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BSI Standards Publication

Safety of packaging machines

Part 2: Packaging machines for pre-formed rigid containers

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National foreword

This British Standard is the UK implementation of EN 415-2:2025. It supersedes BS EN 415-2:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/3/3, Packaging machines.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

June 2025

ICS 55.200

Supersedes EN 415-2:1999

English Version

Safety of packaging machines - Part 2: Packaging machines for pre-formed rigid containers

Sécurité des machines d'emballage - Partie 2: Machines
d'emballage pour contenants rigides préformés

Sicherheit von Verpackungsmaschinen - Teil 2:
Verpackungsmaschinen für vorgefertigte formstabile
Behälter

This European Standard was approved by CEN on 21 April 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

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

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European foreword

This document (EN 415-2:2025) has been prepared by Technical Committee CEN/TC 146 “Safety of packaging machines”, the secretariat of which is held by UNI.

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 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

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 415-2:1999.

The following significant changes have been made:

- Machines for secondary packing and unpacking have been removed from the Scope
- Description of hazards has been extended and the order of their presentation is hazard-based
- Safety requirements have been rewritten so that they are in line with EN 415-10:2014
- Noise test code has been rewritten to be in line with EN 415-9:2009
- Normative references have been changed to reflect the many changes that have been made to B1 and B2 standards.

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.

EN 415, *Safety of packaging machines* consists of the following parts:

- *Part 1: Terminology and classification of packaging machines and associated equipment*
- *Part 2: Packaging machines for pre-formed rigid containers*
- *Part 4: Palletizers and depalletizers*
- *Part 5: Wrapping machines*
- *Part 6: Pallet wrapping machines*
- *Part 7: Group and secondary packaging machines¹*
- *Part 8: Strapping machines*
- *Part 9: Noise measurement methods for packaging machines, packaging lines and auxiliary equipment, grade of accuracy 2 and 3;*
- *Part 10: General requirements*

¹ EN 415-7:2006+A1:2008 is currently being revised with a new title: “Cartoning and Case-packing machines”.

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— *Part 11: Determination of efficiency and availability.*

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.

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Introduction

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 abovementioned 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).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

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 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.

The full set of requirements for machines in the scope of this document is composed by those given in this document in conjunction with the relevant requirements of EN 415-10:2014.

Annex ZA of this document only lists Essential Health and Safety Requirements that are relevant for machines in the scope of this standard.

When an assembly of machinery or partly completed machinery (multi-functional machine) contains a function which is covered by another standard, the risk assessment and measures for that function should comply with the relevant standard. In addition, the risks presented by the combination of functions or mechanisms – which is not covered by one of the standards - should be considered.

NOTE EN ISO 11161:2007 and its A1:2010 provides guidance for combinations of machines.

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1 Scope

This document is applicable to the following machines and to machines which incorporate more than one function as listed below. The document also applies to partly completed machinery as far as conformity is claimed for certain essential health and safety requirements.

This document applies to the following machines when they handle rigid containers:

- unscrambling machines
- cap removing machines
- cleaning machines
- sanitizing machines
- filling machines
- capping, closing and sealing machines
- closure securing machines
- inspection machines
- labelling machines
- decorating machines
- heating and cooling machines for packed product, working at atmospheric pressure
- sterilizing machines (excluding machines that sterilize using heat treatment)

with one or more of the following functions: cleaning, sanitizing, pasteurizing, filling, labelling, closing, sealing or inspecting and handling pre-formed rigid containers including their closures.

This document is also applicable to the following equipment if it is part of one of the machines listed above:

- conveyors
- vacuum transfer conveyors
- magnetic belt conveyors
- dispose or reject mechanisms (pushers)
- keg stopping devices
- keg lifting and inverting mechanisms
- extraction or ventilation systems
- hoppers
- rotary mechanisms
- coding and marking equipment incorporated in a packaging machine: