



SPMT 3000

- the self-propelled, electronically steered heavy load combination

Turn mass into motion!



Low, wide and strong – the SPMT 3000 range for transportation of oversize containers

SPMT 3000 – Self Propelled Modular-Transporter

Deep, wide, strong

Three metres wide, lowerable down to 920 millimetres and equipped with twin-tyres – these are the features of the new SPMT 3000 heavy load range from SCHEUERLE. The hydrostatically-driven combination vehicle is available in four or six-axle versions. The Power-Pack Unit – PPU Z 340 – provides the energy for the hydrostatically propelled and electronically steered transporter. Driving modes such as standard, circular, diagonal and transversal can be comfortably carried out with the steering program of the SPMT 3000 regardless whether with an individual vehicle or a complete vehicle group.

The “tractor unit” for the InterCombi

Naturally, the SPMT 3000 can also be coupled with trailer modules from the InterCombi programme. Same height, same

width, same coupling equipment – the SPMT 3000 is the cost-effective addition in order to be able to create self-propelling transport units with available InterCombi modules.



The large axle compensation guarantees uniform load distribution

SPMT 3000

- wide, deep, strong + electronically steered



SPMT 3000 - your benefits


 lower construction, extremely loadable and reliable

 wide wheel track for high stability

 self-developed control technology, functional and dependable

 axle compensation +350/-300 mm

 steering angle +/- 140 degree

 the experience gained from the development, production and practical use of more than 2000 axle lines of driven heavy load combinations

 can be combined without any restrictions to the world's largest electronically-steered fleet of vehicles

 international network for sales, service and after-sales



SPMT 3000

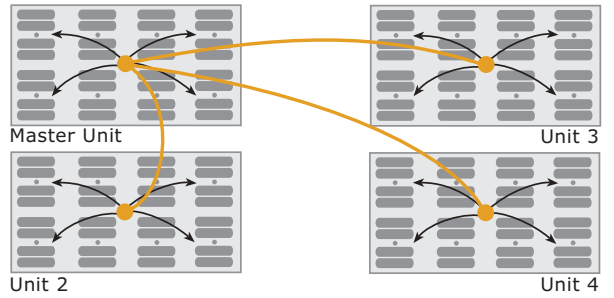
- Experience from developing more than 2000 electronically-steered units

STEPS.3 - steering technology

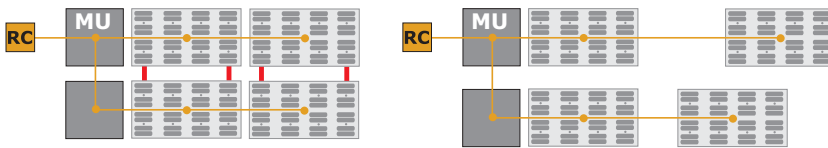
The new self-propelled SPMT 3000 platform modular transporter series is equipped with "STEPS.3 steering technology" (SCHEUERLE Transport Electronic Processor System, 3rd Generation). This latest generation covers all further developments in the vehicle sector and guarantees compatibility to the SPMT 2430 modular transporter generation.

With STEPS.3, SCHEUERLE offers reliable control technology for the special requirements in heavy load transportation which synchronizes all functions between individual vehicle units. Within a group, a transporter unit is defined as the so-called "master unit".

From here, all other transporter units are sent appropriate control commands for steering, traction drive, braking etc. irrespective of the number of vehicles in the group.



