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Identifikacija in/ali ugotavljanje količine odpadkov

Identification and/or determination of the quantity of waste

Identifikation und/oder Mengenbestimmung von Abfall

Identification et/ou détermination de la quantité de déchets

Ta slovenski standard je istoveten z: **EN 14803:2020**

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Identification and/or determination of the quantity of waste

Identification et/ou détermination de la quantité de déchets

Identifikation und/oder Mengenbestimmung von Abfall

This European Standard was approved by CEN on 27 April 2020.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 14803:2020) 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of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

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 14803:2006.

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

a) The Introduction has been deleted.

b) Clause 2 "Normative References" and Clause 3 "Terms and definitions" have been revised.

c) 4.2.1.2.4 "Optical data carrier position (dot code/ bar code) for automatic reading", 4.2.1.2.5 "Optical data carrier (dot code/bar code) position for manual reading", Table 2 "Test requirements and acceptance criteria for bar code/dot code stickers", 4.5 "Data processing centre (DPC)" and 4.6.1.2 "Bar code/dot code" have been deleted.

d) Table 4 "Code structure of the unique identification in the transponder" has been updated.

e) 4.7 "Integrity of data" has been revised.

f) A.2 "Comb lifting device with identification" has been revised.

g) Former Annex B "Positions of optical data carriers (dot code/bar code labels) on waste containers" has been deleted.

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, Turkey and the United Kingdom.

1 Scope

This document specifies general requirements and verifications for methods of identification of waste containers and/or determination of the quantity of waste and other reusable materials including:

— safety requirements;

— interface requirements and performances;

— data to be treated and their integrity.

This document is applicable to systems for handling containers conforming to the EN 840 series.

Although this document does not cover systems for handling containers not conforming to the EN 840 series, users are encouraged to apply the requirements of this document to these systems as far as possible.

This document is applicable to systems both for billing and not for billing.

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 840-1, *Mobile waste and recycling containers - Part 1: Containers with 2 wheels with a capacity up to 400 l for comb lifting devices - Dimensions and design*

EN 840-2, *Mobile waste and recycling containers - Part 2: Containers with 4 wheels with a capacity up to 1 300 l with flat lid(s), for trunnion and/or comb lifting devices - Dimensions and design*

EN 840-3, *Mobile waste and recycling containers - Part 3: Containers with 4 wheels with a capacity up to 1 300 l with dome lid(s), for trunnion and/or comb lifting devices - Dimensions and design*

EN 840-4, *Mobile waste and recycling containers - Part 4: Containers with 4 wheels with a capacity up to 1 700 l with flat lid(s), for wide trunnion or BG- and/or wide comb lifting devices - Dimensions and design*

EN 840-5, *Mobile waste and recycling containers - Part 5: Performance requirements and test methods*

EN 840-6, *Mobile waste and recycling containers - Part 6: Safety and health requirements*

EN 1501 (all parts), *Refuse collection vehicles — General requirements and safety requirements*

EN 45501, *Metrological aspects of non-automatic weighing instruments*

EN 60068-2-6, *Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal) (IEC 60068-2-6)*

EN 60068-2-27, *Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock (IEC 60068-2-27)*

EN 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

EN ISO 7250-1, *Basic human body measurements for technological design — Part 1: Body measurement definitions and landmarks (ISO 7250-1:2017)*

ISO 11784, *Radio frequency identification of animals — Code structure*

OIML R 51, Automatic catchweighing instruments

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
identification
ID
process which consists in accurately recognising and verifying a waste container by reading a data carrier

3.2
determination of the quantity of waste
DQW
determination of the weighing of the waste mass and/or counting of emptying operations

3.3
data carrier
device carrying data which can be recognised by an electro-magnetic, optical or other reading device

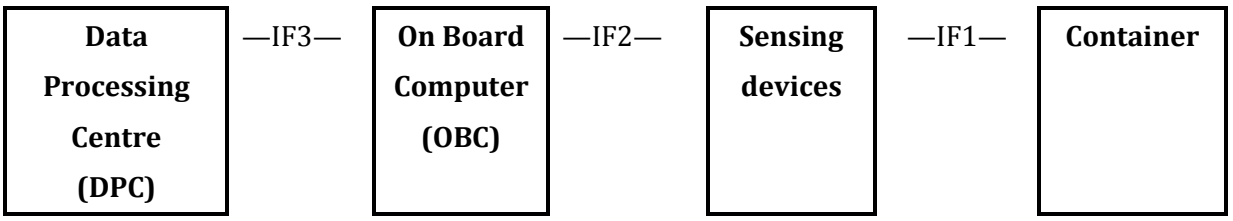
3.4
interface
IF
boundary linking two systems

Note 1 to entry: The interface could be a mechanical interface, a data interface, an electrical interface etc.

Note 2 to entry: IF2 now corresponds to EN 16815 “CleANopen – Application profile for municipal vehicles”.

