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| Maßstab 1:50 |            |        |
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| Gepr.        | 07.03.2014 | Sommer |
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| Urspr.       |            |        |

**SCHEUERLE**  
FAHRZEUGFABRIK GmbH  
Öhringer Str. 16  
D-74629 Pfedelbach

6-Achs SPMT 210.12.4 G4

6-axle SPMT 210.12.4 G4

50000390

Version  
**B**

Bl. 1  
1 Bl.

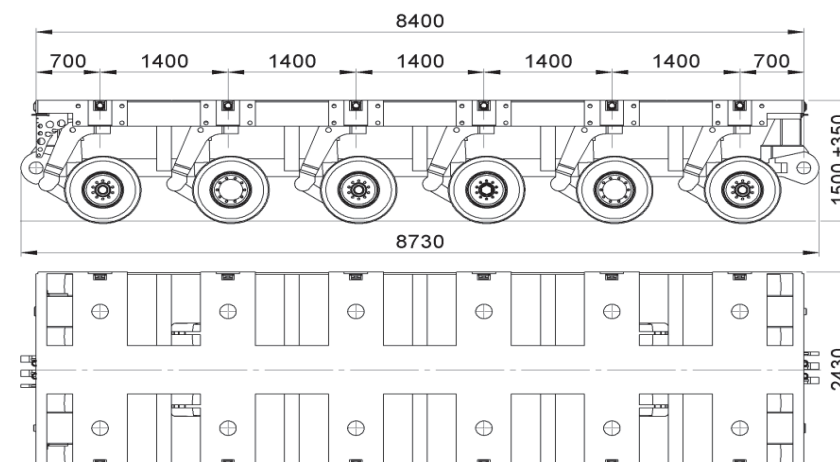
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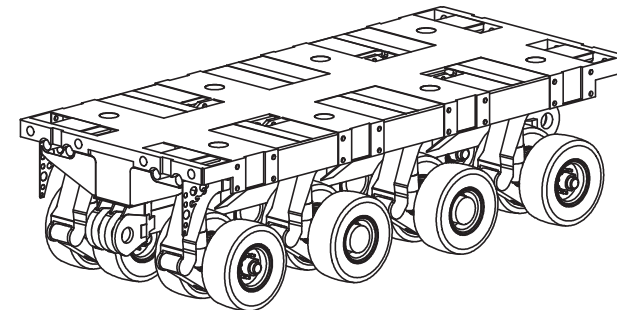
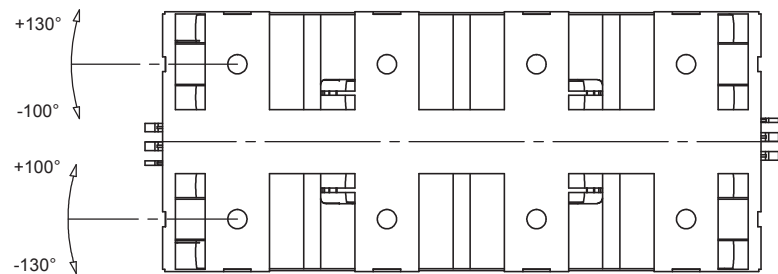
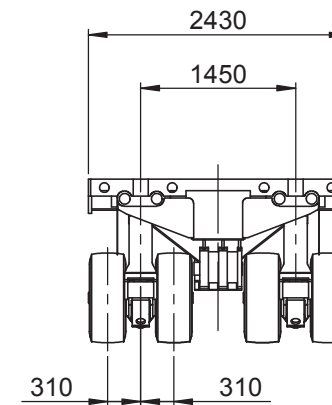
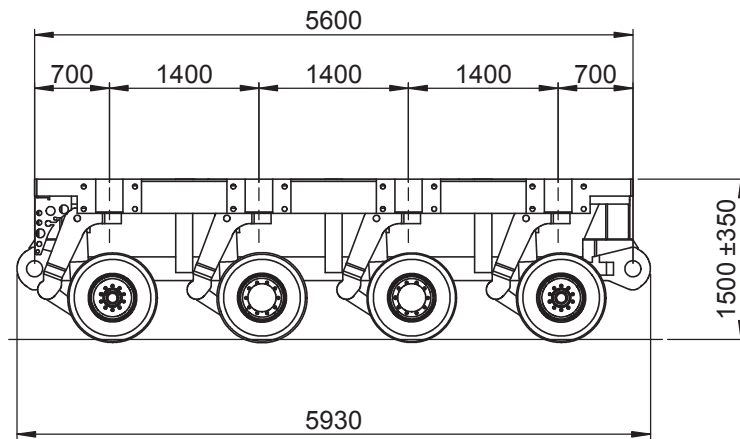
Ers.d.

## 6-axle SPMT with 4 driven pendulum axles, M78

|                                       |  |
|---------------------------------------|--|
| No. of Wheel bogies - driven          | 4 pcs.                                     |
| No. of Wheel bogies - braked          | 6 pcs.                                     |
| No. of Wheel bogies - idle            | 2 pcs.                                     |
| Wheel bogies - total                  | 12 pcs.                                    |
| Tractive force approx.                | 240 kN                                     |
| Braking force approx.                 | 240 kN                                     |
| Platform dimensions, (L x W)          | 8400 mm x 2430 mm                          |
| Platform height-lowered (loaded)      | approx. 1150 mm (approx. 1180 mm unloaded) |
| Platform height-driving pos. (loaded) | 1.500 mm                                   |
| Axle compensation                     | 700 (± 350 mm)                             |
| Type of steering / steering angle     | rack and pinion gear / ± 130°              |
| Frame, bending moment                 | M78, +7785 / -6262                         |



|   | TT20 (Tube Type)<br>355 / 65-15 IC 40 |        |        |        | TL24 (Tube Less)<br>355 / 65-15 IC 40 |        |        |        | PF24<br>355 / 65-15 IC 40 Poly filled tires |        |        |        |
|---|---------------------------------------|--------|--------|--------|---------------------------------------|--------|--------|--------|---|--------|--------|--------|
| Payload max. approx.  | 216,8 t                               |        |        |        | 264,7 t                               |        |        |        | 262,7 t                                     |        |        |        |
| Gross weight  | 240,0 t                               |        |        |        | 288,0 t                               |        |        |        | 288,0 t                                     |        |        |        |
| Project dead weight approx.                                     | 23,2 t                                |        |        |        | 23,3 t                                |        |        |        | 25,3 t                                      |        |        |        |
| Axle load - admissible  | 40,0 t                                |        |        |        | 48,0 t                                |        |        |        | 48,0 t                                      |        |        |        |
| Wheel bogie (X24 max. 24t, X30 max. 30t pendulum axle load)     | X24                                   |        |        |        | X24                                   |        |        |        | X24   |        |        |        |
| Support Cylinder (D24 max. 24t, D30 max 30t pendulum axle load) | D24                                   |        |        |        | D24                                   |        |        |        | D24   |        |        |        |
| Operating temperature   | -20/+40 °C                            |        |        |        | -20/+40 °C                            |        |        |        | -20/+40 °C                                  |        |        |        |
| Admissible travel speed   | Standard                              |        |        |        | 11,5 km/h                             |        |        |        | 11,5 km/h                                   |        |        |        |
| Admissible travel speed / axle line load for tire:              | 10 km/h                               | 5 km/h | 3 km/h | 1 km/h | 10 km/h                               | 5 km/h | 3 km/h | 1 km/h | 10 km/h                                     | 5 km/h | 3 km/h | 1 km/h |
| Tire pressure 10 bar  | 27,0 t                                | 30,0 t | 32,0 t | 40,0 t | 27,0 t                                | 30,0 t | 32,0 t | 40,0 t |   |        |        |        |
| Tire pressure 15 bar  |                                       |        |        |        | 31,2 t                                | 42,0 t | 48,0 t | 48,0 t |   |        |        |        |
|   |                                       |        |        |        |                                       |        |        |        | 31,2 t                                      | 36,0 t | 40,0 t | 48,0 t |



