
**Technical product documentation
(TPD) — General principles of
presentation —**

**Part 33:
Representation of views, sections and
cuts in construction drawings**

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

*Partie 33: Représentation des vues, des sections et des coupes dans les
dessins de construction*



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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).

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 on 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 the following URL: www.iso.org/iso/foreword.html

This document was prepared by Technical Committee ISO/TC 10 *Technical product documentation*, SC 8 *Construction documentation*.

This first edition cancels and replaces the first edition of ISO 8048:1984, to be included in the ISO 128 series after renumbering. The revision includes the renaming of [Clause 2](#) as normative references, an update of references in the document, an additional [Clause 3](#) for terms and definitions and an additional bibliography.

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

Part 33:

Representation of views, sections and cuts in construction drawings

1 Scope

This document lays down general rules for marking, designation, placing and orientation of views, sections and cuts, and the position of text in relation to figures on construction drawings.

For all general rules, reference is made to the relevant parts of the ISO 128 series. As regards relative positions of views, the method using reference arrows according to ISO 128-30 is used.

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10209 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/>

4 Marking of views, sections and cuts

The direction of a view shall be marked with an arrow near the reference figure (see [Figures 1, 5 and 6](#)).

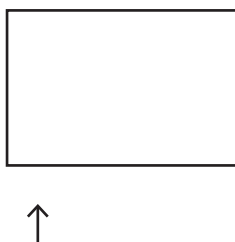


Figure 1 — Mark for direction of a view

The position and direction of viewing of a section or cut shall be marked with a cutting plane and arrows near the reference figure (see [Figures 2, 3 and 5](#)). The direction of view should be chosen to suit the needs of each individual project and of the information to be conveyed.

The cutting plane shall be drawn to a suitable length for legibility (see [Figure 2](#)).

If the cutting plane is not straight, the plane shall be drawn to its full length (see [Figure 3](#)).

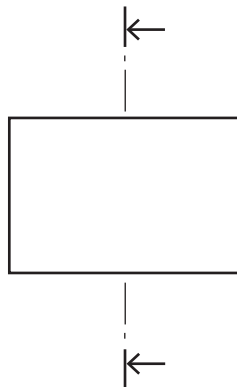


Figure 2 — Cutting plane marks for a section

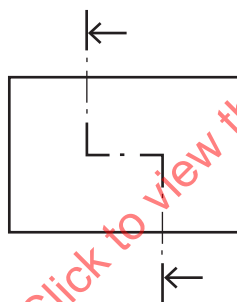


Figure 3 — Cutting plane marks for a non-straight section

The location of a detail, showing a part of the same view, section or cut as the main figure, shall be marked on it with a thin line circle (see [Figure 4](#)).

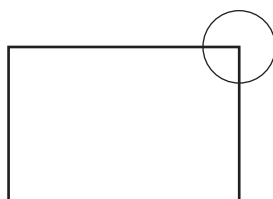


Figure 4 — Mark for the location of a detail

5 Designation

For identification, location and reference between various parts of the documentation for a project, denominations or designations of the documented parts shall be used.

Designations of views, sections, cuts and details shall be used in the following order, as shown in [Figure 5](#):

