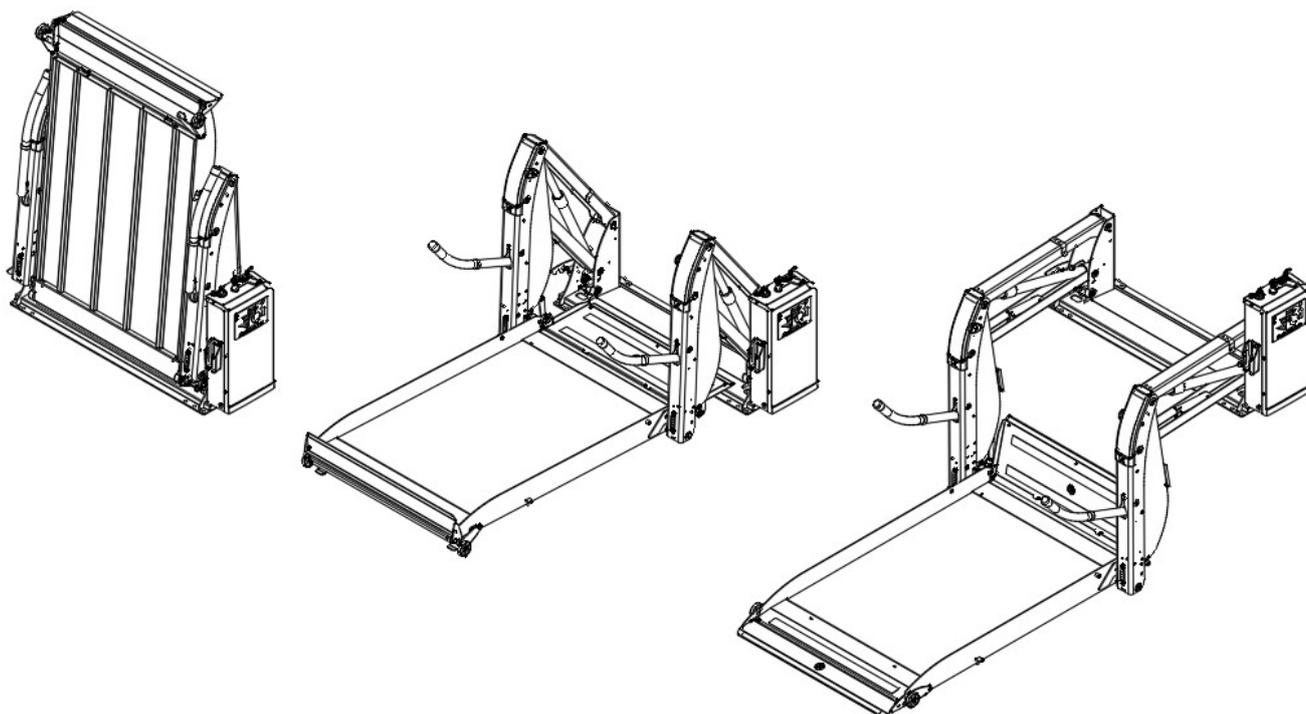




CE  
UK  
CA

# DHOLLANDIA

## DH-P2 / PH2 DH-P1 / PH1 OPERATION MANUAL



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**Read the manual in its entirety before operating the lift**

**Keep this manual in the vehicle cab, as reference for the driver and lift operator**

# TABLE OF CONTENTS

1	Understanding safety and warning signs .....	2
2	Contact information and disclaimers .....	3
3	General introduction.....	4
4	Intended use .....	4
5	Identification.....	5
6	Description and terminology .....	6
6.1	General .....	6
6.2	Safety devices.....	12
7	Safety instructions for using the lift .....	15
7.1	DO NOT use the lift without adequate safety and operator training .....	15
7.2	General safety instructions.....	15
7.3	Danger zones, risk of crush and shear injury .....	19
7.4	Additional instructions for the wheelchair occupants and standees .....	22
7.5	Load diagram .....	24
7.6	Recommended daily pre-trip inspection .....	25
7.7	Importance of preventative maintenance .....	26
8	Operating instructions – principles and procedures .....	27
8.1	Control units.....	27
8.1.1	Standard 2-button wander lead with spiral cable (ref. OAE001).....	27
8.1.2	Optional 3-button wander lead with spiral cable (ref. OWE002) .....	27
8.1.3	Optional 4-button wander lead with spiral cable (option OWE003).....	28
8.1.4	Auxiliary toggle switch control for DH-PH2* / DH-P2 lifts (option OWE001) .....	28
8.2	Switching the main power on/off .....	29
8.3	Platform locks.....	30
8.4	Operation instructions for DH-PH2* / P2* lifts .....	31
8.5	Operation instructions for the DH-PH1* / P1* lifts .....	35
9	Emergency operation.....	39
10	Decals.....	41
10.1	Introduction .....	41
10.2	Regular decals on the lift.....	41
10.3	Decals on inside of bus near the lift .....	43
11	Meaning of safety and warning signs.....	45
12	End note.....	47

# 1 UNDERSTANDING SAFETY AND WARNING SIGNS

- Many safety signs and symbols used in this manual are based on international standards, others refer to specific situations or actions.
- Consult section 11 on page 45 for an overview of signs and symbols used in DHOLLANDIA manuals and their meaning.
- Please take special notice of the following signs used in the manual. They indicate the likelihood and severity of a potential injury if a person fails to follow the instructions presented on the safety sign.



**DANGER**: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. [white letters on red background]



**WARNING**: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. [black letters on orange background]



**CAUTION**: indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. [black letters on yellow background]



**NOTICE**: is used to address practices not related to physical injury. [white letters on blue background]



**SAFETY INSTRUCTIONS**: indicate general instructions relative to safe work practices, reminders of proper safety procedures, or the location of safety equipment. [white letters on green background]



**SAFETY ALERT SYMBOL**: is used to alert the user to potential hazards. All safety messages that accompany this sign shall be obeyed to avoid possible harm. [free-standing, or on background colours red, orange, yellow or black]



- Failure to understand and to follow the instructions in this manual can put the operator and any bystanders at great risk of serious bodily injury and death.
- Prior to operating the lift, make sure you understand the safety and warning signs used, and read them in conjunction with the instructions in this manual.
- If in doubt, DO NOT operate the lift. Contact your national DHOLLANDIA distributor. See page 3 for contact info.

## 2 CONTACT INFORMATION AND DISCLAIMERS

- DHOLLANDIA lifts are regularly being adapted to new vehicle and chassis developments and specialized customer requirements. Therefore, DHOLLANDIA reserves the right to alter product specifications without prior notice and potentially modifications or new developments might not have been taken into account at the time of printing.

### **NOTICE**

Please confirm you have reviewed the most up-to-date version of this manual prior to operation of the associated DHOLLANDIA lift. See below for instructions to download the latest version of the manual.

- Contact your national DHOLLANDIA distributor if you have any questions regarding the installation, operation, repair and maintenance of DHOLLANDIA lifts, to obtain replacement copies of manuals or decals, or to learn about available equipment options for DHOLLANDIA lifts.



If in doubt where to find your national DHOLLANDIA distributor, visit the official DHOLLANDIA website

[www.dhollandia.com](http://www.dhollandia.com) → **Country selection / language selection** → **Distributors & service**



The latest version of all manuals can also be downloaded from the DHOLLANDIA website

[www.dhollandia.com](http://www.dhollandia.com) → **Country selection / language selection** → **Downloads** → **Operation manuals** → ... **select required manual**

- Take notice of following important disclaimers:

### **DISCLAIMERS**

- DHOLLANDIA disclaims liability for any personal injury, death or property damage that results from **operating a lift that has been modified from the original design**, without explicit written approval from the manufacturer.
- DHOLLANDIA disclaims liability for any personal injury, death or property damage that results from the **use of aftermarket or non-OEM replacement parts for service or repair of the lift**.
- DHOLLANDIA disclaims liability for any personal injury, death or property damage that results from **improper use of the lift**.
- DHOLLANDIA disclaims liability for any personal injury, death or property damage that results from **overloading or improperly loading the platform**, disregard of the maximum rated lift capacity and the applicable load charts.
- There are no warranties, express or implied, including the warranty of merchantability or a warranty of fitness for a particular purpose extending beyond that set forth in this manual.

### 3 GENERAL INTRODUCTION

- The manuals mentioned below apply to various types of lifts DH-P2\*, DH-PH2\*, DH-P1\*, DH-PH1\* operating in a similar way. In case of any doubt, always contact your national DHOLLANDIA distributor. See contact info on page 3.
- The DH-PH2\* and DH-PH1\* are wheelchair lifts, used to assist wheelchair occupants or persons with an impaired mobility embark and disembark the vehicle. The DH-P2\* and DH-P1\* are commercial lifts, used to handle cargo.
- This OPERATION MANUAL explains how the DHOLLANDIA lift is manufactured, what safety devices are incorporated in its design and how to use the lift in a correct manner, that preserves the integrity of the machine over the intended lifetime and helps maximize the safety of the operator and any bystanders.
- The MAINTENANCE AND REPAIR MANUAL (separate) explains how to maintain and service the lift in the appropriate manner, maximizing the safety of the operator and any bystanders and ensuring the reliability of the lift over the intended lifetime.
- The CE / UKCA IDENTIFICATION AND INSPECTION LOGBOOK (separate) contains the serial number identification, the CE / UKCA Declaration of Conformity, the Fitting Declaration to be filled out by the installer of the lift, and an overview of the owner's legal obligations in terms of periodic testing and certification.
- The manuals must be kept with the lift at all times, as a reference book for the operators and technical service.

#### **WARNING**

- Improper use of the lift will put the operator and other parties at great risk of serious bodily injury and death. Therefore, the use of the lift is restricted to skilled operators only, who have been properly trained, and who know and understand the full contents of this manual.
- Unauthorized modifications to the lift can put the operator and other parties at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to modify the lift and its safety devices in any way.
- The use of aftermarket or non-OEM replacement parts to repair the lift is strictly prohibited and may result in serious bodily injury or death of the operator or any bystanders.

### 4 INTENDED USE

DHOLLANDIA wheelchair lifts DH-PH2\* and DH-PH1\* are designed to be fitted to multi passenger vehicles, busses and coaches, and shall be used exclusively to assist wheelchair occupants or persons with an impaired mobility embark and disembark the vehicle, within the limits of the load chart, in compliance with the operator instructions and safety instructions described in this manual.

DHOLLANDIA commercial lifts DH-P2\* and DH-P1\* are designed to be fitted to vans and light-duty commercial vehicles, and shall be used exclusively to load and unload the goods transported on the vehicle they are fitted to, within the limits of the load chart, in compliance with the operator instructions and safety instructions described in this manual.

#### **WARNING**

- Improper use of the lift will put the operator and bystanders at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to use the lift in a different way, or for different purposes than described in the operation manual.
- The lift must NEVER be used as an elevated work platform, to push loads, to move snow or other debris.
- DHOLLANDIA disclaims liability for any personal injury and / or property damage that results from improper use.

## 5 IDENTIFICATION

- Every DHOLLANDIA lift is identified by and labelled with a **unique 8-digit serial number** (with or without a space between the first and last 4 digits). Use this number for any inquiry on a particular lift, or when ordering replacement parts.
- In addition to the lift type and serial number, the various serial number labels provide additional information such as: the maximum rated lift capacity and load chart, the date of manufacture, etc...
- A large label is usually affixed to the vehicle body near the lift.
  - Medium sized labels are affixed to the lift frame, to the platform and to the power pack.
  - Small labels are affixed to the hydraulic cylinders and the electric motor inside the power pack.

### EXAMPLE



## 6 DESCRIPTION AND TERMINOLOGY

### 6.1 GENERAL

- The DH-PH2\* and DH-PH1\* are wheelchair lifts, used to assist wheelchair occupants or persons with an impaired mobility embark and disembark the vehicle. These wheelchair lifts incorporate a number of safety devices that are not required on commercial lifts
- The DH-P2\* and DH-P1\* are commercial lifts derived from aforementioned wheelchair lifts. They are used to handle cargo.
- In this manual the following terms will be used:
  1. Lift = refers to both wheelchair and commercial lifts
  2. Wheelchair lift = refers to wheelchair applications only → abbreviation [W]
  3. Commercial lift = refers to commercial cargo handling applications only → abbreviation [C]
- In one and the same sentence, the abbreviations [W] and [C] will be used to include one type of lift and exclude the other.
- DHOLLANDIA lifts are developed and manufactured using state-of-the-art technology, high quality materials and components, and highly skilled workmanship. They comply with the European CE and UKCA safety regulations mentioned in the Declaration of Conformity issued with each lift (unless otherwise agreed for tail lifts exported outside the CE / UKCA region).
- The DH-P2\* and DH-PH2\* are fully automatic twin-arm lifts, holding the platform at both sides, providing maximum stability and additional lift capacity.
- In travel position, the platform and lift frame are stowed in upright position, just in front of the vehicle doors. Upon deployment, the platform is tilted down from a vertical travel position to a horizontal work position. Guard rails, the bridge plate at the inboard platform edge and roll stop at the outboard platform edge are deployed automatically.
- The DH-P1\* and DH-PH1\* are operated by a single arm, holding the platform at 1 side only. In standard execution, they have a fixed frame, the closed platform stands in the door aperture. Option OWU006 features a rotating frame, so that the platform can be swung out of the way to a travel position at the side of the vehicle body.
- In travel position, the platform and lift frame are stowed in upright position, just in front of the vehicle doors (standard execution), or swung out of the way against the side of the vehicle body (option OWU006). Upon deployment, the lift frame is swung into the door aperture (only for OWU006). Then the platform is tilted down from a vertical travel position to a horizontal work position. The guard rail, bridge plate at the inboard platform edge and roll stop at the outboard platform edge are deployed automatically.
- Main details and terminology: see below.

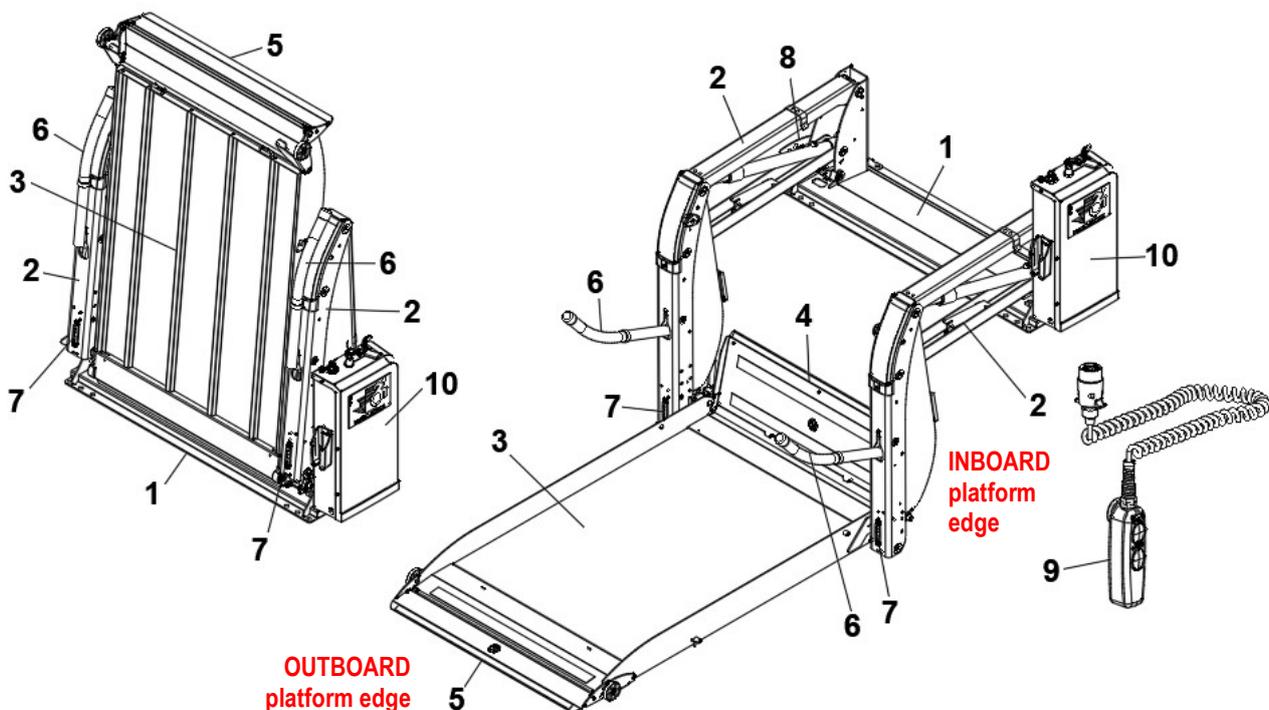
#### DH-PH2\* / DH-P2\* • TERMINOLOGY

See figure below for parts corresponding to numbers in this table

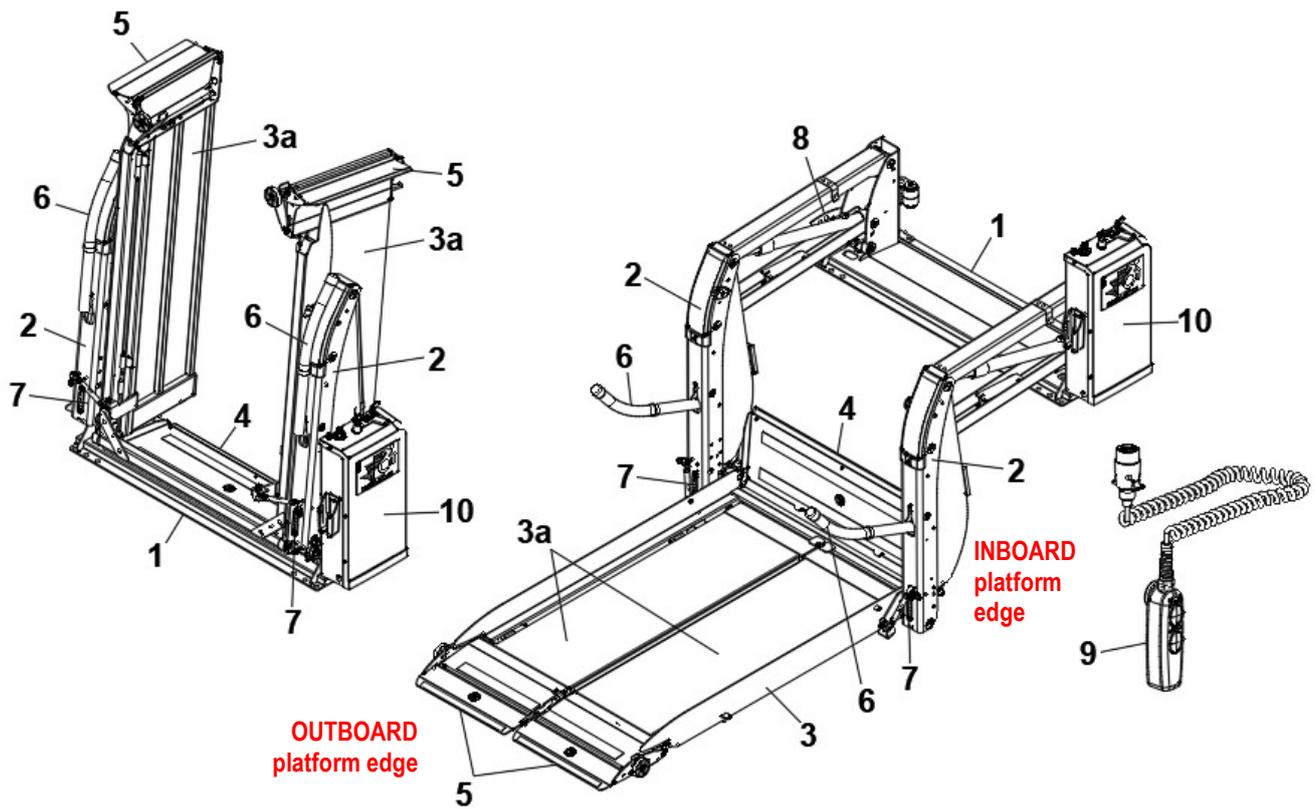
#	Description
1	<b>Lift frame:</b> steel assembly incorporating the lift arms and lift cylinders, who together carry the platform. The lift frame is mounted in a fixed position on the vehicle floor.
2	<b>Lift arms + lift cylinders:</b> 2 lift arms L+R actuated by the lift cylinders, used to lift / lower the platform and its load (= functions UP / DOWN).
3	<b>Platform:</b> carries the load during lifting / lowering. It is equipped with a bridge plate at the inboard platform edge and a roll stop at the outboard platform edge. The guard rails for the platform are integrated in the 2 lift arms. [W] → Platform in mesh steel, evacuating rainwater, snow, dirt, etc. quickly through the platform surface. [C] → Steel platform frame filled with aluminium profiles with non-slip ripples.
3a	<b>Platform wings</b> [OWU002 = vertical split platform]: the platform incorporates 2 articulated platform sections that swing down and form a closed platform surface when the lift is deployed in its work position; and swing up and create an open space between the lift arms when the lift is stowed in its travel position.
3b	<b>Platform main section</b> [OWU003 = horizontally foldable platform]: inboard main section of the foldable platform, attached to the lift arms.

