
Stereomicroscopes — Information provided to the user

Stéréo-microscopes — Informations délivrées à l'utilisateur

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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.org
Web www.iso.org

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 5, *Microscopes and endoscopes*.

This second edition cancels and replaces the first edition (ISO 15362:1998), which has been technically revised.

Stereomicroscopes — Information provided to the user

1 Scope

This International Standard specifies the minimum information to be provided by the manufacturer of stereomicroscopes to the user.

In addition to the mandatory information **(m)**, further data are recommended (r).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11883, *Optics and optical instruments — Microscopes — Marking of stereomicroscopes*

3 Data provided by the manufacturer

3.1 General

The following data shall be provided by the stereomicroscope manufacturer when the respective assemblies feature the properties described.

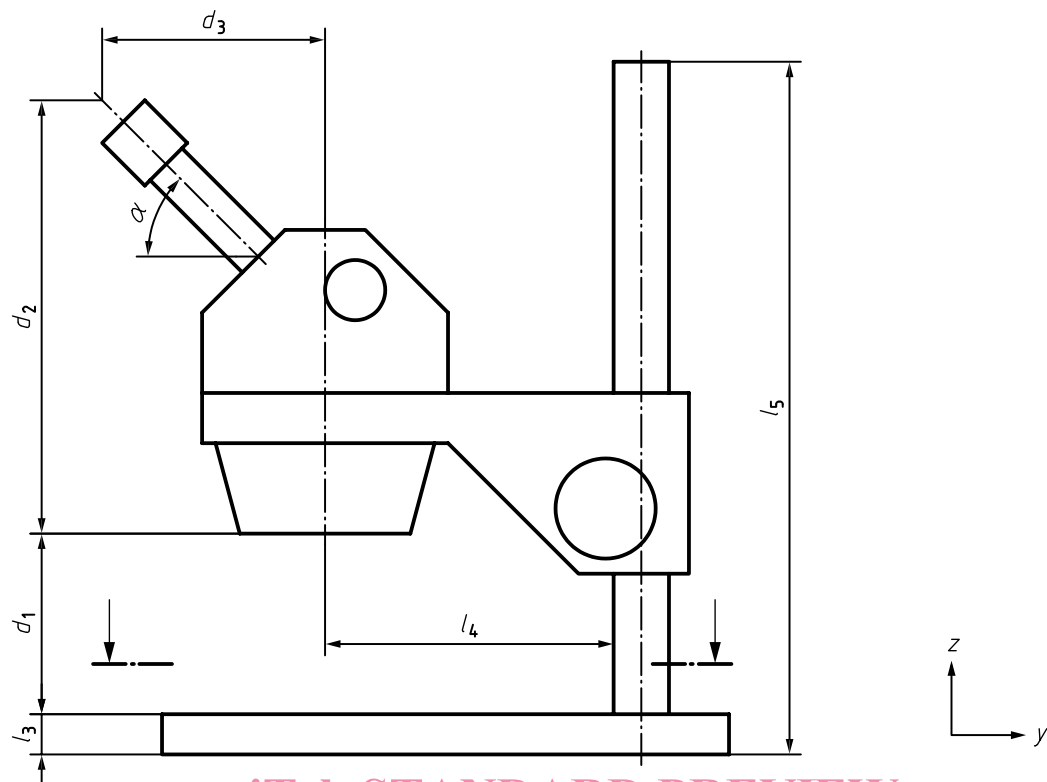
The format of the data shall be in accordance with ISO 11883.

- a) details of origin;
- b) **(m)** manufacturer;
- c) (r) country of origin, if required.

3.2 General data concerning the stereomicroscope

- a) **(m)** magnification;
- b) **(m)** zoom range or number of discrete steps;
- c) **(m)** object field diameter;
- d) **(m)** free working distance d_1 (see [Figure 1](#));
- e) (r) numerical aperture.

NOTE This data can be compiled as shown in [Table 1](#). Where magnifications are changeable, all data is intended to be/can be given for the minimum and maximum values.



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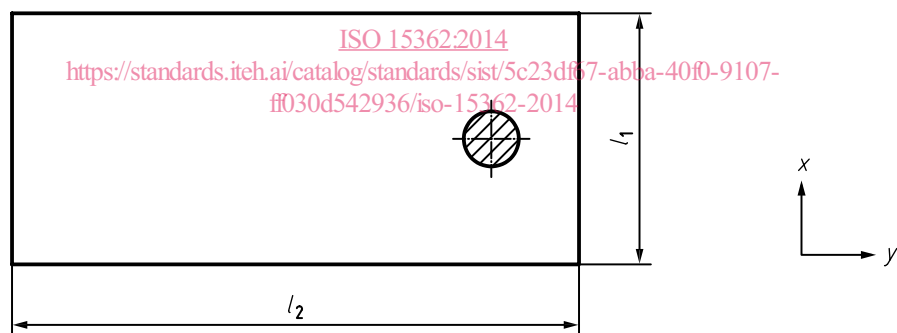


Figure 1 — Dimensions of the microscope and of the stand

Table 1 — Example of general data

Objective	Eyepiece	Zoom/step position	Magnification	Object field diameter mm	Numerical aperture	Free working distance mm
0,5×	10×	min	5×	40	0,02	200
		max	20×	10	0,04	
1,0×	10×	min	10×	20	0,04	100
		max	40×	5	0,08	
2,0×	10×	min	20×	10	0,08	50
		max	80×	2,5	0,16	
0,5×	16×	min	8×	32	0,02	200
		max	32×	8	0,04	
1,0×	16×	min	16×	16	0,04	100
		max	63×	4	0,08	
2,0×	16×	min	32×	8	0,08	50
		max	125×	2	0,16	

3.3 Main body including tube

- a) **(m)** binocular or trinocular tube;
- b) **(m)** interpupillary distance adjustment range, in mm;
- c) **(m)** inclination angle α of the viewing direction (see [Figure 1](#));
- d) **(r)** dioptre adjustment;
- e) **(r)** distance d_2 from the exit pupil to the mechanical front of the main body (see [Figure 1](#));
- f) **(r)** distance d_3 from the exit pupil to the optical axis (see [Figure 1](#));
- g) **(r)** focal length of the tube lens in mm (if any).

3.4 Objective (if removable or switchable)

- a) **(m)** magnification or focal length;
- b) **(m)** free working distance d_1 (see [Figure 1](#)).

3.5 Eyepieces

- a) **(m)** magnification;
- b) **(m)** field number;
- c) **(r)** interchangeability of graticules;
- d) **(r)** suitability for spectacle wearers;
- e) **(r)** dioptre adjustment.

3.6 Dimensions of the stand (see [Figure 1](#))

- a) **(r)** base dimensions l_1 , l_2 , and l_3 (measured in x , y , and z);

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- b) (r) free distance l_4 from the optical axis to the column;
- c) (r) overall mechanical height l_5 (without accessories);
- d) (r) range of focus drive.

3.7 Accessories

- a) **(m)** The influence of the accessories on the basic data, for example on the magnification, shall be indicated.
- b) (r) The manufacturer should list all accessories that are available for the stereomicroscope.
- c) (r) The manufacturer should list all restrictions related to the single or multiple use of accessories.

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