



SLOVENSKI STANDARD
SIST EN 12984:2006+A1:2010
01-oktober-2010

Stroji za predelavo hrane - Prenosni in/ali ročno vodeni stroji in naprave z mehansko gnanimi rezalnimi orodji - Varnostne in higienske zahteve (vključno z dopolnilom A1)

Food processing machinery - Portable and/or hand-guided machines and appliances with mechanically driven cutting tools - Safety and hygiene requirements

Nahrungsmittelmaschinen - Tragbare und/oder handgeführte Maschinen und Geräte mit mechanisch angetriebenen Schneidwerkzeugen - Sicherheits- und Hygieneanforderungen

Machines pour la transformation des produits alimentaires - Machines et appareils portatifs et/ou guidés à la main munis d'outils coupants - Prescriptions relatives à la sécurité et à l'hygiène

Ta slovenski standard je istoveten z: EN 12984:2005+A1:2010

ICS:

67.260	Tovarne in oprema za živilsko industrijo	Plants and equipment for the food industry
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12984:2005+A1

June 2010

ICS 67.260

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English Version

**Food processing machinery - Portable and/or hand-guided
machines and appliances with mechanically driven cutting tools -
Safety and hygiene requirements**

Machines pour la transformation des produits alimentaires -
Machines et appareils portatifs et/ou guidés à la main
munis d'outils coupants mus mécaniquement -
Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Tragbare und/oder
handgeführte Maschinen und Geräte mit mechanisch
angetriebenen Schneidwerkzeugen - Sicherheits- und
Hygieneanforderungen

This European Standard was approved by CEN on 26 September 2005 and includes Amendment 1 approved by CEN on 6 May 2010.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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EN 12984:2005+A1:2010 (E)**Foreword**

This document (EN 12984:2005+A1:2010) has been prepared by Technical Committee CEN/TC 153 "Food processing machinery — Safety and hygiene requirements", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by December 2010, and conflicting national standards shall be withdrawn at the latest by December 2010.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 2010-05-06.

This document supersedes EN 12984:2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags \square_{A1} \square_{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 EU Directive(s).

\square_{A1} For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document. \square_{A1}

It is one of a series of European Standards for meat processing machinery, in compliance with \square_{A1} EN 1672-2:2005 \square_{A1} and Annex B.

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, Croatia, 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.

Introduction

This European Standard is a type C standard as stated in EN ISO 12100-1.

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

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 the other standards, for machines that have been designed and built according to the provisions of this type C standard.

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EN 12984:2005+A1:2010 (E)

1 Scope

1.1 This European Standard covers portable and/or hand-guided machines and appliances equipped with mechanically driven cutting tools.

This European Standard specifies requirements for the design and manufacture of portable and/or hand-guided machines and appliances equipped with electrically, hydraulically or pneumatically driven cutting tools (see Figures 1 to 9), hereinafter referred to as “machines”.

The machines covered by this European Standard are used for slaughtering animals, for cutting up animal carcasses, poultry and other foodstuff such as e.g. fish.

They are mainly intended for use in slaughterhouses and rooms, which are used for cutting and preparing. These machines are used for the industry and trade.

A1 This European Standard specifies all significant hazards, hazardous situations and events relevant to the machines in the scope, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4). **A1**

This European Standard deals with the hazards which can arise during commissioning, operation, maintenance and de-commissioning of the machine.

This European Standard is not applicable to portable and/or hand-guided machines and appliances equipped with electrically, hydraulically or pneumatically driven cutting tools, which are manufactured before the date of publication of this European Standard by CEN.

1.2 This European Standard covers the following machines subdivided into tool types:

1.2.1 Saws (see Figures 1 to 5)

- Circular saws (see Figures 1 and 2);
- straight blade reciprocating saws (see Figures 3 and 4);
- band saws (see Figure 5).

