unit, steering and lifting hydraulics in the pendulum axles are supplied by a Power Pack Unit (PPU). Just as the classic SPMT by the TII Group, the vehicles are steered by a wireless or cable remote control. The modular systems are available as a self-propelled version with or without electronic steering. Electronic steering allows for steering maneuvers and operation in loose coupling mode as known from the classic SPMT. It is easy to determine how many axles you will need – with 45 tons per axle throughout, the SCHEUERLE-KAMAG K25 H, the SCHEUERLE InterCombi as well as the NICOLAS MHD is a solid parameter you can count on.



# SCHEUERLE-KAMAG K25 H SP & SPE

## K25 H SELF-PROPELLED & K25 H SELF-PROPELLED ELECTRONICALLY STEERED

SCHEUERLE-KAMAG K25 H SP and SPE vehicles are available with three, four or six axles. They economically complement existing K25 H vehicles to create self-propelled transport units. Their benefit is not simply the low and robust construction but also the sophisticated steering technology. In particular operators of non-propelled

K25 H fleets appreciate the SP and SPE models which can be easily coupled with the trailer variants. This allows them to compose self-propelled combinations for on-site transportation, thus opening up new fields of business.

### ALL COMPARATIVE DATA ARE IN REFERENCE TO A K2506 H

		<b>3.2</b>	<b>SL 3.2</b>	<b>Standard</b>	<b>ES</b>	<b>SL</b>	<b>PB</b>	<b>SP</b>	<b>SPE</b>
<b>Axle load</b>	kg	36,000	36,000	45,000	45,000	45,000	45,000	45,000	45,000
<b>Dead weight</b>	kg	20,600	21,600	20,000	20,000	21,000	21,000	21,000	24,300
<b>Payload</b>	kg	195,400	194,400	250,000	250,000	249,000	249,000	249,000	245,700
<b>Total weight</b>	kg	216,000	216,000	270,000	270,000	270,000	270,000	270,000	270,000
<b>Platform height minimum</b>	mm	950	950	875	875	875	875	875	920
<b>Platform height in drive position</b>	mm	1,250	1,250	1,175	1,175	1,175	1,175	1,175	1,220
<b>Axle compensation</b>	mm	± 300	± 300	± 300	± 300	± 300	± 300	± 300	± 300
<b>Total lifting</b>	mm	600	600	600	600	600	600	600	600
<b>Length</b>	mm	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
<b>Width</b>	mm	3,200	3,200	3,000	3,000	3,000	3,000	3,000	3,000
<b>Axial distance</b>	mm	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
<b>Tire size</b>		245/70 R17.5	245/70 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5
<b>Number of tires / AL</b>		8	8	8	8	8	8	8	8
<b>Oil volume in the vehicle</b>	l	220	75	220	220	75	-	-	-
<b>Steering</b>		Hydraulic/mechanic forced steering							electronic
<b>Steering angle</b>	°	± 60	± 60	± 60	± 60	± 60	± 60	± 60	± 140





# SCHEUERLE INTERCOMBI SP & SPE

## INTERCOMBI SELF-PROPELLED & INTERCOMBI SELF-PROPELLED ELECTRONICALLY STEERED

SCHEUERLE InterCombi SP and SPE vehicles are available with three, four or six axles. They economically complement existing InterCombi vehicles to create self-propelled transport units. Their benefit is not simply the low and robust construction but also the sophisticated steering technology. In particular operators of non-propelled InterCombi fleets appreciate the SP and SPE models which can be easily coupled with the trailer variants. This allows

them to compose self-propelled combinations for on-site transportation, thus opening up new fields of business.

The MHD SPE by NICOLAS with hydrostatic drive is available with 4, 6 and 8 axles. The PowerPack driving units PP 410 and PP 215 provide the energy for the hydrostatically driven and electronically steered transporter. They ideally complement existing MHD platform trailers to create.

