

Polycrystalline diamond inserts, tipped — Dimensions, types

ICS 25.100.01

National foreword

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The UK participation in its preparation was entrusted to Technical Committee MTE/18, Tools tips and inserts for cutting applications, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii and iv, pages 1 to 14, an inside back cover and a back cover.

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Foreword

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ISO 16463 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

Polycrystalline diamond inserts, tipped — Dimensions, types

1 Scope

This International Standard applies to inserts with insert shapes in accordance with ISO 883 and ISO 6987, tipped with polycrystalline diamond (DP).

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 883, *Indexable hardmetal (carbide) inserts with rounded corners, without fixing hole — Dimensions*

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

ISO 3365, *Indexable hardmetal (carbide) inserts with wiper edges, without fixing hole — Dimensions*

ISO 6987, *Indexable hard material inserts with rounded corners, with partly cylindrical fixing hole — Dimensions*

3 Insert shapes and design

3.1 Insert shapes

Triangular (T), square (S), rhombic 80° (C), 55° (D) and 35° (V) and trigon (W).

3.2 Normal clearance, α_n

Normal clearance 5° (B), 7° (C), 11° (P) and 20° (E).

3.3 Cutting edge corner

Inserts for turning with corner radius r_E 0,2 mm; 0,4 mm; 0,8 mm; 1,2 mm and 1,6 mm.

Inserts for milling with wiper edge.

NOTE The design of non-tipped corners is optional.