



**AUTOMATIC COMPRESSION
TESTING MACHINES
EN**

CONCRETE

www.testmak.com

EN AUTOMATIC COMPRESSION TESTING MACHINES

WELDED FRAMES WITH FRAME ACCESSORIES

CODE	PHOTO	CAPACITY	FRAME TYPE	STANDARDS
C3200EF		1000 kN	2 COLUMN (WELDED FRAME)	EN 12390-3 12390-4 BS 1881 1610 NF P18-411
C3215EF		1500 kN	2 COLUMN (WELDED FRAME)	
C3222EF		2000 kN	2 COLUMN (WELDED FRAME)	
C3226EF		3000 kN	2 COLUMN (WELDED FRAME)	

Frame prices include the following accessories;

- 1- Spacer Discs for ASTM Standards (1,2,3 and 4 inch)
- 2- Upper Platen;
- 3- Lower Platen;
- 4- Piston with Limit switch (for piston stroke)
- 5- Removable transparent front and rear safety doors
- 6- Security Switch for to stop the machine if the door is opened during a test.

AUTOMATIC POWER PACK

CODE	PHOTO	CAPACITY	LANGUAGE	SOFTWARE	POWER
C3000/01		1000 kN	ENGLISH FRENCH SPANISH RUSSIAN	FOR COMPUTER TABLET PC SMARTPHONE	110-120V 220-240V
C3000/02		1500 kN			
C3000/03		2000 kN			
C3000/04		3000 kN			

EN AUTOMATIC COMPRESSION TESTING MACHINES

EN SERIES AUTOMATIC COMPRESSION TESTING MACHINES

Testmak EN Standards Automatic Compression Testing Machines are designed for reliable and consistent to do the of compressive strength tests of different sizes concrete cylinder and cube moulds of samples.

Compressive strength test machines are manufactured in accordance with international TS EN 12390-3, 12390-4 and TS EN ISO 7500 standards. It also meets the requirements of all CE norms related to operator health and safety.

Concrete compression test machines are produced in Class 1 starting from 50 kN. The upper platen adjusts itself to apply homogeneous loading on the sample. Upper and lower platens are in accordance with international specifications. Surface hardness is 55HRC, flatness tolerance 0.02 mm. Traceable certificate of surface hardness is shipped with the device on request.

Experiments can be performed than on automatic control and data acquisition unit or with the free TCM200 computer software. Tablet and smartphone applications are also available optional. Can do test by connecting with smartphone or tablet the machines via wireless internet (Wifi) and can perform print test report, from the thermal printer or via computer software with desktop printer. (reporting, graphic output, etc.)

Testable Specimens

- 1-) Values of 100, 150, 200 mm concrete cube samples such as dimensions, test speed and fracture sensitivity rate are automatically predefined in the device.
- 2-) Values of 100*100, 150*300, 160*320 mm concrete cylinder samples such as dimensions, test speed and fracture sensitivity rate are automatically predefined in the device.
- 3-) If you want to enter special values, you can easily change or add them on the touch screen.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Limit switch (for piston stroke)
- Emergency stop button
- Removable transparent front and rear safety doors
- Software controlled maximum load value
- Security Switch for to stop the machine if the door is opened during a test.



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Hydraulic Power Pack

The integrated electric motor and the high pressure hydraulic pump are energy efficient and operate at variable speeds to achieve and maintain required pressures based on loading program demands. This state-of-the-art drive system is dramatically quieter, eliminates pressure variations from over-heated oil, and extends the service life of the hydraulic components.

TCM200 Touchscreen Controls

The TCM200 touchscreen controls specimen contact, pre-loading, rate of load, break detection, data collection, and return of the piston to the home position following specified requirements for the selected test method.



Advantages of TCM200 touch screen control and data acquisition unit

- 1-) Values of 100, 150, 200 mm concrete cube samples such as dimensions, test speed and fracture sensitivity rate are automatically predefined in the device.
- 2-) Values of 100*100, 150*300, 160*320 mm concrete cylinder samples such as dimensions, test speed and fracture sensitivity rate are automatically predefined in the device.
- 3-) If you want to enter special values, you can easily change or add them on the touch screen.