### ALL COMPARATIVE DATA ARE IN REFERENCE TO A IC 4-AXLE MODULE

		<b>S0/S10</b>	<b>S1</b>	<b>ES (S17)</b>	<b>SP (S0/S10)</b>	<b>SPE (S0/S10)</b>	<b>PB (S0/S10)</b>
<b>Axle load</b>	kg	36,000 / 45,000	36,000	45,000	36,000 / 45,000	40,000 / 45,000	36,000 / 45,000
<b>Dead weight</b>	kg	13,300 / 13,450	13,400	13,400	13,700 / 13,800	16,300 / 16,500	14,700 / 14,800
<b>Payload</b>	kg	144,000 / 166,550	130,600	166,550	130,300 / 166,200	143,700 / 163,500	129,300 / 165,200
<b>Total weight</b>	kg	157,300 / 180,000	144,000	179,950	144,000 / 180,000	160,000 / 180,000	144,000 / 180,000
<b>Platform height minimum</b>	mm	865	945	865	865	920	865
<b>Platform height in drive position</b>	mm	1,190	1,270	1,190	1,190	1,220	1,190
<b>Axle compensation</b>	mm	± 325	± 325	± 325	± 325	± 325	± 325
<b>Total lifting</b>	mm	650	650	650	650	650	650
<b>Length</b>	mm	6,000	6,000	6,000	6,000	6,000	6,000
<b>Width</b>	mm	3,000	3,100	3,000	3,000	3,000	3,000
<b>Axial distance</b>	mm	1,500	1,500	1,500	1,500	1,500	1,500
<b>Tire size</b>		215/75 R17.5	235/75 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5	215/75 R17.5
<b>Number of tires / AL</b>		8	8	8	8	8	8
<b>Steering angle</b>	°	± 60	± 60	± 60	± 60	± 140	± 60

SELF-PROPELLED

# POWERBOOSTER

SPMT AND SECOND TRACTOR UNIT IN ONE



*The PPU can be placed at the rear as well as on top of the vehicle*



*The rear-mounted PPU can be adjusted for uneven surfaces*

## **1. As a push truck on transportation routes**

**with gradients:** As soon as a tractor has no sufficient power to manage the incline, i.e. the speed drops below 9 mph (14 km/h), the driving gear starts automatically, thus providing sufficient thrust.

## **2. On public roads – as trailer combination:**

Once the driving gear is switched off, the drive unit can achieve a speed of 50 mph (80 km/h) in the transport combination with a prime mover.

**3. For in-plant transports:** For in-house transports, the drive unit with PPU can be controlled.

## **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.

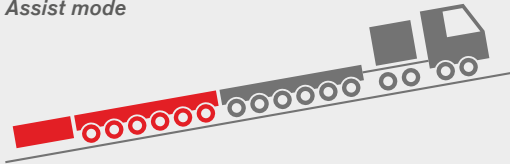
## **5. Mechanical “end-to-end” coupling:**

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.





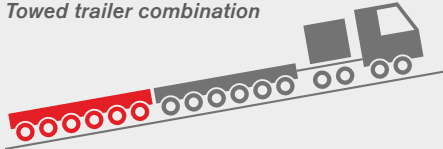
*Assist mode*



*Control without truck*



*Towed trailer combination*



*End-to-end coupling*



## **AREAS OF USE**

/ On-site, on public roads, around the world

## **PAYLOAD**

/ Unlimited due to modular vehicle concept

## **VEHICLE TYPES**

/ SCHEUERLE-KAMAG K25 H PB

/ SCHEUERLE InterCombi PB

/ SCHEUERLE WideCombi PB

/ KAMAG PTL OffroadTrailer PB

/ SCHEUERLE HighwayGiant PB

## **ADVANTAGES**

/ PB vehicles can be towed at up to 50 mph

/ At the destination, they can be remotely maneuvered as a self-propelled vehicle

/ Additional power in drive mode can do without a second tractor unit

/ PB vehicle modules can be coupled in a trailer combination

/ Extra traction on any terrain with the OffroadTrailer PB





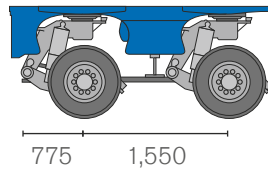
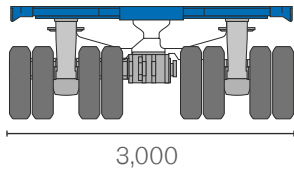
SELF-PROPELLED

# NICOLAS MHD SPE

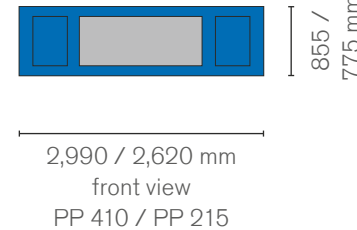
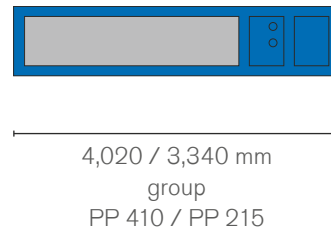
ECONOMICAL AND STURDY

The MHD SPE by NICOLAS with hydrostatic drive is available with 4, 6 and 8 axles. The PowerPack driving units PP 410 and PP 215 provide the energy for the hydrostatically driven and electronically steered transporter. They ideally complement existing MHD platform trailers to create self-propelled transport units. Their benefit is not simply the low and robust construction but also the sophisticated steering technology. An axle load of 45 tons makes the NICOLAS MHD a robust allrounder used around the world, primarily in the energy sector.

