

INTERNATIONAL STANDARD

ISO
7519

First edition
1991-11-15

**Technical drawings — Construction drawings —
General principles of presentation for general
arrangement and assembly drawings**

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Reference number
ISO 7519:1991(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7519 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Sub-Committee SC 8, *Construction documentation*.

Annex A of this International Standard is for information only.

ISO 7519:1991

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Technical drawings – Construction drawings – General principles of presentation for general arrangement and assembly drawings

1 Scope

This International Standard is complementary to ISO 128 for construction drawings and establishes general principles of presentation to be applied to construction drawings for general arrangement and assembly, mainly within the field of building and architectural drawings.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 128:1982, *Technical drawings – General principles of presentation*.

ISO 129:1985, *Technical drawings – Dimensioning – General principles, definitions, methods of execution and special indications*.

ISO 9431:1990, *Construction drawings – Spaces for drawing and for text, and title blocks on drawing sheets*.

3 General

3.1 Building components which are detailed or specified in other documents (e.g. component range drawings, detail drawings and specifications) can be shown in a very simple manner on general arrangement and assembly drawings.

3.2 The degree of simplification depends on the kind of object represented, the scale of the drawing and the purpose of the documentation.

3.3 In a simplified representation only essential features shall be shown, if possible in outline only. The object shall be drawn to scale.

3.4 Figures in a simplified representation may be completed with graphical symbols, designations and text.

3.5 Reference shall be made, normally in the space for text on the drawing sheet, to the specified documentation for manufacturing, construction and assembly (see ISO 9431).

4 Lines

4.1 The types and description of lines shall be in accordance with ISO 128, with the addition of an extra-thick line.

4.2 An extra-thick line shall be used to stress certain parts.

4.3 The following thicknesses of lines shall be used:

thin line – relative thickness 1;

thick line – relative thickness 2;

extra-thick line – relative thickness 4.

4.4 On an individual drawing, two or three different line thicknesses may be used.

4.5 Outlines of parts in section are generally drawn with thicker lines than those in view (see figure 1).

For parts in section, either continuous thick lines (ISO 128, line type A) or continuous extra-thick lines shall be used.

For parts in view, either continuous thick or thin lines (ISO 128, line type A or B) shall be used depending on the line thickness used for sections (the ratio of line thicknesses shall be 1:2).

4.6 In order to distinguish parts in section from each other or parts in section from parts in view, different line thicknesses or hatching or shading of areas of parts in section may be used (see figure 1).

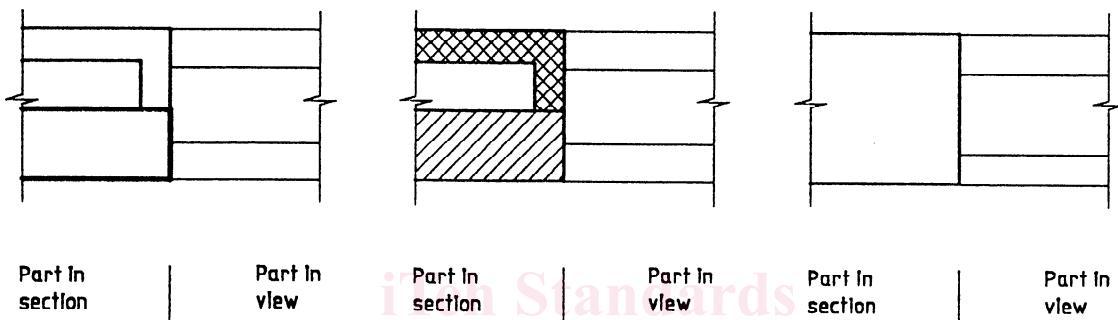


Figure 1 — Examples of outlines of parts in section and in view

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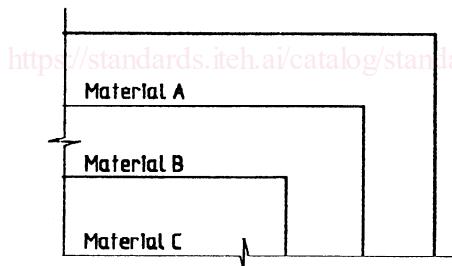


Figure 2 — Boundaries of different materials

ISO 7519:1991

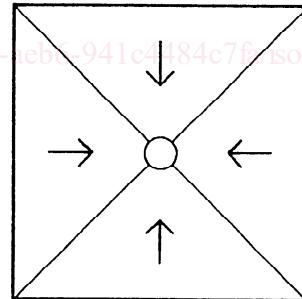
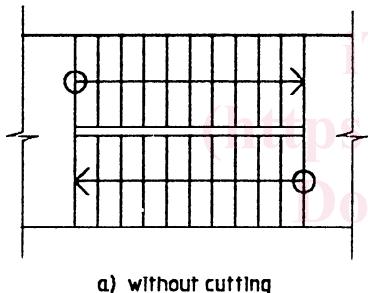


