# INTERNATIONAL STANDARD

ISO 128-34

First edition 2001-01-15

# Technical drawings — General principles of presentation —

Part 34: Views on mechanical engineering drawings

iTeh Spessins techniques — Principes généraux de représentation — Partie 34: Vues applicables aux dessins industriels (standards.iteh.ai)

<u>ISO 128-34:2001</u> https://standards.iteh.ai/catalog/standards/sist/c3697295-1877-487e-8540c582e839fc7b/iso-128-34-2001



Reference number ISO 128-34:2001(E)

#### PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

# iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>ISO 128-34:2001</u> https://standards.iteh.ai/catalog/standards/sist/c3697295-1877-487e-8540c582e839fc7b/iso-128-34-2001

© ISO 2001

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.ch Web www.iso.ch Printed in Switzerland

## Contents

| _     |                                                                                                                                |    |
|-------|--------------------------------------------------------------------------------------------------------------------------------|----|
| Forew | vord                                                                                                                           |    |
| 1     | Scope                                                                                                                          | 1  |
| 2     | Normative references                                                                                                           | 1  |
| 3     | Terms and definitions                                                                                                          | 1  |
| 4     | Types of lines and their application                                                                                           | 2  |
| 5     | Local views                                                                                                                    | 2  |
| 6     | Adjacent parts and contours                                                                                                    | 3  |
| 7     | Intersections                                                                                                                  | 4  |
| 8     | Square ends on shafts                                                                                                          | 6  |
| 9     | Interrupted views                                                                                                              | 6  |
| 10    | Repeated features                                                                                                              | 7  |
| 11    | Enlarged features                                                                                                              | 8  |
| 12    | Initial outlines ITeh STANDARD PREVIEW                                                                                         | 8  |
| 13    | Bend lines <del>(standards.itch.ai)</del>                                                                                      | 8  |
| 14    | Slight inclines or curves                                                                                                      | 9  |
| 15    | Transparent objects ISO 128-34:2001<br>https://standards.iteh.ai/catalog/standards/sist/c3697295-1877-487e-8540-               | 9  |
| 16    | https://standards.iteh.ai/catalog/standards/sist/c369/295-18//-48/e-8540-<br>Movable parts <u>c582c839fo7b/iso-128-34-2001</u> | 10 |
| 17    | Finished parts and blanks                                                                                                      |    |
| 18    | Parts made from separate, equal elements                                                                                       | 11 |
| 19    | Surface pattern                                                                                                                | 12 |
| 20    | Fibre and rolled directions                                                                                                    | 12 |
| 21    | Parts with two or more identical views                                                                                         | 12 |
| 22    | Mirror-image parts                                                                                                             | 13 |
|       |                                                                                                                                |    |

### 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 128 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 128-34 was prepared by Technical Committee ISO/TC 10, *Technical product documentation*, Subcommittee SC 6, *Mechanical engineering documentation*.

This first edition is based on ISO 128:1982, clause 5, and replaces the rules specified in that clause.

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

- Part 1: Introduction and index https://standards.iteh.ai/catalog/standards/sist/c3697295-1877-487e-8540c582e839fc7b/iso-128-34-2001
- 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 34: Views on mechanical engineering drawings
- Part 40: Basic conventions for cuts and sections
- Part 44: Sections on mechanical engineering drawings
- Part 50: Basic conventions for representing areas on cuts and sections

## Technical drawings — General principles of presentation —

# Part 34: Views on mechanical engineering drawings

#### 1 Scope

This part of ISO 128 specifies rules for the presentation of views additional to those of ISO 128-30 and applicable to mechanical engineering drawings that follow the orthographic projection methods specified in ISO 5456-2. Attention has also been given to reproduction requirements, including those of microcopying according to ISO 6428.

#### 2 Normative references

The following normative documents contain 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 editions of the normative documents indicated below. For undated references, the latest edition of the normative <u>document4refer</u>red to applies. Members of ISO and IEC maintain registers of currently valid International Standards/sist/c3697295-1877-487e-8540-

c582e839fc7b/iso-128-34-2001

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

ISO 128-24:1999, Technical drawings — General principles of presentation — Part 24: Lines on mechanical engineering drawings.

ISO 128-30:—<sup>1</sup>), Technical drawings — General principles of presentation — Part 30: Basic conventions for views.

ISO 129-1:—<sup>2</sup>), Technical drawings — Indication of dimensions and tolerances — Part 1: General principles.

ISO 5456-2:1996, Technical drawings — Projection methods — Part 2: Orthographic representations.

ISO 6428:1982, Technical drawings — Requirements for microcopying.

ISO 10209-1:1992, Technical product documentation — Vocabulary — Part 1: Terms relating to technical drawings: general and types of drawings.

#### 3 Terms and definitions

For the purposes of this part of ISO 128, the terms and definitions given in ISO 10209-1 apply.

<sup>&</sup>lt;sup>1)</sup> To be published.

<sup>&</sup>lt;sup>2)</sup> To be published. (Revision of ISO 129:1985)

#### 4 Types of lines and their application

The basic types of lines referred to in this part of ISO 128 are specified in ISO 128-20. General rules and basic conventions for their application on mechanical engineering drawings are specified in ISO 128-24.

