



**[SPMT**  
- *Self-Propelled Modular Transporters*

Turn mass into motion!





2.1

## **SPMT Technology**

### **- Extremely robust, extremely strong**

SCHUEERLE SPMTs (self-propelled modular transporters) carry giant equipment all over the world. SCHUEERLE module transporters are based on the experience gained from the development and production of more than 5500 axle lines. With our technology, loads in excess of 15,000 tons, such as fac-

tory modules for power stations, seawater desalination plants and oil exploration equipment as well as offshore platforms, are transported safely and reliably to their final destinations. The SPMT axle lines of the 1st generation delivered in 1984 are still in use every day.

## [Advantages

- More than 5,500 axle lines in use around the world.
- Extensive experience through close cooperation with our global customers already during the product development phase.
- International network of sales, customer support und after sales service.
- Functional and reliable control technology developed in-house.
- Extremely robust and high load-bearing vehicle design.
- Loadable on container flats due to compact vehicle dimensions and optimal dead weight.
- Optimal ratio between dead weight and payload of 1:9.
- The most compact design on the market.



## **[World record**

15,000 tons bound for the sea. For the roughly 200 metre long transport of an oil separator system for waste water treatment, module transporters (SPMTs) were electronically coupled to one another and positioned under the 85.3 metre wide and 67.5 metre long load, using only one remote control. This involved a total of 540 SPMT axle lines with 2,160 wheels from the TII Group.



*The plant is moved from the production hall.*



*SCHEUERLE modules during selection of the steering program.*

## **[“SCHEUERLE Control Technology”**

The use of Scheuerle module transporters in connection with the control technology developed by SCHEUERLE allows precise positioning of extremely heavy loads. The individual module transporters can be randomly coupled, mechanically coupled or arranged in loose coupling mode in an area of 600m x 600m. The SCHEUERLE control technology ensures synchronous control of all transporter units integrated in the fix coupling mode. The electronic multi-mode steering developed by SCHEUERLE provides the module transporters with maximum flexibility and manoeuvrability.



*SPMTs in mechanical “side-by-side” coupling.*



*SPMTs with load distribution frames for the transport of submarines.*



*SPMTs in loose coupling mode. Vehicles are connected with only one data line and controlled with only one operating panel.*



*Integrability of all vehicle generations allows coupling.*

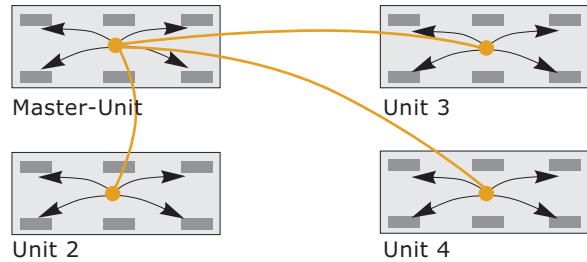


## SCHEUERLE Control Technology

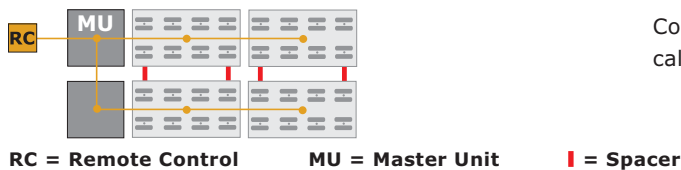
In the future, the SCHEUERLE SPMTs are also available in the proven 3rd or even 4th generation, according to requirement. Both the 3rd and the 4th generation of self-propelled modular transporters (SPMT) are equipped with the approved SCHEUERLE control technology. These two generations cover all further developments in the vehicle sector and ensure compatibility with the previous generations of module transporters.

With this, SCHEUERLE offers a reliable control technology for the special requirements in heavy load transport, synchronising all functions between the individual vehicle units. In fix coupling mode, a transport unit is

defined as "Master Unit". All other transport units – regardless of how many are in the fix coupling mode – receive their corresponding control commands for steering system, drive system, brake, etc. from this Master.

