



Qlar

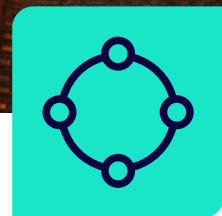
Paving the way for **increased safety**

- MULTIRAIL Train Scale
- MULTIRAIL Test Bench
- MULTIRAIL Train Monitoring



Driving **circular**
transformation

Your worldwide multirail handling partner



Security and reliability with Qlar

Our world is interconnected through rail networks, whether it be for freight, material transport or passenger. The industry is increasingly seeing growing demands and challenges - impacting reliability, safety and performance. Qlar is here to address those challenges.

Public passenger traffic and freight transport all over the world are competing for transport corridors planned to the minute, in a limited rail network with ever longer and ever heavier trains. Individual

transport by car and plane have long reached the limits of their capacity and economic viability in many places.

New high-speed routes and underground systems are therefore being planned or already being constructed all around the globe. Not only does this place greater demands on passenger and freight transport, but also on the safety and reliability of the technology, which can only be met through precise measurements, monitoring, checks and settings. Our contribution is: MULTIRAIL technologies.

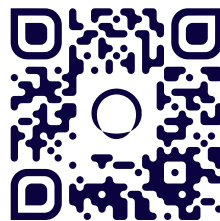


More and more people and materials need to reach their destinations faster than ever before.

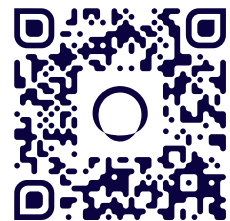
MULTIRAIL helps you do just that.

How we add extra value

- Experienced and knowledgeable project management teams and technical experts
- Remote factory testing capabilities
- Investment in continued innovation
- Digital, remote capabilities for testing and troubleshooting
- Extensive supply of spare parts and aftercare support, including training
- State of the art software solutions for highest data security



More product info?
Scan the code above for access.



Need help or a quote?
Scan the code above to get in contact.

MULTIRAIL Train Scale

The Train Scale product range includes systems for internal check weighing and legal-for-trade weighing results as the basis for calculating the weight of individual wagons and train sets – no matter if it's dynamic or static weighing.

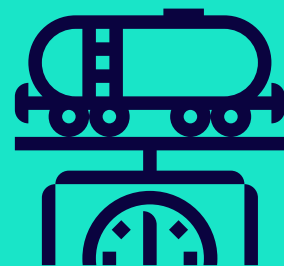
For in motion weighing the process complies with OIML R 106-1 accuracy classes 0.5 or 0.2 and saves both time and staffing resources. Not to the mention the simple way in which the weighing technology is fitted without any gaps or foundations. The UIC-wagon number can automatically be recognized and recorded via cameras or tag readers. Each wagon weight is related to a wagon number. Results are available via REST interface.

Key benefits

- Different scales designs optimized for your application
- Legal for trade weighing results
- Easy installation without rail gaps and foundation available



Dynamic weighing in accuracy class 0.2 per OIML means a permissible tolerance of 200 kg for a 100 t wagon.





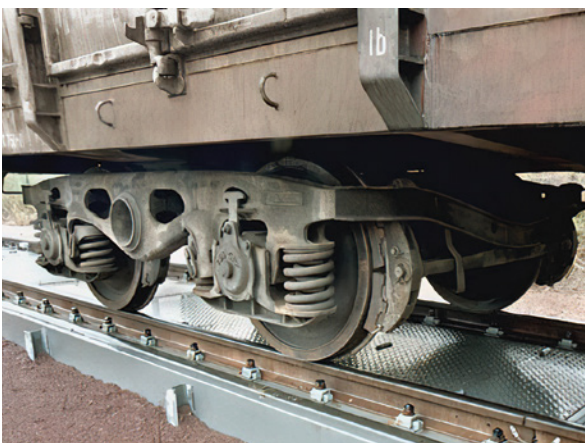
MULTIRAIL Dynamic Train Scales for Solid and Liquid Loads are the legal-for-trade track scales for high-precision weighing of solids and liquids in accordance with OIML R 106, classes 0.5 and 0.2 - also certified in the USA.



