Prüfbericht - Produkte
Test Report - Products

TÜVRheinland®

Prüfbericht-Nr.: *Test report no.*:	**HU262CX9 001**	**Auftrags-Nr.:** *Order no.*:	301564327 P01878011	
Kunden-Referenz-Nr.: *Client reference no.*:	2432001	**Auftragsdatum:** *Order date:*	2025-03-24	
Auftraggeber: *Client*:	SC Sterk Plast s.r.l No 2, Constrantei, Medgidia, 905600 Romania			
Prüfgegenstand: *Test item*:	Behälter mit 4 Rädern und einem Nennvolumen bis 1 300 l mit Flachdeckel *Containers with 4 wheels with a capacity up to 1 300 l with flat lid(s)*			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	1100 lt			
Auftrags-Inhalt: *Order content*:	Mechanical safety test			
Prüfgrundlage: *Test specification*:	EN 840-2:2020 EN 840-5:2020 EN 840-6:2020 AfPS GS 2019:01 PAK			

Wareneingangsdatum: *Date of sample receipt*:	2025-12-09
Prüfmuster-Nr.: *Test sample no:*	A004159647-001
Prüfzeitraum: *Testing period*:	2025-10-13 – 2026-04-10
Ort der Prüfung: *Place of testing*:	TÜV Rheinland InterCert Kft. H-1143 Bp.,Gizella u. 51-57.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland InterCert Kft. H-1143 Bp.,Gizella u. 51-57.
Prüfergebnis*: *Test result**:	Pass

geprüft von: *tested by:*
X
Signed by: Szoke Norbert

Datum: *Date:* 2026-04-15

Stellung / Position: Sachverständige(r)/Expert

genehmigt von: *authorized by*:
X
Signed by: Vegh Peter

Ausstellungsdatum: *Issue date:* 2026-04-15

Stellung / Position: Sachverständige(r)/Expert

Sonstiges / *Other*: Foreseeable misuse has been considered. Currently neither a safeguard clause procedure has been invoked nor is an increase in accidents known for this / these product(s).
The requirements of the decision AfPS GS 2019:01 PAK regarding PAHs were considered (test report no R_1940445 (2022-06-07); Attachment 1 – Photo documentation (7 pages)

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*: Prüfmuster vollständig und unbeschädigt / *Test item complete and undamaged*

* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
** Legend:*	*1 = very good* *P(ass) = passed a.m. test specification(s)*	*2 = good*	*3 = satisfactory* *F(ail) = failed a.m. test specification(s)*	*4 = sufficient* *N/A = not applicable*	*5 = poor* *N/T = not tested*

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.* *Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	

Prüfbericht-Nr.: HU262CX9 001
Test Report No.:

Absatz *Clause*	**EN 840-2:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*

1	**Produktdetails** *Product details*	Mobil waste and recycling containers with 4 wheels and flat lid 1100 lt
2	**Maße / Gewicht** *Dimensions / Weight*	See at page 48
3	**Bedienelemente** *Operating elements*	4 rubber wheels (Ø 200 mm) with steel elements , plastic body, plastic lid
4	**Ausstattung / Zubehör** *Equipment / Accessories*	HDPE body, Rubber wheels, and sealing on the drainage plug, metal rod and screw to fix the lid to the body, metal and rubber wheels
5	**Verwendete Materialien** *Used materials*	HDPE (lid, body), metal rod and screw to fix the lid to the body, 4 Rubber wheels with (2 of them with brakes), Plastic drainage cup with rubber sealing, Plastic snap-in cup to fix the lid to the body
6	**Sonstiges** *Other*	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
7	**Prüfmusterbereitstellung**: *Test sample obtaining:*	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others:

1100 lt – Front view

1100 lt – Side view

1100 lt – Rrear view

1100 lt – Open lid

1100 lt - Information on the surface of the container

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1	**Scope**		
	This document specifies dimensions and design requirements of mobile waste containers with 4 wheels, with flat 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**		
	See EN 840-2:2020		
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: 500 l, 660 l, 770 l, 1 000 l, 1 100 l and 1 200 l. Nominal volumes different from those referenced can be used by agreement between user and manufacturer. The tolerance of the volumes shall be ± 5 % maximum measured according to EN 840-5.	Class II – 1100 liter: • 1100 lt	P ☒ F ☐ N/A ☐ N/T ☐

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5	**Dimensions and design**		
5.1	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: 500 l, 660 l, 770 l, 1 000 l, 1 100 l and 1 200 l. Nominal volumes different from those referenced can be used by agreement between user and manufacturer. The tolerance of the volumes shall be ± 5 % maximum measured according to EN 840-5.	Functional dimensions correspond to Figure 1 on the sample (see at page 14), The nominal volumes are within the require tolerances.	P ☒ F ☐ N/A ☐ N/T ☐
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 (Form A).	The containers are possible to lift and tilt with the lifting equipment, the comb receivers correspond to Figur 2.	P ☒ F ☐ N/A ☐ N/T ☐
5.3	The lid(s) shall cover the opening of the container completely. It/they shall be opened easily by itself/themselves during the emptying cycle. It/They shall be made with at least two fixing points and have at least one means of opening.	The lid is fixed to the body via plastic rod. It The rod is secured with plastic plugs at the end of the rods. The lid can be open easily.	P ☒ F ☐ N/A ☐ N/T ☐

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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 shall also be designed so that they do not harm the operator.	No harm the operator.	P ☒ F ☐ N/A ☐ N/T ☐
5.5	If the container has ribs in the frontal receiver they shall meet the requirements of Figures 2 and 4.	Dimensions correspond to Figures 2 and 4.	P ☒ F ☐ N/A ☐ N/T ☐
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 configurations as shown in Figure 5.	With 4 swivel castors. Certificate of the wheels was provided by the manufacturer. Mounting correspond to Figure 5. Diameter: 200mm SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor: TR 0040.001 B; Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH	P ☒ F ☐ N/A ☐ N/T ☐

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5.7	All the surfaces of the container including design features shall be smooth and free of any foreign bodies or flaws..	No sharp edges, burrs.	P ☒ F ☐ N/A ☐ N/T ☐
5.8	The container should have a drain plug.	Drain plugs provided.	P ☒ F ☐ N/A ☐ N/T ☐
5.9	When direction locks are fitted they shall be fixed on at least two castors.	No direction lock.	P ☐ F ☐ N/A ☒ N/T ☐

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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 6. The effectiveness of the centralized braking system shall conform to EN 840-5.	2 of the 4 wheeles have brake, no centralized braking system	P ☒ F ☐ N/A ☐ N/T ☐
6	**Nominal mass**		
	The container shall be constructed strongly enough to carry a mass of 0,4 kg/dm3 x 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.	1100 liter container: 440 kg	P ☒ F ☐ N/A ☐ N/T ☐
7	**Safety and health requirements**		
	The container shall meet the safety and health requirements according to EN 840-6.	Please refer test report of EN 840-6 (See from page 38-47)	P ☒ F ☐ N/A ☐ N/T ☐

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8	**Testing**		
	The container shall fulfil the performance requirements and the tests of EN 840-5.	Please refer test report of EN 840-5 (See from page 18-37)	P ☒ F ☐ N/A ☐ N/T ☐
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 840-2); — nominal volume; — manufacturer's name or trademark; — total permissible mass, in kilograms; — year and month of manufacturing.	All the necessary information are on the surface of the containers. (See at page 3) - P - P - P - P - P	P ☒ F ☐ N/A ☐ N/T ☐
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.	suitable marking ASTM International Resin Identification Coding System symbols are used. (see on page 3)	P ☒ F ☐ N/A ☐ N/T ☐

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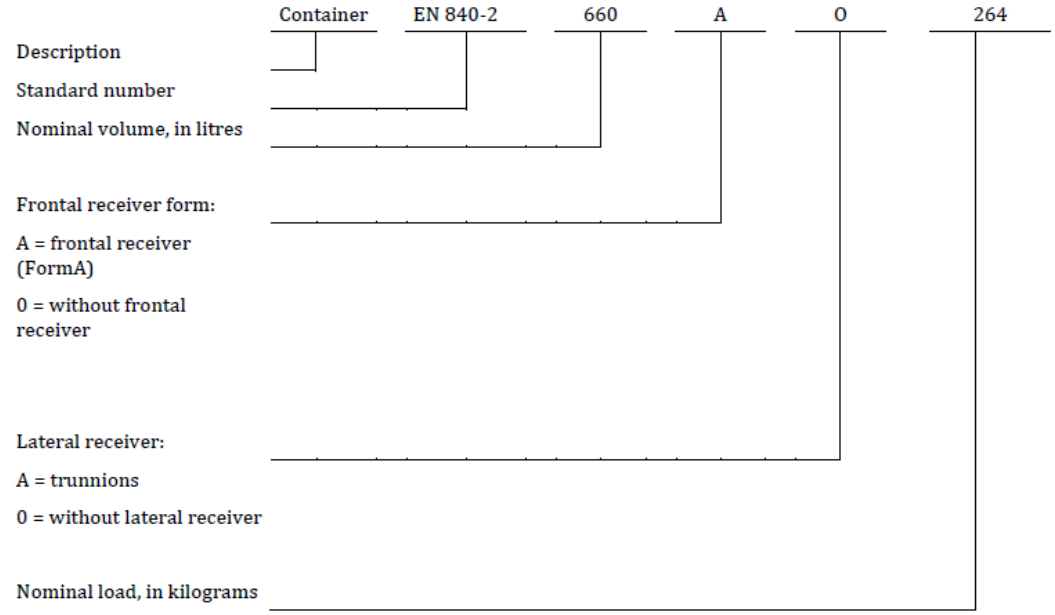
10	**Designation**		
	The container complying with the requirements of this document shall be designated as follows:	1100 lt EN 840-2 1100 A A 440	P ☒ F ☐ N/A ☐ N/T ☐
			

