



SLOVENSKI STANDARD
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Stroji za predelavo hrane - Stroji za valjanje testa za pico - Varnostne in higienske zahteve

Food processing machinery - Pizza dough sheeter machines - Safety and hygiene requirements

Nahrungsmittelmaschinen - Pizzateig-Ausrollmaschinen - Sicherheits- und Hygieneanforderungen

Machines pour les produits alimentaires - Laminoirs pour pâte à pizza - Exigences relatives à la sécurité et l'hygiène

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Tovarne in oprema za
živilsko industrijo

Plants and equipment for the
food industry

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Food processing machinery - Pizza dough sheeter machines - Safety and hygiene requirements

Machines pour les produits alimentaires - Laminoirs
pour pâte à pizza - Exigences relatives à la sécurité et
l'hygiène

Nahrungsmittelmaschinen - Pizzateig-
Ausrollmaschinen - Sicherheits- und
Hygieneanforderungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 153.

If this draft becomes a European Standard, 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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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prEN 18143:2024 (E)**European foreword**

This document (prEN 18143:2024) 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 document is currently submitted to the CEN Enquiry.

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 Annexes ZA and ZB, which are integral parts of this document.

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Introduction

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

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.

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1 Scope

1.1 This document specifies safety and hygiene requirements for the design and manufacture of pizza dough sheeters which:

- a) are intended to be used:
 - 1) for producing mainly pizza dough bases in shops and craft activities (i.e. pizzerias, takeaway pizza shops, craft bakeries and/or pastries, catering facilities, etc.);
 - 2) for flattening and enlarging pieces of dough;
 - 3) only for professional use;
 - 4) by one operator at a time;
 - 5) as standalone table-top machines only;
 - 6) only with manual feeding of the pieces of pizza dough by gravity;
 - 7) only with manual unloading of the flattened and enlarged pieces of pizza dough;
- b) are fitted with:
 - 1) at most two pairs of flattening rollers, the rollers of a pair having the same diameter and the same length;
 - 2) flattening rollers having:
 - i. diameter ≤ 60 mm;
 - ii. fixed direction of the rotation such as to move the pizza dough from top to bottom;
 - iii. motor(s) for the rotation of the flattening rollers which transmit a power $\leq 0,50$ kW to each pair of rollers

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

- hazards arising from the use of an automatic loading and/or unloading system;
- hazards due to packaging, handling and transport;
- hazards due to ambiguous and/or not easily understandable information needed to control the machine.

This document does not deal with any specific requirement on noise emitted from pizza dough sheeters as the generated noise does not cause a relevant hazard.

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

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

- domestic (household) appliances;
- machines with automatic feeding of the pizza dough pieces and/or unloading of the pizza bases;
- machines with feeding of the lumps other than by gravity;

- machines to process other products than pizza dough;
- bagel machines;
- dough sheeters (see EN 1674:2015);
- moulders (see EN 12041:2014);
- sheeters for pasta dough processing;
- experimental and testing machines under development by the manufacturer.

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

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 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

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 60204-1:2016)*

EN 60529:1991,¹ *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 7010:2020,² *Graphical symbols — Safety colours and safety signs — Registered safety signs (ISO 7010:2019, Corrected version 2020-06)*

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 13856-2:2013, *Safety of machinery — Pressure-sensitive protective devices — Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars (ISO 13856-2:2013)*

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

¹ As impacted by EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/corrigendum May 1993, EN 60529:1991/A2:2013/AC:2019-02 and EN 60529:1991/AC:2016-12.

² As impacted by EN ISO 7010/A1:2020, EN ISO 7010/A2:2022 and EN ISO 7010/A3:2022.

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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, definitions and description

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 Terms and definitions**3.1.1****pizza dough**

homogeneous mass of soft dough obtained by mixing various food ingredients

Note 1 to entry: Most important ingredients are flour and water to achieve an adequate softness of the dough such that it can be shaped into discs and/or ovals with a very large surface compared to the thickness.

