INTERNATIONAL STANDARD

ISO 236-2

Second edition
2013-05-01

Reamers —

Part 2: Long fluted machine reamers with Morse taper shanks

Alésoirs —

Partie 2: Alésoirs à machine, à goujures longues, à queue cône Morse

Reference number
ISO 236-2:2013(E)

COPYRIGHT PROTECTED DOCUMENT

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 236-2 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 2, *High speed steel cutting tools and their attachments*.

This second edition cancels and replaces the first edition (ISO 236-2:1976), of which it constitutes a minor revision. In particular, dimensions in inches (Imperial units) have been deleted, and an informative annex, giving the relationship between the symbols of this part of ISO 236 and the symbols according to ISO 13399 (all parts), has been added.

ISO 236 consists of the following parts, under the general title *Reamers*:

— *Part 1: Hand reamers*[1)]

— *Part 2: Long fluted machine reamers with Morse taper shanksIntroduction*

1) It is intended that, upon revision, the main element of the title of Part one will be aligned with the main element of the title of Part two.

Reamers —

Part 2:
Long fluted machine reamers with Morse taper shanks

1 Scope

This part of ISO 236 specifies the dimensions of long fluted machine reamers with Morse taper shanks.

The relationship between the symbols of this part of ISO 236 and those according to ISO 13399 (all parts) is given for information in Annex A.

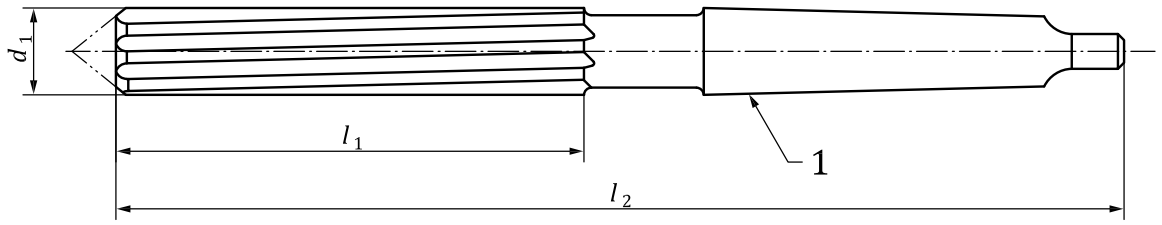
2 Normative references

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

ISO 296, *Machine tools — Self-holding tapers for tool shanks*

3 Dimensions

The dimensions for reamers with Morse taper shank shall be in accordance with the dimensions shown in Figure 1. The diameters and corresponding dimensions shall be as given in Table 1. The dimensions set out as a function of diameter steps shall be as given in Table 2.



Key

1 Morse taper in accordance with ISO 296

Figure 1 — Long fluted machine reamer with Morse taper shank

Table 1 — Diameters and corresponding dimensions of long fluted machine reamers with Morse taper shanks

Dimensions in millimetres

d_1	l_1		l_2		Morse taper No.		d_1	l_1		l_2		Morse taper No.
		Tol.		Tol.					Tol.		Tol.	
7	54	±1,5	134	±2	1		32	133	±2	293	±2	4
8	58		138				(34)[a]	142		302		
9	62		142				(35)[a]					
10	66		146				36					
11	71		151				(38)[a]	152		312		
12	76		156				40					
(13)[a]							(42)[a]					
14	81		161				(44)[a]	163		323	± 3	
(15)[a]			181		2		45					
16	87		187				(46)[a]					
(17)[a]							(48)[a]	174		334		
18	93		193				50					
(19)[a]							(52)[a]			372		5
20	100		200				(55)[a]	184		381		
(21)[a]							56					
22	107		207				(58)[a]					
(23)[a]							(60)[a]					
(24)[a]	115		242		3		(62)[a]	194		391		
25							63					
(26)[a]							67					
(27)[a]	124	±2	251				71	203		400		
28												
(30)[a]												

[a] Sizes in parentheses should be avoided wherever possible.

In special cases, the lengths of reamers and their shank dimensions may be chosen from the next larger or smaller range.

EXAMPLE For the diameter 15 mm, length l_2 may be 187 mm with l_1 being 87 mm and Morse taper No. 2 or length l_2 may be 156 mm with l_1 being 76 mm and Morse taper No. 1 (see Table 2).

Table 2 — Dimensions set out as a function of diameter steps

Dimensions in millimetres

Diameter step, d_1		Corresponding length				
Over	Including	l_1	Tol.	l_2	Tol.	Morse taper No.
6,0	6,7	50	±1,5	130	±2	1
6,7	7,5	54		134		
7,5	8,5	58		138		
8,5	9,5	62		142		
9,5	10,6	66		146		
10,6	11,8	71		151		
11,8	13,2	76		156		
13,2	14,0	81		161		
14,0	15,0			181		2
15,0	17,0	87		187		
17,0	19,0	93		193		
19,0	21,2	100		200		
21,2	23,02	107		207		
23,02	23,6			234		3
23,6	26,5	115		242		
26,5	30,0	124	±2	251		
30,0	31,75	133		260		
31,75	33,50			293		4
33,50	37,5	142		302		
37,5	42,5	152		312		
42,5	47,5	163		323	±3	
47,5	50,8	174		334		
50,8	53,0			371		5
53,0	60,0	184		381		
60,0	67,0	194		391		
67,0	75,0	203		400		
75,0	76,2	212		409		
76,2	85,0			479		6

Annex A
(informative)

Relationship between the symbols of this part of ISO 236 and ISO 13399 (all parts)

For the relationship between the symbols of this part of ISO 236 and symbols according to ISO 13399 (all parts), see Table A.1.

Table A.1 — Relationship between symbols in this part of ISO 236 and ISO 13399 (all parts)

Symbol in this part of ISO 236 **(**ISO 236-2**)**	**Reference in this part of** ISO 236 **(**ISO 236-2**)**	**Property name in** ISO 13399 (all parts)	**Symbol in** ISO 13399 (all parts)	**Reference in** ISO 13399 (all parts) BSU code
l_1	Figure 1	Cutting edge length	L	ISO/TS 13399-2 71DD6C95DA49B
d_1	Figure 1	Cutting diameter	DC	ISO/TS 13399-3 71D084653E57F
l_2	Figure 1	Overall length	OAL	ISO/TS 13399-3 71D078EB7C086

Bibliography

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

ICS 25.100.30

Price based on 5 pages