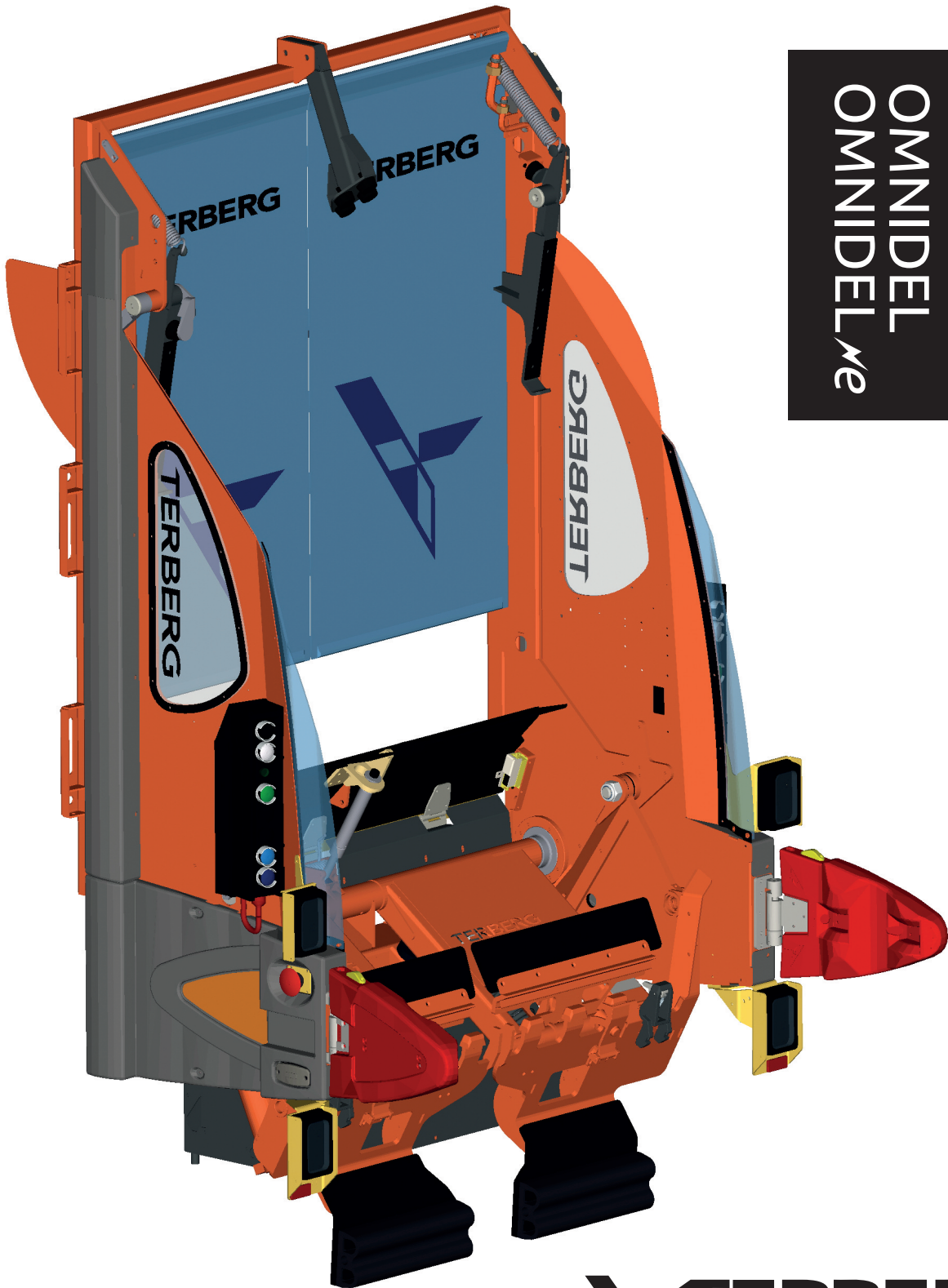


313001

AUTOMATIC BIN LIFT SYSTEM

OMNIDEL  
OMNIDEL<sup>me</sup>



 **TERBERG**  
**MACHINES**

*Translation of the original instruction.*  
*Issue date 07-2017*

The original Dutch version (article code 313000) can be obtained from Terberg. Please send an e-mail to: [info@terbergmachines.nl](mailto:info@terbergmachines.nl)

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## Foreword

This user manual provides information about the operation and maintenance of the **OmniDEL (ne)** bin lift system.

In order to work safely and efficiently with this automatic bin lift system, it is essential that you read this manual carefully before putting the bin lift into use.

Make the user manual available to everyone concerned with the operation and/or the maintenance of the bin lift.

Where necessary, refer to the user manual of the refuse collection vehicle and the refuse handling body.

When all the operating and maintenance instructions have been met the bin lift can be safely used.

Should you nonetheless have any further questions, please get in touch with your distributor.

### Guarantee

For more information about the conditions of guarantee, please contact your distributor.

### Operator requirements

- The bin lift system may only be operated by persons who are familiar with the operation of the bin lift.
- Repairs may only be carried out by qualified personnel.

### Symbols used



#### NOTE:

Additional information.



#### CAUTION:

If these instructions are not followed, this may result in slight to average injury and/or damage to the product or the environment.



#### WARNING:

If these instructions are not followed, this may result in serious or fatal injury and/or serious damage to the product or the environment.

## The user manual has the following sections:

### Introduction

A description of the function, conditions of use and the operating principle of the machine.

### Safety

Description of the safety provisions and the measures that need to be taken into account in order to work safely with the machine. As well as an explanation of the symbols on the machine.

### Transport and storage

Information about the weight, the centre of gravity and how to store the machine.

### Installation and commissioning

A description of the installation and dimensions for the machine when being built onto the RCV (Refuse Collection Vehicle), including a list of tooling required to conduct the installation.

### Operating

A clear description of the important components and instructions for emptying various types of bins.

### Maintenance and cleaning

Describes all regular actions necessary for good functioning of the machine.

### Decommissioning

Description of the actions necessary to dismantle the machine safely and to dispose of this in an environmentally-friendly manner.

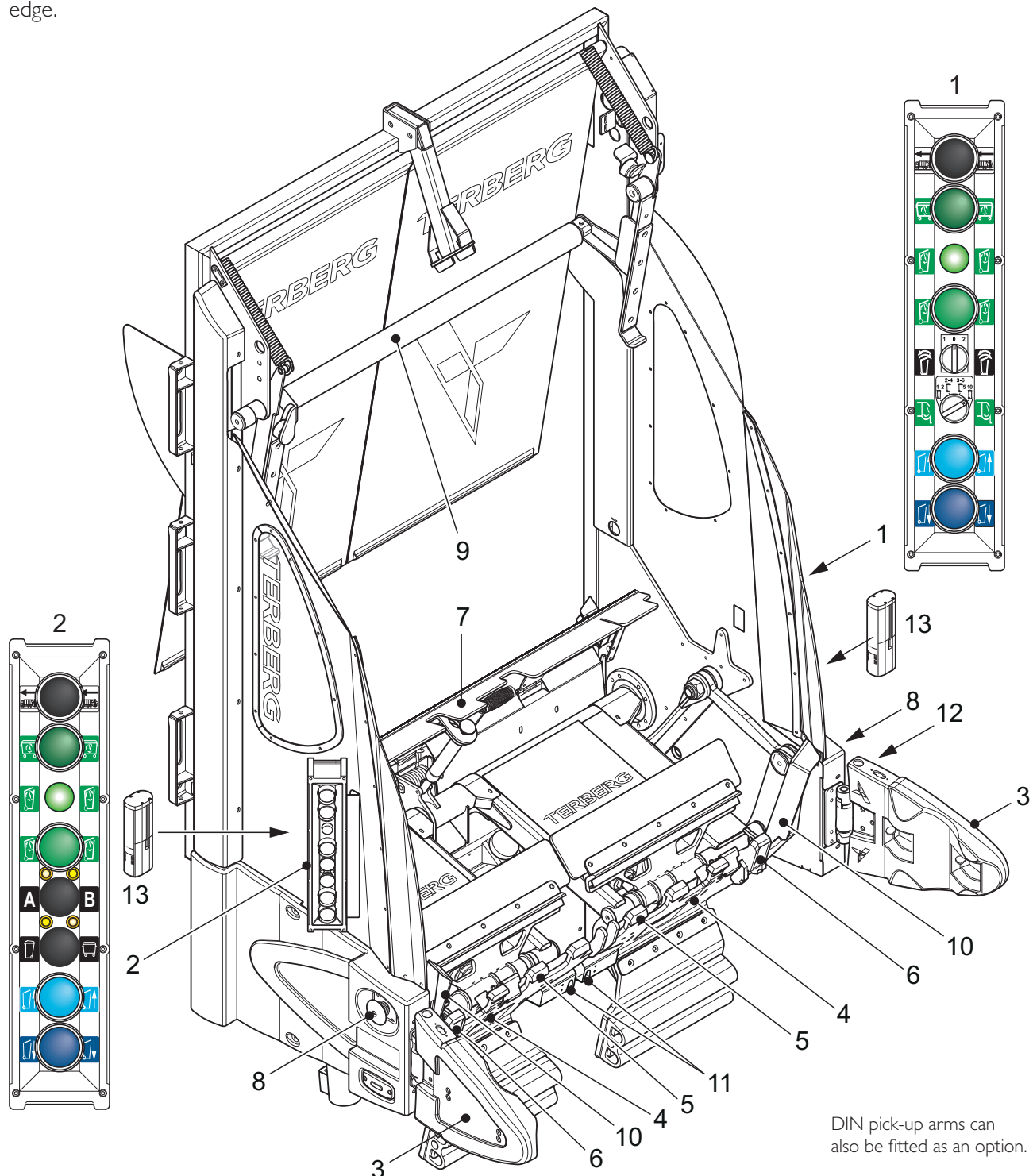
### Appendices:

- Electrical connections and components
  - Hydraulic connections and components
  - Special tools
  - Trouble shooting
- 
- Spare parts book

# I. Introduction

## I.1 Description of the bin lift system

The **OmniDEL** and **OmniDEL~~ne~~** are automatic bin lifts that can be deployed for a wide range of uses. They are not only suitable for emptying the commonly used 2-wheel bins but also most 4-wheel containers. The optional pick-up arms make it possible to empty refuse bins that are not fitted with a comb receiver pick-up edge.



- |   |                            |  |
|---|----------------------------|--|
| 1. 8 Position button control station R/H* | 6. Bin security switch     | 11. Sensor 4-wheel container recognition |
| 2. 8 Position button control station L/H* | 7. Hopper plate            | 12. Diagnostic System*                   |
| 3. Safety arm                             | 8. Emergency stop          | 13. Light screen (option)                |
| 4. Startsensor                            | 9. Catcherbar / Lid opener |  |
| 5. Pick-up comb                           | 10. Bin guide plate        |  |

\* Depending on the country: - The L/H and R/H control stations are interchanged.  
 - The Diagnostic System is placed on the L/H or R/H side of the bin lift.

## I.2 Technical specifications


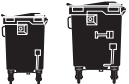
### OmniDEL

Guidelines and standards	2006/42/EG, EN 1501-1 & EN 1501-5:2011
Weight	595 kg (depending on configuration)
Noise levels	≤ 65 dB(A)
Vibrations	≤ 2.5 m/s <sup>2</sup>
Operating voltage	24 Volts
Maximum current consumed by control	10 Amps
Oil flow	40-60 litres/minute
Working pressure PTO	Min. 180 bar / Max. 250 bar
Return pressure	Max. 2.0 bar
Quick release couplings	DIN 25, ISO 72141-1





### OmniDEL~~ne~~

Guidelines and standards	2006/42/EG, EN 1501-1 & EN 1501-5:2011
Weight	655 kg (depending on configuration)
Noise levels	≤ 58 dB(A)
Vibrations	≤ 2.5 m/s <sup>2</sup>
Operating voltage	24 Volts
Maximum current consumed by control	10 Amps
Average power consumption during normal daily use	20 Ah
Average electrical power 2-wheel bin	1.8 kW
Maximum electrical power 2-wheel bins (1000N)	3.6 kW
Maximum electrical power 4-wheel containers (5000N)	5.2 kW

#### Bins/containers to be emptied, “teardrop” catcherbar

	2-wheel bins 	4-wheel containers flat lid 
Capacity	80 - 360 litres	500, 660 and 770 litres
According to standard	EN 840-1	EN 840-2
Lifting capacity	1000N (100 kg)	3500N (350 kg)
Cycle time (excl. dwell time)	6.0 seconds	11 seconds
Time in tipping position	Adjustable	Adjustable

#### Bins/containers to be emptied, 2-position catcherbar / lid opener

	2-wheel bins 	4-wheel containers flat lid 	4-wheel containers roll top 	Paladin containers 
Capacity	80 - 360 litres	500 - 1280 litres	770 and 1100 litres	900 litres
According to standard	EN 840-1	EN 840-2	EN 840-3	--
Lifting capacity	1600N (160 kg)	5000N (500 kg)		
Cycle time (excl. dwell time)	6.0 seconds	11 seconds		
Time in tipping position	Adjustable	Adjustable		



*The emptying of bin/container types other than those indicated above, is not permitted with this bin lift system. If in doubt, please contact your distributor.*

## 2. Safety

### 2.1 General safety instructions

- The bin lift may only be operated by persons who have received operator training and are fully familiar with the working of the bin lift.
- Read the operating instructions carefully before taking the bin lift into service.
- Read the instructions for the compactor carefully.
- The bin lift may not be operated under any circumstances if the oil flow is greater than 60 litres/minute.
- Do not use the bin lift in areas or near installations where there is a risk of fire and/or explosion due to the presence of gases and/or combustible substances.
- You will be working where traffic is present during your daily work as operator of the bin lift. Do not endanger yourself or other road users during your daily operations with the bin lift.
- Before commencing the run discuss and agree with your colleagues how to act in particular situations such as stopping, driving away, etc.
- When you are working with the bin lift system you may not wear any loose hanging clothing or jewellery.
- Always wear work clothing, safety shoes and work gloves that comply with the standards shown in the table below while working with the bin lift.

