SLOVENSKI STANDARD
SIST EN 840-1:2020

01-junij-2020

Nadomešča:
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Premični zabojniki za odpadke in za recikliranje - 1. del: Zabojniki na dveh kolesih s prostornino do 400 l za iztresalnike z glavnikom - Mere in oblika

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

Fahrbare Abfall- und Wertstoffbehälter - Teil 1: Behälter mit 2 Rädern und einem Nennvolumen bis 400 l für Kammschüttungen - Maße und Formgebung

Conteneurs roulants à déchets et de recyclage - Partie 1 : Conteneurs à 2 roues de capacité inférieure ou égale à 400 l pour lève-conteneurs à peigne - Dimensions et conception

Ta slovenski standard je istoveten z: **EN 840-1:2020**

ICS:

13.030.40	Naprave in oprema za odstranjevanje in obdelavo odpadkov	Installations and equipment for waste disposal and treatment

SIST EN 840-1:2020 **en,fr,de**

EUROPEAN STANDARD
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EN 840-1

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ICS 13.030.40

Supersedes EN 840-1:2012

English Version

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

Conteneurs roulants à déchets et de recyclage - Partie 1 : Conteneurs à 2 roues de capacité inférieure ou égale à 400 l pour lève-conteneurs à peigne - Dimensions et conception

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This European Standard was approved by CEN on 7 October 2019.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

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

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European foreword

This document (EN 840-1:2020) 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 October 2020, and conflicting national standards shall be withdrawn at the latest by October 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 840-1:2012.

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

a) Table 2 "Examples of the most frequent assignments of classes and volumes" has been added:

b) Tables 3 and 4 have been revised and new recommendations were added;

c) Figure 3 "Functional dimension for frontal receivers" has been updated;

d) former Annex B "Recommendations for manufacturers of lifting devices" has been deleted;

e) document has been editorially revised and brought in line with the state of the art.

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 dimensions and design requirements of mobile waste and recycling containers with 2 wheels, with capacity up to 400 l to be used by comb lifting devices.

These containers are only approved for the before explicitly mentioned lifting devices.

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 840-5, *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 1501-5:—[1], *Refuse collection vehicles — General requirements and safety requirements — Part 5: Lifting devices for refuse collection vehicles*

EN ISO 11469, *Plastics - Generic identification and marking of plastics products (ISO 11469)*

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

NOTE Terms for components of mobile waste and recycling containers and lifting devices in three languages are given in Annex A.

3.1
mobile waste and recycling container
appropriately designed container fitted with wheels intended to temporarily store waste

3.2
lifting device
structure which picks-up, tilts and empties containers

3.3
comb lifting device
lifting device in which the picking-up system consists of a row of teeth and a locking system to retain the container during emptying

3.4
volume
total space inside the container when the lid is closed

[1] Under preparation. Stage at the time of publication: FprEN 1501-5.

Note 1 to entry: See Table 1.

3.5
nominal volume
capacity
volume stated by the manufacturer

Note 1 to entry: See Table 1 without tolerances.

Note 2 to entry: The English term “capacity” and the French term “capacité” are translated in the German version by the term “Nennvolumen”.

3.6
nominal load
load mass of 0,4 kg/dm³ x nominal volume

Note 1 to entry: See Clause 6.

3.7
total permissible mass
mass of the container plus the nominal load

3.8
functional and safety dimension
essential dimensions which ensure the functionality and interchangeability of the container with the compatible lifting device and which are necessary for the operator's safety and health

4 Volumes

This standard identifies the two classes of containers:

— Class I - small size (nominal volume up to 200 l);

— Class II - large size (nominal volume between 200 l and 400 l).

Within the two above-mentioned classes of containers the volumes shown in Table 1 are identified.

Table 1 — Volumes

Volumes, in l										
60^{+13}_{-5}	80^{+18}_{-5}	120^{+8}_{-6}	140^{+6}_{-12}	180^{+40}_{-10}	190^{+25}_{-10}	210^{+15}_{-5}	240^{+15}_{-5}	260^{+25}_{-5}	340^{+40}_{-25}	390 ± 20

For methods of measuring capacity, see EN 840-5.

The volumes shown in Table 1 correspond to mobile waste and recycling container's capacities at present used in Europe. Since there are some overlapping capacities due to the tolerances, client and manufacturer shall decide while ordering the capacity chosen.

