International Standard 7009

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Woodworking machines — Single spindle moulding machines — Nomenclature and acceptance conditions

Machines à bois — Toupies monobroches travaillant sur une face — Nomenclature et conditions de réception

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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 7009 was developed by Technical Committee ISO/TC 39, *Machine tools*, and was circulated to the member bodies in April 1981.

It has been approved by the member bodies of the following countries:

Belgium	India	Romania
Brazil	Ireland	South Africa, Rep. of
China	Italy	Spain
Egypt, Arab Rep. of	Japan	Sweden
France	Korea, Dem. P. Rep. of	United Kingdom
Germany, F.R.	Korea, Rep. of	USSR
Hungary	Mexico	

No member body expressed disapproval of the document.

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Woodworking machines — Single spindle moulding machines — Nomenclature and acceptance conditions

1 Scope and field of application

This International Standard specifies the terminology appropriate to each part of the machine and, with reference to ISO/R 230, the geometrical test for single spindle moulding 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 spindle moulding 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 the 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.

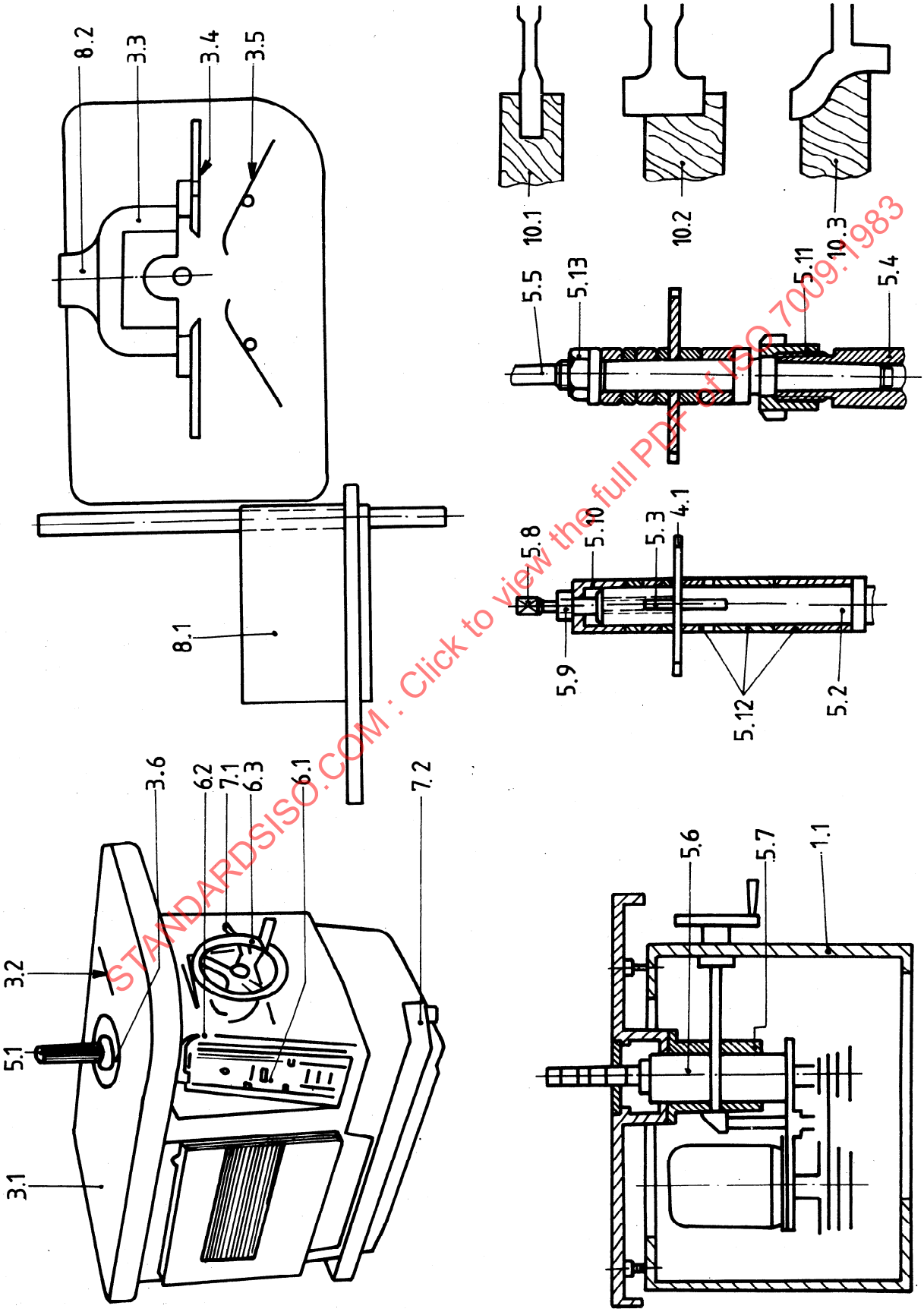
3.4 When inspecting a machine, it is not always possible or necessary to carry out all the tests given in this International Standard.

