



NSAI
Standards

Irish Standard
I.S. EN 1974:2020

Food processing machinery - Slicing machines - Safety and hygiene requirements

I.S. EN 1974:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 1974:2020

Published:

2020-11-25

This document was published under the authority of the NSAI and comes into effect on:

2020-12-14

ICS number:

67.260

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 1974:2020 is the adopted Irish version of the European Document EN 1974:2020, Food processing machinery - Slicing machines - Safety and hygiene requirements

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 1974

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2020

ICS 67.260

Supersedes EN 1974:1998+A1:2009

English Version

Food processing machinery - Slicing machines - Safety and hygiene requirements

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

Nahrungsmittelmaschinen-
Aufschnittschneidemaschinen - Sicherheits- und
Hygieneanforderungen

This European Standard was approved by CEN on 18 October 2020.

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.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.



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

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

Contents

| | Page |
|--|------|
| European foreword..... | 4 |
| Introduction | 5 |
| 1 Scope | 6 |
| 2 Normative references | 6 |
| 3 Terms and definitions | 7 |
| 4 List of significant hazards | 11 |
| 4.1 General..... | 11 |
| 4.2 Mechanical hazards..... | 12 |
| 4.2.1 General..... | 12 |
| 4.2.2 Slicing machine with automatic product feeding and a gauge plate | 12 |
| 4.2.3 Slicing machine with an automatic carriage | 12 |
| 4.2.4 Slicing machine with an automatic feature to handle the sliced product (stacker unit, discharge conveyor, etc.)..... | 12 |
| 4.3 Electrical hazards..... | 12 |
| 4.4 Loss of stability hazards | 12 |
| 4.5 Hygiene hazards | 13 |
| 4.6 Hazards from neglecting ergonomic principles..... | 13 |
| 5 Safety requirements and/or protective measures | 13 |
| 5.1 General..... | 13 |
| 5.2 Mechanical hazards..... | 13 |
| 5.2.1 General..... | 13 |
| 5.2.2 Blade protection | 14 |
| 5.2.3 Requirements for blade sharpeners | 18 |
| 5.2.4 Product support..... | 21 |
| 5.2.5 Product support with clamping device | 21 |
| 5.2.6 Product support with pusher..... | 23 |
| 5.2.7 Product support with manual feed carriage | 24 |
| 5.2.8 Slicing machine with an automatic carriage | 24 |
| 5.2.9 Slicing machines with power-driven pusher | 25 |
| 5.2.10 Slicing machine provided with stacker unit..... | 26 |
| 5.2.11 Control system | 27 |
| 5.3 Electrical hazards..... | 27 |
| 5.4 Stability..... | 27 |
| 5.4.1 General..... | 27 |
| 5.4.2 Stability test | 27 |
| 5.5 Hygiene | 28 |
| 5.5.1 General..... | 28 |
| 5.5.2 Food area..... | 29 |
| 5.5.3 Splash area..... | 29 |
| 5.5.4 Non-food area | 29 |
| 5.5.5 Hygiene requirements..... | 30 |
| 5.6 Ergonomics..... | 30 |
| 6 Verification of safety requirements and/or measures..... | 31 |
| 7 Information for use | 32 |

| | | |
|--------------|--|-----------|
| 7.1 | General | 32 |
| 7.2 | Instruction handbook | 32 |
| 7.2.1 | General | 32 |
| 7.2.2 | Information relating to the slicer itself | 32 |
| 7.2.3 | Information relating to the installation of the slicing machine | 32 |
| 7.2.4 | Information relating to transportation and storage of the slicing machine | 32 |
| 7.2.5 | Information relating to the use of the slicing machine | 33 |
| 7.2.6 | Information for maintenance | 34 |
| 7.2.7 | Information on cleaning | 34 |
| 7.2.8 | Information about the training of the operator | 35 |
| 8 | Marking | 35 |
| | Annex A (normative) Principles of hygiene design of slicing machines | 36 |
| A.1 | Terms and definitions | 36 |
| A.2 | Materials of construction | 36 |
| A.2.1 | General | 36 |
| A.2.2 | Food area | 36 |
| A.2.3 | Splash area | 36 |
| A.2.4 | Non-food area | 36 |
| A.3 | Design | 36 |
| A.3.1 | General | 36 |
| A.3.2 | Food area | 36 |
| A.3.3 | Splash area | 38 |
| A.3.4 | Non-food area | 40 |
| | Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered | 41 |
| | Bibliography | 43 |

EN 1974:2020 (E)

European foreword

This document (EN 1974:2020) 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 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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 1974:1998+A1:2009.

This document 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 2006/42/EC.

For relationship with EU Directive 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

In comparison with the previous edition, the following major technical modifications have been made:

- the Scope and Terms and definitions have been updated;
- general redraft of the list of significant hazards;
- safety and/or protective measure cross reference added;
- improvement on blade protection requirements (blade guard, gauge plate, integrated blade sharpener, product support, stacker unit and control system);
- improvement on the hygiene section;
- general redraft on the verification of safety requirements and/or measures;
- updating on the instruction handbook section, new requirements added.

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, Turkey and the United Kingdom.

Introduction

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

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, medium and large 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);
- consumers (in case of machinery intended for use by consumers).

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.

EN 1974:2020 (E)

1 Scope

This document specifies the safety and hygiene requirements for the design and manufacture, installation, training, use, cleaning and maintenance of slicing machines which are fitted with a motor-driven blade of more than 150 mm in diameter, provided with a product support. These types of slicing machines are intended to be used in shops, restaurants, supermarkets, canteens, etc. to slice foodstuffs.

This document deals with all significant hazards, hazardous situations and events relevant to slicing machines, when they are used as intended by the manufacturer (see Clause 4).

This document applies to the hazards arising during all the phases of the life of the machine as described in EN ISO 12100:2010, 5.4.

Automatic industrial slicing machines covered by EN 16743:2016 are excluded from the scope of this document.

This document covers the following types of slicing machines:

- horizontal feed slicing machine (see Figure 1);
- gravity feed slicing machine (see Figure 2).

Both types can have an either hand-operated or power-operated carriage to move the product towards the blade. They both can be fitted with manual or automatic devices to receive and convey the slices away from the machine. All these types can also be provided with a scale.

This document applies to machines which are manufactured after the date of issue 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 614-1:2006+A1:2009, *Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles*

EN 1672-2:2005+A1:2009, *Food processing machinery - Basic concepts - Part 2: Hygiene requirements*

EN 60204-1:2006¹, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2005, modified)*

EN 60529:1991², *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN ISO 4287:1998³, *Geometrical product specifications (GPS) - Surface texture: Profile method - Terms, definitions and surface texture parameters (ISO 4287:1997)*

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

¹ As impacted by EN 60204-1:2006/A1:2009 and EN 60204-1:2006/corrigendum Feb. 2010.

² As impacted by EN 60529:1991/corrigendum May 1993, EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/AC:2016-12 and EN 60529:1991/A2:2013/AC:2019-02.

³ As impacted by EN ISO 4287:1998/AC:2008 and EN ISO 4287:1998/A1:2009.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-