- a) capital letters

- b) numerals
- c) lower-case letters

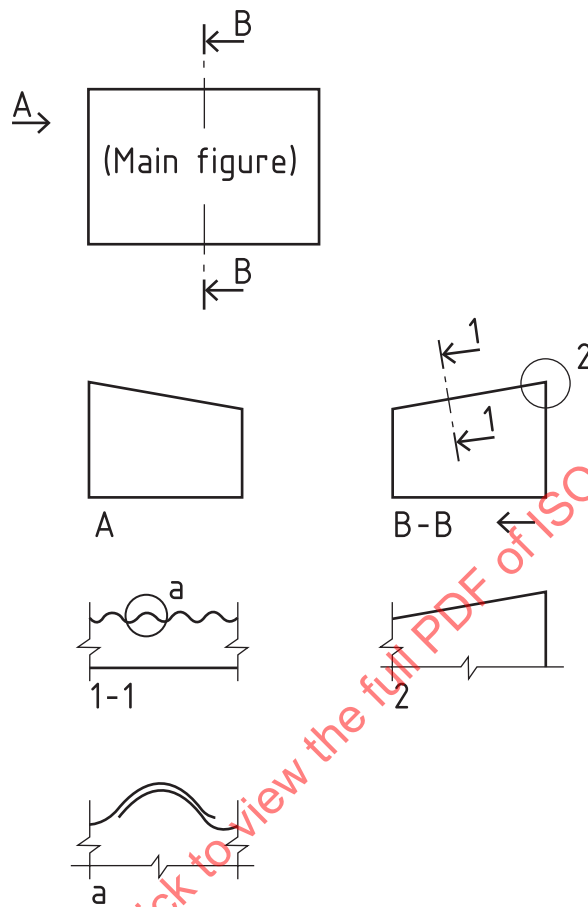


Figure 5 — Designations of views, sections, cuts and details

The designation can be supplemented by a drawing number, which is then placed after the designation, for example B-B/24, including section B-B on drawing 24, and 2/45, indicating section 2 on drawing 45.

Designations shall be chosen so that a systematic and well-arranged disposition of figures on the drawing is obtained (see [Figure 6](#)).

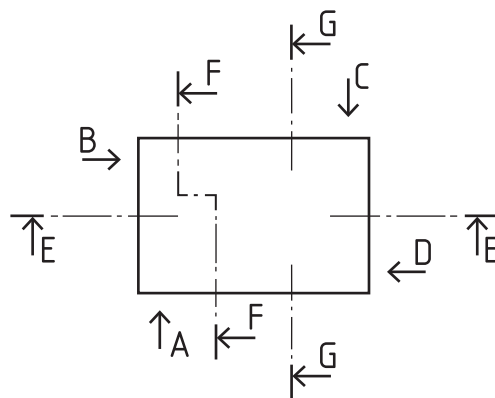


Figure 6 — Arrangement of multiple marks and designations

Identical details shall be given the same designation, irrespective of their sight directions in the main figure (see [Figure 7](#)).

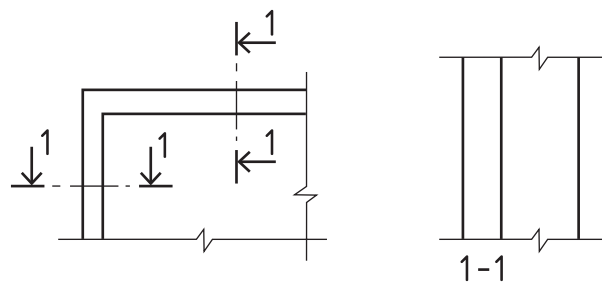


Figure 7 — Designations of identical details

6 Position and orientation

Figures shall be placed in their order of designation (see [Figures 5](#) and [8](#)). If possible they shall be given the same orientation as the main figures.

Figures of details can also be grouped so that they give a compressed picture of an object or a part of it (see [Figure 9](#)).

If possible, plans for one and the same project shall be orientated in the same way on all the drawings.

If possible, all other horizontal sections and cuts shall be orientated in the same way as the main plans of the building.

Vertical sections and cuts shall be drawn upright, if possible.

