

Second edition 2022-08

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 128-3:2022(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

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 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

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

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 128-3:2020), of which it constitutes a minor revision, and ISO 128-43:2015. The changes are as follows:

- Clause 2: reference to ISO 10209 has been updated;
- Figures A.3, A.4, A.5, B.4, D.10, E.1 and E.2 have been redrawn to be consistent with the text;
- minor editorial changes.

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.

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 <u>Figure 1</u>, <u>Figure 6</u> and <u>Figure 7</u>, 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 Annexes C, D, E and E.