

Technical data sheet

TERBERG/ZAGRO RR222 4x2

Multifunctional Terminal Tractor and Road Rail Vehicle



OPERATING CONDITION LIMITS

Outside temp limits: Std. -25°C +50°C
 Maximum GCW Road: . 100T @ 16% gradient
 Maximum GCW Rail:..... 1000T @ 0% gradient
 Max. tractive force on Rail: 85kN (Mu=0.85)
 Track gauge standard: 1435mm
 Vehicle weight incl. 9.8T Ballast: 21.500 kg

ENGINE

Mercedes OM926LA (Euromot IIIB/US Tier 4i)

Six cylinder four-stroke direct injection diesel engine with turbo charging and intercooler.
 Engine equipped with Mercedes (Ad-Blue) system including SCR-catalyst.
 Displacement: 7,2 dm3
 Bore: 106 mm
 Stroke: 136 mm
 Compression ratio: 17,5:1
 Output:..... 175 kW (235 Hp) at 2200 rpm
 Torque: 850 Nm at 1200-1600 rpm
Acc. ECE 80/1269

*** Engine selection depending on operating region and availability. For more info contact our sales team.**

GEARBOX

ZF, type, 6WG211

Automatic Powershift transmission with 6 gears forward and 3 gears reverse. Including standard F/R shift protection. Including standard Lock-Up clutch

ensuring the lowest possible fuel consumption and high operating speeds.

Gear ratio's theoretical speed (km/h)

5.683F+5.041R	5,0 + 5,7	(F1+R1)
3.702F	7,7	(F2)
2.304F+2.044R	12,4 + 14	(F3+R2)
1.501F	19,0	(F4)
0.963F+0.854R	29,6 + 33,4	(F5+R3)
0.627	45,5	(F6)
Rear: Tyre size 11R22.5 (4x) (axle ratio 16.36:1)		

COOLING SYSTEM

Plate and bar type radiator of heavy-duty construction mounted on rubber silentblocks with separate air to air transmission oilcooler and engine intercooler all mounted side by side.

EXHAUST SYSTEM

SCR-catalyst mounted in well protected vertical position behind cabin.
 Mercedes-Benz AD-Blue injection system with heated lines and 40Ltr ABS tank protected mounted.

CHASSIS

Welded construction of rolled steel channels 200x100x10 mm in combination with heavy duty steel plate sections.
 Air and fuel tanks protected mounted.
 Access steps with anti-slip surface integrated in the chassis.

FUEL TANK

Steel tank, 320 l capacity.

FRONT AXLE

Terberg TTA 60 Non driven steering axle.

Axle load: max. 10.000 kg (at 20 km/h)*
 * Actual axle load capacity depending on tyre load rating.

REAR AXLE

Kessler D81PL477

Reduction ratio 16.36:1
 Capacity: 35.000 KGs (at 20 km/h)*
 Axle load in rail operation: ±10.000kg (with 8.5T kg traction mass)
 *depending on tyre rating.

SUSPENSION

Front: Parabolic 4-leaf leafsprings in rubber mountings with 2 telescopic shockabsorbers and additional rubber stops. Maintenance free system.
Rear: Solid mounted to chassis.

Optional:

- Airluspension with rubber stops.

RIMS AND TYRES

Front and Rear axle:

Tyres: 11R22,5 (2 pieces)

Rims: 10 stud steel wheels 22.5 x 8.25

STEERING SYSTEM

Fully hydrostatic orbital steering system with priority valve and double acting steering cylinder. Emergency steering property.

Maximum steering pressure 175 bar
 Steering wheel diameter 350 mm
 Steering lock angle 48°
 Turning circle over front plate 14,3 m
 Automatic-hydraulic steering wheel locking while rail operation.

TRACTOR BRAKE SYSTEM

Dual-circuit compressed-air brake system for front and rear axles.

Front axle: S-cam brake system.

Rear axles: high capacity simplex wedge brake system.

Automatic slack adjusters front and rear.

Air reservoirs: 2 x 40 l + 1 x 30 l.

2-cylinder air compressor 900ltr/min.

Double cartridge Air dryer with integrated pressure governor.

Front axle: membrane brake cylinder.

Rear axles: spring-brake membrane brake cylinders on both axles.

* System pressure: 7.5 - 8.1 bar

ELECTRICAL SYSTEM

24 Volt system.

Alternator : 28 V / 100 A

Batteries : 2 x 12 Volt / 140 Ah

Output starter : 3,9 kW

Fuses and relays easy accessible mounted in central electrical box inside the cabin.

Wiring with easy readable code numbers.

All dashboard check/control lights as LED.

LIGHTING

Main headlights with dipped and main beam and direction indicators.