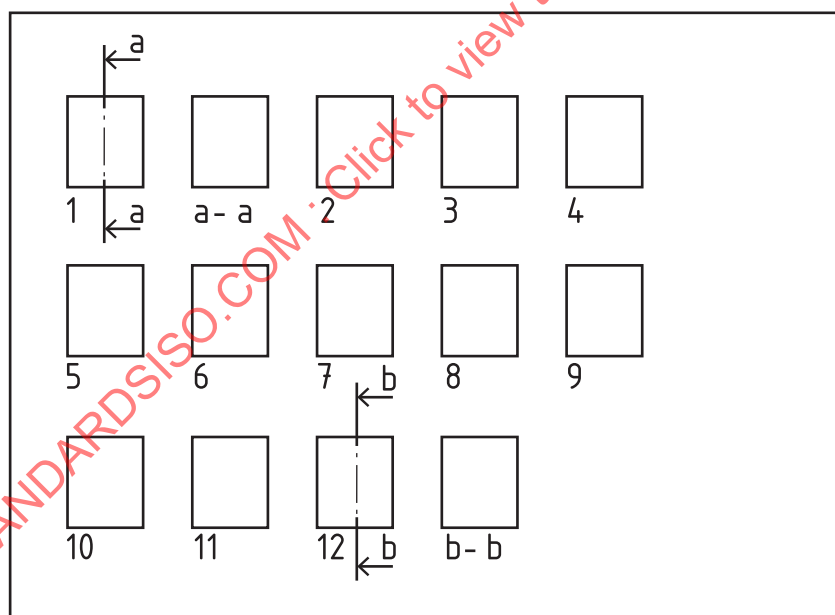


Figure 8 — Order of multiple figures on a drawing

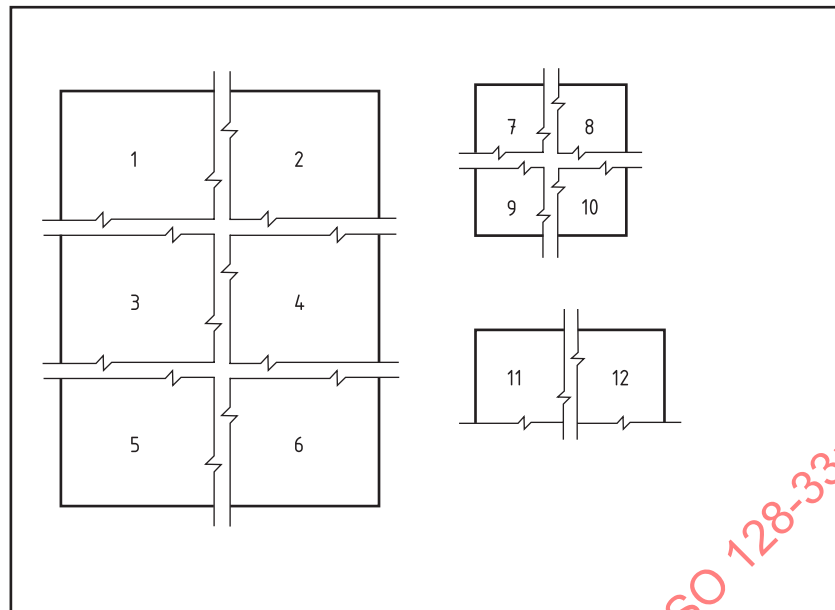


Figure 9 — Composition of grouped details on a drawing

7 Position of text in relation to figures

Text shall be written either below or to the right side of the figure or immediately next to the element to which it refers.

Descriptive text and titles shall be written so that they can be read from below the drawing.

Text in connection with dimension and leader lines shall be written parallel to and slightly above (≈ 1 mm) these lines.

Designation of parts of a building shall normally be written so that they can be read from below the drawing, irrespective of the orientation of the part on the drawing.

Titles common to groups of figures shall be placed to the left and above the group of figures (see [Figure 10](#)).

A title referring to only one figure shall be placed below the figure and with the same edge to the left (see [Figures 10](#) and [11](#)).

Designations used for identification and referencing shall be separately and clearly identifiable. This can be accomplished, for example, by using bigger or thicker signs, underlining or enclosing in circles.

Text referring to a figure as a whole shall be placed below the figure title and with the same edge to the left (see [Figure 10](#)).

