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## 1.0 INTRODUCTION

The STM-50 Screen Tension Meter is designed to measure how taut a woven material is when tension has been applied in two directions at right angles to each other, as in the case of a screen printing frame.

The measuring surface on the bottom of the instrument is fitted with a one-inch bar indenter placed midway between two outer “reference” bars spaced two inches apart. When the instrument is placed on the material, the greater the tension, the more the bar will be pushed in and the greater the reading on the scale.

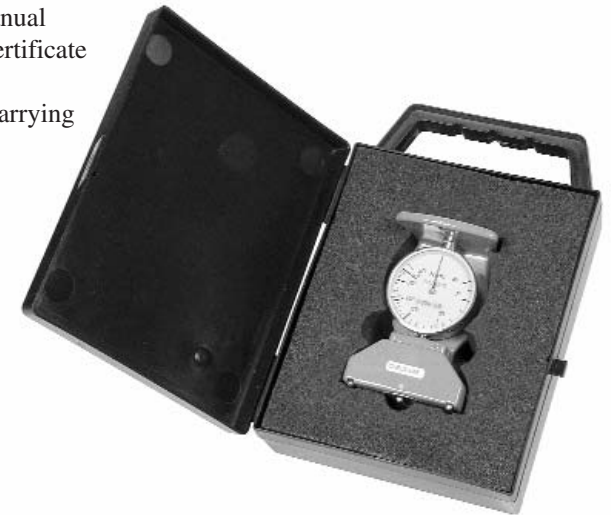
### 1.1 Unpacking

Unpack the STM-50 carefully and inspect it for any damage. If damage is found, contact Electromatic immediately by telephone at 516-295-4300 or send email to [info@checkline.com](mailto:info@checkline.com).

### 1.2 Complete Kit

STM-50 Screen Printing Tension Meters are supplied as a complete kit, including:

- Instrument
- Operating manual
- Calibration certificate without data
- Foam-fitted carrying case



**WARNING**

**Tensions that exceed the tension range of the instrument by more than 100% may cause permanent damage to the movement and must be avoided under any circumstances.**

**This device must not be operated in explosion hazard areas and must not come into contact with aggressive substances.**

## 2.0 OVERVIEW

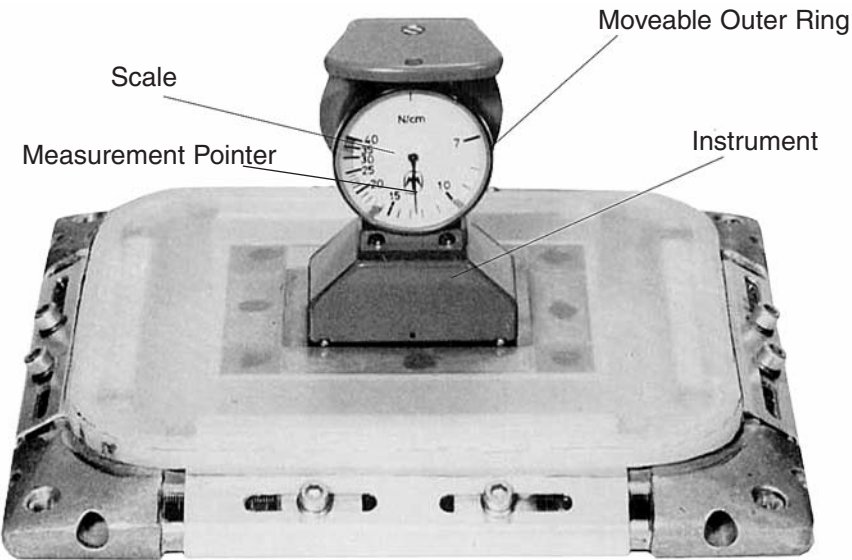


Fig. 1

### 2.1 Tension Range Markers

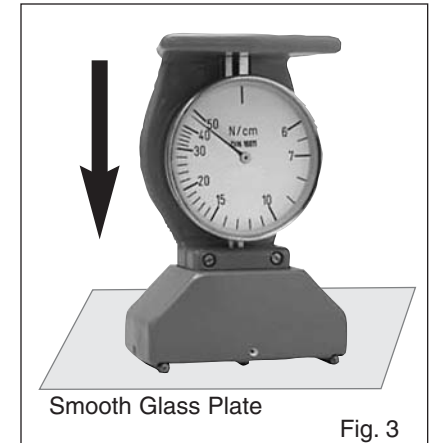
The STM-50 is equipped with two adjustable Tension Range Markers that can be used to mark the upper and lower limits of the most frequently used tension range



Fig. 2

## 3.0 VERIFYING CALIBRATION

1. To confirm the calibration, place the STM-50 on a glass plate and press down (see Fig. 3).
2. The scale pointer should make one full turn on the scale, from zero to zero, when you press down on the instrument. If it does not, contact Electromatic for assistance.



## 4.0 TAKING A MEASUREMENT

1. Place the instrument on a flat surface and make sure that the Measurement Pointer lines up with the zero position on the scale. If it does not, rotate the Outer Ring carefully, moving the Zero Position Marker until it lines up with the Measurement Pointer.
2. Place the STM-50 on the screen web as shown in Fig 1. Tap the screen web lightly with your hands a few times to compensate for any mechanical friction cause by the instrument. This will help to ensure repeatable measurements.
3. Press down firmly on the STM-50. The Measurement Pointer will show the screen tension directly in N/cm.

## 5.0 SPECIFICATIONS

<b>Tension Range</b>	6–50 N/cm
<b>Dimensions</b>	3" x 1.8" x 4.5" (75 x 46 x 115mm) L x W x H
<b>Weight (approx)</b>	16.9 oz (480 g)

# SCREEN PRINTING TENSION METER

## STM-50



**Operating Instructions**