

DWT DOUBLE WHEEL TRACKER, EN VERSION

The wheel tracking test is used for determining the susceptibility of Hot Mix Asphalt (HMA) to deform under load by measuring the rut depth formed by repeated passes of a loaded wheel at a fixed temperature. Two versions available as prescribed by EN 12697-22 Small Size device: specimen conditioning in air and in air or water.

Both versions can be upgraded with automatic system which lift one of the wheel from the specimen that has reached the rut target continuing the test on the other specimen. See Upgrading options Automatic wheel lifting mechanism.

We also produce Wheel Trackers conforming to AASHTO T324 standard and a universal version conforming to both AASHTO and EN standards. See Hamburg type double wheel tracker and Universal AASHTO/EN double wheel tracker.

The **DWT Double Wheel Tracker** can be used as part of your **Superpave performance based testing** program.

Machine body

Sheet steel, powder coated. Transparent sliding door.

Loaded wheel system

The EN versions are fitted with double solid rubber tyre, 203 mm dia. x 50 mm wide.

The wheel load is 700 N. The system includes a motorized lifting system for raising the wheel assembly at the end of the test.

Wheel tracking carriage

The wheel is moved 230 mm backwards and forwards on the top of the slab, which is fixed. The speed is adjustable via the PC from 20 to 30 cycles per minute (40 to 60 passes). The longest slab dimension is oriented to the wheel's direction of travel. Special slab moulds for circular samples obtained from coring or gyratory compactors are also available. See accessories.

Temperature control system

The EN prescribes either air or water environment. A water level of about 20 mm above the sample has to be maintained. Where a heated air environment is specified, the specimen, during testing, must be maintained at uniform and constant specified temperature $\pm 1^{\circ}\text{C}$. The DWT Double Wheel Trackers fully satisfy and exceed the above requirements: the temperature accuracy is $\pm 0.5^{\circ}\text{C}$.

Impression measurement system

Each wheel is fitted with RUT DEPTH transducers for measuring deformations from 0 to 40 mm ± 0.01 mm.



DWT DOUBLE WHEEL TRACKER, EN VERSION

SPECIFICATION

- **Displacement motion:** the arm is moving and the carriage is fixed
- **Wheel travel:** 230 mm
- **Wheel speed:** variable from 20 to 30 cycles/min
- **Wheel load:** 700 N
- **Temperature range:** ambient to 80°C, $\pm 0.5^\circ\text{C}$
- **Rut depth transducer range:** 50 mm, 0.01 mm accuracy
- **Moulds:** not included, to be ordered separately
- **Slab thickness:** adjustable from 40 to 100 mm in 10 mm steps
- **Overall dimensions (w x d x h):** 1540x1020x1600 mm
- **Weight approx.:** 600 kg
- **PC and software:** included

Models	78-PV32E05	78-PV33E05
Standards	EN 12697-22	EN 12697-22
Testing mode	In air	In air and water
Description	DWT Double Wheel Tracker, dry conditioning version	DWT Double Wheel Tracker, wet and dry conditioning version
Material and dimensions (diameter per width) of the two loaded wheels	Rubber tyre 203x50 mm	Rubber tyre 203x50 mm

Temperature control method (accuracy $\pm 0.5^{\circ}\text{C}$ for both water and air)	Three 1200 W electronically controlled air blowers	Air: three 1200 W electronic controlled air blowers Water: three 1500 W heaters, re-circulating pump, automatic feed and control level
Power rating	4600 W	5500 W

STANDARDS

- EN 12697-22

FEATURES

- Meets and exceeds EN standards
- Fully automatic test performance on two specimens or one specimen
- Variable wheel speed from 20 to 30 cycles/min
- Fixed table, mobile wheel 230 mm travel
- Wheel load of 700 N
- Temperature range from ambient to 80°C ($\pm 0.5^{\circ}\text{C}$)
- Accurate temperature control ($\pm 0.5^{\circ}\text{C}$) for both in water and air test
- Rut depth transducers feature 50 mm travel, 0.01 mm accuracy
- Direct rut depth measurement system, with transducers axially mounted in alignment with the wheel's centre
- Motorized wheel-assembly lifting system for easy removal of slabs
- Free access to the wide testing area
- Optional independent lifting system for double or single wheel testing
- Slab mould size of 400x300 mm
- Slab thickness adjustable from 40 to 100 mm (in 10 mm steps)
- Extensive use of stainless steel in the machine's construction; not limited to the parts in contact with water
- Laptop PC control with dedicated software including results performance, test database management and multiple test elaboration
- Automatic water filling and leveling system, no need to adjust or control the water level above the specimen during test
- Possibility to add two optional temperature probes to monitor the two samples temperature
- The software includes the possibility to program pre-heating and machine start (without operator intervention) and to measure the rut depth measurement in user-defined positions for research purposes or local specifications

ACCESSORIES

78-PV3/001

Set of two moulds 400x300 mm for PAVELAB DWT Double wheel tracker

78-PV3UP10

System for the independent lifting of the loading wheel at the rut target, continuing the test, without interruption, with the other wheel.

78-PV3UP20

Couple of additional temperature probes for monitoring the two samples temperatures.

78-PV3UP40

Upper closing panel made from transparent plastic for DWT machine

78-PV31A00/CAL

Set of traceable calibration certificates for 78-PV32xxx or 78-PV31XXX wheel tracker (including load, two displacement transducers, wheel speed/frequency, tyre hardness -if applicable, air or water temperature).

ORDERING CODE

78-PV32E05

DWT Dry double wheel tracker. Conforming to EN 12697-22, Small Size Device. Complete with PC, software and transparent sliding door. 380V/50Hz/3ph+N

78-PV33E05

DWT Wet and Dry double wheel tracker. Conforming to EN 12697-22 Small Size Device. Complete with PC, software and transparent sliding doors. 380V/50Hz/3ph+N



