

SLOVENSKI STANDARD

SIST EN 840-4:2014

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Nadomešča:

SIST EN 840-4:2004

Premični zabojniki za odpadke in za recikliranje - 4. del: Zabojniki na štirih kolesih s prostornino do 1700 l in ravnim(-i) pokrovom(-i) za široke iztresalnike z rokama ali BG in/ali glavnikom - Mere in oblika

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

Fahrbare Abfall- und Wertstoffbehälter - Teil 4: Behälter mit 4 Rädern und einem Nennvolumen bis 1700 l mit Flachdeckel(n), für breite Schüttungen mit Zapfenaufnahme oder BG-Schüttungen und/oder für breite Kammschüttungen - Maße und Formgebung

Conteneurs roulants à ordures ménagères et recyclables - Partie 4: Conteneurs à 4 roues de capacité inférieure ou égale à 1 700 l à couvercle(s) plat(s), pour lève-conteneurs par tourillon large ou BG-basculateurs et/ou lève-conteneurs à peigne large - Dimensions et conception

Ta slovenski standard je istoveten z: EN 840-4:2012

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

EN 840-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2012

ICS 13.030.40

Supersedes EN 840-4:2004

English Version

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

Conteneurs roulants à ordures ménagères et recyclables -
Partie 4: Conteneurs à 4 roues de capacité inférieure ou égale à 1 700 l à couvercle(s) plat(s), pour lève-conteneurs par tourillon large ou BG-basculeurs et/ou lève-conteneurs à peigne large - Dimensions et conception

Fahrbare Abfall- und Wertstoffbehälter - Teil 4: Behälter mit 4 Rädern und einem Nennvolumen bis 1700 l mit Flachdeckel(n), für breite Schüttungen mit Zapfenaufnahme oder BG-Schüttungen und/oder für breite Kammschüttungen - Maße und Formgebung

This European Standard was approved by CEN on 22 September 2012.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 840-4:2012) 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 June 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 840-4:2004.

Technical changes since the latest edition:

- The content was adapted to the current state of the art and revised editorially.
- Figure 3 has been deleted.
- Frontal receivers Form B and C have been deleted. Figure 2 has been changed accordingly.

This European Standard is one part of the series of standards of EN 840 with the main title *Mobile waste and recycling containers* comprising the following parts:

- *Part 1: Containers with 2 wheels with a capacity up to 400 l for comb lifting devices — Dimensions and design;*
- *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;*
- *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;*
- *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 (the present document);*
- *Part 5: Performance requirements and test methods;*
- *Part 6: Safety and health requirements.*

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 840-4:2012 (E)**1 Scope**

This European Standard specifies dimensions and design requirements of mobile waste and recycling containers with 4 wheels, with flat lid(s) and capacity up to 1 700 l to be used by wide trunnion or BG-lifting device and/or wide comb lifting device.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 840-6:2012, *Mobile waste and recycling containers — Part 6: Safety and health requirements*

EN 1501-1, *Refuse collection vehicles — General requirements and safety requirements — Part 1: Rear loaded refuse collection vehicles*

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

3 Terms and definitions

STANDARD PREVIEW

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

NOTE Terms for components of mobile waste and recycling containers and lifting devices in three languages are given in Annex A of EN 840-1:2012.

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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**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**BG lifting device**

lifting device in which the picking-up system consists of a pair of arms with adaptors that fit the BG receivers and locks them in order to retain the container during emptying

Note 1 to entry: See Figures 5 and 6.

3.6**volume**

total space inside the container when the lid is closed

3.7**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".

3.8**nominal mass**

mass, which is calculated as given in Clause 6

3.9**total permissible mass**

mass of the container plus the nominal load

3.10**functional and safety dimensions**

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 1 050 l);
- Class II - large size (nominal volume between 1 050 l and 1 700 l).

Within the two above-mentioned classes of containers the following volumes are identified: 750 l, 1 000 l, 1 300 l, 1 400 l, 1 500 l, 1 600 l and 1 700 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 do not need to correspond to the drawings given in Figure 1. The functional dimensions given in Table 1 shall be respected. Recommendations for manufacturers of lifting devices are given in Annex A (see also EN 1501-1).

