INTERNATIONAL STANDARD

ISO 4206

Third edition
2016-10-15

Counterbores with parallel shanks and solid pilots

Outils à lamer, à queue cylindrique et pilote fixe

Reference number
ISO 4206:2016(E)

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

Contents

Page

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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 2, *Holding tools, adaptive items and interfaces*.

This third edition cancels and replaces the second edition (ISO 4206:1991), of which it constitutes a minor revision, notably with the addition of Annex A, which gives the relationship between the designations of this International Standard and the ISO 13399 series.

Counterbores with parallel shanks and solid pilots

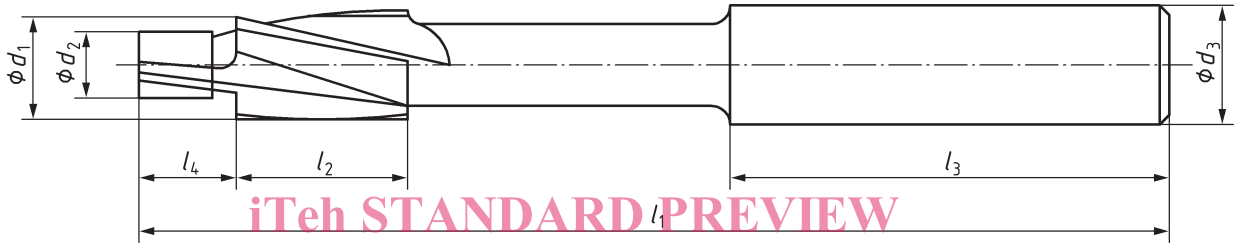
1 Scope

This International Standard specifies the dimensions, in millimetres, and the tolerances of counterbores with parallel shanks and solid pilots for general use.

2 Dimensions

The dimensions and tolerances are shown in Figure 1 and given in Table 1.

NOTE Figure 1 illustrating this International Standard is diagrammatic only. It is not intended to show details of design.



NOTE This Figure shows a counterbore with cutting diameter d_1 greater than 5 mm.

Figure 1

Table 1

Cutting diameter d_1 **z9**[a]	**Pilot diameter** d_2 **e8**[a]	**Shank diameter** d_3 **h9**[a]	l_1	l_2	l_3	l_4
$2 \leq d_1 \leq 3{,}15$	Diameter to be specified to suit pilot hole diameter, when ordering (minimum possible diameter is $d_2 = 1/3\ d_1$)	$= d_1$	45	7	—	$\approx d_2$
$3{,}15 < d_1 \leq 5$			56	10		
$5 < d_1 \leq 8$			71	14	31,5	
$8 < d_1 \leq 10$			80	18	35,5	
$10 < d_1 \leq 12{,}5$		10				
$12{,}5 < d_1 \leq 20$		12,5	100	22	40	
[a] See ISO 286-2.						

Annex A
(informative)

Relationship between designations of this International Standard and ISO 13399

For the relationship between the designations of this International Standard and preferred symbols according to ISO 13399, see Table A.1.

Table A.1 — Relationship between designations of this International Standard and ISO 13399

Symbol in ISO 4206	Reference in ISO 4206	Property name in the ISO 13399 series	Symbol in the ISO 13399 series	Reference in the ISO 13399 series
d_1	Figure 1 Table 1	Cutting diameter	DC	71D084653E57F
d_2	Figure 1 Table 1	Guide pilot diameter	GPD	71ED6A7A6E6A2
d_3	Figure 1 Table 1	Connection diameter machine side	DCONMS	71EBDBF5060E6
l_1	Figure 1 Table 1	Overall length	OAL	71D078EB7C086
l_3	Figure 1 Table 1	Shank length	LS	71CF298870946
l_4	Figure 1 Table 1	Guide pilot length	GPL	72724DE9E999D
d_3 **h9**	Table 1	Tolerance class connection diameter machine side	TCDCONMS	72719B2BD8041

Bibliography

[1] ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

[2] ISO 4205, *Countersinks, 90°, with parallel shanks and solid pilots*

[3] ISO 13399 (all parts), *Cutting tool data representation and exchange*

ICS 25.100.30

Price based on 3 pages