

Prüfbericht-Nr.: <i>Test report no.:</i>	HU248WB6 002	Auftrags-Nr.: <i>Order no.:</i>	301561694 P01498889	Seite 1 von 79 Page 1 of 79
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	1217479	Auftragsdatum: <i>Order date:</i>	2024-11-08	
Auftraggeber: <i>Client:</i>	Hellenic Environmental Systems Industry S.A. 8 I. Koutsochera St., 25100 Egio, Greece			
Prüfgegenstand: <i>Test item:</i>	Mobile waste and recycling containers with 4 wheel			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	MGB 660, MGB 770, MGB 1000, MGB 1100			
Auftrags-Inhalt: <i>Order content:</i>	Certificate renewal of S 60153666			
Prüfgrundlage: <i>Test specification:</i>	EN 840-2:2020 EN 840-5:2020 EN 840-6:2020 RAL-GZ 951/1:2023 AfPS GS 2019:01 PAK			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-12-13; 2025-02-28			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003888829 – 001; A003935610 – 001			
Prüfzeitraum: <i>Testing period:</i>	2025-01-06 – 2025-02-25			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland InterCert Kft. H-1143 Bp.,Gizella u. 51-57.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland InterCert Kft. H-1143 Bp.,Gizella u. 51-57.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	 X _____ Aláírta: Szoke Norbert		genehmigt von: <i>authorized by:</i>	 X _____ Signed by: Vegh Peter
Datum: <i>Date:</i>	2025-03-07		Ausstellungsdatum: <i>Issue date:</i>	2025-03-07
Stellung / Position:	Sachverständige(r)/Expert		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). Hersteller/Manufacturer: Hellenic Environmental Systems Industry S.A. / The requirements of the decision AfPS GS 2019:01 PAK regarding PAHs were considered (test report no.: AZ388033 (2020-11-06) and AZ393473 (2020-11-24) / Attachment 1 – Photo documentation (9 pages) This test report is based on and only valid together with the test report HU248WB6 001, issued by TÜV Rheinland InterCert Kft. and it is prepared because of standard up-date from RAL-GZ 951/1/11.20 to RAL-GZ 951/1:2023 for renewing the GS certificate S 60153666.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				



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Anmerkungen
Remarks

1	<p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms 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.</p> <p><i>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.</i></p>
2	<p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</p> <p><i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</i></p>
3	<p>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.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described 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.</i></p>
4	<p>Report history: This report is in addition to the original test report No.: HU248WB6 001 and the following additional reports: HU248WB6 002: Failed points listed in HU248WB6 001 were corrected.</p>

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Produktbeschreibung
Product description

1	Produktdetails Product details	Mobil waste and recycling containers with 4 wheels Article names: MGB 660, MGB 770, MGB 1000, MGB 1100
2	Maße / Gewicht Dimensions / Weight	See at page 78
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:	<input checked="" type="checkbox"/> Sending by customer <input type="checkbox"/> Sampling by TÜV Rheinland Group <input type="checkbox"/> others: manufacturer: Hellenic Environmental Systems Industry S.A., 29 Industrial Area O.T., Kariatini, 691 00, Greece

MGB 1100 - Front view



MGB 1100 - Information on the lid – date of manufacturing, material



MGB 1100 - Marking on the body



MGB 1100 - Marking on the lid – Name, address and email of the manufacturer



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1	<p>Scope</p> <p>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.</p>		
2	<p>Normative references</p> <p>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</p> <p>EN 840-5, Mobile waste and recycling containers — Part 5: Performance requirements and test methods</p> <p>EN 840-6, Mobile waste and recycling containers — Part 6: Safety and health requirements</p> <p>EN 1501-5:—1, Refuse collection vehicles — General requirements and safety requirements — Part 5: Lifting devices for refuse collection vehicles</p> <p>EN ISO 11469, Plastics - Generic identification and marking of plastics products (ISO 11469)</p>		
3	<p>Terms and definitions</p> <p>See EN 840-2:2020</p>		
4	<p>Volumes</p> <p>This part of EN 840 identifies the two classes of containers:</p> <p>— Class I - small size (nominal volume up to 1 000 l);</p> <p>— Class II - large size (nominal volume between 1 000 l and 1 300 l).</p> <p>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.</p>		
	<p>Class I 660 liter:</p> <ul style="list-style-type: none"> • MGB 660 <p>Class I 770 liter:</p> <ul style="list-style-type: none"> • MGB 770 <p>Class II – 1100 liter:</p> <ul style="list-style-type: none"> • MGB 1000 • MGB 1100 	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>	

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5	Dimensions and design		
5.1	<p>This part of EN 840 identifies the two classes of containers:</p> <ul style="list-style-type: none"> — 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). <p>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 $\pm 5\%$ maximum measured according to EN 840-5.</p>	<p>Functional dimensions correspond to Figure 1 on the representative sample (see at page 79), nominal volume of the representative sample – MGB 1100 - is 1100 l.</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
5.2	<p>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).</p>	<p>P12 dimension was less than allowed Other functional dimensions correspond to Figure 2 on the representative sample (see at page 79)</p> <p>P12 dimensions was out of limit on the provided sample, the lid was deformed during transportation. (photo evidence was provided).</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
5.3	<p>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.</p>	<p>The lid is fixed to the body via metal rod on the representative sample. The bottom edge of the lid has a tunnel with 2 holes for the handles on the body, which also contains tunnel for the rod. The rod is secured with a screw on one end.</p> <p>The lid can be open easily.</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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. A003888829 – 001, sent on 2024-02-13, was mounted with wheels unintentionally: TR 0040.001 (with a weight of 2,23 kg) and TR 0040.002 (with a weight of 2,45 kg) with max. load capacity / wheel: 250 kg, which does not use for this type acc. to the manufacturer. The wheel belongs to this type was sent by the manufacturer (A003935610 – 001 sent on 2025-02-28). Wheels for this type: Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 (with a weight of 3,10 kg) Castor with brake: TR 0040.004 (with a weight of 3,4 kg) ⌀200mm Max. load capacity / wheel: 250 kg	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
5.8	The container should have a drain plug.	Drain plugs provided.	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
5.9	When direction locks are fitted they shall be fixed on at least two castors.	No direction lock.	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>

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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.	Representative sample: 2 braked wheels, no centralized braking system	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
6	Nominal mass		
	The container shall be constructed strongly enough to carry a mass of 0,4 kg/dm ³ 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.	660 liter container: 264 kg 770 liter container: 308 kg 1000 liter container: 400 kg 1100 liter container: 440 kg	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 38-48)	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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10	Designation					
	The container complying with the requirements of this document shall be designated as follows:		Representative sample: MGB1100 EN 840-2 1100 A A 505		P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>	
	Container	EN 840-2	660	A	O	264
	Description	_____				
	Standard number	_____				
	Nominal volume, in litres	_____				
	Frontal receiver form:	_____				
	A = frontal receiver (FormA)					
	0 = without frontal receiver					
	Lateral receiver:	_____				
	A = trunnions					
	0 = without lateral receiver					
	Nominal load, in kilograms	_____				

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Table 1 — Dimensions

Dimensions in millimetres

Dimen- sion Nº	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	
1a	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.	
5a	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	
7a	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
8a	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
10a	460 ⁰ ₋₄₅	460 ⁺⁶⁵ ₋₄₅	460 ⁺⁶⁵ ₋₄₅	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	500 ⁺¹⁵ ₋₄₀	In case of trunnions
11	∅ 200 ± 2 ^{*)}	∅ 200 ± 2 ^{*)}	∅ 200 ± 2 ^{*)}	∅ 200 ± 2 ^{*)}	∅ 200 ± 2 ^{*)}	∅ 200 ± 2 ^{*)}	^{*)} ∅ 160 ± 2 optional according to 5.3 of EN 840-6:2020
12a	19 min.	19 min.	19 min.	19 min.	19 min.	19 min.	In case of frontal receiver
13a	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	13 ⁺⁵ ₋₃	In case of frontal receiver
14a	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	21 ⁺² ₋₂	In case of frontal receiver
16a	26 ± 1	26 ± 1	26 ± 1	26 ± 1	26 ± 1	26 ± 1	In case of frontal receiver
17a	58 max.	58 max.	58 max.	58 max.	58 max.	58 max.	In case of frontal receiver
18a	20 min.	20 min.	20 min.	20 min.	20 min.	20 min.	In case of frontal receiver
19a	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.	
21a	33 ⁺⁰ ₋₁	33 ⁺⁰ ₋₁	33 ⁺⁰ ₋₁	33 ⁺⁰ ₋₁	33 ⁺⁰ ₋₁	33 ⁺⁰ ₋₁	In case of frontal receiver
23a	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	∅ 40 ± 2	In case of trunnions

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Dimen- sion 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

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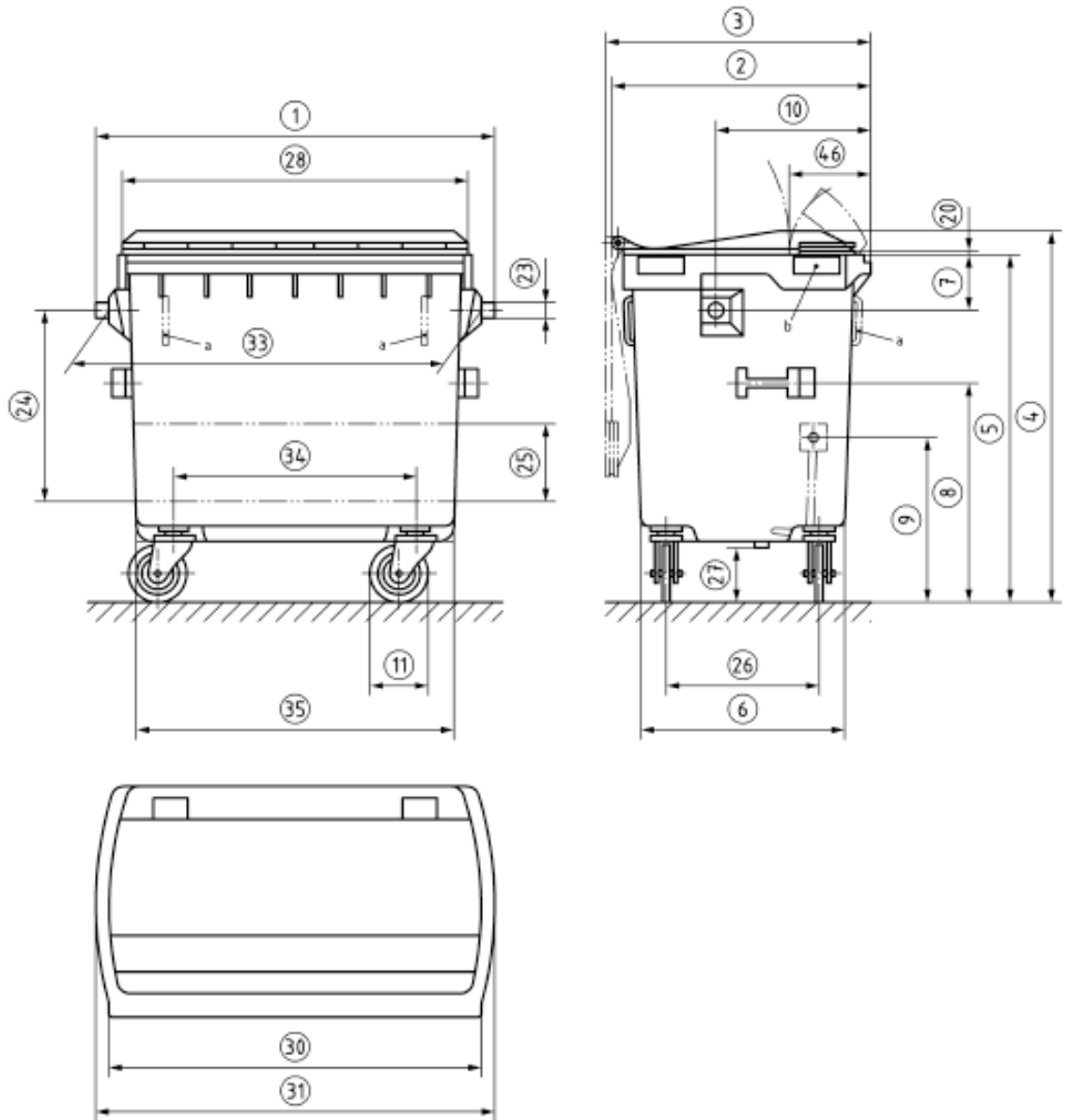
Dimension N°	Class I - Small sizes < 1 000 l			Class II - Large sizes ≥ 1 000 l			Remarks
	500 l	660 l	770 l	1 000 l	1 100 l	1 200 l	
38 ^a	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	6 ⁺² _{-4,5}	In case of frontal receiver
40 ^a	R 4 max.	R 4 max.	R 4 max.	R 4 max.	R 4 max.	R 4 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.

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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)

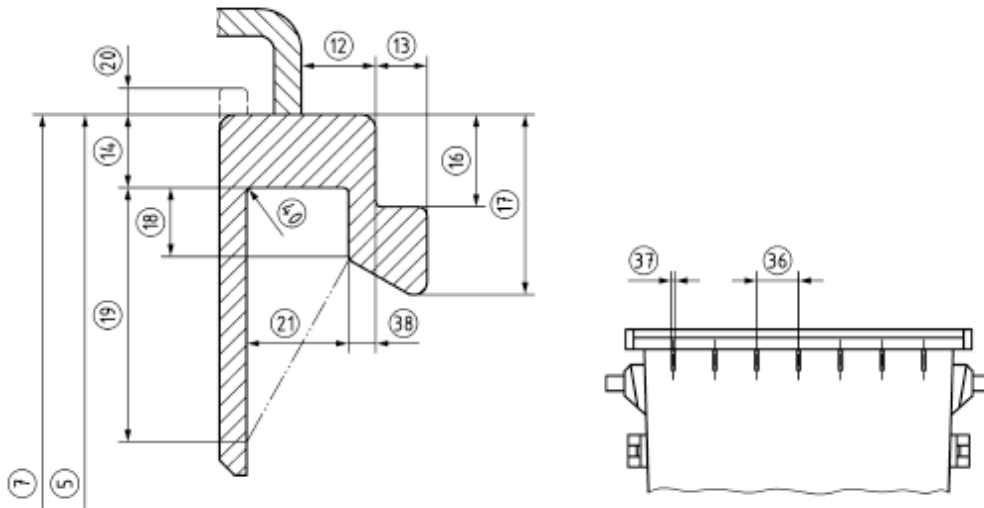
NOTE For more details regarding the dimensions, see Table 1.

