

# OPERATION MANUAL

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## TXG-320 FILM THICKNESS GAUGE



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## 1.0 PRODUCT DESCRIPTION

The Airblast 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.ocate a representative site for measurement and select the appropriate grade of Testex Tape (Coarse or X Coarse).

## 1.1 SPECIFICATIONS

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

## 2.0 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

## 3.0 STANDARDS

The Airblast film thickness gauge operates completely according to "ISO 8503-5 Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - part 5: Replica tape method for the determination of the surface profile."

As described in this standard the closing force is 1,5 N. the gauge has to have an accuracy of 5 micron and a resolution of 1 micron.

The Airblast Film thickness gauge is supplied in a hardcase.

Look up the appropriate standard for a correct execution of the test.

## 4.0 DELIVERY INCLUDES

- Film thickness gauge
- Battery SR44
- Manual

## 5.0 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.

## 6.0 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 µm) 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 replica tape (with anvils released) you can make verification measurements.

## 7.0 MAINTENANCE

- Clean the instrument with a clean dry cloth. Don't use water, abrasives or solvents. NEVER clean by any mechanical means.
- Prevent mechanical shocks or contact with Sharp objects.
- Batteries should be removed when the instrument is not used for an extended time.
- Don't expose the instrument to high temperatures.
- Avoid contact with lightly flammable objects..
- We advise you to regularly reset the zero-point, partly because metal slightly deforms under influence of temperature, which might influence the measurement.

## 8.0 DISCLAIMER

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.

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