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# International Standard



# 1708

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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

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

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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 developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

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.

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

This third edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the second edition (i.e. ISO 1708-1979), which had been approved by the member bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Israel	Spain
Belgium	Italy	Sweden
Brazil	Japan	Switzerland
Chile	Korea, Rep. of	Thailand
Czechoslovakia	Netherlands	Turkey
France	New Zealand	United Kingdom
Germany, F.R.	Poland	USA
Greece	Portugal	
Hungary	Romania	

No member body had expressed disapproval of the document.

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

## 1 Scope and field of application

This International Standard describes, with reference to ISO/R 230, 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 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 characteristics (speeds, feeds, etc.) which should generally be checked before testing accuracy.

## 2 Reference

ISO/R 230, *Machine tool test code*.

## 3 Preliminary remarks

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

**3.2** To apply this International Standard, reference shall be made to ISO/R 230, especially for 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 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 should 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 clause 2.311 in ISO/R 230) it should be taken into consideration that the minimum value of tolerance is 0,005 mm (0.0002 in) for precision lathes and 0,010 mm (0.0004 in) for other lathes.