Geometrical Product Specifications (GPS) - Standard reference temperature for geometrical product specifications and verification

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 1:2003 sisaldab Euroopa standardi EN ISO 1:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 1:2003 consists of the English text of the European standard EN ISO 1:2002. This document is endorsed on 14.08.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This International Standard specifies the standard reference temperature for geometrical product specification and verification	**Scope:** This International Standard specifies the standard reference temperature for geometrical product specification and verification

ICS 17.040.01

Võtmesõnad: dimensional measurements, mea, measurement, measuring instruments, measuring techniques, measuring temperatures, measuring tools, product specifications, reference temperatures, temperature, testing and instruments, testing conditions, verification, workpieces

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 1

July 2002

ICS 17.040.01

English version

Geometrical Product Specifications (GPS) - Standard reference temperature for geometrical product specification and verification (ISO 1:2002)

Spécification géométrique des produits (GPS) - Température normale de référence pour la spécification géométrique des produits et vérification (ISO 1:2002)

Geometrische Produktspezifikation (GPS) - Bezugstemperatur für die geometrische Produktspezifikation (ISO 1:2002)

This European Standard was approved by CEN on 24 June 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 1:2002 E

Foreword

This document (ISO 1:2002) has been prepared by Technical Committee ISO/TC 213 "Dimensional and geometrical product specifications and verification" in collaboration with Technical Committee CEN/TC 290 "Dimensional and geometrical product specification and verification", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2003, and conflicting national standards shall be withdrawn at the latest by January 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE FROM CMC The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 1:2002 has been approved by CEN as a European Standard without any modifications.

INTERNATIONAL STANDARD

ISO 1

Second edition
2002-07-15

Geometrical Product Specifications (GPS) — Standard reference temperature for geometrical product specification and verification

Spécification géométrique des produits (GPS) — Température normale de référence pour la spécification géométrique des produits et vérification

Reference number
ISO 1:2002(E)

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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.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 1 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 1:1975), which has been technically revised. Specifically, the following points have changed:

— the standard reference temperature has been modified; consequently, the title has been changed, and

— the footnote, referring to a definition of the metre which no longer exists, has been deleted.

Annex A is for information only.

Introduction

This International Standard is a geometrical product specification (GPS) standard and is to be regarded as a global GPS standard (see ISO/TR 14638). It influences all links in all chains of standards.

For more detailed information on the relationship of this International Standard to other standards and the GPS matrix model, see annex A.

The standard reference temperature is now applied to the GPS specification, i.e. all GPS characteristics are defined and specified at the standard reference temperature. Consequently, when measurements of geometrical features of workpieces and/or metrological characteristics of measuring equipment are carried out, deviations from the standard reference temperature will introduce errors and measurement uncertainties in the measurement result.

The definitions of the units of length and temperature were determined and adopted by the International Committee of Weights and Measures (CIPM) under the authority of the Convention of the Meter. These definitions are published in the *Procès-verbaux* of the CIPM[4], [5], [6].

This International Standard does not require that all calibrations of metrological characteristics of measuring equipment, workpiece measurements and manufacturing be carried out at the standard reference temperature. Uncertainty in temperature measurement and measurement at temperatures other than the standard reference temperature contribute to the uncertainty assessment of the measurement result and lead to systematic errors in the measurement result. An ISO Technical Report[2] which discusses these issues is being prepared.