# SLOVENSKI STANDARD
# oSIST prEN ISO 7083:2020

**01-marec-2020**

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**Tehnična dokumentacija izdelkov - Simboli za uporabo tehnične dokumentacije izdelkov - Sorazmerja in mere (ISO/DIS 7083:2020)**

Technical Product Documentation - Symbols used on technical product documentation - Proportions and dimensions (ISO/DIS 7083:2020)

Technische Produktdokumentation - Symbole für die Technische Produktdokumentation - Größenverhältnisse und Maße (ISO/DIS 7083:2020)

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Documentation technique de produits - Symboles utilisés dans la documentation technique de produits - Proportions et dimensions (ISO/DIS 7083:2020)

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**Ta slovenski standard je istoveten z:** **prEN ISO 7083**

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**ICS:**

| | | |
|---|---|---|
| 01.100.01 | Tehnično risanje na splošno | Technical drawings in general |
| 01.110 | Tehnična dokumentacija za izdelke | Technical product documentation |

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# ISO/DIS 7083

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Secretariat: **BSI**

Voting begins on:
**2020-01-07**

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**2020-03-31**

# Technical Product Documentation — Symbols used on technical product documentation — Proportions and dimensions

ICS: 01.100.20

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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).

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The committee responsible for this document is Technical Committee *[or Project Committee]* ISO/TC10, *Technical Product Documentation* , Subcommittee SC 1, *Basic conventions.*

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This second edition cancels and replaces the first edition (ISO 7083:1983), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Added symbols for standards under TC10 and TC213

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# Introduction

This documentation is a collection of all the current symbols used on technical product documentation, predominantly created in ISO/TC10 and ISO/TC213. The symbols are indexed to the individual standards in which they are were created and which they are implemented. The ISO/TC10 SC1 validation processed will be reactivated and ensure the harmonization of symbols

When developing new symbols for use on technical drawings, new symbols are submitted to TC10 for review. TC10 will confirm that a duplicate symbol with a different meaning does not exist and will add the new symbol to this standard once the originating standard has been approved and published.

The following is a description of the process used for incorporation of a new symbol:

1. Fill in the New Symbol Application Form.
2. Attach symbol graphics file per the accepted graphics formats in the form.
3. Send application and graphics file to TC 10/SC 1.
4. TC 10/SC1 forwards the documents to the Validation Team (appointed group of experts).
5. The Validation Team reviews the application and symbol according to the following areas:
    - Justification for new symbol
    - Design
    - Compliance with ISO 81714-1, *Design of graphical symbols for use in the technical documentation of products - Part 1: Basic rules*
    - Duplication and similarity to existing and registered symbols
6. The Validation Team prepares their report and the application documents back to TC 10/SC 1. Rejected proposals are sent back to originator with attached cause of rejection.
7. If new symbol request is approved the originator is notified and the symbol is appointed a registry number and submitted to ISO Central Secretariat for registration and publication in ISO/ OBP.
8. The approved new symbol is added to the list of symbols to be added in the next revision of ISO 7083.

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# Technical Product Documentation — Symbols used on technical product documentation — Proportions and dimensions

## 1 Scope

This document specifies the recommended proportions for the symbols used on technical product documentation. It gives recommended dimensions based on the grid related to the line width to be used.

This standard does not apply to symbols used in process plant documentation which is covered in ISO 81714-1.

The proportions of the symbols are based on the standard heights of lettering given in IS0 3098-l.

## 2 Normative references

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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.

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ISO 3098-1, *Technical product documentation - Lettering - Part 1: General requirements*

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## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

## 4 General conditions

The lettering used with the symbols shall be in accordance with the specifications of IS0 3088-l.

It is recommended that on any one drawing the height, line width and type of lettering with the symbols be equal to those applied for the dimensioning and- other indications on that drawing.

The symbols and their lettering are produced by digital means or may be hand-written (using a rule for drawing the frames) or executed by means of other appropriate methods (for example, stencils, transfers, mechanical drawing)

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## 5 Dimensions

Recommended dimensions of the symbols with lettering type A are specified in Table 1, those for use with lettering type B in Table 2.

