



SLOVENSKI STANDARD
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Safety of woodworking machines - Circular sawing machines - Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading

Sicherheit von Holzbearbeitungsmaschinen - Kreissägemaschinen - Teil 7: Einblatt-Stammkreissägemaschinen mit mechanischem Tischvorschub und Handbeschickung und/oder Handentnahme

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Sécurité des machines pour le travail du bois - Machines à scier circulaires - Partie 7: Scies circulaires monolames à grumes à avance intégrée à table et à chargement manuel et/ou déchargement manuel

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ICS:

25.080.60	Strojne žage	Sawing machines
79.120.10	Lesnoobdelovalni stroji	Woodworking machines

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EUROPEAN STANDARD
NORME EUROPÉENNE
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English Version

**Safety of woodworking machines - Circular sawing machines -
Part 7: Single blade log sawing machines with integrated feed
table and manual loading and/or unloading**

Sécurité des machines pour le travail du bois - Machines à
scier circulaires - Partie 7: Scies circulaires monolames à
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Kreissägemaschinen - Teil 7: Einblatt-
Stammkreissägemaschinen mit mechanischem
Tischvorschub und Handbeschickung und/oder
Handentnahme

This European Standard was approved by CEN on 5 November 2001 and includes Amendment 1 approved by CEN on 30 July 2009.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 1870-7:2002+A1:2009) has been prepared by Technical Committee CEN /TC 142, "Woodworking machines - Safety", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1, approved by CEN on 2009-07-30.

This document supersedes EN 1870-7:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

A1 This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the Machinery Directive.

For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. A1

Organisations contributing to the preparation of this European Standard include European Committee of Woodworking Machinery Manufacturers Association "EUMABOIS".

Annexes A, B, C and D are normative, the A1 Annexes ZA and ZB A1 are informative.

A1 EN 1870 *Safety of woodworking machines — Circular sawing machines* consists of the following parts:

Part 1: Circular saw benches (with and without sliding table), dimension saws and building site saws

Part 3: Down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches

Part 4: Multi-blade rip sawing machines with manual loading and/or unloading

Part 5: Circular saw -benches/up-cutting cross-cut sawing machines

Part 6: Circular sawing machines for firewood and dual purpose circular sawing machines for firewood/circular saw benches, with manual loading and/or unloading

Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading

Part 8: Single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading

Part 9: Double blade circular sawing machines for cross-cutting with integrated feed and with manual loading and/or unloading

Part 10: Single blade automatic and semi-automatic up-cutting cross-cut sawing machines

Part 11: Semi-automatic and automatic horizontal cross-cut sawing machines with one saw unit (radial arm saws)

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Part 12: Pendulum cross-cut sawing machines

Part 13: Horizontal beam panel sawing machines

Part 14: Vertical panel sawing machines

Part 15: Multi-blade cross-cut sawing machines with integrated feed of the workpiece and manual loading and/or unloading

Part 16: Double mitre sawing machines for V-cutting

Part 17: Manual horizontal cutting cross-cut sawing machines with one saw unit (manual radial arm saws) ^(A1)

The European Standards produced by CEN/TC142 are particular to woodworking machines and complement the relevant A and B Standards on the subject of general safety (see introduction of ^(A1) EN ISO 12100-1:2003 ^(A1) for a description of A, B and C standards).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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0 Introduction

This European Standard has been prepared to be a harmonised standard to provide one means of conforming to the essential safety requirements of the Machinery Directive, and associated EFTA regulations. This European Standard is a type "C" standard as defined in [A1](#) EN ISO 12100-1:2003 [A1](#).

The extent to which hazards are covered is indicated in the scope of this European Standard.

The requirements of this European Standard concern designers, manufacturers, suppliers and importers of single blade circular log saw machines with integrated feed and manual loading and/or unloading.

This European Standard also includes information to be provided by the manufacturer to the user.

Common requirements for tooling are given in EN 847-1.

1 Scope

[A1](#) This document deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to single blade circular log sawing machines with integrated feed table with manual loading and/or unloading, (hereinafter referred to as machines), designed to cut solid wood. [A1](#)

This European Standard does for Computer Numerically Controlled (CNC) machines not cover the hazards related to Electro-Magnetic Compatibility (EMC).

