International Standard 1984

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Acceptance conditions for milling machines with table of fixed height with horizontal or vertical spindle — Testing of accuracy

Conditions de réception des machines à fraiser à table de hauteur fixe, à broche horizontale ou verticale — Contrôle de la précision

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (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 set up 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 1984 was developed by Technical Committee ISO/TC 39, *Machine tools*.

This second edition was submitted directly to the ISO Council, in accordance with clause 5.10.1 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 1984-1974), which had been approved by the member bodies of the following countries :

Belgium	India	South Africa, Rep. of
Chile	Italy	Spain
Czechoslovakia	Japan	Switzerland
Egypt, Arab Rep. of	Korea, Rep. of	Thailand
France	Netherlands	United Kingdom
Germany, F.R.	New Zealand	USA
Greece	Philippines	
Hungary	Portugal	

The member body of the following country had expressed disapproval of the document on technical grounds :

Sweden

Printed in Switzerland

Acceptance conditions for milling machines with table of fixed height with horizontal or vertical spindle — Testing of accuracy

1 Scope and field of application

This International Standard specifies, with reference to ISO/R 230, both geometrical and practical tests on general purpose and normal accuracy milling machines with table of fixed height, with horizontal or vertical spindle, and the corresponding permissible deviations which apply.

It deals only with the verification of accuracy of the machine and does not apply to the testing of the running of the machine (vibrations, abnormal noises, stick-slip motion of components, etc.), or to machine 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 should be made to ISO/R 230, 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 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 described 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 these tests are to be clearly stated when ordering a machine.

3.5 Practical tests should be made with finishing cuts — for example : depth = 0,1 mm (0,004 in), feed per tooth = 0,1 mm (0,004 in) — and not with roughing cuts which are liable to generate appreciable cutting forces.

3.6 When the tolerance is established for a measuring range different from that given 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 0,01 mm (0,000 4 in).

3.7 For reasons of simplicity, the diagrams in this International Standard illustrate only one type of machine.