LED rear lights mounted at rear of chassis, including direction indicators and brake lights.

2 working lights on rear side of driver cabin.

HYDRAULIC SYSTEM

Engine driven hydraulic pump for steering and lifting 5th wheel plate, directly mounted to transmission, with priority valve for the steering system.

Hydraulic oil tank protected mounted to the chassis frame. Tank capacity 50 dm³. Hydraulic valve pneumatically operated from inside the cab to lift/lower/hold the 5th wheel.

Working pressure 250 Bar.

2 heavy-duty hydraulic single stage liftrams

5TH WHEEL**2" Cast steel plate**

Technical capacity 36.000 kgs.

Lifting capacity 34.000 kgs.

Automatic locking of jaws system.

Pneumatic unlocking of 5th wheel, operated from cabin.

Indicator light for positive locking inside the cabin.

CABIN

Full width, execution for 2 persons.



Forward facing main driver's position on L.H. side with all necessary controls.

Dimensions outside:

- width : 2380 mm
- Length : 1593 mm
- height : 1821 mm

Cabin construction of overdimensioned strong steel profiles to resist latest Rops/Fops regulations.

Anti-vibration cabin mounting and additionally air-suspended.

Rear cabin door arranged centrally for safe and comfortable entrance and exit. Spacious safety windows for excellent panorama view (toned).

Each 2 sliding windows on driver's and co-driver's side.

Driver cabin can be tilted electro-hydraulically up to 65° for comfortable accessibility of the engine compartment for maintenance works.

2 Parallel wipers on front window.

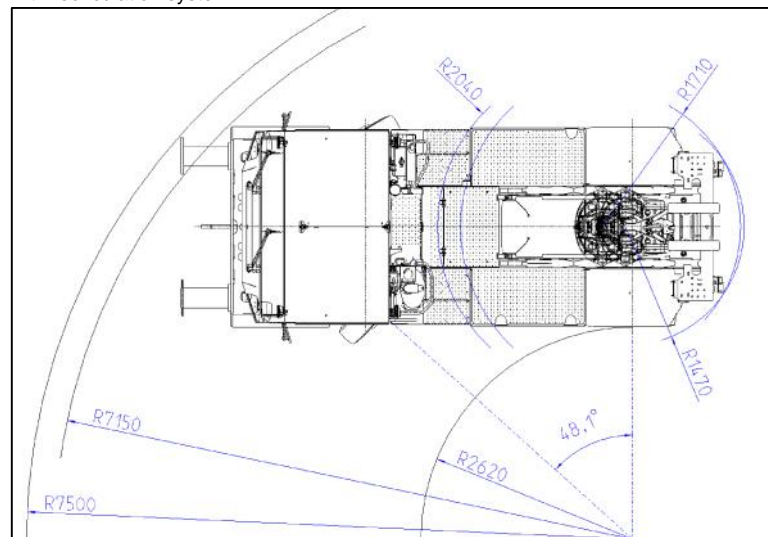
1 wiper at each rear window.

2 air-suspended Isri 6860 series comfort seats for driver and co-driver with armrests. Adjustable 2-point safety belts. Mounted on console with extra storage space.

Air blower heating/ventilation three-step with recirculation system.

Dashboard controls:

- Throttle pedal
- Foot brake pedal
- Parking brake lever
- Ignition key switch
- Hazard lights
- Lighting
- Gear selector
- Indicator lights:
 - * Oil pressure
 - * Alternator charging
 - * Direction indicator
 - * Main beam
 - * Parking brake activated
 - * Air filter clogged
 - * Fuel prefilter clogged
- Engine revolution counter
- Operating hours counter
- Control system with optical and acoustical warning signal for:
 - * High temperature gearbox
 - * Low oil pressure engine
 - * High temperature engine
 - * Low air pressure circuit 1
 - * Low air pressure circuit 2
 - * Low fuel level
 - * Low voltage
- Combined switch for:
 - * Direction indicators
 - * Wipers front window
 - * Main/dipped beam
 - * Horn



TRACK GUIDING SYSTEM

- For track gauge 1435 mm
- 2 heavy rail guiding axles
With each 2 guide wheels Ø 400 mm
- With profile 70° H4020
- Including track sweepers
- Colour monitor with 2 colour cameras as rerailing assistance
- Rear rail guiding axle as swing axle via central bolt
- Front rail guiding axle
- Separately controllable hydraulic control for lifting/lowering of the front and rear track guiding with pressure compensation and damping
- Combined ergonomic control unit in the driver cabin
- LCD indication in the driver cabin with optic-acoustic warning in case of hydraulic pressure loss
- Automatic pressure adjustment
- CAN-Bus control
- Automatic fixation of the hydraulic steering at the front axle while rail operation
- Automatic lifting of front axle while rail operation
- Hydraulic safety locking of the rail axles while road operation
- Open-circuit guards directly at the cylinders
- Manual handpump for lifting of the rail axles in case of vehicle hydraulic failure
- Pneumatically operated footstep with hand grip front right (when shunting-configuration)

RAILWAY LIGHTING

Signalling and warning device.