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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
	500 l	660 l	770 l	1 000 l	1 100 l	1 200 l	
1[a]	1 370 ± 10	1 370 ± 10	1 370 ± 10	1 370 ± 10	1 370 ± 10	1 370 ± 10	In case of trunnions
2	680 max.	780 max.	800 max.	1 115 max.	1 115 max.	1 115 max.	Total width lid(s) closed
3	740 max.	850 max.	870 max.	1 190 max.	1 190 max.	1 190 max.	When lid open
4	1 370 max	1 370 max.	1 370 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.	Tipping edge
6	480 ± 50	585 ± 50	585 ± 50	870 ± 50	885 ± 50	885 ± 50	
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.	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	Handle position if present
9	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^{0}_{-45}	460^{+65}_{-45}	460^{+65}_{-45}	500^{+15}_{-40}	500^{+15}_{-40}	500^{+15}_{-40}	In case of trunnions
11	Ø 200 ± 2 *)	Ø 200 ± 2 *)	Ø 200 ± 2 *)	Ø 200 ± 2 *)	Ø 200 ± 2 *)	Ø 200 ± 2 *)	*) Ø 160 ± 2 optional according to 5.3 of EN 840-6:2020
12[a]	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}	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}	In case of frontal receiver
16[a]	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.	In case of frontal receiver
18[a]	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.	When ribs are fitted
20	15 max.	15 max.	15 max.	15 max.	15 max.	15 max.	
21[a]	33^{+8}_{-1}	33^{+8}_{-1}	33^{+8}_{-1}	33^{+8}_{-1}	33^{+8}_{-1}	33^{+8}_{-1}	In case of frontal receiver
23[a]	Ø 40 ± 2	Ø 40 ± 2	Ø 40 ± 2	Ø 40 ± 2	Ø 40 ± 2	Ø 40 ± 2	In case of trunnions

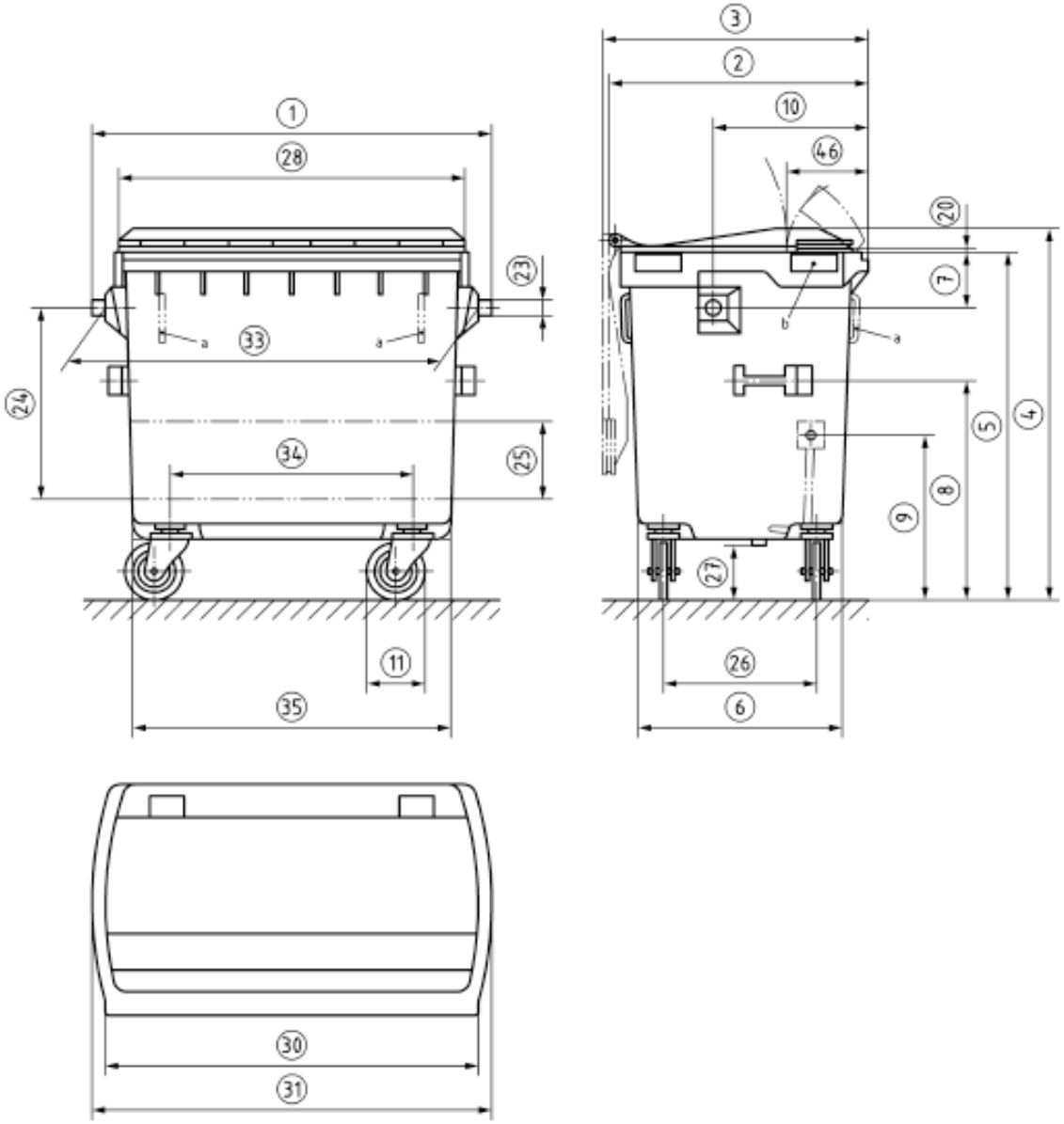
Dimension N°	Class I - Small sizes < 1 000 l			Class II - Large sizes ≥ 1 000 l			Remarks
	500 l	660 l	770 l	1 000 l	1 100 l	1 200 l	
24[a]	670^{+30}_{0}	670^{+30}_{0}	670^{+30}_{0}	670^{+30}_{0}	670^{+30}_{0}	670^{+30}_{0}	The front of the container beneath the ribs of the lifting comb shall be smooth. No constructions shall protrude in this area.
25[a]	350 ± 10	350 ± 10	350 ± 10	350 ± 10	350 ± 10	350 ± 10	Clearance for lifting device
26	380 ± 30	480 ± 30	480 ± 30	750^{+50}_{-40}	750^{+50}_{-40}	750^{+50}_{-40}	
27	130 min.	130 min.	130 min.	130 min.	130 min.	130 min.	Ground clearance
28[a]	1 275 max.	1 275 max.	1 275 max.	1 275 max.	1 275 max.	1 275 max.	Lid
29[a]	1 185 min.	1 185 min.	1 185 min.	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}	1200^{+15}_{0}	1200^{+15}_{0}	1200^{+15}_{0}	Overall frontal receiver
31[a]	1 265 max.	1 265 max.	1 265 max.	1 265 max.	1 265 max.	1 265 max	Overall length of the top rim or handles
32	-	-	-	-	-	-	This dimension is used no longer.
33[a]	1260^{+20}_{-10}	1260^{+20}_{-10}	1260^{+20}_{-10}	1260^{+20}_{-10}	1260^{+20}_{-10}	1260^{+20}_{-10}	In case of trunnions 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^{+70}_{-50}	880^{+20}_{-50}	880^{+20}_{-50}	880^{+20}_{-50}	880^{+20}_{-50}	950 ± 120	
35	$1\,090^{+80}_{-70}$	1 090 ± 70	1 090 ± 70	1 090 ± 70	1 090 ± 70	1 090 ± 70	The outer corner shall be designed according to dimension W2 of EN 1501-5:—, Table Figure A.6
36[a]	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 centre 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.	When ribs are fitted

Dimension N°	Class I - Small sizes < 1 000 l			Class II - Large sizes ≥ 1 000 l			Remarks
	500 l	660 l	770 l	1 000 l	1 100 l	1 200 l	
38[a]	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	$6^{+2}_{-4,5}$	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.	In case of frontal receiver
41	10 min.	10 min.	10 min.	10 min.	10 min.	10 min.	
42	Ø 16 max.	Ø 16 max.	Ø 16 max.	Ø 16 max.	Ø 16 max.	Ø 16 max.	
43	Ø $6,6^{+0,2}_{0}$	Ø $6,6^{+0,2}_{0}$	Ø $6,6^{+0,2}_{0}$	Ø $6,6^{+0,2}_{0}$	Ø $6,6^{+0,2}_{0}$	Ø $6,6^{+0,2}_{0}$	
44	$8,3^{+0,1}_{0}$	$8,3^{+0,1}_{0}$	$8,3^{+0,1}_{0}$	$8,3^{+0,1}_{0}$	$8,3^{+0,1}_{0}$	$8,3^{+0,1}_{0}$	
45	approximately 50	approximately 50	approximately 50	approximately 50	approximately 50	approximately 50	
46[a]	360 max.	360 max.	360 max.	360 max.	360 max.	360 max.	If two or more part lids are fitted they shall enable the comb and trunnion lifting device to operate correctly.