Figure 1 — System dimensions

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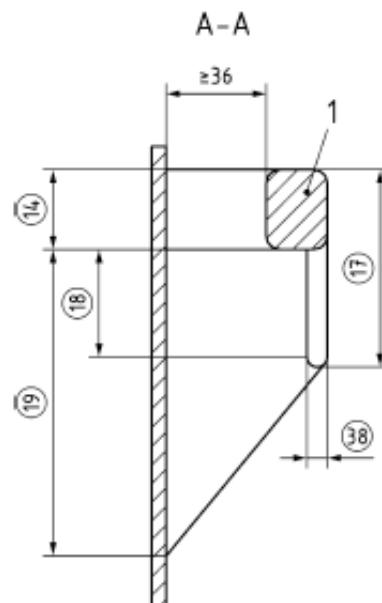
A

Key

A form A

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

Figure 2 — Frontal receivers



Key

1 handle

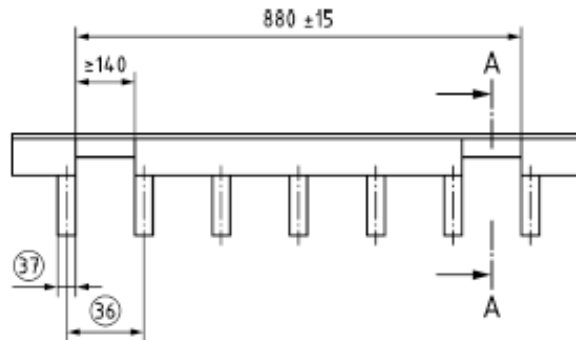
NOTE For more details regarding the dimensions, see Table 1.

Figure 3 — Handle

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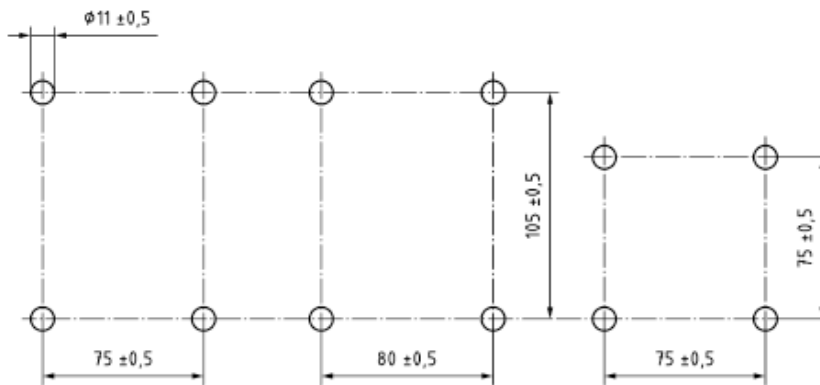
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NOTE For more details regarding the dimensions, see Table 1.

Figure 4 — Frontal receiver with integrated handles



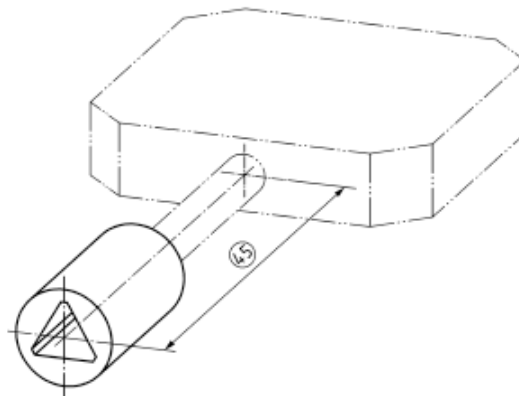
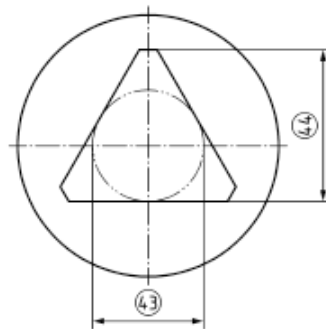
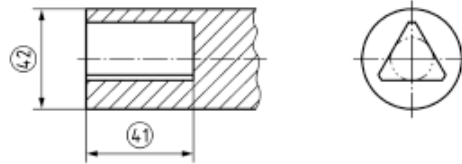
NOTE For more details regarding the dimensions, see Table 1.

Figure 5 — Distance between centres of castor wheels

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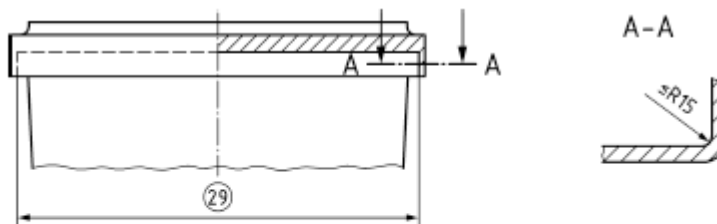
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NOTE For more details regarding the dimensions, see Table 1.

Figure 6 — Standard triangular key



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

Figure 7 — Functional dimension for frontal receivers

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	Scope		
	<p>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.</p> <p>This European Standard is applicable to mobile waste and recycling containers with capacities up to 1 700 l.</p>		
2	Normative references		
	See DIN EN 840-5:2020		
3	Terms and definitions		
	See EN 840-5:2020		
4	Tests		
4.1	General		
	<p>Before and after the tests a visual inspection of the container shall be done for the purpose of:</p> <p>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.</p> <p>After completing the tests some deformation of the container is permissible, however, it shall remain entirely functional.</p>		
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 (unsmooth areas; trails in colour) perceivable from a distance of 1 m by the naked eye shall be visible.	No cracks, sharp edges, burrs	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 and from page 48)	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 79)	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 Representative sample: 1050 l (within the tolerance of $\pm 5\%$)	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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4.2.2.4	Tank method		
	<p>The test equipment shall consist of a tank with sufficient capacity to receive the container to be tested. The test procedure is as follows:</p> <ul style="list-style-type: none"> - 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 $(15 \pm 5)^\circ\text{C}$; - measure the quantity of water inside the container. <p>Accuracy of measurement shall be $\pm 1\%$ of the measured capacity of the container.</p>		P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
4.2.3	Deflection for comb lifting system		
	<p>The frontal receiver shall have a horizontal deflection of no more than:</p> <p>a) 1,5 % of the length of the frontal receiver for plastic; b) 0,6 % of the length for steel.</p> <p>For other systems the values are to be defined when the systems are standardised.</p>	<p>Length of the frontal receiver on the representative sample: 1185 mm Max. allowed deflection acc. to this standard is 1,5%, but according to the client's request, RAL-GZ 951/1 was considered too, therefore requirement of RAL-GZ 951/1:2023, clause 3.3.2 for 4 wheeled containers: 0,7%: 8,295mm Deflection on the representative sample in the middle of the frontal receiver: 3,2 mm</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
4.2.4	Masses		
	<p>The tolerances on the container mass claimed are as follows: for plastic containers $\pm 5\%$ and for metal containers $\pm 10\%$.</p>	<p>Official weight of MGB 1100 acc. to the user manual: 51 kg Max. allowed difference: 2,55 kg, but according to the client's request, RAL-GZ 951/1 was considered too, therefore requirement of RAL-GZ 951/1:2023, clause 3.3.5 applied: 1,5% ->0,765 kg</p> <p>Weight measured on sample mounted with new wheels: (A003935610 – 001 sent on 2025-02-28): 51,2 kg</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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.	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
4.4	Conditions of the test		
	The tests shall be carried out at the following temperatures: — $T_1 = (23 \pm 5) \text{ }^\circ\text{C}$ — $T_2 = (-18 \text{ }^\circ_2) \text{ }^\circ\text{C}$. 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.		

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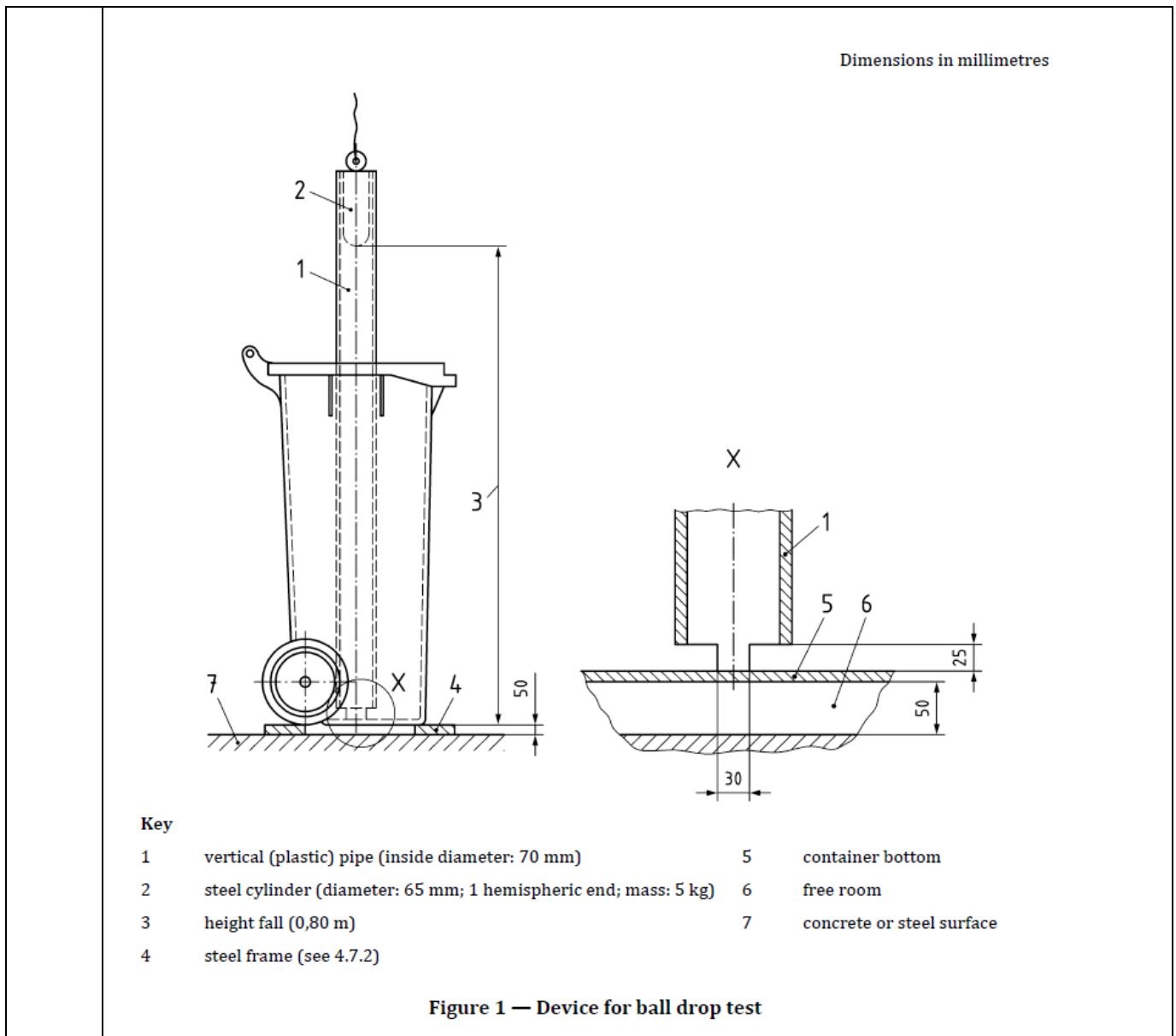
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4.5	Test load		
	<p>For the test the containers are to be filled with ballast bags of HDPE granules of 4 kg max., with granules having a density of 0,5 kg/dm³.</p> <p>The test load shall be 0,4 kg/dm³ multiplied by nominal volume, but not more than 440 kg.</p>		
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		
	<p>The ball drop test is not compulsory for steel containers.</p> <p>The ability of sensitive points of the container to resist impacts at low temperature shall be tested under conditions in 4.4.</p> <p>The 2-wheeled containers shall be placed on a concrete or steel surface in the normal position.</p> <p>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.</p> <p>The 4-wheeled containers shall stand on their wheels.</p> <p>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.</p> <p>The device shall be according to Figure 1.</p>	<p>Drop height acc. to this standard is 0,8 m, but according to the client's request, RAL-GZ 951/1 was considered too, therefore requirement of RAL-GZ 951/1:2023 clause 3.3.9: drop height for the bottom of the container: 1m</p> <p>Tested on representative sample. Plastic lid. No leakage after the test (no damage, crack or fracture after the drops)</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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<p>The following areas of containers shall be tested by impact tests:</p> <p>a) on the body bottom (see Figure 2 d) there shall be 3 successive impacts for each impact point defined below:</p> <p style="padding-left: 40px;">1) the injection point(s), 2) A and D or C and B.</p> <p>after the test the container shall be waterproof in the tested points;</p>	<p>Dropping points according to the listed points and Bild 5 in RAL-GZ 951/1:2023, see at page 60</p>	
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- 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).

