



URORAIL by  
**URDMAC**



## Road-rail vehicles & machines





## About us



Our company is today the result of **UROMAC's** own development and the partnering with companies with long histories, going as far back as 1940. After three generations UROMAC has become a specialist in machinery for the demanding sectors like military, mining, forest, construction and railway.

**UROMAC** started activities in the 1940's producing machinery for forest and agriculture applications. The quality of the products developed by the company as well as the flexibility to adapt them to customers' needs was highly appreciated by the market and the company acquired an excellent reputation in the domestic market. In the 1970's **UROMAC** entered into the construction sector producing 4x4 small loaders.

In 1991 the company entered a new era by partnering with **URO Group** and starting its first international expansion. URO Group is a dynamic and modern company focused on the design and manufacturing of multi-purpose off-road vehicles for a wide range of applications, either industrial or military.

Thanks to this partnership **UROMAC** started producing 4x4 site dumpers and forklifts and expanding internationally into new markets like northern Africa and South America.

In the 2000's **UROMAC** entered into the railway sector offering a complete range of road-rail machines and vehicles for maintenance and construction of railway infrastructure, shunting, civil engineering applications, forestry and power and overhead lines.



**UROMAC** is the first complete manufacturer of this type of machines and vehicles specially engineered and designed for this function. UROMAC covers the whole process from design, manufacturing and delivery according to customer specifications and standard and regulations.

This catalogue presents a carefully selected range of railroad vehicles and machines to be used in the railway industry, which includes a number of new solutions and product applications adapted to the present demand of the Railway Industry.





# Road-rail vehicles & machines

## Advantages



### ROA-DRAIL UNITS

Major road-rails, short lines and metropolitan transit systems face today the challenge of combine increase in rail traffic and therefore maintenance operations with decreasing time for maintenance activities.

Road-rail vehicles and machines offer a flexible and cost effective solution. These units can be easily transported to the work site (by truck or driving the unit) and mount on the track quickly enhancing effective working time.

**UROMAC** offers a complete range of road-rail vehicles and machines able to travel both on highway and rail offering solutions for track inspection, crew and material transportation and specialized maintenance tasks.

### DUMPERS

**UROMAC's** Road-rail Dumpers are ideal for construction and renovation of railway tracks. Its compact and ergonomic design, its versatility and ease driving make these road-rail Dumpers the perfect solution for transporting tools to work site, pouring cement or ballast and help digging machines at site.

### LACERTIS

Based on its experience and know-how as a Dumper manufacturer and also on customers' requirements **UROMAC** has developed a new modular machine concept with multiple applications using one single chassis: rotary tipping for ballast, concrete mixer, brush cutter, snow-plow...). Thus the effectiveness of the investment is improved as the unit can be utilized year around by easily changing the attachment at the shop.

The driver is seated in frontal position increasing visibility and safety and the articulated chassis provides high stability on track and ease mounting track operation.

### H-RAIL

**UROMAC** launches an innovative solution and establish a new category of road-rail vehicles. Based on a machine chassis and mechanisms **UROMAC** has developed a new concept of road-rail truck that maximizes efficiency in maintenance operations while significantly reducing the investment needed.

The articulated chassis provides high stability on track and ease mounting track operation and its ideal for tracks under renovation or construction.

### T-RAIL

Based on the outstanding **URO K-5** 4x4 truck used by more than 20 armies worldwide **UROMAC** has developed a new road-rail truck. The complete engineering, design and manufacturing by **UROMAC** give us the control throughout the whole manufacturing process and allow us to customize the vehicle for every customer need.

**T-RAIL** has an excellent performance on track thanks to its narrow chassis which is ideal for railway and tunnel gauges.

**T-RAIL** offers 100% off road capacity to circulate on rough terrains, quagmires, sand or snow offering continuous traction in both road and railway track.





## Lacertis

### PERFORMANCE, FLEXIBILITY, VERSATILITY

#### Articulated chassis

The articulated chassis provides high stability on track especially in stretches under renovation or construction.

#### Easy tracking

This reduces transportation times and increase effective working time.

#### Frontal driver position

Unlike other Dumpers in **LACERTIS** the driver is seated in frontal position increasing visibility and safety.



#### Simplicity and robustness

Designed for long lifetime using heavy duty components from main manufacturers.

#### Off-road performance

**LACERTIS** is excellent in most extreme terrains (snow, sand, mud) and easy on/off track operation with no need of level crossing.

#### Attachments

Choose from a wide range of attachments to perform a wide variety of railway maintenance of way operations.



#### Powerful hydraulics

Efficient hydraulic system guarantees performance and interface with railway attachments.

#### Railway axles system

Equipped with guiding rail-wheel system available for any track gauge. Manual track gauge change by the driver. Pneumatic tires ensure continuous traction even in sloping stretches.

