
Geometrical product specifications (GPS) — Types of documents with GPS

*Spécification géométrique des produits (GPS) — Types de documents
avec les GPS*



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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

Introduction

This document is a geometrical product specifications (GPS) standard and is to be regarded as a fundamental GPS standard (see ISO 14638). It influences all chain links of all chains of general GPS standards (see [Annex A](#) for further information).

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 this document apply in ISO/GPS, unless otherwise indicated.

Traditionally, functional requirements, manufacturing requirements and verification requirements are mixed up in one and the same specification. Furthermore, the basic function of a part may be jeopardized when changing the manufacturing and/or the verification process.

Consequently, the functional requirements may not be identified easily and, furthermore, traceability to functional needs often gets obscured or impossible to derive.

Therefore, it is necessary to provide a structure to organize the mindset of the involved stakeholders (such as designers, process engineers, verifiers, purchasers and suppliers). The design intent as expressed in the functional specification is imperative and constitutes the master for all subsequent specifications.

This document provides such a structure for documents with GPS, thus enabling:

- easier communication;
- clear distinction between the three basic types of specifications applied;
- improved contractual reliability.

Geometrical product specifications (GPS) — Types of documents with GPS

1 Scope

This document specifies the basic types of documents with geometrical product specifications (GPS), their relationship and their related terms and definitions.

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 10209, *Technical product documentation — Vocabulary — Terms relating to technical drawings, product definition and related documentation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10209 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

designer

party who defines and specifies a *component* (3.6), a *sub-assembly* (3.5) or an *assembly* (3.4)

3.2

manufacturer

party who produces a *component* (3.6), a *sub-assembly* (3.5) or an *assembly* (3.4)

3.3

verifier

party proving conformity of a *component* (3.6), a *sub-assembly* (3.5) or an *assembly* (3.4)

3.4

assembly

set of one or more *sub-assemblies* (3.5) or *components* (3.6) constituting a single end-use product

3.5

sub-assembly

set of more than one *component* (3.6) intended to be assembled together with other such sets or components

3.6

component

constituent part of equipment that cannot be physically divided into smaller parts without losing its character