TM TEST MAK
MATERIAL TEST EQUIPMENTS
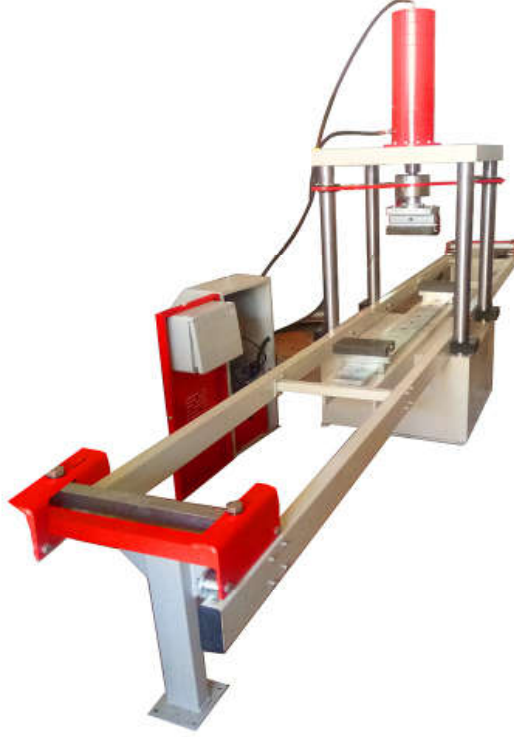

CONCRETE
PRODUCT BROCHURE

CONCRETE RAILWAY SLEEPERS AND BEARERS
STATIC TESTING MACHINE 600 KN

C5600

PRODUCT MODEL

C5600	Concrete Railway Sleepers and Bearers Static Testing Machine, 600kN Capacity - 220-240 V 50-60 Hz

STANDARDS

Standards	TS EN 1338, 1339, 1340, 12390-5, 12390-6; ASTM C78, C293, C496

INFORMATION

Manufacturer	TESTMACLAB LABORATUVAR TEST CİHAZLARI PAZ. VE DIŞ TİC. LTD. ŞTİ
Country of Origin	TÜRKİYE
Product name	Concrete Railway Sleepers and Bearers Static Testing Machine

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Concrete Railway Sleepers and Bearers Static Testing Machine

DESCRIPTION

The C5600 600 kN capacity Flexural Frame is designed for minimum deflection at maximum load resulting in very high accuracy. The load frame is a four column design carrying the ram fitted to the upper crosshead. The frames has a double acting stroking ram with over travel switch protection to shut the machine down when maximum ram travel is reached. A load cell is used for load measurements on the frame.

The C5600 600 kN capacity Flexural Frame is designed to accept all accessories required for flexural, transverse or compression tests.

The load frame provides the stability needed for accurate and repeatable test results over the years of operation.

TESTMAK 600 kN capacity Flexural Frame can be connected to any TESTMAK compression machine as a second frame or can be used with any TESTMAK power pack as an independent Flexural Machine.

Flextural test assemblies should be ordered seperately.

Characteristics:

• High stability four column design

• 350 mm piston stroke with safety limit switch

• High accuracy load measurement with strain gauge load cells

• Can accept wide range of accessories for mentioned standards

• The distance between lower rollers can be set up to 2000 mm

• Can be connected to any TESTMAK compression machine or TESTMAK power pack

TECHNICAL SPECIFICATIONS

Capacity	600 kN
Class 1 range	12-600 kN
Resolution	1/256000
Ram Travel	350 mm
Max. Vertical Clearance	930 mm (Without accessories)
Max. Horizontal Clearance	640 mm
Upper Rollers	2 Qty Diameter: 38 mm x 160 mm Length
Lower Rollers	2 Qty Diameter: 38 mm x 160 mm Length
Max. Clerance Between Lower Rollers	2000 mm
Dimensions	1100x2000x2700 mm
Weight	2600 kg

LCD DATA ACQUISITION CONTROL SYSTEM

The Data Acquisition Control provides real-time graphical indication. Automatically determines the load rate in accordance with the international standards upon sample type. With the STOP and START buttons, the test will automatically stop or start.

