Blaine Permeability Apparatus

LT-CE0005 | Determination of cement specific surface area

Manual measurement • U-tube manometer • Stainless steel test cell



170 × 220 × 470

OVERALL DIMENSIONS • mm

8 kg

APPARATUS WEIGHT

EN 196-6 • ASTM C204 • AASHTO T153

LT-CE0005

Photographs and Measuring Components

Specimen cell, glass manometer and manual aspirator

LT-CE0005 manually measures air-flow time through a compacted cement bed. The operator observes liquid movement in the U-tube manometer. An appropriate reference material and calibration data relate the measurement to specific surface area.

TEST CELL

Stainless steel cell, plunger and perforated disc prepare the specimen bed. The cell connects to the manometer.

AIR CONNECTION

Connection between cell, manometer and aspirator line. Check air tightness before measurement.



U-TUBE MANOMETER

Observe liquid movement in the glass tube. Time the passage between the defined marks.

RUBBER BULB

Creates the initial pressure difference in the manometer. The operator controls the start of air flow.



Test cell and glass manometer connection



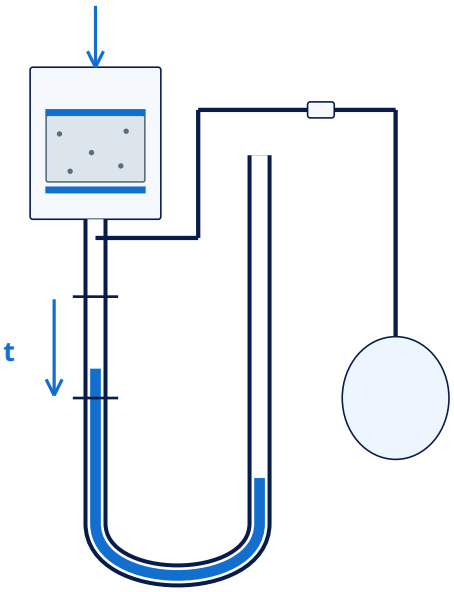
Aspirator bulb, filter papers and plastic funnel

LT-CE0005

From Air-Flow Time to Blaine Fineness

Prepare bed • Create pressure difference • Measure time • Apply calibration

SPECIMEN BED • U-TUBE MANOMETER • BULB



t: s S: cm²/g / m²/kg

AIR FLOW THROUGH A COMPACTED CEMENT BED

FLOW TIME + CALIBRATION = SPECIFIC SURFACE

OPERATING PRINCIPLE • SCHEMATIC VIEW • NOT TO SCALE

Prepare the Specimen Bed

Fit disc and filter paper. Use the plunger to bring the required specimen mass to the defined bed volume.

Measure Time

Use the bulb to establish the starting condition. Time liquid movement between the specified marks.

Calculate Blaine Fineness

Evaluate time with suitable calibration. Record the result with surface units and specimen identification.

The Blaine method uses resistance to air flow through a cement bed of defined dimensions and porosity. Calibration relates the measured flow time to mass-related specific surface area. Express results in cm²/g or m²/kg.

Calibration and Specimen Preparation

Use a reference material and calibration data suitable for the test method. Check requirements for specimen density, bed preparation and measuring temperature.

Verify cell connection air tightness and liquid level. Record specimen identification, preparation details, temperature and measured times. Consistent preparation supports repeatability.

Basic Set and Result Units

The basic set includes U-tube manometer, cell, plunger, perforated disc, manometer liquid, bulb, tubing, plastic funnel and 100 filter papers. Calibration sand is supplied as a separate accessory.

Results represent surface area per unit mass. Unit conversion: 1 m²/kg = 10 cm²/g. Blaine fineness is used to monitor cement grinding consistency.

Technical Specifications and Accessories

LT-CE0005 • Manual Blaine fineness measurement set

Specification	Technical Information
Product Code	LT-CE0005
Measuring Method	Manual Blaine air permeability; specific surface area
Overall Dimensions	170 × 220 × 470 mm
Weight	8 kg
Standards	EN 196-6, ASTM C204, AASHTO T153

Product Code	Part / Accessory	Specification / Pack
LT-CE0005/1	U-Tube Manometer	Glass tube
LT-CE0005/2	Cell, Plunger and Perforated Disc	Stainless steel cell assembly
LT-CE0005/3	Manometer Liquid	250 ml
LT-CE0005/4	Rubber Aspirator Bulb	Rubber bulb
LT-G0129	Plastic Funnel	100 mm
LT-CE0005/5	Filter Paper	100 pieces
LT-CE0005/6	Filter Paper	1000 pieces
LT-CE0005/7	Calibration Sand	100 ml × 2 bottles
LT-CE0005/8	Blaine Glass	Glass component

Bed Preparation, Air Tightness and Timing

Prepare the bed according to the method. Check cell connection and liquid level; evaluate flow times together with calibration data.

From Specimen to Specific Surface Area

01
Prepare
Prepare specimen, filters and cell bed.

02
Start
Use the bulb to create initial pressure difference.

03
Measure
Time liquid passage between manometer marks.

04
Calculate
Apply calibration and report specific surface.

Product Page | liyatest.com.tr/en/urun/blaine-permeability-apparatus/