# International Standard ISO 7950

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

# Woodworking machines — Single chain mortising machines — Nomenclature and acceptance conditions

*Machines à bois — Mortaiseuses à chaîne simples — Nomenclature et conditions de réception*

**First edition — 1985-06-01**



**UDC 674.05 : 621.913.6** **Ref. No. ISO 7950-1985 (E)**

**Descriptors** : machine tools, woodworking machinery, slotting machines, nomenclature, tests, measurement, accuracy.



Price based on 8 pages

## 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 7950 was prepared by Technical Committee ISO/TC 39, *Machine tools*.





Printed in Switzerland

# Woodworking machines — Single chain mortising machines — Nomenclature and acceptance conditions



## 1 Scope and field of application

This International Standard specifies the nomenclature appropriate to each part of the machine and, with reference to ISO/R 230, the geometrical tests for single chain mortising machines, and gives the corresponding permissible deviations which apply to machines for general purpose use and normal accuracy.

NOTE — In addition to terms used in two of the three official ISO languages (English and French), this International Standard gives in the annex the equivalent terms in German, Spanish, Italian and Swedish; these have been included at the request of ISO Technical Committee TC 39 and are published under the responsibility of the member bodies for Germany, F.R. (DIN), Spain (IRANOR), Italy (UNI) and Sweden (SIS). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

This International Standard 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 the components etc.), nor to its characteristics (speeds, feeds etc.) which should generally be checked before testing accuracy.

This International Standard does not impose any practical test. For single chain mortising machines, practical tests should be exceptions and have to be stated in a previous agreement between the producer and the user.

## 2 Reference

ISO/R 230, *Test code for machine tools.*

## 3 Preliminary remarks

**3.1** In this International Standard all dimensions and permissible deviations are expressed in millimetres.

**3.2** To apply this International Standard, reference should be made to ISO/R 230, especially for installation of the machine before testing, the warming up of the main spindle and other moving parts, and description of measuring methods. The measuring instruments shall not permit errors over 1/3 of the checked tolerances.

**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 mounting of instruments or gauging easier, tests may be applied in any order.

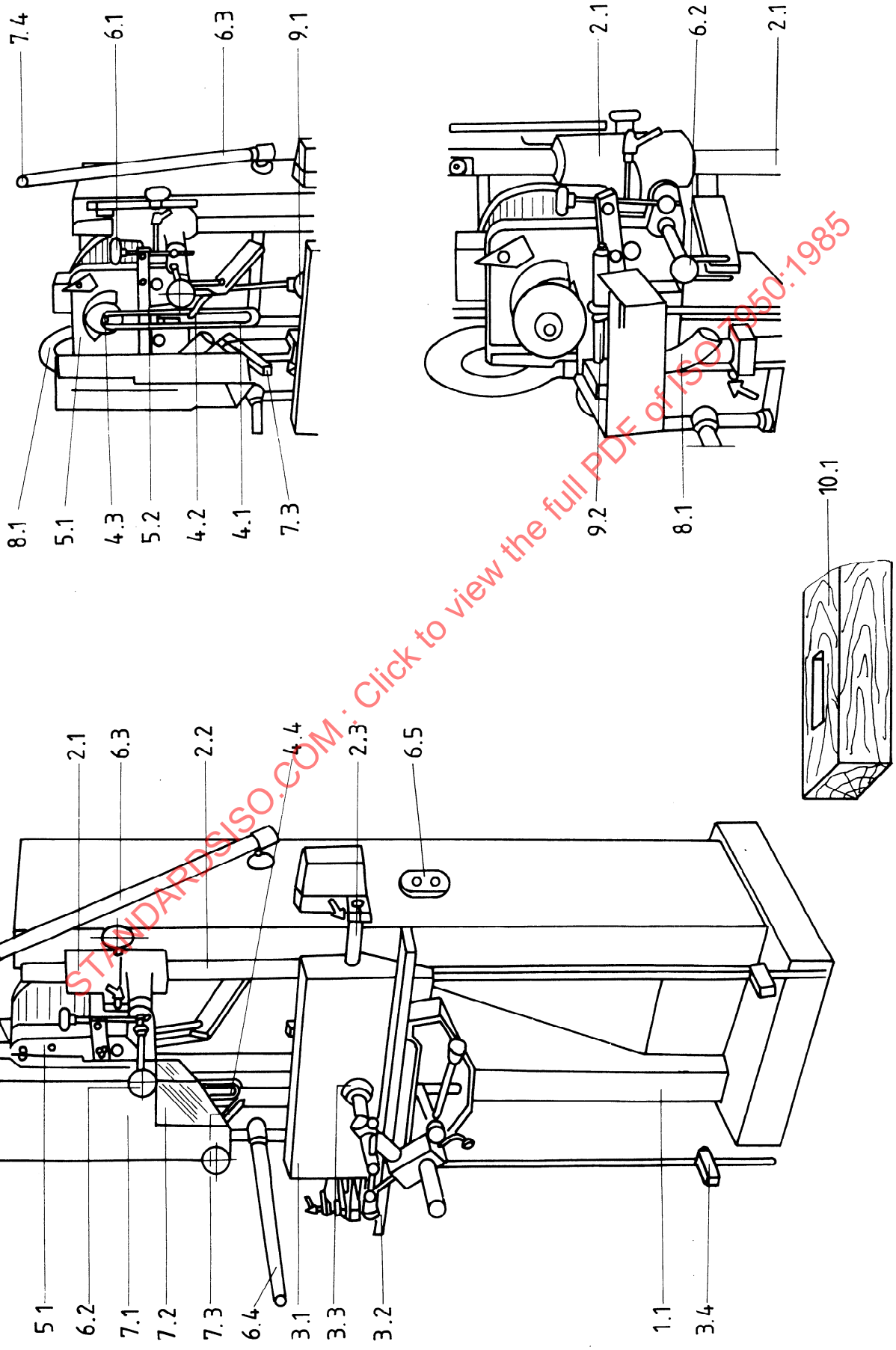
**3.4** When inspecting a machine, it is not always possible or necessary to carry out all the tests given in this International Standard.

