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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Woodworking machines — Single blade stroke circular sawing machines for lengthwise cutting of solid woods and panels — Nomenclature and acceptance conditions

iTeh STANDARD PREVIEW

*Machines à bois — Machines à scier monolame à outil mobile pour coupe longitudinale de
bois massifs et de panneaux — Nomenclature et conditions de réception*

ISO 7958:1987

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Reference number
ISO 7958:1987 (E)

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 7958 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.

Woodworking machines — Single blade stroke circular sawing machines for lengthwise cutting of solid woods and panels — 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 230-1, the geometrical and practical tests for single blade stroke circular sawing machines for lengthwise cutting of solid woods and panels, and gives the corresponding permissible deviations which apply to machines of general purpose use and normal accuracy.

NOTE — In addition to terms used in the three official ISO languages (English, French and Russian), this International Standard gives the equivalent terms in the German, Spanish, Italian and Swedish 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), Spain (IRANOR), Italy (UNI) and Sweden (SIS). However, only the terms given in the official languages can be considered as ISO terms.

This International Standard deals only with the verification of the 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 the accuracy is tested.

This International Standard applies to those machines designated by the number 12.131.21 in ISO 7984.

The annex does not form an integral part of this International Standard.

2 References

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

ISO 7984, *Woodworking machines — Technical classification of woodworking machines and auxiliary machines for wood-working.*

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 230-1, especially for installation of the machine before testing, the warming up of the main spindle and other moving parts, and the description of the measuring methods. The measuring instruments shall not permit measurement 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 and gauging easier, tests may be applied in any order.

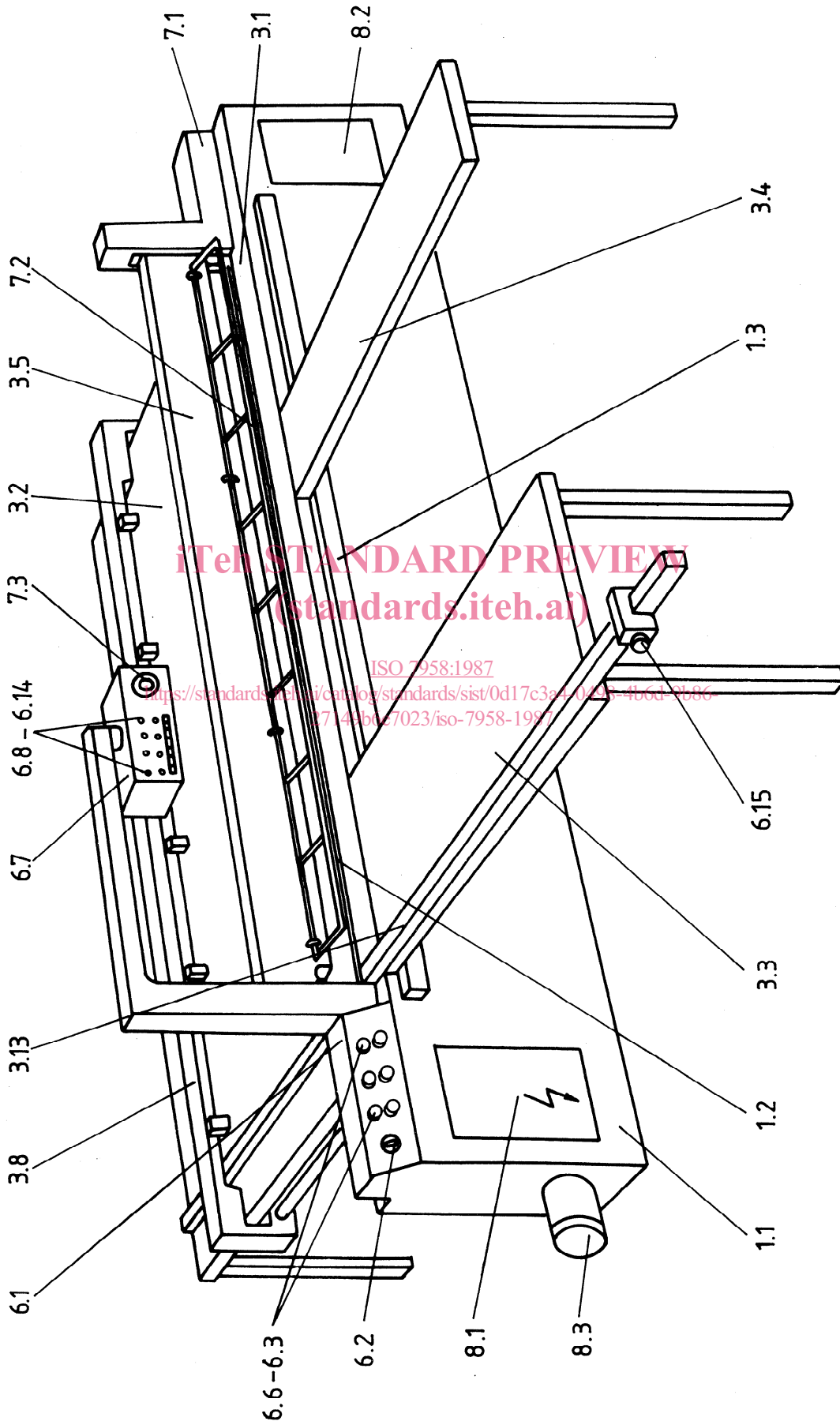
3.4 When inspecting a machine, it is not always possible or necessary to carry out all the tests given in this International Standard.