MULTIRAIL Dynamic Train Scales for Loading can weigh wagons immediately before and after loading thanks to precision measuring technology. This allows maximum use to be made of wagon capacity without the wagon weight exceeding the permitted track load.



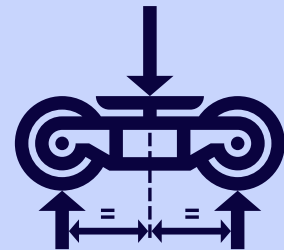
MULTIRAIL Dynamic Train Scales for Hot Metal is for precise determination of hot metal output for blast furnace operations.



MULTIRAIL Static Train Scales for Solid and Liquid Loads allows the static or dynamic weighing of individual wagons or entire train sets. Data and weights are recorded legal-for-trade using weighing electronics and processed using a PC system adapted to the customer.



The MULTIRAIL Test Bench is critical towards ensuring optimum performance, longevity and safe operation of bogies and wagons.



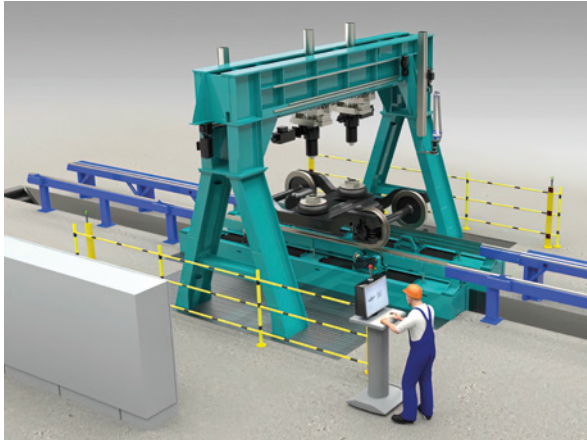
MULTIRAIL Test Bench

Precision is needed in rail workshops to ensure that trains can run quickly and safely with minimum wear. Here bogies and rail car bodies are measured, adjusted and thereby optimised under simulated load conditions, both when originally built and undergoing maintenance.

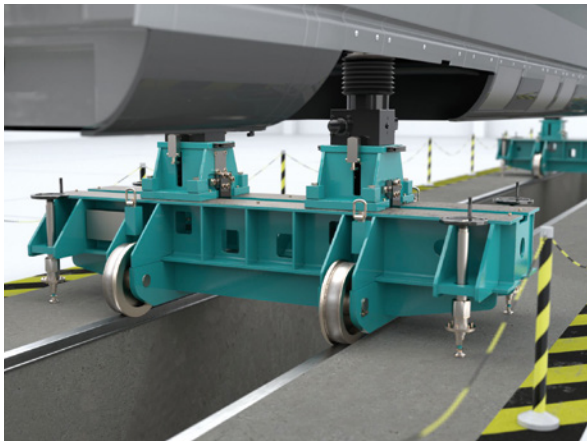
Our MULTIRAIL Test Bench enables automated inspections for the highest levels of precision and accuracy. Whether it be simulating and measuring Bogie Loads, Corner Loads or Wheel Loads, our comprehensible Test Bench solution covers all applications.

Key benefits

- Derailment and safety protection
- Minimization of wear for longer-service life
- Optimizes performance
- Reduction in dynamic forces
- Safeguarding of smooth running and comfort
- Optimization of maintenance intervals



MULTIRAIL Bogie Test Bench is part of a new generation of bogie test rigs fit for the future. One prominent feature is the fully electro-mechanical design with spindle technology which ensures extremely efficient work practices and high levels of precision.



MULTIRAIL Corner Load Test Bench uses direct force measuring technology to measure the distribution of load and centre of gravity of the rail car body in accordance with DIN 25043. In this way it accurately measures the forces that impact on the bogie. Precision on the test rig.



MULTIRAIL Wheel Load Test Bench is used for the static and dynamic monitoring of axle loads and vertical wheel forces of locomotives and wagons according to EN15654-2. It measures wagon weights, monitors the wagon's centre of gravity and calculates weight distribution in the bogie.