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

NOTE Dimensions 22 and 39 are no longer used and have been deleted from the table as a result.

Absatz	**EN 840-2:2020**	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Evaluation*



Key

a) handles to be fitted if the container is without frontal receiver

b) requirements for handle if in front of trunnion (see 5.4)

NOTE For more details regarding the dimensions, see Table 1.

Figure 1 — System dimensions

Absatz	**EN 840-2:2020**	Messergebnisse - Bemerkungen	Bewertung
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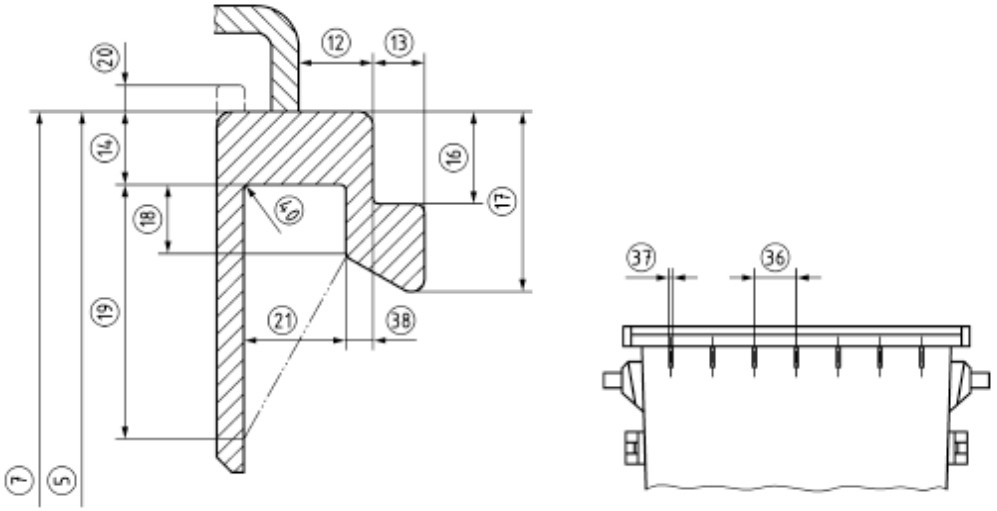


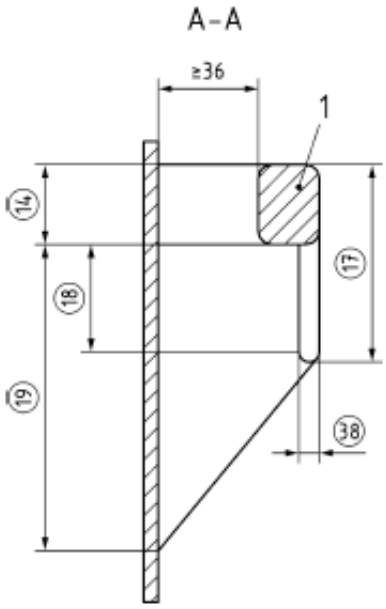
A

Key

A form A

NOTE For more details regarding the dimensions, see Table 1.

Figure 2 — Frontal receivers

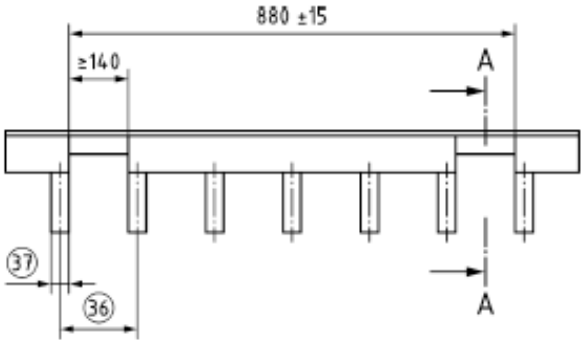


Key

1 handle

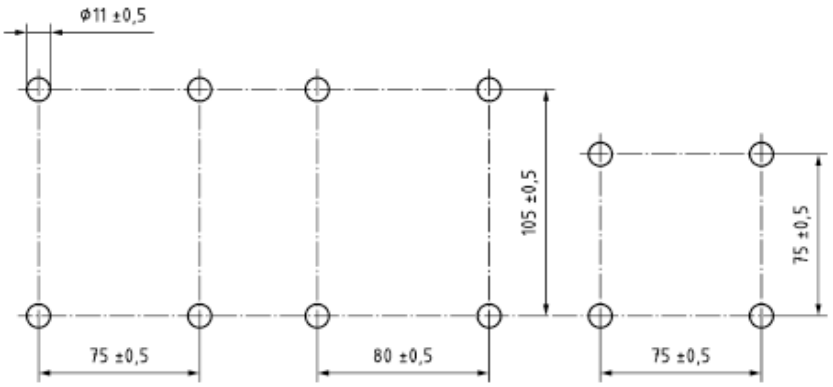
NOTE For more details regarding the dimensions, see Table 1.

Figure 3 — Handle



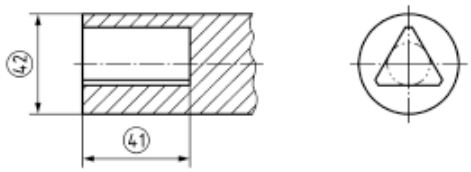
NOTE For more details regarding the dimensions, see Table 1.

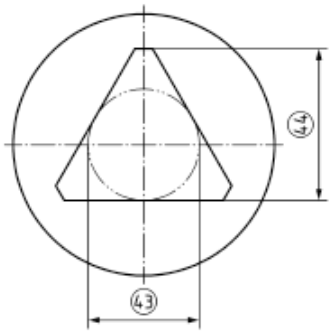
Figure 4 — Frontal receiver with integrated handles

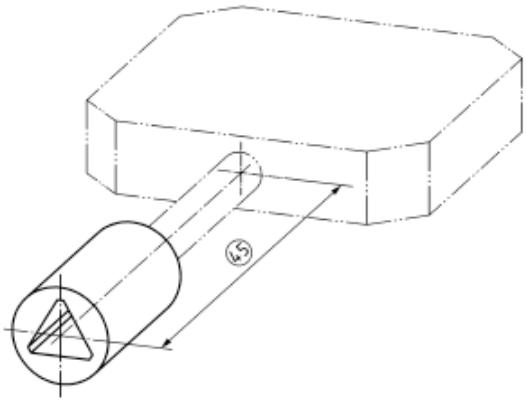


NOTE For more details regarding the dimensions, see Table 1.

Figure 5 — Distance between centres of castor wheels

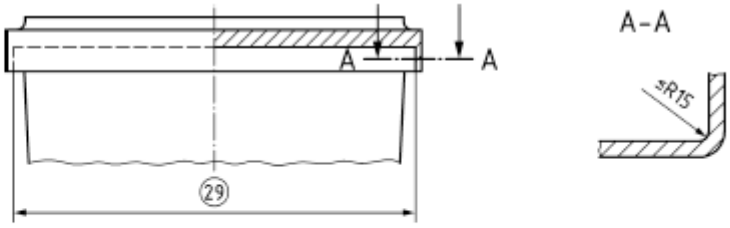






NOTE For more details regarding the dimensions, see Table 1.

Figure 6 — Standard triangular key



NOTE For more details regarding the dimensions, see Table 1.