#### Transportable

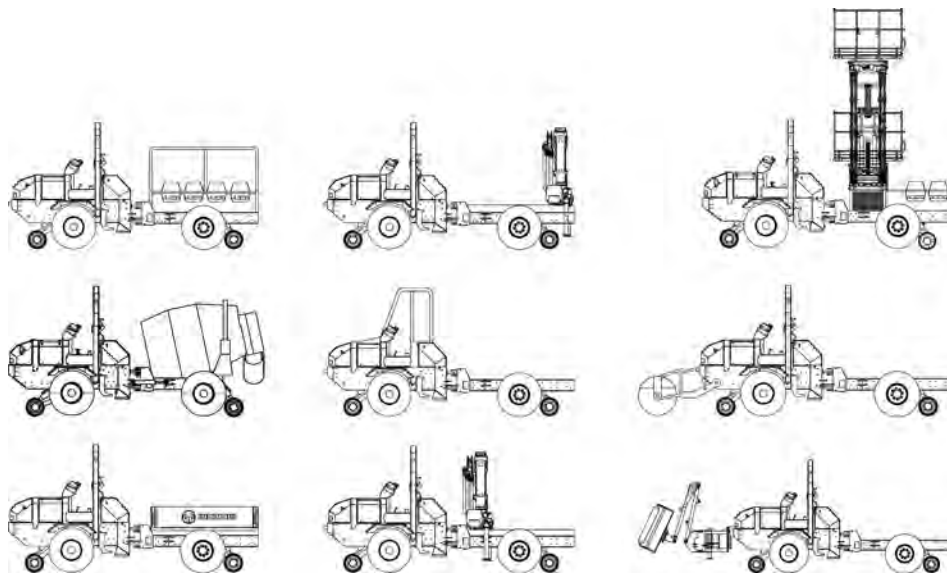
**LACERTIS** can be transported on trucks or conventional platforms due to its compact design. Loading and unloading maneuvers are quick, simple and safe.





# Road-rail vehicles & machines

## FLEXIBLE SOLUTIONS TO MEET ANY NEED



## Lacertis

Railway maintenance of way requires dedicated machinery to perform certain tasks that will only be used during certain periods of the year (i.e. snowplow).

**LACERTIS** is the ideal partner for railway operators and contractors seeking to maximize their return on investment.

The combination of a single chassis with multiple attachments and accessories reduce the investment while increases the productivity.

**UROMAC** offers its customer the possibility to adapt the **LACERTIS**'s chassis to meet their specific needs.

**LACERTIS** is part of a modular system and forms a platform for different attachments that transform this machine into a road-rail multi-purpose vehicle.

With support from **UROMAC**, customers can find in **LACERTIS** the ideal solution for maneuverability, productivity and profitability.





## H - Rail

### INNOVATIVE, PROFITABLE, USEFUL

#### Articulated chassis

The articulated chassis provides high stability on track especially in stretches under renovation or construction.

#### Easy on and off tracking

This reduces transportation times and increase effective working time.

#### Simplicity and robustness

Designed for long lifetime using heavy duty components from first class manufacturers.



#### Off-road performance

Excellent in most exigent terrains (snow, sand, mud) and easy mount on/off track operation with no need of level crossing.

#### Attachments

Choose from a wide range of attachments to perform any railway maintenance operation.

#### Powerful hydraulics

Efficient hydraulic systems powered by LINDE guarantees performance and interface with railway attachments.

#### Low profile tires

Large pneumatic tires are excellent in all kind of terrains and minimize the maintenance cost and the risk of fails.

#### Railway axles system

Equipped with guiding diploir system available for any railway gauge. Manual track gauge change by the driver.

#### Transportable

**H-RAIL** can be transported in trucks or conventional platforms due to its compact design. Loading and unloading maneuvers result quick, simple and safe.

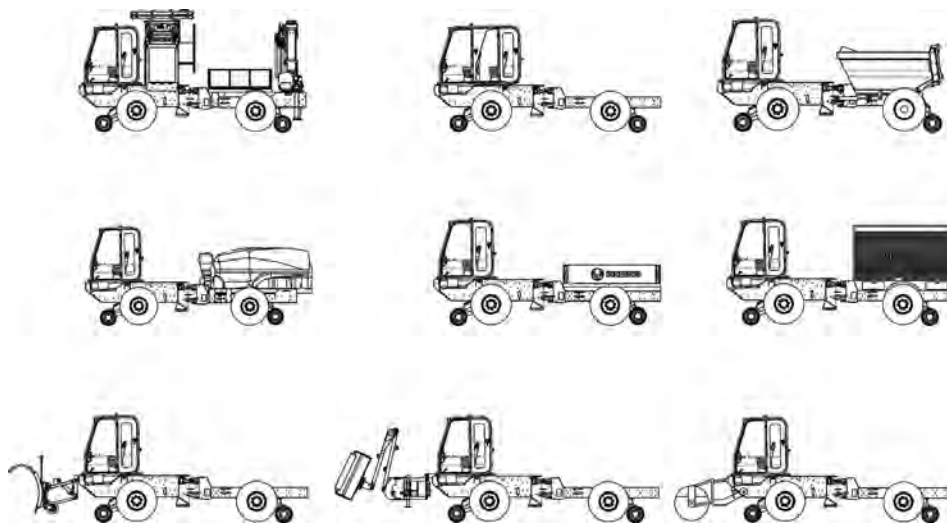




# Road-rail vehicles & machines

## H - Rail

**NEW CONCEPT: SIMPLICITY, MODULARITY, VERSATILITY, EFFICIENCY**



The use of roadrail trucks is quite extended for OHL, track inspection and maintenance works. However railway operators and contractors face the problem of how maximizing the investment made when the vehicle only works a short distance/time a day on track at reduced speed.

