

BS ISO 9448-2:2013



BSI Standards Publication

Tools for pressing — Guide bushes

Part 2: Form A, gliding bushes, plain, type 1

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of ISO 9448-2:2013. It supersedes BS 7568-18:1992 (ISO 9448-2:1991) which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MTE/12, Tools for pressing and moulding.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 77008 1
ICS 25.120.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2014.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

INTERNATIONAL
STANDARD

ISO
9448-2

Second edition
2013-12-15

Tools for pressing — Guide bushes —
Part 2:
Form A, gliding bushes, plain, type 1

Outillage de presse — Bagues de guidage —

Partie 2: Forme A, bagues lisses pour guidage lisse, type 1



Reference number
ISO 9448-2:2013(E)

© ISO 2013



COPYRIGHT PROTECTED DOCUMENT

© ISO 2013

All rights reserved. Unless otherwise specified, 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
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Dimensions	1
3 Material	2
4 Designation	2
Bibliography	3

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. 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. 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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

ISO 9448-2 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding*.

This second edition results from the reinstatement of ISO 9448-2:1991, which was withdrawn in 2006 and with which it is technically identical.

ISO 9448 consists of the following parts, under the general title *Tools for pressing — Guide bushes*:

- Part 1: *Forms*
- Part 2: *Form A, gliding bushes, plain, type 1*
- Part 3: *Form B, ball cage bushes, plain, type 1*
- Part 4: *Form C, gliding bushes, headed, type 1*
- Part 5: *Form D, ball cage bushes, headed, type 1*
- Part 6: *Form E, gliding bushes, flanged, type 1*
- Part 7: *Form F, ball cage bushes, flanged, type 1*
- Part 8: *Form G, gliding bushes, stepped, type 1*
- Part 9: *Form B, ball cage bushes, plain, type 2*
- Part 10: *Form E, gliding bushes, flanged, type 2*
- Part 11: *Form F, ball cage bushes, flanged, type 2*

Tools for pressing — Guide bushes —

Part 2: Form A, gliding bushes, plain, type 1

1 Scope

This part of ISO 9448 specifies the main dimensions and tolerances, in millimetres, of guide bushes of form A, plain gliding bushes, type 1, intended for use in press tools and to be mounted in the clamp plate by means of interference fit.

It gives guidance on the materials, and specifies the hardness and the designation of bushes in accordance with this part of ISO 9448.

2 Dimensions

The dimensions of type 1 plain gliding bushes (form A) shall conform to the indications of [Figure 1](#) and [Table 1](#).

Details not stated, such as chamfers, radii and lubrication grooves, are left to the manufacturer's discretion.

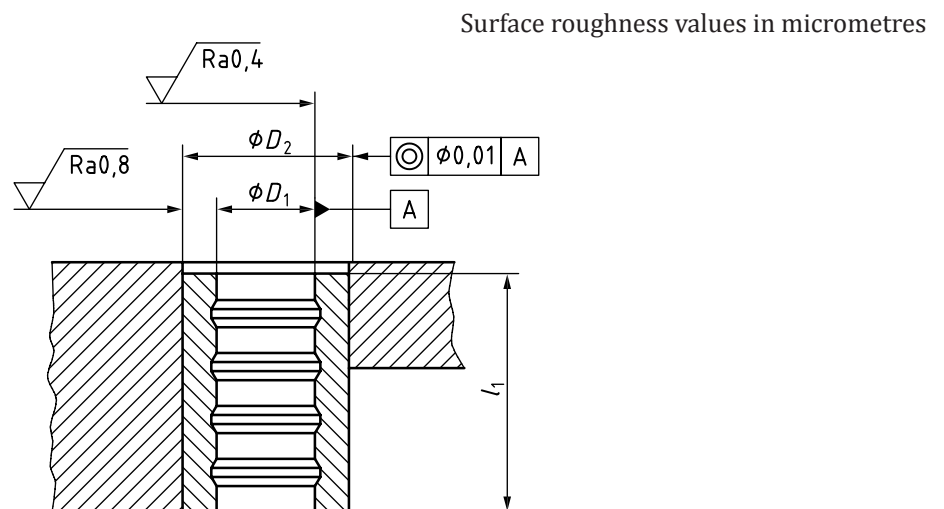


Figure 1 — Form A, plain gliding guide bushes, type 1

Table 1

l_1		D_1						
		G6			G5			
		12	16	20	25	32	40	50
		D_2						
		n6 ^a						
nom.	tol.	22	28	32	40	48	58	70
25	-2,0 -2,5	×	×					
32		×	×	×				
40	-3 -4	×	×	×	×			
50		×	×	×	×	×		
63				×	×	×	×	
80				×	×	×	×	×
100	-3 -5					×	×	×
125							×	×
160								×
× standardized dimension								
To prevent 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 and 48.								
^a Intended to fit into a hole having a tolerance of H7. When the bushes are glued, tolerance j6 is permitted.								

3 Material

The material is left to the manufacturer's discretion and the hardness shall be 60^{+2}_0 HRC.

4 Designation

A guide bush in accordance with this part of ISO 9448 shall be designated by:

- "Guide bush";
- a reference to this part of ISO 9448, i.e ISO 9448-2;
- its form;
- its guiding diameter, D_1 , in millimetres;
- its length, l_1 , in millimetres.

EXAMPLE A guide bush of form A, plain gliding bush, type 1 of guiding diameter $D_1 = 12$ mm and of length $l_1 = 25$ mm is designated as follows:

Guide bush ISO 9448-2 A - 12 × 25

Bibliography

- [1] ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

Useful Contacts:

Customer Services

Tel: +44 845 086 9001

Email (orders): orders@bsigroup.com

Email (enquiries): cservices@bsigroup.com

Subscriptions

Tel: +44 845 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com



...making excellence a habit.™