Anhang ZB
(informativ)

Zusammenhang zwischen dieser Europäischen Norm und den grundlegenden Anforderungen der abzudeckenden Richtlinie 2014/30/EU [2014 OJ L96]

Diese Europäische Norm wurde im Rahmen eines von der Europäischen Kommission erteilten Normungsauftrages bezüglich harmonisierter Normen zur Unterstützung der Richtlinie 2014/30/EG über elektromagnetische Verträglichkeit, M/552 / C(2016) 7641, endgültig vom 30.11.2016, erarbeitet, um ein freiwilliges Mittel zur Erfüllung der grundlegenden Anforderungen der Richtlinie 2014/30/EG des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (2014 OJ L96) bereitzustellen.

Sobald diese Norm im Amtsblatt der Europäischen Union im Sinne dieser Richtlinie in Bezug genommen worden ist, berechtigt die Übereinstimmung mit den in Tabelle ZA.1 aufgeführten normativen Abschnitten dieser Norm innerhalb der Grenzen des Anwendungsbereiches dieser Norm zur Vermutung der Konformität mit den entsprechenden grundlegenden Anforderungen und der zugehörigen EFTA Vorschriften.

Tabelle ZB.1 — Zusammenhang zwischen dieser Europäischen Norm und Anhang I der Richtlinie 2014/30/EU [2014 OJ L96]

Grundlegende Anforderungen der EMV-Richtlinie 2014/30/EU	Abschnitt(e)/Unterabschnitt(e) dieser Europäischen Norm	Erläuterungen/Anmerkungen
Anhang I Abschnitt 1	5.3.3	Elektromagnetische Verträglichkeit

WARNHINWEIS 1 — Die Konformitätsvermutung bleibt nur bestehen, so lange die Fundstelle dieser Europäischen Norm in der im Amtsblatt der Europäischen Union veröffentlichten Liste erhalten bleibt. Anwender dieser Norm sollten regelmäßig die im Amtsblatt der Europäischen Union zuletzt veröffentlichte Liste einsehen.

WARNHINWEIS 2 — Für Produkte, die in den Anwendungsbereich dieser Norm fallen, können weitere Anforderungen und weitere Rechtsvorschriften der EU anwendbar sein.

Literaturhinweise

[1] EN 614-1:2006+A1:2009, *Sicherheit von Maschinen — Ergonomische Gestaltungsgrundsätze — Teil 1: Begriffe und allgemeine Leitsätze*

[2] EN 617, *Stetigförderer und Systeme — Sicherheits- und EMV-Anforderungen an Einrichtungen für die Lagerung von Schüttgütern in Silos, Bunkern, Vorratsbehältern und Trichtern*

[3] EN 618, *Stetigförderer und Systeme — Sicherheits- und EMV-Anforderungen an mechanische Fördereinrichtungen für Schüttgut ausgenommen ortsfeste Gurtförderer*

[4] EN 619, *Stetigförderer und Systeme — Sicherheits- und EMV-Anforderungen an mechanische Fördereinrichtungen für Stückgut*

[5] EN 1005-1: 2002+A1:2008, *Sicherheit von Maschinen — Menschliche körperliche Leistung — Teil 1: Begriffe*

[6] EN 1005-2:2003+A1:2008, *Sicherheit von Maschinen — Menschliche körperliche Leistung — Teil 2: Manuelle Handhabung von Gegenständen in Verbindung mit Maschinen und Maschinenteilen*

[7] EN 1005-3:2002+A1:2008, *Sicherheit von Maschinen — Menschliche körperliche Leistung — Teil 3: Empfohlene Kraftgrenzen für Maschinenbetätigung*

[8] EN ISO 14118:2018, *Sicherheit von Maschinen — Vermeidung von unerwartetem Anlauf*

[9] ISO 2048:1974, *Continuous handling equipment — Nomenclature*

[10] ISO 6184-1:1985, *Explosion protection systems — Part 1: Determination of explosion indices of combustible dusts in air*

