
Varnost lesnoobdelovalnih strojev - Krožne žage - 7. del: Enolistne žage za razrez hlodov z vgrajeno podajalno mizo in ročnim podajanjem in/ali odvzemom

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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25.080.60	Strojne žage	Sawing machines
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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 1870-7

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ICS 79.120.10

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
grumes à avance intégrée à table et à chargement manuel
et/ou déchargement manuel

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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.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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Foreword

This European Standard has been prepared by Technical Committee CEN /TC 142, "Woodworking machines - Safety", the secretariat of which is held by BSI.

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 July 2002, and conflicting national standards shall be withdrawn at the latest by July 2002.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

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 annexes E and ZA are informative.

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 EN 292-1:1991 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

EN 1870-7:2002 (E)**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 EN 292-1:1991.

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

This European Standard sets out the requirements and describes the method for the removal of hazards or, the measures that shall be taken to limit the risks on 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.

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

This European Standard covers the hazards relevant to the machine as stated in clause 4.

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

[SIST EN 1870-7:2002](https://standards.iteh.ai/catalog/standards/sist/42c47ae1-a30b-4909-9c45-e0e19964e8bc/sist-en-1870-7-2002)

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This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 292-1:1991	<i>Safety of machinery - Basic concepts general principles for design - Part 1: Basic terminology, methodology</i>
EN 292-2:1991	<i>Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications</i>
EN 292-2:1991/A1:1995	<i>Safety of machinery - Basic concepts general principles for design - Part 2: Technical principles and specifications</i>
EN 847-1	<i>Tools for woodworking - Safety requirements - Part 1: Milling tools circular sawblades</i>
EN 954-1:1996	<i>Safety of machinery - Safety related parts of control systems - Part 1: General principles for design</i>
EN 982	<i>Safety of machinery - Safety requirements for fluid power systems and their components - Hydraulics</i>
EN 983	<i>Safety of machinery - Safety requirements for fluid power systems and their components - Pneumatics</i>
EN 1070:1998	<i>Safety of machinery - Terminology</i>

EN 1088:1995	<i>Safety of machinery - Interlocking devices associated with guards - Principles for design and selection</i>
EN 60204-1:1992	<i>Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:1992 modified)</i>
EN 60529:1991	<i>Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)</i>
EN 60825-1	<i>Safety of laser products – Part 1: Equipment classification, requirements and users' guide (IEC 60825-1:1993)</i>
EN 60947-4-1	<i>Low voltage switchgear and controlgear - Part 4-1: Electromechanical contactors and motor-starters - Section 1: Electromechanical contactors and motor starters (IEC 60947-4-1:1997)</i>
EN 60947-5-1:1997	<i>Low -voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Section 1 : Electromechanical control circuit devices (IEC 60947-5-1:1997)</i>
EN ISO 3743-1	<i>Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for small moveable sources in reverberant fields - Part 1: Comparison method for hard walled test rooms (ISO 3743-1:1994)</i>
EN ISO 3743-2	<i>Acoustics - Determination of sound power levels of noise sources - Engineering methods for small moveable sources in reverberant fields - Part 2: Method for special reverberation test rooms (ISO 3743-2:1994)</i>
EN ISO 3744	<i>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)</i>
EN ISO 3746:1995	<i>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)</i>
EN ISO 9614-1	<i>Acoustics - Determination of sound power levels of noise sources using sound intensity Part 1: Measurement at discrete points (ISO 9614-1:1993)</i>
EN ISO 11202:1995	<i>Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at the work-station and at other specified positions (ISO 11202:1995)</i>
EN ISO 11204:1995	<i>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)</i>
EN ISO 11688-1	<i>Acoustics – Recommended practice for the design of low -noise machinery and equipment - Part 1: Planning (ISO/TR 11688-1:1995)</i>
ISO 3745	<i>Acoustics - Determination of sound power levels of noise sources - Precision methods for anechoic and semi-anechoic rooms</i>
ISO 7960:1995	<i>Airborne noise emitted by machine tools- Operating conditions for woodworking machines</i>
HD 21.1 S3	<i>Polyvinyl chloride insulated cables of rated voltages up to and including 450/705V - Part 1: General requirements</i>
HD 22.1 S3	<i>Rubber insulated cables of rated voltages up to and including 450/750V - Part 1: General requirements</i>
HD 22.4 S3:1995 +A1:1999	<i>Rubber insulated cables of rated voltages up to and including 450/750 V - Part 4: Cords and flexible cables (IEC 60245-4:1994 modified).</i>

