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Glass containers — Height and non-parallelism of finish with reference to container base — Test methods

iTeh STANDARD PREVIEW

*Récipients en verre — Hauteur et non-parallélisme de la bague par
rapport au fond du récipient — Méthodes d'essai*

ISO 9009:1991

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Reference number
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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.

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.

International Standard ISO 9009 was prepared by Technical Committee ISO/TC 63, *Glass containers*, Sub-Committee SC 2, *Test methods*.

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Introduction

The test methods specified in this International Standard refer to two technical features of quality which are as a rule stated separately. However, since both features affect the performance of a container and the test methods on the two features can be carried out at the same time using the same apparatus, the test methods have been given in one International Standard.

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Glass containers — Height and non-parallelism of finish with reference to container base — Test methods

1 Scope

This International Standard specifies test methods for determining the height and the non-parallelism of finish with reference to the container base of glass containers.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7348:1991, *Glass containers — Manufacture — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 7348 and the following definitions apply.

3.1 (maximum) height of a container: The distance between the highest point on the plane of the top surface of the finish and the standing surface. (See figure 1.)

3.2 minimum height of a container: The distance between the lowest point on the plane of the top surface of the finish and the standing surface. (See figure 1.)

3.3 non-parallelism: The difference between the maximum and minimum heights of a container. (See figure 1.)

4 Principle

4.1 Checking of the height of a container using maximum and minimum GO/NO GO gauges or by using an appropriate measuring instrument. Determination of the (maximum) height.

4.2 Determination of the non-parallelism of finish.

5 Apparatus

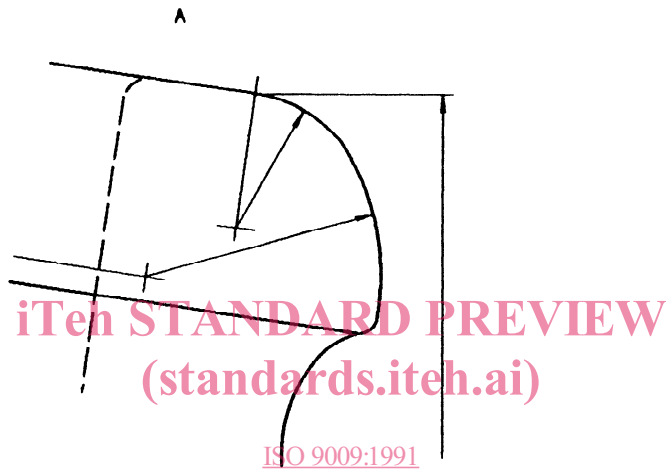
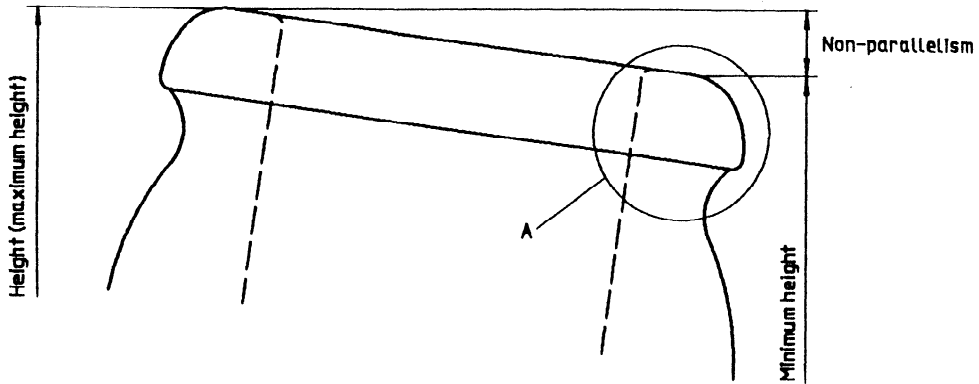
5.1 For checking the height

Various types of gauge exist. Examples are given in 5.1.1 and 5.1.2 .

