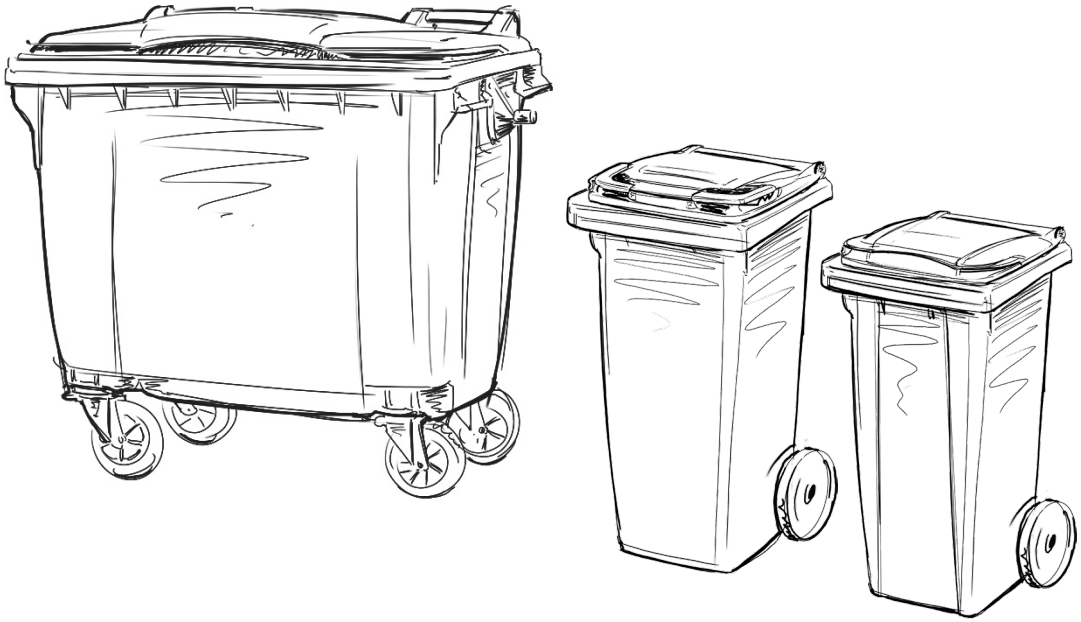
OPERATING INSTRUCTIONS

for the correct use of

mobile containers for waste and recyclables

Version July 2022



INTRODUCTION

These operating instructions were created on the basis of the application guidelines for waste and recyclables containers of the Quality Control Association of Waste and Recycling Containers (www.ggawb.de) and refer to the standard versions of the ESE 2- and 4-wheel product line.

TABLE OF CONTENTS

1. SCOPE

These operating instructions apply to the ESE standard versions of mobile containers for waste and recyclables and those standard versions that have been provided with one or more options and add-on parts from the table below by ESE or ESE representatives:

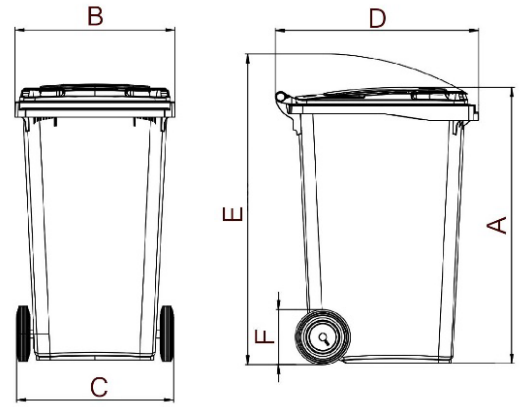
OPTIONS:	ATTACHMENTS:
Lock variants	Swill metal closure for food waste
Fraction apertures with lid	Foot operated lid opening
Fraction apertures without lid	Highway posts
Lid options (lid-in-lid, bio filter lid)	Rubbish bag holder
Hood apertures	30° lid restrictor
Clip options	Towing and lifting options
Identification systems	Handles
Wheel and castor options	
Bio modules, sieves, bio-grid	
Lifting systems, trunnions, adapters	
Dividers, volume reduction inserts	

