



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

GB/T 10095.2-2023

**Cylindrical gears - ISO system of flank tolerance classification -
Part 2: Definitions and allowable values of double flank radial
composite deviations**

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This Document is Part 2 of GB/T 10095 Cylindrical Gears - ISO System of Flank Tolerance Classification. GB/T 10095 consists of the following parts.

--- Part 1.Definitions and Allowable Values of Deviations Relevant to Corresponding Flanks of Gear Teeth;

--- Part 2.Definitions and Allowable Values of Double Flank Radial Composite Deviations.

This Document replaced GB/T 10095.2-2008 Cylindrical Gears - System of Accuracy - Part 2.

Definitions and Allowable Values of Deviations Relevant to Radial Composite Deviations and

Runout Information. Compared with GB/T 10095.2-2008, the major technical changes are as

follows, besides the structural adjustments and editorial modifications.

a) Change the scope of application, which contains a sector gear (see Clause 1 of this Edition;

Clause 1 of the 2008 Edition);

b) Change the terms, definitions, and symbols (see Clause 3 of this Edition; Clause 4 and Clause 5 of the 2008 Edition);

c) Change the system of flank tolerance classification (see Clause 4 of this Edition; Clause

6 of the 2008 Edition);

d) Change the calculation formula of the radial comprehensive tolerance (see Clause 5 of this Edition; Clause 7 of the 2008 Edition);

e) Delete the radial runout (see Annex B of the 2008 Edition).

This Document equivalently adopted ISO 1328-2:2020 Cylindrical Gears - ISO System of Flank Tolerance Classification - Part 2: Definitions and Allowable Values of Double Flank Radial Composite Deviations.

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Document was proposed by and under the jurisdiction of National Technical Committee

on Gear of Standardization Administration of China (SAC/TC 52).

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The historical editions replaced by this Standard are as follows.

- GB/T 10095-1988 was first-time published in 1988;
- When revising for the first-time in 2001, it is divided into 2 parts; this Document corresponds to GB/T 10095.2-2001 Cylindrical Gears - System of Accuracy - Part 2. Definitions and Allowable Values of Deviations Relevant to Radial Composite Deviations and Runout Information;
- It was revised second-time in 2008;
- This is third-time revision.

1 Scope

This Document establishes a gear tooth classification system relevant to double flank radial composite deviations of individual cylindrical involute gears and sector gears. It specifies the appropriate definitions of gear tooth deviations, the structure of the gear tooth flank classification system, and the allowable values of the gear tooth deviations.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in 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 Document.

3 Terms, Definitions and Symbols

Method to measure elemental deviations (3.1.2).

Difference between the maximum and minimum values of center distance found after evaluating all the teeth of a product gear (3.1.5) in a double flank test (3.1.1) with a master gear

(3.1.4).

4 Application of the ISO Double Flank Radial Composite Tolerance Classification System

Specification of radial composite tolerances requires the definition of datum surfaces to be used

for double flank inspection. See ISO/TR 10064-3.

5 Tolerance Values

For gears with more than 200 teeth, except for sector gears, a default value of 200 shall be used

for the number of teeth.

This subclause applies only to sector gears whose teeth occupy two-thirds of a full circle or less.

If $|z_k/z| > 2/3$, Formula (4) shall be used for the total radial composite tolerance, F_{idT} , of the sector gear as though it is equivalent to a full circle gear.

Annex A

(Informative)

Graph of Tolerance Values for Class R34, R44, and R50 for

Spur Gears with Module = 1.0 mm

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