BS EN 12574-1:2017



BSI Standards Publication

Stationary waste containers

Part 1: Containers with a capacity up to 10 000 I with flat or dome lid(s), for trunnion, double trunnion or pocket lifting device — Dimensions and design



BS EN 12574-1:2017

National foreword

This British Standard is the UK implementation of EN 12574-1:2017. It supersedes BS EN 12574-1:2006 which is withdrawn.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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Supersedes EN 12574-1:2006

English Version

Stationary waste containers - Part 1: Containers with a capacity up to 10 000 l with flat or dome lid(s), for trunnion, double trunnion or pocket lifting device - Dimensions and design

Conteneurs fixes à déchets - Partie 1 : Conteneurs de capacité allant jusqu'à 10 000 l à couvercle(s) plat(s) ou bombé(s), pour lève-conteneurs à préhension par tourillons, double tourillon ou manchons - Dimensions et conception

Stationäre Abfallsammelbehälter - Teil 1: Behälter mit einem Volumen bis 10 000 l mit Flach- oder Schiebedeckel(n), für Schüttungen mit Zapfenaufnahme, Doppelzapfenaufnahme oder Taschenaufnahme - Maße und Formgebung

This European Standard was approved by CEN on 21 November 2016.

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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 foreword

This document (EN 12574-1:2017) 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 August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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 12574-1:2006.

This European Standard is one part of the series of standards EN 12574 about "Stationary waste containers" comprising the following parts:

- Part 1: Containers with a capacity up to 10 000 l with flat or dome lid(s), for trunnion, double trunnion or pocket lifting device Dimensions and design;
- Part 2: Performance requirements and test methods;
- Part 3: 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This part of EN 12574 specifies dimensions and requirements of stationary waste containers (in the text also called containers) without wheels or with wheels for positioning purposes only, with flat or dome lid(s) and capacities up to 10 000 l for trunnion, double trunnion or pocket 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 1501-5, Refuse collection vehicles - General requirements and safety requirements - Part 5: Lifting devices for refuse collection vehicles

EN 12574-2:2017, Stationary waste containers - Part 2: Performance requirements and test methods

EN 12574-3:2017, Stationary waste containers - Part 3: Safety and health requirements

EN 840-1:2012, 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

3 Terms and definitions

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

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

3.1

stationary waste container

appropriately designed container without wheels or fitted with them, for positioning empty containers only, to temporarily store waste

3.2

lifting device

structure which picks-up, tilts and empties containers into the RCV (Refuse Collection Vehicle) and returns the container to the ground

3.3

trunnion lifting device

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

3.4

double trunnion lifting device

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

Note 1 to entry: The double trunnion picking-up system supports the torsional moment during the tilting motion.

3.5

pocket lifting device

lifting device in which the picking-up system of the RCV consists of a pair of arms to fit the pockets located on either side of the container

3.6

volume

total space inside the container when the lid is closed

3.6.1

nominal volume

volume of the waste container as declared by the manufacturer

3.6.2

usable volume

inside volume of the container that can be filled with waste

Note 1 to entry: The usable volume is based on specific application depending on the collected material and on the shape of the cover. It corresponds to:

- the volume below the filling apertures, in case of special filling apertures
- the volume of the tank, in case of collection of liquid material or in case of customer request
- the total space inside the container when the lid is closed

3.7

nominal load

load, which is calculated by density values of material multiplied by the nominal volume (3.6.1)

Note 1 to entry: Clause 6

3.8

total permissible mass

nominal load plus the dead mass of the container including all attached components lifted together

3.9

capacity

for the purpose of this standard volume and capacity are deemed to be the same

3.10

interface for trunnion lifting device

distance at the base of the trunnion where it meets the container

Note 1 to entry: see dimension number 13 in Figure 1

3.10.1

wide interface

interface for trunnion lifting device of (1 760 \pm 10) mm

3.10.2

narrow interface

interface for trunnion lifting device of ($1\,260^{+20}_{-10})\,$ mm

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3.11

interface for pocket lifting device

distance between the two lateral boxes stopping the arms before lifting phase

3.11.1

wide interface

interface for pocket lifting device of (1820 ± 15) mm

3.11.2

medium interface

interface for pocket lifting device of (1710 ± 15) mm

3.11.3

narrow interface

interface for pocket lifting device of (1600 ± 15) mm

3.12

disabled access

specific ergonomic devices and/or solutions in the waste containers to facilitate access by disabled persons