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. If the container is equipped with a comb receiver, it shall correspond to Figure 2.

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 two fixing points and have at least one means of opening.

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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 also shall be designed so that they do not damage the operator.

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

5.6 The container shall have four 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 measurements 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 2 castors.

5.10 The container should be fitted with 2 braked wheels to requirements of EN 840-5. In case of centralised braking and locking system the brake pedal and the lock shall be fixed on a lateral side of the container. The centralised locking shall be able to be unlocked with a standard triangular key as shown in Figure 8. The effectiveness of this centralised 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.

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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 European Standard (EN 840-4);
- 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. Starting five years after the publication of this standard, 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 European Standard shall be designated as follows:

	Container	EN 840-4	1 700	A	A	440
Description						
Standard number						
Nominal volume, in litres						
Frontal receiver form: A = frontal receiver 0 = without frontal receiver						
Lateral receiver: A = trunnions B = BG receiver 0 = without lateral receiver						
Nominal load, in kilograms						

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Table 1 — Dimensions

Dimensions in millimetres

Dimension N°	Class I - Small sizes ≤ 1 050 l		Class II - Large sizes > 1 050 l					Remarks
	750 l	1 000 l	1 300 l	1 400 l	1 500 l	1 600 l	1 700 l	
1 ^a	1 770 ± 10	1 770 ± 10	1 770 ± 10	1 770 ± 10	1 770 ± 10	1 770 ± 10	1 770 ± 10	In case of trunnions
2	815 max.	990 max.	1 190 max.	1 190 max.	1 190 max.	1 190 max.	1 190 max.	Total width lid(s) closed
3	815 max.	990 max.	1 250 max.	1 250 max.	1 250 max.	1 250 max.	1 250 max.	When lid(s) open
4	1 470 max.	1 470 max.	1 470 max.	1 470 max.	1 470 max.	1 470 max.	1 470 max.	
5 ^a	860 min.; 1 290 max.	860 min.; 1 290 max.	860 min.; 1 290 max.	860 min.; 1 290 max.	860 min.; 1 290 max.	860 min.; 1 290 max.	860 min.; 1 290 max.	Tipping edge
6	583 ± 50	720 ± 50	920 ± 150	920 ± 150	920 ± 150	920 ± 150	920 ± 150	
7 ^a	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	135 min.; 280 max.	In case of trunnions and min. 850 from ground
8 ^a	700 to 850	700 to 850	700 to 850	700 to 850	700 to 850	700 to 850	700 to 850	Handle position if present
9	600 to 850	600 to 850	600 to 850	600 to 850	600 to 850	600 to 850	600 to 850	Lock position if present
10 ^a	460 ⁺⁶⁵ ₋₄₅	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	In case of trunnions
11 ^a	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	∅ 200 ± 2 [*])	[*]) ∅ min 160 optional according to 5.3 of EN 840-6:2012
12 ^a	19 min.	19 min.	19 min.	19 min.	19 min.	19 min.	19 min.	In case of frontal receiver
13 ^a	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	In case of frontal receiver
14 ^a	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	In case of frontal receiver
15	-	-	-	-	-	-	-	This dimension is no more used
16 ^a	26 ± 1	26 ± 1	26 ± 1	26 ± 1	26 ± 1	26 ± 1	26 ± 1	In case of frontal receiver
17 ^a	58 max.	58 max.	58 max.	58 max.	58 max.	58 max.	58 max.	In case of frontal receiver
18 ^a	20 min.	20 min.	20 min.	20 min.	20 min.	20 min.	20 min.	In case of frontal receiver
19 ^a	130 max.	130 max.	130 max.	130 max.	130 max.	130 max.	130 max.	When ribs are fitted
20	15 max.	15 max.	15 max.	15 max.	15 max.	15 max.	15 max.	In case of frontal receiver
21 ^a	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	33 ⁺⁸ ₋₁	In case of frontal receiver

Table 1 (continued)

