

**Pakkemasinate ohutus. Osa 7: Grupi- ja
sekundaarpakendamismasinad
KONSOLIDEERITUD TEKST**

Safety of packaging machines - Part 7: Group and
secondary packaging machines CONSOLIDATED
TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 415-7:2006+A1:2008 sisaldab Euroopa standardi EN 415-7:2006+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 18.08.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 02.07.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 415-7:2006+A1:2008 consists of the English text of the European standard EN 415-7:2006+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 18.08.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 02.07.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 55.200

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English Version

Safety of packaging machines - Part 7: Group and secondary packaging machines

Sécurité des machines d'emballage - Partie 7: Machines de groupe et d'emballage, secondaire

Sicherheit von Verpackungsmaschinen - Teil 7: Sammelpackmaschinen

This European Standard was approved by CEN on 20 April 2006 and includes Amendment 1 approved by CEN on 25 May 2008.

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Contents

	Page
Foreword	6
Introduction	7
1 Scope	8
2 Normative references	8
3 Terms and definitions	12
3.1 Definition of terms	12
3.2 Description of group and secondary packaging machines	14
4 Hazards on group and secondary packaging machines	28
4.1 General	28
4.2 General group and secondary packaging machine hazards	29
4.2.1 General	29
4.2.2 Mechanical hazards	29
4.2.3 Electrical hazards	30
4.2.4 Thermal hazards	30
4.2.5 Noise	30
4.2.6 Hazards from products and materials	30
4.2.7 Hazards due to neglecting ergonomic principles	31
4.2.8 Hazards caused by failures	31
4.2.9 Hazards due to neglecting hygienic design principles	32
4.2.10 Common mechanisms on group and secondary packaging machines	32
4.3 Hazards associated with a tray erecting machine	33
4.3.1 General	33
4.3.2 Tray blank magazine	34
4.3.3 Tray blank extracting mechanism	34
4.3.4 Tray blank transport mechanism	34
4.3.5 Forming assembly	35
4.3.6 Discharge mechanism	35
4.4 Hazards associated with case erecting machines	35
4.4.1 General	35
4.4.2 Hazards associated with a semi-automatic case erector	35
4.4.3 Hazards associated with a fully automatic case erector	35
4.5 Hazards associated with a place packing machine	37
4.5.1 General	37
4.5.2 In-feed conveyor	38
4.5.3 Product collating mechanisms	38
4.5.4 Transport mechanism	38
4.5.5 Product loading mechanism	39
4.6 Hazards associated with a horizontal case loading machine	39
4.6.1 General	39
4.6.2 Product in-feed conveyor	39
4.6.3 Product turning devices	40
4.6.4 Product collating mechanism	40
4.6.5 Case loading mechanism	40
4.6.6 Case funnel	40
4.6.7 Case support arms	40
4.6.8 Discharge conveyor	40
4.7 Hazards associated with case taping machines	40
4.7.1 General	40
4.7.2 Hazards associated with a manually adjusted case taping machine without flap tucking	40
4.7.3 Hazards associated with a self adjusting case taping machine without flap tucking	42
4.7.4 Hazards associated with a manually adjusted case taping machine with flap tucking	43

4.7.5	Hazards associated with a fully automatic case taping machine.....	45
4.8	Hazards associated with a wraparound case packing machine.....	46
4.8.1	General	46
4.8.2	Case blank magazine	47
4.8.3	Product in-feed conveyor	48
4.8.4	Transport mechanism	48
4.8.5	Case erecting mechanism	48
4.8.6	Product loading mechanism	48
4.8.7	Flap tucking mechanisms.....	48
4.8.8	Case sealing devices.....	48
4.8.9	Case compression.....	48
4.8.10	Discharge conveyor	48
5	Safety requirements and measures for group and secondary packaging machines	49
5.1	General	49
5.2	General requirements for group and secondary packaging machines	49
5.2.1	General	49
5.2.2	Requirements to eliminate mechanical hazards	49
5.2.3	Electrical requirements.....	56
5.2.4	Thermal hazards	58
5.2.5	Noise reduction.....	58
5.2.6	Measures to control hazards generated by products and materials	59
5.2.7	Ergonomic design principles	60
5.2.8	Requirements to prevent hazards caused by failures	61
5.2.9	Hygienic design requirements	63
5.2.10	Requirements for mechanisms used on most group and secondary packaging machines	64
5.3	Safety requirements for a tray erecting machine.....	66
5.3.1	General	66
5.3.2	Tray blank magazine	66
5.3.3	Tray blank extracting mechanism.....	67
5.3.4	Tray blank transport mechanism.....	67
5.3.5	Forming assembly.....	67
5.3.6	Discharge mechanism	67
5.4	Safety requirements for a case erecting machine	67
5.4.1	Safety requirements for a semi-automatic case erector	67
5.4.2	Safety requirements for a fully automatic case erector	68
5.5	Safety requirements for a place packing machine.....	69
5.5.1	General	69
5.5.2	In-feed conveyor	69
5.5.3	Product collating mechanisms	69
5.5.4	Transport mechanism	69
5.5.5	Product loading mechanism	69
5.6	Safety requirements for a horizontal case loading machine	71
5.6.1	General	71
5.6.2	In-feed conveyor – See 5.3.6.2.	71
5.6.3	Product turning devices	71
5.6.4	Product stacking mechanism.....	71
5.6.5	Case loading mechanism	71
5.6.6	Case funnel	71
5.6.7	Case support arms	72
5.6.8	Discharge conveyor – See 5.3.6.....	72
5.7	Safety requirements for case taping machines.....	72
5.7.1	Safety requirements for a manually adjusted case taping machine without flap tucking.....	72
5.7.2	Safety requirements for a self adjusting case taping machine without flap tucking	73
5.7.3	Safety requirements for a manually adjusted case taping machine with flap tucking	73
5.7.4	Safety requirements for a fully automatic case taping machine	74
5.7.5	Noise reduction.....	74
5.8	Safety requirements for a wraparound case packing machine	74
5.8.1	General	74
5.8.2	Case blank magazine	74

