

---

---

**Tools for pressing — Guide pillars —**  
**Part 4:**  
**Type C, pillars with taper lead and bush**

*Outillage de presse — Colonnes de guidage —*

*Partie 4: Type C, colonnes à emmanchement conique et sa bague de guidage*

STANDARDSISO.COM : Click to view the full PDF of ISO 9182-4:2020



STANDARDSISO.COM : Click to view the full PDF of ISO 9182-4:2020



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Dimensions .....	1
5 Material .....	3
6 Designation .....	3
Bibliography .....	5

STANDARDSISO.COM : Click to view the full PDF of ISO 9182-4:2020

## 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)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 9182-4:2013), which has been technically revised.

The main changes compared to the previous edition are as follows:

- addition of surface roughness indications in [Figure 1](#);
- addition of the dimensioning of the taper of the pillar ([Figure 1](#)) and of the bush ([Figure 2](#));
- updating of the Bibliography.

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 4: Type C, pillars with taper lead and bush

### 1 Scope

This document specifies the dimensions and tolerances of guide pillars, type C, with taper lead and bush, intended for use in press tools.

It 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 definitions are listed in this document.

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

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

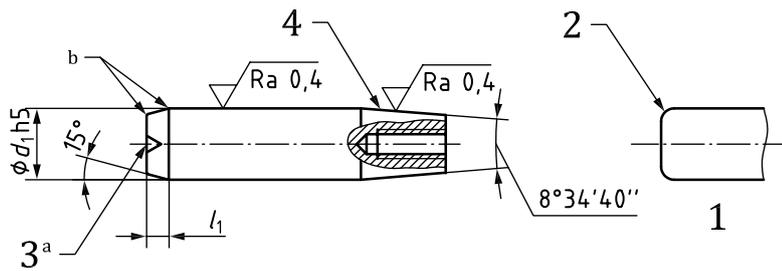
### 4 Dimensions

The dimensions of guide pillar with taper lead (type C) shall conform to the indications of [Figure 1](#) and [Table 1](#).

The dimensions of the bush for guide pillar with taper lead shall conform to the indications of [Figure 2](#) and [Table 1](#).

The dimensions of the mounting of the bush on the pillar shall conform to the indications of [Figure 3](#) and [Table 1](#).

Dimensions in micrometres



**Key**

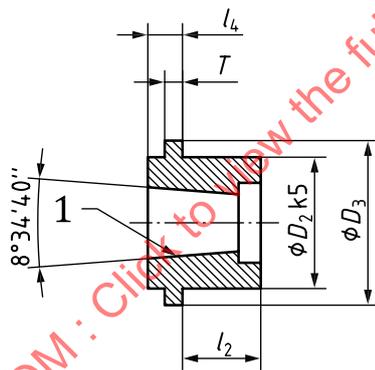
- 1 alternative
- 2 radius
- 3 centres
- 4 taper

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

a Optional.

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

**Figure 1 — Guide pillar with taper lead**

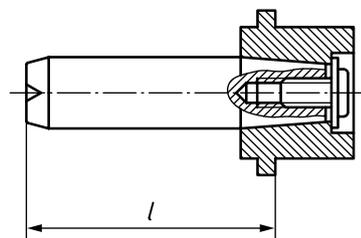


**Key**

- 1 taper

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

**Figure 2 — Bush for guide pillar with taper lead**



**Figure 3 — Mounting of the bush on the pillar**

Table 1

Dimensions in millimetres

$d_1^a$		12	16	20	25	32	40	50	63	80	100
$D_2$		22	28	32	40	48	58	70	85	105	125
$D_3$		30	36	40	48	56	66	80	95	117	137
$l_1$ min.		4	4	4	6	6	6	8	8	8	8
$l_2$ min. <sup>b</sup>		20	25	32	32	40	40	50	63	80	100
$l_4$		10	10	12	12	15	15	18	18	22	22
$T \pm 0,1$		6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3
$l_{-1}^0$	80	×									
	90	×	×								
	100	×	×	×							
	112	×	×	×	×						
	125	×	×	×	×	×					
	140		×	×	×	×	×				
	160		×	×	×	×	×	×			
	180		×	×	×	×	×	×			
	200			×	×	×	×	×	×		
	224				×	×	×	×	×		
	250				×	×	×	×	×	×	
	280					×	×	×	×	×	
	315						×	×	×	×	
	355						×	×	×	×	×
	400							×	×	×	×
450							×	×	×	×	

**Key**

× 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.

<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 is left to the manufacturer's discretion and the hardness shall be  $(60^{+2}_0)$  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 9182-4;
- its type;
- its diameter,  $d_1$ , in millimetres;
- the bush length,  $l_2$ , in millimetres;

f) the length,  $l$ , in millimetres.

EXAMPLE A guide pillar, type C, of diameter  $d_1 = 12$  mm with a bush length  $l_2 = 20$  mm and a length  $l = 80$  mm is designated as follows:

**Guide pillar ISO 9182-4 - C - 12 × 20 × 80**

STANDARDSISO.COM : Click to view the full PDF of ISO 9182-4:2020