S205M
UNITRONIC 50 KN NEW

UNIVERSAL MULTIPURPOSE TOUCH-SCREEN COMPRESSION, FLEXURAL AND TENSILE FRAME

- COMPRESSION AND FLEXURAL TESTS, 50 KN MAX. CAPACITY LOAD
- TENSILE TESTS, 25 KN MAX. CAPACITY LOAD (OPTION MOD. S205-05M)

With automatic load or displacement/deformation control, for testing:

SOIL:
- CBR (California Bearing Ratio)
- UNCONFINED COMPRESSION
- QUICK TRIAXIAL

ASPHALT:
- MARSHALL
- SPLITTING TENSILE
- DIRECT SHEAR (Leutner) on the connection between bituminous strata
- AUTO SCB

CONCRETE:
- FLEXURE ON BEAMS AND TILES

CEMENT:
- FLEXURE on 40x40x160 mm specimens
- COMPRESSION on cubes 40, 50, 70 mm
- TENSILE on mortar briquettes (option mod. S205-05M)

METAL, PLASTIC, WIRES, ROPES, TEXTILES, PAPERS ETC.
- TENSILE TESTS, 25kN max capacity load (option mod. S205-05M)

CLAY BLOCKS:
- PUNCHING

ROCK AND STONES:
- UNIAXIAL SPLITTING TENSILE

S205M / S205-05M

Equipped with suitable devices, Unitronic tester performs compression, flexural, splitting tensile and direct tensile tests, with automatic load or displacement/deformation control, within the limits of its max. **50 kN capacity** for compression/flexural **and 25 kN for tensile** (see model S205-05M).

The load is applied by a mechanical jack that is driven by a stepper motor and controlled by an internal microprocessor on a **high precision control board**.

Stroke electric end switches are applied to the load piston to save the machine from accidental handlings.

The crosshead foresees couplings to fix the different test devices (see accessories). The stress is measured by an electric load cell and the displacement control is achieved directly by the high technology electronic board incorporated into the machine within a variable **speed range up to 51 mm/min** to cover the Marshall test.

Real time display of time, load, deformation, displacement and graph simultaneously is allowed thanks to the latest generation control board (See technical specifications – firmware).

TECHNICAL SPECIFICATIONS

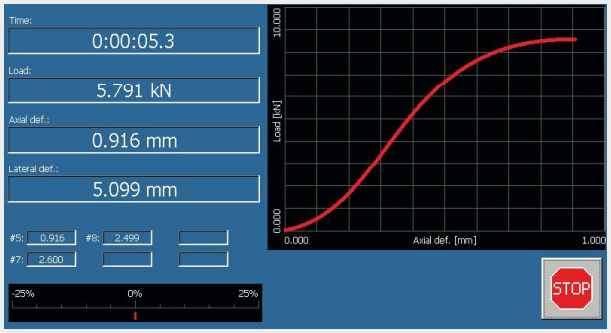
HARDWARE

- Maximum Sample Diameter: 150 mm
- Minimum testing speed: 0.00001 mm/min
- Maximum testing speed: 51 mm/min
- Maximum compression force: 50 kN
- Minimum vertical clearance: 390 mm
- Maximum vertical clearance: 1110 mm
- Horizontal clearance: 380 mm
- Platen diameter: 177 mm
- Platen travel: 100 mm
- Unitronic 50 kN is **supplied without accessories and software** to perform specific tests that must be ordered separately (see accessories at next pages)

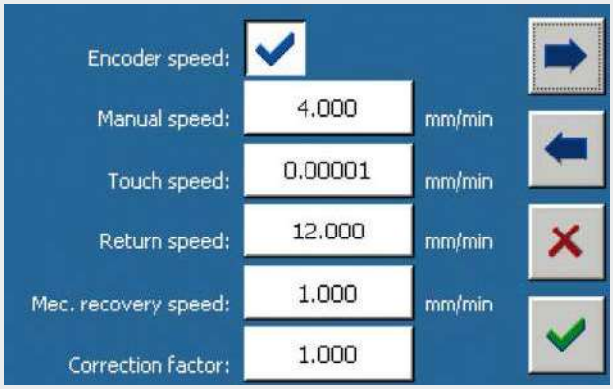
Power supply: 230V 1ph 50-60Hz 1500W
Dimensions: (h x w x d) 1675x500x530 mm approx.
Weight: 130 Kg approx.