[A1](#) *deleted text* [A1](#)

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This European Standard is primarily directed at machines that are manufactured after the date of issue of this European Standard.

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2 Normative references

[A1](#) The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. [A1](#)

[A1](#) *deleted text* [A1](#)

[A1](#) EN 614-1:2006, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles* [A1](#)

EN 847-1, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular sawblades*

[A1](#) EN 894-1:1997, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 1: General principles for human interactions with displays and control actuators*

EN 894-2:1997, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 894-3:2000, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators* [A1](#)

[A1](#) *deleted text* [A1](#)

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

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EN 983, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*

EN 1005-1:2001, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

EN 1005-2:2003, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*

EN 1005-3:2002, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*

EN 1005-4:2005, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*

EN 1037:1995, *Safety of machinery — Prevention of unexpected start-up* ^{A1}

^{A1} deleted text ^{A1}

EN 1088:1995, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 50370-1:2005, *Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 1: Emission*

EN 50370-2:2003, *Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 2: Immunity* ^{A1}

EN 60204-1:2006 ^{A1}, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements* ^{A1} (IEC 60204-1:2005, modified) ^{A1}

EN 60439-1:1999, *Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies* (IEC 60439-1:1999) ^{A1}

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code)* (IEC 60529:1989)

EN 60825-1:2007, *Safety of laser products — Part 1: Equipment classification and requirements* (IEC 60825-1:2007) ^{A1}

EN 60947-4-1, ^{A1} *Low-voltage switchgear and controlgear — Part 4-1: Contactors and motor-starters — Electromechanical contactors and motor-starters* (IEC 60947-4-1:2000) ^{A1}

EN 60947-5-1:2004, *Low voltage switchgear and control gear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices* (IEC 60947-5-1:2003) ^{A1}

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals* (IEC 61310-1:2007) ^{A1}

EN ISO 3743-1, ^{A1} *Acoustics — Determination of sound power levels of noise sources — Engineering methods for small, movable sources in reverberant fields — Part 1: Comparison method for hard-walled test rooms* (ISO 3743-1:1994) ^{A1}

EN ISO 3743-2, ^{A1} *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 2: Methods for special reverberation test rooms* (ISO 3743-2:1994) ^{A1}

EN ISO 3744, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane* (ISO 3744:1994)

▣^{A1} EN ISO 3745, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and hemi-anechoic rooms (ISO 3745:2003)* ▣^{A1}

EN ISO 3746:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)*

EN ISO 9614-1, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1:1993)*

EN ISO 11202:1995, ▣^{A1} *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Survey method in situ (ISO 11202:1995)* ▣^{A1}

EN ISO 11204:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a workstation and at other specified positions — Method requiring environmental corrections (ISO 11204:1995)*

EN ISO 11688-1, *Acoustics — Recommended practice for the design of low -noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

▣^{A1} EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)* ▣^{A1}

▣^{A1} EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2008)* ▣^{A1}

▣^{A1} *deleted text* ▣^{A1}

ISO 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

▣^{A1} HD 21.1 S4, *Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation — Part 1: General requirements* ▣^{A1}

▣^{A1} HD 22.1 S4:2002, *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation — Part 1: General requirements* ▣^{A1}

▣^{A1} HD 22.4 S4:2004, *Cables of rated voltages up to and including 450/750 V and having crosslinked insulation — Part 4: Cords and flexible cables* ▣^{A1}