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| Gez.         | 03.04.2012 | Plett  |
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| 4-Achs SPMT 140.8.4 G4 |         |       |
| 4-axle SPMT 140.8.4 G4 |         |       |
| 50000492               | Version | Bl. 1 |
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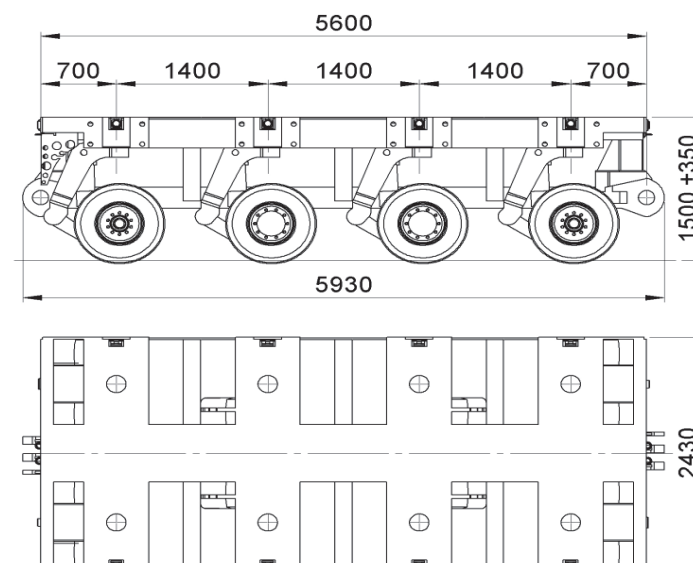
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## [ 4-axle SPMT with 4 driven pendulum axles, M78

|   |   |
|---|---|
| • No.of Wheel bogies - driven           | 4 pcs.                                    |
| • No.of Wheel bogies - braked           | 4 pcs.                                    |
| • No.of Wheel bogies - idle             | 0 pcs.                                    |
| • Wheel bogies - total                  | 8 pcs.                                    |
| • Tractive force approx.                | 240 kN                                    |
| • Braking force approx.                 | 160 kN                                    |
| • Platform dimensions, (L x W)          | 5600 mm x 2430 mm                         |
| • Platform height-lowered (loaded)      | approx. 1150 mm (approx.1180 mm unloaded) |
| • Platform height-driving pos. (loaded) | 1.500 mm                                  |
| • Axle compensation                     | 700 (± 350 mm)                            |
| • Type of steering / steering angle     | rack and pinion gear / ± 130°             |
| • Frame, bending moment                 | M78, +7785 / -6262                        |



|   | TT20 (Tube Type)<br>355 / 65-15 IC 40 |        |        |        | TL24 (Tube Less)<br>355 / 65-15 IC 40 |        |        |        | PF24<br>355 / 65-15 IC 40 Poly filled tires |        |        |        |
|---|---------------------------------------|--------|--------|--------|---------------------------------------|--------|--------|--------|---|--------|--------|--------|
| Payload max. approx.  | 143,9 t                               |        |        |        | 175,8 t                               |        |        |        | 174,5 t                                     |        |        |        |
| Gross weight  | 160,0 t                               |        |        |        | 192,0 t                               |        |        |        | 192,0 t                                     |        |        |        |
| Project dead weight approx.                                     | 16,1 t                                |        |        |        | 16,2 t                                |        |        |        | 17,5 t                                      |        |        |        |
| Axle load - admissible  | 40,0 t                                |        |        |        | 48,0 t                                |        |        |        | 48,0 t                                      |        |        |        |
| Wheel bogie (X24 max. 24t, X30 max. 30t pendulum axle load)     | X24                                   |        |        |        | X24                                   |        |        |        | X24   |        |        |        |
| Support Cylinder (D24 max. 24t, D30 max 30t pendulum axle load) | D24                                   |        |        |        | D24                                   |        |        |        | D24   |        |        |        |
| Operating temperature   | -20/+40 °C                            |        |        |        | -20/+40 °C                            |        |        |        | -20/+40 °C                                  |        |        |        |
| Admissible travel speed   | Standard                              |        |        |        | 11,5 km/h                             |        |        |        | 11,5 km/h                                   |        |        |        |
| Admissible travel speed / axle line load for tire:              | 10 km/h                               | 5 km/h | 3 km/h | 1 km/h | 10 km/h                               | 5 km/h | 3 km/h | 1 km/h | 10 km/h                                     | 5 km/h | 3 km/h | 1 km/h |
| Tire pressure 10 bar  | 27,0 t                                | 30,0 t | 32,0 t | 40,0 t | 27,0 t                                | 30,0 t | 32,0 t | 40,0 t |   |        |        |        |
| Tire pressure 15 bar  |                                       |        |        |        | 31,2 t                                | 42,0 t | 48,0 t | 48,0 t |   |        |        |        |
|   |                                       |        |        |        |                                       |        |        |        | 31,2 t                                      | 36,0 t | 40,0 t | 48,0 t |

# [Technical Specification SPMT



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# [Technical Specification SPMT

## 1. Series Description

- The SPMT(Self-Propelled Modular Transporters) series is a modular transport system, characterized by the following features:
  - Electronic-hydraulic multidirectional steering
  - Module width in container dimensions for low transport costs and
  - high payload capacity per axle line
- The platform trailers are available in 3-, 4-, 5-, 6- and 8-axle design.

## 2. Frame

- The platform is a closed frame construction and mainly consists of a trapeze-type main beam, parallel arranged bogie beams, transversally connected by the lateral booms to the main beam. The main beam is available in three different designs.
  - Standard main beam: for axle loads up to 48 tons, the so called M78 frame,
  - Extra strong main beam for concentrated load introduction and axle load up to max. 60 tons, the M93 frame and the
  - Standard main beam, which is longitudinally split and suitable for 3 axle lines or stretch combinations (accessories required), the so called M78 Split frame.
- At the front sides,
  - Lamellar coupling arranged below, with hydraulic coupling bolts at one side, to allow coupling of the platform in longitudinal direction. The hydraulic coupling bolt can be operated from both sides.
  - Push bars arranged on top along the whole vehicle width with integrated centering supports in form of centering rings and centering pins, as well as boreholes to fix the bracing element.
  - Two lashing rings welded at each side with a capacity of 8.000 daN to tow the platform trailers during the transport to the operation site.
- Above or in the platform:
  - Metal sheet welded between the axles, above the outriggers for defined load introduction outside the main beam.
  - Load equipment integrated between the first and second, as well as the penultimate and last axle line – optional with shackle for easy loading by crane. Use as attachment point incl. capacity of 10.000 daN.
- Laterally along the platform:
  - Flange plate arranged above the axles, with integrated drilling pattern to couple the platform trailers parallel to each other; or for fixation of e.g. bolsters or other accessories to be attached to the platform. Optional lashing point integrated in the flange plate with a lashing capacity of 13.400 daN in all directions.