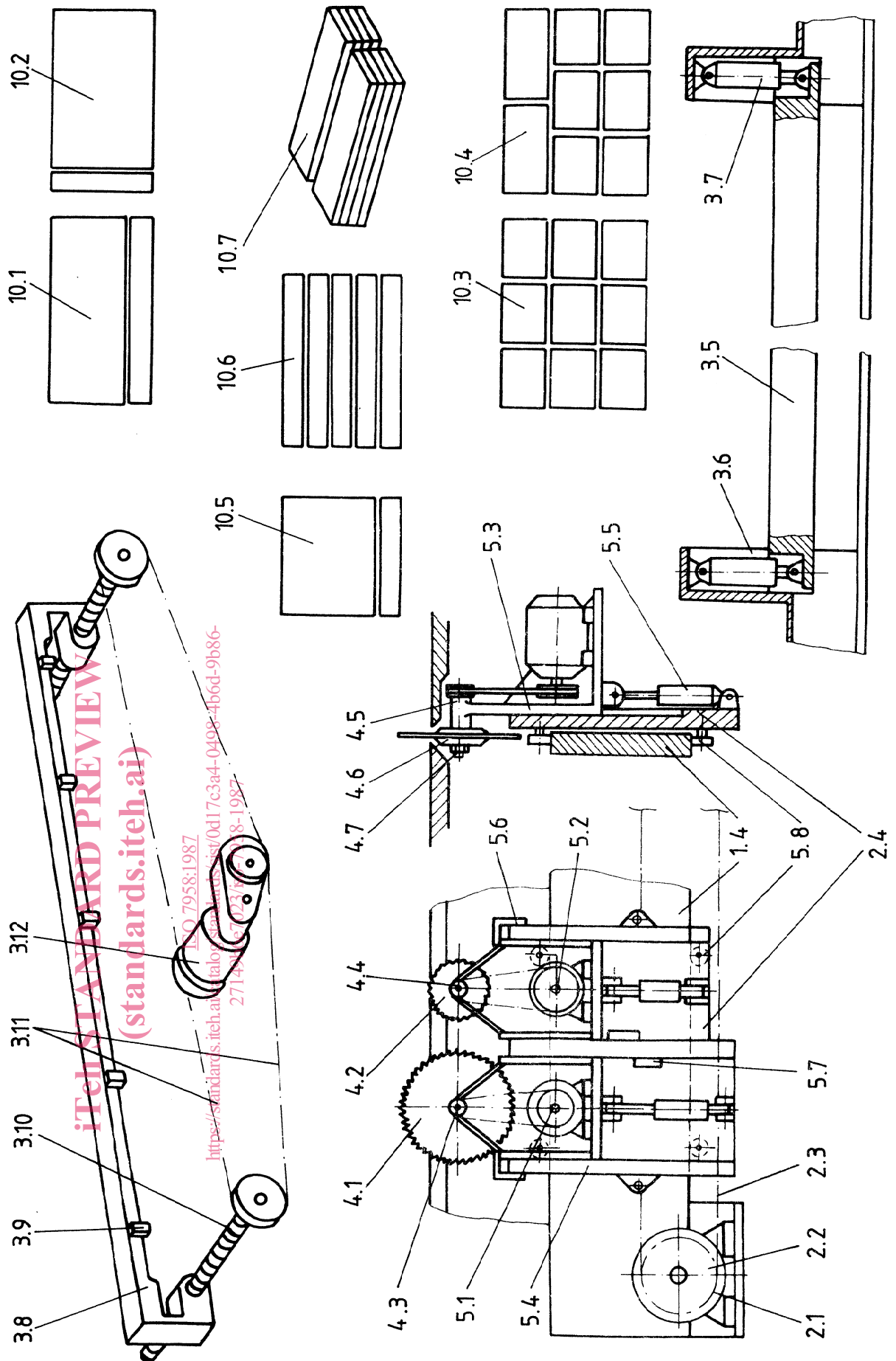
3.5 It is up to the user to choose, in agreement with the manufacturer, those tests relating to the properties which are of interest to him, but these tests shall be clearly stated when ordering a machine.

