Wheel Tracker Large Device

CRT-WTENLD

Optimisation of the wheel tracking test time and result accuracy through computerised control

Wheel tracking is used to assess the resistance to rutting of asphaltic materials under conditions which simulate the effect of traffic. In this machine, two 500x180mm specimens are tested simultaneously by tracking with wheels fitted with pneumatic tyres under specified conditions of load, speed and temperature while the development of the rut profile is monitored at specified intervals during the test. The moulded specimens are inserted and removed from the wheel tracker using an Easy-load system.

The Wheel Tracker Large Device CRT-WTENLD supersedes the French Pavement Rutting Tester by using a unique instrumented measurement device, linked to the data acquisition, to measure the development of rutting during testing. It allows extreme efficiency compared to any other type of devices of its type. The test procedure and conditions are controlled and data acquired using Windows™ software running on a host computer via a high speed digital interface and signal conditioning system.

We have recently innovated Wheel Tracker Large Device and added two new exciting features:

Temperature recording and display This new functionality in the software allows the operator to observe in real time a graph of the temperature as a function of time for each of the 4 probes (air and sample temperature for each side of the machine) from the start of the conditioning period until the end of the main test. Temperature data are also stored in a file for record keeping and analysis. Data are recorded at user-defined intervals, with a minimum interval of 30 seconds. **3-colour light system indicating the status of the computer** Controlling your time in a very active test lab environment divided over various tests and test devices is not always easy. We have incorporated a beacon on our Large Wheel Tracker to make life easier for laboratory operators. It clearly indicates the status of the test at a glance across the laboratory. This beacon is essentially an efficient 3-color light system which works as follows: • Red - Undergoing test cycles • Amber - Take measurements reading • Green - Test completed - machine stopped This function allows the operator to work more effectively.

Standards

- EN 12697-22 Large device
- NF P98-253-1

Key Features

- Tests materials for roads with axle loads of at least 13 tonnes
- Unique rut profile measurement device linked to data acquisition system
- Integral temperature controlled cabinet
- Test temperature range 40 to 60°C
- Tests for specified number of cycles or to specified rut depth
- **3-colour light system indicating the status of the computer**

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- Double glazed doors for viewing test
- Easy-load system for specimen handling
- Conditioning of specimens at test temperature
- User friendly Windows™ software
- Automatic test start/stop
- Closed loop speed control
- Specimens can be compacted in the CRT-RCENLD-II and then wheel tracked without de-moulding
- Supplied with certification of a UKAS accredited calibration

Key Uses

- Determination of the rut resistance of asphaltic paving materials

Software

- User friendly, intuitive and reliable Windows™ software developed using LabVIEW™
- Software is designed to perform EN 12697-22 Large device
- Integrated acquisition system for data capture and machine control
- Software automatically starts the wheel motion and brings the specimens up into contact with the moving wheels
- Rut depth of both specimens is monitored according to the procedure specified in the standard
- Three linear displacement transducers are housed in a frame which slides over the moulds on each side of the machine
- The frame is positioned at five pre-determined measurement points to allow a total of 15 rut readings to be automatically captured by the software
- Readings are automatically stored and on-screen graphs show rut development as well as historical rut data. The acquired rut data is also saved to disk
- Software stops the wheel tracker on completion of a test and prints a test report if required
- **Temperature recording and display**
- The stored test data can be analysed and compared with other test data utilising a spreadsheet package
- Utilities are included for transducer check, diagnostic routines and RTD calibration

Accessories

Accessories are not included in the price of main device (unless stated otherwise) and may be purchased separately if required.

CRT-WTENLD-VM	Versatile Mould Option (for NON Cooper Moulds)
CRT-WTRCM-100LD	Mould - 500x180x100 deep
CRT-WTRCM-50LD	Mould - 500x180x50 deep
CRT-INSERT-50LD	Mould - Insert 500x180x50 deep
CRT-WTRCLD-ASS (Replacement Part)	Full Assembly: Tyre - Wheel - Innertube
CRT-WTRCLD-EXT (Replacement Part)	Valve Extender for Tyre
CRT-WTRCLD-IREP (Replacement Part)	Replacement Innertube
CRT-WTRCLD-WREP (Replacement Part)	Replacement Wheel

Specifications

Technical specifications are subject to change without notice.

Wheel Load	5kN
Mould Dimensions mm	500 x 180
Wheel Speed	1 Hz
Slab Thickness mm [1]	50 to 100 mm (other sizes available)
Rut Depth Transducer Range mm	25
Temperature Range	40 to 60°C
Electrical Supply	3 Phase 415 Volts @ 32A (other supplies available)
Compressed Air	7-10 bar @ 600 L/min
Dimensions mm (W x D x H)	1500 x 1400 x 1700
Working space required mm (WxDxH)	5500 x 2400 x 1900
Weight (approx.) Kg	1054
PC	Included

[1] others available upon request

Calibration & Maintenance

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Calibration, Annual Service and Maintenance Contracts are available for this device. Please enquire for further details. Note: This device should be checked and calibrated annually.

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