

**BS ISO 16792:2015**



**BSI Standards Publication**

# **Technical product documentation — Digital product definition data practices**

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**National foreword**

This British Standard is the UK implementation of ISO 16792:2015. It supersedes BS ISO 16792:2006 which is withdrawn.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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**16792**

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## Technical product documentation — Digital product definition data practices

*Documentation technique de produits — Données de définition d'un produit*



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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](http://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](http://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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 10, *Technical product documentation*.

This second edition cancels and replaces the first edition (ISO 16792:2006), which has been technically revised mainly to incorporate the technical changes in ISO 1101:2012 and ISO 5459:2011. [Clause 12](#) on indication for welds and [Clause 13](#) on indications for surface texture have been added. A new informative annex on classification codes has also been added.



## Introduction

Every effort was made during the preparation of the first edition of this International Standard, adapted from ASME Y14.41:2012, to apply existing requirements developed for two-dimensional (2D) presentation equally to the output from three-dimensional (3D) models. Where new geometrical product specification (GPS) rules have proved essential, these have been drafted with a view to their being equally applicable to both 2D and 3D. Therefore, in order to maintain the integrity of a single system, these new rules are being incorporated in the relevant existing ISO standards for cross-reference. Application examples have been included where, due to the specific requirements of 3D modelling, additional guidance was deemed beneficial.

It is recognized that there is a need to support drawings in conjunction with 3D models now and for the foreseeable future. This need has been addressed in this International Standard through the definition of the two methods for documenting digital models and specification of requirements to ensure that the information in a data set is consistent between the model and the drawing.

The figures in this International Standard are intended only as illustrations to aid the user in understanding the practices elaborated in the text. In some cases, figures show a level of detail as needed for emphasis; in others, they are only complete enough to illustrate a concept or facet thereof. The absence of figures has no bearing on the applicability of the specified requirement or practice.

In order to comply with the requirements of this International Standard, actual data sets shall meet the content requirements set forth in its text.

Most figures are illustrations of models in a 3D environment. Figures illustrating drawings in digital format include a border.

Text in uppercase letters used in the figures are intended to appear in digital product definition data, or data sets, while that in lowercase letters is for information only and is not intended to appear in data sets.



# Technical product documentation — Digital product definition data practices

## 1 Scope

This International Standard specifies requirements for the preparation, revision, and presentation of digital product definition data, hereafter referred to as data sets. It supports two methods of application: model-only and model and drawing in digital format. Its structure presents requirements common to both methods followed by clauses providing for any essential, differing requirements for each method. Additionally, its use in conjunction with computer-aided design (CAD) systems could assist in the progression towards improved modelling and annotation practices for CAD and engineering disciplines, as well as serving as a guideline for IT engineers.

The aspects specified in this International Standard refer mainly, but not exclusively, to requirements that differ or are additional to those provided in existing, related standards. Where no such requirements are identified, it is safe to assume that the appropriate existing ISO standards are instead applicable.

## 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 128 (all parts), *Technical drawings — General principles of presentation*

ISO 129-1:2004, *Technical drawings — Indication of dimensions and tolerances — Part 1: General principles*

ISO 286 (all parts), *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes*

ISO 1101:2012, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 1302, *Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation*

ISO 2553, *Welding and allied processes — Symbolic representation on drawings — Welded joints*

ISO 3098-1:2015, *Technical product documentation — Lettering — Part 1: General requirements*

ISO 3098-5:1997, *Technical product documentation — Lettering — Part 5: CAD lettering of the Latin alphabet, numerals and marks*

ISO 5456 (all parts), *Technical drawings — Projection methods*

ISO 5457:1999, *Technical product documentation — Sizes and layout of drawing sheets*

ISO 5459:2011, *Geometrical product specifications (GPS) — Geometrical tolerancing — Datums and datum systems*

ISO 7200:2004, *Technical product documentation — Data fields in title blocks and document headers*

ISO 10209:2012, *Technical product documentation — Vocabulary — Terms relating to technical drawings, product definition and related documentation*

ISO 11442:2006, *Technical product documentation — Document management*

ISO 14405-1, *Geometrical product specifications (GPS) — Dimensional tolerancing — Part 1: Linear sizes*