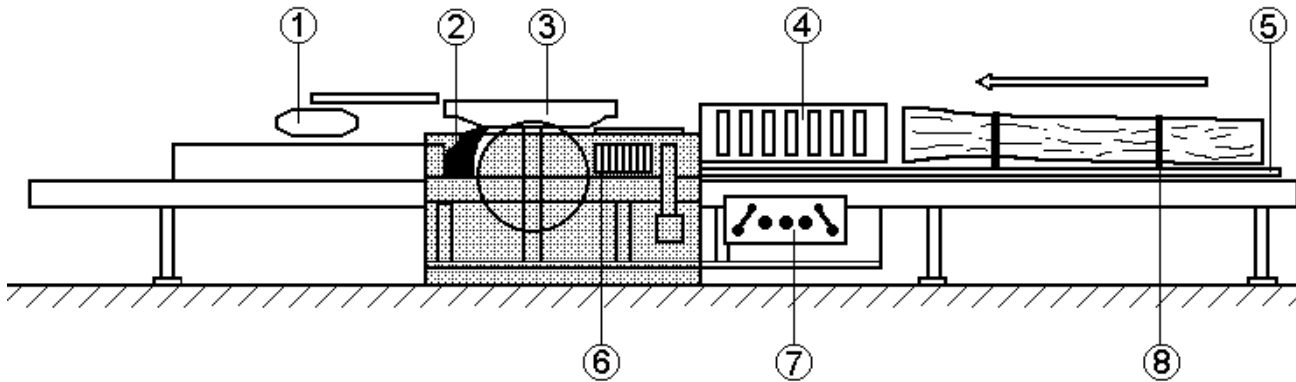
3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in ▣^{A1} EN ISO 12100-1:2003 ▣^{A1} and the following apply:

3.1 Terms

The main parts of the machine and their terminology are illustrated in Figure 1.

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Key	
1	Dropping device
2	Riving knife
3	Holding-down device
4	Fence
5	Feed table
6	Feed rollers
7	Controls
8	Log hook

Figure 1 — Terminology

3.2 Definitions

3.2.1

single blade circular log sawing machine with integrated feed table and manual loading and/or unloading

a machine designed for the ripping of solid wood e.g. logs, having the following characteristics:

- a) integrated feed table; [SIST EN 1870-7:2002+A1:2009](https://standards.iteh.ai/catalog/standards/sist/c1c869d0-8005-4512-ac2f-b01961e383ba/sist-en-1870-7-2002a1-2009)
- b) sawblade diameter ≥ 600 mm; [b01961e383ba/sist-en-1870-7-2002a1-2009](https://standards.iteh.ai/catalog/standards/sist/c1c869d0-8005-4512-ac2f-b01961e383ba/sist-en-1870-7-2002a1-2009)
- c) the sawblade is mounted on a horizontal spindle below the table;
- d) the sawblade spindle is in a fixed position.

3.2.2

stationary machine

a machine designed to be located on or fixed to the floor or other parts of the structure of the premises and to be stationary during use

3.2.3

A1 displaceable machine **A1**

a machine which is located on the floor, stationary during use and equipped with a device, normally wheels, which allow it to be moved between locations

3.2.4

machine actuator

a power mechanism used to effect motion of the machine

3.2.5

integrated feed

a feed mechanism for the workpiece (or tool) which is integrated with the machine and where the workpiece (or machine element with incorporated tool) is (are) held and controlled mechanically during the machining operation

NOTE The words in brackets are not applicable to the machines covered by this European Standard

3.2.6**anti kickback device**

a device which either reduces the possibility of kickback or arrests the motion during kickback of the workpiece or parts of it or parts of the machine

3.2.7**ejection**

the unexpected movement of the workpiece or parts of it or part of the machine from the machine during processing

3.2.8**kickback**

a particular form of ejection and is describing the unexpected movement of the workpiece or parts of it or parts of the machine opposite to the direction of feed during processing

3.2.9**run-up time**

the time elapsed from the actuation of the start control device until the spindle reaches the intended speed

3.2.10**run-down time**

the time elapsed from the actuation of the stop control device up to spindle standstill

3.2.11**dropping device**

device designed to remove the sawn workpiece from the integrated feed table (see Figure 2)