# [Technical Specification SPMT

## 3. Wheel bogies

### 3.1 Wheel bogie

- The wheel bogie of the platform trailer consists of wheel bogies with drive axles, brake axles or running axles, arranged beneath the transverse beams and swivel-mounted by means of steering head bearing integrated in the transverse beam, supported by single-acting hydraulic cylinders.
- There are two types of bogies available:
  - The bogie X24 is designed for an axle load up to 48 tons. It is standardly installed in each platform trailer. The axles have single tyres and are equipped as standard with special industrial pneumatic tyres. Or as an option
  - The bogie X30 for axle line load up to max. 60t tons. This can be chosen together with an extra strong frame or longitudinally split frame (Split-version). It is also equipped as standard with special industrial pneumatic tyres.
- Maintenance-free pendulum bearing of the axles
- Maintenance-free swing arm bearing by joint bearing with grease lubrication

### 3.2 Tyres

- The axles can be equipped with four various tyres. In the standard version the tyres are filled with air and achieve a maximum axle load of 40 tons.
- Optionally, two different tyres for max. 48 tons axle load are available.
  - On the one hand there are the tires filled with Poly-Fill on undivided rim and
  - On divided rim tubeless tires filled with air under higher pressure.
- As a further option in conjunction with the bogie X30 there is the poly-filled tyre, for a max. axle load of 60 tons, filled under higher pressure.

## 4. Electrical system

- Electrical system 24 V DC design
- The platform trailers are equipped with all electric lines, distributors and couplings, to transmit the electrical energy and control commands and to form combinations with further platform trailers.
- All electric / electronic switchgear- and control units are installed vibration-proof in control cabinets. They are made of stainless steel 1.4301 and performed with degree of protection IP 66 and IP69k according to IEC 60529.
- Easily accessible control cabinets, connection of the cable strings via plug for easy repair or quick exchange.
- Coupling plug in robust and durable MIL technology

# [Technical Specification SPMT

## 5. Coating and Corrosion protection

- Coating according to internal coating regulation
- Lower side of the platform and bogies are coated in RAL 7016 (dark grey).
- Topcoat of the vehicle frame (lateral- and loading area) in RAL 3020 (traffic red), different colour according to customer's request against additional price in accordance with internal colour chart.
- Rims and wheel hubs in RAL 9006 (silver)

## 6. Functional description

### 6.1 Hydraulic support

- Hydraulic axle compensation, hydraulic lifting device of the platform
- Pipe- and protection system in one circuit design in the hydraulic support system
- Each support cylinder can be removed from the system by a shut-off valve (ball valve) with help of an axle plug. After lowering the platform, the bogie can be mechanically arrested and after relifting the bogie is lifted.
- installed shut-off valves (ball valves) between each axle, this means the single bogies can be divided into 3- or 4- point support.

### 6.2 Hydrostatic drive propulsion

- The hydrostatic drive propulsion is effected in a so called „closed circuit“. Hydro motors with flanged planetary gearboxes are installed in the drive axles, which are driven by the hydraulic pumps in the PPU. Speed adjustment is infinitely variable.

**OSP** – the drive axles are equipped with an electronic overtight lock, which prevents overtightening of the drive wheels on slippery ground.

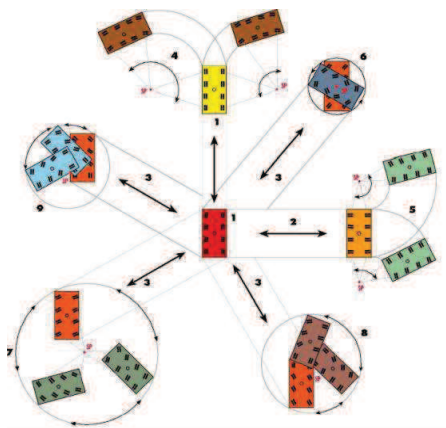
### 6.3 Brake system

- Hydraulic-mechanic service- and parking brake
- The hydraulically actuated spring-accumulated brake cylinder and a slack adjuster are used to actuate the S-cams and the pad is pressed to the brake drum.
- The required hydraulic release pressure is generated by the axial piston adjustment pump of the steering system in the PPU and the braking is performed via a finely dosed pressure control valve.
- Due to the spring force in the brake cylinder, the combination is still safely braked and held in case of failure of hydraulic supply,

# [Technical Specification SPMT

## 6.4 Electronic-hydraulic multidirectional steering (SADESS)

- The bogies are steered by an electronic-hydraulic multidirectional steering (**SADESS Scheuerle All Directional Electronic Steering System**). It consists of the digital steering electronic with several steering programs and the hydraulic steering device, performed as double rack-gear.
- Such way a steering angle of  $\pm 130^\circ$  results.
- For combinations in open compound, the steering pole is freely programmable.
- The infinitely adjustable proportional valves on the bogies are activated by joystick which are installed on the remote control, thus the hydraulic steering drive is driven.
- The steering propulsion is designed in such a way that during standstill and under full load steering and change of steering programs are possible.
- The following steering programs are at disposal:



- All-wheel steering lengthwise
- All-wheel steering transverse
- Diagonal steering lengthwise
- Diagonal steering transverse
- Truck steering front
- Truck steering rear
- Carousel steering

