



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

GB/T 1182-2018

**Geometrical product specifications (GPS) -- Geometrical
tolerancing -- Tolerances of form, orientation, location and
run-out**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 1182-2008 "Geometrical product specification (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out". Compared with GB/T 1182-2008, the main technical changes are as follows.

- ADD a three-dimensional annotation legend, to the visual annotations, that interpret the technical specifications;
- ADD the interpretation and marking method of the concept of variable width tolerance zone;

- ADD the interpretation and marking method of the concept of offset tolerance zone;
- ADD the interpretation and marking method of the concept of filter specification features;
- ADD the interpretation and marking method of the concept of the reference element's fitting specification feature;
- ADD the interpretation and marking method of the concept of full surface;
- ADD the interpretation and marking method of the concept of intersection planes;
- ADD the interpretation and marking method of the concept of orientation plane;
- ADD the interpretation and marking method of the concept of directional features;
- ADD the interpretation and marking method of the concept of collection plane;
- ADD the clear rules and default rules of the geometrical tolerance zone;
- ADD the filtering rules.

This standard uses the redrafting method, to amend and adopt ISO 1101.2017 "Geometrical product specification (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out".

Compared with ISO1101.2017, this standard has technical differences. The terms, which are involved in these differences, have been marked by a vertical single line (?) on the outer margins. The corresponding technical differences and their reasons are as follows.

- Regarding normative references, this standard has adjusted the technical differences, to adapt to China's technical conditions. The adjustments are reflected in Chapter 2 "Normative references". The specific adjustments are as follows.

- * USE GB/T 4249-2018, which modifies and adopts international standard, to replace ISO 8015:2011;
- * USE GB/T 4457.4-2002, which modifies and adopts international standard, to replace ISO 128-24:1999;
- * USE GB/T 13319, which identically adopts international standard, to replace ISO 5458;
- * USE GB/T 16671-2018, which modifies and adopts international standard, to replace ISO 2692:2014;
- * USE GB/T 17851, which modifies and adopts international standard ISO 5459;
- * USE GB/T 17852, which modifies and adopts international standard ISO 1660;
- * USE GB/T 19096, which identically adopts international standard, to replace ISO 13715;
- * USE GB/Z 24637.1, which identically adopts international standard, to replace ISO 17450-1:2011;
- * USE GB/Z 24637.2, which identically adopts international standard, to replace ISO 17450-2;
- * USE GB/T 24734, which non-equivalently adopts international standard, to replace ISO 16792;
- * USE GB/Z 26958 (all parts) to replace ISO/TS 16610 (all parts). Refer to Appendix G, for the degree of consistency between various parts of the two standards.

This standard also made the following editorial changes.

- DELETE Table 1 in the introduction of ISO 1101:2017. CHANGE "Table 2 ~ Table 10" in ISO 1101:2017 to "Table 1 ~ Table 9".
- ADD Appendix G (informative) - The degree of consistency between various parts of the two standards GB/Z 26958 and ISO/TS 16610;

- CHANGE the Appendix G of the original ISO 1101:2017 into Appendix H.

This standard was proposed by AND shall be under the jurisdiction of the National Standardization Technical Committee for Product Geometric Technical Specifications (SAC/TC 240).

Drafting organizations of this standard. China Productivity Center for Machinery, China Aviation Technology Research Institute, Zhengzhou University, SAIC Motor Corporation Technology Center, Beijing Automotive Co., Ltd., Omanco (Shanghai) Consulting Co., Ltd., Pan Asia Automotive Technology Center Co., Ltd., Dekey (Beijing) Technology Co., Ltd., Xi'an Jiaotong University, SAIC-GM-Wuling Automobile Co., Ltd., Qoros Automobile Co., Ltd., Carl Zeiss (Shanghai) Management Co., Ltd., Dalian Institute of Technology, Hexagon Survey Technology (Qingdao) Co., Ltd., Shanghai Institute of Metrology and Testing Technology.

1 Scope

This standard defines the symbols and description rules, for the geometrical tolerance specifications of workpieces.

This standard gives the basic principles of geometrical tolerance specifications.

The legends in this standard are intended to illustrate how to use visual annotations (including annotations, such as TED), to fully interpret technical specifications.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB/T 4249-2018 Geometrical product specifications (GPS) - Fundamentals

- Concepts, principles and rules (ISO 8015:2011, MOD)

GB/T 4457.4-2002 Mechanical drawings - General principles of presentation