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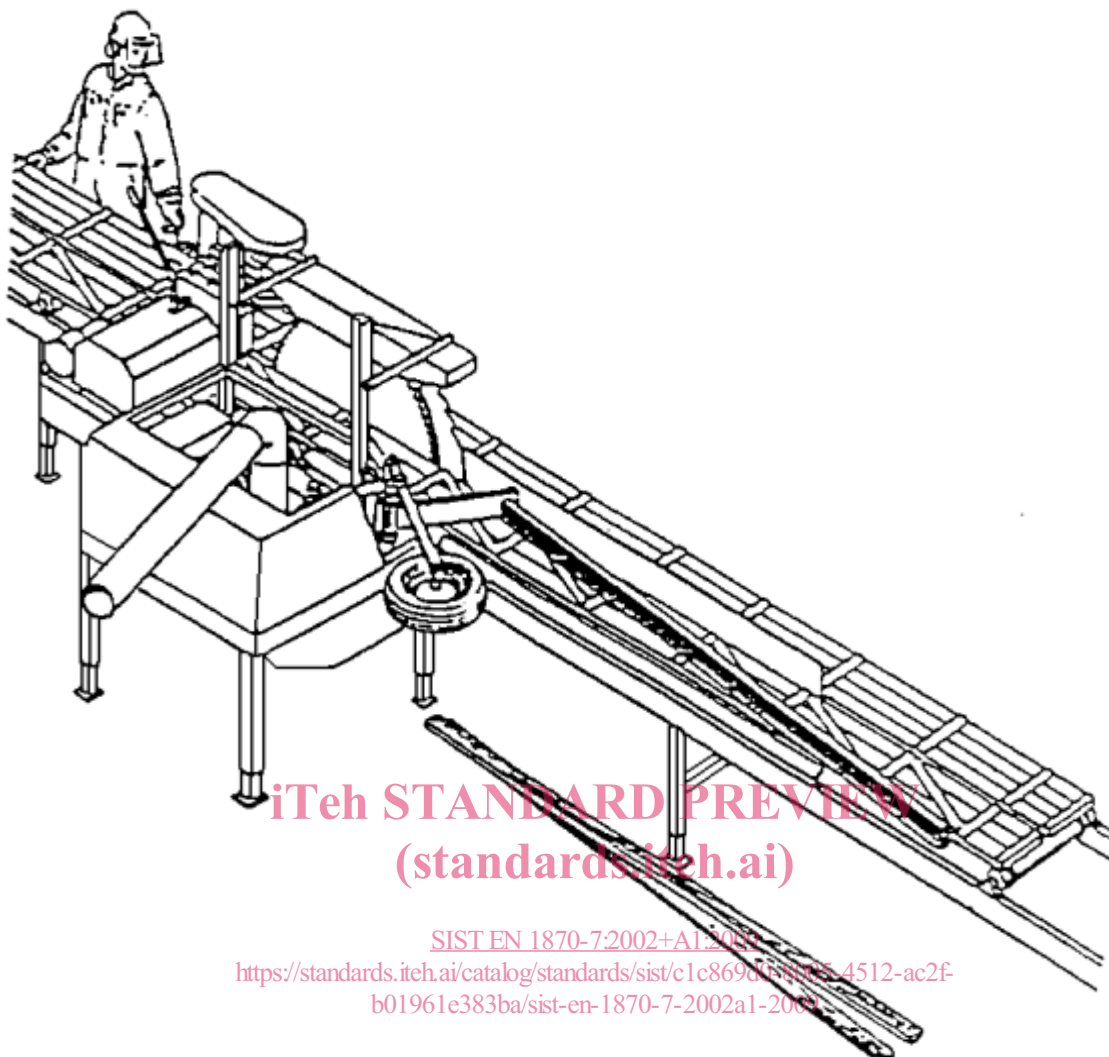


Figure 2 — Example of dropping device (guards not shown)

3.2.12

log lifter

equipment, integral with the machine and which lifts the log from the ground onto the integrated feed table (see Figure 3)

