Aggregate Impact Value Apparatus

LT-A0066 | Laboratory assembly for Aggregate Impact Value (AIV)

Hardened steel • Automatic blow counter • Sample preparation accessories



45 × 35 × 85 cm

OVERALL APPARATUS DIMENSIONS

51.5 kg

APPROXIMATE APPARATUS WEIGHT

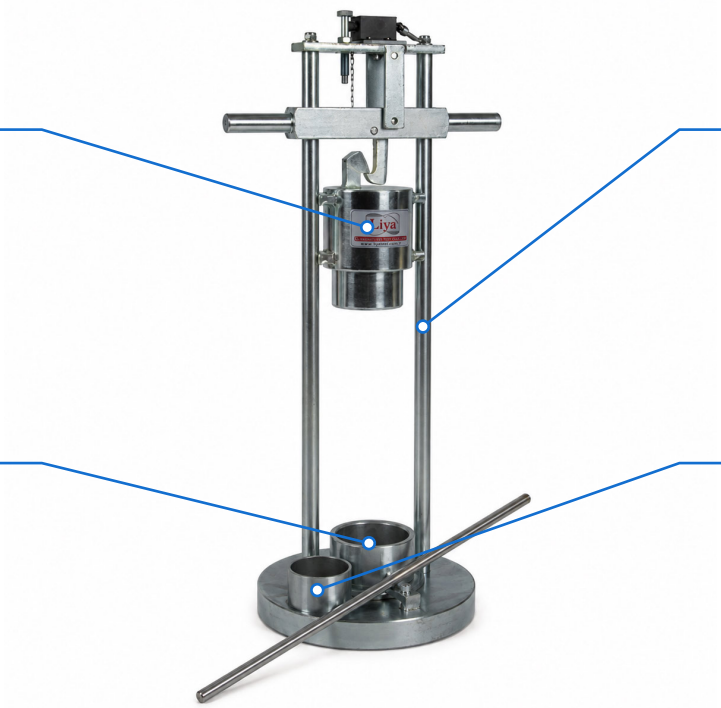
BS 812-112 • Aggregate fragmentation resistance under controlled impacts

LT-A0066

Photograph and Apparatus Components

Impact hammer, guide columns, test cup and preparation accessories

LT-A0066 evaluates aggregate resistance to sudden impact and shock. The hammer falls onto the specimen under controlled conditions, while an automatic counter records blows. A measure and tamping rod assist sample preparation.



IMPACT HAMMER

Falls onto the specimen from the height prescribed by the method, causing fragmentation.

GUIDE COLUMNS

Guide the hammer vertically. Check that the mechanism moves freely before testing.

TEST CUP AND BASE

The aggregate specimen is placed in the steel cup. The lower base supports the assembly.

MEASURE AND TAMPING ROD

The cylindrical measure prepares the sample quantity; the rod assists consistent placement.



Impact hammer and vertical guide mechanism



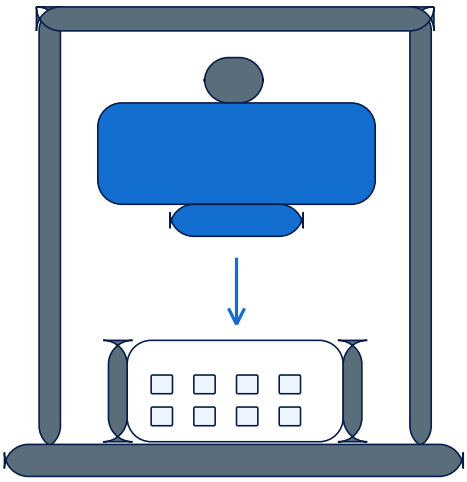
Test cup, cylindrical measure and tamping rod

LT-A0066

Controlled Vertical Impact Application

Prepare sample • Fill cup • Apply blows • Weigh the fines

FALLING HAMMER + AGGREGATE SAMPLE



CONTROLLED VERTICAL IMPACT

IMPACT FRAGMENTATION IN THE TEST CUP

M: INITIAL DRY SPECIMEN MASS

AIV (%) = 100 × m / M

m: MASS PASSING THE TEST SIEVE • REPRESENTATIVE SECTION • NOT TO SCALE

Prepare the Sample

Select the size fraction and condition it by the method. Record the initial dry specimen mass.

Apply the Blows

Place and tamp the sample in the cup. Apply the prescribed blows; the counter records each impact.

Sieve and Calculate AIV

Remove and sieve the material. Calculate percentage AIV from the mass of fines passing the test sieve.

The falling hammer applies a sudden load to the aggregate. Repeated blows fragment some particles; the generated fines are sieved and weighed. Fines as a percentage of initial dry specimen mass give the AIV. Under the same test conditions, lower AIV indicates greater impact resistance.

Size Fraction and Sample Condition

BS 812-112 evaluates aggregate resistance to sudden impact and shock using the AIV method. The primary fraction passes the 14 mm sieve and is retained on the 10 mm sieve.

Select dry or soaked test conditions according to the method. Check specimen preparation, blow count, drop height and test sieve using a consistent record system.

Counter Checks and Post-Test Care

The automatic blow counter records impacts applied. Check the initial count before each series and record the completed number of blows.

Check free movement of the hammer and guides, test cup seating and specimen preparation. After testing, empty the cup, clean the components and prepare the apparatus for the next specimen.

LT-A0066

Technical Specifications and Test Workflow

LT-A0066 • Impact assembly, automatic counter and standard accessories

Technical Specification	Value / Description
Product Code	LT-A0066
Test Method	BS 812-112
Determined Value	Aggregate Impact Value / AIV
Loading Action	Sudden impact and shock
Main Construction	Hardened steel
Blow Monitoring	Automatic blow counter
Specimen Section	Steel test cup
Standard Cylindrical Measure	Ø75 × 50 mm
Standard Preparation Rod	Steel tamping rod
Primary Test Fraction	Passing 14 mm / retained on 10 mm
Overall Dimensions	45 × 35 × 85 cm
Approximate Apparatus Weight	51.5 kg

Compare Impact Resistance under the Same Method Conditions

Apply specimen condition, blow count and sieving by BS 812-112. Evaluate AIV together with abrasion resistance, crushing resistance and the relevant project requirements.

From Aggregate to Impact Value

01
Prepare
Select the fraction and record initial mass.

02
Fill
Place and tamp the specimen in the test cup.

03
Apply Blows
Apply prescribed blows and check the counter.

04
Calculate
Sieve and weigh the fines; calculate AIV.

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