Figure 3 — Example showing a sloping floor

4.9 Stairs shall be shown on plan drawings as follows (see figure 4).

- Stairs shall be drawn with a continuous thin line (ISO 128, line type B).
- The direction arrow shall be located on the centre-line of the stairs and shall be drawn with a continuous thin line (ISO 128, line type B), with an open circle indicating the bottom riser and with an open arrowhead indicating the top riser.
- The cutting of a flight of stairs shall be shown symbolically by an oblique continuous thin line with zigzags (ISO 128, line type D) [see figure 4 b)]. In cases where the meaning cannot be misinterpreted, the zigzags may be omitted.
- If necessary, levels of landings may be indicated by numerical values and/or the steps may be numbered in the ascending direction, using "1" for the bottom step.



a) without cutting

b) with cutting

Figure 4 — Stairs

4.10 Ramps shall be shown on plan drawings as follows (see figure 5).

- Ramps shall be drawn with a continuous thin line (ISO 128, line type B).
- The direction arrow shall be located on the centre-line of the ramp and shall be drawn with a continuous thin line (ISO 128, line type B), with an open circle indicating the bottom level and with an open arrowhead indicating the top level.
- If necessary, the top and bottom levels may be indicated by numerical values in accordance with ISO 129 and/or the slope may be indicated by a ratio of inclination.

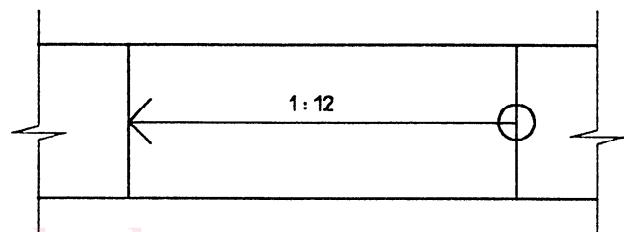


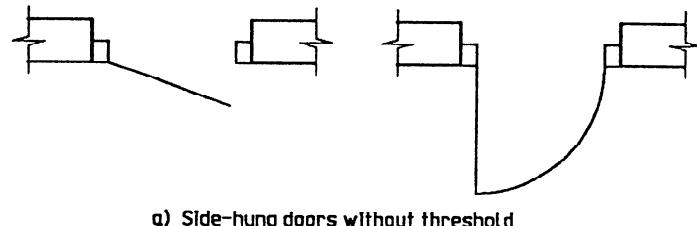
Figure 5 — Ramp

5 Simplified representation of doors and windows

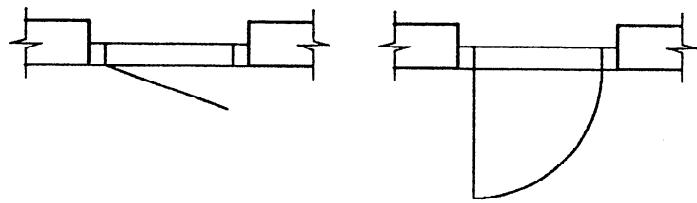
5.1 Doors and windows shall be drawn with a continuous thin or thick line (ISO 128, line type B or A).

5.2 The openings of doors shall be shown. Openings of side-hung doors shall be shown by drawing the door leaf at an angle of 30° without an arc, or at an angle of 90° with an arc (see figure 6).

5.3 On drawings to large scales (1:50 and larger) doors and windows shall be drawn to show the type, placement, threshold, etc. (see figure 6).

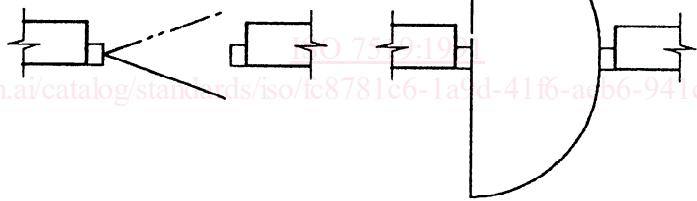


a) Side-hung doors without threshold

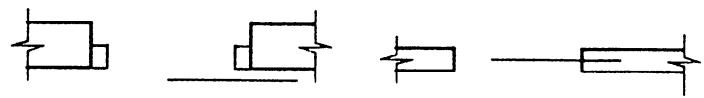


b) Side-hung doors with threshold

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c) Swing doors



d) Sliding doors