

Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment

**Part 3: Guidelines for achieving
agreements on measurement
uncertainty statements (ISO/TS
14253-3:2002)**

ICS 17.040.01

National foreword

This Draft for Development is the UK implementation of CEN ISO/TS 14253-3:2007. It is identical to ISO/TS 14253-3:2002.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the international organization responsible for its conversion to an international standard. A review of this publication will be initiated not later than 3 years after its publication by the international organization so that a decision can be taken on its status. Notification of the start of the review period will be made in an announcement in the appropriate issue of Update Standards.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into an international Standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee TDW/4, Technical product realization (TPR).

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Comments

English Version

**Geometrical product specifications (GPS) - Inspection by
measurement of workpieces and measuring equipment - Part 3:
Guidelines for achieving agreements on measurement
uncertainty statements (ISO/TS 14253-3:2002)**

Spécification géométrique des produits (GPS) - Vérification
par la mesure des pièces et des équipements de mesure -
Partie 3: Lignes directrices pour l'obtention d'accords sur la
déclaration des incertitudes de mesure (ISO/TS 14253-
3:2002)

Geometrische Produktspezifikation (GPS) - Prüfung von
Werkstücken und Messgeräten durch Messen - Teil 3:
Richtlinien für das Erzielen einer Einigung über
Messunsicherheitsangaben (ISO/TS 14253-3:2002)

This Technical Specification (CEN/TS) was approved by CEN on 8 October 2007 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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Introduction

This part of ISO 14253 is a geometrical product specification (GPS) Technical Specification and is to be regarded as a global GPS Technical Specification (see ISO/TR 14638). It influences links 4, 5 and 6 of all chains of standards in the general GPS matrix.

For more detailed information of the relation of this Technical Specification to other standards and the GPS matrix model, see annex A.

ISO 14253-1 provides decision rules for proving conformance or non-conformance with specifications of workpieces and measuring equipment when taking into account the uncertainty of measurement. ISO/TS 14253-2 provides instructions for preparing uncertainty budgets for determining measurement uncertainty as defined in the *Guide to the Expression of Uncertainty in Measurement (GUM)*. However, the possibility still exists that disagreement between customer and supplier can occur on the estimated measurement uncertainty.

It is becoming increasingly common for suppliers to have in place a quality system providing satisfactory assurance to the customer that the latter is receiving a product which conforms to specifications. This avoids the need for costly duplicate inspections.

For this reason, the most common case of disagreement over a measurement uncertainty statement or an uncertainty budget involves the customer questioning the supplier's uncertainty budget. The customer also may question the measured value of a characteristic of a workpiece or of measuring equipment, thus indirectly questioning the total uncertainty budget (see ISO 14253-1).

In a rarer case of disagreement, the supplier may question the customer's uncertainty budget when the customer rejects a workpiece or measuring equipment (see 6.2 of ISO 14253-1:1998).

In addition to those mentioned, there are other cases of disagreement, as well as other motivations that may lead to discussion of stated uncertainties.

Geometrical Product Specifications (GPS) — Inspection by measurement of workpieces and measuring equipment —

Part 3:

Guidelines for achieving agreements on measurement uncertainty statements

1 Scope

This part of ISO 14253 provides guidelines and defines procedures for assisting the customer and supplier to reach amicable agreements on disputed measurement uncertainty statements regulated in accordance with ISO 14253-1, and so avoid costly and time-consuming disputes.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 14253. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 14253 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 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 in GPS measurement, in calibration of measuring equipment and in product verification*

ISO 14978:—¹⁾, *Geometrical Product Specifications (GPS) — General concepts and requirements for GPS measuring equipment*

ISO/TS 17450-1:—¹⁾, *Geometrical Product Specifications (GPS) — General concepts — Part 1: Model for geometric specification and verification*

ISO/TS 17450-2:—¹⁾, *Geometrical Product Specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators and uncertainties*

Guide to the Expression of Uncertainty in Measurement (GUM). BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, 1st edition, 1993, corrected and reprinted in 1995

International Vocabulary of Basic and General Terms in Metrology (VIM). BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, 2nd edition, 1993

1) To be published.