

## SOLYTEK

**Company Profile** 

### **About the Company**

SOLYTEK has been operating on the International Railway Market since 1999 as a manufacturer and supplier of Railway Infrastructure Equipment.

SOLYTEK has been working closely with French Railways for developing and suppling inovative track solutions.
SOLYTEK activities cover OHL Electrification as well as Track Laying and Maintenance.

SOLYTEK is member of French Railway Manufacturer Association.

ASEAN Office established in 2015 in Bangkok to cover S-E Asia regional needs.

#### **OHL Electrification**



### Machinery:

insulator cleaning track car, catenary maintenance track car, unrolling/rerolling systems under constant mechanical tension, rail/road maintenance cars, telescopic jib and cradles, lightweight trolley for OHL maintenance, etc.

### **Railway Track**



### ▶ Rolling stock :

track motor cars, railroad loaders, railroad vehicles, Hyrail equipment, etc.

## **▶** Track Maintenance:

sleepers laying equipment, rail threader, raiload loaders, CWR loading and unloading wagons, switch and panel replacing systems, track and tunnel cleaning wagons, tamping units, ballast brushes, etc.

#### On-track grinders

Lightweight grinding trolley, heavy duty roadrail trucks, ranging from 4 to 8 stones, etc.

#### Lightweight machines:

rail sawing, rail grinding, rail descaling, rail drilling, destressing equipment, rail and sleeper handing, measuring devices, lighting equipment, spare parts, etc.

#### **Track Innovation**

SOLYTEK designs and supplies specific machines according to customer requirement complying with Railways and UIC standards.

#### **SOLYTEK** references

#### **▶** France

French Railways SNCF Major contractors: COLASRAIL, ETF, EIFFAGE RAIL, TSO, etc.

### **Export**

Main SOLYTEK customers are in following countries: China, Japan, Korea, Taiwan, Phillipines, Malaysia, Thailand Tunisia, Morocco, Mauritania, Czech Republic, Sweden, Norway.



## SOLYTEK

**Track Laying Maintenance Equipment** 



**Rail loading wagon** 



**Track cleaning wagon** 



Road rail loaders with accessories



**Switch replacing** 



**Sleeper Layers** 



Road rail grinding vehicle



## SOLYTEK

**OHL Laying and Maintenance Machines and Equipment** 



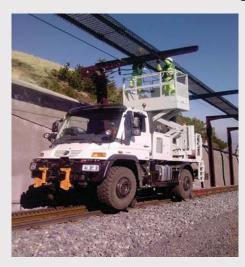


**Range of Unrolling Wagons** 





**Range of Multipurpose Vehicles** 





**Range of Road rail Vehicles** 





## TRACK EQUIPMENT

## **MOTOCAR**

**Rail Vehicles** for the transport of personnel or equipments or equipped for maintenance/building works.

Different size of motorcars allows to equip they with cabins for personnel, cranes, platforms, catenary controls or systems

Ideal for railway/metro building and maintenance.



## **UNIMOG**

**Road - Off Road Rail** Vehicles for the transport of personnel or equipments or equipped for maintenance/building works.

Complete autonomy to switch from road to rail or off-road.

Ideal for seaport, mine, quarry, foundry, steelwork, railway/metro work.



## **TRUCK**

**Road - Off Road Rail** Vehicles for the transport of equipments or equipped for maintenance/building works.

Complete autonomy to switch from road to rail or off-road.

Ideal for mine, quarry, railway/metro work.





## **TROLLEY AND TRAILER**

**Rail** Vehicles for the transport of equipments. With or without engine and remote control.

Ideal for quarry, foundry, steelwork, railway/metro work.



### **CRANE**

Designed for lifting and transport of the rail, the rail loader cranes La Falco give response to speed and safety requirement of the railway sites.

Radiocontrolled and extremely modular.

Ideal for railway/metro building and maintenance.



## **TAILORED MACHINE**

**La Falco,** thanks to its acknowledgment and experience, designs and develops railway machine following the customer needs.

This machines can be complete or addressed to complete an existing process.





## SWITCH AND PANNEL LAYING MACHINES

## **F 40 TR**

The radio-controlled track and switch laying gantry F40 TR is designed for the longitudinal and lateral laying to the track and switch. With low set-up time and very quick work cycles, this machine permit a extremely fast laying work. Available in any track gauge. The machine is self-loading on truck and on wagon. Ensuring a great lifting capacity, easy of use and work safety, this machine is La Falco solution



Thanks to **patented work system**, this machine has a **laying speed impossible to equal** for any other machine on world market.

## T 30

The gantry T30 is designed for the lateral laying of track and switch, and longitudinal laying by service rail or crawlers.

With low set-up time and very quick work cycles, this machine permit a extremely fast laying work.

Available in any track gauge, it can be carried on a railway (according UIC 505.1 profile) and on a road with normal transport.



The lateral laying is performed by machine's shoes. The longitudinal laying is performed by trolleys or crawlers mounted on the machine.

## **CTS 30 & CTS 80**

for track and switch laying.

Motorized and radio-controlled trolleys designed and built for the transport of track and switch from building place to laying place.

Equipped with liftable, movable and rotatable support plane, these trolleys allow to move the switch or the track during the transport to overcome obstacles on the way.



**In team with laying gantries**, these machines are the best choice for infrastructure railway laying.



## **Specification**

## **F 40 TR**

**Engine** 88 KW (120 HP) @ 2300 rpm

Lifting capacity 40 Ton

Laying types Frontal and Lateral

Weight 9800 Kg

Command type Radio-controlled, automatic patented work mode

Track Gauge Available any track gauge

T 30

**Engine** 47.8 KW (65 HP) @ 2300 rpm

Lifting capacity 30 Ton

Laying types Frontal and Lateral

Weight 4800 Kg

Command type Manual or radio-controlled

Track Gauge Available any track gauge

**CTS 80** 

Engine 30.6 KW (40 HP) @ 3600 rpm

Lifting capacity 80 Ton

Weight 6500 Kg

Track Gauge Available any track gauge

**CTS 30** 

**Engine** 15.3 KW (20 HP) @ 3600 rpm

Lifting capacity 50 Ton

Weight 4000 Kg

Track Gauge Available any track gauge











## BALLAST REGULATOR CP 250



The CP250 ballast regulator machine is designed and constructed to meet the needs of work and reliability of companies of armament. The compact size combined with the high operational capability make this machine suitable for all uses, from small jobs to large profiling local shipyards for renewal or new construction.

The machine is built on a solid frame with 2 axes on which the working bodies are connected, the engine compartment and fuel tanks, cockpit and all parts of the machine.

The ballast regulator is developed in full compliance with UNI EN 14033; is a vehicle of category 4, so as to be placed in the composition with other rolling stock. It is equipped with a brake system of UIC, as well as type of traction systems and unified repulsion.

