

BS EN 840-6:2012



BSI Standards Publication

Mobile waste and recycling containers

Part 6: Safety and health requirements

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National foreword

This British Standard is the UK implementation of EN 840-6:2012. It supersedes BS EN 840-6:2004+A1:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/508/1, Waste containers and associated lifting devices on refuse collection vehicles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2013

ISBN 978 0 580 72437 4

ICS 13.030.40

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2013.

Amendments issued since publication

Date	Text affected
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EUROPEAN STANDARD

EN 840-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2012

ICS 13.030.40

Supersedes EN 840-6:2004+A1:2008

English Version

Mobile waste and recycling containers - Part 6: Safety and health requirements

Conteneurs roulants à ordures ménagères et recyclables -
Partie 6 : Exigences d'hygiène et de sécurité

Fahrbare Abfall- und Wertstoffbehälter - Teil 6: Sicherheits-
und Gesundheitsschutzanforderungen

This European Standard was approved by CEN on 23 September 2012.

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Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 General requirements of construction	4
4 Handles	4
5 Wheels	6
6 Direction block	6
7 Brakes	7
8 Edges	7
9 Lids.....	7
10 Cleaning.....	7
11 Instructions for use	7
Annex A (informative) A-Deviations	9
Bibliography	10

Foreword

This document (EN 840-6:2012) 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of an identical text or by endorsement, at the latest by June 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.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 840-6:2004+A1:2008.

Technical changes since the latest edition:

- The content was adapted to the current state of the art and revised editorially.
- Entry 4.3 and Figure 3 about handles have been added.

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;*
- *Part 5: Performance requirements and test methods;*
- *Part 6: Safety and health requirements (the present document).*

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.

1 Scope

This European Standard provides the essential safety, health and ergonomic requirements for mobile waste and recycling containers according to EN 840-1 to EN 840-4, not including hazardous wastes containers.

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 840-5:2012, *Mobile waste and recycling containers — Part 5: Performance requirements and test methods*

3 General requirements of construction

3.1 The container shall be constructed so that when it is unloaded or loaded with a nominal mass, it has a secure fit on an approved compatible lifting device and shall be automatically locked safely into the lifting device during the tilting and emptying operation.

3.2 The container shall be safely fitted to the lifting device of the vehicle without being carried or lifted manually.

3.3 Wheeled containers shall be constructed so that, under test conditions according to EN 840-5, the pushing and pulling forces to keep the container moving shall not exceed the values given in EN 840-5:2012, 4.9. Pushing and pulling forces shall be declared in the instructions for use (see Clause 11).

3.4 During construction of containers the following factors influencing measurable handling force shall be optimised:

- design of container as regards to form, size and position of centre of gravity in relation to positioning of wheels and handles;
- even distribution of loads on wheels;
- low rolling resistance.

4 Handles

4.1 Two wheeled containers shall have handles for pulling, pushing and manoeuvring the container that enable the operator to grip safely with two hands.

Four wheeled containers shall have handles for pushing, pulling, manoeuvring and lifting the container. Injuries caused by sharp edges shall be avoided.

4.2 Handles for pulling, pushing and manoeuvring the container shall have one of the external forms as shown in Figure 1 (based on the external form of Figure 1 ring form section and U-shaped form section are permitted). A minimum length of 120 mm and a minimum clearance of 36 mm around the handle is required (see Figure 2).

4.3 Handles for pulling, pushing and manoeuvring the container shall be positioned at a height of (900^{+400}_{-25}) mm (measured in the middle of the handle) above the ground. On two wheeled containers, for containers with a volume ≥ 140 l, these handles shall have a minimum height of 800 mm in a tilted position

(centre of gravity above the wheel axle). For containers less than 140 l the handles shall have a minimum height of 700 mm. On four wheeled containers vertical handles are optional. If two handles are fitted they shall be a minimum of 450 mm apart and shall cover a height range from 780 mm to 1 050 mm. 2 wheeled containers shall be filled with the test load for the test, their lids shall be closed.

