
**Tools for pressing — Round punches
with 60° conical head and reduced shank**

*Outillage de presse — Poinçons ronds à tête conique à 60° et à corps
épaulé*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

STANDARDSISO.COM : Click to view the full PDF of ISO 9181:2007

© ISO 2007

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 9181 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding*.

This second edition cancels and replaces the first edition (ISO 9181:1990), of which it constitutes a minor revision. In particular, the indication of surface textures has been updated in accordance with ISO 1302:2002.

Tools for pressing — Round punches with 60° conical head and reduced shank

1 Scope

This International Standard specifies the dimensions and tolerances, in millimetres, for round punches with a 60° conical head and reduced shank, having shank diameters D_1 of 2 mm or 3 mm.

It gives examples of materials and hardness, and specifies the designation of punches which meet the requirements of this International Standard.

The main use of punches defined in this International Standard is for punching holes in steel sheet. They may also be used for punching holes in other materials.

2 Dimensions

The dimensions of round punches with 60° conical head and reduced shank shall conform to the indications of Figure 1 and Table 1.

3 Material and corresponding hardness

The material is left to the manufacturer's discretion. The following hardness values are given as examples:

a) tool steel with 12 % Cr:

- point: (62 ± 2) HRC
- head: (45 ± 5) HRC

b) high-speed steel:

- point: (64 ± 2) HRC
- head: (50 ± 5) HRC

4 Designation

A round punch with 60° conical head and reduced shank in accordance with this International Standard shall be designated by:

- a) "round punch with conical head";
- b) a reference to this International Standard, i.e. ISO 9181;
- c) its shank diameter, D_1 ;