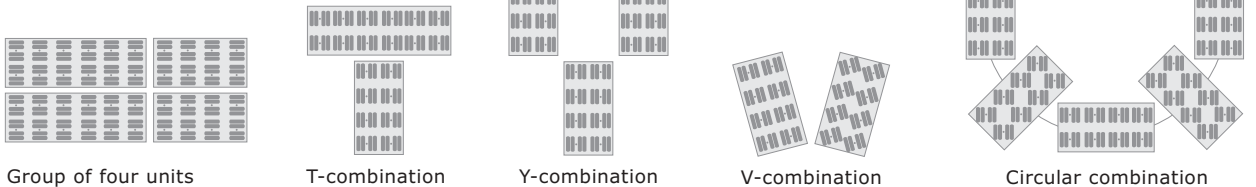
Mechanically-coupled vehicle combination or as a freely-arranged grouping



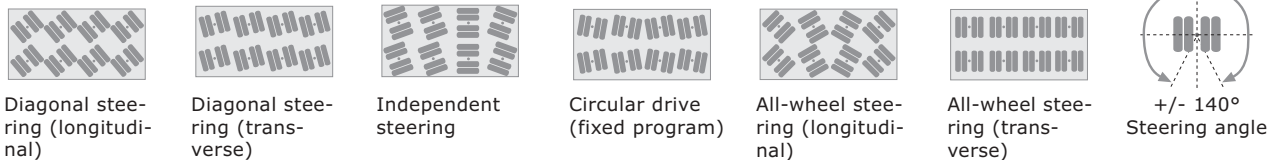
RC = Remote Control MU = Master Unit I = Spacer

Coupling by means of coupling elements (spacers) or using only a data link up to a distance of 999 m.

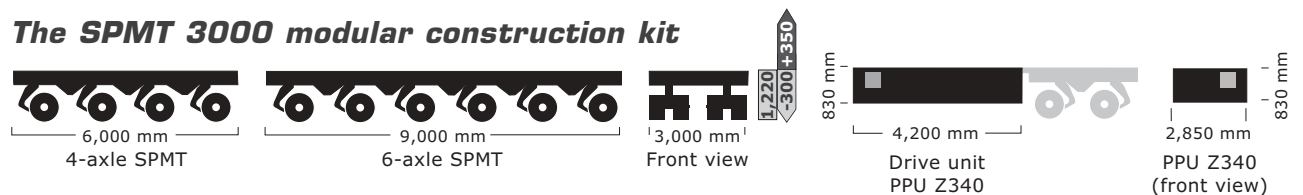
Vehicle combinations



Steering modes



The SPMT 3000 modular construction kit



TECHNICAL DATA

Axles	Combinations (examples)	Total weight	Payload max.*	Tractive force	Gradient
4		160 t	144 t	320 kN	16 %
6		240 t	216 t	320 kN	10 %
14		560 t	504 t	960 kN	14 %
20		800 t	720 t	1280 kN	12.8 %
30		1200 t	1080 t	1920 kN	12.9 %
40		1600 t	1440 t	2560 kN	12.9 %
48		1920 t	1728 t	2880 kN	11.9 %

Data based on the following figures:
Speed 0.5 km/h · Rolling resistance 0.03

4-axle module Type PEKZ 140.8.4 – 3000
 6-axle module Type PEKZ 210.12.4 – 3000

Dead weight ≤ 14 t
Dead weight ≤ 24 t

* Payload in each case minus the weight of the Power Pack Unit (PPU = Z 340MA 7.2 t).

	PEKZ 140.8.4 – 3000				PEKZ 210.12.4 – 3000			
	10 km/h	5 km/h	1 km/h	0.5 km/h	10 km/h	5 km/h	1 km/h	0.5 km/h
Reference speed	10 km/h	5 km/h	1 km/h	0.5 km/h	10 km/h	5 km/h	1 km/h	0.5 km/h
Perm. total weight approx. kg	112,000	136,000	144,000	160,000	168,000	180,000	192,000	216,000
Perm. axle load approx. kg	28,000	34,000	36,000	40,000	28,000	34,000	36,000	40,000
Pendulum axles in total	8	8	8	8	12	12	12	12
Driving axles	4	4	4	4	4	4	4	4
Braking axles	4	4	4	4	8	8	8	8
No. of wheels 215/75 R 17.5	32	32	32	32	48	48	48	48

Strong connections



Connection of hydraulics and electronics through quick-release couplers



Centering actuator for raising and lowering of the Power Pack Unit



On request: hydraulic bolting device

Precise control operations



Remote control with cable connection



Radio remote control



Functional control panel

Powerful drive system



Power Pack Unit provides power for drive, lift and steering



Hydrostatic wheel drive in the twin-tyred pendulum axles



Drive axles proved and tested countless times over

InterCombi series - mobile with the SPMT 3000

The SPMT 3000 can be coupled with other heavy load trailer combinations of the InterCombi series. If the SPMT 3000 is used in a vehicle group with mechanically-steered InterCombi units,

the steering can be adapted according to the possibilities available within the trailer units.