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 subclause 2.311 in ISO 230-1), it should be taken into consideration that the minimum value of the tolerance is 0,01 mm.

4 Nomenclature



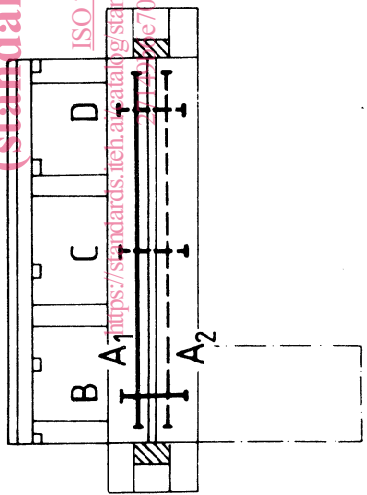
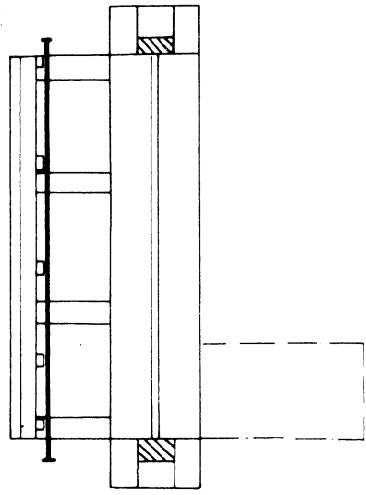