2. CURRENT APPLICABLE REGULATIONS AND GUIDELINES

DIN EN 840-1	Mobile waste and recycling containers - Part 1: Containers with 2 wheels with a capacity up to 400 l for comblifting devices -Dimensions and design
DIN EN 840-2	Mobile waste and recycling containers - Part 2: Containers with 4 wheels with a capacity up to 1 300 l with flat lid(s), for trunnion and/or comb lifting devices - Dimensions and design
DIN EN 840-3	Mobile waste and recycling containers - Part 3: Containers with 4 wheels with a capacity up to 1 300 l with dome lid(s), for trunnion and/or comb lifting devices - Dimensions and design
DIN EN 840-5	Mobile waste and recycling containers - Part 5: Performance requirements and test methods
DIN EN 840-6	Mobile waste and recycling containers - Part 6: Safety and health requirements
DIN 30760	Mobile waste and recycling containers - Containers with two wheels with a capacity from 60 l to 360 l for diamond lifting devices
EN 15132	Container shells for mobile waste containers with a capacity up to 1700 l - Performance requirements and test methods
EN 1501-1 to -5	Refuse collection vehicles
2009/104/EC	User guidelines accident prevention regulations
BG Verkehr	Media for the waste collection industry / E3, E10
90/269 EWC	Guidelines on lifting and carrying that is harmful to health. Ordinance on safety and health protection in the manual handling of loads at work (Ordinance on load handling - LasthandhabV)
RAL-GZ 951/1	Plastic containers for waste and recycling materials - Quality assurance

3. DIMENSIONS TABLE OF 2-WHEEL ESE CONTAINERS

2-wheel containers Type of container/volume	Max. permissible weight (kg)	Overall height A (mm)	Overall width without wheels B (mm)	Overall width axle with wheels C (mm)	Overall depth (mm)	Tipping height E (mm)	Standard wheel / castor diameter F (mm)
40	40	930	480	381	554	992	200
60	50	940	445	461	520	990	200
80	50	940	445	378	520	990	200
SL 120	60	974	480	480	555	1041	200
CL 120	60	932	480	478	553	993	200
CL 140	70	1030	480	478	553	1083	200
P 140	70	1065	480	484	550	1115	250
SL 180	90	1065	478	478	744	1156	200
CL 180	90	1004	480	478	737	1120	200
P 190	90	1075	549	559	704	1157	250
SL 240	110	1079	583	569	737	1183	200
CL 240	110	1003	580	569	738	1130	200
PL 240	110	1055	580	575	730	1190	250
SL 340/360	160	1112	585	570	880	1264	200
P 360/400	160	1070	750	770	815	1195	310
P 363/403	160	1105	750	770	815	1230	310/125

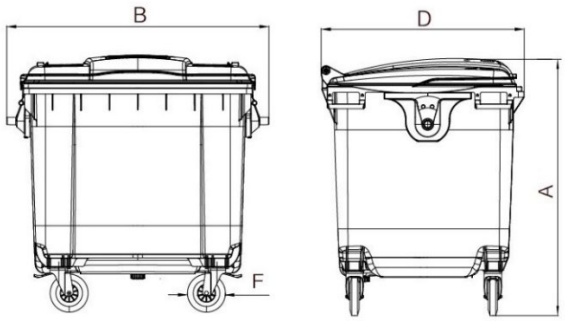


For the dimensions there may be deviations in the standard range. Drawings and technical data of the containers can be found on our website:
www.ese.com/de/home/produkte/produktfinder/

The traction for continuous movement of the ESE 2-wheel containers is max. 60 N.

4. DIMENSIONS TABLE OF 4-WHEEL ESE CONTAINERS

4-wheel containers Type of container/volume	Max. permissible weight (kg)	Overall height A (mm)	Overall width without wheels B (mm)	Overall depth (mm)	Standard wheel / castor diameter F (mm)	Preset brake torque
S 400	350	1120	980	740	200	Max. 250 N
S 500	430	1260	980	740	200	Max. 250 N
500	240	1130	1256	652	200	Max. 250 N
SL 660	310	1213	1258	780	200	Max. 250 N
P 660	310	1218	1255	773	200	Max. 250 N
SL 770	360	1365	1258	780	200	Max. 250 N
P 770	360	1368	1255	773	200	Max. 250 N
1100 FD	510	1354	1375	1073	200	Max. 250 N
1100 RD	510	1463	1375	1057	200	Max. 250 N



For the dimensions there may be deviations in the standard range. Drawings and technical data of the containers can be found on our website:
www.ese.com/de/home/produkte/produktfinder/

The pulling force for continuous movement of the 4-wheel containers is max. 285 N.