FIRMWARE

- Touch-screen TFT LCD graphic display, 800x480 pixels, 7 inches.
- Windows base interface (no external PC required either for advanced tests)
- 8 analog channels (24 bit) suitable for connection of load, displacement, deformation, LVDT, temperature (PT100, PT1000, NTC) transducers and strain gauges (by using an external adapter)
- 10 profiles, with a potential of 80 storable calibrations, for an immediate use of multiple sensors.
- Ports: Ethernet, RS232, RS485, 2 x USB Host-port
- Internal memory Slot for Micro SD



Indirect tensile bitumen test

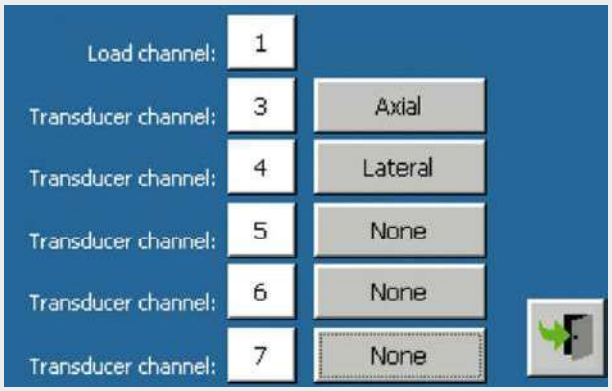


Device settings

S205-05M
UNITRONIC 25KN
COMPRESSION AND TENSILE FRAME

The Unitronic frame S205M is modified and improved to perform also tensile tests with max. capacity of 25 kN

Note: This modification is possible only in MATEST factory.



Channels configuration

S205N UNITRONIC 50 KN CAN PERFORM THE FOLLOWING TESTS:


CBR TEST


MARSHALL TEST


CEMENT COMPRESSION


CONCRETE FLEXURE


QUICK TRIAXIAL


SPLITTING TENSILE


CEMENT FLEXURE


CLAY BLOCKS PUNCHING


UNCONFINED COMPRESSION

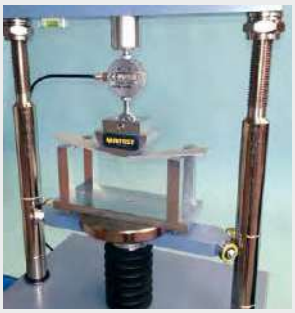

DIRECT SHEAR (LEUTNER)


TENSILE TEST ON MORTAR BRIQUETTES


TILE FLEXURE


UNIAXIAL ROCK SPLITTING TENSILE


AUTOMATIC SCB SYSTEM


TRANSVERSE / DEFORMATION TEST ON ADHESIVE


TENSILE TEST ON METALS, PLASTIC, WIRES, TEXTILES ETC.

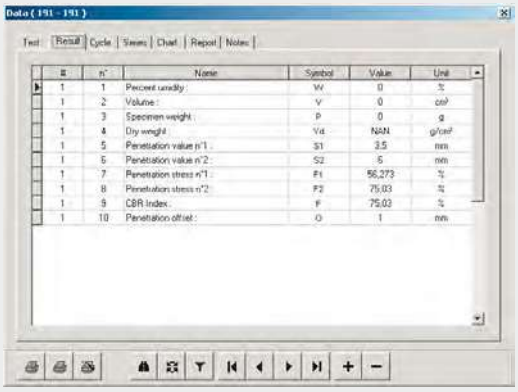
S205N | S205-05N UNITRONIC, SPECIFIC APPLICATIONS

CBR: CALIFORNIA BEARING RATIO TEST

STANDARDS:
EN 13286 -47
ASTM D1883
BS 1377:4
AASHTO T193
NF P94-078
CNR UNI 10009

Test development with displacement control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell, 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-01 Penetration piston
S218N Software for CBR test



S218N Software CBR test

QUICK TRIAXIAL TEST

STANDARDS:
ASTM D2850
BS 1377

Test development with displacement control.

Note:
Additional needed accessories see p. 555, 556.

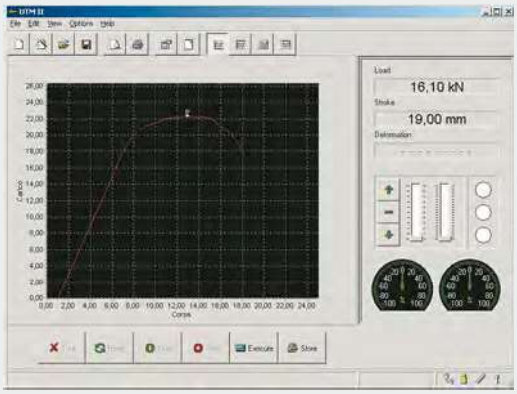
S205N Unitronic 50 kN
S337-31 Strain gauge load cell 2.5 kN capacity
S337-51 Calibration process of load cell / Unitronic
S205-11 Loading piston with ball
S305 Triaxial cell (for accessories see p. 546, 555, 556)
S218-02N Software for QUICK TRIXIAL test

UNCONFINED COMPRESSION TEST

STANDARDS:
ASTM D2166
BS 1377:7
AASHTO T208

Test development with displacement control.

S205N Unitronic 50 kN
S337-31 Strain gauge load cell 2.5 kN capacity.
S337-51 Calibration process of load cell / Unitronic
S212-08N Upper and lower compression platens Ø 100 mm with accessories
As Alternative
S212-09N Upper + lower compression plates, Ø 165 mm with upper seat ball
S218-01N Software for Unconfined Compression test



S218-01N Software unconfined test

UNIAXIAL SPLITTING TENSILE TEST OF ROCK CORE SPECIMENS

STANDARD:
ASTM D3667

Test development with displacement control.

