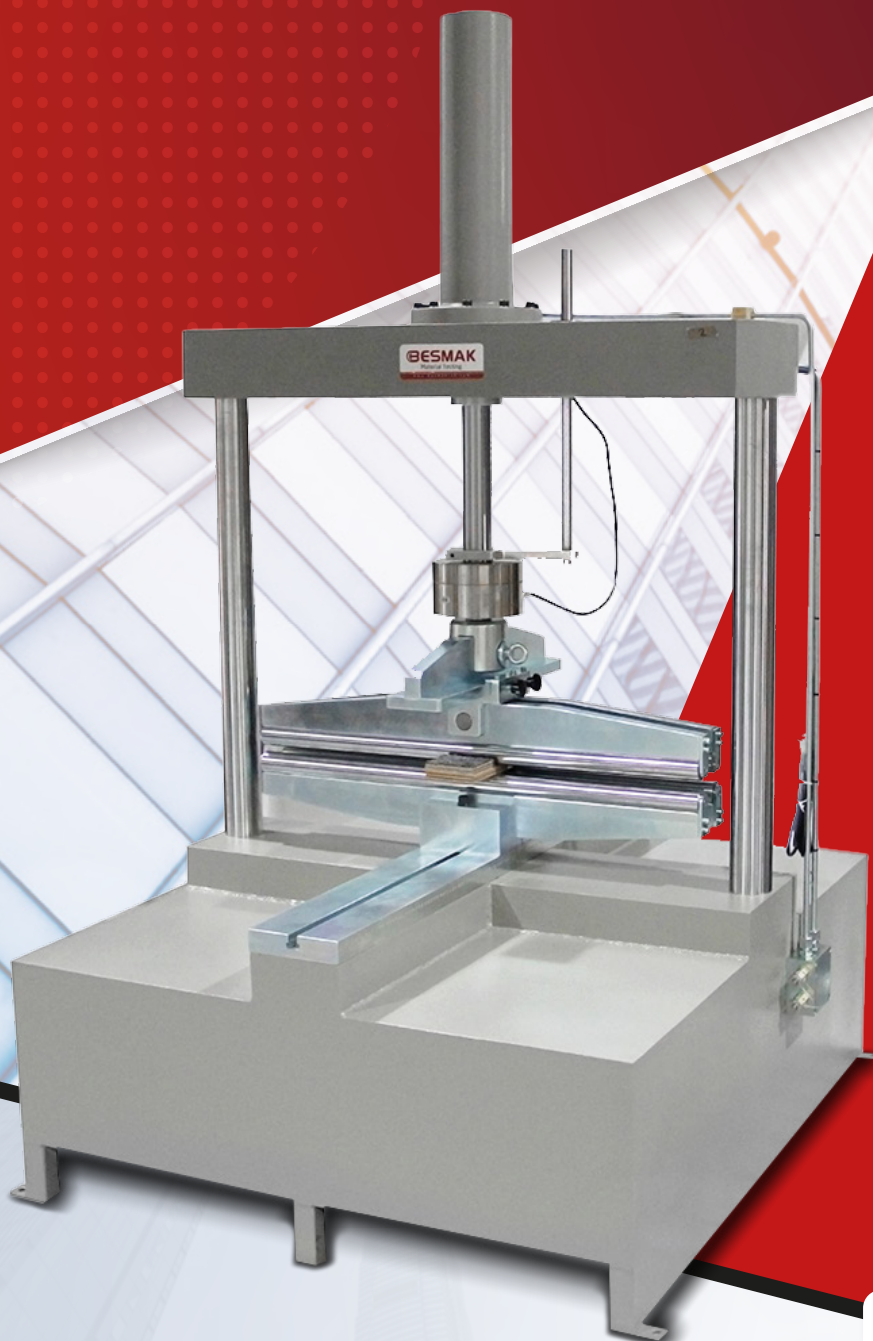


2025

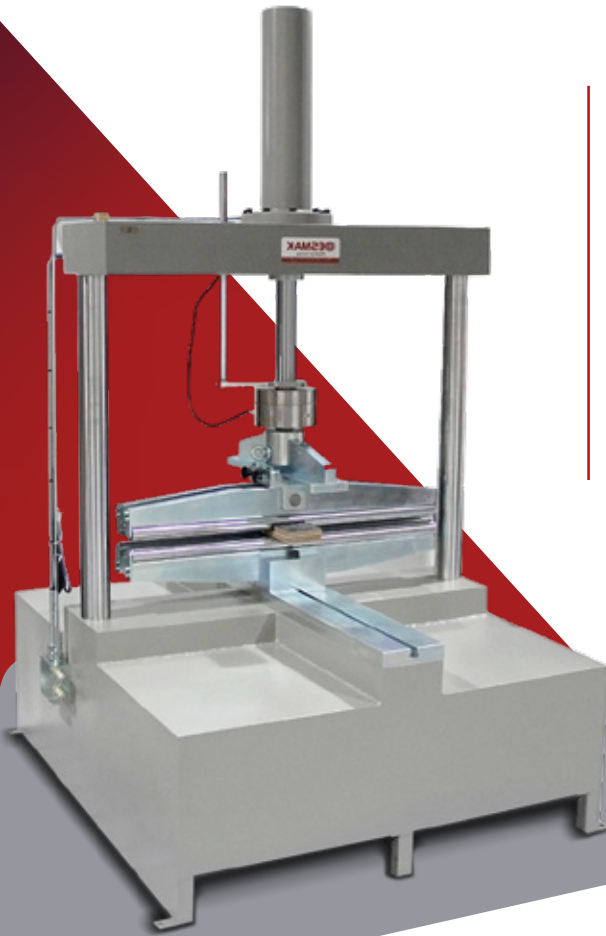
BESMAK

SERVO HYDRAULIC FLEXURAL MACHINE

FULLY AUTOMATIC



BCO-FC



DESCRIPTION

With over 30 years of experience, BESMAK provides reliable, technological, and standard-compliant solutions for construction material testing. Featuring servo-hydraulic load frames, user-friendly software, and high-precision digital control systems, BESMAK ensures superior performance in concrete and material testing. Its advanced flexural testing machines stand out with robust structures and versatile testing capabilities. The innovative Sematron Touch Series Control and Software System enhances testing efficiency with high-speed data processing and multi-sensor support.



BEND TEST

APPLIED STANDARDS

✓ EN 12390-5

Reliable Flexural Testing to EN 12390-5 Standards!

The EN 12390-5 standard covers the test methods for determining the flexural strength of hardened concrete. According to this standard, tests are conducted using three-point or four-point bending test methods. The loading rate, support span, and test procedures are precisely defined in the standard. BESMAK Flexural Testing Machines are fully compliant with EN 12390-5, offering reliable and repeatable