

# DIN EN ISO 5059-1:2025-11 (E)

## Geometrical product specifications (GPS) - Dimensional measuring equipment - Part 1: Design and metrological characteristics of two-point inside micrometers (ISO 5059-1:2025)

---

<b>Contents</b>	<b>Page</b>
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>vii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Design characteristics</b> .....	<b>2</b>
4.1 General design and nomenclature.....	2
4.2 Main dimensions.....	3
4.3 Thermally insulating grip.....	3
4.4 Measuring faces.....	3
4.5 Adjustment devices.....	3
4.6 Spindle clamp.....	4
4.7 Interchangeable extensions.....	4
<b>5 Metrological characteristics</b> .....	<b>4</b>
5.1 General.....	4
5.2 Rated operating conditions.....	4
5.3 Reference point.....	4
5.4 Test methods.....	5
5.5 Length measurement error, $E$ (limited by $E_{\text{MPE}}$ ).....	5
5.5.1 General.....	5
5.5.2 Length measurement error without using interchangeable extension (for the main body).....	5
5.5.3 Length measurement error with interchangeable extension.....	5
5.6 Maximum permissible error (MPE) values.....	6
<b>6 Determination of conformity to specifications</b> .....	<b>7</b>
6.1 General.....	7
6.2 Measurement uncertainty.....	7
6.3 Decision rule.....	7
<b>7 Marking</b> .....	<b>7</b>
<b>Annex A (normative) Default MPE values for metrological characteristics</b> .....	<b>8</b>
<b>Annex B (informative) Relation to the GPS matrix model</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>11</b>