

<b>STN</b>	<b>Geometrické špecifikácie výrobkov (GPS). Normalizovaná referenčná teplota na špecifikáciu geometrických a rozmerových vlastností (ISO 1: 2016).</b>	<b>STN EN ISO 1</b>  25 0051
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Geometrical product specifications (GPS) - Standard reference temperature for the specification of geometrical and dimensional properties (ISO 1:2016)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/17

Obsahuje: EN ISO 1:2016, ISO 1:2016

Oznámením tejto normy sa ruší  
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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017  
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EUROPEAN STANDARD

**EN ISO 1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2016

ICS 17.040.01

Supersedes EN ISO 1:2002

English Version

## Geometrical product specifications (GPS) - Standard reference temperature for the specification of geometrical and dimensional properties (ISO 1:2016)

Spécification géométrique des produits (GPS) -  
Température normale de référence pour la  
spécification des propriétés géométriques et  
dimensionnelles (ISO 1:2016)

Geometrische Produktspezifikation (GPS) -  
Referenztemperatur für geometrische  
Produktspezifikation und -prüfung (ISO 1:2016)

This European Standard was approved by CEN on 7 August 2016.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN ISO 1:2016) 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of an identical text or by endorsement, at the latest by March 2017, and conflicting national standards shall be withdrawn at the latest by March 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 1:2002.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 1:2016 has been approved by CEN as EN ISO 1:2016 without any modification.

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**Geometrical product specifications  
(GPS) — Standard reference  
temperature for the specification  
of geometrical and dimensional  
properties**

*Spécification géométrique des produits (GPS) — Température  
normale de référence pour la spécification des propriétés  
géométriques et dimensionnelles*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This third edition cancels and replaces the second edition (ISO 1:2002), which has been technically revised. Specifically, the following points have changed:

- the standard reference temperature definition has been included; consequently, the title, introduction and scope, have been changed;
- the general definition of reference temperature has been included.



## Introduction

This International Standard is a geometrical product specification (GPS) standard and is to be regarded as a fundamental GPS Standard (see ISO 14638:2015<sup>[1]</sup>). For more detailed information on the relationship of this International Standard to other standards and the GPS matrix model, see [Annex B](#).

The definitions of the units, including those of length and temperature, are adopted by the General Conference of Weights and Measures (CGPM) under the authority of the Convention of the Metre. These definitions are maintained in the SI brochure.<sup>[5]</sup>

The unit of length, the metre, is independent of temperature. The current definition of the metre<sup>[6]</sup> is based on the distance light travels in vacuum during a unit of time. However, a physical object is subject to thermal expansion and consequently, its geometrical and dimensional properties are dependent on its temperature. Specifying a reference temperature allows the geometrical and dimensional properties of a physical object to be unambiguously stated.



# Geometrical product specifications (GPS) — Standard reference temperature for the specification of geometrical and dimensional properties

## 1 Scope

This International Standard defines the concepts of a reference temperature and of the standard reference temperature, and specifies the standard reference temperature value for the specification of geometrical and dimensional properties of an object. Some examples of geometrical and dimensional properties include size, location, orientation (including angle), form and surface texture of a workpiece.

This International Standard is also applicable to the definition of the measurand used in verification or calibration.

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**