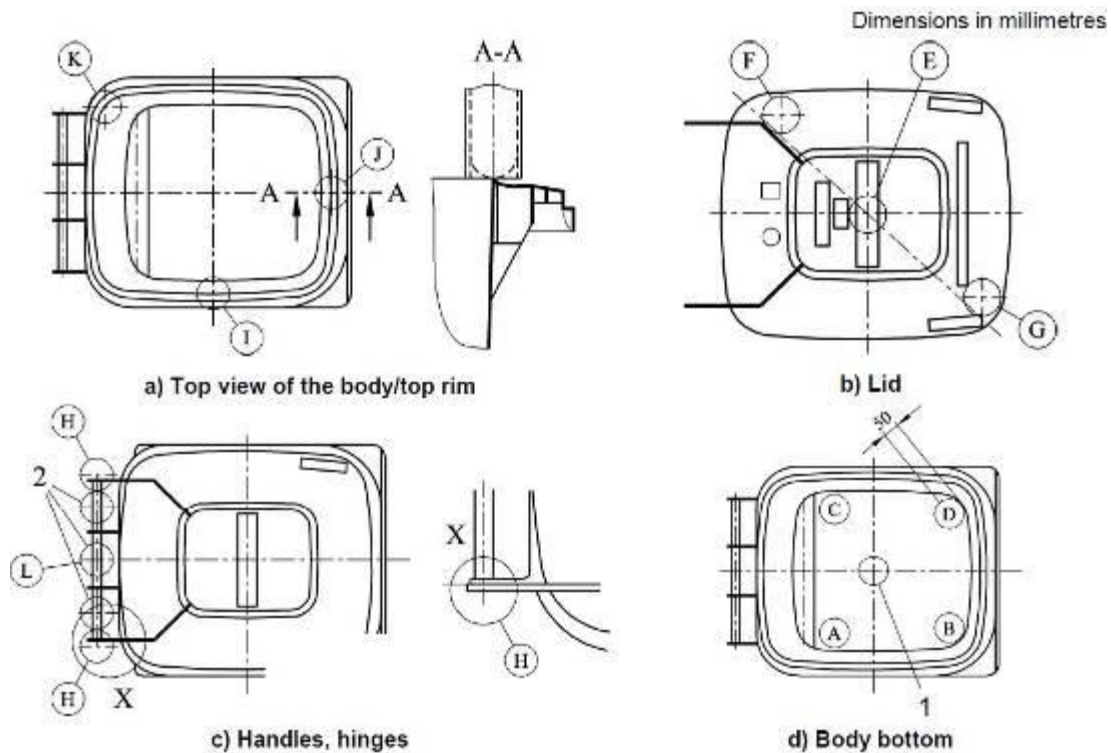


Figure 2 — Impact points for ball drop test

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	<p>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.</p> <p>After the test the following procedure shall be applied, if there is any doubt about the result:</p> <ul style="list-style-type: none"> - fill the body with a water volume equal to 10 % of the maximum capacity of the body; - wait for 10 min. <p>After 10 min, if the container leaks, it is declared to be non conforming.</p>	No leaking	
4.7.3	Impacts on an inclined plane		
	<p>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:</p> <ul style="list-style-type: none"> - 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. <p>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).</p> <p>Other apparatus than shown in Figure C.1 may be used if it allows the same impact and velocity conditions.</p> <p>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.</p> <p>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.</p> <p>After completing the test some deformation of the container is permissible, however, it shall remain entirely functional.</p>	<p>Representative sample – MGB 1100 loaded with 440kg Inclination of slope: 10°</p> <p>After 2 impact on each corners and faces, there is no deformation or crack which influence functionality.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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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 $(1,85 \pm 0,05)$ 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).

Representative sample – MGB
1100 loaded with 440kg
Kerb height: 140 mm

There is no permanent deformation which disturbing handling or usage after 4-4 impacts. The wheels did not brake.

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).

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4.7.5.2	Test conditions		
	<p>- 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.</p> <p>After the test there shall be no permanent deformation or breakage which disturbs handling, tilting, rolling (castors move freely).</p>	<p>Drop height: 140mm, but according to the client's request, RAL-GZ 951/1 was considered too, therefore requirement of RAL-GZ 951/1, clause 3.3.14 applied: 200 mm</p> <p>Representative sample – MGB 1100 loaded with 440kg There is no permanent deformation which disturbing handling or usage after test. The wheels still rolling freely.</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
4.8	Stability test		
	<p>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.</p> <p>The test shall be carried out without wind.</p> <p>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.</p> <p>The container shall be checked in 3 directions.</p> <p>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.</p> <p>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.</p> <p>c) Diagonal stability: the diagonal line of the container shall be parallel to the slope line.</p> <p>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.</p>	<p>Inclined testing plane: 10°, but according to the client's request, RAL-GZ 951/1 was considered too, therefore requirement of RAL-GZ 951/1 clause 3.3.13 applied: inclined plane: 12°</p> <p>The empty and loaded representative sample – MGB 1100 - did not tip over during the test neither empty nor loaded.</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>

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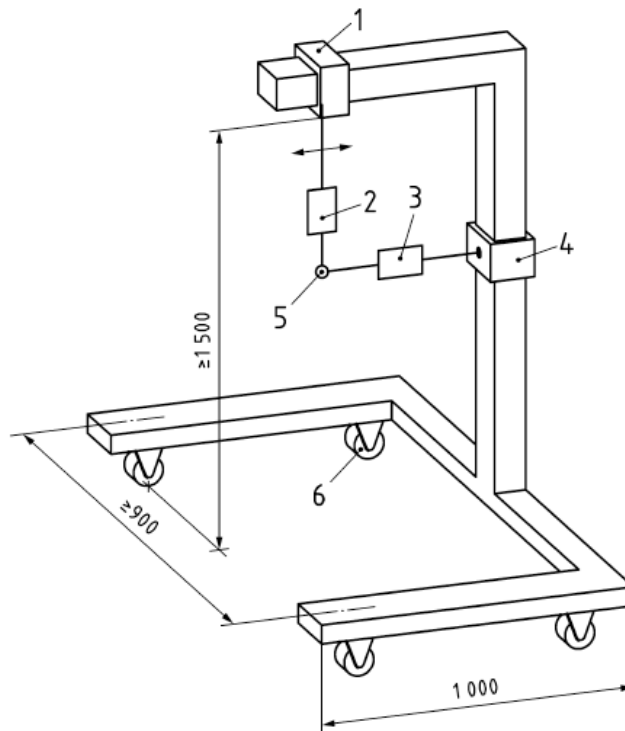
4.9	Pulling and rolling tests		
4.9.1	General		
	<p>The aim of these tests is to check the handling and immobilisation of the containers and to fulfil the safety and health requirements for the operators. These tests shall include:</p> <ul style="list-style-type: none"> - pulling tests; - wheels tests; - brake tests. 		
4.9.2	Pulling tests		
	<p>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.</p> <p>In order to get comparable results all tests shall be carried out under the following conditions:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. <p>The test is passed if the maximum pulling forces according to Table 2 are not exceeded.</p>	<p>The representative sample was filled with 110 pcs bags with HDPE granulates, with a total weight of 440kg. Measured forces are compliant to the requirements with the new wheels (under 285 N): F_{start}: 280 N F_{running}: 149 N</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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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		
	<p>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.</p> <p>The apparatus shall be a concrete surface horizontal circle with a diameter of 1,1 m.</p> <p>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.</p> <p>The test shall be carried out in turns of moving and rest.</p> <p>The test shall be carried out at temperature T1.</p> <p>After completing the test tyres and wheels shall remain functional.</p> <p>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.</p>	<p>Certificates were provided for ⊙200mm wheels.</p> <p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60315 Artikel-Nr.: Castor: TR 0040.001 Castor with brake: TR 0040.002 ⊙200mm</p> <p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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.	<p>Angle of the slope: 10° The narrow side of the loaded container was placed in the testing direction. Duration: 60s</p> <p>The representative sample – MGB 1100 - did not roll during the test.</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
4.10	Lifting-tilting tests		
4.10.1	General		
	<p>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.</p> <p>The container and the lifting device are on the same plane, on even ground. The test should be carried out under normal service conditions.</p>	<p>The representative container - MGB 1100 - fits 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>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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4.10.2	Lifting-tilting of the empty container		
	<p>This is a preliminary test to be done after visual inspection of the container and before the other tests.</p> <p>The test is carried out on an empty container successively with the lid closed.</p> <p>A minimum of 5 lifting-tilting cycles should be completed without damage or malfunction.</p> <p>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.</p>	<p>The representative container - MGB 1100 - fits well on the lifting device.</p> <p>No damage or disfunction after 5-5 lifting-tilting cycles lifting with frontal receiver and trunnion.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
4.10.3	Lifting-tilting of the loaded container		
	<p>The test shall be carried out on one sample under the following conditions:</p> <ul style="list-style-type: none"> - 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. <p>After every 10 cycles a break of 5 min is planned.</p> <p>After completing the test it shall be possible to safely position the container on the lifting devic without lifting it by hand.</p> <p>The container shall be locked safely when tilting, during the cycles.</p> <p>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.</p>	<p>Representative sample – MGB 1100 - was filled with 440kg. 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.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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4.11	Miscellaneous tests		
4.11.1	Internal stress-cracking tests (for thermo plastics only)		
	<p>after this test mean use of inadequate material or bad processing conditions. The test shall be carried out under the following conditions:</p> <ul style="list-style-type: none"> - 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. <p>After the test the container shall be rinsed immediately and shall be checked visually only 6 h after the test.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> - 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. <p>1) A suitable detergent is nonyl-phenol-ethoxilate with a number of ethylene oxide (EO) mol greater than or equal to 9.</p>	<p>Used detergent: Product: FOR CLEAN Manufacturer: Bio-Circle Surface Technology GmbH</p> <p>6 hours later after 48h soaking than rinsed there is no crack visible on the sample.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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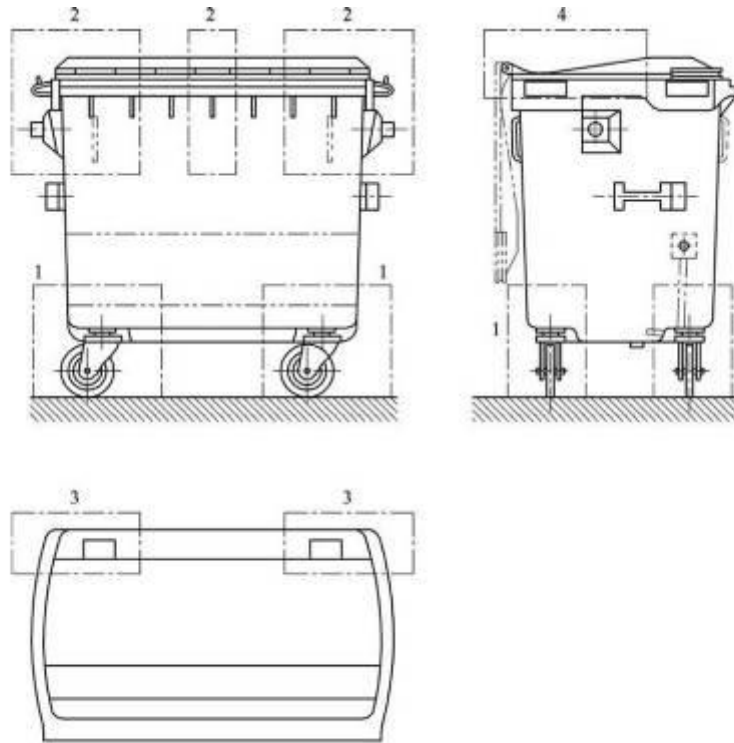


Figure 4 — Segments to be tested

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
Cycles: 1000

After the test, there is no permanent deformation or breakage on the sample.

P
F
N/A
N/T

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4.11.3	Corrosion test		
	<p>The container shall be resistant to corrosion due to the state of the art.</p> <p>It is the task of the manufacturer to use surface treatments or materials which guarantee this performance.</p> <p>Bodies and lids, hot dip galvanised after completion, and other hot dip galvanised parts shall meet the requirements of EN ISO 1461.</p> <p>Zinc electro-plated parts shall meet the requirements of EN ISO 2081.</p> <p>Weldless bodies, lids and parts made out of continuously hot-dip zinc coated steel sheets shall meet the requirements of EN 10142.</p>	<p>Certificate of the wheels was provided by the manufacturer. Mounting correspond to Figure 5.</p> <p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60315 Artikel-Nr.: Castor: TR 0040.001 Castor with brake: TR 0040.002 ⊙200mm</p> <p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
4.11.4	Weathering (for thermo plastics only)		
	<p>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).</p> <p>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.</p> <p>The results of weathering on plastic containers shall include: - ageing of the plastic material; - changes in colour.</p>	<p>Test report was provided. Report no.: 037/2014 (2014_09_30) made by Arbeitskreis für Werkstoffprüfung in Darmstadt</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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4.11.5	Test method for dome lid container (EN 840-3)		
4.11.5.1	Equipment		
	<p>— A child mannequin, recommended to be in compliance with an appropriate European Regulation²; 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.</p> <p>— A parallel piped-shaped plastic box (dimensions: length 600 mm x width 400 mm x height 320 mm).</p> <p>²) ECE R44: European Regulation N° 44 incl. amendment 1; <i>Uniform provisions concerning the approval of retaining devices for child occupants of power-driven vehicles ('child restraints systems')</i>.</p>		
4.11.5.2	Test method		
	<p>The test described below shall be performed five times for each of the following three child mannequin positions in relation to the container rim:</p> <ul style="list-style-type: none"> - center; - left hand side; - right hand side. <p>The untested dome lid braked container is placed on a hard concrete plane with an inclination of 1° maximum to the horizontal.</p> <p>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.</p>		
4.11.5.3	Acceptance criteria		
	<p>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.</p> <p>It is acceptable for the child mannequin's head to remain suspended for an amount of time not to exceed 2 s.</p>	Flat lid	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>

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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

Subclause	Test	2-wheeled containers					4-wheeled containers						
		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

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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, <i>Mobile waste and recycling containers — Part 5: Performance requirements and test methods</i>		
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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4.3	<p>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).</p>	<p>Information provided in the manual.</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
4.4	<p>During construction of containers the following factors influencing measurable handling force shall be optimized:</p> <ul style="list-style-type: none"> - 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. 	<p>For reference</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
5	Handles		
5.1	<p>Two wheeled containers shall have handles for pulling, pushing and manoeuvring the container that enable the operator to grip safely with two hands.</p> <p>Four wheeled containers shall have handles for pushing, pulling, manoeuvring and lifting the container. Injuries caused by sharp edges shall be avoided.</p>	<p>On the handles of the representative container - MGB 1100, there is no sharp edges.</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>