LCD Data Acquisition Control System has different units are available (kN / kgf / lbf). Can do Automatic Load Rate upon Sample Type. Total load and also per area are given. and has real time graph indication. Stops Automatically, when Test is completed. Test results can be send printer to with software or from the thermal printer. Can do calibration easily from 5 points. Manual Control is available. Computer and printer are not included in the price.
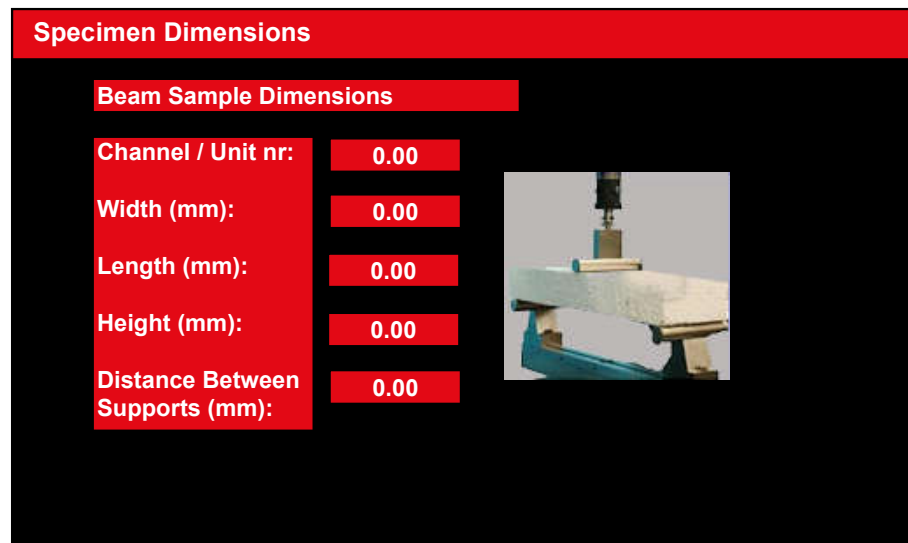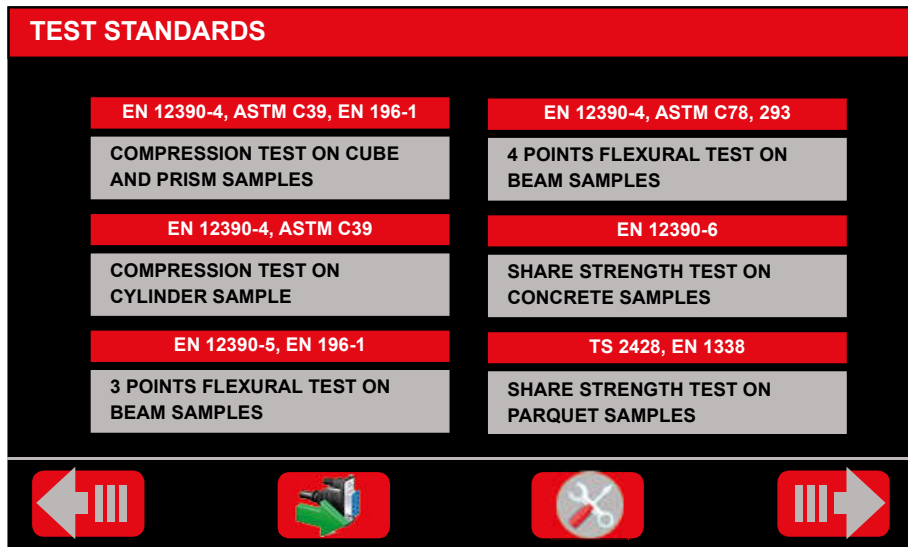
Data Acquisition Control