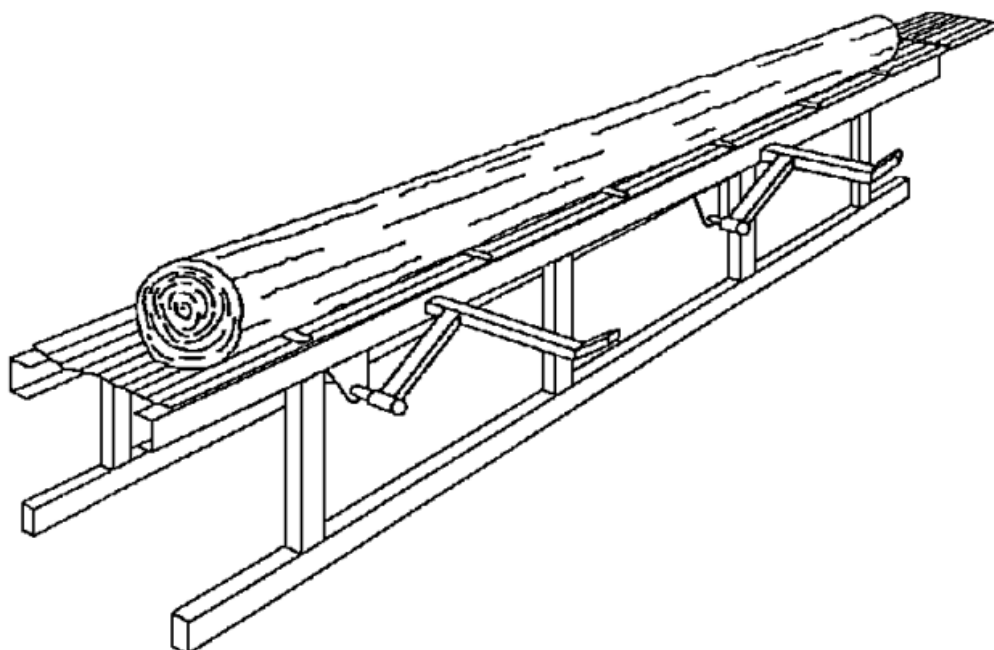
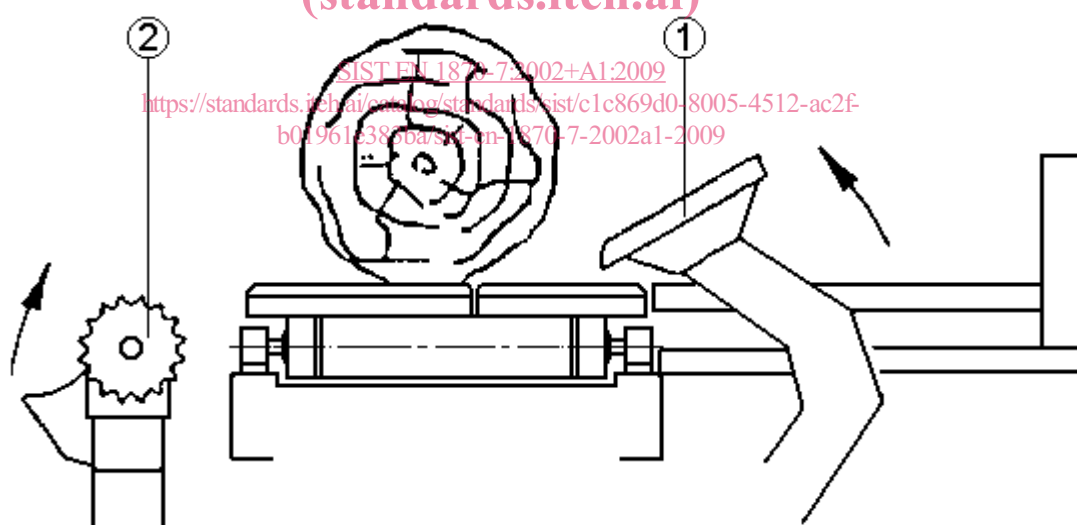


Figure 3 — Example of log lifter

3.2.13

log positioner

device for horizontal (adjusting) and rotational positioning of the log prior to sawing (see Figure 4).