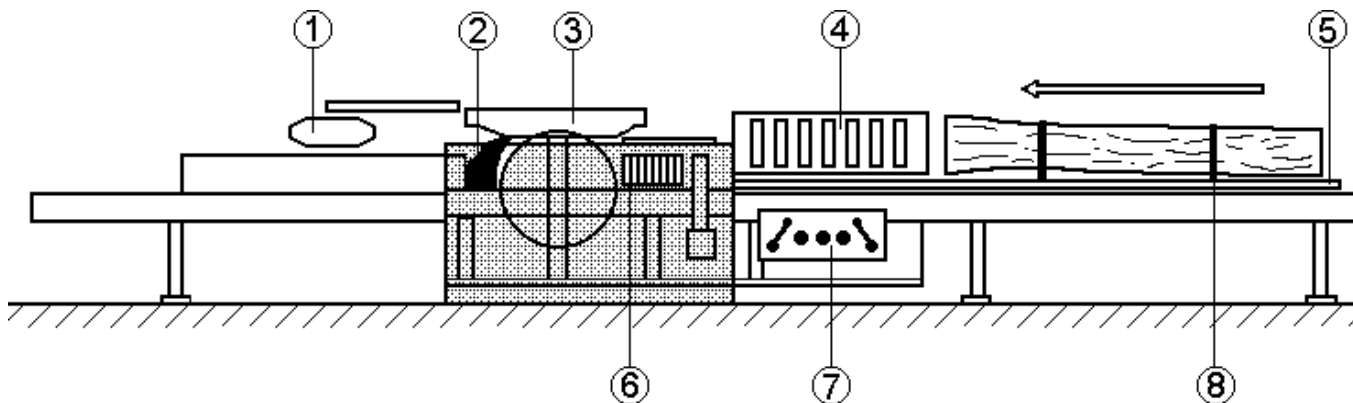
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3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1070:1998 and the following apply:

3.1 Terms

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



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

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Figure 1 — Terminology

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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;
- b) sawblade diameter ≥ 600 mm;
- 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

