

INTERNATIONAL STANDARD

ISO 8051

Second edition
1999-03-01

Long shank taps with nominal diameters from M3 to M10 — Full-diameter shank taps with recess

*Tarauds à machine, à queue longue, de diamètre nominal M3 à M10 —
Tarauds à queue pleine, à gorge*

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Reference number
ISO 8051:1999(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 8051 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 4, *Screwing taps and dies*.

This second edition cancels and replaces the first edition (ISO 8051:1989) which has been technically revised.

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Long shank taps with nominal diameters from M3 to M10 — Full-diameter shank taps with recess

1 Scope

This International Standard specifies the dimensions for full-diameter shank taps with recess with nominal diameters from M3 to M10 and thus complements ISO 2283 which concerns relieved shank taps.

It applies to long shank machine taps.

Technical specifications for taps covered by this International Standard (including marking) are given in ISO 8830.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 529:1993, *Short machine taps and hand taps*.

ISO 8830:1991, *High-speed steel machine taps with ground threads — Technical specifications*.

3 Dimensions

Dimensions are given in Figure 1 and Table 1.

The threaded lengths of these taps are in accordance with those given in ISO 529.

Shank lengths ($L-l$) are increased by 50 % with respect to those given in ISO 529; total lengths therefore vary accordingly.

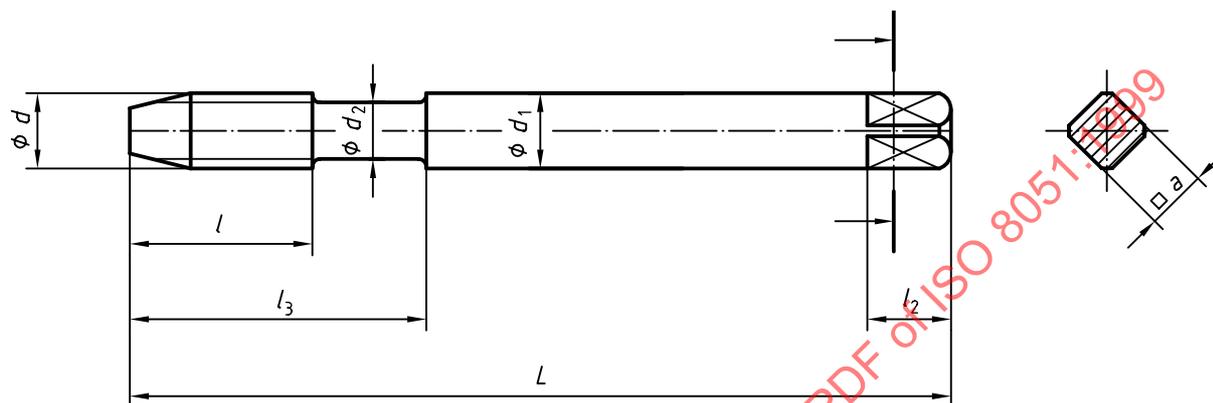


Figure 1

Table 1

Dimensions in millimetres

Designation		d	Pitch		d_1	l	L	d_2^a	l_3	Square			
Coarse pitches	Fine pitches	nom.	coarse	fine	h_9^b	max.	h_{16}	min.		a h_{11}^c	l_2 $\pm 0,8$		
M3	M3 × 0,35	3	0,5	0,35	3,15	11	66	2,12	18	2,5	5		
M3,5	M3,5 × 0,35	3,5	0,6		3,55		68	2,5	20	2,8			
M4	M4 × 0,5	4	0,7	0,5	4	13	73	2,8	21	3,15	6		
M4,5	M4,5 × 0,5	4,5	0,75		4,5			3,15		3,55			
M5	M5 × 0,5	5	0,8		5	16	79	3,55	25	4	7		
–	M5,5 × 0,5	5,5	–		5,6	17	84	4	26	4,5			
M6	M6 × 0,75	6	1	0,75	6,3	19	89	4,5	30	5	8		
M7	M7 × 0,75	7			7,1			5,3		5,6			
M8	M8 × 1	8	1,25	1	8	22	97	6	35	6,3	9		
M9	M9 × 1	9			9			7,1		36		7,1	10
M10	M10 × 1	10			1,5			10		24		108	7,5
–	M10 × 1,25		–	1,25									

^a The recess is optional at the manufacturer's discretion. If the recess is not required, such taps shall have a thread length equal to $l + [(l_3 - l)/2]$.

^b In accordance with ISO 237, tolerance h_9 applies to precision shanks; for non-precision shanks, the tolerance is h_{11} .

^c In accordance with ISO 237, the tolerance is enlarged to h_{12} when including errors of form of the square and of its position in relation to the shank.

4 Marking

Marking shall be in accordance with ISO 8830.

Bibliography

- [1] ISO 237:1975, *Rotating tools with parallel shanks — Diameters of shanks and sizes of driving squares.*
- [2] ISO 2283:—¹⁾, *Long shank taps with nominal diameters from M3 to M24 and 1/8 to 1 in — Reduced shank taps.*

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¹⁾ To be published. (Revision of ISO 2283:1972)