

SVENSK STANDARD

SS-EN 1807-2:2013



Fastställt/Approved: 2013-04-03
Publicerad/Published: 2013-04-04
Utgåva/Edition: 1
Språk/Language: engelska/English
ICS: 14.320; 79.120.10

Träbearbetningsmaskiner – Maskinsäkerhet för bandsågar – Del 2: Stockbandsågar

Safety of woodworking machines – Band sawing machines – Part 2: Log sawing machines

This preview is downloaded from www.sis.se. Buy the entire standard via <https://www.sis.se/std-89610>

Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN 1807-2:2013 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1807-2:2013.

Denna standard ersätter SS-EN 1807+A1:2009, utgåva 1.

The European Standard EN 1807-2:2013 has the status of a Swedish Standard. This document contains the official version of EN 1807-2:2013.

This standard supersedes the Swedish Standard SS-EN 1807+A1:2009, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Träbearbetningsmaskiner och -verktyg, SIS/TK 247.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN 1807-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2013

ICS 79.120.10

Supersedes EN 1807:1999+A1:2009

English Version

Safety of woodworking machines - Band sawing machines - Part 2: Log sawing machines

Sécurité des machines pour le travail du bois - Machines à
scier à ruban - Partie 2: Scies à grumes

Sicherheit von Holzbearbeitungsmaschinen -
Bandsägemaschinen - Teil 2: Blockbandsägemaschinen

This European Standard was approved by CEN on 13 January 2013.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and terminology.....	8
3.1 Terms and definitions	8
3.2 Terminology	11
4 List of significant hazards	15
5 Safety requirements and/or measures	19
5.1 General.....	19
5.2 Controls	19
5.2.1 Safety and reliability of control systems.....	19
5.2.2 Position of controls	20
5.2.3 Starting	21
5.2.4 Normal stopping	22
5.2.5 Emergency stop.....	22
5.2.6 Tracking mode	23
5.2.7 Mode selection	23
5.2.8 Speed control.....	24
5.2.9 Control duplication.....	24
5.2.10 Failure of the power supply	25
5.3 Protection against mechanical hazards	25
5.3.1 Stability	25
5.3.2 Risk of break-up during operation	25
5.3.3 Saw blade holder and saw blade design.....	27
5.3.4 Braking.....	32
5.3.5 Devices to minimise the possibility or the effect of ejection	33
5.3.6 Workpiece supports and guides	33
5.3.7 Prevention of access to moving parts.....	34
5.3.8 Dogging	37
5.4 Protection against non-mechanical hazards	37
5.4.1 Fire	37
5.4.2 Noise	37
5.4.3 Emission of chips and dust.....	38
5.4.4 Electricity.....	39
5.4.5 Ergonomics and handling.....	40
5.4.6 Pneumatics.....	40
5.4.7 Hydraulics.....	40
5.4.8 Vibration	41
5.4.9 Electromagnetic compatibility.....	41
5.4.10 Laser	41
5.4.11 Static electricity	41
5.4.12 Errors of fitting.....	41
5.4.13 Supply disconnection (Isolation)	41
5.4.14 Maintenance	42
6 Information for use	42
6.1 General.....	42
6.2 Marking	42

6.3	Instruction handbook	43
	Annex A (normative) Test for adjustable guard over cutting area of saw blade	47
	Annex B (normative) Operating conditions for noise emission measurement	49
B.1	General	49
B.2	General data sheet	49
	Annex C (normative) Impact test method for guards	52
C.1	General	52
C.2	Test method	52
C.2.1	Preliminary remarks	52
C.2.2	Testing equipment	52
C.2.3	Projectile for guards	52
C.2.4	Sampling	52
C.2.5	Test procedure	52
C.3	Results	53
C.4	Assessment	53
C.5	Test report	53
C.6	Test equipment for impact test	53
	Annex D (normative) Braking tests	55
D.1	Conditions for all tests	55
D.2	Tests	55
D.2.1	Unbraked run-down time	55
D.2.2	Run-up time	55
D.2.3	Braked run-down time	55
	Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	57
	Bibliography	60

SS-EN 1807-2:2013 (E)

Foreword

This document (EN 1807-2:2013) 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 September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

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, together with EN 1807-1:2013, supersedes EN 1807:1999+A1:2009.