5.8.3	In-feed conveyor	74
5.8.4	Transport mechanism	74
5.8.5	Case erecting mechanism	75
5.8.6	Product loading mechanism	75
5.8.7	Flap tucking.....	75
5.8.8	Case closing devices – See 5.4.2.6.....	75
5.8.9	Case compression.....	75
5.8.10	Discharge conveyor	75
6	Verification of safety requirements and measures	75
6.1	General	75
6.2	Visual inspections with the machine stopped.....	75
6.2.1	Mechanical parts.....	75
6.2.2	Pneumatic systems	75
6.2.3	Hydraulic systems	75
6.2.4	Electrical systems	75
6.2.5	Guards	76
6.2.6	Design requirements	76
6.3	Measurements with the machine stopped	76
6.3.1	Guards	76
6.3.2	Electrical testing	76
6.4	Visual inspections with the machine running	76
6.4.1	Guards	76
6.4.2	Interlocking devices	76
6.4.3	Dissipation of stored energy	76
6.5	Measurements with the machine running.....	76
6.5.1	Measurement and declaration of noise emission	76
6.5.2	Temperature	76
6.6	Verification procedures	77
7	Information for use	79
7.1	Markings	79
7.2	Signals and warning signs	79
7.3	Instruction handbook.....	80
7.3.1	General	80
7.3.2	Requirements specific to group and secondary packaging machines	80
Annex A	(normative) Noise test code for group and secondary packaging machines - grade of accuracy 2 and 3.....	82
A.1	Scope	82
A.2	Definitions	82
A.3	Determination of emission sound pressure level at the work station	82
A.4	Determination of the sound power level	83
A.5	Installation and mounting conditions.....	83
A.6	Operating conditions.....	83
A.7	Measurement uncertainties	85
A.8	Information to be recorded.....	85
A.9	Information to be reported.....	85
A.10	Declaration and verification of noise emission values.....	86
Annex B	(normative) Methods of safeguarding small and medium sized apertures.....	88
B.1	General	88
B.2	Interlocked guard.....	88
B.3	Interlocked guard with ESPE trip device.....	90
B.4	ESPE trip device	92
B.5	Automatic guard	94
Annex C	(normative) Methods of safeguarding large apertures.....	96
C.1	General	96
C.2	ESPE in a vertical plane.....	96
C.3	Dynamic cell positioning of ESPE	98
C.4	Positioning of ESPE	99

Annex D (normative) ESPE Muting 101

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC 103

Annex ZB (informative) ^(A1) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC ^(A1) 104

Bibliography 105

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Foreword

This document (EN 415-7:2006+A1:2008) has been prepared by Technical Committee CEN/TC 146, "Packaging machines - Safety", 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

This document includes Amendment 1, approved by CEN on 2008-05-25.

This document supersedes EN 415-7:2006.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A_1}$ $\boxed{A_1}$.

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 Directives.

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

Other standards produced by the Technical Committee are:

EN 415 Safety of packaging machines;

Part 1: Terminology and classification of packaging machines and associated equipment.

Part 2: Pre-formed rigid container packaging machines.

Part 3: Form, fill and seal machines.

Part 4: Palletisers and depalletisers.

Part 5: Wrapping machines.

Part 6: Pallet wrapping machines.

Part 8: Strapping machines.

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 United Kingdom.

Introduction

Group and secondary packaging machines are used extensively in Europe, in an increasingly wide range of industries. They contain several significant hazards and have the potential to cause serious injury.

This document is a type C standard as defined in the Introduction of EN ISO 12100-1:2003.

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

This European Standard applies to the following groups of machines:

Group and secondary packaging machines and the collating systems associated with them.

The individual machines are described in 3.2 of this European Standard.

This European Standard deals with safety requirements for machine design, construction, installation, commissioning, operation, adjustment, maintenance and cleaning of group and secondary packaging machines.

