Marshall compression frames

Available models:

B042 KIT Marshall mechanical load frame

B043 KIT Marshall digital load frame

S212-S215 KIT Universal Multispeed load frame (see pag. 378)

S213-S214 KIT CBR/Marshall dual speed load frame (see pag. 378)

S205 UNITRONIC load frame (see pag. 384)

B042 KIT

Marshall mechanical 30 kN load frame

STANDARDS: **EN 12697-34, EN 13108** / ASTM D1559, D6927-06
AASHTO T245 / BS 598:107 / NF P98-251-2
CNR N° 30

Ruggedly constructed with frame to encompass the strain and loads, easy to use, it is designed to operate with the minimum of maintenance.
Platen rate is 50.8 mm/minute also maintained under load thanks to an overpowered electric motor. The applied load is measured by a precision proving ring 30 kN capacity incorporating a stem brake holding the maximum reading and it is supplied with relevant calibration certificate. The machine includes an electric device for automatic stop when reaching the max capacity load of the proving ring, so as to prevent any overload damage, limit switches stopping the platen at max. and min. excursions.
The unit is supplied complete with load ring 30 kN capacity, stability mould flow meter with dial gauge.
Power supply: 230 V 1 ph 50 Hz 750 W
Dimensions: 410x400x1110 mm
Weight: 110 kg

SPARES:

B046N
STABILITY MOULD, 4" Ø
STANDARDS: EN, ASTM, NF, BS, CNR, AASHTO
The inside diameter is of 4" (101,6 mm).
The mould is completely open in the front and the introduction of the specimen becomes very easy thus avoiding disassembling operations.
Weight: 6 kg

B047 FLOW METER
Mounted on top of the stability mould, holding the dial gauge and incorporating a stem-brake keeping maximum deflection.
Weight: 0,5 kg

B047-01
DIAL GAUGE
Stroke 10 mm,
div. 0,01 mm to be used in conjunction with the Flow Meter B047.

ACCESSORIES:

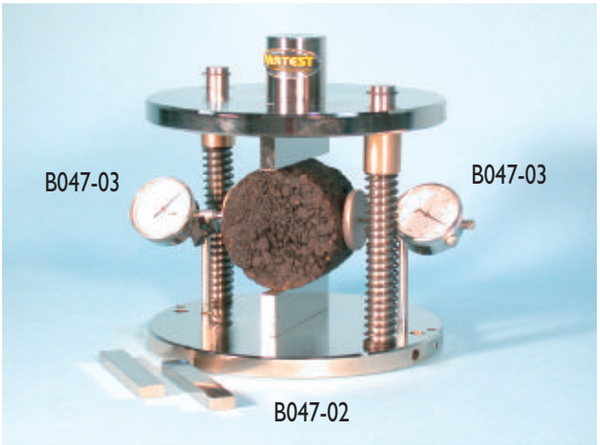
B047-02

Tensile splitting device

STANDARDS: **EN 12697-23** / ASTM D4123 / CNR 134

Used to measure the splitting tensile strength and the radial strain of a Marshall specimen dia 4" and 6", where a vertical load is applied. Supplied complete with knives to test specimens having dia. 4" and 6". Steel manufactured, plated against corrosion.
Dimensions: dia. 248x270 mm. - Weight: 14 kg

B047-03
Set of two dial gauges 10 mm. stroke and 0,01 mm. sens. complete with adjustable supports for strain measurements.



B043 KIT

Digital Marshall Tester 30 kN capacity

STANDARDS: **EN 12697-34, 12697-23, 12697-12, EN 13108**
ASTM D1559, D6927-06 / AASHTO T245 / BS 598:107
NF P98-251-2 / CNR N° 30

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 ± 0,1% linearity.
The **Cyber-Plus Evolution** 8 channels digital display unit with microprocessor (technical details: see B044N-SET page. 98, Hardware technical details: see pag. 24) measures and displays at the same time the stability in kN and the flow in mm with pick 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: 230 V 1 ph 50 Hz 900 W
Dimensions: 650x400x1100 mm. Weight: 120 kg

ACCESSORIES for B043 KIT:

B043-01N

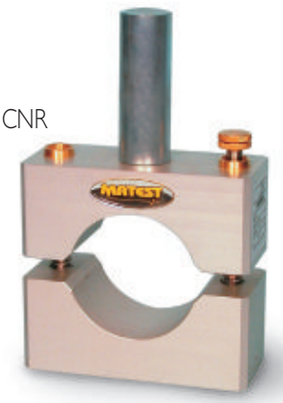
SOFTWARE UTM2 (Universal Testing Machine 2)
Developed for the management and the remote control through PC of Matest testing machines.
Licence for **MARSHALL** test
Standards: **EN 12697-34** / CNR N. 30 / ASTM D1559
BS 598 :107 / NF P98-251-2
Data processing program for "X-Y STABILITY/FLOW"
General description and technical details: see UTM2 pag. 14

SPARE:

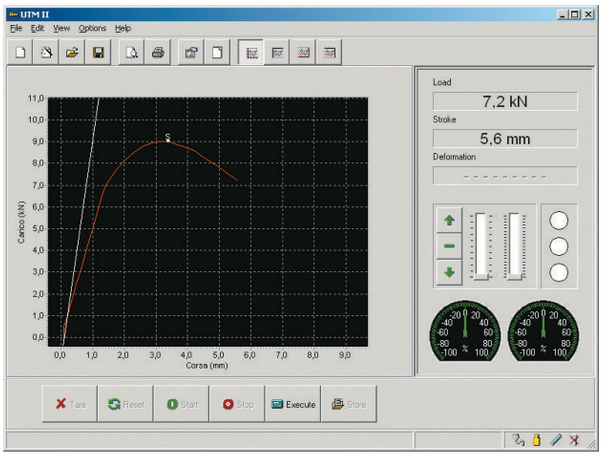
B046N

STABILITY MOULD 4" Ø
STANDARDS: EN, ASTM, NF, BS, CNR

The inside diameter is 4" (101,6 mm); the mould is completely open in the front and the introduction of the specimen becomes very easy thus avoiding disassembling operations.
Weight: 6 kg



B046 N



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

B043 KIT

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

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 dia. 150mm or 100mm obtained from road cores or on laboratory made specimens.
Needed accessories:

B043 KIT Digital Marshall tester
B047-10 LEUTNER testing head for specimens 150mm dia.
B047-11 Spacers for 100 mm dia. specimens with Leutner head.
B043-03N Software for Marshall and Leutner tests.

B047-10 + B047-11

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