3c	<b>Foldable point</b> [OWU003 = horizontally foldable platform]: foldable point of the platform, folded automatically as the platform is deployed or stowed.
4	<b>Bridge plate:</b> plate mounted at the inboard platform edge, used to bridge any gap between the platform and the vehicle floor when the platform is raised to its maximum height.
5	<b>Roll stop:</b> roll stop mounted at the outboard platform edge. The roll stop is tilted up automatically when the platform leaves the ground, it is tilted down automatically when the platform touches the ground. [W] → The roll stop prevents the wheelchair from slowly and unexpectedly rolling off the platform during lifting and lowering. It is not designed to stop fast and powered movements. See also 7.4 on page 22
6	<b>Guard rails [W]:</b> fall protections at both sides of the platform, protecting the wheelchair occupant and his attendant from falling off the platform. The guard rails are integrated in the lift arms. They are deployed and stowed automatically in synchronisation with the movement of the platform.
7	<b>Flashing platform lights:</b> used to make the platform visible to other parties in traffic.
8	<b>Platform lock:</b> Mechanical lock to prevent the platform from falling open in case of an accidental loss of hydraulic pressure. 3 types of locks are available: <ol style="list-style-type: none"> <li>1. Standard ref. OWF014.1: lock with gas cylinder mounted on 1 side only. This lock only engages in case of a slow hydraulic pressure loss. In normal conditions at full pressure, it remains inactive.</li> <li>2. Option OWF014.2: same as above, but mounted on both sides of the lift.</li> <li>3. Option OWF015: Lock with springs instead of gas cylinders. This lock engages automatically when platform is closed, and must be released manually every time before opening the platform.</li> </ol>
9	<b>Wander lead with spiral cable:</b> control box to execute all functions DEPLOY – UP – DOWN - STOW. [W] → 3-button wander lead with a safety stop at the vehicle floor prior to stowing the platform [= ref. OWE002]. A 4-button execution [= option OWE003] is available as an option. [C] → 2-button wander lead with for all 4 functions. A 3-button execution [= option OWE002] and 4-button execution [= OWE003] are available as an option.
10	<b>Hydraulic power pack:</b> contains the electric motor driving the hydraulic pump, the oil tank, and the control valves.

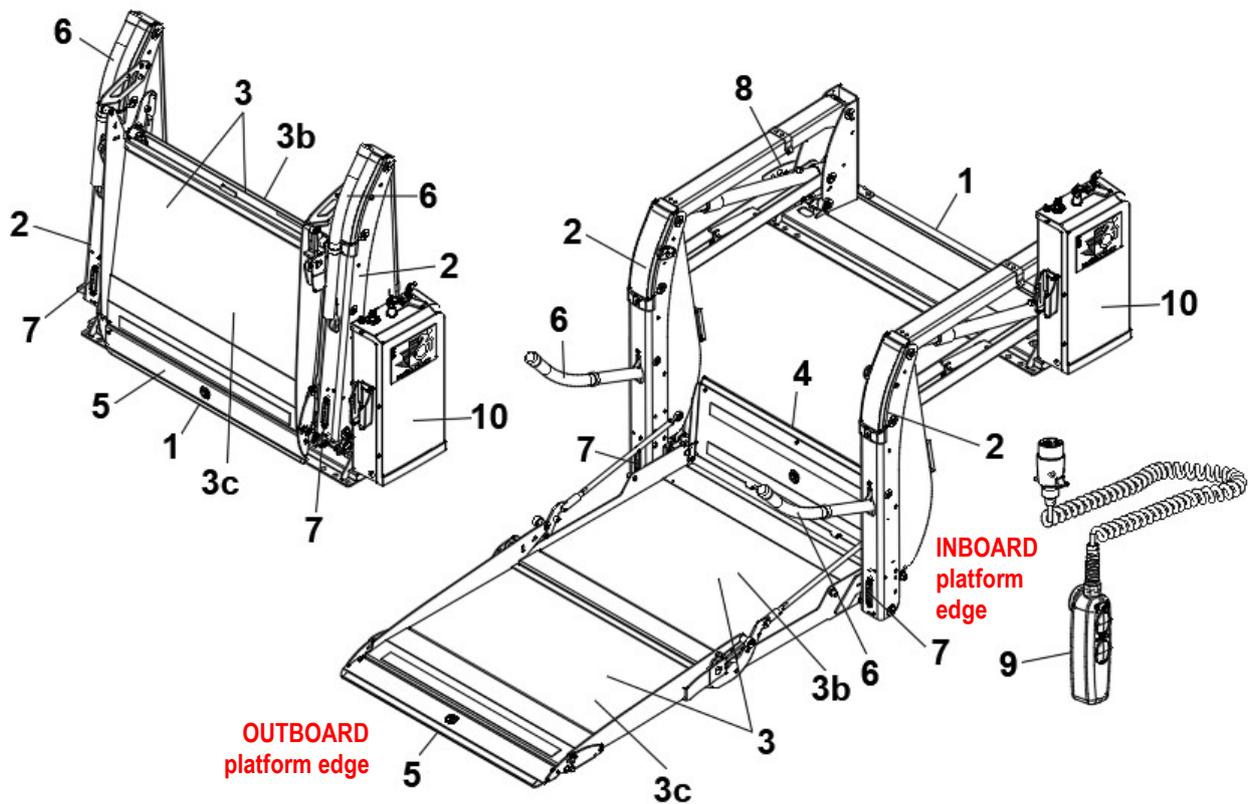
### DH-PH2\* • TWIN ARM LIFT WITH STANDARD PLATFORM • TERMINOLOGY



**DH-PH2\* + OWU002 • TWIN ARM LIFT WITH VERTICAL SPLIT PLATFORM • TERMINOLOGY**

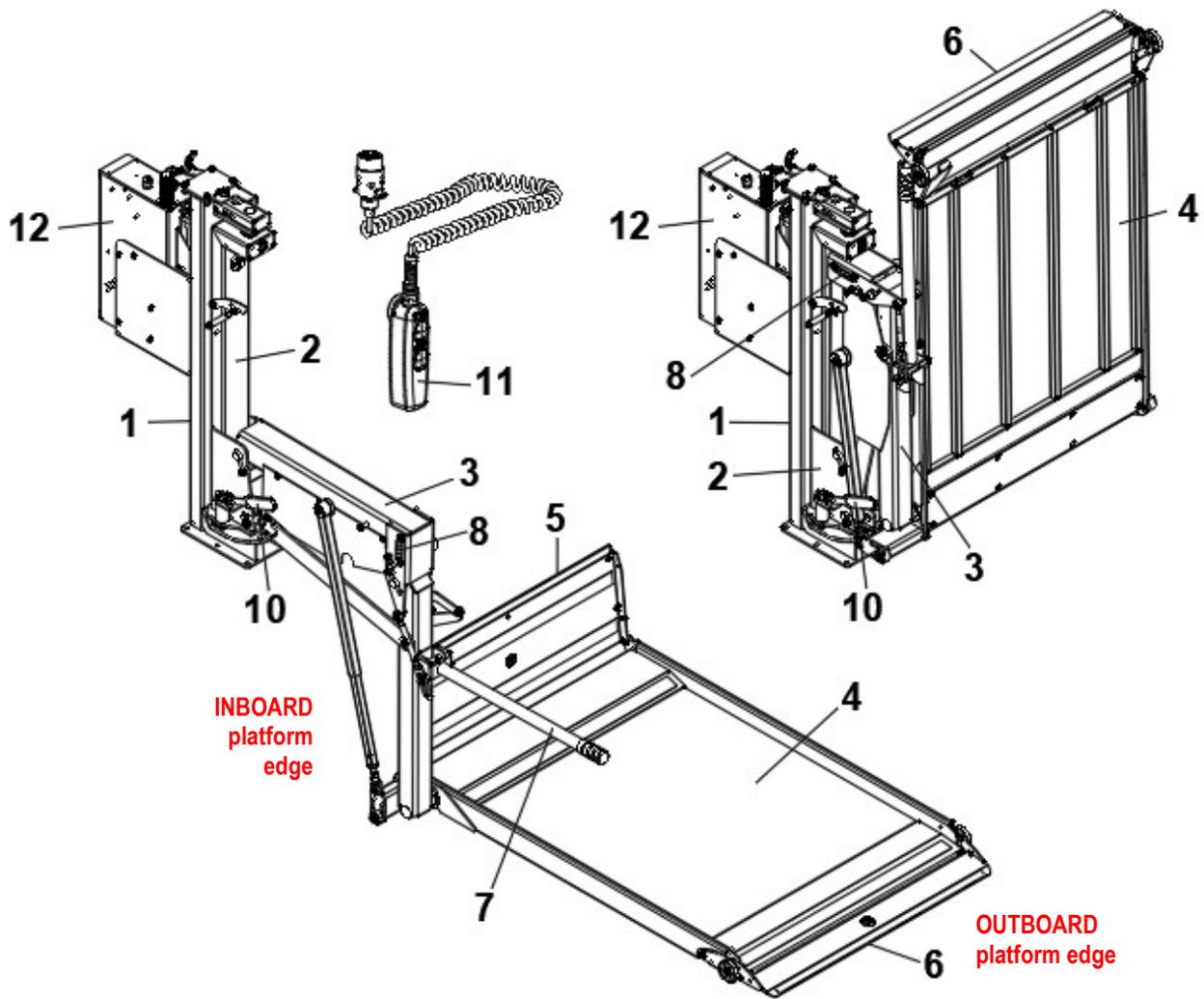


**DH-PH2\* + OWU003 • TWIN ARM LIFT WITH HORIZONTALLY FOLDABLE PLATFORM • TERMINOLOGY**



See figure below for parts corresponding to numbers in this table

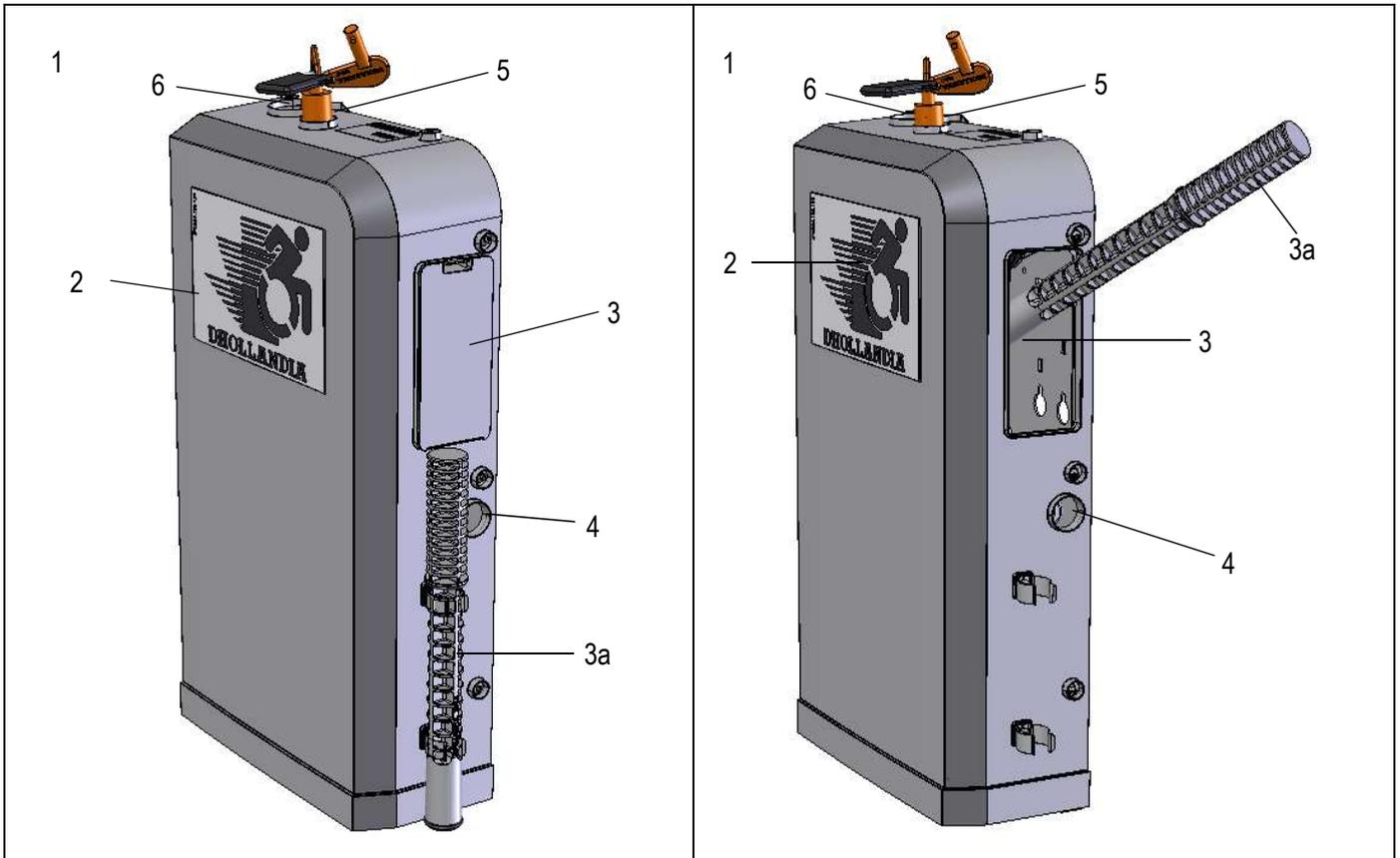
#	Description
1	<b>Main column:</b> steel assembly incorporating the lift frame, lift arm and lift cylinder. The main column is mounted in a fixed position on the vehicle floor and additionally attached to the side of the vehicle body. Following types are available: <ol style="list-style-type: none"> <li>1. Standard: fixed column. The main column and lift frame are one and the same assembly. The platform has only 1 travel position just in front of the vehicle doors.</li> <li>2. Option OWU006: free-access execution. The lift frame can pivot on the main column. The platform can swing from a travel position against the side of the vehicle body to a work position in the door aperture.</li> </ol>
2	<b>Lift frame:</b> steel assembly incorporating the lift arm and lift cylinder, who together carry the platform.
3	<b>Lift arm + lift cylinder:</b> a single lift arm actuated by a lift cylinder, used to lift / lower the platform and its load (= functions UP / DOWN).
4	<b>Platform:</b> carries the load during loading / unloading, lifting / lowering. It is equipped with a bridge plate at the inboard platform edge and a roll stop at the outboard platform edge. The guard rail for the platform is integrated in the lift arm. [W] → Platform in mesh steel, evacuating rainwater, snow, dirt, etc. quickly through the platform surface. [C] → Steel platform frame filled with aluminium profiles with non-slip ripples.
5	<b>Bridge plate:</b> plate mounted at the inboard platform edge, used to bridge any gap between the platform and the vehicle floor when the platform is raised to its maximum height.
6	<b>Roll stop:</b> roll stop mounted at the outboard platform edge. The roll stop is tilted up automatically when the platform leaves the ground, it is tilted down automatically when the platform touches the ground. [W] → The roll stop prevents the wheelchair from slowly and unexpectedly rolling off the platform during lifting and lowering. It is not designed to stop fast and powered movements. See also 7.4 on page 22
7	<b>Guard rail [W]:</b> fall protection at the side of the platform, protecting the wheelchair occupant and his attendant from falling off the platform. The guard rail is integrated in the lift arms. It is deployed and stowed automatically in synchronisation with the movement of the platform.
8	<b>Flashing platform lights:</b> used to make the platform visible to other parties in traffic.
9	<b>Platform lock:</b> Mechanical lock to prevent the platform from falling open in case of accidental loss of hydraulic pressure. The lock incorporates a gas cylinder and only engages in case of a slow hydraulic pressure loss. In normal conditions at full pressure, it remains inactive.
10	<b>Pivot lock</b> [OWU006 = pivoting frame]: unlock and lock the pivot lock to pivot the lift frame from a travel position against the side of the vehicle body to a work position in the door aperture and vice versa.
11	<b>Wander lead with spiral cable:</b> control box to execute all functions DEPLOY – UP – DOWN - STOW. The wander lead features 2 buttons for 4 functions.
12	<b>Hydraulic power pack:</b> contains the electric motor driving the hydraulic pump, the oil tank, and the control valves.



