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**Tools for pressing — Guide pillars —  
Part 2:  
Type A, straight pillars**

*Outillage de presse — Colonnes de guidage —  
Partie 2: Type A, colonnes droites*

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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 document 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)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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For an explanation of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding*.

This third edition cancels and replaces the second edition (ISO 9182-2:2013) which has been technically revised.

The main changes are as follows:

- deletion of pillar diameter 80 mm and 100 mm and modification of the tolerance on  $d_1$ ;
- addition of an option with a thread;
- modification of the surface roughness value;
- modification of the hardness of the pillar;
- deletion of the pillar end alternative with radius for type A2;
- improvement of drawing of type A2 and addition of the dimension of the throat for the locking ring;
- deletion of the dimensions of the lead for type A1;
- change in the designation of the lengths.

A list of all parts in the ISO 9182 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Tools for pressing — Guide pillars —

## Part 2: Type A, straight pillars

### 1 Scope

This document specifies the dimensions and tolerances of guide pillars, type A, intended for use in press tools. These guide pillars can be straight, type A1, or straight with end-locking and locking ring, type A2.

This document gives guidance on the materials and specifies the hardness and the designation of guide pillars which meet the requirements of this document.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

No terms and definition are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

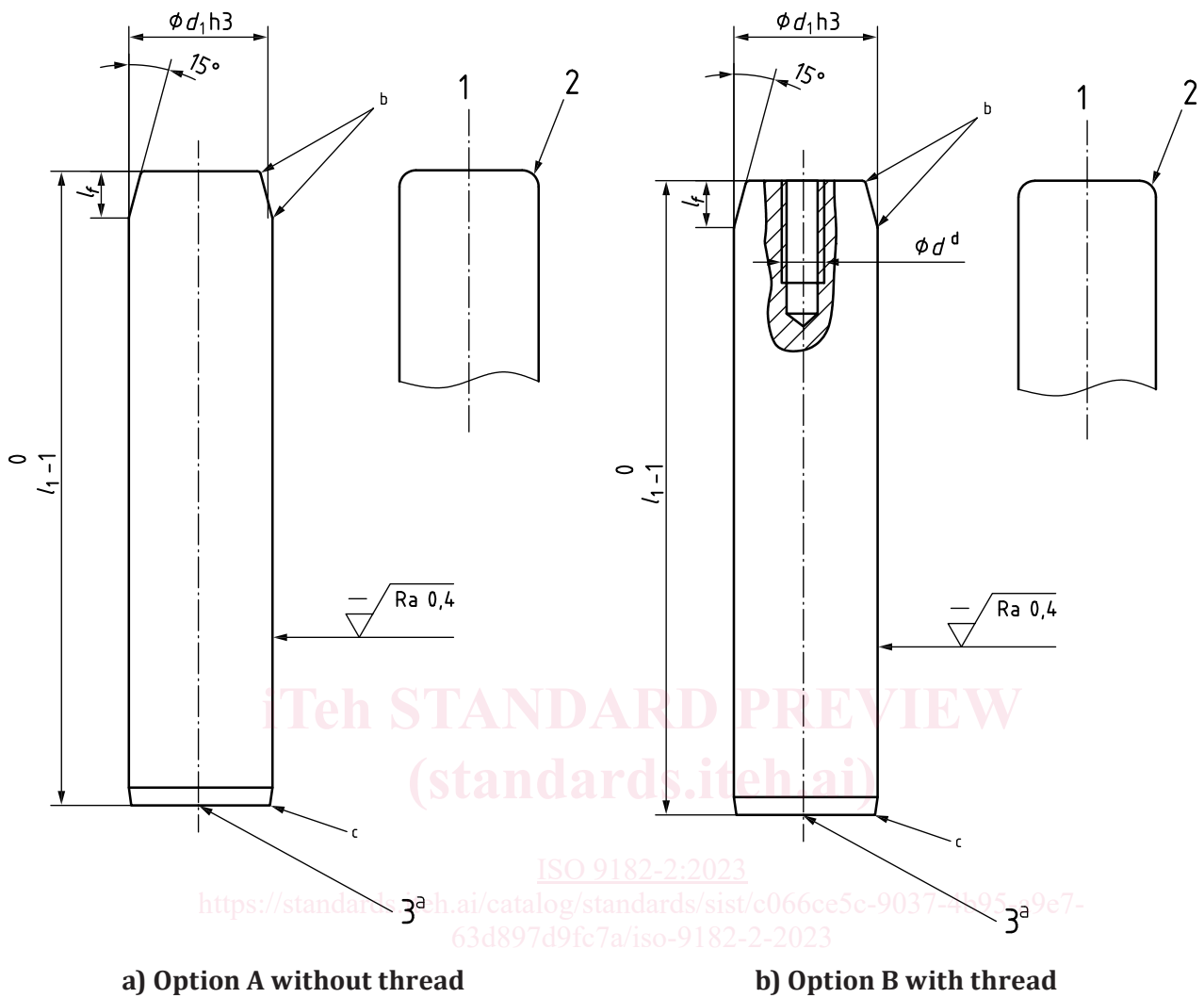
- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 4 Dimensions