5.1.1 Height gauge, consisting for example of a baseplate with one or two vertical pillars and

- a) a fixed horizontal cross-piece, in which case the distance between the baseplate and the cross-piece is equivalent to the dimension to be gauged, or
- b) a fixed horizontal cross-piece with a step, in which case the distances between the baseplate and the two portions of the cross-piece are equivalent to the maximum and minimum heights to be gauged (see, for example, figure 2), or
- c) an adjustable horizontal cross-piece, which may be fixed at a distance from the baseplate equivalent to the distance to be gauged.

5.1.2 Window gauge, which combines minimum body diameter and maximum height.



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Figure 1 — Non-parallelism

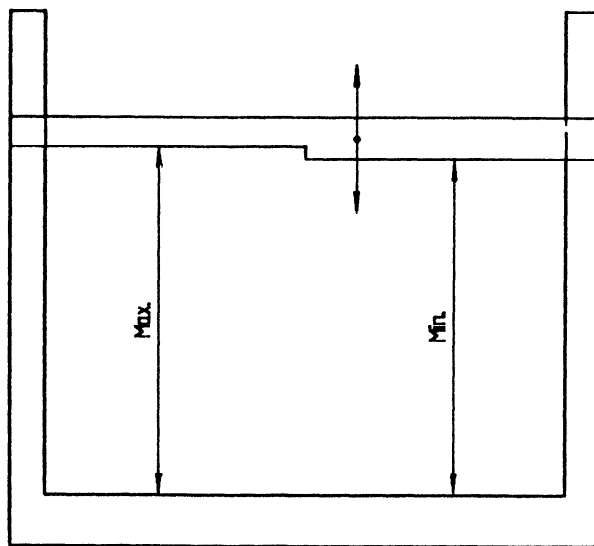


Figure 2 — Example of a height gauge

5.2 For determination of height

Various types of apparatus exist, such as an engineering height vernier and a micrometer height gauge. Such apparatus shall have an accuracy of measurement of at least 0,1 mm.

5.3 For determination of non-parallelism

The apparatus may be

- a) that described in 5.1.1 c) together with feeler gauges in 0,1 mm steps, or
- b) the apparatus described in 5.2.

For quick qualitative determinations, a spirit level may be used.

6 Sampling

Sampling shall form the subject of agreement between the parties concerned.

7 Procedure

7.1 Height of container

7.1.1 Quick check

Place the container on a metal baseplate. Set up a height gauge (5.1.1) (see, for example, figure 2) so that the minimum and maximum heights correspond to the height tolerance requirements to an accuracy of 0,1 mm.

Determine those containers which slide under the highest portion of the gauge and which do not slide under the lowest portion of the gauge.

7.1.2 Determination of (maximum) height

Using an engineering height vernier or other suitable apparatus (5.2), measure the (maximum) height of the container to an accuracy of 0,1 mm.

7.2 Non-parallelism of finish with reference to container base

Place the container on a metal baseplate. Using an engineering height vernier or other suitable apparatus (5.2) measure, to an accuracy of 0,1 mm, the lowest point of the finish (i.e. the minimum height) and, if not already determined in 7.1.2, the highest point of the finish (i.e. the maximum height) (see figure 1).

8 Expression of results

8.1 Height of container

8.1.1 Quick check (see 7.1.1)

If results by attributes are required, take as the result the number of containers which meet the height tolerance requirements.

8.1.2 (Maximum) height (see 7.1.2)

Take as the result the height, in millimetres, determined in 7.1.2.

8.2 Non-parallelism of finish with reference to container base

Take as the result the difference between the maximum and minimum heights, in millimetres, determined in 7.2.

9 Test report

The test report shall specify the following information:

- a) reference to this International Standard;
- b) reference to the test method(s) used (i.e. 7.1 and/or 7.2);
- c) the size of the sample and the type of container tested;
- d) manufacturing details;
- e) the type of apparatus used;
- f) the results obtained;
- g) the tester's name and signature, and date of test.

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