transportable machine

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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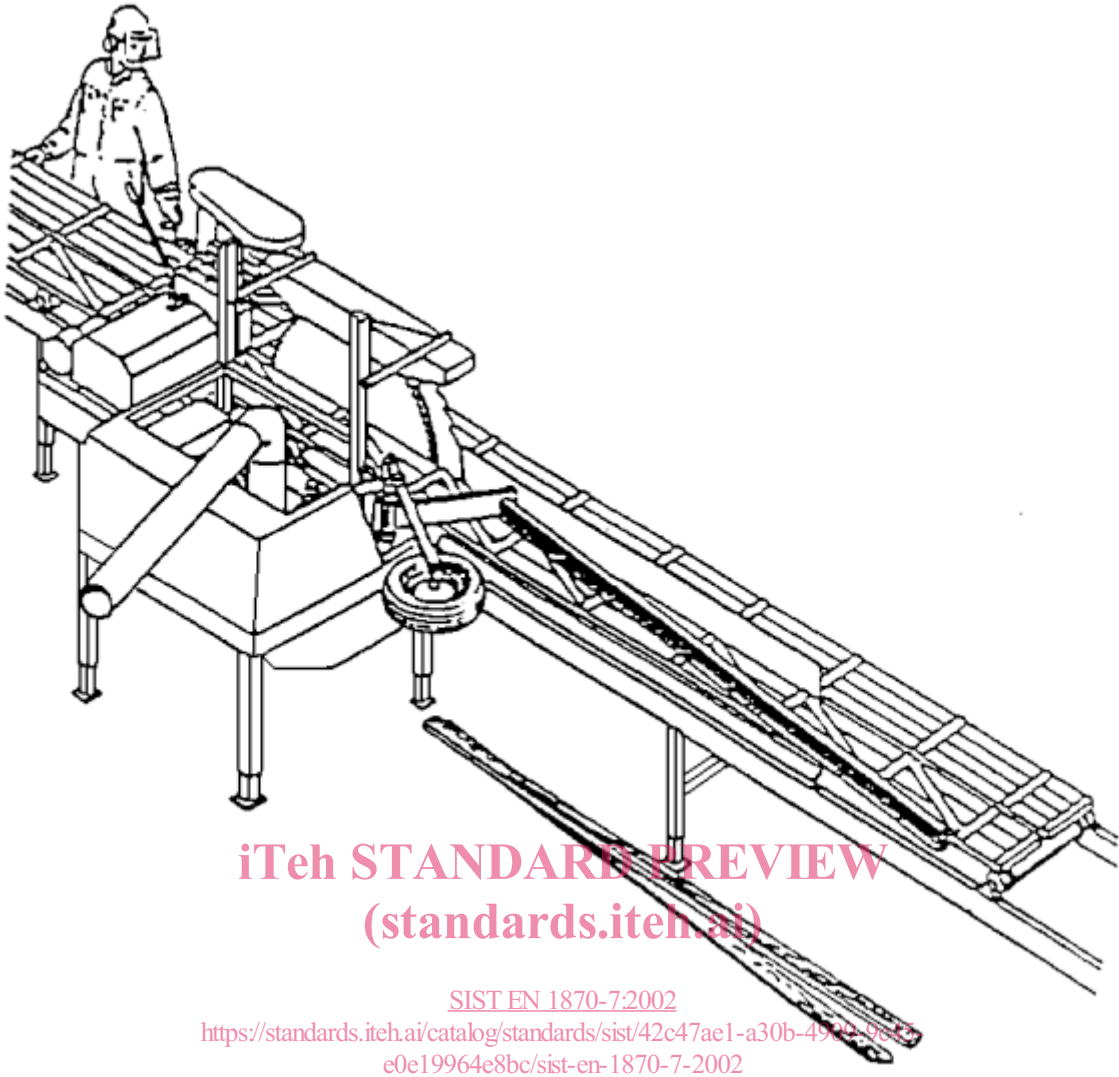
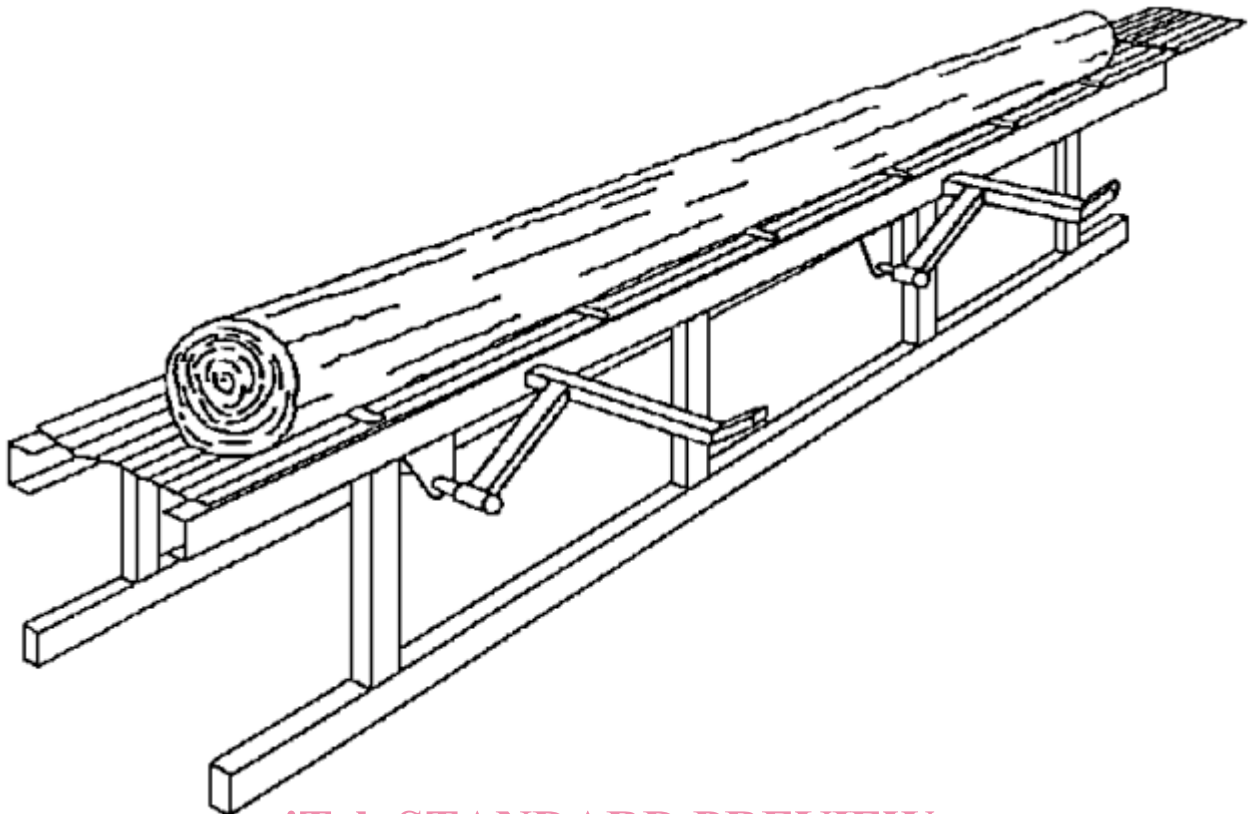