#### Ballast plough: frontal and central

The front plough are located in the front of the machine and are working the ballast on the quayside. The plough drive source is via hydraulic cylinders that allow him to perform the movements of:

- -Rotation: swing to go deep into the quay
- -Translation: to gather or scatter the harvesting area of the machine
- -Opening/closing: regulates the opening of plough and consequently the amount of ballast collected

## Engine and hydraulic system:

In order to ensure the best performance the profiling machine mounts a DEUTZ engine supercharged with power of 160 kW. The engine responds to the latest anti-pollution regulations. The compartment that houses the engine is fully sound-insulated to reduce noise pollution produced by the machine.

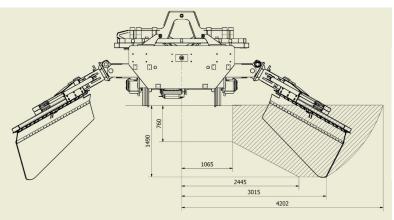
#### Brush with conveyor:

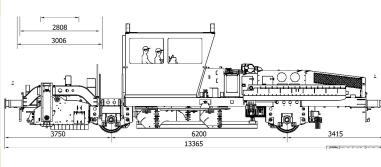
The ballast regulator has a brush installed in the back. The brush is tasked to clean up the sleepers after the passage of the ploughs, removing any leftover material and knocking him through the conveyor on one side of the shoulder.



## Specifications

| Engine           | Deutz TCD 6.1      |
|------------------|--------------------|
| Power            | 160 kW @ 2300 rpm  |
| Torque.          | 900 Nm @ 1450 rpm  |
| Emission         | 2004/26/EU STEP 3B |
| Max. speed       | 60 km/h            |
| Towed max. speed | 60 km/h            |
| Work max. speed  | 20 km/h            |
| Weight           | 34120 kg           |
| Wheelbase        | 6200 mm            |
| Total lenght     | 13365 mm           |
| Width            | 3000 mm            |
| Height           | 3500 mm            |
| Max. gradient    | 60 ‰               |
| Max. traction    | 90000 N            |
| Cant             | 160 mm             |
| Ø wheels         | 860 mm             |
| Draw gear        | Unify              |
| Buffer           | Unify              |
| Automatic brake  | Unify              |
| Direct brake     | Unify              |
| Parking brake    | Unify, TRISTOP     |
| Diesel tank      | 600 lt             |
| Oil tank         | 600 lt             |
| Refuel pump      | 30 lt/min          |





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## **ROAD-RAIL VEHICLE UNIMOG**





| • Road Rail vehicle for transport of personnel or equipment, or |
|-----------------------------------------------------------------|
| equipped for track maintenance / construction works.            |

- Based on Mercedes-Benz UNIMOG U400 Euro 5
- Complete autonomy to switch from road to rail or off-road.
- Ideal for seaport, mine, quarry, foundry, steelwork, railway/metro work.
- Railway system complies with EN 15756

## **Technical Specifications**

| Diesel Engine       | 175 kW   |
|---------------------|----------|
| • Speed on rail     | 35 km/h  |
| • Speed on road     | 90 km/h  |
| Standard gauge      | 1 435 mm |
| • Curve radius mini | 25 m     |
| • Cant Maxi         | 160 mm   |
|                     |          |

## • Diameter rail wheels 330 mm

## • Towing capacity maxi

• Gradient maxi

## 80 t

7%

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## ACCESSORIES FOR UNIMOG

## **Few Examples of accessories:**

Cleaning unit



Tree cutter



Ballast grade



**Elevated Plateform** 





## SOLYTEK HIGH PRESSURE CLEANING WAGON **WLR-1000B**

- High pressure system mounted on wagon
- Working speed up to 60km/h
- Motor pump unit 285 HP Output : 90l/min at 1000 bar
- 4 nozzles 1000 bar adjustable for cleaning of 2 rails
- Buffer water tank of 3m<sup>3</sup> capacity, i.e. 30 mn autonomy, located near the motor pump unit allows cleaning of stations and platforms
- Connections to 2 water tanker wagons of 58 m<sup>3</sup> allowing a large autonomy (up to 24h with 2x58m<sup>3</sup>)
- Large comfortable cabin
- Silent control desk
- Fishplate cleaning set (option)
- Low pressure cleaning ramp (option)











Low pressure cleaning ramp





## **RAILROAD LOADER 30T**

## An unrivalled explosion of power and control

Enzo is the most powerful among our rail to road loader line: 30 Tons weight and 200 HP engine gives the maximum power under the control of the best technology.

It is designed and built to deal with extremely heavy loads, all the particulars are developed to ensures the best performances with the highest reliability.

Available approvals in many country.



#### Works on rails and road

The rail/road loader works with the same high performances on the rails and on the road.

## **Huge number of applications**

polyvalent jibs: grabs for excavators/loaders; drilling tools; sleeper saw; tamping units; sleeper fork and beam; jackhammer; ditch and ballast cleaning, tailored tools, ...

#### High lifting capability

Enzo is equipped with a strong jibs that have a maximum lifting hydraulic power of 14 tons.

#### High traction power

The machine weight, the accurate design and a 200 Hp engine give to the rail road loader Enzo a high capability of traction up to 160 KN on the road and 140 KN on the rails.





## **Innovations**

Hydrostatic transmission on closed circuit with **DTC**: **D**ynamic **T**orque **C**ontrol that ensures always smooth acceleration.

**DSC**: the **D**ynamic **S**tability **C**ontrol prevents the overturning allowing always flowing movements.

**EsaHydra:** six independent hydraulic circuits keep the maximum power and velocity with multiple movements.

Tiptronic gear shift: on movement gear shift



## **Specifications**

**Principal Applications** polyvalent jibs: grabs for excavators/loaders; drilling

tools; sleeper saw; tamping units; sleeper fork and beam; jackhammer; ditch and ballast cleaning and

more and more..

Diesel Engine (Deutz) power: 147 KW (200 hp) @ 2300 rpm, Common rail

turbo intercooler, liquid cooled

Fuel tank capacity 200 |

Weight of the machine 28500 Kg

Maximum size UIC 505/1

Max lifting load Road: 10.000 Kg / Rails: 8.300 Kg

**Turning Tower** rotation angle: 360° continuous

**Driving cab** two seats, sound insulated, wide visibility, heatless

pans. Equipped with cooling and heating air system

**Cab equipment** On board computer with touch screen

Max. vel. (road/Rail) 30 Kmh / 30 Kmh

**Steering** hydr. servo, adjustable steering column, automatic

locking device during rails work.

Service brake (road/rail) hydr. 8 disc brake on 4 wheels / rail simplified with

tri-stop cylinders: rail wagon brake allowed

Parking brake (road/rail) hydr. negative action on 4 wheels / pneumatic on

through tri-stop cylinders on 4 wheels

Rails gauge for any track gauge; option: 2 gauge on the same axle

**Axels** with epyciclic reduction gears on wheels

Front / rear rail axles steering, swinging with hydr. cylinders for swinging

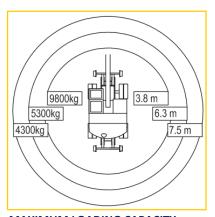
lock / fixed

Front / rear rail boogies independent with hydr. control

Hydraulic oil circuit Total capacity: 400 l

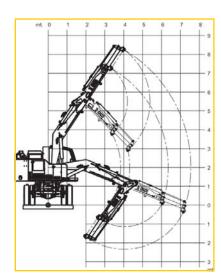
Maximum arm extension 7500 mm

**Refueling pump** carrying capacity: 30 l /min



MAXIMUM LOADING CAPACITY DIAGRAM ON ROAD







## RAILROAD LOADER 16 T GF22

## Best agility for rough environments

GF 22 is the lighter OF rail to road loader range: 16 Tons weight and a perfect counterbalance give it an unrivaled manageability.

