Geometrical product specifications (GPS) - Basic concepts - Part 4: Geometrical characteristics for quantifying GPS deviations (ISO 17450-4:2017)

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 17450-4:2018 sisaldab Euroopa standardi EN ISO 17450-4:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 17450-4:2018 consists of the English text of the European standard EN ISO 17450-4:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 31.01.2018.	Date of Availability of the European standard is 31.01.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Geometrische Produktspezifikation (GPS) - Grundlagen - Teil 4: Geometrische Merkmale zur Quantifizierung von GPS-Abweichungen (ISO 17450-4:2017)

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

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European foreword

This document (EN ISO 17450-4:2018) 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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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

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Endorsement notice

The text of ISO 17450-4:2017 has been approved by CEN as EN ISO 17450-4:2018 without any modification.

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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).

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For an explanation on the voluntary nature of standards, 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.

This document was prepared by Technical Committee is 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*.

A list of all parts in the ISO 17450 series can be found on the ISO website.

Introduction

This document is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO 14638). The rules and principles given in this document apply to all segments of the ISO GPS matrix which are indicated with a filled dot (•).

The ISO/GPS matrix model given in ISO 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 document to other standards and to the GPS matrix model, see Annex A.

Geometrical product specifications (GPS) — Basic concepts —

Part 4: Geometrical characteristics for quantifying GPS deviations

1 Scope

This document specifies general rules for quantifying GPS deviations for individual GPS characteristics.

NOTE GPS deviations can be local or global. A GPS characteristic defined from local GPS deviations is a parameter that transforms the set of local deviations into a global characteristic using a quantifying function (for more details, see Table 1).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 25378, *Geometrical product specifications (GPS) — Characteristics and conditions — Definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 25378 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
local geometrical deviation
$d(P), d(P)_{A_n}$

local signed distance between a point, *P*, of an input feature and a point of the reference feature

Note 1 to entry: $d(P)$ identifies any local geometrical deviation attached to any point (P) of the input feature.

Note 2 to entry: A local geometrical deviation, $d(P)_{A_n}$, can be located in an n-dimensional reference space, A_n, attached to the reference feature.

Note 3 to entry: A local geometrical deviation exists in any point of the input feature (see Figure 1). Each local geometrical deviation of a point of the input feature can be represented in a reference space, A_n, by the abscises of its corresponding point of the reference feature and by the ordinate corresponding to the local geometrical deviation.

Note 4 to entry: A local geometrical deviation can be described as an ordinate of a point of the variation curve whose abscises are defined in the reference space, A_n.

Note 5 to entry: A local geometrical deviation is equal to zero when the deviated feature crosses the reference feature.