Figure 7 — Functional dimension for frontal receivers

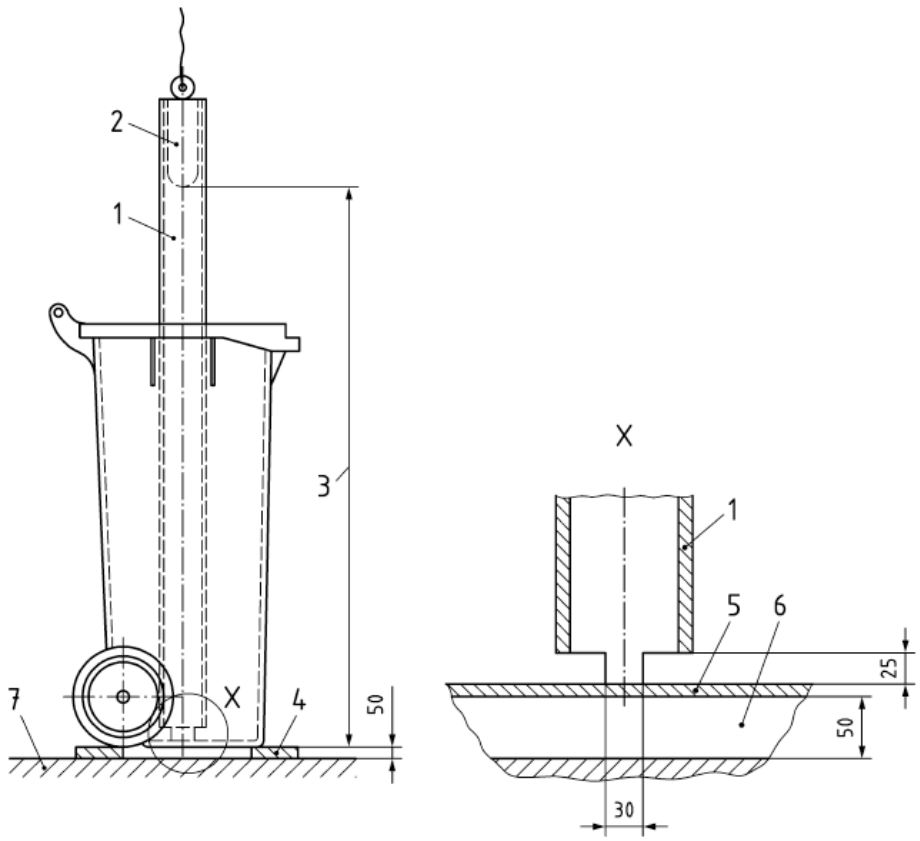
Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
	Scope		
	This European Standard gives the test methods for mobile waste and recycling containers according to EN 840-1 to EN 840-4. It also gives the levels to be reached during the tests or after they have been done. This European Standard is applicable to mobile waste and recycling containers with capacities up to 1 700 l.		
2	**Normative references**		
	See DIN EN 840-5:2020		
3	**Terms and definitions**		
	See EN 840-5:2020		
4	**Tests**		
4.1	**General**		
	Before and after the tests a visual inspection of the container shall be done for the purpose of: a) checking that the container is not damaged and has no visual defect; b) checking that the manufacturing characteristics of the container to be tested are those specified in the standards applying to the container according to EN 840-1 to EN 840-4; c) comparing the condition of the container before and after the sequence of the tests. After completing the tests some deformation of the container is permissible, however, it shall remain entirely functional.		
4.2	**Control before the tests**		
4.2.1	**Visual aspects**		
	No obvious damage, cracks, bubbles, large flashes or sharp edges shall be present. No surface defects (un-smooth areas; trails in colour) perceivable from a distance of 1 m by the naked eye shall be visible.	No cracks, sharp edges, burrs	P ☒ F ☐ N/A ☐ N/T ☐

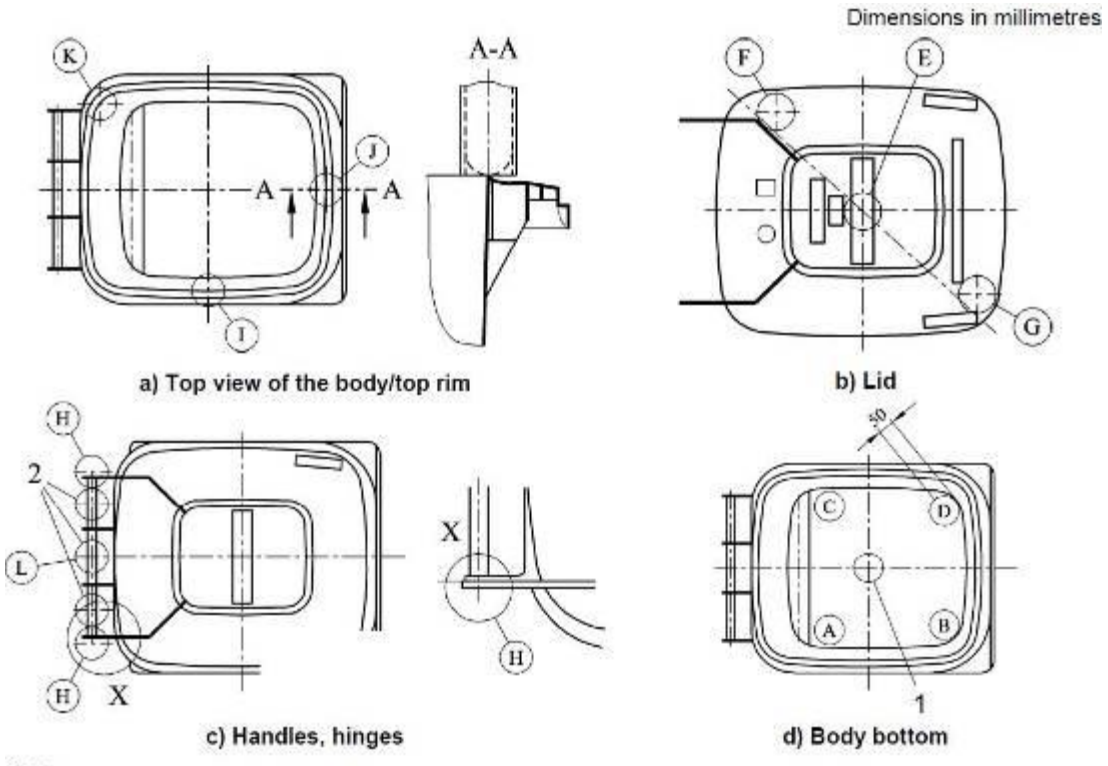
Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.2.2	**Compatibility with EN 840-1 to EN 840-4**		
4.2.2.1	**Components**		
	Body, lid, wheels and other fittings shall conform to the relevant container standard.	Please refer test report of EN 840-2 and -6 (See from page 4-17 and from page 38)	P ☒ F ☐ N/A ☐ N/T ☐
4.2.2.2	**Sizes and dimensions**		
	Functional and safety dimensions for the container and its components shall be checked according to the figures and the relevant tables of EN 840-1 to EN 840-4.	Dimensions met with the requirement in Figure 1-7 in EN 840-2, measured on representative sample. (See at page 49)	P ☒ **F** ☐ N/A ☐ N/T ☐
4.2.2.3	**Volumes**		
	The volumes of container shall be measured: a) for the body, by tank method; b) for the lid, by tank method; c) volume results in a) and b) minus any duplicated volumes. The volumes shall be within the tolerances according to EN 840-1 to EN 840-4. For containers according to EN 840-3 volume measurement by means of calculation is allowed.	Please refer test report of EN 840-2 Measured volumes are within the tolerance of ± 5 % on the representative samples.	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.2.2.4	**Tank method**		
	The test equipment shall consist of a tank with sufficient capacity to receive the container to be tested. The test procedure is as follows: - place the empty container in a tank, the container shall not be inclined; - simultaneously fill the tank and the container with water at a temperature of (15 ± 5)°C; - measure the quantity of water inside the container. Accuracy of measurement shall be ± 1 % of the measured capacity of the container.	The representative containers are withing the limit acc to EN 840-2:2020, clause 4, on page 7: ± 5 % 1100 lt containers: 1045 – 1155 l: 1100 lt: Body: 1026l+ Lid: 81l = Sum: 1107l	P ☒ F ☐ N/A ☐ N/T ☐
4.2.3	**Deflection for comb lifting system**		
	The frontal receiver shall have a horizontal deflection of no more than: a) 1,5 % of the length of the frontal receiver for plastic; b) 0,6 % of the length for steel. For other systems the values are to be defined when the systems are standardised.	The horizontal deflections on the samples are less than the max allowed: 1,5% See the results on page 49	P ☒ F ☐ N/A ☐ N/T ☐
4.2.4	**Masses**		
	The tolerances on the container mass claimed are as follows: for plastic containers ± 5 % and for metal containers ± 10 %.	The masses of the samples differ not more than ±5% from the claimed masses. See the results on page 49	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.2.5	**Colour**		
	The colour shall be defined and agreed between customer and supplier. For colour measurement, differences and tolerances refer to existing International Standards.		
4.2.6	**Marking**		
	Marking of the container shall correspond to EN 840-1 to EN 840-4.	Please refer test report of EN 840-2 (See on page 3, clause 9.1 in page 9)	P ☒ F ☐ N/A ☐ N/T ☐
4.3	**Control after the tests**		
	Not withstanding variations in deflection and sizes, it shall be possible to lift and tilt the container loaded according to 4.5 with nominal load safely on the designated lifting equipment and to move the container on its wheels.	Possible to lift and tilt the loaded representative container with the device and move on its wheels. Samples were loaded with nominal load acc. to 6 on page 8	P ☒ F ☐ N/A ☐ N/T ☐
4.4	**Conditions of the test**		
	The tests shall be carried out at the following temperatures: — $T_1 = (23 \pm 5)$ °C — $T_2 = (-18\,^{0}_{-2})$ °C. The minimum duration of conditioning before testing at a test temperature T2 shall be 12 h. If the test shall be carried out outside the room conditioned at T2 it shall be carried out within 5 min after taking the test pieces from the conditioned room. If the duration of the tests is more than 5 min, then the container shall be kept in the conditioned room for at least 15 min before a new 5 min period of testing. For special purposes a temperature lower than -18 °C or higher than 23 °C can be agreed; in this case it shall be indicated in the test report.		