5. CASTORS AND BRAKE SYSTEMS IN 4-WHEEL CONTAINERS

The type of castors and brake systems can be found in the order papers.

5.1. TOTAL-STOP CASTORS

The total-stop wheel system is the most common system and is the standard brake system for all 4-wheel containers.
In the total-stop wheel system, each of the front castors on the container are equipped with a wheel brake as standard. To secure the container, both wheel brakes must always be activated. According to DIN EN 840, there must be 2 castors equipped with wheel brakes on each 4-wheel container.

Rollers	Standard	Recommendation for tow-bar and coupling	For heavy duty
Wheel diameter	200 mm	200 mm	200 mm
Static load per wheel	205 kg	350 kg*	1500 kg*
Wheel bearing	Sleeve bearing	Roller or ball bearing	Roller or ball bearing

*in accordance with DIN EN 840, the containers must not exceed a maximum speed of 4 km/h and a maximum load of 0.4 kg/L x volume L.

5.2. CASTORS WITH DIRECTION LOCK (STEERING LOCK)

The direction locks fix two swivel castors in one direction and prevent free rotation of the steering axle. Direction locks are often used in combination with tow-bar and coupling. The containers can be easily pulled in a certain direction. Direction locks also control the movement of the container over some distance laterally. They can also be installed in combination with a central brake system.

5.3. CASTORS WITH CENTRAL BRAKE SYSTEM

In the case of a central brake system, the two front central-brake castors are connected with a locking bar. The brake is activated by a foot pedal, a so-called lateral lock-grip contains a mechanism that is unlocked using a triangular key. The system requires a single operation compared to the total-stop system - in which case two castors have to be separately secured. The central brake system is tamper-proof and can only be unlocked with a triangular key. Therefore, it is recommended as a brake system for containers in public spaces. It can also be installed in combination with direction locks.

6. INTENDED USE

6.1 COLLECTION OF RECYCLABLES AND RESIDUAL WASTE

The container is intended for the collection of recyclables and residual waste. Only the intended categories (such as residual waste, waste/paper, glass, organic waste) may be thrown into the respective container. The containers must be handled carefully and properly and must be checked for damage and malfunctions before use (e.g. cracks in the containers, loose fastenings, or wheels etc.) that could result in dangerous situations. If damage to containers is found that could result in dangerous situations, the containers may no longer be used.

No hot ashes, caustic, burning, glowing or hot substances, as well as no materials that may deform or damage the container, must be collected in the waste and recyclables containers. No waste materials may be thrown in, for which storage and transport are separately regulated by law. For example, these include dead creatures, lacquer and paint residues, hazardous substances, batteries, fluorescent tubes, medicines etc. (see GGVS, GGVE, GGVSee for Germany; ADR regulations for Europe).

6.2 MAX. PERMISSIBLE WEIGHT

The maximum total permissible weight of the filled container must not be exceeded (see marking on the bin). In accordance with DIN EN 840, the total permissible weight is calculated from the sum: the maximum waste density 0.4 [kg/dm³] x the nominal container volume plus the container weight. When filling the containers with normal household waste, it is usually not the case that the weight is exceeded.
Exceeding the maximum total permissible weight may happen when the container is completely filled, for example, with building rubble, food waste or similar substances with a high specific density, but is not permitted

The total permissible weights can be found in the dimensions table under points 3 and 4.

6.3 FILLING THE WASTE AND RECYCLABLES CONTAINERS

- Only open the lid for filling using the lid handles or the handle strip provided.
- Do not operate the lids, especially the sliding lid, from the rear. The sliding lid must also not be opened from the sides.
- For add-on parts such as the foot operated lid opener, only these devices for opening the lid are to be used, otherwise damage can be caused to the container or it may result in dangerous situations.
- Aperture options, such as glass inserts, paper inserts or other options, must be used if installed
- The lid must be opened and securely arrested, so that any accidental closing during filling (caused by a gust of wind or movement of the waste and recyclables container) is avoided.
- The waste and recyclables must be placed in the container in such a way that no dangerous situations can arise from the formation of dust, vapours, splinters or splashes.
- Bending over the container is prohibited when filling or checking the filling level.
- No hot ash, caustic, burning, glowing or hot substances, as well as no materials that may deform or damage the container, must be thrown into the waste and recyclables containers.
- Waste and recyclables must not be pressed down into the containers.
- The waste and recyclables containers may only be filled to such an extent that the lids can still be properly closed without the need for additional pressure. **If containers with gravity locks are overfilled or their lids are pressurised, this can result in the locks not working properly.**
- If closing systems are installed on the container, they must be operated again after filling in such a way that the container is securely closed again during operation.
- The lid must be closed after each filling process (protection against rainwater, insects, small animals).

