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Food processing machinery - Clipping machines - Safety and hygiene requirements CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13885:2005+A1:2010 sisaldab Euroopa standardi EN 13885:2005+A1:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.09.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 23.06.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13885:2005+A1:2010 consists of the English text of the European standard EN 13885:2005+A1:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 23.06.2010.

The standard is available from Estonian standardisation organisation.

ICS 67.260

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## English Version

**Food processing machinery - Clipping machines - Safety and hygiene requirements**

Machines pour les produits alimentaires - Machines à attacher - Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Clipmaschinen - Sicherheits- und Hygieneanforderungen

This European Standard was approved by CEN on 21 April 2005 and includes Amendment 1 approved by CEN on 20 May 2010.

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 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 Management Centre has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword



This document (EN 13885:2005+A1:2010) has been prepared by Technical Committee CEN/TC 153 “ Machinery intended for use with foodstuffs and feed ”, 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 2010-05-20.

This document supersedes EN 13885:2005.

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

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.

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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 **A1** document **A1**.

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.

## 1 Scope

### 1.1 This European Standard applies to clipping machines

This European Standard specifies safety and hygiene requirements to minimise the hazards which can arise during the commissioning, the use and the maintenance of clipping machines for portioning and closing of casings filled with foodstuffs, and intended to be used in butcheries, meat processing factories, main kitchens and other food processing factories.

This European Standard deals with all significant hazards, hazardous situations and events relevant to clipping machines, when they are used <sup>[A1]</sup> as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4) <sup>[A1]</sup>.

This European Standard is not applicable to clipping machines which are manufactured before the date of publication of this European Standard by CEN.

### 1.2 This European Standard covers the following types of machines:

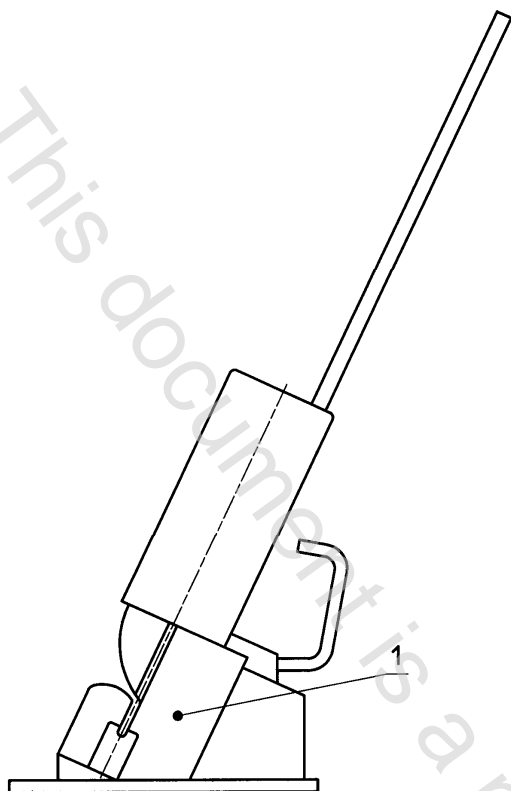
Concerning the sort of actuation:

- machine for gathering up by hand, power motioned locking-stroke;
- machine for automatic-motioned gathering and automatic-motioned locking-stroke.

Concerning the removal-system:

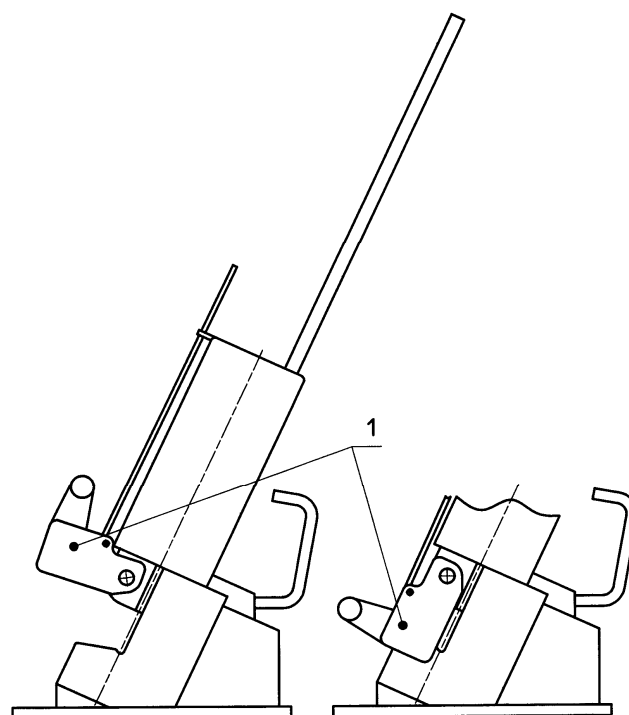
- machine with removal by fixed or movable clip-guide (see Figures 1 and 2);
- machine with spread-removal (see Figures 3 and 4).



