



For further information on the ROMDAS road measurement system please visit www.romdas.com

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ROMDAS
Manufactured by
Data Collection Ltd.
New Zealand

*providers of innovative technology for
measuring and managing roads*

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TPB Reference Profiler

Overview

The ROMDAS Transverse Profile Beam (TPB) Reference Profiler has been developed for measuring accurate transverse reference profiles. These profiles are analysed to establish the profile of the road and rut depths in mm.

Reference profile surveys are generally done for:

- ◆ Calibrating or validating a high speed transverse profile measurement system (e.g. the TPL);
- ◆ Construction quality control for car parks, bridges, airports etc;
- ◆ Collecting data for research purposes such as developing a new rut depth model or calibrating/testing the existing HDM rutting model.

Features

The TPB consists of the measurement beam and a tablet PC as the data logger. The measurement beam contains a motorised carriage which moves the measurement wheel along the beam length.

The vertical and horizontal position of the wheel is recorded to provide an accurate profile. The beam contains a battery, optical rotary encoders and a precision inclinometer to measure the profile.





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Operation

The elevation of the wheel relative to the beam is recorded. Moving the wheel across the pavement gives the transverse profile. This results in a set of elevation measurements between every placement.

Components

During the survey the TPB displays a graph of the profile in real time along the section.

The TPB software can record up to 100 different location runs. The data is automatically compensated for temperature and the level of the beam.

The output for each survey site is a Microsoft Access database file with the following tables:

- ◆ **Location Tables:** Up to 100 Location tables per site with each Location Table containing raw profile, temperature and inclination data for each Transverse Profile;
- ◆ **Results Table:** Processed data containing rut depths for each wheel path and pavement distortion calculations.



Technical Specifications

Beam length: 3.8 m

Method of measurement: High resolution optical encoders and precision inclinometer

Vertical resolution: 0.01 mm

Horizontal resolution: 0.1 mm

Battery life: 10 hours with continuous operation

Weight: 30 kg including battery