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## Carbide tips for brazing on turning tools

*Plaquettes à braser en carbures métalliques pour outils de tour*

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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.

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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 242:1975), of which it constitutes a minor revision.

# Carbide tips for brazing on turning tools

## 1 Scope

This International Standard specifies the dimensions of carbide tips for turning tools intended to be fixed on the shanks of tools by brazing.

NOTE Throwaway carbide indexable inserts are the subject of ISO 883.

## 2 Interchangeability

The dimensions adopted are unified dimensions intended to permit interchangeability between the tips and the tool shanks on which they have to be mounted.

## 3 Types and dimensions

Tips with a thickness below 4 mm are supplied without a chamfer at the base and without the clearance angle; cutting edges may be slightly rounded.

The nominal lengths of types (see [Figure 1](#)) are given in [Table 1](#).

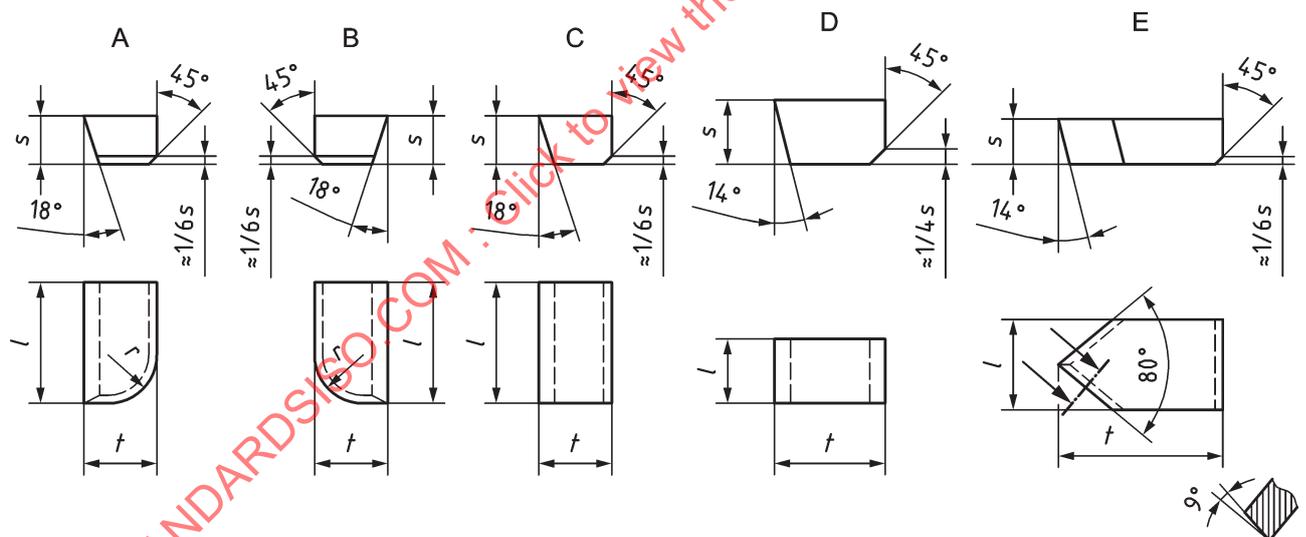


Figure 1 — Types

Table 1 — Nominal lengths of types

Dimensions in millimetres

Types	A and B				C			D			E		
	<i>l</i>	<i>t</i>	<i>s</i>	<i>r</i>	<i>l</i>	<i>t</i>	<i>s</i>	<i>l</i>	<i>t</i>	<i>s</i>	<i>l</i>	<i>t</i>	<i>s</i>
3	—	—	—	—	—	—	—	3,5	8	3	—	—	—
4	—	—	—	—	—	—	—	4,5	10	4	4	10	2,5
5	5	3	2	2	5	3	2	5,5	12	5	5	12	3
6	6	4	2,5	2,5	6	4	2,5	6,5	14	6	6	14	3,5
8	8	5	3	3	8	5	3	8,5	16	8	8	16	4
10	10	6	4	4	10	6	4	10,5	18	10	10	18	5
12	12	8	5	5	12	8	5	12,5	20	12	12	20	6
16	16	10	6	6	16	10	6	—	—	—	16	22	7
20	20	12	7	7	20	12	7	—	—	—	20	25	8
25	25	14	8	8	25	14	8	—	—	—	25	28	9
32	32	18	10	10	32	18	10	—	—	—	32	32	10
40	40	22	12	12	40	22	12	—	—	—	—	—	—
50	50	25	14	14	50	25	14	—	—	—	—	—	—

All the dimensions given are minimum dimensions.

## Annex A (informative)

### Relationship between designations in ISO 242 and ISO 13399 series

**Table A.1 — Relationship between designations in ISO 242 and ISO 13399 series**

Symbol in ISO 242	Reference in ISO 242	Property name in ISO 13399	Symbol in ISO 13399	Reference in ISO 13399
<i>l</i>	<a href="#">Figure 1</a> , style A, B, C, D, E; table	insert length	INSL	ISO/TS 13399-2 ID-#: 71CE7A9DFA23A
<i>r</i>	<a href="#">Figure 1</a> , style A, B; table	mating radius	RCON	ISO/TS 13399-2 ID-#: 727BE4EA8C69D
<i>s</i>	<a href="#">Figure 1</a> , style A, B, C, D, E; table	insert thickness	S	ISO/TS 13399-2 ID-#: 71CE7A9F5308C
<i>t</i>	<a href="#">Figure 1</a> , style A, B, C, D, E; table	insert width	W1	ISO/TS 13399-2 ID-#: 71CE7A9FB11C3
18° and 14°	<a href="#">Figure 1</a> , style A, B, C, D	clearance angle major	AN	ISO/TS 13399-2 ID-#: 71DD70308D3E3
9°	<a href="#">Figure 1</a> , style E	clearance angle major	AN	ISO/TS 13399-2 ID-#: 71DD70308D3E3
80°	<a href="#">Figure 1</a> , style E	insert included angle	EPSR	ISO/TS 13399-2 ID-#: 71CE7A96BC122

## Bibliography

- [1] ISO 241, *Shanks for turning and planing tools — Shapes and dimensions of the section*
- [2] 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*
- [3] ISO 883, *Indexable hardmetal (carbide) inserts with rounded corners, without fixing hole — Dimensions*
- [4] ISO 13399 (all parts), *Cutting tool data representation and exchange*

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