Figure 2 — Example of dropping device (guards not shown)

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)



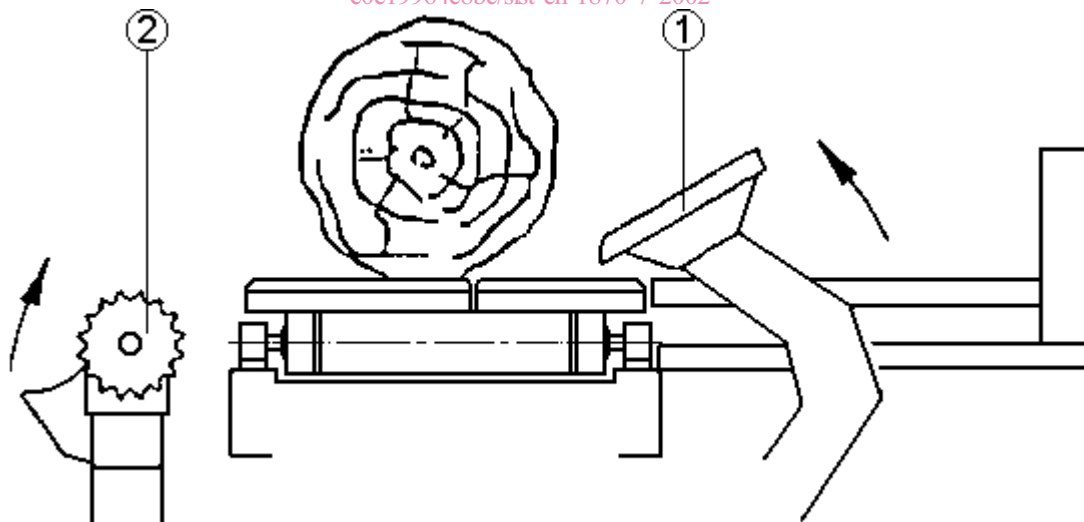
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Figure 3 — Example of log lifter
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3.2.13

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).