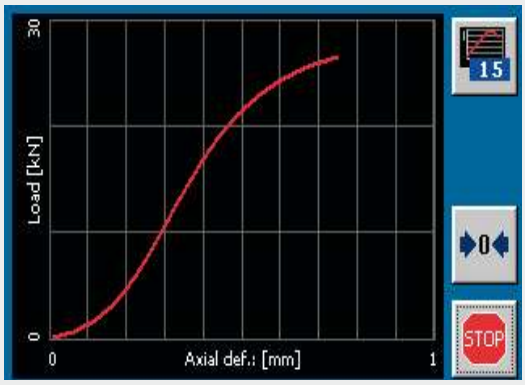
S205N Unitronic 50 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
E171 Compression device

MARSHALL STABILITY TEST

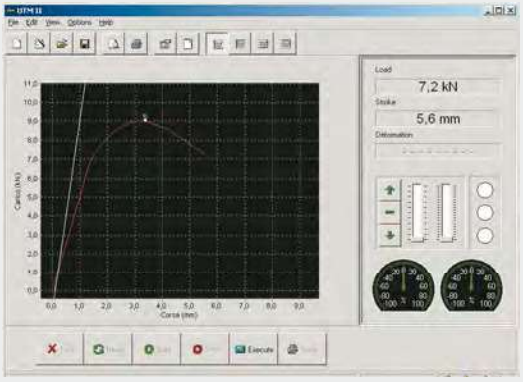
STANDARDS:
EN 12697-34
ASTM D1559
D5581, D6927
AASHTO T245
BS 598 :107
NF P98-251-2

Test development with displacement control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell, 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
B046N Stability mould
B043-01N Software for Marshall test



File Marshall test



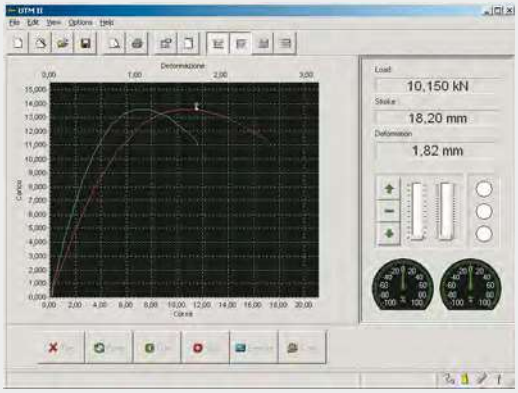
B043-01N Software Marshall test

SPLITTING TENSILE TEST

STANDARDS:
EN 12697-23,12
ASTM D6931
AASHTO T283
CNR 134

Test development with displacement control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell, 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
B047-02 Splitting tensile device for samples Ø 4" and 6"
B047-04 Set of TWO displacement transducers with accessories
B043-02N Software for Splitting Tensile test



S043-02N Software splitting tensile test

DIRECT SHEAR (LEUTNER) BETWEEN BITUMINOUS STRATA

STANDARD:
ALP A StB T4

Test development with displacement control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
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

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

AUTO SCB SEMI-CIRCULAR BEND

STANDARDS:
EN 12697-44
AASHTO TP124
ASTM D8044

Test development with displacement control.

EN 12697-44

B250-01 Basic indirect tensile (idt) jig, for 100-150 mm diameter
B254-01 Scb jig (requires basic idt jig)
B254-51 Pair of scb wear plates
S337-34 Load cell 50 kn capacity
B045-13 Loading piston
S336-15 Transducer type "B" travel: 10 mm
B045-14 Coupling hardware
S335-15 Universal coupling pliers for transd./dial
B043-05N Software for auto-scb test

AASHTO TP124 | ASTM D8044

B208 SCB frame
B254-02 Springs
B254-10 Roller support
S337-31(*) Load cell 2,5 kn capacity
B045-13 Loading piston
S336-15 Transducer type "b" travel: 10 mm
B045-14 Coupling hardware
S335-15 Universal coupling pliers for transd./dial
B043-05N Software for auto-scb test

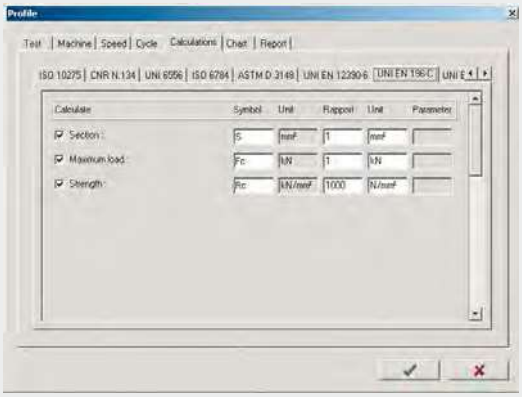
Note: for more details see p. 128.