#### 5 Local views

Provided presentation is unambiguous, a local rather than a complete view of symmetrical parts is permitted. Local views should be drawn in third angle projection, regardless of the arrangement used for the general execution of the drawing. Local views shall be drawn with continuous wide lines (type 01.2) and connected to principal views by long dashed dotted narrow lines (type 04.1). Examples are shown in Figures 1 to 4.

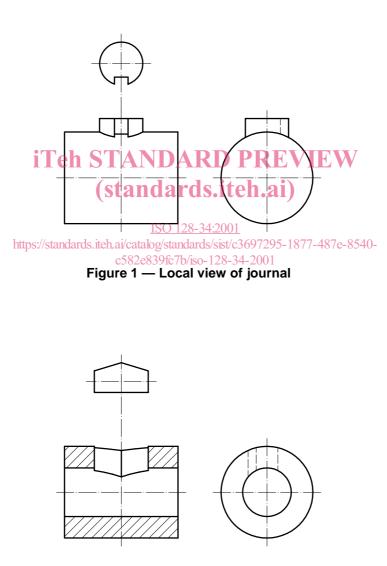


Figure 2 — Local view of groove

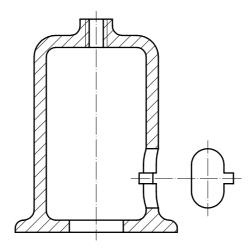
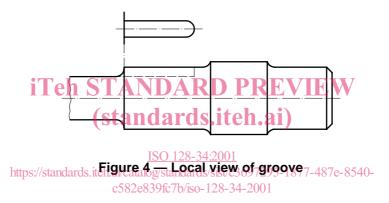


Figure 3 — Local view of hole



#### 6 Adjacent parts and contours

Where parts adjacent to an object are presented, they shall be drawn with long dashed double-dotted narrow lines (type 05.1). The adjacent part shall not hide the principal part, but may be hidden by it (see Figure 5 and Figure 6). Adjacent parts in cuts and sections shall not be hatched.

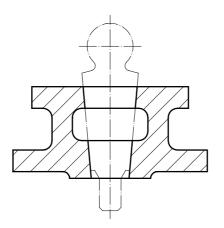


Figure 5 — Bounded adjacent part

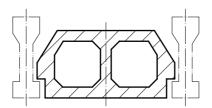
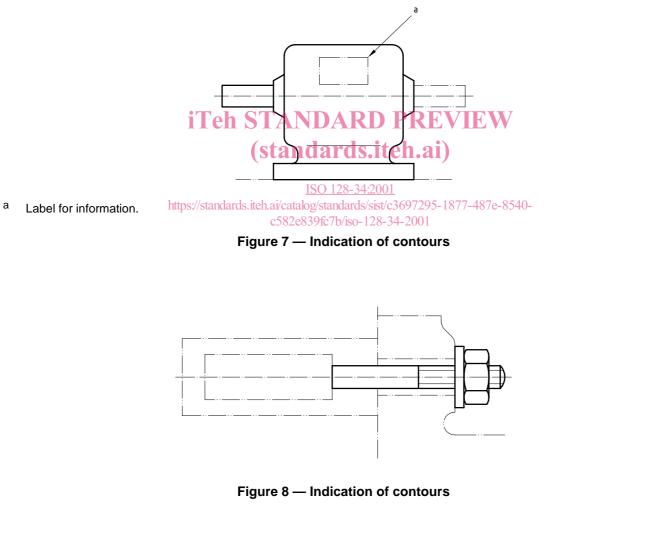


Figure 6 — Adjacent parts

When the contours of features cannot or may not be definitively delineated, the area presumed to enclose them shall be indicated by long dashed double-dotted narrow lines (type 05.1), as in Figure 7 and Figure 8.



#### 7 Intersections

True geometric intersection lines shall be drawn with continuous wide lines (type 01.2) when visible, and with dashed narrow lines (type 02.1) when hidden (see Figure 9).

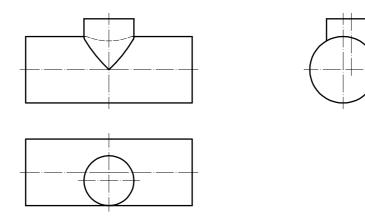


Figure 9 — True intersection

Simplified representations of true geometric intersection lines may be applied at intersections, as follows.

- Between two cylinders the curved lines of intersection may be replaced by straight continuous wide lines (see Figure 10).
- Between a cylinder and a rectangular prism the displacement of the straight line of intersection may be omitted (see Figure 2).

However, the simplified representation should be avoided if it affects the intelligibility of the drawing. (standards.iteh.ai)

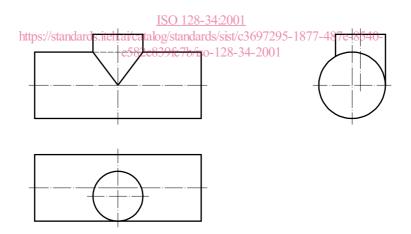


Figure 10 — Simplified intersection

Imaginary intersection lines, such as fillets or rounded corners, shall be indicated in a view by continuous narrow lines (type 01.1) that do not touch the outlines (see Figure 11).