**UROMAC** launches an innovative solution and establish a new category of road-rail vehicles. Based on a machine chassis and mechanisms **UROMAC** has developed a new concept of road-rail truck that maximizes efficiency in maintenance operations while significantly reducing the investment needed.

**H-RAIL** is the perfect solution for overhead lines and track inspection jobs in railway reducing the cost of investment and increasing efficiency and profitability.

**H-RAIL** hydrostatic transmission and 4x4 traction bring smooth driving on track increasing safety when working/driving from the platform. Moreover the articulated chassis can be blocked to prevent swinging working on height.





## T - Rail

### BORN FOR RAILWAY

Many road-rail trucks are transformed versions of existing commercial vehicles. **T-RAIL** has been specifically designed, engineered and manufactured for this purpose.

**T-RAIL** is completely manufactured by **URO Group UROMAC** covers the whole process from design, manufacturing and delivery according to customer specifications and standard and regulations



### Powerful

Equipped with 250 HP engine and 2 speeds transfer case, T-RAIL can tow wagons up to 300 or 600 tons depending on the model.

### Off-road performance

**T-RAIL** is excellent in most exigent terrains (snow, sand, mud) and guarantee access to the track.

### Easy tracking

This reduces transportation times and increase effective working time.

### Implements

Choose from a wide range of implements to perform any railway maintenance operation.



### Compact size

**T-RAIL** compact design (reduced width and length) is ideal for running on track. The distance between axles is small so the truck is more stable in sections with tight bends.

### Excellent adaptation to track

Hydraulic compensation system guarantees continuous traction and contact especially on tracks under renovation or regular conditions.

### Railway system

Equipped with guiding rail-wheel system available for any railway gauge. Manual track gauge change by the driver (optional). Possibility of using traction rail wheel (subject to demand)



### Speed

Maximum speed on track is limited electronically for safety reasons and can be adjusted depending on the conditions of the track



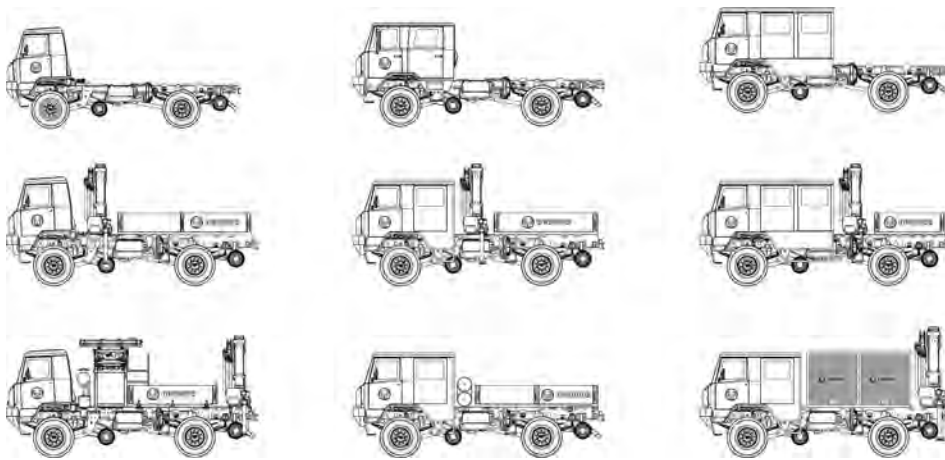


# Road-rail vehicles & machines

## T - Rail

### MODULARITY OF CHASSIS APPLICATIONS VERSATILITY

*Common chassis + Modular Bodies + Additional Equipment = Multiple applications and versions on a standardized platform*



### Maximum traction on track

2 speeds transfer case and main axles, both with 100% differential locking system, guarantee maximum traction on any condition

### Bidirectional on rail

Smooth driving on track increasing safety when working/driving from the platform

### Multi cabin

**T-RAIL** is available with single (Smooth driving on track increasing safety when working/driving from the platform.

Some railway shunting activities, like towing wagons, require the use of high performance road-rail vehicles.

**T-RAIL** is an efficient, reliable and cost effective solution for railway operators, contractors and factories to work on multiple applications:

- Towing wagons
- Servicing and maintenance
- Overhead lines
- Re-railing and emergency rescue
- Forest and pulp companies
- Fire fighting

Over more than 30 years **URO** has developed a complete range of 4x4 trucks used in more than 20 countries for a wide variety of applications: military, emergency, public works or forestry companies. Now **UROMAC** combines its know-how in roadrail vehicles and **URO** expertise in off-road trucks to offer a customized solution for every need





## G - Rail 9000



Rough terrain Dumper with articulated chassis and rotary tipping.

