

## COMPRESSION/FLEXURAL TESTING MACHINES WITH DUAL MEASURING RANGE

TO TEST CEMENT AND MORTAR SPECIMENS, BRICKS, ROCKS, REFRACTORIES ETC.

STANDARDS: EN 196-1, EN 13286-41, EN 933-5, EN 1015-11 | ISO 679 | ASTM C109, C348, C349, C1194 | DIN 1164 | BS 4550 | GOST 26798-1

These testing machines foresee a **dual measuring range in the same testing chamber**. The two ranges can be used alternatively and are suitable to perform:

- Flexural tests on cement prisms 40.1x40x160 mm (selecting the low capacity range)
- Compression tests on portions of prism 40.1x40x160 mm broken in flexure, cubes side 40, 50, 70, 100 mm 2", cores with max. height of 180 mm (selecting the nominal range).

The measuring range 0 - 15kN can be also used for compression tests on specimens with expected low strength values.

Equipped with an electric microswitch to stop the piston after the specimen breakage, in order to avoid damages to the compression or flexure device.

### MAIN FEATURES FOR ALL MODELS

- Two columns high stiffness frame.
- Max. vertical daylight between platens: 185 mm
- Horizontal daylight between columns: 175 mm
- Platens diameter: 153 mm
- Ram travel: 45 mm approx.
- Two pressure transducers granting the Class 1 starting from 10% of the scale for both the ranges.
- Supplied complete with lower compression platen and coupling piece to easily fix the compression devices.
- Power supply (motorized models): 230V 1ph 50Hz 750W
- Weight: 310 - 340 kg



E160D + E170



E161-01A + E172-01

### COMPRESSION | FLEXURAL

### LOAD MEASURING SYSTEM

MODEL	Dual range kN	Manual	Motorized	Gauge	Digitec mod. C108N (p. 219)	Autotec mod. C098N (p. 219)
<b>E152</b>	300/50	▼		▼		
<b>E156</b>	300/50		▼	▼		
<b>E160D</b>	500/15		▼		▼	
<b>E160-01D</b>	250/15		▼		▼	
<b>E161-01A *</b>	250/15		▼			▼
<b>E161-03A *</b>	500/15		▼			▼

## COMPRESSION/FLEXURAL TESTING MACHINES WITH DUAL MEASURING RANGE TO TEST CEMENT AND MORTAR SPECIMENS, BRICKS, ROCKS, REFRACTORIES ETC.



STANDARDS: EN 196-1, EN 13286-41, EN 933-5, EN 1015-11 | ISO 679 | ASTM C109, C348, C349, C1194 | DIN 1164 | BS 4550 | GOST 26798-1



**CYBER-PLUS OR SERVO-PLUS EVOLUTION** DIGITAL DISPLAY

**INVERTER**

For a further improvement of energy efficiency and silent operation, (optional device code C099N).  
Technical details, p. 223, 312



**BARCODE**

Scanner for specimen file/identification, (optional device code C099-01N).  
Details, p. 223



E160N + E170

E161-01N + C104-04 + C127N + E172-01

COMPRESSION | FLEXURAL

LOAD MEASURING SYSTEM

MODEL	Dual range kN	Motorized	Cyber-Plus Evolution mod. C109N (p. 224)	Servo-Plus Evolution mod. C104N (p. 224)
<b>E160N</b>	500/15	▼	▼	
<b>E160-01N</b>	250/15	▼	▼	
<b>E161-01N *</b>	250/15	▼		▼
<b>E161-03N *</b>	500/15	▼		▼

\* Servo-Plus/Autotec models feature fully automatic power pack - electrovalve operated test start (no manual lever).

**ACCESSORIES FOR FLEXURE | COMPRESSION MACHINES**

**E172-01** FLEXURE DEVICE for 40.1x40x160 mm mortar specimens. EN 1015-11, EN 196-1, EN/ISO 679 See p. 428

**E172-01**

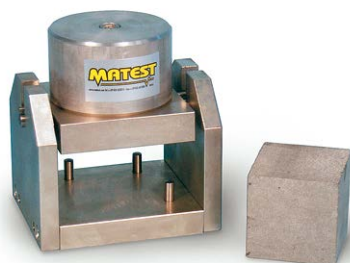
**E172-02** FLEXURE DEVICE for 40x40x160 mm mortar specimens. ASTM C348. See p. 428

**E170** COMPRESSION DEVICE for portions of prism 40.1x40x160 mm broken in flexure. EN 196, EN/ISO 679, ASTM C349. See p. 428

