



ASPHALT TEST EQUIPMENTS
PRODUCT BROCHURE

ASPHALT CONTENT (NCAT) IGNITION FURNACA (NCAT)

B1510



PRODUCT MODEL

B1510 Asphalt Content Binder Ignition Furnace - 380 V 50 Hz

STANDARDS

Standards ASTM D6307 | AASHTO T308 | AASHTO TP53 | EN 12697-39



INFORMATION

Manufacturer	TESTMACLAB LABORATUVAR TEST CİHAZLARI PAZ. VE DİŞ TIC. LTD. ŞTİ
Country of Origin	TURKEY
Product name	Asphalt Content Binder Ignition Furnace

DESCRIPTION

The device is designed to measure asphalt binder content by loss on ignition. The analyzer fully compliant with the latest standards, including: AASHTO T 308-10, ASTM 06307-10, & BS/EN 12697-39:2004. The device avoids the health, environmental & waste management issues & expense associated with the older solvent extraction methods with reduced emissions due to high temperature afterburner. The correction factor must be incorporated manually. Precise weight measurements displayed to 0.1g resolution. Th device has the capacity for large sample sizes for more accurate results. The max capacity of the balance is 6 kg with 0,1 g resolution.

Analyzer has average test times from 40 mins for 6mm aggregates, to 60 mins for 40 mm aggregates. The binder has a printer reports. Flexible enough for most methods derived from the ASMT, AASHTO and BSIEN loss on ignition standards. The Analyzer replaces the older solvent based test methods.

Correction factors are first calculated, using either pre-determined asphalt mixes as a benchmark or aggregate only samples in order to correct for volatile components within the aggregate. Also the effect of reduced air density over the hot sample is tested and corrected by a calibration factor.

Sample masses based on the aggregate particle size are collected using standard sampling methods and the weight before ignition is measured on a balance (or scale) outside the analyzer furnace.

The sample is then introduced into the preheated analyzer and run.

For operator safety the Analyzer's door locks and the test runs to completion. The end point is automatically detected by the Analyzer using absolute or percentage weight changes of %0,01 for consecutive 3 minutes.

OVEN AND AFTERBURNER

- High efficiency heating system with afterburner for a total combustion of exhaust fumes to minimize emissions to conform CE Directives.
- Sample size up to 4000 g for more representative test results
- Temperature range is 392 to 1202°F (200 to 650°C).
- Maximum power rating is 4,8 kW
- Supplied complete with 2 sample trays, fork to catch the pan and cooling cage

HARDWARE

- 16 bit microprocessor controller.
- CPU card controlling both test data display, temperature, database and internal functions.
- On board 40 column serial printer
- An accurate internal balance monitors weights automatically throughout ignition to within ± 0.1 g.
- PID closed loop thermoregulation for both oven and afterburner
- 240x120 pixel large graphic display
- RS 232 output for PC connection

FIRMWARE

- Bidirectional real time communication with the weighing system
- Test setting menu for initial weight, weight loss percentage, correction factor.
- Calibration menu to check and set temperature and weight calibration, for possible manual control.
- Test performance menu of all the test data.
- Internal database for up to 100 tests.