3.13

lid

set of parts closing the top of the body of a waste container including one or more flaps, and including all the related components

3.14

locked lid

lid which is closed so that it cannot be opened manually by a single person; this locked lid is usually opened by a vehicle refuse collection vehicle during emptying operations

3.15

access flap

part of the lid which is opened for waste introduction

3.16

hinged access flap

flap that can be opened for waste introduction by a rotation around a hinge axle which is part of the lid

Note 1 to entry: See an example in Figure 4, type 4, with hinged lid open and tilted cover.

3.17

sliding flap

flap that can be opened only by a sliding movement

3.18

locked flap

part of the lid carrying filling aperture(s) or mechatronics device(s) which it is not opened for waste introduction

4 Volumes

The nominal volume of the containers shall be up to $10\ 000\ l$ (see Tables 1, 2, 3, 4 and 5). The tolerance on nominal volume is $\pm\ 5\ \%$. For measuring methods of volume, see EN 12574-2:2017.

5 Dimensions and design

- **5.1** The design of the containers need not correspond strictly to the drawings given in Figures 1 to 8. However, the dimensions given in Tables 1 to 5 and Figures 1 to 8 shall be respected.
- **5.2** The container shall be constructed so that when it is unloaded or loaded with a nominal load, it fits on an approved compatible lifting device according to EN 1501-5.
- **5.3** The lid(s) shall be permanently fitted to the body via at least two fixing points and have at least one hand grip or other means for opening. The force for opening the lid manually shall be maximum 50 N. For container lids needing a handling force higher than 50 N the lid shall be held self-acting in opened position.
- **5.4** Handles and their location shall be designed so that they neither injure the operator nor obstruct the emptying operation according to Clause 4 of EN 12574-3:2017. For handles fitted above trunnion, see Figure 2.
- **5.5** Sharp edges shall be avoided in all cases. Rounded edges with a radius more than 1,4 mm are not considered as sharp edges. The surfaces shall be free of any foreign bodies or flaws.
- **5.6** The container should have a drain hole equipped with a suitable plug. The hole and the plug are optional.
- **5.7** If the container has positioning wheels, it shall be possible to immobilize it by design or device. If wheels are fitted, the minimum diameter shall be 200 mm.
- **5.8** Disabled access: optional specific ergonomic devices and/or solutions in the waste container for facilitating the access of disabled could be for instance:
- opening/s in a special low level;
- manual handle located at low level for opening the normal lid.
- **5.9** Locked lid: the force required to unlock a locked lid shall exceed 500 N however applied. Cover locking device shall be not demountable or by-passed without specific tool/s.

6 Nominal load and total permissible mass

The container shall be constructed strongly enough for the nominal load calculated by 0,25 kg/dm³ or 0,40 kg/dm³ (see EN 12574-2:2017, 4.5) multiplied by nominal volume.

Total permissible mass shall be declared by the waste container manufacturer.

7 Safety and health requirements

The containers shall meet the safety and health requirements according to EN 12574-3:2017.