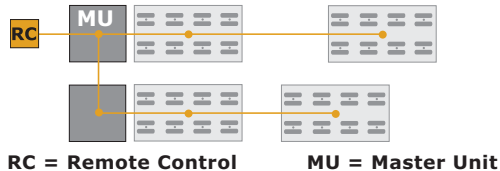


## Mechanically coupled vehicle combination (example of combination)



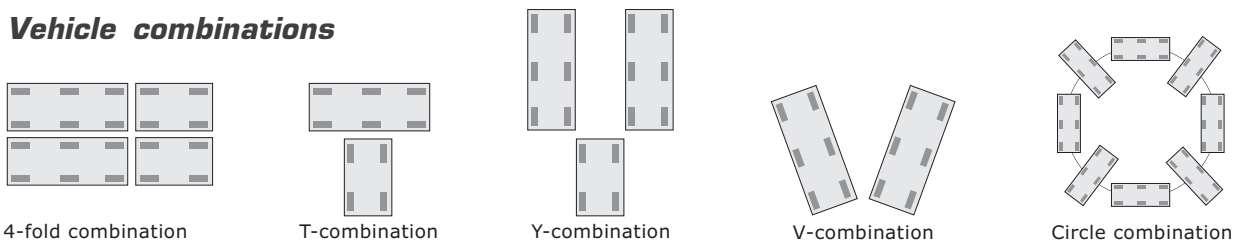
Connection elements (spacers) are used for mechanical side-by-side coupling of transport units.

## Vehicle combination in loose coupling mode (example of combination)

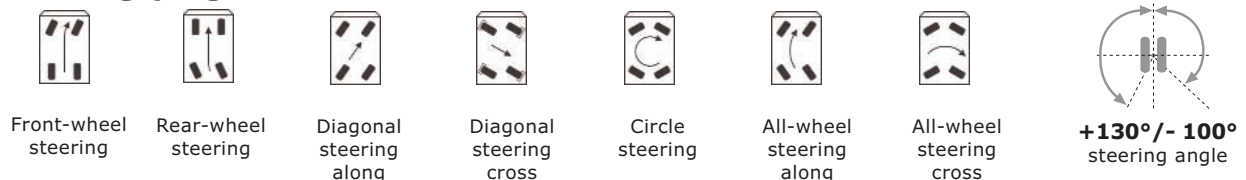


All transport units are positioned freely and connected to the Master Unit (MU) only by a data line. The transport units can be set up in an area of 600m x 600m.

## Vehicle combinations

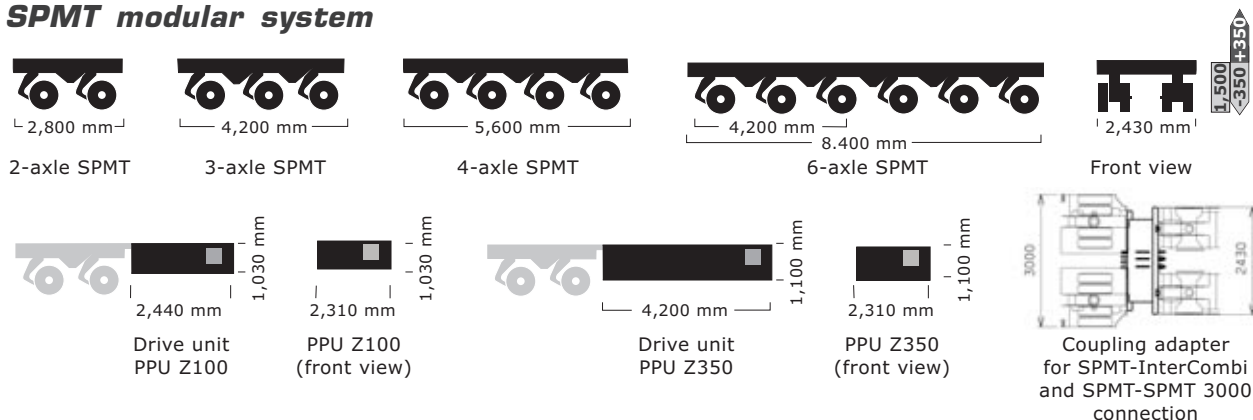


## Steering programs



# COMBINATIONS

## SPMT modular system



## Technical data

| Axles | Combinations (examples) | Total weight G3 | Total weight G4 | Max. payload G3 | Max. payload G4 | Tractive force | Gradient |
|-------|-------------------------|-----------------|-----------------|-----------------|-----------------|----------------|----------|
| 4     |                         | 160 t           | 192 t           | 144.0 t         | 174.2 t         | 240 kN         | 12.0 %   |
| 6     |                         | 240 t           | 288 t           | 216.3 t         | 262.0 t         | 240 kN         | 7.0 %    |
| 14    |                         | 560 t           | 672 t           | 504.3 t         | 610.4 t         | 720 kN         | 9.8 %    |
| 20    |                         | 800 t           | 960 t           | 720.6 t         | 872.4 t         | 960 kN         | 9.0 %    |
| 30    |                         | 1200 t          | 1440 t          | 1080.9 t        | 1308.6 t        | 1440 kN        | 9.0 %    |
| 40    |                         | 1600 t          | 1920 t          | 1441.2 t        | 1744.8 t        | 1920 kN        | 9.0 %    |
| 48    |                         | 1920 t          | 2304 t          | 1729.8 t        | 2094.6 t        | 2160 kN        | 8.2 %    |

