

## B005N BITUMEN CONTENT FURNACE BY IGNITION METHOD

STANDARDS: AASHTO T308-10 | ASTM D6307-10 | BS EN 12697-39:2012



**B005N**

The binder content of bituminous mixtures is one of the major properties related to pavement performance. In particular, it affects the pavement's tendency to permanent deformation, fatigue life and susceptibility to moisture damage. Therefore, the measurement of this property is fundamentally important for **quality control (QC), quality assurance (QA) and research purposes**. In this context the ignition method can determine the binder content with high precision, offering a valid alternative to the solvent extraction methods.

Matest apparatus combines a sophisticated furnace and weighing system to continuously measure weight loss during combustion. It then **automatically calculates binder content at the end of the test**. Moreover, the method can be used for evaluation of mixture composition because the remaining aggregate can be used for determining aggregate gradation and density.

The unit presents a **7" colour Touch screen controller** with front panel user interface and easy to use step-thru operation. The user-friendly software allows the operator to set up the test with the possibility of introducing data of the mix design for a greater accuracy of the results.

Considering the high temperatures involved (the furnace may reach a temperature of 750° C) the apparatus is equipped with suitable safety systems to ensure that the furnace door is kept closed during the test and that the heating elements are deactivated any time the door is opened. Analysis can be made on a sample weighing maximum 5 kg and most tests are completed in 20 to 45 minutes. Average test times are from 20 mins (for 6 mm aggregates), to 45 mins (for 40 mm aggregates).

### MAIN FEATURES

- Fully automatic and customizable test cycle, real-time display of test parameters and results
- Possibility of introducing data of the mix design for a greater accuracy of the results up to 0.11%
- Ignition method reduces testing time and costs.
- 7" touch-screen display with smart interface.
- Integral balance measures loss on ignition to 0.1 g resolution.
- Rapid heating of main chamber with robust Ø 1 mm wire elements
- Integral fan-assisted high-temperature afterburner greatly reduces emissions
- Direct access to the scale to facilitate inspection and maintenance
- Unlimited memory storage with: 2 USB ports, 1 SD card slot, RS232/485 serial port
- On-board graphic printer

An independently controlled afterburner with exhaust fan and vent reduces emissions so low that no aspiration hood is needed.

The machine is supplied complete with 2 sample baskets with stands, hot sample safety guard, sample basket loading handle, printer paper rolls, calibration plate and protective mask. Gloves to be ordered separately.

**Outer dimensions:** 635x825x1214 mm

**Inner dimensions:** 350x445x260 mm

**Power supply:** 400V 3ph 50/60Hz 8500W

**Max Temperature:** 750 °C

**Weight:** 70 kg approx.

### TECHNICAL SPECIFICATIONS

- Samples weight up to 5000g
- Precise weight measurements displayed to 0.1 g resolution
- Test duration of 20-45 minutes
- Scale: 15,000 g capacity, 0.1 g res., ±0.1 g repeatability
- Closed-loop PID thermo-regulation
- Afterburner temperature is controlled independently from the main chamber
- Failsafe door interlock keeps the door locked during a test
- No need for filters

### ACCESSORY

**B005-10** METAL STAND to hold the furnace.