**Payload:** 9000 kg – 19850 lb. (max. 5.6 yards)

**Engine:** DEUTZ 100 HP

**Several track gauge available:**

1.435 mm (4' 8 1/2")

1.668 mm (5' 5 2/3")

1.000 mm (3' 3 3/8")

Adjustable manual diplois system for easy track gauge change

Heavy Duty machine

High performance/cost ratio

Articulated chassis:

- Easy access to the track even in step sections
- Excellent adaptation on tracks under construction (irregular, not levelled, etc)
- High stability on track

### BENEFITS

UROMAC Road-rail Dumpers offer clear advantages when working on railway tracks:

- 4x4 units: thanks to its permanent 4x4 transmission these units can work in the hardest conditions and are ideal to climb heavy slopes and mount on the railway track.
- High stability on tracks: thanks to its articulated chassis.
- Easy access to the track

## G - Rail 5000



Rough terrain Dumper with articulated chassis and rotary tipping

**Payload:** 5000 kg – 11000 lb. (max. 2.3 yards)

**Engine:** DEUTZ 49 HP

**Several track gauge available:**

1.435 mm (4' 8 1/2")

1.668 mm (5' 5 2/3")

1.000 mm (3' 3 3/8")

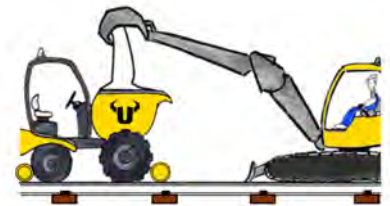
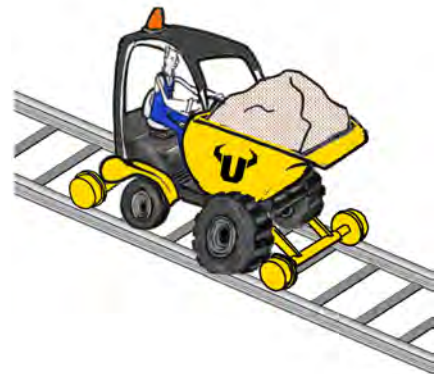
Adjustable manual diplois system for easy track gauge change

Heavy Duty machine

High performance/cost ratio

Articulated chassis:

- Easy access to the track even in step sections
- Excellent adaptation on tracks under construction (irregular, not levelled, etc)
- High stability on track



### APPLICATIONS

- Transporting tools to work site
- Pouring cement or ballast
- Construction and repair jobs combined with digging machines and excavators

- Compact design: perfect to work on narrow stretches and reduced maneuverability.
- Ergonomics and ease of driving: UROMAC road-rail dumpers are specially designed to work on railway tracks but no special driving license is required.
- Security: the permanent transmission ensures continuous traction on track. Besides UROMAC road-rail dumpers have extra safety elements like anti

roll over system in narrow track gauge, hydraulic steering lock and lighting system for railway

- Heavy-duty: UROMAC Road-rail Dumpers are designed to work on extreme conditions and manufactured using first class components like DEUTZ engines and LINDE hydrostatic pumps.



# Road-rail vehicles & machines

## Site dumpers / Fork lifts



**DUMPER VH-2500**

<b>Payload</b>	2.500 kg - 5.500 lb
<b>Engine</b>	Yanmar 36 HP
<b>Steering</b>	Hydraulic
<b>Transmission</b>	Hydrostatic 4x4 Permanent
<b>Brakes</b>	Oil immersed discs
<b>Wheels</b>	10,0 / 75 - 15,3
<b>Turning circle</b>	2,4 / 4,2 m - 7,87 / 13,78 ft
<b>Hopper</b>	Frontal
<b>Unladen Weight</b>	2.150 kg - 4.740 lb
<b>Max. speed</b>	20 km/h - 12,5 mph
<b>Standard equipment</b>	Lighting system
<b>Options</b>	Self loading shovel 220 l Work lights



**DUMPER GYRANTER 2.7**

<b>Payload</b>	2.700 kg - 5.950 lb
<b>Engine</b>	Yanmar 36 HP
<b>Steering</b>	Hydraulic
<b>Transmission</b>	Hydrostatic 4x4 Permanent
<b>Brakes</b>	Oil immersed discs
<b>Wheels</b>	10,0 / 75 - 15,3
<b>Turning circle</b>	2,4 / 4,2 m - 7,87 / 13,78 ft
<b>Hopper</b>	Rotary 180°
<b>Unladen Weight</b>	2.400 kg - 5.300 lb
<b>Max. speed</b>	20 km/h - 12,5 mph
<b>Standard equipment</b>	Lighting system
<b>Options</b>	Self loading shovel 220 l Work lights