4.4 If handles are positioned above the trunnion they shall have a safety guard according to Figure 3.

Dimensions in millimetres

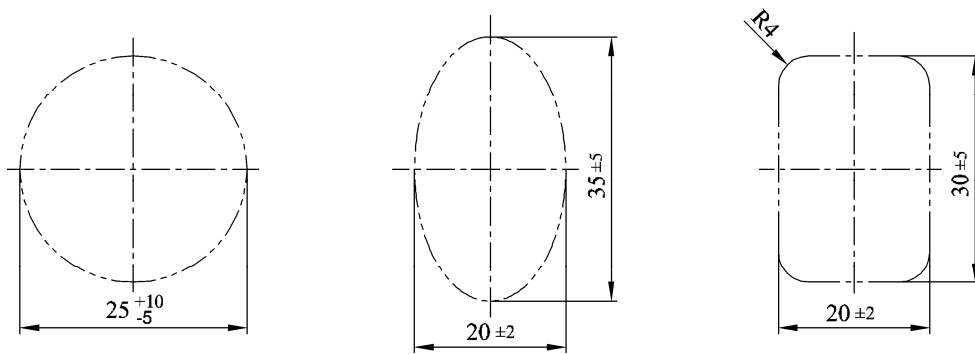
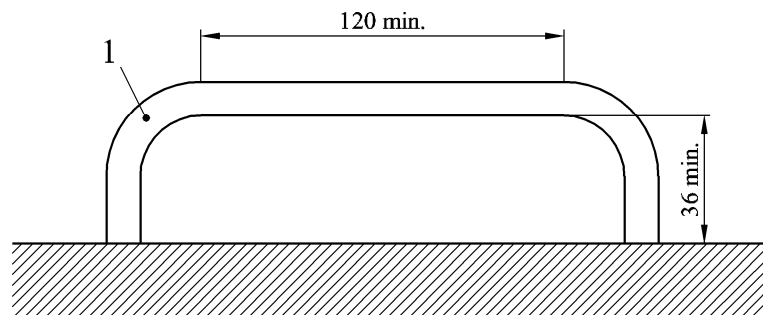


Figure 1 — Handles (round, oval, rectangular)

Dimensions in millimetres



Key

1 handle

Figure 2 — Clearance

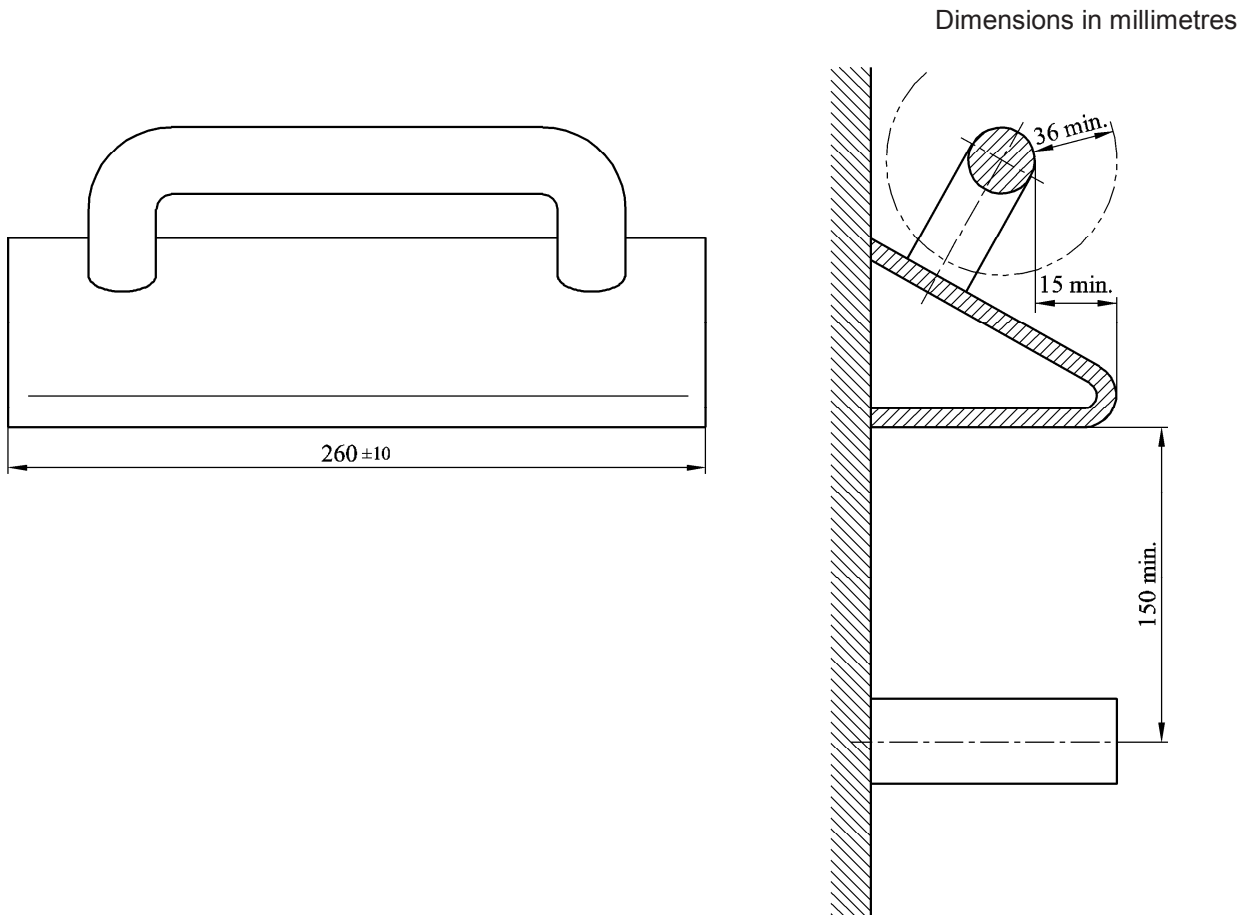


Figure 3 — Handles above trunnion

5 Wheels

5.1 Containers with 4 wheels and a capacity not exceeding 1 700 l shall only have swivel castor wheels.

Containers for towing with four wheels can have two fixed wheels or wheels which could be fixed.

