

## Product Code

- UTB-0240 Automatic Ring and Ball/Softening Point Tester**  
**UTB-0241 Two Rings Assembly for UTB-0240**  
**UTGG-1335 Glass Griffin Beaker, 800 mL, Heat Resistant**  
**UTB-0236E Pouring Plate, EN, Metal**  
**UTB-0236A Pouring Plate, ASTM, Brass**

Models for 220-240V 50-60 Hz, 1	UTB-0240
ph. Models for 110-120V 60 Hz, 1	UTB-0240-N

## Standards

EN 1427; ASTM D36; AASHTO T53

UTEST UTB-0240 Automatic Ring and Ball/Softening Point Tester is an innovative microprocessor controlled automatic testing device which is used for determining the softening point of bituminous materials using water or glycerol as bath liquid in a range from 30°C to 150°C.

Two bitumen samples casted in shouldered brass rings while being held in horizontal position, temperature is increased under controlled rate acc. to standards. The softening point is the average temperature value of two samples at the time they collapse 25 mm while each carrying a steel ball.

UTB-0240 is equipped with the assembly (UTB-0241), a cooling and heating system, speed controlled magnetic stirrer, motorized beaker lift, optic sensors, temperature probe with its holder, USB port for PC connection and data transfer from control unit.

UTS-0241 Assembly includes a ring holder, a bottom plate, 2pcs. brass rings, 2pcs. brass ball centering guides, 2pcs. stainless steel balls, a glass beaker (UTGG-1335) and a magnetic stirrer bar.

The pouring plate, should be ordered separately.

Two revolutionary features of the UTB-0240 are the immersed heating resistance and the cooling mechanism for the specimen pre-conditioning. Immersed heating resistance provides direct heat transfer to bath liquid without any loss and it is more efficient than the traditional hot plates. Combined with the PID control, temperature gradient is strictly maintained during the test. Cooling unit reduces the temperature of the bath liquid to 5°C automatically. This feature eliminates the dependency to a refrigerator or dealing with ice cubes for test preparation.

To ensure uniform temperature distribution, bath liquid is stirred by an integrated step motor with adjustable speed and a magnetic stirring bar.

Optic sensors instantaneously detect the specimen collapse and the control unit records the softening point temperature value.

Control unit collects data from the temperature probe and governs the cooling and heating systems in PID control loop. Apart from the control, it utilizes user interface functions such as defining test sequences, multiple point & offset calibration of the temperature probe, calibration preparation menu, fine tuning of temperature gradient and visual simulation of the test area.

The device can also be connected to a computer via on board USB-Port to record test data for each minute and export the data in an excel sheet.

USOFT-0240 Software for Automatic Softening Point Test permits to select the test method and the test parameters, run the test automatically, store, retrieve and print data, diagnose and calibrate the instrument.



UTB-0240

## Main Features

- Uses both water and glycerol as bath liquid (30-150°C)
- Automatic pre-conditioning and test start
- User defined test sequences and automatic finalization of the test
- PID controlled heating and cooling system
- Optic sensors for accurate determination of softening point
- Motorized beaker lift
- Colored touch-screen graphic display
- Title information input such as date/time, test number, operator name
- Versatile calibration and calibration preparation menu
- USB-Port for PC connection
- PC-software for data acquisition and excel output

## Safety Features

- Heater is automatically shut down at the end of the test cycle and cooling media and a solenoid valve is automatically opened by the controller.
- Automatic test interruption when there is a probe failure or when the probe is not positioned properly.

Dimensions	400x660x840 mm
Weight (approx.)	63 kg
Power	1200 W