6.4 EMPTYING OF THE CONTAINER VIA LIFTING DEVICE

The lifting device used on the waste collection vehicle must be compatible with the containers and ensure that the 2- and 4-wheel containers are emptied without damage.

To avoid any damage to containers and injuries to employees, the following instructions must be observed:

- The container is not intended for manual emptying. It is equipped with a comb receiver according to DIN EN 840 Form A and approved for comb lifting devices according to DIN EN 1501-5. 4- wheel containers can also be lifted with trunnions according to DIN EN 840 and with trunnion lifting devices according to DIN EN 1501-5.

- When using lifting devices, it must be ensured that the entire container is securely locked onto the comb receiver of the lifting device throughout the whole emptying process. Locking tolerances in accordance with EN1501 are permitted.

- Furthermore, the entire width of the upper frontal comb receiver must be completely covered throughout the whole emptying cycle by the locking bar of the filling vehicle. The dimensions of the truck lifting device must correspond to the recommendation for manufacturers of lifting devices according to DIN EN 840 and the series of standards EN 1501. This must be checked regularly and immediately adjusted if there are any deviations.

- The containers are designed and tested according to RAL-GZ 951/1 for a max. expansion angle of the comb receiver of 25°. The filling standard DIN EN 1501-5 also stipulates this maximum permissible expansion angle for lifting devices. It is important to ensure that this expansion angle is not exceeded. For example, this can be due to impermissible lifting speed or acceleration or due to frequent shaking and/or incorrect container restraint device in the emptying position of the lifting device.

- The container lid must be closed. The exception is the emptying of multi-chamber containers in divided lifting devices for the collection of different waste fractions in a waste collection vehicle. Only in this instance is it allowed for the employee to manually open the lid prior to the lifting process, taking into account all safety aspects.

- The pushing pad of the lifting device (container restraint device) may in the final emptying position of the container only come into contact with the rear surface of the container or, ideally, with the wheels. Container restraint devices that come into contact with other container areas than the above mentioned are not permitted. For example, contact of the container restraint device with the rear container handle is not permitted for 2-wheel containers or similarly the contact with the dividers of multi-chamber containers.

- The container restraint device as well as other lifting components must never come into contact with the lids. This also applies to multi-chamber lifting devices.

- Containers with damage to the receivers must not be emptied and may no longer be used.

6.5 RECOMMENDATIONS FOR BIO WASTE CONTAINERS

In both summer and winter it is advisable that wet bio waste is wrapped, for example in newspaper. The binding of moisture to the paper reduces freezing in winter and inhibits the fermentation process in summer, which means that the substances do not spread an unpleasant smell as quickly, they attract fewer insects and therefore also reduce maggot formation.

Bio waste containers with ventilation functions and grid can also be used to reduce weight or for automatic fluid drainage.
Tightly sealing systems with or without a filter lid can also be used depending on the application.

In general, the following applies:

- The bio waste container should be placed in a shady place if possible. If placed in direct sunlight, the container can reach temperatures of over 60° C due to the sun's rays, making the plastic more flexible and, at very high temperatures, the dimensional stability can decrease
- The lid should always be closed again immediately after the filling process

- Wrap wet waste in newspaper

- Do not fill with pure liquids

- In regions where garden and kitchen waste are disposed of together, fill both in layers. Do not fill with wet lawn cuttings immediately, as this quickly leads to clumping, which can hinder the emptying process.

- Occasionally clean the bin with water only. Observe the total permissible weight of the container (embossed on the front edge of the container). Overfilling results in risk of injury during transport and emptying in the waste collection vehicle!