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 the Machinery Directive 2006/42/EC.

For relationship with EU Directive 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

The following significant technical changes have been made in this new edition:

- for controls, the requirement of Performance Level according to EN ISO 13849-1 instead of categories according to EN 954-1;
- a more complete clause with set of requirements for "Emission of chips and dust";
- requirement for guard-locking on interlocked movable guards to prevent access to moving parts, of type N of EN 1088 when the band saw blade run-down time is maximum 10 s and of type M when the run-down time exceeds 10 s.

EN 1807, *Safety of woodworking machines — Band sawing machines* consists of the following parts:

- *Part 1 Table band saws and band re-saws;*
- *Part 2 Log sawing machines.*

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

The European Standards produced by CEN/TC 142 are particular to woodworking machines and complement the relevant A and B Standards on the subject of general safety (see Introduction of EN ISO 12100:2010 for a description of A, B and C standards).

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

Introduction

This document 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 document is a "type C" standard as defined in EN ISO 12100:2010.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of other standards, for machines that have been designed and built according to the provisions of this type C standard.

The requirements of this document are directed to manufacturers and their authorised representatives of log band saws, with and without travelling table, reciprocating carriage, moving head rig or conveyor feed. They are also useful for designers.

This document also includes provisions and examples of information to be provided by the manufacturer to the user.

SS-EN 1807-2:2013 (E)

1 Scope

This European Standard deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to stationary and displaceable log band sawing machines with either manual or automatic loading and/or unloading, hereinafter referred to as “machines”, designed to cut solid wood, when they are used as intended and under the conditions foreseen by the manufacturer, including reasonably foreseeable misuse.

This European Standard does not apply to:

- a) table band saws and band re-saws;

NOTE 1 Table band saws and band re-saws are covered by EN 1807-1.

- b) specific hazards related to automatic loading and/or unloading;
- c) any hazards relating to the combination of a single machine being used with any other machine (as part of a line – e.g. loading and/or unloading automated systems);
- d) any hazards arising from any other machining processes (e.g. milling and sawing) related to associated machines or cutting groups, e.g. canters and circular saws.

This European Standard does not deal with the specific hazards related to thermal engine and P.T.O. equipment fitted to the machine.

This European Standard is not applicable to machines manufactured before the date of its publication as EN.

NOTE 2 Machines with manual loading and/or unloading covered by this document are listed under 4 of Annex IV of the Machinery Directive.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 894-1:1997+A1:2008, *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+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 894-3:2000+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators*

EN 1005-1:2001+A1:2008, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

EN 1005-2:2003+A1:2008, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*

EN 1005-3:2002+A1:2008, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*

EN 1005-4:2005+A1:2008, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*

EN 1037:1995+A1:2008, *Safety of machinery — Prevention of unexpected start-up*

EN 1088:1995+A2:2008, *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*

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

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

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)²⁾*

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

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

EN 61800-5-2:2007, *Adjustable speed electrical power drive systems — Part 5-2: Safety requirements — Functional (IEC 61800-5-2:2007)*

EN ISO 3743-1:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small movable sources in reverberant fields — Part 1: Comparison method for hard-walled test rooms (ISO 3743-1:2010)*

EN ISO 3743-2:2009, *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)*

EN ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744:1994)*

EN ISO 3745:2012, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for anechoic rooms and hemi-anechoic rooms (ISO 3745:2012)*

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:2010)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

1) This document is impacted by the stand-alone amendment EN 60439-1:1999/A1:2004, *Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999/A1:2004)*.

2) This document is impacted by the stand-alone amendment EN 60529:1991/A1:2000, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989/A1:2000)*.