

SLOVENSKI STANDARD oSIST prEN ISO 8624:2019

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Očesna optika - Okvirji očal - Merilni sistem in izrazje (ISO/DIS 8624:2019)

Ophthalmic optics - Spectacle frames - Measuring system and terminology (ISO/DIS 8624:2019)

Augenoptik - Brillenfassungen - Maßsystem und Begriffe (ISO/DIS 8624:2019)

Optique ophtalmique - Montures de lunettes - Système de mesure et terminologie (ISO/DIS 8624:2019)

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en

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Ophthalmic optics — Spectacle frames — Measuring system and terminology

Optique ophtalmique — Montures de lunettes — Système de mesure et terminologie

ICS: 11.040.70

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Foreword

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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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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 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

This fourth edition cancels and replaces the third edition (ISO 8624:2011) and its amendment (ISO 8624:2011/Amd, 1), which has been technically revised. 20

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

- the informative annex with its complementary definitions has been transferred to <u>3.2</u>;
- the plane of the lens shape has been redefined and now relates to the orientation and position of the vertical centre line, in turn based on the apex of the groove in the frame and not a dummy lens;
- the definition of overall length of side for those without joints has been amended slightly, while the Figures now take account of the 3-dimensional nature of spectacle fronts where there is a significant face form angle;
- an informative annex takes the 3D aspect further.

Ophthalmic optics — Spectacle frames — Measuring system and terminology

1 Scope

This document specifies a measuring system for spectacle frames and related terminology. It is applicable to spectacle frames with fronts that are intended to be symmetrical.

NOTE Minor asymmetry of only the nasal bearing surfaces has been included in this edition. Since such asymmetry does not affect the lens shapes, only the definition of bridge height is affected, having an amendment in its note 2 to entry.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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 <u>http://www.electropedia.org/</u>

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3.1 Principal terms of the boxed lens system

3.1.1

boxed lens system

system of measurement and definitions of spectacle frames based on rectangles tangential to the lens shapes that are used for the determination of the dimensions of the spectacle front and in which the upper tangent is both common to the right and left lens shapes and regarded as being horizontal

Note 1 to entry: In the case of spectacle frames having a significant face form angle, the line touching the uppermost edges of the right and left lens shapes shall be regarded as horizontal.

Note 2 to entry: For measurement of a lens aperture, the measurements should be taken projected onto the plane formed by the upper and lower tangents to the lens shape. For frame measurements, this is taken to be the apex of the groove or equivalent.

Note 3 to entry: For spectacle frames having a significant *face form angle*, the horizontal boxed lens size shall be measured in the plane of the lens shape.

Note 4 to entry: Since the tangent common to the right and left *lens shapes* is regarded as being horizontal, the lines at right angles to it, e.g. the two of the sides of the box either side of the lens shape, are called "vertical". While the frame is worn, the horizontal lines will remain horizontal if the head is held erect, but the vertical lines will frequently not be vertical but, although in a vertical plane, will have their lower ends tipped in towards the cheeks (see the as-worn pantoscopic angle in ISO 13666).

3.1.2 boxed centre

С

intersection of the *horizontal centreline* (3.2.1) and *vertical centreline* (3.2.2) of the rectangular box that circumscribes the *lens shape* (3.2.10)

Note 1 to entry: See Figure 1.

3.1.3 horizontal boxed lens size horizontal lens size *a*

distance between the vertical sides of the rectangle tangential to the *lens shape* (3.2.10)

Note 1 to entry: For spectacle frames having a significant *face form angle*, the *horizontal boxed lens size* shall be measured in the respective *plane of the lens shape*.

Note 2 to entry: See Figure 1.

3.1.4 vertical boxed lens size vertical lens size b

distance between the horizontal sides of the rectangle tangential to the *lens shape* (3.2.10)



Кеу

- C boxed centre
- a horizontal lens size
- *b* vertical lens size
- *c* boxed centre distance
- *d* distance between lenses

Figure 1 — Measurements related to spectacle frames — Spectacle fronts

3.1.5 boxed centre distance

horizontal distance between the *boxed centres* (3.1.2)

Note 1 to entry: See Figure 1.

Note 2 to entry: For spectacle frames having a significant *face form angle*, the *boxed centre distance* shall be measured between the *vertical centrelines* passing through the groove of the frame aperture. See Figure 4.

3.1.6 distance between lenses d

horizontal distance between the nasal vertical sides of the rectangles tangential to the right and left *lens shapes* (3.2.10)

Note 1 to entry: See <u>Figure 1</u>.

3.1.7 overall length of side

length from the intersection of the dowel screw's axis with the median plane of the joint to the end of the side and parallel to the centreline of it, the drop having been straightened

Note 1 to entry: See Figure 2.

Note 2 to entry: For sides without a joint, the side should be held open at $(90_{-5}^{0})^{\circ}$ to the front or to that part of the side that is intended to be attached to the front, and the length measurement is from the end of the side to the back surface of the lug less 10 mm. See Figure 3.

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Key

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- 1 axis of hinge or dowel screw axis
 - en-iso-8624-2020
- 2 median plane of joint
- 3 centreline of side
- 4 length to bend (see <u>3.2.7</u>)
- 5 length of drop (see <u>3.2.8</u>)
- *l* overall length of side (*l* = dimensions 4 + 5)

Figure 2 — Measurements related to spectacle frames — Spectacle sides

(X – detail of the measurement position at the intersection of the three lines at the joint.)

Dimension in millimetres



Кеу

l overall length of side

Figure 3 — Measurement of overall length of side for sides without a joint

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