

DATA SHEET

DWT Hamburg, EN and Universal Wheel Tracker calibration tool



78-PV3/KIT DWT Wheel Tracker calibration tool

General description

78-PV3/KIT DWT Wheel Tracker calibration tool is a verification and calibration device for your IPC Global DWT Double Wheel Tracker.

The kit includes a full range of calibration and verification devices, including:

- **A high-resolution encoder** (with traceable calibration certificate) with data acquisition module, connection to PC, PC software and laptop, to measure and record all the wheel movement parameters, such as the RMSE (Root-Mean Square Error) to measure the real sinusoidal movement (based on the specifications from NCHRP Project 20-07 Task 361, now included in AASHTO T324-2019), wheel position and speed, and wheel speed at center. All the wheel movement data are then recorded and visualized with the included software, and a comprehensive verification report including all the data for further verifications (see below for details) can be issued.
- **Shaped metal specimen** conforming to the specification of AASHTO T324-2019 Section X2 and Figure X1.1 to verify and calculate the RMSE of the rut measurement in the 11-points.
- **A 3500 N capacity load cell**, with spherical seat and readout unit (with traceable calibration certificate), to verify and calibrate the load on the wheel.
- **A digital thermometer with probe** (with traceable calibration certificate) to measure the temperature of water or air.
- **Adapters and spacers** for use with IPC Global Double Wheel Tracker.
- **Laptop PC** with dedicated software
- **Carrying case** in hard plastic

The kit allows to provide a comprehensive verification and calibration of the wheel tracker to all the specifications included in AASHTO T324-2019 and EN 12697-22 Small Device (apart from wheel rubber hardness), or to periodically check the performances of the Wheel Tracker machine. The kit has been designed for use with IPC Global DWT Double Wheel Tracker but it can be adapted for use with equipment from other manufacturers.

Main features

- One single kit that comes with its own carrying case.
- Complete calibration system to verify and calibrate

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- All parameters defined in AASHTO T324-2019, included the RMSE sinusoidal verification and the RMSE 11-points rut depth verification using the shaped metal specimen prescribed in the Appendix X2 of the Standard.
- Wheel movement, load, temperature and rut depth.
- Universal: our kit can verify and calibrate any brand of Double Wheel Tracker.
- Traceable: All calibration tools included in the kit come with a traceable calibration certificate.
- A complete kit including a laptop PC with pre-installed PC software to display and record all the measurements and to issue a verification and calibration certificate.
- All calibration tools are complete with traceable calibration certificate.

Standards

- EN 12697-22
- AASHTO T324

Specifications

Load verification device

Capacity: 3500 N

Resolution: 0.1 N

Accuracy: ± 0.1 N

Wheel sinusoidal movement, span, center and position device

Span: 1000mm

Resolution: 0.01mm

Accuracy: ± 0.01 mm

RMSE resolution: 0.01mm

Temperature verification device

Ranges: from -50°C to 199.9°C (from -58°F to 399.9°F)

Resolution: 0.1°C (0.1°F)

Accuracy: $\pm 0.2\%$ full scale

Battery life/type: 3x1.5 V/ approx. 1600 hours of continuous use

Probe length: 120mm

Weight and dimensions

Total weight: 20 kg

Dimensions: 550 x 420 x 220 mm



Carrying case with full kit

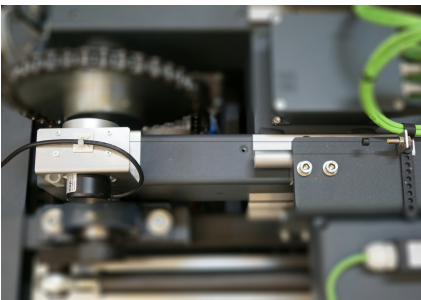
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Shaped metal specimen



Load cell, spherical seat and readout unit



Detail of the encoder in operation



Temperature verification

