

INTERNATIONAL STANDARD

**ISO
1708**

Fourth edition
1989-11-01

Acceptance conditions for general purpose parallel lathes — Testing of the accuracy

*Conditions de réception des tours parallèles d'usage général — Contrôle de la
précision*



Reference number
ISO 1708 : 1989 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1708 was prepared by Technical Committee ISO/TC 39, *Machine tools*.

This fourth edition cancels and replaces the third edition (ISO 1708 : 1983), of which it constitutes a minor revision.

Annex A of this International Standard is for information only.

© ISO 1989

All rights reserved. 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 the publisher.

International Organization for Standardization

Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Acceptance conditions for general purpose parallel lathes — Testing of the accuracy

1 Scope

This International Standard specifies, with reference to ISO 230-1, both geometrical and practical tests on general purpose parallel lathes, and gives the corresponding permissible deviations which apply.

It deals only with the verification of the accuracy of the machine. It does not apply to the testing of the running of the machine (vibrations, abnormal noises, stick-slip motion of components, etc.), or to the checking of machine characteristics (speeds, feeds, etc.,) which shall generally be checked before the accuracy is tested.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 230-1 : 1986, *Acceptance code for machine tools — Part 1: Geometric accuracy of machines operating under no-load or finishing conditions*.

3 Preliminary remarks

3.1 In this International Standard, all dimensions and deviations are expressed in millimetres and in inches.

3.2 To apply this International Standard, reference shall be made to ISO 230-1, especially for the installation of the machine before testing, warming up of spindles and other moving parts, description of measuring methods and recommended accuracy of testing equipment.

3.3 The sequence in which the geometrical tests are given is related to the sub-assemblies of the machine, and this in no way defines the practical order of testing. In order to make the mounting of instruments or gauging easier, tests may be applied in any order.

3.4 When inspecting a machine, it is not always necessary to carry out all the tests given in this International Standard. It is up to the user to choose, in agreement with the manufacturer, those tests relating to the properties which are of interest to him, but the agreed tests shall be clearly stated when ordering a machine.

3.5 Practical tests shall be made with finishing cuts [for instance, depth = 0,1 mm (0,004 in); feed = 0,1 mm (0,004 in) per revolution] and not with roughing cuts, which are liable to generate appreciable cutting forces.

3.6 When establishing the tolerance for a measuring range different from that indicated in this International Standard (see ISO 230-1 : 1986, 2.311) it should be taken into consideration that the minimum value of tolerance is 0,005 mm (0,000 2 in) for precision lathes and 0,01 mm (0,000 4 in) for other lathes.