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.5	**Test load**		
	For the test the containers are to be filled with ballast bags of HDPE granules of 4 kg max., with granules having a density of 0,5 kg/dm³. The test load shall be 0,4 kg/dm³ multiplied by nominal volume, but not more than 440 kg.		
4.6	**Other test conditions**		
	Any other test conditions shall be defined within the tests involved.		
4.7	**Tests on the containers**		
4.7.1	**General**		
	All tests shall be carried out on new containers		
4.7.2	**Impact tests by ball drop**		
	The ball drop test is not compulsory for steel containers. The ability of sensitive points of the container to resist impacts at low temperature shall be tested under conditions in 4.4. The 2-wheeled containers shall be placed on a concrete or steel surface in the normal position. There shall be a steel frame between the concrete surface or the steel surface and the container so that the complete area of the bottom of the container can be deflected during the test. The 4-wheeled containers shall stand on their wheels. Ball drop tests shall be carried out using a 5 kg steel cylinder, diameter 65 mm, with hemispheric end radius of 32,5 mm. The steel cylinder is guided in a vertical pipe with a slot or with holes in order to allow the air to escape during the drop. The device shall be according to Figure 1.	Drop height: 0,8 m There is no crack or broke on the samples after the drops. The representative containers are still waterproof.	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
	Dimensions in millimetres  **Key** 1 vertical (plastic) pipe (inside diameter: 70 mm) 2 steel cylinder (diameter: 65 mm; 1 hemispheric end; mass: 5 kg) 3 height fall (0,80 m) 4 steel frame (see 4.7.2) 5 container bottom 6 free room 7 concrete or steel surface **Figure 1 — Device for ball drop test**		
	The following areas of containers shall be tested by impact tests: a) on the body bottom (see Figure 2 d) there shall be 3 successive impacts for each impact point defined below: 1) the injection point(s), 2) A and D or C and B. after the test the container shall be waterproof in the tested points;		

Absatz	**EN 840-5:2020**	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Evaluation*
	b) there shall be 2 successive impacts for each impact point defined below (see Figures 2a), 2b), 2c)) 1) the centre of the lid (E), 2) one corner of the lid (cylinder to be tangent to the lid) (F), 3) the corner diametrically opposite (cylinder to be tangent to the lid) (G), 4) each hinge (H), 5) the centre of the front face of the top rim (J), 6) the centre of a lateral face of the top rim (I), 7) the back corner opposite the lateral face previously tested of the top rim (K), 8) centre of any handle (L,see Figure 2c) key 2).		
	 **Key** 1 Injection point (If one injection point only, impact on it and on A - D or B - C) 2 middle of handle **Figure 2 — Impact points for ball drop test**		

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
	Outside of the conditioning room (see 4.4), the test shall not last more than 5 min. After this time the container shall be reconditioned for at least 15 min. After the test the following procedure shall be applied, if there is any doubt about the result: - fill the body with a water volume equal to 10 % of the maximum capacity of the body; - wait for 10 min. After 10 min, if the container leaks, it is declared to be non conforming.	No leaking	
4.7.3	**Impacts on an inclined plane**		
	Only 4-wheeled containers shall be tested with impact on each wall of the body and on each corner to check the resistance to straining and breaking of sensitive areas, including protruding areas and fittings. The test conditions shall be: - test temperature T1= room temperature; - test load according to 4.5; - inclination of 10°(ten degrees) to the horizontal; - impact against a wall perpendicular to the moving direction; - a total of 16 impacts according to the sequence in Table 1. During the procedure the lid shall be closed. The loaded container shall be placed on a trolley with an inclination of 10°(ten degrees) (relative to the horizontal). Precautions shall be taken to avoid accidental tipping of the container during the test (see Figure C.1). Other apparatus than shown in Figure C.1 may be used if it allows the same impact and velocity conditions. The impact velocity shall be (1,85 ± 0,05) m/s when a face is tested and (1,3 ± 0,05) m/s when a corner is tested. The vertical faces of the container will be numbered from 1 to 4 and the face marked 1 being the large face fitted for the (comb) lifting system. Corners are marked 1.2, 2.3, 3.4 and 4.1. After completing the test some deformation of the container is permissible, however, it shall remain entirely functional.	Loaded acc. to clause 6 on page 11: 440 kg Inclination of slope: 10° Minor deformation founded but container remain entirely functional.	P ☒ F ☐ N/A ☐ N/T ☐

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Table 1 — Sequence of the lateral impacts

Impact n°	Face or corner tested	No of impacts
1 to 2	Face 1	2
3 to 4	Corner 1.2	2
5 to 6	Face 2	2
7 to 8	Corner 2.3	2
9 to 10	Face 3	2
11 to 12	Corner 3.4	2
13 to 14	Face 4	2
15 to 16	Corner 4.1	2

4.7.4 Kerb travel (run)

Only 4-wheeled containers shall be tested for kerb travel using run tests under the following conditions:

- test shall be carried out at room temperature T1;
- test load according to 4.5;
- apparatus shall comply with Annex A;
- kerb height shall be 140 mm orthogonal to the moving direction and located at the end of the run;
- wheels are to be guided in order to be orthogonal to the kerb at the time of the impact;
- impact velocity shall be (1,85 ± 0,05) m/s;
- there shall be 4 impacts for each of the shorter ends of the container (8 in total).

After the test there shall be no permanent deformation or breakage which disturbs handling, tilting, rolling (castors move freely).

The containers were loaded with nominal load: 0,4kg/dm3

After the impacts, the serviceability is fulfilled.

P ☒
F ☐
N/A ☐
N/T ☐

4.7.5 Kerb travel (drops)

4.7.5.1 General

Strength tests shall be carried out on 2- and 4-wheeled containers under the following conditions:

- test temperature T1 = room temperature;
- test load according to 4.5;
- height fall of 140 mm.

The container shall be lifted up to 140 mm and then dropped freely so that 2 wheels hit the ground first.

After the test there shall be no permanent deformation or breakage, which disturbs handling, tilting, rolling or safety and health (castors shall move freely).

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.7.5.2	**Test conditions**		
	- 2 wheels shall hit the ground; - at least 1 000 drops shall be carried out; - number of 5 drops per minute maximum; - test apparatus shall be according to Figure B.1 and B.2. After the test there shall be no permanent deformation or breakage which disturbs handling, tilting, rolling (castors move freely).	Drop height: 200mm cycles: 1000 The containers were loaded with nominal load: 0,4kg/dm3 Tested on representative sample: 1100 lt Loaded with 440kg There is no sign of crack or broke on the sample after the test.	P ☒ F ☐ N/A ☐ N/T ☐
4.8	**Stability test**		
	The static stability of empty and loaded containers on a flat plane of 10°(ten degrees) to the horizontal shall be tested at first on empty containers and after that on containers filled with the nominal load. The test shall be carried out without wind. For 4-wheeled containers, the brakes, if any, could prevent them from rolling. Other arrangements shall be made to prevent containers from gliding or rolling without hindering tipping. The container shall be checked in 3 directions. a) Stability at right angles to the slope line (transversal stability): the wider part of 4-wheeled containers and the wheel's axle of 2-wheeled containers shall be parallel to the slope line. b) Longitudinal stability: the wider part of 4-wheeled containers and the wheel's axle of 2-wheeled containers shall be in the right angle to the slope line. c) Diagonal stability: the diagonal line of the container shall be parallel to the slope line. The longitudinal stability test of 4-wheeled containers includes the brake test according to 4.9.4. In consideration of all test conditions the container shall neither tip nor move.	Inclined testing plane: 10° The empty and loaded (with nominal load of 440 kg) sample did not tip over during the test neither empty nor loaded.	P ☒ F ☐ N/A ☐ N/T ☐

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4.9	**Pulling and rolling tests**		
4.9.1	**General**		
	The aim of these tests is to check the handling and immobilisation of the containers and to fulfil the safety and health requirements for the operators. These tests shall include: - pulling tests; - wheels tests; - brake tests.		
4.9.2	**Pulling tests**		
	The strength required to start and maintain the container movement shall be measured (regarding the apparatus, see Figure 3). The pulling forces defined as horizontal forces in pulling direction are measured and the result shall be stated in the instructions for use. In order to get comparable results all tests shall be carried out under the following conditions: a) new container (loaded according to 4.5); b) ground shall be a plane, smooth concrete horizontal surface (slope = 1°(one degree) maximum); c) pulling force direction shall be horizontal ± 2° (two degrees) to all sides; d) pulling speed shall be 0,1 m/s ± 0,005 m/s; e) pulling distance shall be 3 m minimum; f) temperature in the test area and of the tested container shall be T1; g) total tolerance range of measuring equipment shall be ± 3 % of the measured value; h) preparation of the tested container before every test shall be: 1) 2-wheeled containers shall be in a tilted position where the strength for a handle is 20% of the force (Newton), created by the container's total permissible mass (kilograms), 2) 4-wheeled containers shall have the wheels aligned in the pulling direction. The direction block, if fitted, shall be in operation; i) tests shall be carried out 3 times. The test is passed if the maximum pulling forces according to Table 2 are not exceeded.	The representative samples were loaded with nominal load (HDPE granulat) acc. to clause 6 on page 11: Measeured forces are compliant to the requirements (under 285 N). Tested on representative sample: 1100 lt (New lid), loaded with 440 kg. Max. measured force: 275 N	P ☒ F ☐ N/A ☐ N/T ☐

