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

GB/T 16892-2022

**Geometrical product specifications (GPS)-Dimensioning and
tolerancing-Non-rigid parts**

产品几何技术规范（GPS） 尺寸和公差标注 非刚性零件

(English Translation)

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Table of Contents

Foreword...	3
Introduction...	5
1 Scope...	6
2 Normative references...	6
3 Terms and definitions...	6
4 Basic principles...	7
5 Indications on drawings...	7
Annex A (Informative) Examples of indication and interpretation...	8

Foreword

This document is drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 16892-1997 "Geometrical tolerancing indication of non-rigid parts". Compared with GB/T 16892-1997, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- a) Change the definition of "non-rigid part" (see 3.1; 3.1 of the 1997 edition);
- b) Change the attribute of the annex "Scale and size of graphical symbols for indicating geometrical tolerances of non-rigid parts" (see Annex B; Annex A of the 1997 edition).

This document modifies and adopts ISO 10579:2010 "Geometrical product specifications (GPS) - Dimensioning and tolerancing - Non-rigid parts".

Compared with ISO 10579:2010, this document has made the following structural adjustment:

- Add Annex B. Annex C corresponds to Annex B of ISO 10579:2010.

The technical differences between this document and ISO 10579:2010 and their reasons are as follows:

- Add the application limits of this document (see Clause 1), to meet the requirements of the drafting rules of standardization documents in China;
- Use normatively-referenced GB/T 1182-2018 to replace ISO 1101:2004 (see Clause 5), to adapt to China's technical conditions and increase operability;
- Add "Scale and size of graphical symbols for indicating geometrical tolerances of non-rigid parts" (see Annex B).

The following editorial changes have been made to this document:

- Incorporate the corrigendum of ISO 10579:2010/COR.1:2011; the outer margin of
- Rewrite Annex B of ISO 10579:2010;
- GB/T 16671 replaces ISO 2692:2006; GB/T 13319 replaces ISO 5458:1998; GB/T

17851 replaces ISO 5459:1981 (see Bibliography).

Geometrical product specifications (GPS) -

Dimensioning and tolerancing - Non-rigid parts

1 Scope

This document specifies the dimensioning and tolerancing methods of non-rigid parts; and the drawing indication specifications required for the constraints when being tested and verified.

This document is applicable to non-rigid parts.

2 Normative references

The contents of the following documents, through normative references in this text, constitute indispensable provisions of this document. Among them, for dated references, only the edition corresponding to that date applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 1182-2018 Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out (ISO 1101:2017, MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Non-rigid part

Parts whose deformation in the free state significantly exceeds the dimensional and/or geometrical tolerance (range) in the constrained state.

3.2

Free state

The state under the action of gravity only.

4 Basic principles

The allowable deformation of non-rigid parts under free state shall meet the geometrical tolerance requirements under assembly conditions (assembly shall be conducted under normal stress state).

Any part is subjected to gravity. Its deformation is related to the placement orientation of the part in the free state. When indicating the tolerance of the part in the free state, various factors causing the deformation of the part (such as gravity direction, support state, etc.) shall be indicated on the drawing.

For non-rigid parts, when "GB/T 16892-2022" is indicated in the drawing, unless the to be requirements under constraint conditions; see Clause 5.

5 Indications on drawings

Drawings of non-rigid parts shall include the following indications as appropriate. See Annex A:

- a) Indicate "GB/T 16892-2022" in or near the title block;
- b) Indicate the constraint conditions required by the drawing;
- c) For the geometrical tolerance in the free state, in accordance with the provisions tolerance in the tolerance frame, as specified in Annex B;
the dimensional tolerance, as specified in Annex B;

e) The drawing shall be marked with the conditions required by the tolerance under the free state, such as the direction of gravity or the state of support, etc.

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