## 7. Accessories

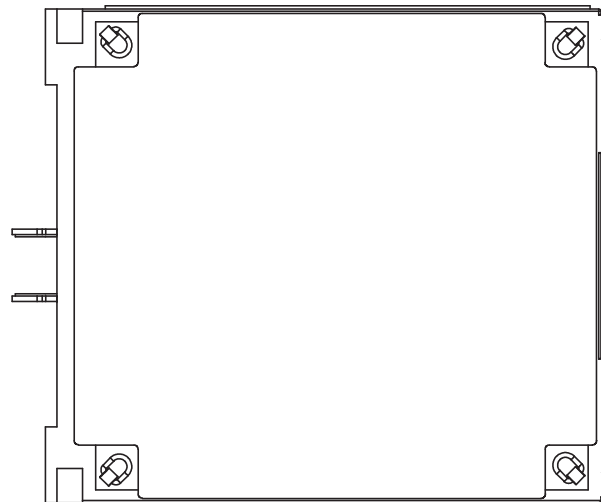
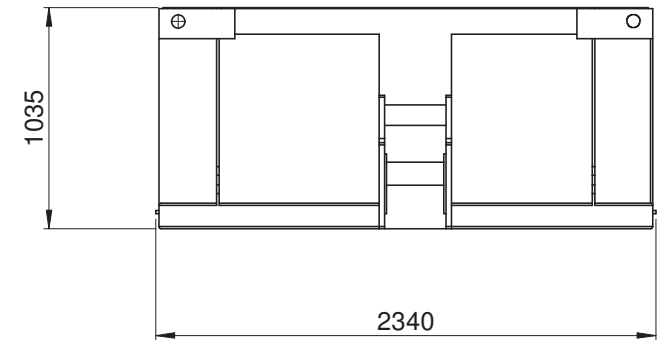
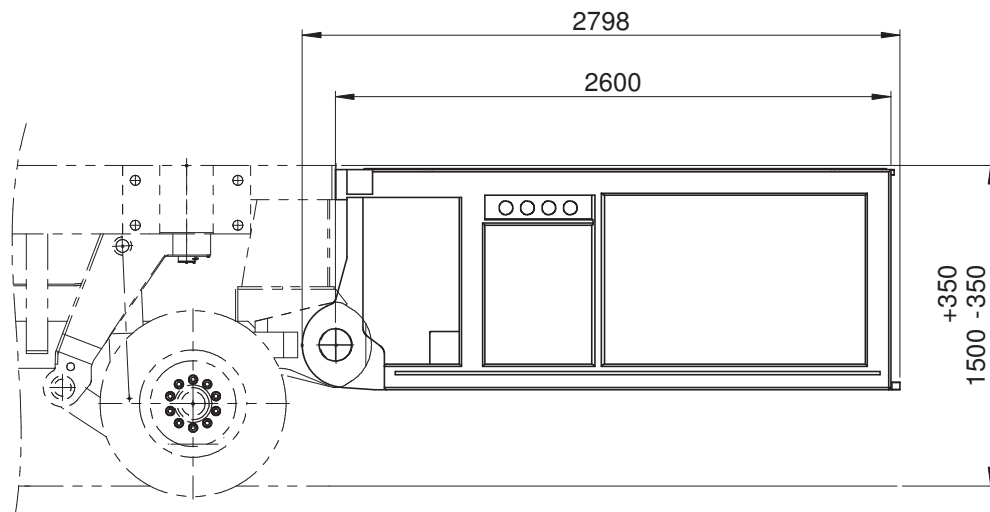
### 7.1 Standard Accessoires

- 1 (one) total documentation in paper
- 1 (one) total documentation on CD
- 1 axle pin per bogie for single axle lifting
- 1 set of mechanic connection elements for coupling in longitudinal direction
- 1 set of electric connection cables for coupling in longitudinal direction
- 1 set of hydraulic piping for coupling at the platform trailer

# [Technical Specification SPMT

## 7.2 Options

|  | Standard frame n<br>M78 | Extra Strong frame M<br>93 | Split frame M78 |
|--|-------------------------|----------------------------|-----------------|
| Equipment for 48 t per AL (Tyres TL 24 Tubeless air 15 bar)                        | x                       | x                          | x               |
| Equipment for 48 t per AL (Tyres PF 24 Polyfill)                                   | x                       | x                          | x               |
| Equipment for 60 t per AL T(Tyres PF30 + X30 bogie)                                |                         | x                          | x               |
| Low temperature cylinder seal set until -40°C, with limitation of payload capacity | x                       |                            | x               |
| Arctic equipment AC (-40°C) for M93, without limitation of payload capacity        |                         | x                          |                 |
| Axle lighting per axle line  | x                       | x                          | x               |



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| Gepr.        | 03.11.2011 | Plett  |
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SPMT PPU Z150  
Deutz TCD 2012 L06

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# PPU Z 150DE SPMT

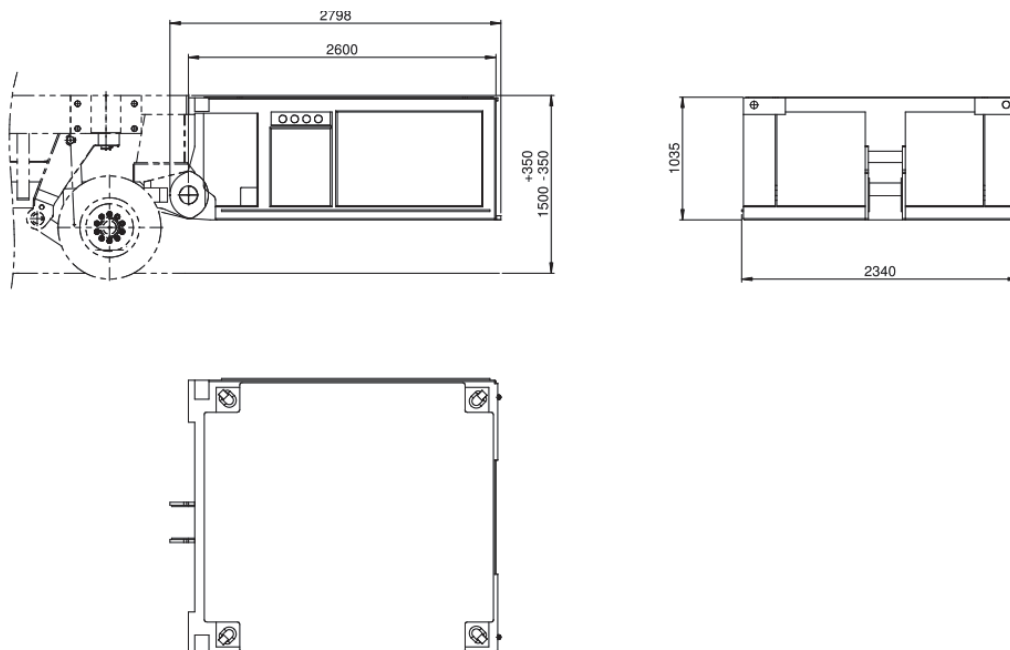
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Technical Data Sheet

Drawing No. 50353226

|  |  |        |     |
|--|--|--------|-----|
| Dimensions L x B x H                         | approx. 2.800 x 2.340 x 1.035 mm                           |        |     |
| Coupling length                              | approx. 2.650 mm   |        |     |
| Dead weight                                  | approx. 4.000 kg   |        |     |
| Diesel engine – Manufacturer / Type          | Deutz – TCD 2012 L06 2V                                    |        |     |
| Certification of exhaust emission            | EUROMOT IIIA / EPA Tier 3                                  |        |     |
| Number of cylinders / arrangement / capacity | 6 / R / 6.060 cm <sup>3</sup>                              |        |     |
| Performance                                  | 147 kW (197 PS) at 2.400 U/min                             |        |     |
| Engine torque                                | 770 Nm at 1.600 U/min                                      |        |     |
| Mode of cooling                              | Liquid cooling/intercooling                                |        |     |
| Starter – voltage / performance              | 24 V / 4,0 kW  |        |     |
| Generator – voltage / current                | 28 V / 80A   |        |     |
| Fuel consumption                             | 215g / kWh   |        |     |
| Battery / voltage                            | 2 x 12 V, 225 Ah / 24 V                                    |        |     |
| Fuel tank                                    | 170 l filling volume                                       |        |     |
| Hydraulic oil tank (stainless steel)         | 420 l filling volume / useable volume appr. 250 l          |        |     |
| Variable displacement pump - drive           | Q <sub>max.</sub> = 290 l/min, p <sub>max.</sub> = 400 bar |        |     |
| Variable displacement steering               | Q <sub>max.</sub> = 140 l/min, p <sub>max.</sub> = 350 bar |        |     |
| Ambient temperature                          | approx. – 20° C up to + 40° C                              |        |     |
| Painting at Scheuerle Standard (50002100)    | RAL 7016 grey  |        |     |
| PPU suitable for operation of                | SPMT type axle load  | 40/48t | 60t |
|  | Max axles lifting/lowering                                 | 20     | 16  |
|  | Max driven pendulum axles                                  | 16     |     |

Included in the scope of supply are the mechanical coupling bolts and screws, hydraulic and electric connection elements for the connection **PPU-Platform trailer**.



