

SLOVENSKI STANDARD

SIST EN 840-3:2020

01-junij-2020

Nadomešča:
SIST EN 840-3:2014

Premični zabojniki za odpadke in za recikliranje - 3. del: Zabojniki na štirih kolesih s prostornino do 1300 l in izbočenim(-i) pokrovom(-i) za iztresalnike z rokama in/ali glavnikom - Mere in oblika

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

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Fahrbare Abfall- und Wertstoffbehälter - Teil 3: Behälter mit 4 Rädern und einem Nennvolumen bis 1 300 l mit Schiebedeckel(n), für Schüttungen mit Zapfenaufnahme und/oder für Kammschüttungen - Maße und Formgebung

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Conteneurs roulants à déchets et de recyclage - Partie 3 : Conteneurs à 4 roues de capacité inférieure ou égale à 1 300 l à couvercle(s) bombé(s), pour lève-conteneurs par tourillon et/ou à peigne - Dimensions et conception

Ta slovenski standard je istoveten z: EN 840-3:2020

ICS:

13.030.40	Naprave in oprema za odstranjevanje in obdelavo odpadkov	Installations and equipment for waste disposal and treatment
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en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 840-3

April 2020

ICS 13.030.40

Supersedes EN 840-3:2012

English Version

**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**

Conteneurs roulants à déchets et de recyclage - Partie 3
: Conteneurs à 4 roues de capacité inférieure ou égale à
1 300 l à couvercle(s) bombé(s), pour lève-conteneurs
par tourillon et/ou à peigne - Dimensions et
conception

Fahrbare Abfall- und Wertstoffbehälter - Teil 3:
Behälter mit 4 Rädern und einem Nennvolumen bis 1
300 l mit Schiebedeckel(n), für Schüttungen mit
Zapfenaufnahme und/oder für Kammschüttungen -
Maße und Formgebung

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.

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

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

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European foreword

This document (EN 840-3:2020) 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 840-3:2012.

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

- a) Figure 2 "System dimensions design B (type plastic)" and Figure 3 "System dimensions design C (type metal)" have been updated;
- b) Figure 9 "Handles above trunnion (type metal)" and Figure 10 "Functional dimension for frontal receivers" have been added;
- c) former Annex A "Recommendations for manufacturers of lifting devices" has been deleted;
- d) document has been editorially revised and adapted to the new design rules.

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.

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1 Scope

This document specifies dimensions and design requirements of mobile waste and recycling containers with 4 wheels, with dome lid(s) and capacity up to 1 300 l to be used by trunnion and/or comb lifting device.

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 containers and lifting devices in three languages are given in Annex A of EN 840-1:2020.

3.1

mobile waste 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

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

3.4**trunnion lifting device**

lifting device in which the picking-up system consists of a pair of arms with automatic locking mechanism to fit the trunnion to retain the container during emptying

3.5**volume**

total space inside the container when the lid is closed

3.6**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”.

3.7**nominal mass**

mass, which is calculated as given in Clause 6

3.8**total permissible mass**

mass of the container plus the nominal load

3.9**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 part of EN 840 identifies the two classes of containers:

- Class I - small size (nominal volume up to 1 000 l);
- Class II - large size (nominal volume between 1 000 l and 1 300 l).

Within the two above-mentioned classes of containers the following volumes are identified: 770 l, 1 000 l, 1 100 l and 1 300 l. Nominal volumes different from those referenced can be used by agreement between user and manufacturer. The tolerance of the volumes shall be $\pm 5\%$ maximum measured according to EN 840-5.

5 Dimensions and design

5.1 The design of the containers need not correspond to the drawings given in Figures 1 to 3. The functional dimensions given in Table 1 shall be respected. Recommendations for manufacturers of lifting devices are given in EN 1501-5:—.

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

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into the lifting device during the lifting operation. If the container is equipped with a comb receiver, it shall correspond to Figure 4 and Figure 6.

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

5.4 Handles fitted in front of the trunnion shall have a measurement over the handles of 10 mm less than the actual measurement in Table 1, dimension N° 33. The handles and their location shall also be designed so that they do not harm the operator.

5.5 If the container has ribs in the frontal receiver they shall meet the requirements of Figure 4 and Figure 6.

5.6 The container shall have 4 swivel castors. Each swivel castor shall be capable of withstanding 1/3 of the total permissible mass. Each castor shall meet the requirements of EN 840-5. The container shall have facilities for mounting the castor platine according to at least one of the configurations as shown in Figure 7.

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

5.8 The container should have a drain plug.

5.9 When direction locks are fitted they shall be fixed on at least two castors.

5.10 The container should be fitted with two braked wheels to requirements of EN 840-5. In case of centralized braking and locking system the brake pedal and the lock shall be fixed on a lateral side of the container. The centralized locking shall be able to be unlocked with a standard triangular key as shown in Figure 8. The effectiveness of this centralized braking system shall conform to EN 840-5.

6 Nominal mass

The container shall be constructed strongly enough to carry a mass of $0,4 \text{ kg/dm}^3 \times \text{nominal volume}$. Containers with a nominal volume of more than 1 100 l shall be constructed strongly enough to carry a load of 440 kg.

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 part of EN 840 shall be durably and readably marked on the body in a visible part with:

- number of this document (EN 840-3);
- nominal volume;

- manufacturer's name or trademark;
- total permissible mass, in kilograms;
- year and month of manufacturing.

9.2 Additional marking for quality, recycling, etc. is allowed. 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:

	Container	EN 840-3	1 100	A	A	440
Description						
Standard number						
Nominal volume, in litres						
A = frontal receiver						
0 = without frontal receiver						
Lateral receiver:						
A = trunnions						
0 = without lateral receiver						
Nominal load, in kilograms						

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Table 1 — Dimensions

Dimensions in millimetres

Dimension N°	Class I - Small sizes < 1 000 l	Class II - Large sizes ≥ 1 000 l		Remarks
	770 l	1 100 l	1 300 l	
1a	1 370 ± 10	1 370 ± 10	1 370 ± 10	In case of trunnions
2	820 max.	1 115 max.	1 115 max.	
3	1 100 max.	1 245 max.	1 245 max.	
4	1 425 max.	1 470 max.	1 480 max.	
5a	860 min.; 1 290 max.	860 min.; 1290 max.		Tipping edge
6	-	855 ± 50	855 ± 50	Only design B
7a	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	
8a	550 min.; 700 max.	650 min.; 850 max.	650 min.; 850 max.	Handle position if required
9	600 to 850	600 to 850	600 to 850	Lock position if presented
10a	405 ⁺²⁵ ₋₅	550 ⁺¹⁰ ₋₄₀	550 ⁺¹⁰ ₋₄₀	For design A
	-	500 ± 15	500 ± 15	For design B
11b	Ø 200 ± 2	Ø 200 ± 2	Ø 200 ± 2	
12a	19 min.	19 min.	19 min.	In case of frontal receiver
13a	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	In case of frontal receiver
14a	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	In case of frontal receiver
16a	26 ± 1	26 ± 1	26 ± 1	In case of frontal receiver
17a	58 max.	58 max.	58 max.	In case of frontal receiver
18a	20 min.	20 min.	20 min.	In case of frontal receiver
19a	130 max.	130 max.	130 max.	When ribs are fitted
20	15 max.	15 max.	15 max.	
21a	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	In case of frontal receiver. For design B
23a	Ø 40 ± 2	Ø 40 ± 2	Ø 40 ± 2	In case of trunnions
24a	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	The front of the plastic container beneath the ribs of the lifting comb shall be smooth. No constructions shall protrude in this area.

Dimension N°	Class I - Small sizes < 1 000 l	Class II - Large sizes ≥ 1 000 l		Remarks
	770 l	1 100 l	1 300 l	
25 ^a	350 ⁺⁴⁰ ₋₁₀	350 ± 10	350 ± 10	Clearance for lifting device
26	535 ± 85	750 ⁺⁵⁰ ₋₄₀	750 ⁺⁵⁰ ₋₄₀	
27	130 min.	130 min.	130 min.	Ground clearance
28 ^a	1 275 max.	1 275 max.	1 275 max.	Lid
29 ^a	1 185 min.	1 185 min.	1 185 min.	Inside operating length of frontal receiver
30 ^a	1200 ⁺¹⁵ ₀	1200 ⁺¹⁵ ₀	1200 ⁺¹⁵ ₀	Overall frontal receiver
31 ^a	1 265 max.	1 265 max.	1 265 max.	Overall length of the body rim or handles
32	-	-	-	This dimension is no more used
33 ^a	1260 ⁺²⁰ ₋₁₀	1260 ⁺²⁰ ₋₁₀	1260 ⁺²⁰ ₋₁₀	Around the centre lifting trunnion there shall be a radius of 150 mm. There shall not be any projection beyond the trunnion boss
34	880 ⁺²⁰ ₋₅₀	880 ⁺²⁰ ₋₅₀	950 ± 120	
35	1 090 ± 70	1 090 ± 70	1 090 ± 70	The outer corners shall be designed according to dimension w ₂ of EN 1501-5:—, Table Figure A.6.
36 ^a	150 ± 3	150 ± 3	150 ± 3	When ribs are fitted (centers)
37 ^a	7 max.	7 max.	7 max.	When ribs are fitted
38 ^a	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	In case of frontal receiver
39 ^a	160 ⁺⁵ ₋₃₀	130 max.	130 max.	In case of frontal receiver; only for design A and C
40 ^a	R 4 max.	R 4 max.	R 4 max.	In case of frontal receiver
41	10 min.	10 min.	10 min.	
42	Ø 16 max.	Ø 16 max.	Ø 16 max.	
43	Ø 6,6 ^{+0,2} ₀	Ø 6,6 ^{+0,2} ₀	Ø 6,6 ^{+0,2} ₀	
44	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	
45	approximately 50	approximately 50	approximately 50	