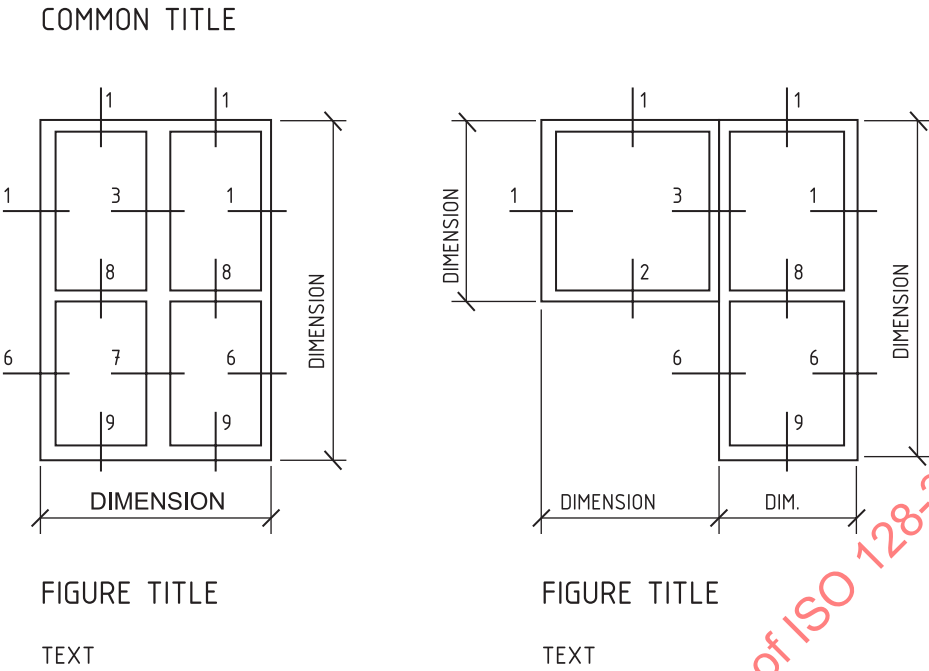


Figure 10 — Position of titles and text for figures

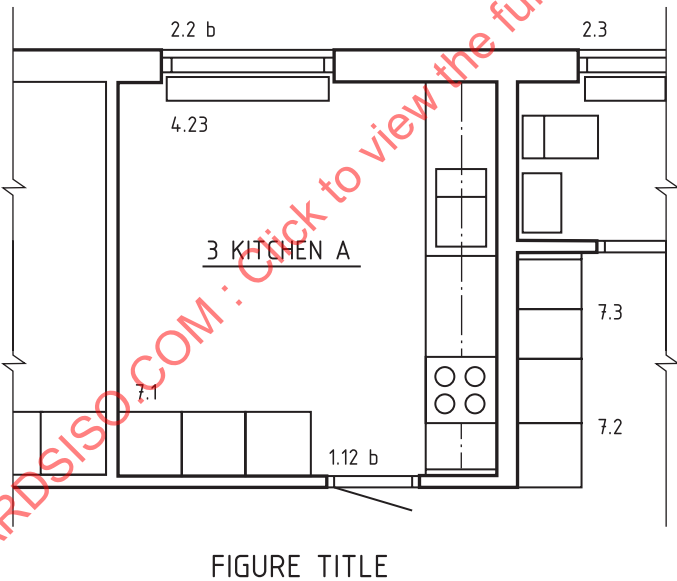


Figure 11 — Position of title for a single figure

Text referring to a part of a figure shall normally be linked by a leader line (see [Figure 12](#)). If the text consists of more than one line, all the text shall be placed above the relevant line.

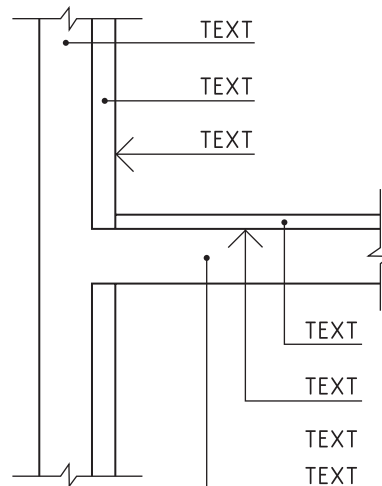


Figure 12 — Text linked by leader lines

A leader line that ends between outlines of a figure shall end with a dot.

A leader line that ends at outlines of a figure shall end with an arrow.

A leader line that ends on lines representing closely grouped conduits or pipes shall terminate with an oblique stroke (see [Figure 13](#)).

Texts shall be grouped.



Figure 13 — Leader line for multiple conduits or pipes