
**Geometrical Product Specifications
(GPS) — Surface texture: Profile method —
Calibration of contact (stylus) instruments**

*Spécification géométrique des produits (GPS) — État de surface: Méthode
du profil — Étalonnage des instruments à contact (palpeur)*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12179 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

Annexes A and B form a normative part of this International Standard. Annexes C and D are for information only.

Introduction

This International Standard is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences the chain link 6 of the chain of standards on roughness, waviness and primary profile.

For more detailed information on the relationship of this standard to the GPS matrix model, see annex D.

This International Standard introduces calibration of contact (stylus) instruments as defined in ISO 3274. The calibration is to be carried out with the aid of measurement standards.

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Geometrical Product Specifications (GPS) — Surface texture: Profile method — Calibration of contact (stylus) instruments

1 Scope

This International Standard applies to the calibration of the metrological characteristics of contact (stylus) instruments for the measurement of surface texture by the profile method as defined in ISO 3274. The calibration is to be carried out with the aid of measurement standards.

Annex B applies to the calibration of metrological characteristics of simplified operator contact (stylus) instruments which do not conform with ISO 3274.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards:

ISO 3274:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Nominal characteristics of contact (stylus) instruments*.

ISO 4287:1997, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*.

ISO 5436-1:2000, *Geometrical Product Specifications (GPS) — Surface texture: Profile method; Measurement standards — Part 1: Material measures*.

ISO 10012-1:1992, *Quality assurance requirements for measuring equipment — Part 1: Metrological confirmation system for measuring equipment*.

ISO 12085:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Motif parameters*.

ISO 14253-1:1998, *Geometrical Product Specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 1: Decision rules for proving conformance or non-conformance with specification*.

ISO/TS 14253-2:1999, *Geometrical Product Specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 2: Guide to the estimation of uncertainty of measurement in GPS measurement, in calibration of measuring equipment and in product verification*.

Guide to the expression of uncertainty in measurement (GUM). BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, 1st edition, 1995.

International vocabulary of basic and general terms used in metrology (VIM). BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, 2nd edition, 1993.