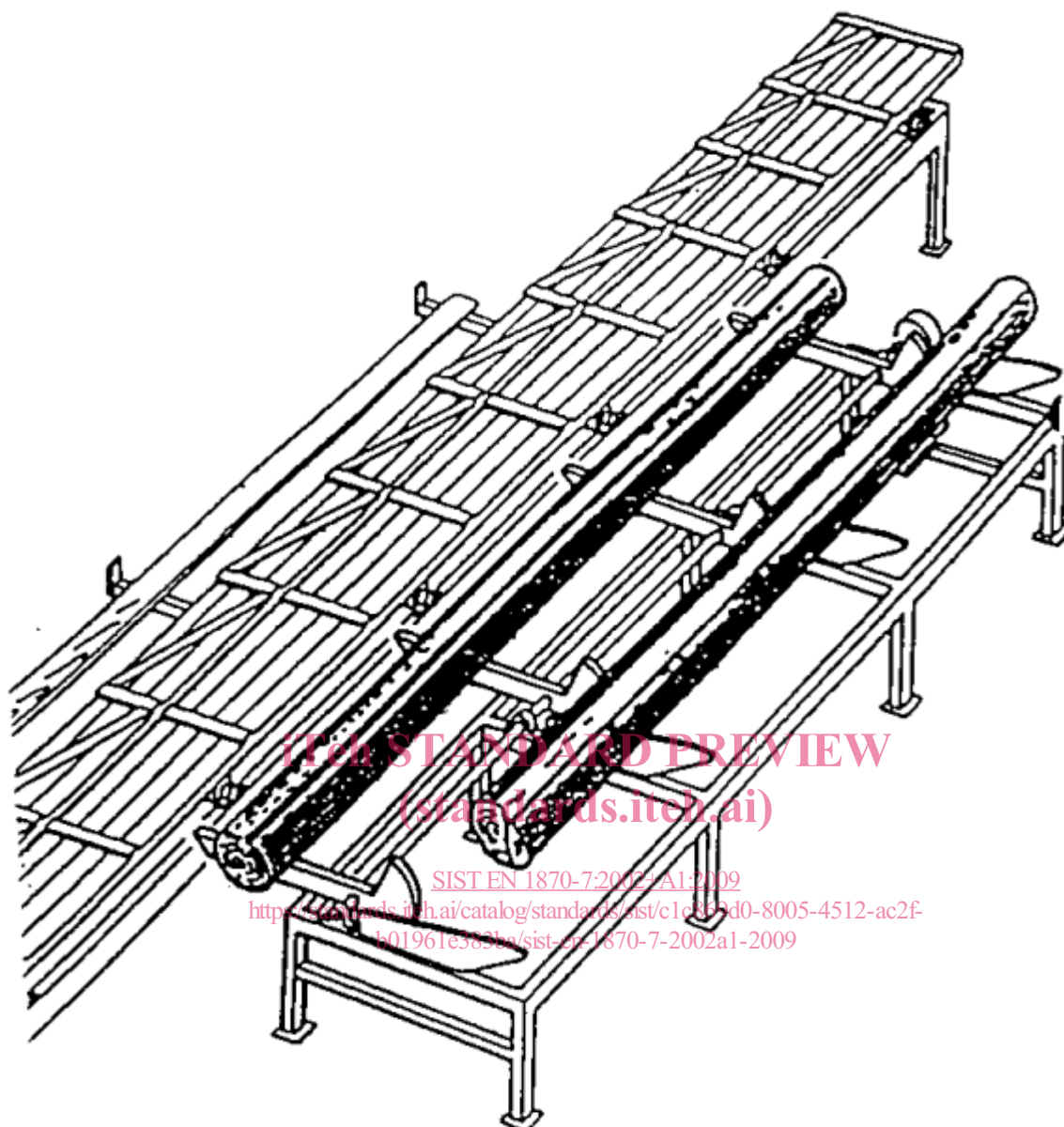
Key	1	Log adjuster
	2	Log rotator

Figure 4 — Example of log adjuster and rotator

3.2.14

log delivery device

device for loading the log onto the integrated feed table (see Figure 5).



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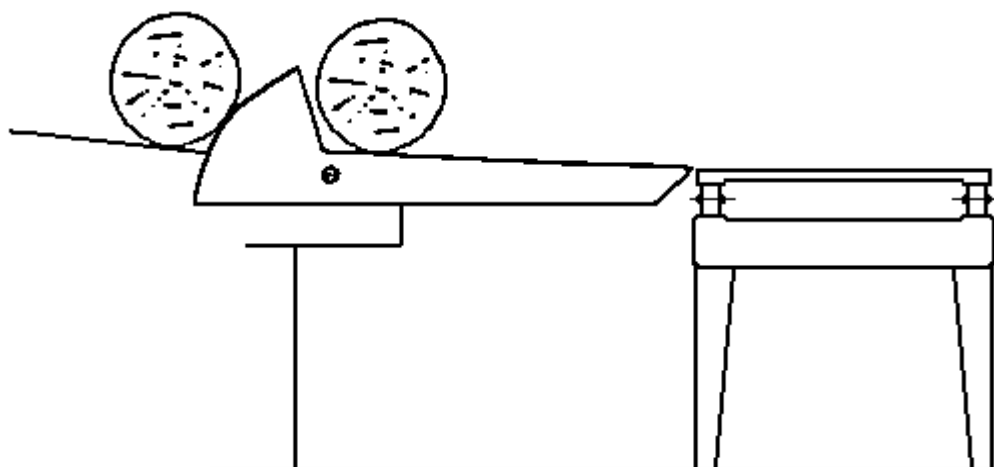