## POWER PACK • TERMINOLOGY

See figure below for parts corresponding to numbers in this table

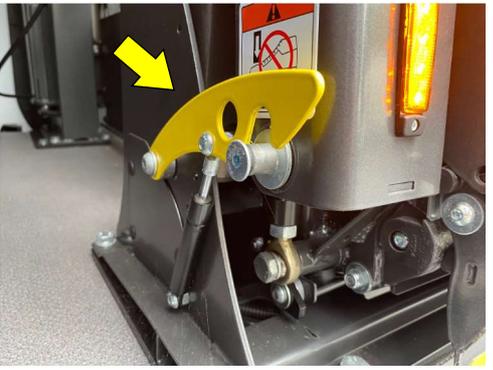
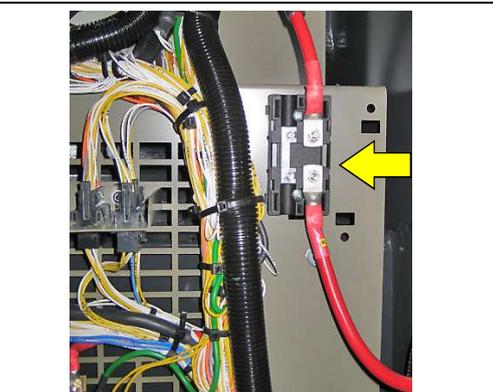
#	Description
1	<b>Power pack:</b> sealed box containing the electric motor and hydraulic pump, the oil tank, control valves, electronic control unit and various emergency controls that can be operated in case of an electrical power failure.
2	<b>Removable cover:</b> can be removed to get access to the electric motor and hydraulic pump, the oil tank, control valves and electronic control unit.
3	<b>Hydraulic hand pump:</b> manual back-up pump to lift the platform in case of an electrical power failure (= function UP). The lever [# 3a] for the hand pump is stored at the front face of the cover of the power pack.
4	<b>Emergency Descent button:</b> manual back-up button to lower the platform in case of an electrical power failure (=function DOWN).
5	<b>Main battery disconnect switch:</b> switch to switch the main power from the vehicle battery to the lift on / off. <ul style="list-style-type: none"> <li>• It will stop the lift in case of emergency involving hazard to the operator or wheelchair occupant.</li> <li>• It will stop the lift and reduce the risk of a power pack burn-out if the starter solenoid is stuck and the motor runs continuously (control button or contact damaged, starter solenoid short circuited by low voltage).</li> </ul>
6	<b>Electric connection:</b> plug for the connection of the wander lead with spiral cable

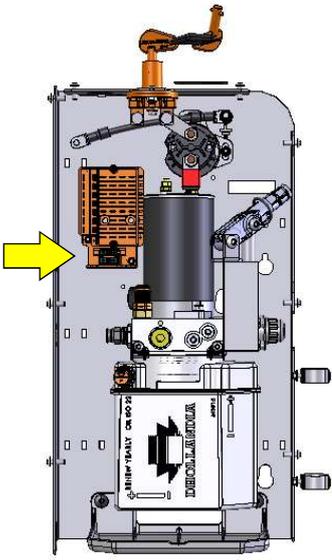
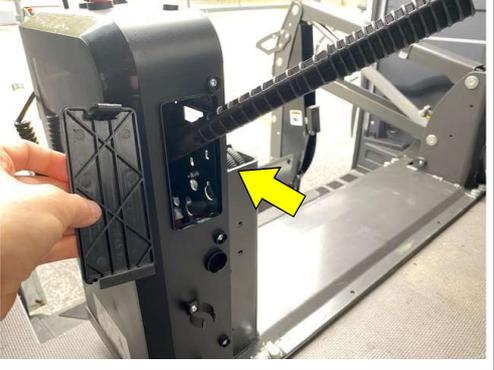


## 6.2 SAFETY DEVICES

- DHOLLANDIA lifts are equipped with a multiple safety devices to enable its intended use with a maximum degree of safety for the operator, the wheelchair occupant on the platform and any incidental bystanders. The following safety devices are incorporated on the DH-P\*... Series:

N°	Description	Image
1	<p><b>Non-slip surface:</b> the platform surface incorporates a non-slip profiling to prevent the operator and platform occupants from slipping and falling.</p> <p>[W] → Platform in mesh steel, evacuating rainwater, snow, dirt, etc. quickly through the platform surface.</p> <p>[C] → Steel platform frame filled with aluminium profiles with non-slip ripples.</p>	
2	<p><b>Roll stop:</b> roll stop mounted at the outboard platform edge. The roll stop is tilted up automatically when the platform leaves the ground, it is tilted down automatically when the platform touches the ground.</p> <p>The roll stop prevents the wheelchair from slowly and unexpectedly rolling off the platform during lifting and lowering. It is not designed to stop fast and powered movements. See also 7.4 on page 22</p>	
3	<p><b>Guard rail(s) [W]:</b> fall protections mounted at both sides of the DH-PH2* platform (*), protecting the wheelchair occupant and his attendant from falling off the platform. The guard rails are deployed and stowed automatically in synchronisation with the movement of the platform.</p> <p>(*) 1 guard rail only on the 1-arm lift DH-PH1*</p>	
4	<p><b>Bridge plate:</b> plate mounted at the inboard platform edge, used to bridge any gap between the platform and the vehicle floor when the platform is raised to its maximum height.</p> <p>The bridge plate tilts down automatically as the platform approaches the vehicle floor. It tilts up automatically as the platform lowers to the ground.</p> <p>It also forms a toe-guard for the operator and the wheelchair occupant while travelling up / down on the platform.</p>	

5	<p><b>Flashing platform lights:</b> used to make the platform visible to other parties in traffic.</p>	
6	<p><b>End stop for STOW [W]:</b> DH-PH2* wheelchair lifts are supplied with a 3-button wander lead and a safety stop at the end of each lift movement (= UP) before the platform can be closed (= STOW).</p> <p>On DH-P* lifts equipped with a 2-button wander lead, the platform will stop at the vehicle floor if the platform is loaded and the UP button of the wander lead released upon arrival. The platform will continue to close (= STOW) if the platform is empty and the UP button kept activated.</p>	
7	<p><b>Platform lock:</b> Mechanical lock to prevent the platform from falling open in case of a slow loss of hydraulic pressure.</p> <p>See also terminology description above for differences between DH-P2 / PH2* and DH-P1 / PH1*.</p>	
8	<p><b>Main battery disconnect switch:</b> switch to switch the main power from the vehicle battery to the lift on / off.</p> <ul style="list-style-type: none"> <li>• It will stop the lift in case of emergency involving hazard to the operator or wheelchair occupant.</li> <li>• It will stop the lift and reduce the risk of a power pack burn-out if the starter solenoid is stuck and the motor runs continuously (control button or contact damaged, starter solenoid short circuited by low voltage).</li> </ul>	
9	<p><b>Main battery fuse:</b> a main fuse 100 – 150A is supplied by the vehicle manufacturer or by DHOLLANDIA. It protects the main battery cable from the batteries to the power pack of the lift against short circuits and amperage peaks.</p>	

10	<p><b>15A fuse:</b> lighter fuses are used to protect the control unit, associated wires and the printed circuit against short circuits and amperage peaks.</p>	
11	<p><b>Emergency descent button:</b> manual back-up button to open (= DEPLOY) and lower (= DOWN) the platform in case of an electrical power failure.</p>	
12	<p><b>Hydraulic hand pump:</b> manual back-up pump to lift the platform in case of an electrical power failure (= UP).</p>	
13	<p><b>Pressure relief valve:</b> safety device integrated in the power pack, enabling the manufacturer and the installer of the lift to limit the real lift capacity to the maximum rated capacity of the lift sold, and protect it against overload while lifting (= UP).</p>	
14	<p><b>Pressure compensated flow valves:</b> flow valves are integrated in the hydraulic circuits to ensure the platform lowers at a safe speed, both empty and when fully loaded.</p>	
15	<p><b>Decals:</b> the lifts are supplied with a number of operation decals, load diagrams and safety decals. Some of these decals are premounted by DHOLLANDIA on the lift. Some of these decals are supplied loose and shall be affixed by the installer near to the lift at a location clearly visible to the operator. The decals must be kept clean and legible at all times, and replaced whenever required.</p>	

## 7 SAFETY INSTRUCTIONS FOR USING THE LIFT

### 7.1 DO NOT USE THE LIFT WITHOUT ADEQUATE SAFETY AND OPERATOR TRAINING

- DHOLLANDIA lifts shall be exclusively used in accordance with the INTENDED USE as described in section 4 on page 4, within the limits of the applicable load chart, in compliance with the operator instructions and safety instructions in this manual.

#### WARNING

- Improper use of the lift will put the operator and other parties at great risk of serious bodily injury and death.
  - To reduce the risk of serious bodily injury to the operator and any bystanders, the use of the lift is restricted to skilled operators, who have been properly trained, and who know and understand the full contents of this manual.
  - To reduce the risk of serious bodily injury or death, THE OPERATOR MUST COMPLY WITH ALL SAFETY INSTRUCTIONS AND WARNING LABELS IN THIS SECTION AND THE ENTIRE MANUAL before and while operating the lift.
- The operator should follow all other policies and procedures applicable to the job situation including health and safety regulations, road and traffic regulations, as well as company procedures. The operator should not use the lift if he/she cannot use it in accordance with all applicable regulations and instructions.
  - The operator must be at least 18 years of age.

### 7.2 GENERAL SAFETY INSTRUCTIONS

#### WARNING

- To avoid serious bodily injury or death, the operator must use appropriate work clothes. NEVER wear loose-fitting clothes that may be trapped in the moving parts of the wheelchair lift. ALWAYS wear professional safety-toe shoes, protective gloves, and eye protection. Use of a hardhat is recommended.

Must



Recommended



- Slipping (and falling) can result in serious bodily injury and death. To prevent injury by slipping:



- ALWAYS wear professional safety-toe shoes with a good non-slip sole.
- DO NOT use the lift if it is covered with snow, mud, dirt, debris, liquids or other substances.
- DO NOT run on the platform.

- Tripping (and falling) can result in serious bodily injury and death. To prevent injury by tripping:



- DO NOT use lift platform as a step. NEVER leave the lift unattended in partially deployed position.
- Pay attention to protruding items on the platform surface at all times (ex. platform lights, roll stops and their levers, foreign objects, etc...).
- DO NOT run on the platform.

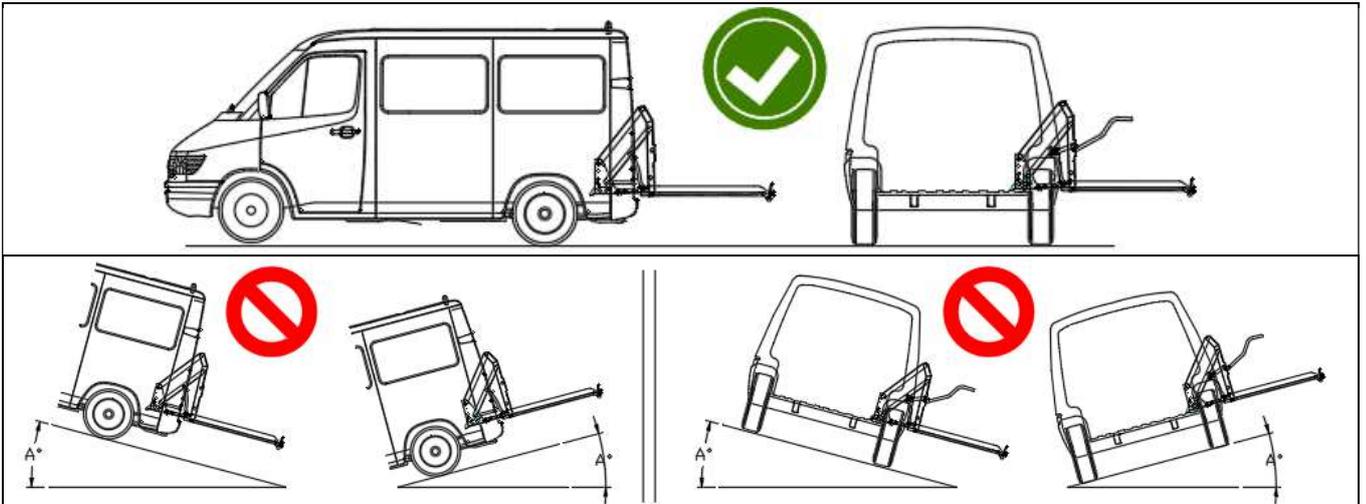
- Falling from the platform can result in serious bodily injury and death. To prevent injury by falling:



- Make sure your footing is solid and you maintain 3 points of contact (2 feet on the platform, 1 hand on a guard rail).
- Use guard rails where available. See 7.4 from page 22 onwards.
- NEVER move the vehicle while a person is standing on the platform or inside the vehicle body.
- NEVER use the platform as an elevated working platform.

## ⚠ WARNING

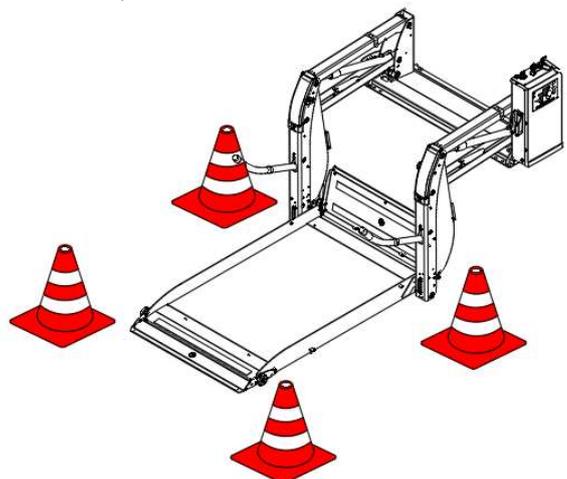
- Prior to operating the lift, the vehicle must be safely parked on level and solid ground, have the parking brake applied, and the engine switched off. Open any doors located in front of the lift and secure any moving parts of the vehicle body. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.



- Prior to deploying the platform, check if the lift can be used safely. Take precautions to ensure your own safety, and the safety of bystanders or other parties in traffic. Clear the working area of any objects that could potentially impede movement of the lift. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- To reduce the risk of serious bodily injury or death which may result from other vehicles when parked, ALWAYS make sure a safety distance of 16 ft or 5 m is kept between the back of the vehicle and the following vehicle.

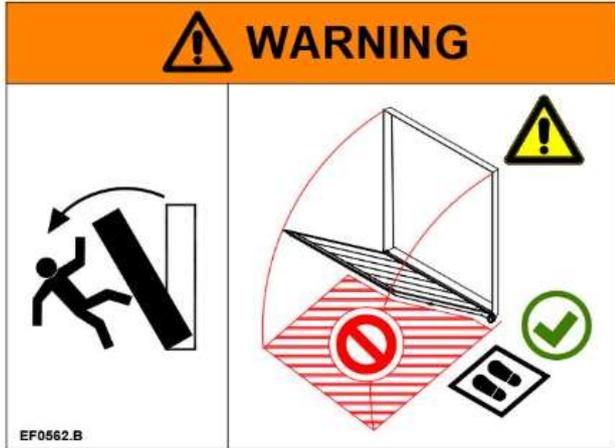


- Ensure that the vehicle cannot tip-over when putting weight on the platform. If the vehicle is equipped with mechanical or hydraulic stabilizing legs, deploy these before opening the platform. Ensure that the stabilizing legs are positioned on solid even ground. In case of soft terrain (sand, gravel...), solid support blocks must be used under the stabilizing legs. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- To reduce the risk of serious bodily injury or death, ALWAYS make sure the platform is clearly visible to other persons from all approach directions. The lifts are equipped with flashing platform lights. Nevertheless, DHOLLANDIA recommends the use of 4 warning cones, placed around the work area of the platform.
- To reduce the risk of serious bodily injury or death, make sure the working zone is sufficiently lighted.



## ! WARNING

- Inspect the lift prior to each use. If any unsafe condition exists or unusual noises or movements are noticed, DO NOT use the lift and contact an authorized DHOLLANDIA service agent for repair. Please see 'pre-trip inspection' procedures under 7.6 from page 25 onwards.
- Read and comply with all warning decals, pictograms and instructions affixed to the lift. Failure to abide by warnings and instructions may result in serious bodily injury or death.
- The lift must not be used if the operator is intoxicated, impaired or distracted in any way. NEVER use a phone or mobile device when operating the lift.
- The lift shall be used by means of original control units only. Operating the lift with unauthorized control units will increase risk of serious bodily injury or death to the operator or any bystanders.
- Limit the operation of the lift to one single operator. Operation of the lift by more than one operator at a time may cause confusion and increase the risk of serious bodily injury or death.
- To prevent people from being hit by the platform, by objects falling off the platform; being caught in pinch points or being pinched by the moving parts of the lift:

	<p>→ Keep visual control over the entire working area of the lift and its platform at all times, including the area <b>DIRECTLY BEHIND</b> and <b>UNDER</b> the platform.</p>
	<p>→ Upon deployment, <b>DO NOT</b> allow any other person to stand in the proximity of the lift and its platform. <b>ENSURE AT ALL TIMES THAT NOBODY STANDS UNDER OR WITHIN REACH OF THE MOVING PLATFORM.</b></p> <p>→ Prior to opening the doors, make sure that the lift has not lost its hydraulic pressure and is not leaning against the doors. When opening the doors and deploying the platform, <b>ALWAYS</b> stand clear of the range of motion of the platform!</p> <div style="text-align: center;">  <p><b>EF0562.B</b></p> </div> <p>→ Upon lifting and lowering: <b>DO NOT</b> allow any other person, except the person to be lifted or lowered, to be in the proximity of the lift and its platform.</p>

- Careful supervision is necessary if used on behalf of, or near children.
- NEVER leave the lift unattended in open position. Before leaving the vehicle unattended, close the doors of the vehicle, stow the platform in its travel position and switch off the electrical power to the lift. Leaving the lift in open position unattended can result in serious bodily injury or death to unaware bystanders. See 8 from page 27 onwards for instructions on properly stowing platform into its travel position.
- NEVER move the vehicle with the lift in the open position. ALWAYS stow the lift in its travel position, close and secure the doors of the vehicle and switch off the electrical power to the lift before moving the vehicle. Failure to properly stow the lift in its travel position prior to moving the vehicle may result in serious bodily injury or death.

## **WARNING**

- Use of the lift near vehicular traffic may result in serious bodily injury or death from being struck by another vehicle. When operating the lift on or near a street or parking lot, be sure to stay clear of vehicular traffic. ALWAYS be sure to clearly identify to other drivers that the lift is in use. DHOLLANDIA recommends use of warning cones to clearly identify to drivers that the lift is being operated. When the lift is operated near vehicular traffic, wear working clothes in high-visibility colours and a retro-reflective safety vest.
- DO NOT raise the lift with the rear doors partially open. Doing so may damage the doors or the lift platform and may also result in serious bodily injury or death to the operator or any bystanders.
- Above all, USE GOOD COMMON SENSE when operating the lift. DO NOT operate the lift until the contents of this manual have been read and fully understood. Improper use of the lift increases the risk of serious bodily injury or death to the operator and any bystanders.

## ***NOTICE***

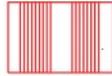
- The safety instructions in this manual are drawn up with an average, common use of the lift in mind.
- For specific applications or work conditions, other instructions might be appropriate to reach a higher level of safety. If contra-indications exist, a formal risk analysis must be performed by the client's health and safety management and safe work procedures for the drivers and operators must be issued.

### 7.3 DANGER ZONES, RISK OF CRUSH AND SHEAR INJURY

- There are several main danger zones on and around the platform, that can be hazardous to the operator and any other persons nearby.