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.

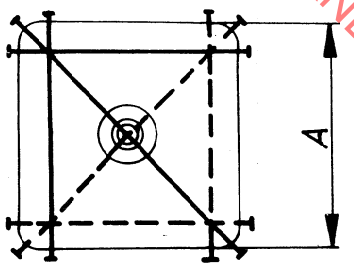
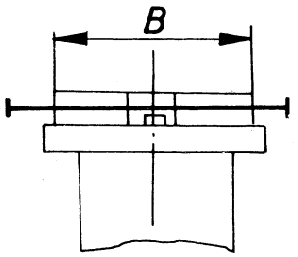
3.7 When establishing the tolerance for a measuring range different from that given in this International Standard (see 2.311 in ISO/R 230), it should be taken into consideration that the minimum value of the tolerance is 0,01 mm.

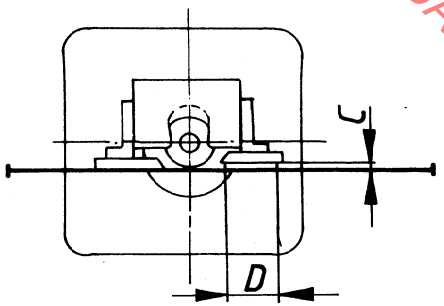
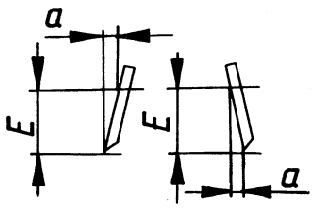
4 Nomenclature

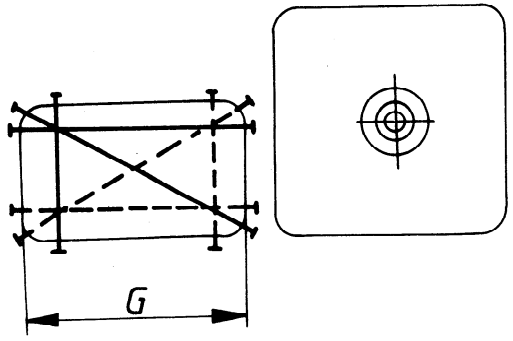
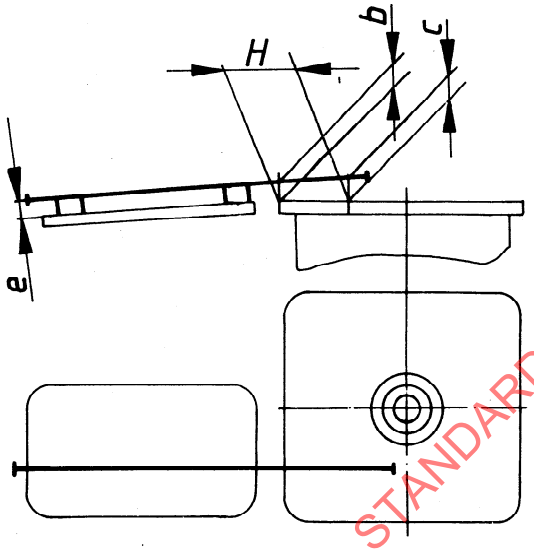


