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

GB/T 2080-2026

Replacing GB/T 2080-2007

**Indexable hard material inserts with rounded corners, with
partly cylindrical fixing hole - Dimensions**

帶圓角沉孔固定的硬质合金可转位刀片 尺寸

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 2080-2007 "Dimensions of Carbide Indexable Inserts with Rounded Corner Countersunk Holes", aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2007 edition);
- b) Three new blade types have been added. DP, VP, and RD (see Chapter 4);
- c) The requirements for dimensional tolerances in interchangeability have been changed (see 5.1, 4.1 of the 2007 edition);
- d) The dimensions of the blade thickness s for square blades with an 11° back angle were changed (see Table 6, 2007 edition);
- e) Added specifications for the dimensions and permissible deviations of rhomboid inserts with an 11° back rake angle and a 55° tip angle (see 8.8);
- f) Added specifications for the dimensions and permissible deviations of rhomboid inserts with an 11° back rake angle and a 35° tip angle (see 8.9);
- g) Added specifications for dimensions and permissible deviations with a 15° clearance angle and round blades (see 8.10);
- h) The allowable deviation of the normal back angle has been increased to $\pm 30'$ (see Figures 3-8, Figure 12, Tables 9-11);
- i) Increased the allowable dimensional tolerances for three blade types. DP, VP, and RD (see Tables A.1 to A.2);
- j) The size ranges for three blade types, DP, VP, and RD, have been expanded (see Table

C.1 and Table C.5);

k) Added specifications for the dimensions and permissible deviations of the RPMT1204MO specification inserts (see Table 11);

l) The size range of the RPMT1204MO specification inserts has been changed (see Table C.1, Table C.1 in the 2007 edition).

This document is modified to adopt ISO 6987:2012 "Dimensions of carbide indexable inserts with countersunk corners".

This document has undergone the following structural adjustments compared to ISO 6987:2012.

---Sections 5.3.1 to 5.3.7 correspond to sections 4.3 of ISO 6987:2012;

---8.1 corresponds to the first paragraph of Chapter 7 in ISO 6987:2012;

---8.2~8.9 correspond to 7.1~7.8 of ISO 6987:2012;

---8.10 corresponds to 7.9 and 7.10 of ISO 6987:2012.

The technical differences between this document and ISO 6987:2012, and the reasons therefor, are as follows.

---The scope of application has been changed to clarify that this document applies to tools mounted on turning and boring tools by countersunk screws or other means.

The carbide indexable insert with rounded corners and countersunk hole fixation (see Chapter 1, Chapter 1 of ISO 6987:2012) is convenient for this purpose.

Application of files;

---Three new insert types have been added. DP, VP, and RD (see Chapter 4). These three insert types are commonly used in the market and are convenient for this purpose.

Application of files;

---The requirements for dimensional tolerances have been changed (see 5.1, 5.3, and 4.1, 4.3 of ISO 6987:2012). Dimensional tolerances are now normative.

Requirements;

---Added specifications for the dimensions and permissible deviations of rhomboid inserts with an 11° back rake angle and a 55° tip angle (see 8.8), increasing operability.

For the purpose of this document, it is intended to facilitate its application.

---Added specifications for the dimensions and permissible deviations of rhomboid inserts with an 11° back rake angle and a 35° tip angle (see 8.9), increasing operability.

For the purpose of this document, it is intended to facilitate its application.

---Added specifications for dimensions and permissible deviations with a 15° back angle and round blade (see 8.10), increasing operability and facilitating this process.

Application of files;

---The allowable deviation of the normal angle has been increased to $\pm 30'$ (see Figures 3-8, Figure 12, Tables 9-11), improving operability and facilitating the implementation of this document.

Applications;

---The dimensional and permissible tolerance specifications for RPMT1204MO inserts have been added (see Table 11) to improve operability and facilitate this process.

Application of files;

---Increased dimensional tolerances for DP, VP, and RD blade types (see Tables A.1 to A.2) to improve operability and facilitate operation.

Application of this document;

---The size ranges for three blade types-DP, VP, and RD-have been expanded (see Tables C.1 and C.5) to increase operability and facilitate this document.

Applications;

---The size range of the RPMT1204MO specification inserts has been changed (see Table C.1, Table C.1 of ISO 6987:2012), increasing operability.

This document is designed for ease of use and application.

---The size range for SCMT1505 specification inserts has been changed (see Table C.2, ISO 6987:2012), R2.4 tip angle not...

These are commonly used specifications on the market, not blade models covered in this document, which increases operability and facilitates the application of this document.

The following editorial changes have been made to this document.

---The phrase "Tables C.1 to C.4 give the range of blade sizes" in Chapter 3 of ISO 6987:2012 has been deleted;

---Added mentions in Appendix C and Appendix D (see 8.1);

---The titles of Figures B.1 to B.4 have been changed (see Appendix B);

---The symbol designations for preferred, secondary, and not recommended blade types in Appendix C have been changed (see Appendix C).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Nonferrous Metals Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Nonferrous Metals (SAC/TC243).

1 Scope

This document specifies the dimensions of carbide indexable inserts with rounded corners and countersunk holes. These inserts are primarily secured with countersunk screws.

It is mounted on turning and boring tools by means of fixing or other methods (such as pin fixing).

This document applies to hardened, countersunk-hole fixed parts that are mounted on turning or boring tools by countersunk screws or other means.

Indexable inserts made of high-strength alloy.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 2075 Classification and Application Codes of Hard Cutting Materials for Cutting (GB/T 2075-2025, ISO 513:2012, IDT) GB/T 2076 Rules for designating the type of indexable inserts for cutting tools (GB/T 2076-2021, ISO 1832:2017, IDT)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Blade Type

The carbide indexable inserts included in this document are of the following types.

---TC. An equilateral triangular blade with a 7° back angle;

---TP. An equilateral triangular blade with an 11° back angle;

---SC. Square blade with a 7° back angle;

---SP. Square blade with an 11° back angle;

---CC. A diamond-shaped blade with a 7° back rake angle and an 80° tip angle;