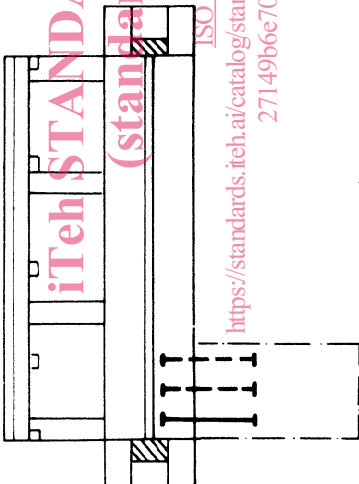
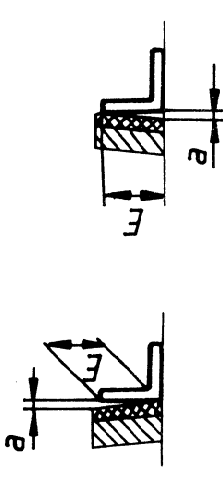
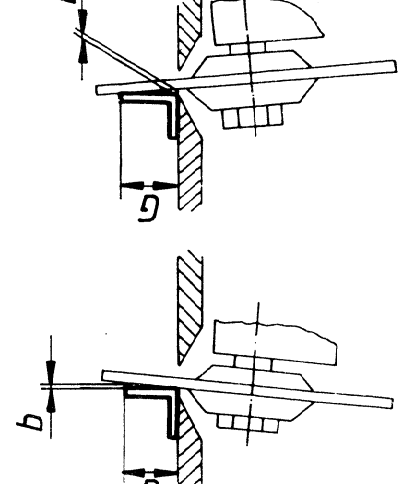
| Reference | English | French | Russian |
|-----------|---|--|---|
| | | Single blade stroke circular sawing machines for lengthwise cutting of solid woods and panels | Machines à scier monolame à outil mobile pour coupe longitudinale de bois massifs et de panneaux |
| 1 | Framework | Ossature | Каркас |
| 1.1 | Main frame | Bâti | Главная станина |
| 1.2 | Sawblade opening | Ouverture pour passage de lame | Проход для пильного диска |
| 1.3 | Attachment groove for accessories | Rainure pour fixation d'accessoires | Желобок для установки вспомогательных устройств |
| 1.4 | Sawing carriage slideway | Glissière du chariot de sciage | Направляющая каретки для пиления |
| 2 | Feed of workpiece and/or tools | Déplacement des pièces et/ou outils | Подача деталей и/или инструмента |
| 2.1 | Motor | Moteur | Двигатель |
| 2.2 | Drive pulley | Roue d'entraînement | Ведущее колесо |
| 2.3 | Driving belt | Courroie | Приводной ремень |
| 2.4 | Sawing carriage | Chariot de sciage | Каретка для пиления |
| 3 | Workpiece support, clamp and guide | Support, maintien et guidage des pièces | Опора, крепление и направление деталей |
| 3.1 | Machine table | Table machine | Стол станка |
| 3.2 | Table with special top surface | Table munie d'un revêtement | Стол со специальным покрытием |
| 3.3 | Crosscutting table | Table pour coupe transversale | Стол для поперечной распиловки |
| 3.4 | Table extension | Table auxiliaire d'appui | Вспомогательный стол |
| 3.5 | Pressure bar | Presseur | Прижимная штанга |
| 3.6 | Pressure bar slideway | Glissière du presseur | Направляющая прижимной штанги |
| 3.7 | Pressure bar screw jack | Vérin du presseur | Винт прижимной штанги |
| 3.8 | Ripping fence | Guide longitudinal | Продольная направляющая |
| 3.9 | Stop on ripping fence | Butée sur guide longitudinal | Упор на продольной направляющей |
| 3.10 | Screw for movement of ripping fence | Vis de déplacement du guide longitudinal | Винт для перемещения продольной направляющей |
| 3.11 | Feed chain for movement of ripping fence | Chaîne d'entraînement du déplacement du guide longitudinal | Приводная цепь для перемещения продольной направляющей |