Technicial Specifications

• 3 universal analog input sockets (ADC)
• Each analog input with 18 bit precision (1/256000)
• 1 replacement analog input
• A total of 4 analog high-precision measuring capacities
• 2 analog output sockets (DAC)
• Analog outputs generate a 0-10V DC output signal
• Motor speed control devices, servo valves with this output signal, proportional valves, etc. reference signal is produced.
• PULSE / DIR outputs (PULSE / DIR / ENA) to control the servo and stepper motor drives
• 5 digital outputs for general purpose (can pull relays and control different electrical units)
• 5 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)
• 2 RS232 serial communication signal outputs (communicates with computers)
• It also connects to motor drives via serial communication via MODBUS connection
• 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)
• Color TFT display supports 16 lar and 7 800 screen sizes, supports 16M colors and supports 800x480 pixel screen resolution
• Resistive touch screen allows easy operation of device functions by touching the screen
• Access to frequently used functions with 6 membrane keypads
• The industrial standard operates with 24V DC supply voltage. Built-in voltage filter and regulator protects against input signal fluctuations
• Sensor modules are compatible with loadcell (load cell), pressure sensor (4-20 / 0-20 mA), potentiometric distance

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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 or device
• 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
• 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
• 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.

When energized to the device, on the digital indicator display will show the following information.

TEST STANDARDS

EN 12390-4, ASTM C39, EN 196-1	EN 12390-4, ASTM C78, 293
COMPRESSION TEST ON CUBE AND PRISM SAMPLES	4 POINTS FLEXURAL TEST ON BEAM SAMPLES
EN 12390-4, ASTM C39	**EN 12390-6**
COMPRESSION TEST ON CYLINDER SAMPLE	SHARE STRENGTH TEST ON CONCRETE SAMPLES
EN 12390-5, EN 196-1	**TS 2428, EN 1338**
3 POINTS FLEXURAL TEST ON BEAM SAMPLES	SHARE STRENGTH TEST ON PARQUET SAMPLES

Specimen Dimensions

Beam Sample Dimensions

Channel / Unit nr:	0.00
Width (mm):	0.00
Length (mm):	0.00
Height (mm):	0.00
Distance Between Supports (mm):	0.00

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Specimen Dimensions

Beam Sample Dimensions

Channel / Unit nr:	0.00
Width (mm):	0.00
Length (mm):	0.00
Height (mm):	0.00
Distance Between Supports (mm):	0.00

Specimen Dimensions

Conrete Sample Dimensions

Channel / Unit nr:	0.00
Length (mm):	0.00
Diameter (mm):	0.00

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Specimen Dimensions

Conrete Paving Sample Dimensions

Channel / Unit nr:	0.00
Length (mm):	0.00
Thickness (mm):	0.00
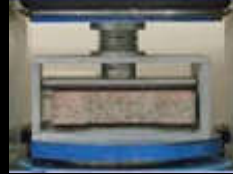
Specimen Dimensions

Border Sample Dimensions

Channel / Unit nr:	0.00
Width (mm):	0.00
Length (mm):	0.00
Height (mm):	0.00
Distance Between Supports (mm):	0.00