Personal protection equipment:	According to standard:
Work clothing	NEN-EN-ISO 20471:2013
Safety shoes	NEN-EN-ISO 20345:2011
Work gloves	NEN-EN 420:2003+A1:2009

- Make sure that an unattended bin lift can never be started by a person who is not authorised to do so (remove ignition key whenever the vehicle is left unattended).
- Technical faults must be reported immediately to the person who is responsible for the supervision of the bin lift. The bin lift must be put out of action until the fault (that could cause danger) has been repaired.
- Never use the lifting chair or other parts of the bin lift system as a seat, **this is life threatening!**
- Under no circumstances may the controls be changed.
- Under no circumstances may any of the safety provisions fitted be removed or changed.
- If the safety provisions are damaged they must be repaired or replaced immediately by original parts.
- Under no circumstances may the cycle speeds set by the manufacturer be changed.
- Under no circumstances may the lifting forces set by the manufacturer be changed.
- Operating and safety decals must be present and properly legible.
- Actions that override the safety provisions are expressly forbidden!
- The lifting chairs should be positioned in their travel position before reversing.
- It is not permitted to stand on the footboards while the refuse collection vehicle is reversing.
- Make sure that you are visible to the driver of the refuse collection vehicle when it is reversing.

### 2.2 Safety instructions applying while using the bin lift system

- Make sure that there are no persons in the immediate vicinity of the bin lift during the loading cycle.
- When the bin lift system is operating, under no circumstances is it permitted to put your hand in the bin lift system (**Risk of injury!**).
- In the event of danger immediately press the nearest emergency stop switch.
- It is not permitted to work with bin/container types other than those stated in the manual.
- Check that there are no foreign objects in or between the bin lift system that could obstruct its working.
- It is not permitted to load / insert loose waste over the bin lift while the bin lift is operating automatically.
- Compacting may not be carried out when there are objects sticking out of the throw-in opening.
- Nothing should protrude from the bin/container.
- Keep the lid closed.

- 
- Only empty bins that have the lid fully closed.
  - Do not empty damaged bins/containers.
  - Bins/containers that are too heavy must not be lifted:  
 maximum lifting capacity 2-wheel bins: 1600N (160kg)  
 maximum lifting capacity 4-wheel containers "teardrop" catcherbar: 3500N (350kg)  
 maximum lifting capacity 4-wheel containers two position catcherbar: 5000N (500kg)
  - Let go of the bin/container as soon as it is lifted.
  - Check that the bin/container is positioned correctly on the pick-up comb before emptying it.
  - Because the bin security switch is out of action during manual operation you must check extra carefully that the bin/container is located properly on the pick-up comb.
  - It is forbidden to manually assist the lifting cycle by hand.
  - Only apply extra shaking if there is a need for this.
  - Only take the bin/container away when it is back on the ground.
  - Do not take the bin/container away until the bin lift has come to a standstill.
  - Place empty bins/containers where they will not cause a danger to other road users.
  - It is forbidden to empty bins/containers containing hazardous and/or radioactive substances.
  - It is forbidden to empty bins/containers containing smouldering or burning substances.
  - Do not use the bin lift system in situations where there is poor visibility of the bin lift.
  - Never walk backwards in the direction of the bin lift system.
  - Two bin presenting and/or taking at a time by one person should be kept to a minimum.
  - When using the bin lift in extreme weather conditions the bin lift should be handled with care.
  - If the bin lift is contaminated by weather conditions it must be cleaned.
  - During winter conditions, if the bin lift is contaminated by heavy snow or ice deposition on mechanical parts or various sensors, the system can get clogged up.  
 Apply stop switch prior to cleaning. Clean these parts and keep as dry as possible. For example with a broom.  
*Never clean the bin lift using defrosting liquids!*

## 2.3 Safety instructions applying during maintenance and while carrying out repairs

- Maintenance and carrying out of repairs is only permitted for qualified technical personnel.
- Faults that have been observed must be repaired before the bin lift is taken back into service.
- During maintenance and repair work switch off the bin lift (switch off the engine of the collection vehicle and the main power switch).
- During repair work it must be made impossible for unintentional switching on to occur; therefore remove the ignition key from the ignition switch.
- Make sure that the lifting chairs are adequately supported when working under the chairs.
- Switch off the drive of the refuse collection vehicle before beginning cleaning.
- It is possible that grease can squirt out from the hinge points when a high pressure cleaner is used, protect your eyes by always wearing safety glasses.
- Use the lifting points provided to raise the bin lift.
- Remember that the hydraulic system is filled with hydraulic oil under pressure, when working on the hydraulic system. Always use personal protection equipment to prevent contact with the skin and eyes.  
 Use collecting trays to prevent pollution of the environment.
- You must keep to the maintenance intervals prescribed by the manufacturer.
- Electrical fuses must never be bridged or replaced by a fuse with higher capacity.
- When dismantling disconnect the bin lift from the vehicle using the plugs and quick release couplings intended for this purpose.
- Damaged safety and instruction decals must be replaced immediately.

## 2.4 Warning signs

All safety and instruction decals must be replaced when damaged.  
The pictogram decals have the following meaning:



Do not stand under the lifting chair!



Do not stand in working area!

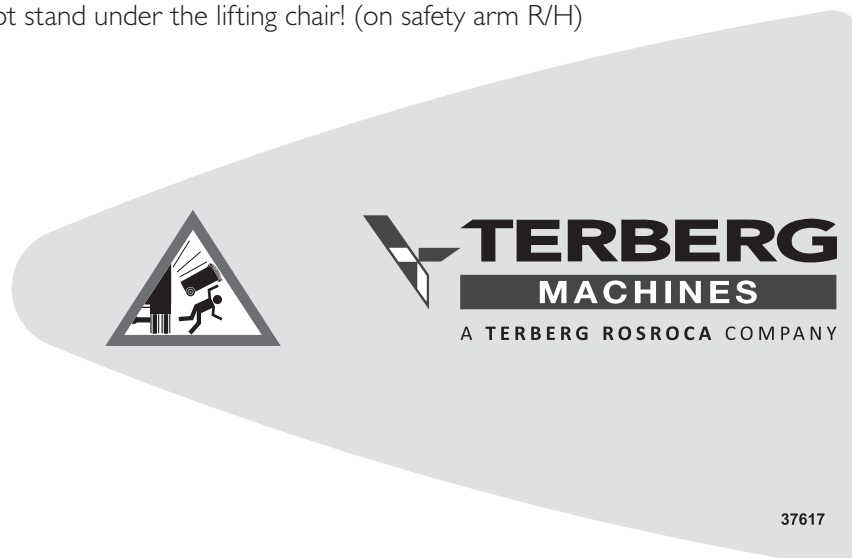


Do not put your hand in the bin lift; risk of injury!

Do not stand under the lifting chair! (on safety arm L/H)



Do not stand under the lifting chair! (on safety arm R/H)

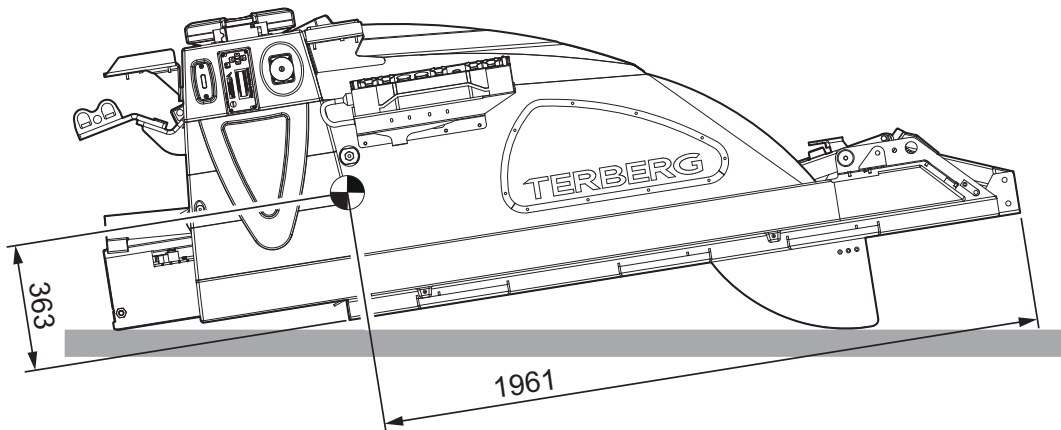




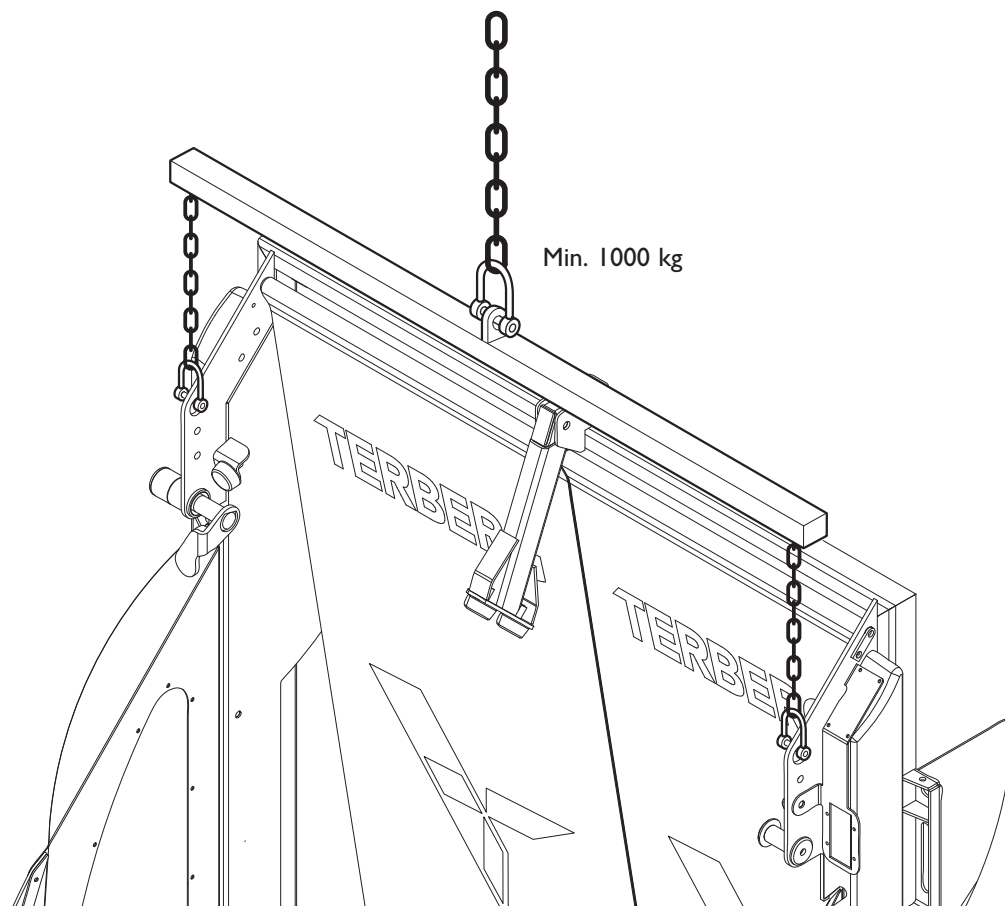
## 3. Transport and storage

### 3.1 General

- Check the position of the centre of gravity of the bin lift when raising this with a forklift truck or tackle.

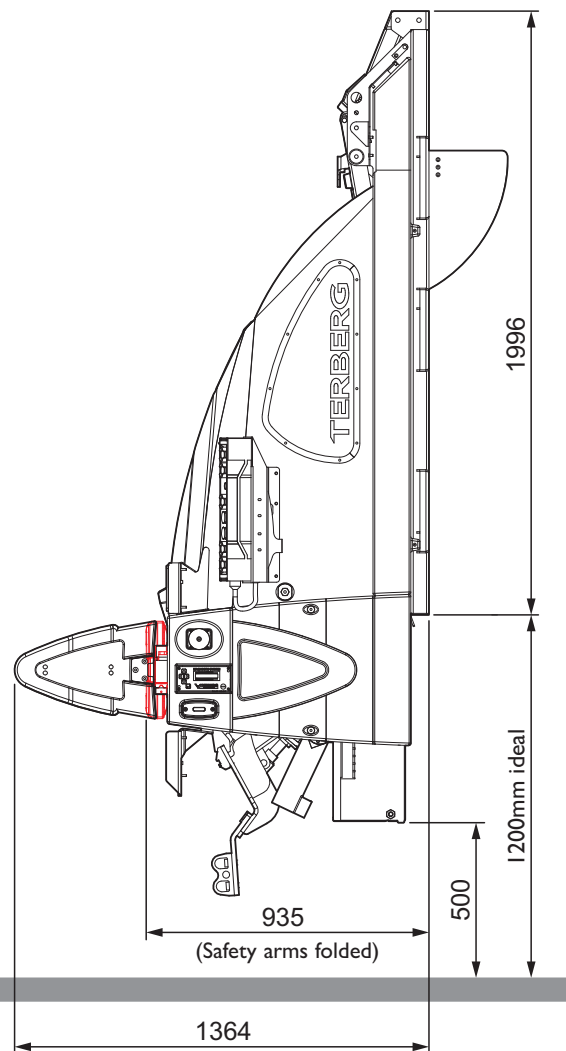
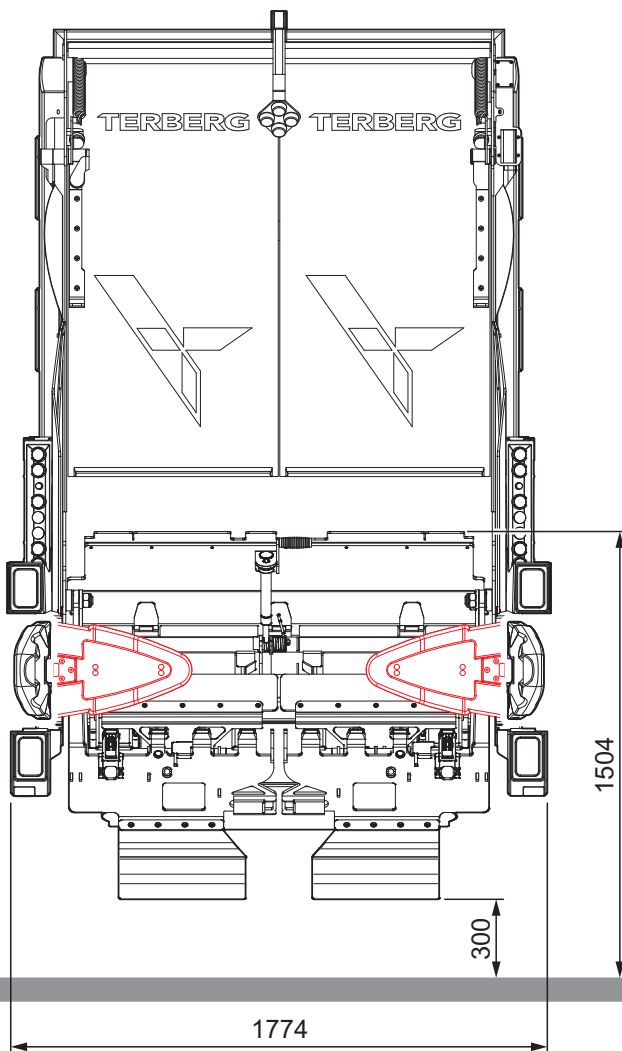
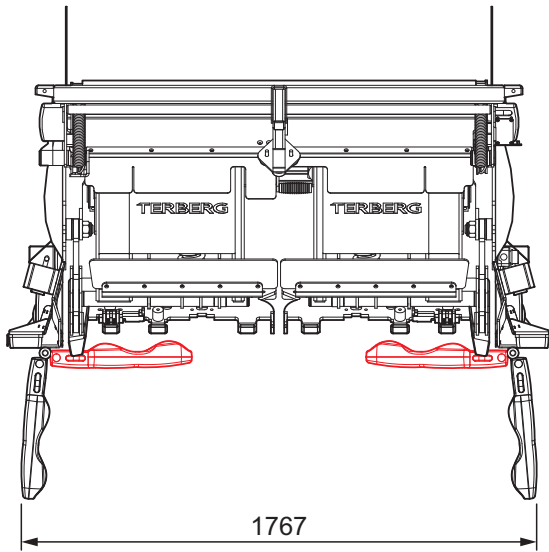