**3.5** 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** A movement is longitudinal when it takes place in the working direction of the piece.

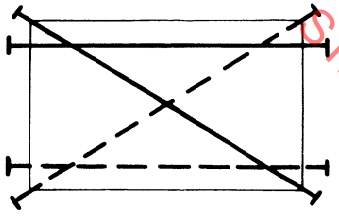
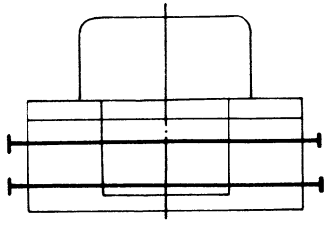
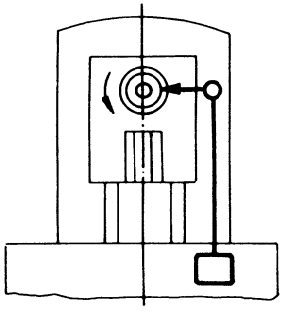
**3.7** When establishing the tolerance for a measuring range different from that given in this International Standard (see 2.311 in ISO/R 230), it should be taken into consideration that the minimum value of the tolerance is 0,01 mm.

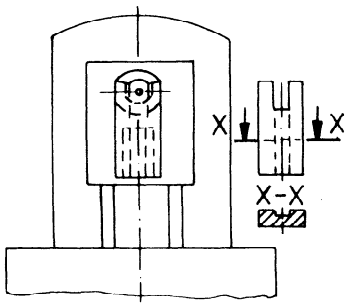
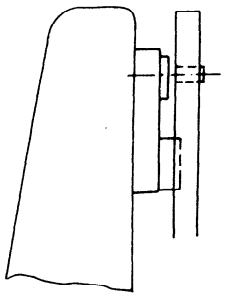
## 4 Nomenclature

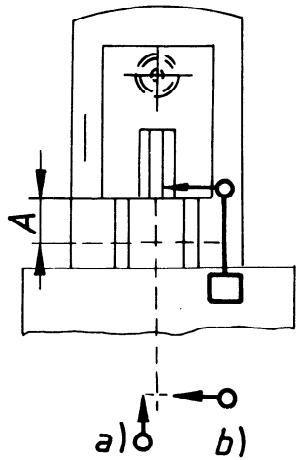
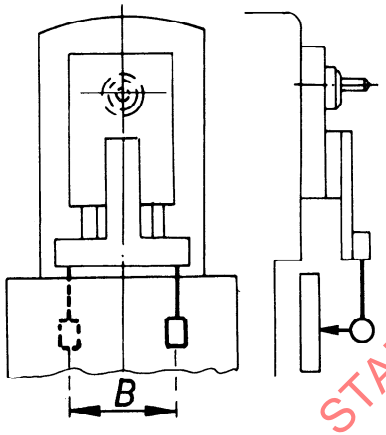