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<p>5.2</p>	<p>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).</p>	<p>Representative sample: MGB 1100 Side handles: clearance: 41 mm h x w = 29 x 18,6 mm L = 140,7 mm</p> <p>(Rear handles are closed by design, only for information: clearance: 30 mm ød= 33 mm L = 197 mm)</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
<p>5.3</p>	<p>Handles for pulling, pushing and manoeuvring the container shall be positioned at a height of (900^{+40}_{-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.</p>	<p>Representative sample: MGB 1100</p> <p>Handle at the side: H = 1146 mm Distance between 2 handles: min 598 mm</p> <p>(Rear handle, only for information, not fully grabbable handle: H = 1284 mm)</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>

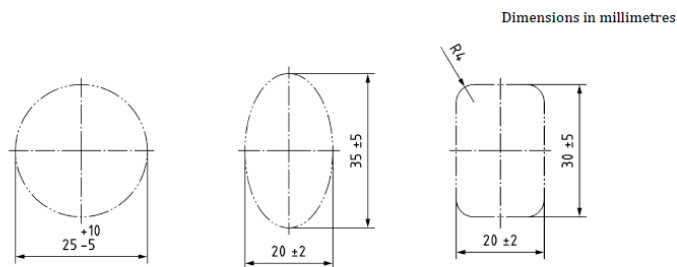
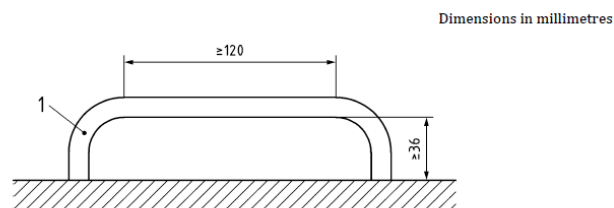


Figure 1 — Handles (round, oval, rectangular)



Key
1 handle

Figure 2 — Clearance

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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 brake.	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
6.2	The wheels and their position shall ensure a minimum of pushing/pulling force and good stability.	for reference	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 \varnothing 200mm	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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. Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 representative sample - MGB 1100	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 representative sample.	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>

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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. Mounting correspond to Figure 5. Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
8.3	Brakes shall be capable of being used easily by the operator.	Brakes are easy to use by the operator. (Tested on representative sample: MGB 1100)	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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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 is available on the representative sample	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
8.5	The brakes shall be tested according to EN 840-5:2020, 4.9.4.		P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 sample - MGB 1100. The body and lid are made of plastics	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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9.2	All edges which may be used for manoeuvring shall be rounded so that nobody can be injured.	Rounded edges on the representative sample - MGB 1100	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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 sample - MGB 1100	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
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	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>

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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 sample	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
10.4	<p>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.</p> <p>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.</p> <p>The container shall be tested according to EN 840-5:2020, 4.11.5.</p>	Flat lid	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
11	Cleaning		
	Containers shall be designed for easy cleaning.	for reference	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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12	Instructions for use		
12.1	<p>Instructions for use shall be supplied so that the operator can have access to all available information on the correct use of containers.</p> <p>Those instructions shall give information on all relevant factors to enable correct usage of a container. Also safety and health requirements shall be included.</p>	<p>Manual provided. Information about safety use, health requirements is provided in German.</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
12.2	<p>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:</p> <ul style="list-style-type: none"> - 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. <p>The lid(s) shall be closed before the lifting device pick up the container.</p> <p>This information shall conform to the delivered container.</p>	<p>Instruction manual with all necessary information provided in German. European representative name and address is in the manuals.</p> <ul style="list-style-type: none"> - P, EN 840-2, -5, -6 -P, provided -P, info provided -P, 200mm -P, info provided -P, info provided -P, info provided -P, 25 Nm -P, info provided - P, info provided, but the values are not appropriate - P, drawing with the essential diameters provided <p>Warning provided.</p> <p>- P</p>	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
A	Annex A (informative) - A-Deviations		
	See DIN EN 840-6:2020		

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	The content of the standard was packed. For details, be referred to the original document.		
	Scope of the test findings		
	The test results refer only to the samples submitted for the test. The digital photos, if there are any, serve for supplementary explanation and do not constitute an own part of the test result.		
	Accuracy of measurement		
	The test results have a degree of measurement uncertainty. If applicable, the uncertainty of measurement complies with the requirements of the standards. If the uncertainty of measurement is not separately specified, the combined standard uncertainty of the overall result is $\leq 5\%$.		
1	Area of Application		
	<p>These quality requirements and testing requirements are valid for 2-wheeled and 4-wheeled plastic waste and recycling containers with frontal receivers, DU-receivers and lateral receivers that have a volume of up to 1700 litres.</p> <p>In addition to the technical points of the quality and test regulations, the user of the quality mark must constantly comply with the requirements of this appendix to the quality assurance principle. The evidence shall be provided in the form of certificates and/or equivalent test certificates within the scope of the initial test and external monitoring.</p>		
2	Standards and Guidelines		
	<p>The listed standards and guidelines are an integral part of the quality requirements and testing standards and they must be fulfilled in order to obtain the Quality Mark.</p> <p>A Quality Mark holder shall use a certified and regularly audited QM-system service to carry out the internal testing process. A certificate from an accredited testing institute serves as valid proof (e.g.: DIN EN ISO 9001).</p> <p>The respective and most current specifications are applicable.</p> <p>Validity will be reviewed annually.</p>		

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2.1	Product Standards
	<p>The contents stated in the standards must be fully complied with.</p> <p>A Quality Mark holder can use a certified and regularly audited QM-system service to carry out the internal testing process. A certificate from an accredited testing institute serves as valid proof (e.g.: DIN EN ISO 9001).</p> <p>A certificate from an accredited testing institute serves as valid proof (DIN EN ISO/IEC 17025).</p> <p>DIN EN 840 Mobile waste and recycling containers</p> <p>DIN EN 840-1 Containers with 2 wheels and a capacity of up to 400 l for comb lifting devices – dimensions and design</p> <p>DIN EN 840-2 Containers with 4 wheels and a capacity of up to 1300 l with flat lid(s) for trunnion lifting devices and /or comb lifting devices – dimensions and design</p> <p>DIN EN 840-3 Containers with 4 wheels and a capacity of up to 1300 l with dome lid(s) for trunnion lifting devices and/or comb lifting devices – dimensions and design</p> <p>DIN EN 840-4 Containers with 4 wheels with a capacity up to 1700 l with flat lid(s), for wide trunnion or BG- and/or wide comb lifting devices – dimensions and design</p> <p>DIN EN 840-5 Performance requirements and test methods</p> <p>DIN EN 840-6 Safety and health requirements</p> <p>DIN 30760 Mobile waste and recycling containers – Containers with two wheels with a capacity from 60 l to 360 l for diamond lifting devices</p>
2.2	Equivalent Product Standards
	<p>The contents of the applicable equivalent standards must be fulfilled with regard to the technical testing requirements for waste and recycling containers. The internal test certificate of the applicant serves as valid proof.</p> <p>DIN EN 15132 Container shells for mobile waste containers with a capacity up to 1700 l - Performance requirements and test methods</p> <p>DIN EN 14803 Identification and/or determination of the quantity of waste</p>

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2.3	Guidelines
	<p>CE-Marks 2000/14/EG European guidelines regarding environmental impact of noise emissions. The CE-declaration of conformity of the applicant serves as valid proof.</p> <p>GS-Marks The requirements for the awarding of the GS-mark shall be fulfilled. Comprised of: ProdSG Product Safety Law (2001/95/EG European product safety guideline = europäische Produktsicherheitsrichtlinie) Confirmation from a GS awarding office accredited by the ZLS (Zentrale Landesstelle für Sicherheit = Central State Office for Safety)</p> <p>AfPS GS 2019:01 PAK Testing and assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in the awarding of GS Marks The internal test certificate of the applicant serves as valid proof. A test certificate from an accredited test institute must be submitted to the GGAWB demand.</p> <p>DIN EN ISO 9001 Quality management systems – Requirements</p> <p>DIN EN ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories</p> <p>DIN EN ISO/IEC 17020 Conformity assessment – Requirements for the operation of various types of bodies performing inspection</p> <p>The standards and guidelines listed in Section 2 are not checked by the Quality Control Association (Gütegemeinschaft) itself and compliance with them is therefore not guaranteed. Rather, their compliance (conformity) with the Quality Control Association must be proven in an appropriate form as part of the initial test and external monitoring.</p>
3	Quality requirements and testing requirements
3.1	General
	In the following text of the quality requirements and testing requirements document, the abbreviation “AWB” will be used for the wording waste and recycling containers and the abbreviation “DU” for the wording diamond container.
3.2	Definitions

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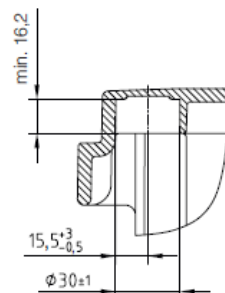
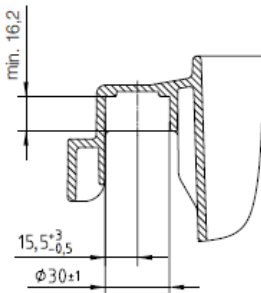
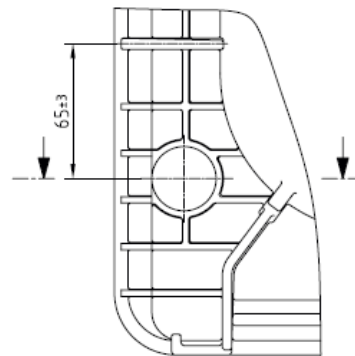
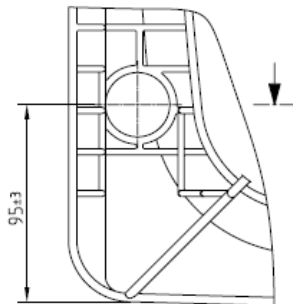
3.2.1	Serviceability
	<p>The serviceability based on the test procedures according to section 3 is defined as follows:</p> <ul style="list-style-type: none"> - The AWB body is waterproof. - The complete AWB has to be moved when it is in empty state as well as when it is filled to its nominal load, by one person (average height m/w): <ul style="list-style-type: none"> • in a straight line for 3m (2-wheeled + 4-wheeled AWB) • and turned 360° on its pivotal point (4-wheeled AWB) - The lifting device test for the entire AWB shall be carried out when the AWB is empty and full. - Cracks in the AWB and/or other damage may not cause injury (e.g. cracks in the handle areas) or lead to other safety problems (e.g. lids fall off during emptying procedures). - The lid shall cover the body opening and it can be opened and closed. - Defects in appearance are allowed.
3.2.2	Test temperature
	<p>$T_1 = (23 \pm 5) \text{ °C}$ $T_2 = (-18 \pm 2) \text{ °C}$</p>
3.3	Quality requirements and testing requirements
3.3.1	Test load
	<p><i>Test requirements</i></p> <p>AWBs that have been constructed according to agreement between the manufacturer and the customer that do not comply with the DIN EN 840 agreed payload (e.g. density 0.8 kg/dm³ for left-over food and compostable waste from the commercial sector) will be loaded with a test load consisting of the agreed density times nominal volume.</p>

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3.3.2	Dimensions		
	<p><i>Quality requirements</i> The dimensions and tolerances that are the basis for the tests carried out according to this quality assurance are defined in the listed standards in section 2. Data concerning additional container sizes has been compiled in data sheets according to the size and design of the AWBs and appended to these quality requirements and testing requirements (see enclosure).</p> <p>In the initial test all of the dimensions will be checked. However only the functional dimensions (AWB characterized in the DIN EN 840) and the container dimensions (AWB-DU according to DIN 30760, 4-wheel see appendix 7.2) will be used for evaluation. In the case of monitoring tests (internal and external monitoring), the dimensions to be tested are those measurements / positions specified in the test.</p> <p>These are: 2-wheeled AWB: P5, P12, P23, P26 4-wheeled AWB: P1, P5, P7, P12, P21, P28, P30, P33 2-wheeled AWB-DU: P2, P10, P18 4-wheeled AWB-DU: d, k, s</p> <p>Only the test dimensions will be used for evaluation. The AWB has a form element (chip nest) integrated into the front section for adapters for a data storage medium (e.g. transponders) (Fig. 1).</p> <p>Dimension 15.5 mm defines the position of the chip nest. Dimension Ø 30 +/-1 defines the principle diameter for mounting the RFID housing.</p> <p>The position dimensions will only be measured during the initial test.</p> <p>Deflection of the frontal receiver Comb lifting devices The horizontal deflection of the frontal receiver may not exceed – for 2-wheeled AWB 1 % – for 4-wheeled AWB 0.7 % Deformation of the frontal receiver DU-lifting devices The DU container receiver shall be tested using a DU lifting device. A uniform carry pattern between the DU lifting device and all of the ribs of the DU container receiver must be proven. The defined dimensional tolerances may not be exceeded.</p>	<p>Dimensions see on page 79</p> <p>Deflection: clause 4.2.3 on page 20</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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Chipnest 2-rad AWB /
Chip nest 2-wheeled AWB

Bild 1/Fig. 1

Chipnest 4-rad AWB/
Chip nest 4-wheeled AWB

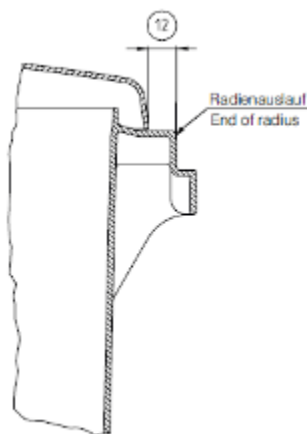


Bild 2/Fig. 2

Test requirements

Test temperature T1

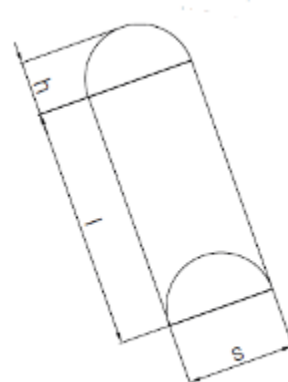
The measurements shall be taken using a suitable measuring device after 24 hours, at the earliest, and determined using a measurement accuracy of 0.1 mm and then compared to the standards listed in section 2.1 or to the data sheets according to the dimensions and tolerances in the appendix, respectively. The test must be carried out on 3 AWBs at room temperature. All functional dimensions will be checked (AWB according to DIN EN 840) and as the case may be, container dimensions (AWB-DU according to DIN 30760) during the initial test.