| 3.12 | Ripping fence motor | Moteur d'entraînement du guide longitudinal | Приводной двигатель продольной направляющей |
| 3.13 | Crosscut fence | Guide transversal | Поперечная направляющая |
| 4 | Tool-holders and tools | Porte-outils et outils | Державки инструмента и инструмент |
| 4.1 | Sawblade | Lame de scie | Пильный диск |
| 4.2 | Scoring sawblade | Inciseur | Зачиститель |
| 4.3 | Sawblade spindle | Broche de la scie | Вал пильного диска |
| 4.4 | Scoring saw spindle | Broche de l'inciseur | Вал зачистителя |
| 4.5 | Spindle bracket | Support de broche | Опора вала |
| 4.6 | Sawblade flange | Flasque de blocage de la lame | Фланец для блокировки пильного диска |
| 4.7 | Locknut | Écrou de blocage | Блокировочная гайка |
| 5 | Workhead and tool drives | Unité de travail et son entraînement | Рабочая головка и привод инструмента |
| 5.1 | Saw motor | Moteur de scie | Двигатель пилы |
| 5.2 | Scoring saw motor | Moteur de l'inciseur | Двигатель зачистителя |
| 5.3 | Sawing carriage | Chariot de sciage | Каретка для пиления |
| 5.4 | Sawing carriage vertical slideway | Glissière de déplacement vertical de la scie | Направляющая вертикального перемещения пилы |
| 5.5 | Screw jack for vertical movement of sawing carriage | Vérin de déplacement vertical de la scie | Винт для вертикального перемещения пилы |
| 5.6 | Upper stop for vertical movement of sawing carriage | Butée supérieure de déplacement de la scie | Верхний упор перемещения пилы |
| 5.7 | Lower stop for vertical movement of sawing carriage | Butée inférieure de déplacement de la scie | Нижний упор перемещения пилы |
| 5.8 | Sawing carriage roller bearings | Rouleaux de déplacement du chariot de sciage | Ролики для перемещения каретки |
| 6 | Controls | Commandes | Управление |
| 6.1 | Control console | Armoire de commande | Шкаф управления |
| 6.2 | Main switch | Commutateur principal | Главный переключатель |
| 6.3 | Saw switch | Commutateur de scie | Переключатель для пилы |
| 6.4 | Scoring saw switch | Commutateur de l'inciseur | Переключатель для зачистителя |
| 6.5 | Pressure and feed start button | Commutateur de presseur et de l'avance | Переключатель для прижимной штанги и подачи |

