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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*

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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).

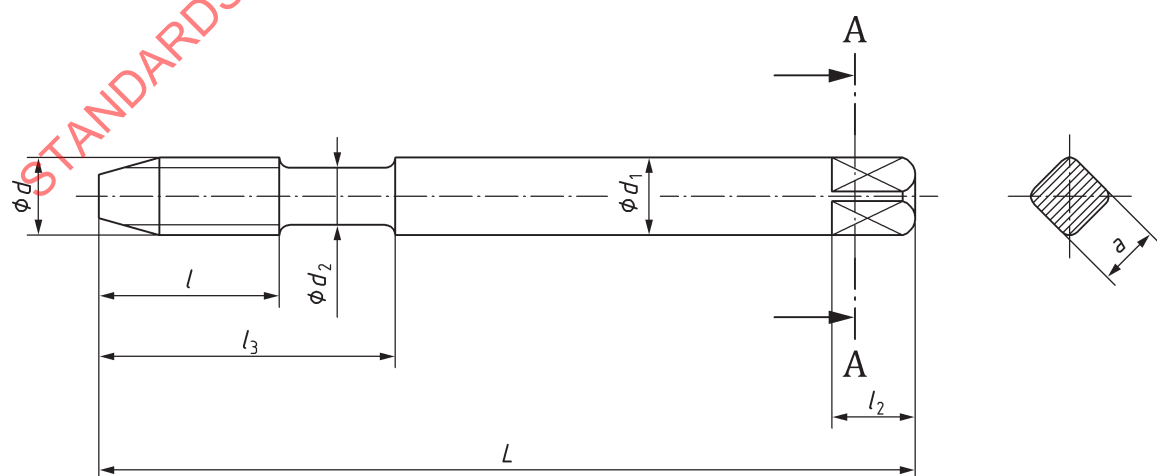


Figure 1

Table 1

| Designation       |                 | <i>d</i><br>nom. | Pitch  |      | <i>d</i> <sub>1</sub><br>h9 <sup>b</sup> | <i>l</i><br>max. | <i>L</i><br>h16 | <i>d</i> <sub>2</sub> <sup>a</sup><br>min. | <i>l</i> <sub>3</sub> | Square                       |                                |
|-------------------|-----------------|------------------|--------|------|------------------------------------------|------------------|-----------------|--------------------------------------------|-----------------------|------------------------------|--------------------------------|
| Coarse<br>pitches | Fine<br>pitches |                  | coarse | fine |                                          |                  |                 |                                            |                       | <i>a</i><br>h11 <sup>c</sup> | <i>l</i> <sub>2</sub><br>± 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                            | 11                             |
| —                 | 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  $l + \left[ (l_3 - l) / 2 \right]$ .

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