TOIDUTÖÖTLEMISMASINAD. KAUSI TÕSTMISE JA KALLUTAMISE MASINAD. OHUTUS- JA HÜGIEENINÕUDED

Food processing machinery - Bowl lifting and tilting machines - Safety and hygiene requirements

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13288:2025 sisaldab Euroopa standardi EN 13288:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 13288:2025 consists of the English text of the European standard EN 13288:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.11.2025.	Date of Availability of the European standard is 12.11.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Food processing machinery - Bowl lifting and tilting machines - Safety and hygiene requirements

Machines pour les produits alimentaires - Élévateurs/basculeurs de cuve - Exigences relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Hub- und Kippeinrichtungen für Bottiche - Sicherheits- und Hygieneanforderungen

This European Standard was approved by CEN on 29 September 2025.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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

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European foreword

This document (EN 13288:2025) 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 May 2026, and conflicting national standards shall be withdrawn at the latest by May 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13288:2005+A1:2009.

EN 13288:2025 includes the following significant technical changes with respect to EN 13288:2005+A1:2009:

— normative references were updated;

— new informative annex relating to updated list of significant hazards;

— all safety requirements were updated;

— list of verification was updated;

— Annex ZA was updated regarding requests of the European Commission on Machinery Directive (2006/42/EC).

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document is a type-C standard as stated in EN ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved – with the means of the document – by the above-mentioned stakeholder groups:

— machine users/employers (small enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document. The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A- or type-B-standards, the requirements of this type-C-standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C-standard.

1 Scope

1.1 This document specifies safety and hygiene requirements for the design and manufacture of bowl lifting and tilting machines (see description in Annex A) which:

a) are intended to be used in bakeries and pastry shops for discharging masses of dough and/or ingredients for bakery and/or pastry products all at once or progressively tipping a container or a machine with non-removable container by lifting and/or tilting it according to a guided path;

b) are intended to be used with manual inlet and outlet of the bowl.

NOTE b) does not refer to machines with integrated mixing machine with non-removable bowl.

The lifting and tilting machines can be equipped with a scraper (optional) for removing the rests of dough from the bowl after the dough has been discharged.

1.2 The following relevant hazards are not covered by this document:

— hazards due to the mixing process (for dough mixers see EN 453:2014 and for planetary mixers see EN 454:2014);

— hazards associated to the properties of the content of the bowl (except the mass);

— hazards due to operational stop;

— hazards due to failure of the power supply;

— hazards due to laser radiation;

— hazards due to machinery maintenance;

— hazards due to information and information devices;

— hazards due to materials and products;

— hazards due to lack of design of the machine to facilitate its handling;

— hazards due to lack of stability during transport, assembly and disassembly;

— hazards due to pulleys, drums, wheels, ropes and chains.

This document does not deal with any specific requirements on noise emitted from bowl lifting and tilting machines as the generated noise does not cause a relevant hazard.

The significant hazards covered by this document are described in Annex B.

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

a) experimental and testing machines under development by the manufacturer;

b) self-propelled movable bowl lifting and tilting machines;

c) lift trucks;

d) bowl lifting and tilting machines working in automatic production lines where the initiation of the movement is not due to a human voluntary action;

e) domestic appliances.

In case of a movable machine, this document does not deal with:

— hazards due to transportation of bowls with the machine;

— hazards due to the displacement of the machine on its own wheels;

— powered equipment that may be provided to assist the mobility of mobile bowl lifting and tilting machine.

When drafting this document, it has been assumed that the machines are not intended to be cleaned with water and steam jets.

1.4 This document is not applicable to machines which are manufactured before the date of publication of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1672-2:2020, *Food processing machinery — Basic concepts — Part 2: Hygiene and cleanability requirements*

EN 60204-1:2018, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204:2016)*

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

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 7010:2020, *Graphical symbols — Safety colours and safety signs — Registered safety signs (ISO 7010:2019, Corrected version 2020-06)*

EN ISO 7731:2008, *Ergonomics — Danger signals for public and work areas — Auditory danger signals (ISO 7731:2003)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1:2023, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2023)*

EN ISO 13851:2019, *Safety of machinery — Two-hand control devices — Principles for design and selection (ISO 13851:2019)*

EN ISO 13854:2019, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body (ISO 13854:2017)*

EN ISO 13855:2010, *Safety of machinery — Positioning of safeguards with respect to the approach speeds of parts of the human body (ISO 13855:2010)*

EN ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)*

EN ISO 14118:2018, *Safety of machinery — Prevention of unexpected start-up (ISO 14118:2017)*

EN ISO 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection (ISO 14119:2013)*

EN ISO 14120:2015, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards (ISO 14120:2015)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1
bowl
any container and its trolley (if applicable)

3.2
lifting system
device for the ascending, tilting and descending of the bowl

Note 1 to entry: The lifting and the tilting movement can be done by two different systems.

3.3
bowl locking device
grip and hold device which keeps the bowl in position before lifting and during lifting, tilting and descending of the bowl

3.4
distance guard
guard which does not completely enclose a hazard zone, but which prevents or reduces access by virtue of its dimensions and its distance from the hazard zone, for example perimeter fence or tunnel guard

Note 1 to entry: A distance guard can be partially or fully surrounding.

[SOURCE: EN ISO 14120:2015, 3.2.2]