Figure 5 — Example of log delivery device

**3.2.15
log clamp**

device for holding the log at the butt end in position on the integrated feed table during sawing (see Figure 6).

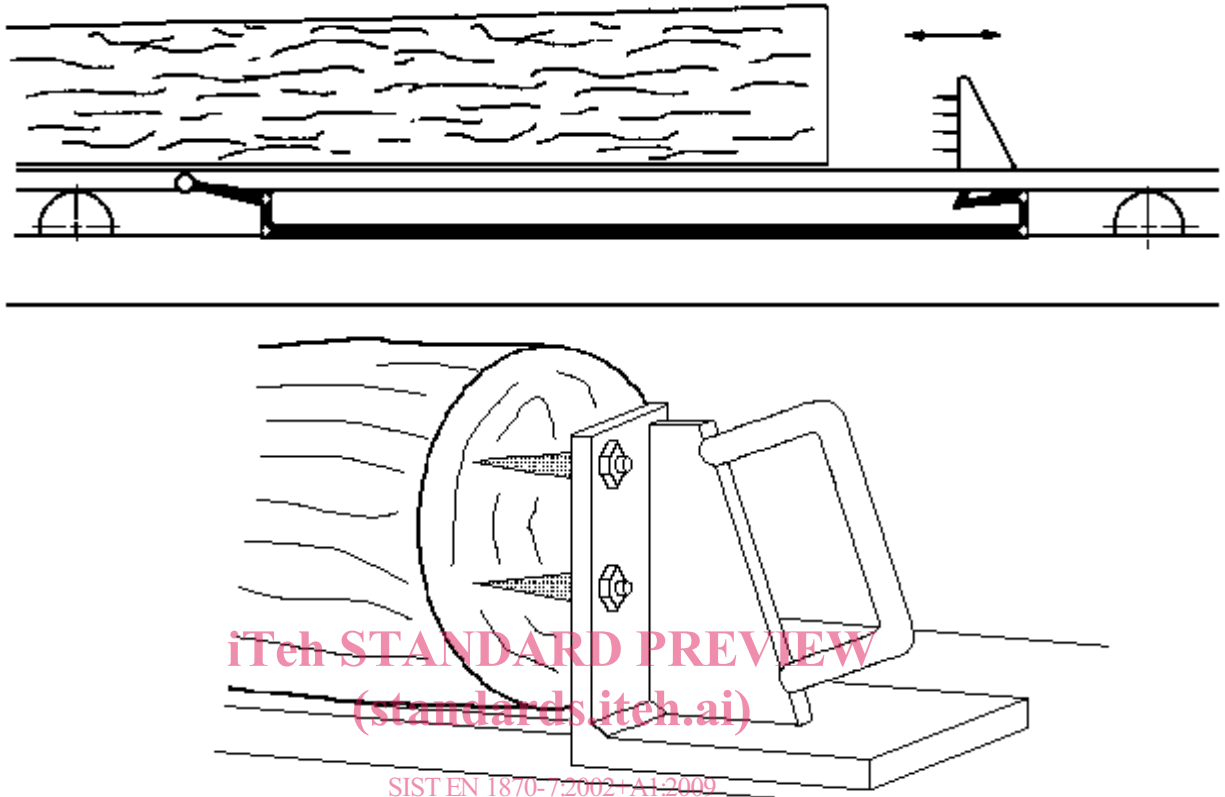


Figure 6 — Example of log clamp

**3.2.16
log hook**

device to hold the long axis of the log stable during feeding (see Figure 7).