**Table 1 — Lettering type A**

Dimensions in millimetres

| Characteristic | Recommended dimensions | | | | | |
|---|---|---|---|---|---|---|
| Height of frame (H) * | 7 | 10 | 14 | 20 | 28 | 40 |
| Height of characters (h) | 3,5 | 5 | 7 | 10 | 14 | 20 |
| Diameter (D) ** | 14 | 20 | 28 | 40 | 58 | 80 |
| Line Width (d) | 0,25 | 0,35 | 0,5 | 0,7 | 1 | 1,4 |

**Table 2 — Lettering type B**

Dimensions in millimetres

| Characteristic | Recommended dimensions | | | | | | |
|---|---|---|---|---|---|---|---|
| Height of frame (H) * | 5 | 7 | 10 | 14 | 20 | 28 | 40 |
| Height of characters (h) | 2,5 | 3,5 | 5 | 7 | 10 | 14 | 20 |
| Diameter (D) ** | 10 | 14 | 20 | 28 | 40 | 56 | 80 |
| Line Width (d) | 0,25 | 0,35 | 0,5 | 0,7 | 1 | 1,4 | 2 |

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* Where an additional tolerance value is to be inscribed in a lower compartment (see IS0 1011, this height should be increased, dependent on the heights of the inscriptions.

** See Table 3 and **Error! Reference source not found.**50

**5.1** The recommended widths of tolerance indicators frame should be :

— first compartment, equal to height of frame (H);

— second compartment, to suit the length of the inscription;

— third and subsequent compartments, if required, to suit the width of the reference letter (or letters).

The distances between the vertical strokes of the compartments and the inscriptions shall be at least twice the line width, with a minimum of 0,7 mm.

## 6 Proportions

Examples for the proportions of the symbols for use with lettering type B, vertical or inclined, are shown in Table 3 through Table 52**Error! Reference source not found.**.

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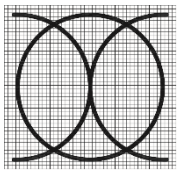
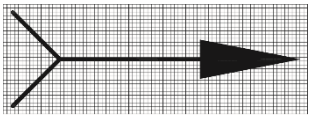
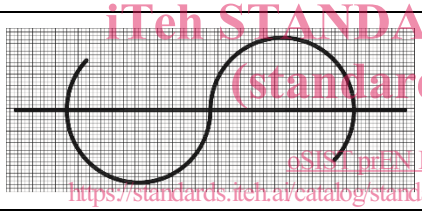
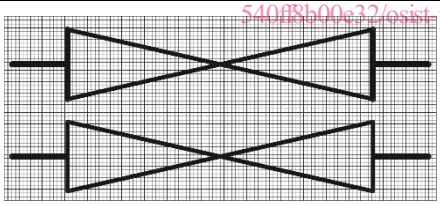
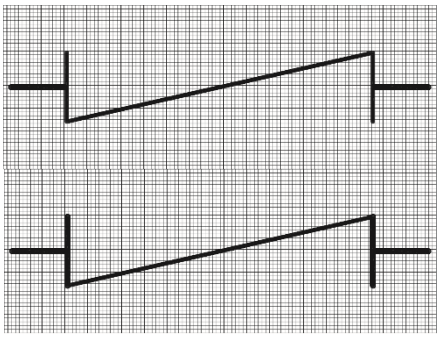
The configurations are depicted on a grid with a spacing equal to the line width. The design of the inscribed characters is mostly not shown, but shall be the same as in IS0 3098-l for lettering type B, vertical or inclined.

For the alternative lettering type A, vertical or inclined, appropriate grids should be used.

The symbols in ISO 128-15:2013 are shown in Table 3

**Table 3 ISO 128-15:2013 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 1 | |  | **Amidship**<br>ISO 128-15 |
| 2 | |  | **Generic Seam**<br>ISO 128-15 |
| 3 | |  | **Segmentation Seam**<br>ISO 128-15 |
| 4 | |  | **Small opening section**<br>ISO 128-15 |
| 5 | |  | **Small opening section**<br>ISO 128-15 |
| 6 | | <br>(See ISO 3098-1) | **Center line**<br>ISO 128-15 |
| 7 | | <br>(See ISO 3098-1) | **Rounded line**<br>ISO 128-15 |

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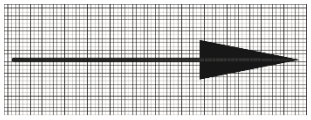
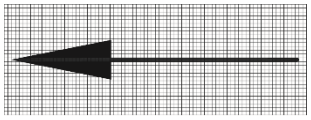
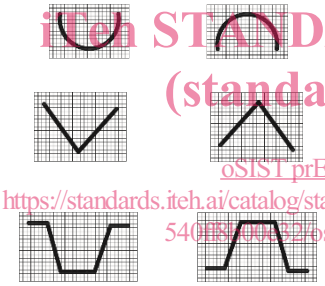
| | | | |
|---|---|---|---|
| **8** | | <br>(See ISO 3098-1) | **Frame Number**<br>ISO 128-15 |
| **9** | | <br>(See ISO 3098-1) | **Molded base line**<br>ISO 128-15 |
| **10** | | <br>(See ISO 3098-1) | **Waterline**<br>ISO 128-15 |
| **11** | |  | **Projection direction (Bow direction)**<br>ISO 128-15 |
| **12** | |  | **Projection direction (Stern direction)**<br>ISO 128-15 |
| **13** | |  <br>(front side) ( back side) | **Swage and groove (upside down symbol indicates back side)**<br>ISO 128-15<br>ISO 128-25 |