5.2 The wheels and their position shall ensure a minimum of pushing/pulling force and good stability.

5.3 The wheels on all containers shall have a nominal diameter of 200 mm. Wheels of nominal diameter of 160 mm on four-wheeled containers as well as larger wheels on two-wheeled containers are optional, as long as pushing forces are not exceeded (see 3.3).

5.4 All wheels or castors shall be constructed to resist static and dynamic stress, e.g. by rolling against kerbstones (test according to EN 840-5).

5.5 If castor-mounting brackets are used they shall not protrude beyond the widest part of the container body.

6 Direction block

When direction blocks are fitted on containers with 4 wheels they shall be fitted to at least two wheels.

7 Brakes

7.1 General remark:

When brakes are fitted on containers with 4 wheels they shall be fitted to at least 2 wheels.

7.2 The brakes shall be adjustable or self-compensating and capable of retaining the container on a minimum slope of ten degrees to the horizontal.

7.3 Brakes shall be capable of being used easily by the operator.

7.4 If containers are fitted with a central brake locking system it shall be possible to secure it against unauthorised unlocking.

7.5 The brakes shall be tested according to EN 840-5:2012, 4.9.4.

8 Edges

8.1 The container shall not have any sharp edges (a radius less than 1,4 mm).

8.2 All edges which may be used for manoeuvring shall be rounded so that nobody can be injured.

9 Lids

9.1 To avoid the danger of crushed fingers when closing the lid, dome lids shall have a safety clearance to the front edge of at least 35 mm. The gap shall be closed by an elastic material.

Flat lids shall not damage fingers.

9.2 Containers with dome lids shall be provided with a mechanism to hold the lid open automatically and prevent it from accidentally closing.

9.3 Containers with assisted lids shall be provided with a device to ensure that the container lid cannot cause injury by its movement.

9.4 The dome lid container shall be designed in such a manner that, in particular, a child's head cannot be trapped between lid and body of the container.

For dome lid container, a minimum gap of 181 mm shall be kept between lid and body of the container. This gap shall not be closed either automatically (by spring force or gravity) or unintentionally by a child's hand force.

The container shall be tested according to EN 840-5:2012, 4.11.5.

10 Cleaning

Containers shall be designed for easy cleaning.

11 Instructions for use

11.1 Instructions for use shall be supplied so that the operator can have access to all available information on the correct use of containers.

Those instructions shall give information on all relevant factors to enable correct usage of a container. Also safety and health requirements shall be included.

11.2 In order to give purchasers and all users of the container the necessary information to enable them to correctly choose and safely use the containers, the information provided shall as a minimum include:

- number of the European Standard (e.g. EN 840-6);
- volume;
- total permissible mass;
- wheel diameter;
- type of the wheel bearings;
- whether direction blocks are fitted or not;
- whether brakes are equipped or not;
- adjusted braking torque;
- whether a central brake lock is equipped;
- pulling force, measured using the type test (see EN 840-5);
- essential dimensions including height of handles in the upright and tilted position.

The lid(s) shall be closed before the lifting device pick up the container.

This information shall conform to the delivered container.

Annex A (informative)

A-Deviations

A-Deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC-member.

This European Standard does not fall under any Directive of the EU. In the relevant CEN-CENELEC-countries these A-deviations are valid instead of the fixations of the European Standard until they have been removed.

DENMARK

EN 840-1 to EN 840-6 do not fulfil the national Danish legislation regarding requirements for health and safety. This legislation is based on EEC-Directive 89/391/EC of 12 June 1989 and EEC-Directive 90/269/EEC of 29 May 1990.

The Danish legislation is written down in "Executive Order No. 867 of 13 October 1994 concerning Performance of Work" and in "Executive Order No. 1164 of 16 December 1994 concerning Manual Handling" both given by the Minister of Work. The Legal understanding of the Executive Orders are written in the Danish Working Environment Service (WES) guidelines. WES-guideline No. 4.1.0.1 of 1993 describes "Manual handling and transportation of domestic garbage" and No. 4.1.0.2 of 1996 describes "Construction of technical systems and equipment for handling domestic garbage" (former WES circular-order No. 10/1990).

Therefore the manual handling and use of containers described in EN 840-1 to EN 840-6 can be met in Denmark with additional requirements.

Bibliography

- [1] 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*
- [2] 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*
- [3] 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*
- [4] 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*

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