Hamburg (Immersion) Wheel Tracker

CRT-WTIM

> ***The only truly sinusoidal Hamburg wheel tracker on the market. Another representation of Cooper quality and attention to detail***

The Hamburg type dual arm immersion wheel tracker is widely used to evaluate the resistance to rutting and moisture susceptibility of asphalt mixtures following either EN12697-22 or AASHTO-T324. The device was developed in the 1970's by Esso A.G. of Hamburg, Germany. It was based on the TRL wheel tracker which is also now included in EN12697-22. Originally the Hamburg test was used by the City of Hamburg to measure rutting susceptibility. The test was performed for 9,540 wheel passes at either 40 or 50°C. Water was used to obtain the required test temperature rather than air. The City of Hamburg later increased the number of wheel passes to 19,200 and found that some mixtures began to deteriorate from moisture damage. Greater than 10,000 wheel passes was generally needed to show the effects of moisture damage. Specimens can be prepared in the laboratory, or cores taken from the road can be used. Loaded steel or rubber wheels track a sample under regulated load, speed and temperature, whilst the development of the rut is constantly monitored and recorded throughout the test.

Standards

- EN 12697-22
- AASHTO-T324
- Other national standards where relevant

Key Features

- Able to perform AASHTO-T324 and EN 12697-22
- State of the art software which provides higher level users with options, and lab technicians ease of use
- Advanced machine with 4 testing modes: Wet, wet heat, Dry and Dry heat (with optional heating hood)
- A mechanical re-circulating water bath controls the temperature to within ± 0.5°C in a range of (20-75) ºC
- Variable speed range between 15 and 30RPM
- Two displacement transducers attached to the wheel support arms measure the depth of the ruts as they develop with a resolution of 0.01mm to a maximum rut depth of 50mm
- The depth of the rut is measured automatically and constantly as specified in the AASHTO and EN standards
- Rubber or stainless steel wheels, and various widths to alter the applied pressure
- Various mould options including laboratory compacted and cores (AASHTO and EN)
- UKAS Certificate supplied
- Cooper is the world number one wheel tracker manufacturer

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Key Uses

- Investigation of resistance to rutting
- Investigation of moisture susceptibility
- Testing of laboratory compacted slabs
- Testing of field cores
- Production of creep slope, stripping inflection point and stripping slope

Software

- User friendly, intuitive and reliable Windows™ software developed using LabVIEW™
- Software allows two standard but fully customisable testing methods AASHTO-T324 and EN 12697-22
- Full software control of arms individually at outset and completion of test
- The operator is guided through every step of the test
- Real-time display of current water temperature, specimen temperature and rut depth
- Data is recorded to disk at regular intervals for further analysis
- Software communicates with the Immersion wheel tracker via the USB interface
- Utilities are included for transducer check, diagnostic routines and calibration
- Excel import data output

Accessories

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

CRT-WTRCM-50	Mould - 305x305x50mm deep
CRT-WTRCM-100	Mould - 305x305x100mm deep
CRT-INSERT-10	Mould - Insert 305x305x10mm
CRT-WTM-DIAM200	Split Wooden Holder with Steel Base-plate Ø200mm
CRT-WTIMRCM-50	Mould - 305x305x50 deep Stainless Steel
CRT-WTIMRCM-100	Mould - 305x305x100 deep Stainless Steel
CRT-WTIMRCM-26060	Mould - 260x320x60 deep Stainless Steel
CRT-WTIMRCM-26060-150	Plastic Mould (6") inserted in Stainless Steel Mould
CRT-WTIMRCM-26050	Mould - 260x320x50 deep Stainless Steel
CRT-WTIMRCM-26050-150	Plastic Mould (6") inserted in Stainless Steel Mould
CRT-WTIM-RUBBERWHEEL (Replacement Part)	Stainless Steel Rubber Wheel for EN Standard
CRT-WTIM-SOLIDWHEEL (Replacement Part)	Stainless Steel Solid Wheel for ASSHTO Standard

Specifications

Technical specifications are subject to change without notice.

Wheel Speed	Variable up to 30 cycles (60 passes) per minute
Wheel Load	700 ± 10 N
Load Cell kN	250
Mould Dimensions mm	305 x 305 and 305 x 400 (others available, please contact us or see accessories)
Slab Thickness mm	50 - 100 (different thicknesses can be tested with spacers)
Rut Depth Transducer Range mm	50
Temperature Range	20 - 75 ºC
Electrical Supply[1]	380-415 Volts 50Hz @ 16A
Dimension mm (W x D x H)	1430 x 1380 x 1260
Estimated Weight Kg	687
PC	Included

[1] others available upon request

Calibration & Maintenance

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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