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**Technical drawings — General principles of  
presentation —**

**Part 22:**

Basic conventions and applications for leader  
lines and reference lines

*Dessins techniques — Principes généraux de représentation —*

*Partie 22: Conventions de base et applications pour les traits de rappel de  
cote et traits de référence*



## Foreword

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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 128-22 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 1, *Basic conventions*.

ISO 128 consists of the following parts, under the general title *Technical drawings — General principles of presentation*:

- *Part 20: Basic conventions for lines*
- *Part 21: Preparation of lines by CAD systems*
- *Part 22: Basic conventions and applications for leader lines and reference lines*
- *Part 23: Lines on construction drawings*
- *Part 24: Lines on mechanical engineering drawings*
- *Part 25: Lines on shipbuilding drawings*
- *Part 30: Basic conventions for views*
- *Part 31: Additional conventions for views*
- *Part 40: Basic conventions for cuts and sections*
- *Part 41: Cuts and sections for mechanical engineering drawings*
- *Part 50: Basic conventions for representing areas on cuts and sections*
- *Part 60: Additional conventions for cuts and sections*

Annex B forms an integral part of this part of ISO 128. Annex A is for information only.

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Printed in Switzerland

# Technical drawings — General principles of presentation —

## Part 22:

## Basic conventions and applications for leader lines and reference lines

### 1 Scope

This part of ISO 128 specifies general rules on the presentation of leader and reference lines and their components as well as on the arrangement of instructions on or at leader lines in all kinds of technical documents.

### 2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 128. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 128 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 128-20:1996, *Technical drawings — General principles of presentation — Part 20: Basic conventions for lines*.

### 3 Terms and definitions

For the purposes of this part of ISO 128, the following terms and definitions apply.

#### 3.1

##### **leader line**

continuous narrow line which establishes the connection between the features of a graphical representation and additional alphanumeric and/or written instructions (notes, technical requirements, item references, etc.) in an unambiguous manner

#### 3.2

##### **reference line**

continuous narrow line connecting with the leader line horizontally or vertically and/or at which the additional instructions are indicated

### 4 Presentation of leader lines

Leader lines are executed as continuous narrow lines in accordance with ISO 128-20. They are drawn preferably at an angle to the relevant representation and/or the frame limiting the drawing sheet, and not parallel to adjacent lines, e.g. hatching lines. The inclination to the relevant lines shall be  $> 15^\circ$ . See Figures 1 to 13.

Leader lines may be drawn with sharp kinks (see Figure 5), and two or more leader lines may be joined up (see Figures 2, 5, 7, 8 and 11). They should not cross other leader lines, reference lines or indications, such as graphical symbols or dimensional values.