

ICS 17.040.10
CCS J 04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1804-2000

**General tolerances - Tolerances for linear and angular
dimensions without individual tolerance indications
(English Translation)**

Issued on: July 24, 2000

Implemented on: December 1, 2000

Issued by: State Bureau of Quality and Technical Supervision

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Foreword

This Standard is formulated through amendment made to GB/T 1804-1992 "General tolerance - Tolerances for linear and angular dimensions without individual tolerance indications" and GB/T 11335-1989 "Limit deviations of angle without tolerance indication" according to the international standard ISO 2768-1:1989 "General tolerance - Part 1. Tolerances for linear and angular dimensions without individual tolerance indications". It shall be technically equivalent to this Standard.

In this way, it shall enable the general tolerance standard for dimensions without individual tolerance indications of China to be as identical or equivalent to the international standard as possible, so as to adapt to the international trade, technological and economic exchanges, as well as the demands for adoption of international standards for rapid development.

In comparison with the original GB/T 1804 and GB/T 11335, this Standard has added

4 clauses, namely normative reference, definitions, general principles and

determination, and also changed the title of the standard.

This Standard has replaced GB/T 1804-1992 and GB/T 11335-1989 from the date of

implement.

Annex A of this Standard is an informative annex.

This Standard is proposed by State Bureau of Machine Building Industry.

This Standard shall be under the jurisdiction of National Technical Committee of Standardization for Geometrical Production Specification and Verification.

Drafting organization of this Standard. Mechanical Engineering Research Institute.

Main drafters of this Standard. Li Xiaopei and Yu Hanqing.

1 Scope

This Standard specifies tolerance classes and limit deviations of general tolerances for linear and angular dimensions without individual tolerance indications.

This Standard applies to the dimensions of parts that are produced by metal removal, it also applies to the dimensions of parts that are formed from sheet metal. The dimensions of non-metal materials or other process method may also reference to this Standard.

This Standard only applies for the following dimensions which do not have an individual tolerance indication.

- a) linear dimensions (e.g. external sizes, internal sizes, step sizes, diameters, radius, distances, rounding radius and chamfer heights);
- b) angular dimensions, including angular dimensions usually not indicated, e.g. right angles (90°); excluding the angles as mentioned in GB/T 1184, or angles of uniform polygons;
- c) linear and angular dimensions produced by machining assembled parts.

This Standard does not apply for the following dimensions.

- a) linear and angular dimensions which are covered by reference to other standards on general tolerances;
- b) auxiliary dimensions indicated in brackets;
- c) theoretically exact dimensions indicated in rectangular frames.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

GB/T 1800.1-1997 Limits and fits - Bases - Part 1.Terminology

GB/T 1184-1996 Geometrical tolerancing - Geometrical tolerances for features without individual tolerance indications (eqv ISO 2768-2.1989)

GB/T 4249-1996 Tolerancing principle (eqv ISO 8015.1985)

GB/T 6403.4-1986 Rounding and chamfered of parts

3.2 General tolerances

It refers to the tolerances the can be guaranteed under the normal processing conditions in workshops. If the dimensions adopts general tolerances, there is no need to indicate the limit deviations adjacent to such dimensions.

4 General principles

When selecting the tolerance class of the general tolerance for dimensions without individual tolerance indications on drawings, the respective customary workshop accuracy shall be taken into consideration and the corresponding technical documents or standards shall give specific specifications.

5 Tolerance class and limit deviations of general tolerances

General tolerances are divided into 4 classes, namely fine f, medium m, coarse c and very coarse v. Corresponding tolerance class and limit deviation are given according to linear and angular dimensions without individual tolerance indications

5.1 Linear dimensions

Table 1 gives the limit deviation of linear dimensions; Table 2 gives the limit deviations

of rounding radius and chamfer height.

5.2 Angular dimensions

Table 3 gives the limit deviation of angular dimensions, the values of which shall be determined by the short side length of an angle, while that for cone angle it shall be determined by the length of cone generatrix.

6 Method for general tolerance indication on drawings

If general tolerances in accordance with this Standard shall apply, the number of this Standard and the code of tolerance class shall be indicated near the title block on drawings or in technical requirements and technical documents (such as industrial standards). For example, when medium class is selected, it shall be indicated as the following.

7 Determination

Unless otherwise stated, workpieces exceeding the general tolerance shall not lead to automatic rejection provided that the ability of the workpiece to function is not impaired (see clause A.5).

Annex A

(Informative)

Concepts behind general tolerance of linear and angular dimensions

A.1 All features on component parts always have a size and a geometrical shape. For the deviation of size and for the deviations of the geometrical characteristics (form, orientation and location) the function of the part requires limitations which, when exceeded, impair this function. Therefore, certain tolerance requirements shall be given when all features on component parts are indicated on drawings.

For features having no special requirement for functions, the general tolerances may be given. The general tolerances can be applied in geometrical elements such as linear dimensions, angular dimensions, form and location.

For features adopting general tolerances, it is not necessary to indicate the tolerance