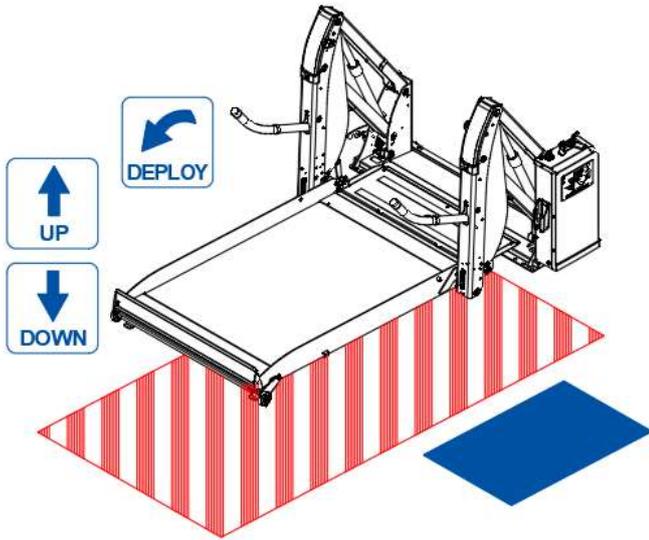
Correct operator position



Danger zone



ALWAYS stay clear of the area behind the platform and the range of motion of the platform.



#### WARNING

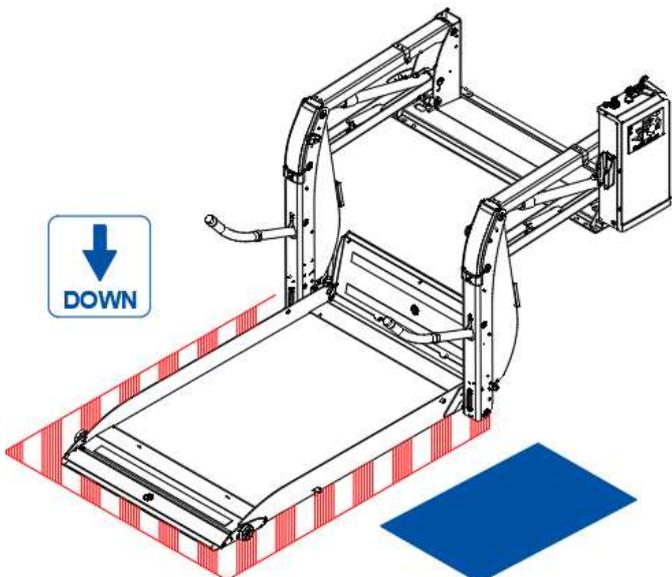


Impact by the platform or the moving parts of the lift will result in serious bodily injury or death. To prevent people from being hit by the platform, by objects falling off the platform or being caught in pinch points or being pinched by the moving parts of the lift:

- Keep visual control over the entire working area of the lift at all times, including the area directly behind and under the platform;
- DO NOT allow any person to stand near the lift and its platform. Ensure at all times that nobody stands under, or within reach of the moving platform and its load.



ALWAYS beware of the crushing zone between the lowering platform and the ground



#### WARNING

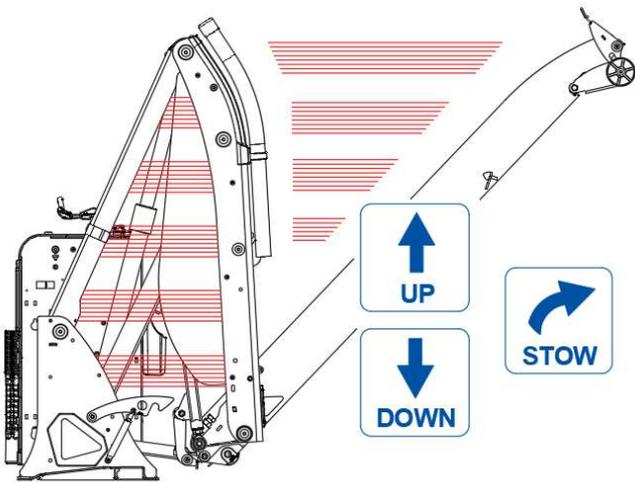


Lowering an empty or fully loaded platform on one's feet may result in serious bodily injury. To prevent people from having their feet crushed or sheared by the lowering platform:

- Keep visual control over the entire working area of the lift at all times, including the area directly behind and under the platform;
- When operating the lift from a position on the ground, ALWAYS stand at the side of vehicle body, at a safe distance of minimum 50 cm away from the moving platform.



ALWAYS beware of the crushing zone between rising platform and the lift arms, and between the moving parts of the lift generally.



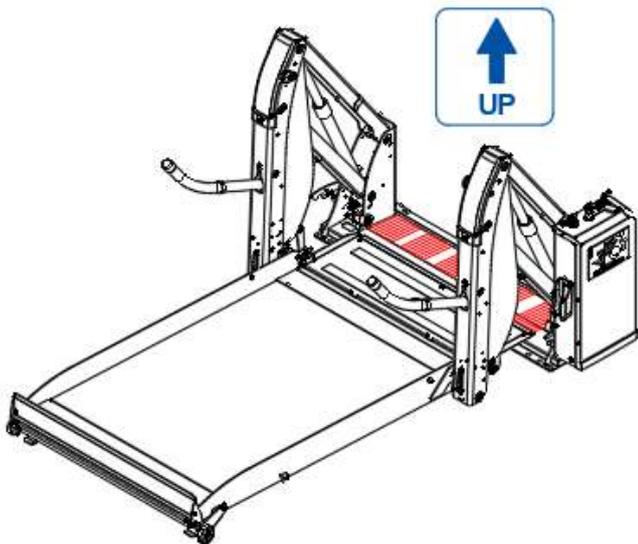
## ! WARNING



- The space between the various parts of the lift arms and lift cylinders diminishes as the platform rises. Parts of the body protruding into that area can be crushed or sheared while lifting, lowering or stowing the platform. This will result in serious bodily injury.
- Therefore, ALWAYS keep arms, feet and clothing clear of pinch points and moving parts of the lift.
- NEVER reach over or through any of the moving parts of the lift.
- ALWAYS keep visual control over the entire working area of the lift.



When standing inside the vehicle, ALWAYS beware of the crushing zone between the bridge plate and the vehicle floor.



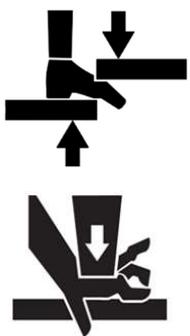
## ! WARNING



Impact by the platform or moving parts of the lift can result in bodily injury.

- Therefore, also when standing inside the vehicle, ALWAYS stay clear of the moving platform.
- ALWAYS stand at a safe distance from the bridge plate as it approaches the vehicle floor.

## ! WARNING



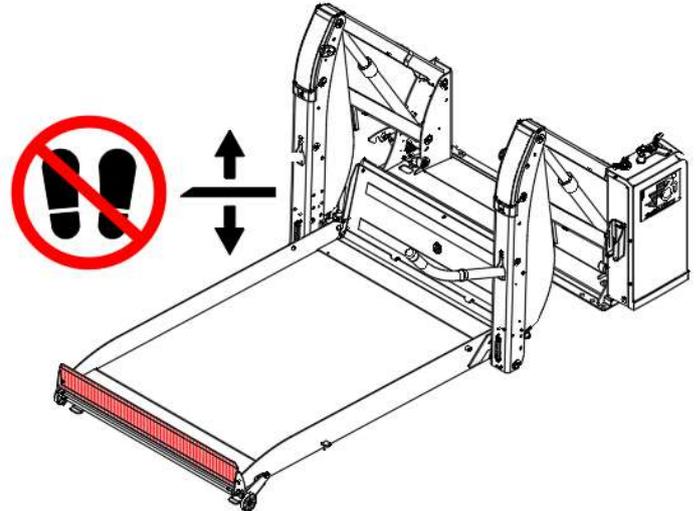
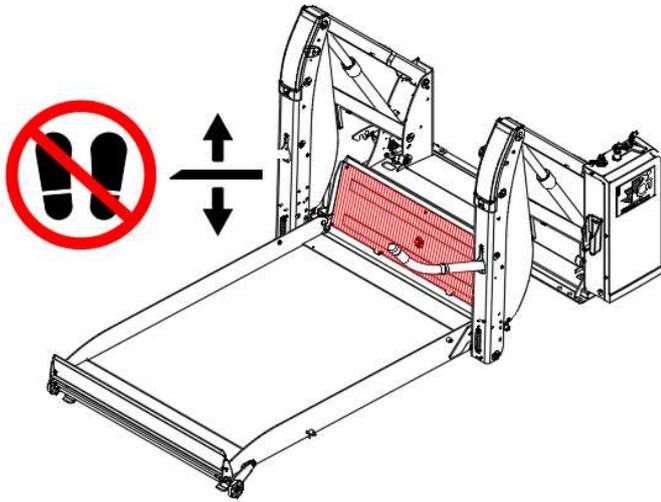
The operator or other persons approaching too close to these danger zones risk serious bodily injury or death by pinching, crushing or shearing of limbs, upper body or head. To prevent these hazards:

- ALWAYS stand clear of the range of motion of the platform and moving parts of the lift.
- Keep hands, feet and upper body clear of pinch points and moving parts of the lift.
- When standing on the platform, ALWAYS hold onto the guard rails.
- When operating the lift from a different position, ALWAYS stand on the ground at a safe distance from the platform and the moving parts of the lift.
- DO NOT allow any other person to stand near the lift and its platform.

## NOTICE

- NEVER allow anybody to stand on or hinder the bridge plate at the inboard platform edge when the platform is set in motion or is in motion.

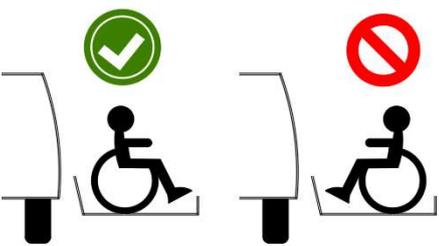
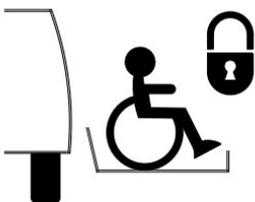
- NEVER allow anybody to stand on or hinder the roll stop at the outboard platform edge when the platform is set in motion or is in motion.



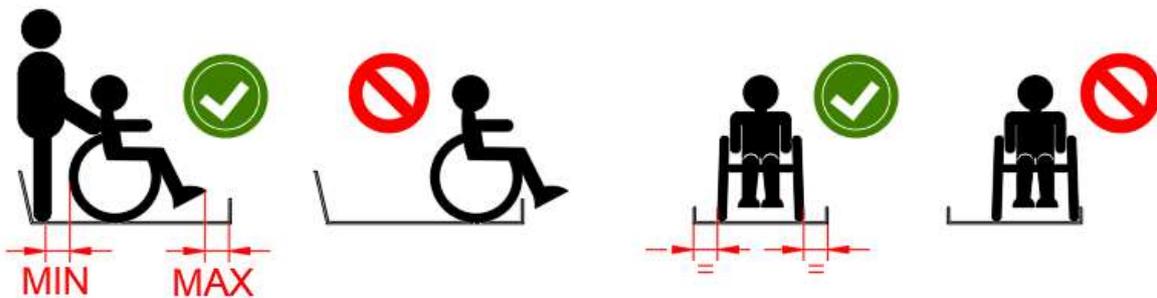
## ⚠ WARNING

- The operator and the wheelchair occupant or platform occupant SHALL NOT attempt to leave the platform before it has reached its final position for embarkation or disembarkation, either at the ground or at the vehicle floor.
- Any persons assigned to assisting the wheelchair or platform occupant with embarkation or disembarkation, MUST stay out of reach of the platform until it has reached its final position and has come to a complete stop, either at the ground or at the vehicle floor.

## 7.4 ADDITIONAL INSTRUCTIONS FOR THE WHEELCHAIR OCCUPANTS AND STANDEES

<b>⚠ WARNING</b>	
	<ul style="list-style-type: none"> <li>The roll stop prevents the wheelchair from slowly and unexpectedly rolling off the platform during lifting and lowering. It is NOT designed to stop fast and powered movements.</li> <li>When the wheelchair rolls and falls off the platform, this can cause serious bodily injury to the wheelchair occupants or any persons standing near the platform.</li> </ul>
	<ul style="list-style-type: none"> <li>To maximise the effectiveness of the roll stop, ALWAYS direct the small front wheels of the wheelchair towards to the roll stop. The roll stop is NOT designed to bring the big rear wheels of a wheelchair to a positive stop in case of abrupt or fast movement.</li> </ul>
	<ul style="list-style-type: none"> <li>ALWAYS board the platform slowly and cautiously.</li> <li>Do NOT ride against the roll stop as a means of braking.</li> <li>ALWAYS engage the parking brakes of the wheelchair prior to moving the platform.</li> <li>For electric wheelchairs, ALWAYS put the controls in neutral position and switch the power off. If possible, the controls should be switched off and set to manual mode before embarking the platform, and the wheelchair be pushed manually onto the platform to reduce and control the speed.</li> </ul>

- Make sure the wheelchair, wheelchair occupant and the standee don't interfere with the roll stop at the outboard platform edge and the automatic bridge plate at the inboard platform edge.
- Make sure the wheelchair occupant and standee are positioned as close as possible to the vehicle without interfering with the automatic bridge plate; and centrally between the 2 lift arms



- When exiting the vehicle, never back onto the platform. Always face outward, ensure the platform is safely in place at the loading floor of the vehicle, the guard rails are secured in the upright position and the roll stop is raised and secured in vertical position.
- Use extreme care in wet or slippery conditions. Wheelchair brakes are less effective if the platform and / or wheels of the wheelchair are wet or dirty.

<b>⚠ WARNING</b>	
	<ul style="list-style-type: none"> <li>A fall of the platform may cause serious bodily injury or death to the platform occupants.</li> <li>Standees on the platform MUST ALWAYS make sure their footing is solid.</li> <li>Standees and wheelchair occupants physically capable of doing so, MUST ALWAYS hold onto the guard rails at the side of the platform.</li> </ul>

## **WARNING**



- Whenever available, position and secure the wheelchair-equipped safety belt (torso restraint) before loading the wheelchair onto the platform.

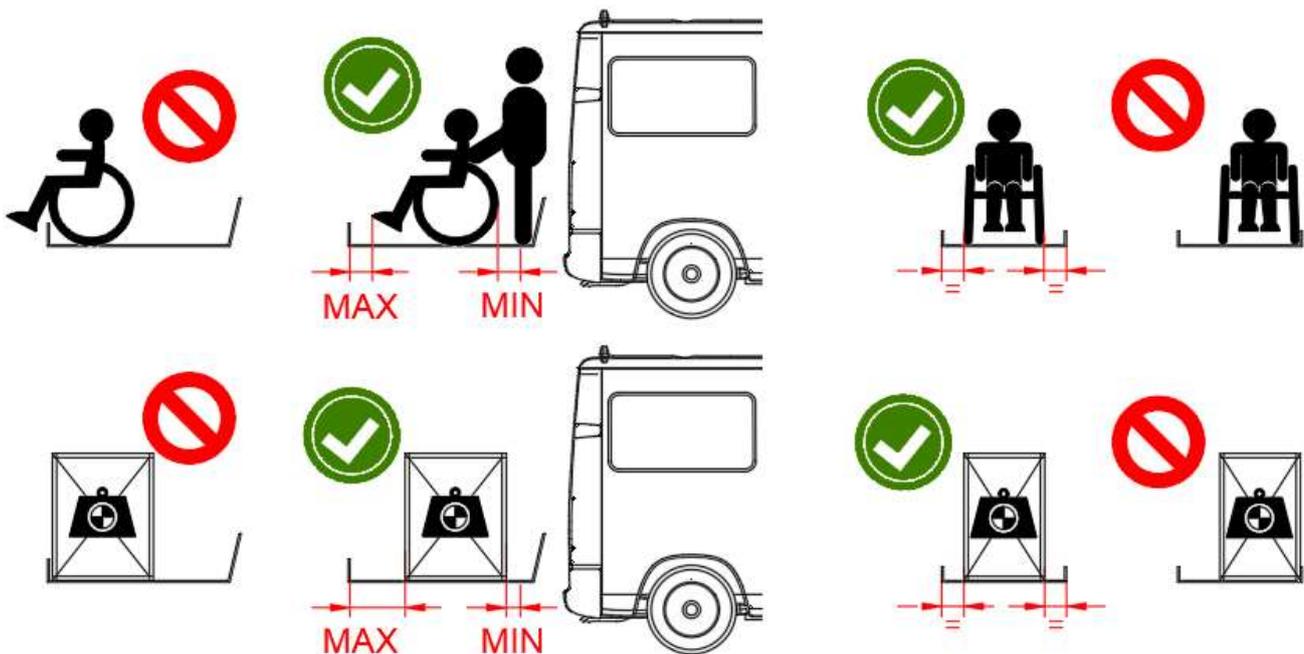
- Different disabilities require different types of wheelchairs and different types of wheelchair-equipped safety belts (torso restraint systems). It is the responsibility of the wheelchair occupant to have his or her wheelchair equipped with suitable safety devices.
- Wheelchair lift attendants should be instructed on any special needs and / or procedures required for the safe transport of the wheelchair occupants.
- Attendants on the platform pushing the wheelchair on and off, **MUST** face the same direction as the wheelchair itself, to maintain visual control over the wheelchair occupant while lifting and lowering.
- Standees alone shall face the direction of travel, toward the vehicle when embarking, or away from the vehicle when disembarking. They shall stand in the centre of the platform and hold onto the guard rail(s) at the side of the platform.
- It is **FORBIDDEN** to remove the guard rails or any other safety devices.

## 7.5 LOAD DIAGRAM

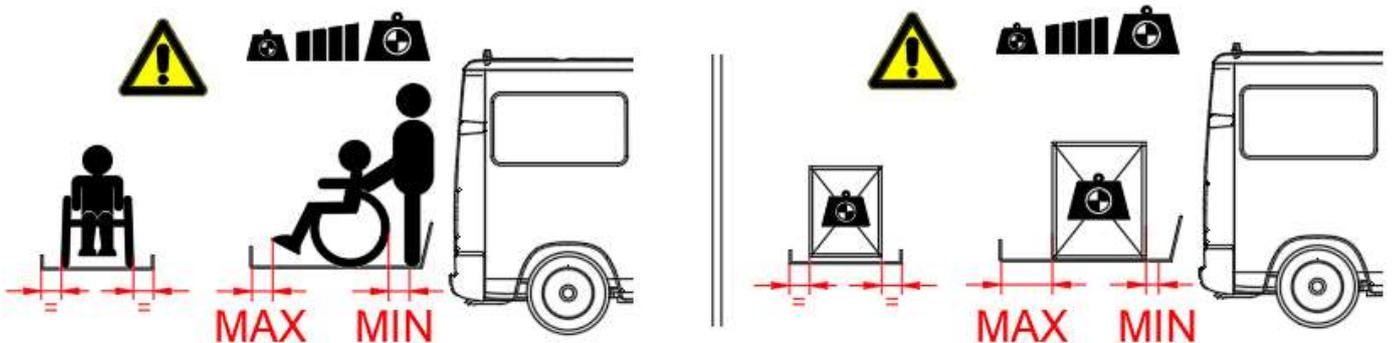
### NOTICE

- Wheelchair and commercial lifts are NOT designed to lift / lower weights corresponding to their **maximum rated capacity** over the **entire** surface of the platform. The maximum rated capacity is valid at a **center point of maximum load of 500 mm** behind the inboard platform edge. Behind that point, the maximum safe working load diminishes.
- When lifting (= function UP), the lift is normally protected against overload by the pressure relief valve in the hydraulic circuit. Most of overload events and resulting damage happen when lowering loads (= function DOWN).

