

Suction Excavation Goes On-Line



MTS GmbH introduce their new Rail Road System (RRV) to their DINO range of suction excavation equipment.

Benefitting from the proven twin fan technology and patented filtration of the standard DINO range, the RRV version has all the power and performance to complete a wide array of rail applications.

Available on various chassis' fitted with a Van Tetering road rail attachment the unit is driven on road to the vicinity of the rail works and driven onto the lines at a suitable crossing or other access point.

Rail wheels are lowered and engaged with the tracks and the vehicle can then be driven on tracks in forward or reverse modes at speeds up to 40Km/h.

Advantages:

- **Ease of placement – driven to vicinity**
- **Increased excavation safety**
- **Multiple applications**

Distributed in the UK and Ireland by MTS Suction Systems, a subsidiary company of MTS GmbH, the DINO Road Rail System is already operational in the UK.

Current approvals are available in some mainland European countries with others currently pending.

Applications:

- **Ballast Removal**
- **Track replacement works**
- **UTX's (Under Track Crossings)**
- **Safe excavation around buried services**
- **Remote culvert cleaning**
- **Track clearance after flooding**
- **General civils works requiring excavation**
- **Spillage clean-up operations**
- **Points box clean-out**
- **Cable trunking cleanout**

DINO Rail Road



The Equipment:

The Van Tetering System

A well proven RRV system that transfers the rotation of the vehicle road wheels via a drive pulley that is engaged against driving surface of the road wheels.

This road wheel motion is transferred via helical gearing through to the rail wheels. This system offers major advantages over traditional 'Solex' systems including: -

- Travel direction for forward and reverse gear remain the same on road or track
- The drive pulley has a larger surface area than the rail wheel reducing both wheel spin and tyre damage.
- The system allows interchangeability of rail wheels for different track types and gauges
- The system also has a 1:1 ratio meaning the speed of the road wheel is the same as the speed of the rail wheel.

Prior to the truck rising into its rail position the leaf springs are secured by hydraulic cylinders to prevent tandem axles pivoting, and the front axle is secured by two hooks that prevent axle sag when in the rail position. The specially designed parallelogram construction provides the maximum amount of ground clearance.



DINO Rail Road



The MTS System

Market leading performance from the MTS DINO range ensures the DINO Rail Road performs to the same high standards as its road bound sibling. With twin fans, patented self-cleaning air filtration and a full remote control power hydraulic Mega Boom, the rail feature also features a special split lid spoil tank to give a lower overall profile and to reduce tipping height for works under overhead power cables.

Spoil capacity is slightly reduced to 6m³ to help reduce overall dimensions and the tank tips to the side, either at track side or when the vehicle has left the rails. The Mega Boom is also equipped with an IKE rotating suction tube to aid in break up harder ground and ballast removal.

A remote control hydrostatic drive system is also fitted to enable the unit to be moved slowly (max 5km/hour) along the line whilst suctioning material without the need for a driver in the cab.



Specifications

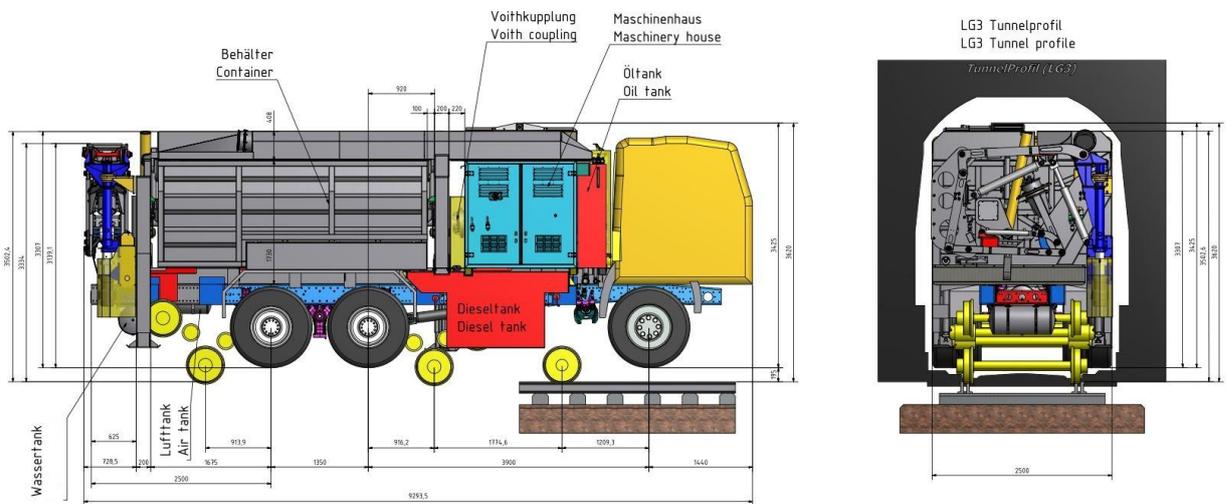
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|--------------------|--|
| Suction Equipment: | Universal build for wide range of tunnel profiles |
| Ventilator: | Twin Fan 40,000m ³ /hour |
| Filtration System: | Automatic self-cleaning |
| Container Volume: | 6m ³ |
| Container Lid: | Split design for side tipping |
| Compressor: | 4.5m ³ /m @ 8bar |
| Hose Carrier: | Mega Arm with IKE Rotary suction tube |
| Suction Hose: | 250mm Diameter |
| Remote Control: | PLC Control and Remote control with approval of the Deutsche Bahn AG |
| RRV Moving Device: | Hydraulically operated with friction wheel system |

DINO Rail Road



Tunnels

To enable the equipment to work across the rail network the design had to take tunnels and overhead power lines into consideration. The low profile build and split lid design have both helped the equipment reach these goals. Current designs will fit into LG3 Tunnel dimensions and smaller profile units are possible.



Other Rail Equipment

MTS also offer a range of rail related systems ranging from small suction boxed through to bespoke specialist rail car mounted units.

With an in-house design facility the company is able to help clients to bring their concepts through to design and manufacture, please ask for further detail.