Irish Standard
I.S. EN 1501-3:2021

Refuse collection vehicles - General requirements and safety requirements - Part 3: Front loaded refuse collection vehicles

I.S. EN 1501-3:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 1501-3:2021 is the adopted Irish version of the European Document EN 1501-3:2021, Refuse collection vehicles - General requirements and safety requirements - Part 3: Front loaded refuse collection vehicles

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 1501-3

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English Version

Refuse collection vehicles - General requirements and safety requirements - Part 3: Front loaded refuse collection vehicles

Véhicules de collecte de déchets - Exigences générales et exigences de sécurité - Partie 3 : Véhicules de collecte des déchets à chargement frontal

Abfallsammelfahrzeuge - Allgemeine Anforderungen und Sicherheitsanforderungen - Teil 3: Frontlader

This European Standard was approved by CEN on 15 February 2021.

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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.

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European foreword

This document (EN 1501-3:2021) has been prepared by Technical Committee CEN/TC 183 “Waste management”, 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of an identical text or by endorsement, at the latest by September 2021 and conflicting national standards shall be withdrawn at the latest by March 2022.

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 1501-3:2008.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The main changes compared to the previous edition are listed below:

— document has been completely revised and restructured;

— European foreword and Introduction have been updated;

— Clause 1, Scope, has been slightly revised and clarified;

— Clause 2, Normative references, have been updated;

— in Clause 3, new terms and definitions have been added and others revised;

— Table 1 has been updated;

— Table 2 “Basic scenarios and applicable danger zones” and a completely new Annex C with multiple figures of danger zones has been added;

— previous Table 3 “Verification” has been deleted and information integrated in Table 1;

— requirements on compaction mechanism (5.3), discharge system (5.4), lifting devices (5.5), remote controls (5.10.3.4), monitoring and warning (5.11), maintenance (5.13), stability (5.14), noise control (5.18) and many more have been revised;

— Annex A and B have been revised;

— Annex D “Illuminated areas” has been added;

— Annex ZA has been updated.

EN 1501 consists of the following parts under the general title *Refuse collection vehicles — General requirements and safety requirements*:

— *Part 1: Rear loaded refuse collection vehicles;*

— *Part 2: Side loaded refuse collection vehicles;*

— *Part 3: Front loaded refuse collection vehicles* (this part);

— *Part 4: Noise test code for refuse collection vehicles;*

— *Part 5: Lifting devices for refuse collection vehicles.*

This document will be enforced at the same time as EN 1501-5:2021 and applied whenever the front loaded RCV is fitted with a lifting device.

For combinations of a front loaded refuse collection vehicle with rear and/or side loading capability the corresponding clauses of standards EN 1501-1:2021, EN 1501-2:2021 and EN 1501-5:2021 apply.

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, 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 12100:2010.

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.

This standard is designed for careful consideration by designers, manufacturers, suppliers and users of front loaded RCVs.

This document should be read in conjunction with EN 1501-5:2021 developed for lifting devices which are compatible with the refuse collection vehicle specified in this document.

While producing this document it was assumed that:

— for RCV the requirements of road traffic regulations apply. Where road traffic regulations are in conflict with the provisions of this standard, the road regulations have priority;

— due to the European regulations on the approval of vehicles for use on public roads, the requirements of UN/ECE R10:2019 for an RCV with regard to EMC applies. Therefore, EMC is not further considered in this standard;

— the guidelines issued by the chassis-cab manufacturer have been taken into account;

— chassis related safety items are handled by the chassis manufacturer according to their state of the art and in compliance with the public road regulations;

— that based on measurements on different types of RCVs hand-arm vibrations are in general lower than 2,5 m/s^2;

— that based on measurements on different types of RCVs whole-body vibrations are lower than 0,5 m/s^2;

— components without specific requirements are designed in accordance with the usual engineering practice and calculation codes, including all failure modes, of sound mechanical and electrical construction and made of materials with adequate strength and of suitable quality;

— components are kept in good repair and working order, so that the required characteristics remain despite wear and tear;

— harmful materials, such asbestos, are not used as part of the front loaded RCV;

— only persons who have been appropriately trained will operate the front loaded RCV.

1 Scope

This document applies to a front loaded refuse collection vehicle (RCV), as defined in 3.2.

This document deals with all significant hazards, hazardous situations and events relevant to the front loaded RCV, when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer, throughout its foreseeable lifetime, as defined in Clause 4.

This document is applicable to the design and construction of the front loaded RCV so as to ensure that it is fitted for its intended function and can be operated, cleaned (including unblocking), adjusted and maintained during its entire lifetime. It is not applicable to the end of life of the front loaded RCV.

This document describes and defines the safety requirements of the front loaded RCV excluding the interface with the lifting device(s) and excluding the lifting device itself and excluding loader cranes, which could be mounted on the RCV.

Safety requirements for the lifting device(s), loader cranes and their interface to the RCV are defined in EN 1501-5:2021.

Safety requirements for loader cranes are defined in EN 12999:2020. Additional specific requirements to loader cranes installed on RCVs are defined in EN 1501-5:2021.

This document also applies to compactors, operated on a truck for collecting purposes.

This document is not applicable to:

— operation in severe conditions, e.g. extreme environmental conditions such as:

  — below −20 °C and above +40 °C temperatures;

  — tropical environment;

  — wind velocity in excess of 75 km/h;

— contaminating environment;

— corrosive environment;

— operation in potentially explosive atmospheres;

— handling of loads the nature of which could lead to dangerous situations (e.g. hot refuses, acids and bases, radioactive materials, contaminated refuse, especially fragile loads, explosives);

— operation on ships.

This document is not applicable to machinery which is manufactured before the date of publication of this document by CEN.

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 547-1:1996+A1:2008, *Safety of machinery - Human body measurements - Part 1: Principles for determining the dimensions required for openings for whole body access into machinery*

EN 547-2:1996+A1:2008, *Safety of machinery - Human body measurements - Part 2: Principles for determining the dimensions required for access openings*