GF22 is a road to rail loader with reduced working dimension to allow operation even in restricted spaces with lighter loads

Available approvals in many country.



#### Works on rails and road

The rail/road loader works with the same high performances on the rails and on the road.

#### Light and balanced

The GF 22 weight allows to the machine to work on wet, sandy or muddy soils with better performance than heavier machine.

#### Compact

The reduced working dimensions make the machine ideal for working in tight spaces with the maximum speed.

#### Quick

The 130 HP engine give to the 16.6 Tons GF22 loader the ideal power in order to obtain the maximum acceleration and speed performance. The tractive force is 102KN on the road and 82KN on the rail.





## **Innovations**

Hydrostatic transmission on closed circuit with **DTC**: **D**ynamic **T**orque **C**ontrol that ensures always smooth acceleration.

**DSC**: the **D**ynamic **S**tability **C**ontrol prevents the overturning allowing always flowing movements.

**EsaHydra:** six independent hydraulic circuits keep the maximum power and velocity with multiple movements.

Tiptronic gear shift: on movement gear shift



## **Specification**

**Principal Applications** polyvalent jibs: grabs for excavators/loaders; drilling

tools; sleeper saw; tamping units; sleeper fork and beam; jackhammer; ditch and ballast cleaning and

more and more..

Diesel Engine (Deutz) power: 95KW (130 HP) @ 2300 rpm, common rail

turbo intercooler, liquid cooled

Fuel tank capacity 160 |

Weight of the machine 16.600 Kg

Maximum size UIC 505/1

Max lifting load Road: 5.600 Kg / Rails: 4.200 Kg

**Turning Tower** rotation angle: 360° continuous

**Driving cab** two seats, sound insulated, wide visibility, heatless

pans. Equipped with cooling and heating air system

**Cab equipment** On board computer with touch screen

Max. vel. (road/Rail) 30 Kmh / 30 Kmh

**Steering** hydr. servo, adjustable steering column, automatic

locking device during rails work.

Service brake (road/rail) hydr. 8 disc brake on 4 wheels / rail simplified with

tri-stop cylinders: rail wagon brake allowed

Parking brake (road/rail) hydr. negative action on 4 wheels / pneumatic on

through tri-stop cylinders on 4 wheels

Rails gauge for any track gauge; option: 2 gauge on the same axle

**Axels** with epyciclic reduction gears on wheels

Front / rear rail axles steering, swinging with hydr. cylinders for swinging

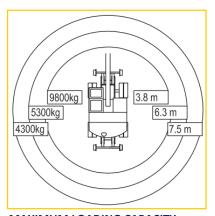
lock / fixed

Front / rear rail boogies independent with hydr. control

Hydraulic oil circuit Total capacity: 300 l

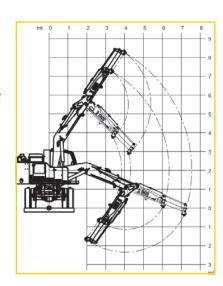
Maximum arm extension 6200 mm

**Refueling pump** carrying capacity: 30 l /min



MAXIMUM LOADING CAPACITY
DIAGRAM ON ROAD







## HYDRAULIC TAMPING HEAD GBH 100





## **Main features**

- Light weight .
- Adjustable distance between arms .
- Adjustable tamping depth .
- Tamping on twin sleepers .

## **Technical Specifications**

Weight 350 kg
Packing force at 200 bar 6 000 daN
Frequency 46-50 Hz
Maxi pressure 200 bar
Flow rate at 200 bar 60-80 l/min

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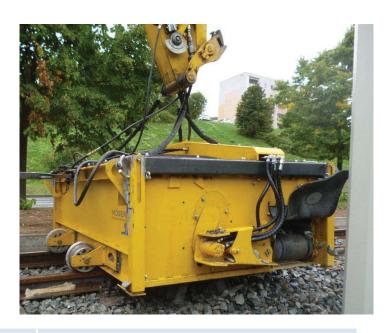
## **Options**

Rotator



## HYDRAULIC BALLAST BRUSH RO-V 291





- Hydraulic ballast brush with transversal conveyor belt to remove remaining ballast after track works.
- Weight and dimensions make transportation on a 7.5 t truck possible.
- Rigid rail chassis with changeable wheels
- Brush drive by 2 powerful motors, free of maintenance
- Adjustable brush pressure by a hydraulic valve ensures a minimum brush wear.
- Rotation speed continuously adjustable
- Changing the brush fingers and maintenance may be done easily by access through a maintenance cover.
- Getting on track is realized by a chain suspension which is installed onto the device

## **Technical Specifications**

• Weight 1650 kg

• Dimensions 2120x2870x1100 mm

• Brushing width 2500 mm

• Max. flow rate of brush and

conveyor 200 l/min

• Max. pressure 200 bar

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## **Options**

Towing bar



## SLEEPER BEAM PTT 800





- For handling 8 bi-block sleepers .
- Sleepers are gripped on the metallic bars .
- Sleeper of pair level are taken first , then sleepers of odd level .
- Distance between sleepers is adjusted by bolts reverse thread.
- Frame is fixed, grips being movable.
- Load safety device .
- Supplied with CE certificate and lifting certificate .

## **Technical Specifications**

| • Length                   | 6 150 mm        |
|----------------------------|-----------------|
| • Width                    | 902 mm          |
| • Height (without rotator) | 710 mm          |
| • Weight (without rotator) | 920 kg          |
| Weight of rotator          | 72 kg           |
| Maxi weight of sleepers    | 350 kg          |
| Mini width of sleepers     | 280 mm          |
| Adjustable distance        | 560 mm à 800 mm |
| Rotator max pressure       | 250 bar         |
| Beam max pressure          | 350 bar         |
| • Flow rate                | 30 l/min        |

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## **Options**

Rotator



## SLEEPER LAYING BEAM Ro-V 233 B-4 KL





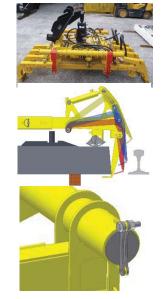
The hydraulically operated sleeper laying beam Ro-V 233.B-4-KL has been developed to grab and place sleepers on track bed in an effective way. The device is foreseen for excavators with a weight category of more than 16000 kg. In the standard variation 3 independent hydraulic control circuits are necessary for rotating, gripping and spreading. Please contact your dealer for an individual customizing.