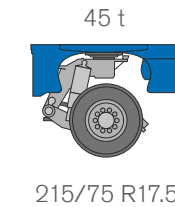
## Vehicle dimensions



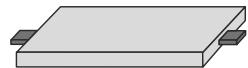
## PPU



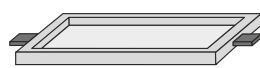
## Axle load



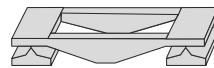
## Accessories



Platform  
(extendable)



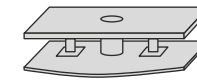
Beam  
(extendable)



High-performance  
beam and swivel  
bolster



Adapter for  
wind towers



Swivel bolster





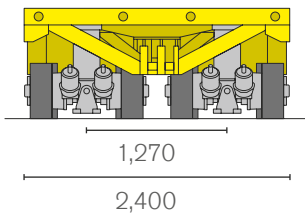
SELF-PROPELLED

# NICOLAS MODULAR LIFT MASTER

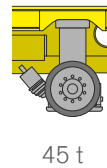
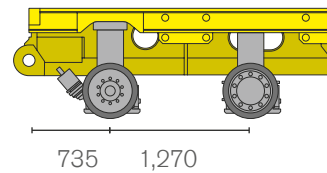
**THE SPECIALIST WITH LOWEST POSSIBLE LOADING HEIGHT**

The NICOLAS Modular Lift Master is a modular self-propelled vehicle with a built-in drive unit. With an axle load of 45 tons, a loading height of 630 mm and optional electric drive, the vehicle is "at home" around the operations and the dismantling of nuclear installations as well as in handling radioactive waste - and can also be used in fields such as the aerospace industry and in plant engineering. Available with 2, 4 and 6 axles with a steering angle of  $\pm 95^\circ$ , the vehicles can be used individually or coupled. The NICOLAS Modular Lift Master is available with solid tires for process reliability in closed spaces.

## Vehicle dimensions



## Axle load







SELF-PROPELLED

# SHIPYARD TRANSPORTERS

## MODULAR ON A LARGE SCALE

Shipyards transporters of the TII Group can be used in a modular way. By combining several vehicles, enormous loads can be transported. The precise steering response and powerful lifting hydraulics make the SHT by SCHEUERLE an indispensable element of economical and functional logistics in the shipbuilding industry. A steering angle of  $\pm 165^\circ$  in both directions makes shipyard transporters of the TII Group very maneuverable even where space is limited. This is particularly important when several vehicles are combined.

### AREAS OF USE

/ Shipyards

### PAYLOAD

/ 124 - 1,000 t – greater loads technically feasible

### STANDARD MODELS

/ 4 to 32 axles

/ Platform length up to 25.5 m

/ Platform width up to 10 m

/ Larger vehicles and special designs technically feasible at any time

### ADVANTAGES

/ Robust vehicle design

/ Extremely maneuverable due to  $\pm 165^\circ$  steering angle

/ Proven SCHEUERLE pendulum axle technology

/ Electronic steering

/ Wide range of optional safety and comfort features



# COUPLING CAPABILITY

## VEHICLES OF THE TII GROUP IN COMBINATION

	SCHEUERLE SPMT	KAMAG K24	SCHEUERLE InterCombi SP/SPE	SCHEUERLE- KAMAG K25 H SP/SPE	SCHEUERLE InterCombi PB	SCHEUERLE- KAMAG K25 H PB	SCHEUERLE SHT
SCHEUERLE SPMT	✓	✓ (from SPMT G 5)	✓	✓	✗	✗	✓
KAMAG K24	✓ (from SPMT G 5)	✓	✗	✗	✗	✗	✓

### Exploiting synergies

Customers of the TII Group benefit from synergies within the product portfolio – even across different model ranges. For instance, SPMT have already been successfully coupled with shipyard transporters or SCHEUERLE InterCombi platform trailers with SCHEUERLE SPMT. Even combinations not originally intended can often be realized by technical adjustment on a case-by-case basis. In these instances, engineers of the TII Group will advise the customer on-site and develop a technical solution for the mechanical, hydraulic and electronic coupling of the desired vehicle combination.



# **TII SALES**

**REALLY CLOSE TO YOU**

## **Available to you 24/7**

SCHEUERLE, NICOLAS, KAMAG and TIIGER have bundled their customer service for all brands and sites in the joint sales organization TII Sales GmbH & Co. KG. With a wide network of representatives and their own distribution centers, the TII Sales staff is available as your point of contact around the world. This guarantees comprehensive consulting on the spot, right from the start.