**Key**

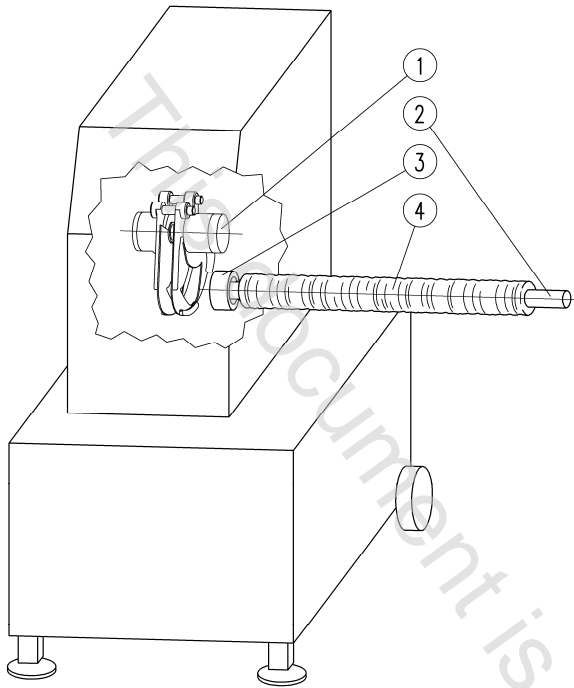
- 1 Fixed clip guide

**Figure 1 — Machine with removal by fixed clip guide**

**Key**

- 1 Movable clip guide

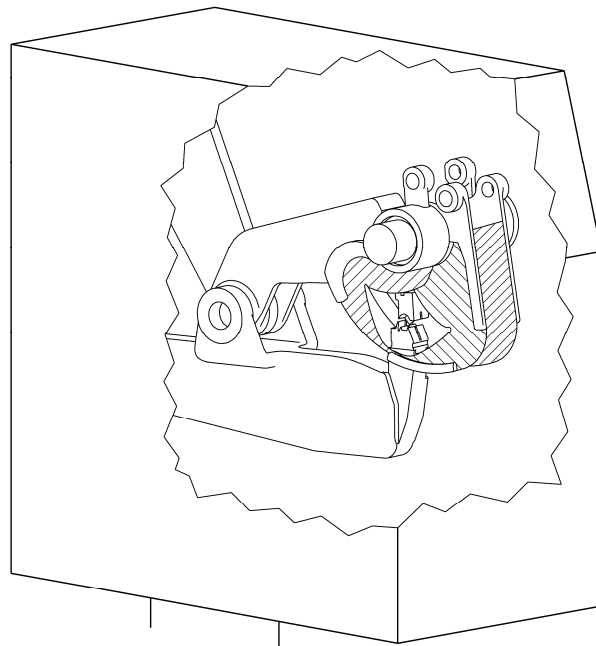
**Figure 2 — Machine with removal by movable clip guide**



**Key**

- 1 Spread-removal
- 2 Filling-tube
- 3 Casing brake
- 4 Tube (casing)

**Figure 3 — Machine with spread-removal**



**Figure 4 — Spread-removal – detail**

Concerning construction:

- table-top-machine;
- movable floor machines;
- floor-mounted-machine.

### 1.3 Description

Clipping machines will be used for closing of tubes with a single-clip (one side) or a double-clip (endlocking and startlocking).

The machines are equipped with closing tools (punch/die), which make the locking by deforming the locking-element (clip).

A removal/gathering is used to form a free space and to gather the tube in a way that the locking equipment can be put over the pressed tail and this can be locked.

By automatic action the clipping machine will be placed at the end of the filling-tube and after each ejecting of the filling-portion there are positioned one or two clips at the casing.

From the machine the filled portion will be divided with a knife from the skin which still remains on the filling-tube. If necessary, an additional loop for hanging up the package will be attached.

## 1.4 Intended use

A clipping machine is designed and constructed in such a way, that in combination with a filling equipment, the food stuff will be transported through a filling-tube in a casing, which is gathered on the filling-tube. Afterwards this casing will be closed with a clip.

Furthermore, it is usual to close already filled casings, bags or other packages by hand with a free-standing or hand-operated/hand held clipping machine.

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

With the aim of clarifying the intentions of the standard and avoiding doubts when reading it, the following assumptions were made when producing it:

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

## 2 Normative references

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.

EN 574, *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 983, *Safety of machinery — Safety requirements for fluid power systems and components — Pneumatics*

EN 1005-1, *Safety of machinery — Human physical performance — Part 1: 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 1088:1995, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

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 61496-1:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2004, modified)*

EN ISO 3744:1995, *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 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment* (ISO 4871:1996)

EN ISO 11201:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane* (ISO 11201:1995)


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 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* (ISO 13849-1:2006)

EN ISO 13857, *Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs* (ISO 13857:2008)

EN ISO 14121-1, *Safety of machinery — Risk assessment — Part 1: Principles* (ISO 14121-1:2007) 

### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN ISO 12100-1:2003, EN ISO 12100-2:2003, and the following apply.

#### 3.1

##### **discharge device**

inclined plane with/without rolls or driven discharge belt

#### 3.2

##### **clip/closing element**

closing clamp out of metal or plastics in one- piece- or two-piece type

#### 3.3

##### **clip guide**

feed-channel to the closure tool

#### 3.4

##### **casing**

tubes

#### 3.5

##### **casing brake**

device for retaining and braking of the casing on the filling-tube

#### 3.6

##### **string-/band-dispenser**

device for manufacturing of ring-sausages

#### 3.7

##### **code device**

device for marking the packaged unit