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Test Parameters

F [1] 0.0

б 0.0

Test nr:	0.0
Fmax	0.0
s.	0.0
	0.0
Set Speed	0.0

0.0

0.0

0.0

0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0

Start the Test **Pause on Load** **End of test**
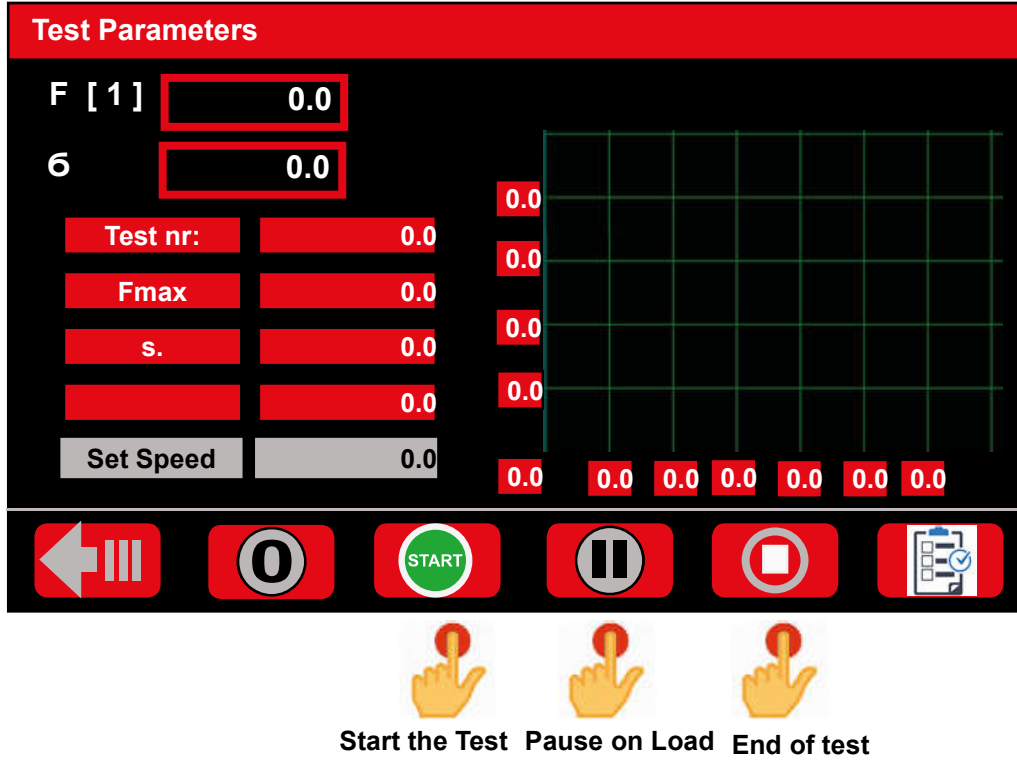
Start the Test

Press (START) to start the test. First, the device performs a bit of fast loading up to the boot value. When the boot value is reached, the speed is automatically set to the test speed level and kept constant at this level until the end of the test.

Pause on Load

If you want to stabilize the load at any load level during the test (PAUSE), press the hold button. In this case, the load is fixed at the load value level when the hold button is pressed and the device starts to wait. If this button is pressed again, the load will resume.

Stop on Load

The device automatically terminates the test when the condition specified for the end of the test occurs.

This condition is usually a decrease in the load as a result of the breakage of the test specimen, but sometimes the test can be completed when a certain load or deformation value is reached.

The user can also end the test at any time by pressing the STOP key at any time (STOP). The unit automatically terminates the test to protect the machine and the sensors when the device detects that the specified loading capacity has been reached.

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Test Results

The test results are saved as a table in the device memory. To access this table, press the test button on the test scre-en. In this case, the test results are displayed.

Test Parameters		
F [1]	0.0	
Ƃ	0.0	
Test nr:	0.0	
Fmax	0.0	
s.	0.0	
	0.0	
Set Speed	0.0	

0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0

Test Results

When the test results are displayed in a table, the test result is displayed on each page. Use the up / down arrow keys to scroll throu-gh the pages. This allows switching between 500 test results in the device memory.

Test Results				1
No	Sample	Fmax	Ƃ (Mpa)	(s.)

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## SOFTWARE

The tests and calibration can be done and monitored with a computer by connecting it to the machine. LCD Control unit can connecting with USB port to the machine. Using the state-of-the-art software provided by TESTMAK with the machine will help performing and managing the tests in a very easy and fast way. By performing the tests via computer, the results can be saved and recalled when required. Reports can be generated automatically by the software and sent to printer.