#### Technical details:

| load                     | 4 x 350 kg                              |
|--------------------------|-----------------------------------------|
| tare                     | app. 1000kg                             |
| oil pressure             | min. 100 bar                            |
| oil flow rating          | app. 30 l/min (indiv. custom. possible) |
| sleeper pick up distance | Infinitely adjustable min. 240 mm       |
| sleeper laying distance  | Infinitely adjustable max. 750 mm       |

Basically the Ro-V233.B-5 is equipped with a rotator head by Indexator.

#### Overview of the advantages:



- low weight of approx. 1000 kg
- sleepers can also be lifted directly from track bed
- •sleeper pick up distance variable from 240 mm
- sleeper laying up distance variable up to 750 mm
- quick adjustment between several sleeper types
- small transport dimensions
- lockable storage space in the frame for crow bar
- customizing of the hydraulic equipment for several tool carriers



## MULTI PURPOSE PLATE GRAB MODEL PG 400



- Multipurpose grab designed for handling various loads; individual monobloc concrete sleepers, rails, etc
- Possibility to handle sleepers of various lengths without adjustment.
- Weighing 575 kg, it can be used on the truck cranes or excavators whilst a grip force up to 5 tons per jaw means that sleepers are securely held.
- Soft removable poluyréthane pads spread the grip force accross the face of the sleepers to prevent marking or damage.
- Computer Aided Engineering techniques have been used extensively to verify the strength and durability of all components.
- Double cylinder hydraulic system.
- Steel toes for rail handling

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## **Technical Specifications**

| Safe Working Load                          | 1 250 kg |
|--------------------------------------------|----------|
| <ul> <li>Weight with rotator</li> </ul>    | 575 kg   |
| <ul> <li>Weight without rotator</li> </ul> | 530 kg   |
| <ul> <li>Height with rotator</li> </ul>    | 1 025 mm |
| • Length                                   | 708 mm   |
| • Width                                    | 800 mm   |
| <ul> <li>Max. gap between toes</li> </ul>  | 544 mm   |
| <ul> <li>Min. gap between toes</li> </ul>  | 0 mm     |
| <ul> <li>Max. gap between pads</li> </ul>  | 425 mm   |
| <ul> <li>Min. gap between pads</li> </ul>  | 0 mm     |
| Max. inlet pressure                        | 300 bar  |
| • Recommended inlet pressure               | 200 bar  |
| • Rotator. Max inlet pressure              | 250 bar  |
|                                            |          |

## Options

Rotator



## HYDRAULIC BEAM FOR 16 SLEEPERS HANDLING MODEL 16SH17





Integrated power supply option views

- Beam designed to handle 2 beds of 8 concrete sleepers
- Robust Machine welded manufacturing.
- To be used with compatible machine or bridge crane
- 4 lifting points to be used with bridge crane
- In option, Mono or Triphase Power supply, and battery pack for autonomous use.
- 2 actuators located on each side to clamp
- Claws equipped with polyurethane pads to absorb sleepers lenght slight tolerances, and avoid damaging sleepers while handling
- Provided with CE certificate.

## **Technical Specifications**

| • CIVIU                                   | 5 250 kg    |
|-------------------------------------------|-------------|
| • Weight                                  | 850 kg      |
| <ul> <li>Height without option</li> </ul> | 1 020 mm    |
| • Lenght                                  | 2 595 mm    |
| • Width                                   | 2 350 mm    |
| • Sleepers max. lenght                    | 2 275 mm    |
| • Required clamping force per sl          | eeper 3,2kN |
| • Pressure                                | 150 bar     |

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- Rotator
- Integrated power supply
- Integrated Battery pack
- Different sleepers lenght



## SLEEPERS BATCH HANDLING BEAM (UP TO 25 PCS)





- Sleeper handling beam designed for up to 5 lavers
- Robust machine welding manufacturing
- Protection pads
- Possibility to adjust depending on numbers of sleeper layers: 1-2-3-4-5
- Anti-reverse valve on actuators
- Delivered with CE and lifting certificates

## **Technical Specifications**

For 25 Sleepers simultaneous handling

| • SWL                                   | 10 000 kg |
|-----------------------------------------|-----------|
| <ul> <li>Weight with rotator</li> </ul> | 3 600 kg  |
| <ul> <li>Sleepers lenght</li> </ul>     | 2 500 mm  |
| • Width                                 | 1 500 mm  |
| May Pressure                            | 210 har   |

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## **Options**

Rotator



## TELESCOPIC RAIL BEAM Ro-V 284 T

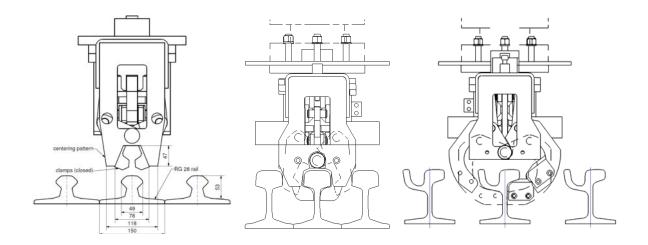




The hydraulically operated rail grapple Ro-V 284-T was designed to handle and to lay rails. The beam is extendable up to 6000 mm by hand. Two independent hydraulical circuits are necessary for the rotator and the grapples. There are three different grapples for vignol rail, grooved rail and RG 28 available. They can be changed easily on construction site. The unit is equipped with a parking support which can be folded for storing the machine.

#### Technical details:

| Working load                  | 1500 kg          |
|-------------------------------|------------------|
| Dead weight (without rotator) | 280 kg           |
| Oil pressure                  | 200 bar          |
| Oil flow rate                 | approx. 12 l/min |
| length                        | 3932 mm          |
| Maximal length                | 6104 mm          |
| width                         | 550 mm           |





## MECHANICAL RAIL BEAM 1 TO 5 RAILS HANDLING







View of Model No. PRM 3 with grapple for 3 rails

Closed Position

- This beam has been conceived for Rail handling, up to maximum 5 rails simultaneously side by side.
- Lenght of rails from 10 to 18 m
   Fixing points distance being 5 m or 9 m.
- To be used with our grapple type RO- V 216 which are compact, rigid, and easy to use.
- Grapples are working semic-automatically.
   Load safety system preventing opening of grapples,
   when load is not on the ground.
- Grapples open automatically when load is touching the ground. A lever arm is set to be activated manually to maintain opened position in order to lift up the beam.
- Lever arms are connected to each other with a wiring system enabling the operator to open all grapples without entering danger zone.
- Supplied with CE certificate and Lifting certificate.

## **Technical Specifications**

| • Weight                                                                           | 570 kg           |
|------------------------------------------------------------------------------------|------------------|
| • Lenght                                                                           | 9120 mm          |
| • Width                                                                            | 250 mm           |
| • Height (without grapple)                                                         | 1300 mm          |
| <ul><li> Grapple for Single rail</li><li>. Weight</li><li>. Working load</li></ul> | 9 kg<br>1500 kg  |
| <ul><li> Grapple for 5 rails</li><li>. Weight</li><li>. Working load</li></ul>     | 49 kg<br>7500 kg |

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## **Options**

• 25 m long rail handling.