## Optional:

|          |                            |
|----------|----------------------------|
| 50002272 | Arctic package for Z150 DE |
| 50002616 | Chalvyn valve for Z 150 DE |

# Cable Remote Control

## Remote Control System with Cable Connection

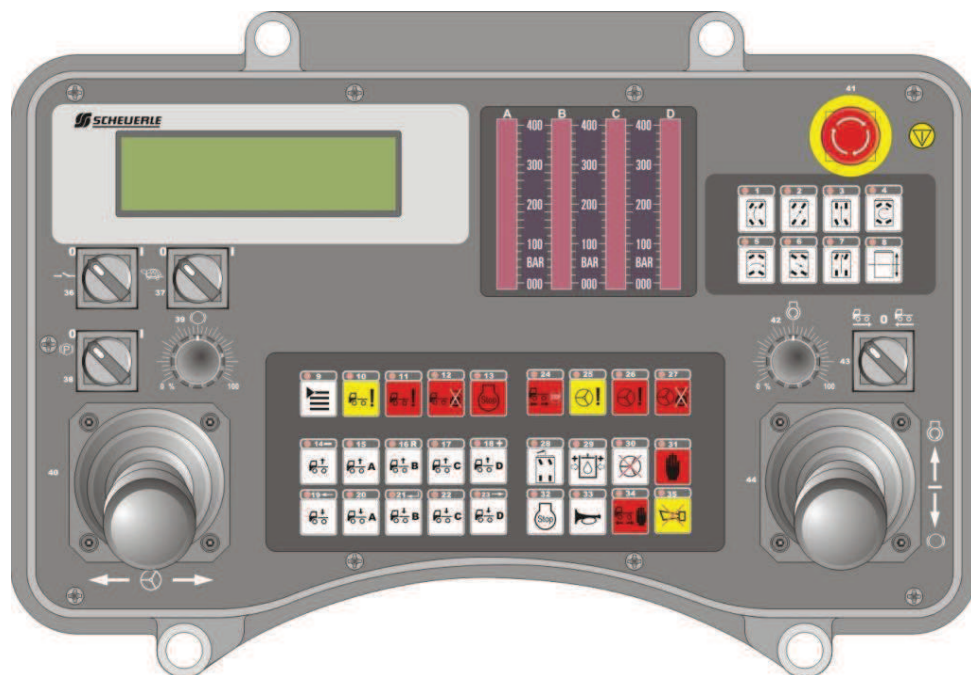
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### Technical Data and Description

|   |   |
|---|---|
| <b>Dimensions L x W x H</b>             | approx. 455 x 310 x 460 mm (including breast plate)           |
| <b>Weight</b>                           | approx. 7,0 kg  |
| <b>Connection cable (pluggable)</b>     | 17-poles  |
| <b>Ambient temperature in operation</b> | approx. -20 up to +70 °C (arctic version – 40 up to + 70 ° C) |
| <b>Protection category</b>              | IP 67 for the housing, IP 54 for joysticks acc. to IEC 60529  |
| <b>Available Cable length</b>           | 5 m / 7,5 m / 10 m / 20 m                                     |

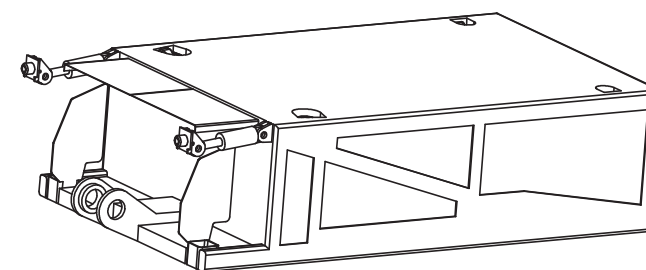
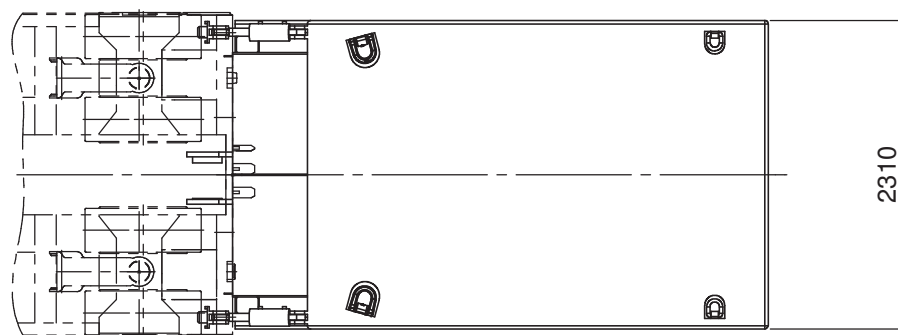
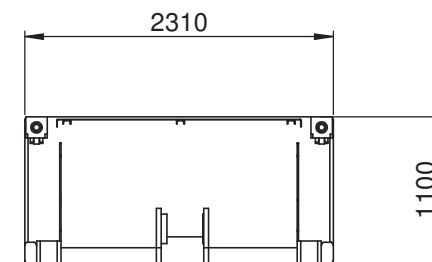
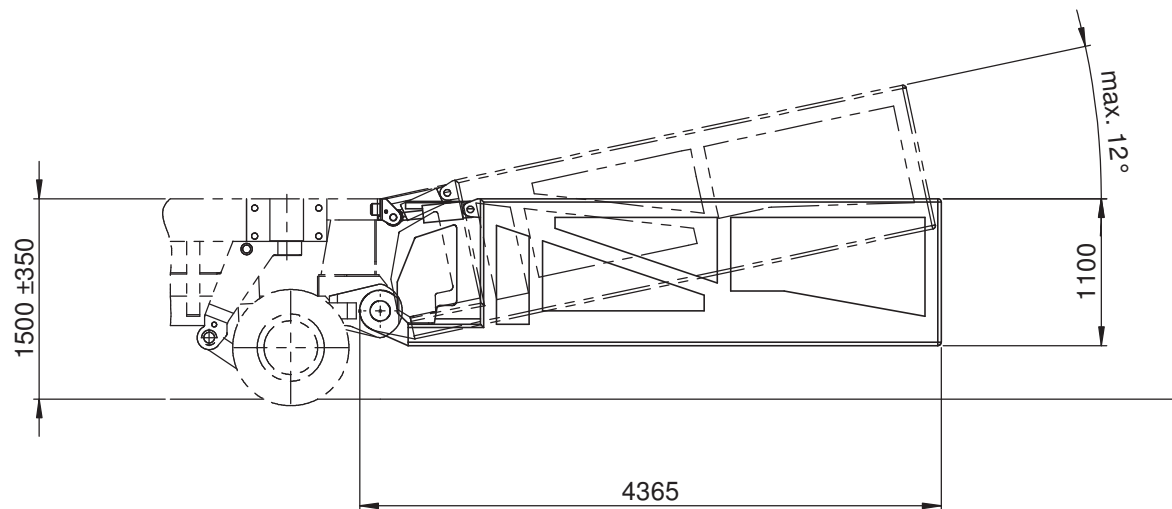
The **Remote Control System with Cable Connection** represents the basic system for the operation of the self propelled Module-Transporters. It consists of a shock-resistant synthetic housing with breastplate, carrier straps and detachable standing brackets, as well as the control panel with membrane keyboard, displays, selector switches and joysticks. The system is either pluggable to the PPU, to the driver 's cabin or to one of the platform trailers. The remote control system is equipped with an all-round protection bracket, thus preventing an undesired activation of the joysticks when falling to the ground. The breastplate with carrier straps allows a comfortable and safe operation with the remote control system.