6.6 LOCATION AND MOVING OF THE CONTAINER

- In general, the bio waste container should be placed in a shady place if possible. If placed in direct sunlight, the container can reach temperatures of over 60° C due to the sun's rays, making the plastic more flexible and, at very high temperatures, the dimensional stability can decrease.
- For transport, the container must only be gripped and rolled using the push handles or the handle bar.
- The container is not intended and suitable for carrying manually.
- No items may be stored on the container or lid.
- Snow and ice residue must be removed before using the container.
- The container must be set up on level ground, and waste and recyclables containers must always be in a safe position.
- The use of containers in potentially explosive areas is not permitted, due to the possible static charging of plastic containers and the possible sparking of steel containers.
- The containers fit into container shells according to DIN EN 15132.
- Due to leaking collected materials and their gases, vapours, dusts, which may be hazardous to health, the container must always be transported with the lid closed.

6.7 CLEANING THE CONTAINERS

- The waste and recyclables containers should be occasionally sprayed with water.
- Waste water disposal regulations must be observed.
- Do not use abrasive cleaning agents or solvents!

7. REPAIRS

- Only persons authorised by the manufacturer of the waste and recyclables containers are authorised to carry out repairs.
- Only original spare parts should be used to repair the container.
- Repairing damaged receivers on the containers is not permitted. This applies to the DIN comb receiver (DIN EN 840 Form A), the diamond receiver (DIN 30760), the trunnions (4-wheel) and all other lifting receivers!

8. RETROFITTING ADDITIONAL EQUIPMENT

In the case that the container is subsequently changed, e.g. with additional equipment such as a lock installation, only original parts from the manufacturer may be used. Installation may only be carried out by persons authorised by the manufacturer.

9. TESTING

Before each emptying process or at least once a year, the waste and recyclables containers must be checked for their safe condition. This includes the integrity of the receivers, the condition of the wheels and their fastenings, the function of the brakes, the lid fastenings/hinge and, in the case of waste and recyclables containers with a round lid, the function of the child safety device in accordance with DIN EN 840-6.

- Receiver of containers:
  If the receiver on the container is damaged, the container must not be placed in the lifting device!
- Setup of lifting device:
  The dimensions of the vehicle's lifting device must correspond to the recommendation for manufacturers of lifting devices according to DIN EN 840 and the series of standards EN 1501.
  If the lifting device is damaged or not properly adjusted, the container must not be placed in the lifting device!
- Wheels, castors and brakes:
  The container must not be used if wheels/wheel attachments/wheel brakes are damaged!

- Child safety device on round lid containers:
  Waste and recyclables containers with round lids that are equipped with a child safety device (safety lid/ lid in lid, two-button solution or spring lock) must be checked with regard to the proper function of the child safety device.

  The safety lid must be checked for easy opening. A child safety gap of at least 181 mm must be ensured before the lid is completely closed by means of additional, manual operation. By way of derogation, the insert lid can be opened upwards when the insert lid is closed.
  If the existing child safety device on a waste and recyclables container with a round lid does not work correctly, the container must not be used!

10. STORAGE AND TRANSPORT

- Unloading the containers from transport vehicles must be carried out with care.

- The containers must not be dropped from the vehicle onto the floor, either individually or in stacks.

- The stacking ribs on the container are not designed for continuous long-term storage. Stacks with this maximum load must not be stored continuously for longer than 3 months. If the 3 month period is exceeded, **optical** changes, e.g. warping of the stacking ribs and container side surfaces occur. **Functionality and usage properties** of the container are however ensured for stacked storage up to 6 months.

- The number of containers per stack in the delivered condition must never be exceeded.

- If stored outside, the open containers must be protected against rainwater or snow. Not only is it important to ensure that the top container is tightly sealed by a lid, but also that the entry of water into the containers stacked underneath is prevented by means of suitable measures. A container or stack that is filled with water far exceeds the maximum permissible load and can result in considerable damage or safety deficiencies.

- Special care must be taken when handling container stacks; only trained personnel may be entrusted with this task.

11. GENERAL SAFETY INSTRUCTIONS

- The container location and standing area in front of the container should be flat, fastened and horizontal!

THE FOLLOWING APPLIES IN PARTICULAR TO 4-WHEEL CONTAINERS:

- Do not bend your upper body over the container and never put your head in the container! This applies in particular to containers with round lids, as these containers are equipped with lid release springs and the opened lid can close automatically! This also applies if the lid is locked in half or full opening position and similarly if the container is equipped with a child safety device according to EN 840-6! Containers with round lids that are equipped with a child safety device must be checked regularly (see Chapter 7). If the function of the child safety device cannot be clearly determined, the container must not be used.

- Do not sit or stand on the container!

