DeFelsko®

Management Procedure 2006
Revision: A
Date Issued: June 6, 2024
Date Revised:

Calibration Procedure

PosiTest PG

Table of Contents

1 Introduction and UUC Performance Requirements

1.1 This procedure describes the calibration of DeFelsko PosiTest PG gage.

Table 1-1

Models	Measurement Range
PosiTest PG	0 - 1250 µm* (0 - 50 mils)

* Depending on cutting tip

1.2 The unit being calibrated will be referred to as the UUC (unit-under-calibration).

2 Measurement Standards and Support Equipment Performance Requirements

2.1 The UUC accuracy requirements are based upon the published UUC performance specifications.

2.2 The test uncertainty ratio applied in this Calibration Procedure is 4:1 unless otherwise stated.

2.3 The Minimum-Use-Specifications are the minimum test equipment specifications required to meet all the UUC accuracy requirements and the test uncertainty ratio applied.

Table 2-1 UUC Accuracy Requirements and Description

Performance Specifications		
Range	Accuracy	Test Method
0.0 – 2.0 mm* (0 – 0.080")	± 0.02 mm (± 0.001")	Compare to Reference Standard

* Scale length exceeds maximum coating thickness

Table 2-2 Minimum Use Specification

Range	Accuracy
0.0 – 2.0 mm (0.0 – 0.080")	± 0.005 mm (± 0.00025")

Table 2-3 Actual Equipment Specification

Range	Accuracy	Resolution	Manufacturer/Model #'s Applicable
0.0 – 2.0 mm	± 0.005 mm	0.01 mm	Klarmann Rulings KR-867

***Caution*:** The instructions in this Calibration Procedure relate specifically to the equipment and conditions listed in Section 2. If other equipment is substituted, the information and instructions must be interpreted accordingly.

Table 2-4 Calibration Environmental and Warm-up Requirements

Measurement Standards & Support Equipment Environmental Requirements:	Temperature: 23 ± 1° C. Relative Humidity: 40 - 60%
Measurement Standards & Support Equipment Warm-up and Stabilization Requirements:	Not Required

3 Preliminary Operations

Note: Review the entire document before starting the calibration process.

3.1 Visual Inspection

3.1.1 Visually inspect the UUC for, but not limited to:

- Dirty optics
- Damage to unit

3.1.2 Damage or excess wear shall be repaired prior to beginning the calibration process.

3.1.3 Inspect the Stage Micrometer for damage or contamination. If required, gently clean the standard by using a pre-moistened lens cleaning wipe or lens cleaner and a lens tissue.

4 Calibration Process

4.1 Review the Performance Requirements Table 5-1.

Note: Whenever the test requirement is not met, verify the results of each test and take corrective action before proceeding.

4.2 Place a piece of clean white lens tissue on a hard flat surface then place the Stage Micrometer, with the printed side facing up, on the tissue. The tissue is required to provide adequate contrast to read the Stage Micrometer scale.

4.3 Place the UUT on the Stage Micrometer, turn on the light and focus the UUT so the Stage Micrometer scale image is crisp.

4.4 Align the two scales then compare the alignment of the 0.66, 0.94 and 1.88 mm marks of the Stage Micrometer and UUT scale. At the 0.66, 0.94 and 1.88 mm marks also compare to the 0.026”, 0.037” and 0.074” marks of the UUT respectively.

4.5 If the UUT marks align within two divisions of the Stage Micrometer, the UUT passes.

5 Performance Requirements

Table 5-1 Performance Requirements and Calibration Data for PosiTest PG

Reference Value	Pass / Fail
0.66 mm (0.026”)	
0.94 mm (0.037”)	
1.88 mm (0.074”)	

Note: Do not write in this procedure.

Management Procedure Change Notice

Procedure Number: MP 2006
Revision Level: A
Date of Change: June 6, 2024
Title: Calibration Procedure, PosiTest PG

Reason for Change: • New product
Description of Change: • New procedure

I confirm I have read and understand the procedure and the change described above.

Printed Name	Signature	Date

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