

**Tööpingid. Ohutus. Seadmed külmmetalli  
saagimiseks KONSOLIDEERITUD TEKST**

Machine tools - Safety - Sawing machines for cold  
metal CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13898:2003+A1:2009 sisaldab Euroopa standardi EN 13898:2003+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 27.03.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 11.02.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13898:2003+A1:2009 consists of the English text of the European standard EN 13898:2003+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.03.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 11.02.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** circular saws, instructions, metal working, protective measure, safety, safety devices, safety engineering, safety requirements, saw blades, sawing machines, sawing machines (tools), saws, specification (approval), specifications, user information, workplace safety

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English Version

**Machine tools - Safety - Sawing machines for cold metal**Machine-outils - Sécurité - Machines à scier les métaux à  
froidWerkzeugmaschinen - Sicherheit - Sägemaschinen für die  
Kaltbearbeitung von Metall

This European Standard was approved by CEN on 1 August 2003 and includes Amendment 1 approved by CEN on 29 December 2008.

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## Foreword

This document (EN 13898:2003+A1:2009) has been prepared by Technical Committee CEN/TC 143 "Machine tools - Safety", the secretariat of which is held by SNV.

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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-12-29.

This document supersedes EN 13898:2003.

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

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 EC Directive(s).

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

Annexes A and B are normative.

Annexes C and D are informative.

This document includes a Bibliography.

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.

## 0 Introduction

This standard is a type 'C' standard (see introduction of EN 292-1:1991) which applies to sawing machines.

The extent to which significant hazards are covered by this standard is indicated in the scope of this standard. In addition, sawing machines should comply, as appropriate, with EN 292-1 and -2 for hazards which are not covered by this standard.

Complementary requirements and guidance are given in type A and type B standards to which reference is made in the text.

The figures are intended to be examples and not to give the only interpretation of the text.

## 1 Scope

**1.1** This standard specifies the safety requirements and measures to be adopted by persons undertaking the design, construction and supply (including installation, setting-up, maintenance, and repair) of machines whose primary intended use is for sawing cold metal (ferrous and non-ferrous), or material partly of cold metal, by means of a saw blade.

**1.2** This standard takes into account the intended use, reasonably foreseeable misuse, machine setting and blade fitting, maintenance and cleaning, and their effects on the safety of operators and other exposed persons. It presumes access to the machine from all directions at floor level and addresses both normal operation and unexpected or unintended starting.

**1.3** This standard applies to the ancillary devices which form an integral part of the machine. Where such devices are not an integral part of the machine, the designer, manufacturer or supplier of the installation should take into account their intended use, and should make provision for the safe linking of such devices with the machine.

**1.4** This standard applies to (metal) sawing machines which are manufactured after the date of publication by CEN of this standard.

## 2 Normative references

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, *Safety of machinery - Basic concepts, general principles for design – Part 1: Basic terminology, methodology.*

EN 292-2:1991, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications.*

EN 292-2/A1:1995, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications, Amendment A1.*

- EN 294:1992, *Safety of machinery – Safety distance to prevent danger zones being reached by the upper limbs.*
- EN 349, *Safety of machinery – Minimum gaps to avoid crushing of parts of the human body.*
- EN 414, *Safety of machinery – Rules for the drafting and presentation of safety standards.*
- EN 418, *Safety of machinery – Emergency stop equipment, functional aspects – Principles for design.*
- EN 614-1, *Safety of machinery – Ergonomic design principles – Part 1: Terminology and general principles.*
- EN 614-2, *Safety of machinery - Ergonomic design principles - Part 2: Interactions between the design of machinery and work tasks.*
- EN 626-1, *Safety of machinery – Reduction of risks to health from hazardous substances emitted by machinery – Part 1: Principles and specifications for machinery manufacturers.*
- EN 811, *Safety of machinery – Safety distances to prevent danger zones being reached by the lower limbs.*
- EN 842, *Safety of machinery - Visual danger signals - General requirements, design and testing.*
- EN 894-1, *Safety of machinery - Ergonomic requirements for the design of displays and control actuators - Part 1: General principles for human interactions with displays and control actuators.*
- EN 894-2, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays.*
- EN 894-3, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 3: Control actuators.*
- EN 953:1997, *Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards.*
- EN 954-1, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design.*
- EN 981, *Safety of machinery - System of auditory and visual danger and information signals.*
- EN 982, *Safety of machinery – Safety requirements for fluid power systems and their components – Hydraulics.*
- EN 983, *Safety of machinery – Safety requirements for fluid power systems and their components – Pneumatics.*
- EN 999, *Safety of machinery – The positioning of protective equipment in respect of approach speeds of parts of the human body.*
- EN 1005-1, *Safety of machinery – Human physical performance – Part1: Terms and definitions.*
- EN 1005-2, *Safety of machinery – Human physical performance – Part 2: Manual handling of machinery and component parts of machinery.*
- EN 1005-3, *Safety of machinery – Human physical performance – Part 3: Recommended force limits for machinery operation.*
- EN 1033, *Hand-arm vibration – Laboratory measurement of vibration at the grip surface of hand-guided machinery – General.*

EN 1037:1995, *Safety of machinery – Prevention of unexpected start-up.*

EN 1050:1996, *Safety of machinery – Principles for risk assessment.*

EN 1070:1998, *Safety of machinery – Terminology.*

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

EN 1299, *Mechanical vibration and shock – Vibration isolation of machines – Information for the application of source isolation.*

EN 1760-1, *Safety of machinery – Pressure sensitive protective devices – Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors.*

EN 1837, *Safety of machinery – Integral lighting of machines.*

EN 60204-1:1997, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:1997).*

EN 61000-6-2, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards; Immunity for industrial environments (IEC 61000-6-2: 1999, modified).*

EN 61000-6-4, *Electromagnetic compatibility (EMC) – Part 6-4: Generic standards; Emission standard for industrial environments (IEC 61000-6-4:1997, modified).*

EN 61496-1:1997, *Safety of machinery – Electro-sensitive protective equipment – Part 1: General requirements and tests (IEC 61496-1:1997).*

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).*

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 4871, *Acoustics – Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996).*

EN ISO 7250, *Basic human body measurements for technological design (ISO 7250:1996).*

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, *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).*

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

EN ISO 11546-1, *Acoustics - Determination of sound insulation performances of enclosures - Part 1: Measurements under laboratory conditions (for declaration purposes) (ISO 11546-1:1995).*

EN ISO 11546-2, *Acoustics - Determination of sound insulation performances of enclosures - Part 2: Measurements in situ (for acceptance and verification purposes) (ISO 11546-2:1995).*

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

EN ISO 11688-2, *Acoustics - Recommended practice for the design of low-noise machinery and equipment - Part 2: Introduction to the physics of low-noise design (ISO/TR 11688-2:1998).*

EN ISO 11691, *Acoustics - Measurement of insertion loss of ducted silencers without flow - Laboratory survey method (ISO 11691:1995).*

EN ISO 11820, *Acoustics - Measurements on silencers in situ (ISO 11820:1996).*

EN ISO 11821, *Acoustics - Measurement of the in situ sound attenuation of a removable screen (ISO 11821:1997).*

EN ISO 14122-2, *Safety of machinery - Permanent means of access to machinery - Part 2: Working platforms and walkways (ISO 14122-2:2001).*

EN ISO 14122-3, *Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001).*

ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels – Part 1: Direct-hardening unalloyed and low alloyed wrought steel in form of different black products.*

IEC 61496-2:1997, *Safety of machinery – Electro-sensitive protective equipment – Part 2: Particular requirements for equipment using active optoelectronic protective devices (AOPDs).*