## **Benefit from us!**

Whether you would like to convert an existing fleet or solve individual transportation issues – TII Sales offers the required expertise to always provide customers of the TII Group with the ideal solution. We recognize specific requirements, discuss them with you and promptly offer the best vehicles. In doing so, we will focus on the future together. How is the market developing, how can you change your existing fleet if needed, which accessories

and expansions are worth considering to grow your business – TII Sales will advise you in all of these questions and provide you with the collective know-how of all four companies.



### **Engineering hand in hand**

In close cooperation with developers and designers, the project engineers of the TII Group develop application-specific solutions. In close consultation with the customer, the respective requirements are first identified and analyzed with the customer. Then, we determine which modifications must be made on existing models or what a redevelopment needs to look like to meet all your needs.

### **With you through all project stages**

Customers are continuously assisted by the sales team even when it comes to order processing. From proposal via project implementation all the way to delivery, you will be assisted by the TII Sales representative responsible for you. Members of the sales organization are traveling around the globe. They have a vast know-how of industries and an eye for individual solutions. They will be there for you whenever and wherever they are needed.

#### **Contact Sales**

Phone: +49 7941 691 271  
Fax: +49 7941 691 178  
E-Mail: [sales@tii-sales.com](mailto:sales@tii-sales.com)



# **SERVICE OFFERED BY THE TII GROUP**

## **LIFELONG PARTNERSHIP**

The service offered by the TII Group provides for global support during the entire service life of the vehicles. Service team members can be reached 24/7 via a free hotline. From the acceptance of new vehicles, training and instructions on the vehicle via modifications and overhauls all the way to repairs and the supply of spare parts, the TII Group offers all types of services to ensure the efficient operation of the vehicles for their customers worldwide. This range of services is complemented by accompanying support services. In particular, this includes financing support, procurement of used

vehicles to other interested parties, consulting on planned transports as well as tailor-made service packages. Building on the specific product data, the documentation and operating instructions, training measures are performed on the product to address the customer's needs. An essential element of the service range also includes modifications and overhauls. With targeted measures, customers can ensure an even longer-term use of the vehicles acquired. Immediate support is ensured by the global cooperation with service partners and our own technicians. A well-assorted stock of spare parts

facilitates prompt maintenance. The TII Group offers security of supply for spare parts and small accessories for the entire product range and the regular life cycle of a product, thus guaranteeing operational reliability for the user.



### **Contact Service**

Phone: +49 7941 691 111

E-Mail: [service@tii-sales.com](mailto:service@tii-sales.com)



# CAREER

## AT THE TII GROUP

### TII as an employer

The TII Group offers its employees opportunities that would not normally be available in major corporations. The international character of the business with heavy-duty vehicles – over 70 % are exported worldwide – brings a cosmopolitan flair to the daily working life. A steelworks vehicle for Oman, a modular transport solution for Colombia, mining equipment for Australia. At the TII Group, new employees notice from the very beginning that they are moving something on a global scale, both literally and figuratively. Joining the company is possible at all stages of life – the TII Group offers opportunities for trainees, students, young and experienced professionals.

### Vocational Training

At the company's in-house vocational training center, the TII Group provides apprenticeships in all professions typical for the industry. In the process, future construction mechanics, mechatronics engineers, product designers, industrial clerks and office clerks are not only provided with solid basic knowledge but also specialist knowledge. Due to insights gained in related departments such as design or project planning, apprentices at the TII Group get a glimpse of the bigger picture early on.

### Cooperative studies, internships or final paper

Be it engineering, business management or computer science: The TII Group offers dual courses of study in cooperation with renowned colleges (DHBW). Furthermore, students often like taking the opportunity to gain their first professional experience through internships at the TII Group.

### Starting out with and without professional experience

The TII Group offers attractive career options for qualified skilled workers, young professionals and professionals with years of experience. Be it as a skilled worker in production, as an engineer in design or as a manager in sales - dedication and performance are rewarded at the TII Group. Our global presence offers an interesting working environment, not only for members of the sales and service staff traveling around the globe. Flat hierarchies and open structures guarantee responsible, independent actions.

#### Contact Career

##### SCHEUERLE

Bettina Yel  
bettina.yel@scheuerle.com

##### NICOLAS

Agnès Hooghe  
agnes.hooghe@nicolas.fr

##### KAMAG

Anja Scharf  
anja.scharf@kamag.com



Address: 33 Valencia Way,  
Maddington WA 6109  
Phone: (08) 9459 6212 / 1800 CRANES  
E-mail: ronco@ronco.com.au  
Website: www.ronco.com.au