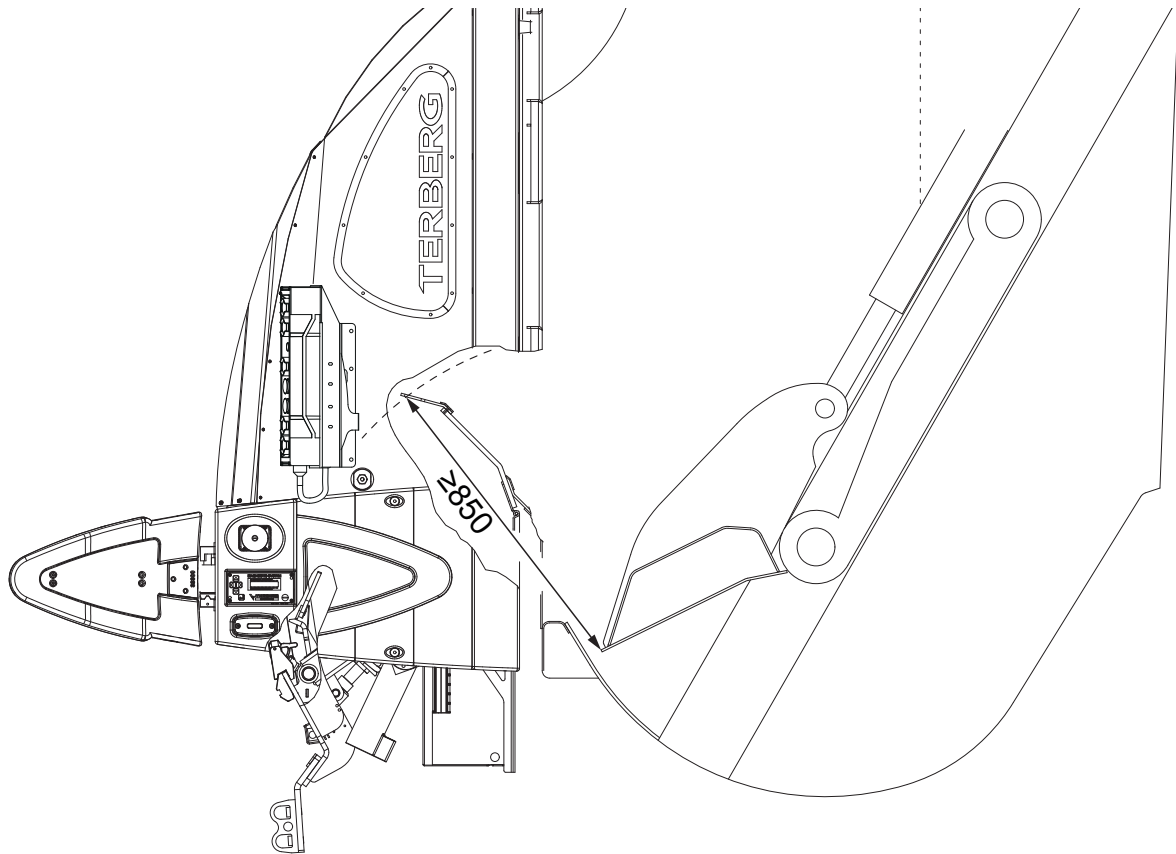
- When dismantling disconnect the bin lift from the vehicle using the plugs and quick release couplings intended for this purpose.
- Protect the 16-pole connecting plugs from water.
- Connect the hydraulic couplings together.
- Weight: OmniDEL: 595 kg (depending on configuration)  
OmniDEL ~~ne~~: 655 kg (depending on configuration)
- Use a mobile hoist with minimum lifting capacity of 1000 kg and a hoist beam.
- Raise the bin lift using the lifting points provided.
- Lay the bin lift flat on the ground.



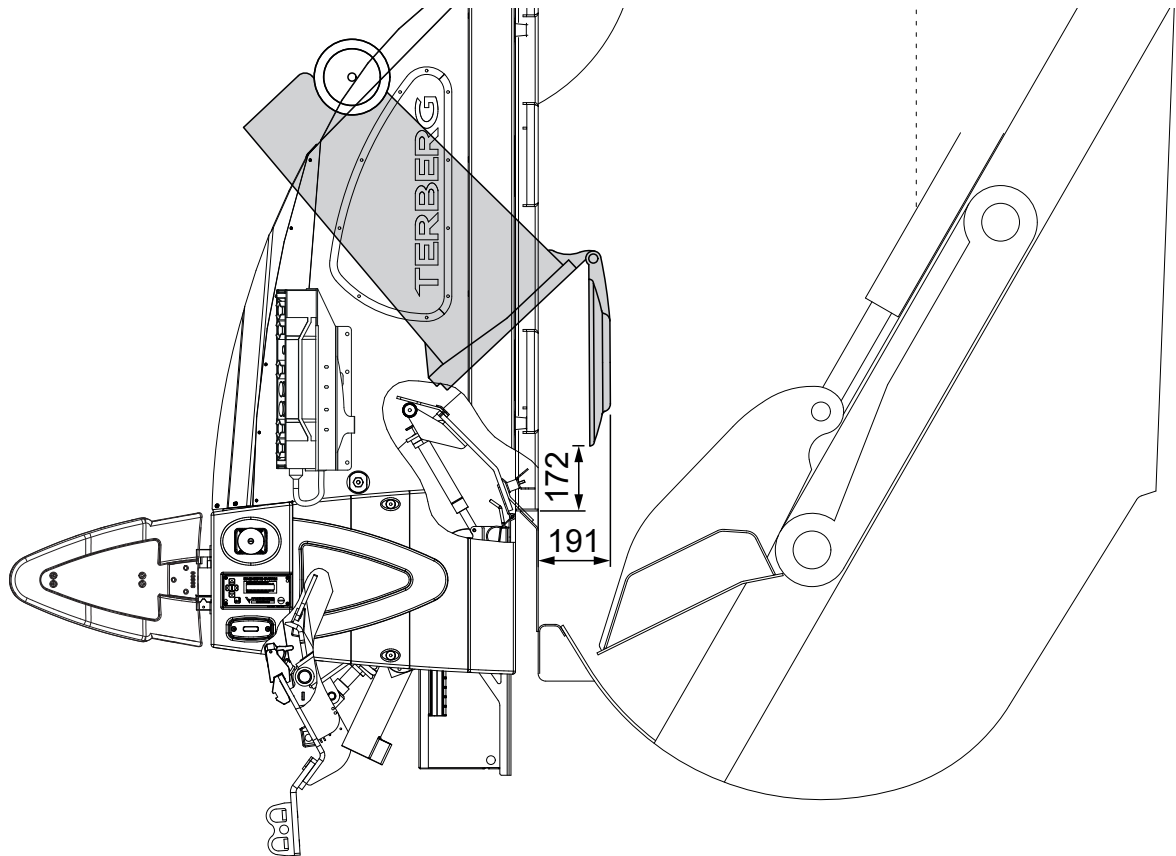
## 4. Installation and commissioning

### 4.1 Dimensions of the bin lift

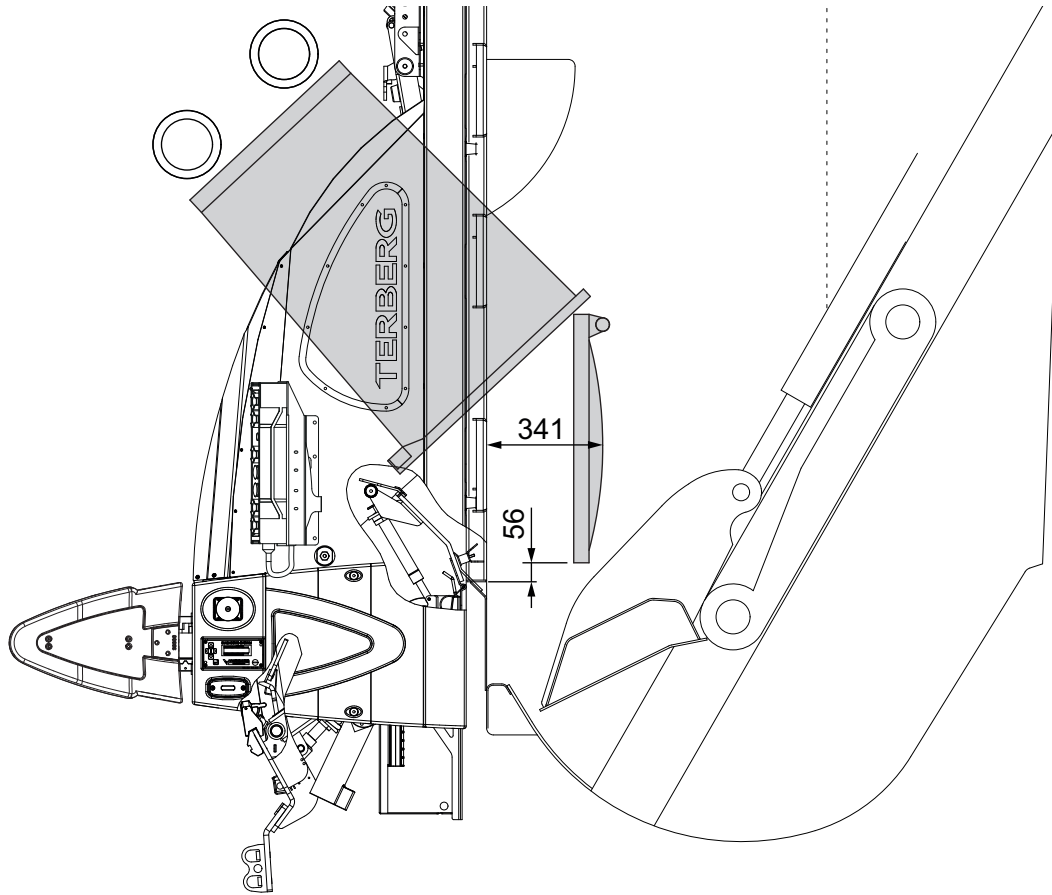




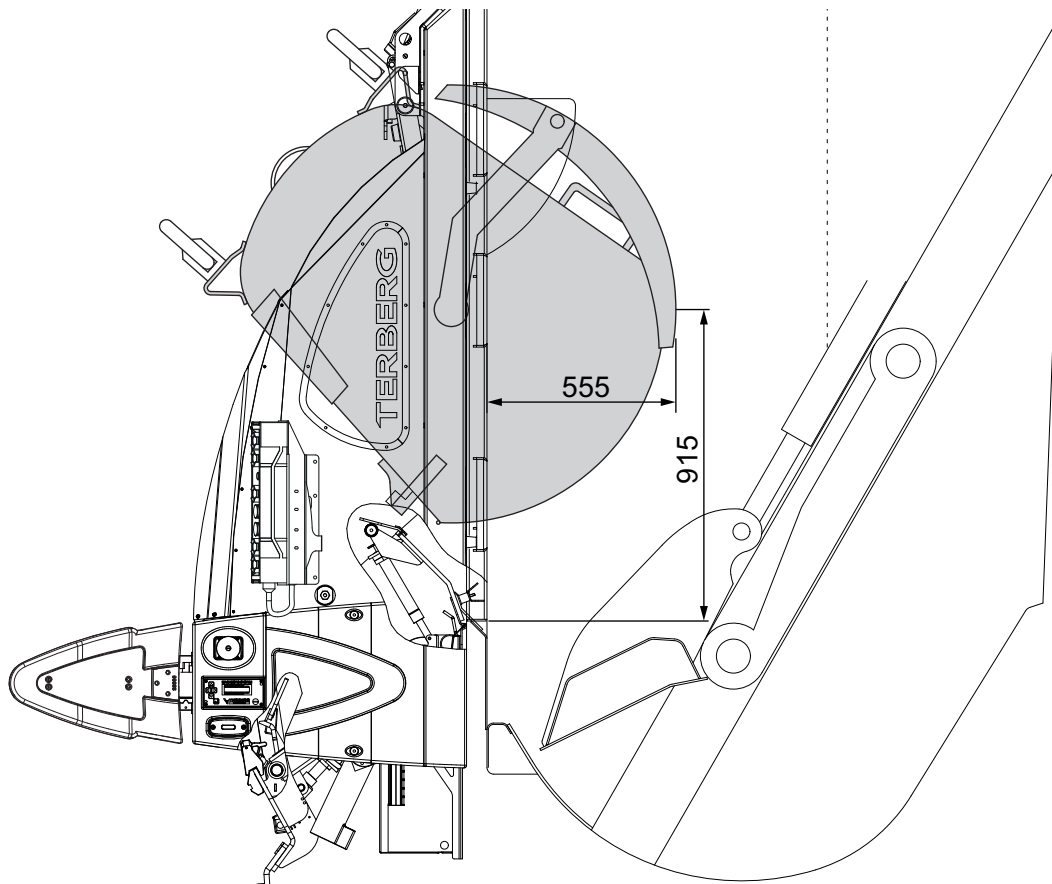
- Free space from the edge of the hopper plate  $\geq 850$ mm.