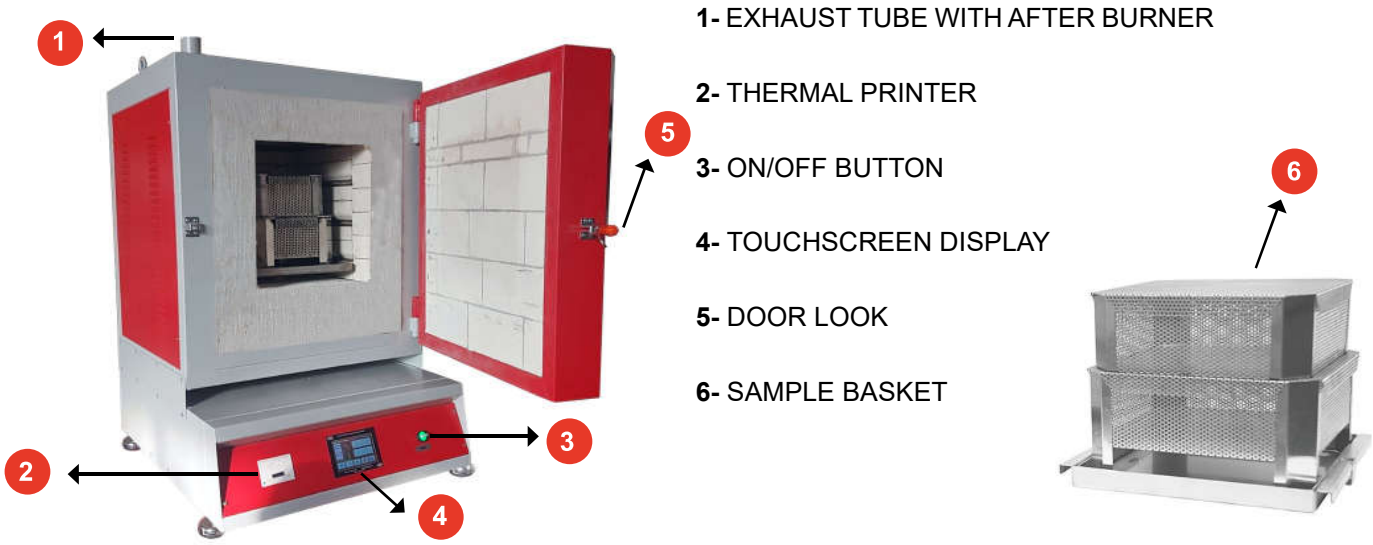
FEATURES

- Door safety features, such as a software-activated door lock, an automatic interlock that cuts power when door is open, full 180 degree door opening and door hinge lock eliminate harmful solvents and make operation easy. CE-Approved.
- Automatic monitoring of closed door before test start.
- Main furnace with high efficiency heating system, max power 4800W.
- After-burner, for a total combustion of exhaust fumes to minimize emissions.
- Forced ventilation, no need for filters and hood.

Starter Kit for NCAT Asphalt Content Furnace

- | | |
|--------------------------------|--------------------------------|
| • (4) Sample Baskets | • Aluminum Cooldown Plate |
| • (2) Basket Covers | • Cool Down Safety Cage |
| • 2) Trays | • Fan Motor Lubricant |
| • (2) Basket Retainer Brackets | • Face Shield |
| • (4) Rolls of Printer Paper | • Heat Resistant Gloves |
| • Transport Handle | • Stainless Steel Basket Brush |

TOUCH SCREEN DIGITAL DISPLAY



TEST PROCEDURE

Before making a test it is necessary that the unit reaches its working temperature.

This is normally reached within 20 minutes.

Heat the sample in an external oven to approx. 110°C for 4 hours so as to eliminate any water and then spread the sample in the sample baskets using a spatula (in any case refer to the test standards EN 12697-39 and ASTM D6307 for correct sample preparation).

We recommend that two baskets are used even if the material to be tested is small, it grants better efficiency and a faster test.

TECHNICAL SPECIFICATIONS

Internal Dimensions	355x266x355mm (14"W x 10.5"H x 14"D)
External Dimensions	610*1105x900 mm (24"W x 43.5"H x 35.4"D)
Heating Element	Kantalt A1
Temperature Range	392 to 1202°F (200 to 650°C)
Weight	240 Kg
Power	380 V 50 Hz 4800 W



Unlock the furnace door, then open the door and introduce the sample baskets using due care and attention.

Close the door, and wait a few seconds for the reading of the sample weight to stabilize.

Do not forget to tare the basket weight by pressing on the tare "0" symbol in the main screen.

Press PLAY to start the test; When the test is started the display is updated in real time: The safety lock will remain inserted, and the release function will remain unavailable until the end of the test itself.

The test is ended when the set end test parameters are met, which is no more than %0,01 for 3 competitive minutes . the test will not be saved when test is manually stopped.

The furnace door remains locked till the temperature drops below 150 degrees Celsius for a new test.