**DUMPER GYRANTER 4x**

<b>Payload</b>	4.000 / 5.000 kg - 8.800 / 11.000 lb
<b>Engine</b>	Deutz 49 HP
<b>Steering</b>	Hydraulic
<b>Transmission</b>	Hydrostatic 4x4 Permanent
<b>Brakes</b>	Oil immersed discs
<b>Wheels</b>	11,5 / 80 - 15,3
<b>Turning circle</b>	2,7 / 4,6 m - 8,85 / 15,10 ft
<b>Hopper</b>	Rotary 180°
<b>Unladen Weight</b>	2.720 kg - 6.000 lb
<b>Max. speed</b>	25 km/h - 15,5 mph
<b>Standard equipment</b>	Lighting system
<b>Options</b>	Railway system Work lights



**DUMPER GYRANTER 9000**

<b>Payload</b>	9.000 kg - 19.800 lb
<b>Engine</b>	Deutz 100 HP
<b>Steering</b>	Hydraulic
<b>Transmission</b>	Hydrostatic 4x4 Permanent
<b>Brakes</b>	Oil immersed discs
<b>Wheels</b>	18 - 19,5
<b>Turning circle</b>	2,7 / 4,6 m - 8,85 / 15,10 ft
<b>Hopper</b>	Rotary 180°
<b>Unladen Weight</b>	4.638 kg - 10.225 lb
<b>Max. speed</b>	25 km/h - 15,5 mph
<b>Standard equipment</b>	Lighting system
<b>Options</b>	Railway system Work lights

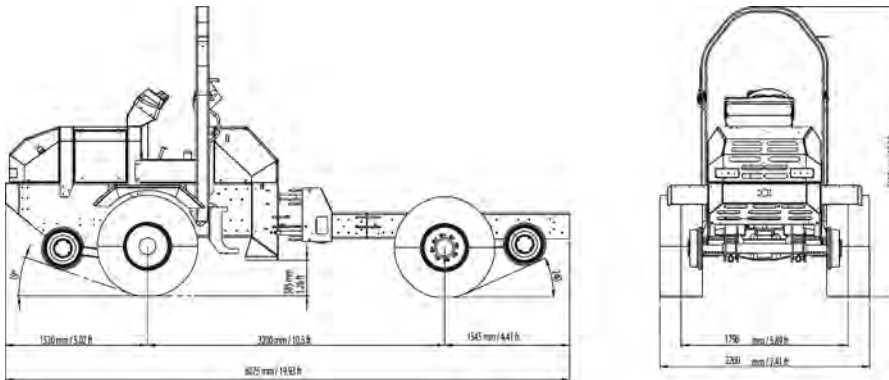


**DTH 2500 / 2000 FORKLIFT**

<b>Payload</b>	2.500 / 2.000 kg - 5.500 / 4400 lb
<b>Engine</b>	Deutz 49 HP
<b>Steering</b>	Hydraulic
<b>Transmission</b>	Hydrostatic 4x4 Permanent
<b>Brakes</b>	Oil immersed discs
<b>Wheels</b>	Front: 11,5 / 80 - 15,3 Back: 10,0 / 75 - 15,3
<b>Turning circle</b>	1,7 / 3,9 m - 5,5 / 12,8 ft
<b>Hopper</b>	-
<b>Unladen Weight</b>	3.870 / 3.600 kg - 8.530 / 7.936 lb
<b>Max. speed</b>	20 km/h - 12,5 mph
<b>Standard equipment</b>	Lighting system
<b>Options</b>	4,5 m Triplex mast Work lights



## Lacertis



- Low cost maintenance machine
- Special driving license not required (depending on country)
- Frontal driving machine - high visibility and safety
- Articulated chassis - excellent adaptation to the track
- Easy access to the track (no need to go to level crossing)
- Excellent performance on trucks under construction (irregular, not levelled, etc)
- Many possibilities of configuration with attachments (snowplow, brushcutter, concrete mixer, sprayer ...)
- Hydrostatic transmission
- Adaptable to all track gauges (standard and narrow)

### ENGINE - DEUTZ TCD2011L04W

Number of cylinder	4
Bore / stroke	96 / 125 mm 3,78 / 4,92 in
Displacement	96 / 125 mm 3,78 / 4,92 in
Compressor ratio	3,62 l - 0,95 gal
Max. rated speed	2.600 rpm
Mean piston speed	10,8 m/s - 35,43 ft/s

#### Power ratings for construction equipment engines

Power ratings for automotive and industrial engines at speed:	74,9 kW 2.600 rpm 9,6 bar - 140 psi
---------------------------------------------------------------	-------------------------------------------

Max. torque at speed	350 Nm 1.600 rpm
Minimum idle speed	900 rpm
Specific fuel consumption	208 g/kWh
Weight	269 kg - 595 lb