The remote control system is executed weather-proof and vibration-resistant for rough operation conditions and fitted with UV-resistant components. It is suitable for a storage temperature of - 40 up to +85 °C (- 40 up to +185 °F), is in conformity with the EC-Machine Directives 98/37/EG and EMV-tested.



#### Following functions are available amongst others:

- System On/Off and Diesel engine shut off
- Control of steering, drive system, lift system (single support groups) and brake system
- Selection of steering programs, driving direction, deceleration, diesel engine's rpm and slow drive mode
- Input of the values for variable distance steering
- Monitoring of supporting pressure, steering angle and malfunctions
- Control lamps for major conditions
- Emergency stop of complete system and diesel engine



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|--------------|------------|--------|---|--|--|
| Maßstab 1:40 |            |        |  <b>PPU Z350 DA<br/>SPMT</b> |  |  |
| Gez.         | Datum      | Name   |   |  |  |
| Gepr.        | 26.06.2012 | Sommer | <b>50000373</b>   |  |  |
|              | 26.06.2012 | Gebert |   |  |  |
| Urspr.       |            |        | Version <b>0</b>  |  |  |
|              |            |        | Ers.f.  |  |  |
|              |            |        | Ers.d.  |  |  |

FAHRZEUGFABRIK GmbH  
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Bl. 1  
1 Bl.

# SPMT Modular Transporter

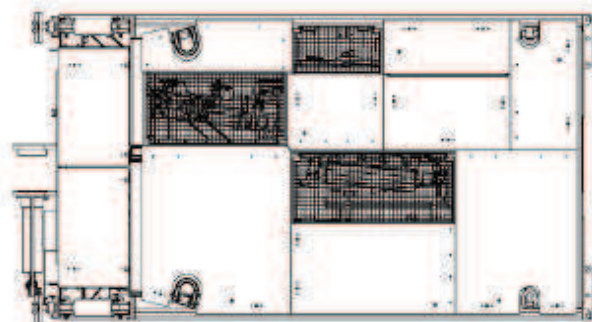
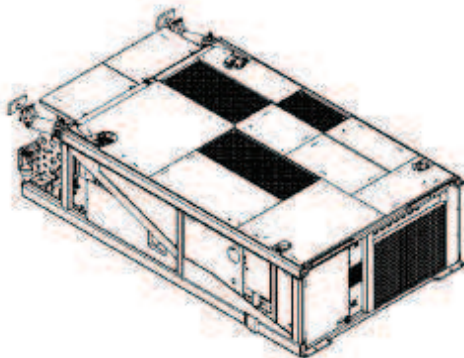
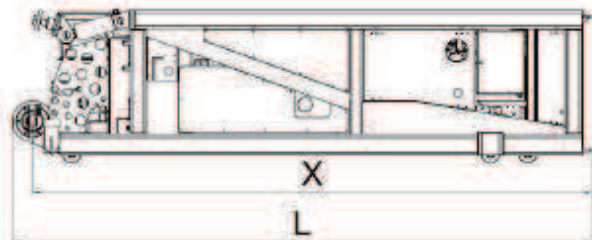
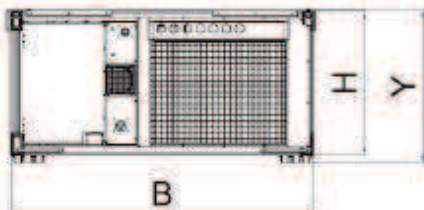
## Power Pack Unit Z 350 DA – Standard

50000373\_S02

Technical data sheet

Drawing No. 50000373

|   |   |        |     |
|---|---|--------|-----|
| Dimensions 'L' x 'B' x 'H'                          | approx. 4.430 x 2.310 x 1.100 mm  |        |     |
| Coupling length 'X'                                 | approx. 4.275 mm  |        |     |
| Total height with rollers 'Y'                       | approx. 1.157 mm  |        |     |
| Dead weight   | approx. 7.200 kg  |        |     |
| Admissible tilted position – lengthwise / crosswise | max. 13° / 5°   |        |     |
| Diesel engine – Manufacturer / Type                 | Daimler AG – OM 502 LA  |        |     |
| Exhaust emission category                           | EUROMOT IIIA / EPA Tier 3   |        |     |
| Number of cylinders / Design / Capacity             | 8 / V-type / 15 930 cm³   |        |     |
| Performance   | 350 kW (476 PS) at 1.800 rpm  |        |     |
| Torque  | 2.300 Nm at 1.200 rpm   |        |     |
| Cooling system                                      | Liquid cooling – intercooling   |        |     |
| Starter – Voltage / Performance                     | 24 V / 6,2 kW   |        |     |
| Generator – Voltage / Performance                   | 24 (28) V / 2.800 W   |        |     |
| Fuel consumption                                    | approx. 10 to 84 l/h  |        |     |
| Batteries / Voltage                                 | 2 x 12 V, 225 Ah / 24 V   |        |     |
| Fuel tank   | approx. 400 l filling volume  |        |     |
| Hydraulic oil tank (stainless steel)                | approx. 800 l filling volume, 520 l useable volume  |        |     |
| 1. Variable pump drive propulsion                   | Q <sub>max.</sub> = 345 l/min, p <sub>max.</sub> = 400 bar                                      |        |     |
| 2. Variable pump drive propulsion                   | Q <sub>max.</sub> = 240 l/min, p <sub>max.</sub> = 400 bar                                      |        |     |
| 1. Variable pump steering                           | Q <sub>max.</sub> = 370 l/min, p <sub>max.</sub> = 350 bar                                      |        |     |
| Ambient temperature                                 | approx. – 20 °C up to + 40 °C (- 4 °F up to 104 °F)<br>(according to type of PPU up to – 40 °C) |        |     |
| PPU suitable for operation of                       | SPMT type axle load   | 40/48t | 60t |
|   | Max axles lifting/lowering  | 40     | 34  |
|   | Max driven pendulum axles   | 26     |     |