8 Testing

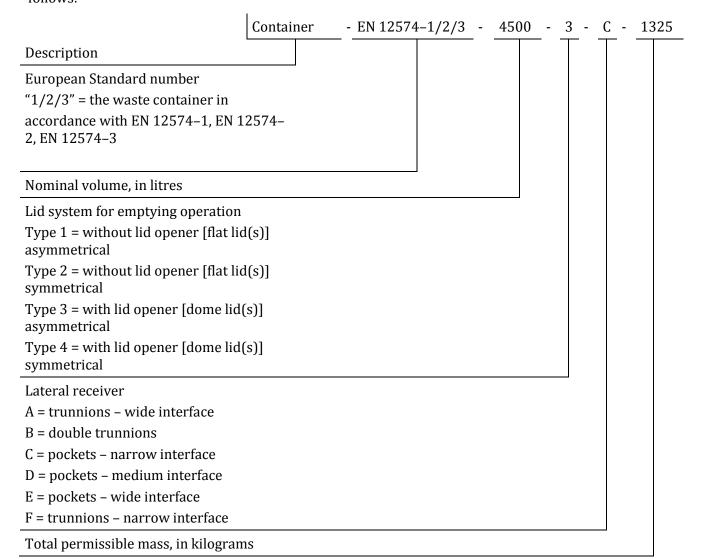
The container shall fulfil the performance and test requirements of EN 12574-2:2017.

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 12574-1/2/3"; for waste containers prepared for fitting mechatronic devices "EN 12574-1/2/3";
- nominal volume:
- manufacturers name and trademark;
- total permissible mass, in kilograms;
- year and month of manufacturing.
- **9.2** Additional signs of quality, recycling, etc. are allowed.

10 Designation

The containers complying with the requirements of this European Standard shall be designated as follows:



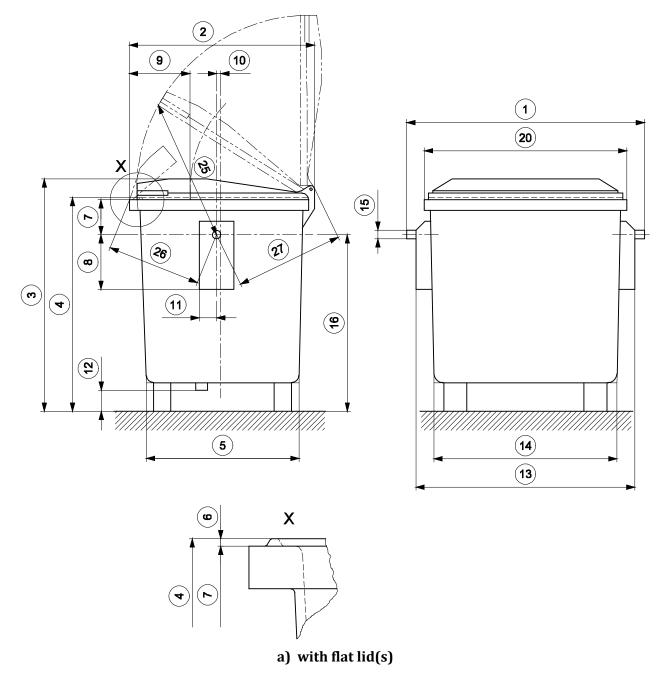
The standard number can be "1/2/3": this number characterizes the level of compliance with the features of the waste container:

 "1/2/3" in the case the waste container is according to EN 12574-1:2017, EN 12574-2:2017 and EN 12574-3:2017;

Table 1 — Dimensions related to containers for trunnion lifting device (Figures 1, 2, 3 and 4)

	Containers for trunnion lifting device			
	Type F	Type A		
	Narrow interface	Wide interface		
Item no	Dimensions	Dimensions	Remarks	
	mm	mm		
1 a	1 380 -10	1 880 ± 10	important for the lifting device	
2 a	1 520	max.	total width lid/s closed	
3	1 470	max.	only for flat lidded containers	
4 a	1 350	max.		
5	1 350	max.		
6	15 m	ax.		
7	240 ±	: 50		
8 a	460 n	nin.		
9 a	460 n	nax.	only for flat lidded containers	
10 a	0 to 90		only for flat lidded containers	
11	800		only for flat lidded containers	
12 a	30 min.		minimum ground clearance	
13 a	1260+20	1 760 ± 10	important for lifting device	
14	1 150 max.	1 650 max.		
15 a	40 ± 2			
16 a	1 050 ± 50			
17 a	160 ± 10			
18 a	450 ± 50			
19	450 min.			
20 a	1 250 max.	1 750 max.	max. overall for top frame and lid	
21 a	650 min.			
22 a	1 820 max.			
23 a	0 to 150		lid(s) trunnion position for assisted rotation of lid(s) for emptying operation	

24 a	490 ± 60	distance between trunnion and lid(s) trunnion
25 a	1 700 max.	distance from the trunnion axle to the lid edge measured from 0° up to 90° (lid opening)
26 a	820 max.	maximum distance from the trunnion axle to the frontal body edge
27 a	820 max.	maximum distance from the trunnion axle to the rear body edge
^a Compulsory dimension.		