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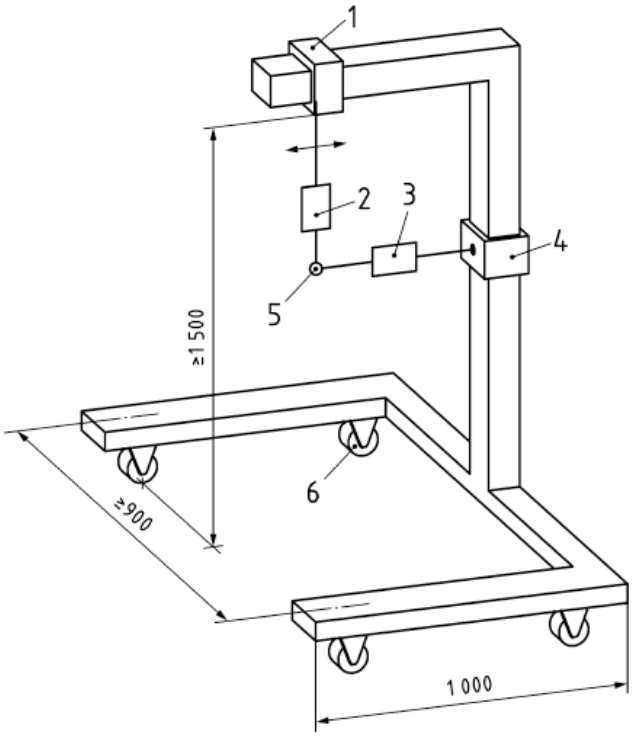
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Evaluation*

Dimensions in millimetres



Key

1 adjuster

2 measuring head for handle lifting force
(20 % of container dead weight)

3 measuring head for pulling force in rigid and hinged fittings

4 adjuster for the handle height

5 handle of container
(2-wheeled container in tilted position)

6 swivel castors with direction block

NOTE By using the above testing tool the horizontally measured pulling force is ensured.

Figure 3 — Apparatus for measurement (Example of testing device of 2-wheeled container)

Table 2 — Maximum forces for sustained pulling (up to 1 700 l capacity)

Container	**Pulling force N max.**
2-wheeled	60
4-wheeled	285
Maximum forces (including initial force) ought to be no more than 300 N, according to some work regulations.	

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4.9.3	**Wheels testing**		
	The functional qualities of the wheels over a given distance, at a defined speed, under load, with a periodical step shall be tested. It is a test specifically for the wheel. The apparatus shall be a concrete surface horizontal circle with a diameter of 1,1 m. The wheel is rolled in a circle. A step of 11,5 cm height is placed in the circle along a radius and allows the wheel to fall down after each 3,5 m run (1 turn). The wheel is loaded with loads according to Table 3. The test shall be carried out in turns of moving and rest. The test shall be carried out at temperature T1. After completing the test tyres and wheels shall remain functional. After the test there shall be no permanent deformation or breakage, which disturbs handling, tilting, rolling. (castors shall move freely). The hub shall be fully intact with no loosening or breaking of rivets.	With 4 swivel castors. Certificate of the wheels was provided by the manufacturer. Mounting correspond to Figure 5. Diameter: 200mm SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor: TR 0040.001 B; Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH	P ☒ F ☐ N/A ☐ N/T ☐

Table 3 — Conditions for testing wheels (200 mm diameter)

Conditions	Wheels for 2-wheeled containers	Wheels for 4-wheeled containers
Number of wheels	2 consecutively	2 consecutively
Load per wheel	40 kg	65 kg
Cycles running time	1 min	5 min
Resting time and again	3 min	5 min
Total distance run	5 km	20 km
Equivalent time	1,5 h	–
Running speed	3,3 km/h	3,3 km/h
Checking of the wheel	at the end of the test	every 3 h

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4.9.4	**Brake tests**		
	The container shall not roll on a gradient of 10° to the horizontal under all load conditions.	The containers were loaded with nominal load: 0,4kg/dm3, inclination of the slope: 10. The wheels did not move during the test period (60 sec).	P ☒ F ☐ N/A ☐ N/T ☐
4.10	**Lifting-tilting tests**		
4.10.1	**General**		
	This test checks that the container fits well on lifting devices in agreement with EN 1501-1. The apparatus shall be a compatible standardised lifting device. All lifting attachments of the container shall be tested. The container and the lifting device are on the same plane, on even ground. The test should be carried outunder normal service conditions.	The containers fit well on the lifting device. Lifting device comply with the series of standards DIN EN 1501. Lifting device: Terberg – Omnidel 313078 Type: TCA-DEL3e	P ☒ F ☐ N/A ☐ N/T ☐

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4.10.2	**Lifting-tilting of the empty container**		
	This is a preliminary test to be done after visual inspection of the container and before the other tests. The test is carried out on an empty container successively with the lid closed. A minimum of 5 lifting-tilting cycles should be completed without damage or misfunction. After completing the tests no damage on any part of the containers, lid, etc, shall be visible with the naked eye. No hindering during the cycles is allowed. If unsuccessful, the test shall be stopped.	The 1100 l container fits well on the lifting device. No damage or disfunction after 5-5 lifting-tilting cycles lifting with frontal receiver and trunnion.	P ☒ F ☐ N/A ☐ N/T ☐
4.10.3	**Lifting-tilting of the loaded container**		
	The test shall be carried out on one sample under the following conditions: - test load shall conform to 4.5. A device to prevent the test load from being ejected during the test; - test temperature T1; - at least 100 cycles shall be made. After every 10 cycles a break of 5 min is planned. After completing the test it shall be possible to safely position the container on the lifting devic without lifting it by hand. The container shall be locked safely when tilting, during the cycles. After completing the test no permanent deformation or abnormal distortion of the container causing remature ageing and no changes in dimensions that would give handling and lifting difficulties shall appear.	1100l container was filled with nominal load: 440 kg. After 200 cycles of lifting-tilting (100 with lifting by frontal receiver, 100 with lifting via trunnion), there is no permanent deformation which makes handling or lifting difficult. Loaded: 440 kg After the test, the containers can be use safely, serviceability of the containers is fulfilled after the test.	P ☒ F ☐ N/A ☐ N/T ☐

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4.11	**Miscellaneous tests**		
4.11.1	**Internal stress-cracking tests (for thermo plastics only)**		
	after this test mean use of inadequate material or bad processing conditions. The test shall be carried out under the following conditions: - tank large enough to include the whole container; - water bath with 2 % to 3 % in volume a strong detergent, e.g. based of nonyl-phenol-ethoxilate with a number of ethylene oxide (EO) mol greater than or equal to 9; - bath temperature of (70 ± 5)°C; - duration of the bath shall be 48 h. After the test the container shall be rinsed immediately and shall be checked visually only 6 h after the test. After completing the test no cracks or tears in sensitive areas (containers and lids) where they could extend to bring the container out of use, e.g. front rim, handles, grip hinges, wheel junctions, hinges, injection points, reinforcing ribs, rib edges shall be visible. For containers with four wheels a test of segments is allowed with segments of approximately a quarter of a square meter. For the detergent test the following critical area should be sawed from the container and should be tested in accordance with 4.11.1: - Wheel suspension (see area 1 in Figure 4): The wheel bracket is to be cut out from the bottom at a height of approx. 500 mm. All wheel suspensions including the screwed in fastening elements and the drain sleeve shall be tested. - Frontal receiver (see area 2 in Figure 4): Both corner parts are to be checked. The area should be 300 mm x 300 mm large. - Hinge area (see area 3 in Figure 4): Both corner parts are to be checked. The area should be 300 mm x 300 mm large. - Lid (see area 4 in Figure 4): An area from the hinges to the injection points is to be tested. [1]) A suitable detergent is nonyl-phenol-etoxilate with a number of ethylene oxide (EO) mol greater than or equal to 9.	Used detergent: Product: FOR CLEAN Manufacturer: Bio-Circle Surface Technology GmbH 6 hours later after 48h soaking than rinsed there is no crack visible on the sample.	P ☒ F ☐ N/A ☐ N/T ☐

