Wheel Tracker Large Device

CRT-WTENLD

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

BRIEF INTRODUCTION

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 500 x 180mm 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.

A unique instrumented measurement device, linked to the data acquisition, is used to measure the development of rutting during testing. 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.

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
- 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 demoulding
- Supplied with certification of a UKAS accredited calibration

KEY USES

- Determination of the rut resistance of asphaltic paving materials

STANDARDS

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

SYSTEM ELEMENTS

The CRT-WTENLD is comprised of:

- A rigid metal frame supporting an insulated cabinet which uses PID control and four PRTs(two specimen and two air) for accurate closed loop temperature control
- Two tables which are normally set to lift and apply 5kN load to the moulded specimens
- Two 400mm Ø pneumatic tyres that are reciprocated in a sinusoidal motion a distance of 410mm at a frequency of 1Hz
- Three LVDTs on the rut profile measurement device
- Two automatic vertically sliding double glazed pneumatic doors which provide excellent access and enable visual monitoring of the test when required
- An LCD screen and keyboard which are installed on an arm with adjustable height

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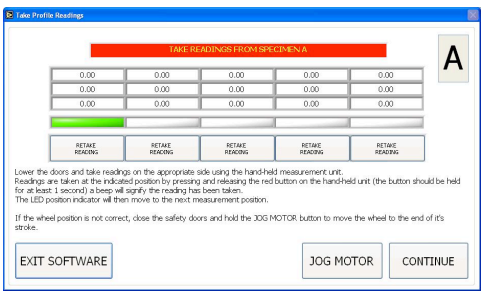
SPECIFICATIONS

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

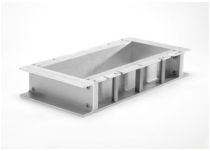
SOFTWARE

- 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
- 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 the main device and may be purchased separately if required.



CRT-WTRCM-100LD
Mould - Large Device Wheel Tracker/Roller Compactor 500 x 180 x 100mm deep

CRT-INSERT-50LD
Mould - Insert 500 x 180 x 50mm deep

CRT-WTRCLD-FK
Lifting trolley specifically designed for use with the Roller Compactor and Wheel Tracker Large Device.

CRT-WTRCLD-TREP
Replacement pneumatic tyre for Large Device Wheel Tracker/ Roller Compactor

CRT-WTRCLD-IREP
Replacement inner tube for Large Device Wheel Tracker/ Roller Compactor

CRT-WTRCLD-EXT
Valve Extender for tyre for Large Device Wheel Tracker/ Roller Compactor

Calibration & Maintenance

Calibration, Annual Service and Maintenance Contracts are available for this device.
UKAS accreditation to satisfy typed testing as described in EN 13108.
Please enquire for further details.

Note: This device should be checked and calibrated annually.