



SLOVENSKI STANDARD

SIST EN 14655:2005

01-november-2005

Stroji za predelavo hrane - Rezalniki francoskih štruc (baget) - Varnostne in higienske zahteve

Food processing machinery - Baguette slicers - Safety and hygiene requirements

Nahrungsmittelmaschinen - Baguette-Schneidemaschinen - Sicherheits- und Hygieneanforderungen

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

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ICS:

67.260

Tovarne in oprema za
živilsko industrijo

Plants and equipment for the
food industry

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EUROPEAN STANDARD

EN 14655

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English version

Food processing machinery - Baguette slicers - Safety and hygiene requirements

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

Nahrungsmittelmaschinen - Baguette-Schneidemaschinen - Sicherheit- und Hygieneanforderungen

This European Standard was approved by CEN on 19 May 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.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This European Standard (EN 14655:2005) 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 December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

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 European Standard.

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.

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Introduction

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

The machinery concerned and the extend 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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1 Scope

This European Standard specifies safety and hygiene requirements for the design and manufacture of baguette slicers used in catering by adults, taking account of installation, cleaning, operating, maintenance and decommissioning.

The intended use of these machines is to cut baguette and similar types of long bread sticks, into slices.

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

These machines have a crescent blade fixed to a shaft, with a rotating movement and vertical manual loading.

These machines are intended to be installed on a table, a specific support or an integral stand.

The following machines are excluded from the scope of this European Standard:

- frame cutter machines with multiple blades¹⁾;
- machines with rotary crescent (sickle) or circular blade fixed to a shaft with oscillating movement and horizontal manual loading¹⁾;
- experimental and testing machines under development by the manufacturer;
- domestic appliances.

This European Standard deals with all significant hazards, hazardous situations and events relevant to baguette slicers, when they are used as intended and under the conditions foreseen by the manufacturer (see Clause 4).

Noise is not considered to be a significant hazard. A noise test code is given in Annex A. This European Standard does not deal with noise reduction.

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

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.

EN 294:1992, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs*

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

EN 953, *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*

1) See prEN 13954.

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

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

EN 61496-1, *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 4287:1998, *Geometrical product specifications (GPS) — Surface texture profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

EN ISO 4871:1996, *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 12001:1996, *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)*

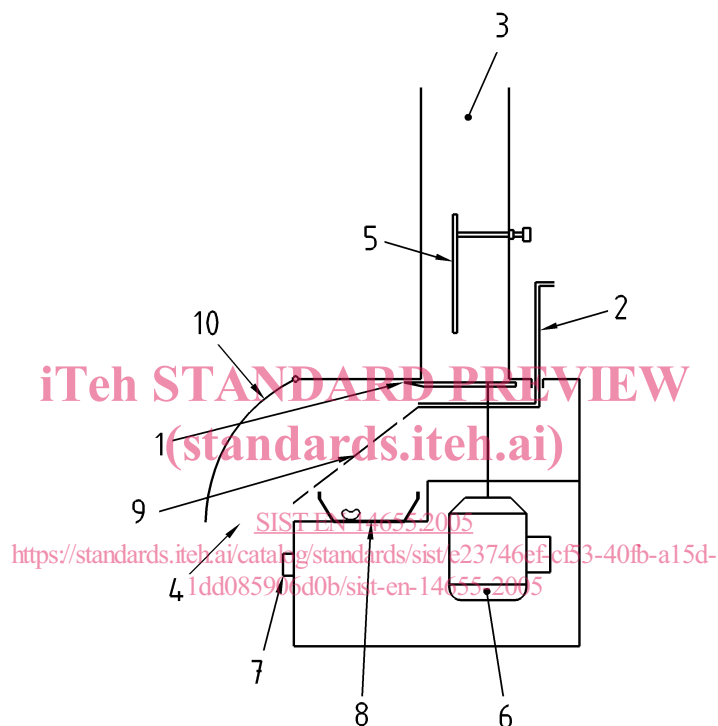
3 Terms and definitions

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

3.1

baguette slicer

machines with crescent blade fixed to a shaft with a rotating movement and vertical manual loading (see example in Figure 1)



Key

- | | |
|---|--------------------------------|
| 1 cutting device (one rotating blade) | 6 drive mechanisms |
| 2 device to adjust the thickness of the slices | 7 electrical controls |
| 3 infeed chute | 8 crumb tray |
| 4 discharge device | 9 ramp |
| 5 guidance device to adjust the size of the infeed chute to the dimensions of the bread | 10 cover of the discharge area |

Figure 1 — Example of baguette slicer

4 List of significant hazards

4.1 General

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

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Before using this European Standard, it is important to carry out a risk assessment of the baguette slicer to check that its significant hazards are identified in this clause.

