
**Geometrical product specifications
(GPS) — Surface texture: Profile method;
Measurement standards —**

**Part 2:
Software measurement standards**

*Spécification géométrique des produits (GPS) — État de surface:
Méthode du profil; Étalons —
Partie 2: Étalons logiciels*

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Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Type F software measurement standards	2
4.1 General	2
4.2 Type F1 — Reference data	3
4.3 Type F2 — Reference software	3
5 File format for Type F1 reference data	3
5.1 General	3
5.2 Record 1 — Header	4
5.3 Record 2 — Other information (optional and non-mandatory)	6
5.4 Record 3 data	8
5.5 Record 4 checksum	9
6 Software measurement standard certificate	9
Annex A (informative) Example of file format	11
Annex B (informative) Relation to the GPS matrix model	15
Bibliography	17

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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 5436-2 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This second edition cancels and replaces the first edition (ISO 5436-2:2001), which has been technically revised. It also incorporates the Technical Corrigenda ISO 5436-2:2001/Cor.1:2006 and ISO 5436-2:2001/Cor.2:2008.

ISO 5436 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Surface texture: Profile method; Measurement standards*:

- Part 1: *Material measures*
- Part 2: *Software measurement standards*

Introduction

This part of ISO 5436 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences chain link 6 of the chain of standards on roughness, waviness and primary profiles.

The ISO/GPS Masterplan given in ISO/TR 14638 gives an overview of the ISO/GPS system of which this document is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document, unless otherwise indicated.

For more detailed information on the relationship of this part of ISO 5436 to other standards and the GPS matrix model, see Annex B.

This part of ISO 5436, together with ISO 5436-1, introduces two new measurement standards:

- Type E, for calibrating the profile co-ordinate system;
- Type F, for calibrating software.

This part of ISO 5436 is concerned with software measurement standards.

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Geometrical product specifications (GPS) — Surface texture: Profile method; Measurement standards —

Part 2: Software measurement standards

1 Scope

This part of ISO 5436 defines Type F1 and Type F2 software measurement standards (etalons) for verifying the software of measuring instruments. It also defines the file format of Type F1 software measurement standards for the calibration of instruments used for measuring the surface texture by the profile method defined in ISO 3274.

NOTE 1 Throughout this part of ISO 5436, the term “softgauge” is used as a substitute for “software measurement standard Type F1”.

NOTE 2 Formerly, “measurement standards” were referred to as “calibration specimens”.

NOTE 3 ISO 3274 only refers to instruments with independent reference datums.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

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

ISO 16610-21:2011, *Geometrical product specifications (GPS) — Filtration — Part 21: Linear profile filters: Gaussian filters*

ISO 17450-2:2012, *Geometrical product specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators, uncertainties and ambiguities*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in Measurement (GUM:1995)*

ISO/IEC Guide 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3274, ISO 5436-1, ISO 12085, ISO 16610-21:2011, ISO/IEC Guide 99 and the following apply.

3.1

software measurement standard

reference data or reference software intended to reproduce the value of a measurand with known uncertainty in order to verify the software used to calculate the measurand in a measuring instrument