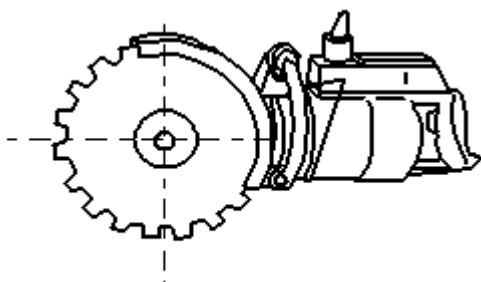


Figure 1 — Cutting saw

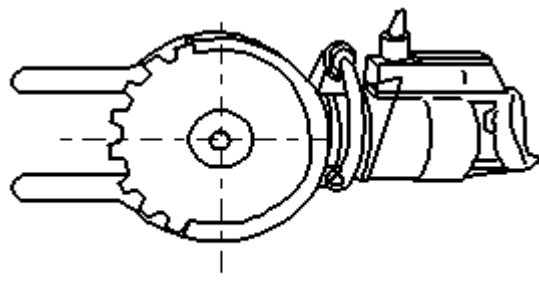


Figure 2 — Leg saw, horn saw

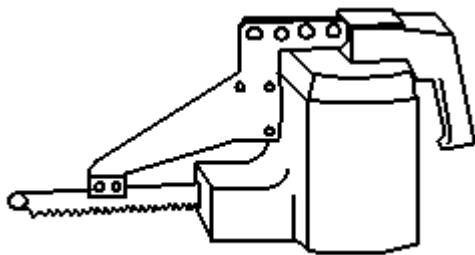


Figure 3 — Sternum saw

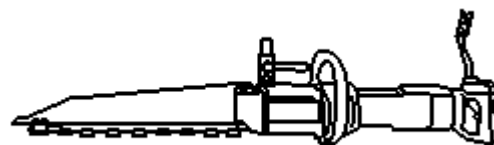


Figure 4 — Reciprocating saw

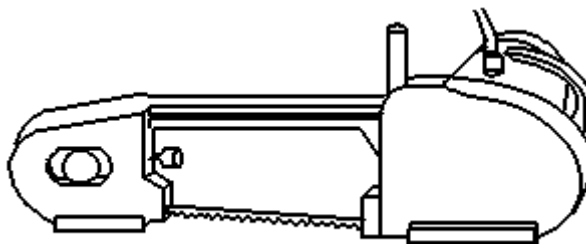


Figure 5 — Band saw for carcasses

1.2.2 Shears, pincers (see Figures 6 and 7)

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Figure 6 — Pincer/shear

Figure 7 — Pincer for cutting the feet of pigs/shear

1.2.3 Knives (see Figures 8 and 9)

- Ring-blade circular knives;
- circular knives with simple or double blade;
- reciprocating knives with one or two straight blades;
- rotating knives.

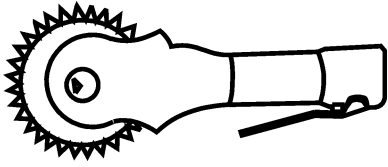


Figure 8 — Derinder

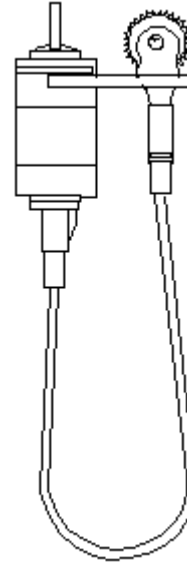


Figure 9 — Flexible driven circular knife

Portable and/or hand-guided machines are constructed of a machine housing with a motor or pressure cylinder within the housing, or a motor which drives the tool via a flexible drive cable, the tool being hand-held at the place of use or being hand-guided on a movable device.

The motor or drive can comprise electrical, hydraulic or pneumatic components.

For weight balancing, a suspension unit with a tensioning spring or a counter-balancer can make the work easier for the operator. This equipment is not covered by this European Standard.

1.3 Intended use

Portable and/or hand-guided machines are used on suspended or lying, stunned and blood-drained animals for cutting off legs, feet and horns, for cutting out anuses, for skinning, for opening the sternum, for halving, quartering or further cutting carcasses and for removing fat.

Although it should be advised against, this European Standard, taking into account practice, deals with the hazards due to cleaning with pressurised water.

With the aim of clarifying the intentions of this European Standard and avoiding doubts when reading it, the following assumptions were made for operation:

- only designated and instructed persons operate the machine,
- place of use is adequately lit, and

the equipment will be used in an environment with hygiene hazards but without other special hazards.

2 Normative references

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

^{A1} CR 1030-1, *Hand-arm vibration — Guidelines for vibration hazards reduction — Part 1: Engineering methods by design of machinery*

EN 574:1996, *Safety of machinery — Two-hand control devices — Functional aspects — Principles for design*

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

EN 953, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

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 1672-2:2005, *Food processing machinery — Basic concepts — Part 2: Hygiene requirements*

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

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

EN 60745-1:2006, *Hand-held motor-operated electric tools — Safety — Part 1: General requirements (IEC 60745-1:2006, modified)*

EN 61558-2-6, *Safety of power transformers, power supply units and similar — Part 2-6: Particular requirements for safety isolating transformers for general use (IEC 61558-2-6:1997)*

EN ISO 4287, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

EN ISO 11688-1:1998, *Acoustics — Recommended practice for the design of low noise-machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

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)*

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by the upper and lower limbs (ISO 13857:2008)* ^{A1}

EN 12984:2005+A1:2010 (E)**3 Terms and definitions**

For the purposes of this European Standard, the terms and definitions given in EN ISO 12100-1:2003 and the following apply.

3.1 hand-guided machines
motor or pressure cylinder and the tool are one and are mounted on a movable device and hand-guided during use

3.2 portable machines
drive and the tool are one and are carried to their place of use and hand-guided during use; power transmission between motor and tool is also possible by means of a flexible drive cable. The drive can be a motor or a cylinder

3.3 spring balancer – counterbalance
system on which the machine is suspended and which balances the major portion of the weight

4 List of significant hazards**4.1 General**

This clause and Annex B contains all the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for this type of machinery and which require action identified to eliminate or reduce risk.

NOTE Before using this European Standard it is important to carry out a risk assessment according to EN 1050:1996 of the portable and/or hand-guided machines to check that it has identified all significant hazards hazardous situations and events in this clause.

4.2 Mechanical hazards**4.2.1 Zone 1**

Cutting part

Hazard from cutting or severing limbs and injuries of the body

4.2.2 Zone 2

Transmission mechanism from motor to cutting part

Severing or entanglement hazard of fingers or hand

4.2.3 Zone 3

Protective covers

Hazard from ejected parts