

# DIGITAL STRENGTH TESTER (BU SERIES)

BU Series Micro Controller based Strength Tester has been developed for quick and accurate testing of tensile properties of various materials such as plastics, rubber, Teflon, leather, fabrics, textile yarn, tyre cord yarn, metals, films, cork sheet, particle board, plastic strips, PVC, wires, foils, tapes & springs etc. The machine test system offers all the advantages of latest technology of Micro Controllers. It is designed for users with basic testing requirement but who want the accuracy and repeatability of an electronic testing system. It is primarily a direct replacement for mechanical UTM machines and mainly suitable for material quality checks and production. The rated loading capacity of machine ranges from 20 Kgs to 2000 Kgs.

A variety of grips and fixtures can be supplied with the machine which makes it versatile for any kind of testing.

## SAFETY PRECAUTIONS

Care should be taken to ensure that the load cell is not over-loaded; otherwise it could be damaged irreparably. Repairs should not be attempted by unqualified personnel. DO NOT lift the machine by the column rods as it may disturb the alignment causing malfunction during operation.

## POWER SUPPLY

The BU machine operates on a 220V, 50 Hz AC Supply.

## OPERATING CONTROLS

### 1. ON/OFF SWITCH

This switch controls the main supply to the instrument. It is located on the machine front panel.

### 2. FUSE HOLDER

Located next to the ON/OFF Switch, it protects the motor from damage in case of a fault.

### 3. LCD DISPLAY

The machine is provided with a 16-Character LCD display for showing force.

### 4. LOADCELL CONNECTOR

A 5-Pin Amphenol connector connects the load cell to the internal electronics. If machine is supplied with multiple load cells, this needs to be connected on the back panel.

## 5. KEYBOARD

The BU machine has a 6 Key user interface

TARE Key:	To reset the initial force reading to zero
UNIT Key:	To change the units, it shows force reading in Kgs, gm, lbs. and N
PEAK Key:	To show the peak force value during a test
PEAK CLEAR Key:	To reset the peak force to zero
UP Key:	To move the machine in UP Direction
DOWN Key:	To move the machine in DOWN Direction

## OPERATING PROCEDURE

1. To start the machine, press the RED power button on the side of the panel.
2. The internal electronics boots up in about 1 second and the machine shows the current force.
3. Move the machine to the decided Gauge Length using the local UP or DOWN buttons and hold the sample using the gripping fixture.
4. Press the FTARE Button to initialize the force reading to zero.
5. Press the UP or DOWN button to start the test. The digital indicator shows the current force and the elongation reading can be noted from the calibrated scale provided next to the moving cross head.
6. Once the test is done release the button to stop the machine.
7. Use the peak key to note down the maximum force during the test. Use peak clear key before starting the next test. This will ensure that the peak reading during the previous test has been reset to zero.

## MAINTENANCE

The lead screw and nut mechanism needs to be greased regularly. The frequency of greasing depends on the usage; however, it is advised to inspect the columns and screws once a month. Either grease or light machine oil can be used for lubrication. The guide columns and lead screws and nut arrangement can be accessed by opening the bellows. The Load Cell provided with it machine needs to be calibrated as per the duration specified in the calibration certificate. Typically calibration certificates are valid for one year.

**GUARANTEE**

The BU Model is sold with a guarantee for a period of 12 months. This covers free repairs for any manufacturing defects. The guarantee is void in case of physical damage or attempted repairs from the customer end. The instrument must be sent to our facility to for repair works.

**MODEL VARIATIONS**

All variations on the BU machine are based on the capacity of the load cell. For example BU-200 has a maximum capacity of 200 Kgs, BU-500 has a maximum capacity of 500 Kgs and so on. All machines above this capacity have to be motorized.

**SPECIFICATIONS**

Model:	BU
Crosshead Speed:	100mm/min
Power Supply:	230V AC, 50 Hz
Size:	250 mm * 150 mm * 1200 mm (L *W *H)
Weight:	25Kg approx.
Accuracy:	+/- 0.5% FSD
Force Resolution:	16-Bit
Displacement Resolution:	1mm

**MODEL : BU-200**

Maximum Force Rating	: +/- 200 Kgs
Force Resolution	: 20 grams approx.

**MODEL : BU-500**

Maximum Force Rating	: +/- 500 Kgs
Force Resolution	: 50 grams approx.

## OPERATING MANUAL

MODEL : BU-2000

Maximum Force Rating : +/- 2000 Kgs

Force Resolution : 200 grams approx.

MODEL : BU-5000

Maximum Force Rating : +/- 5000 Kgs

Force Resolution : 500 grams approx.

**Note: All BU Series machines are made to order and can be modified as per customer requirement for different sizes, grips and fixtures.**

### CONTACT INFORMATION

#### Office

D-218 ANSA Industrial Estate  
Saki Vihar Road, Andheri East  
Mumbai – 400 072  
Tel: +91 89990 65546  
Website: [www.sncmumbai.in](http://www.sncmumbai.in)

#### Works

M/S. Systems and Controls  
C-15 MIDC Malegaon – Sinnar  
Nashik – 422 103  
Tel: +91 70281 33547  
Email: [info@sncmumbai.in](mailto:info@sncmumbai.in)