COMPRESSION TEST ON MORTAR SPECIMENS (50KN MAX. LOAD)

STANDARDS:
EN 196-1
EN ISO 679
ASTM C109, C349
NF P15-451
BS 3892
DIN 1164

Test development with displacement control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
E170 Compression device on portion of 40x40x160 mm specimens
E163N Software for compression tests



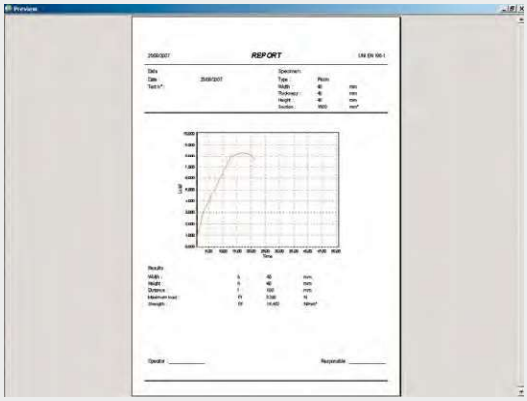
E163N Software for mortar compression

FLEXURAL TESTS ON MORTAR PRISM 40X40X160 MM

STANDARDS:
EN 196-1
ASTM C348
NF P15-451
DIN 1164
EN ISO 679

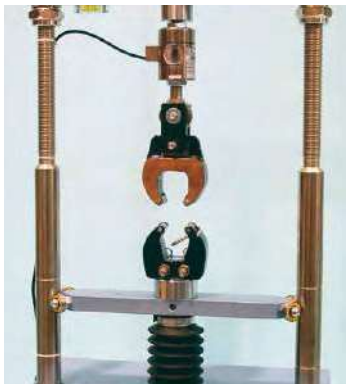
Test development with displacement control.

S205N Unitronic 50 kN
S337-32 Strain gauge load cell 10 kN capacity
S337-51 Calibration process of load cell / Unitronic
S212-05 Loading piston
E172-01 Flexure EN device for 40x40x160 mm specimens (available also to ASTM, see p. 428)
E164N Software for flexural tests



E164N Software for mortar flexure

TENSILE TEST ON MORTAR BRIQUETTES "8" SHAPED



STANDARDS:
ASTM C190, C307
AASHTO T132

Test development with load control.

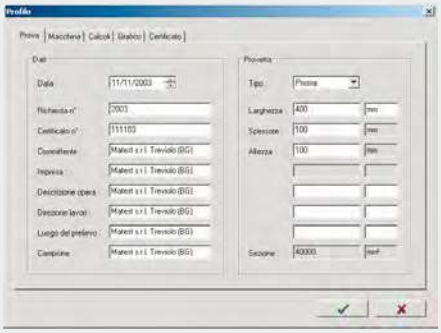
S205-05N Unitronic Compression 50 kN / Tensile 25 kN
S337-32 Tensile/Compression strain load cell 10kN capacity
S337-51 Calibration process of load cell / Unitronic
S205-07 Tensile jaws "8" shaped for mortar briquette
S205-08N Software for tensile test
E111 Briquette mould (see p. 408)

TWO POINT FLEXURAL AND TRANSVERSE TESTS ON CONCRETE BEAMS AND BENDING TEST METHOD ON GLASS-FIBRE REINFORCED CONCRETE

STANDARDS:
EN 12390-5
EN 1170-4
ASTM C78, C293

Test development with load control for concrete beams and displacement control for bending test on glass-fibre reinforce cement.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S205-16 Two-point bending device to test glass-fibre reinforced cement. Rollers dimensions: Ø 40 by 310 mm long. Lower rollers adjustable from 110 to 310 mm. Upper rollers adjustable from 45 to 120 mm. Weight: 20 kg approx
C109-11N Software for flexure tests on concrete beams



C109-11N Flexure: Outline of test data

TRANSVERSE/DEFORMATION TEST ON ADHESIVES FOR TILES

STANDARD:
EN 12004-2

Test development with displacement control.

S205-13 A, B, C

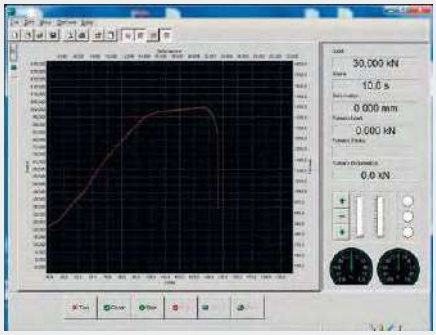
S205N Unitronic 50 kN
S205-14 Strain gauge load cell 500 N capacity
S337-51 Calibration process of load cell / Unitronic
S205-13 Flexure device with lower bearers and upper loading piston
S205-13A Template A: rectangular frame for specimens to EN 12002, internal dimensions 280x45x5 mm
S205-13B Template B: mould for specimens to EN 12002, dimensions 300x45x3 mm
S205-13C Weight 100 N, cross sectional area of 290x45 mm, for preparation of specimens to EN 12002

PUNCHING TEST ON CLAY BLOCKS

STANDARDS:
EN 15037-2, -3
UNI 9730-3

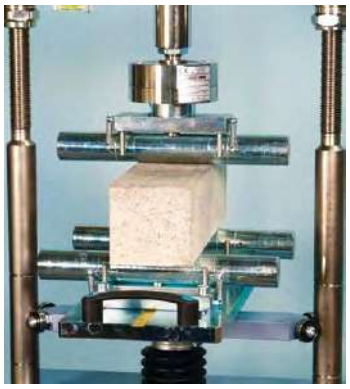
Test development with load control.

