GEKON MODULAR

Measuring trolley for rail corrugation and rail profiles

The GEKON trolley is a measuring device intended for contactless measuring of the corrugation of both grooved and UIC rail. It can be used for rail head microgeometry assessment. It can also be used for continuous laser scanning of rail profiles and evaluation of Rail head wear.

PRECISION TRACK INSPECTION

KZV's Exclusive Distributor for Canada and the United States
www.trackinspect.com

The GEKON trolley is able to measure a series of continuous track sections, evaluate the acquired data and compute the results being complied with the standard EN 13231-3. For the measurement, the GEKON uses two chords with laser sensors placed vertically to the longitudinal axis of the rail.

The trolley can also be equipped with two rail profiles scanners for continuous record of rail shape.

TROLLEY DESIGN

The GEKON consists of a measuring units and external computer (smartphone, tablet or notebook). The measuring units include laser sensors for corrugation measurement. Each unit can also be equipped with rail profile scanner.

The complete trolley is lightweight and compact. It is very easy to remove the trolley and return it to the track in a few seconds. It is therefore possible to take the measurement on the track during uninterrupted traffic.

The trolley easily dismountable into several basic parts for transportation. These parts and all equipment can be placed into the transport box with wheels.

MEASURING PRINCIPLE

The GEKON Trolley is equipped with measuring software (Android or Widows OS). During the signal processing are performed mathematical operations - using of variable filters like filtering out of outlying peaks.

After the measuring, collected primary data are transferred from the measuring computer into any PC computer for evaluation.

Evaluation software computes all filteres data using blocks of signal processing and provides oucomes like:

- graphs of the corrugation and wear signals
- cross sections of rail profiles with wear evaluation
- statistics, section evaluation tables of track condition using several methods (P-to-P, RMS, %)
- 1/3 octave analysis

ON BOARD COMPUTER

The GEKON Trolley stores the acquired data into an on-board computer in special format. The software installed in the on-board computer images the course of the measured signals during the data acquisition and the rail profiles.

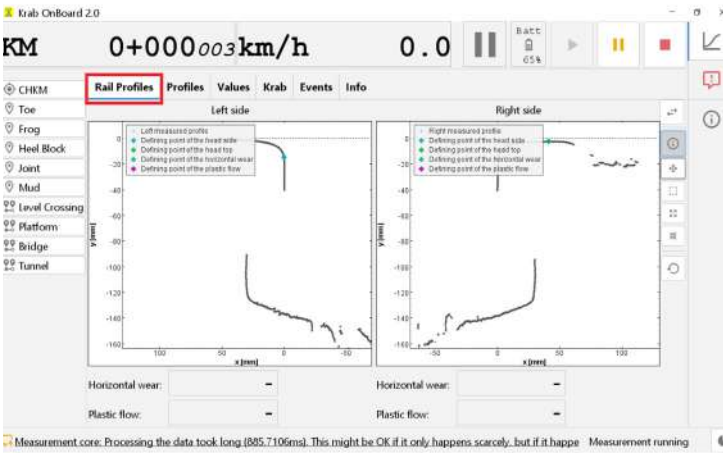
THE BASIC TECHNICAL DATA

Double without/with 2 scanners weight:	27 kg/30 kg
Double version dimensions (mm):	900x315x1824 (LxHxW)
Transport box dimensions (mm):	1115x380x700 (LxHxW)
Battery operation time:	20 hours
Measuring speed:	1 m/s
Scanning interval:	5 mm
Sensor resolution:	0,15 µm

Double rail measurement version with two rail profile scanners

Lighweight and easy to manipulate with

Foldable into several pieces for easy transportation



Example of rail profiles graphs in measuring SW Krab OnBoard 2.0

Manufacturer:
Komercni zeleznicni vyzkum, spol. s r.o.
U Kaplicky 1199
165 00 PRAGUE
Czech Republic

www.kzv.cz