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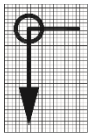
The symbols in ISO 128-22:1999 are shown in Table 4

**Table 4 ISO 128-22:1999 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| **14** | | <br>d = 5 x line width | **Dot**<br>ISO 128-22 |
| **15** | |  <br>d = 8 x width of the leader line | **Circle**<br>ISO 128-22 |

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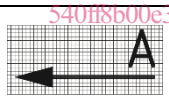
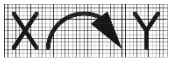
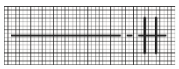
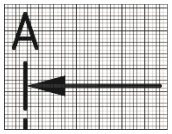
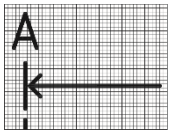
The symbols in ISO 128-25:1999 are shown in Table 5

**Table 5 ISO 128-25:1999 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 16 | | | **Swedge**<br>ISO 128-25<br>ISO 128-15 |

The symbols in ISO 128-30:2001 are shown in Table 6

**Table 6 ISO 128-30:2001 Symbols**

| Fig. No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 17 | | | **First angle projection**<br>ISO 128-30<br>ISO 5456-2 |
| 18 | | | **Third angle projection**<br>ISO 128-30<br>ISO 5456-2 |
| 19 | |  | **Reference arrow**<br>ISO 128-30 |
| 20 | |  | **Arc arrow**<br>ISO 128-30 |
| 21 | |  | **Symmetry**<br>ISO 128-30 |
| 22 | |  | **30° cuts and section arrows**<br>ISO 128-30 |
| 23 | |  | **90° cuts and section arrows**<br>ISO 128-30 |

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The symbols in ISO 128-33:2018 are shown in Table 7

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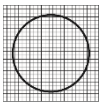
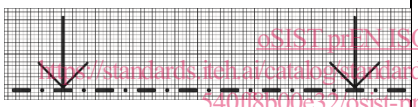
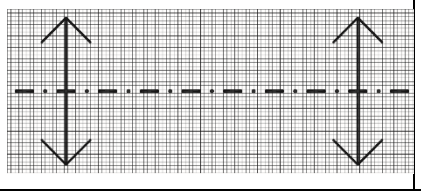
**Table 7 ISO 128-33:2018 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 24 | | | **Direction of view**<br>ISO 128-33 |
| 25 | | | **Cutting plane**<br>ISO 128-33 |
| 26 | |  | **Location of detail**<br>ISO 128-33 |

The symbols in ISO 128-43:2015 are shown in Table 8

**Table 8 ISO 128-43:2015 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 27 | |  | **Direct orthographic projection**<br>ISO 128-43 |
| 28 | |  | **Mirrored orthographic projection**<br>ISO 128-43 |

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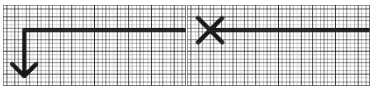
The symbols in ISO 129-1:2018 are shown in Table 9

**Table 9 ISO 129-1:2018 Symbols**

| No. | ISO Reg. No. | Symbol | Symbol Name or Description<br>Standards symbol used in |
|---|---|---|---|
| 29 | | | **Diameter**<br>ISO 129-1<br>ISO 5261 |
| 30 | | <br>(See ISO 3098-1) | **Radius**<br>ISO 129-1 |
| 31 | | <br>(See ISO 3098-1) | **Spherical radius**<br>ISO 129-1 |
| 32 | | | **Square**<br>ISO 129-1<br>ISO 5261 |
| 33 | | | **Spherical diameter**<br>ISO 129-1 |
| 34 | | | **Repeated spacing**<br>ISO 129-1<br>ISO 6433 |
| 35 | | | **Indication of a point**<br>ISO 129-1 |
| 36 | |  | **Indication of level**<br>ISO 129-1 |
| 37 | | <br>(See ISO 3098-1) | **Out-of-scale**<br>ISO 129-1 |
| 38 | | <br>See ISO 3098-1 | **Auxiliary Dimension**<br>ISO 129-1 |
| 39 | | | **Symmetry**<br>ISO 129-1 |

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