

**Geometrical product specifications (GPS) - Roundness -
Part 1: Vocabulary and parameters of roundness (ISO
12181-1:2011)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 12181-1:2011 sisaldab Euroopa standardi EN ISO 12181-1:2011 ingliskeelset teksti.

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English Version

Geometrical product specifications (GPS) - Roundness - Part 1:
Vocabulary and parameters of roundness (ISO 12181-1:2011)

Spécification géométrique des produits (GPS) - Circularité -
Partie 1: Vocabulaire et paramètres de circularité (ISO
12181-1:2011)

Geometrische Produktspezifikation (GPS) - Rundheit - Teil
1: Begriffe und Kenngrößen der Rundheit (ISO 12181-
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Foreword

This document (EN ISO 12181-1:2011) 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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Endorsement notice

The text of ISO 12181-1:2011 has been approved by CEN as a EN ISO 12181-1:2011 without any modification.

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Introduction

This part of ISO 12181 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences chain link 2 of the chain of standards on form of a surface (independent of a datum).

The ISO/GPS Masterplan given in ISO/TR 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 part of ISO 12181 to other standards and the GPS matrix model, see Annex C.

This part of ISO 12181 defines terms and concepts necessary for defining the specification operators according to ISO 17450-2 for roundness of integral features.

Extracting data always involves applying a certain filtering process. An additional filtering of the extracted data might or might not be applied. This additional filter can be a mean line filter (Gaussian, spline, wavelet, etc.) or a non-linear filter (e.g. morphological filter). The type of filtering influences the actual specification operator and, consequently, the actual definition of roundness. Therefore, the type of filtering needs to be stated unambiguously.

This part of ISO 12181 is not intended to disallow any means of measuring roundness.

Geometrical product specifications (GPS) — Roundness —

Part 1:

Vocabulary and parameters of roundness

1 Scope

This part of ISO 12181 defines the terms and concepts related to the roundness of individual integral features and covers complete roundness profiles only.

2 Normative references

The following referenced documents are indispensable for the application 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 14660-1:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 1: General terms and definitions*

ISO 14660-2:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 2: Extracted median line of a cylinder and a cone, extracted median surface, local size of an extracted feature*

ISO 17450-1:—¹⁾, *Geometrical product specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14660-1, ISO 14660-2 and ISO 17450-1 and the following apply.

3.1 General terms

3.1.1

roundness

property of a circle

3.1.2

roundness axis

axis of a feature associated to an integral feature

NOTE The integral feature can be a cylindrical surface or a surface of revolution.

1) To be published. (Revision of ISO/TS 17450-1:2005)