L-Box Test Set

LT-C0056 | Assessment of SCC passing ability

Two / three bars • Sliding gate • Passing ratio measurement



Ø12 mm

OBSTACLE BAR DIAMETER

2 / 3

BAR COUNT OPTIONS

EN 12350-10 • 30 × 100 × 135 cm • 35 kg

LT-C0056

Photographs and Components

Vertical filling hopper, gate, horizontal channel and support stand

The L-box evaluates the ability of self-compacting concrete to pass between reinforcement-like obstacles. Concrete flows from the vertical hopper into the horizontal channel under its own weight. Final heights in both sections determine the passing ratio.

VERTICAL HOPPER

Fill the hopper with fresh concrete while the gate is closed, providing the initial volume for flow.

GATE AND OBSTACLES

Opening the gate releases concrete through an arrangement of two or three Ø12 mm steel bars.



HORIZONTAL CHANNEL

Concrete passes through the bars and flows along the channel. Measure the final height at the far end.

SUPPORT STAND

The stand supports the hopper and channel at working height; its rigid structure maintains the test arrangement.



Vertical hopper and passing zone



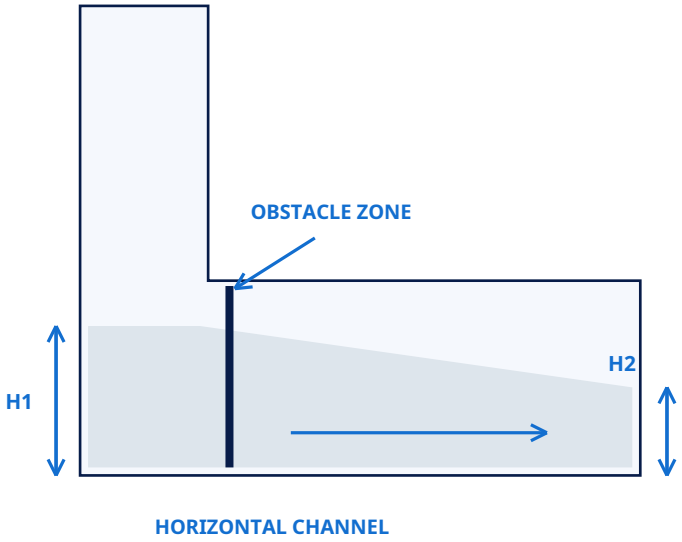
Horizontal flow channel and support stand

LT-C0056

Operating Principle and Passing Ratio

Fill • Open the gate • Wait for flow to stop • Calculate H2/H1

L-BOX • SCHEMATIC SIDE VIEW



PASSING RATIO = H2 / H1

H1: VERTICAL SECTION • H2: CHANNEL END

Fill the Hopper

Close the gate and place the concrete in the vertical hopper. Follow the method for preparation and waiting steps.

Open and Observe

Open the gate smoothly. Observe concrete passing between the bars and progressing along the channel.

Measure the Heights

Once flow has stopped, measure H1 and H2. Calculate and record the passing ratio as H2/H1.

H1 is the final concrete height at the rear of the vertical section; H2 is the final height at the far end of the horizontal channel. The H2/H1 ratio describes passing behaviour through the obstacles. Record the bar arrangement and test conditions with the result.

Two- or Three-Bar Arrangement

Obstacle bars are Ø12 mm in diameter. Clear spacing is 41 ±1 mm with three bars and 59 ±1 mm with two bars.

Select the arrangement for the test requirement. Use the same arrangement when comparing mixes; record aggregate accumulation and blocking observations alongside the height readings.

EN 12350-10 and Cleaning

EN 12350-10 covers determination of the passing ratio of self-compacting concrete using the L-box. Follow the method for specimen preparation and measurements.

Clean the vertical and horizontal sections after testing. Removable components facilitate access to concrete residue. Check that the gate moves freely before the next test.

LT-C0056

Specifications and Use Workflow

LT-C0056 • L-box test set for self-compacting concrete

Technical Feature	Value / Description
Product Code	LT-C0056
Application	Passing ability of SCC
Test Standard	EN 12350-10
Obstacle Bar Diameter	Ø12 mm
Obstacle Bar Count	2 or 3
Three-Bar Clear Spacing	41 ±1 mm
Two-Bar Clear Spacing	59 ±1 mm
Flow Control	Sliding gate
Measurement / Calculation	H1 and H2 concrete heights / H2/H1
Set Arrangement	Filling hopper and support stand
Overall Dimensions	30 × 100 × 135 cm
Weight	35 kg

Bar Arrangement and Consistent Measurement

Record bar count and clear spacing. Measure final concrete levels after flow stops; report H1, H2, the passing ratio and blocking observations together.

L-Box Test and Recording Workflow

01

Set Up and Fill

Select bar arrangement; close the gate and fill.

02

Start Flow

Open the gate; observe concrete passing.

03

Measure

Measure H1 and H2 after flow stops.

04

Calculate and Clean

Record H2/H1; clean the apparatus.

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