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Turning tools with carbide tips — Internal tools

Outils de tour à plaquettes en carbures métalliques — Outils d'intérieur

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This second edition cancels and replaces the first edition (ISO 514:1975), of which it constitutes a minor revision.

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Turning tools with carbide tips — Internal tools

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1 Scope

This International Standard specifies the types and dimensions of turning tools with carbide tips; it deals only with internal tools.

The shank sections and the inserts used are selected respectively from those defined in ISO 241 and ISO 242.

NOTE External tools and the definition of right-hand and left-hand tools are the subject of ISO 243; designation and marking are the subject of ISO 504.

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 241, *Shanks for turning and planing tools — Shapes and dimensions of the section*

ISO 242, *Carbide tips for brazing on turning tools*

3 Specifications

3.1 Types of internal tools

Only two types of internal tools, considered to be those most generally used, are provided for; they are tool No. 8 and tool No. 9, which differ from each other only in the shape of the end of the operative portion.

Both types may be made either with a square shank or with a cylindrical shank, the front portion of the tool being of round section in both cases.

Dimension l shown in Table 1 is the nominal length of the carbide tip, type A or C, selected from those specified in ISO 242; this dimension is equal to approximately 0,6 d.

3.2 Shank sections

For the particular case of internal tools, only two types of sections are selected from among the various types specified in ISO 241:

a) the square section $h = b$;

b) the round section d.

3.3 Overall lengths

Only one range of overall lengths is specified, the length being a function of the diameter d.

The lengths are scaled approximately in the series of preferred numbers R 40/3 and are a practically linear expression in terms of d, no value departing by more than 15 mm from the value obtained with the formula:

$10\,d + 50$ mm

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