test results with high-precision load cells and advanced software support. This ensures accurate analysis of the mechanical properties of concrete, contributing to structural safety and quality control.



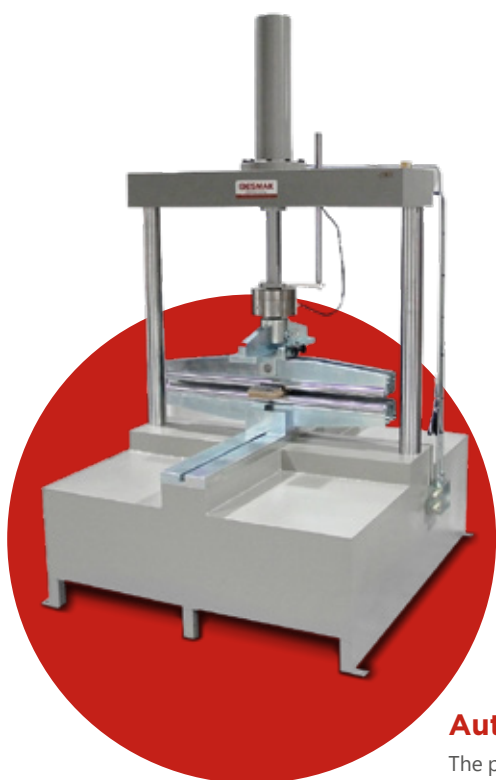
TECHNICAL SPECIFICATIONS

GENERAL FEATURES

- Available in different capacities between 50 – 1000 kN
- Complies with EN 12390-5 standard for flexural testing of hardened concrete
- Multiple compression and bending frames can be connected to a single machine

✓ **EN 12390-5**

✓ **50 - 1000 kN**



FRAME

Column construction:

Screwed to the upper and lower blocks for maximum stability

Lower platen:

T-Slotted and marked for precise roller distance adjustment

Piston safety:

Equipped with a rod-type limit switch for secure operation

Precision machining:

All transmission surfaces are plane-parallel treated and finely machined

Auto-reset function:

The piston automatically returns to the default position after test completion

Piston type:

Single-acting (spring return) or double-acting pistons, machined from solid metal for high stability

Suitable for testing 100×100×400/500 mm, 150×150×600/750 mm concrete beams, kerbs, interlocking pavers, flagstones, and blocks of different sizes



