

B043 KIT
DIGITAL MARSHALL TESTER 50 KN CAPACITY

STANDARDS: EN 12697-34, 12697-23, 12697-12
 ASTM D6927, D5581, D1559 | AASHTO T245
 BS 598:107 | NF P98-251-2

The testing frame is the same as for mod. B042 KIT, but the load is measured by an electric cell 50 kN capacity with high precision strain transducers; the flow is measured by an electronic displacement transducer 50 mm stroke and $\pm 0.1\%$ linearity.

The Cyber-Plus Evolution 8 channels digital display unit with micro-processor (technical details: see B044N-SET p. 132, Hardware technical details: see p. 19) measures and displays at the same time the stability in kN and the flow in mm with peak hold features, with the possibility to transfer them to a PC and a printer through a RS232 port.

Supplied complete with Stability mould.

Power supply: 230V 1ph 50Hz 900W

Dimensions: 650x400x1100 mm

Weight: 120 kg approx.



B043 KIT

ACCESSORIES
B043-01N

SOFTWARE UTM2 (Universal Testing Machine 2)

Licence for MARSHALL test

Standards: EN 12697-34 | ASTM D6927, D5581, D1559
 BS 598:107 | NF P98-251-2

Data processing program for "X-Y STABILITY/FLOW"

General description and technical details: see UTM2 p. 18

B046-03

STABILITY MOULD, **steel made**, for \varnothing 4" (101.6 mm)

Specimens to ASTM D6927.

Alternative solution to B046N mould.

Weight 9 kg approx.



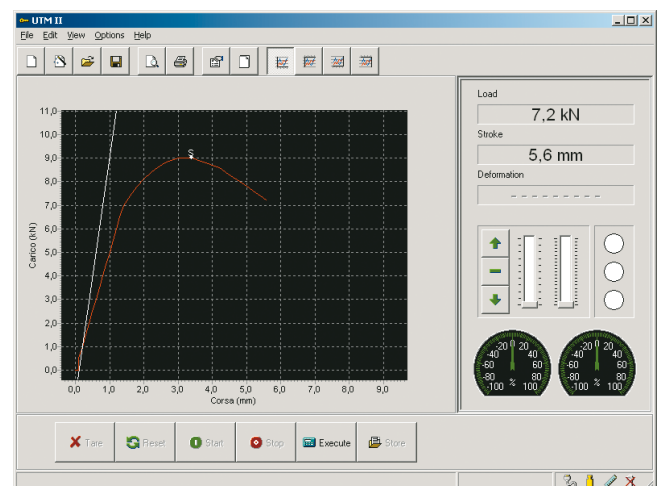
B046N

B046-03
SPARE
B046N

STABILITY MOULD \varnothing 4" (101.6 mm)

The **aluminium made** mould, is completely open in the front so the introduction of the specimen is made easy as there is no disassembly needed.

Weight: 6 kg approx.



B043-01N: Load/deformation "x-y" graphic example

Note: The Digital Marshall Tester B043KIT, completed by the specific accessories (listed below) is suitable to perform also the following tests:

DETERMINATION OF INDIRECT TENSILE STRENGTH

STANDARDS: EN 12697-23, EN 12697-12 | ASTM D6931
AASHTO T283

B047-02

TENSILE SPLITTING DEVICE FOR SAMPLE Ø 4" AND 6"
Used to measure the indirect tensile strength and the radial strain of a Marshall specimen Ø 4" and 6", where a vertical load is applied. Supplied complete with loading strips to test specimens having Ø 4" and 6". Steel manufactured, plated against corrosion.

Dimensions: Ø 248x270 mm

Weight: 14 kg approx.

Alternative solution:

B047-02S TENSILE SPLITTING DEVICE for samples Ø 4" and 6" complete. Simple model not accepting the device B047-04 for strain measurements.



ACCESSORIES

B047-04 SET OF TWO LINEAR RESISTIVITY TRANSDUCERS, stroke 10 mm, accuracy and linearity $\pm 0.3\%$ to meet CNR N.134. Complete with supports and accessories for strain measurements.

B044-03 DISPLACEMENT TRANSDUCER, **additional**, 50 mm stroke, for a double measurement of the vertical displacement of the specimen during the tensile splitting test. Complete with cable and connector. When used with B043-02N software the average value of the two transducers is given.

B043-02N SOFTWARE UTM2 (Universal Testing Machine 2)
Licence for INDIRECT TENSILE STRENGTH
Standards: EN 12697-23, EN 12697-12 | ASTM D6931
AASHTO T283
General description and technical details:
see UTM2 p. 18

DIRECT SHEAR (LEUTNER) BETWEEN BITUMINOUS STRATA

STANDARD: ALP A StB T.4

Direct shear test (LEUTNER) on the connection between bituminous strata, carried out on asphalt cylinder specimens diameter 150 mm or 100 mm obtained from road cores or on laboratory made specimens.

NEEDED ACCESSORIES

B047-10

LEUTNER testing head for specimens Ø 150 mm

B047-11

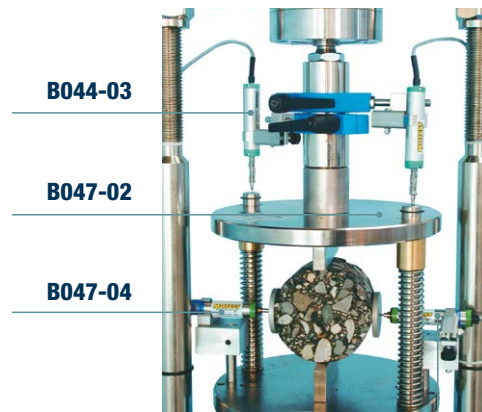
SPACERS for Ø 100 mm specimens with Leutner head.

B043-03N

SOFTWARE for Marshall and Leutner tests.



B047-10 + B047-11



B047-04



B047-02S

DETERMINATION OF WATER SENSITIVITY OF BITUMINOUS SAMPLES

STANDARD: EN 12697-12

This test determines the effect of saturation and accelerated water conditioning on the indirect tensile strength of bituminous mixtures, by evaluating the effect of moisture with different sample conditions.

Equipment: Digital Marshall tester B043KIT, indirect tensile strength accessories, and also:

B052-02

WATER BATH, DIGITAL, WITH COOLING DEVICE

Temperature range: +3 to +95 °C, accuracy ± 1 °C.

(EN 12697-12 Standard requires a temperature to be selected in the range of +5 to +25 °C).

Capacity: 45 litres

Inside dimensions:

635x360x205 mm

The bath can also be used

for Marshall tests and

general laboratory purposes.

Technical details: see p. 135



B052-02