

TetkoMat 10-100

A reliable, consistent and durable tension meter for all screen printing applications.

The TetkoMat 10-100 is a portable, compact, mechanical tension measuring device for accurate and consistent measurement of all screen printing fabrics.

The TetkoMat 10-100 was developed to Sefar's specifications and is manufactured in Switzerland. It provides a simple, quick, and direct reading that measures in Newtons per centimeter (N/cm). N/cm is a unit of force measurement cited in the International Standard (DIN 16611A.2) for Relative Calibration of Tension Control Instruments.

The high sensitivity of the TetkoMat 10-100 allows measurement control of tension variations within a screen regardless of frame size. This enables the screen maker to correct or change tensioning techniques to achieve the most uniformly tensioned screen. Correct and uniform screen tensions optimize screen life stability.

Specifications

Dimensions	4.5 x 3 x 1.75 inches
Carrying Case	9 x 8 x 3 inches
Weight	Meter 17.5 oz./Case 12 oz.
Measuring Value	N/cm
Range	10/100 N/cm



Sefar North America
111 Calumet Street
Depew, NY 14043
716 683 4050
719 683 4053 fax



The TetkoMat 10-100 provides the following advantages:

Substantial improvement in tension measuring methods as compared to touch control, gauging by percentage of fabric elongation, and air pressure values.

Accurate tension measurements will improve registration and reduce rejects, resulting in increased productivity.

Reproducible and uniform tension measurements, screen after screen.

An affordable production aid for all sizes of operations.

Ideal for high volume, multiple screen making stations where more than one TetkoMat 10-100 is required.

Preparations for Measuring Procedures

TetkoMat 10-100 Description

The TetkoMat 10-100 consists of a shock-proof measuring base with a precision mechanical dial indicator. The TetkoMat 10-100 works on the principle of force deflection. The unique design of the meter's 3-point measuring base permits accurate measurement on the screen, independent of the screen frame or stretching device.

The instrument is protected in a convenient, rugged plastic carrying case, which houses the meter, the calibration plate, and an allen wrench for safe transportation and storage.



The TetkoMat Model 10-100 is ready to use when removed from the case. Always return the TetkoMat 10-100 to its carrying case when not in use.

IMPORTANT - Before using the TetkoMat 10-100, place instrument on glass calibration plate to check the calibration (the needle should fall on 0 N/cm). If value is incorrect, refer to [Maintenance and Tuning Instructions](#). If in calibration, proceed to [Measuring Procedures](#).



Measuring Procedures

Consult the mesh manufacturer's recommended tension values for the mesh specification that will be stretched. Select the correct N/cm value based on mesh specification, stretching system, and frame size.

Adjust black pointers on dial to upper and lower tolerances allowed for selected N/cm value.

To measure tension, position the TetkoMat 10-100 measuring head parallel to the warp or weft thread direction, in the center of the screen. The meter must be placed at least 3 inches from the inside dimension of the frame. Continue to measure the mesh tension until the recommended level is achieved.

The tension of the thread that is parallel to the meter base is the direction being measured. The meter should be turned 90 degrees to measure the tension in the opposite direction as well. Tap the mesh during the measuring process because the meter is spring loaded.

Measuring Range

Range	Sefar Mesh	Mesh Component
10-100 N/cm	SEFAR® PET 1500	Polyester Monofilament
	SEFAR® PA 1000	Nylon Monofilament
	SEFAR® Wire	Stainless Steel

Specifications

Dimensions	4.5 x 3 x 1.75 inches
Carrying Case	9 x 8 x 3 inches
Weight	Meter 17.5 oz./Case 12 oz.
Measuring Value	N/cm
Range	10-100 N/cm
Accuracy	+/- 5% of full scale

TetkoMat 10-100 Key

A	Shock Absorber
B	Dial Indicator
C	Calibration Point
D	Measuring Bars
E	Calibration Plate
F	Scale Arrestor Screw
G	Indicator Needle
H	Hex Pin Screw (Back Side)
I	Measuring Base

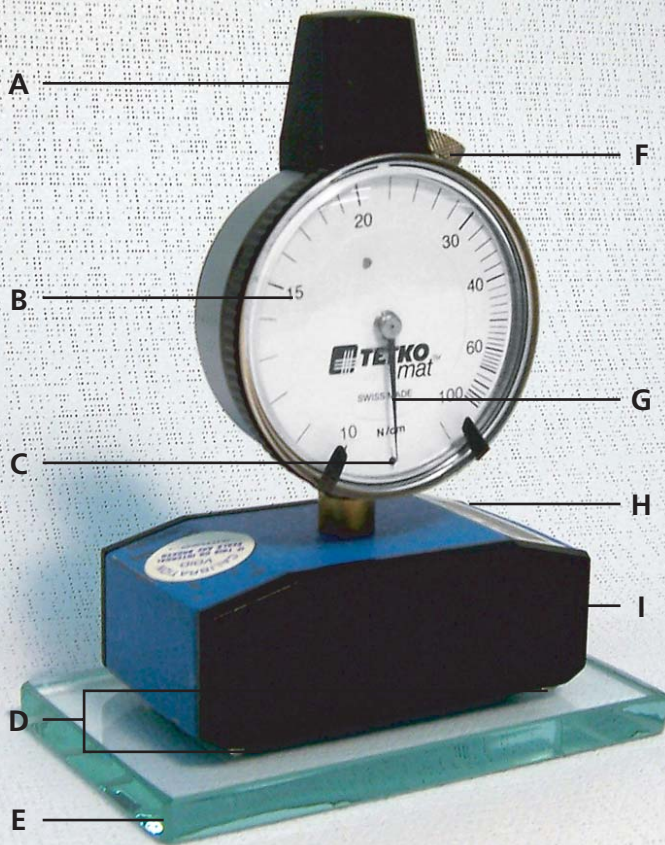
The TetkoMat 10-100 is a precision instrument that must be calibrated annually for greatest measuring accuracy. For certified calibration, Sefar recommends:

Simco Electronics
2125 SW 28th Street
Allentown, PA 18103
Phone: 800 432 2351

To test calibration, place TetkoMat 10-100 on glass plate to ensure that indicator needle is aligned with the calibration point on the dial (0). If the indicator needle is not aligned with calibration point, execute the tuning procedure below.

Tuning Procedure

1. Clean stationary support bars thoroughly to remove any residues or foreign particles.
2. Position the TetkoMat 10-100 on the calibration plate.
3. If the indicator needle and calibration point are not aligned, the TetkoMat 10-100 is not in calibration. Proceed to Step 4.
4. Loosen the scale arrestor screw located on the top right of the dial housing, and turn the dial face until the indicator needle is positioned at the calibration point. Tighten the scale arrestor screw.
5. Re-check calibration for consistency. If consistent, the device is tuned for use.
6. If required to calibrate more than 45 degrees from the original calibration point, or if severe inconsistencies in readings occur, Sefar recommends the tension gauge be sent in for routine calibration or repairs.



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