

Robel

Emission-Free Track Maintenance



ROMILL Urban E³ has been designed for emission-free rail treatment in subways © Robel

Being one of the pioneers of emission-free and ergonomic track maintenance, Robel has been developing battery, electric and hybrid drives for railway construction machinery for many years.

Now, in addition to its fleet of cordless hand-operated machines, the company also provides rail-bound vehicles with electric technologies and hybrid drives. As a partner company of Plasser & Theurer, Robel carries the renowned E³ brand (economic – ecologic – ergonomic) for all its products with alternative drive technology.

Extended Range of Use. Higher Occupancy.

Due to higher investment in rail infrastructure worldwide, track construction is booming. At the same time, sites are being tolerated less and less by residents and communities. Also, current legislation increasingly stipulates emission limits, especially for sensitive urban areas.

The use of battery-powered machines considerably reduces on-site emissions, thus expanding the area of application for maintenance companies. This applies above all to work in tunnels or in a subway: the measured carbon and nitrogen

emissions from machines and vehicles with alternative drives are a fraction of the permitted maximum values – a solid option for new contracts in urban track maintenance.

The Green Way of Urban Rail Treatment

At iaf in Münster, Robel is presenting the world's first milling train with hybrid drive for zero-emission rail processing in subways: ROMILL Urban E³ is equipped with battery technology for up to three hours of exhaust-free rail machining.

The three-piece machine consist fits

RORUNNER electric track vehicle for Munich's underground network © Robel



into the tightest tunnel clearances and uses a brand new, purely electrical milling technology by Schweerbau International, which for the first time also allows the reprofiling of low-quality track. The spark and dust-free rotational cutting process includes by-product collection on the train for recycling. In addition, a high-speed polishing process is used to create a noise-optimised surface finish.

More about ROMILL Urban:



Electric RORUNNER for Tunnel Maintenance

In 2024, six four-axle track vehicles with an alternative drive solution will go into operation in Munich for Stadtwerke München GmbH. A key incentive for the city network operator is the planned reduction of air and noise emissions, resulting in a noticeable improvement of the environmental working conditions in tunnels.

Transit to the construction site is emission-free, using pick-up shoes via third rail. A battery storage system supplies the energy for working mode and crane operation,

and an additional diesel generator is available for long shifts.

The multi-function vehicles take on transport and traction tasks, taking into consideration ramps with maximum gradients. All units are designed for bi-directional working, with a crane on both vehicle ends and loading platforms at both sides.

More Drive for Hand Operated Machines

Electric motors are not only emission-free, but considerably smaller and lighter than their combustion equivalents. Nevertheless, they deliver the same performance, additionally supported by intelligent control systems. This means that the machines can be operated with significantly less effort, allowing ergonomic application with better view of the work area, faster processes and flawless maintenance results.

The established E³ fleet of hand-operated machines with alternative drives consists of battery-powered rail band saws, drilling machines, vertical tampers and a high-pressure hydraulic unit for rail stressor and weld trimmer.

This group is now supplemented by electric machines such as the new rail cutter, welding joint grinder and a hybrid rail head profile grinder, which can be powered by either a 2300Wh battery or a mains adapter. As a world premiere, Robel is launching the fully electric power wrench ROWRENCH 30.67 with GPS and self-learning control at iaf – the next step towards more economic, ecologic and ergonomic work on track.

More about E³ hand operated machines:



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Video shows: ROGRIND 13.45MD E³ welding joint grinding machine, driven by battery or power pack

iaf 31.05. – 02.06.2022
Münster
Outdoor exhibition A 403-406

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The ROBEL Group. We think the whole process.

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