



Standard Test Method for Measuring Length, Width, and Squareness of Sheeted Paper and Paper Products¹

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1. Scope

1.1 This test method determines the average length, width, and squareness of sheets of paper. It may also be used to determine the difference between consecutive sheets in a lot of paper. It is especially useful with printing and writing papers which have been cut to specific sizes. The procedure is applicable to a wide range of sheet dimensions, including dimensions as small as 1.6 in. (41 mm) to as large as 60.2 in. (1530 mm). While not the subject of this test method, the equipment described may be used to determine uniformity of hole punching and various process variables related to the cutting of sheeting papers.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are provided for information purposes only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 585 Practice for Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, or Related Products²
- D 685 Practice for Conditioning Paper and Paper Products for Testing²
- D 1968 Terminology Relating to Paper and Paper Products²
- E 122 Practice for Choice of Sample Size to Estimate a Measure of Quality for a Lot or Process³

3. Terminology

3.1 **Definitions**—Definitions of terms in this test method may be found in Terminology D 1968. Use the *Dictionary of*

*Paper*⁴ for terms not found in Terminology D 1968.

4. Significance and Use

4.1 This test method is intended for use in measuring the two principle dimensions, length and width, of paper sheets. Accurate, reproducible sheet dimensions are required for successful passage of paper sheets through printing or copying machines.

4.2 In addition to sheet dimensions, sheet squareness measurements may also be made.

4.3 While not specifically described in this test method, the equipment and techniques described herein may be extended to other uses, such as the measurement of location and reproducibility of punched holes in sheets of paper.

4.4 This test method is intended for use in measuring conformity of sheet size as stated in standard specifications of materials, such as cut-sized papers.

5. Apparatus

5.1 The device used consists of a square or rectangular glass plate of size larger than the specimen sheet whose measurements are to be determined. The device is inscribed with dimension scales in one or both dimensions of the glass photo-engraved in 0.01-in. (0.25-mm) increments, and with one or both dimension directions beginning with values of 0.00 in. (0.00 mm) in the lower left corner of the plate as it is used by the operator. The glass plate is housed in a hardwood or other suitable rigid frame and back-illuminated by a soft uniform light source. A register bar or the stop block is attached to the frame in either the length or the width dimension from the 0.00/0.00 corner of the glass plate to assist in accurately positioning the specimen sheet for measurement.

5.1.1 Accuracy of the measurement scale is of prime importance, and should be ± 0.005 in. (± 0.13 mm) or less. Exact construction of the rigid frame is important only to the degree that it provides support for the glass plate over the illuminant source. Light source must be uniform under the entire glass plate. Exact intensity must be such that the dimension graduations photo-imaged onto the glass plate are easily distinguished by the operator, and may require variation due to

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² *Annual Book of ASTM Standards*, Vol 15.09.

³ *Annual Book of ASTM Standards*, Vol 14.02.

⁴ Available from the Technical Association of the Pulp and Paper Industry, Technology Park, P.O. Box 105113, Atlanta GA 30348.