[11] EN 60529:1991+A1:2000, *Schutzarten durch Gehäuse (IP-Code)*

[12] EN 60529:1991+A1:2000, *Schutzarten durch Gehäuse (IP-Code) (IEC 60529:1989+A1:1999)*

[13] EN 60529:1991+A2:2003, *Schutzarten durch Gehäuse (IP-Code) (IEC 60529:1989+A2:2013)*

[14] IEC 61241-1-1:2007, *Electrical apparatus for use in the presence of combusible dust — Part 1: Electrical apparatus protected by enclosures and surface temperature limitation — Specification for apparatus*

[15] IEC/TS 60079-32-1:2013+A1:2017, *Explosive atomospheres — Part 32-1: Electrostatic hazards, guidance*

[16] FEM 2.581/2.582, *Schüttguteigenschaften; Allgemeine Schüttguteigenschaften und ihre Darstellung in Kurzform*

[17] FEM/VDI 2263, *Staubbrände und Staubexplosionen, Gefahren, Beurteilungen, Schutzmaßnahmen*

[18] FEM/VDI 3673, *Druckentlastung von Staubexplosionen*

– Entwurf –

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 620

August 2018

ICS 53.040.10

Will supersede EN 620:2002+A1:2010

English Version

Continuous handling equipment and systems - Safety and EMC requirements for fixed belt conveyors for bulk materials

Équipements et systèmes de manutention continue - Prescriptions de sécurité et de CEM pour les transporteurs à courroie fixes pour produits en vrac

Stetigförderer und Systeme - Sicherheits- und EMV-Anforderungen an ortsfeste Gurtförderer für Schüttgutt

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 148.

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.

This draft European Standard was established by CEN 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

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

Ref. No. prEN 620:2018 E

Contents

Page

European foreword

This document (prEN 620:2018) has been prepared by Technical Committee CEN/TC 148 "Continuous handling equipment and systems - Safety", the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 620:2002+A1:2010.

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 relationship with EU Directives, see informative Annexes ZA and ZB, which are integral parts of this document.

This standard forms part of a series of five standards the titles of which are given below:

— EN 617 "*Continuous handling equipment and systems — Safety and EMC requirements for the equipment for the storage of bulk materials in silos, bunkers, bins and hoppers*";

— EN 618 "*Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of bulk materials except fixed belt conveyors*";

— EN 619 "*Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of unit loads*";

— EN 620 "*Continuous handling equipment and systems — Safety and EMC requirements for fixed belt conveyors for bulk materials*";

— EN 741 "*Continuous handling equipment and systems — Safety requirements for systems and their components for pneumatic handling of bulk materials*".

Introduction

This European Standard is a type C standard as stated in EN ISO 12100.

The products concerned and the extent to which hazards are covered are indicated in the scope of this standard.

While producing this standard it was assumed that:

— clarifications occur between the manufacturer and the purchaser concerning particular conditions for the use and places of use for the machinery (typically considering adjacent machinery, means of access, guarding concept, control systems) related to health and safety. An agreement is needed between the manufacturer and purchaser about belt material considering specific risk e.g. fire;

— only suitably trained persons operate this machinery;

— the machinery will be kept in good repair and working order, in accordance with the manufacturer's instructions, to retain specified health and safety characteristics throughout its working life;

— the place of installation is adequately lit.

— the place of installation will allow safe use of the machinery;

— by design of the load bearing elements, the safe operation of the system and components is ensured for loading ranging from zero to 100 % of the rated capacities and during testing;

— all parts of the machinery without specific requirements, will be:

a) made from materials of adequate strength and durability and of suitable quality for their intended purpose;

b) designed in accordance with the usual engineering practice and engineering codes, taking account of all failure modes and incorporating appropriate safety factors.

1 Scope

1.1 This document deals with the technical requirements for stationery belt conveyors and systems as defined in 3.1 to 3.2.4, for designed for continuously conveying loose bulk materials. The covered phases of life cycle are design, setting, operation, maintenance and cleaning. Requirements for electromagnetic compatibility are also covered.