In the case of monitoring tests, all dimensions will be checked that are marked as test dimensions. Test dimension 12 The dimension 12 shall be measured at the upper rim of the body at the end of the radii (Fig. 2).

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3.3.3	Volumes		
	<p><i>Quality requirements</i></p> <p>The volume of the AWB consists of both the volume of the body and the lid minus the volume resulting from the depth of protrusion of the body up into the lid.</p> <p>The permitted volumes for each AWB size are defined in section 2.1 which includes a list of standards or in the container specific data sheets (see appendix 7.2), respectively.</p> <p><i>Test requirements</i></p> <p>Test temperature T1</p>	<p>Please refer test report of EN 840-2 Representative sample: 1051 l (within the tolerance of $\pm 5\%$) Body: 990,3 l Lid: 60,5 l</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.3.1	Volume determination for AWBs with flat lids		
	<p>The testing unit for the body consists of a tank that is large enough to accommodate the body of the AWB being tested.</p> <p>To perform the test, the empty body is placed in the tank. The tank and body are filled evenly with water (temperature $15 \pm 5\text{ °C}$). The amount of water in the body until the point of overflow is reached is measured. The measurement accuracy is $\pm 1\%$ of the measured volume.</p> <p>The testing unit for the lid consists of a container that is loosely filled with plastic granules. In order to determine the volume of the lid, it is placed (embedded) horizontally and form-fit in the plastic granules. The lid is filled with water to a level that equates to the depth of protrusion of the body up to the lid.</p>		<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.3.2	Volume determination for AWBs with sliding lids		
	<p>The determination of the volume of the body takes place under conditions of external pressure equalization in water according to 3.3.3.1 until water reaches the over flow rim.</p> <p>Since the volume of the lid minus both of the body circular side elements capacity cannot be determined, the volume of the lid must be calculated mathematically.</p> <p>In this case, the segment height "h" on the body should be measured from the upper rim of the volumetric measuring point to the crown. The secant "s" is determined using the overlying lid and the length "l" as an arithmetic average taken from three single measuring points at the height of the secant on the body (Fig. 3).</p>		<p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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	<p>The volume is calculated using: $V \sim 2/3 h \times s \times l$ V = Volume h = Segment height s = Secant l = Length As an alternative, the volume of the lid can be Established by using a calculation of exact geometry.</p>	 <p>Bild 3/Fig. 3</p>
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3.3.4	Load		
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	<p><i>Quality requirements</i> The AWBs must be designed for a load of 0.4kg/dm³ multiplied by the nominal volume and for a maximum of 440 kg. This load quantity applies to AWBs that are used for streams of waste and recyclables from private households, including compostable food and garden waste. Demands for higher load quantities, e.g. 0.8kg/dm³ for waste food and compostable waste from the commercial sector, respectively, must be agreed upon by the AWB manufacturer and the customer. In this example the AWB must be designed for a load of 0.8kg/dm³ times the nominal volume.</p>	<p>660 liter container: 264 kg 770 liter container: 308 kg 1000 liter container: 400 kg 1100 liter container: 440 kg</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
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3.3.5	Mass of the thermoplastic waste and recycling containers bodies		
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	<p><i>Quality requirements</i> The mass of the thermoplastic waste and recycling container bodies of each AWB from one consignment, from one mold and made of one material may not deviate more than 1.5 % from the average. <i>Test requirements</i> Test temperature T1 A gravimetric analysis is carried out on 3 AWB bodies. The measurement precision must be ± 10 g.</p>	<p>Official weight of MGB 1100 acc. to the user manual: 51 kg 1,5%: 0,765 kg Measured on the representative sample with the new wheels: 51,2kg The results see in clause 4.2.4, on page 20.</p>	<p>P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/></p>
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3.3.6	Warm storage		
	<p><i>Quality requirements</i></p> <p>An AWB made of plastic, including all individual parts susceptible to age, may not have any bubbles, cracks or deformities that limit serviceability (see section 3.2.1). Measurements must be taken before and after warm storage.</p> <p>The maximum possible changes in dimension resulting from warm storage that have occurred under practical conditions caused by post-crystallization and post-shrinkage may not be more than 1.5 % and must be within the set dimension tolerance range.</p> <p>The following shall be tested:</p> <p>2-wheeled AWB: P5, P12 4-wheeled AWB: P5, P12, P28 2-wheeled AWB-DU: P2, P10, (P16-P17) 4 wheeled AWB-DU: d, k, (t-r)</p> <p>The dimensions P12, (P16–P17) and (t-r) are combined measurements between the body and the lid and shall only be evaluated based on their dimensional accuracy of the specified tolerances.</p> <p><i>Test requirements</i></p> <p>An AWB is placed in a circulating air oven at a temperature of 90° C to 95° C for 3 days, free of influencing forces, simulating normal use (standing in storage) so that deformations are not impeded.</p> <p>The lid must be closed. After the container has cooled to room temperature, the appearance of the AWB under goes a visual inspection under good daylight conditions from a distance of 1 metre and another dimension check is carried out.</p>	<p>Temperature during the test were between 90 °C - 95 °C</p> <p>After 3 days of treatment, the monitoring dimensions for monitoring the shrinkage did not change more than 1,5%</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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3.3.7 Surface active agent testing for 4-wheeled waste and recycling containers-DU

	<p><i>Test requirements</i></p> <p>As an alternative to testing an entire AWB, testing can also be carried out on individual segments which, from a manufacturing point of view, are the most demanding and from an application-technical point of view, those segments of an AWB that are stressed the most. These are (Fig 4)</p> <p>Section 1. Wheel suspensions for the body</p> <p>The wheel construction, including the mounting, is sawed out of the bottom of the AWB-DU circa 50 cm above the mounting. All wheel suspensions with screwed mountings and the outlet sleeve are checked.</p> <p>Section 2. Body receiving section</p> <p>Both corner areas are to be checked. The surface area should be circa 30 x 30 cm.</p> <p>Section 3. Body – hinge area</p> <p>Both corner areas are to be checked. The surface area should be circa 30 x 30 cm.</p> <p>Section 4. Lid</p> <p>In this test, the area of the hinges up to the injection points must be checked.</p> <p>The individual areas can be seen in Fig. 4.</p>	<p>See in clause 4.11.1 on page 33.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
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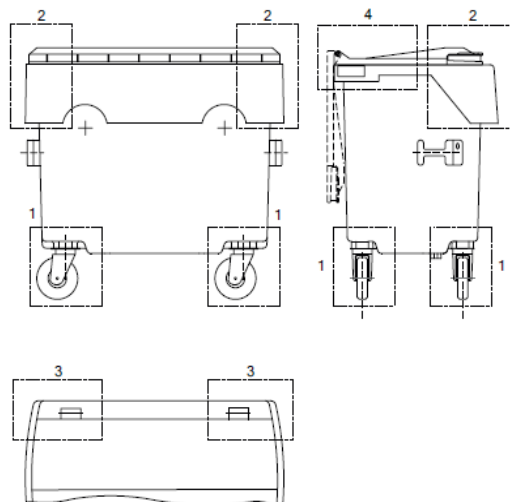


Bild 4 - Netzmittelprüfung für 4-rädrige AWB-DU aus Kunststoff an Segmenten

Fig. 4 - Surface active agent testing for 4-wheeled plastic AWB-DU on segments

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3.3.8	Fall test		
	<p><i>Quality requirements</i></p> <p>Cracks on the bodies (of 2-wheeled containers on the body and wheels) that could influence the serviceability (see 3.2.1) are not permitted.</p> <p>2-wheeled AWB (incl. wheels)</p> <p><i>Test requirements</i></p> <p>Test temperature T₂ for the initial test and T₁ for the monitoring tests.</p> <p>2 Test objects shall be filled with test material and each one dropped from a height of 3 metres four times. The AWB must land flat on its underside on a smooth horizontal and non-resilient impact area in the first 3 drop tests. The AWB should land on the front bottom edge in the fourth drop test. In order for this to occur, the AWB must be positioned at an angle of 4-10°.</p> <p>An inspection of damage to the AWB is to be carried out after each fall test.</p> <p>4-wheeled AWB (without wheels)</p> <p>Test temperature T₁</p> <p>The test object shall be filled with test material and dropped so that it can fall freely from a height of 2.5 metres four times. The AWB without wheels must land flat on its underside on a smooth horizontal and non-resilient impact area in each of the 4 tests. An inspection of damage to the AWB is to be carried out after each fall test.</p>	<p>Fall height: 2,5m Cycles:4</p> <p>There is no crack or broke on the representative container - MGB 1100 - after the test.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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3.3.9	Drop ball test for 2-wheeled and 4-wheeled AWBs		
	<p><i>Quality requirements</i></p> <p>The drop height for testing the underside of the body is carried out at 1m, which deviates from the DIN EN 840-5 (0.8 m) standard.</p> <ul style="list-style-type: none"> – Drop ball test at test temperature T_2 – Definition 4-wheeled AWB and 4-wheeled AWB-DU (Fig. .5) and 2-wheeled AWB-DU (Fig. 6) <p><i>Test requirements</i></p> <p>Three consecutive impacts must be carried out on each of the following points of impact on the inside of the bottom of the container:</p> <ul style="list-style-type: none"> – Injection points (1) shown in the example, 4 injection points – Point A and D or point C and B <p>Two consecutive impacts must be carried out on each of the following points of impact on the rim of the body:</p> <ul style="list-style-type: none"> – in the middle of the front section of the upper rim (E) – in the middle of the side of the upper rim (F) – on the back corner of the upper rim (G), opposite to the previously tested side. – if handles exist, the impact point is in the middle of each handle (H) <p>2 consecutive impacts must be carried out on each of the following points of impact. The lid is mounted on the body in this test. Points of impact:</p> <ul style="list-style-type: none"> – in the middle of the lid (I) – on a corner of the lid (the cylinder must touch the lid) (J) – on the diametrically opposite corner (the cylinder must touch the lid) (K) – on every hinge (L) <p>Testing procedures for the Diamond-receiver are also carried out in the same manner on the 4-wheeled AWB-DU.</p> <p>The testing points may be within in a tolerance range of $r = 10$ mm around the defined points of impact.</p> <p>4-wheeled AWB sliding dome lid</p> <p>The drop ball test is carried out on the injection points of the sliding domed lid. The lid is mounted on the body and in the closed position for this test.</p>	See at page 22, clause 4.7.2	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>

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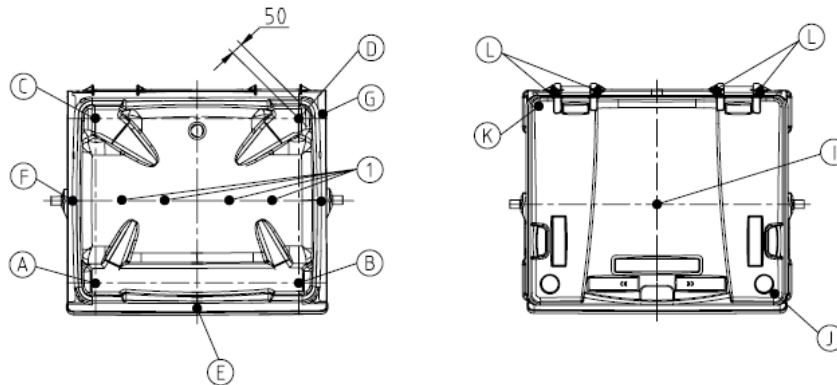


Bild 5 - Aufprallpunkte für Kugelfallversuch 4-rad AWB und 4-rad AWB-DU

Fig. 5 - Points of impact for drop ball test 4-wheeled AWB and 4-wheeled AWB-DU

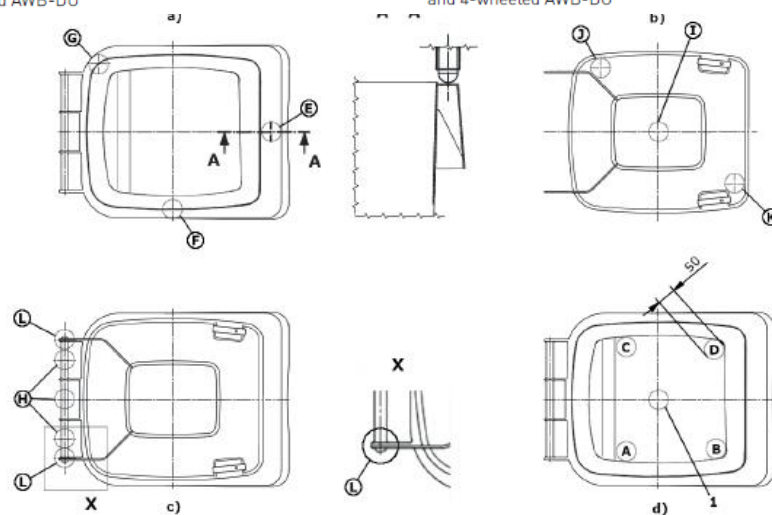


Bild 6 - Zusätzliche Aufprallpunkte für Kugelfallversuch 2-rad AWB-DU

Fig. 6 - Additional points of impact for drop ball test 2-wheeled AWB-DU

3.3.10. Titing Test

Quality requirements

All of the receivers for lifting devices found on AWBs shall be tested. For example:

- Frontal receivers
- trunnion frontal receiver
- DU frontal receiver

The serviceability of the AWB must be guaranteed after testing has taken place.