WAGON BRAKE SYSTEM

- For trailing loads up to 1000 tons, max. 40 axles
- 2 electrically driven aircompressors with capacity 150lpm each (@ 8 bar reservoir pressure)
- Electronic hand-brake valve for sensitive control of the wagon brake system
- Air reservoirs with Total 360 l air reserve
- Each 2 brake hoses (HL + HBL) with LH3 shut-off cock front left and right

STANDARD COUPLING SYSTEM

2 buffer as per UIC 526-1 with UIC-hook and mechanical shackle at the front.

SUPPLEMENTS FOR THE STANDARD COUPLING SYSTEM**Automatic shunting coupling RK900**

Integrated swivelling device.

Pneumatic operation of the coupling head from the driver cabin.

Additional manual emergency release.
Elimination of mechanical shackle.

Automatically operated throw shackle

Pneumatic operation of the throw shackle.

Elimination of mechanical shackle.

OPTIONS BASIC VEHICLE

- Driver cabin as right-hand drive
- Air conditioning

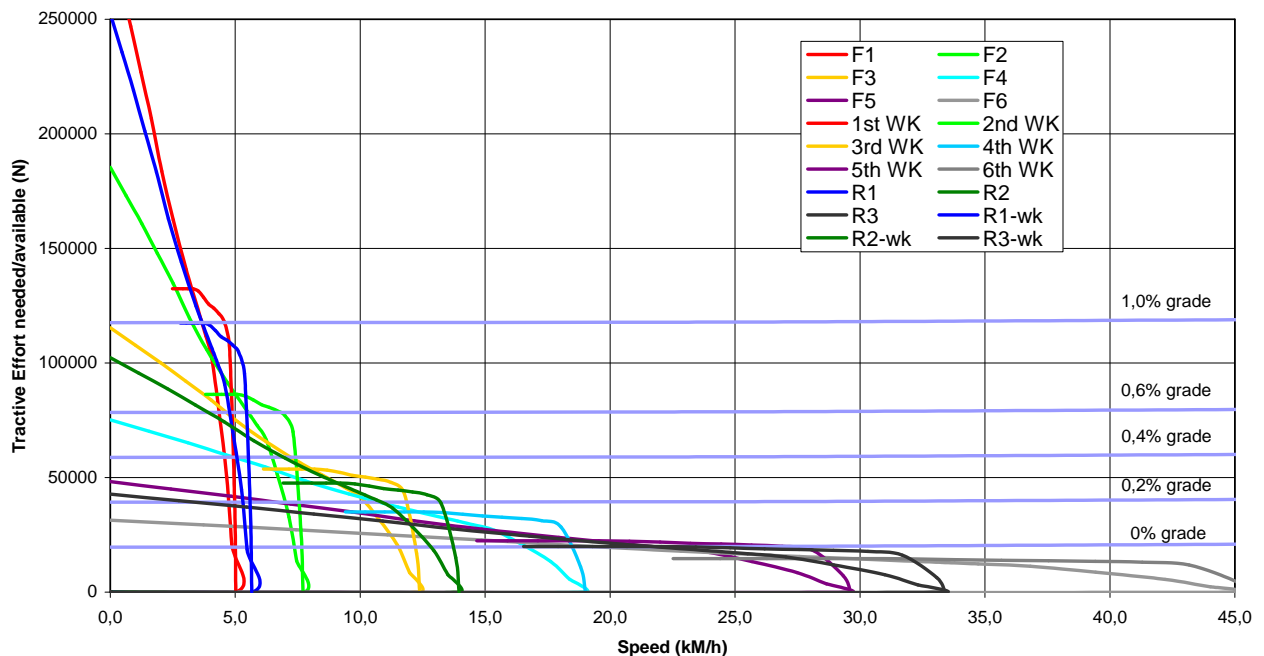
- Engine pre-heating 220V
- Hot water auxiliary heating for heating of the cooling water circuit
- 2 additional working lights at the top-front of the driver cabin
- Radio with CD-Player