SPMT 2430 - the benchmark for self-propelled heavy duty modules



The technology of the SPMT 3000 is based on the experience gained by SCHEUERLE through the development and production of over 2,000 axle lines in the SPMT series. Loads weighing more than 15,000 tonnes have already been transported using SPMT heavy load combinations from SCHEUERLE.



COMBINABLE

- with the worldwide largest electronically-steered modular transporter fleet



Connection adapter for SPMT 2430 with SPMT 3000/InterCombi



Combination of SPMT 2430 with SPMT 3000/InterCombi



Lateral coupling of two SPMT vehicles, operated with only one Power Pack Unit



Combination of SPMT and InterCombi units in a freely-arranged grouping

EXPERTISE

- Scheuerle at a glance

Heavy Duty Transport - created by SCHEUERLE

The history of heavy duty transporters across the world is closely connected with the name of SCHEUERLE. The SCHEUERLE Fahrzeugfabrik GmbH has its origins in a forge founded by Christian Scheuerle in 1869. His grandson, Willy Scheuerle, began the development of heavy duty transportation vehicles in 1937. Willy's innovative ideas have inspired the entire industry and revolutionized the transport of the heaviest loads in many sectors of industry. Thus, heavy duty vehicles from SCHEUERLE are used in shipyards, the offshore industry, iron and steel plants, for bridge and tunnel construction, in the air and space industries as well as road haulage around the world.

Since 1987, SCHEUERLE Fahrzeugfabrik GmbH has been part of the TII Group (Transporter Industry International) belonging to the German industrialist, Otto Rettenmaier.



Our programme



Off-shore/Industry



Shipbuilding



Metallurgy



Bridge and tunnel construction



Air and space industries



Driverless transport system



Road transportation



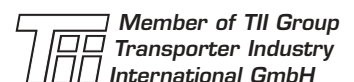
Road/Industry



Terminal logistics/ports



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TECHNICAL SPECIFICATION

SCHEUERLE 6-and 4-axle Module Unit, system SPMT 3000, TYPE HYE 140.8.4 and 210.12.4 design basically as per listed drawings; designed as 6-and 4-axle module unit with bolt coupling on both ends,

Drawing list:

6-axle unit Type SPMT 3000 HYE 210.12.4	No. 417.1.0.22.01
4-axle unit Type SPMT 3000 HYE 140.8.4	No. 417.1.0.14.01
PPU Z 340 MA HYE	No. 417.1.0.34.01

TECHNICAL DATA, EACH UNIT:

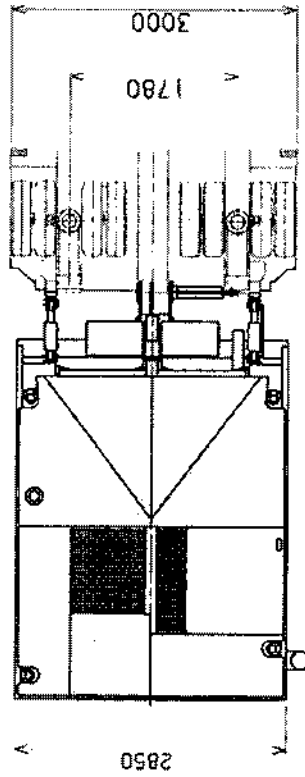
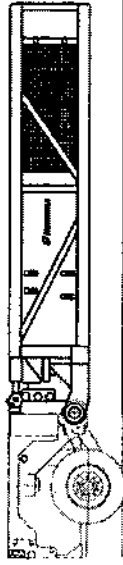
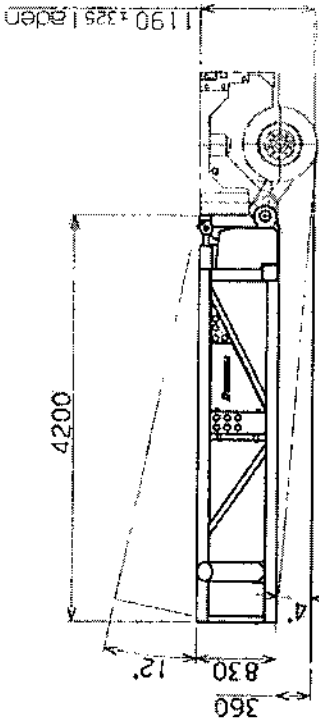
	4-axle unit	6-axle unit
	Type HYE 140.8.4	Type HYE 210.12.4
Speed:	0,5 km/h	0,5 km/h
Payload capacity:	approx. 144.400 kg	216.600 kg
Gross weight:	160.000 kg	240.000 kg
Unit weight without PPU:	approx. 15.600 kg	23.400 kg
Weight of PPU	approx. 6.100 kg	6.100 kg
Axle load: 4 x		6 x 40.000 kg
Pendulum axle load: 8 x		12 x 20.000 kg
Tires:	32/48 nos., size 215/75R 17,5; twin tires mounted on tapered rims, proprietary brand	
Loading area:	6.000 mm x 3.000 mm 9.000mm x 3.000 mm open frame design	
Loading height:	1.220 +350/-300 mm	
Lowest position	920 mm	
Total lift:	650 mm	
Axle distance:	3/5 x	1.500 mm
Steering angel	+/- 140°	
Tractive force (4 drive pendulum axles):	320 kN	
<u>Speed:</u>		
Unladen at 0 % gradient:	up to	14,8 km/h

Max. climbing ability (6-axle combi.) at 240.000 kg gross weight up to 10 %
Max. climbing ability (10-axle combi.) at 400.000 kg gross weight up to 12 %

MODULE UNIT EQUIPPED WITH:

- Twelve/eight (12/8) pendulum axles, thereof four (4) drive pendulum axles each with hydrostatic self-propulsion by means of integrated axial variable displacement motors, nominal tractive force each pendulum axle max. 80 kN, total 320 kN.
- Eight/four (8/4) brake pendulum axles with pneumatically operated brake.
- Module unit equipped with electronically digital controlled variable distance - multidirectional steering with directly selectable basic steering programs. Steering range $\pm 140^\circ$ (similar as per drawing No. 92.1000.64-A, page A8 to A11).
- SCHEUERLE hydro motor steering system with a steering angle of ± 140 degree. The steering moment will be transferred to the running gear by one hydraulic motor. When moving in a compound, the great steering angle of $\pm 140^\circ$ allows the compound increased flexibility and maneuverability.
- The SCHEUERLE Transporter SPMT 3000 includes a computer-controlled all-directional electronic steering system lending it extraordinary manoeuvrability.
- The special design concept employs infinitely controlled proportional valves, one hydraulic motor, step-less steering (an important feature for accurate positioning) with very low steering forces.
- Digitally designed electronic components for steering electronics.
- Analogously operating electric system for safety and emergency function.
- Shielded external global data bus system consisting of one (1) cable integrating all electronic functions.
- Hydraulic axle load compensation with hydraulic axle support and lift/lowering system for 3- and 4-point support at free programmability of the supporting groups. Arrangement by means of single connection and disconnection of the axle lines. Additional stop cock for pressure relief on each pendulum axle.
- Overspeed protection system, electronically controlled ASR-system, integrated in the system to protect the hydraulic drive motors.
- Hose fracture safety valves to protect the system from hose pipe failure.