### HYDROSTATIC PUMP

Displacement	Nominal displacement	75 cm <sup>3</sup> / rev
	Maximum displacement	75,9 cm <sup>3</sup> / rev
Speed	Maximum continuous speed	3.100 rpm
	Maximum alternative speed	3.500 rpm
	Max. continuous pressure	250 bar
Pressure	Maximum pressure of work	420 bar
	Max. alternative pressure	500 bar
Torque	Continuous input torque	305 Nm
	Max. input torque	485 Nm
Power	Continuous power	98 kW
	Max. power	157 kW
Weight	Weight	49 kg

Payload	9.000 kg - 19.800 lb max. 5,6 yard.
Engine	Deutz 100 HP
Cooling system	Water
Hydrostatic pump and engine	Linde
Transmission	Hydrostatic automotive 4x4 permanent
Brakes	Oil immersed discs Negative parking brake
Steering	Hydraulic
Front and rear wheels	18 - 19,5
Unladen weight	4.800 kg - 10.580 lb
Max. speed	28 km/h - 17,40 mph
Gradient negotiable	Asphalt: 43° / Earth: 38°
Oil tank	160 l - 42 gal
Diesel tank	160 l - 42 gal
Entry - exit angles	Front: 35° / Rear: 28°
Rail Gauge	1.435 mm (4' 8 1/2")
	1.668 mm (5' 5 2/3")
	1.000 mm (3' 3 3/8")
Steering lock	Hydraulic
External turning circle	6,87 m - 22,54 ft 5,07 m - 16,63 ft
Optional	- Telemetry - GPS system - Hydraulic shock absorber - Trailer lock with hydraulic brake coupling

### FRONT AND REAR AXLES

Maximum static load (daN)	21.600
Maximum dynamic load (daN)	12.000
Maximum output torque (daN)	2.570
Reduction ratio at differential	5,714 : 1
Reduction ratio at wheels	6,6 : 1
Total reduction ratio	36,7714 : 1
Track dimension	1.796
Service brakes type	Oil immersed discs
Wheel braking torque (daN)	840
Service brake acting pressure (bar)	40

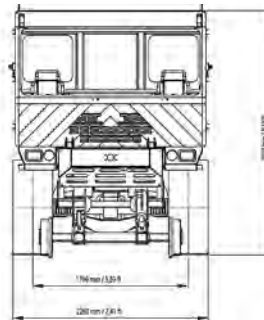
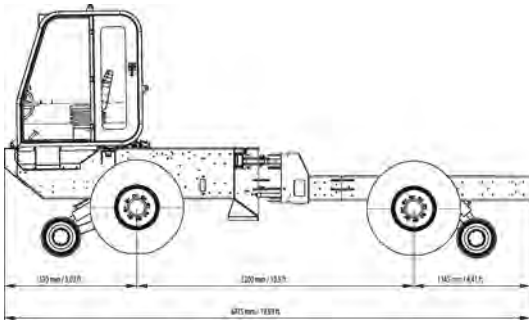
### GEAR PUMP

Displacement	28 cc/rev
Max. pressure	200 bar
Peak pressure	250 bar
Min. rpm	650 rpm
Average rpm	2.500 rpm
Max. rpm	3.500 rpm



# Road-rail vehicles & machines

## H- Rail



Engine	Deutz 100 HP
Cooling system	Water
Hydrostatic pump and engine	Linde
Transmission	Hydrostatic automotive 4x4 permanent
Brakes	Oil immersed discs Negative parking brake
Steering	Hydraulic
Front and rear wheels	18 - 19,5
Unladen weight	4.800 kg - 10.580 lb
Max. speed	28 km/h - 17,40 mph
Gradient negotiable	Asphalt: 43° / Earth: 38°
Oil tank	160 l - 42 gal
Diesel tank	160 l - 42 gal
Entry - exit angles	Front: 35° / Rear: 28°
Rail Gauge	1.435 mm (4' 8 1/2") 1.668 mm (5' 5 2/3") 1.000 mm (3' 3 3/8")
Steering lock	Hydraulic

DIPLOIRIS	
Available widths	1435 mm (4' 8 1/2") 1668 mm (5' 5 2/3") 1000 mm (3' 3 3/8")
Width change	Manual
Railway wheel	UIC S1002 Tempered
Surface Treatment	Induction Treatment
Railway wheel diameter	400 mm - 15,75 in

SCISSOR LIFT	
Max. height deployed	5500 mm- 18 ft from railway
Max. transversal displacement	3000 mm - 9,85 ft from railway axis
Elevation mechanism	Double scissor (hydraulic powered)
Max. load	400 kg - 880 lb (250 kg - 550 lb in extreme positions)
Control from scissor lift	Truck and scissor lift displacements
Lights	Working lights around scissor lift
Electrical insulation	8 ceramic insulators (60 kV)

LOADER CRANE	
Model	HIAB 077
Max	
Max. load	73 kNm
Loader crane range	min. 4.080 mm - 13,38 ft max. 9.530 mm - 31,26 ft
Angular speed rate	15° per second
Elevation speed	1,5 m/s - 4,9 ft/s