- Necessary space for tilted 120 litre 2-wheel bin.



- Necessary space for tilted 770 litre 4-wheel container flat lid.



- Necessary space for tilted 1100 litre 4-wheel container roll top.

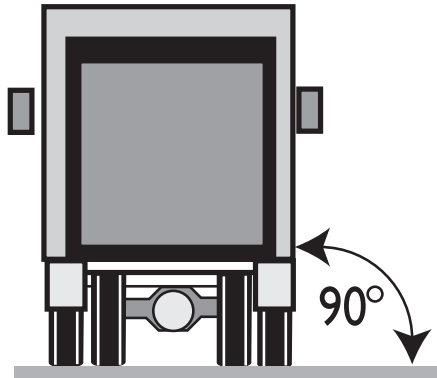
## 4.2 Assembly of the bin lift system on the body of the refuse collection vehicle

### Tools required:

- Spanners/ring spanners 10, 19 and 24 mm.
- Mobile hoist/crane with minimum lifting capacity 1000 kg.
- Hoist beam with chains.



When mounting the bin lift on the compaction body standard EN 1501-5 shall be observed.



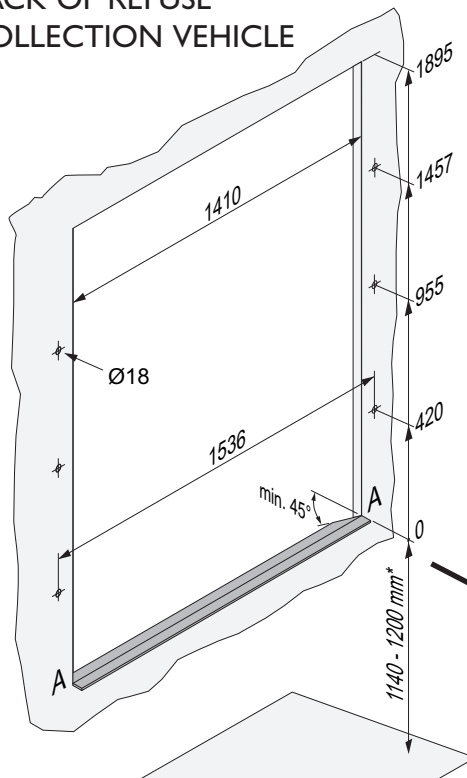
- Make sure that the refuse collection vehicle on which the bin lift is being mounted is standing on a level surface.
- Switch off the engine of the refuse collection vehicle and remove the ignition key from the ignition switch (keep on your person).
- Fit the supports (A) for the bin lift to rest on at the correct height at the back of the refuse collection vehicle.



Ensure that the support is strong enough to bear the load of the bin lift system plus the weight of a full bin/container (max. total weight).

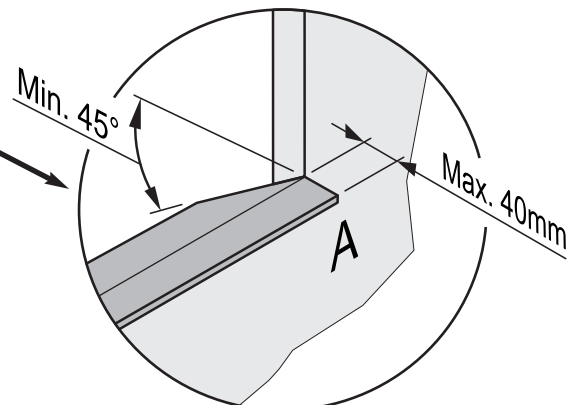
- Fit a guide plate between these supports at a minimum angle of 45°; this plate is to guide the tipped waste into the hopper.
- Make sure that the lifting chairs are in the lowest position before beginning to lift.
- Connect the bin lift to a hoist beam.
- Raise the bin lift to build-on height using a lifting installation with minimum lifting capacity of 1000 kg.

### BACK OF REFUSE COLLECTION VEHICLE



- Position the bin lift on the assembly supports (A).
- Fix the bin lift to the assembly frame on the refuse collection vehicle using M16 bolts (class 8.8), lock nuts and washers (DIN 6340) with a tightening torque of 200 Nm.

### DETAIL of support (A)



\* Build on height for loaded vehicle,  
minimum: 1140mm  
maximum: 1200mm

Terberg Machines B.V. recommends: 1200mm.

## 4.3 Safety light screen (optional)

In some body and chassis configurations it is impossible to keep to the 850mm distance as described in NEN-EN-ISO 13857:2008. In these cases it is possible to stop the compactor using an interlock in accordance with standard NEN-EN-ISO 14119:2013. The safety light screen provides such an interlock.

### Working principle

A single ray light screen is fitted in the opening of the bin lift hopper. The compactor is stopped as soon as the light ray is interrupted. This occurs both by the movement of a single lifting chair through the light ray and if a person or object is in the danger zone.

The function of the light screen is switched off when both lifting chairs reach a height of 140cm above ground level. From that moment the chair, in the way it is designed, blocks access to the hopper.

### Extra compacting

Because of the extra interruptions to the compactor system the bin lift sends the compactor system an additional single starting pulse. As soon as the lifting chair lowers down during the automatic cycle, the compactor carries out one extra movement.

## 4.4 Coupling greasing system to a body greasing system (optional)

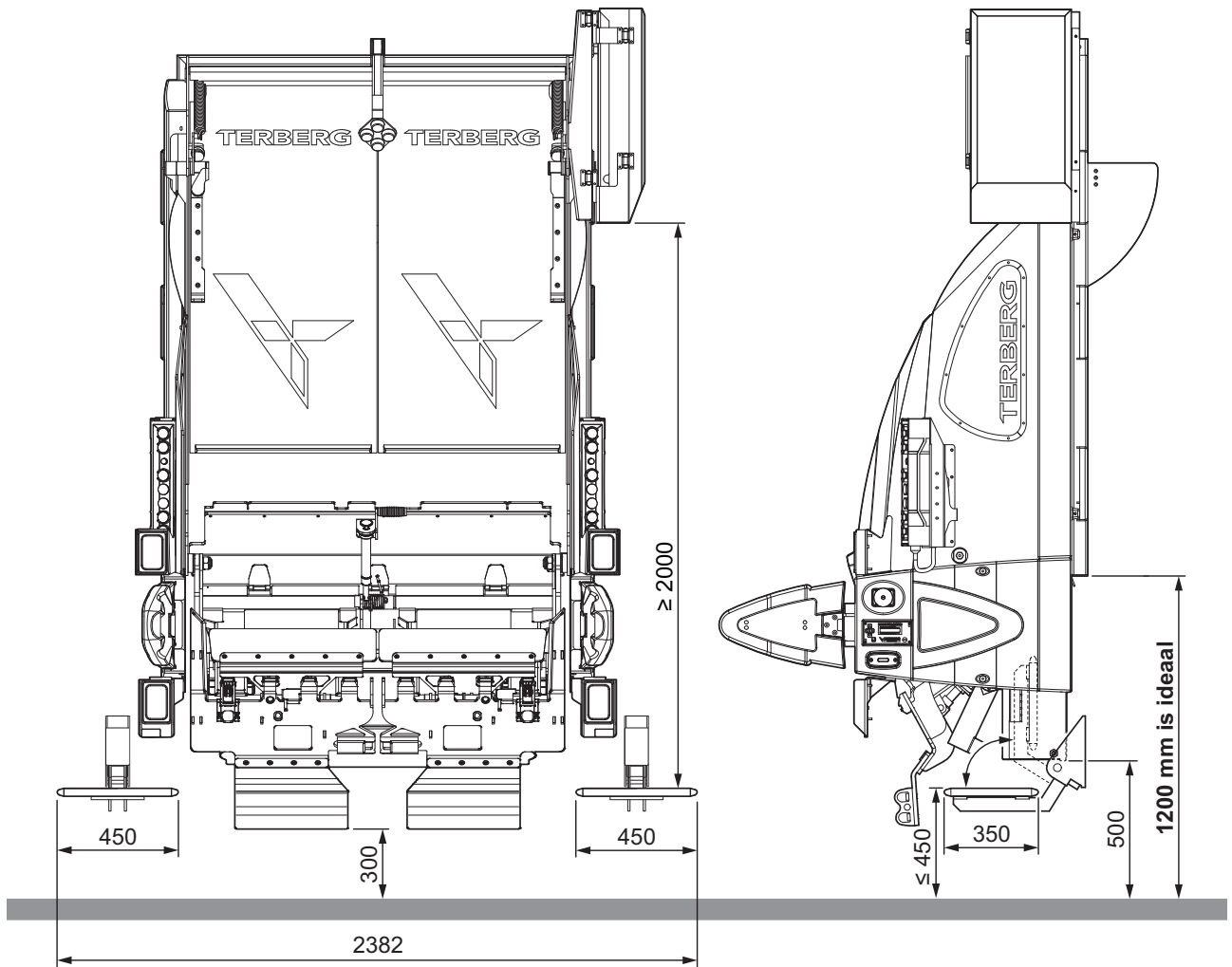
The optional available centralized greasing system of the OmniDEL and OmniDEL<sup>me</sup> is suitable for coupling to a Progressive Greasing System.

Technical specifications Progressive Greasing System:	
Type of grease	NLGI grade 2
Maximum pump pressure	300 bar
Minimum capacity	10 cm <sup>3</sup> /20 hours*

\* When using NLGI grade 0 grease - 10 cm<sup>3</sup>/10 uur

- Check the grease pump fitted and order the necessary parts.
- If additional information is necessary contact the supplier of the greasing system.
- Install an extra piston pump element on the housing of the grease pump.
- Fit a 6mm grease pipe if the distance between the grease pump and the bin lift is less than 10 metres. If the distance is greater than 10 metres a 10mm grease pipe must be used.
- Check the working of the greasing system as soon as it has been fitted.

## 4.5 Assembly advice footboards (optional)



If the bin lift is fitted with a weighing system the space between the footboard and the weighing computer must be checked: this must be  $\geq 2000$  mm (standard EN 1501-5).



The sensors of the footboards must be connected according to the recommendation of the body manufacturer.

## 4.6 Hydraulic connection OmniDEL

Check that the oil supply is never greater than 60 litres/min. If the oil flow is greater than 60 litres/min. the supplier of the refuse collection vehicle body must be contacted.



*The bin lift may not be taken into use with an oil supply of more than 60 litres/min under any circumstances!*

- Clean the hydraulic quick release couplings of the bin lift and the refuse collection vehicle before connecting them.
- Couple the hydraulic quick release couplings from the bin lift to those on the body: the male coupling piece on the bin lift is the return connection. Make sure that the couplings are fitted properly into each other so that leakages and consequent damage are prevented.
- Remember that the hydraulic system is filled with hydraulic oil under pressure when working on the hydraulic system.



*Always use personal protection equipment to avoid contact with the skin and eyes.*

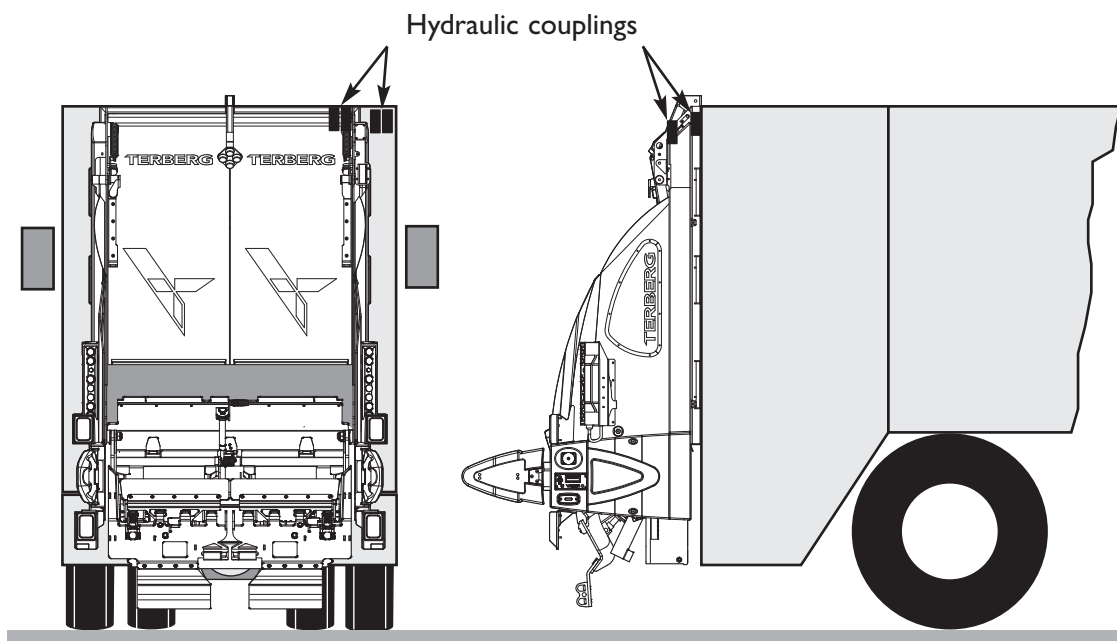


*Use absorbents to avoid polluting the environment.*



*Before starting to use the bin lift system, first read the operating instructions.*

- The hydraulic couplings on the bin lift are positioned at the top right of the bin lift.



- The quick release couplings are in accordance with:  
DN25A  
ISO72141-1
- The return connection is fitted with a hydraulic hose  $\varnothing 22$  mm and length 1250 mm.

## 4.7 Hydraulic connection OmniDEL *ne*

- The OmniDEL *ne* does not have a hydraulic coupling to the body of the refuse collection vehicle.
- In order to profit in the best possible way from the lower fuel consumption check that there is no hydraulic pump and hydraulic piping connected to supply an hydraulic bin lift.



## 4.8 Electrical connection to compactor body: OmniDEL and OmniDEL $\neq$

The connection between the bin lift and the body of the refuse collection vehicle is in accordance with standard EN 1501-5.