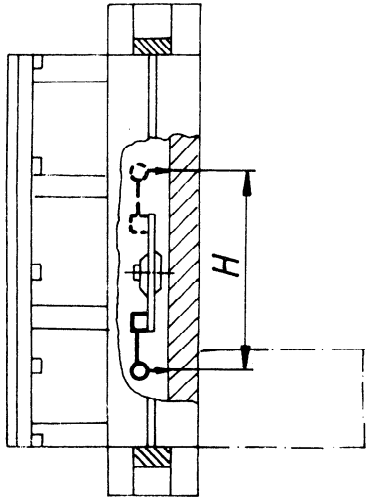
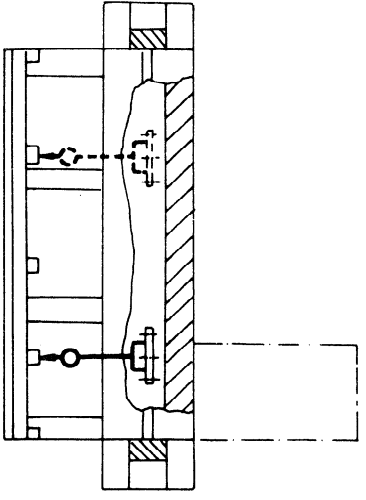
| Reference | English | French | Russian |
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| | | Single blade stroke circular sawing machines for lengthwise cutting of solid woods and panels | Machines à scier monolame à outil mobile pour coupe longitudinale de bois massifs et de panneaux |
| 6.6 | Reverse switch, single and repetitive cuts | Inverseur de coupe unitaire et répétitive | Реверсивный переключатель для одиночной и повторяющейся распиловки |
| 6.7 | Control panel | Tableau de visualisation | Пульт управления |
| 6.8 | Cutting control, ripping | Commande coupes longitudinales | Управление продольной распиловкой |
| 6.9 | Digital counter, ripping | Numérotation coupes longitudinales | Цифровая индикация продольной распиловки |
| 6.10 | Cutting control, crosscutting | Commande coupes transversales | Управление поперечной распиловкой |
| 6.11 | Digital counter, crosscutting | Numérotation coupes transversales | Цифровая индикация поперечной распиловки |
| 6.12 | Control for height of cut | Commande de hauteur de coupe | Управление высотой распиловки |
| 6.13 | Feed control | Commande de l'avance | Управление подачей |
| 6.14 | Control for number of cuts | Commande du nombre de coupes | Управление числом распиловок |
| 6.15 | Lock for stop on crosscut fence | Blocage de butée sur guide transversal | Блокировка упора поперечной направляющей |
| 7 | Safety devices (examples) | Dispositif de sécurité (exemples) | Предохранительные устройства (примеры) |
| 7.1 | Sawblade guard | Protecteur de la lame | Защита пильного диска |
| 7.2 | Safety guard | Grille de sécurité | Предохранительная решетка |
| 7.3 | Emergency stop | Commutateur d'urgence | Аварийный переключатель |
| 8 | Miscellaneous | Divers | Прочее |
| 8.1 | Electrical equipment enclosure | Armoire des organes électriques | Электрощкаф |
| 8.2 | Pneumatic equipment enclosure | Armoire des organes pneumatiques | Щкаф пневматических устройств |
| 8.3 | Exhaust outlet | Buse d'aspiration | Отсасывающий патрубок |
| 9 | (clause free) | (chapitre libre) | (свободная глава) |
| 10 | Examples of work | Exemples de travail | Примеры работ |
| 10.1 | Lengthwise cut | Coupe longitudinale | Продольная распиловка |
| 10.2 | Crosswise cut | Coupe transversale | Поперечная распиловка |
| 10.3 | Lengthwise and crosswise cuts | Coupes longitudinales et transversales | Продольная и поперечная распиловки |
| 10.4 | Front and various cuts | Coupes frontales et variables | Торцевые и разные распиловки |
| 10.5 | Single cut | Coupe unitaire | Одиночная распиловка |
| 10.6 | Repetitive cuts | Coupes répétitives | Повторяющиеся распиловки |
| 10.7 | Multiple cut | Coupe en piles | Распиловка пакетов |

