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Geometrical product specifications (GPS) - Matrix model
(ISO 14638:2015)

EESTI STANDARDI EESSÕNA

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English Version

Geometrical product specifications (GPS) - Matrix model (ISO 14638:2015)

Spécification géométrique des produits (GPS) - Modèle de matrice (ISO 14638:2015)

Geometrische Produktspezifikation (ISO GPS) - Matrix-Modell (ISO 14638:2015)

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Foreword

This document (EN ISO 14638:2015) 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of an identical text or by endorsement, at the latest by July 2015, and conflicting national standards shall be withdrawn at the latest by July 2015.

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Endorsement notice

The text of ISO 14638:2015 has been approved by CEN as EN ISO 14638:2015 without any modification.

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Introduction

Geometrical Product Specification (ISO GPS) is the system used to define the geometrical requirements of workpieces in engineering specifications, and the requirements for their verification.

ISO GPS standards are the responsibility of ISO/TC 213. ISO GPS standards are used in conjunction with other standards for Technical Product Documentation (TPD), which is the responsibility of ISO/TC 10, to produce Technical Product Specifications (TPS).

This International Standard provides an overview of the structure of the ISO GPS system.

The fundamental rules of ISO GPS given in ISO 8015 apply to this standard and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this standard, unless otherwise indicated.

Geometrical product specifications (GPS) — Matrix model

1 Scope

This International Standard is a fundamental ISO GPS standard. It explains the concept of Geometrical Product Specification (ISO GPS), and provides a framework to illustrate how current and future ISO GPS standards address the requirements of the ISO GPS system.

The framework is intended to be of use to users of ISO GPS standards, by illustrating the extent of the scope of the different standards, and showing how they relate to each other.

The framework is also used for structuring the development of standards for GPS by technical committee ISO/TC 213.

The full set of standards comprising the ISO GPS system is listed on the ISO/TC 213 website at http://www.iso.org/iso/home/store/catalogue_tc/catalogue_tc_browse.htm?commid=54924&published=on. Where relevant standards and documents are available from sources other than ISO/TC213, these may also be listed, although any such listing does not intend to be complete and exhaustive.

2 Concept

ISO GPS is a system which is used to describe certain workpiece characteristics through some of the different stages of its life cycle (design, manufacture, inspection, etc.).

ISO GPS is concerned with geometrical properties such as size, location, orientation, form, surface texture, etc.

Nine geometrical properties are identified in the ISO GPS system. Additional geometrical properties may be added in the future. The properties are:

- size;
- distance;
- form;
- orientation;
- location;
- run-out;
- profile surface texture;
- areal surface texture;
- surface imperfections.

The ISO GPS standards relating to each of these nine geometrical properties are grouped together in a series of nine categories of standards (see 3.3). Each category may be further sub-divided into a number of more specific elements, and each of these specific elements identifies a chain of standards.

For example, 'size' is a geometrical property category. Size can then be subdivided into 'size of cylinders', 'size of cones', 'size of spheres', etc., each of which corresponds to a chain of standards.

Angles are covered within the properties of size and distance, and radii are covered within the properties of distance and form.