

Technical product documentation (TPD) - General principles of representation - Part 1: Introduction and fundamental requirements (ISO 128-1:2020)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 128-1:2020 sisaldab Euroopa standardi EN ISO 128-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 128-1:2020 consists of the English text of the European standard EN ISO 128-1:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.06.2020.	Date of Availability of the European standard is 10.06.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 01.100.01

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Technical product documentation (TPD) - General
principles of representation - Part 1: Introduction and
fundamental requirements (ISO 128-1:2020)

Documentation technique de produits (TPD) -
Principes généraux de représentation - Partie 1:
Introduction et exigences fondamentales (ISO 128-
1:2020)

Technische Produktdokumentation (TPD) - Allgemeine
Grundlagen der Darstellung - Teil 1: Einleitung und
grundlegende Anforderungen (ISO 128-1:2020)

This European Standard was approved by CEN on 18 May 2020.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 128-1:2020) has been prepared by Technical Committee ISO/TC 10 "Technical product documentation" in collaboration with Technical Committee CEN/SS F01 "Technical drawings" the secretariat of which is held by CCMC.

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 December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 128-1:2020 has been approved by CEN as EN ISO 128-1:2020 without any modification.

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Arrangement of the ISO 128 series	3
5 Fundamental requirements	3
6 Basic entities of technical drawings	4
6.1 General.....	4
6.2 Mechanical engineering.....	4
6.3 Construction engineering.....	5
6.4 Shipbuilding.....	5
6.5 Materials and processes.....	5
7 Using the ISO 128 series	5
Bibliography	6

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 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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS F01, *Technical drawings*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 128-1:2003), which has been technically revised. The main changes to the previous edition are as follows:

- the index has been moved to ISO 128-100;
- references have been updated to point to the revised parts of the ISO 128 series.

A list of all parts in the ISO 128 series can be found on the ISO website.

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.

Technical product documentation (TPD) — General principles of representation —

Part 1: Introduction and fundamental requirements

1 Scope

This document gives general rules for the execution of technical drawings (2D and 3D), as well as presenting the structure of the other parts of the ISO 128 series. This document is applicable to technical drawing in the fields of mechanical engineering, construction, architecture and shipbuilding. It is applicable to both manual and computer-based technical drawings.

For the purpose of this document the term “technical drawing” shall be interpreted in the broadest possible sense, encompassing the total package of documentation specifying the product (workpiece, subassembly, assembly).

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 129 (all parts), *Technical product documentation (TPD) — Presentation of dimensions and tolerances*

ISO 286-1, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 1: Basis of tolerances, deviations and fits*

ISO 1101, *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 2538-2, *Geometrical product specifications (GPS) — Wedges — Part 2: Dimensioning and tolerancing*

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

ISO 2692, *Geometrical Product Specifications (GPS) — Geometrical tolerancing — Maximum material requirement (MMR), least material requirement (LMR) and reciprocity requirement (RPR)*

ISO 3040, *Geometrical product specifications (GPS) — Dimensioning and tolerancing — Cones*

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

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

ISO 5458, *Geometrical product specifications (GPS) — Geometrical tolerancing — Pattern and combined geometrical specification*

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

ISO 6284, *Construction drawings — Indication of limit deviations*

ISO 6428, *Technical drawings — Requirements for microcopying*

ISO 6433, *Technical product documentation — Part references*

ISO 7083, *Technical drawings — Symbols for geometrical tolerancing — Proportions and dimensions*

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

ISO 7573, *Technical product documentation — Parts lists*

ISO 8015, *Geometrical product specifications (GPS) — Fundamentals — Concepts, principles and rules*

ISO 8560, *Technical drawings — Construction drawings — Representation of modular sizes, lines and grids*

ISO 9431, *Construction drawings — Spaces for drawing and for text, and title blocks on drawing sheets*

ISO 10135, *Geometrical product specifications (GPS) — Drawing indications for moulded parts in technical product documentation (TPD)*

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

ISO 13715, *Technical product documentation — Edges of undefined shape — Indication and dimensioning*

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

ISO 14405-2, *Geometrical product specifications (GPS) — Dimensional tolerancing — Part 2: Dimensions other than linear or angular sizes*

ISO 14405-3, *Geometrical product specifications (GPS) — Dimensional tolerancing — Part 3: Angular sizes*

ISO 15785, *Technical drawings — Symbolic presentation and indication of adhesive, fold and pressed joints*

ISO 15787, *Technical product documentation — Heat-treated ferrous parts — Presentation and indications*

ISO 16016, *Technical product documentation — Protection notices for restricting the use of documents and products*

ISO 25178-1, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 1: Indication of surface texture*

ISO 80000-1, *Quantities and units — Part 1: General*

ISO 80000-3, *Quantities and units — Part 3: Space and time*

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 technical drawing

drawing showing a technical installation, process or product with a view to clarifying its structure and enabling its construction

[SOURCE: ISO 5127:2017, 3.4.7.54, modified — Note 1 to entry removed.]