S205N Unitronic 50 kN
S337-32 Strain gauge load cell 10 kN capacity
S337-51 Calibration process of load cell / Unitronic
C093-11 Flexural punching device
S205-15 Holding beam for the punching device
C109-16N Software for punching test on clay blocks



C109-16N

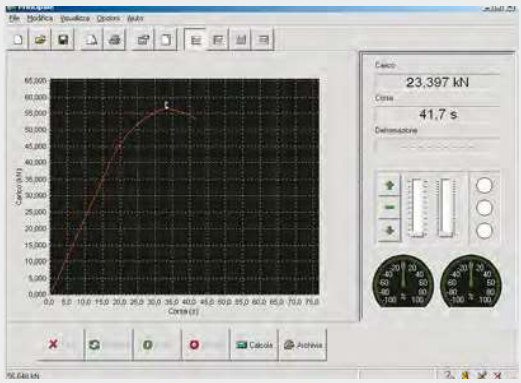
FLEXURAL TEST FOR CENTRE POINT LOADING ON CLAY TILES AND CONCRETE BEAM



STANDARDS:
EN 12390-5, 491, 538
ASTM C78, C293
BS 1881:118

Test development with load control.

S205N Unitronic 50 kN
S337-34 Strain gauge load cell, 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S205-18 Flexure device for centre point loading to test clay tiles and concrete beams dimensions 100x100x400(500) mm. Consisting of lower beam with two bearers (one articulated) adjustable from 110 to 310 mm, and upper central articulated bearer fixed to the load cell.Bearer dimensions: Ø 40 mm by 310mm long. Weight: 20 kg approx
C109-11N Software for flexure tests



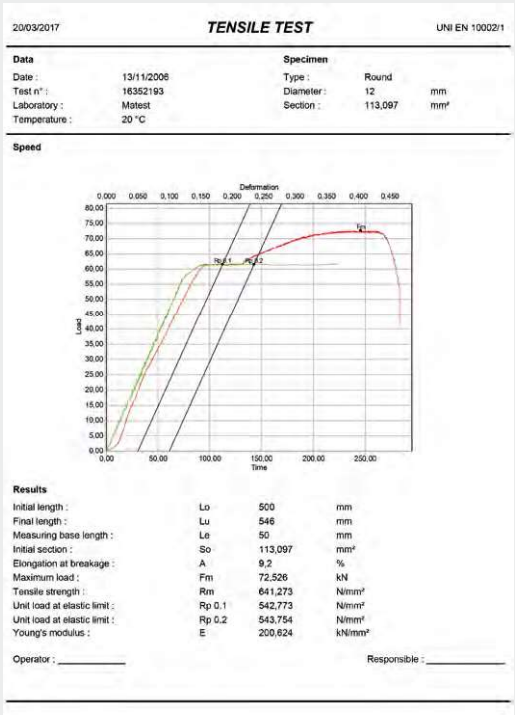
C109-11N Software for flexural test on concrete beam

TENSILE TESTS ON METALS, PLASTICS, WIRES, TEXTILES ETC.

STANDARDS:
ASTM D2166
BS 1377:7
AASHTO T208

Test development with load control.

S205-05N Unitronic Compression 50 kN / Tensile 25 kN
S337-36 Tensile strain load cell 25 kN capacity
S337-51 Calibration process of load cell / Unitronic
H005-11 Tensile heads (upper and lower)
S205-09 Coupling for tensile heads installation
H005-21 Flat seizing grips for flat specimens 1 - 10 mm thickness by 25 mm max. width and round specimens Ø 3-5 mm
H005-31 "V" shape seizing grips for round specimens Ø 5-12 mm
H014-06 to H014-10 Extensometer, electronic, for tensile deformation strength tests. (See p. 445)
H009N Software for visualisation in real time of load/deformation, graphic, test certificate etc



H009N

At p. 444 you will find devices to test plastics, wires, ropes, flexural and bending tests and various models of extensometers. On request it is also possible to equip the Unitronic frame S205-05N with devices for tensile tests of different materials, within the 25kN max. capacity load.

Note: Needed accessories listed above, are common for different tests. We recommend to check them when ordering, to avoid duplications.

S206N
UNITRONIC 200 KN
UNIVERSAL MULTIPURPOSE TOUCHSCREEN COMPRESSION/FLEXURAL AND TENSILE FRAME FOR:

- COMPRESSION / FLEXURAL TESTS, 200 kN MAX. CAPACITY LOAD
- TENSILE TESTS, 50 kN MAX. CAPACITY LOAD

With automatic load or displacement/deformation control, for testing:

SOIL:
- CBR (California Bearing Ratio)

ASPHALT:
- DURIEZ
- MARSHALL
- SPLITTING TENSILE
- DIRECT SHEAR (Leutner) on the connection between bituminous strata

CONCRETE:
- FLEXURE ON BEAMS AND TILES

CEMENT:
- FLEXURE on 40x40x160 mm specimens
- COMPRESSION on cubes 40, 50, 70 mm

METAL, PLASTIC, WIRES, ROPES, TEXTILES, PAPERS ETC.
- TENSILE TESTS, 50kN max capacity load

CLAY BLOCKS:
- PUNCHING

ROCK AND STONES:
- UNIAXIAL SPLITTING TENSILE

S206N

TECHNICAL FEATURES:

By using suitable devices, Unitronic tester, within the limits of its max. 200 kN capacity for compression/flexural and 50 kN for tensile, performs compression, flexural, splitting tensile and direct tensile tests, with automatic load or displacement/deformation control.