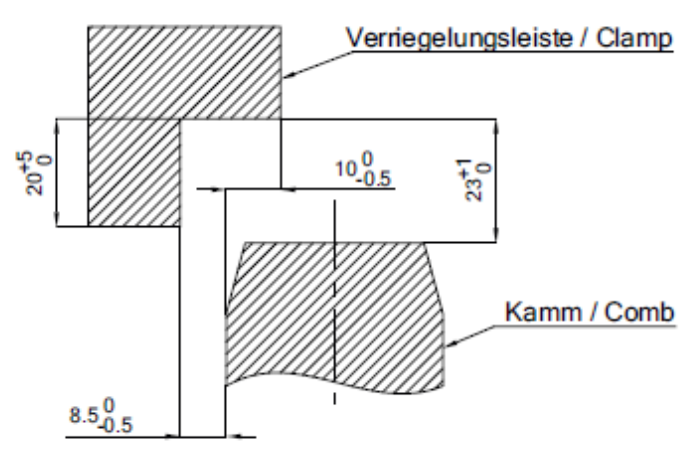
Test requirements

The lifting devices used in the tests must comply with the series of standards DIN EN 1501.

See at page 32.

P	<input checked="" type="checkbox"/>
F	<input type="checkbox"/>
N/A	<input type="checkbox"/>
N/T	<input type="checkbox"/>

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Absatz Clause	RAL-GZ 951/1:2023 Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse - Bemerkungen Measuring results - Remarks	Bewertung Evaluation								
3.3.10.1.	Tilting test AWB-DU										
	<p><i>Test temperature T_1</i></p> <p>To verify the locking system on the DU lifting device receiver, the dimension P18 (2-wheeled AWB-DU) respectively dimension s (4-wheeled AWB-DU) of the AWB or the lifting device dimension 92 +/-1 shall be checked and documented.</p> <p>Furthermore, the recommendations for manufacturers of lifting devices remain valid as listed and defined in the DIN 30760 appendix A. It shall be assured that for every receiving of a container that a different point of contact between the Diamond-receiver of the lifting device and the AWB-DU is achieved.</p>	Not AWB-DU	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>								
3.3.10.1.1	Tilting test for empty AWB-DU										
	<p>Testing is carried out using a closed AWB-DU. At least 5 trouble-free lifting cycles must be carried out. The lids must be able to move freely.</p> <p>Dimension P18 (2-wheeled AWB-DU) respectively dimensions (4-wheeled AWB-DU) must be measured after the lifting test has been carried out on the loaded AWB-DU.</p>	Not AWB-DU	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>								
3.3.10.1.2	Tilting test for fully loaded AW-DU										
	<p>The container to be tested must be filled with the test load. The emptying of the test load during the lifting procedure is to be prevented by a suitable device. The lid must be able to move freely. The container must</p> <table border="1" data-bbox="268 1594 922 1787"> <thead> <tr> <th>Test conditions</th> <th></th> </tr> </thead> <tbody> <tr> <td>Cycle time for each cycle</td> <td>10 - 12 seconds</td> </tr> <tr> <td>Rest period after each cycle</td> <td>5 - 10 seconds</td> </tr> <tr> <td>Number of cycles</td> <td>100</td> </tr> </tbody> </table> <p>come into contact with the ground after each lifting cycle.</p> <p>Dimension P18 (2-wheeled AWB-DU) respectively dimensions (4-wheeled AWB-DU) must be measured after the lifting test has been carried out on the loaded AWB-DU.</p>	Test conditions		Cycle time for each cycle	10 - 12 seconds	Rest period after each cycle	5 - 10 seconds	Number of cycles	100	Not AWB-DU	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
Test conditions											
Cycle time for each cycle	10 - 12 seconds										
Rest period after each cycle	5 - 10 seconds										
Number of cycles	100										

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3.3.10.2	Tilting test for waste and recycling containers with lateral receiver		
	<p>Before testing according to DIN EN 840-5 and DIN EN 1501-5 is carried out</p> <ul style="list-style-type: none"> – the dimensions of the lateral receiver on the lifting device must be measured (1270 + 10 mm) and – the safety catch must be checked for easy movability. <p>The lid must be able to move freely in this test.</p>	See at page 31, clause 4.10	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
3.3.10.3	Tilting test for waste and recycling containers with frontal receiver		
	<p>Before testing according to DIN EN 840-5 and DIN EN 1501-5 is carried out the dimensions of the lifting device locking device must be checked (Fig. 7).</p> <p>The lid must be able to move freely in this test.</p>	See at page 31, clause 4.10	P <input checked="" type="checkbox"/> F <input type="checkbox"/> N/A <input type="checkbox"/> N/T <input type="checkbox"/>
	 <p>Bild 7 - Kammschüttung/ Fig. 7 - Comb lifting devices</p>		

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Absatz Clause	RAL-GZ 951/1:2023 Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse - Bemerkungen Measuring results - Remarks	Bewertung Evaluation
3.3.11	Lid test for flat lids		
	<p><i>Quality requirements</i></p> <p>The lid of the AWB may warp during testing, however the deformation must partially or completely return to its "normal" shape at room temperature 24 hours after testing has been completed. Neither the rim of the lid nor the lid itself should be able to be pushed into the body by means of the applied load at temperature.</p> <p>The lid must rest on the container body correctly before testing is started. It must be equipped with at least two pivot points and with at least one mechanism for opening.</p> <p><i>Test requirements</i></p> <p>At the beginning of the test, the lid of the AWB is closed and resting on the rim of the AWB. The lid is to be tested at 40 °C for 4 hours with a testing load of 400 N on a surface of 25 x 25 cm located at the center of the lid. The serviceability of the lid is checked after 24 hours (see3.2.1).</p>	<p>Temperature: 40°C Duration: 4 h Load: 40 kg on the lid</p> <p>There is no damage after the tests on the representative sample - MGB 1100, the serviceability of the lid is contact.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.12	Locking system safety on the lifting device for waste and recycling container AWB-DU		
	<p><i>Test requirements</i></p> <p>The space between the upper edge of the DU-receiver of the container and the lower edge of the locking bar of the lifting device shall be measured before and after the tilting trials in section 3.3.10 In this case, a maximum distance of 7 mm is allowed.</p>	Not AWB-DU	<p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.13	Stability		
	<p><i>Test requirements</i></p> <p>Other than the given values stated in DIN EN 840-5 (10°), the test must be carried out at a temperature below 12°. In order to keep the container from sliding before it is tipped over, the test floor area must be equipped with a dead stop and a sand paper overlay 120 K (or comparable).</p>	See at page 27, clause 4.8	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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Absatz Clause	RAL-GZ 951/1:2023 Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse - Bemerkungen Measuring results - Remarks	Bewertung Evaluation
3.3.14	Kerb travel – falls		
	<p><i>Test requirements</i></p> <p>Other than the given values stated in DIN EN 840-5 (140 mm), the test object is lifted 200 mm. In the case of 4-wheeled AWBs, the side to be tested may be chosen by the person carrying out the test.</p>	<p>See at page 27, clause 4.7.5.2</p> <p>The certification of the wheel is available.</p> <p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.15	“Kerb travel” – run test, 4-wheeled waste and recycling containers only		
	<p><i>Test requirements</i></p> <p>The goal of the test is to test the wheel mounting of the AWB body.</p> <p>For this reason, the AWB being tested shall only be fitted with casters that do not have a wheel-stopping mechanism.</p>	<p>See clause 4.7.4 on page 26</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
3.3.16	Brake test, 4-wheeled waste and recycling containers only		
	<p><i>Test requirements</i></p> <p>The hold time for the braked AWB is 60 seconds. The narrow side of the container must be placed in the testing direction due to the fact that braking efficiency is less here and consequently, the most critical test case exists.</p>	<p>See clause 4.9.4 on page 31</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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3.3.17	Wheel test – true running		
	<p><i>Quality requirements</i></p> <p>The diameter of the wheel shall be measured before and after each test and may only be a maximum of 5 mm under the nominal dimension in each case.</p> <p><i>Test requirements</i></p> <p>Additional specifications of the run test according to DIN EN 840-5, paragraph 4.9.3 for wheels for AWBs according to DIN EN 840-1.</p> <p>In order to protect the testing device, a counter support shall be mounted at a distance of 25 mm from the wheel while the test is carried out. This will prevent the wheel from falling off the axle in the event of a breakdown and will stop the testing device from being damaged (Fig. 8).</p> <p>Explanatory statement:</p> <p>If the distance were less, e.g. only 5 mm, a breakdown of the wheel would not be registered by the test device and the test device would not shut down. When the distance is 25 mm, the wheel cannot fully fall off the axle. The testing device can register the breakdown and shut down.</p> <p>Due to the unsatisfactorily defined testing device description found in DIN EN 840-5, the test devices built according to DIN EN 840-5 lead to different test results.</p> <p>Additional specifications of the run test according to DIN EN 840-5, paragraph 4.9.3 for caster for AWBs according to DIN EN 840-2, -3 and -4.</p> <p>A counter support is mounted at a distance of 10 mm from the wheel bolt in order to test the casters and prevent the casters from being able to breaking away to the side when they are rolled over a step (Fig. 8).</p> <p>Explanatory statement:</p> <p>The further the caster is able to break away, the greater the wear on the wheel, and the greater the stress on the caster housing. Due to the unsatisfactorily defined testing device description found in DIN EN 840-5, the test devices built according to DIN EN 840-5 lead to different test results.</p>	<p>Manufacturer: Trimex Tyre & Rubber Import und Export GmbH SKZ certificate: 60415 Artikel-Nr.: Castor: TR 0040.003 Castor with brake: TR 0040.004 ⊙200mm</p> <p>The certification of the wheel is available.</p>	<p>P <input checked="" type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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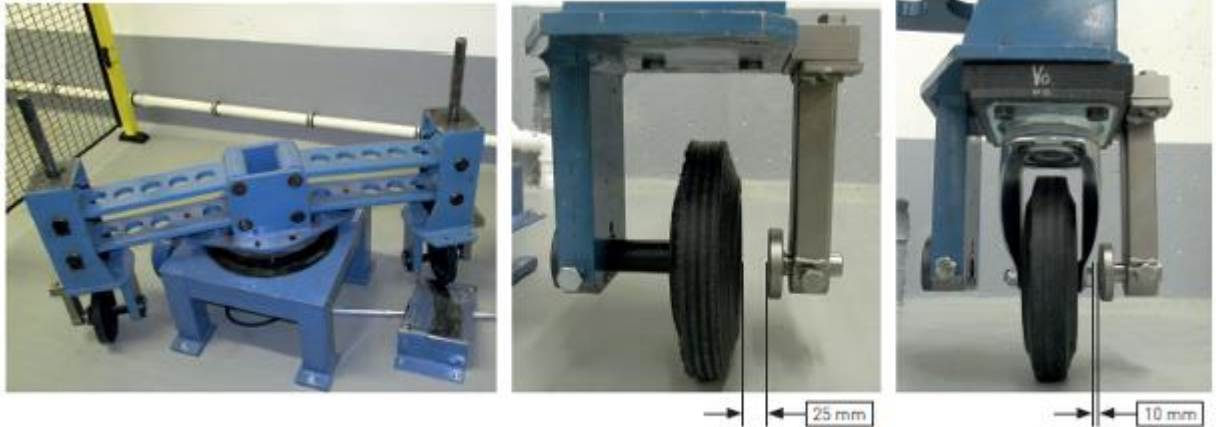


Bild 8 - Radprüfung, Prüfstand mit Gegenhalter/ Fig. 8 - Wheel test, testing device with counter support

3.18 Angle expansion test of the frontal receiver of 2-wheeled and 4-wheeled waste and recycling containers

Quality requirements
The AWB may not have any cracks or stress whitening in the area of the frontal receiver.

Test requirements
Test temperature T₂

The container to be tested shall be fixed using a locking bar to the frontal receiver of the test device in such a way (e.g. screwed on) so that the dimensions of the test device do not change during the entire testing period.

The container is lifted in the area of the wheel housing and brought to the angle position $\alpha_D = 25^\circ$ inside a maximum of 20 seconds.
The container is held in this position for 5 seconds.
The testing of each AWB must be carried out inside 5 minutes after the AWB has been taken out of the cold chamber.
After this, the AWB is put back into the resting position, released from the locking mechanism and examined.
3 AWBs shall be tested.

Representative sample was frozen to -20°C.

No cracks or stress whitening on the representative sample after the test.