**E170****E171**

**E171** COMPRESSION DEVICE for cubes 50 mm and 2" side. ASTM C109, C1194. See p. 428

**E171-01** COMPRESSION DEVICE for cubes 70.7 mm side. BS 4550. See p. 428

**E171-01**

 **Note:** other models of flexure and compression devices with accessories are listed at p. 428

**E161-05** DISTANCE PIECE, 50 mm high

**E161-06** DISTANCE PIECE, 25 mm high

 **Note:** the compression devices do not require any distance piece.

**C127N** GRAPHIC PRINTER on thermo-paper on board

**C127-11** THERMO-PAPER roll for printer (pack of 10 rolls)

**E161-12** SAFETY GUARDS, polycarbonate made, to CE Safety Directive, complete with hinges and lock

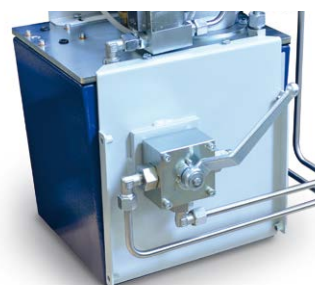
**C121-51** STOP SWITCH on safety guards. See p. 317

**C097-05** CLASS 1, starting from 1% of the full range. With a special calibration procedure it is possible to grant Class 1 practically on the full range of the compression machine.

**E161-11** BENCH, to hold the compression frame.

**E161-11**

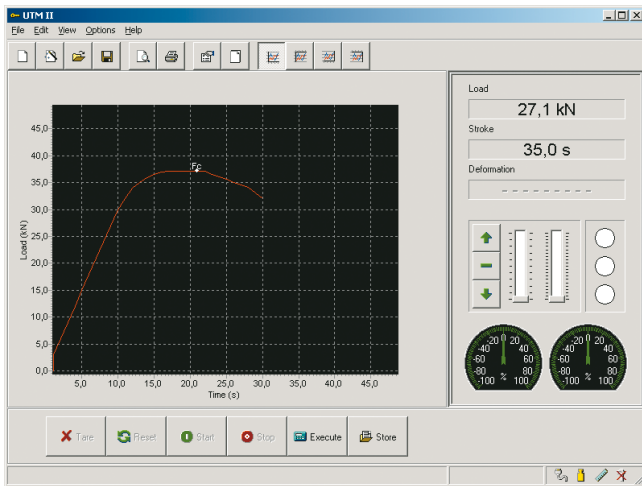
**C115-01** TWO WAY HYDRAULIC VALVE, to activate a second frame. Technical details: see p. 318

**C115-01**

**C106-10** FLEXURAL DEVICE FOR CONCRETE BEAMS 100x100x400 mm and 150x150x600 mm

**C106-10**

**H009-01** PERSONAL COMPUTER, LCD 22" monitor, keyboard, mouse, cables. The supply of the PC includes the installation of the software



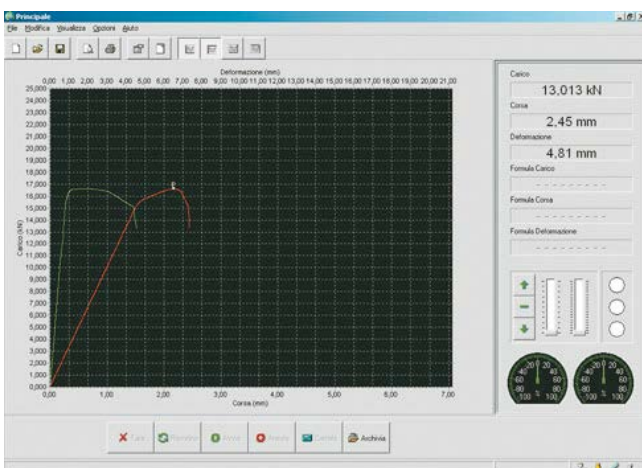
E163

The screenshot shows the Data (190 - 190) software interface. It features a table with columns: #, n°, Name, Symbol, Value, and Unit. The table contains the following data:

#	n°	Name	Symbol	Value	Unit
1	1	Width:	b	40	mm
1	2	Height:	h	40	mm
1	3	Distance:	l	100	mm
1	4	Maximum load:	Fr	8300	N
1	5	Strength:	Rf	19,453	N/mm²

Below the table are navigation and control buttons.

E164



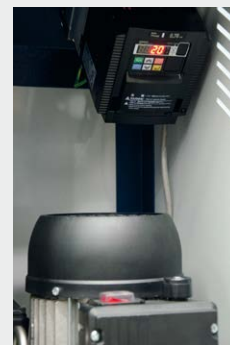
C123N

**C104-04** CONSOLE HOUSING THE SERVO-PLUS EVOLUTION  
The pump assembly "lined" with sound proofing material for noise reduction and the digital system are encased to enhance the design and look of the machine. Technical details: see p. 312



C104-04

**C099N** INVERTER DEVICE granting a lot of improvements.  
**NEW** Applicable only on Cyber-Plus and Servo-Plus Evolution machines.  
Technical details: see p. 223, 312



C099N

SOFTWARE for DIGITEC / AUTOTEC  
or CYBER / SERVO PLUS models

**C123 (N)\*** SOFTWARE **Servonet** for remote control through PC

**E163 (N)\*** SOFTWARE for compression tests

**E164 (N)\*** SOFTWARE for flexural tests

Technical detail: see p. 18

**(N)\*** for Cyber - Servo Plus models.