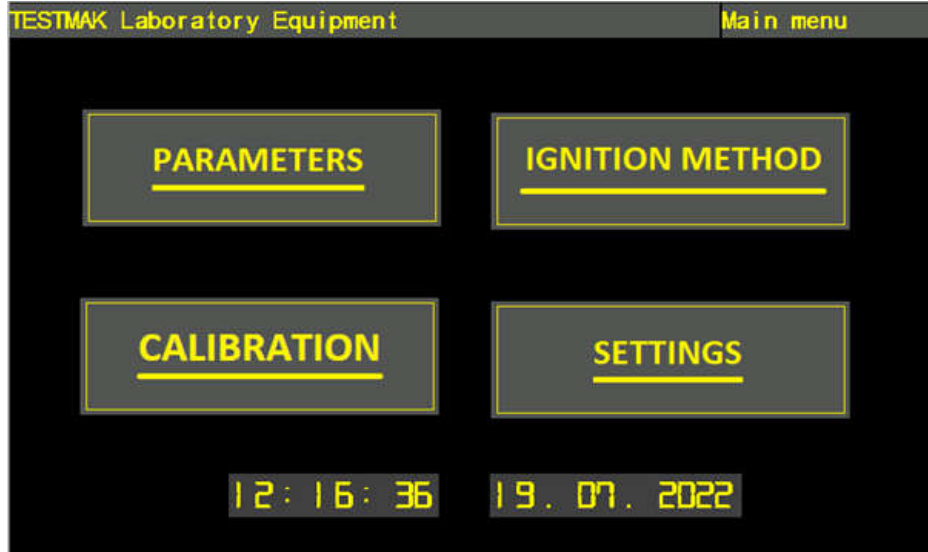


Remaining sample after the test

TOUCH SCREEN DIGITAL DISPLAY

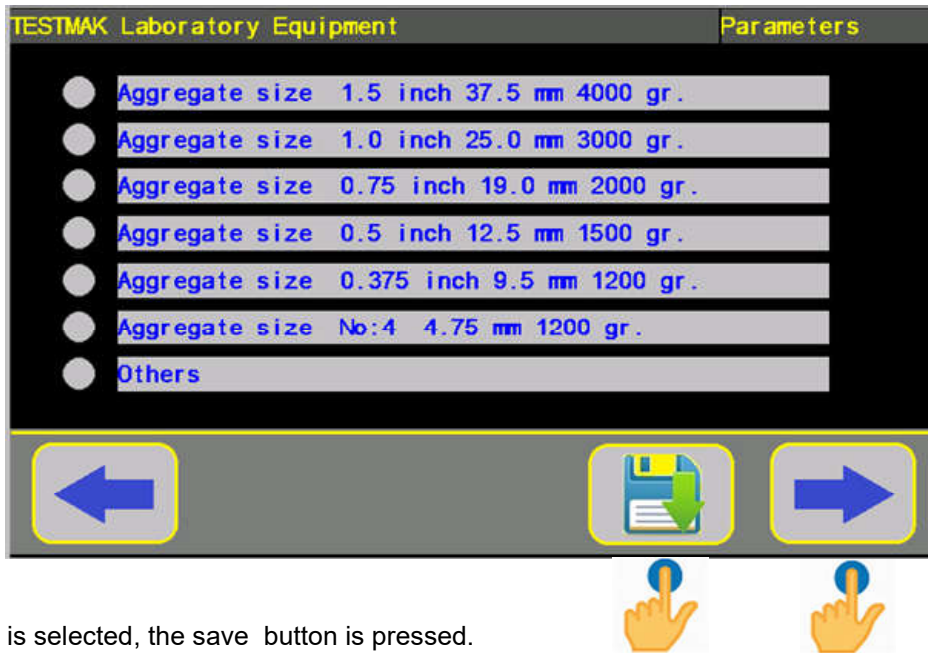


When you press the start button the program starts to initialize and after 10 sec. the test screen appears.



Sample selection is made by pressing the parameter button in the menu.

If special values are to be entered, the “other” option should be selected.



After the sample is selected, the save button is pressed.

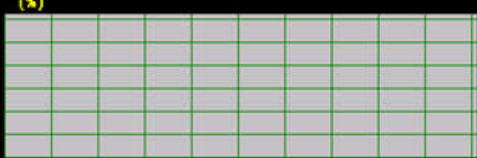
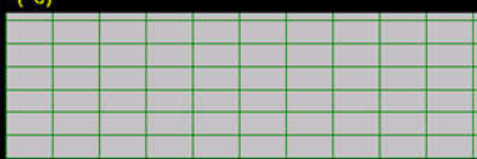
After pressing the Save button, you can go to the next menu with the forward button.

TESTMAK Laboratory Equipment		Parameters
Initial weight (gr.) :	4000	
Set temp. (°C) :	500	
Heating pace (°C/min) :	1 50	
Correction rate (%) :	0 50	
End of test timer (min) :	5	

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Pressing the next button for go to test page.

TESTMAK Laboratory Equipment		Ignition method
Test No :	<input type="text"/>	<div style="display: flex;"> <div style="flex: 1;"> <p>(%)</p> <p>300</p> <p>250</p> <p>200</p> <p>150</p> <p>100</p> <p>50</p> </div> <div style="flex: 1;">  </div> </div> <div style="display: flex;"> <div style="flex: 1;"> <p>(°C)</p> <p>600</p> <p>500</p> <p>400</p> <p>300</p> <p>200</p> <p>100</p> </div> <div style="flex: 1;">  </div> </div>
Sample (gr)	<input type="text"/>	
Loss (gr)	<input type="text"/>	
Loss (%)	<input type="text"/>	
Timer (s.)	<input type="text"/>	
Temp. (°C)	<input type="text"/>	
Temp. (°F)	<input type="text"/>	

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Pressing the start button for start to test.

TESTMAK Laboratory Equipment		Report
Test Nr. :	1	Search
Date and Time :	19/07/2022 12:21	
Aggregate type :	1	
Initial weight (gr) :	1	
Weight after burn (gr) :	1	
Lost weight (gr) :	1	
Loss percentage (%) :	1	
Correction factor (%) :	1	
Burn time (min) :	1	








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