

BS ISO 8051:2016



BSI Standards Publication

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

**National foreword**

This British Standard is the UK implementation of ISO 8051:2016. It supersedes BS ISO 8051:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/18, Tools tips and inserts for cutting applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

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**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*



Reference number  
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## 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.

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The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 2, *Holding tools, adaptive items and interfaces*.

This third edition cancels and replaces the second edition (ISO 8051:1999), of which it constitutes a minor revision with the following change:

- addition of [Annex A](#), which gives the relationship between the designations of this International Standard and the ISO 13399 series.

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

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.

NOTE [Annex A](#) gives the relationship between the designations of this International Standard and ISO 13399 (all parts).

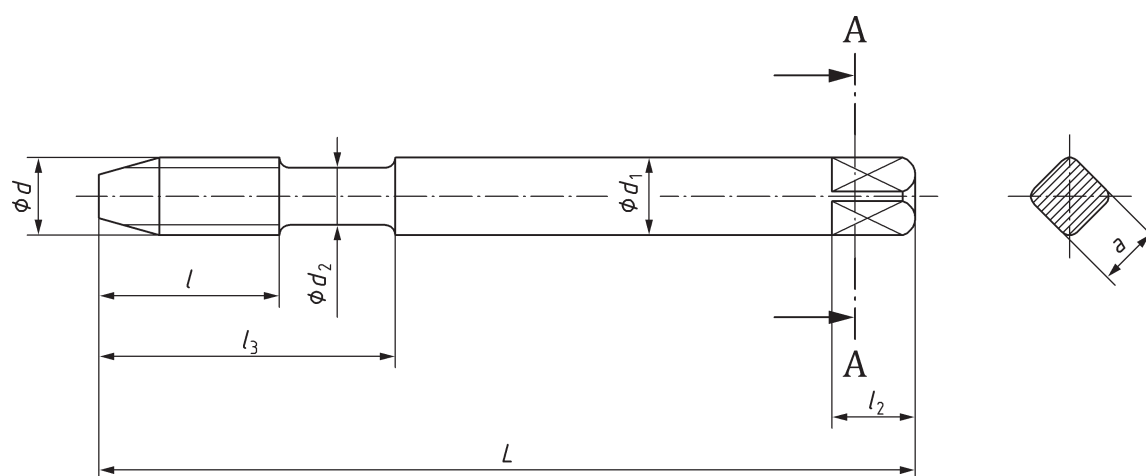


Figure 1

Table 1

Designation		<i>d</i> nom.	Pitch		<i>d</i> <sub>1</sub> h9 <sup>b</sup>	<i>l</i> max.	<i>L</i> h16	<i>d</i> <sub>2</sub> <sup>a</sup> min.	<i>l</i> <sub>3</sub>	Square		
Coarse pitches	Fine pitches		coarse	fine						<i>a</i> h11 <sup>c</sup>	<i>l</i> <sub>2</sub> ± 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	39	8
—	M10 × 1,25		—	1,25								

<sup>a</sup> The recess is optional at the manufacturer's discretion. If the recess is not required, such taps shall have a thread length equal to  $l + \left[ \frac{(l_3 - l)}{2} \right]$ .

<sup>b</sup> In accordance with ISO 237, tolerance h9 applies to precision shanks; for non-precision shanks, the tolerance is h11.

<sup>c</sup> In accordance with ISO 237, the tolerance is enlarged to h12 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.



## Annex A (informative)

### Relationship between designations in this International Standard and ISO 13399

For the relationship between designations in this International Standard and preferred symbols according to ISO 13399, see [Table A.1](#).

**Table A.1 — Relationship between designations in this International Standard and ISO 13399**

Symbol in ISO 8051	Reference in ISO 8051	Property name in ISO 13399 series	Symbol in ISO 13399 series	Reference in ISO 13399 series
$d$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Thread diameter	TD	71E02C5C2EED3
$d_1$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Connection diameter machine side	DCONMS	71EBDBF5060E6
$d_2$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Neck diameter	DN	71EAC48EC5DE0
$l$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Thread cutting part length	THL	71E02C65BB9DA
$l_3$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Usable length	LU	71EBB33490FDA
$L$	<a href="#">Figure 1</a> <a href="#">Table 1</a>	Overall length	OAL	71D078EB7C086

## Bibliography

- [1] ISO 237, *Rotating tools with parallel shanks — Diameters of shanks and sizes of driving squares*
- [2] ISO 2283, *Long shank taps with nominal diameters from M3 to M24 and 1/8 in to 1 in — Reduced shank taps*
- [3] ISO 13399 (all parts), *Cutting tool data representation and exchange*







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