



Electrification

Mosdorfer Rail



Sheffield Supertram installation of the Tensorex C+ 3D

Mosdorfer Rail is positioning itself as the go-to partner for new and the renewal of existing railway electrification, combining deep engineering heritage with some genuinely disruptive innovations in overhead catenary systems. For InnoTrans visitors, they are offering a mix of proven system reliability, lower life-cycle cost and smarter solutions tailored to the next generation of high-speed, commuter and urban networks.

Who Is Mosdorfer Rail?

Mosdorfer Rail develops, produces and supplies high-quality components and complete solutions for railway electrification, focused on overhead line catenary systems for mainline, high-speed and light rail. As part of the Austrian Knill Gruppe – a long-established specialist in energy transmission – they combine rail-specific expertise with group-wide experience in high-voltage fittings and energy infrastructure.

From their locations in the UK, Italy, Spain and India, Mosdorfer Rail serves infrastructure owners and

turnkey contractors across all continents. The mission is explicit: to be the trusted partner for railway electrification worldwide, providing the “best solutions for energy systems operators” through robust products, fast delivery and close technical collaboration.

What Mosdorfer Rail Does for Railway Networks

At the core of the portfolio are complete railway catenary systems, from individual fittings to full overhead line solutions for new build and upgrade

projects. This includes the patented range of Tensorex C+ and 3D, Tensorex Sense monitoring system, cantilever assemblies, clamps and connectors, droppers, composite insulators, power supply components, safety equipment, and tools for installation and maintenance.

Every element is engineered around reliability and long-term cost efficiency. High-strength cantilevers and droppers are designed to maintain precise contact wire geometry under dynamic load, while a broad range of clamps and rail connectors ensures secure, low-resistance connections in demanding environments. For infrastructure managers facing rising traffic volumes and tighter possession windows, the emphasis on maintenance-free or low-maintenance components translates directly into higher availability and fewer disruptions.

Light Rail and Urban Mobility Focus

Mosdorfer Rail is equally active in tramway, metro and light rail applications, where urban design constraints and tight curves place different demands on catenary systems. They provide full system supply for light rail, offering tailored assemblies and fittings that accommodate reduced structure heights, complex alignments and challenging streetscapes without compromising electrical performance.

This move is strategic: the company highlights light rail as a key growth area and 'the future' of its portfolio, aligning with global investment in sustainable, city-scale electric transport. For operators, that means the same engineering depth that underpins high-speed mainline projects is now being applied to compact, aesthetically sensitive, urban systems that still demand high availability.



Mosdorfer Rail
cantilever system
in Tanzania

Flagship Innovation: Tensorex C+ and Tensorex C+ 3D as well as the Tensorex Sense Monitoring Device

One of Mosdorfer Rail's signature technologies is the Tensorex C+ automatic spring tensioning system for overhead catenary. Designed to maintain constant mechanical tension in the contact wire, Tensorex C+ replaces traditional counterweight arrangements with a compact, enclosed, spring-based solution that is easier to install and largely maintenance-free over its service life.

More recently, the company has introduced Tensorex C+ 3D, developed for longer tension lengths and more complex line geometries. This evolution allows designers to span longer sections, reduce the number of tensioning devices and simplify mast layouts, which in turn can lower installation costs and minimise visual impact – useful both on open-route railways and in constrained urban corridors.

These systems have been deployed on major international projects, including new bridges and high-profile corridors, demonstrating their ability to deliver stable contact wire tension in harsh climates and high-load conditions. For InnoTrans attendees, Tensorex C+ and its 3D variant will be central talking points for anyone looking to modernise legacy catenary or design leaner, future-proof electrification schemes.

Smart monitoring just got smarter with the Tensorex Sense, an intelligent monitoring solution that transforms existing Tensorex C+ tensioning devices into connected, digitally enabled assets.

Designed as a retrofit solution, Tensorex Sense allows operators to upgrade existing infrastructure without replacing installed equipment. By integrating rotary transducers, temperature sensors, GSM communications and cloud-based analytics, the system continuously monitors the operating condition of each tensioning device in real time.

Maintenance teams can access live performance data via smartphone, tablet or PC, including device location, operating position relative to ambient temperature, battery status and overall system condition. When predefined operating limits are approached, automatic alerts are sent by email or text message, allowing maintenance teams to plan inspections before faults develop into service-affecting failures.



Mosdorfer Rails
Tensorex C+

By shifting maintenance from reactive to predictive, Tensorex Sense helps improve network reliability, reduce unnecessary site visits and enhance safety through targeted intervention.

Beyond Hardware: Sustainability, Training and Service

Mosdorfer Rail's proposition extends beyond product catalogues to engineering support, training and long-term partnerships. They offer expert consultancy throughout the project lifecycle, from system design and component selection to on-site support, guided by extensive references worldwide in high-speed, conventional and urban rail.

Sustainability is a recurring theme in their communication, with a focus on durable products, responsible manufacturing and solutions that reduce energy losses and maintenance interventions across the asset life. The company has also invested in skills development, exemplified by its involvement in a 'Rail School of Excellence' training facility at HMP Highpoint,

where Mosdorfer Rail contributed infrastructure and expertise to support rehabilitation through rail industry training. For network owners and Tier 1 contractors, this signals a partner that is engaged with the wider ecosystem as well as with technical delivery

A Brand Evolving with the Market

Following the acquisition of Pfisterer's rail division, Mosdorfer Rail has deliberately repositioned its brand to underline its role as an independent, innovative key supplier in the global catenary market. A refreshed visual identity, new website and unified messaging around 'Railway Catenary Systems & Solutions for Overhead Contact Lines' now provide a clearer window into the full capabilities of the business.

The group's footprint includes manufacturing and engineering centres in Sheffield, Barcelona and Mumbai, coordinated under the Knill Gruppe umbrella but clearly differentiated as a rail-focused, customer-facing entity. This gives Mosdorfer Rail the scale and resilience to support large, multi-year framework contracts, alongside the agility to deliver tailored solutions for specific corridors, climates or operational concepts.

Why InnoTrans Visitors Should Pay Attention

For InnoTrans delegates, Mosdorfer Rail offers three compelling angles: proven system reliability, meaningful innovation and a global yet accessible support structure. Infrastructure managers can explore how technologies like Tensorex C+ 3D and next-generation cantilever designs can increase availability, extend maintenance intervals and simplify future upgrades. Urban and light rail stakeholders will find a vendor ready to deliver complete, compact OCL solutions that work in visually sensitive and operationally complex city environments.

Equally important, project engineers and planners can tap into a partner with the experience to balance performance, safety, cost and sustainability from concept to commissioning. In a market where electrification programmes are accelerating and expectations on resilience and carbon performance are rising, Mosdorfer Rail is positioning itself not just as a component supplier, but as an innovation-driven collaborator for the next generation of rail and light rail infrastructure.