P
F
N/A
N/T

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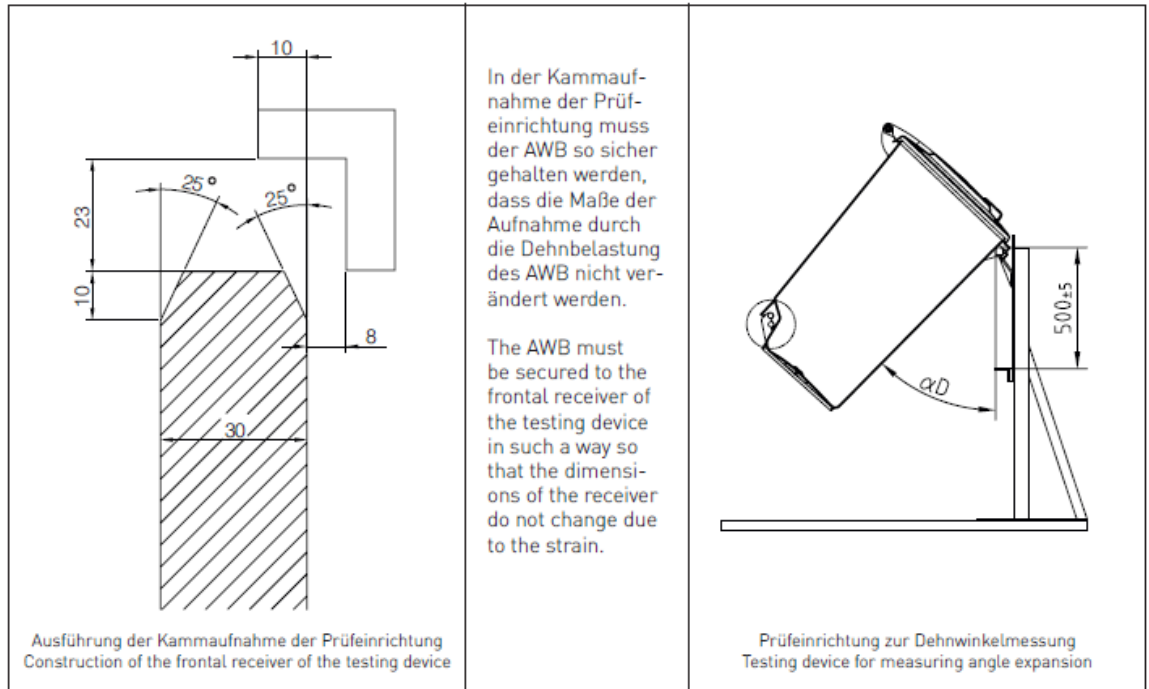


Bild 9 - Dehnwinkelprüfung/ Fig.9 Expansion angle test

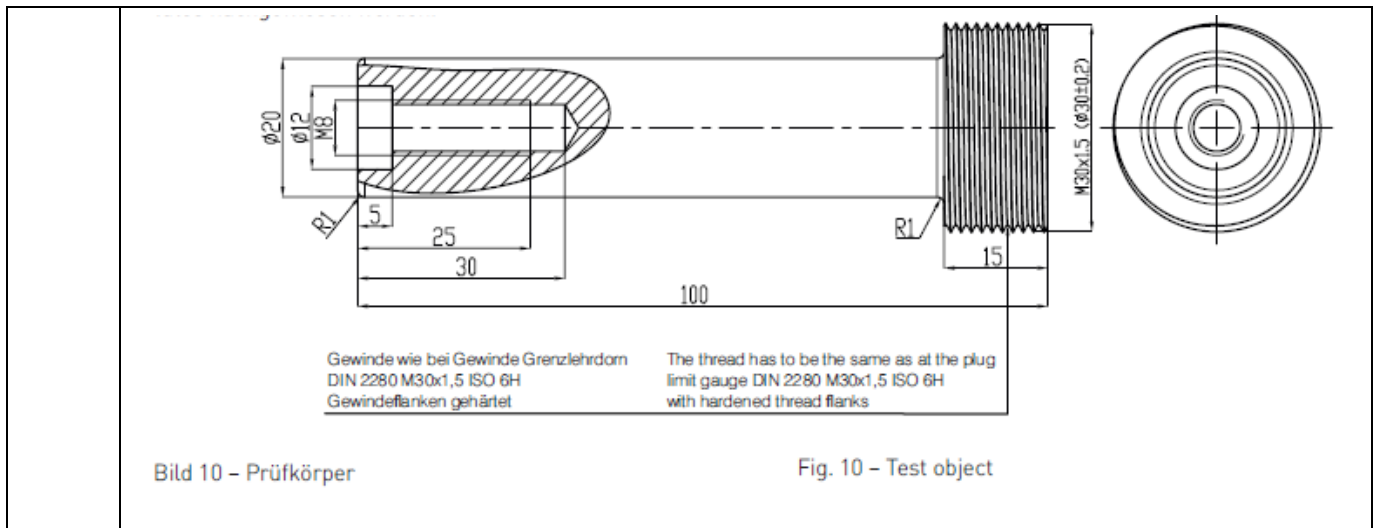
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3.3.19	Stability of the transponder adapter in the RAL chip nest		
	<p>Quality requirements</p> <p>Evaluation of test results</p> <p>The test is “passed” when the test body has not fallen out of the AWB chip nest after 1 hour. All test samples must pass the test.</p> <p>Frequency of the tests</p> <p>The test is only carried out during the initial sample testing and external monitoring.</p> <ul style="list-style-type: none"> – Initial sample test: 3 test samples – External monitoring: 1 test sample <p>Test requirements</p> <ul style="list-style-type: none"> – Test object <p>The test object must be consistent with Fig. 10. Dimensional accuracy must be proven by means of a certificate from an acknowledged testing institut.</p> <ul style="list-style-type: none"> – Mounting of a test object (PK) in the RAL-chip nest <ul style="list-style-type: none"> • Time of mounting A minimum of 24 hours after the production of the AWB • Mounting temperature <p>Ambient temperature at the time mounting takes place: (23 +/- 5) °C</p> <ul style="list-style-type: none"> • Mounting temperature The test object is inserted. <p>Attention must be taken to ensure that the test object is inserted at a right angle to the chip nest and inserted as far as it will go in.</p> <ul style="list-style-type: none"> – Test of fixedness of the test object in the AWB-chip nest <ul style="list-style-type: none"> • Time of the test <p>A minimum of 24 hours after the mounting of the test object in the AWB-Chip nest</p> <ul style="list-style-type: none"> • Test temperature <p>Ambient temperature at the time of testing:</p>	<p>Not part of the test (no RAL mark).</p>	<p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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4 Monitoring

4.1 Overview

Monitoring is divided into the following categories:

- Initial testing
- Internal testing
- External testing
- Re-examination and testing

4.2 Initial testing

4.2.1 General

Passing the initial test is an indispensable requirement for the awarding of and the entitlement to display the Quality Mark – “Waste and Recycling Containers” including the materials specific inscription “K” for plastic (“Kunststoff” in German).

The initial test must be completed by every manufacturer who has applied for the awarding of the Quality Mark at The Quality Control Association of Waste and Recycling Containers.

The Quality Committee of the Quality Control Association shall commission neutral experts or a suitable testing institute both of which are accredited according to DIN EN ISO/IEC 17025/17020.

The applicant shall bear the costs of the initial testing.

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4.2.2	Content and scope of the initial test		
	<p>In the case of the initial test, the applicant must prove that it is ensured by means of his/her manufacturing facility and his/her expert personnel that he/she can produce the AWBs in accordance with these quality and test requirements.</p> <p>The materials used to manufacture AWBs must be recyclable. Upon request by the GGAWB, verification of the distinguishing characteristics of materials used for manufacturing AWBs shall be proven by providing an appropriate test certificate from an acknowledged testing authority or the manufacturer.</p> <p>The initial test is carried out on the entire AWB that comes from current production according to section 2 and 3. In case of the modification or substitution of individual parts (body, lid, running gear) proof of the re-testing of functional demonstration of the part and the appropriate tests must be provided.</p>	<p>Not part of the test (no RAL mark)</p>	<p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>

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4.3 Internal testing

	<p>Every Quality Mark holder must continually carry out internal testing in order to show compliance with the quality and test regulations and to ensure that his/her AWBs bearing the RAL Quality Mark are always in compliance with the quality requirements of this quality assurance.</p> <p>Documentation concerning all tests carried out for internal monitoring purposes and all of these test results must be completely and consistently recorded and retained for a minimum of 5 years.</p> <p>A Quality Mark holder can use a certified and regularly audited QM-system service to carry out the internal testing process.</p> <p>The following tests must be carried out:</p> <p>The Quality Mark holder must take immediate and necessary measures to eliminate defects after unsatisfactory test results.</p>	<table border="1"> <thead> <tr> <th>Requirement</th> <th>Frequency</th> <th>Quality and test requirements according to section</th> <th>DIN EN 840-5</th> </tr> </thead> <tbody> <tr> <td>Appearance and workmanship</td> <td>1x per shift and per day, colour test only after a production lot change</td> <td></td> <td>4.2.1</td> </tr> <tr> <td>Dimensions and mass/weight</td> <td>1x per manufacturing period and per week</td> <td>3.3.2</td> <td>4.2.2.2</td> </tr> <tr> <td>Deflection of the frontal receiver</td> <td></td> <td>3.3.5</td> <td>4.2.4</td> </tr> <tr> <td>Behaviour after warm storage</td> <td>1x per week</td> <td>3.3.6</td> <td></td> </tr> <tr> <td>Behaviour after wetting agent test</td> <td>1x per week</td> <td>3.3.7</td> <td>4.31.1</td> </tr> <tr> <td>Ball drop test - under cold conditions</td> <td>1x per week</td> <td>3.3.9</td> <td>4.7.2</td> </tr> <tr> <td>Fall test - under room temperature conditions</td> <td>1x per week</td> <td>3.3.8 only T₁</td> <td></td> </tr> <tr> <td>Marking & labelling</td> <td>1x per month</td> <td>5</td> <td></td> </tr> <tr> <td>Locking system safety on the lifting receiver device only for AWS-DU</td> <td>1x per manufacturing period and per week</td> <td>3.3.12</td> <td></td> </tr> <tr> <td>Functional test for safety lid*</td> <td>Every AWB with a sliding dome lid</td> <td></td> <td></td> </tr> <tr> <td>Brake test - 4-wheeled AWB only</td> <td>1x per manufacturing period and per week</td> <td></td> <td>4.9.4</td> </tr> </tbody> </table> <p><small>*Instruction regulations and a label serve as proof</small></p>	Requirement	Frequency	Quality and test requirements according to section	DIN EN 840-5	Appearance and workmanship	1x per shift and per day, colour test only after a production lot change		4.2.1	Dimensions and mass/weight	1x per manufacturing period and per week	3.3.2	4.2.2.2	Deflection of the frontal receiver		3.3.5	4.2.4	Behaviour after warm storage	1x per week	3.3.6		Behaviour after wetting agent test	1x per week	3.3.7	4.31.1	Ball drop test - under cold conditions	1x per week	3.3.9	4.7.2	Fall test - under room temperature conditions	1x per week	3.3.8 only T ₁		Marking & labelling	1x per month	5		Locking system safety on the lifting receiver device only for AWS-DU	1x per manufacturing period and per week	3.3.12		Functional test for safety lid*	Every AWB with a sliding dome lid			Brake test - 4-wheeled AWB only	1x per manufacturing period and per week		4.9.4	<p>Not part of the mechanical test</p> <p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>
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Fall test - under room temperature conditions	1x per week	3.3.8 only T ₁																																																	
Marking & labelling	1x per month	5																																																	
Locking system safety on the lifting receiver device only for AWS-DU	1x per manufacturing period and per week	3.3.12																																																	
Functional test for safety lid*	Every AWB with a sliding dome lid																																																		
Brake test - 4-wheeled AWB only	1x per manufacturing period and per week		4.9.4																																																

4.4 External testing

4.4.1 General

The Quality Committee of the Quality Control Association shall commission neutral experts or suitable testing institutes (accredited according to DIN EN ISO/IEC 17025/17020).

External testing shall be carried out without previous notice and testing shall take place during operational working times in the plant of the Quality Mark holder. The tester must legitimize his presence and identify himself before testing begins.

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4.4.2 Content and scope of external monitoring

	<p>The external monitoring process requires that the Quality Mark holder provide the tester with all of the documentation about internal monitoring. The tester shall examine these documents concerning their entirety and can request further information about the documentation.</p> <p>The tester shall take random samples of the quality assured AWBs of the Quality Mark holder according to these quality and test regulations. Samples requested for by the tester shall remain with the tester.</p> <p>Stored testing samples</p> <p>In case AWBs marked with a Quality Mark are not available, 5 stored testing samples for each upcoming AWB test must be available. The production date of the stored testing samples must not be older than the period since the last monitoring test.</p> <p>The following tests must be carried out:</p>	<p>Not part of the mechanical test</p>	<p>P <input type="checkbox"/></p> <p>F <input type="checkbox"/></p> <p>N/A <input checked="" type="checkbox"/></p> <p>N/T <input type="checkbox"/></p>																																	
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Requirement</th> <th style="width: 30%;">Quality and test requirements according to section</th> <th style="width: 40%;">EN 840-5</th> </tr> </thead> <tbody> <tr> <td>Appearance and workmanship</td> <td></td> <td>4.2.1</td> </tr> <tr> <td>Dimensions and mass/weight. Deflection of the frontal receiver</td> <td>3.3.2 3.3.5</td> <td>4.2.2.2 4.2.4</td> </tr> <tr> <td>Behaviour after wetting agent test</td> <td>3.3.7</td> <td>4.11.1</td> </tr> <tr> <td>Ball drop test - under cold conditions</td> <td>3.3.9</td> <td>4.7.2</td> </tr> <tr> <td>Fall test - under room temperature conditions</td> <td>3.3.8</td> <td></td> </tr> <tr> <td>Marking & labelling</td> <td>5</td> <td></td> </tr> <tr> <td>Locking system safety on the lifting receiver device only for AWB-DU</td> <td>3.3.12</td> <td></td> </tr> <tr> <td>Functional test for safety lid (sliding dome lid)</td> <td></td> <td></td> </tr> <tr> <td>Brake test - 4-wheeled AWB only</td> <td></td> <td>4.9.4</td> </tr> <tr> <td>Stability of the transporter adapter</td> <td>3.3.19</td> <td></td> </tr> </tbody> </table>	Requirement	Quality and test requirements according to section	EN 840-5	Appearance and workmanship		4.2.1	Dimensions and mass/weight. Deflection of the frontal receiver	3.3.2 3.3.5	4.2.2.2 4.2.4	Behaviour after wetting agent test	3.3.7	4.11.1	Ball drop test - under cold conditions	3.3.9	4.7.2	Fall test - under room temperature conditions	3.3.8		Marking & labelling	5		Locking system safety on the lifting receiver device only for AWB-DU	3.3.12		Functional test for safety lid (sliding dome lid)			Brake test - 4-wheeled AWB only		4.9.4	Stability of the transporter adapter	3.3.19			
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Absatz Clause	RAL-GZ 951/1:2023 Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse - Bemerkungen Measuring results - Remarks	Bewertung Evaluation
°°°	<p>The tester shall compile a monitoring report from the results of the external monitoring process. The Quality Mark holder shall be given a copy of the monitoring report and a further copy shall be given to the Quality Committee of The Quality Control Association.</p> <p>External monitoring of production shall be carried out once a year.</p> <p>External monitoring of the quality assured AWB shall be carried out every 2 years.</p> <p>The tester shall use the test reports specially developed by The Quality Control Association for external monitoring.</p> <p>Should the test results be negative, the Quality Mark holder may not deliver the AWBs to recipients that were manufactured in the time period between the last passed test and the test that was not passed.</p> <p>If manufacturing operations have been tested internally in the time period between the last test passed and the failed test, the Quality Mark holder may not ship any AWBs that were manufactured in the time period between the last internal test passed and the failed external test.</p> <p>If any AWBs are shipped within the specified time periods, the Quality Mark holder must inform the recipient in both cases.</p> <p>External monitoring costs shall be paid by the Quality Mark holder.</p>		
4.5	Repeat test		
	<p>Should the tester finds defects in quality assurance during the external monitoring process carried out at the Quality Mark holders location, the Quality Committee of The Quality Control Association can set a date for repeat testing. Scope, content and the date of the repeat test shall be defined by the Quality Committee. The Quality Committee shall assign the same tester, who carried out the previous test, to carry out repeat testing.</p> <p>Should the repeat test not be passed, a further course of action shall be determined and taken according to the procedure regulations for the awarding of and entitlement to display the Quality Mark of The Quality Control Association of Waste and Recycling Containers (Gütegemeinschaft Abfall- und Wertstoffbehälter e. V.).</p> <p>The costs for the repeat test shall be paid by the Quality Mark holder.</p>	Not part of the mechanical test	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
5	Marking and labelling		
	<p>Waste and recycling containers made of plastic that are demonstrably consistent with these quality and test requirements can be labelled with the RAL-Quality Mark "AWB "or "AWB-DU", respectively, of The Quality Control Association as seen below including the materials inscription "K" for plastic ("Kunststoff" in German) as soon as the manufacturer has been awarded with the Quality Mark from the Quality Control Association.</p>	Not part of the mechanical test	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>

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Bild 11 - Logo



Fig. 11 - Logo

The labelling of the quality assured AWB with the RALQuality Mark (Fig. 11) shall be affixed to the body and to the lid.