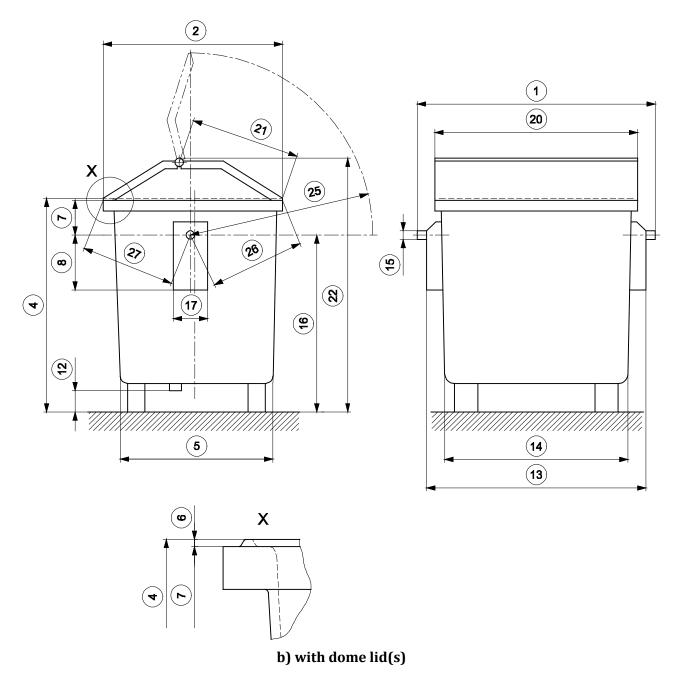
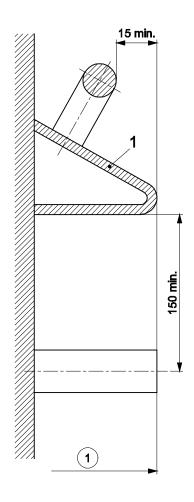


Figure 1 — Dimensions of containers for trunnion lifting device without lid opener (type 1)

Dimensions in millimetres



Key

1 handle protection

Figure 2 — Handle protection (if above trunnion) and clearance at trunnion

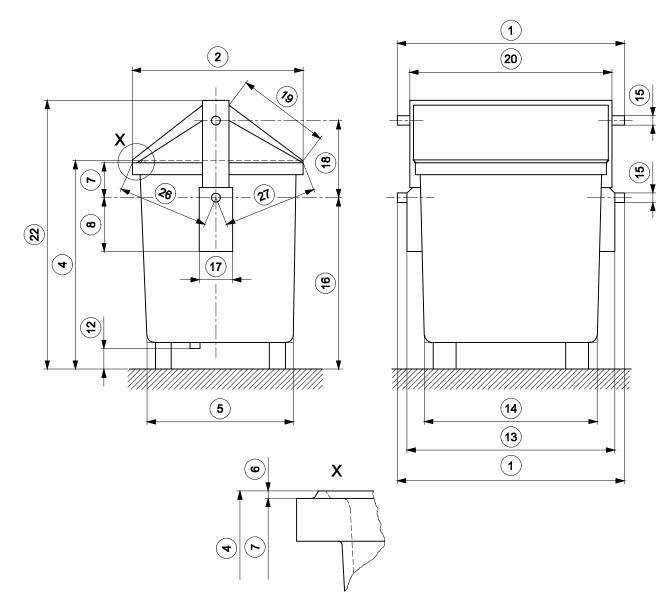


Figure 3 — Dimensions of containers with dome lid(s) for trunnion lifting device with lid opener (type 3 and 4)

