

2025

**BESMAK**

# SERVO

## ELECTROMECHANICAL UNIVERSAL TESTING MACHINE

SINGLE COLUMN



**BMT-ES**

# BESMAK BMT-E Series Universal Testing Machine, designed with rigid frame in Column type construction. Can perform tensile, compression, bend, creep, and cyclic tests on all raw materials and finished goods.

These testing instruments are engineered for precision, built for durability, and offer flexibility for changing requirements. They are designed with features that increase testing efficiency and improve the testing experience for the operator.

Meets or exceeds requirements of all national and international standards; namely ISO, ASTM, BS, DIN, EN, and AFNOR Convenient working height and ergonomic controls improve operator productivity and comfort Thousands of accessories to meet test requirements in almost any application or industry:

- Biomedical
- Automotive
- Electronics
- Plastics
- Metals
- Composites
- Elastomers
- Aerospace
- Textiles
- and many more

✓ LOAD MEASUREMENT RESOLUTION: 24 BIT

✓ HYDRAULIC/PNEUMATIC/MECHANICAL GRIPS

✓ DEFLECTOMETER, COMPRESOMETERS

✓ SPECIAL TESTING FIXTURES

✓ FASTENER FIXTURES

✓ ISO

✓ASTM

✓ BS

✓ DIN

✓EN

✓AFNOR

## DESCRIPTION :

BMT-ES Single Column series are designed for testing of a wide range of different materials. This system easy to use and measurement system for accurately and precisely determining simple load, distance and break applications. It can be also equipped with an extensive range of fixtures . They are designed with features that increasetesting efficiency and improve the testing experience for the operator. This Systems perform tensile, compression, bend, punctrure, creep and cyclic tests.



COMPRESSION TEST



CREEP TEST



TENSILE TEST



CYCLIC TEST



BEND TEST



## TECHNICAL FEATURES

Load Capacity:	0. 1 kN – 10 kN
Frame Type:	Rigid frame in Single Column construction
Electronic Unit:	New generation SEMATRON Electronic Control Unit with 1 kHz data acquisition and control system
Control :	<ul style="list-style-type: none"> <li>• EDC Controller</li> <li>• Besmak Universal Testing Software (Load and Deformation/Displacement Control)</li> </ul>
Accuracy:	± 0,5%
Load Measuring:	Class 0.5 according to EN ISO 7500-1
Resolution:	20 bit
Displacement Resolution:	0,001 mm
Testing Speed range (Min- Max) at Full Force:	0.0001 - 1000 mm/min
Vertical Test Area:	1000 mm* (Without Accessories)
Horizontal Test Area :	According to Accessories*
Software:	Besmak Universal Testing Software
Power Requirement:	220 Volt, 50/60Hz

*\*\* contact us for other dimensions*



PRODUCT CODE	PRODUCT NAME
BMT-0.1ES	Servo-Electromechanical Universal Test Machine, 0,1 kN Capacity
BMT-1ES	Servo-Electromechanical Universal Test Machine, 1 kN Capacity
BMT-2.5ES	Servo-Electromechanical Universal Test Machine, 2,5 kN Capacity
BMT-5ES	Servo-Electromechanical Universal Test Machine, 5 kN Capacity
BMT-10ES	Servo-Electromechanical Universal Test Machine, 10 kN Capacity

## KEY FEATURES

- Convenient working height and ergonomic controls improve operator productivity and comfort
- Remote control unit with Live Display, Soft keys and Specimen Protect for enhanced usability and productivity
- High precision load measurement with sensitive load cell class 0.5
- Load Cells can be replaced according to different load ranges to make much more accurate and sensitive measurements
- Load measurement resolution is 24 bit
- Hydraulic/Pneumatic/Mechanical Grips
- Deflectometer, Compresometers
- Special Testing Fixtures
- Fastener Fixtures
- Custom Made Fixtures for special applications



## TECHNICAL SPECIFICATIONS

BESMAK Servo Electromechanical, Universal Testing Machine, single column bench-top design, can work tensile, compression and bending etc. tests and can work on both displacement and load control mode.

