Semi-Automatic Concrete Compression Tester

LT-C0265 / C0275 / C0365 / C0375 | EN and ASTM configurations

Two-stage pump • Operator-controlled loading • Digital load monitoring



600-3000 kN

SERIES CAPACITY OPTIONS

420 bar

MAXIMUM SYSTEM PRESSURE

Cube and cylinder specimens • Automatic stop at failure • Hardened steel platens

Photographs and Components

Loading frame, compression platens, LPI display and operator controls

The semi-automatic concrete compression tester determines the strength of cubes and cylinders. Its two-stage pump provides rapid approach and controlled loading. The operator selects the test rate; the digital readout shows load variation and peak load.

LOADING FRAME

The welded frame supports platens and specimen along the loading axis.

SPECIMEN AND PLATENS

Centre the specimen between hardened platens; distance pieces reduce clearance.



LPI DIGITAL DISPLAY

Monitor load development and peak load on the digital display during testing.

OPERATOR CONTROLS

Start, speed control and load/unload controls manage semi-automatic operation.



LPI display, speed control and emergency stop



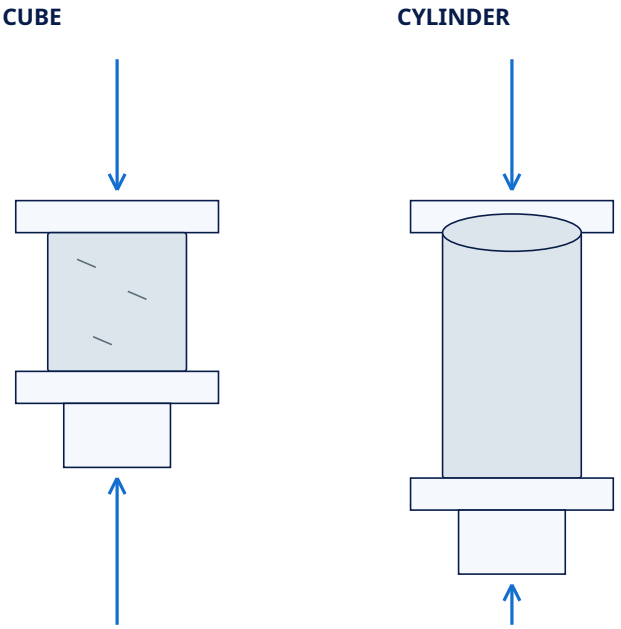
Specimen, compression platens and distance pieces

LT-C0265 / C0275 / C0365 / C0375

Semi-Automatic Compression Test

Rapid approach • Operator-selected test rate • Automatic stop at failure

COMPRESSION LOAD BETWEEN PLATENS



CUBE AND CYLINDER • SCHEMATIC

Rapid Approach

A high-flow, low-pressure gear pump moves the piston rapidly towards the specimen.

Controlled Loading

After contact, the radial piston pump provides loading pressure. The operator selects the test rate.

Monitor Peak Load

Monitor load and peak value on the readout. Loading stops automatically when the specimen fails.

The motorized hydraulic system transmits load to the specimen through the platens. The operator controls the loading stage, while the readout displays load variation. Semi-automatic operation combines rapid approach and automatic stopping at failure with operator controls.

Compressive Strength Calculation

Compressive strength is calculated by dividing the failure load by the loaded cross-sectional area:

$f_c = F_{max} / A$

Fmax: peak force; A: loaded area. Using N and mm^2 gives strength in MPa. Enter accurate specimen dimensions.

Platen Contact and Safety

The lower and ball-seated upper platens are manufactured from hardened, ground steel. Surface roughness is 3.2 µm.

Centring marks support specimen positioning. A limit switch, maximum pressure valve, emergency stop and front/rear protective doors support the system.

Machines and Loading Frames

2000 and 3000 kN EN / ASTM models • Dimensions and weight comparison

Product Code	Type	kN	Dimensions (cm)	kg
LT-C0265	EN	2000	43 × 92 × 100	870
LT-C0275	ASTM	2000	43 × 92 × 100	770
LT-C0365	EN	3000	54 × 102 × 105	1220
LT-C0375	ASTM	3000	54 × 102 × 105	1120

Separate Loading Frames

Product Code	Type	kN	Dimensions (cm)	kg
LT-C0200/1	EN	2000	43 × 50 × 100	800
LT-C0210/1	ASTM	2000	43 × 50 × 100	700
LT-C0300/1	EN	3000	54 × 60 × 105	1150
LT-C0310/1	ASTM	3000	54 × 60 × 105	1050

Capacity and Power Supply

The series includes 600, 1500, 2000 and 3000 kN options. Tables show the 2000 and 3000 kN models with specified dimensions and weights.

LT-C0255 (EN) and LT-C0260 (ASTM) are additional model options.

Supply for the listed machines:
220 V, 50-60 Hz, single phase.

Test and Machine References

ASTM C39/C39M covers compressive strength testing of cylindrical concrete specimens.

EN 12390-4 defines performance requirements for concrete compression testing machines. EN ISO 7500-1 covers verification and calibration of the force-measuring system.

Select platens and specimen configuration for the chosen method.

Components and Accessories

Motorized hydraulic unit, LPI readout, sensor and mechanical accessories

Product Code	Component / Accessory	Dimensions	kg	Supply
LT-C0325	Motorized hydraulic power + LPI	30 × 42 × 85 cm	70	220 V[1]
LT-C0326	Motorized hydraulic power pack	30 × 42 × 85 cm	70	220 V[1]
LT-C0327	LPI digital readout unit	15 × 21 × 7 cm	0.30	100-240 V[2]
LT-C0228	Precision pressure transducer	-	-	-
LT-C0235	Distance piece	Ø205 × 25 mm	-	-
LT-C0236	Distance piece	Ø205 × 50 mm	-	-
LT-C0237	Distance piece	Ø205 × 80 mm	-	-
LT-C0214	Sliding block platen assembly	51 × 31 × 50 cm	175	-

[1] 50-60 Hz, single phase. [2] 50-60 Hz / battery operation.

Clearance Adjustment and Block Platens

Maximum piston stroke is 50 mm. Distance pieces reduce vertical test clearance. The LT-C0214 sliding block platens support block and brick testing with a suitable configuration and factory installation.

Test Workflow

01
Prepare Specimen
Check dimensions and loaded surfaces.

02
Centre and Set Up
Adjust platen contact and test arrangement.

03
Control Loading
Start approach and select the test rate.

04
Read Peak Load
Evaluate strength from the failure load.

Product Page | liyatest.com.tr/en/urun/semi-automatic-concrete-compression-testing-machine/