- Do not overload the container - risk of tipping (risk of injury, damage is possible)!

- Only move waste and recyclables containers when the lid is closed!

- In the lifting device only use waste and recyclables containers with the lid closed! Separate regulations apply to multi-chamber containers.

- Be careful when moving the container manually uphill or downhill!

- Do not place near fireplaces, barbecue areas or similar heat sources!

- Do not place on sloping ground!

- Apply the brake (central brake system) or, in the case of a total- stop wheel system, the two wheel brakes, after each moving of the container. If necessary, check if the brake device is activated, especially on sloping ground! If the function of the brakes cannot be clearly determined, the container must not be used or moved.

12. RECOMMENDATION FOR USE IN LIFTING DEVICES

In order to ensure safe lifting, it is essential to ensure that the lifting device of the respective waste collection vehicle complies with standard EN 1501-5 on general requirements and safety requirements for lifting devices in waste collection vehicles. If containers are damaged due to incorrectly set up lifting devices there is an increased safety risk.

Additional container options with their add-on parts must be tested by the operator on site to ascertain their compatibility with the lifting device. This is the only way to ensure that the additional container option operates fully in compliance with the standardised lifting device requirements outlined in EN 1501. For example, where a gravity lock is fitted as an additional option, a minimum peripheral speed must be ensured at the lifting device in order to achieve the required impetus to allow the gravity lock to open.

ESE GmbH assumes no liability for damage to containers, lifting devices, people or other objects that is caused as a result of improper use of the 2- and 4-wheel containers.

In particular, the provisions of these operating instructions must be strictly complied with and the recommendations and notes observed!

➔ SEE ANNEX 1 - Examples of safe use of waste and recyclables containers in the lifting device

ANNEX 1

EXAMPLES OF SAFE USE OF WASTE AND RECYCLABLES CONTAINERS IN THE LIFTING DEVICE

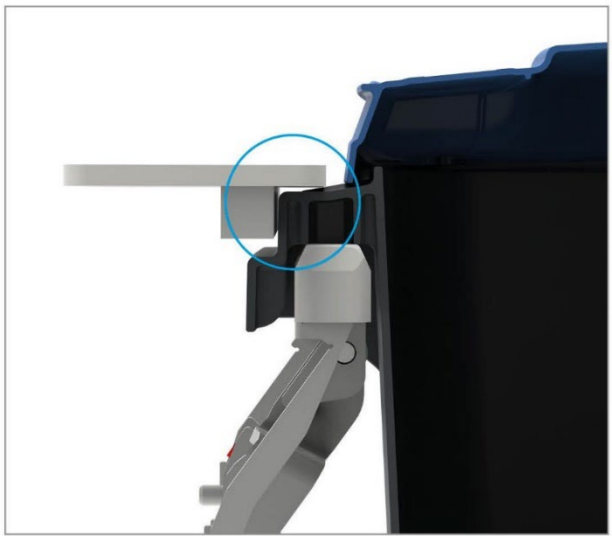
TESTING AND POSITIONING OF THE COMB LIFTING DEVICE ON THE WASTE COLLECTION VEHICLE

This annex describes the safe use of waste and recyclables containers in the lifting device. Only the standards listed in Chapter 2 shall apply to warranty- and safety-related information. All dimensions of the vehicle comb must comply with the recommendations for manufacturers of lifting devices according to EN 840 together with the general requirements and safety requirements for lifting devices of waste collection vehicles EN 1501-5.

All dimensions that are relevant for the safe use of waste and recyclables containers in lifting devices should be checked regularly by the vehicle operators. Deviations must be immediately corrected!

TESTING THE COMB LIFTING SYSTEM ON THE VEHICLE:

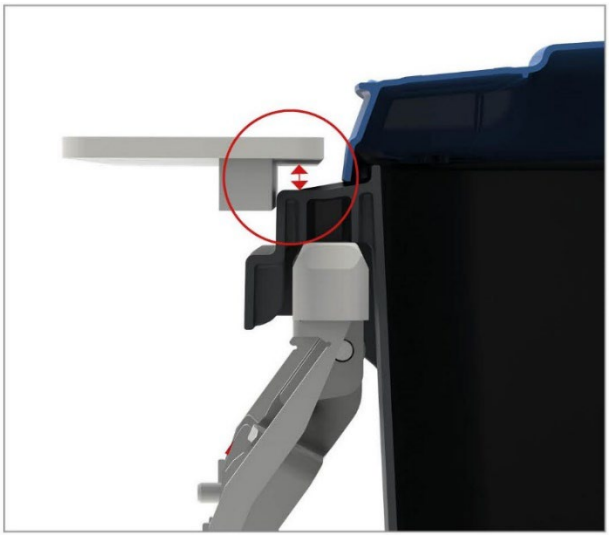
If the container is emptied using a comb lifting system, make sure that the entire frontal receiver of each container is supported by the comb teeth of the lifting device across its entire width.