### ELECTRONIC CONTROL UNIT

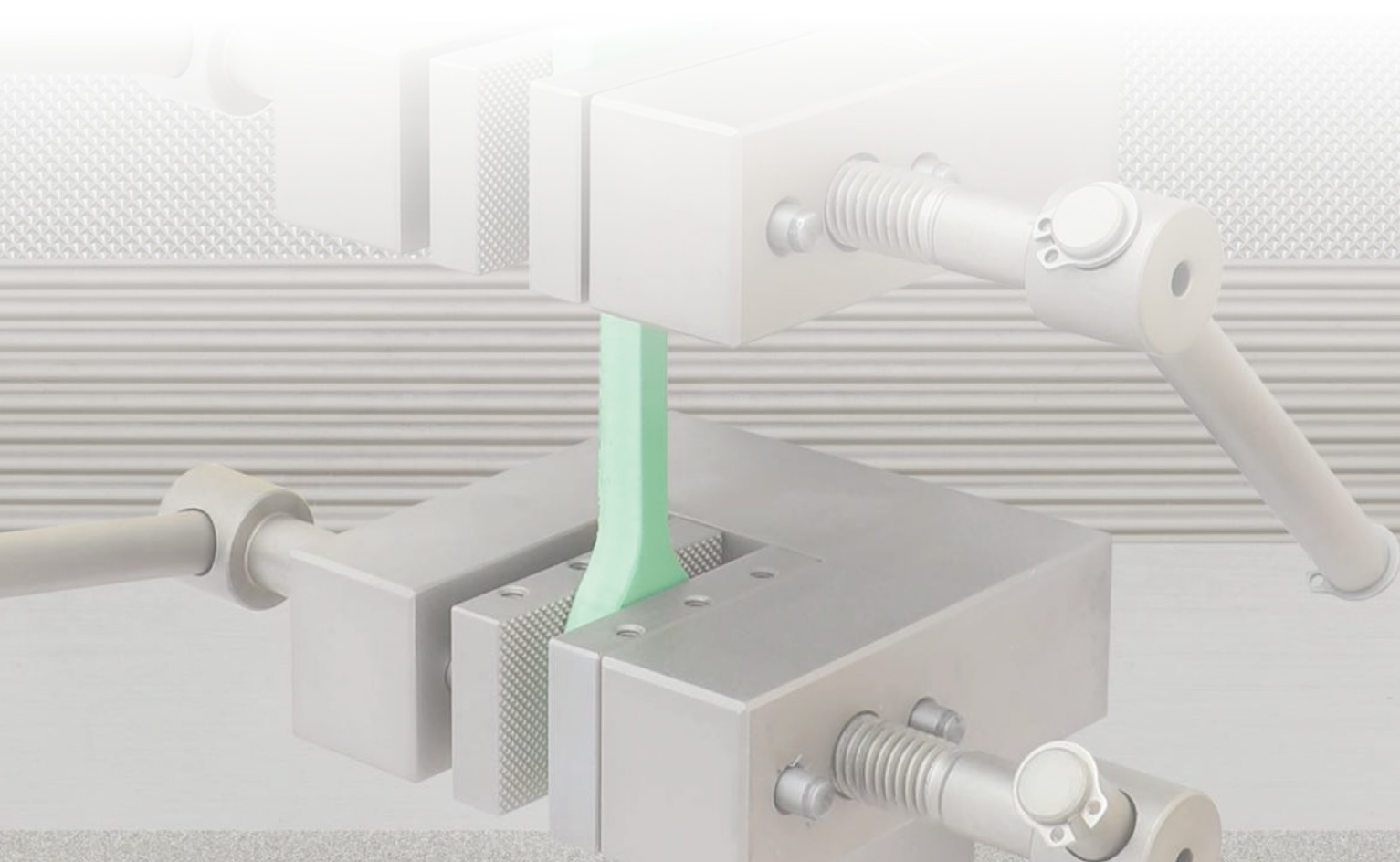
The electronic control unit of machine has 1000 samples per second data acquisition speed. Accurate synchronization between frame and sensors will be done/controlled by advanced PID or close loop configuration. Electronic control unit has total 5 channels (2 analogue, 3 digital). Due to these channels electronic control unit can control different sensors at same time.

User can read and control each attached sensor with control unit, for example; 2nd load cell, LVDTs and extensometers. can perform load and displacement controlled test, position measurement and control with position encoder of 1 micron resolution, adjustable displacement control in between 0.001 - 500 mm/min, standard testing software shows real time data with graph, result can be transferred to Excel format(Raw Values) or pdf format (report format). Power supply 220V, 50/60 Hz.

Electronic control unit is feasible to attach and control clip-on extensometer, laser extensometer, LVDT, automatic extensometer, strain gauge, load cell, and encoder type sensors.

### LOAD MEASUREMENT AND CONTROL

Load measurement and control, with a load cell of class 0.5, 1 kHz data accusation Close-loop electronic controller "SEMATRON V3", Crosshead moving speed (mm/min): 0.001-500.





**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 m<sup>2</sup> 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



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