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	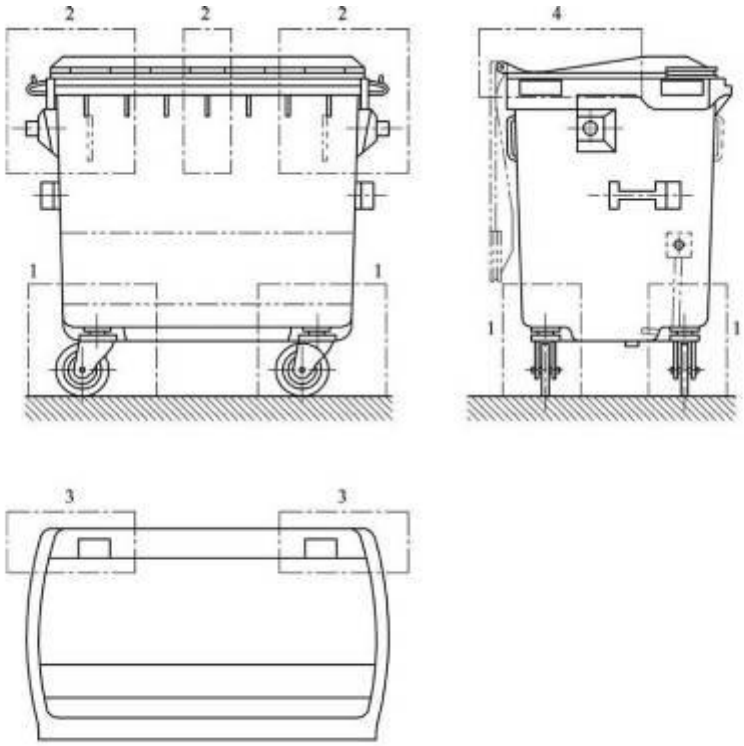 **Figure 4 — Segments to be tested**		
4.11.2	**Handle test**		
	Lifting handles on 4-wheeled containers shall be tested. Lifting handles and their junction with the container shall be strong enough to avoid damage or disconnecting when they are used to lift the container up the kerb. The test shall be carried out under the following conditions: - test temperature T1; - test load shall conform to 4.5; - lifting height shall be minimum 50 mm; - test frequency shall be 5 times per minute with a number of 1 000 liftings at least. The container shall be lifted at least 50 mm by a 50 mm wide hook which is located around the middle of the handle, and afterwards is slowly moved down to the ground. The test is carried out on one side of the container. After the test there shall be no permanent deformation or breakage, which disturbs handling the container.	Lifting height: 50 mm Lifted on one side Loaded with nominal load (clause 6, on page 11) Cycles: 1000 Loaded with 440kg After the test, there is no permanent deformation or breakage on the samples.	P ☒ F ☐ N/A ☐ N/T ☐

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Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Evaluation*
4.11.3	**Corrosion test**		
	The container shall be resistant to corrosion due to the state of the art. It is the task of the manufacturer to use surface treatments or materials which guarantee this performance. Bodies and lids, hot dip galvanised after completion, and other hot dip galvanised parts shall meet the requirements of EN ISO 1461. Zinc electro-plated parts shall meet the requirements of EN ISO 2081. Weldless bodies, lids and parts made out of ontinuously hot-dip zinc coated steel sheets shall meet the requirements of EN 10142.	With 4 swivel castors. Certificate of the wheels was provided by the manufacturer. Mounting correspond to Figure 5. Diameter: 200mm SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor: TR 0040.001 B; Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH	P ☒ F ☐ N/A ☐ N/T ☐
4.11.4	**Weathering (for thermo plastics only)**		
	Preparation of samples, conditions of exposures, sequence of exposures, test methods to measure performances of new and irradiated samples are defined in standards to be established by EN/TC 249. In the meantime, ISO standards may be used (see Annex E). The material tested shall contain all the components added to the basic plastic at the rate used to mold the container, stabiliser, pigments or colorants, and, if any, fillers, other plastic etc. These additives may influence the effects of weathering on the plastic. The results of weathering on plastic containers shall include: - ageing of the plastic material; - changes in colour.	Technical data sheets about UV resistant materials were provided. high density polyethylene resin: PETKIM - PETILEN YY I668(UV) UV stabilizer masterbatch: Tosaf - UV 6639 PP EU	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-5:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.11.5	**Test method for dome lid container (EN 840-3)**		
4.11.5.1	**Equipment**		
	— A child mannequin, recommended to be in compliance with an appropriate European Regulation[2]; size corresponding to 10 years old. The child mannequin is dressed with a thin sweatshirt made of at least 90 % cotton. The child mannequin is wearing the hood. — A parallel piped-shaped plastic box (dimensions: length 600 mm x width 400 mm x height 320 mm). ²) ECE R44: European Regulation N° 44 incl. amendment 1; *Uniform provisions concerning the approval of retaining devices for child occupants of power-driven vehicles ('child restraints systems').*		
4.11.5.2	**Test method**		
	The test described below shall be performed five times for each of the following three child mannequin positions in relation to the container rim: - center; - left hand side; - right hand side. The untested dome lid braked container is placed on a hard concrete plane with an inclination of 1° maximum to the horizontal. Position the legs of the child mannequin on the plastic box, such that the head and arms are inside the container for the centre position and one arm inside the container for the lateral position. Close the lid manually until it stops without any unlocking. Remove the box by device at a speed of 0,5 m/s.		
4.11.5.3	**Acceptance criteria**		
	In each of the three positions, in any sequence of the test, the child mannequin shall fall from the container when the plastic box is removed. It is acceptable for the child mannequin's head to remain suspended for an amount of time not to exceed 2 s.	Flat lid	P ☐ F ☐ N/A ☒ N/T ☐

Absatz	**EN 840-5:2020**	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Evaluation*

4.11.6 Sequence of the tests

The sequence of the tests on each sample are defined by Table 4.

Table 4 — Sequence of the tests

		2-wheeled containers					4-wheeled containers						
Subclause	Test	Sample 1		Sample 2		Other samples	Sample 1		Sample 2		Sample 3		Other samples
		plastic	metal	plastic	metal		plastic	metal	plastic	metal	plastic	metal	
4.2.1	General inspection	0	0	–	–	–	0	0	–	–	–	–	–
4.2.2.2	Measurement	1	1	–	–	–	1	1	–	–	–	–	–
4.7.2	Ball drop	–	–	1	–	–	–	–	1	–	–	–	–
4.7.3	Impact	–	–	–	–	–	8	8	–	–	–	–	–
4.7.4	Kerb run	–	–	–	–	–	9	9	–	–	–	–	–
4.7.5	Kerb drops	6	6	–	–	–	–	–	–	1	1	–	–
4.8	Stability	4	4	–	–	–	4	4	–	–	–	–	–
4.9.2	Pulling	2	2	–	–	–	2	2	–	–	–	–	–
4.9.3	Wheels	–	–	–	–	wheels sample	–	–	–	–	–	–	wheels sample
4.9.4	Brakes	–	–	–	–	–	5	5	–	–	–	–	–
4.10.2	Lifting empty	3	3	–	–	–	3	3	–	–	–	–	–
4.10.3	Lifting loaded	5	5	–	–	–	7	7	–	–	–	–	–
4.11.1	Internal stress	–	–	S	–	S	–	–	S	–	–	–	S
4.11.2	Handles	–	–	–	–	–	6	6	–	–	–	–	–
4.11.3	Corrosion	–	–	2	2	section	–	–	2	2	–	–	–
4.11.4	Weathering	–	–	–	–	S	–	–	–	–	–	–	S
4.11.5	Dome lid	-	-	-	-	-	1	1	-	-	-	-	-

S special new parts:
- for internal stress: on body and lid
- for weathering: on body and lid, or parts of them, or standardized samples

Testing unit: - for 2-wheeled containers 2 regular samples and 2 special ones are required;
- for 4-wheeled containers 3 regular samples and 2 special ones are required.

5 Test report

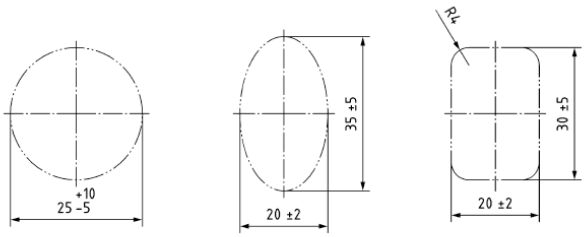
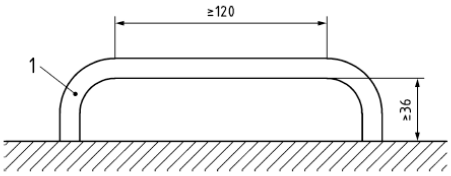
See DIN EN 840-5:2020

A-F Annex A - Annex E see DIN EN 840-5:2020

Annex A (informative) - Slope and stop for "kerb travel" test
Annex B (informative) - Apparatus for kerb fall test
Annex C (informative) - Apparatus for lateral impact test on inclined plane
Annex D (informative) - Wheel Test
Annex E (informative) - Weathering tests

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
1	**Scope**		
	This document provides the essential safety, health and ergonomic requirements for mobile waste and recycling containers according to EN 840-1:2020 to EN 840-4:2020, not including hazardous wastes containers.		
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 840-5:2020, *Mobile waste and recycling containers — Part 5: Performance requirements and test methods*		
3	**Terms and Definitions**		
	See DIN EN 840-6:2020		
4	**General requirements of construction**		
4.1	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. The container shall be in static stability according to 4.8 of EN 840-5:2020.	See at clause 4.10 from page 31.	P ☒ F ☐ N/A ☐ N/T ☐
4.2	The container shall be safely fitted to the lifting device of the vehicle without being carried or lifted manually.	See at clause 4.10 from page 31.	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
4.3	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 840-5:2020, 4.9. Pushing and pulling forces shall be declared in the instructions for use (see Clause 12).	See te results of the test at clause 4.9.2 on page 31 – Pulling tests The forces are written in the instructions for use.	P ☒ F ☐ N/A ☐ N/T ☐
4.4	During construction of containers the following factors influencing measurable handling force shall be optimized: - 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.	For reference The dimensions of the containers correspond to the requirement. The results of the pulling test see at clause 4.9.2 on page 31 – Pulling tests.	P ☒ F ☐ N/A ☐ N/T ☐
5	**Handles**		
5.1	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.	The containers have 2-2 handles for pushing, pulling and manoevering on each sides, and 2 handles for manoevering in the back side (lid hinge, not completely open, one side is closed, see in the photo documentation). There is no sharp edges on the representative sampels.	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
5.2	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).	The geometry corresponds to Figure 2. For dimensions, see at page 49	P ☒ F ☐ N/A ☐ N/T ☐
5.3	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.	The containers have handles on the side, 2 on each side (left and right sides). The height of the handles are between 875 – 1300 mm. The handles are min 450mm apart. For dimensions, see at page 49	P ☒ F ☐ N/A ☐ N/T ☐
	Dimensions in millimetres  **Figure 1 — Handles (round, oval, rectangular)** Dimensions in millimetres  **Key** 1 handle **Figure 2 — Clearance**		