LOAD MEASUREMENT & CONTROL

- Class 1 accuracy or better according to EN-ISO-7500-1
- Load measurement and control with a high-precision pressure sensor, starting from 1% of machine capacity



CONTROL UNIT & DISPLAY

- Fully automatic flexural test machine with closed-loop Sematron Touch Series controller
- Data acquisition speed: 1000 Hz (1 kHz) with automatic calibration (2.5 kHz option available)
- Expandable control channels: 2 standard channels, expandable up to 8 channels
- Automatic pace rate control with high precision
- Load holding function: Users can hold the load at any specific point for a defined period
- 10-inch industrial-grade LCD touchscreen with Linux-based embedded software
- Real-time graphical test monitoring



HYDRAULIC UNIT

- Advanced multi-piston hydraulic pump for smooth and high-flow operation
- Fast piston approach with a pressure limit valve and manifold system
- Oil tank with necessary hydraulic connections

FRAMES

PRODUCT CODE	PRODUCT NAME
BCO-FC100	Servo-Hydraulic Flexural Test Machine, 100 kN Capacity
BCO-FC150	Servo-Hydraulic Flexural Test Machine, 150 kN Capacity
BCO-FC200	Servo-Hydraulic Flexural Test Machine, 200 kN Capacity
BCO-FC300	Servo-Hydraulic Flexural Test Machine, 300 kN Capacity
BCO-FC350	Servo-Hydraulic Flexural Test Machine, 350 kN Capacity
BCO-FC500	Servo-Hydraulic Flexural Test Machine, 500 kN Capacity
BCO-FC600	Servo-Hydraulic Flexural Test Machine, 600 kN Capacity
BCO-FC1500	Servo-Hydraulic Flexural Test Machine, 1500 kN Capacity
BCO-FC2000	Servo-Hydraulic Flexural Test Machine, 2000 kN Capacity

PRODUCT CODE	PRODUCT NAME
BCO-FC100/FR	Flexural Frame, 100 kN Capacity
BCO-FC150/FR	Flexural Frame, 150 kN Capacity
BCO-FC200/FR	Flexural Frame, 200 kN Capacity
BCO-FC300/FR	Flexural Frame, 300 kN Capacity
BCO-FC350/FR	Flexural Frame, 350 kN Capacity
BCO-FC400/FR	Flexural Frame, 400 kN Capacity
BCO-FC600/FR	Flexural Frame, 600 kN Capacity

ACCSESORIES



**BESMAK ELECTRONIC
CONTROL UNIT**
BMT-SCU



**FLEXURAL DEFORMATION
FIXTURE**
BCO-C/BDF



TOUCH SCREEN
BMT-CUT/LCD-10



LOAD CELLS
BMT-LCU



CMOD GAUGE
BMT-CMOD



**SPLITTING TENSILE
APPARATUS**
BCO-115



LVDT
LVDT



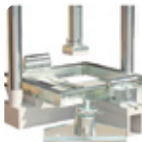
**CEMENT COMPRESSION
APPARATUS**
BCE-CCJ



**3-4 POINT BENDING
FIXTURE FOR CONCRETE
BEAM**
BCO-FF
Concrete Beam



**CEMENT FLEXURAL
APPARATUS**
BCE-CFJ



**ENERGY ABSORPTION
DEVICE**
**BCO-FF / Energy
Absorption**



**FLEXURAL FIXTURE FOR
CONCRETE KERBS**
BCO-KRB



**FLEXURAL FIXTURE
FOR FLAGSTONE
(LONG SAMPLE)**
**BCO-FF / Flagstone
Long Sample**



**COMPRESSION FIXTURE
FOR FLEXURAL TEST
MACHINE**
BCO-CF



**BESMAK is
the representative of
largest companies in industry
which are the active in
many countries around
the world and sales of
Construction Laboratory
Testing Equipments**

In the construction sector soil, asphalt, concrete, aggregates, cement, rock mechanics and construction materials for quality control testing laboratories aimed to provide high quality products using advanced technology and experience since it was established. In this way it's been one of the pioneering company in the international sector.

Our company imports, exports and technical support and has been producing hi-tech CNC machines on the 6300 m² closed area. We keep going R&D with our experienced engineers and we produced new design products in sector. Also electronic control units and software design made by our company too.



BESMAK

MATERIAL TESTING MACHINES



www.besmaklab.com 

info@besmaklab.com 

+90 312 815 56 20 

Saray Avenue Aksoy Street
No:53 Kazan, Ankara/TURKEY

