



SLOVENSKI STANDARD
oSIST prEN ISO 6414:2019
01-marec-2019

Tehnična dokumentacija izdelkov - Tehnične risbe za steklovino (ISO/DIS 6414:2018)

Technical product documentation (TPD) - Technical drawings for glassware (ISO/DIS 6414:2018)

Technische Produktdokumentation (TPD) - Technische Zeichnungen für Glasgeräte (ISO/DIS 6414:2018)

Documentation technique de produits (DTP) - Dessins techniques de verrerie (ISO/DIS 6414:2018)

Ta slovenski standard je istoveten z: prEN ISO 6414

ICS:

01.110	Tehnična dokumentacija za izdelke	Technical product documentation
81.040.30	Izdelki iz stekla	Glass products

oSIST prEN ISO 6414:2019

en,fr,de

DRAFT INTERNATIONAL STANDARD

ISO/DIS 6414

ISO/TC 10/SC 6

Secretariat: SAC

Voting begins on:
2018-12-21Voting terminates on:
2019-03-15

Technical product documentation (TPD) — Technical drawings for glassware

Dessins techniques de verrerie

ICS: 01.100.99

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ISO/CEN PARALLEL PROCESSING



Reference number
ISO/DIS 6414:2018(E)

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Published in Switzerland

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ISO/DIS 6414:2018(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.

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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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*, Subcommittee SC 6, *Mechanical engineering documentation*.

This second edition cancels and replaces the first edition (ISO 6414:1982), which has been technically revised.

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

- Addition of transparency in terms of observation. (see Chapter 4)
- Updating the indication of the surfaces. (see [Figure 3](#))
- Updating the indication of interchangeable conical ground joints. (see [Figure 4](#))
- Addition of the indication of interchangeable spherical ground joints. (see [Figure 5](#))
- Updating of the indication of diameter. (see [Figure 8,9,10](#))
- Addition of simplified drawing. (see Chapter [10.4](#))
- Addition of drawing and indication of thread mouth. (see Chapter 11)
- Changing the size of the scale to the same as the letter B (see [Figure 20](#)).

Introduction

In this International Standard the figures merely illustrate the text and should not be considered as design examples. For this reason the figures are simplified and are not to scale.

For uniformity, all figures in this International Standard are in first angle projection. It should be understood that alternative projection methods could have been used without prejudice to the principles established.

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Technical product documentation (TPD) — Technical drawings for glassware

1 Scope

This International Standard establishes rules and conventions for particular use with technical drawings on glassware, for example, laboratory glassware or glassware used in other technical fields.

Optical parts are not, however, included herein.

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 128-3,¹⁾ *Technical product documentation (TPD) — General principles of presentation — Part 3: Views, sections and cuts*

ISO 383:1976, *Laboratory glassware — Interchangeable conical ground joints*

ISO 641:1975, *Laboratory glassware — Interchangeable spherical ground joints*

ISO 1302:2002, *Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation*

ISO 3040:2016, *Geometrical product specifications (GPS) — Dimensioning and tolerancing — Cones*

ISO 4793:1980, *Laboratory sintered (fritted) filters — Porosity grading, classification and designation*

ISO 4796-1:2000, *Laboratory glassware – Bottles – Part 1: Screw-neck bottles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10209 apply.

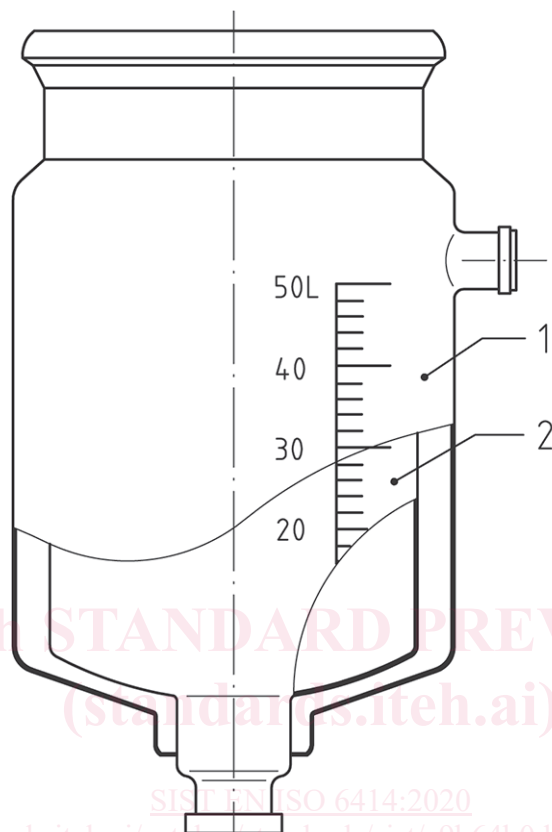
4 General

4.1 As a general principle, all glassware shall be drawn as if it were non-transparent (opaque), see ISO 128-3.

1) Under preparation. Stage at the time of publication: ISO/CD 128-3:2018.

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4.2 In terms of observation of calibration, font, and pointer, the outer glassware shall be drawn as transparency. An example of an inner calibration and its outer transparent glassware drawing is shown in [Figure 1](#).

**Key**

- 1 Jacket component
- 2 Inner component

Figure 1**5 Sections****5.1 Small sections**

Small sections may be blackened, provided that the distance between their outlines on the actual drawing is not larger than 3 mm (see [Figure 1](#)). If larger, the section shall be hatched. For thin-walled parts, see [7.1](#).

5.2 The combination of different materials

Parts of different materials such as glass-metal seals which are fused together and shown in section, shall be hatched differently (see [Figure 2](#)).

6 Treated parts

6.1 General treated surfaces

Treated surfaces (for example ground, silver-plated, etched) shall be indicated in accordance with ISO 1302 (see [Figure 3](#)).

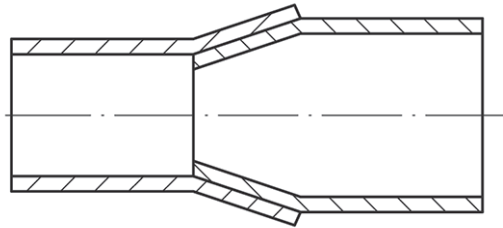


Figure 2

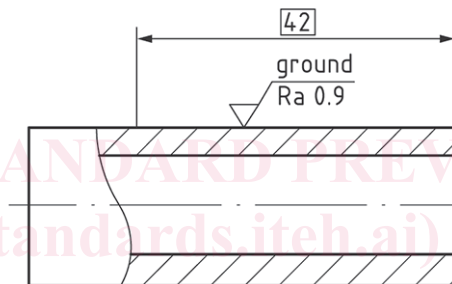


Figure 3

6.2 Special treated surfaces

Interchangeable conical or spherical ground joints complying with the requirements of ISO 383 and ISO 641 respectively, shall be designated in the manner described therein. Accordingly, no detailed dimensioning of that portion and no indication of the surface finish are required. Examples of a code identification for interchangeable conical and spherical ground joints are shown in [Figure 4](#) and [Figure 5](#). In addition, the direction of the cone symbol should match with the direction of the cone, see ISO 3040.