## HYDRAULIC RAIL BEAM MODEL PRH 18





- This beam can be used with different rail types (Vignole, grooved rail, etc.) by changing grips.
- Length between grips ensures good stability and limits bending of ends.
- Load safety system preventing opening of grips when load is not on the ground.
- Clapet de sécurité en cas de rupture de flexible.
- Supplied with CE certificate and lifting certificate.

## **Technical Specifications**

| •Rail length           | 18 m     |
|------------------------|----------|
| Overall length         | 2 120 mm |
| Overall width          | 330 mm   |
| Distance between grips | 2 000 mm |
| Safety load            | 1 500 kg |
| • Weight               | 180 kg   |
| • Pressure             | 350 bar  |

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- Rotator
- Telescopic model



## UNIVERSAL BEAM MODEL PU 100





This beam is designed to be used in pairs for tandem lifting track panels, or singly for handling rail. With a ten ton safe working load, these lifting beams are a great time saver on site for handling, stacking and loading track panels.

- Check Valves fitted to gripping rams
- Safety lockout valve to prevent jaws opening whilst carrying load with over-ride for scrap clearance work
- Heavy-duty 10 ton rotator available
- Fully driver operated
- Lift, carry, stack, load track panels up to 60ft

## **Technical Specifications**

| • SWL           | 10 000 kg |
|-----------------|-----------|
| • Length        | 1 820 mm  |
| • Width         | 380 mm    |
| • Weight        | 380 kg    |
| Weight rotator  | 80 kg     |
| • Max. pressure | 250 bar   |
| •Mini. pressure | 90 bar    |

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## **Options**

Rotator



## MECHANICAL BEAM FOR TRACK PANEL HANDLING MODEL GB 16



- Beam designed to be used for Track panel handling in pair, without any hydraulics
- Track panel handling up to 20 m lenght et 14 t
- Hook shape enables an easy grab for track panels
- Robust machine welded manufacturing
- Delivered with rotative heads and clevis
- Track panel handling economical solution
- Provided with CE and lifting certification

## **Technical specifications**

SWL 14 000 kg
 Weight 925 kg

• Lenght 6 000 mm

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## TRACK PANEL HANDLING BEAM MODEL HLM 13





- Beam with hooks designed for track panel handling without hydraulics use. To be used in Pair.
- Hooks shape enables an easy set up into ballast with the help of a lever
- Robust Machine welded manufacturing
- Delivered with rotating heads and clevis
- Economical solution for Track panel handling
- Provided with CE and lifting certificates

## **Technical Specifications**

| • SWL    | 10 000 kg |
|----------|-----------|
| • Weight | 235 kg    |
| • Lenght | 2085 mm   |
| • Width  | 300 mm    |
| • Height | 1070 mm   |

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# HIGH CAPACITY TRACK PANEL HANDLING BEAM (UP TO 20M LENGHT) MODEL PH 16







- Beam designed for track panel handling up to 20 m lenght and12t
- Robust Machine welding manufacturing
- Clamping of the panel operated by 4 actuators with anti-reverse system
- Actuators protected against shocks with beam structure
- Safety system avoiding claws opening while beam is in lifting position
- Bronze bushings on actuators
- Pressure limiter
- Delivered with CE and lifting certificates
- Available for all type of track gauge
- Available in 2 versions

## **Technical Specifications**

| 12 000 kg |
|-----------|
| 2 000 kg  |
| 760 mm    |
| 6 000 mm  |
| 210 bar   |
| 90 bar    |
|           |

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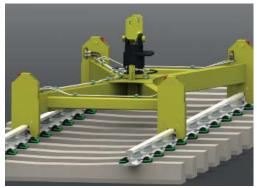
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- Rotator
- Mechanical adaptation



# SHORT TRACK PANEL HANDLING BEAM MODEL SPH 214





- Track panel handling beam designed for short panel up to 10m
- Its 4.5 m lenght minimizes panel deformation and bending
- Clamping of the panel operated by 4 actuators with anti-reverse system
- Actuators protected against shocks with beam structure
- Indicators on each claws enabling operator to vizualize quickly claws position (opened/closed)
- Safety system avoiding claws opening while beam is in lifting position
- Robust manufacturing
- Bronze bushing on actuators
- Delivered with CE and lifting certificates.

## **Technical Specifications**

| • SWL                                      | 6 000 kg |  |
|--------------------------------------------|----------|--|
| <ul> <li>Weight without rotator</li> </ul> | 590 kg   |  |
| <ul> <li>Height without rotator</li> </ul> | 760 mm   |  |
| • Lenght                                   | 4 500 mm |  |
| • Width                                    | 1 900 mm |  |
| <ul> <li>Max pressure</li> </ul>           | 210 bar  |  |
| Mini pressure                              | 90 bar   |  |

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- Rotator
- Mechanical adaptation



## STEEL SECTION MANIPULATOR MODEL SM15







The Steel section Manipulator SM15 has been designed to handle, erect and install track electrification steel masts, for a safety use.

- Combination of scissor grab and hydraulically telescopic legs.
- The load is gripped on all four faces using soft urethane pads preventing any damage to galvanized surfaces, and any sliding of the load for an improved safety.
- A roto tilt adapter head enables precise positioning for accurate placement onto bolted flanges, tube piles.
- Check valves on all grip cylinders
- A unique pendulum valve which can only be overriden by the banksman from outside the cab ensure safety.
- Applicable to square, rectangular, I-beam, fabricated sections.
- Delivered with CE and lifting certificates.

## **Technical Specification**

| Weight                                | 1 400 kg       |
|---------------------------------------|----------------|
| <ul> <li>Safe Working Load</li> </ul> | 3 750 kg       |
| • Min. Load Section                   | 200 x 200 mm   |
| • Max. Load Section                   | 650 x 650 mm   |
| • Applicable to square, rectan        | gular, I-beam, |
| fabricated sections                   |                |
| Head tilt                             | +/- 30°        |
| Grab circuit                          |                |
| - Max. Hyd. Pressure                  | 210 Bar        |
| - Min. Hyd. Pressure                  | 110 Bar        |

• Tilt circuit

- Max. Hyd. Pressure- Min. Hydraulic Pressure90 Bar

• Rotator circuit

- Max. Hyd. Pressure- Min. Hyd. Pressure90 Bar

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- Handling of any type of section
- Adaptation to any type of Excavator



## RAIL LOADERS MODEL CR3PR







- The 4 loaders intended to load and unload rails of 36 m long maximum.
- Installed by pair on 2 wagons.
- 2 loaders are used for handling 18m long rails
- Radio controlled by one operator .
- Synchronized control of 2, 3 or 4 hoists.
- Electric supply from one generating set located on an separate wagon or underneath.
- Additional plugs for connecting hand tools
- Wagons can be returned or reversed.
- Increase of productivity, fast operation,
- Increase of operator safety : control from the ground , thus no risk of falling .

