

INTERNATIONAL
STANDARD

ISO
3291

Second edition
1995-12-15

Extra-long Morse taper shank twist drills

Forets extra-longs à queue cône Morse

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Reference number
ISO 3291:1995(E)

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.

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.

International Standard ISO 3291 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 2, *Drills, reamers, milling cutters and milling machine accessories*.

This second edition cancels and replaces the first edition (ISO 3291:1975) which has been technically revised.

Annex A of this International Standard is for information only.

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Extra-long Morse taper shank twist drills

1 Scope

This International Standard specifies the dimensions of extra-long Morse taper shank twist drills in the range 6 mm to 50 mm diameter with an overall length range of 200 mm to 630 mm.

It gives a list of preferred diameters.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 296:1991, Machine tools — Self-holding tapers for tool shanks.

ISO 10899: —¹⁾, High speed steel two-flute twist drills — Technical specifications.

3 Dimensions

See figure 1 and tables 1 and 2.

4 Technical specifications

Unless otherwise specified, technical requirements shall comply with ISO 10899.

5 Designation

Extra-long Morse taper shank twist drills in accordance with this International Standard shall be designated by:

- a) "twist drill";
- b) reference to this International Standard;
- c) drill diameter, d , in millimetres;
- d) overall length, l , in millimetres.

EXAMPLE

An extra-long Morse taper shank twist drill of diameter $d = 10$ mm and overall length $l = 250$ mm shall be designated as follows:

Twist drill ISO 3291 - 10 - 250

1) To be published.

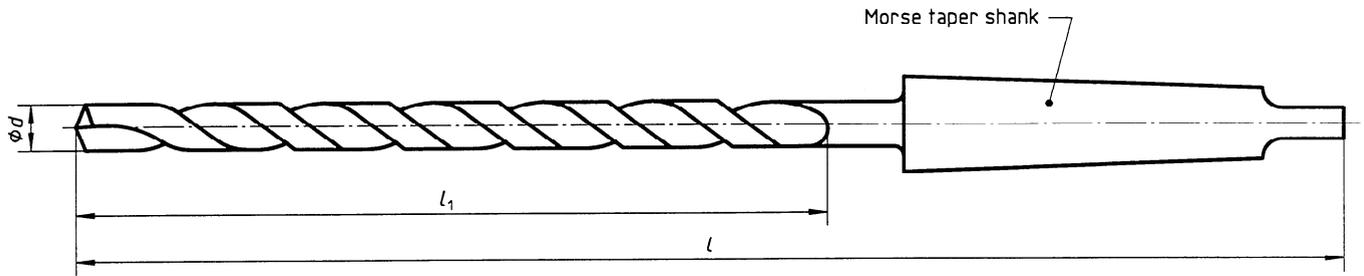


Figure 1 — Extra-long Morse taper shank twist drill

Table 1 — Extra-long Morse taper shank twist drills, preferred sizes

Dimensions in millimetres

Preferred diameters <i>d</i> h8	Overall length <i>l</i>						Morse taper shank No. ¹⁾
	200	250	315	400	500	630	
6	x	x	x				1
6,5	x	x	x				
7	x	x	x				
7,5	x	x	x				
8	x	x	x				
8,5	x	x	x				
9	x	x	x				
9,5	x	x	x				
10		x	x	x			
11		x	x	x			
12		x	x	x			
13		x	x	x			
14		x	x	x			
15			x	x	x		
16			x	x	x	2	
17			x	x	x		
18			x	x	x		
19			x	x	x		
20			x	x	x		
21			x	x	x		
22			x	x	x		
23			x	x	x		
24				x	x	x	
25				x	x	x	
28				x	x	x	
30				x	x	x	
32				x	x	x	
35				x	x	x	
38				x	x	x	
40				x	x	x	
42					x	x	
45					x	x	
48					x	x	
50					x	x	
Range of diameters	$6 \leq d \leq 9,5$	$6 \leq d \leq 14$	$6 \leq d \leq 23$	$9,5 < d \leq 40$	$14 < d \leq 50$	$23 < d \leq 50$	

NOTE — For the values of flute length, *l*₁, see table 2.

1) According to ISO 296.

Table 2 — Flute length l_1 of extra-long Morse taper shank twist drills

Dimensions in millimetres

Morse taper shank No.	Overall length l					
	200	250	315	400	500	630
	Flute length l_1					
1	110	160	225	310		
2			215	300	400	
3				275	375	505
4				250	350	480

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Annex A
(informative)

Bibliography

- [1] ISO 235:1980, *Parallel shank jobber and stub series drills and Morse taper shank drills.*
- [2] ISO 494:1975, *Parallel shank twist drills — Long series.*
- [3] ISO 3292:1995, *Extra-long parallel shank twist drills.*

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