Dimensions in millimetres

Dimension N°	Class I - Small sizes ≤ 1050 I		Class II - Large sizes > 1050 I					Remarks
	750 I	1 000 I	1 300 I	1 400 I	1 500 I	1 600 I	1 700 I	
23 ^a	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	In case of trunnions
24 ^a	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	670 ⁺³⁰ ₀	In case of trunnions and frontal receiver
25 ^a	350 ± 10	350 ± 10	350 ± 10	350 ± 10	350 ± 10	350 ± 10	350 ± 10	Clearance for lifting device (optional for BG System)
26	580 ± 20	580 ± 20	705 ± 115	785 ± 115	785 ± 115	785 ± 115	785 ± 115	
27	130 min.	130 min.	130 min.	130 min.	130 min.	130 min.	130 min.	Ground clearance
28 ^a	1 675 max.	1 675 max.	1 675 max.	1 675 max.	1 675 max.	1 675 max.	1 675 max.	Lid
29 ^a	1 520 min.	1 520 min.	1 520 min.	1 520 min.	1 520 min.	1 520 min.	1 520 min.	Inside operating length of frontal receiver
30 ^a	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	1 600 ⁺¹⁵ ₋₄₀	Overall frontal receiver
31 ^a	1 665 max.	1 665 max.	1 665 max.	1 665 max.	1 665 max.	1 665 max.	1 665 max.	Overall length of the body rim or handles
32	5 ⁺⁸ ₀	5 ⁺⁸ ₀	5 ⁺⁸ ₀	5 ⁺⁸ ₀	5 ⁺⁸ ₀	5 ⁺⁸ ₀	5 ⁺⁸ ₀	Optional
33 ^a	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	1 660 ⁺²⁰ ₋₁₀	Around the center lifting trunnion there shall be a radius of 150 mm. There shall not be any projection beyond the trunnion boss.
34	1 270 ± 160	1 270 ± 160	1 270 ± 160	1 270 ⁺²³⁰ ₋₁₆₀	1 270 ⁺²³⁰ ₋₁₆₀	1 270 ± 160	1 270 ⁺²³⁰ ₋₁₆₀	
35	1 500 ± 80	1 500 ± 80	1 500 ± 80	1 500 ± 80	1 500 ± 80	1 500 ± 80	1 500 ± 80	
36 ^a	150 ± 3	150 ± 3	150 ± 3	150 ± 3	150 ± 3	150 ± 3	150 ± 3	When ribs are fitted stiffeners can be placed at intervals from each side of the center of the lifting bar, equally spaced at/or multiples of 150 mm.
37 ^a	7 max.	7 max.	7 max.	7 max.	7 max.	7 max.	7 max.	When ribs are fitted
38 ^a	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	In case of frontal receiver
40 ^a	R 4 max.	R 4 max.	R 4 max.	R 4 max.	R 4 max.	R 4 max.	R 4 max.	In case of frontal receiver
41	10 min.	10 min.	10 min.	10 min.	10 min.	10 min.	10 min.	Key
42	∅ 16 max.	∅ 16 max.	∅ 16 max.	∅ 16 max.	∅ 16 max.	∅ 16 max.	∅ 16 max.	Key
43	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	∅ 6,6 ^{+0,2} ₀	Key
44	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	8,3 ^{+0,1} ₀	Key
45	≈ 50	≈ 50	≈ 50	≈ 50	≈ 50	≈ 50	≈ 50	Key
46 ^a	390 max.	475 max.	590 max.	590 max.	590 max.	590 max.	590 max.	If two or more part lids are fitted they shall enable the comb and trunnion lifting system to operate correctly.
47 ^a	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	1 664 ⁺¹⁰ ₋₂₀	BG lifting system (see Figures 6 and 7)
48 ^a	130 ± 10	130 ± 10	130 ± 10	130 ± 10	130 ± 10	130 ± 10	130 ± 10	BG lifting system (see Figures 6 and 7)
49 ^a	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	1 520 ⁺¹⁰ ₋₂₀	BG lifting system (see Figures 6 and 7)

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