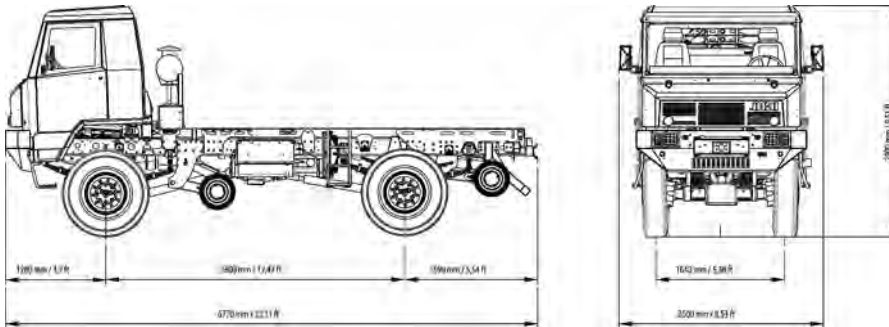
ELECTRIC GENERATOR	
Placed in a protected area	
Easy access for handling and maintenance	
Separable generator tray	

TRUCK BOX	
Dimensions	2000 x 1700 mm (3,4m2) 6,6 x 5,6 ft (36,6 ft2)
Features	Heavy duty truck box Hinged side doors
Location	Variable according to customer

- Low cost maintenance machine
- Special driving license not required (depending on country)
- Easy driving and handling even from scissor platform
- Articulated chassis - excellent adaptation to the track
- Easy access to the track (no need to go to level crossing)
- Excellent performance on trucks under construction (irregular, not levelled, etc)
- Many possibilities of configuration with attachments (snowplow, crane, scissor lift ...)
- Hydrostatic transmission
- Adaptable to all track gauges (standard and narrow)



## T - Rail



High towin capacity: Rubber to steal traction system that gives additional traction for towing versions and in slope tracks.

Heavy Duty Vehicle.

Hydraulic compensation system.

Different configurations:

Towing

Rescue

Overhead line (OHL) catenary

Many possibilities of configuration with attachments (snowplow, crane, scissor lift...).

Easy driving and handling even from scissor platform.

Adaptable to all track gauges (standard and narrow).

Speed: Road: 90 km/h - 56 mph.

Automatic gear box with inverter.

Complete gear box set can be used in both directions, forward and reverse.

Possibility to control the vehicle remotely.

4x4 truck with lock in both axes and transfer box.

Crane.

Crane (various models and capacities) in front or back position.

Narrow vehicle: easy adaptation to any type of flyover.

Engine	Cummins 183 kW 250 HP 950 Nm 6700 cm <sup>3</sup> - 6 cylinders
Fuel	Gasoil
Gearbox	Automatic (Allison) or manual (ZF)
Reducer / Transfer	2 speeds 4x4 permanent traction lockable torque driver Pneumatically controlled
Differential axles	Pneumatically lockable
Suspension	Front: semi-elliptic leaf springs Rear: semi-elliptic leaf springs
Cabin	Simple (2 seats) Double (2+4 seats) Triple (2+4+4 seats)
Brakes	Pneumatically operated All wheels operated
Wheels	1100 R20
Electrical equipment	Nominal voltage 24 v Battery: 2 units 145 a/h Alternator: 28 V/90A
All terrain features	Forcing ability: 800 mm Frontal negotiable gradient: > 100% Lateral negotiable gradient: > 40%
Maximum speed (railway)	Up to 40 km/h - 25 mph (cabin) 5 km/h - 3 mph (from scissor lift)
Tank capacity	200 l - 53 gal

### DIPLORIS

Available widths	1435 mm (4' 8 1/2") 1668 mm (5' 5 2/3") 1000 mm (3' 3 3/8")
Width change	Manual
Railway wheel	UIC S1002 tempered
Surface treatment	Induction treatment
Railway wheel diameter	400 mm - 15,75 in
Mean piston speed	10,8 m/s - 35.43 ft/s
Weight	269 kg - 595 lb

### LOADER CRANE

Model	HIAB 111
Max. load	144 kNm
Loader crane range	Min. 4567 mm - 15 ft Max. 12757 mm - 42 ft
Angular speed rate	15° per second
Elevation speed	1,9 m/s - 6,23 ft/s

### SCISSOR LIFT

Max. height deployed	5.500 mm - 18 ft from railway
Max. transversal displacement	3.000 mm - 9,85 ft from railway axis
Elevation mechanism	Double scissor (hydraulic powered)
Max. load	400 kg - 880 lb (250 kg - 550 lb in extreme positions)
Control from scissor lift	Truck and scissor lift displacements
Lights	Working lights around scissor lift
Electrical insulation	8 ceramic insulators (7,2 kV nominal - 60 kV peak)

### TRUCK BOX

Dimensions	2000 x 2000 mm (4m2) 6,6 x 6,6 ft (43 ft2)
Features	Heavy duty truck box Hinged side doors
Location	Variable according to customer
Angular speed rate	15° per second
Elevation speed	1,9 m/s - 6,23 ft/s

