
**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

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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).

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).

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 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](#).

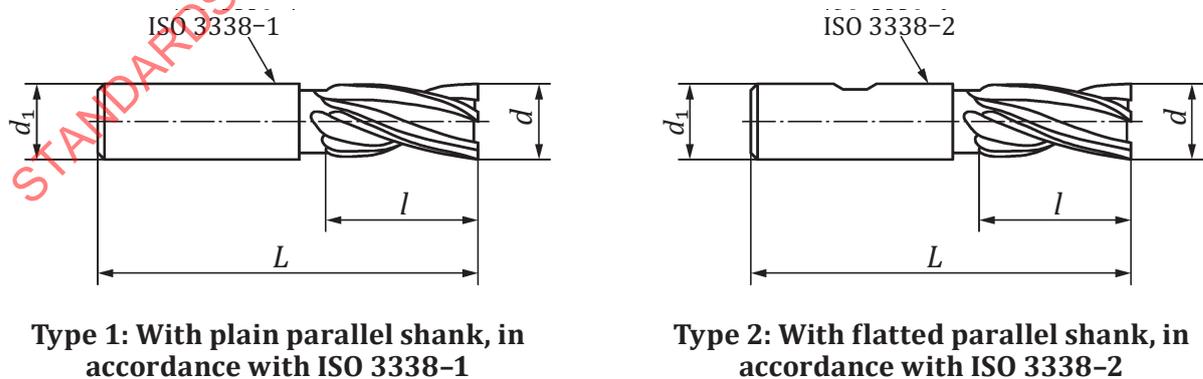


Figure 1 — Dimensions for end mills

Table 1 — Dimensions for end mills

Dimensions in millimetres

<i>d</i>	<i>l</i>		<i>d</i> ₁	<i>L</i>	
	nom.	tol.			
k12				+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	

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