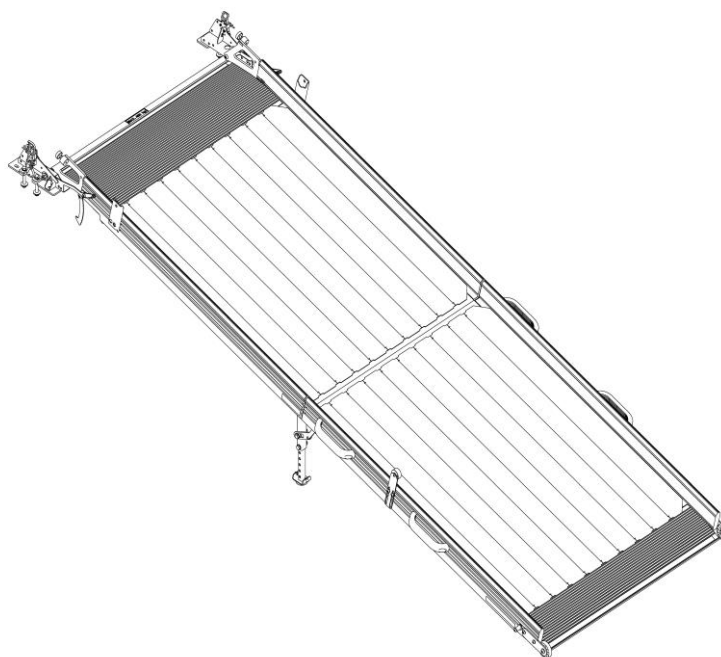
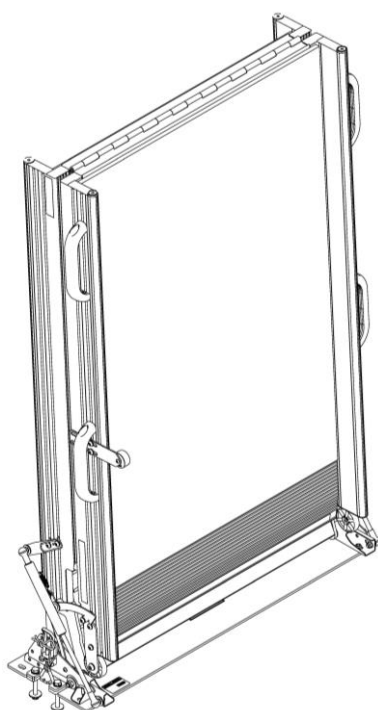




# DHOLLANDIA

## DH-AI\* manual ramp OPERATION MANUAL



### Manufacturer:

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

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

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# 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 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 of 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 ramp, 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 ramp. Contact your national DHOLLANDIA distributor. See page 3 for contact info.

## 2 CONTACT INFORMATION AND DISCLAIMERS

- DHOLLANDIA products 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 ramp. 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 and ramps, to obtain replacement copies of manuals or decals, or to learn about available equipment options for DHOLLANDIA lifts and ramps.



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

**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 → 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 ramp 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 ramp**.
- DHOLLANDIA disclaims liability for any personal injury, death or property damage that results from **improper use of the ramp**.
- 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 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 ramp types DH-AI01.04, DH-AI02.04, DH-AI12.04, DH-AI13.04, DH-AI12.10 operating in a similar way. In case of any doubt, always contact your national DHOLLANDIA distributor. See contact info on page 3.
- This OPERATION MANUAL explains how the DHOLLANDIA DH-AI-series ramps are manufactured; what safety features are incorporated in its design; and how to use the ramp in a correct manner, that preserves the integrity of the product 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 ramp in the appropriate manner, maximizing the safety of the operator and any bystanders, and ensuring the reliability of the ramp 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 ramp, and an overview of the owner's legal obligations in terms of periodic testing and certification.
- The manuals must be kept with the ramp at all times, as a reference book for the operators and technical service personnel.

#### **WARNING**

- Improper use of the ramp will put the operator and other parties at great risk of serious bodily injury and death. Therefore, the use of the ramp 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 ramp can put the operator and other parties at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to modify the ramp and its safety devices in any way.
- Use of aftermarket or non-OEM replacement parts to repair or maintain the ramp is strictly prohibited and may result in serious bodily injury or death to the operator or any bystanders.