The load is applied by a mechanical jack that is driven by a motor **brushless with closed loop through optic encoder** and controlled by a microprocessor. Stroke electric end switches are applied to the load piston to save the machine from accidental handlings.

The two crossheads foresee couplings to fix the different test devices (see accessories). The stress is measured by an electric load cell; the measurement and the displacement control of the crosshead is achieved by the electronic device incorporated into the machine.

FIRMWARE

- Electronic control unit “Cyber-plus Evolution” with Touch-Screen colour display, that runs like a standard PC based on Windows operating system for the management and analysis of the data, test results, graphs.
- The Touch-Screen icon interface allows an easy set up of the parameters and immediate execution of the test.
- The machine can be connected to a PC for remote test execution through suitable Software; the machine can in any case perform the tests without any external PC, because of the “Cyber-Plus” grants performances like a PC.
- Direct connection to Intranet (connection to a LAN network) and Internet to establish a remote communication and receive an immediate diagnostic analysis from Matest technicians, or for updates of the software.
- Unlimited memory storage with: 2 USB ports, 1 SD card slot.
- RJ45 network connection
- Possibility to select different languages.
- Hardware technical details: see p. 18

SPECIFICATIONS OF THE FRAME

- Max. load: 200 kN Compression; 50 kN tensile.
- Max. vertical daylight: 900 mm (without accessories)
- Max. vertical daylight with compression platens: 800 mm
- Compression platens diameter: 216 mm (upper platen on seat ball)
- Distance between columns: 650 mm
- Crosshead travel: ± 200 mm (400 mm total)
- Testing speed range: from 0.01 to 100 mm/min
- Load rate: from 1 N/s to 5 kN/s
- Displacement resolution: 0.01 mm with accuracy better than 0.2%
- Machine Class: 1

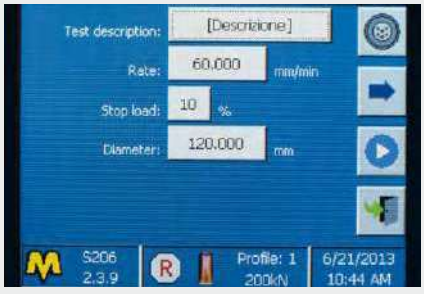
The Unitronic 200 kN is **supplied complete with**:
Electric load cell 200 kN capacity, crosshead displacement device, upper with seat ball and lower compression platens.
Are not included: accessories and software for specific tests that must be ordered separately (see accessories).

Note: The machine can be equipped with intermediate load cells to the max. capacity of the machine, to satisfy specific test requirements.

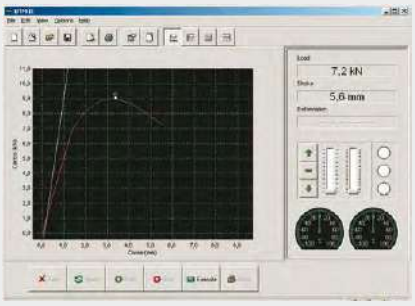
Power supply: 230V 1ph 50-60Hz 850W
Dimensions: 950x560x2400 mm
Weight: 820 kg approx.

UNITRONIC screen examples: CBR test

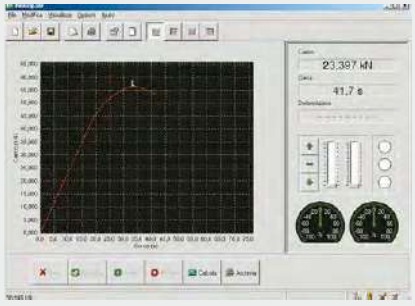
CBR test result



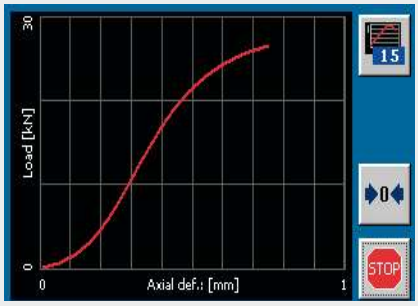
S206-21N Software for Duriez test



B043-01N Software Marshall test



C109-11N Software for flexural test on concrete beam



File Marshall test

S206N UNITRONIC 200 KN CAN PERFORM THE FOLLOWING TESTS:


CBR TEST


MARSHALL TEST


CEMENT COMPRESSION


CONCRETE FLEXURE


DURIEZ


SPLITTING TENSILE BITUMEN


CEMENT FLEXURE


CLAY BLOCKS PUNCHING


UNCONFINED COMPRESSION


DIRECT SHEAR (LEUTNER)


SPLITTING TENSILE BLOCK PAVERS


TILE FLEXURE


UNIAXIAL ROCK SPLITTING TENSILE


AUTOMATIC SCB SYSTEM


SPLITTING TENSILE CONCRETE CYLINDERS


TENSILE TEST ON METALS, PLASTIC, WIRES, TEXTILES ETC.