Further information shall be suitably affixed to the AWB:

	Body	Lid
Mold number (possibly encoded)	X	X
Year and month of manufacture	X	X
DIN 30760 and/ or DIN EN 840, respectively	X	
Volume of the AWB	X	
Max. allowed total mass	X	
Manufacturer's name or trade name	X	
Material indication	X	X
Labelling according to EU guideline 2000/14/EG for standard AWBs: CE-Mark and LWA in dB(A) according to current valid regulation of The Quality Control Association of Waste and Recycling Containers (Gütegemeinschaft Abfall- und Wertstoffbehälter e.V.) (VA-5).		X

The labelling of the wheels shall take place according to the current valid agreement between The Quality Control Association of Waste and Recycling Containers and the wheel manufacturers (VA-6). The RAL-Quality Mark and all other labels and marks must be clearly legible and permanently affixed.

6	Modifications/ Amendments
	Modifications and amendments to these quality and testing regulations including editorial changes require previous written permission from RAL. Notification of modifications or amendments will be provided by the board to the Quality Mark holder and implemented after a corresponding period of transition.































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7	Enclosures
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7.1	Test reports – 2-wheeled AWB, 4-wheeled AWB, 2-wheeled AWB-DU, 4-wheeled AWB-DU
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7.3	Colours
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<p>Colour recommendations for the identification of waste and recyclables according to the RAL Quality mark RAL-GZ 951/1</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Colours</th> <th>Comparable to RAL-colour samples</th> <th>Recommended use</th> </tr> </thead> <tbody> <tr> <td>grey</td> <td>7021 </td> <td>Residual waste</td> </tr> <tr> <td>green</td> <td>6011 </td> <td>Bio-waste or green glass, respectively</td> </tr> <tr> <td>green (suitable for the use of recycled)</td> <td>6020 </td> <td>Bio-waste or green glass, respectively</td> </tr> <tr> <td>brown</td> <td>8025 </td> <td>Bio-waste or brown glass, respectively</td> </tr> <tr> <td>brown (suitable for the use of recycled)</td> <td>8028 </td> <td>Bio-waste or brown glass, respectively</td> </tr> <tr> <td>blue</td> <td>5015 </td> <td>Recovered paper</td> </tr> <tr> <td>blue (suitable for the use of recycled)</td> <td>5003 </td> <td>Recovered paper</td> </tr> <tr> <td>yellow</td> <td>1018 1021 </td> <td>Light-weight packaging materials</td> </tr> <tr> <td>red</td> <td>3020 </td> <td>Hazardous substances</td> </tr> <tr> <td>white</td> <td>9003 </td> <td>Hospital waste or white glass, respectively</td> </tr> </tbody> </table> <p>The colour values shown above are colour guidelines according to RAL. It should be noted that the colours outlined in the overview are recommendations only.</p>	Colours	Comparable to RAL-colour samples	Recommended use	grey	7021 	Residual waste	green	6011 	Bio-waste or green glass, respectively	green (suitable for the use of recycled)	6020 	Bio-waste or green glass, respectively	brown	8025 	Bio-waste or brown glass, respectively	brown (suitable for the use of recycled)	8028 	Bio-waste or brown glass, respectively	blue	5015 	Recovered paper	blue (suitable for the use of recycled)	5003 	Recovered paper	yellow	1018 1021 	Light-weight packaging materials	red	3020 	Hazardous substances	white	9003 	Hospital waste or white glass, respectively	<p>Not part of the mechanical test</p>	<p>P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/></p>
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7.4	Maximum allowed total weights																																																								
	<p>Overview for the determination of the maximum allowed total weights for AWBs made of plastic In the case of filling containers with waste and recycled material having a density of up to 0.4 kg/dm³</p> <table border="1"> <thead> <tr> <th>Container size</th> <th>Maximum allowed total weights</th> </tr> </thead> <tbody> <tr><td>AWB 60</td><td>50 kg</td></tr> <tr><td>AWB 80/90</td><td>50 kg</td></tr> <tr><td>AWB 110/120</td><td>60 kg</td></tr> <tr><td>AWB 140</td><td>70 kg</td></tr> <tr><td>AWB 180</td><td>90 kg</td></tr> <tr><td>AWB 240</td><td>110 kg</td></tr> <tr><td>AWB 280</td><td>120 kg</td></tr> <tr><td>AWB 340/360</td><td>160 kg</td></tr> <tr><td>AWB 500</td><td>240 kg</td></tr> <tr><td>AWB 660</td><td>310 kg</td></tr> <tr><td>AWB 770</td><td>360 kg</td></tr> <tr><td>AWB 1000</td><td>460 kg</td></tr> <tr><td>AWB 1100</td><td>510 kg</td></tr> <tr><td>AWB 1300</td><td>580 kg</td></tr> </tbody> </table> <p>Overview for the determination of the maximum allowed total weights for AWB-DU made of plastic In the case of filling containers with waste and recycled material having a density of up to 0.4 kg/dm³</p> <table border="1"> <thead> <tr> <th>Container size</th> <th>Maximum allowed total weights</th> </tr> </thead> <tbody> <tr><td>AWB-DU 60</td><td>55 kg</td></tr> <tr><td>AWB-DU 80</td><td>55 kg</td></tr> <tr><td>AWB-DU 120</td><td>60 kg</td></tr> <tr><td>AWB-DU 140</td><td>70 kg</td></tr> <tr><td>AWB-DU 180</td><td>90 kg</td></tr> <tr><td>AWB-DU 240</td><td>115 kg</td></tr> <tr><td>AWB-DU 360</td><td>170 kg</td></tr> <tr><td>AWB-DU 660</td><td>315 kg</td></tr> <tr><td>AWB-DU 770</td><td>360 kg</td></tr> <tr><td>AWB-DU 1000</td><td>470 kg</td></tr> <tr><td>AWB-DU 1100</td><td>510 kg</td></tr> </tbody> </table>	Container size	Maximum allowed total weights	AWB 60	50 kg	AWB 80/90	50 kg	AWB 110/120	60 kg	AWB 140	70 kg	AWB 180	90 kg	AWB 240	110 kg	AWB 280	120 kg	AWB 340/360	160 kg	AWB 500	240 kg	AWB 660	310 kg	AWB 770	360 kg	AWB 1000	460 kg	AWB 1100	510 kg	AWB 1300	580 kg	Container size	Maximum allowed total weights	AWB-DU 60	55 kg	AWB-DU 80	55 kg	AWB-DU 120	60 kg	AWB-DU 140	70 kg	AWB-DU 180	90 kg	AWB-DU 240	115 kg	AWB-DU 360	170 kg	AWB-DU 660	315 kg	AWB-DU 770	360 kg	AWB-DU 1000	470 kg	AWB-DU 1100	510 kg	Not part of the mechanical test	P <input type="checkbox"/> F <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/T <input type="checkbox"/>
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8 Overview of the required tests and guidelines

Test requirements for quality assurance according Control Association to RAL-GZ 951/1 for obtaining the Waste Quality Mark Waste and Recycling Containers		The Quality Control Association of Waste and Recycling Containers		
AWB:	Applicant: (company - name - date)	Certificate in appendix		
N°	Description	Responsible / Test.nr. / Date		
Product standard specifications	DIN EN 840-1 DIN EN 840-5 DIN EN 840-6	- Containers with 2 wheels and a volume of up to 400l for comb lifting devices – dimensions and design - Performance requirements and test methods - Safety and health requirements	AP	
	DIN EN 840-2 DIN EN 840-5 DIN EN 840-6	- Containers with 4 wheels and a volume of up to 1300l with a flat lid(s), for lifting devices with lateral receivers and / or for comb lifting devices – dimensions and design - Performance requirements and test methods - Safety and health requirements	AP	
	DIN EN 840-3 DIN EN 840-5 DIN EN 840-6	- Containers with 4 wheels and a volume of up to 1300l with dome lid(s), for lifting devices with lateral receivers and / or for comb lifting devices – dimensions and design - Performance requirements and test methods - Safety and health requirements	AP	
	DIN EN 840-4 DIN EN 840-5 DIN EN 840-6	- Containers with 4 wheels with a capacity up to 1700l with flat lid(s), for wide trunnion or BG- and/or wide comb lifting devices – Dimensions and design - Performance requirements and test methods - Safety and health requirements	AP	
	DIN 30760	Mobile waste and recycling containers – Containers with two wheels with a capacity from 60l to 360l for diamond lifting device	AP	
	Further applicable standards	DIN EN 15132	Container shells for mobile waste containers with a capacity up to 1700l - Performance requirements and test methods	EB
		DIN EN 14803	Electronic identifications of waste containers using transponder technology	EB
	Guidelines	CE-Mark 2000/14/EG	European guidelines concerning the environmental impact of noise emissions	EB
		GS-Mark	Certified safety	AV
AfPS GS 2019:01 PAK		Testing and assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in the awarding of GS Marks	AP	
DIN EN ISO 9001		Quality Management Systems	Not required, but if available AZ	
RAL-GZ 951/1	Additional quality and testing requirements	AP		

Legend: AZ: Accredited Certification Agency AP: Accredited Testing Institute
EB: Manufacturer's Internal Certificate AV: Acknowledges Awarding Agency

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ZUSATZ-DOKUMENTATION
ADDITIONAL DOCUMENTATION

Functional dimensions (information was given by the manufacturer – user manual):

<u>Article name</u>	<u>Overall dimensions</u> (H x W x D) [mm]	<u>Weight</u> [kg]	<u>Nominal volume</u> [l]	<u>Total permissible mass</u> [kg]	<u>Materials</u>
MGB 660	1190x1360x 780	40	660	310	HDPE body, HDPE lid, 2 steel an rubber wheel without brake, and 2 with brake, metal rod for fixing lid and screw to fix it in position
MGB 770	1350x1360x 780	44	770	360	
MGB 1000	1335x1360x1030	51	1000	505	
MGB 1100	1335x1360x1030	51	1100	505	

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ZUSATZ-DOKUMENTATION
ADDITIONAL DOCUMENTATION

Functional dimensions [in mm, if not otherwise indicated]:

Class I 660L		A00388829-001	Notes
1*	1370±10	1370	In case of trunnions
2	1115 max	1022	Total width lid(s) closed
3	1190 max	from bottom of the lid: 1146, from top of the lid: 1042	When lid open
4	1470 max	1345	
5*	860-1290	1237	Tipping edge
6	885 ± 50	845,6	
7*	135-280	205 H = 1030mm from the ground	In case of trunnions and min 850 from ground
8*	700-850	N/A	Handle position if present
9	600-850	N/A	Lock position if present
10*	500 ⁺¹⁵ / ₋₁₀	515	In case of trunnions
11	Ø200±2	198	*) Ø 160 ± 2 optional according to 5.3 of EN 840-6:2020
12*	19 min	19,82	In case of frontal receiver
13*	13 ⁺⁵ / ₋₃	10,4	In case of frontal receiver
14*	21 ⁺² / ₋₂	20,8	In case of frontal receiver
16*	26 ±1	26,0	In case of frontal receiver
17*	58 max	53	In case of frontal receiver
18*	20 min	23	In case of frontal receiver
19*	130 max	125	When ribs are fitted
20	15 max	2	
21*	33 ⁺⁸ / ₋₁	39,04	In case of frontal receiver
23*	40 ±2	39,5 - 41	In case of trunnions
24*	670 ₀ ⁺³⁰	700	The front of the container beneath the ribs of the lifting comb shall be smooth. No constructions shall protrude in this area.
25*	350 ±10	360	Clearance for lifting device
26	750 ⁺⁵⁰ / ₋₄₀	700	
27	130 min	140	Ground clearance
28*	1275 max	1223	Lid
29*	1185 min	1185	Inside operating length of frontal receiver
30*	1200 ₀ ⁺¹⁵	1215	Overall frontal receiver
31*	1265 max	1237	Overall length of the top rim or handles
32	-	-	This dimension is used no longer.
33*	1260 ⁺³⁰ / ₋₁₀	1272	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 ⁺²⁰ / ₋₅₀	849	
35	1090 ±70	1023	The outer corner shall be designed according to dimension W2 of EN 1501-5:—, Table Figure A.6
36*	150±3	150,5	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	4,2	When ribs are fitted
38*	6 ⁺¹ / _{-1,5}	5,7	In case of frontal receiver
40*	R 4 max	R1	In case of frontal receiver
41	10 min	N/A	
42	Ø16 max	N/A	
43	6,6 ₀ ^{+0,2}	N/A	
44	8,3 ₀ ^{+0,1}	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]		51,2	

*The dimensions with blue are mandatory