Note 3 to entry: For the purposes of this document, interfaces (IF) are numbered as follows in Table 1:

Table 1 — Data flow and interfaces



3.5
malfunction
non-deliberate modification, addition, omission or suppression of signals or data

3.6 Data processing

3.6.1
storage
recording of data relating to the collection of waste

3.6.2
transfer
process or method of transmitting data relating to the collection of waste

3.6.3
read
process of retrieving data from some machine-readable medium and, as appropriate, the contention and error control management, and channel and source decoding required to recover and communicate the data entered at source

3.6.4
read only
RO
distinguishing a transponder in which the data is stored in an unchangeable manner and can therefore only be read

3.6.5
read/write
R/W
applied to a radio frequency identification system, it is the ability both read data from a transponder and to change data (write process) using a suitable programming device

3.6.6
write once/read many
WORM
distinguishing a transponder that can be partly or totally programmed once by the user, and thereafter only read

3.6.7
sensing device
system with one or more sensors which detects and/or processes and transfers signals and/or data

3.6.8
encryption
means of securing data, often applied to a plain or clear text, by converting it to a form that is unintelligible in the absence of an appropriate decryption key

3.7 Identification systems

3.7.1
transponder
data carrier (also called “electromagnetic label”) associated with the object to be identified

Note 1 to entry: The transponder is intended to receive a radio frequency signal and to return a different radio frequency signal containing relevant information.

3.7.2
positioning system by geographical co-ordinates
GNSS
identification of a location with geographical co-ordinates

3.7.3
antenna
electronic component which emits or receives energy to/from a data carrier within a radio frequency spectrum

Note 1 to entry: Antennas are also used to receive data from GNSS satellites.

3.7.4
transponder reader
sensing device which, with an antenna, transmits a radio signal according to a given frequency towards one or more transponders and receives a signal back

Note 1 to entry: The reader is used to establish dialogue without contact with the transponder and to exchange data.

3.8 Systems for the determination of the quantity of waste (DQW systems)

3.8.1
weighing
determination of the waste mass

3.8.2
automatic weighing instrument
instrument that weighs without the intervention of an operator and follows a pre-determined program of automatic process characteristic of the instrument

[SOURCE: International Organization of Legal Metrology (OIML R51), 2010, *Automatic catchweighing instruments – Part 1: Metrological and technical requirements – Tests* (§ T.1.1)]

3.8.3
non-automatic weighing instrument
instrument that requires the intervention of an operator during the weighing process, for example to deposit on or remove from the receptor the load to be measured and also to obtain the result

[SOURCE: EN 45501]

3.8.4
On Board Computer
OBC
electronic device for storing and receiving data and performing calculations, and which is fitted on the refuse collection vehicle, and which transfers data from/to sensing devices and to/from the data processing centre (DPC)

3.8.5
data processing centre
DPC
electronic device for storing, receiving and giving back data and performing calculations separate from the vehicle; the DPC transfers data from/to OBCs

4 Requirements

4.1 General requirements on safety and health

4.1.1 Every component and procedure for identification (ID) and/or determination of the quantity of waste (DQW) shall not influence the safety and/or on the correct operation of the refuse collection vehicle (RCV) including the lifting device.

4.1.2 The fitting of components to the waste container shall not have any influence on the safe use of the waste container.

4.1.3 All components for ID and DQW, when used on vehicles conforming to EN 1501 (all parts), shall conform to the EMC requirements as defined in EN 1501 (all parts).

4.1.4 If an existing RCV or lifting device is modified by fitting an ID or DQW system then the conformity with EN 1501 (all parts) and relevant standards shall be checked again.

If the fitting of the sensing devices changes one or more characteristics of the RCV and its associated lifting device (maximum permissible mass, operating, etc.), new characteristics shall be included in the documentation of the RCV and of the lifting device.

A lifting device equipped with systems for ID and DQW shall fulfil the requirements defined in Annex C.

NOTE Attention is drawn to the conformity with the requirements of the Machinery Directive (98/37/EC) and the EMC Directives (89/336/EC, 95/54/EC) if an existing refuse collection vehicle or lifting device is modified by fitting an ID or DQW system.

4.1.5 The system consisting of the OBC and the sensing devices for ID and for DQW shall be galvanically separated from the controlling unit of the lifting device and shall not negatively affect the functions of the chassis, bodywork and lifting device.

4.1.6 The components for ID or DQW shall be fitted in such a way that they do not generate any risk for any person (driver, operator, other person) under normal and emergency situations.

4.1.7 Where handling of elements by persons is necessary, dimensions of related devices shall be based on EN ISO 7250-1.

4.1.8 All electrical systems shall conform to EN 60204-1.

4.1.9 Every component shall be installed in accordance with the instructions of its manufacturer.

4.2 Data carriers

4.2.1 Positioning on the container

4.2.1.1 Manufacturer's instructions

The manufacturer of ID devices shall provide detailed instructions on the assembly of fitting of data carriers on the containers in particular regarding dimensions, tolerances and orientation.

4.2.1.2 Position

4.2.1.2.1 General

The position of data carriers on containers shall be such that safe and unambiguous communication with the reader is possible and that the risk that the data carrier is damaged is minimal.