- In order to prevent premature wear or damage of the lift, possibly resulting in accidents with injuries, it is important to follow the instructions below.
- The **maximum rated capacity** is indicated on the serial number decal and on the CE certificate of conformity. It is the maximum weight allowed to be carried on the platform in the best possible circumstances. This is under the following conditions:
  - In longitudinal direction: the load or wheelchair is placed as close as possible to the vehicle and the inboard platform edge.
  - In lateral direction: the load or wheelchair is placed in a central position between the lift arms (not out of center to one of the sides of the platform).



- Whenever the loading circumstances deviate from these best possible conditions, the safe working load (=SWL) decreases by 30%.



- The dimensions of the load or wheelchair should never exceed those of the platform. The load or wheelchair should never protrude beyond the perimeter of the platform.

## 7.6 RECOMMENDED DAILY PRE-TRIP INSPECTION

### **WARNING**

- Using a lift that is damaged or improperly serviced, can put the operator and bystanders at great risk of serious bodily injury and death.
- To avoid this risk, inspect the lift prior to the first use of each day. Ensure that all safety systems and all functions operate correctly, and that no maintenance or repair is required.
- If any unsafe condition exists or unusual noises or movements are noticed, DO NOT use the lift and contact an authorized DHOLLANDIA agent. [see Notice].
- DO NOT cover up any accidents or damage; it can be dangerous to you, your co-workers, and other persons.

### **NOTICE**

Authorized DHOLLANDIA service agents may be found at [www.dhollandia.com](http://www.dhollandia.com) or by calling your regional DHOLLANDIA distributor. See page 3 for contact info.

**Before operating the lift, the operator must conduct the following daily pre-trip inspection. Use caution: stay clear of the area directly behind and underneath the platform while conducting the daily pre-trip inspection.**

- Prior to opening the doors, make sure that the lift has not lost its hydraulic pressure and is not leaning against the doors. When opening the doors and deploying the platform, ALWAYS stand clear of the range of motion of the platform!
- Replace missing, worn or illegible warning decals immediately. See page 3 for contact info.
- Make sure the cabin switch and / or main battery disconnect switch on the power pack switch on and off accordingly.
- Make sure the battery is fully charged, the main fuse is in good condition, and battery terminal connections are corrosion-free and tight.
- Check the overall condition of the wander lead with spiral cable, its buttons and emergency stop (if so equipped). Confirm that all buttons swiftly return to the neutral position after releasing them. When engaging the emergency stop (if so equipped), all movements should be interrupted. It should not be able to re-initiate any movements as long as the emergency stop has not been reset.
- Check the overall condition of the cables entering the various control units and the cables to the power pack. Make sure cables are not chafed, lose or damaged.
- Ensure the cover of the power pack is properly installed and secured.
- Press STOW to pressurize the platform in the travel position. If the platform is actually closing, check if it remains closed and doesn't creep open again.
- Check the power pack, the lift frame and lift arms for visible oil leaks.

**Follow the instructions in section 8 from page 27 onwards to deploy the platform and continue the checks:**

- Visually inspect the general condition of the lift frame and lift arms. Look for cracks or deformations in the material and welds.
- Make sure all pivot pins in the lift frame, lift arms and platform are properly locked and secured.
- Visually inspect the general condition of the platform. Look for cracks or deformations in the material and welds.
- Verify and make sure the flashing platform lights are working OK.
- Inspect the automatic bridge plate at the inboard platform edge. Look for cracks or deformations in the material and welds. Test it. Make sure the bridge plate tilts progressively down towards the vehicle floor as the platform goes up, and vice versa. At the highest platform position, make sure the bridge plate provides a smooth and safe passage between the platform and the vehicle floor.
- Inspect the roll stop at the outboard platform edge. Look for cracks or deformations in the material and welds. Test it. Make sure the roll stop tilts down as the platform touches the ground. Make sure the roll stop tilts up and gets locked in the upright position as the platform lifts off the ground.
- [W] → Inspect the guard rails. Look for cracks or deformations in the material and welds. Test them. Make sure they can be secured in the upright position.

- Make sure the platform surface is clean and can be accessed safely. Remove any snow, mud, dirt, debris, or slippery liquids. Make sure you wear safety-toe shoes with a good non-slip sole.
- Check the lift cylinders for visible oil leaks. Follow the hydraulic pipes and fittings to the power pack. Make sure all wires and hydraulic pipes are undamaged, not pinched or chafed anywhere, and adequately secured with cable ties. Check for visible oil leaks.

**Perform all movements several times with an unloaded platform with all available control units. Use the operating instructions in section 8 for guidance.**

- Make sure all movements occur smoothly and quietly, without jerking motion or unusual noises. The functions DEPLOY – DOWN are based on gravity and shouldn't produce any significant noise. The function UP – STOW use the hydraulic power pack, the hydraulic motor and pump are audible during these functions.



**Remember: if any part of the pre-trip inspection reveals a need for service or repair**

- **DO NOT use the lift until it has been serviced or repaired by a qualified service technician.**
- **Switch OFF power at the main battery disconnect switch or cabin switch**

## 7.7 IMPORTANCE OF PREVENTATIVE MAINTENANCE

### **NOTICE**

- Competent and regular preventative maintenance is essential to the operational reliability of the lift as well as the safety of the operator and all bystanders.
- All maintenance and repair work must be performed by authorized DHOLLANDIA service agents and using original DHOLLANDIA replacement parts only.
- Please consult the separate MAINTENANCE AND REPAIR MANUAL for specific instructions regarding periodic maintenance.

- If a lift cannot be repaired immediately in case of breakdown, it must be put out of operation and secured against unauthorized use.
- If required, use the emergency procedures of section 9 on page 39 to manually stow the platform in its travel position. If this doesn't go smoothly, do NOT apply brutal force as this might cause physical damage to the lift.
- Avoid using the help of external devices (forklift, gantry crane, etc.) to stow a lift back in its travel position. When doing so, the platform will not be supported by its hydraulic cylinders. When trying to deploy it again, the platform will drop in free fall, without any possibility to stop the fall by means of the regular controls.

### **WARNING**



Incorrect handling in case of a breakdown, or impact by a falling platform, can result in serious bodily injury or death. To reduce the risk of injury:

- Close the platform lock and apply additional means to immobilize the platform (ratchet straps, hoists etc.).
- Attach a clear and highly visible warning to the platform and the external control box.
- Warn your supervisor and have the vehicle put out of service.
- Contact an authorized DHOLLANDIA service agent to repair the lift prior to any further use.

- To re-open the lift, use again an external device (forklift, gantry crane, etc.) for additional support. Or repair the breakdown first, bring the hydraulic system under pressure and release the platform locks after satisfactory testing of the hydraulic integrity. Follow the MAINTENANCE AND REPAIR MANUAL for all maintenance and repair works.

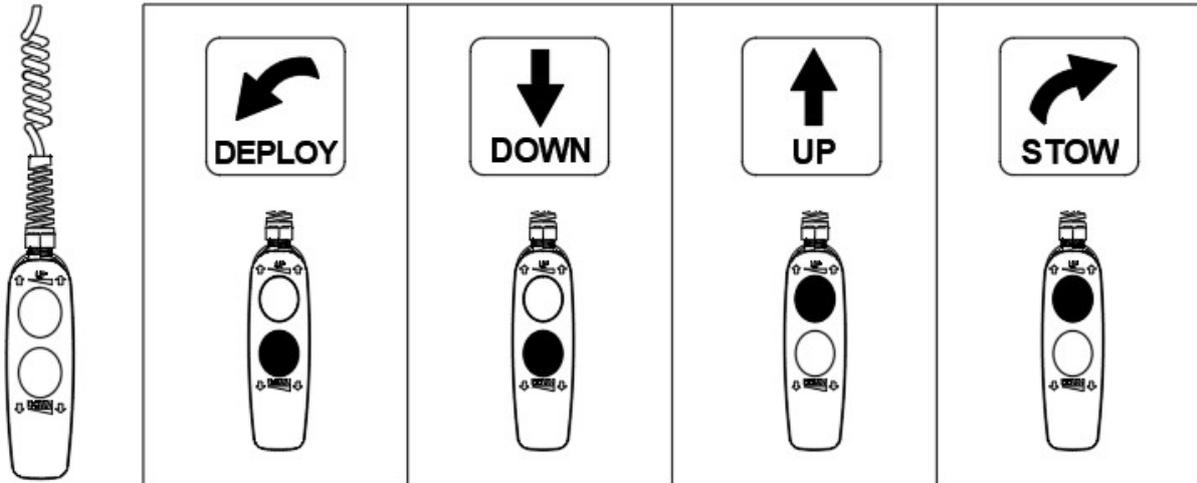
## 8 OPERATING INSTRUCTIONS – PRINCIPLES AND PROCEDURES

### 8.1 CONTROL UNITS

- The following types of controls are used on the DH-P\* lifts

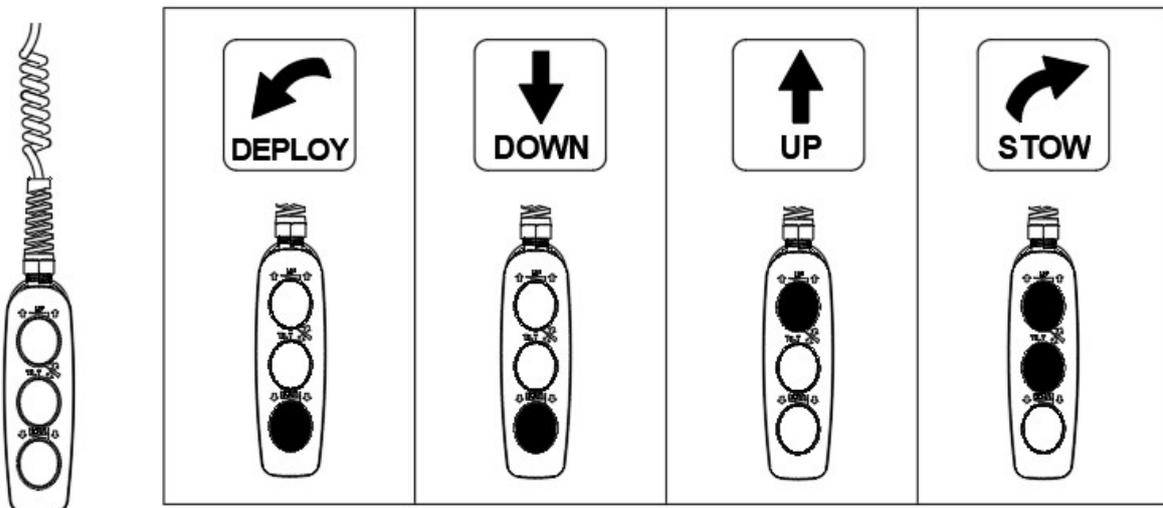
#### 8.1.1 Standard 2-button wander lead with spiral cable (ref. OAE001)

- This control unit has 2 buttons to control the functions DEPLOY – UP – DOWN - STOW.
- Press DEPLOY to open the platform. When pressing the DEPLOY button, the platform will first deploy from the vertical travel position to the horizontal work position, then continue down to the ground. When pressing the UP button, the platform will first raise from the ground to the vehicle floor. The platform will stop at the vehicle floor if the platform is loaded and the UP button released upon arrival. The platform will continue to close (= STOW) if the platform is empty and the UP button kept activated.
- Operation:



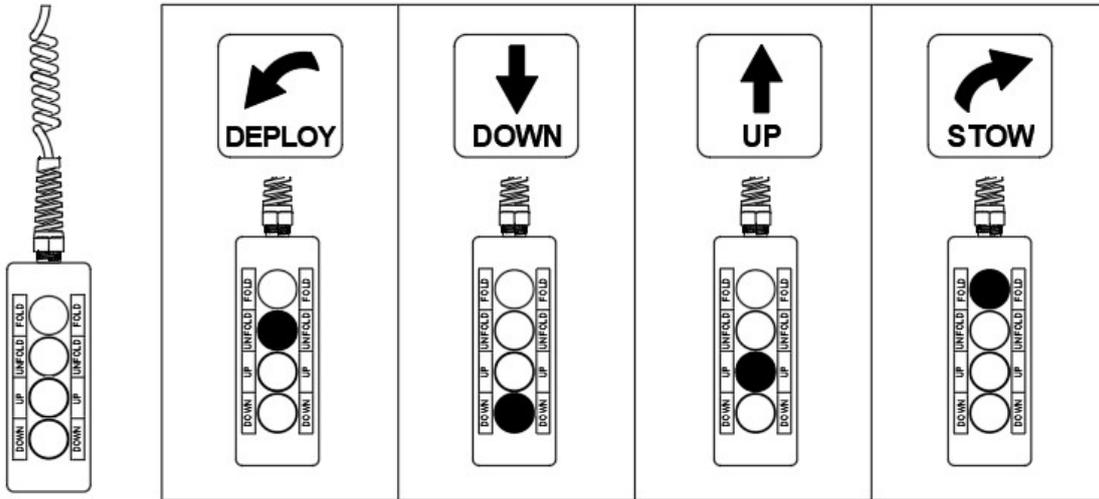
#### 8.1.2 Optional 3-button wander lead with spiral cable (ref. OWE002)

- This control unit is standard on DH-PH2\* wheelchair lifts, it is optional on the other DH-P\* lifts.
- It has 3 buttons to control the functions DEPLOY – UP – DOWN – STOW, and works in conjunction with an electrical end stop on the lift arm (see # 7 in section 6.2 on page 12).
- Operation: Press DEPLOY to open the platform. When pressing the DOWN button, the platform will first deploy from the vertical travel position to the horizontal work position, then continue down to the ground. When pressing the UP button, the platform will first raise from the ground to the vehicle floor and take a safety stop. Press the 2 upper buttons to close the platform in its travel position (= STOW).
- Operation:



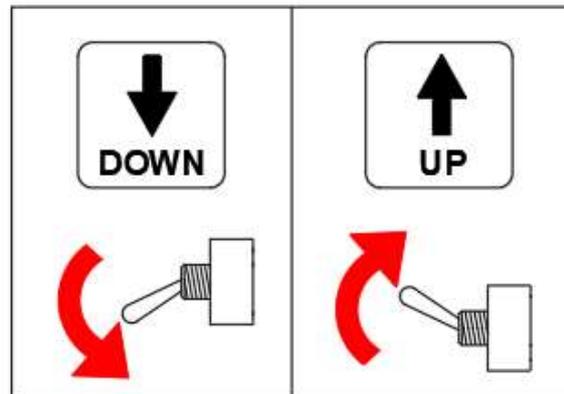
### 8.1.3 Optional 4-button wander lead with spiral cable (option OWE003)

- This control unit is optional on all lifts.
- It has 4 dedicated buttons to control the various functions DEPLOY – UP – DOWN – STOW.
- Operation:



### 8.1.4 Auxiliary toggle switch control for DH-PH2\* / DH-P2 lifts (option OWE001)

- An auxiliary toggle switch on one of the guard rails, is available as an option.
- Push the toggle switch upwards to lift the platform (= UP). Push the toggle switch down to lower the platform (=DOWN).
- Operation:



## **! WARNING**

- When using this toggle switch control to STOW the platform, the operator's arm or upper body could become pinched or crushed between the closing platform and the lift arms. This will result in serious bodily injury.
- Therefore, NEVER stow the platform by means of the toggle switch mounted on the guard rails.
- ALWAYS use the wander lead with spiral cable to stow the platform and stand on the ground at a safe distance on the side of the platform.

## 8.2 SWITCHING THE MAIN POWER ON/OFF

- Depending on configuration, the power to the lift is switched ON / OFF by means of a cabin switch, a main battery disconnect switch, or a combination of both.

### Cabin switch



Push the button to switch the electrical power to the wheelchair lift ON.

Push the button in opposite direction to switch the electrical power the wheelchair lift OFF.

### Main battery disconnect switch



Turn the key clockwise to switch the battery power ON.

Turn the key counter-clockwise to switch the battery power OFF.

## **NOTICE**

In case of combined system, (main battery disconnect and cabin switch) both must be switched on to activate the lift. Switching off only one of two will deactivate the lift, but it is strongly recommended to switch-off both. NEVER leave the main battery disconnect switch on while lift is not is use.

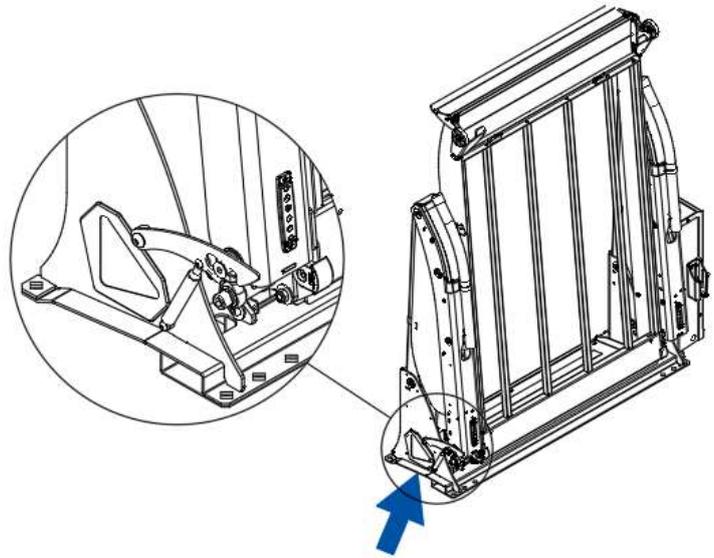
- Note: besides this industry-standard cabin switch, the vehicle manufacturer might add additional switches or safety features. Refer to the operation manual of the vehicle manufacturer for further detail.

### 8.3 PLATFORM LOCKS

- The DH-P\* lifts are available with 3 types of platform locks, with a different mode of operation.

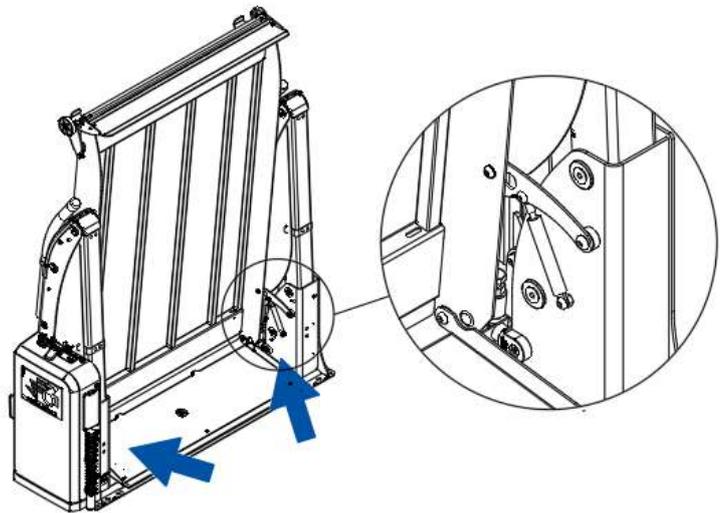
#### Automatic lock with gas cylinder mounted on 1 side only (ref. OWF014.1)

- Standard on all DH-P\* lifts
- This lock contains a gas cylinder, so that it only locks the platform in case of a slow hydraulic pressure loss. In normal conditions with the lift remaining at full pressure, this lock remains inactive.