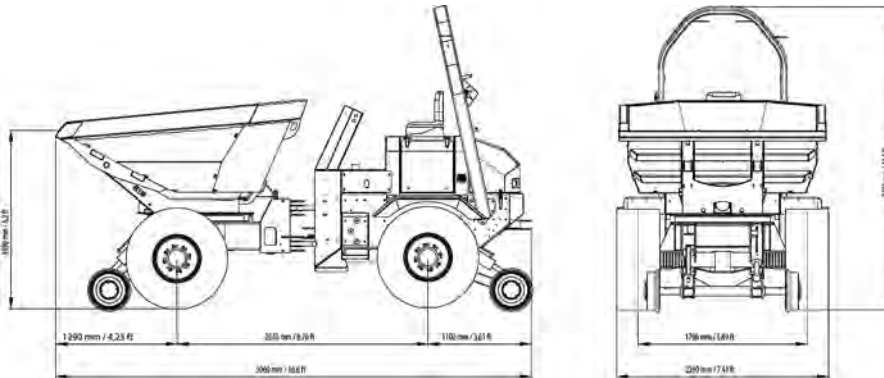
### ELECTRIC GENERATOR

Placed in a protected area
Easy access for handling and maintenance
Separable generator tray



# Road-rail vehicles & machines

## G - Rail 9000



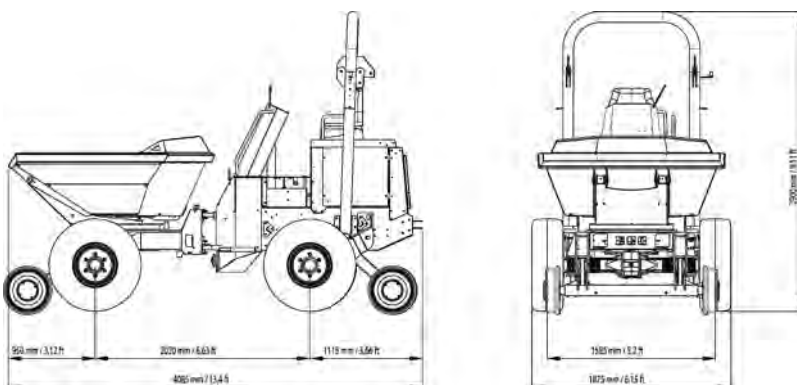
- Low cost maintenance machine
- High performance / cost ratio
- High stability on track
- Articulated chassis - excellent adaptation to the track
- Easy access to the track (no need to go to level crossing)

- Adaptable to all track gauges (standard and narrow)
- Excellent performance on trucks under construction (irregular, not levelled, etc)
- Hydrostatic transmission

### Dimensiones

Payload	9.000 kg - 19.800 lb max. 5,6 yard
Engine	Deutz 100 HP
Cooling system	Water
Hydrostatic pump and engine	Linde
Transmission	Hydrostatic automotive 4x4 permanent
Brakes	Oil immersed discs Negative parking brake
Steering	Hydraulic
Front and rear wheels	18 - 19,5
Unladen weight	5.530 kg - 12.191 lb.
Max speed	28 km/h - 17,40 mph
Gradient negotiable	Asphalt: 43° / Earth: 38°
Oil tank	125 l - 33 gal
Diesel tank	70 l - 18,5 gal
Entry-exit angles	Front: 35° / Rear: 28°
Rail gauge	1.435 mm (4' 8 1/2") 1.668 mm (5' 5 2/3") 1.000 mm (3' 3 3/8")
Steering lock	Hydraulic
Optional	- Telemetry - GPS system - Hydraulic shock absorber - Trailer lock with hydraulic brake coupling

## G - Rail 5000



- Low cost maintenance machine
- High performance / cost ratio
- High stability on track
- Articulated chassis - excellent adaptation to the track
- Easy access to the track (no need to go to level crossing)

- Adaptable to all track gauges (standard and narrow)
- Excellent performance on trucks under construction (irregular, not levelled, etc)
- Hydrostatic transmission

### Dimensiones

Payload	5.000 kg - 11.000 lb max. 2,3 yard.
Engine	Deutz 49 HP
Cooling system	Air/Oil
Hydrostatic pump and engine	Linde
Transmission	Hydrostatic automotive 4x4 permanent
Brakes	Oil immersed discs
Steering	Hydraulic
Front and rear wheels	11,5 / 80 - 15,3
Unladen weight	3.300 kg - 7.275 lb.
Max speed	18 km/h - 11,2 mph
Gradient negotiable	Asphalt: 43° / Earth: 38°
Oil tank	50 l - 13,2 gal
Diesel tank	50 l - 13,2 gal
Entry-exit angles	Front: 41° / Rear: 24°
Rail gauge	1.435 mm (4' 8 1/2") 1.668 mm (5' 5 2/3") 1.000 mm (3' 3 3/8")
Steering lock	Hydraulic
Optional	- Telemetry - GPS system - Hydraulic shock absorber - Trailer lock with hydraulic brake coupling