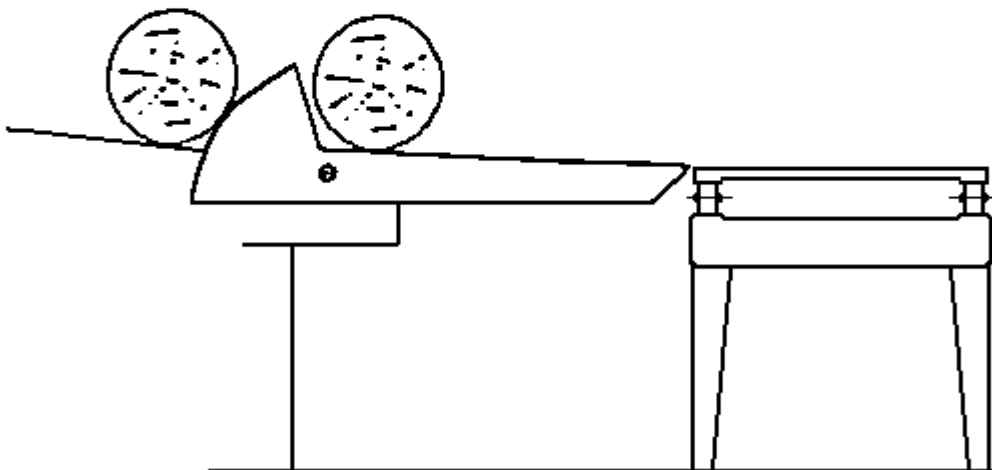
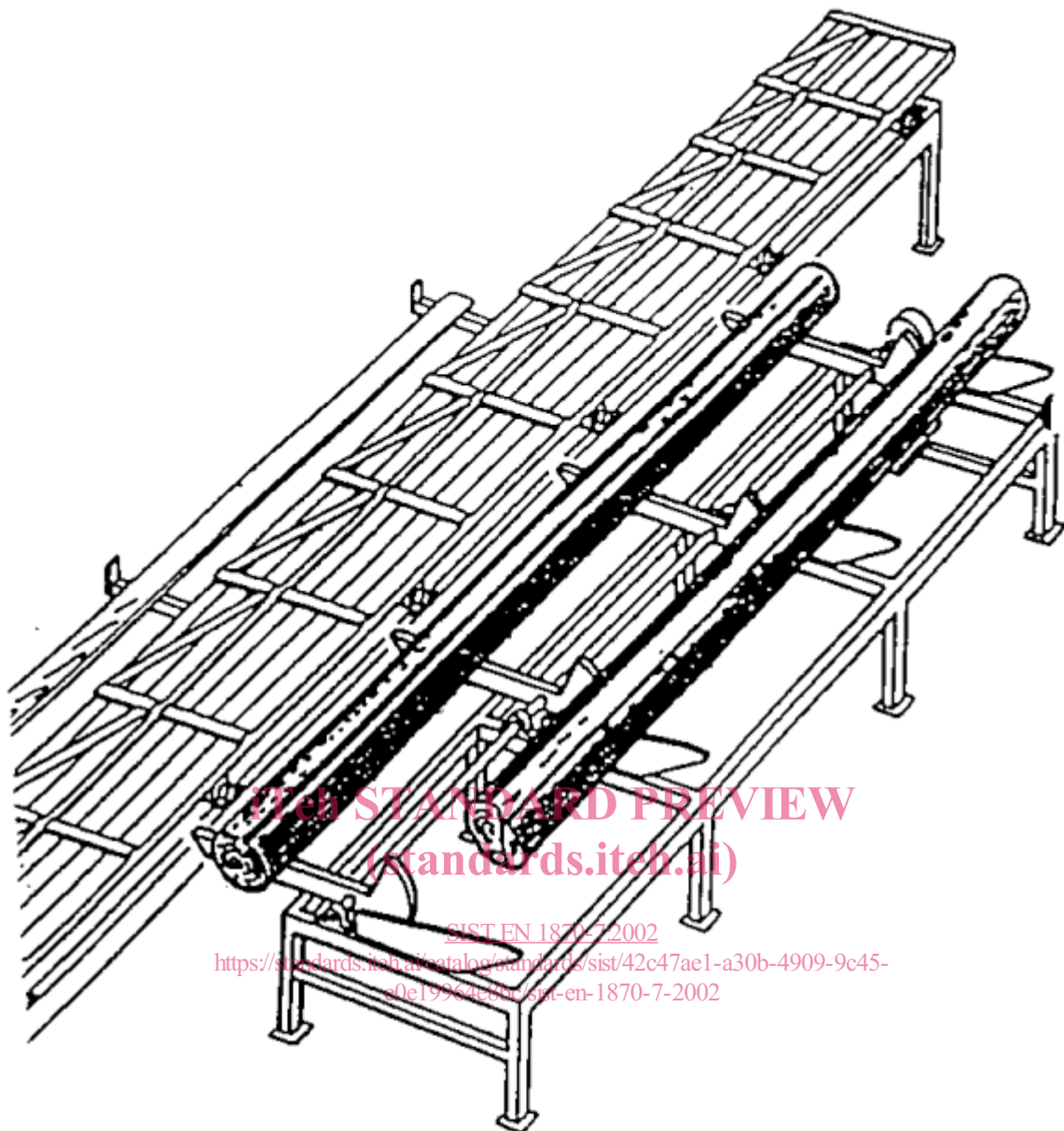