Nominal volumes different from those referenced in Table 1 can be used by agreement between user and manufacturer. The tolerance of the volumes shall be ± 10 % maximum measured according to EN 840-5. Table 2 includes examples of the most frequent assignments of classes and volumes of the containers.

Table 2 — Examples of the most frequent assignments of classes and volumes

Class I a	Class I b	Class I c	Class I d	Class II a	Class II b	Class II c	Class II d
e.g. 60 l 80 l 90 l	e.g. 120 l 110 l	e.g. 140 l	e.g. 180 l 190 l	e.g. 210 l 190 l 180 l	e.g. 240 l	e.g. 340 l 260 l 360 l	e.g. 390 l 370 l 400 l

5 Dimensions and design

5.1 The design of the containers need not correspond to the drawings given in Figure 1. The functional dimensions given in Tables 3 and 4 shall be respected. For compatibility in lifting devices, the container shall correspond to its dimensions within the selected class type (Table 3, Table 4).

5.2 The container shall be constructed so that when it is unloaded or loaded with a nominal load (see Clause 6), it fits on an approved compatible lifting device. It shall be automatically locked safely into the lifting device during the lifting operation. The frontal receiver shall correspond to one of the options given in Figure 2 (Form A or B).

5.3 The lid(s) shall cover the opening of the container completely. It shall be opened easily by itself during the emptying cycle. It/they shall be made with at least 2 fixing points and have at least one means of opening.

5.4 Each wheel shall be capable of withstanding a static load of 100 kg.

5.5 All the surfaces of the container including design features shall be smooth and free of any foreign bodies or flaws.

5.6 The container shall be able to be immobilised by design.

6 Nominal mass

The container shall be constructed strongly enough to carry a mass of 0,4 kg/dm^3 x nominal volume.

7 Safety and health requirements

The container shall meet the safety and health requirements according to EN 840-6.

8 Testing

The container shall fulfil the performance requirements and the tests of EN 840-5.

9 Marking

9.1 Each container complying with the requirements of this document shall be durably and readably marked on the body in a visible part with:

— number of this document (EN 840-1);

— nominal volume;

— manufacturer’s name or trademark;

— total permissible mass, in kilograms;

— year and month of manufacturing.

9.2 Plastic parts of containers, lids and wheels shall be marked in accordance with EN ISO 11469. The use of recycled materials is allowed, presuming that all requirements of this standard are complied with.

10 Designation

The container complying with the requirements of this document shall be designated as follows:

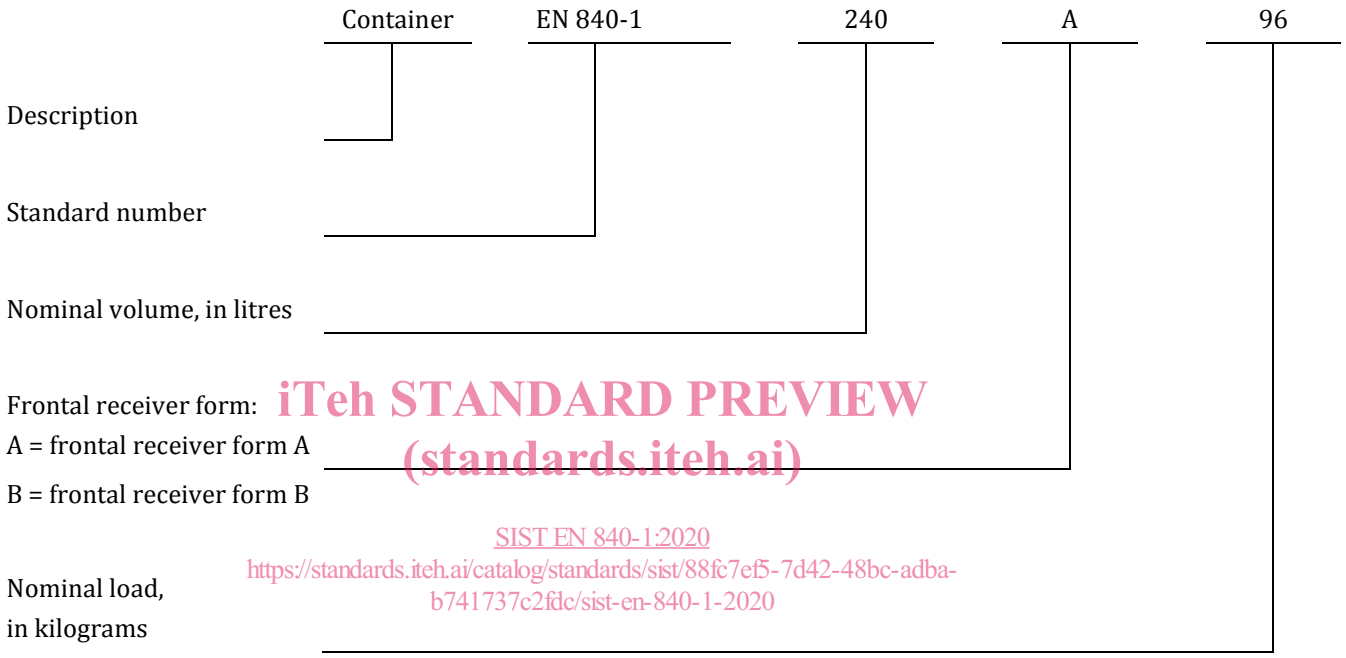

Table 3 — Dimensions for containers – Class I (up to 200 l)

Dimensions in millimetres

Dimension N°	Class I a		Class I b	Class I c	Class I d	Remarks
	Type a	Type b				
1[a]	448 ± 5	480 ± 5	505 max.	505 max.	505 max.	Total width of the container
2[a]	448 ± 5	480 ± 5	480 ± 5	480 ± 5	480 ± 5	Width of the frontal receiver
3	530 max.	555 max.	555 max.	555 max.	755 max.	
4	1 005 max		1005 max.	1 100 max.	1 100 max.	Total height including handles on the lid
5[a]	860 min.; 970 max.		860 min.; 970 max.	860 min.; 1030 max.	860 min.; 1030 max.	
6	450 max.	490 max.	490 max.	490 max.	500 max.	
7	1 010 max.		1010 max.	1 155 max.	1 200 max.	
8	430 min.; 670 max.		430 min.; 670 max.	430 min.; 670 max.	560 min; 760 max	For 300 mm wheels, the maximum dimension is 70 mm more.
10	320 ± 10	385 max	385 max.	385 max.	410 max.	
11[a]	200^{+1}_{-5}		200^{+1}_{-5}	200^{+1}_{-5}	200^{+1}_{-5}	Larger wheels accepted
12[a]	19 min.		19 min.	19 min.	19 min.	
13[a]	$6^{+2}_{-4,5}$		$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	
15[a]	13^{+5}_{-3}		13^{+5}_{-3}	13^{+5}_{-3}	13^{+5}_{-3}	
16[a]	21^{+2}_{-2}		21^{+2}_{-2}	21^{+2}_{-2}	21^{+2}_{-2}	
18[a]	26 ± 1		26 ± 1	26 ± 1	26 ± 1	
19[a]	58 max.		58 max.	58 max.	58 max.	
20	20 min.		20 min.	20 min.	20 min.	
21[a]	130 max.		130 max.	130 max.	130 max.	
22	15 max.		15 max.	15 max.	15 max.	
23	33^{+8}_{0}		33^{+8}_{0}	33^{+8}_{0}	33^{+8}_{0}	

Dimension N°	Class I a		Class I b	Class I c	Class I d	Remarks
	Type a	Type b				
26[a]	147 ± 8	180 ± 5	180 ± 5	180 ± 5	180 ± 5	Compulsory dimensions when ribs are fitted, max. ribs thickness 6 mm A middle rib is only allowed with class II a type a, class II b, class II c, class II d type b.
27	270° min.		270° min.	270° min.	270° min.	
28	413 min	445 min	445 min. [b]	445 min. [b]	445 min.	The dimension No 28 has to correspond to Figure 3 and the lifting device. Definition in accordance with comb dimension, standard and identification character of EN 1501-5:—

[a] Compulsory dimensions for functional and safety reasons. The other dimensions indicated are suggested recommended values.

[b] This dimension in Class I b and Class I c is to be maintained as minimum for new designed containers. For earlier containers applies up to 420 min.

NOTE Dimensions 9, 14, 17, 24 and 25 are no longer used and have been deleted from the table as a result.