INTERNATIONAL STANDARD

ISO 239

Second edition
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Drill chuck tapers

Cônes d'emmanchement pour mandrins de perceuse

Reference number
ISO 239:1999(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 239 was prepared by Technical Committee ISO/TC 29, *Small tools*.

This second edition cancels and replaces the first edition (ISO 239:1974) which has been technically revised.

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Drill chuck tapers

1 Scope

This International Standard lays down the dimensions of drill chuck tapers and includes two distinct types :

a) Morse taper type;

b) Jacobs taper type.

It includes, for each type of taper, a table giving the dimensions.

2 Interchangeability

2.1 Morse taper type

See Figure 1 and Table 1.

The tapered portions are identical with the following Morse tapers:

— No.1, for tapers B6, B10 and B12;

— No.2, for tapers B16 and B18;

— No.3, for tapers B22 and B24.

The length of each of these tapers is, of course, distinctly less than the overall length of the corresponding Morse taper; each taper may be regarded as corresponding approximately either to that part of Morse taper nearest the small end (e.g. B10) or to the part nearest the large end (e.g. B12).

2.2 Jacobs taper type

See Figure 2 and Table 2.

Table 2 reproduces and classifies the normal dimensions of Jacobs tapers; they also observe the generally accepted designations, in spite of their somewhat illogical appearance.

The range of increasing values for diameter D contains two No. 2 tapers, the first of which is a short taper; between tapers Nos. 2 and 3, there are two interpolated tapers which bear the out-of-series numbers 33 and 6 respectively.

3 Morse taper type

See Figure 1 and Table 1.

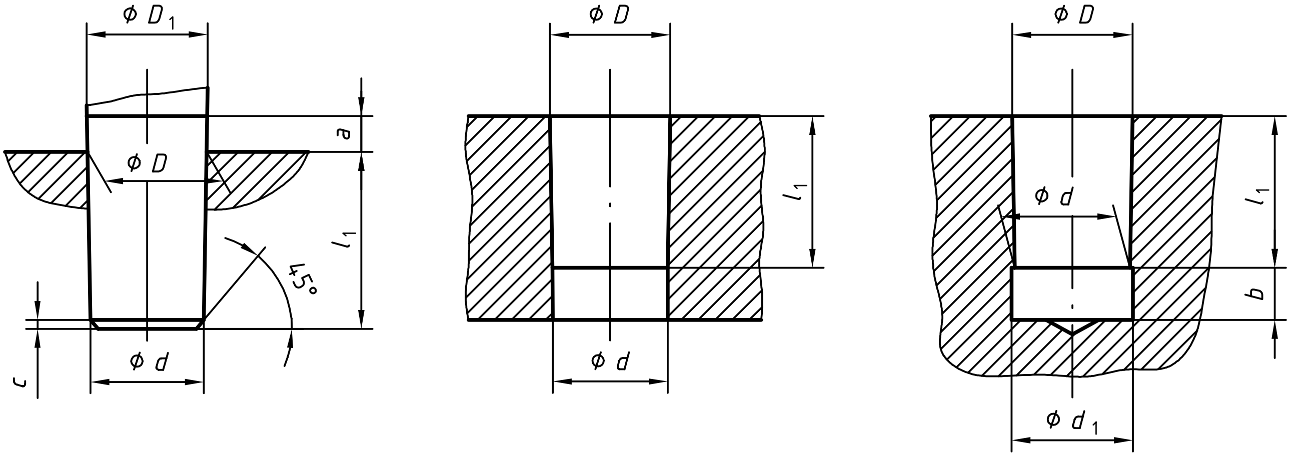

Figure 1

Table 1

Dimensions in millimetres

Morse taper designation	D	D_1 [a]	d [a]	d_1	l_1	a max.	b	c	**Taper**	
									Morse No.	on diameter
B6	6,35	6,5	5,85	6,5	10	3	3	0,5	1	0,05
B10	10,094	10,3	9,4	9,8	14,5	3,5	3,5	1		0,049 88
B12	12,065	12,2	11,1	11,5	18,5					
B16s [b]	15,608	15,8	14,5	15	21,5	5	4	1,5	2	0,049 95
B16	15,733	16	14,5	15	24					
B18s [b]	17,431	17,6	16,2	16,8	25					
B18	17,78	18	16,2	16,8	32					
B22	21,793	22	19,8	20,5	40,5	5	4,5	2	3	0,050 2
B24	23,825	24,1	21,3	22	50,5					

a Values to calculate, given for information. The effective values are obtained by applying the rate of taper and the basic dimension *D* to the actual values of *a* and l_1 respectively.

b Short Morse taper.