



## ONLINE TRANSVERSE MEASURING DEVICE

# TMD 2-4

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The TMD 2-4 is an efficient solution for the detection of transverse profile on left and right rail of tracks. The online measuring device TMD 2-4 is applicable for grooved rails and standard Vignol rails.

The working procedure for rail measuring is based on non-contact principle achieved by laser detection units. The two detection units are assembled on left and right side of the measuring device, one for each rail. The laser detection units can be mounted on trolleys, bogies and working equipment. The online measuring device can be coupled and linked directly to a working unit and actuated automatically by means of defined reference points on track.

The TMD 2-4 supports a standard USB interface, external power supply and on-board power supply (2x 18 VDC batteries). The measurement data are recorded in the form of raw data and printable files, on hard disc and USB stick. All recorded data can be analysed on an external PC. The program supports the output of the measured profiles with comparison to the target template curve and information for documentation.

Detection and calculation of actual transverse profile comply with EN 13231.

# Technical data of TMD 2-4 with online touch panel

## TMD 2-4

### Non-contact laser detection units

Horizontal range for detection	.....	≤ 100,0 mm
Horizontal resolution	.....	0,1 mm
Vertical range for detection	.....	50 mm
Vertical resolution	.....	≤ 0,01 mm
Vertical accuracy	.....	≤ 0,01 mm
Scan time max.	.....	2000 Hz
Trolley detection speed	.....	0 to 5,0 kph
Recording time	.....	≥ 1 sec
LASER wave length	.....	658 nm
LASER class	.....	2 M
LASER power consumption	.....	≤ 8 mW
Power consumption (standby)	.....	0,8 A
Power consumption (scanning)	.....	1,3 A
Rechargeable battery type	.....	2x 18VDC / 2x 60 Ah
Battery capacity (measurements)	.....	8 hrs
Operating temperature range	.....	-10°C to +65°C
Weight of measuring head left/right	.....	2x 9 kg
Weight of control unit	.....	32 kg
Weight detection trolley	.....	180kg
Online-port	.....	RS232

### Control panel

Display	.....	10 inch touch screen
Resolution	.....	1024x768 Pixel, LCD
Degree of protection	.....	IP 67 (100% humidity)

### Evaluating-Software PROFIL-SOFT

#### Online-processing software for on-site validation of the measuring results

- Operating system: XP, WIN 7, WIN 10
- 10 different templates (reference profiles) including different inclinations
- Up to 5 gradient axes for treshold calculation
- Evaluation methods:
  - two fixed reference points according to EN 13231
  - calculation of rail wear perpendicular to reference profile
  - track gauge detection
  - in time 10 points detection according to EN13231
- One-window screen: all relevant measuring data are displayed in one window per rail.
- In time data recording on USB



#### DEVELOPMENT – DESIGN – MANUFACTURING – SALE – SERVICE

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