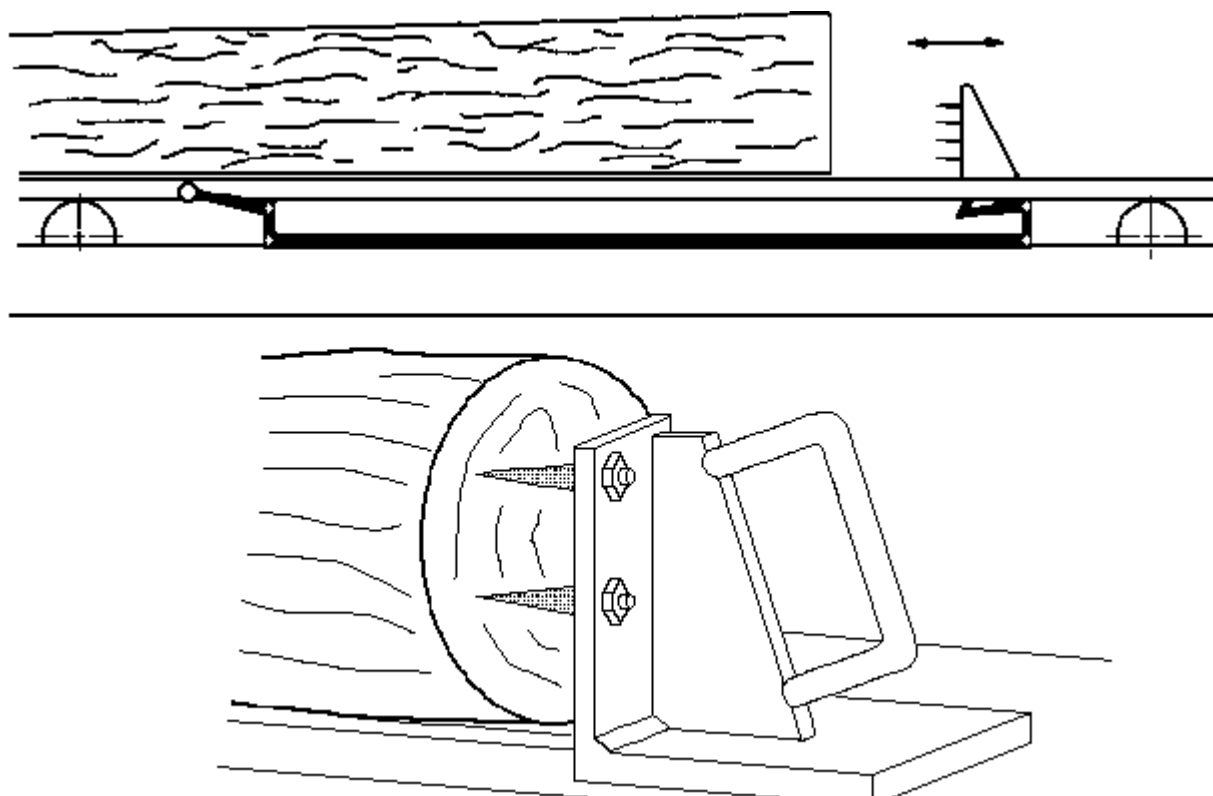