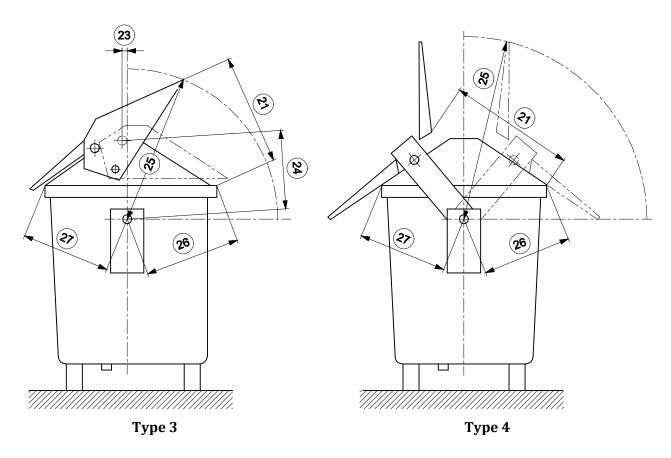


Figure 4 — Dimensions of the lid opening system (type 3 and 4) for containers showed in Figure 3 $\,$

 $Table\ 2-Dimensions\ related\ to\ containers\ for\ pocket\ lifting\ device\ with\ dome\ lid\ (Figure\ 5)$

Dimensions in millimetres

Item no	2 500 1	4 500 1	Remarks
1	1 390 max.	2 080 max.	
2	1 050 ± 30	1 420 ± 30	
3	910+30	990_0	
4	795 ± 80	1 100 -15	
5	310 ± 50	480 ± 70	
6	1 250 ± 50	1 250 ± 50	
7	1 550 +70 -10	1 740 +70 -10	
8 a	280 min.	280 min.	
9 a	270+30	270+30	
10 a	440+40 -50	440+40	
11 a	550+5	550 ^{+ 5} ₋₆₀	
12 a	260+20	290_0	
13 a	135+15	135+15	
14 a	210+20 -15	210+20	
15	200 ± 10	250 ± 10	
16	1 180 ± 40	1 850 ± 10	
17 a	2 040 ± 20	2 040 ± 20	
18 a	1 780 ± 50	1 845 ± 10	
19	80 ± 5	80 ± 5	
20 a	120+7	120+7	
21 a	Narrow interface ty	/pe C: 1 600 ± 15	
22	1 540 max.	1 540 max.	
23 a	900+140	900+140	
24	30 min.	30 min.	minimum ground clearance

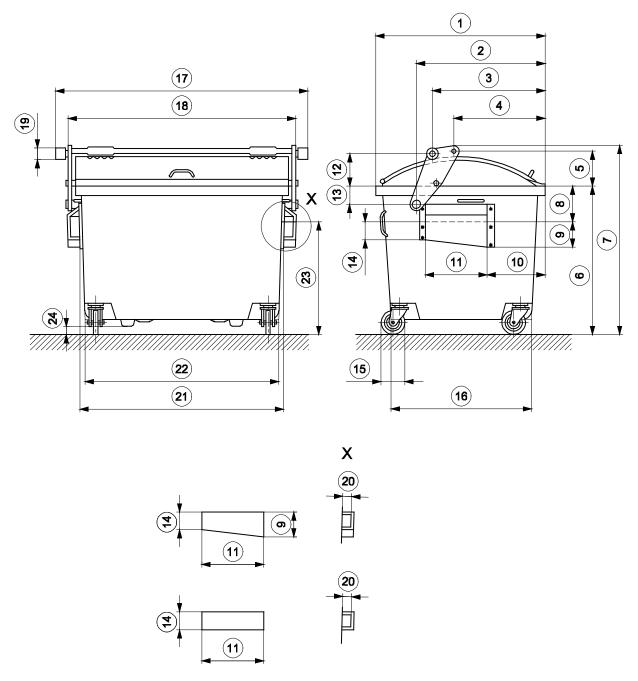
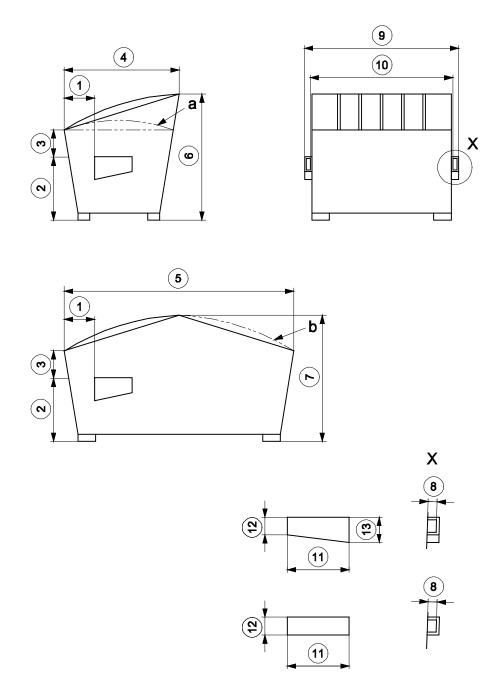