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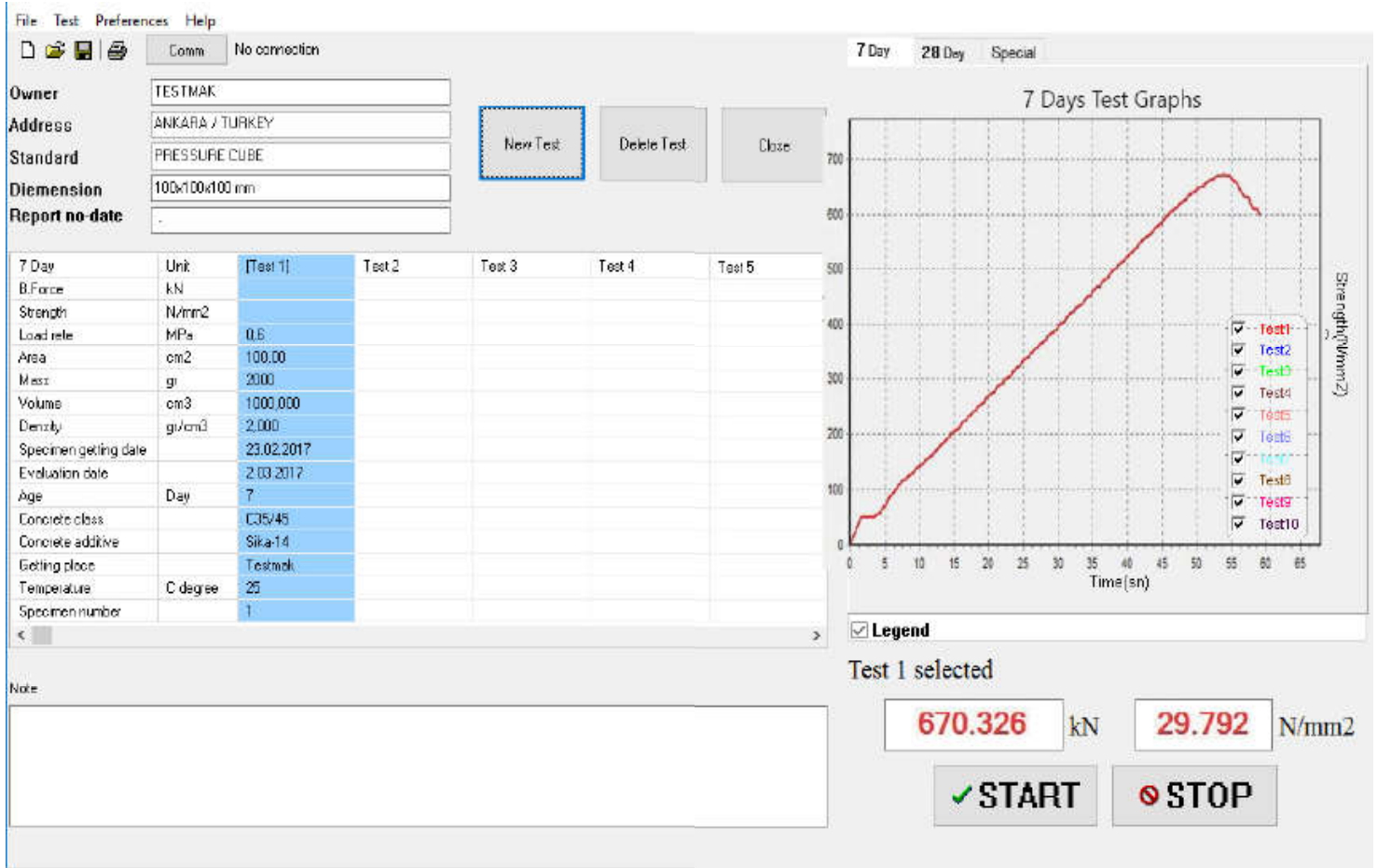
THANK YOU

FOR CHOOSE US

Dear business partners, thank you very much for believing in us and recommending our products to your customers; We sincerely believe that our company will grow even more thanks to you, our esteemed business partners.

You can reach us than our phones or e mail address 24 hours a day.

CONTACT US

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