Figure 5 — Example of log delivery device

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).



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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).

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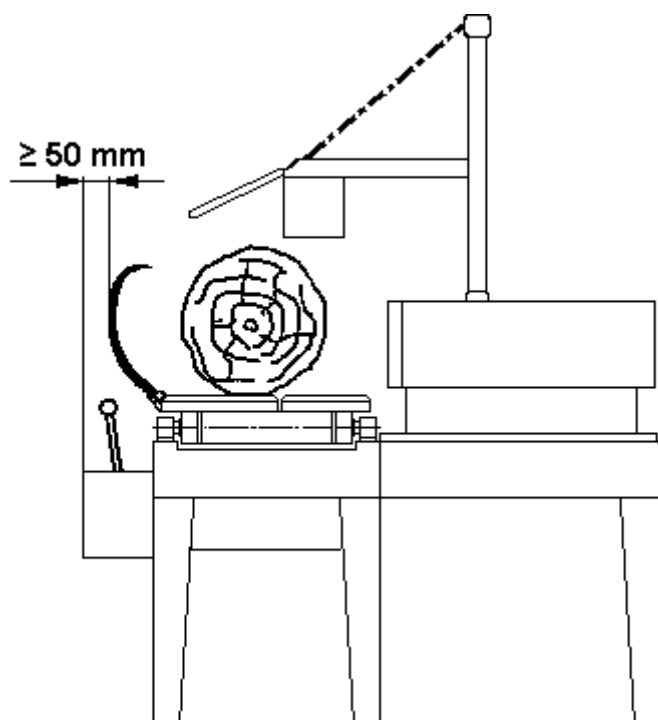


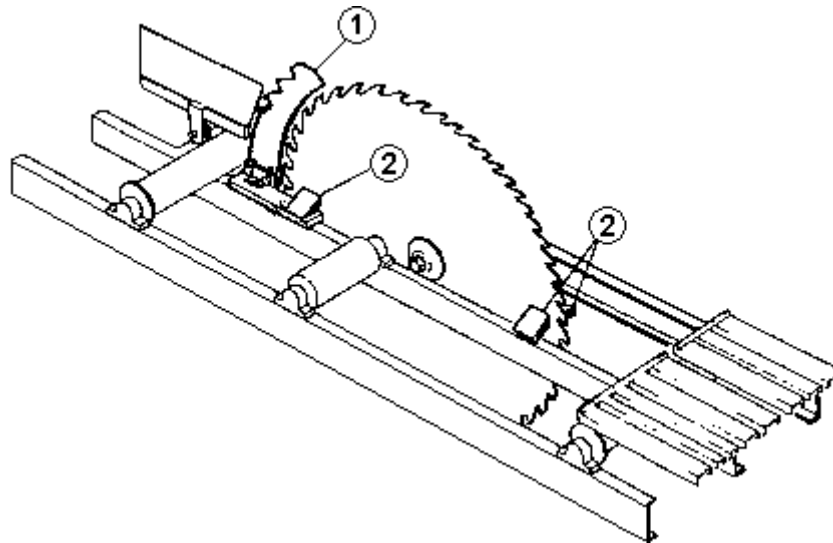
Figure 7 — Example of log hook

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3.2.17

sawblade guide

a device to secure the straightness and vibration free functioning of the sawblade (see Figure 8).



