

# SLOVENSKI STANDARD

## SIST EN 840-1:2013

01-julij-2013

Nadomešča:

SIST EN 840-1:2004

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### Premični zabojniki za odpadke - 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 ordures ménagères et recyclables - Partie 1 : Conteneurs à 2 roues de capacité inférieure ou égale à 400 pour lève-conteneurs à peigne - Dimensions et conception

Ta slovenski standard je istoveten z: **EN 840-1:2012**

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#### **ICS:**

13.030.40	Naprave in oprema za odstranjevanje in obdelavo odpadkov	Installations and equipment for waste disposal and treatment
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**SIST EN 840-1:2013**

**en,fr,de**

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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 ordures ménagères et recyclables -  
Partie 1 : Conteneurs à 2 roues de capacité inférieure ou  
égale à 400 l pour lève-conteneurs à peigne - Dimensions  
et conception

Fahrbare Abfall- und Wertstoffbehälter - Teil 1: Behälter mit  
2 Rädern und einem Nennvolumen bis 400 l für  
Kammshüttungen - 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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## Foreword

This document (EN 840-1:2012) 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 840-1:2004.

Technical changes since the latest edition:

- The content was adapted to the current state of the art and revised editorially.
- Figure 3 – The functional dimension 28 for frontal receivers and the dimension 28 were redefined.

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* (the present document);
- *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;*
- *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 840-1:2012 (E)****1 Scope**

This European Standard 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.

**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, *Mobile waste and recycling containers — Part 6: Safety and health requirements*

EN 1501-5, *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.

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

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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****volume**

total space inside the container when the lid is closed

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 as given in Clause 6

**3.7****total permissible mass**

mass of the container plus the nominal load

**3.8****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 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**  
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Volume in l										
$60^{+13}_{-5}$	$80^{+18}_{-5}$	$120^{+8}_{-6}$	$140^{+6}_{-12}$	$180^{+40}_{-10}$	$190^{+25}_{-10}$	$210^{+15}_{-5}$	$240^{+15}_{-5}$	$260^{+25}_{-5}$	$340^{+40}_{-25}$	$390 \pm 20$

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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  $\pm 10\%$  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 Figure 1. The functional dimensions given in Tables 2 and 3 shall be respected.

**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.

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**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  $0,4 \text{ kg/dm}^3$  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 European Standard shall be durably and readably marked on the body in a visible part with:

- number of this European Standard (EN 840-1),
- nominal volume; [SIST EN 840-1:2013](https://standards.iteh.ai/catalog/standards/sist/84d83bf4-39b4-4a0b-b40d-cad3b030610e/sist-en-840-1-2013)
- manufacturer's name or trademark; <https://standards.iteh.ai/catalog/standards/sist/84d83bf4-39b4-4a0b-b40d-cad3b030610e/sist-en-840-1-2013>
- 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 European Standard shall be designated as follows:

	Container	EN 840-1	240	A	96
Description					
Standard number					
Nominal volume, in litres					
Frontal receiver form: A = frontal receiver form A B = frontal receiver form B					
Nominal load, in kilograms					

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Table 2 — Dimensions for containers from 60 l to 180 l – Class I (up to 200 l)

Dimensions in millimetres

Dimension N°	60 l		120 l	140 l	180 l	Remarks
	Type a	Type b				
1a	448 ± 5	480 ± 5	505 max.	505 max.	505 max.	Total width of the container
2a	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
5a	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.
9a	410 max.	450 max.	450 max.	450 max.	465 max.	
10	320 ± 10	385 max	385 max.	385 max.	410 max.	
11a	200 <sup>+1</sup> <sub>-5</sub>		200 <sup>+1</sup> <sub>-5</sub>	200 <sup>+1</sup> <sub>-5</sub>	200 <sup>+1</sup> <sub>-5</sub>	Larger wheels accepted
12a	19 min.		19 min.	19 min.	19 min.	
13a	6 <sup>+2</sup> <sub>-4,5</sub>		6 <sup>+2</sup> <sub>-4,5</sub>	6 <sup>+2</sup> <sub>-4,5</sub>	6 <sup>+2</sup> <sub>-4,5</sub>	
15a	13 <sup>+5</sup> <sub>-3</sub>		13 <sup>+5</sup> <sub>-3</sub>	13 <sup>+5</sup> <sub>-3</sub>	13 <sup>+5</sup> <sub>-3</sub>	
16a	21 <sup>+2</sup> <sub>-2</sub>		21 <sup>+2</sup> <sub>-2</sub>	21 <sup>+2</sup> <sub>-2</sub>	21 <sup>+2</sup> <sub>-2</sub>	
17	-		-	-	-	This dimension is no longer used.
18a	26 ± 1		26 ± 1	26 ± 1	26 ± 1	
19a	58 max.		58 max.	58 max.	58 max.	
20	20 min.		20 min.	20 min.	20 min.	
21a	130 max.		130 max.	130 max.	130 max.	
22	15 max.		15 max.	15 max.	15 max.	
23	33 <sup>+8</sup> <sub>0</sub>		33 <sup>+8</sup> <sub>0</sub>	33 <sup>+8</sup> <sub>0</sub>	33 <sup>+8</sup> <sub>0</sub>	
26a	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 allowed, but only for Volume ≥ 200 l
27	270° min.		270° min.	270° min.	270° min.	
28						The dimension No 28 has to correspond to the lifting device. Definition in accordance with comb dimension, standard and identification character of EN 1501-5