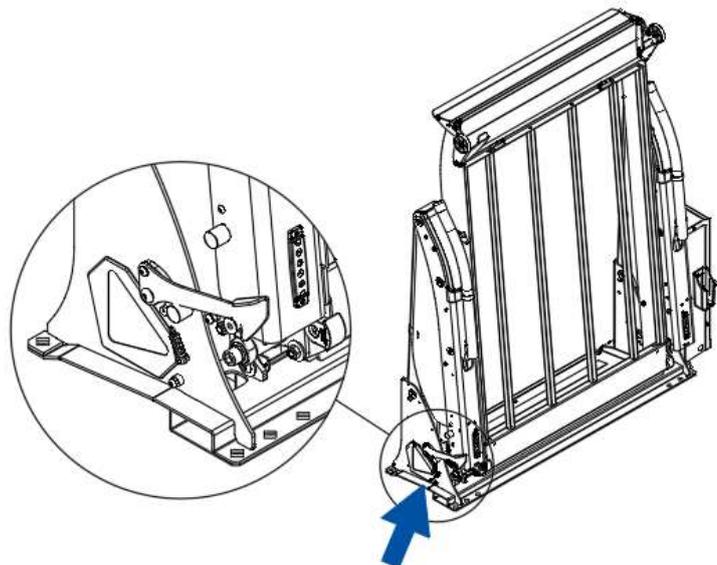
#### Automatic lock with gas cylinder mounted on 2 sides (ref. OWF014.2)

- Optional on DH-PH2\* / P2\* lifts
- These locks on both sides of the platform contain a gas cylinder each, so that they only lock the platform in case of a slow hydraulic pressure loss. In normal conditions with the lift remaining at full pressure, these locks remain inactive.



#### Manual lock with spring mounted on 1 side (ref. OWF015)

- Optional on DH-PH2\* / P2\* lifts
- This lock engages automatically when the platform is closed, and must be released manually every time before opening the platform.



- Prior to opening the platform (= DEPLOY), ALWAYS press STOW to pressurise the platform in its travel position. Only when you have checked if the platform remains properly pressurised in its travel position, you can safely open it (= DEPLOY).
- Do NOT open the platform lock or deploy the platform if the platform is visibly tilting down by itself.

## 8.4 OPERATION INSTRUCTIONS FOR DH-PH2\* / P2\* LIFTS

### **WARNING**

- Prior to operating the lift, ALWAYS take note of the safety features, door system, door interlocks etc. installed by the manufacturer of the vehicle and the operation instructions issued by him. These might have a significant influence on the safety of the operator and any persons lifted or lowered with the platform.
- Negligence can put the operator and other parties at great risk of serious bodily injury and death.

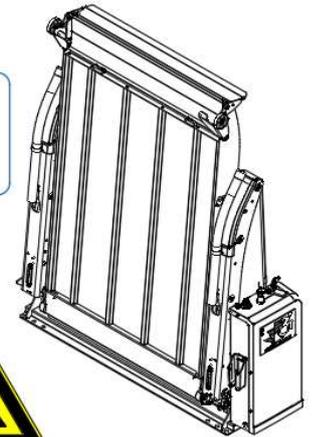
#### Deployment of the platform



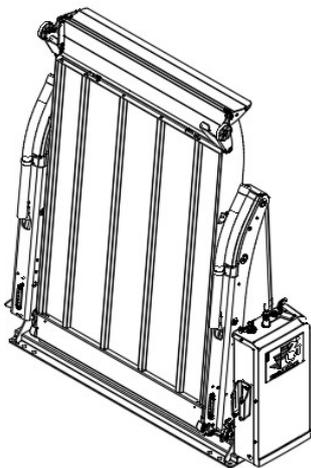
Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.



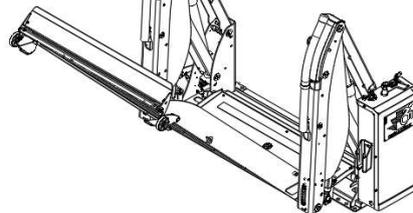
Switch ON the electrical power to the lift by means of the cabin switch and / or the main battery disconnect switch on the power pack.



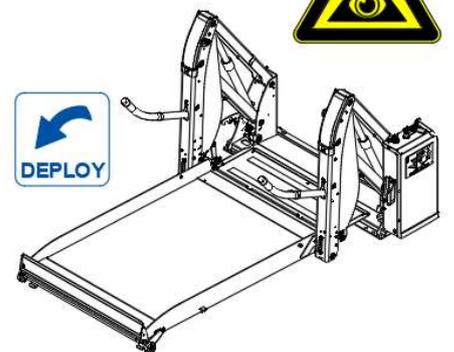
Press STOW. Check if the hydraulic system is building up pressure and the platform is pressing hard against the lift arms.



On lifts with automatic platform locks (ref. OWF014.1 – OWF014.2), check if the platform lock is disengaged. On lifts with a manual platform lock (ref. OWF015), manually release the platform lock. See also section 8.3 on page 30.

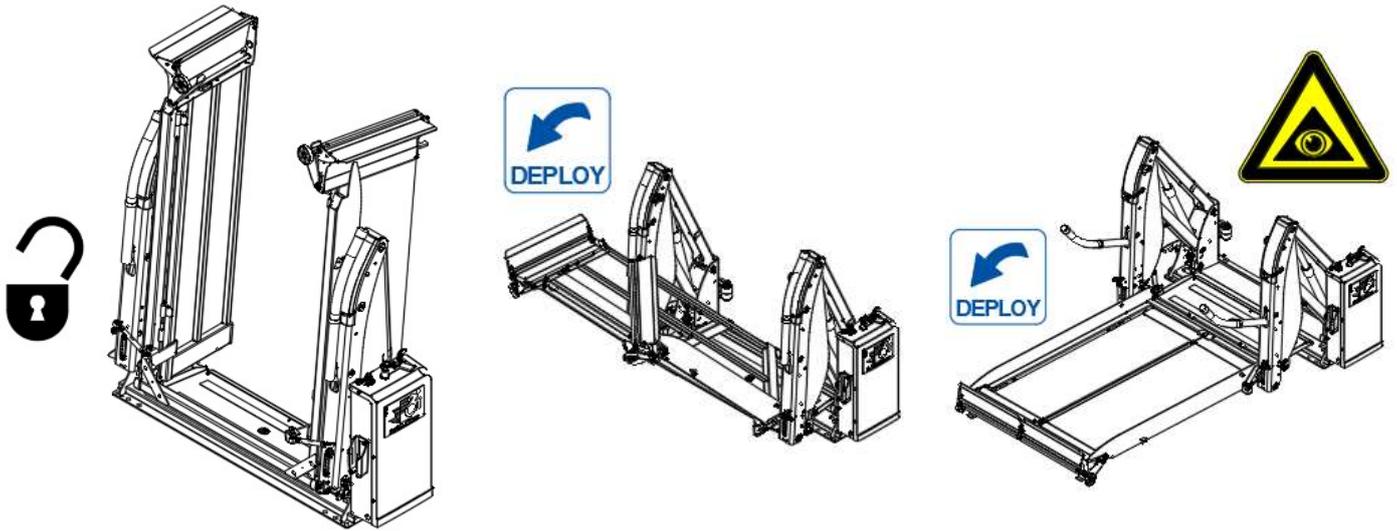


Stand on the ground at a safe distance from the range of motion of the platform. Press DEPLOY to open the platform to the horizontal work position.

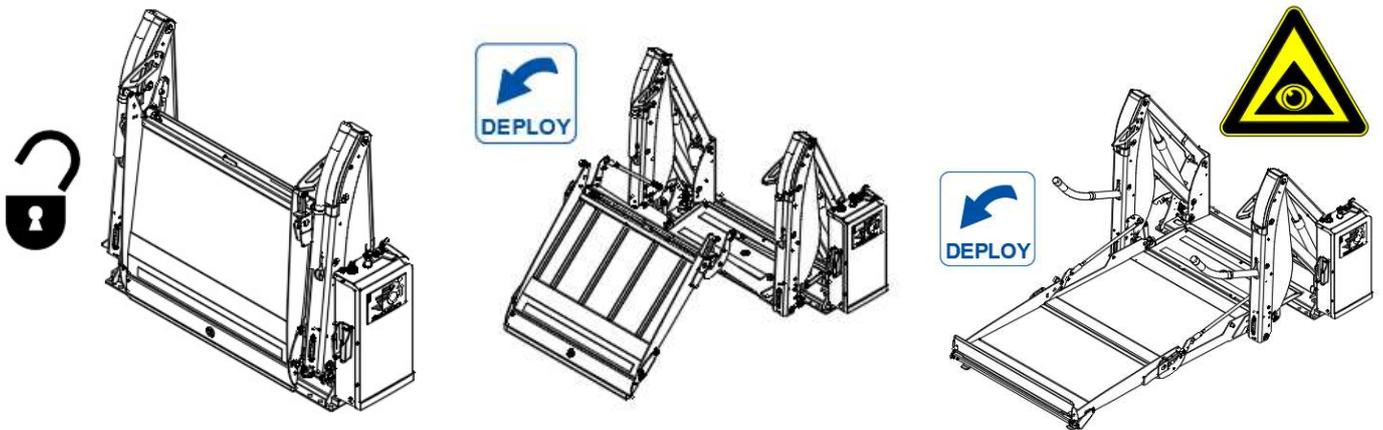


Check if the guard rails [W] are deployed in their active position. Check if the bridge plate is lined up with the vehicle floor. Make sure the lift can be used safely.





Note:  
 Option OWU002 = vertical split platform: upon deployment the platform wings will automatically fold down to form one firm platform surface by the time the platform is fully deployed into its horizontal work position.

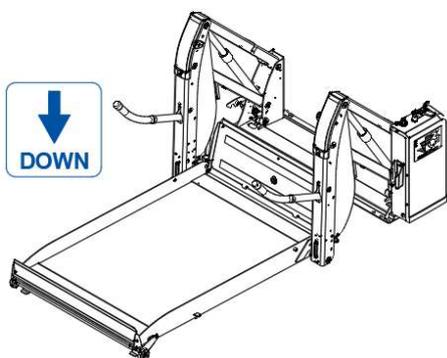


Note:  
 Option OWU003 = horizontally foldable platform: upon deployment, the platform main section and foldable point will automatically stretch out to form one firm platform surface by the time the platform is fully deployed into its horizontal work position.

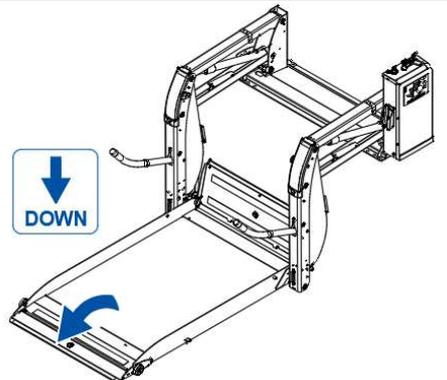
**Loading and unloading**



ALWAYS follow the safety instructions, operation instructions and load diagram.



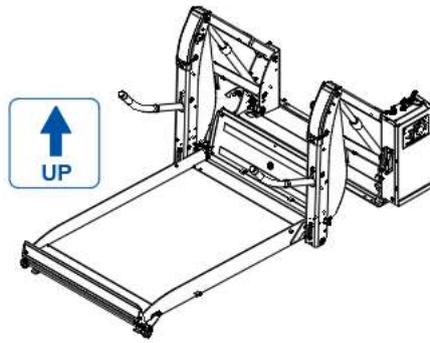
Press DOWN to lower the platform to the ground.



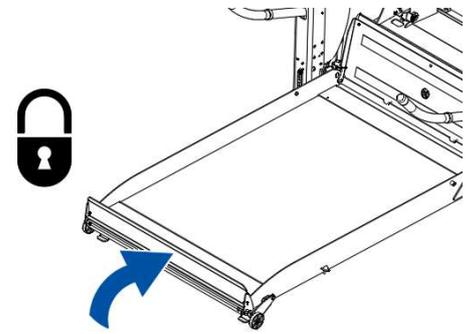
DO NOT step or ride off the platform before it has come to a stop at the ground, and the roll stop is fully tilted down.



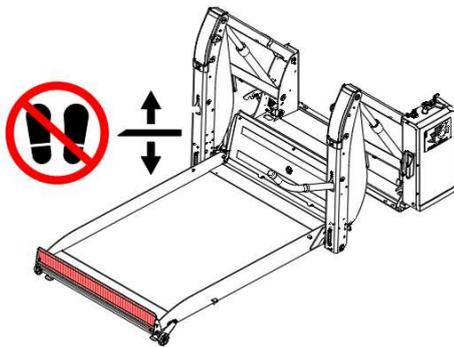
Load and unload at the ground, help wheelchair occupants embark and disembark in accordance with the instructions of section 7.4 from page 22 onwards.



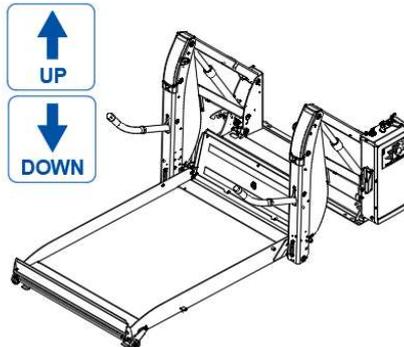
Press UP to raise the platform from the ground to the vehicle floor.



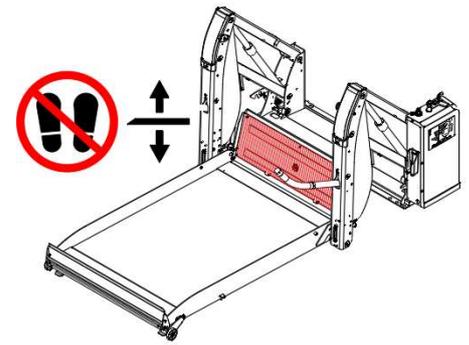
When the platform leaves the ground, ALWAYS make sure the roll stop is raised and secured in the upright position.



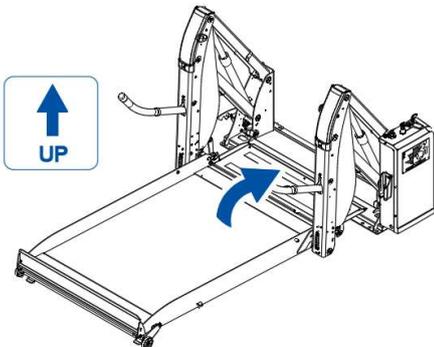
NEVER allow anybody to stand on, or hinder the roll stop at the outboard platform edge when the platform is set in motion or is in motion.



Lift (= UP) and lower (= DOWN) in accordance with the instructions in this manual.



While lifting (= UP), the bridge plate will tilt down automatically as the platform approaches the vehicle floor. DO NOT stand on the bridge plate before the platform has come to a complete stop.

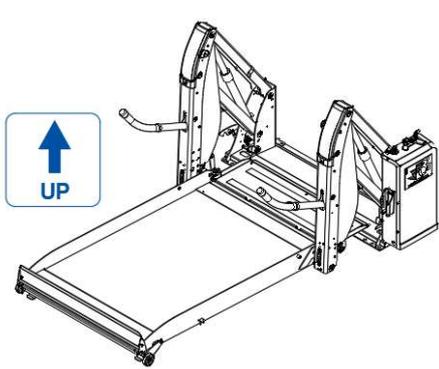


Press UP until the platform has come to a complete stop. DO NOT disembark before the bridge plate is level with the vehicle floor and is solidly supported by it from underneath.

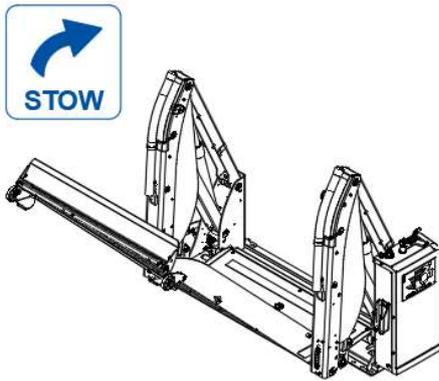


Load and unload at the vehicle floor, help wheelchair occupants embark and disembark in accordance with the instructions of section 7.4 from page 22 onwards.

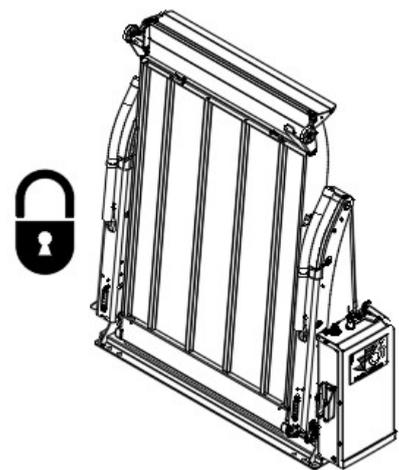
**Stowing the platform in travel position**



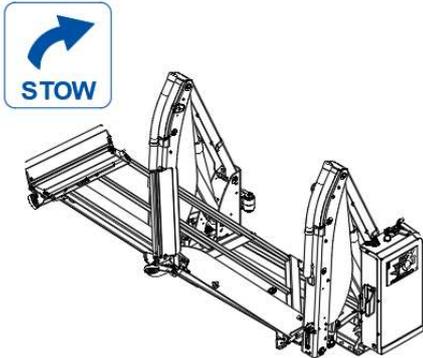
Press UP to raise the platform to the vehicle floor.



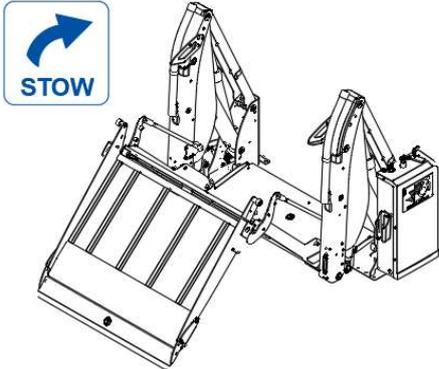
Stand on the ground at a safe distance from the range of motion of the platform. Press STOW to close the platform in its travel position. Release the buttons when you hear the platform turn in overpressure.



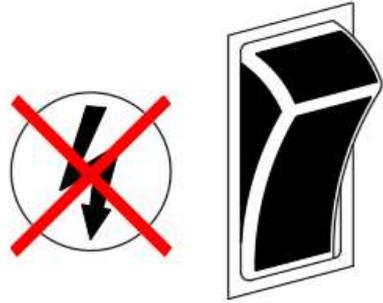
Lifts with automatic platform locks (ref. OWF014.1 – OWF014.2) do not require active engagement of the platform locks. These locks only engage in case of a slow hydraulic pressure loss. On lifts with a manual platform lock (ref. OWF015), the platform lock should engage automatically. Make sure the platform is locked in its travel position prior to closing the doors. See also section 8.3 on page 30.



