INTERNATIONAL STANDARD

ISO 10145-1

Second edition
2016-03-01

End mills with brazed helical hardmetal tips —

Part 1: Dimensions of end mills with parallel shank

Fraises cylindriques deux tailles à plaquettes hélicoïdales en métaux-durs, brasées —

Partie 1: Dimensions des fraises à queue cylindrique

Reference number
ISO 10145-1:2016(E)

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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 defined cutting edges, cutting items*.

This second edition cancels and replaces the first edition (ISO 10145-1:1993), which constitutes a minor revision.

ISO 10145 consists of the following parts, under the general title *End mills with brazed helical hardmetal tips*:

— *Part 1: Dimensions of end mills with parallel shank*

— *Part 2: Dimensions of end mills with 7/24 taper shank*

End mills with brazed helical hardmetal tips —

Part 1:
Dimensions of end mills with parallel shank

1 Scope

This part of ISO 10145 specifies the general dimensions of end mills with brazed helical hardmetal tips, with parallel shank.

The following two types of end mills with parallel shank are specified:

— end mills with plain parallel shank;

— end mills with flatted parallel shank.

This part of ISO 10145 applies to right-hand and left-hand end mills, irrespective of the helix angle and number of flutes.

2 Normative references

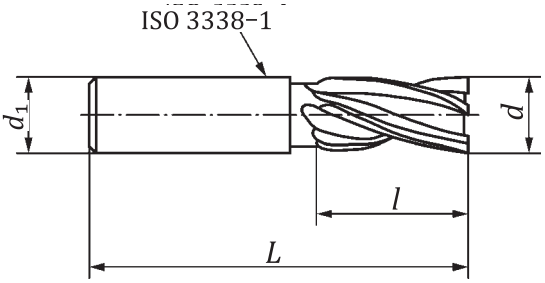
The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3338–1, *Parallel shanks for milling cutters — Part 1: Dimensions of plain parallel shanks*

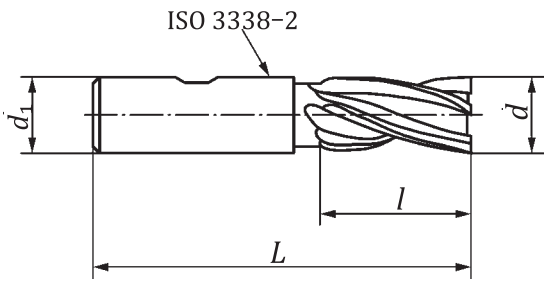
ISO 3338–2, *Cylindrical shanks for milling cutters — Part 2: Dimensional characteristics of flatted cylindrical shanks*

3 Dimensions

The dimensions for end mills as shown in Figure 1 are specified in Table 1.



Type 1: With plain parallel shank, in accordance with ISO 3338–1



Type 2: With flatted parallel shank, in accordance with ISO 3338–2

Figure 1 — Dimensions for end mills

Table 1 — Dimensions for end mills

Dimensions in millimetres

d	l		d_1	L
k12	nom.	tol.		$^{+2}_{0}$
12	20	$^{+2}_{0}$	12	75
	25			80
16	25		16	88
	32			95
20	32		20	97
	40			105
25	40	$^{+3}_{0}$	25	111
	50			121
32	40		32	120
	50			130
40	50		40	140
	63			153

Annex A
(informative)

Relationship between designations in this part of ISO 10145 and ISO 13399

For relationship between designations in this part of ISO 10145 and preferred symbols according to ISO 13399, see Table A.1.

Table A.1 — Relationship between designations in this part of ISO 10145 and ISO 13399 series

Symbol in ISO 10145–1	Reference in ISO 10145–1	Property name in ISO 13399	Symbol in ISO 13399	Reference in ISO 13399
d	Figure 1 and Table 1	cutting diameter	DC	ISO/TS 13399-3 71CE7A96D9F7D
d_1	Figure 1 and Table 1	connection diameter machine side	DCONMS	ISO/TS 13399-3 71EBDBF5060E6
l	Figure 1 and Table 1	depth of cut maximum	APMX	ISO/TS 13399-3 71D07576C0558
L	Figure 1 and Table 1	overall length	OAL	ISO/TS 13399-3 71D078EB7C086

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