



**ASPHALT TEST EQUIPMENTS  
PRODUCT BROCHURE**

## **DUCTILITY TEST MACHINE**

**B1650 - B1650/CS - B1650/FD**





## PRODUCT MODEL

B1650	Ductility Testing Machine, 220-240V 50-60Hz
B1650/CS	Ductility Testing Machine with Cooling Unit, 220-240V 50-60Hz
B1650/FD	Force Ductility Testing Machine with Cooling Unit, 220-240V 50-60Hz
B1655	Ductility Mould and Base Plate

## STANDARDS

Standards	EN 13589, 13398, 13703   ASTM D113   AASHTO T51   AASHTO T300   NF T66-006   NLT 126   UNE 7093   BS 4710
-----------	---

## INFORMATION

Manufacturer	TESTMACLAB LABORATUVAR TEST CİHAZLARI PAZ. VE DİŞ TİC. LTD. ŞTİ
Country of Origin	TURKEY
Product name	Ductility Testing Machine

## DESCRIPTION

Testmak Ductility Testers are used to determine the ductility-flexibility of bituminous materials. In the test, the elongation at break of the bituminous sample, which was drawn from both ends at 25°C and at a speed of 50 mm/min, in the form of briquettes is measured.

It is designed to allow testing with 3 samples at the same time. The inner chamber is made of stainless steel. The water temperature of 25°C, required for the experiment, is provided by the heating resistance placed in the inner chamber of the device.

Testmak Ductility Testers consist of a digital speed control unit and a water circulation pump placed in the inner chamber to ensure homogeneous water temperature. If the ambient temperature is high, a ductility device with cooling unit can be ordered.

### **B1650/CS Ductility Tester with Cooling Unit**

B1650/CS model Ductility Tester with cooling unit has the same features as B1650 Ductility Tester without cooling unit. The cooling unit can only be installed at the factory. Changes cannot be made later.

### **B1650/FD Model Force Ductility Tester**

The mechanical design of the B1650/FD Tensile Force Measuring Ductility Tester is different from the standard ductility tester (B1650 and B1650/CS). B1650/FD has three 300N capacity load cells, digital linear ruler and automatic data control and acquisition system with TFT Graphic display. The measurement accuracy of the load cells is  $\pm 0.1$  N. B1650/FD has cooling unit.

The test speed can be adjusted via the Automatic Data Control and Collection Unit with Graphic Display, and the load-length variation graph of 3 different samples can be displayed separately by using the software of the device.



**B1650/FD**

**How to Perform Ductility Test in ASTM D113 Standards?****Purpose of Ductility Test:**

The shrinkage and elongation of bitumen is called ductility. The ductility test is carried out to determine the elongation ability of bitumen under slow acting loads. The amount that the sample prepared in accordance with the standards can stretch without breaking is determined in cm.

Equipments to be Used in the Ductility Experiment:

- 3 Ductility Patterns.

**How to Ductility Experiment:**

- The sample is heated not to exceed 90°C above the softening point temperature and poured into ductility molds. 3 samples are prepared.
- After the samples are kept at room temperature for 30 minutes to cool, they are kept in a water bath at 25°C for another 30 minutes.
- The samples removed from the bath are placed in the ductility device at their perforated ends and the device is operated. The drawing process is continued until the samples break.
- The ductility device works at a speed of 5 cm/min.

**Result:**

At the time of bitumen rupture, the elongation amount is read in cm from the ruler on the device. This value indicates the binding performance of the bitumen. Bitumen with high ductility value also has high binding properties.

**TECHNICAL SPECIFICATIONS**

Product Code	B1650/FD	B1650/CS	B1650
Speed	50 mm/min.	50 mm/min.	50 mm/min.
Carriage Stroke	1500 mm	1500 mm	1500 mm
Temperature	Equipped with a cooling unit allowing tests to be carried out with water at a temperature between 5°C and 25°C		25°C ± 0,5°C.
Dimensions	350x2150x750 mm	350x2000x750 mm	350x1800x750 mm
Weight	130 kg	110 kg	90 kg
Power	1000 W	1000 W	350 W

## 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



Ağaç Metal Sanayi Sitesi 1354 Cadde  
1436 Sokak No:16 İvogsan Yenimahalle -  
ANKARA / TÜRKİYE



info@testmak.com  
marketing@testmak.com



TÜRKİYE / HEAD Office : +90 312 395 44 57  
UKRAINE Office : +380 63 741 29 20  
SOUTH AMERICA / Cuba Office : +53 5 073 96 12



www.testmak.com