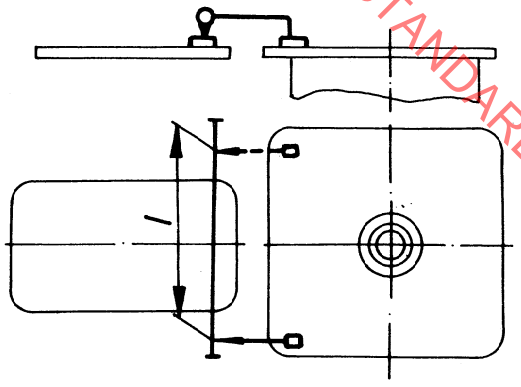
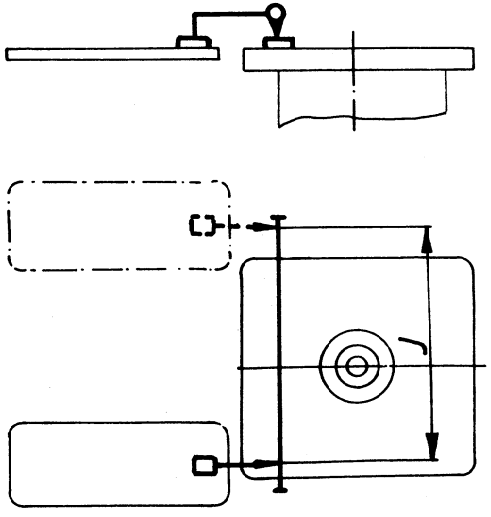
Ref.	English	French
	Single spindle moulding machine	**Toupie monobroche travaillant sur une face**
1	**Framework**	**Ossature**
1.1	Main frame	Bâti
2	**Feed of workpiece and/or tools**	**Déplacement des pièces et/ou outils**
3	**Workpiece support clamp and guide**	**Support, maintien et guidage des pièces**
3.1	Table	Table
3.2	Table slot	Rainure de table
3.3	Fence	Guide
3.4	Fence plates	Plaques du guide
3.5	Pressures	Presseurs
3.6	Table rings	Rondelles amovibles
4	**Toolheads and tools**	**Porte-outils et outils**
4.1	Cutter	Fraise
5	**Workheads and tool drives**	**Unité de travail et son entraînement**
5.1	Spindle	Broche monobloc
5.2	French spindle	Broche à lumière
5.3	French spindle slot	Lumière de la broche
5.4	Main spindle	Broche coupée
5.5	Loose top spindle	Allonge de la broche
5.6	Main spindle housing	Douille de maintien de la broche
5.7	Main spindle slide	Fourreau pour guidage de la douille
5.8	French spindle locking screw	Vis de blocage
5.9	Locknut for locking screw	Contre-écrou
5.10	French cap	Bague chapeau
5.11	Main spindle top nut	Écrou différentiel
5.12	Spacing collar	Bague entretoise
5.13	Top spindle nut	Écrou de blocage
6	**Control**	**Commandes**
6.1	Starting switches	Commutateur
6.2	Spindle lock	Commande de verrouillage de la broche
6.3	Spindle vertical adjustment	Commande de réglage vertical de la broche
7	**Safety devices**	**Dispositifs de sécurité**
7.1	Spindle brake	Commande de blocage de la douille
7.2	Brake pedal	Pédale de frein
8	**Miscellaneous**	**Divers**
8.1	Travelling table	Chariot à tenonner
8.2	Dust extraction outlet	Buse d'aspiration
9	**Free**	**Libre**
10	**Examples of work**	**Exemples de travail**
10.1	Grooving	Rainure
10.2	Rebating	Feuillure
10.3	Moulding	Moulure

5 Acceptance conditions and permissible deviations

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G1		Checking flatness of the table *a*) longitudinal straightness *b*) transverse straightness *c*) diagonal straightness	*a*) and *b*) 0,10 for $A \leqslant 630$ 0,15 for $630 > A \leqslant 1250$ 0,20 for $A > 1250$ *c*) 0,15 for $A \leqslant 630$ 0,25 for $630 > A \leqslant 1250$ 0,30 for $A > 1250$	Straightedge and feeler gauges	Clause 5.212 and 5.322
G2		Checking straightness of the fence plates	Metal plates 0,10 for $B \leqslant 630$ 0,15 for $B > 630$ Wooden plates 0,30 for $B \leqslant 630$ 0,40 for $B > 630$	Straightedge and feeler gauges	Clause 5.212

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G3		Checking parallelism of the fence plates	Metal plates 0,05 Wooden plates 0,20	Straightedge and feeler gauges	Clause 5.412.2 The measurement shall be made for $C = 2$ cutting depth. Tolerance on $D = 200$ in length.
G4		Checking squareness of the fence plates with respect to the table	Metal plates 0,10/100* Wooden plates 0,20/100*	Square and feeler gauges	Clause 5.212.1 * Distance E

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G5		Checking flatness of the auxiliary travelling table *a*) longitudinal straightness *b*) transverse straightness *c*) diagonal straightness	*a*) and *c*) 0,20 for $G \leqslant 630$ 0,30 for $G > 630$ *b*) 0,20	Straightedge and feeler gauges	Clause 5.212 and 5.322
G6		Checking parallelism of the auxiliary travelling table with respect to the fixed table in the horizontal plane	$H = 450$ $b - e = 0{,}10$ $c - e = 0{,}10$ $b \leqslant c$	Straightedge and feeler gauges	Clause 5.322 The measurement shall be made over the distance H from the edge of the table in three positions. The auxiliary travelling table shall be always higher than the table.

No.	Diagram	Object	Permissible deviation	Measuring instruments	Observations and references in test code ISO/R 230
G7		Checking parallelism of the auxiliary travelling table of the machine in the feed direction	0,10 for $I = 450$	Straightedge and dial gauge	Clause 5.412.2 The measurement shall be made at two points of the straightedge at a distance I.
G8		Checking parallelism in a vertical plane of the travelling table motion with respect to the table of the machine	0,10 for $J = 500$	Straightedge and dial gauge	Clause 5.422.22