*Make sure that the work area of the compaction mechanism is sufficiently protected.*



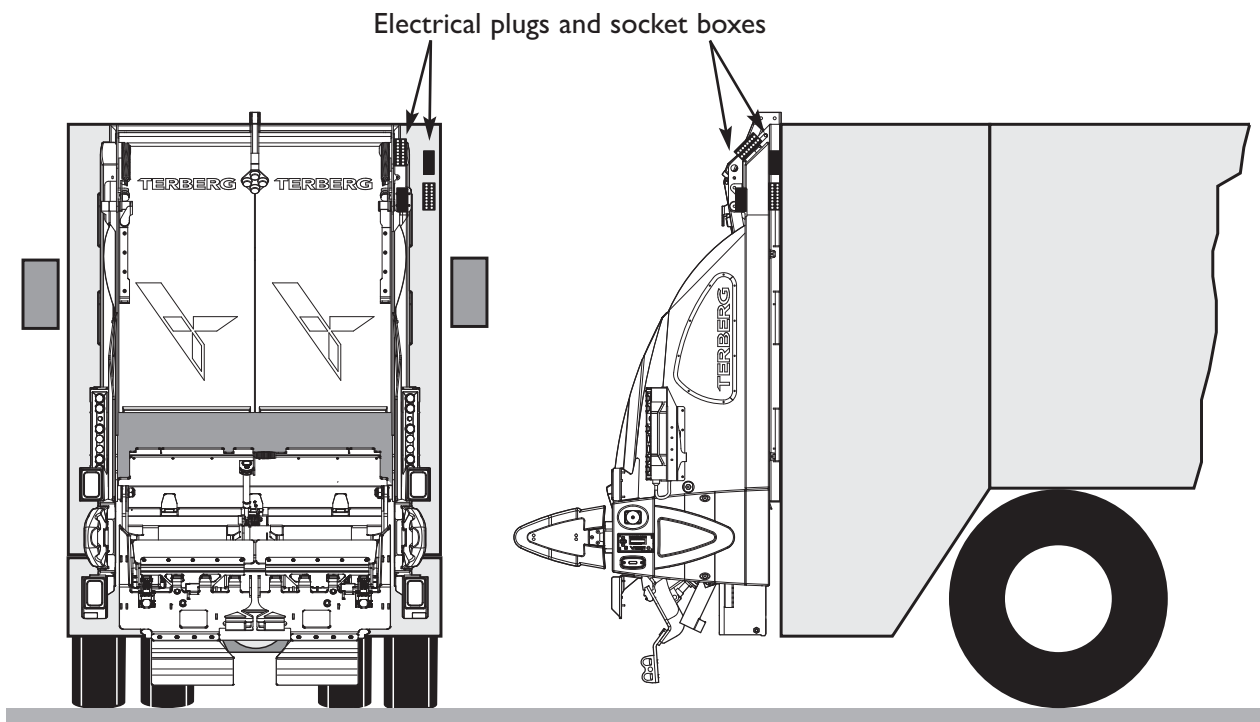
*The following work may only be carried out by qualified personnel.*

**Check the following points before making the connection:**

- Start the vehicle and switch on the compactor.
- Press the compactor system start button.

**The compactor must now operate as a “hold to run” system; as soon as the start button of the compactor installation is released the compactor must stop.**

- Check that the emergency stop switches of the compactor installation are working properly and that the emergency stop buzzer in the cabin also works.
- Reset the emergency stop switches and check again that the compactor works as a “hold to run” system.



- Separate the 16-pole plug from the 16-pole fixed socket.
- Connect the body plug into the fixed socket on the bin lift.
- Connect the bin lift plug to the fixed socket on the body.

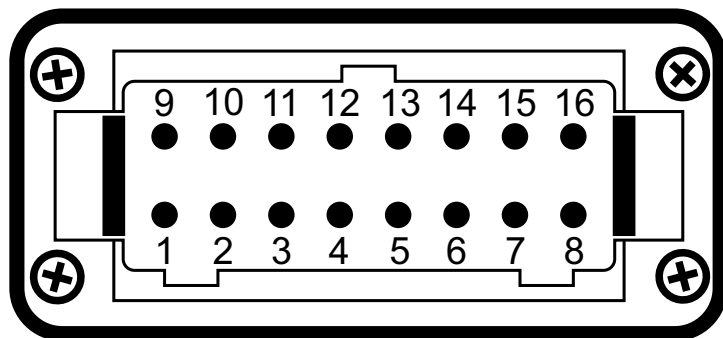
## 4.8.1 Explanation of cable loom connection pins

### 16-pole plug cable loom pin / wire definitions from bin lift

Pin number:	Signal type:	Signal description:	Observation:
1	Supply	Power supply in	+24 V, direct from chassis, 5 Amps maximum
2	Supply	Power supply in	+24 V, direct from chassis, 5 Amps maximum (linked with pin 1)
3	Gnd	Ground	Mass chassis, 3 Amps maximum
4	Gnd	Ground	Mass chassis, 3 Amps maximum (linked with pin 3)
5	Input	Reverse gear engaged +24 V	
6	Output	Chairs low position, out of travel position +24 V	
7	Bus	CleAN open* CAN (L)	
8	Input	Emergency stop circuit 1	Loop 1, input from the RCV, maximum 300 mAmps and 50 V
9	Output	Emergency stop circuit 1	Loop 1, output to RCV, maximum 300 mAmps and 50 V
10	Input	Emergency stop circuit 2	Loop 2, input from RCV, maximum 300 mAmps and 50 V
11	Output	Emergency stop circuit 2	Loop 2, output to RCV, maximum 300 mAmps and 50 V
12	Output	Bin count pulse (one pulse per bin, no matter if 2- or 4-wheeled)	+24 V, 300ms → 1 sec. maximum
13	Input	"RCV" ready	Body is in working order, lifter can use revs and oil.
14	Output	Hydraulic supply request and engine speed request (+24 V)	
15	Bus	CleAN open CAN (H)	
16	Output	Start compaction cycle	+24 V, 300ms → 1 sec. maximum

\* CleAN open is a CAN data protocol for refuse collection vehicles; it makes data communication possible between the various components (bin lift, identification system, weighing system and suchlike) of the refuse collection vehicle.

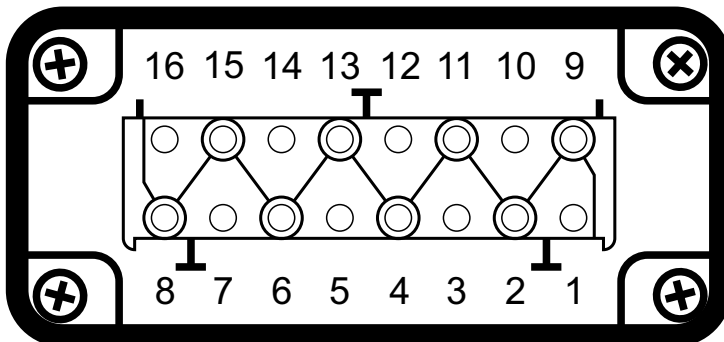
### 16-pole plug contact side



## 16-pole plug fixed socket pin / wire definitions on bin lift

Pin number:	Signal type:	Signal description:	Observation:
1	Input	RCV in neutral gear = +24 V	16 to 34 V
2		Not connected	Info no bin lift fitted
3	Output	Safe distance from footboard level	
4	Output	Safe distance from footboard level	
5	Input	Footboards OCCUPIED 0V	
6	Output	Clash between bin lift and packer plate (info to RCV that container is within reach of packer plate).	+24 V = packer plate stops, as soon as the container is out of reach of the packer plate an extra start signal compaction cycle is given.
7	Bus	CleAN open CAN (L)	
8		Not connected	
9		Not connected	
10		Not connected	
11		Not connected	
12	Input	Emergency stop control system: normal "safe" state = +24 V	Maximum 3 Amps
13	Output	Signal hopper plate switch (OK = +24 V). Safety distance okay from ground level.	
14	Input	Clash between packer plate and bin lift (info to bin lift that packer plate is within reach of container).	+24 V = bin lift stops in horizontal position out of reach of the packer plate.
15	Bus	CleAN open CAN (H)	
16	Output	Signal hopper plate switch (OK = +24 V). Safety distance okay from ground level.	

## 16-pole socket box contact side



## 4.9 Battery connection OmniDEL $\neq$

The OmniDEL $\neq$  must be connected to the battery of the refuse collection vehicle using two 70mm<sup>2</sup> cables.



The pre-mounted cable set with the necessary appendages can be ordered from Terberg Machines B.V. (part number: 37501)

The OmniDEL $\neq$  is electrically driven. Therefore, the following points must be taken into account:

### Battery

Minimum battery capacity: 175 Ah

Terberg Machines recommends: 245 Ah

### Alternator

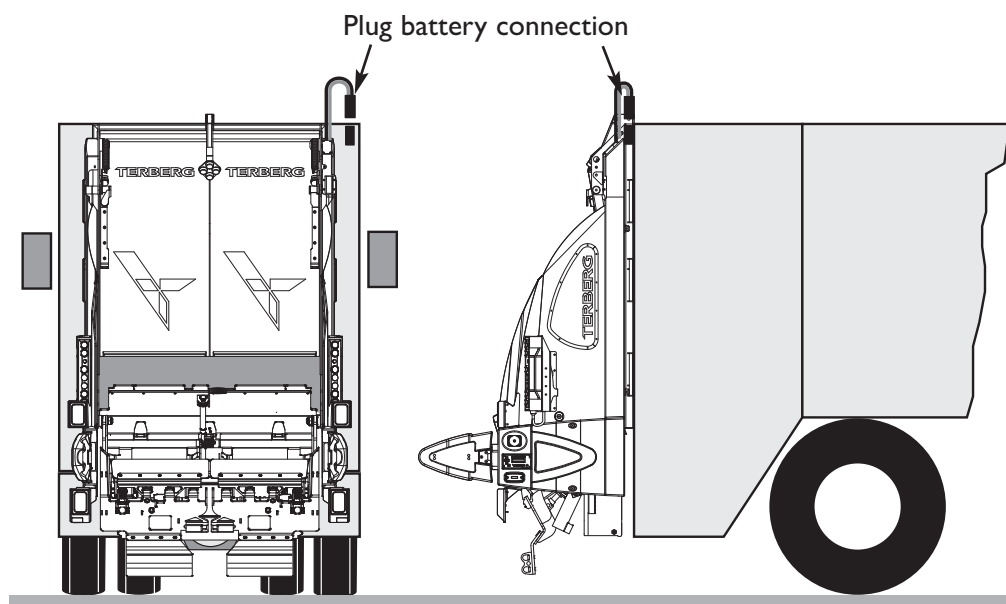
The OmniDEL $\neq$  requires 20 Ah, 24 Volt DC from the alternator during normal daily operation.

Minimum alternator capacity: 75 A

Terberg Machines recommends: 100 A

### Position of the electrical connection on the bin lift

The bin lift is fitted with a two-pole plug at the top right of the bin lift.

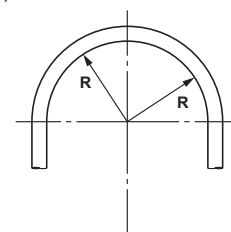


Before beginning to make the connection switch off the main switch of the refuse collection vehicle and/or disconnect the negative terminal of the battery!



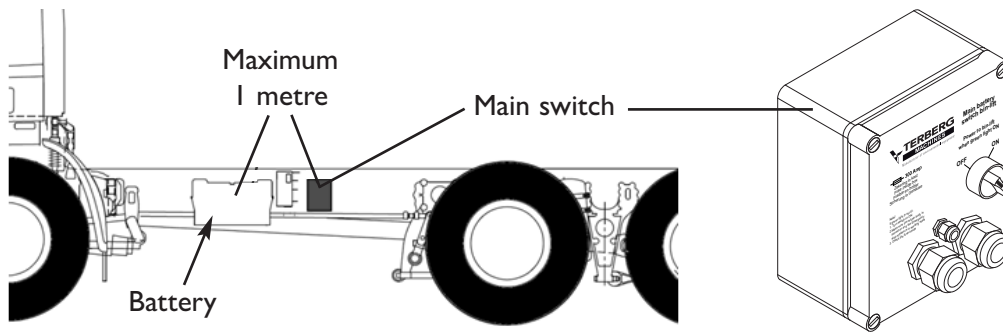
Vehicle manufacturers provide instructions as to how extra power users are to be connected. Always follow these instructions.

- Start laying the cable from the 2-pin plug end after connecting to bin lift and securing in a safe none-vulnerable position over the top of the compaction body, ensure any hinge point has suitable free cable to allow movement. Pass the cable down between the body and cab on the side where the battery box is located.
- Make sure that the cable is not laid over any sharp edges.
- Do not force the cable around sharp bends. The minimum radius (R) of a bend is 5 cm.
- Fix the cable at maximum intervals of 30 cm.

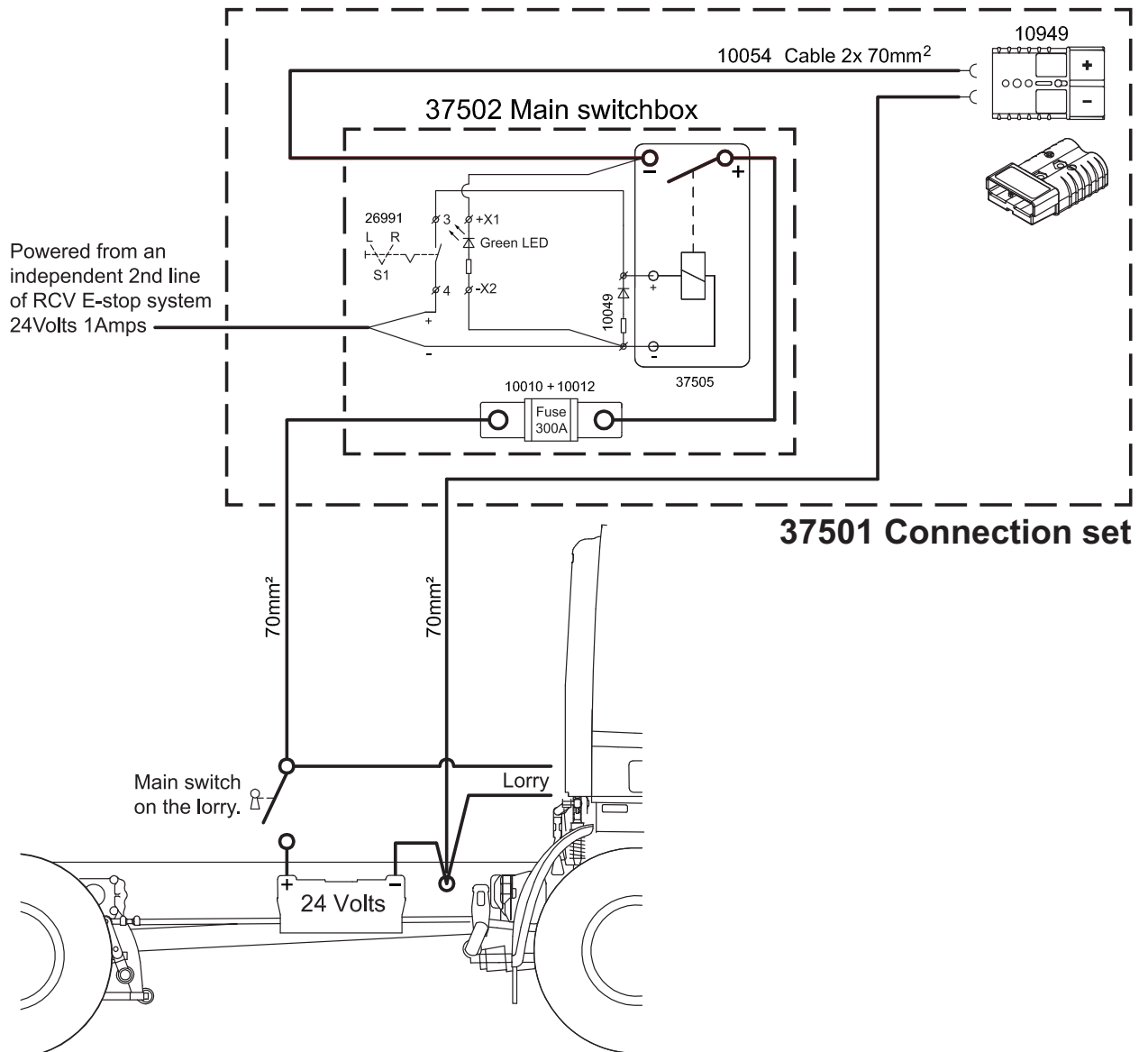


Keep the cable as short as possible in order to reduce weight and voltage drop to a minimum!

