

**Toidutöötlemismasinad. Horisontaalse völliiga mikserid.
Ohutus- ja hügieeninõuded**

Food processing machinery - Mixers with horizontal shafts -
Safety and hygiene requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13389:2005+A1:2010 sisaldab Euroopa standardi EN 13389:2005+A1:2009 ingliskeelset teksti.

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English Version

Food processing machinery - Mixers with horizontal shafts - Safety and hygiene requirements

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

Nahrungsmittelmaschinen - Mischmaschinen mit
waagerechten Wellen - Sicherheits- und
Hygieneanforderungen

This European Standard was approved by CEN on 1 August 2005 and includes Amendment 1 approved by CEN on 1 November 2009.

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



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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13389:2005+A1:2009) 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of an identical text or by endorsement, at the latest by June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.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 1 November 2009.

This document supersedes EN 13389:2005.

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

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

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 the United Kingdom.

Introduction

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

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.

1 Scope

A1 This European Standard specifies requirements for the design, transport, installation, operation and maintenance of batch production fixed or tilting horizontal bowl type mixers with one or two rotating shafts with or without movable blades. These mixers are used to mix, knead and homogenise food for animal or human consumption in powder, paste or liquid form. The mixers can be floor mounted or transportable (with or without castors). They are intended to be used when stationary. **A1**

These machines are used in feed mills and factories which produce, work on or process foodstuff, for example biscuits, bread, chocolate, cereal products.

This European Standard does not deal with the use of the machine in potentially explosive atmospheres.

A1 This European Standard deals with the significant hazards, hazardous situations and events relevant to mixers with horizontal shafts, 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 also specifies food hygiene requirements.

The feeding equipment, the dosing equipment, and the requirements of equipment for the supply of inert gases, and for heating and cooling, are excluded from the scope of this European Standard.

The hazards due to the unloading equipment (container, discharge belt, etc.) are not dealt with in this European Standard.

When drafting this European Standard, it has been assumed that the machines are not intended to be cleaned with a water jet.

This European Standard is not applicable to mixers with horizontal shafts 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 distance to prevent danger zones being reached by the upper limbs.*

A1 *deleted text* **A1**

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

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

A1 *deleted text* **A1**

EN 999, *Safety of machinery — The positioning of protective equipment in respect of approach speeds of parts of the human body.*

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

EN 1127-1, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology.*

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

EN 13478, *Safety of machinery — Fire prevention and protection*.

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204:2005, modified)* ^{A1}

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

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, *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/AC1:1995)*.

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 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)*.

EN ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)* ^{A1}

EN ISO 13732-3, *Ergonomics of the thermal environment - Touching of cold surfaces - Part 3: Ergonomics data and guidance for application (ISO/DIS 13732-3:2002)*.

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 13850:2008, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* ^{A1}

3 Terms, definitions, mode of operation 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

fixed bowl mixer

mixer with a bowl which is fixed during filling, mixing and discharge