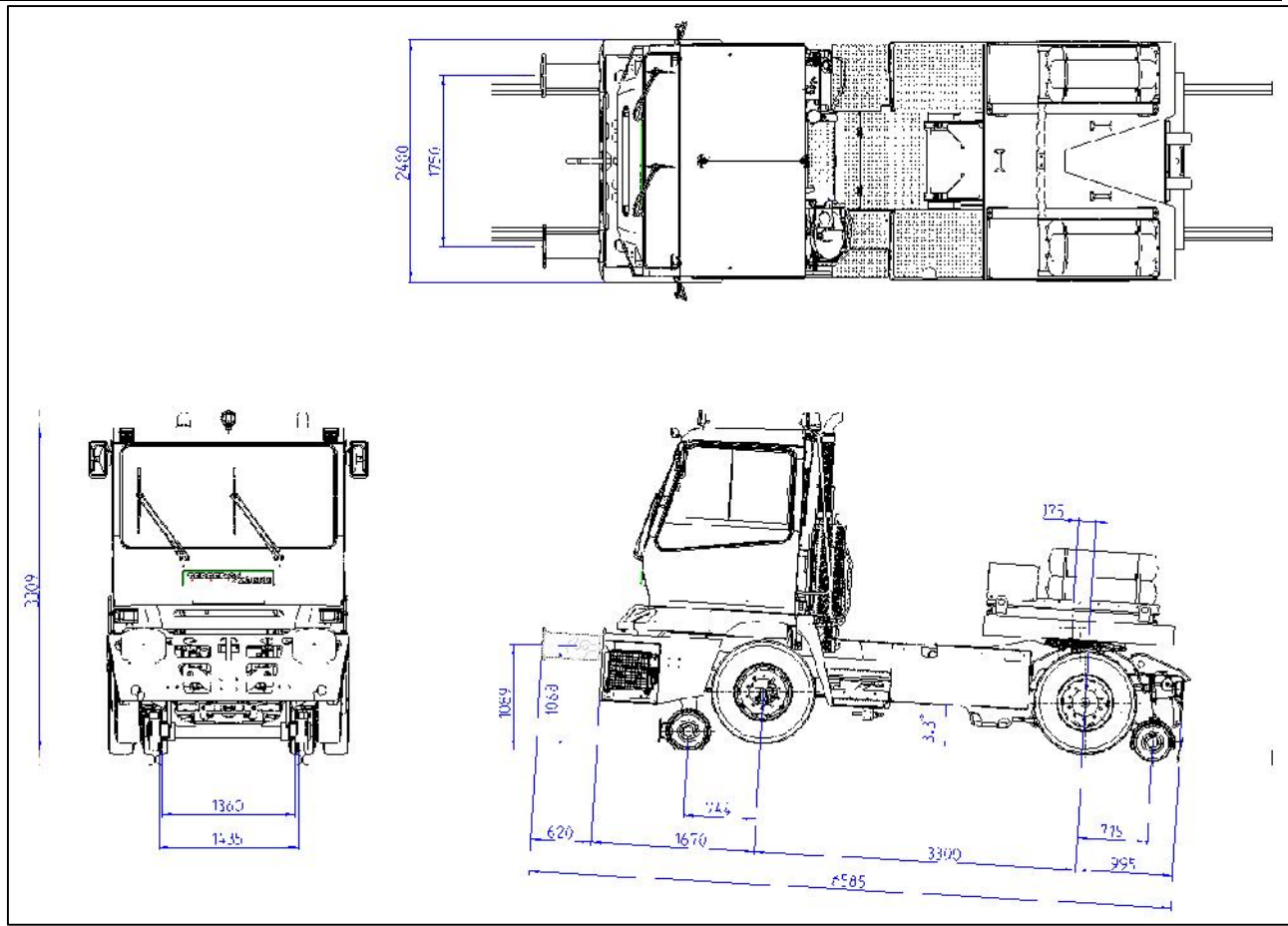
OPTIONS FOR RAIL OPERATION

- Co-driver's seat with rotating console (180°) makes second operator stand
For rail operation with bidirectional trailing load (required control elements are arranged twice).
- Special guide wheel profile according to customer's specification
- Emergency stop switches at all four corners of the vehicle (function: engine stop, apply parking brake, ventilate wagon brake system)
- Illumination of guide wheels
- Camera for supervision of the front coupling system
- Signalling and warning devices in special execution
- Radio remote control for rail Operation (Loc Control 100 RS Compact, Schweizer Electronic)
- Footstep (pneumatically retractable) with hand grip front left
- Pneumatic sanding equipment
- Standard coupling system front in combination with:
Each 2 brake hoses (HL + HBL) with LH3 shut-off cock front left and right
- Coupling systems other than UIC on request

Tractive Effort Diagram Mercedes OM926LA-175kW - ZF6WG211

RR222-4x2 with Lock-Up, GCW 1000t, axleratio 16.36 Tyres 11R22.5





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