- Fit the main switch as close as possible to the battery with a maximum of 1 metre from the battery.



- Make the electrical connections as shown in the wiring diagram below.



If the lorry has a main switch the electrical connection must be made after the main switch.



The connection points for the +24 V and the earth are usually shown in the instructions provided by the lorry manufacture for fitting bodywork.



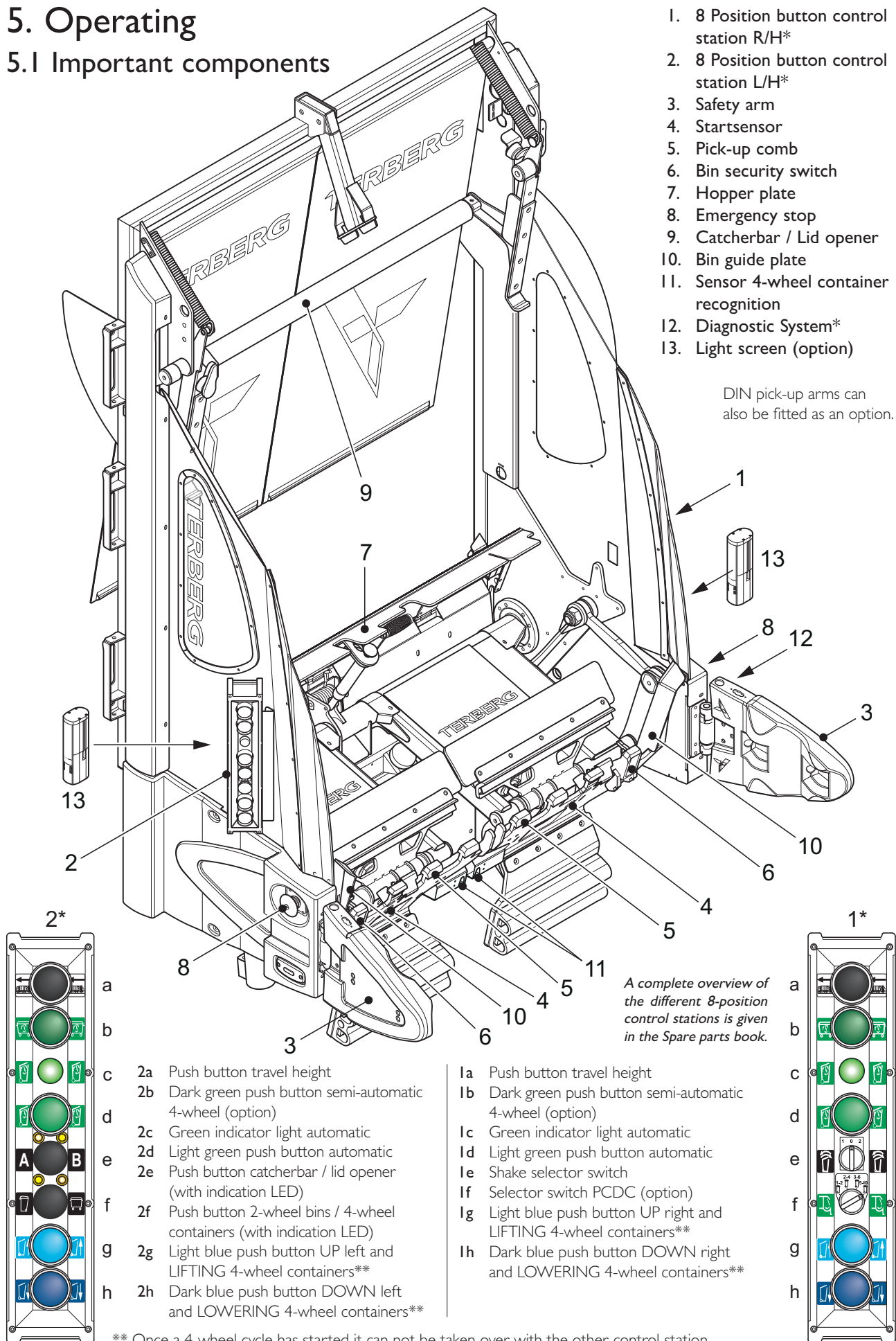
In order to comply with international safety standards the bin lift main power shut off control box must be connected to the body emergency stop system circuit.

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# 5. Operating

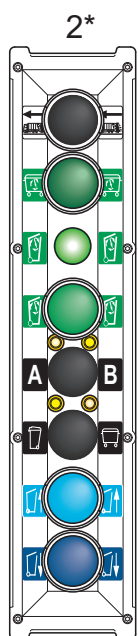
## 5.1 Important components



- 1. 8 Position button control station R/H\*
- 2. 8 Position button control station L/H\*
- 3. Safety arm
- 4. Startsensor
- 5. Pick-up comb
- 6. Bin safety switch
- 7. Hopper plate
- 8. Emergency stop
- 9. Catcherbar / Lid opener
- 10. Bin guide plate
- 11. Sensor 4-wheel container recognition
- 12. Diagnostic System\*
- 13. Light screen (option)

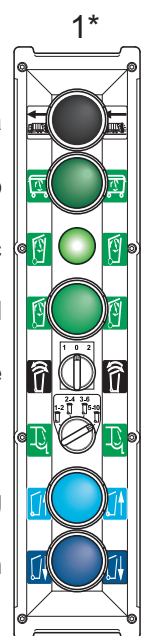
DIN pick-up arms can also be fitted as an option.

A complete overview of the different 8-position control stations is given in the Spare parts book.



- a 2a Push button travel height
- b 2b Dark green push button semi-automatic
- c 2c Green indicator light automatic
- d 2d Light green push button automatic
- e 2e Push button catcherbar / lid opener (with indication LED)
- f 2f Push button 2-wheel bins / 4-wheel containers (with indication LED)
- g 2g Light blue push button UP left and LIFTING 4-wheel containers\*\*
- h 2h Dark blue push button DOWN left and LOWERING 4-wheel containers\*\*

- a 1a Push button travel height
- b 1b Dark green push button semi-automatic
- c 1c Green indicator light automatic
- d 1d Light green push button automatic
- e 1e Shake selector switch
- f 1f Selector switch PCDC (option)
- g 1g Light blue push button UP right and LIFTING 4-wheel containers\*\*
- h 1h Dark blue push button DOWN right and LOWERING 4-wheel containers\*\*



\*\* Once a 4-wheel cycle has started it can not be taken over with the other control station.

\* Depending on the country: - The L/H and R/H control stations are interchanged.  
 - The Diagnostic System is placed on the L/H or R/H side of the bin lift.

## 5.2 Daily checks

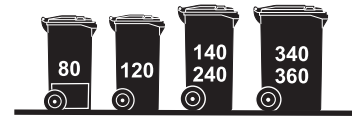
Before commencing work you must check the following points on the bin lift system:

- Check that there are no oil leaks.
- Check that there are no foreign objects (branches, plastic bags etc.) in the bin lift system that could interfere with the correct working.
- Check the working of the bin lift by carrying out all possible actions using empty bins/containers:
  - Emergency stop switches
  - Setting of the catcherbar "if present"
  - Shaking
  - Manual operation
  - Automatic function
  - Recognition of 4-wheel containers

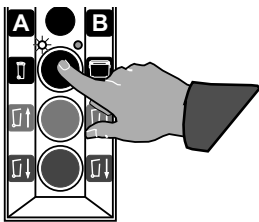
## 5.3 OmniDEL(ve) with "Teardrop" catcherbar

### 5.3.1 Loading 2-wheel bins

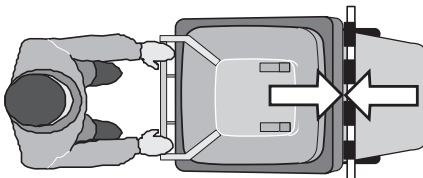
#### 5.3.1.1 MANUAL loading 2-wheel bins, capacity 80-360 litres EN 840-1



- 1) Set the bin lift for 2-wheel bins; the left-hand LED near the 2-wheel bin must light up.

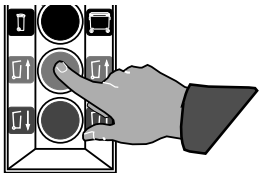


- 2) Roll the bin up against the pick-up comb.

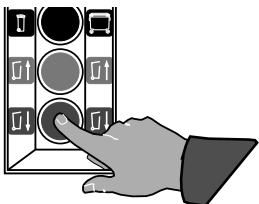


*Because in manual operation the bin security switch is deactivated, great care must be taken that the bin is located correctly on the pick-up comb.*

- 3) Press the UP button; the bin is raised into the tilting position.



- 4) Press the DOWN button; the bin lowers to the ground.



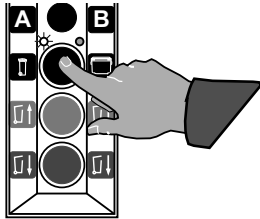
- 5) Take the bin off of the bin lift when the wheels touch the ground.



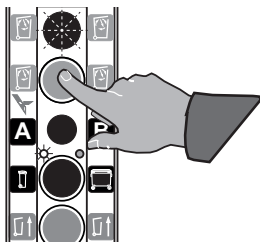
### 5.3.1.2 AUTOMATIC loading 2-wheel bins, capacity 80-360 litres EN 840-1



- 1) Set the bin lift for 2-wheel bins; the left-hand LED near the 2-wheel bin must light up.

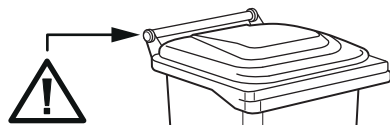



- 2) Switch to automatic function, press the light green button, the green check light will come on.

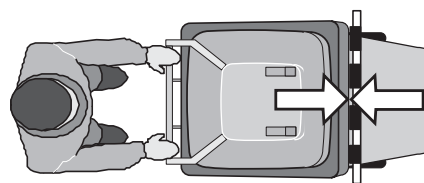


 The automatic function must be switched on for each side.

- 3) Roll the bin up against the pick-up comb.



 Prevent clothes from getting caught behind the handle. Roll the bin up against the bin lift with outstretched arms!



- 4) Let go of the bin as soon as it is lifted; the bin goes up until tilted and then returns to the original position.

- 5) Take the bin off of the bin lift when the wheels touch the ground.

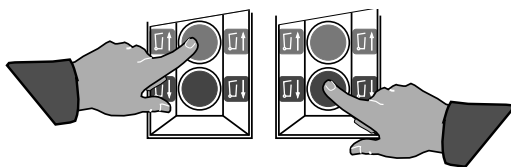


When the bin is not located correctly on the pick-up comb and as a result the bin security switch is not pressed, the upward movement is interrupted and the bin descends to the bottom position. When the lifting movement is interrupted, in spite of the fact that the bin is located correctly on the pick-up comb, you must check the bin for damage.



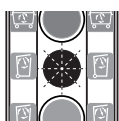
After emptying a 240 litre bin the pick-up comb will be in too high a position with respect to an 80 / 120 litre bin. By moving the 80 / 120 litre bin briefly before the start sensor the lifting chair will automatically descend to the right height.

- The automatic bin lift cycle can be interrupted by pressing either the UP or DOWN button.



In certain circumstances it may happen that a bin that has just been emptied is automatically picked up again. Press the DOWN button if this is not wanted to cancel the cycle!

The green check light will flash to show that the automatic cycle has been interrupted.



When the lifting chair is back in the starting position the green check light will stay on continuously again and it is then possible to empty bins automatically once more.

## “Teardrop” catcherbar (continued)

### 5.3.2 Loading 4-wheel containers

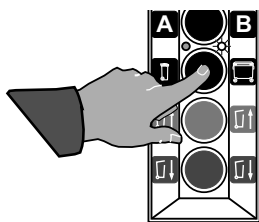
#### 5.3.2.1 Automatic 4-wheel container recognition

The bin lift is equipped with automatic 4-wheel container recognition, if a 4-wheel container is rolled against the pick-up combs, the bin lift system automatically changes over to 4-wheel containers.

#### 5.3.2.2 4-wheel containers with FLAT lid, capacity 500, 660 and 770 litres EN 840-2



1) Set the bin lift for 4-wheel containers; the right-hand LED near the 4 wheel container must light up.

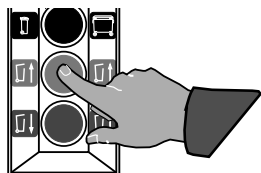


2) Roll the container over the pick-up combs.

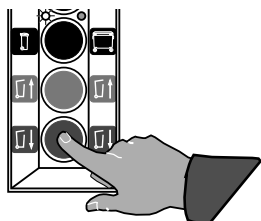


*Make sure that the container is located correctly on the pick-up combs.*

3) Press the UP button; the bin lifts, tilts and empties itself.



4) Press the DOWN button; the bin lowers to the ground.



5) Take the container off of the bin lift when the wheels touch the ground.