## **Technical Specifications**

| <ul> <li>SWL of each loader</li> </ul>   | 750 kg   |  |
|------------------------------------------|----------|--|
| <ul><li>Lifting speed (fast)</li></ul>   | 4 m/min  |  |
| <ul><li>Lifting speed (slow)</li></ul>   | 1 m/min  |  |
| <ul> <li>Translation speed</li> </ul>    | 16 m/min |  |
| <ul> <li>Mini length of rails</li> </ul> | 12 m     |  |
| <ul> <li>Weight of loader</li> </ul>     | 1 491 kg |  |
| • Height                                 | 2 602 mm |  |
| <ul> <li>Generating set</li> </ul>       | 30 kVA   |  |

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## TRANSPORT TRAILER





|                                                      | Technical Specifications |           |
|------------------------------------------------------|--------------------------|-----------|
| For transport of material and equipment              | • Weight                 | 2 500 kg  |
| - For transport of material and equipment            | • Length                 | 5 000 mm  |
| Designed to be towed by road vehicle or rail vehicle | • Width                  | 2 480 mm  |
| Parking brake and emergency brake.                   | Fixed front axle         |           |
| Tarking brake and emergency brake.                   | • 3 points rear axle     |           |
| Removable platform gates                             | Wheel diameter           | 380 mm    |
| Wheel profile ORE S 1002 DIN 5573 (UIC510-2)         | • Capacity               | 17 000 kg |
|                                                      | Heigth of gates          | 400 mm    |
|                                                      |                          |           |

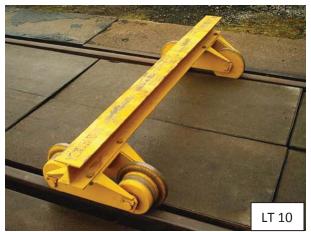
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- 8 m long trailer
- Tyre wheels



## TRANSPORT TROLLEY MODEL LT 10





- For transport of materials (rails, sleepers, etc.).
- Available with fix or rotating beam (LT 10P).
- Insulated wheels.
- Connecting bar of 3 or 4 m long, or telescopic from 4 to 6 m.

## **Technical Specifications**

• Length 550 mm

• Width 1 900 / 1 930 mm

• Height 335 / 687 mm

• Wheel distance 280 mm

• Wheel diameter 240 / 254 mm

• Weight 150 kg

• Capacity 10 t

• Pivoting angle (LT 10P) ± 10°

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- Manual brake
- Connecting bar



# TRANSPORTING DEVICE WITH RAIL MOVER



The ETM is railway equipment for loading, transport and handling of any type of rail. The base consists of 4 insulated railway wheels. On one of these wheels is applied a simple and comfortable screw parking brake.

On the centre of the girder, slidable longitudinally, is fixed a 360° rotating turret, with applied the loading arm which is adjustable in the tilt thanks to a screw. In the arm slides the tackle with applied the anchoring rail tongs.

# **Technical Specifications**

10000kg

Transporting device capacity

| Transporting device capacity | 1000018 |
|------------------------------|---------|
| •Hoist arm capacity kg       | 1500kg  |
| • Length mm                  | 2100mm  |
| •Width mm                    | 1100mm  |
| •Height mm                   | 1650mm  |
| Weight kg                    | 630kg   |

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# RAIL CHANGER PSR 1 & PSR 2



The rail movers PSR1 and PSR2 allow the gripping and handling of any type of rail.

It consists of two stands in steel tubes with various locking positions in height of the beam of sliding, the supporting feet widened that gives the entire equipment maximum adherence to the railway ballast.

Two strong levers articulated with ergonomic handle and a padded wheel housed in the base of a tripod allow handling and on rails of the whole system.

The group hoist is sliding on the beam due to a carriage provided with four gauge wheels keyed on ball bearings and locking screw. All equipment is easy to assemble, reassemble, transport.

# **Technical Specifications**

1000 kg Load capacity PSR 1: Load capacity PSR 2 : 2000 kg Length: 2130 mm 1400 mm • Width: • Height : 1845 mm • Height under clamp: 1400 mm Total weight PSR 1: 95 kg 70 kg Total weight PSR 2 :

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# **RANGE OF ROADRAIL GRINDERS**

| Item | Picture          | Туре            | Speed   | Concept                                                                                                                   |
|------|------------------|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------|
| 1    |                  | Ro-V 149.3      | 35 Km/h | <ul> <li>Multicar cabin</li> <li>2 axles</li> <li>Roadrail chassis</li> <li>6.5 t</li> <li>10 stones 11 kW</li> </ul>     |
| 2    | Option to item 1 |                 | 35 Km/h | Trailer with 2 grinding heads                                                                                             |
| 3    |                  | Ro-V 195-8      | 50 km/h | <ul> <li>Mercedes Benz Axor 18t</li> <li>2 axles</li> <li>Rail chassis</li> <li>8 stones 15 kW</li> </ul>                 |
| 4    |                  | Ro-V 195-<br>8x | 50 km/h | <ul> <li>Mercedes Benz Actros 28t</li> <li>3 axles</li> <li>Rail chassis with 2 bogies</li> <li>8 stones 15 kW</li> </ul> |

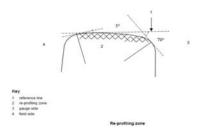


# **TRACK GRINDER MODEL V 149-3**



The machine has been designed for the following grinding tasks as per EN13231-3

- Treatment of vignol rails and main line rails
- Treatment of grooved rails in Tram networks
- Descaling of running table
- Corrugation grinding on running surface
- Rail reprofiling from 5° on outer face to 70°



#### **Grinding units (Free conception)**

6 grinding units (6 to 10 stones)

### Options:

• Cup unit:

Single head: angle range -15° to +45° Double head: angle range 0° to +70° • Disc unit: angle range +45° to +90°



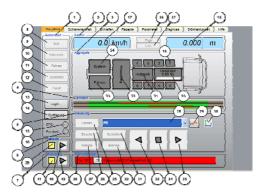
Movements

- Lateral shift parallel to x-axis for positioning
- Angular adjustment around pivot axis
- Feed motion, axial to compensate stone wear
- Tool angle to change sparking direction
- Variable rotating speed

#### **Gauge variation**

To adapt the machine to different track gauges, from 1000 mm to 1500 mm, operated manually by a spanner and synchronized by a chain drive.