### 4 INTENDED USE

DHOLLANDIA DH-AI ramps form a multi-purpose solution. They can be used in passenger transport applications to assist wheelchair occupants or persons with an impaired mobility embark or disembark the vehicle. And they can be used for commercial transport to load and unload cargo.

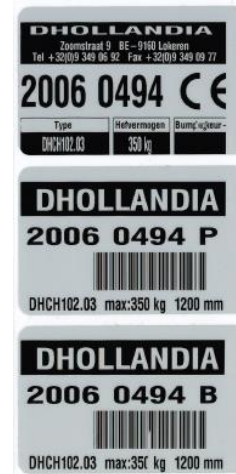
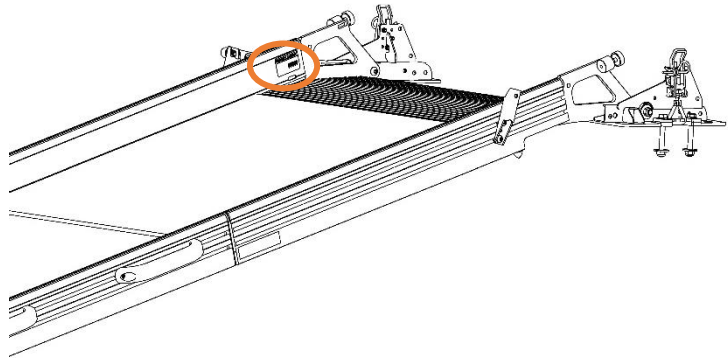
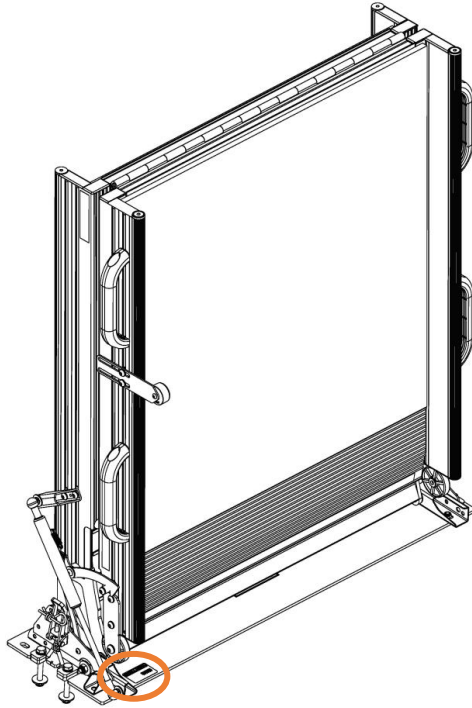
The ramps shall be used with respect of the maximum rated capacity and applicable load diagrams, and bearing a safe ramp angle in mind. The maximum safe ramp angle shall form the subject of a risk analysis by the client or user, considering the application and conditions of use. Following maximum ramp angles shall NOT be exceeded: 25% or 14° for passenger applications; 30% or 17° for commercial applications.

#### **WARNING**

- Improper use of the ramp will put the operator and bystanders at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to use the ramp in a different way, or for different purposes than described in the operation manual.
- DHOLLANDIA disclaims liability for any personal injury and / or property damage that results from improper use.

## 5 IDENTIFICATION

- Every DHOLLANDIA product 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 ramp, or when ordering replacement parts.
- In addition to the ramp type and serial number, the various serial number labels provide additional information such as: the maximum rated capacity, the date of manufacture, etc...
- Serial number labels are affixed to the ramp frame and to the platform.