Note: S206N UNITRONIC 200 kN can perform many other different test (like for ex.: quick triaxial, unconfined, etc.) by utilizing suitable accessories and electric load cells.

S206N UNITRONIC 200 KN, CAN PERFORM THE FOLLOWING TESTS:

CBR: CALIFORNIA BEARING RATIO TEST

STANDARDS: EN 13286 -47 I ASTM D1883 I BS 1377:4
AASHTO T193 I NF P94-078 I CNR UNI 10009

CBR Mould

S206N Unitronic 200 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S206-31 Flange/connector of the load cell S337-34
S212-01 Loading piston
S218N Software for CBR test (p. 18)

DURIEZ TEST ON 80 AND 120 MM DIAMETER SAMPLES

STANDARD: NF P98-251/1, NF P98-251/4

B095-01

S206N Unitronic 200 kN
B096-01 Duriez set Ø 80 mm (p. 131)
B095-01 Duriez set Ø 120 mm (p. 131)
S206-21N Software for Duriez test (p. 18)

MARSHALL STABILITY TEST

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

B046N

S206N Unitronic 200 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S206-31 Flange/connector of the load cell S337-34
S212-05 Loading piston
B046N Stability mould
B043-01N Software for Marshall test (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 Ø 150 mm or 100 mm obtained from road cores or on laboratory made specimens.

S337-34
S212-05

B047-10 + B047-11

S206N Unitronic 200 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S206-31 Flange/connector of the load cell S337-34
S212-05 Loading piston
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 Leutner and Marshall tests (p. 18).

SPLITTING TENSILE TEST

STANDARDS: EN 12697-23, 12 I ASTM D6931 I AASHTO T283
CNR 134

B047-02 + B047-04

S206N Unitronic 200 kN
S337-34 Strain gauge load cell 50 kN capacity
S337-51 Calibration process of load cell / Unitronic
S206-31 Flange/connector of the load cell S337-34
S212-05 Loading piston
B047-02 Splitting tensile device for samples Ø 4" and 6" (p. 123)
B047-04 Set of TWO displacement transducers with accessories (p. 123)
B043-02N Software for Splitting Tensile test (p. 18)

PULL OFF TENSION TEST

STANDARD: TP ASPHALT - StB 81

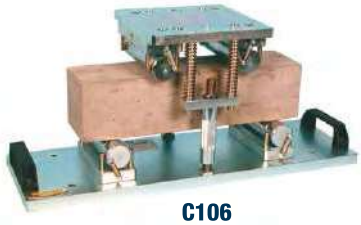
S206N Unitronic 200 kN
B260-10SP Pull off tension jig
H009N Software for tensile test
S337-51 Calibration process of load cell / Unitronic

Note: Accessories for temperature measurement not included.

B260-10SP

FLEXURAL TEST ON CONCRETE BEAMS

STANDARDS: EN 12390-5 I ASTM C78, C293 I AASHTO T97
NF P18-407 I BS 1881:118 I UNE 83305



C106

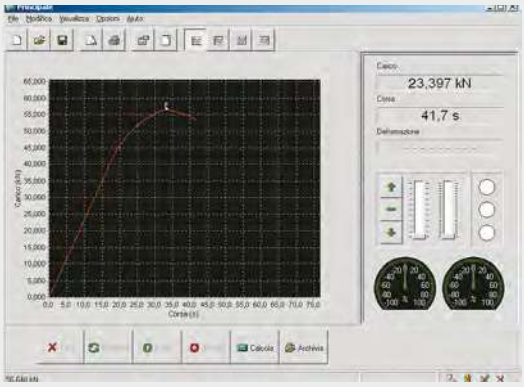
S206N Unitronic 200 kN
C106 Flexure device (p. 315)
C109-11N Software for flexural tests on concrete beams. (p. 18)

TWO POINT FLEXURAL AND TRANSVERSE TESTS ON CONCRETE BEAMS AND BENDING TEST METHOD ON GLASS-FIBRE REINFORCED CONCRETE

STANDARDS: EN 1170-4, EN 12390-5 I ASTM C78, C293

S206N Unitronic 200 kN
S337-34 Strain gauge load cell 50kN capacity
S337-51 Calibration process of load cell / Unitronic
S205-16 Four-point bending device to test glass-fibre reinforced concrete.
Rollers dimensions: Ø 40 by 310 mm long
Lower rollers adjustable from 110 to 310 mm
Upper rollers adjustable from 45 to 120 mm
Weight: 20 kg approx.
S206-31 Flange/Connector of the load cell S337-34
C109-11N Software for flexure tests on concrete beams (p. 18)