#### **Automated control system**



- One operator
- Touchscreen for outside operation
- Visualisation of all settings
- Storage for hundreds of grinding patterns
- Safety and warning functions

#### Main features

- Diesel electric power system 120 kVA, 2002/88/EC
- Additional exhaust particle filter system
- Dust collection system 2x4000 m3/h, automatic pulsing
- Fire suppression system
- PC/PLC control system for grinding and driving settings
- Air pressure for feeding and pulsing-no oil
- On and off track in  $\sim$ 3 minutes
- GSM Remote control (software update and maintenance)
- Warning and lightening system according to EU standard
- Air conditioning for control and cabin
- · Airseal concept to avoid dust in electric motors



#### **TECHNICAL SPECIFICATIONS**

**Dimensions** 4845 x 1900 x 2450 mm Max. weight 6500 kg Max. axle load on road 3900 kg Max. axle load rail 3300 kg Max. travel speed road 20 km/h 35 km/h Max. travel speed rail Working speed 0-5 km/h Max. Gradient 80% on running track for driving 60% for braking **Road chassis** Number axles 2 Axle distance 2920 mm Driven axles 1 Rail chassis Number axles 2 Number driven wheels 0 Diameter wheel 290 mm running diameter Axle distance 1470 mm 1000-1500 mm, adjustable manually, infinitely variable Track gauge pneumatically, pressure adjustable Spreading attachment **Grinding unit Number stones** up to 10 Rotating speed infinitely variable up to 6000 rpm **Grinding motor** electric motor-spindle unit 7.5/11kW or 11/15kW Max. Grinding power 2x4 kW, 8000m<sup>3</sup>/h fan power **Dust collection** diesel-electric by generator, 110 kW- Complying 2002/88/EC **Power supply** Diesel tank capacity 2x70l (consumption approx. 8-10l/h) **Hydraulic system** System pressure 120 bar 22.5I/min Max. oil flow

Tank volume 101

**Pneumatic system** 

System pressure 10 bar, system with intake filter and water separator Max. air flow 230I/min Tank volume 4x20l, 1x15l

**Cooling system** 

Cooling power 12kW, compressor 2.5kW Max. machine working temperature 35°C Max. machine working humidity 75%

Min. Machine working temperature 0°C

Noise level 75 db (A) at 1m - 70 db at 7m depending on machine settings

and actual grinding configuration

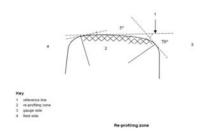


# **TRACK GRINDER MODEL Ro V 228-4**



The machine has been designed for the following grinding tasks as per EN13231-3

- Treatment of vignol rails and main line rails
- Treatment of grooved rails in Tram networks
- Descaling of running table
- Corrugation grinding on running surface
- Rail reprofiling from 5° on outer face to 70°



#### **Grinding units (Free conception)**

4 grinding units (Max. 8 stones) Options:

• Cup unit:

Single head: angle range -15° to +45° Double head: angle range 0° to +70° • Disc unit: angle range +45° to +90°



#### **Movements**

- Lateral shift parallel to x-axis for positioning
- Angular adjustment around pivot axis
- Feed motion, axial to compensate stone wear
- Tool angle to change sparking direction
- Variable rotating speed

#### **Gauge variation**

To adapt the machine to different track gauges, from 1000 mm to 1676 mm, operated manually by a spanner and synchronized by a chain drive.

#### **Automated control system**



- One operator
- Visualisation of all settings
- Storage for hundreds of grinding patterns
- Safety and warning functions

#### Main features

- Diesel electric power system 80 kVA
- Dust collection system 2x3000 m3/h, automatic pulsing
- PC/PLC control system for grinding and driving settings
- Air pressure for feeding and pulsing-no oil
- On and off track in  $\sim$ 3 minutes
- GSM Remote control (software update and maintenance
- Warning and lightening system according to EU standards
- · Air conditioning for control and cabin
- Airseal concept to avoid dust in electric motors



#### **TECHNICAL SPECIFICATIONS**

Dimensions (L/W/H) 3754 (7350) x 1930 x 1920 mm

Max. weight 3050 (+2520) kg

Max. travel speed road 3 kph

Max. travel speed rail 12 kph

Working speed 0-5 kph

Max. Gradient 80% on running track for driving 60% for braking

Road chassis (optional for grinder)

Number wheels 4

Axle distance 2920 mm

Driven wheels 2

**Rail chassis** 

Number axles 2

Number driven wheels 4

Diameter wheel 290 mm running diameter

Track gauge 1000-1676 mm, adjustable manually, infinitely variable

Spreading attachment pneumatically, pressure adjustable

**Grinding unit** 

Number stones up to 8

Rotating speed infinitely variable up to 6000 rpm Grinding motor electric motor-spindle unit

Max. Grinding power 7.5/11kW or 11/15kW

**Dust collection**4 kW, 3000m<sup>3</sup>/h fan power **Power supply**diesel-electric by generator trolley, 80 kVA

Diesel tank capacity 2x70l (consumption approx. 8-10l/h)

**Pneumatic system** 

System pressure 10 bar, system with intake filter and water separator

Max. air flow 230I/min

Max. machine working temperature 35°C

Max. machine working humidity 75%

Min. Machine working temperature 0°C

**Noise level** 75 db (A) at 1m – 70 db at 7m depending on machine settings

and actual grinding configuration



# SELF PROPELLED TURNOUT GRINDER MODEL Ro V 135



Use for grinding work at all known rail sections being laid (Ri 59 / Ri 60,PH 37,S 49,UIC 60) and all other vignol rails.

It is possible to treat rail surface, rail edge, the ground of rail groove, and the guiding rail.

The following grinding work is required:

Wearing of the section by the use of the train, e.g. at the grooved section.

On this type of machine, the installation of cup wheels - end face grinding - (D x H ; 100 mm x 110 mm) and end face wheels - peripheral grinding - (D x W ; 230 mm x 6 - 25 mm) on a standardised grinding arbour d = 22 mm is possible

The rotational speed of the grinding body was determined with 5000 rpm (grinding drive performance 7.5 kW/400 V three-phase current) in order to avoid the formation of tarnish characteristics by extremely high grinding temperatures at the rails.

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# **Technical Specifications**

Dimensions (exterior)

L (rectangular to moving direction

on track) x W x H (mm) 1900 x 1400 x 1000

Weight 240 kg

Electric connection 400 V 7,9 kVA

Drive motor, infinitely variable up to 5km/h

Rotating speed of spindle 5000 rpm

Tool reception 22mm, arbour

Track gauge 1000 mm - 1500 mm

- light 24 V
- socket 24 V
- socket 230 V / 16 A / 50 Hz

#### **Options**

 2 ramps for grinding the groove ground at the approach of switch rails



DigiLame, the digital gauge which measures the rail and the weld straightness.

## Its function

DigiLame measures the straightness of the rail on its upper and lateral sides. It allows verifying the quality of the welds, quantifying the corrugation, or obtaining the curvature of a straightened rail.

Its supporting system ensures a reliable positioning on the rail, and repeatable measurements. Measures are directly displayed and recorded on the track.



The software enables many analyses, comparisons, assemblies of records on longer distances.