The extent to which hazards, hazardous situations and events are covered, are indicated in Clause 4.

Exclusions

This European Standard is not applicable to the following machines:

- machines that were manufactured before the date of publication of this document by CEN;
- strapping machines. These machines are covered by EN 415-8;
- crate loaders and un-loaders for pre-formed rigid containers. These machines are covered by EN 415-2;
- cartoning machines. Cartoning machines are covered by EN 415-3.

This European Standard does not consider the following hazards:

- use of group and secondary packaging machines in potentially explosive atmospheres;
- health, safety or hygiene hazards associated with the products that may be handled by the machines, but does include general advice on this subject;
- hazards that may be associated with electromagnetic emissions from group and secondary packaging machines;
- hazards that may be associated with decommissioning group and secondary packaging machines.

2 Normative references

The following referenced documents are indispensable for the application 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 294:1992, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs*

EN 349:1993, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 415-1:2000, *Packaging machines safety — Part 1: Terminology and classification for packaging machines and associated equipment*

- EN 418, *Safety of machinery — Emergency stop equipment, functional aspects, principles for design*
- EN 563, *Safety of machinery — Temperatures of touchable surfaces — Ergonomics data to establish temperature limit values for hot surfaces*
- EN 574:1996, *Safety of machinery — Two-hand control devices — Functional aspects — Principles for design*
- EN 614-1:1995, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*
- EN 619, *Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of unit loads*
- EN 626-1, *Safety of machinery — Reduction of risks to health from hazardous substances emitted by machinery — Part 1: Principles and specifications for machinery manufacturers*
- EN 626-2, *Safety of machinery — Reduction of risk to health from hazardous substances emitted by machinery — Part 2: Methodology leading to verification procedures*
- EN 775, *Manipulating industrial robots — Safety (ISO 10218:1992, modified)*
- EN 811, *Safety of machinery — Safety distances to prevent danger zones being reached by the lower limbs*
- EN 894-1, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 1: General principals for human interactions with displays and control actuators*
- EN 894-2, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*
- EN 894-3, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators*
- EN 953:1997, *Safety of machinery — Guards - General requirements for the design and construction of fixed and moveable guards*
- EN 954-1:1996, *Safety of machinery — Safety related parts of control systems — Part 1: General principles for design*
- EN 982:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*
- EN 983:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*
- EN 999, *Safety of machinery — The positioning of protective equipment in respect of approach speeds of parts of the human body*
- EN 1005-2:2003, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*
- EN 1005-3, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*
- EN 1005-4:2005, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*
- EN 1037, *Safety of machinery — Prevention of unexpected start-up*

- EN 1050, *Safety of machinery — Principles for risk assessment*
- EN 1088:1995, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*
- EN 1672-2:2005, *Food processing machinery — Basic concepts — Part 2: Hygiene requirements*
- EN 1760-1, *Safety of machinery — Pressure sensitive protective devices — Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors*
- EN 1760-2, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*
- EN 13478, *Safety of machinery — Fire prevention and protection*
- EN 60204-1:1997, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997)*
- EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*
- EN 61310-1:1995, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals (ISO 61310-1:1995)*
- EN 61310-3, *Safety of machinery — Indication marking and actuation — Part 3: Requirements for the location and operation of actuators (ISO 61310-3:1999)*
- EN 61496-1:2004, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (ISO 61496-1:2004, modified)*
- CLC/TS 61496-3, *Safety of machinery — Electro-sensitive protective equipment — Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR) (IEC 61496-3:2001)*
- EN 61508-1, *Functional safety of electrical/electronic/programmable electronic safety-related systems — Part 1: General requirements (IEC 61508-1:1998 + Corrigendum 1999)*
- EN 61508-2, *Functional safety of electrical/electronic/programmable electronic safety-related systems — Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems (IEC 61508-2:2000)*
- EN 61508-3, *Functional safety of electrical/electronic/programmable electronic safety-related systems — Part 3: Software requirements (IEC 61508-3:1998 + Corrigendum 1999)*
- EN 62061:2005 *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005)*
- 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 3746:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)*
- EN ISO 3747:2000, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Comparison method for use in situ (ISO 3747:2000)*
- EN ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 9614-2:1996, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning (ISO 9614-2:1996)*

EN ISO 11201:1995, *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 reflective plane (ISO 11201:1995)*

EN ISO 11202:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Survey method in situ (ISO 11202:1995)*

EN ISO 11204:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Method requiring environmental corrections (ISO 11204:1995)*

EN ISO 12001:1996, *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 14122-1:2001, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means of access between two levels (ISO 14122-1:2001)*

EN ISO 14122-2, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001)*

EN ISO 14122-3, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*

EN ISO 14122-4, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO 14122-4:2004)*

IEC 60417-1:2002, *Graphical symbols for use on equipment — Part 1: Overview and application*

ISO 7000, *Graphical symbols for use on equipment — Index and synopsis*