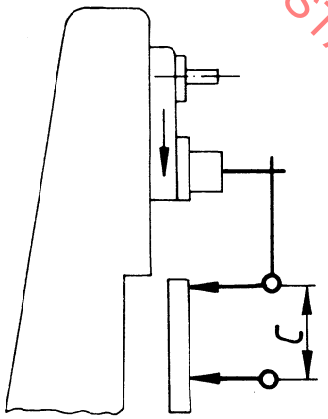
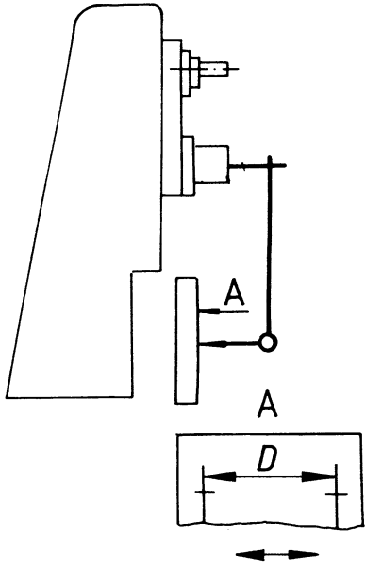
| Reference | English | French |
|---|---|---|
| | **Single chain mortising machine** | **Mortaiseuse à chaîne simple** |
| 1 | **Framework** | **Ossature** |
| 1.1 | Body | Bâti |
| 2 | **Feed of workpiece and/or tool** | **Déplacement des pièces et/ou outils** |
| 2.1 | Headstock carriage | Chariot porte-chaîne |
| 2.2 | Main vertical slide | Glissière verticale |
| 2.3 | Table slide | Glissière de la table |
| 3 | **Workpiece support clamp and guide** | **Support, maintien et guidage des pièces** |
| 3.1 | Back plate | Table verticale |
| 3.2 | Horizontal table | Table horizontale |
| 3.3 | Clamp | Presse |
| 3.4 | Bottom location for door lock mortising | Support coulissant pour mortaisage de portes |
| 4 | **Tool holder and tools** | **Porte-outils et outils** |
| 4.1 | Mortise chain | Chaîne à mortaiser |
| 4.2 | Guide bar | Barre de guidage |
| 4.3 | Chain sprocket | Pignon d'entraînement |
| 4.4 | Guide bar roller | Roulement de la barre de guidage |
| 5 | **Work heads and tool drives** | **Unité de travail et son entraînement** |
| 5.1 | Chain headstock | Tête porte-chaîne |
| 5.2 | Guide bar holder | Talon de guidage |
| 6 | **Controls** | **Commandes** |
| 6.1 | Chain tension adjustment | Commande de réglage de la tension de la chaîne |
| 6.2 | Chain cross adjustment | Commande de réglage du déplacement transversal de la tête porte-chaîne |
| 6.3 | Head vertical movement control | Commande du déplacement vertical de la tête porte-chaîne |
| 6.4 | Table longitudinal movement control | Commande du déplacement longitudinal de la table verticale |
| 6.5 | Stop/start switch | Commutateur |
| 7 | **Safety devices** (examples) | **Dispositifs de sécurité** (exemples) |
| 7.1 | Guard | Capot de protection |
| 7.2 | Guard window | Écran protecteur |
| 7.3 | Chip breaker | Pare-éclats |
| 7.4 | Safety catch | Commande de déverrouillage de la tête porte-chaîne |
| 8 | **Miscellaneous** | **Divers** |
| 8.1 | Chip outlet nozzle | Soufflerie chasse-copeaux |
| 9 | **Accessories** | **Accessoires** |
| 9.1 | Chain lubricating device | Dispositif de graissage de la chaîne |
| 9.2 | Chain grinder | Dispositif d'affûtage de la chaîne |
| 10 | **Examples of work** | **Exemples de travail** |
| 10.1 | Mortise | Mortaise |

## 5 Acceptance conditions and permissible deviations — Geometrical tests

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references in test code ISO/R 230 |
|---|---|---|---|---|---|
| G1 |  | Checking of flatness of the back plate :<br>*a*) longitudinal straightness<br>*b*) diagonal straightness | *a*) and *b*)<br>0,20<br>for any measuring length ⩽ 500<br>0,40<br>for any measuring length > 500 | Straightedge and feeler gauge | Clause 5.322 |
| G2 |  | Checking of straightness of the metallic part of the table | 0,20<br>for any measuring length ⩽ 500<br>0,30<br>for any measuring length > 500 | Straightedge and feeler and gauge | Clauses 5.212 and 5.222 |
| G3 |  | Measuring of run-out of the spindle | 0,04 | Dial gauge | Clause 5.612.2 |

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references in test code ISO/R 230 |
|---|---|---|---|---|---|
| G4 |  | Checking of alignment of the sprocket spindle to the guide bar location | 0,25 | Manufacturer's special type of gauge | Clause 5.442 |
| G5 |  | Checking of alignment of the guide bar location and sprocket spindle shoulder | 0,20 | Straightedge and manufacturer's special type of gauge | Clause 5.442 |

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references in test code ISO/R 230 |
|---|---|---|---|---|---|
| G6 |  | Checking of parallelism of the head motion to the guide bar location | *a*) and *b*)<br>0,20<br>for $A = 150$ | Dial gauge | Clause 5.422.2 |
| G7 |  | Checking of parallelism of guide bar location to the back plate | 0,25<br>for $B = 150$ | Dial gauge and manufacturer's special type of gauge | Clause 5.412.2 |

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references in test code ISO/R 230 |
|---|---|---|---|---|---|
| G8 |  | Checking of parallelism of the head motion to the back plate | 0,20<br>for $C = 150$ | Dial gauge | Clause 5.422.2 |
| G9 |  | Checking of parallelism of the plane of the back plate to its motion | 0,30<br>for $D = 300$ | Dial gauge | Clause 5.422.2 |