4.2 Mechanical hazards

The significant mechanical hazards are:

- cutting hazard;
- severing hazard;
- drawing in hazard;
- shearing hazard;
- loss of stability.

The example shown in Figure 2 illustrates 3 danger zones associated with these hazards:

Zone 1: Access to cutting side of blade through infeed chute.

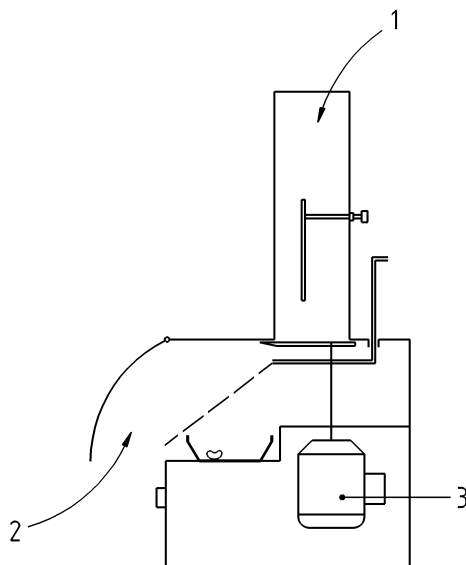
Hazards of cutting or severing.

Zone 2: Access to cutting side of blade and other moving parts of the machine through discharge area and crumb tray.

Hazards of cutting or severing, drawing in and shearing.

Zone 3: Access to all moving parts (e.g. drive mechanisms) through other sides of the machine.

Hazards of shearing, drawing in.

**Key**

- 1 zone 1
- 2 zone 2
- 3 zone 3

Figure 2 — Danger zones of a baguette slicer

4.3 Electrical hazards

Hazard of electric shock from direct or indirect contact with live components.

Hazard of external influences on electrical equipment (e.g. cleaning and dust generated by slicing the bread).

4.4 Lack of hygiene

Lack of hygiene creates hazards to human health and unacceptable alteration of foodstuff e.g. contamination by microbial growth or foreign materials.

4.5 Hazards generated by neglecting ergonomic principles

Risk of injury or chronic damage to the body resulting from harmful body postures during operation, cleaning and maintenance.

5 Safety and hygiene requirements and/or measures

5.1 General

Machinery shall comply with the safety requirements and/or measures of this clause.

In addition, the machine shall be designed according to the principles of EN ISO 12100 for hazards relevant but not significant which are not dealt with by this European Standard.

NOTE For hazards which are to be reduced by the application of a type B standard such as EN 294, EN 349, EN 418, EN 614-1, EN 953, EN 954-1, EN 1088, EN 60204-1, EN 60529, EN 61310-1, EN ISO 3744, EN ISO 4287, EN ISO 4871, EN ISO 11201, EN ISO 12001 and EN ISO 12100, the manufacturer should carry out a risk assessment to establish the requirements of this type B standard which are to be applied. This specific risk assessment is part of the general risk assessment of the machine.

5.2 Mechanical hazards

5.2.1 General

Where reference is made to interlocking devices throughout 5.2, they shall be interlocking devices without guard locking, in accordance with 4.2.1, Clauses 5 and 6 of EN 1088:1995.

Safety related parts of the control system shall be not less than category 1 of EN 954-1:1996.

5.2.1.1 Zone 1: Infeed chute

5.2.1.1.1 General

Machines shall be designed with an infeed chute which can be removable or hinged for reason of transport (shipping). In that case, it shall be in accordance with 5.2.1.1.3 (see an example in Figure 6) and:

- either the infeed chute shall be designed according to Table 3 of EN 294:1992, the distance between the upper edge of the infeed chute or protective device and the blade shall be ≥ 850 mm; or
- if, for practical operational reasons (ergonomics), this distance cannot be achieved, all the following requirements apply:
 - largest dimension of the cross-section of the chute opening shall be ≤ 200 mm (see Figure 3), and;
 - requirements in 5.2.1.1.2 to 5.2.1.1.3 shall be met.