- Loading platform with steel plate covering. Heavy low-positioned lamellar coupling on both longitudinal sides. Lateral sides provided with side coupling devices for side-by-side configuration. Clearly structured lateral frame construction.
- Central high-webbed sectional main beam of the platform and strong lamellar end-to-end-coupling. Bolt lamellar coupling at front and rear. Lamellar construction with hydraulically operated coupling bolt. Main frame as integrated hollow construction (box-type) designed for max. side and torsion stability in straight, even construction.
- Bending moments in positive and negative load force direction in the X-X axis min. 715 mt (7.150 KNm).
- High-tensile tension bolts within the upper coupling level..
- Hydraulic connection lines as far as technically possible reduced to a minimum for all combinations.
- Paint: Standard, colour at customer's preference.
- SPMT 3000-HYE units directly coupled to standard Inter Combi units, IC, drawbar type.
- No height differences between SPMT 3000 units and IC units.
- Steering operating lines for standard Inter Combi units installed in the SPMT 3000-HYE units
- Steering, lifting, lowering and braking operations of the front-coupled SPMT-units are activated from the PPU Z 340 HYE.
- Module units completely equipped and tested as single units and in the relevant combination.
- Module units equipped and suitable for environmental conditions such as high humidity in coastal areas. Operation within a temperature range of -20°C up to +40°C.
- Module units interchangeable within the relevant combinations.
- Short operating instructions and nominated name plates of the operating panels in English and German language.
- Operating manual, maintenance manual in English and German and spare parts lists in duplicate and in English language.
- Module units functioning, tested and ready to be put into operation.



Motor Engine MAN D2876 LUE 622
 Leistung Power 338 kW
 Gewicht PPU ca. Deadweight PPU approx. 6 500 kg

