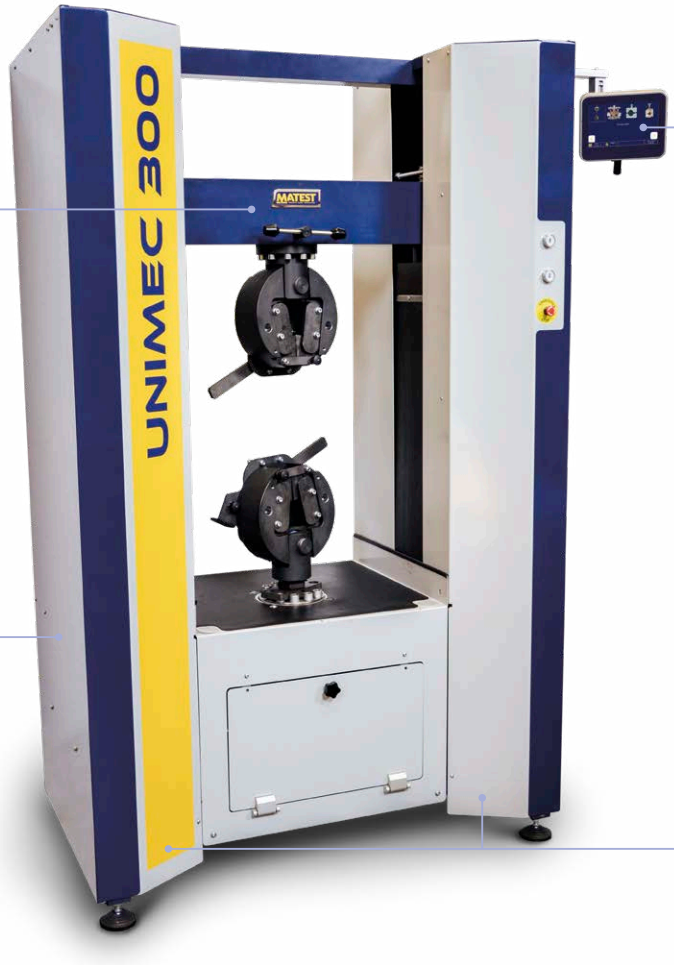
H012

UNIMEC 300

SERVO-CONTROLLED ELECTROMECHANICAL UNIVERSAL TESTING MACHINE

Unimec 300 is an electromechanical universal testing machine suitable to **test different kinds of construction materials** such as concrete, mortar, steel, soil, asphalt, bitumen and also plastic, rubber, wood and others. It can work in two directions, allowing to **perform tests both in tension and in compression up to 300kN**. Unimec 300 is equipped with a **high precision load cell to grant accurate results**, allowing to control in displacement, deformation or load. The **movement system includes two linear actuators** (of the ball-screw type) which provide two main effects: reduction of the friction at minimum, granting a smooth and precise positioning of the crosshead; elimination of manual operations to determine the position of the crosshead, the movement is completely automatized and controlled with an easy-access keyboard.



Crosshead, with a quick coupling, for an easier and faster accessories installation

Adjustable touch-screen display

The painted steel carter protects guide columns against dust and corrosion

Two linear actuators (ball-screw type)

MAIN FEATURES

- Two high resistance steel columns with ground hard chrome surfacing granting high rigidity.
- Two ball-screw type actuators with preloaded lead screws that grant high precision for the crosshead positioning.
- Sintered bushes with low friction coefficient for a smooth movement.
- Automatized positioning of the upper crosshead.
- Possibility to execute tests in both directions.
- Solid base containing the transmission components and the hardware control instruments.
- Stiffness: better than 300 kN/mm

TECHNICAL SPECIFICATIONS

- Vertical daylight without accessories, from 132 to 1032 mm
- Horizontal daylight between columns: 650 mm
- Max load in compression and tension: 300 kN
- Crosshead speed range: 0.0001 ÷ 200 mm/min
- Max crosshead stroke: 900 mm
- 8 channels (24 bit) suitable for connection of load, displacement, deformation, LVDT, temperature transducers and strain gauges*
- Display LCD, TFT, 800x480 pixels, 7'', graphic touchscreen
- Ports: 1 ethernet, 2 USB

Power supply: 230V 1ph 50Hz 1100W
Dimensions: 1400x710x1950 mm
Weight: 1000 kg approx.

* Possibility to add 8 extra channels for a total of 16.

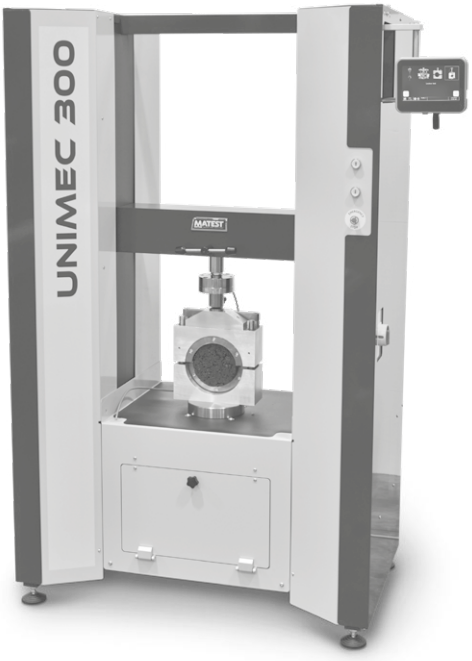
MULTIPLE APPLICATIONS

Thanks to its versatility, Unimec 300 is the best choice for advanced research and evaluation of mechanical properties of different specimens and materials in accordance with the latest relevant standards or following procedures not yet described by any standard.

- Compression on concrete (EN 12390-3, ASTM C39)
- Compression on mortar (EN 196-1, ASTM C109, C349)
- Flexure on concrete (EN 12390-5, 1170-4, ASTM C77, C293)
- Flexure on mortar (EN 196-1, ASTM C348)
- Splitting tensile test on concrete (EN 1338, 12390-6, ASTM C496)
- Punching test on clay blocks (EN 15037-3)
- California bearing ratio (EN 13286-47, ASTM D1883)
- Direct shear (Leutner) between bituminous strata (ALP A StB t.4)
- Duriez compression (NF P98-251/1, NF P98-251/4)
- Marshall stability test (EN 12697-34, ASTM D5581, D6927)
- Splitting tensile test on bitumen (EN 12697-23, ASTM D6931)
- Energy absorption capacity (EN 14488-5)
- Pull off tension test (TP ASPHALT - StB 81)
- Tensile test on metals (ISO 6892-1, 15630-1, ASTM A370, E8)
- Tensile test on plastics and geotextiles materials (ISO 527, 10319, ASTM D4595)
- Tensile test on composite materials
- …and others

DETAILS MAKE THE DIFFERENCE

Removable pin for fast replacement of accessories



User-friendly interface

Opening door for better access and easy maintenance

Accessible control panel