Wheel diagnosis at track speed!

Essential as we don't
leave safety to chance.



MULTIRAIL

Wayside Train Monitoring

Rail track operators want to know the weight of trains travelling on their track, and the owners of rail vehicles need to know if their trains are running unevenly.

Such information is crucial to optimised maintenance intervals and rail transport safety, as heavily overloaded wagons or a wheel flat caused by a brake defect bring with them huge potential for derailment, which needs to be detected and corrected in good time. Optimised travel also improves comfort levels and reduces noise.

MULTIRAIL Wayside Train Monitoring accurately diagnoses the wheels while the train is in motion, checking for circularity deviations, vertical wheel forces and load distributions. The system identifies vehicles that could damage the track due to excessive dynamic forces or overloading.

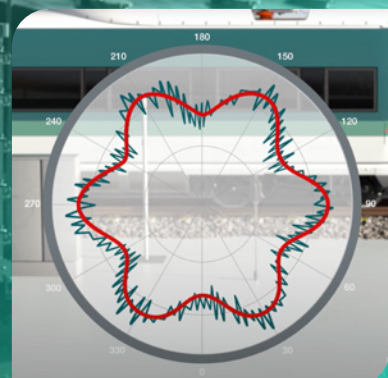


Key benefits

- Wayside monitoring system for line speed
- Detection of wheel irregularities with 'full scan' method
- Determination of load distribution in accordance with UIC loading guidelines
- Highly accurate in-motion weighing



MULTIRAIL Wayside Train Monitoring has a measurement uncertainty of just $\pm 1\%$, even at train speeds of 80 km/h.



MULTIRAIL Technologies

We are the global partner that lives your process challenges with you. Our passion for always going the extra mile to find the best solutions is what drives our process for transforming your processes.

Qlar has developed special load cells for different, high-precision industrial applications. Virtually all the weighing technology solutions of the MULTIRAIL family are based on well-engineered and virtually invisible force measuring technology, which stably transfer forces in the track and at the same time precisely calculate the vertical and sometimes horizontal wheel forces.

As force measuring is a key competence, our expertise in this area allows us to collaborate with virtually all major European rolling stock manufacturers in their test centres and production. Enabling us to play an important part in their product development, to continually improve performance for our customers.

We are also actively involved in European standards committees on the interoperability and comparability of test processes. As a technology leader, all this allows us to play an active role in setting global trends in rail transport with the motivation to increase safety, economic viability and comfort.

A photograph of three industrial workers in a factory setting. On the left, a man in a blue hard hat and orange safety vest is looking towards the center. In the middle, another man in a blue hard hat and orange safety vest is looking at a tablet held by a woman on the right. The woman is wearing a white hard hat and an orange safety vest. The background shows industrial machinery and structures. The text 'Paving the way for increased safety' is overlaid on the bottom half of the image.

Paving the way
for increased safety

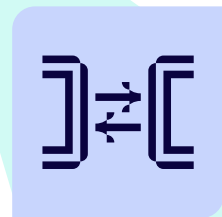
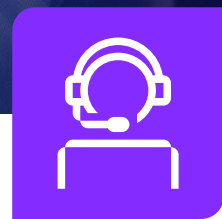


Digital remote Aftermarket services

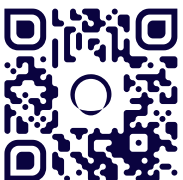
Digital support from our global Aftermarket team, means that no matter your location, an engineer can be available to help you.

- **Phone support**
24/7 expert availability
- **Video support**
Consultation including video streaming and desktop access
- **Remote connection**
Remote in-depth analysis and support of your personnel
- **Mixed reality interaction**
Access to devices including augmented reality information exchange

To contact our team please call: **+49 6151 1531 1531**
or email: **service-eu@qlar.com**



Qlar



Still questions? Contact us:
www.qlar.com/contact

09.24 · All information is given without obligation.
All specifications are subject to change.

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