<sup>a</sup> Compulsory dimensions for functional and safety reasons. The other dimensions indicated are suggested recommended values.

Table 3 — Dimensions for containers from 210 I to 400 I – Class II (&gt; 200 I)

Dimensions in millimetres

Dimension N°	210 I		240 I	340 I	390 I		Remarks
	Type a	Type b			Type a	Type b	
1 <sup>a</sup>	546 ± 5		580 ± 5	665 max.	755 <sup>+5</sup> <sub>-15</sub>		Total width of the container
2 <sup>a</sup>	546 ± 5	480 ± 5	580 ± 5	655 max	745 <sup>+5</sup> <sub>-15</sub>	660 ± 10	Width of the frontal receiver
3	730 max.		740 max.	880 max.	810 max.		
4	1 100 max.		1 100 max.	1 115 max.	1 100 max.		Total height including handles on the lid
5 <sup>a</sup>	860 min.; 1 030 max.		860 min.; 1 030 max.	860 min.; 1 030 max.	860 min.; 1 030 max.		
6	565 max.		590 max.	650 max.	775 max.		
7	1 180 max.		1 190 max.	1 250 max.	1 200 max.		
8	560 min.; 760 max.		560 min; 760 max.	560 min; 760 max.	560 min.; 760 max.		For 300 mm wheels, the maximum dimension is 70 mm more.
9 <sup>a</sup>			557 max.				Not for 210, 340 and 390
10	515 ± 15		430 <sup>+20</sup> <sub>-30</sub>	565 max.	722 ± 5		
11 <sup>a</sup>	200 <sup>+1</sup> <sub>-5</sub>		200 <sup>+1</sup> <sub>-5</sub>	200 <sup>+1</sup> <sub>-5</sub>	200 <sup>+1</sup> <sub>-5</sub>		Larger wheels accepted
12 <sup>a</sup>	19 min.		19 min.	19 min.	19 min.		
13 <sup>a</sup>	6 <sup>+2</sup> <sub>-4,5</sub>		6 <sup>+2</sup> <sub>-4,5</sub>	6 <sup>+2</sup> <sub>-4,5</sub>	6 <sup>+2</sup> <sub>-4,5</sub>		
15 <sup>a</sup>	13 <sup>+5</sup> <sub>-3</sub>		13 <sup>+5</sup> <sub>-3</sub>	13 <sup>+5</sup> <sub>-3</sub>	13 <sup>+5</sup> <sub>-3</sub>		
16 <sup>a</sup>	21 <sup>+2</sup> <sub>-2</sub>		21 <sup>+2</sup> <sub>-2</sub>	21 <sup>+2</sup> <sub>-2</sub>	21 <sup>+2</sup> <sub>-2</sub>		
17 <sup>a</sup>	-		SIST EN 840-1:2013 <sup>7</sup>		-		This dimension is no longer used.
18 <sup>a</sup>	26 ± 1		26 ± 1	26 ± 1	26 ± 1		
19 <sup>a</sup>	58 max.		58 max.	58 max.	58 max.		
20 <sup>a</sup>	20 min.		20 min.	20 min.	20 min.		
21 <sup>a</sup>	130 max.		130 max.	130 max.	130 max.		
22	15 max.		15 max.	15 max.	15 max.		
23 <sup>a</sup>	33 <sup>+8</sup> <sub>0</sub>		33 <sup>+8</sup> <sub>0</sub>	33 <sup>+8</sup> <sub>0</sub>	33 <sup>+8</sup> <sub>0</sub>		
26 <sup>a</sup>	291 ± 5	180 ± 5	291 <sup>+3</sup> <sub>-5</sub>	300 <sup>+5</sup> <sub>-10</sub>	390 <sup>+5</sup> <sub>-10</sub>	291 ± 5	Compulsory dimensions when ribs are fitted, max. ribs thickness 6 mm
27	270° min.		270° min.	270° min.	270° min.		
28							The dimension No 28 has to correspond to the lifting device. Definition in accordance with comb dimension, standard and identification character of EN 1501-5.

<sup>a</sup> Compulsory dimensions for functional and safety reasons. The other dimensions indicated are suggested recommended values.