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**Tools for pressing — Guide pillars —  
Part 5:  
Type D, end-locking pillars with flange**

*Outillage de presse — Colonnes de guidage —*

*Partie 5: Type D, colonnes à retenue inférieure, démontables*

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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)).

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

This fourth edition cancels and replaces the third edition (ISO 9182-5:2020) which has been technically revised.

The main changes are as follows:

- deletion of pillar diameter 12 mm, 16 mm, 80 mm and 100 mm, of pillar lengths 400 mm, 450 mm and 500 mm and modification of the tolerance on  $d_1$ ;
- addition of the dimension of the thread of the lower end of the pillar;
- addition of an option with a thread of the upper end of the pillar;
- modification of the surface roughness value on  $d_1$  and addition of a surface roughness on  $d_2$ ;
- deletion of the pillar end alternative with radius;
- change in the designation of the lengths and diameter of the pillar.

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 5:

### Type D, end-locking pillars with flange

#### 1 Scope

This document specifies the dimensions and tolerances of guide pillars, type D, end-locking pillar with flange, intended for use in press tools.

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

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6753-1, *Tools for pressing and moulding — Machined plates — Part 1: Machined plates for press tools*

#### 3 Terms and definitions

No terms and definition are listed in this document.

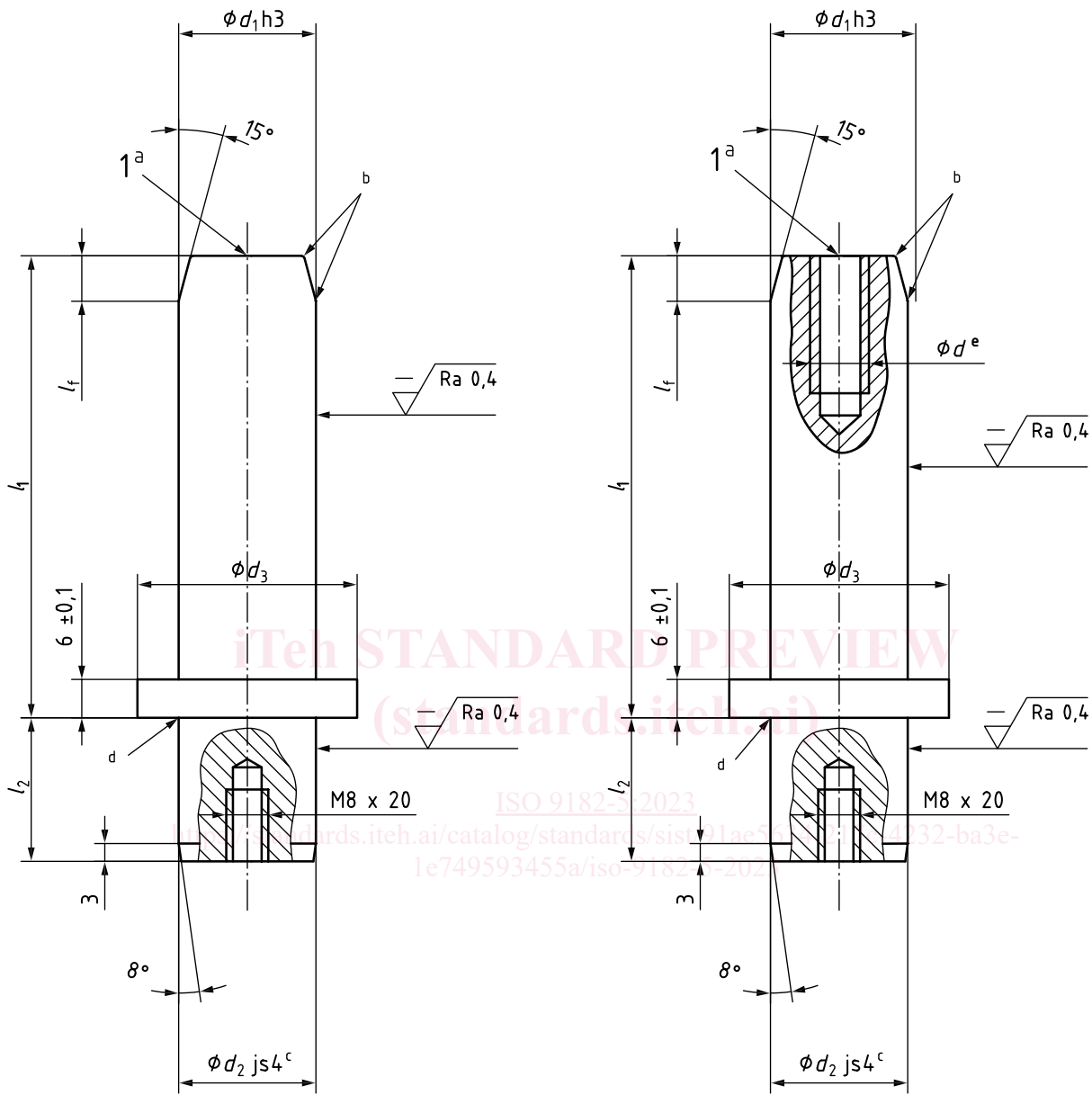
ISO and IEC maintain terminology databases for use in standardization at the following addresses:

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

#### 4 Dimensions

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

Dimensions in millimetres  
Surface roughness value in micrometres



a) Option A without thread

b) Option B with thread

**Key**

1 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 To be mounted in a hole toleranced H5.

d Type and size of an undercut (if any), according to ISO 18388 are left to the manufacturer's discretion.

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

**Figure 1 — End-locking guide pillar with flange**

**Table 1 — Dimensions of end-locking guide pillar with flange**

Dimensions in millimetres

|  |     |    |    |    |    |    |    |
|--|-----|----|----|----|----|----|----|
| $d_1^a$  |     | 20 | 25 | 32 | 40 | 50 | 63 |
| $d_2$  |     | 20 | 25 | 32 | 40 | 50 | 63 |
| $d_3$  |     | 25 | 32 | 40 | 50 | 63 | 80 |
| $l_f$ min.   |     | 4  | 6  | 6  | 6  | 8  | 8  |
| $l_2$ min <sup>b</sup>   |     | 20 | 25 | 32 | 40 | 50 | 50 |
| $l_1^0$<br>-1  | 80  | ×  | ×  |    |    |    |    |
|  | 90  | ×  | ×  | ×  |    |    |    |
|  | 100 | ×  | ×  | ×  |    |    |    |
|  | 112 | ×  | ×  | ×  |    |    |    |
|  | 125 | ×  | ×  | ×  | ×  | ×  |    |
|  | 140 | ×  | ×  | ×  | ×  | ×  |    |
|  | 160 | ×  | ×  | ×  | ×  | ×  | ×  |
|  | 180 | ×  | ×  | ×  | ×  | ×  | ×  |
|  | 200 | ×  | ×  | ×  | ×  | ×  | ×  |
|  | 224 |    | ×  | ×  | ×  | ×  | ×  |
|  | 250 |    | ×  | ×  | ×  | ×  | ×  |
|  | 280 |    |    | ×  | ×  | ×  | ×  |
|  | 315 |    |    |    | ×  | ×  | ×  |
| 355  |     |    |    |    | ×  | ×  |    |
| <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: 19, 24, 30, 38, 48, and 60. |     |    |    |    |    |    |    |
| <sup>b</sup> Larger values of $l_2$ shall be chosen as a function of other dimensions such as plate thickness in accordance with ISO 6753-1.   |     |    |    |    |    |    |    |

## 5 Material

The material and hardness are left to the manufacturer's discretion, but the hardness shall be (56<sup>+2</sup><sub>0</sub>) 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:

- a) "Guide pillar";
- b) a reference to this document, i.e. ISO 9182-5:2023;
- c) its type;
- d) its diameter,  $d_1$ , in millimetres;
- e) the length,  $l_2$ , in millimetres;
- f) the length,  $l_1$ , in millimetres;
- g) option A (without thread) or option B (with thread).

**EXAMPLE** A guide pillar, type D, of diameter  $d_1 = 20$  mm, length  $l_2 = 20$  mm, and a length  $l_1 = 80$  mm with a thread is designated as follows:

**Guide pillar ISO 9182-5 - D - 20 × 20 × 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*
- [5] ISO 18388, *Technical product documentation (TPD) — Relief grooves — Types and dimensioning*

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