S205-16



C109-11N Software for flexural test on concrete beam

FLEXURAL TEST WITH CENTRE POINT ON CONCRETE BEAMS AND CLAY TILES

STANDARDS: EN 12390-5 I ASTM C78, C293 I BS 1881:118

S206N Unitronic 200 kN
S205-18 Flexure device with centre point loading to test clay tiles and concrete beams dimensions 100x100x400(500) mm
Consisting of lower beam with two bearers
(one articulated) adjustable from 100 to 315 mm, and upper central articulated bearer fixed to the load cell.
Weight: 20kg approx.
S337-34 Strain gauge load cell 50 kN capacity
(to replace the 200 kN load cell)
S206-31 Flange/connector of the load cell S337-34
C109-11N Software for flexural tests on concrete beams (p. 18)

S205-18

SPLITTING TENSILE TEST ON CONCRETE CYLINDERS

STANDARDS: EN 12390-6 I ASTM C496 I NF P18-408 I BS 1881:117

C100-01 + C101-01

S206N Unitronic 200 kN
C101-01 Splitting tensile test device (technical details and other devices: p. 314)
C100-01 Packing strips for the device C101-01
C109-12N Software for splitting tensile test. (p. 18)

SPLITTING TENSILE TEST ON CONCRETE CUBES AND BLOCK PAVERS

STANDARDS: EN 1338 I EN 12390-6

C100-02 + C103

S206N Unitronic 200 kN
C103 Splitting tensile test device (p. 314)
C100-02 Packing strips for the device C103
C109-12N Software for Splitting tensile test (p. 18)

PUNCHING TEST ON CLAY BLOCKS

STANDARDS: EN 15037-2, 15037-3 | UNI 9730-3

S206N Unitronic 200 kN
C093-11 Punching device for clay block for flooring tests
S205-15 Holding beam for the device
S337-32 Strain gauge load cell 10 kN capacity
S206-32 Flange/Connector for the load cell S337-32
S337-51 Calibration process of load cell / Unitronic
C109-16N Software for the punching test (p. 18)

COMPRESSION TEST ON MORTAR SPECIMENS

STANDARDS: EN 196-1 | ASTM C109, C349 | NF P15-451
EN ISO 679 | DIN 1164

S206N Unitronic 200 kN
E170 Compression device on portions of 40x40x160 mm specimens
(devices for different specimens described at p. 428)
E163N Software for the compression test (p. 18)

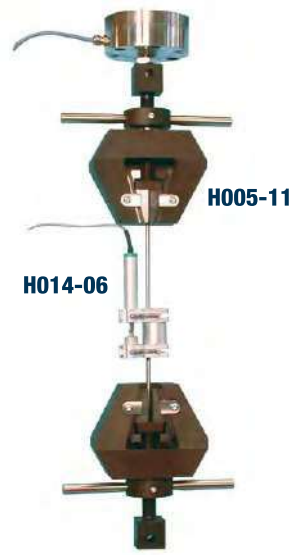
FLEXURAL TEST ON MORTAR PRISMS 40X40X160 MM

STANDARDS: EN 196-1 | ASTM C348 | NF P15-451
DIN 1164 | EN ISO 679

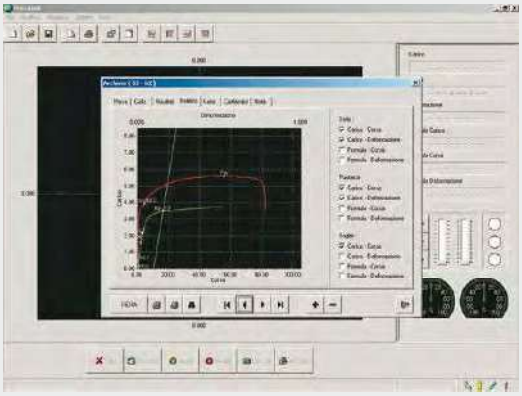
S206N Unitronic 200 kN
E172-01 Flexure device for 40x40x160 mm specimens
(available also device to ASTM, see p. 428)
S337-32 Strain gauge load cell 10 kN capacity
S206-32 Flange/connector of the load cell S337-32
S337-51 Calibration process of load cell / Unitronic
E164N Software for the flexural test (p. 18)

TENSILE TESTS ON METALS, PLASTICS, WIRES, TEXTILES ETC.

STANDARDS: ASTM D2166 | BS 1377:7 | AASHTO T208



S206N Unitronic 200 kN
H005-11 Tensile heads, upper and lower (p. 444).
Daylight between heads: min. 50 mm / max. 420 mm
S206-33 Flange/connector of the tensile heads H005-11
H005-21 Flat seizing grip for flat specimens 1-10 mm thickness by 25 mm max. width, and round specimens Ø 3-5 mm
H005-31 "V" shape seizing grips for round specimens Ø 5-12 mm



H009N Practical example of a saving test graph where the user can select which traces have to be shown, modify the scales or personalize the colors and give a new name to the axis upgrading.

OPTIONAL ACCESSORIES

H014 Extensometer, electronic, for tensile deformation strength tests (p. 445)
H009N Software for load/deformation, graphs, test certificate

Technical specifications: see p. 449 where there are also listed devices to test plastics, wires, ropes, flexural and bending tests and various models of extensometers.

Note: Accessories for specific tests listed above, are common for different tests. We recommend to check them when ordering, to avoid duplications.