# Its strenghts

- Insensitivity to water, grease, and rusty rails
  - Acquisition every 5 or 10 mm
- Important robustness and maneuverability
  - High accuracy High autonomy •
- Measures together the upper and the lateral sides of the rail
  - Powerful and ergonomic treatment software

Homologated by SNCF / N°: DPI 14167

# Its technical data (...)

Tracks concerned: train, tram or metro

Measured length: 1000 mm, Acquisitions: every 5 or 10 mm

(depending on the choice of the operator)

Range: +/- 4 mm



# (...) Its technical data

Accuracy: +/- 0.020 mm on the table, +/- 0.025 mm on the lateral side

Autonomy (excluding PDA): more than 420 measures

Rechargeable and retractable battery

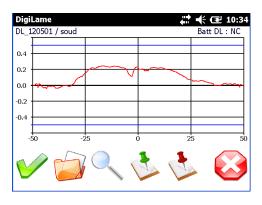
Weight: 8,75 kg

Dust and water resistance: IP54 Delivered with a rugged PDA \*

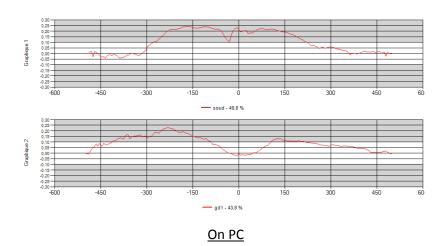
Delivered with DigiPC, the PC software that displays the data, and allows statistical analysis (NB:

compatible with many standard formats)

# \*: Standard PDA or notepad optional



On PDA



Photos and data non contractual.



UOTrack continuously quantifies the corrugation of the track.

# Its function and its principle

UOTrack allows to do the « zero point » of the track to determinate the need for a preventive or palliative treatment of the rail, to measure its undulations before and after grinding, or to validate a work according to the EN 13231-3 standard.

This lightweight and convenient tool consists of a BaseTrack trolley (which potentially measures track gauge and cant) equipped with one or two OndulRail measuring skis. Hitched behind the trolley, each ski slides over the rail and continuously measures the corrugation via its distance sensor.



The software calculates the key parameters required by the standards in different ranges of wavelengths (RMS ...).

# Its strenghts

- High accuracy •
- Insensitivity to water, grease and rusty rails
  - Easy passage of switches
    - Synthetic results
- Important robustness and maneuverability •
- Powerful and ergonomic treatment software

Homologated SNCF / N°: DPI 13012

# Its technical data (...)

Tracks concerned: train, tram or metro

Corrugation range: +/- 3,5 mm, with a resolution of several microns

Minimum distance between acquisitions: 2 mm

Speed: up to 2 m/s

Odometry measurement: on both rails with management of the gaps and of the reverse



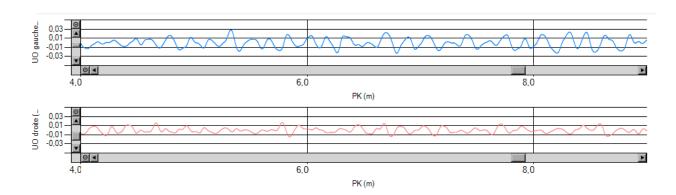
# (...) Its technical data

Optional track gauge measurement: 1 435 mm +/- 40 mm (other standards upon request), with an accuracy of 0.3 mm.

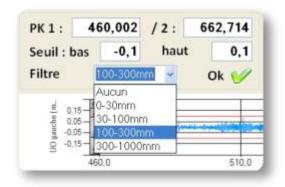
Optional cant measurement: +/- 200 mm (1435 mm), with an accuracy of 0.3 mm Battery life: more than 20 hours (excluding computers), with rechargeable battery Delivered with the TeamSoft software that displays the data, and allows statistical analysis Treatments according to the classic ranges of wavelength (10-30 mm ...), or others Available with a standard or a rugged PC (according to the demand)

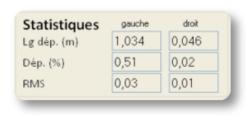
### Its mathematical treatments

• Possibility to visualize the corrugation continuously (speed of a walking man), filtered in the range 100-300 mm, and to post-visualize the corrugation filtered in any other ranges:



• Calculation of the percentage and of the total length of points out of tolerance in a specific area, with calculation of the Root Mean Square (RMS).





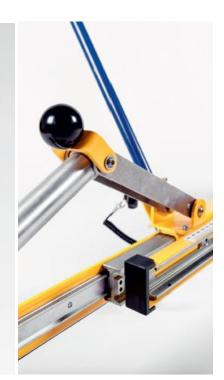
Photos and data non contractual.



# LASER RULE AUTOCENTRIC HEIGHT & STAGGER







- Trolley allowing measurement of height & stagger of catenary towards the axis of the track
- Self-centering of the carriage towards axis of the track
- EDM assisted LEICA D810 camera
- Compatible with Platinum CAMEROV HDD System
- Easy to carry with Carrying strap
- Transportation/storage box provided
- Foldable through retractable cylinder system

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# **Technical Specification**

## Trolley

- Unfolded dimension 1615 x 920 x 1280 mm
- Folded dimension 1085 x 265 x 345 mm
- Weight 17,5 kg
- Gap Indicator of track
- Measure stagger tol. +/-450mm

#### **EDM**

- Battery duration 4000 measurements
- Bluetooth equipped
- Photos of measurements

#### Kit content

- Auto-centric trolley
- Distancer LEICA D810
- Support for PC system CAMEROV HDD

Approved by French National Railways SNCF Approval No.: CIO EO 15093



# WINDING & STORAGE WAGON

#### **Drum holders**

- For storage of old wires
- Capacity between 400 and 800 DaN per wire or simultaneously
- Automatic guiding of old wires with adapted windows

# **Guiding mast**

- For guidance of the catenaries that have been drawn
- From 4,5 m to 6,5 m in relation to rails
- Controlled from the platform

### **Power unit**

- Diesel engine with hydraulic system
- Power from 80 kW to 1800 min-1
- Large volume tank for 40 hour autonomy
- Noise protected







# Storage cells

- For storage of
- 6 drums Ø 1 450 or Ø 1 600 mm

# Radio controlled handling crane

- Capacity: 2,2 t at 8 m
- Equipped with railway safety devices
- Recording laying lengths, speed, force and temperature

# **Equipment**

- Electric generator 230/380 Tri 9KVA
- Lights for night work



# **UNWINDING WAGON**

# Double vertical braking system for contact wires

- Unwinding capacity between 1000 to 3000 DaN for two wires simultaneously or singly
- Accurate mechanical tension linked to a hydraulic control
- Mechanical tension measured directly for each wire
- Regulated tension during delivery phase

#### **Motorised drum holders**

- Designed for ease of installation.
- Load bearing cables go directly through the guiding mast.
- For a laying force of between 100 and 600 DaN



### Accurate high capacity positioning mast

- Allows precise positioning of cables for up to 3 000 DaN.
- Laying of 4.5 m to 6.5 m relative to rails & +/- 0,5m / track centreline.



#### Adapted swivelling platform

- All controls and piloting from the platform
- Capacity: 7 persons or 1000 daN
- Up to 16 m<sup>2</sup> surface available
- Small lifting platforms for a further 1.5 m height •

Capacity: 1 person
• Surface: 0.6 m<sup>2</sup>

### Radio controlled handling crane •

Capacity: 2,2 t at 8 m

- Equipped with railway safety devices
- Recording laying lengths, speed, force and temperature
- Proposal of delivery settings







# **Equipment**

- Recovery winch
- Equipped with winches for ease of cable deployment
- Lights for night work



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