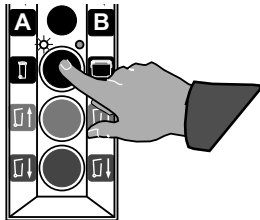
## 5.4 OmniDEL(ve) with 2-position catcherbar

### 5.4.1 Loading 2-wheel bins

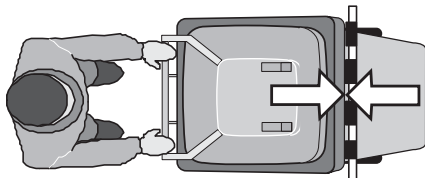
#### 5.4.1.1 MANUAL loading 2-wheel bins, capacity 80-360 litres EN 840-1



- 1) Set the bin lift for 2-wheel bins, the left hand LED near the 2-wheel bin must light up. The catcherbar / lid opener will automatically move to the correct position: **Position A**.

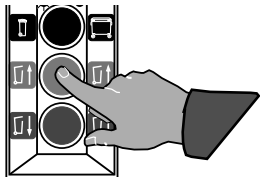


- 2) Roll the bin up against the pick-up comb.

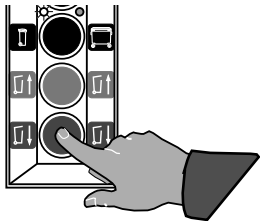


*Because in manual operation the bin security switch is deactivated, great care must be taken that the bin is located correctly on the pick-up comb.*

- 3) Press the UP button; the bin is raised into the tilting position.

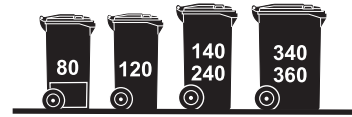


- 4) Press the DOWN button; the bin lowers to the ground.

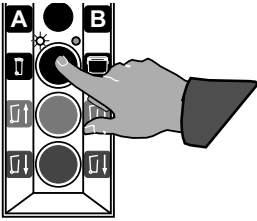


- 5) Take the bin off of the bin lift when the wheels touch the ground.

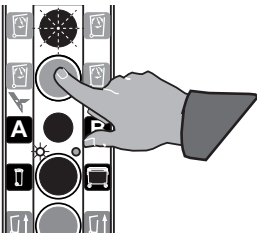
### 5.4.1.2 AUTOMATIC loading 2-wheel bins, capacity 80-360 litres EN 840-1



- 1) Set the bin lift for 2-wheel bins; the left-hand LED near the 2-wheel bin must light up. The catcherbar / lid opener will automatically move to the correct position: **Position A**.

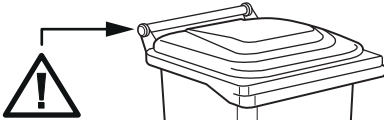


- 2) Switch to automatic function, press the light green button, the green check light will come on.

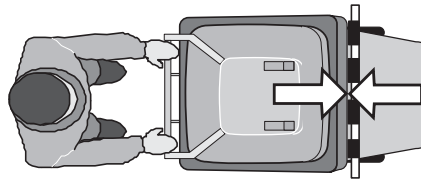


The automatic function must be switched on for each side.

- 3) Roll the bin up against the pick-up comb.



Prevent clothes from getting caught behind the handle. Roll the bin up against the bin lift with outstretched arms!



- 4) Let go of the bin as soon as it is lifted; the bin goes up until tilted and then returns to the original position.

- 5) Take the bin off of the bin lift when the wheels touch the ground.

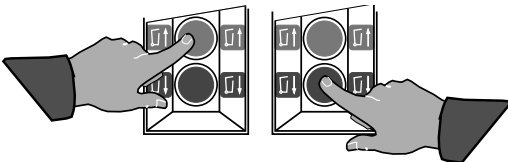


When the bin is not located correctly on the pick-up comb and as a result the bin security switch is not pressed, the upward movement is interrupted and the bin descends to the bottom position. When the lifting movement is interrupted, in spite of the fact that the bin is located correctly on the pick-up comb, you must check the bin for damage.



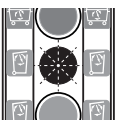
After emptying a 240 litre bin the pick-up comb will be in too high a position with respect to an 80 / 120 litre bin. By moving the 80 / 120 litre bin briefly before the start sensor the lifting chair will automatically descend to the right height.

- The automatic bin lift cycle can be interrupted by pressing either the UP or DOWN button.



In certain circumstances it may happen that a bin that has just been emptied is automatically picked up again. Press the DOWN button if this is not wanted to cancel the cycle!

The green check light will flash to show that the automatic cycle has been interrupted.



When the lifting chair is back in the starting position the green check light will stay on continuously again and it is then possible to empty bins automatically once more.

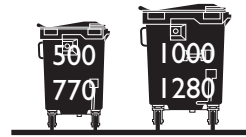
## 2-position catcherbar (continued)

### 5.4.2 Loading 4-wheel containers

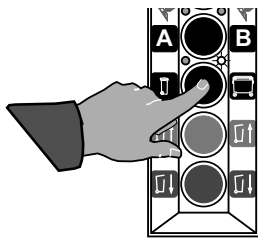
#### 5.4.2.1 Automatic 4-wheel container recognition

The bin lift is equipped with automatic 4-wheel container recognition, if a 4-wheel container is rolled against the pick-up combs, the bin lift system automatically changes over to 4-wheel containers.

#### 5.4.2.2 4-wheel containers with FLAT lid, capacity 500-1280 litres EN 840-2

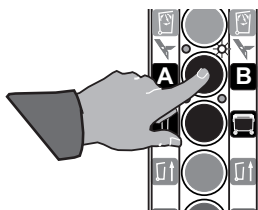


1) Set the bin lift for 4-wheel containers; the right-hand LED near the 4-wheel container must light up.



2) Adjust the catcherbar / lid opener in the correct position.

- 500, 660 and 770 litres containers → Position A
- 1000, 1100 and 1280 litres containers → Position B



3) Roll the container over the pick-up combs.

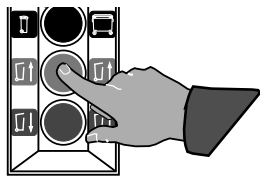


*Make sure that the container is located correctly on the pick-up combs.*

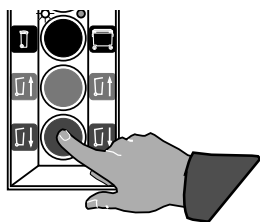


*Make sure that there are no persons in the immediate vicinity of the bin lift during the loading cycle.*

4) Press the UP button; the container lifts, tilts and empties itself.



5) Press the DOWN button; the container lowers to the ground.



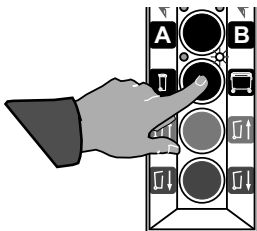
6) Take the container off of the bin lift when the wheels touch the ground.

## 2-position catcherbar (continued)

### 5.4.2.3 4-wheel containers with ROLL top, capacity 770 and 1100 litres EN 840-3

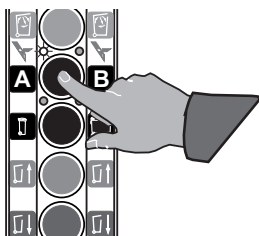


1) Set the bin lift for 4-wheel containers; the right-hand LED near the 4-wheel container must light up.



2) Adjust the catcherbar / lid opener in the correct position.

- 770 and 1100 litres containers → Position A



3) Roll the container over the pick-up combs.

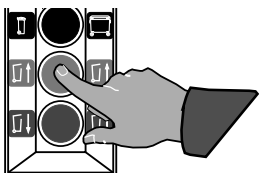


*Make sure that the container is located correctly on the pick-up combs.*

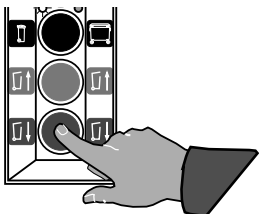


*Make sure that there are no persons in the immediate vicinity of the bin lift during the loading cycle.*

4) Press the UP button; the container lifts, tilts and empties itself.



5) Press the DOWN button; the container lowers to the ground.

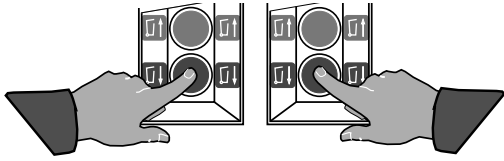


6) Take the container off of the bin lift when the wheels touch the ground.

## 5.5 DIN pick-up arms (optional)

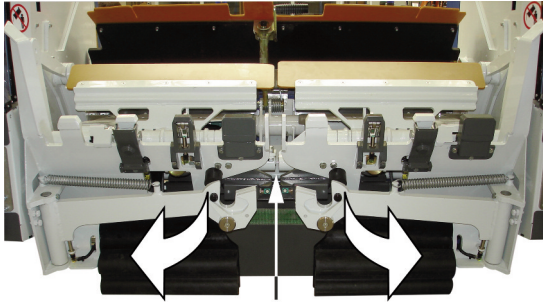
As an option the OmniDEL(ve) can be equipped with DIN pick-up arms.

- 1) Lower both lifting chairs to the lowest position.

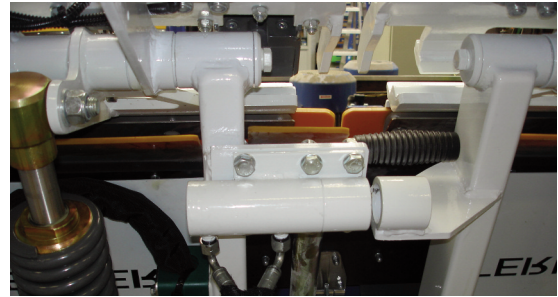


- 2) Unfold the pick-up arms.

The bin lift switches over to 4-wheel containers, the right LED near the 4-wheel container must light up.



Hydraulic intermediate lock



Hydraulic locking mechanism

With the 'DIN pick-up arm option' the lifting chairs are provided with an hydraulic intermediate lock. In this case the lifting chairs are locked together after setting the bin lift to 4-wheel containers (unfolding the pick-up arms) and pressing the UP or DOWN button.

- 3) Then proceed as described in:

5.4.2.2 Loading 4-wheel containers FLAT LID capacity 500 - 1280 litres EN 840-2 and

5.4.2.3 Loading 4-wheel containers ROLL TOP capacity 770 and 1100 litres EN 840-3

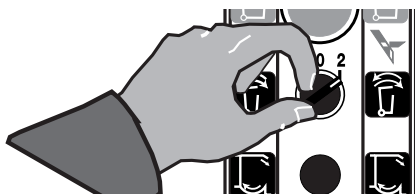
## 5.6 Shake function 2-wheel bins (Green waste)

If waste remains stuck in the bin the shake function can be used.

Put the switch to **position 1** for **one shake**.



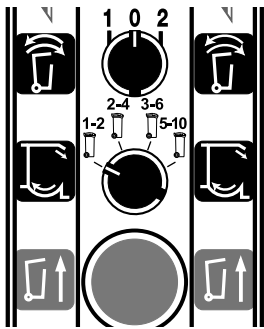
Put the switch to **position 2** to **shake twice**.



*Only give an extra shake if there is a need for this. Shaking takes time and causes extra noise for the surrounding area.*

## 5.7 Setting compacting cycle 2-wheel bins (optional)

The compacting cycle refers to the compacting action that the compactor makes to move and compact the waste into the body of the refuse collection vehicle.



The compacting cycle is controlled using the 4-positions switch.

**Position 1-2**, the compacting cycle starts after emptying **one to two** bins.

**Position 2-4**, the compacting cycle starts after emptying **two to four** bins.

**Position 3-6**, the compacting cycle starts after emptying **three to six** bins.

**Position 5-10**, the compacting cycle starts after emptying **five to ten** bins.



*If the compaction compartment is too full this may cause damage to the compaction system and the bin lift.*

## 5.8 Single man trade 4-wheel containers

Single man trade is a function that makes it possible for one man to empty 4-wheel containers. When this function is switched on a 4-wheel container is automatically lifted about 20 cm when it is positioned over the pick-up combs.



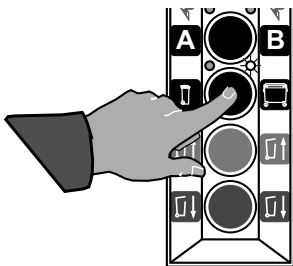
*One-man operation is only possible when 4-wheel containers are lifted with the pick-up comb.*



*Emptying 4-wheel containers via DIN-arms is not possible with the single man trade function, because the bin security switches do not operate then.*

### Switching on single man trade

- 1) Set the bin lift to 4-wheel containers, the right-hand LED near the 4-wheel container must light up, or roll a 4-wheel container over the pick-up combs and the bin lift will automatically switch to 4-wheel containers.

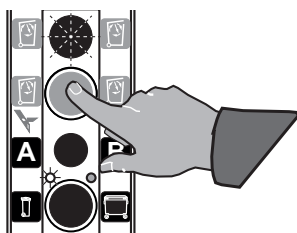


- 2) Check the position of the catcherbar / lid opener:

**Position A** → Containers with **FLAT LID 500, 660, 770 litres**  
Containers with **ROLL TOP 770 and 1100 litres**

**Position B** → Containers with **FLAT LID 1000, 1100 and 1280 litres**

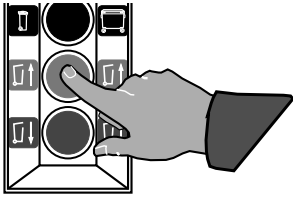
- 3) Press the light green button (automatic function), the green check light will come on.



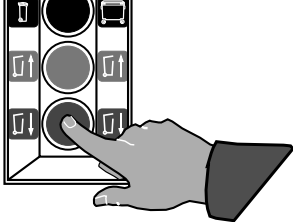


4) Roll the 4-wheel container over the pick-up combs, the container will be lifted up about 20 cm.

5) Press the UP button. The container will be raised to the tilting position.



6) Press the DOWN button. The container lowers to the original position.



When after lifting with one-man operation, you lift 2-wheel bins, the one-man operation function is remembered.

As soon as you offer a 4-wheel container again one-man operation is immediately reactivated!

## 5.9 Semi-automatic function 4-wheel containers (optional)

The bin lift can be fitted with a semi-automatic function for 4-wheel containers as an option.

**This function is only active when 'Single man trade' is active.**



The semi-automatic function is only possible when 4-wheel containers are lifted with the pick-up comb.