Note: Option OWU002 = vertical split platform: upon stowage the platform wings will automatically swing open and create an open space between the lift arms by the time the platform is fully stowed in its travel position.



Note: Option OWU003 = horizontally foldable platform: upon stowage, the platform main section and foldable point will automatically fold together by the time the platform is fully stowed in its travel position.



Switch OFF the electrical power to the lift by means of the cabin switch and / or the main battery disconnect switch on the power pack.



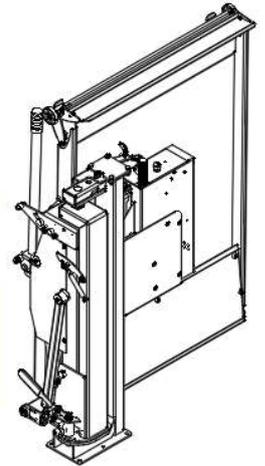
At all times during operation, release the activated button(s) to stop the platform from moving. Additionally switching off the cabin switch and / or the main battery disconnect switch will switch off the electrical power to the lift.

## 8.5 OPERATION INSTRUCTIONS FOR THE DH-PH1\* / P1\* LIFTS

### WARNING

- Prior to operating the lift, ALWAYS take note of the safety features, door system, door interlocks etc. installed by the manufacturer of the vehicle and the operation instructions issued by him. These might have a significant influence on the safety of the operator and any persons lifted or lowered with the platform.
  - Negligence can put the operator and other parties at great risk of serious bodily injury and death.
- 
- The instructions below are made up for the DH-PH1\* / P1\* lift with the optional pivoting lift frame. For the basic version with fixed lift frame, the first 5 steps do not apply. Start from the 6<sup>th</sup> instruction onwards.

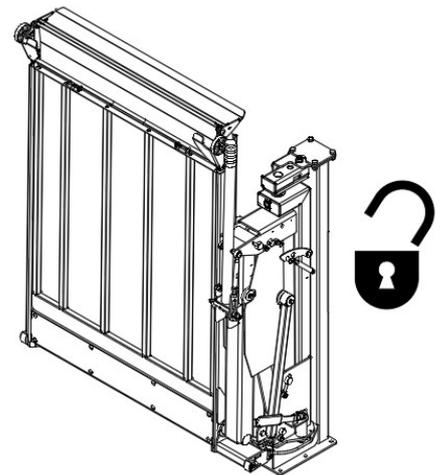
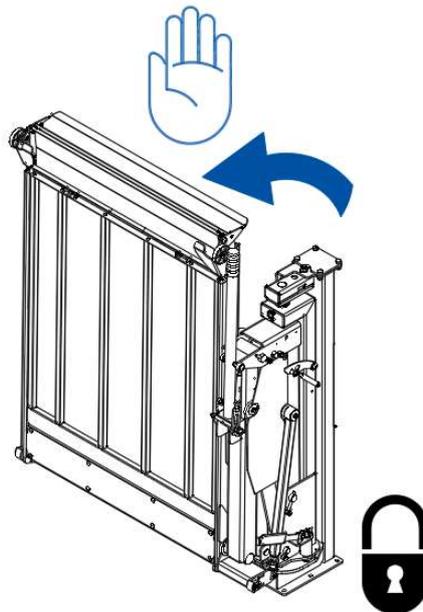
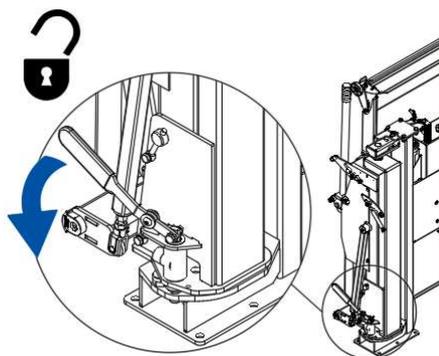
#### Deployment of the platform



Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.

Switch ON the electrical power to the lift by means of the cabin switch and / or the main battery disconnect switch on the power pack.

Press STOW. Check if the hydraulic system is building up pressure and the platform is pressing hard against the lift arms.



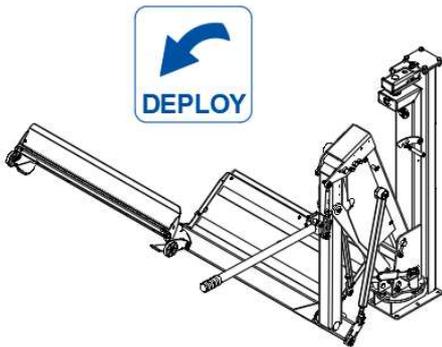
If the platform is stowed against the side of the vehicle body, push down the pivot lock to pivot the lift frame towards the door aperture.

Manually pivot the lift frame from its travel position against the side of the vehicle body over 90° towards its work position in the door aperture.

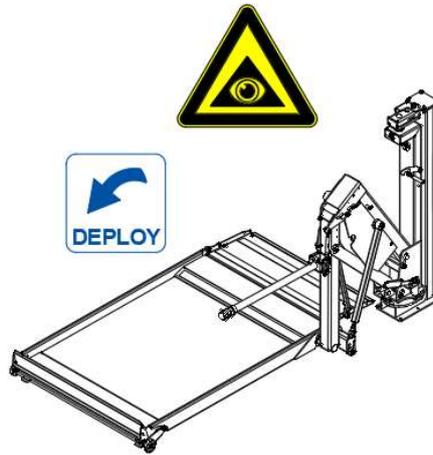
On lifts with automatic platform locks (ref. OWF014.1), check if the platform lock is disengaged.

On lifts with a manual platform lock (ref. OWF015), manually release the platform lock.

See also section 8.3 on page 30.



Stand on the ground at a safe distance from the range of motion of the platform. Press DEPLOY to open the platform to the horizontal work position.

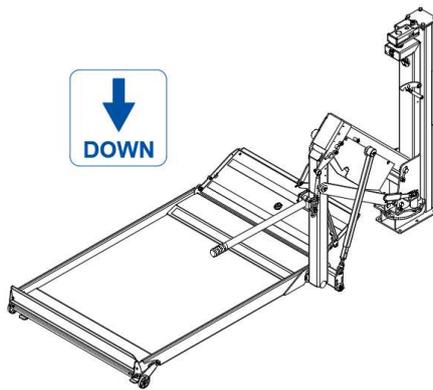


Check if the guard rail [W] is deployed in its active position. Check if the bridge plate is lined up with the vehicle floor. Make sure the lift can be used safely.

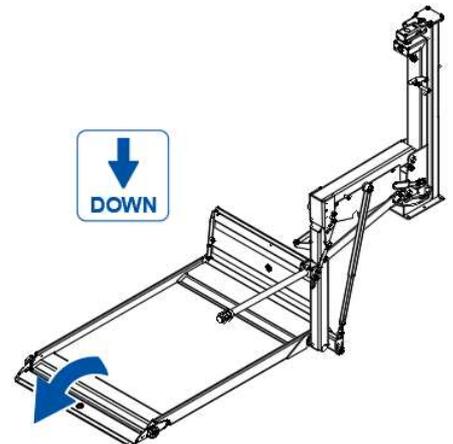
**Loading and unloading**



ALWAYS follow the safety instructions, operation instructions and load diagram.



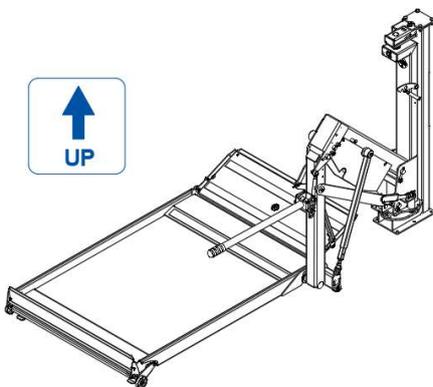
Press DOWN to lower the platform to the ground.



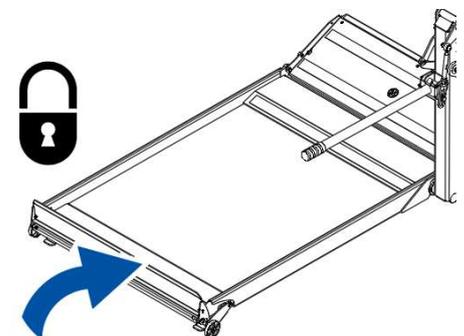
DO NOT step or ride off the platform before it has come to a stop at the ground, and the roll stop is fully tilted down.



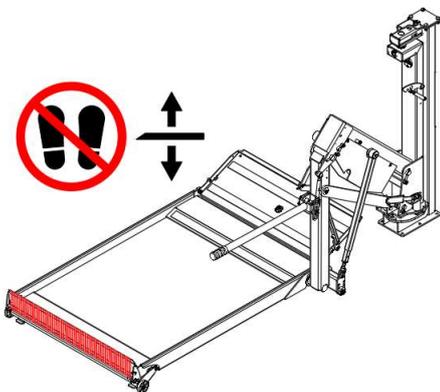
Load and unload at the ground, help wheelchair occupants embark and disembark in accordance with the instructions of section 7.4 from page 22 onwards.



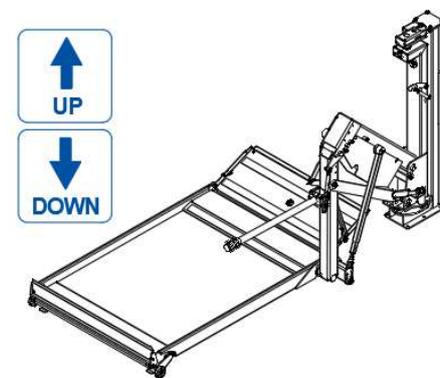
Press UP to raise the platform from the ground to the vehicle floor.



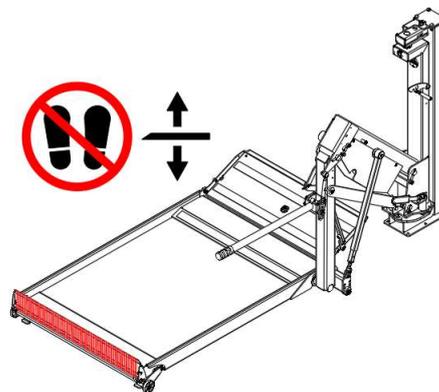
When the platform leaves the ground, ALWAYS make sure the roll stop is raised and secured in the upright position.



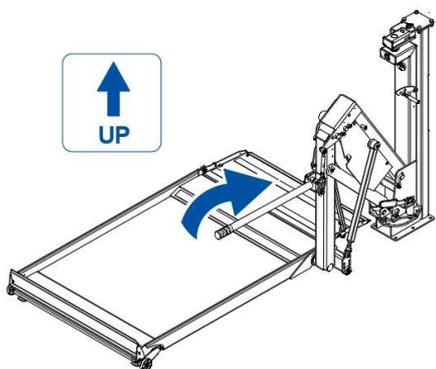
NEVER allow anybody to stand on, or hinder the roll stop at the outboard platform edge when the platform is set in motion or is in motion.



Lift (= UP) and lower (= DOWN) in accordance with the instructions in this manual.



While lifting, the bridge plate will tilt down automatically as the platform approaches the vehicle floor. DO NOT stand on the bridge plate before the platform has come to a complete stop.

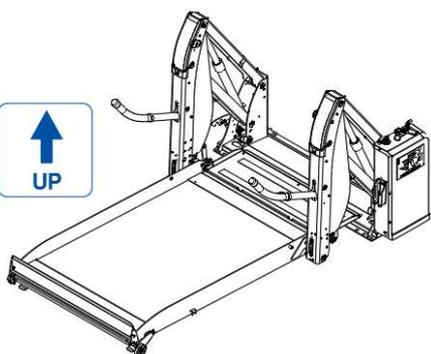


Press UP until the platform has come to a complete stop. DO NOT disembark before the bridge plate is level with the vehicle floor and is solidly supported by it from underneath.

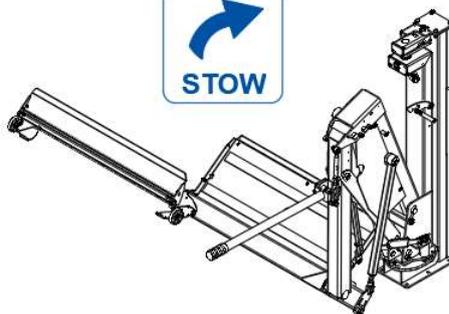


Load and unload at the vehicle floor, help wheelchair occupants embark and disembark in accordance with the instructions of section 7.4 from page 22 onwards.

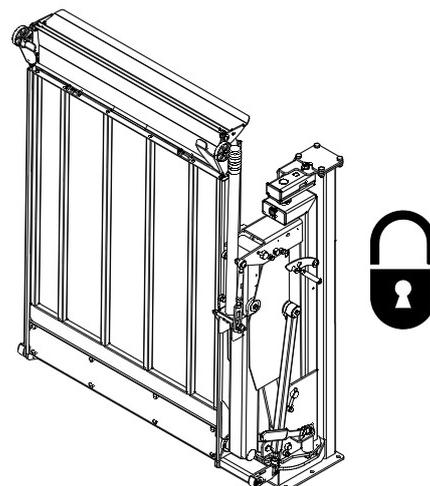
**Stowing the platform in travel position**



Press UP to raise the platform to the vehicle floor.



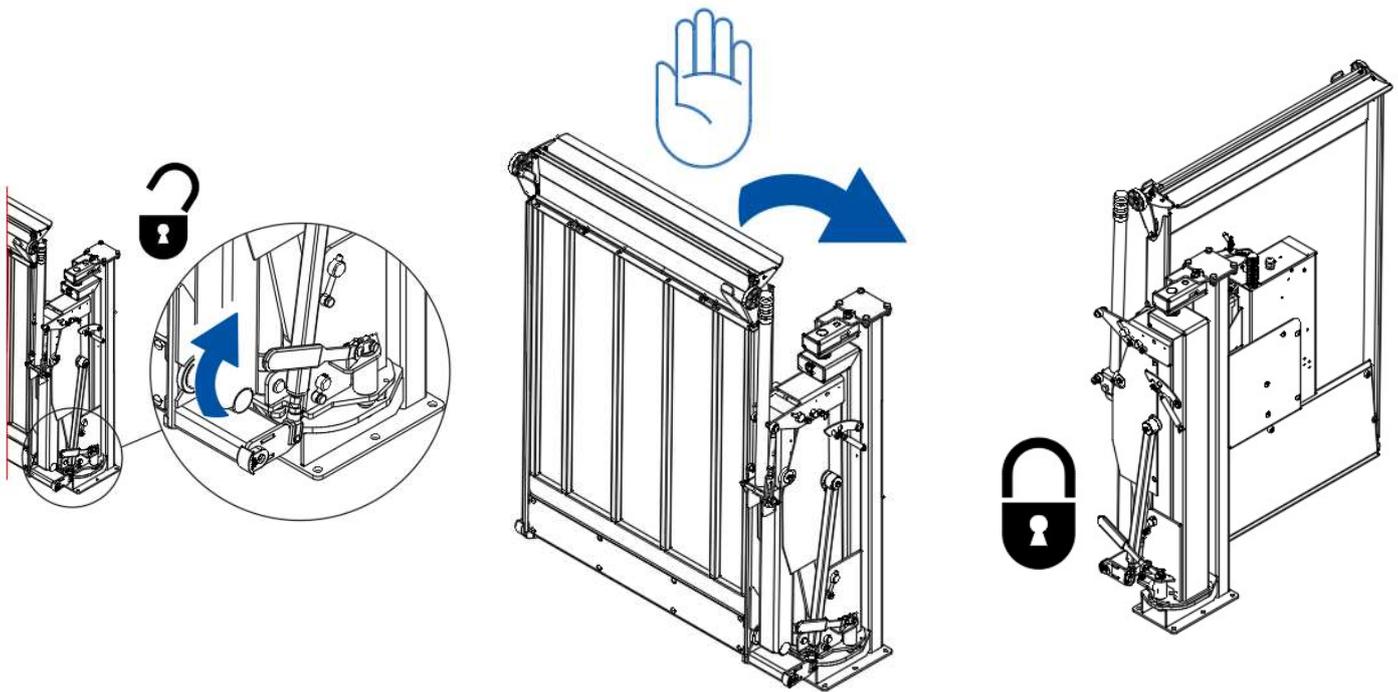
Stand on the ground at a safe distance from the range of motion of the platform. Press STOW to close the platform in its travel position. Release the buttons when you hear the platform turn in overpressure.



Lifts with automatic platform locks (ref. OWF014.1) do not require active engagement of the platform locks. These locks only engage in case of a slow hydraulic pressure loss.

On lifts with a manual platform lock (ref. OWF015), the platform lock should engage

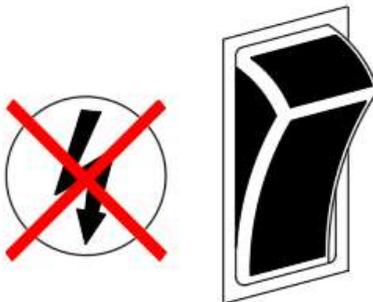
automatically. Make sure the platform is locked in its travel position prior to closing the doors.  
See also section 8.3 on page 30.



Push down the pivot lock to pivot the lift frame towards its travel position.

Manually pivot the lift frame from its work position in the door aperture to its travel position against the side of the vehicle body.

Make sure the platform and lift frame are secured in their travel position.



Switch OFF the electrical power to the lift by means of the cabin switch and / or the main battery disconnect switch on the power pack.



At all times during operation, release the activated button(s) to stop the platform from moving. Additionally switching off the cabin switch and / or the main battery disconnect switch will switch off the electrical power to the lift.

## 9 EMERGENCY OPERATION

- In case of a failure in the electrical power supply to the wheelchair lift (insufficient battery power, damaged fuse, damaged electrical controls...), the various functions of the lift can be operated manually as explained below.

### WARNING

- Negligence or ignorance during the emergency operation can put the operator and third parties at great risk of serious bodily injury or death.
- Therefore, the emergency operation of the wheelchair lift is restricted to skilled operators, who have been properly trained, and who know and understand the full contents of this manual.
- Prior to operating the manual emergency controls of the lift, ALWAYS make sure you follow all applicable instructions.
- In case of doubt, DO NOT CONTINUE, but contact the national DHOLLANDIA distributor for further help and instructions. See contact info on page 3.

### WARNING



- To avoid unexpected movements, the electric power to lift must be switched off before starting the emergency operation.
- Always stand clear of the platform area.
- Keep head, hands and feet clear of pinch points and moving parts.

