
ROBEL
URBAN MAINTENANCE
RORUNNER E³
Hybrid track maintenance vehicles
for urban maintenance
www.robel.com

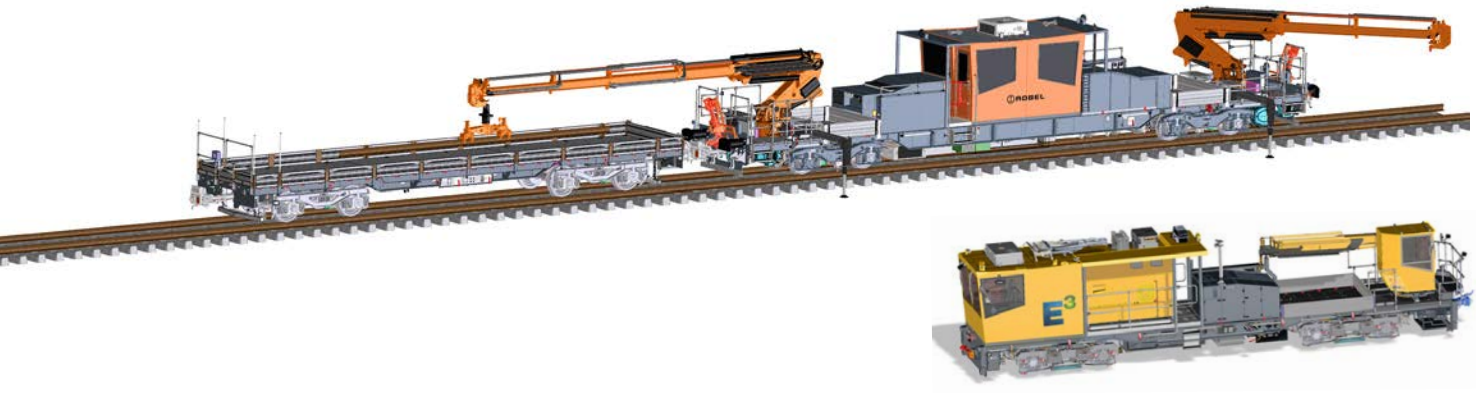


BIDIRECTIONAL VEHICLE FOR WORKING IN THE METRO AND ON INDUSTRIAL SIDING

The decision by Stadtwerke München (SWM) in favour of a new, low-emission drive solution points the way forward for urban infrastructure work. One focus is on improving environmental and working conditions in tunnels.

With a fleet of ten work vehicles, SWM is switching to electric, quiet, and clean maintenance for its metro lines. Staff on the job benefit from significantly improved safety and ergonomics, while operating companies benefit from optimized logistics and increased process speed.

- Mirrored vehicle body for operation in both directions
- Cranes operate independently of each other by radio remote control
- Low frame height, loading areas at platform level
- Pantographs can be disconnected and retracted individually
- Braking energy is fed into the conductor rail or battery
- Double heading via radio, triple heading via cable
- Cab for 6 people



Also available as an **urban railway concept**.

TECHNICAL DATA	RORUNNER E³
Drive	Three-power drive, 4 axles | 4 x 120 kW traction motors
Energy sources	Conductor rail | Battery pack 102 kWh | Diesel engine 105 kW (backup)
Working time, battery operation	3.5 h
Axle load	max. 13.25 t
Payload	2 x 3 t each (per loading area)
Max. traction power (as single vehicle)	130 kN from 0-20 km/h
Max. permitted speed	40 km/h
Dimensions	20 m total length over draw gear
Brake	Electric | Pneumatic
Track gauge	1435 mm
Authorization	German law for trams (BOStrab), industrial siding (EBO-A)
Structure gauges	Munich metro
Crane operation	Electrically driven hydraulic unit, simultaneous operation of both cranes possible
Trailer load	Regular 60 t | Towing operation max. 125 t per machine at 5%°



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Hybrid track maintenance vehicle

Travel to the construction site is emission-free with the pantograph via the side conductor rail. A battery storage system supplies the electricity for working and crane operation. An additional diesel generator is available for longer deployments.

Battery pack
- More than 3 hours of working time with battery-only operation
- LTO technology (lithium-titanate battery)
- 5 battery stacks with a capacity of 20 kWh each (353 kg)
- Battery thermal management system (temperature monitoring)
- Integrated cooling system reduces the risk of overheating
- Battery capacity displayed on the remote control

Diesel engine
- In operation once the battery capacity has been used up
- DEUTZ engine (105 kW)
- Integrated generator, diesel and AdBlue tank
- Can be swapped for an additional battery pack

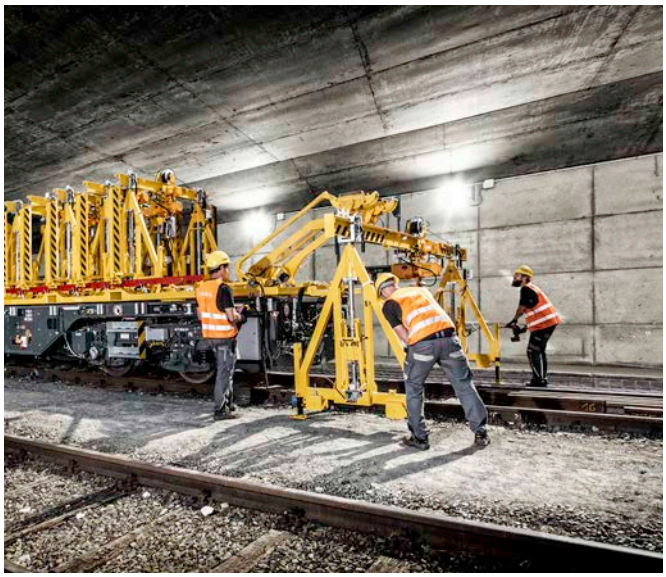


ROTRAILER
Track maintenance vehicle trailer

For transporting heavy loads or as a versatile base for additional modules.

- High loading capacity thanks to large loading area
- Mounting of interchangeable structures via twist lock
- Can be used in formations
- Adaptable for mounting various measuring devices

Optional modules, including:
- Scissor lifting platform
- Drainage cleaning system
- Grinding unit for rail care
- Low-floor section for ballast trough or cable drum support



ROLIFT
Mobile positioning system

For quickly replacing rails as well as complete switches and crossings, particularly in confined spaces

The ROLIFT system offers an alternative to cranes and heavy machinery for replacing rails and S&C parts, especially in areas that are difficult to access, such as platforms, viaducts, and tunnels. The system consists of 6 pre-installed electric units that are mounted to a twist-lock frame on a ROTRAILER. A rotary drive ensures fast loading and unloading of the units.

- Automated processes and pre-installed gantry units allow for a significantly quicker work process and thus shorter maintenance times
- Delivery, replacement, and removal take place within the same shift
- Electrically remote-controlled crane gantries move rails and large switch components evenly and gently



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