BS EN ISO 12181-1:2011

BSI Standards Publication

Geometrical product specifications (GPS) — Roundness

Part 1: Vocabulary and parameters of roundness

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National foreword

This British Standard is the UK implementation of EN ISO 12181-1:2011. It supersedes DD CEN ISO/TS 12181-1:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee TDW/4, Technical Product Realization.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Geometrische Produktspezifikation (GPS) - Rundheit - Teil 1: Begriffe und Kenngrößen der Rundheit (ISO 12181-1:2011)

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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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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 CEN ISO/TS 12181-1:2007.

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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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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 2.

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.

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ISO 12181-1 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This first edition of ISO 12181-1 cancels and replaces ISO/TS 12181-1:2003, which has been technically revised.

ISO 12181 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Roundness*:

— *Part 1: Vocabulary and parameters of roundness*

— *Part 2: Specification operators*

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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.

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