#### Emergency operation – DEPLOY and DOWN

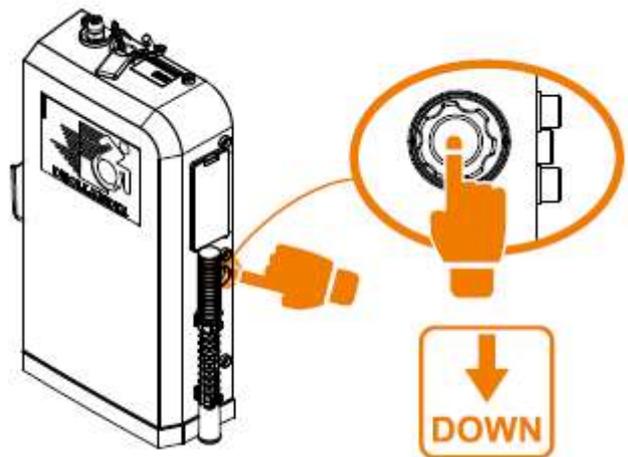
The lift can be deployed and lowered by replacing the electrical functions DEPLOY and DOWN as mentioned in sections 8.4 and 8.5 from page 31 onwards by the corresponding manual emergency action.

Locate the Emergency Descent button at the side of the power pack.

Press this button to open the platform from its vertical travel position to the horizontal work position (= DEPLOY). Press this button further to lower the platform to the ground (= DOWN).

The platform will stop soon after the button is released.

Note: the position of the Emergency Descent button can vary slightly depending on the execution of the power pack.



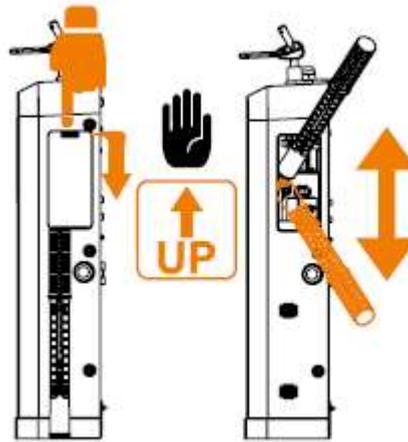
## Emergency operation – UP and STOW

The lift can be lifted and stowed by replacing the electrical function UP and STOW as mentioned in sections 8.4 and 8.5 from page 31 onwards by the corresponding manual emergency action.

Locate the lever of the hand pump on the cover of the power pack. If so equipped, remove the cover over the hand pump. Fit the lever over the lever arm of the hand pump.

Move the lever of the hand pump up and down slowly to lift the platform (= UP). When the platform has reached the vehicle floor, continue to pump to close the platform in its travel position (= STOW).

The platform will stop soon after the pumping is stopped.



- Note:



- Where mentioned on the decals or in the manual, this sign refers to a normal operation by means of the electric controls.



- Where mentioned on the decals or in the manual, this sign refers to a manual emergency operation by means of the back-up devices (Emergency Descent button and hand pump).

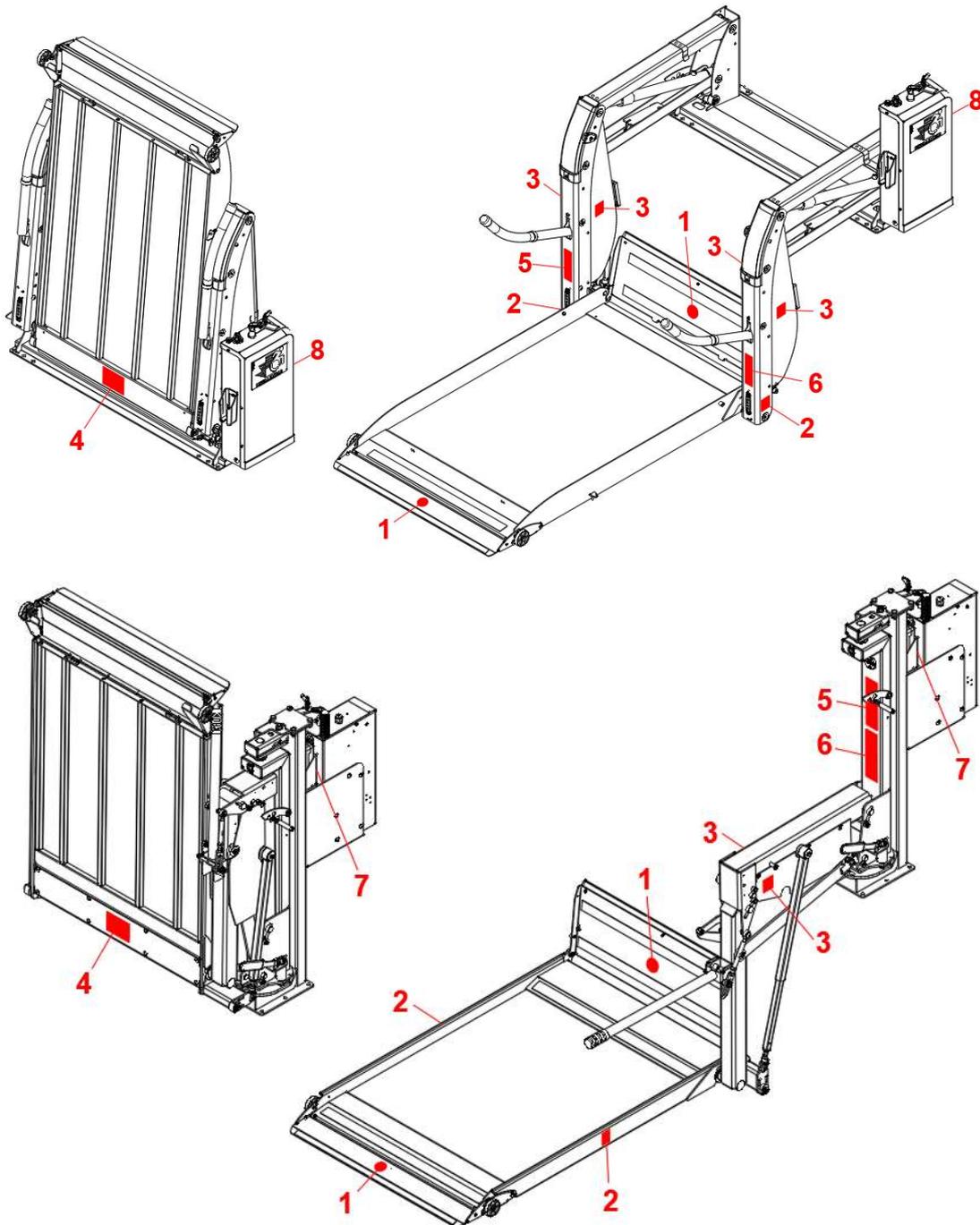
## 10 DECALS

### 10.1 INTRODUCTION

- Decals are used to remind the operator and warn the wheelchair occupant for a number of specific hazards and instructions. Decals can be premounted on the lift itself, or shall be mounted by the installer during installation and PDI of the lift.
- NEVER remove or paint over any decal. Missing, worn or illegible warning decals must be immediately replaced. Get replacement decals from DHOLLANDIA. Contact your national DHOLLANDIA distributor. See page 3 for contact info.
- The operator should comply with all affixed safety and operation decals. Beware that the decals merely summarize the main points, and that the operator must know, understand, and comply with the full contents of the operation manual.
- Note: the decals marked as “EXAMPLE” can vary in function of the maximum rated capacity of the wheelchair lift or the chosen type of external control box.

### 10.2 REGULAR DECALS ON THE LIFT

- The following decals are premounted by DHOLLANDIA on the wheelchair lift.



1 EF0505.B



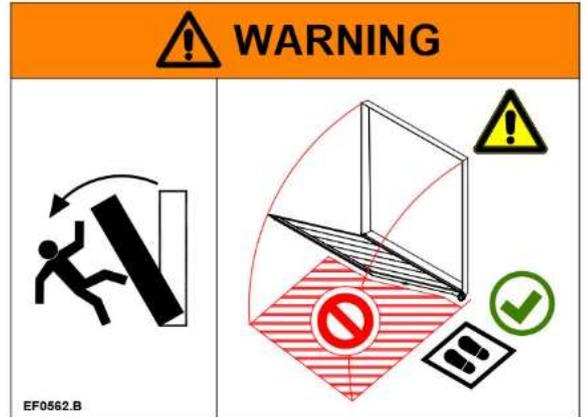
2 EF0506



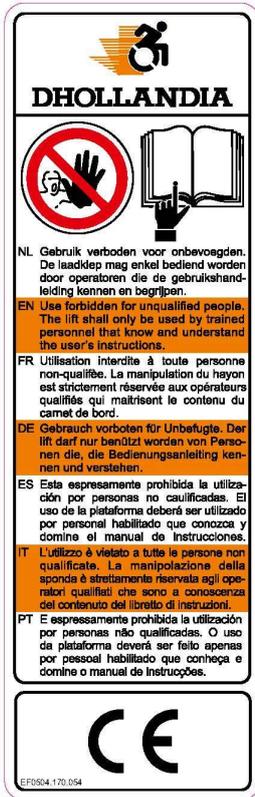
3 EF0503



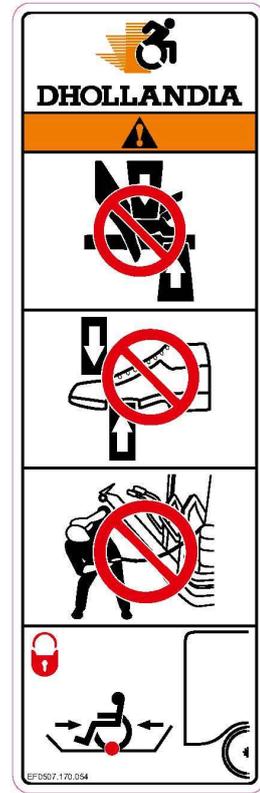
4 EF0562.B



5 EF0504



6 EF0507



7 EF0514

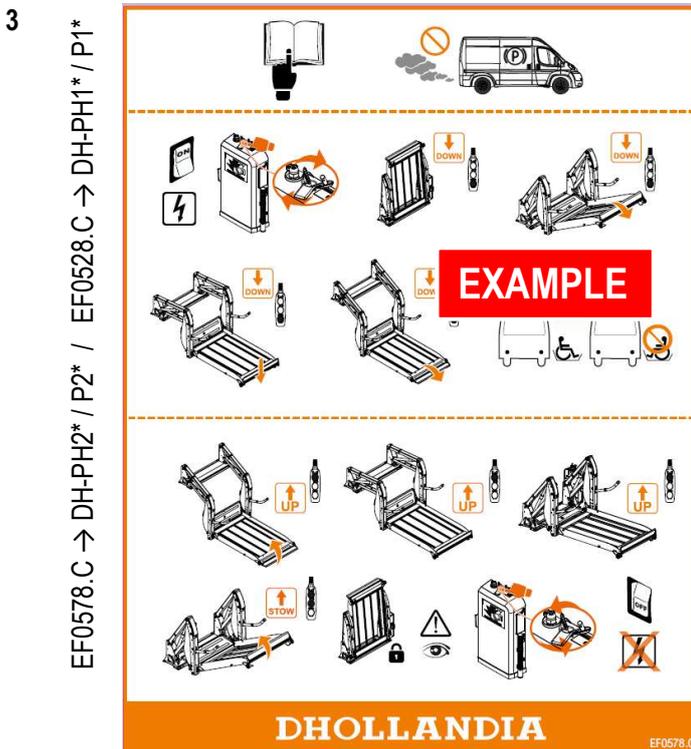
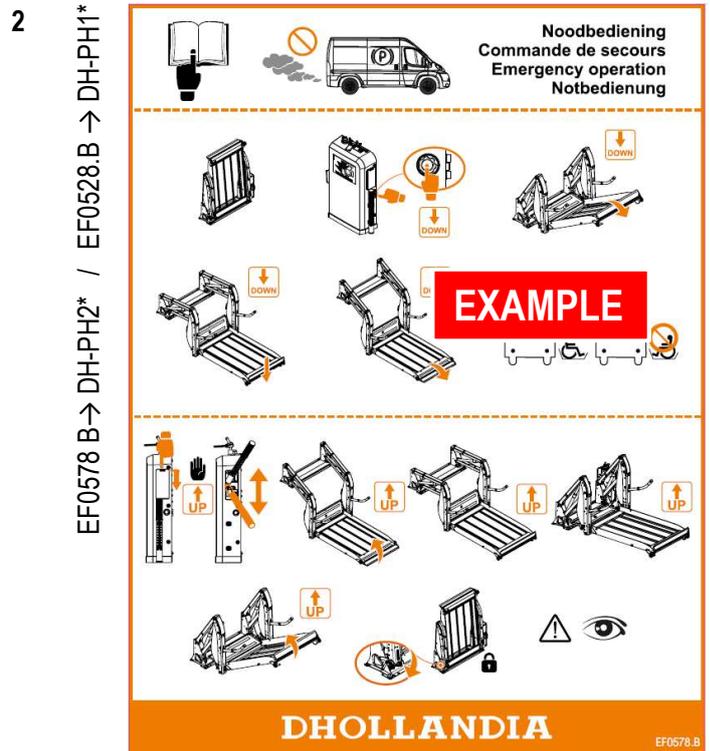
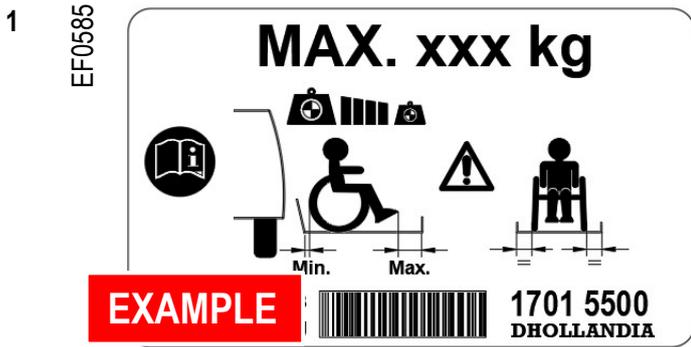


8 EF0514.B



### 10.3 DECALS ON INSIDE OF BUS NEAR THE LIFT

- The following decals are supplied loose with the wheelchair lift and shall be affixed by the installer near to the lift at a location clearly visible to the operator, preferably inside the bus to maximize longevity.



5

EF0504

  
**DHOLLANDIA**




**NL** Gebruik verboden voor onbevoegden. De laaddeip mag enkel bediend worden door operatoren die de gebruiksaanwijzing kennen en begrijpen.

**EN** Use forbidden for unqualified people. The lift shall only be used by trained personnel that know and understand the user's instructions.

**FR** Utilisation interdite à toute personne non-qualifiée. La manipulation du hayon est strictement réservée aux opérateurs qualifiés qui maîtrisent le contenu du carnet de bord.

**DE** Gebrauch verboten für Unbefugte. Der Lift darf nur benutzt werden von Personen die die Bedienungsanleitung kennen und verstehen.

**ES** Esta expresamente prohibida la utilización por personas no cualificadas. El uso de la plataforma deberá ser utilizado por personal habilitado que conozca y domine el manual de instrucciones.

**IT** L'utilizzo è vietato a tutte le persone non qualificate. La manipolazione della sponda è strettamente riservata agli operatori qualificati che sono a conoscenza del contenuto del libretto di istruzioni.

**PT** É expressamente proibida a utilização por pessoas não qualificadas. O uso da plataforma deverá ser feito apenas por pessoal habilitado que conheça e domine o manual de instruções.



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**DHOLLANDIA**









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**⚠ WARNING**





**Liftgate hazards can result in crushing or falling.**

**Keep hands and feet clear of pinch points.**

**If riding liftgate, make sure load is stable and footing is solid.**



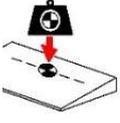
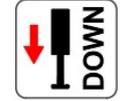
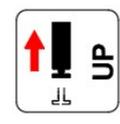
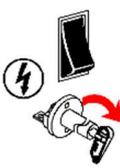
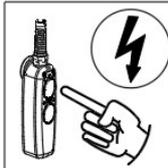
**Read and understand the user's manual, all instructions and warnings before use.**

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## 11 MEANING OF SAFETY AND WARNING SIGNS

WARNING signs		MANDATORY ACTION signs	
	Overview and keep visual control over the working area of the lift at all times.		Contact your regional DHOLLANDIA distributor.
	General warning sign used to alert the user to potential hazards. All messages that follow this sign shall be obeyed to avoid possible harm.		Consult the DHOLLANDIA website. Download from DHOLLANDIA website.
	Entrapment hazard. Keep hands, limbs, loose clothes and long hair away from moving parts.		Read the manual or instructions.
	Crushing & shearing hazard. Keep hands away from moving parts.		Hold onto guard rail. Protect yourself from falling off the platform, or vehicle floor.
	Crushing & shearing hazard. Keep feet away from moving parts.		Wear safety gloves.
	Slipping hazard.		Wear safety-toe shoes.
	Tripping hazard.		Wear appropriate work clothes, avoid loose-fitting clothes that might be trapped in the moving parts of the lift.
	Hazard caused by tilting objects.		Wear safety protection, eye protection and a safety hard hat.
	Hazard of falling from heights.		
	Crushing & entrapment hazard. Keep head, upper body and limbs away from moving parts.		

PROHIBITION signs			
	General prohibition. DO NOT do!		DO NOT use machine by more than 1 operator!
	General prohibition. DO NOT do!		DO NOT step or stand here!

Other frequently used signs		Signs for electro/hydraulic functions	
	Yes do this way. Correct work procedure.		Deploy the platform from its travel position to its work position.
	No, DO NOT do this way. -Incorrect work procedure.		Lower the platform.
	Position the load at the applicable center of gravity or load center. - Follow the load instructions.		Lift the platform
	Emergency stop. Will cause an immediate stop of the lift.		Stow the platform from its work position to its travel position.
	Emergency exit. Provision (lever, valve) creating an emergency exit.		LEG(S) DOWN: lower down the stabilizing legs
	Unlock. Disengage the mechanical locking system.		LEG(S) UP: raise the stabilizing legs
	Lock. Engage the mechanical locking system.		SWITCH between internal and external controls
	Switch ON the electrical power.		Instructions for maintenance, repair, or emergency operation in case of a breakdown
	Switch ON the electrical power to the lift via the main battery disconnect switch and / or cabin switch.		Normal operation by means of the electric controls
	Switch OFF the electrical power.		Manual emergency operation
	Switch OFF the electrical power to the lift via the main battery disconnect switch and / or cabin switch.		
	This is an operation to be executed manually (as opposed to an electrical function controlled by means of one of the control units).		

## NOTICE



- Competent and regular preventative maintenance is essential to the operational reliability, and the safety of the operator and bystanders.



- The latest update of our check-list for preventative maintenance & inspection can be downloaded from:

**www.dhollandia.com → Country & language selection → Downloads → Checklists → ... select required manual**

- All maintenance and repair work should be performed by authorized DHOLLANDIA service agents and using only authorized OEM DHOLLANDIA replacement parts.
- Consult the separate MAINTENANCE AND REPAIR MANUAL for safety instructions, maintenance guidelines, and troubleshooting support.
- Lubricate the lift on a regular basis to maximize its durability and operational reliability. This is at least 3 times per year in a single shift operation; more frequently in case of very intensive use (multiple shift, 24h operation, etc.) or use in hostile environment conditions (frequent high pressure cleaning with strong detergents, etc.).



- The latest version of the MAINTENANCE AND REPAIR MANUAL can be downloaded from the DHOLLANDIA website:

**www.dhollandia.com → Country & language selection → Downloads → Operation manuals → ... select required manual**