

**Toidutöötlemismasinad.
Leivalõikamismasinad. Ohutus- ja
hügieeninõuded**

Food processing machinery - Bread slicers - Safety
and hygiene requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13954:2005 sisaldab Euroopa standardi EN 13954:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 28.12.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13954:2005 consists of the English text of the European standard EN 13954:2005.</p> <p>This document is endorsed on 28.12.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala: This European Standard specifies safety and hygiene requirements for the design and manufacture of bread slicing machines of type 1 and 2 as defined in Clause 3.</p>	<p>Scope: This European Standard specifies safety and hygiene requirements for the design and manufacture of bread slicing machines of type 1 and 2 as defined in Clause 3.</p>
--	--

ICS 67.260

Võtmesõnad: cleaning, danger, design, discharge, hazards

ICS 67.260

English Version

Food processing machinery - Bread slicers - Safety and hygiene
requirements

Machines pour les produits alimentaires - Machines à
couper le pain - Prescriptions relatives à la sécurité et à
l'hygiène

Nahrungsmittelmaschinen - Brotschneidemaschinen -
Sicherheits- und Hygieneanforderungen

This European Standard was approved by CEN on 8 August 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms, definitions and description	6
3.1 Terms and definitions	6
3.2 Description	7
4 List of significant hazards	10
4.1 General	10
4.2 Mechanical hazards	10
4.3 Electrical hazards	13
4.4 Lack of hygiene	13
4.5 Hazards generated by neglecting ergonomic principles	13
4.6 Hazards from cleaning and handling	13
4.7 Noise	14
5 Safety and hygiene requirements and/or protective measures	14
5.1 General	14
5.2 Mechanical hazards	14
5.3 Electrical hazards	19
5.4 Hygiene requirements	21
5.5 Hazards generated by neglecting ergonomic principles	22
5.6 Hazards from cleaning and handling	23
5.7 Noise reduction	23
6 Verification of safety and hygiene requirements and/or measures	23
7 Information for use	24
7.1 Instruction handbook	24
7.2 Marking	25
7.3 Noise declaration	25
Annex A (normative) Noise test code for bread slicers (Grade 2 of accuracy)	26
Annex B (normative) Principles of design to ensure the cleanability of bread slicers	29
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by 98/79/EC	48
Bibliography	49

Foreword

This European Standard (EN 13954:2005) has been prepared by Technical Committee CEN/TC 153 "Food processing machinery — Safety and hygiene specifications", 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 April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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).

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

This European Standard is complementary to EN 14655:2005 that is covering bread slicing machines with crescent blade(s) (type 3).

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

Introduction

There are various types of bread slicing machines. They are divided mainly into the following types:

- Type 1: Frame cutter machines with multiple blades moving vertically;
- Type 2: Machines with rotary crescent (sickle) or circular blade fixed to a shaft with oscillating movement and horizontal manual loading;
- Type 3: Machines with crescent blade fixed to a shaft, with a rotating movement and vertical manual loading;
- Type 4: Machines with one or more rotating band blades.

This European Standard is a type C standard as stated in EN ISO 12100-1:2003.

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 that 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 specifies safety and hygiene requirements for the design and manufacture of bread slicing machines of type 1 and 2 as defined in Clause 3.

The intended use of these machines is to cut baked bread into slices.

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

This European Standard covers requirements for the safe operation of the machine including: loading, cutting, unloading, cleaning, crumb removal and maintenance.

These machines can be manually or automatically operated.

1.2 The following machines are excluded from the scope of this document:

- experimental and testing machines under development by the manufacturer;
- frame cutter machines with multiple blades moving horizontally;
- domestic appliances and machines intended for use by the general public;
- machines with horizontal circular cutting systems;
- rectangular cutting machines for cutting or sawing of panel size products into small pieces.

The significant hazards covered by this document are described in Clause 4.

1.3 In drafting this European Standard, it has been assumed that the bread slicers falling within the scope are operated only by trained personnel and that the machines are not intended to be cleaned with water jet.

1.4 This European Standard is not applicable to bread slicing machines which are manufactured before the date of publication of this European Standard.

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 294:1992, *Safety of machinery — Safety distances 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 614-1:1995, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 953:1997, *Safety of machinery — Guards — General requirements for design and construction of fixed and movable guards*

EN 954-1:1996, *Safety of machinery — Safety related parts of control systems — Part 1: General principles for design*

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

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

EN 61310-1, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:1995)*

EN 61496-1:1997, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:1997, 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 4287:1998, *Geometrical product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

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

EN ISO 11201, *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 11688-1:1997, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

EN ISO 12001, *Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code (ISO 12001:1996)*

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)*

3 Terms, definitions and description

3.1 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.

3.1.1

type 1 machines

bread slicers with reciprocating multiple blades moving vertically

3.1.2

type 2 machines

machines with rotary crescent (sickle) or circular blade fixed to a shaft with oscillating or rotating movement and horizontal manual loading