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मानक

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IS 7822 (2005): Twist Drills - Extra-long Morse Taper Shanks [PGD 32: Cutting tools]



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भारतीय मानक
एँठित बरमें — अतिरिक्त लम्बाई के
मौरस टेपर शँक — विशिष्टि
(दूसरा पुनरीक्षण)

Indian Standard

TWIST DRILLS — EXTRA-LONG MORSE
TAPER SHANK — SPECIFICATION
(*Second Revision*)

ICS 25.100.30

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BUREAU OF INDIAN STANDARDS
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NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical with ISO 3291 : 1995 'Extra-long Morse taper shank twist drills' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Drills, Reamers and Threading Tools Sectional Committee and approval of the Medical Instruments, General and Production Engineering Division Council.

This standard was first published in 1975 based on ISO 3291 : 1975 and was revised in 1983. In order to align with the latest version of ISO Standard the revision of this standard has been taken up.

The text of this ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. In this adopted standard certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker in the International Standard while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

Figure 1 is only an improvement over the existing drawing. National Annex A may be referred for Fig. 1 (see page 5).

The concerned Technical Committee responsible for the preparation of this standard has reviewed the provisions of the following International Standards and decided that they are acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 296 : 1991	Machine tools — Self-holding tapers for tool shanks
ISO 10899 : 1996	High speed steel two-flute twist drills — Technical specifications

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

**TWIST DRILLS — EXTRA-LONG MORSE
TAPER SHANK — SPECIFICATION**

(Second Revision)

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.

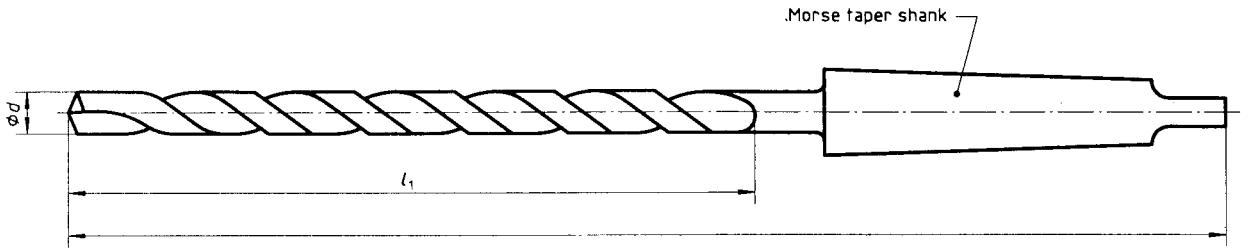


Figure 1 — Extra-long Morse taper shank twist drill

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

Dimensions in millimetres

Preferred diameters d h8	Overall length l						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	3	
24				x	x		
25				x	x		
28				x	x		
30				x	x		
32				x	x	4	
35				x	x		
38				x	x		
40				x	x		
42					x		
45					x		
48					x		
50					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

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.*

NATIONAL ANNEX A
(*National Foreword*)

A-1 The modified figure given below is only an improvement over the Fig. 1 given on page 2 of this adopted standard.

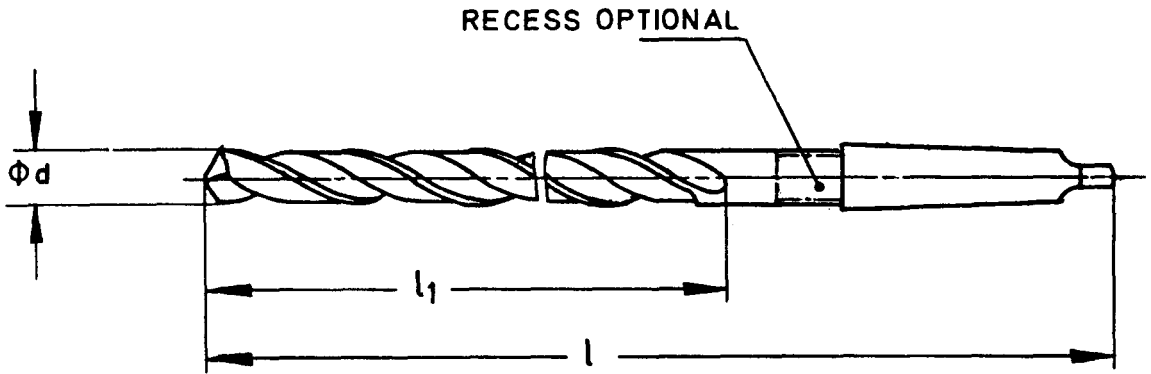


FIG. 1 EXTRA-LONG MORSE TAPER SHANK TWIST DRILL

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This Indian Standard has been developed from Doc: No. **MGP/BP 10 (0337)**.

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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