1.2 This document does not give the additional requirements for:

a) use in coal mining and open cast lignite mining;

b) use for man-riding;

c) floating, dredging and ship mounted structures supporting the conveyor;

d) biological and chemical hazards resulting from handling foodstuffs or pharmaceuticals;

e) the design of the supporting structure which is not part of a conveyor;

f) the effects of wind;

g) hazards resulting from handling specific hazardous materials, (e.g. explosives, radiating material);

h) hazards resulting from contact with or inhalation of harmful fluids, gases, mists, fumes or dust;

i) biological and micro-biological (viral or bacterial) hazards;

j) hazards due to heat radiation from the materials handled;

k) hazards caused by operation in electromagnetic fields outside the range of EN 61000-6-2:2005;

l) hazards caused by operation subject to special regulations (e.g. explosive atmospheres);

m) hazards caused by the use of ionising radiation sources;

n) conveyors using a moving belt with other than a continuous rubber or polymeric surface for the conveying medium.

The safety requirements of this standard apply to equipment and systems placed on the market after the date of publication of this standard.

NOTE Directive 2014/34/EC concerning equipment and protective systems intended for use in potentially explosive atmospheres can be applicable to the type of machine or equipment covered by this European Standard. The present standard is not intended to provide means of complying completely with the essential health and safety requirements of Directive 2014/34/EC.

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 349:1993+A1:2008, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 842:1996+A1:2008, *Safety of machinery — Visual danger signals — General requirements, design and testing*

EN 1063:1999, *Glass in building — Security glazing — Testing and classification of resistance against bullet attack*

EN 1127-1:2011, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 61000-6-2:2005, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments*

EN 61000-6-3:2007, *Electromagnetic compatibility (EMC) — Part 6-3: Generic standards — Emission standard for residential, commercial and light-industrial environments*

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: Specification for general requirements (IEC 60204-1:2005)*

EN 60204-1:2006/A1:2009, *Safety of machinery — Electrical equipment of machines — Part 1: Specification for general requirements (IEC 60204-1:2005/AMD1:2008)*

EN 60204-11:2000, *Safety of machinery — Electrical equipment of machines — Part 11: Requirements for HV equipment for voltages above 1000 V a.c. or 1500 V d.c. and not exceeding 36 kV (IEC 60204-11:2000)*

EN 60947-5-1:2004, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2003)*

EN 60947-5-1:2004/A1:2009, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2003/AMD1:2009)*

EN 60947-5-5:1997, *Low-voltage switchgear and controlgear — Part 5-5: Control circuit devices and switching elements — Electrical emergency stop device with mechanical latching function (IEC 60947-5-5:1997)*

EN 60947-5-5:1997/A11:2013, *Low-voltage switchgear and controlgear — Part 5-5: Control circuit devices and switching elements — Electrical emergency stop device with mechanical latching function (IEC 60947-5-5:1997)*

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 61496-1:2013, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2012)*

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 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 12150-1:2015, *Glass in building — Thermally toughened soda lime silicate safety glass — Part 1: Definition and description*

EN ISO 12543-1:1999, *Glass in building — Laminated glass and laminated safety glass — Definitions and descri ption of component parts (ISO 12543-1:2011)*

EN ISO 12543-2:2011, *Glass in building — Laminated glass and laminated safety glass — Part 2: Laminated safety glass (ISO 12543-2:2011)*

EN ISO 12543-3:2011, *Glass in building — Laminated glass and laminated safety glass — Part 3: Laminated glass (ISO 12543-3:2011)*

EN ISO 12543-4:2011, *Glass in building — Laminated glass and laminated safety glass — Part 4: Test methods for durability (ISO 12543-4:2011)*

EN ISO 12543-5:2011, *Glass in building — Laminated glass and laminated safety glass — Part 5: Dimensions and edge finishing (ISO 12543-5:2011)*

EN ISO 12543-6:2011, *Glass in building — Laminated glass and laminated safety glass — Appearance (ISO 12543-6:2011)*

EN ISO 13732-1:2008, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)*

EN ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery — Emergency stop function — Principles for design (ISO 13850:2015)*

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 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

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)*

EN ISO 14122-1:2016, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means and general requirements of access (ISO 14122-1:2016)*

EN ISO 14122-2:2016, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2016)*