3.1.2**lump**

pre-portioned piece of pizza dough

Note 1 to entry: It can have a totally irregular shape or have been previously treated to give it an approximately regular shape (roundish, oval, rectangular, etc.).

3.1.3**flattening**

reduction of the thickness of a lump passing in the space between two counter-rotating rollers and consequent enlargement of its upper and lower surface

3.1.4**shaping**

reduction of the thickness of a pre-flattened lump for achieving an as much regular as possible shape of the flattened lump through an accurate adjustment of the gap between two counter-rotating rollers

Note 1 to entry: The shape of the resulting flattened lump depends mostly on the form of the lump before being flattened (for instance, a rounded lump can be transformed into an oval-shaped disc, a more or less oval-shaped lump can be transformed into a flattened more rounded or even more oval shape depending on the side of insertion into the rollers).

3.1.5**manual operation**

process in which the piece of dough is manually placed to the inlet of the machine by action of the operator

3.1.6

pair of rollers

two cylinders with parallel axis

3.1.7

scraper

device used for removing residual of dough and flour from the roller

3.1.8

fixed 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) and which is affixed in such a manner (for example, by screws, nuts, and welding) that it can only be opened or removed by the use of tools or by destruction of the means by which the guard is affixed

[SOURCE: EN ISO 14120:2015, 3.2 and 3.2.2]

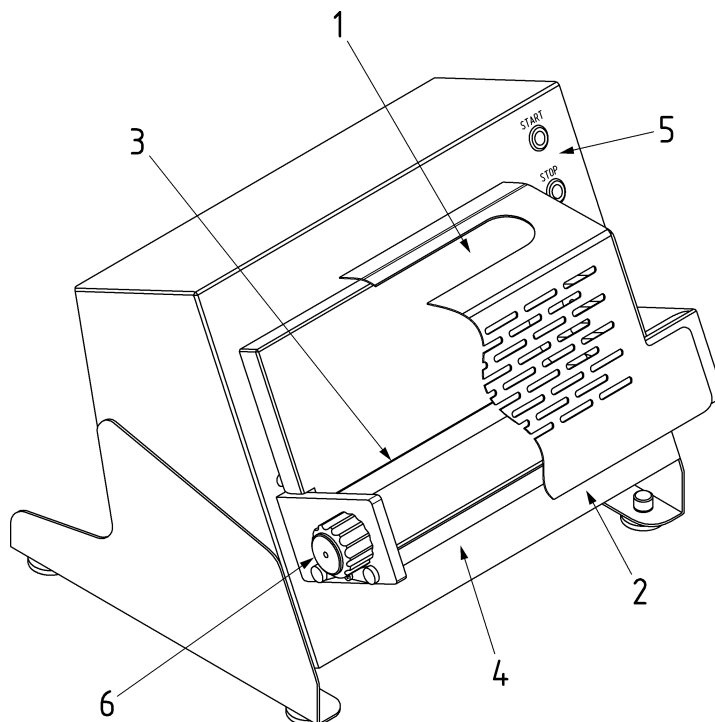
3.2 Description

3.2.1 Description of the machine

This document covers the following types of machines:

- a) machines with a single pair of rollers (see Figure 1);
- b) machines with two pairs of rollers, the upper pair inclined with respect to the lower pair (see Figure 2); these machines are provided with a tilting device, placed between the two pairs of rollers, whose functioning is ensured by the mass of dough coming out from the upper roller pair and falling toward the lower rollers feed zone (it is not motor-driven and returns in its resting position by means of a very weak spring);
- c) machines with two parallel pairs of rollers (see Figure 3); these machines are not provided with a tilting device.

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**Key**

- 1 Lump inlet
- 2 Flattened lump outlet
- 3 Rollers
- 4 Scrapers (optional)
- 5 Control devices
- 6 Device for adjusting the gap between the rollers

Figure 1 — Single pair of rollers machine

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