CORRECTLY ADJUSTED!

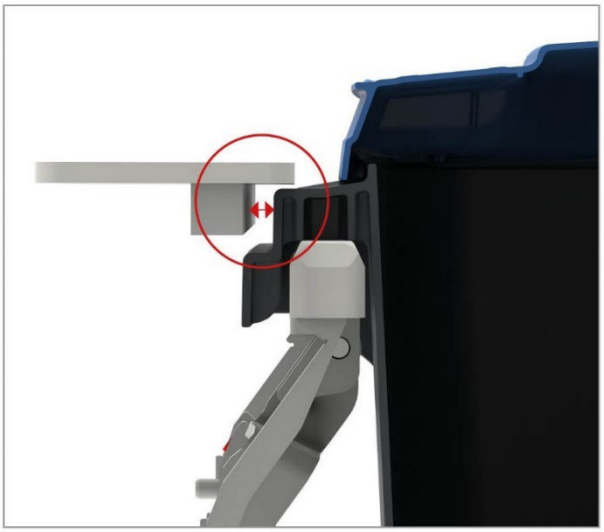
The lifting comb and the locking bar are correctly adjusted.

PERMITTED TOLERANCES:
Nominal dimension 23 mm
Upper deviation + 1 mm, lower deviation 0
Nominal dimension 8 mm
Upper deviation + 0.5 mm, lower deviation 0



NOT CORRECTLY ADJUSTED!

The vertical distance between comb and locking bar is too large.



NOT CORRECTLY ADJUSTED!

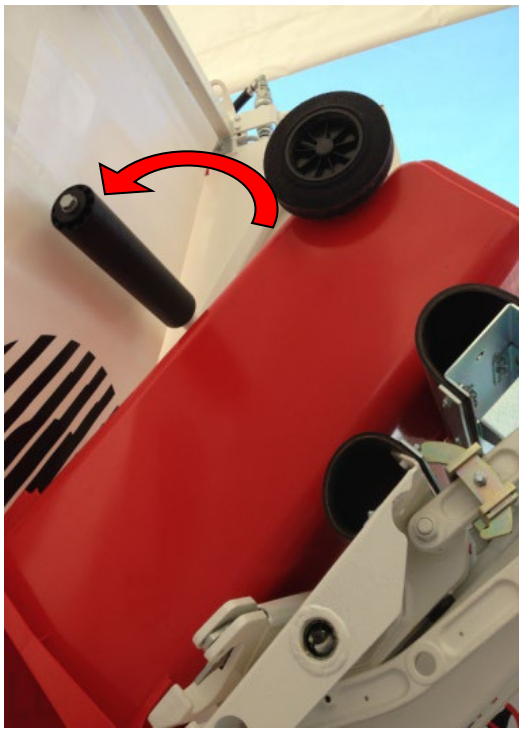
The horizontal distance between comb and locking bar is too large.

CONTAINER STABILISATION IN THE LIFTING DEVICE

In order to ensure the stabilisation of the container during the tipping process, the lifting device of the vehicle must be in the correct position and in a technically satisfactory condition.

The container support is made of rubber, has a minimum height of 120 mm and must be in contact with the container across the entire width. The container support surface must be positioned 100 mm from the bottom of the container and at least 450 mm from the comb. All relevant dimensions are indicated in standard EN 1501.

f



In the end position of the tipping process the container restraint device must be set in such a way that the container cannot move more than max. 25° towards the vehicle interior, at this point at the latest the container restraint function must be activated.

Under no circumstances may the container or lid be jammed by the container holder.

CONTACT:

ESE GmbH
Friedrich-Bückling-Straße 8
D-16816 Neuruppin

Tel: +49 (0) 33 91 516 505
Fax: +49 (0) 33 91 516 599
E-mail: info-ws-de@ese.com