

BS ISO 3364:2011



BSI Standards Publication

Indexable hardmetal (carbide) inserts with rounded corners, with cylindrical fixing hole — Dimensions

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National foreword

This British Standard is the UK implementation of ISO 3364:2011. It supersedes BS4193-3:1997 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/18, Tools tips and inserts for cutting applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments issued since publication

Date	Text affected
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**Indexable hardmetal (carbide) inserts
with rounded corners, with cylindrical
fixing hole — Dimensions**

*Plaquettes amovibles en métaux-durs (carbures métalliques) avec
arrondi de pointe et trou de fixation cylindrique — Dimensions*





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3364 was prepared by Technical Committee ISO/TC 29, *Small Tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This fourth edition cancels and replaces the third edition (ISO 3364:1997), which has been technically revised.

Indexable hardmetal (carbide) inserts with rounded corners, with cylindrical fixing hole — Dimensions

1 Scope

This International Standard specifies the dimensions of indexable hardmetal (carbide) inserts with rounded corners, with cylindrical fixing hole and with 0° normal clearance. These inserts are primarily intended to be mounted by top and hole clamping or by hole clamping alone on turning and boring tools.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 513, *Classification and application of hard cutting materials for metal removal with defined cutting edges — Designation of the main groups and groups of application*

ISO 1832, *Indexable inserts for cutting tools — Designation*

3 Types of insert

The types of indexable hardmetal (carbide) insert specified in this International Standard are the following:

- TN: triangular inserts, with 0° normal clearance;
- SN: square inserts, with 0° normal clearance;
- CN: rhombic inserts, with 0° normal clearance and 80° included angle;
- DN: rhombic inserts, with 0° normal clearance and 55° included angle;
- WN: hexagonal (trigon) inserts, with 0° normal clearance and 80° included angle;
- VN: rhombic inserts, with 0° normal clearance and 35° included angle.

Inserts covered by this International Standard are standardized with chip breakers on both faces, with chip breakers on one face only and with no ship breakers at all.

Neither the shape nor the dimensions of chip breakers are standardized. Thus, if necessary, special features shall be explained by means of a diagram or additional specifications.

Table B.1 gives the range of sizes for these inserts.

4 Interchangeability

4.1 Tolerances

Indexable hard metal (carbide) inserts specified in this International Standard are provided in tolerance classes in accordance with ISO 1832.

Other tolerances are given, either in Table 1 for hole dimensions, or in Tables 2 to 7 for insert dimensions.

4.2 Thickness, s , of inserts with chip breakers

The thickness, s , of inserts with chip breakers is defined as the distance between the cutting edge at the corner and the opposing supporting surface of the insert; see Figure 1 a) and b) for inserts with chip breakers on one face only and Figure 1 c) for inserts with chip breakers on both faces.

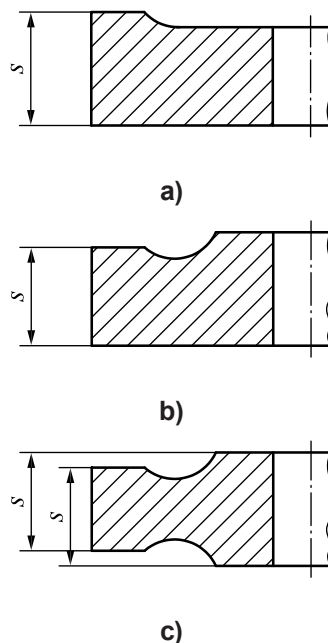


Figure 1 — Thickness of inserts with chip breakers

In order to guarantee interchangeability when mounting the insert, the diameter, d_1 , of the fixing hole is related to the diameter, d , of the inscribed circle of the insert according to Table 1.

Table 1 — Fixing hole

Dimensions in millimetres						
d	6,35	9,525	12,7	15,875	19,05	25,4
$d_1 \pm 0,08$	2,26	3,81	5,16	6,35	7,94	9,12

5 Designation and marking

5.1 Designation

The designation of the indexable hardmetal (carbide) inserts complying with this International Standard shall conform to ISO 1832.

In addition to this designation, one or both of the following may be indicated:

- the symbol of the group of application, in accordance with ISO 513;
- the commercial designation of the hardmetal (carbide) grade.