The dimensions of straight guide pillar (type A1) shall conform to the indications of [Figure 1](#) and [Table 1](#).

The dimensions of straight guide pillar with end-locking and locking ring (type A2) shall conform to the indications of [Figure 2](#) and [Table 1](#).

Surface roughness value in micrometres



a) Option A without thread

b) Option B with thread

**Key**

- 1 alternative
- 2 radius
- 3 centre hole

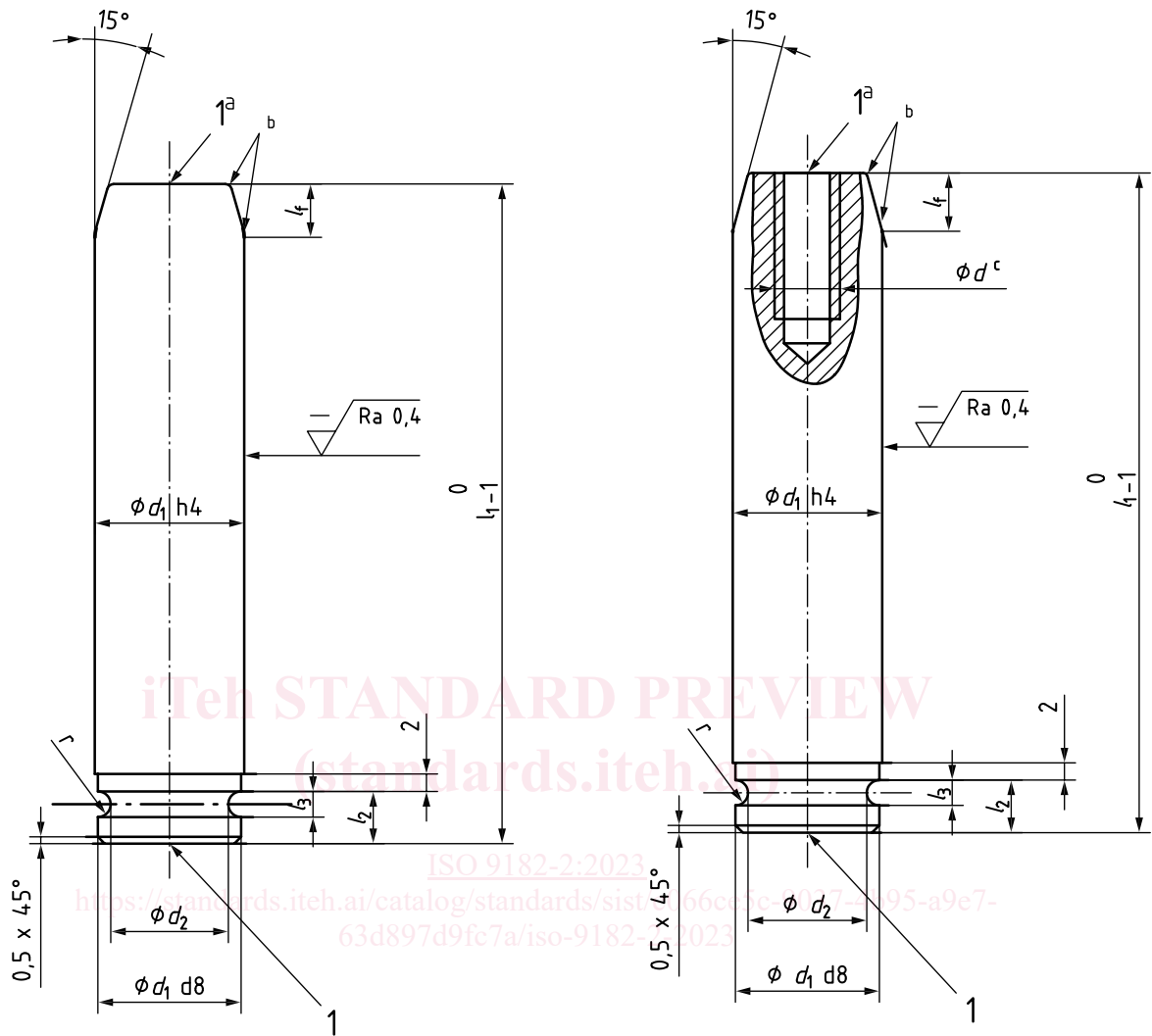
NOTE 1 Tolerance classes and limit deviations are defined in ISO 286-2.