Figure 5 — Containers with dome lid(s) for pocket lifting device with lid opener (type 3)

Table 3 — Dimensions related to containers with flat lid, up to 10 000 l (Figure 6)

Item no	Dimensions	Remarks	
	mm		
1 a	270 to 490	container edge – pocket upper edge	
2 a	850 ± 100	ground clearance – pocket upper edge	
3 a	min. 170	pocket upper edge – frame upper edge	
4 a	max. 1 850	container depth	
5 a	max. 3 100	container total width	
6 a	max. 2 020	total height from ground	
7 a	max. 2 020	total height from ground	
8 a	110 +17 -10	important for lifting device	
9 a	max. 2 070	important for lifting device	
10 a	Type C: 1 600 ± 15		
	Type D: 1 710 ± 15		
	Type E: 1 820 ± 15		
11 a	550^{+5}_{-60}		
12 a	210^{+20}_{-15}		
13 a	270^{+30}_{-10}		
a Compulsor	Compulsory dimension.		



Key

- a lids can be horizontal or sloped
- b back lid optional (by arrangement between customer and manufacturer)

Figure 6 — Containers with flat lid(s) for lifting devices with pocket receiver without lid opener

Volumes from 2 000 l to 10 000 l		
Item no Dimensions Remarks		Remarks
	mm	
1 a	60 max.	
2	50 ± 2	
3 a	103 ± 2	inside of pocket
4 a	1 840 max.	
5 a	227 ± 5	inside of pocket
6 a	710 min. 890 max.	inside of pocket
7 a	2 260 max.	no protrusions beyond radius
8 a	1 320 max.	
9	80 ± 2	
10 a	660 min.	
11 a	40 max.	
12 a	280 max.	
13	170 ± 50	
14	1 940 ± 170	
15	40° ± 5°	
16	765 ± 5	optional sliding door – fitted one or both sides
17	765 ± 5	optional sliding door – fitted one or both sides
18	75 ± 5	
19	985	
20 a	940 max.	
21	600 max.	