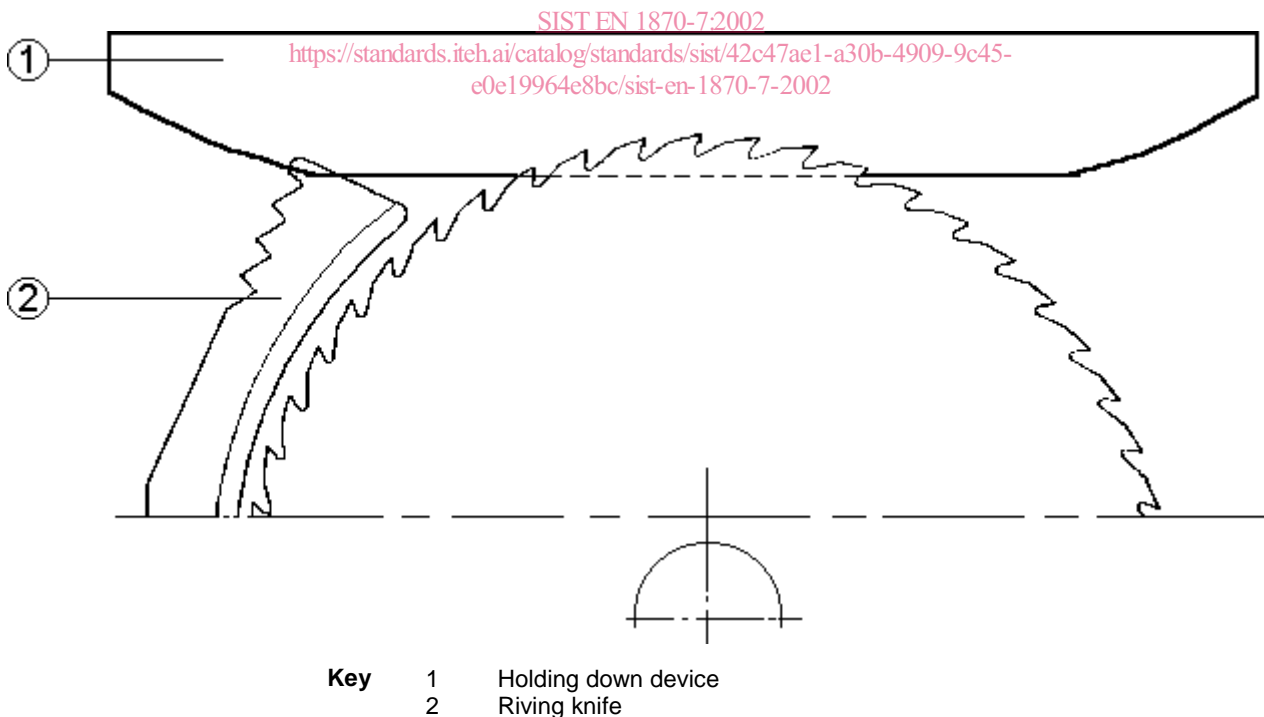
Key	1	Riving knife
	2	Sawblade guide

Figure 8 — Example of sawblade guide

3.2.18

holding down device

an adjustable device situated over the sawblade to minimise the risk of uplifted cut-offs from contacting the uppermost teeth of the sawblade (see Figure 9).



Key	1	Holding down device
	2	Riving knife

Figure 9 — Example of holding down device over the sawblade

3.2.19

confirmation

statements, sales literature, leaflets or other, whereby a manufacturer (supplier) declares either the characteristics of e.g. a material or product or the compliance of the material or product to a relevant standard.

4 List of hazards

This European Standard deals with all hazards listed and relevant to the machines defined in the scope :

- for significant hazards by defining safety requirements and/or measures or by reference to relevant type B European Standards;
- for hazards which are not significant e.g. general, minor or secondary hazards see relevant type A or B standards, especially EN 292-1:1991 and EN 292-2:1991/A1:1995.

These hazards are listed in table 1 in accordance with the requirements of Annex A of EN 292-2:1991/A1:1995.

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