The modular transportation system for payloads up to 15.000 tons

# [ TECHNICAL SPECIFICATION SPMT PPU



|  |   |
|--|---|
| 1. Description POWER PACK UNIT .....       | 2 |
| 2. Frame.....                              | 2 |
| 3. Powertrain .....                        | 3 |
| 4. Hydraulic System .....                  | 3 |
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# [TECHNICAL SPECIFICATION SPMT PPU

## 1. Description POWER PACK UNIT

- The **POWER PACK UNIT (PPU)** consists of all drive components required to operate an SPMT combination. The PPU includes:
  - The diesel engine with flanged hydraulic pumps,
  - Coolers for cooling water, charge air and hydraulic oil
  - Hydraulic oil tank and diesel fuel tank,
  - Switch boxes for electronic and electric control
  - Batteries, filters, control- and regulating valves.
- The Power Pack Unit is designed so that for transport container width is not exceeded and the PPU dimension is not higher than the loading height of the platform trailer.

## 2. Frame

- The PPU frame mainly consists of welded square and angled profiles.
- The sides are:
  - clad with easily removable or foldable sound-absorbing alu plate sheedings
  - equipped with welded-on scrape rails to protect the doors.
- At the front side:
  - At the lower side the lamellar coupling with hydraulic coupling bolt is welded to be able to couple the PPU to the platform trailer
  - At the upper side of the PPU there are hydraulic cylinders which fix the PPU by pressure bars to the platform trailer. Using this cylinder, the PPU can be tilted up to 12° in order to avoid ground contact when driving on ramps. In addition when the inclination is extreme, the PPU can be moved horizontally to prevent damage to the motor due to excessive inclination.
  - Two storage boxes are integrated at the center on top. One of these is a Zarges box to store the remote control, in the second box the tools and the emergency control unit are included.
  - One each on the right and on the left side a coupling plate is provided to supply the modules hydraulically and electrically. Here, corresponding connections are provided in order to connect several PPU's to electrical supply and control lines or to supply a parallel combination without PPU hydraulically / electrically.

# [TECHNICAL SPECIFICATION SPMT PPU

- At the rear:
  - The radiator is protected by a stable cooling grill
  - The main switch board, pressure gauge and coupling point for the remote control is installed.
  - Attachments are placed in order to be able to attach further mounting components to the PPU, such as additional heating aggregate, oil cooler, operating platform or operating seat.
- Upper side of the PPU's
  - Is clad with walk-on aluminum ruffle sheets and closed with latch locks.
  - In the corners are provided corresponding anchor points which allow to load the PPU's alone or together with another platform trailer (4- or 6- axles).
- Lower side
  - Is equipped with 4 plastic rollers, allowing a shifting on firm ground.

## 3. Powertrain

- User friendly and easy to maintain access by opening the lateral and / or upper maintenance flaps on top
- Flexible coupling, flange-mounted to the fly-wheel between hydraulic pumps and diesel engine. This protects the hydraulic pumps from damaging vibrations.
- Complete drive train installed on vibration dampers
- Hydraulic pumps flanged one behind the other, providing maintenance-free access to the individual hydraulic pumps.
- Spark arrestor integrated in the exhaust system of the internal combustion engine.
- The exhaust pipe is guided laterally outside towards the upper side and can be dismantled for transport in order to maintain the transport width.

## 4. Hydraulic System

- Hydraulic tank of stainless steel or coated with anti-corrosive coating, with integrated return filters and shut-off valves for the suction connections of the various hydraulic circuits.
- Breathing- and venting of the hydraulic tank by desiccant cartridge
- Level indicator for minimum and maximum range led to the outside
- Hydraulic oil tank equipped with electric temperature and level sensor

# [TECHNICAL SPECIFICATION SPMT PPU

- 4 pressure gauges for support pressure, with proportional valve for lifting/lowering situated below. Installed at the front right side of the PPU.
- Pressure gauge at rear at the PPU for driving, steering and braking.
- Hydraulically driven and speed-controlled fan of the coolers.

## 5. Fuel System

- Fuel tank of stainless steel or coated with anti-corrosive coating
- Equipped with electric level sensor
- A fuel filter with water separator is installed in the fuel line leading to the diesel engine, which is protecting the injection system from contamination and water. The water separator is heated as standard in the PPU Z390, for the PPU Z350 heating is optionally available.

## 6. Electrical System

- Electrical system in 24 V DC design
- All electrical / electronical switchgear and control units are installed vibration-proof in the switch boxes. They are made of stainless steel 1.4301 and with degree of protection IP 66 and IP69k according to IEC 60529.
- Pressure compensation of the switch boxes by desiccant cartridge
- Easily accessible switch boxes, connection of the cable harnesses by plugs for easy repair or quick exchange.
- Protected display for additional functions for error diagnosis and parameterization in the PPU Z180 and Z390
- Dashboard illumination in LED technology
- Coupling bolt in robust and durable MIL technology

## 7. Coating and Corossion protection

- Coating according to internal paint regulations
- PPU-frame painted in- and outside in RAL 7016 (grey), other colour according to customers desire available against additional price according to internal colour chart.

