4 Column Flexural Test Machine

LT-C2200 | Four-column flexural testing frame with 2000 kN capacity

Double-acting ram • Load-cell measurement • Heavy-specimen positioning system



2000 kN

TEST CAPACITY

420 mm

MAXIMUM RAM STROKE

Rigid four-column frame • 2 upper + 2 lower rollers • 1.5-ton scissor jack

Photographs and Components

Four-column loading frame and heavy-specimen positioning equipment

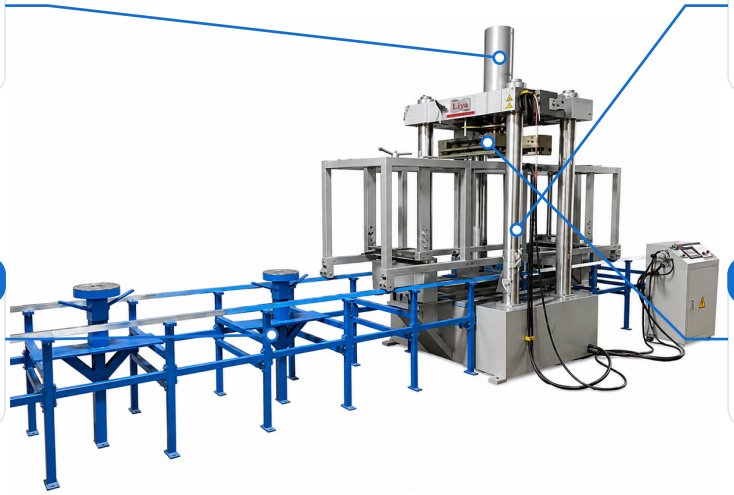
The LT-C2200 provides 2000 kN capacity for flexural and related mechanical tests on large, heavy concrete specimens. Its four-column frame supports stable loading; the double-acting ram applies force to the specimen through the rollers.

DOUBLE-ACTING RAM

The loading system above the upper crosshead operates with a maximum stroke of 420 mm.

FOUR-COLUMN FRAME

The rigid structure provides a stable test area under high loads.



SPECIMEN POSITIONING

Special handling equipment and a 1.5-ton scissor jack help position heavy specimens.

FLEXURAL ASSEMBLY

Two upper and two lower rollers, each Ø40 × 420 mm, form the flexural testing assembly.



Upper crosshead, ram and flexural loading assembly

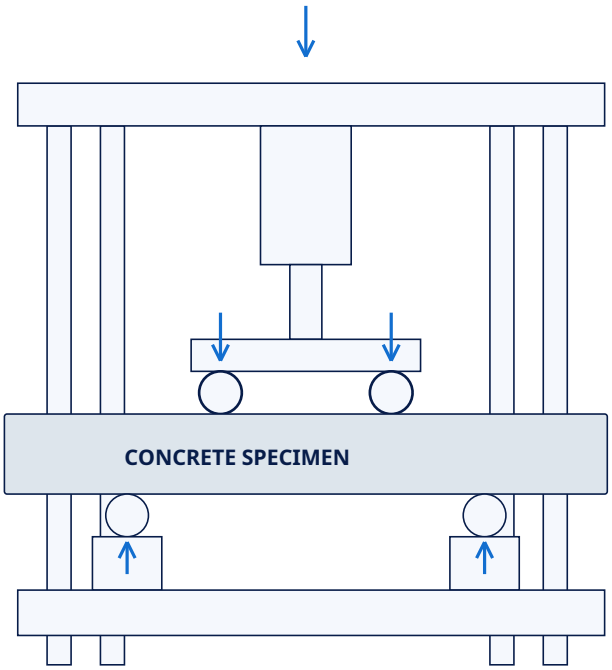


Handling arrangement of the heavy-specimen positioning system

Operating Principle and Load Transfer

Double-acting ram • Two upper loading rollers • Two lower support rollers

LOAD APPLIED BY THE RAM



UPPER ROLLER SPACING: 100-400 mm

LOWER ROLLER SPACING: MAX. 2360 mm

FOUR-POINT FLEXURE • SCHEMATIC

Position the Specimen

Move the specimen into the test area with the positioning system. Set roller spacing for the selected method.

Apply and Measure Load

The double-acting ram transmits load to the upper rollers. The load cell measures the applied force.

Evaluate the Test

Assess the measured force together with specimen geometry, support span and loading arrangement.

Upper rollers transmit load to the concrete specimen; lower rollers carry support reactions. The schematic shows flexural loading with two upper and two lower rollers. Select roller positions and specimen dimensions for the applicable method; the drawing is not to scale.

Accurate Load Measurement

A load cell measures the applied force. The machine provides Class 1 accuracy from 2% of full capacity.

For the 2000 kN frame, this starting level is 40 kN. Ram movement is double-acting with a maximum stroke of 420 mm.

Handling and Protection

Heavy-specimen positioning equipment and a 1.5-ton scissor jack help bring the specimen into its test position.

The jack capacity relates to specimen positioning. A safety limit switch operates when the ram reaches its maximum travel.

Specifications and Test Space

LT-C2200 • 2000 kN • High-stability four-column design

Technical Feature	Value / Configuration
Product Code	LT-C2200
Capacity	2000 kN
Frame	Rigid four-column structure
Ram Type / Maximum Stroke	Double-acting / 420 mm
Load Measurement	Load cell
Accuracy	Class 1 from 2% of full capacity
Max. Vertical Roller Clearance	430 mm
Column Clearance - Loading Direction	Max. 640 mm
Column Clearance - Other Direction	Max. 500 mm
Lower Roller Spacing	Max. 2360 mm
Upper Roller Spacing	Min. 100 mm / max. 400 mm
Roller Arrangement / Dimensions	2 upper + 2 lower / Ø40 × 420 mm

Test Methods

EN 12390-5 and ASTM C78 relate to flexural strength testing of concrete specimens.

EN 12390-6 and ASTM C496 relate to splitting tensile strength testing. EN 1338, EN 1339 and EN 1340 cover relevant tests for concrete paving blocks, flags and kerbs.

Use the appropriate specimen and loading arrangement for each method.

Plan the Working Space

Assess specimen width against the clearances between columns and specimen height against the maximum vertical roller clearance of 430 mm.

Lower roller spacing is up to 2360 mm; upper roller spacing is 100-400 mm. Set the required test spans within these working limits.

LT-C2200

Dimensions and Specimen Positioning

Frame size, positioning equipment and test preparation

Technical Feature	Value / Configuration
Overall Frame Dimensions	1040 × 2500 × 2810 mm
Overall Size with Positioning Equipment	1040 × 5620 × 2810 mm
Approximate Weight	9000 kg
Specimen Positioning	Special heavy-specimen positioning system
Scissor Jack Capacity	1.5 ton
Ram Travel Protection	Safety limit switch at maximum stroke

Test Load and Specimen Positioning

2000 kN is the load capacity of the test frame. The 1.5-ton scissor jack is used for specimen positioning. Select the specimen, roller spacing and loading geometry to suit the applicable test method.

Test Preparation and Use Workflow

01
Set the Arrangement
Select roller spacing for specimen and method.

02
Position the Specimen
Use the handling system and scissor jack.

03
Monitor Loading
Apply ram load; measure force with the load cell.

04
Evaluate the Result
Assess load together with specimen geometry.

Product Page | liyatest.com.tr/en/urun/4-column-flexural-test-machine/