Data on the following figures:

Speed 0.5 km/h · Rolling resistance 0.025 · Acceleration 0.005 m/s<sup>2</sup>

4-axle module type PKEZ 140.8.4 Empty weight 16.0 t  
 6-axle module type PKEZ 210.12.4 Empty weight 23.5 t

\* The respective payload must be reduced by the weight of the applied PowerPackUnit (PPU).  
The dead weight for the PPU Z 100 is 3.5 t, for the PPU Z 350 7.2 t.

# [SPMT G3 & G4

The 4th generation of SCHEUERLE SPMTs has been optimized in terms of product engineering and delivery times by applying the latest welding robot technology. Both the platform and the entire wheel bogie are manufactured with highest precision by robots

especially developed for SCHEUERLE. In contrast to the existing 3rd SPMT generation with an axle load of 40 tons, the new 4th generation from SCHEUERLE features an axle load of 48 tons, using foamed tyres (Polyfill) or super elastic (solid) tyres.



## [Mobile lifting system

The mobile lifting system from SCHEUERLE is an innovation that revolutionizes the bridge construction industry. For the first time, a lifting system is professionally connected to a vehicle.

When using 4 individual vehicles, the lifting towers can also be equipped with swivel bolsters to increase the manoeuvrability under the load.



### [Advantages

- Payload per lifting tower is 400 tons.
- Lifting is possible in 500 mm as well as in 1000 mm step-by-step method.
- Lifting height from surface of road to underside of bridge is 8 m.
- Integration of lifting system into mobile SPMT units.
- Lifting and driving in a combined system.
- Use of SPMT drive-technology for operation of the hydraulic system.
- Adjustment of number of lifting systems to application.

# [Details

## ***Strong connections***



The mechanical coupling of two SPMTs is performed via a hydraulically lockable lamellar coupling.



To adapt to the slope angle when driving on ramps, etc., the Power-PackUnit (Z350) is also equipped with hydraulic regulating cylinders.



Mechanical end-to-end coupling of the SPMTs takes place via lamellar coupling at the bottom and solid screw connection at the top of the vehicle frame.

## ***Customized performance***

Through the selectable number of hydrostatically driven pendulum axles, the tractive force of a SPMT can be adapted to your requirements. Thus, you are always operating economically.



***Pendulum axle with drive***



***Pendulum axle with brake***



***Pendulum axle***

## ***Additional equipment for all transport applications***

Our extensive programme of optional equipment allows the multi-functional use of the SPMT. A practical catalogue offers accessories ranging from wireless radio control to cab for longer distances.



***Cab***



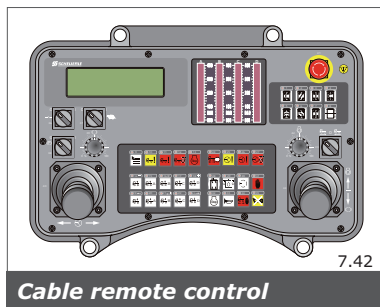
***Radio control***



***Spacer***



***Swivel bolster***



***Cable remote control***



***PPU Z350***



# COMPETENCE

- SCHEUERLE at a glance

The history of heavy duty transporters is closely connected with the name of SCHEUERLE throughout the world. SCHEUERLE Fahrzeugfabrik GmbH has its origin in a forge founded by Christian Scheuerle in 1869. In 1937, his grandson Willy Scheuerle started with the development of heavy duty vehicles. His innovative ideas have inspired the entire industry and revolutionized the transport of heavy loads in many sectors. As a result, heavy duty vehicles from SCHEUERLE are used around the world in shipyards, offshore industry, iron and steel works, bridge and tunnel construction, aerospace industry and road transport.

In 1987, the multi-entrepreneur Otto Rettenmaier of Heilbronn acquired SCHEUERLE and thus laid the foundation for today's worldwide market leader, the TII Group (Transporter Industry International GmbH).



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## Examples of our product range



8.2

**Offshore/Plant engineering**



8.3

**Shipbuilding industry**



8.4

**Road transport**



8.5

**Special transport**



8.6

**Aerospace industry**



8.7

**Road/Industry**



8.8

**Metallurgy**



8.9

**Wind industry**



8.10

**Bridge and tunnel construction**



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