TESTMAK
Material Testing Equipments

AUTOMATIC COMPRESSION TESTING MACHINES ASTM

CONCRETE

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ASTM AUTOMATIC COMPRESSION TESTING MACHINES

WELDED FRAMES WITH FRAME ACCESSORIES

CODE	PHOTO	CAPACITY	FRAME TYPE	STANDARDS
C5200AF		**250.000 lbs (1,112 kN)**	2 COLUNN (WELDED FRAME)	**ASTM** C39,C78, C109, C293, C49 **AASHTO** T 22,T 97, T 177,T 106
C5215AF		**325.000 lbs (1,446 kN)**	2 COLUNN (WELDED FRAME)	
C5222AF		**450.000 lbs (2,002 kN)**	2 COLUNN (WELDED FRAME)	
C5226AF		**675.000 lbs (3,0002 kN)**	2 COLUNN (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		**250.000 lbs (1,112 kN)**	ENGLISH FRENCH SPANISH	FOR COMPUTER TABLET PC SMARTPHONE	110-120V 220-240V
C3000/02		**325.000 lbs (1,446 kN)**			
C3000/03		**450.000 lbs (2,002 kN)**			
C3000/04		**675.000 lbs (3,0002 kN)**			

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ASTM AUTOMATIC COMPRESSION TESTING MACHINES

ASTM SERIES AUTOMATIC COMPRESSION TESTING MACHINES

TESTMAK ASTM series Fully Automatic Concrete Compression Test Machines have a total capacity of 250,000lbf (1,112 kN), 325,000lbf (1,446 kN), 450,000lbf (2,002kN) and 675,000lbf (3,000kN) their rugged, welded steel frames exceed ACI 363 requirements for system rigidity. They perform complete strength tests for concrete cylinders, beams, cubes, cores, and other sample types.
The device is suitable for do testing in AASHTO T 22 , BS 1610 , BS 1881 , ASTM C109/109M , ASTM C293/293M , ASTM C39/39M , ASTM C78/78M standards.

The units are supplied ready for compression strength testing of 6x12in (152x305mm) concrete cylinders up to 12,700psi (87.6mPa) with user-supplied unbonded neoprene capping pads and steel retainers.
Can do tested with a single button on the TCM200 touchscreen controller after the selection of the test method, sample type, specimen data, and test parameters are made.

Testable Specimens

• Concrete Cubes: 6in or 150mm concrete cube sample or any other custom cube and prism size can be tested with this machine.
• Concrete Cylinder: 6x12in (152x305mm) concrete cylinder samples or any other custom diameters cylinder can be tested with this machine.

The piston is covered with a protective panel so that it is not affected by accumulated test residues. The hydraulic power unit is designed independently of the machine to prevent excessive and long-term wear. Emergency stop button, hydraulic safety relief valve, piston overtravel limit switch and part guard gate provide safety for the operator while tests are being performed.

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 6in or 150mm concrete cube samples such as dimensions, test speed and fracture sensitivity rate are automatically predefined in the device.
2-) Values of 6x12in (152x305mm) 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.

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ASTM 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, masonary 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 seemless 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.

Technicial 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 modesCihaz 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.

ASTM 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, masonary units/blocks by controlling the Testmak automatic compression / flexure testing machine

ASTM Automatic Compression Testers send complete with following accessories;

1- Spacer Discs for ASTM Standards
- 6 x 4in (152.4 x 101.6 mm), Dia. x H spacer disc 1 piece
- 6 x 3in (152.4 x 76.2 mm), Dia. x H spacer disc 1 piece
- 6 x 2in (152.4 x 50.8 mm), Dia. x H spacer disc 1 piece
- 6 x 1in (152.4 x 25.4 mm), Dia. x H spacer disc 1 piece

2- Upper Platen;
- Upper Platen: 6.5in (165.1mm) dia. (with ball seating assembly) (For All Model)

3- Lower Platen;
- Lower Platen: 6.5in (165.1mm) dia. (For Frame Model C5200AF and C5215AF)
- Lower Platen: 10.5in (266.7mm) dia. (For Frame Model C5222AF and C5226AF)

4- Piston;
- Piston Diameter 6in (152.4mm) (For Frame Model C5200)
- Piston Diameter 6.75in (171.45mm) (For Frame Model C5215)
- Piston Diameter 10.5in (266.7mm) (For Frame Model C5222)
- Piston Diameter 12.5in (317.5mm) (For Frame Model C5226)

5- Automatic Hydraulic Power Pack ;
- Automatic Hydraulic Power Pack, Max 300 bar (For Frame Model C5200)
- 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)

ASTM AUTOMATIC COMPRESSION TESTING MACHINES

TECHNICAL SPECIFICATIONS

The sturdy, welded steel frame exceeds ACI 363 requirements for system robustness and is manufactured with total capacities of 250,000 lbf (1,112 kN), 325,000 lbf (1,446 kN), 450,000 lbf (2,002 kN), 675,000 lbf (3,002 kN).

Product Code	C5200	C5215	C5222	C5226
Standards	ASTM, AASHTO	ASTM, AASHTO	ASTM, AASHTO	ASTM,, AASHTO
Capacity	250,000lbf	325,000lbf	450,000lbf	675,000lbf
Load Capacity Range	2,500–250,000lbf	3,250–325,000lbf	4,500–450,000lbf	6,000–675,000lbf
Frame Type	C5200AF	C5215AF	C5222AF	C5226AF
Upper Platens Dim.	6.5in (165.1mm) dia.	6.5in (165.1mm) dia.	6.5in (165.1mm) dia.	6.5in (165.1mm) dia.
Lower Platens Dim.	6.5in (165.1mm) dia.	6.5in (165.1mm) dia.	10.5in (266.7mm)	10.5in (266.7mm)
Max. Vertical Clearance	19.625in (498.48mm)	19.25in (488.95mm)	18.375 in (467 mm)	18.375 in (467 mm)
Max. Horizontal Clearance	9.25in (234.95mm)	9.5in (241.3mm)	13.312 in (338 mm)	13.312 in (338 mm)
Ram Diameter	6in (152.4mm)	6.75in (171.45mm)	10.5in (266.7mm)	12.5in (317.5mm)
Piston Stroke	2.5in (63.5mm)	2.5in (63.5mm)	2.5in (63.5mm)	2.5in (63.5mm)
Platen Hardness	60HRC	60HRC	60HRC	60HRC
Fluid Reservoir Capacity	2 gallons (3.78L)	2 gallons (3.78L)	2 gallons (3.78L)	2 gallons (3.78L)
Power	110-120V Hz, 220-240V	110-120V Hz, 220-240V	110-120V Hz, 220-240V	110-120V Hz, 220-240V
DIMENSIONS AND WEIGHT				
Overal Width	30in (762mm)	33in (838.2mm)	34in (863.6mm)	35in (889mm)
Overall Depth	17in (431.8mm)	17in (431.8mm)	24in (609.6mm)	24in (609.6mm)
Overall Height	55 in (1,400 mm)	57 in (1,447.80 mm)	57 in (1,447.80 mm)	59 in (1,500 mm)
Overall Weight	550 lb (248.87kg)	750 lb (340kg)	1,547 lb (700) kg	1,900 lb (860 kg)