

# INTERNATIONAL STANDARD

ISO  
8636-2

First edition  
1988-12-01



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

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## Acceptance conditions for plano-milling machines — Testing of the accuracy —

### Part 2: Gantry-type machines

*Conditions de réception des machines à fraiser à portique — Contrôle de la précision —*

*Partie 2: Machines à portique mobile*

## 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.

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 8636-2 was prepared by Technical Committee ISO/TC 39, *Machine tools*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Acceptance conditions for plano-milling machines — Testing of the accuracy —

## Part 2: Gantry-type machines

### 1 Scope and field of application

This part of ISO 8636 specifies, with reference to ISO 230-1, the preliminary tests, geometrical tests and practical tests for gantry-type plano-milling machines, and the corresponding deviations which apply to general purpose, normal accuracy, machines, excluding machines for machining light alloy panels (for aircraft).

This part of ISO 8636 deals only with the verification of the machine accuracy. It does not apply to the testing of the running of the machine (vibration, abnormal noise, stick-slip motion of components, etc.) nor to the checking of machine characteristics (speeds, feeds, etc.) which should generally be checked before the accuracy is tested.

This part of ISO 8636 gives the nomenclature used for the principal parts of the machine and the designation of the axes.

NOTE — In addition to terms used in the three official ISO languages (English, French and Russian), this part of ISO 8636 gives the equivalent terms in the German and Italian languages in an annex; these have been included at the request of Technical Committee ISO/TC 39 and are published under the responsibility of the member bodies for Germany, F.R. (DIN) and Italy (UNI). However, only terms given in the official languages can be considered as ISO terms.

### 2 References

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

ISO 7572, *Conditions of acceptance and installation for workholding fixed tables of machine tools.*

ISO 8636-1, *Acceptance conditions for plano-milling machines — Testing of the accuracy — Part 1: Portal-type machines.*

### 3 Preliminary observations

**3.1** In this part of ISO 8636, all dimensions and deviations are expressed in millimetres and inches.

**3.2** To apply this part of ISO 8636, reference should be made to ISO 230-1, especially for the installation of the machine before testing, warming up of the spindle and other moving parts, description of measuring methods and recommended accuracy of test equipment.

**3.3** The temperature conditions during the tests shall be specified by agreement between manufacturer and user.

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

**3.5** When inspecting a machine, it is not always necessary to carry out all the tests given in this part of ISO 8636. 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.

**3.6** Practical tests shall be carried out with finishing cuts and not with roughing cuts which are liable to generate appreciable cutting forces.

**3.7** When establishing the tolerance for a measuring range different from that given in this part of ISO 8636 (see subclause 2.311 of ISO 230-1), it should be borne in mind that the minimum tolerance value is 0,005 mm (0.000 2 in).

**3.8** For reasons of simplicity, the diagrams in this part of ISO 8636 are based on one single machine type.