RailTechnology

RAIL MEASURING TECHNOLOGY
WHEN ACCURATE MEASUREMENTS MATTER



O-RCA

O-RCA Optical Rail Corrugation Analyzer (high accuracy laser-based system)
Non-contact longitudinal rail profile and roughness measuring system for rails in tracks and switches.
Suitable for mounting on rail vehicles and hi-rail vehicles

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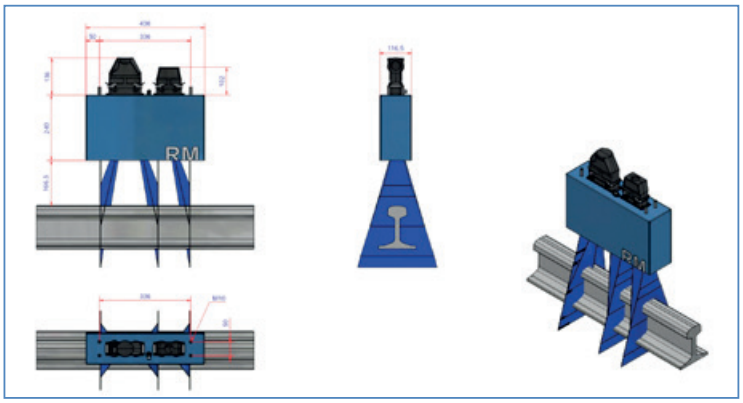
Product description:
Rail surface irregularities of the order of microns (0.001mm) in amplitude are important in the generation of wheel/rail rolling noise and vibrations. The O-RCA is a compact and easy to install high precision contactless measuring device to obtain a continuous longitudinal measurement of irregularities such as corrugations on the rail head. The O-RCA can be fitted to trains, hi-rail vehicles and wagons and can be used on various track gauges (standard, narrow or wide gauge).

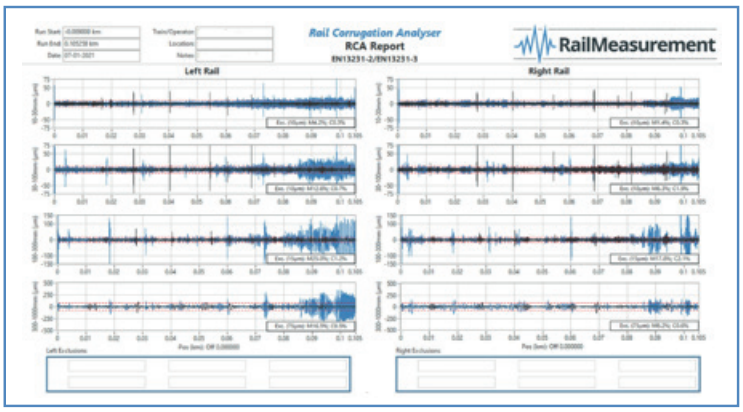
Applications:
- Monitoring of rail quality
- Detection of rail roughness and corrugation
- Detection and classification of both short and long waves
- Assessment of mobile rail treatment results e.g. rail grinding and milling to EN 13231 standards





Main characteristics:
- Measurements that are highly accurate and repeatable
- Relatively simple installation and setup
- Non-Contact measurement system using optical sensors
- Suitable for any track gauge
- User-friendly software for acquisition and review of measurement data
- Robust yet light weight design
- Extensive product support
- No minimum speed is required for accuarte performance of the system





The O-RCA gives reliable measurement results of irregularities on the rail head over the full wavelength range as per EN13231-2:2020 and earlier versions of this standard. The user-friendly reporting software allows for superimposing measuring runs, setting required tolerance limits and showing the % exceedances.

TECHNICALDATA O-RCA

Intervalat which data are saved (sampling frequency)	1-2-5mm Other frequencies upon request
Measuring speed	0-100 kph Faster speeds optional
Measuring principle	Non-contact chord-based optical sensor system with micrometer accuracy
Accuracy of measurements	10-30mm: <1 micron 30-100mm: <1 micron 100-300mm: <1 micron 300-1000mm: <2 microns
Data storage requirements	Approx. 1GB/km
Output compatibility	EN13231-3 EN13231-2 2020
Wavelength filters	10-30, 30-100. 100-300, 300-1000 mm
Requirements	24VDC power supply
Dimensions and weight	436mm(L) x 120mm(W) x 240mm(H) Approx. 18kg per sensor head

TECHNOLOGY FROM THE LEADERS IN RAIL MEASUREMENT SYSTEMS