# [ TECHNICAL SPECIFICATION SPMT PPU

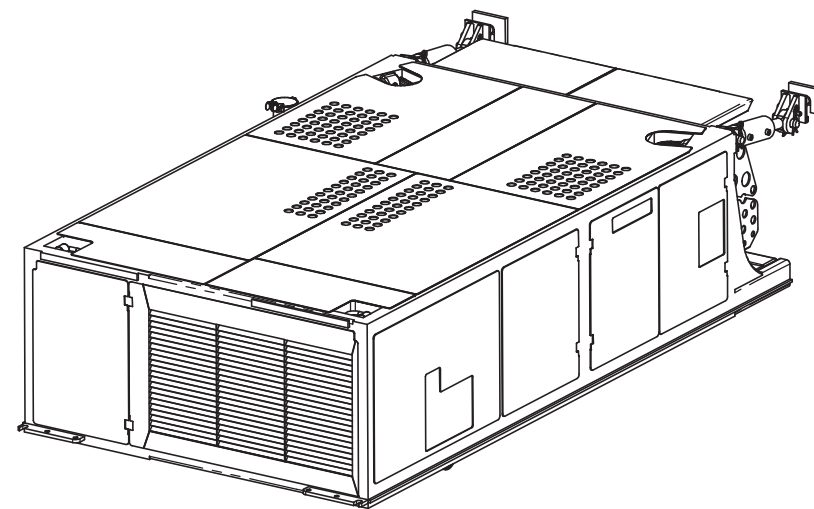
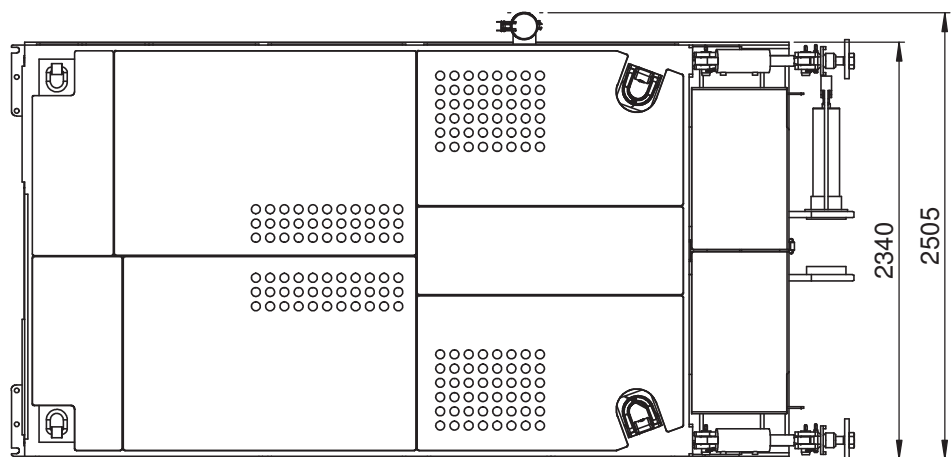
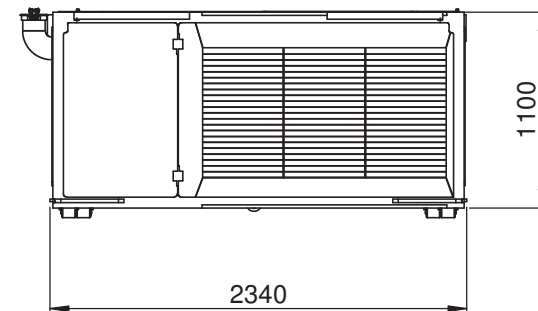
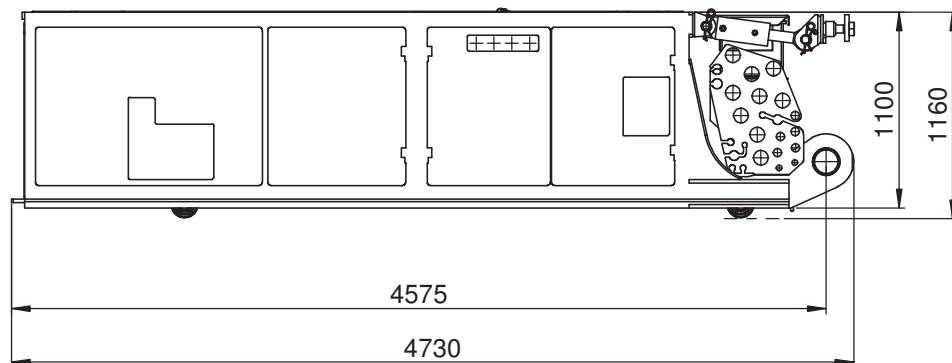
## 8. Accessories

### 8.1 Standard Accessories

- Operating and maintenance instructions in the language of the operator, spare parts list in 2 languages (german/english), provided as CD ROM
- Operating instruction additionally once as paper documents
- Tool kit for SPMT platform trailer and PPU
- Emergency operating unit SPMT

### 8.2 Optional Accessories

- Integrated combustion air shut-off valve (Chalwyn Valve) in the suction line which blocks combustion air supply to the diesel engine at uncontrollable overspeed.
- PPU with low-temperature equipment, for areas with temperatures below -20°C. Equipment according to data sheet.
- Additional couplings for connecting external auxiliary devices such as oil cooler or heating units.




Alterations to design and  
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|              |            |        |   |                             |  |                     |                |
|--------------|------------|--------|---|-----------------------------|--|---------------------|----------------|
| Maßstab 1:30 |            |        | <br><b>FAHRZEUGFABRIK GmbH</b><br>Öhringer Str. 16<br>D-74629 Pfedelbach | Power Pack PPU Z390 DA SPMT |  |                     |                |
|              | Datum      | Name   |   |                             |  |                     |                |
| Gez.         | 15.11.2012 | Plett  |   |                             |  |                     |                |
| Gepr.        | 18.11.2015 | Sommer |   | 50353922                    |  | Version<br><b>A</b> | Bl. 1<br>1 Bl. |
|              |            |        |   |                             |  |                     |                |
| Urspr.       |            |        | Ers.f.  | Ers.d.                      |  |                     |                |

# PPU Z390 DA SPMT

50353922\_S02

Technical Data sheet

Drawing No. 50353922

|  |   |        |     |
|--|---|--------|-----|
| Typ  | Z390 DA SPMT  |        |     |
| Dimensions ‘L’ x ‘W’ x ‘H’                   | approx. 4.730 x 2.310 x 1.100 mm  |        |     |
| Coupling length X                            | approx. 4.575 mm  |        |     |
| Total height with support rolls Y            | approx. 1.160 mm  |        |     |
| Dead weight                                  | approx. 8.000 kg (7.200 kg without fillings)  |        |     |
| Incline admissible– lengthwise/ transverse   | max. 13° / 5°   |        |     |
| Diesel engine – Manufacturer / Type          | Daimler AG - 6R 1300 (OM471LA)  |        |     |
| Certification of exhaust emission            | EU stage 4 / EPA Tier 4 final (SCR Catalyser)   |        |     |
| Number of cylinders / arrangement / capacity | 6 / R / 12.809 cm³  |        |     |
| Performance                                  | 390 kW (530 PS) at 1.700 U/min  |        |     |
| Engine torque                                | 2.460 Nm at 1.300 U/min   |        |     |
| Compressor unit                              | max. 12 bar (tire inflation connection)   |        |     |
| Mode of cooling                              | Liquid cooling/intercooling   |        |     |
| Starter – voltage / performance              | 24 V / 7 kW   |        |     |
| Generator – voltage / performance            | 28 V / 150 A  |        |     |
| Battery / voltage                            | 2 x 12 V, 225 Ah / 24 V   |        |     |
| Fuel tank                                    | approx. 400 l filling volume<br>Diesel fuel according to: DIN EN 590 from 2010 ff.<br>ASTM D795 |        |     |
| Urea tank                                    | approx. 40 l filling volume   |        |     |
| Hydraulic oil tank (stainless steel)         | approx. 760 l filling volume, approx. 560 l useable volume                                      |        |     |
| 1.variable displacement pump - drive         | Qmax. = 345 l/min, pmax. = 400 bar  |        |     |
| 2.variable displacement pump - drive         | Qmax. = 240 l/min, pmax. = 400 bar  |        |     |
| Displacement pump - steering                 | Qmax. = 370 l/min, pmax. = 350 bar  |        |     |
| Ambient temperature                          | ca. – 20 °C up to + 40 °C<br>(according to type of PPU up to – 40° C)                           |        |     |
| PPU suitable for operation of                | SPMT Type axle load   | 40/48t | 60t |
|  | Max. axles lifting /lowering  | 40     | 34  |
|  | Max. driven pendulum axles  | 26     |     |

