

RAIL MEASURING TECHNOLOGY  
WHEN ACCURATE MEASUREMENTS MATTER



**O-CAT**

***RM-O-CAT Optical Corrugation Analysis Trolley***  
*Rail corrugation and acoustic roughness  
measuring trolley for tracks and switches,  
Suitable for vignola and grooved rails  
Single Rail or Dual Rail trolley versions*

### Product description:

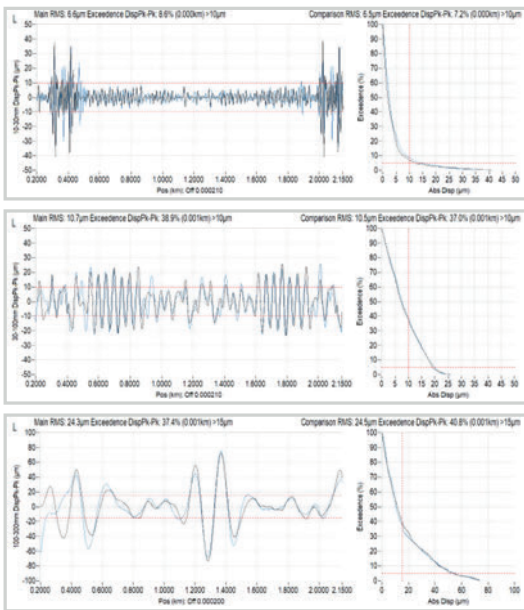
Rail surface irregularities of the order of microns (0.001mm) in amplitude are important in the generation of wheel/rail rolling noise and vibrations. The O-CAT portable rail measuring trolleys are easy to carry and set-up and are suitable for obtaining continuous longitudinal measurements of irregularities on the rail surface. The O-CAT can be configured as single or dual rail measuring trolleys and measurement accuracy is not speed dependant (as is the case for inertial sensor-based instruments).

### Applications:

- Monitoring of rail quality
- Detection of corrugation and acoustic roughness
- Detection and classification of both short and long waves
- Assessment of mobile rail treatment results e.g. rail grinding and milling

### Main characteristics:

- Measurements that are highly accurate and repeatable
- Relatively simple installation and setup
- Contact measurement system using inertial sensors
- Suitable for any track gauge
- User-friendly software for acquisition and review of measurement data
- Operation through notebook or tablet-pc
- Robust yet light weight design
- Extensive product support
- Measurement accuracy not influenced by speed



Typical calibration curves: O-CAT and CMM measurements of a 1.8m section of a calibration beam.



Designed for use as a pedestrian push trolley



Optional use as a towed trolley (up to 15kph)

### TECHNICAL DATA O-CAT TROLLEY

Interval at which data are saved	1 or 2 mm	
Measuring speed	0-15kph	
Accuracy	0.1µm RMS 10-30mm 0.2µm RMS 30-100mm 0.2µm RMS 100-300mm 0.2µm RMS 300-1000mm	300-1000mm reproducibility
Data storage requirements	~11.5 MB per KM of rail	
Output compatibility	EN 13231-2 2020 and equivalents EN ISO 3095:2013 EN 15610	
Laser class	Class 2	
Output	Raw and filtered displacements, moving average amplitudes, percentage exceedances, one third octave spectra	
Wavelength filters	10-30, 30-100, 100-300, 300-1000, 1000-3000, 30-300, 300-3000mm	
Weight	Approx 25kg	