Force, stress, and rate of load are displayed simultaneously during a test, with an option to show real-time load vs time or stress vs strain graphs. Load rate and applied force are precisely regulated by feedback during sample loading. Tests can be printed immediately using the Wi-Fi capability, or the data can easily be collected and transferred to the user's PC for reporting results using a with SD card drive and the USB ports.



A menu button prints each test or transfers test data in summary form. Testing laboratory, sample ID, and client information are stored for error-free reporting and distribution. The diagnostics feature instantly displays the status of the emergency-stop button, drive system, data communication, pressure transducer, and over-travel limit switch. If any of the systems indicate a fault condition, it must be resolved before testing can proceed.



EN AUTOMATIC COMPRESSION TESTING MACHINES

TCM200 Touch Control Unit is designed to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonry units/blocks by controlling the Testmak automatic compression / flexure testing machines.

All the operations of TCM200 Touch are controlled from the front panel touch screen display.

TCM200 Touch Control Unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seamless manner to activate the option or enter a numeric value to set the test parameters. Digital graphic display is able to draw real-time “Load vs. Time”, or “Stress vs. Time” graphics. Can do calibration easily from 10 points. Manual Control is available.

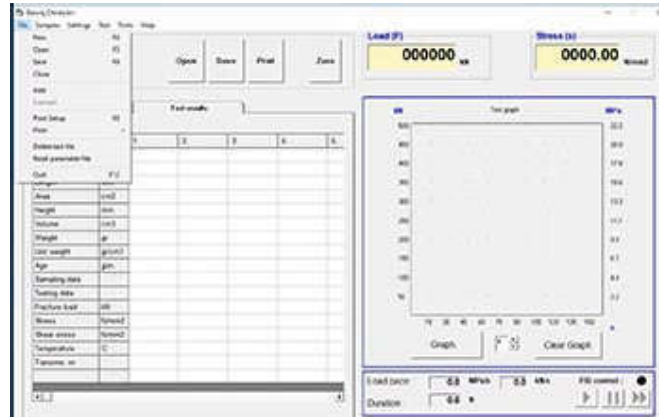
Technical Features for TCM200 Touch Screen

- Color TFT touch display supports 16M colors and supports 800x480 pixel screen resolution
- 3 pcs universal analog input sockets (ADC)
- Each analog input with 18 bit precision (1/256000)
- 1 replacement analog input
- Total of 4 analog high-precision measuring capacities
- 2 analog output sockets (DAC)
- PULSE / DIR outputs (PULSE / DIR / ENA) to control the servo and stepper motor drives.
- Digital outputs for general purpose (can pull relays and control different electrical units)
- Digital inputs for general purpose (receives and evaluates input signals like limit contacts from the environment)
- Potentiometer input (reference signal input for calibration and remote control)
- USB communication signal output (communicates with computers)
- Connects to local networks and the Internet with Ethernet 10/100 network connection output (optional)
- Connects to portable devices via Bluetooth wireless connection (optional)
- 500 test results can be stored in internal memory
- Due to the SD (memory) card connection, a large number of test results can be stored in the device memory (40,000 test results).
- In addition, the results can be taken from the device memory and transferred to the computer as an Excel table. (Optional)
- Resistive touch screen allows easy operation of device functions by touching the screen
- Sensor modules are compatible with loadcell (load cell), pressure sensor (4-20 / 0-20 mA), potentiometric distance sensors, strain washers, thermocouples and all kinds of mV output sensors.
- Provides precise calibration with multi-point calibration (up to 10 points)
- Setting and calibration menus are password protected and prevent unauthorized use
- Allows testing with a computer, tablet, smartphone or on the touch screen panel.
- There are many test sample information screens and test methods in the device memory and tests can be performed easily
- Different menu languages can be selected via the device via language support (Turkish, English, French, Spanish)
- Speed control algorithm is closed loop PID control and all parameters can be adjusted on user side.
- The device can switch between one-touch load and deformation control modes Cihaz farklı makinelere kolayca adapte edilebilir ve en uygun kontrol sağlanır
- The graphical field that visualizes the test results on the screen has the ability to change the scale automatically and automatically adjusts the optimal scale as the values change
- Firmware updates can be made via USB input. In addition, via the computer allows remote or internet update.