Emptying 4-wheel containers via DIN-arms is not possible with the semi-automatic function, because the bin security switches do not operate then.

1) Follow the steps 1 till 3 of 'Single man trade' (see previous page).

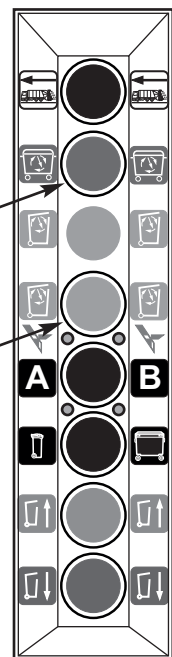
2) Roll the container up above the pick-up combs, the container is lifted about 20 cm.

3) Press the dark green button (Semi-automatic 4-wheel). The container is raised to the tilting position and is lowered back to the original position, about 20 cm above the ground.

4) Press the dark green button again, the container lowers to the ground.

Press button  
Semi-automatic  
4-wheel

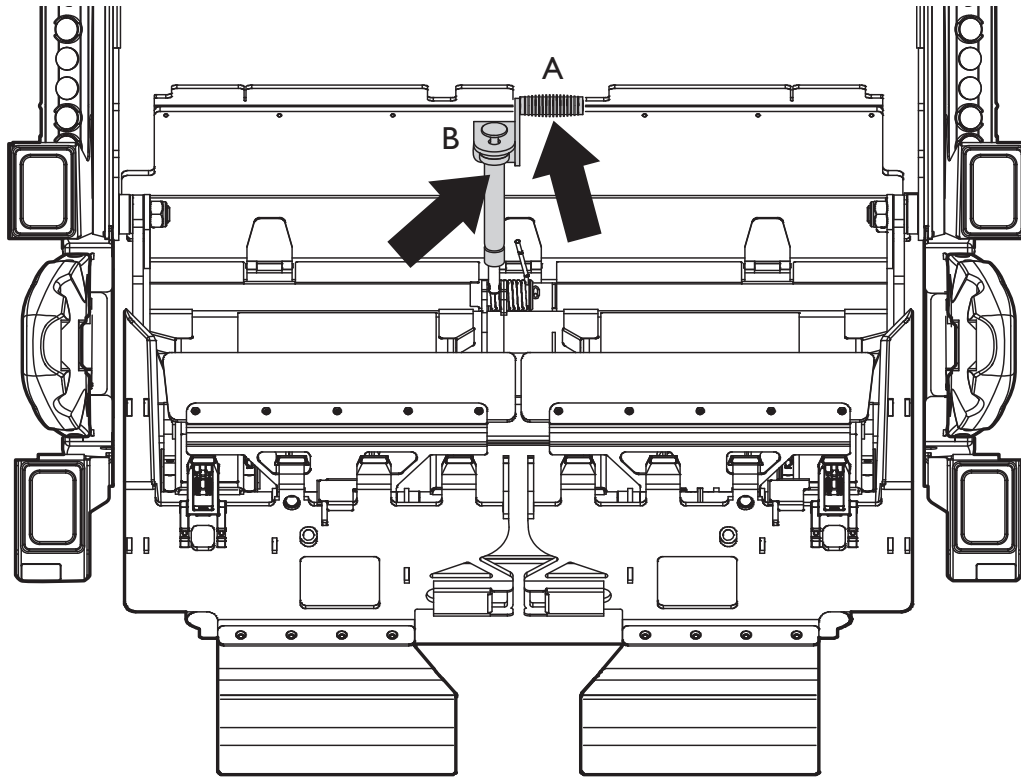
Press button  
automatic function



## 5.10 Loading bags / bulky waste

To make it easier to throw in bags and/or bulky waste, the throw-in height of the bin lift can be adjusted.

- 1) Unlock the hopper plate; lift the hopper plate up a little using handle bar **A**.
- 2) Push support **B** backwards.
- 3) Turn the hopper plate down fully.



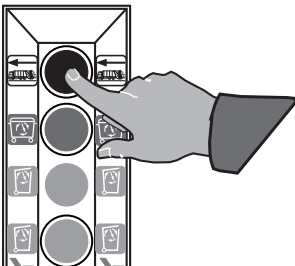
*Do not forget to raise the hopper plate again before collecting bins.*

## 5.11 Travel height

In order to prevent damage to the bin lift, the OmniDEL and the OmniDEL *ne* are fitted standard with this function.

When this function is switched on both lifting chairs move to a pre-set position.

- Press the black button, on the left- or righthand side of the bin lift. Both lifting chairs will move to the travel height.



## 5.12 Safety provisions

### 5.12.1 General

If it is noticed that the bin lift system does not work or has a fault while collecting refuse, the workshop or service station must be informed immediately with a clear description of the defect.

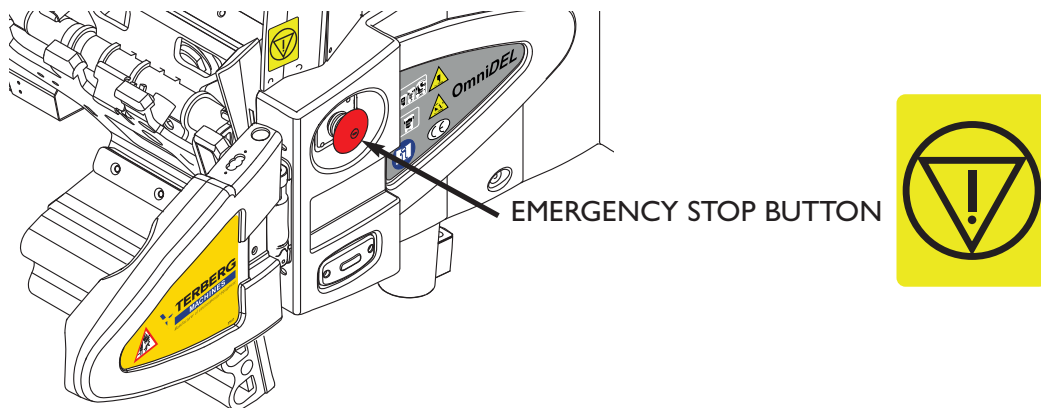


*Repairs may only be carried out by qualified personnel, never rectify faults yourself, this may cause danger for you and damage to the bin lift system!*

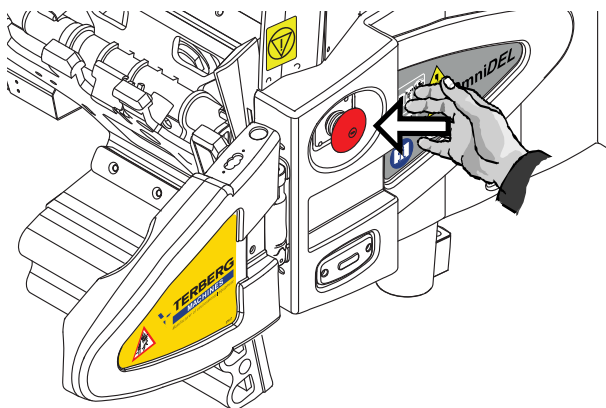
- Do not remove bins/containers until the bin lift has come to a standstill.
- Put empty bins/containers where they will not cause a danger to other road users.
- Do not accept damaged bins/containers.
- Do not empty bins where the lid is not closed properly.
- Warning and operating decals that are no longer legible must be replaced.

### 5.12.2 Emergency stop button

The emergency stop buttons positioned on both sides of the bin lift allow you to stop the bin lift cycle and the compactor immediately **in the event of an emergency**.



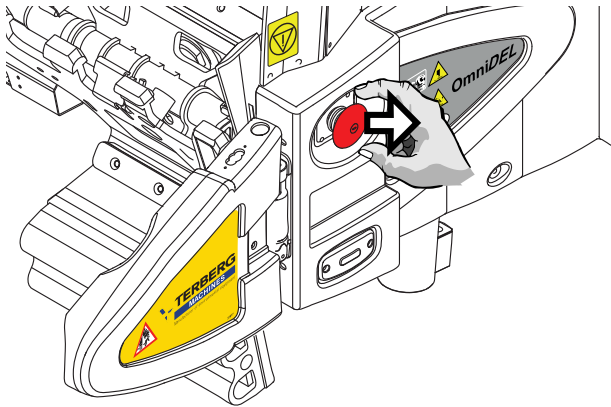
After the emergency stop button has been pressed the flow of hydraulic oil is stopped and the electric circuit is interrupted.



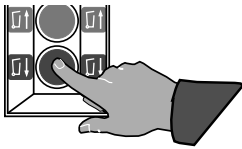
The check lights for automatic working go out. The driver of the refuse collection vehicle is warned by a buzzer in the cabin that the emergency stop button has been pressed.

### 5.12.3 Resetting the emergency stop

- Reset the emergency stop (pull out the emergency stop button); the buzzer in the cabin will stop. Resetting of the compaction body may be required, consult body manual for correct procedure.



- Press the DOWN button; the lifting chair lowers to the lowest position.



- Investigate the reason for pressing the emergency stop button.
- Remove the bin/container from the bin lift system if applicable.
- The bin lift system is ready for use again.

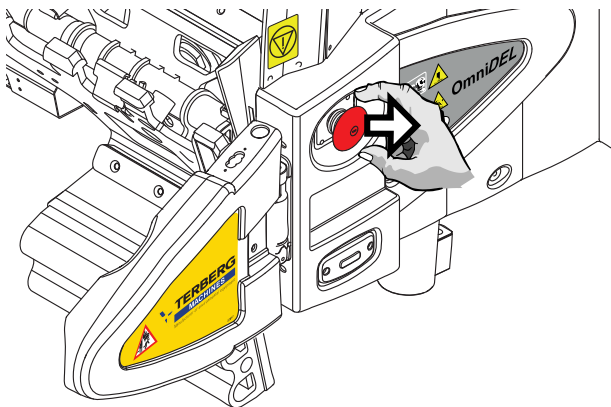
### 5.12.4 Becoming trapped

In the event of a dangerous occurrence or if a person has become trapped in the lifting mechanism and an emergency stop button has been pressed, the system will need to be reset to allow the chairs to be raised or lowered which ever is appropriate to release the person.

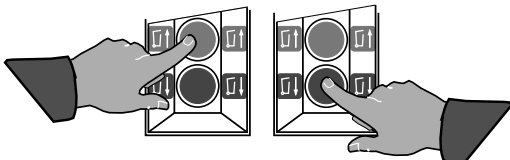
An understanding of the resetting procedure of the compaction body will be required of the operators.

**In such cases act as follows:**

- Reset the emergency stop button.



- Use the dark blue DOWN button to allow the lifting chairs to lower or the light blue UP button to allow the lifting chairs to raise.



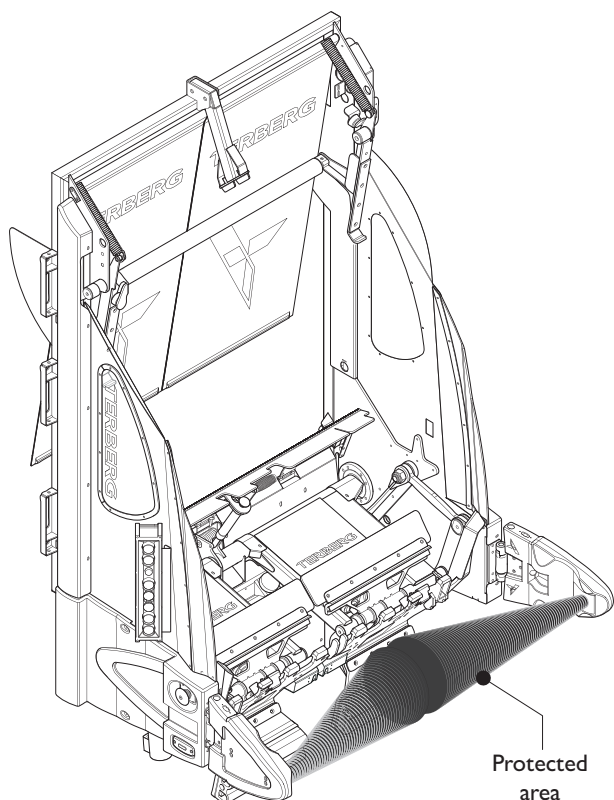
## 5.12.5 Underwalk protection (Rear Protection Device)

To comply with European Standard EN 1501-5 all automatic and semi-automatic bin lift systems are equipped with RPD.

This safety equipment protects persons approaching the bin lift when it is emptying automatically (or semi-automatically).

This safety equipment consists of two ultrasonic sensors, fitted to the two safety arms. The sensors detect persons or objects coming within the protected area of the bin lift. **This occurs separately for each lifting chair.**

*The underwalk protection (RPD) is therefore only active when lifting automatically (or semi-automatically) and the safety arms are folded down.*



*In case of damage to the safety equipment, this must be repaired or replaced by original parts immediately.*



*Repairs to the RPD may only be carried out by qualified personnel.*



*Do not use defrosting fluids for accumulated snow or ice removal, this leaves a sticky layer and snow accumulates even faster. Follow the safety procedure and sweep accumulated snow BY HAND!*

- As soon as the area under a lifted bin is entered, during automatic or semi-automatic lifting, the downward movement is stopped.
  - A warning light mounted on top of each safety arm comes on and indicates that the RPD has been activated on this side of the bin lift.
  - Automatic (or semi-automatic) lifting does however remain active, the green light flashes.
- Lower the chair manually using the manual push-buttons, the warning light goes out and the RPD is reset.
  - The bin lift is again ready to lift bins automatically (or semi-automatically), the green light shows a steady light again.

The sensors are checked during each automatic lifting operation. When a sensor fault is identified the automatic lifting is switched off.

- The RPD system is designed such that it is not activated by rain or snow. When refuse, snow or another object block the 'unobstructed view' of a sensor, the lifting chair will rise and then stop.
  - The warning light on top of the arm will flash. This flashing indicates that the "unobstructed view" of the sensor is blocked, or that there is a fault in the RPD system.
  - The bin lift still works manually, even with a fault in the RPD.

Because the RPD sensors monitor both sides of the bin lift separately, in case of a defect on one side the other will still lift automatically.

### Semi-automatic function 4-wheel containers (optional)

When the bin lift is equipped with the semi-automatic function 4-wheel containers, the activation of the RPD on one of the two sides will result in the bin lift stopping in the tipping position.



*Keep a minimum distance of 2.5 meter between the bin lift and objects which are located behind the bin lift system. This is to avoid a dangerous situation in case that a bin/container falls from the pick-up comb.*