

This is a preview of "ISO 128-3:2020". [Click here to purchase the full version from the ANSI store.](#)

First edition
2020-06

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

Part 3: Views, sections and cuts

*Documentation technique de produits (TPD) — Principes généraux de
représentation —*

Partie 3: Vues, sections et coupes



Reference number
ISO 128-3:2020(E)

© ISO 2020

This is a preview of "ISO 128-3:2020". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

This is a preview of "ISO 128-3:2020". [Click here to purchase the full version from the ANSI store.](#)

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Basic conventions for views	2
4.1 General information on views.....	2
4.2 Choice of views.....	3
4.3 Partial views.....	3
4.4 Simplified view of symmetrical parts.....	4
4.5 First angle projection method.....	4
4.6 First angle projection method views.....	4
4.7 First angle projection graphical symbol.....	5
4.8 Third angle projection method.....	5
4.9 Third angle projection method views.....	5
4.10 Third angle projection graphical symbol.....	6
4.11 Other projection methods.....	6
4.12 Enlarged features.....	6
5 Reference indication for views and enlarged features	7
5.1 General.....	7
5.2 Details of the reference indication.....	7
5.3 Examples of indication.....	8
6 General information on cuts and sections	9
6.1 General.....	9
6.2 Indication of cuts and sections.....	9
6.2.1 Cutting plane.....	9
6.2.2 Identification of the cutting plane.....	9
6.2.3 Identification of the cuts and sections.....	9
6.2.4 Reference indication for cuts and sections.....	10
6.3 Sections revolved in the relevant view.....	11
6.4 Cuts/sections of symmetrical parts.....	12
6.5 Local cuts/sections.....	12
7 Basic conventions for representing areas on cuts and sections	13
7.1 General information on cuts and sections.....	13
7.2 Hatching.....	13
7.3 Shading or toning.....	14
7.4 Extra-wide continuous outlines.....	15
7.5 Thin sections.....	15
7.6 Thin adjacent sections.....	15
7.7 Specific materials.....	16
Annex A (normative) Graphical symbols	17
Annex B (informative) Former practices	20
Annex C (normative) Views on mechanical engineering technical drawings	22
Annex D (normative) Sections on mechanical engineering technical drawings	34
Annex E (normative) Projection methods in building technical drawings	39
Annex F (normative) Representation of views, sections and cuts on construction drawings	41
Bibliography	48

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 first edition cancels and replaces the following documents:

- ISO 128-30:2001
- ISO 128-33:2018
- ISO 128-34:2001
- ISO 128-40:2001
- ISO 128-44:2001
- ISO 128-50:2001

The main changes to these documents are as follows:

- harmonization of the former parts listed above;
- introduction of reference indication for views and enlarged features;
- use of arc arrow in special position of views moved to a former practice annex.

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.

This is a preview of "ISO 128-3:2020". [Click here to purchase the full version from the ANSI store.](#)

Introduction

This document contains generally applicable rules for the presentation of views, sections and cuts in all kinds of technical product documentation. The first angle projection method (formerly referred to as method E) and the third angle projection method (formerly referred to as method A) are described in more detail in ISO 5456-2.

All figures in this document, excluding [Figure 1](#), [Figure 6](#) and [Figure 7](#), have been drawn in first-angle projection method unless other methods are stated. It should be understood that third-angle projection or other methods could have been used equally well without prejudice to the principles established.

The application of views, sections and cuts within drawings of special technical fields varies considerably. Therefore, rules of application specific to technical fields are given in [Annex A](#), [B](#) and [C](#).