

FILM THICKNESS GAUGE

SP1570

MANUAL

1 PRODUCT DESCRIPTION

The TQC Film thickness gauge is a high precision film and foil thickness gauge, especially developed for measuring so-called "replica tapes" as Testex®, used mainly to measure the surface profile.

The large clear display makes it easy to read the measurement under all conditions. Values can be displayed in either microns or inches.

To minimise the influence of body/hand temperature the gauge is mounted detached from the holder.

**1.1 Specifications**

Range: 0-1000 Micron
Resolution: 1 Micron
Accuracy: +/- 5 Micron
Battery: 1,5V Type SR44

1.2 Details

- 1) frame
- 2) Anvil Contact Point
- 3) Fixed Anvil
- 4) Battery compartment lid
- 5) Power on
- 6) Reset zero
- 7) display
- 8) lever
- 9) inch/mm switch

**2 STANDARDS**

ISO 8503-5

3 WHAT'S IN THE BOX?

- TQC Film thickness gauge
- Battery SR44
- Manual

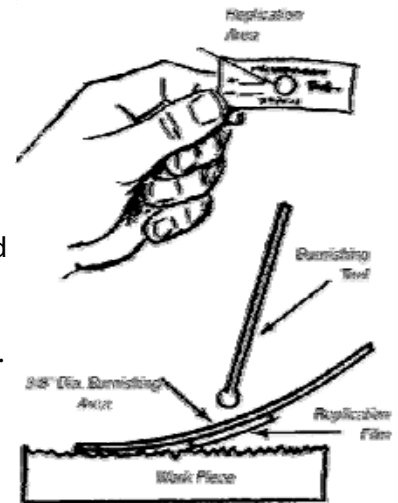
4 PREPARATIONS

1. Select appropriate grade of Press-O-Film replica tape Testex-tape X-COARSE (range 1.5 to 4.5 mils / 40 to 115µm), Testex-tape COARSE (range: 0.8 to 2.0 mils / 20 to 50µm)

2. Prepare snap gage. Make sure the anvils are clean. Only remove dirt with a dry and clean towel, Don't use water or solvents, never clean mechanically.

5 PERFORM A MEASUREMENT

1. Locate a representative site for measurement.
2. Turn the gauge on (ON/OFF -5-).
3. Choose the appropriate parameter (mm/inch -9-).
4. Zero (-6-)the gauge
5. Pull a single piece of adhesive-backed printed paper free of the release paper. The Press-O-Film is the 0.4 inch (1 cm) square white plastic film at the center of the adhesive-backed paper. A circle of paper should remain on the release paper.
6. Apply film to surface to be measured. The adhesive-backed paper will hold it firmly in place.
7. Rub burnishing tool over the round cut-out portion of replica tape, using moderate to firm pressure. Use the smoothest surface on the rubbing tool. A firm pressure is desirable, with either circular, or x- and y-direction, rubbing motions. Compress all parts of the film but be careful not to slide the film with respect to the surface by bumping the edges of the circular paper cutout. When surface is replicated the replica tape will become darker. Make sure that the entire circular area has uniformly darkened.
8. Remove replica and place it (by gently pressuring the lever -8-) centered between anvils(-2-, -3-). Place the anvil, by gently pressuring the lever (-8-), on the Press-O-Film. Subtract 2 mills or 0,05 mm or 50 μ m) from the gage reading (the thickness of the incompressible substrate). The resulting number is the average peak-to-valley height of the blasted surface (Rave).
9. Confirm that reading is well within the tape's recommended range. Tape is most accurate in mid-range region. If the measured profile is near the upper or lower end of the tape's range, confirm your reading with a grade more appropriate to the observed profile. By slightly shifting the replicatape (with anvils released) you can make verification measurements.



6 CALIBRATIONS

We recommend annual calibration. For calibration, send the instrument, together with a RMA form* to TQC, Molenbaan 19, 2908 LL Capelle aan den IJssel, NL.

*You can download the RMA form here: <http://www.tqc.eu/en/service/repairs-calibrations/>

7 MAINTENANCE

- Though robust in design, this instrument is precision-machined. Never drop it or knock it over
- Always clean the instrument after use.
- Clean the instrument using a soft dry cloth. Never clean the instrument by any mechanical means such as a wire brush or abrasive paper. This may cause, just like the use of aggressive cleaning agents, permanent damage.
- Always keep the instrument in its case when not in use.
- We recommend annual calibration

8 DISCLAIMER

The right of technical modifications is reserved.

The information given in this manual is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this manual without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this manual or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this manual is liable to modification from time to time in the light of experience and our policy of continuous product development.