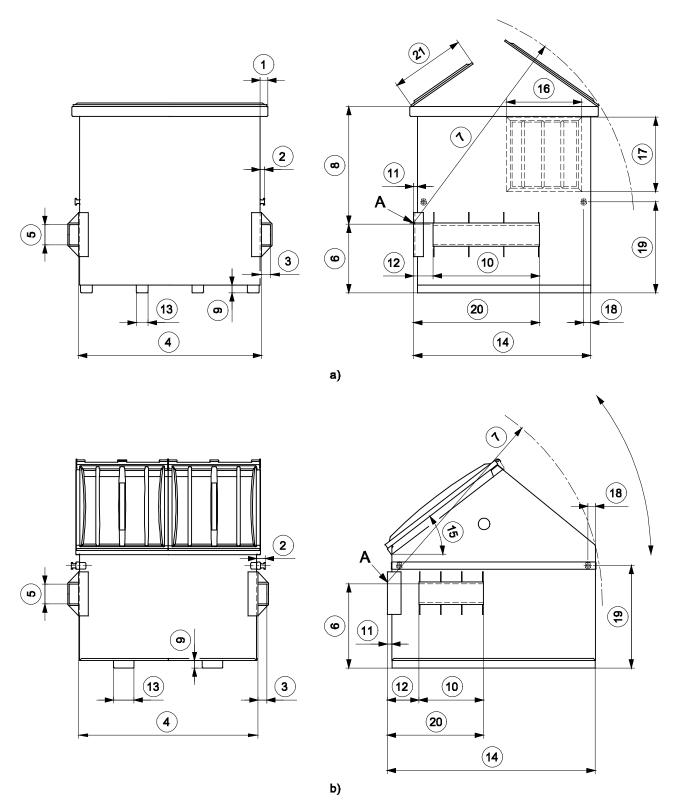
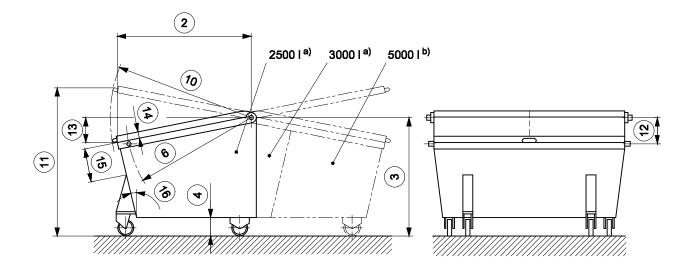
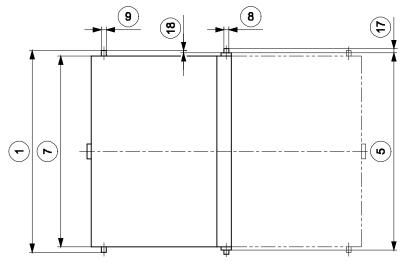


Figure 7 — Dimensions of containers with flat lid(s) for pocket lifting device without lid opener

Table 5 — Dimensions related to containers with flat lid for double trunnion lifting device without lid opener (type 1 and 2) (Figure 8)

Volumes from 2 500 l to 5 000 l			
Item No	Dimensions	Remarks	
	mm		
1	2165 ^{+ 5} ₋₁₀		
2	1 260 max.	from hinge centre to end of lid without handle	
3	1 415 to 1 435		
4	30 min.	minimum ground clearance	
5	2 090 + 7	total width without trunnions	
6	R 1 160 ± 5	distance between centre trunnions	
7	1960 ^{+ 5} ₋₁₅	total width inside front trunnions	
8	ø 50 ± 2		
9	ø 70 ± 5		
10	R 1 370 max.	from hinge centre to end of lid (handle included if present)	
11	1 910 max.	measured to the handles	
12	350+10	vertical distance between trunnions	
13	320+15	to tipping edge	
14	110 max.		
15	600 ± 50	from tipping edge (clearance for lifting device)	
16	17° max.		
17	80 ± 2		
18	40 ^{+ 5} ₋₁₀		





Key

- a) Type 1
- b) Type 2

Figure 8 — Container with flat lid(s) for double trunnion lifting device without lid opener (type 1 and 2)

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 provisions of the European Standard until they have been removed.

DENMARK

EN 12574-1:2017 to EN 12574-3:2017 does 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 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 12574-1:2017 to EN 12574-3:2017 in Denmark can be met with additional requirements.

Bibliography

- [1] EN 1501-1, Refuse collection vehicles and their associated lifting devices General requirements and safety requirements Part 1: Rear-end loaded refuse collection vehicles
- [2] EN 1501-2, Refuse collection vehicles and their associated lifting devices General requirements and safety requirements Part 2: Side loaded refuse collection vehicles
- [3] EN 13071-1, Stationary waste containers up to 5 000 l, top lifted and bottom emptied Part 1: General requirements
- [4] EN 13071-2, Stationary waste containers up to 5 000 l, top lifted and bottom emptied Part 2: Additional requirements for underground or partly underground systems



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