NOTE 2 Centre holes are defined in ISO 6411.

- a Optional.
- b Slightly rounded. The values of the radii are left to the manufacturer's discretion.
- c The lead in is left to the manufacturer's discretion.
- d The diameter of the thread is left to the manufacturer's discretion.

**Figure 1 — Type A1, straight guide pillar**

Dimensions in millimetres  
Surface roughness value in micrometres



a) Option A without thread

b) Option B with thread

**Key**

1 centre hole

NOTE Centre holes are defined in ISO 6411.

a Optional.

b Slightly rounded. The values of the radii are left to the manufacturer's discretion.

c The diameter of the thread is left to the manufacturer's discretion.

**Figure 2 — Type A2, straight guide pillar with end-locking and locking ring**

**Table 1 — Dimensions of straight guide pillar (type A1 and type A2)**

Dimensions in millimetres

$d_1^a$		12	16	20	25	32	40	50	63
$d_2$		10,3	14,3	17,3	22,3	27,8	35,8	45,8	56,8
$l_f$ min.		4	4	4	6	6	6	8	8
$l_2$		4	4	6	6	10	10	10	16
$l_3$		1,7	1,7	2,7	2,7	4,2	4,2	4,2	6,2
$r$		0,85	0,85	1,35	1,35	2,1	2,1	2,1	3,1
$l_1$	80	×							
	90	×	×						
	100	×	×	×	×				
	112	×	×	×	×				
	125	×	×	×	×	×			
	140	×	×	×	×	×			
	160		×	×	×	×	×		
	180		×	×	×	×	×	×	
	200		×	×	×	×	×	×	
	224			×	×	×	×	×	
	250				×	×	×	×	×
	280				×	×	×	×	×
	315					×	×	×	×
	355						×	×	×
	400						×	×	×
450							×	×	
500							×	×	
<b>Key</b>									
× standardized dimension									
<sup>a</sup> To prevent an incorrect assembly of the upper and lower plates of the die set in relation to each other, the following values of $d_1$ are recommended: 11, 15, 19, 24, 30, 38, 48, and 60.									

## 5 Material

The material and hardness are left to the manufacturer's discretion, but the hardness shall be (56  $^{+2}_0$ ) HRC.

NOTE Rockwell C hardness (HRC) is defined in ISO 6508-1.

## 6 Designation

Guide pillars for press tools in accordance with this document shall be designated by:

- “Guide pillar”;
- a reference to this document, i.e. ISO 9182-2:2023;
- its type;
- its diameter,  $d_1$ , in millimetres;
- its overall length,  $l_1$ , in millimetres;



f) option A (without thread) or option B (with thread).

EXAMPLE A guide pillar, type A1, of diameter  $d_1 = 12$  mm and overall length  $l_1 = 80$  mm with a thread is designated as follows:

**Guide pillar ISO 9182-2 - A1 - 12 × 80 - B (option with thread)**

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- [1] ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*
- [2] ISO 6411, *Technical drawings — Simplified representation of centre holes*
- [3] ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*
- [4] ISO 9182-1, *Tools for pressing — Guide pillars — Part 1: Types*

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