

INTERNATIONAL
STANDARD

ISO
10910

First edition
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**Classification and designation of
approximate chip control zones for
indexable inserts with chipbreakers**

*Classification et désignation des zones de contrôle approximatives des
copeaux pour plaquettes amovibles avec brise-copeaux*



Reference number
ISO 10910:1995(E)

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.

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.

International Standard ISO 10910 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

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Classification and designation of approximate chip control zones for indexable inserts with chipbreakers

1 Scope

This International Standard establishes a graph format used to develop diagrams depicting chipbreaker indexable insert performance. Performance results may be derived from the cutting test described in clause 5.

Classification zones are established and coded in this International Standard. Suppliers of chipbreaker insert products may classify their products using the code of the zone within which the primary use of their product is indicated.

It is important to acknowledge that the relationships established by diagrams developed according to this International Standard may vary from one work material to another, as well as with other machining variables, and that it is not the purpose of this International Standard to serve as a specific guide to the practical application of chipbreaker insert products, but rather grant the user a sort of pre-selection, on a general level, that will allow him to look at only those items that have the best chance of satisfying his needs.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged

to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 683-1:1987, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Direct-hardening unalloyed and low-alloyed wrought steel in form of different black products.*

ISO 1832:1991, *Indexable inserts for cutting tools — Designation.*

ISO 3002-1:1982, *Basic quantities in cutting and grinding — Part 1: Geometry of the active part of cutting tools — General terms, reference systems, tool and working angles, chip breakers.*

ISO 3002-3:1984, *Basic quantities in cutting and grinding — Part 3: Geometric and kinematic quantities in cutting.*

ISO 3685:1993, *Tool-life testing with single-point turning tools.*

3 Graph

The axes of the graph format (see figure 1) shall be the feed (according to ISO 3002-3) and the depth of cut (according to ISO 3002-3). The limits of the feed and depth of cut shall be

$$f = 0,025 \text{ mm/rev to } 2,5 \text{ mm/rev and}$$

$$a_p = 0,1 \text{ mm to } 16 \text{ mm.}$$