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
6	**Wheels**		
6.1	Containers with 4 wheels and a capacity not exceeding 1700 l shall only have swivel castor wheels. Containers for towing with four wheels can have two fixed wheels or wheels which could be fixed.	4 swivel castor wheels, two of them with brake.	P ☒ F ☐ N/A ☐ N/T ☐
6.2	The wheels and their position shall ensure a minimum of pushing/pulling force and good stability.	for reference See te results of the test at clause 4.9.2 on page 31 – Pulling tests and clause 4.8 on page 30 – Stability test	P ☒ F ☐ N/A ☐ N/T ☐
6.3	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 4.3).	The nominal diameter of the wheels is ⦸200mm	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
6.4	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).	With 4 swivel castors. Certificate of the wheels was provided by the manufacturer. Mounting correspond to Figure 5. Diameter: 200mm SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor: TR 0040.001 B; Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH	P ☒ F ☐ N/A ☐ N/T ☐
6.5	If castor-mounting brackets are used they shall not protrude beyond the widest part of the container body.	Brackets do not protrude beyond the container's body of the samples.	P ☒ F ☐ N/A ☐ N/T ☐
7	**Direction block**		
	When direction blocks are fitted on containers with 4 wheels they shall be fitted to at least two wheels.	No direction block available on the samples.	P ☐ F ☐ N/A ☒ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
8	**Brakes**		
8.1	General remark: When brakes are fitted on containers with 4 wheels they shall be fitted to at least 2 wheels.	2 wheels with brakes Certificate of the wheels was provided by the manufacturer. Diameter: 200mm SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH	P ☒ F ☐ N/A ☐ N/T ☐
8.2	The brakes shall be adjustable or self-compensating and capable of retaining the container on a minimum slope of ten degrees to the horizontal.	The brake is self-compensating (with spring) See 4.9.4 on page 31	P ☒ F ☐ N/A ☐ N/T ☐
8.3	Brakes shall be capable of being used easily by the operator.	Brakes are easy to use.	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
8.4	If containers are fitted with a central brake locking system it shall be possible to secure it against unauthorised unlocking.	No central brake was available on the sample	P ☐ F ☐ N/A ☒ N/T ☐
8.5	The brakes shall be tested according to EN 840-5:2020, 4.9.4.	see clause 4.9.4 on page 34	P ☒ F ☐ N/A ☐ N/T ☐
9	**Edges**		
9.1	The container shall not have any sharp edges (a radius less than 1,4 mm).	No sharp edges, burrs on the representative samples. The body and lid are made of plastics	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
9.2	All edges which may be used for manoeuvring shall be rounded so that nobody can be injured.	Rounded edges on the representative samples	P ☒ F ☐ N/A ☐ N/T ☐
10	**Lids**		
10.1	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.	There is no harm-risk for fingers on the representative samples	P ☒ F ☐ N/A ☐ N/T ☐
10.2	Containers with dome lids shall be provided with a mechanism to hold the lid open automatically and prevent it from accidentally closing.	Flat lid containers	P ☐ F ☐ N/A ☒ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
10.3	Containers with assisted lids shall be provided with a device to ensure that the container lid cannot cause injury by its movement.	There is no assisted lid on the representative samples	P ☐ F ☐ N/A ☒ N/T ☐
10.4	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 840-5:2020, 4.11.5.	Flat lid containers	P ☐ F ☐ N/A ☒ N/T ☐
11	**Cleaning**		
	Containers shall be designed for easy cleaning.	for reference	P ☒ F ☐ N/A ☐ N/T ☐

Absatz *Clause*	**EN 840-6:2020** Anforderungen - Prüfungen / *Requirements - Tests*	Messergebnisse - Bemerkungen *Measuring results - Remarks*	Bewertung *Evaluation*
12	**Instructions for use**		
12.1	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.	Manual provided. Information about safety use, health requirements is provided in German.	P ☒ F ☐ N/A ☐ N/T ☐
12.2	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.	Instruction manual with all necessary information provided in German. - P, EN 840-6 -P, provided -P, info provided -P, 200mm -P, info provided -P, info provided -P, info provided - N/A -P, info provided - P, info provided - P, dimensions provided Warning provided. - P	P ☒ F ☐ N/A ☐ N/T ☐
A	**Annex A (informative) - A-Deviations**		
	See DIN EN 840-6:2020		

ZUSATZ-DOKUMENTATION
ADDITIONAL DOCUMENTATION

Functional dimensions (provided by the manufacturer in the instruction manual):

Typ / *Type*	Nennvolumen / *Nominal volume* [l]	Bemaßungen / *Dimension* (LxWxH) [mm]	Zulässige Gesamtmasse / *Total permissible mass* [kg]	Gewicht / *Own weight* [kg]	Spritzguß no./ *Mold ID*		Material
			mit Hohlachse / Vollachse *with hollow axle / solid axle*		Körper / *Body*	Deckel / *Lid*	
1100 lt J (new lid)	1100	1347x1380x1081	500	44	ARVA23	ARCP49	

see on page 3.

ANLAGE zum Prüfbericht-Nr.: HU262CX9 001

APPENDIX to Test Report No.:

ZUSATZ-DOKUMENTATION
ADDITIONAL DOCUMENTATION

EN 840-2 - Class I	1100 l	1100 lt	Notes
1*	1370±10	1360	In case of trunnions
2	1115 max	1080	Total width lid(s) closed
3	1190 max	1140	When lid open
4	1470 max	1366	
5*	860-1290	1220	Tipping edge
6	885 ± 50	896,8	
7*	135-280	206,5	In case of trunnions and min 850 from ground
8*	700-850	N/A	Handle position if required
9	600-850	N/A	Lock position if presented
10*	500^{+15}_{-10}	500	In case of trunnions
11	SKZ 64622 (2024-05-14) – Diameter 200 mm o Castor: TR 0040.001 B; Castor with brake: TR 0040.002 B - Manufacturer: Trimex Tyre & Rubber Import and Export GmbH		
12*	19 min	34,2	In case of frontal receiver
13*	13^{+5}_{-5}	12,3	In case of frontal receiver
14*	21^{+5}_{-5}	19,7	In case of frontal receiver
16*	26 ±1	26,1	In case of frontal receiver
17*	58 max	58,7	In case of frontal receiver
18*	20 min	28,9	In case of frontal receiver
19*	130 max	122	When ribs are fitted
20	15 max	4,5	
21*	33^{+8}_{-4}	40,8	In case of frontal receiver.
23*	ø40 ±2	38,4	In case of trunnions
24*	670^{+30}_{0}	P	The front of the plastic container beneath the ribs of the lifting comb shall be smooth. No constructions shall protrude in this area.
25*	350 ±10	P	Clearance for lifting device
26	750^{+120}_{-40}	735,8	
27	130 min	206	Ground clearance
28*	1275 max	1264	Lid
29*	1185 min	1208	Inside operating length of frontal receiver
30*	1200^{+15}_{0}	1227	Overall frontal receiver
31*	1265 max	1234	Overall length of the body rim or handles
32	-	-	This dimension is no more used
33*	1260^{+20}_{-10}	1257	In case of trunnions 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^{+40}_{-20}	833	
35	1090 ±70	1049	The outer corner shall be designed according to dimension W2 of EN 1501-5:—, Table Figure A.6
36*	150±3	151	When ribs are fitted stiffeners can be placed at intervals from each side of the centre of the lifting bar, equally spaced at/or multiples of 150 mm.
37*	7 max	5	When ribs are fitted
38*	$6^{+2}_{-1,5}$	5,18	In case of frontal receiver
40*	R 4 max	R 2,75	In case of frontal receiver
41	10 min	N/A	
42	Ø16 max	N/A	
43	$6{,}6^{+0,4}_{0}$	N/A	
44	$8{,}3^{+0,1}_{0}$	N/A	
45	Approx. 50	N/A	
46*	360 max	N/A	If two or more part lids are fitted they shall enable the comb and trunnion lifting device to operate correctly.
Weight [kg] 4.2.4 pg 20	Weight	44,8	
Deflection 4.2.3, pg 20	max 1,5% of P30	8 max 18,42 mm	
side handle-ground distance	900^{+100}_{-25}	1140	
side handles vertical distance	min 450	545	
clearance	min. 36	56	
h x w	20±2 - 30±5	27,1-18,2	
L	min. 120	141	

***The dimensions with blue are compulsory dimensions for functional and safety reasons. The other dimensions indicated are suggested recommended values.**
[1] – Dimension is out of limit, but only recommended