5 Acceptance conditions and permissible deviations

5.1 Geometrical tests

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references to the ISO 230-1 acceptance code |
|-----|---|--|---|---------------------------------------|---|
| G1 |  | <p>Checking of flatness of the machine table:</p> <p>a) longitudinally</p> | <p>a) Positions A₁ and A₂</p> <p>0,3 for $L^* \leq 3\ 000$</p> <p>0,4 for $3\ 000 < L \leq 4\ 000$</p> <p>0,5 for $4\ 000 < L \leq 5\ 000$</p> <p>0,6 for $L > 5\ 000$</p> <p>b) Positions B, C and D</p> <p>0,2</p> | <p>Straightedge and feeler gauges</p> | <p>Subclause 5.212.1</p> <p>* L is the length of the table</p> |
| G2 |  | <p>Checking of straightness of the ripping fence or the stops on the ripping fence</p> | <p>0,2 for $L^* \leq 3\ 000$</p> <p>0,25 for $3\ 000 < L \leq 4\ 000$</p> <p>0,3 for $4\ 000 < L \leq 5\ 000$</p> <p>0,4 for $L > 5\ 000$</p> | <p>Straightedge and feeler gauges</p> | <p>Subclause 5.212.1</p> <p>* L is the length of the table</p> |

| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references to the ISO 230-1 acceptance code |
|-----|---|--|-----------------------|---|--|
| G3 |  <p style="color: red; font-weight: bold; font-size: 2em; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); opacity: 0.5;">iTeh STANDARD PREVIEW (standardsite.com)</p> <p style="color: red; font-size: 0.8em;">ISO 7958-1:1987 https://standards.iteh.ai/catalog/standards/sist/0d117c3a4-0498-4b6d-9b86-27149b6c7023/iso-7958-1987</p> | <p>Checking of alignment of the crosscutting table to the machine table, in a horizontal plane</p> | <p>0,1</p> | <p>Straightedge and feeler gauges</p> | <p>Subclause 5.322</p> |
| G4 |  | <p>Checking of squareness of the ripping fence (or stops) to the machine table</p> | <p>0,1/100*</p> | <p>Square and feeler gauges</p> | <p>Subclause 5.512.2</p> <p>* Distance <i>E</i></p> |
| G5 |  | <p>Checking of squareness of the sawblade plane to the machine table (Control disc mounted in place of sawblade)</p> | <p>0,1/100*</p> | <p>Control disc, square and feeler gauges</p> | <p>Subclause 5.512.2</p> <p>* Distance <i>G</i></p> |

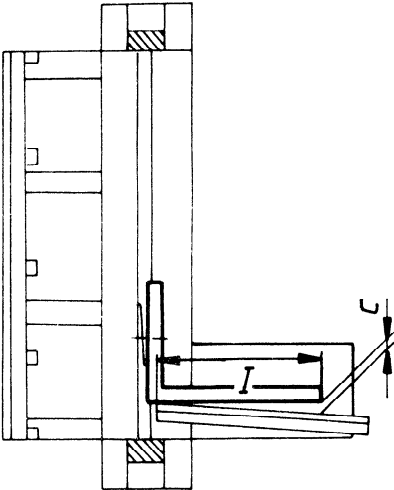
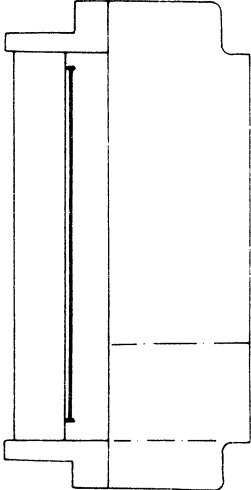
| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references to the ISO 230-1 acceptance code |
|-----|--|--|---|------------------------------------|--|
| G6 |  | <p>Checking of parallelism of the sawblade plane to its slideway (Control disc mounted in place of sawblade)</p> | <p>0,1 for $H = 400$</p> | <p>Control disc and dial gauge</p> | <p>Subclause 5.412.2</p> |
| G7 |  | <p>Checking of parallelism of the carriage movement to the ripping fence</p> | <p>0,3 for $L \leq 3\ 000$</p> <p>0,4 for $3\ 000 < L < 4\ 000$</p> <p>0,5 for $4\ 000 < L \leq 5\ 000$</p> <p>0,6 for $L > 5\ 000$</p> | <p>Dial gauge</p> | <p>Subclause 5.422.2</p> |

* L is the length of carriage movement.

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| No. | Diagram | Object | Permissible deviation | Measuring instruments | Observations and references to the ISO 230-1 acceptance code |
|-----|---|---|---|---|--|
| G8 |  | <p>Checking of squareness of the crosscut fence to the sawblade plane (Control disc mounted in place of sawblade)</p> | <p>0,1/1 000*</p> | <p>Control disc, square and feeler gauges</p> | <p>Subclause 5.512.2</p> <p>* Distance <i>L</i></p> |
| G9 |  | <p>Checking of straightness of the lower side of the pressure bar</p> | <p>0,3 for $L^* \leq 3\ 000$</p> <p>0,4 for $3\ 000 < L \leq 4\ 000$</p> <p>0,5 for $4\ 000 < L \leq 5\ 000$</p> <p>0,6 for $L > 5\ 000$</p> | <p>Straightedge and feeler gauges</p> | <p>Subclause 5.212.1</p> <p>* <i>L</i> is the length of the pressure bar lower side.</p> |

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