EN AUTOMATIC COMPRESSION TESTING MACHINES

TCM200 Touch Software for Automatic Compression / Flexure Testing Machines

TCM200 Touch software provides to perform automatically compression, flexure and splitting tensile strength tests of construction materials such as concrete, cement mortar, masonry units/blocks by controlling the Testmak automatic compression / flexure testing machine



EN Automatic Compression Testers send complete with following accessories;

1- Spacer Discs for EN Standards

- 205x90 mm, Dia. x H spacer disc 1 piece
- 205x50 mm, Dia. x H spacer disc 1 piece
- 205x30 mm, Dia. x H spacer disc 1 piece
- 205x10 mm, Dia. x H spacer disc 1 piece

2- Upper Platen;

- Upper Platen Diameter 300 mm (with ball seating assembly) (For EN Standards) (For All Model)

3- Lower Platen;

- Lower Platen Diameter 300 mm (For EN Standards) (For All Model)

4- Piston;

- Piston Diameter 200 mm (For Frame Model C3210EF)
- Piston Diameter 200 mm (For Frame Model C3215EF)
- Piston Diameter 250 mm (For Frame Model C3222EF and C3224EF)
- Piston Diameter 300 mm (For Frame Model C3226EF and C3228EF)

5- Automatic Hydraulic Power Pack ;

- Automatic Hydraulic Power Pack, Max 315 bar (For Frame Model C5210)
- Automatic Hydraulic Power Pack, Max 350 bar (For Frame Model C5215)
- Automatic Hydraulic Power Pack, Max 410 bar (For Frame Model C5222)
- Automatic Hydraulic Power Pack, Max 600 bar (For Frame Model C5226)

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TECHNICAL SPECIFICATIONS FOR WELDED FRAME

The sturdy, welded steel frame exceeds ACI 363 requirements for system robustness and is manufactured with total capacities of 1000kN, 1500 kN, 2000 kN, and 3000 kN.



Product Code	C3200	C3215	C3222	C3226
Standards	EN	EN	EN	EN
Capacity	1000 kN	1500 kN	2000 kN	3000 kN
Load Capacity Range	10–1000 kN	20–1500 kN	50–2000 kN	50–2000 kN
Frame Type	C3210EF	C3215EF	C3222EF	C3226EF
Upper Platens Dim.	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Lower Platens Dim.	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Max. Vertical Clearance	340 mm	340 mm	340 mm	340 mm
Max. Horizontal Clearance	320 mm	320 mm	360 mm	425 mm
Ram Diameter	200 mm	200 mm	250 mm	300 mm
Piston Stroke	50 mm	50 mm	50 mm	50 mm
Platen Hardness	55HRC	55HRC	55HRC	55HRC
Fluid Reservoir Capacity	12 L	12 L	12 L	12 L
Power	220-240V	220-240V	220-240V	220-240V
DIMENSIONS AND WEIGHT				
Overall Width	700 mm	750 mm	750 mm	925 mm
Overall Depth	480 mm	500 mm	540 mm	550 mm
Overall Height	1250 mm	1300 mm	1400 mm	1500 mm
Overall Weight	650 kg	700 kg	800 kg	1070 kg



Telephone : +90 312 395 36 42
Fax : +90 312 395 36 43

Web : www.testmak.com
E-mail: info@testmak.com

Koca Sinan Industrial Sites 1183 Street No: 40
06370 OSTIM / ANKARA / TURKEY