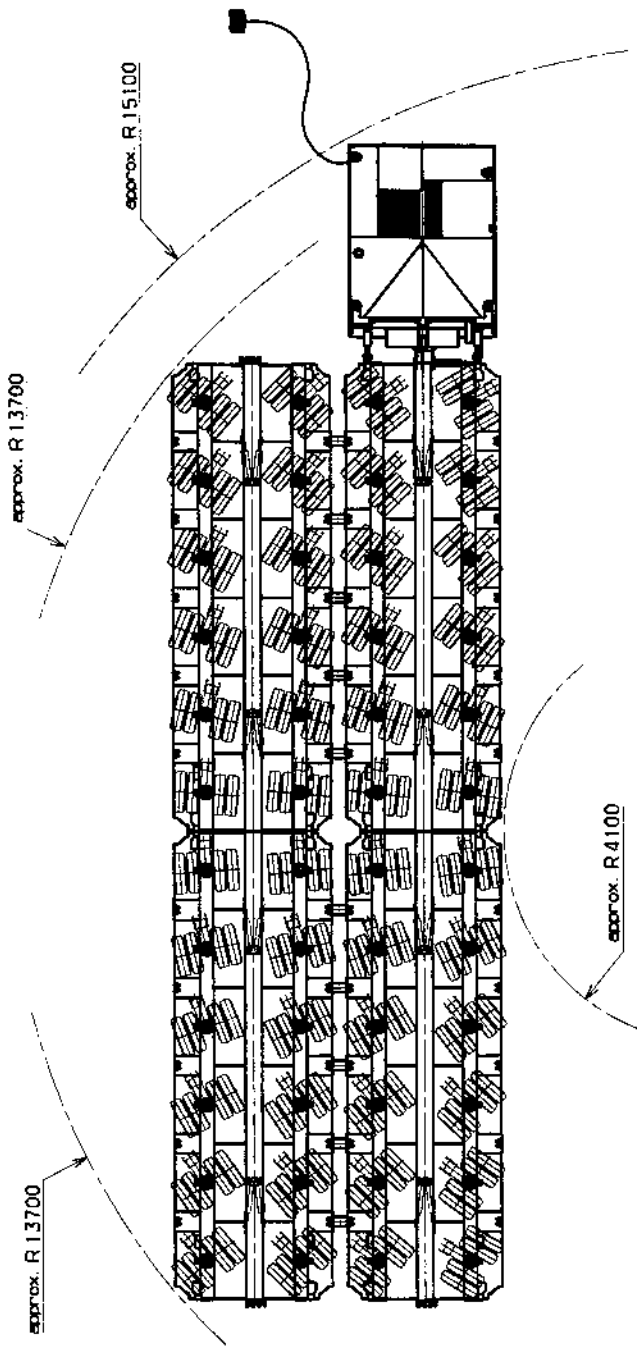
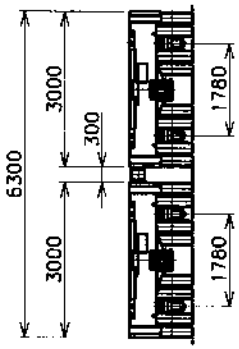
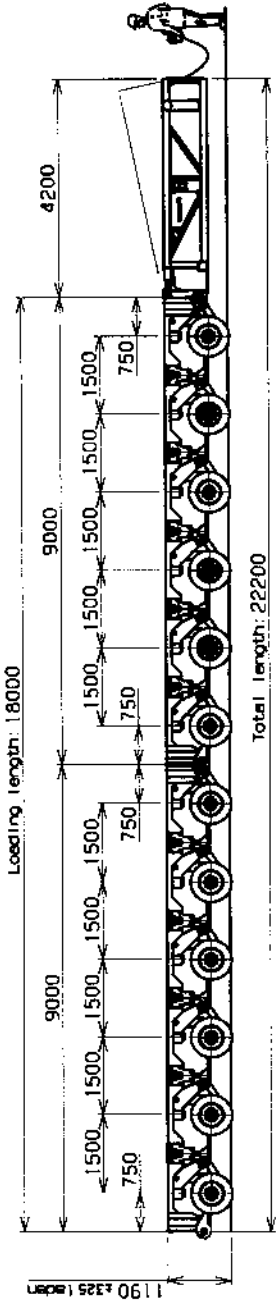
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 SCHAEFFLE-Fahrzeugfabrik GmbH

*228055

Meßstab: 1:50		CAD	A3
2007 Datum Name: Gebert		Inter Combi PPU Z 340 MA IC	
Gez. 05.12		416.1.3.34.01	
Gepr.:		SCHAEFFLE-Fahrzeugfabrik GmbH	

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TECHNICAL DATA TECHNISCHE DATEN

	Geschw. bei 0% Steig.	5 km/h	3 km/h	1 km/h
Speed loaded 0% ascent				
Pay load approx.	729 800 kg	753 800 kg	777 800 kg	
Weight unloaded approx.	86 200 kg	86 200 kg	86 200 kg	
Total weight	816 000 kg	840 000 kg	864 000 kg	
Load per pendulum axle 48x	17 000 kg	17 500 kg	18 000 kg	
Axle load 12x	68 000 kg	70 000 kg	72 000 kg	
Climbing ability max.	2.8 %	2.7 %	2.5 %	
Tires	192x 215/75-R17.5			
Engine	MAN D2876 LUE 622			
Tractive power	6 drive-pendulum-axe 80 kN each			
Max. Speed	9.5 km/h			
Motor	338 kW			
Zugkraft	480 kN			
Max. Geschwindigkeit	9.5 km/h			

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SCHUEERLE-FAHRZEUGFABRIK GMBH

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Masstab: 1:100

2008 Datum Name Kern
 Gez. 25.01
 Gepr. 25.01

FAHRZEUGFABRIK GMBH

HY 04F-0048.006-01P340

416.1.0.72.01

Inter Combi

FAHRZEUGFABRIK GMBH

190 4325 laden

approx. R 13700

approx. R 15100

approx. R 4100

1:100

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 Gez. 25.01
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