BS ISO 16792:2021

BSI Standards Publication

Technical product documentation — Digital product definition data practices

National foreword

This British Standard is the UK implementation of ISO 16792:2021. It supersedes BS ISO 16792:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee TPR/1, Technical Product Realization.

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

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Foreword

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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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 10, *Technical product documentation*.

This third edition cancels and replaces the second edition (ISO 16792:2015), which has been technically revised.

The main changes to the previous edition are as follows:

— information on assembly part identification added;

— information on movable parts in assemblies added;

— figures updated to reflect current International Standards,

— content which is authored in other documents removed;

— former practices moved to Annex A;

— Annex C with additional examples of applying this document added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Every effort was made during the preparation of this document, 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 International Standards for cross-reference. Application examples have been included where, due to the specific requirements of 3D modelling in support of model-based definition (MBD), 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 document 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 document 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, including the associativity of annotations in the design model. The absence of figures has no bearing on the applicability of the specified requirement or practice.

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

This document describes general requirements and practices for digital product definition applied for 3D mechanical engineering (MCAD) but which can be also applied to other disciplines and trades (e.g. ECAD).

For former practices, see Annex A.

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