BS EN 1501-4:2023

BSI Standards Publication

Refuse collection vehicles — General requirements and safety requirements

Part 4: Noise test code for refuse collection vehicles

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National foreword

This British Standard is the UK implementation of EN 1501-4:2023. It supersedes BS EN 1501-4:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/183.

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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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May 2023

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English Version

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Véhicules de collecte de déchets - Exigences générales et exigences de sécurité - Partie 4 : Code d'essai acoustique des véhicules de collecte des déchets

Abfallsammelfahrzeuge - Allgemeine Anforderungen und Sicherheitsanforderungen - Teil 4: Geräuschprüfverfahren für Abfallsammelfahrzeuge

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Full document details: BS EN 1501-4:2023

Contents

Page

European foreword ... 3
Introduction ... 5
1 Scope ... 6
2 Normative references ... 6
3 Terms and definitions ... 7
4 Determination of the A-weighted emission sound pressure level(s) at working station(s) ... 8
4.1 General ... 8
4.2 Measurement positions ... 8
4.2.1 Working station(s) outside the cab ... 8
4.2.2 Working station(s) in the cab ... 9
5 Determination of the A-weighted sound power level ... 10
5.1 General ... 10
5.2 Travel cycle ... 10
5.2.1 Travel path ... 10
5.2.2 Measuring path ... 11
5.3 Microphone positions ... 12
6 Installation and operating conditions ... 14
6.1 Installation conditions ... 14
6.2 Operating conditions ... 14
6.2.1 General operating conditions ... 14
6.2.2 Specific operating conditions for the emission sound pressure level(s) at working station(s) measurement ... 15
6.2.3 Specific operating conditions for the sound power level measurement ... 15
7 Measurement uncertainties ... 16
7.1 Measurement of emission sound pressure level(s) at working station(s) ... 16
7.2 Measurement of sound power level ... 16
8 Information to be recorded and reported ... 16
9 Information for use, noise emission declaration and labelling ... 17
9.1 Information for use including noise emission declaration and sales literature ... 17
9.2 Labelling ... 18
Annex A (informative) Test report form ... 19
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC ... 22
Bibliography ... 23

Documents
Document Sharing Hub
Full document details: BS EN 1501-4:2023

European foreword

This document (EN 1501-4:2023) 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 November 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.

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 1501-4:2007.

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;

— Part 4: Noise test code for refuse collection vehicles (this part);

— Part 5: Lifting devices for refuse collection vehicles.

This document provides a means for the determination and declaration of noise emission by refuse collection vehicles (RCVs) falling within the scope of the standards of the EN 1501 series. The determination of noise emission values is a prerequisite for a manufacturer to assess the noise reduction obtained at the design stage.

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

— This revision of the original standard EN 1501-4:2007 specifies a new test procedure for determining the sound power level. The vehicle is not tested in the loaded condition as before, as the test is carried out without refuse containers and refuse material. Since many different refuse containers are used in the EU and RCVs are loaded with many different refuse materials, the experts of CEN/TC183/WG2 have agreed that in a standardized noise measurement for RCVs, refuse containers and refuse material cannot be taken into account. In order to give the user a clear picture of the noise behaviour of RCVs, and since the EN 1501 series refers purely to RCVs, this standard only deals with the noise behaviour of RCVs itself. The noise behaviour of waste collection containers can mainly be influenced by design and construction under the responsibility of the container manufacturer. With this new method, the sound power level is not only measured during the loading process when the vehicle is stationary, as before, but also while the RCV approaches the loading point and leaves it after loading. This is intended to reflect future noise reductions through the use of alternative drive systems.

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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) / Regulation(s).

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

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 European Standard provides a procedure for the measurement and calculation of sound power emitted by RCVs thus enabling manufacturers and importers to mark and certify rear loaded, side loaded and front loaded RCVs.

The RCV work cycle for the measurement of the emission sound pressure levels at the working stations (L_{PA}) differs from the work cycle of the newly specified measurement of sound power level (L_{WA}), since the L_{WA} is measured while the refuse collection vehicle (RCV) approaches the loading point and leaves it after loading, whereby the L_{PA} is only measured stationary at the loading point. However, experience has shown that the noise emission due to the travelling RCV have no significant effects to the emission sound pressure levels at the working stations.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

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.

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