## 6 DESCRIPTION AND TERMINOLOGY

### 6.1 GENERAL

- The DH-AI ramps are designed as a multi-purpose solution. They can be used for wheelchair access to assist wheelchair occupants or persons with an impaired mobility embark and disembark the vehicle. And they can be used as a commercial ramp, used to load and unload cargo.
- Ramps for wheelchair access are usually finished with a mesh aluminum platform surface [option OAP821.0]. A perforated aluminum plate with non-slip buds is available as an option OAP822.1.
- As the ramps come in different versions, it is important to check the capacity of your specific ramp.
- DHOLLANDIA lifts and ramps 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 / UKCA safety regulations mentioned in the Declaration of Conformity issued with each lift and ramp (unless otherwise agreed for products exported outside the CE / UKCA region).
- The main types of DH-AI ramps are:

Type	Characteristic	Platform sections	Deployment & storage	Capacity
DH-AI01	Lightweight & portable	1	Fully manual	400 kg
DH-AI02	Lightweight & portable	2	Fully manual	400 kg
DH-AI12	Mounted on vehicle floor	2	Assisted by gas cylinders	400 - 1000 kg
DH-AI13	Mounted on vehicle floor	3	Assisted by gas cylinders	400 kg

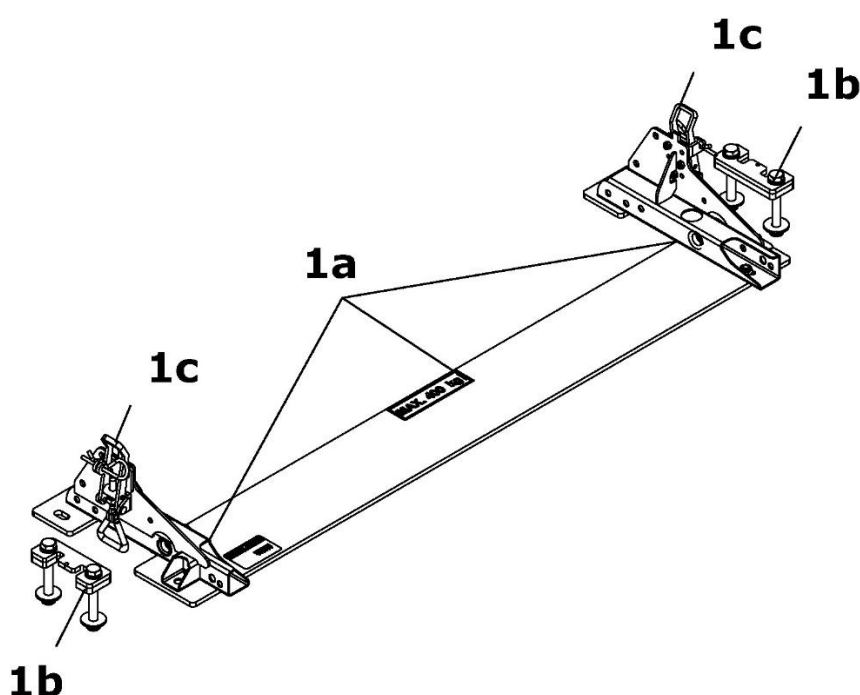
- In travel position, the ramps type DH-AI12 and DH-AI13 are stowed in upright position, just in front of the vehicle doors (standard execution), or swung out of the way against the side of the vehicle body [option OAF820.L]. The portable ramps DH-AI01 and DH-AI02 can be stored anywhere inside or outside the vehicle.
- Main details and terminology: see below.

DH-AI01 / 02 / 12 / 13 • TERMINOLOGY	
See figure below for parts corresponding to numbers in this table	
#	Description
1 1a	<b>Ramp frame + base plate:</b> steel and aluminum assembly forming the feet of the ramp and connecting the ramp with the vehicle floor. Following executions are available: 1. Standard version: ramp frame [1a] + ramp fixations [1b] designed for a fixed position of the ramp inside the vehicle (no swing facility). The ramp frame [1a] is equipped with quick-release locks [1c] so that the ramp can be dismounted and mounted very quickly. 2. Pivoting frame [option OAF820.L]: the ramp frame [1a] incorporates an articulation pin [1d], so that the platform [3] can be swung inside or outside to clear the door aperture. This ramp is not easily demountable.
1b	<b>Ramp fixations:</b> fixation brackets for the ramp frame [1a] to the vehicle floor. The ramp fixations [1b] remain attached to the vehicle floor if the ramp is dismounted (in case of standard version).
1c	<b>Quick-release locks:</b> 1. Standard version: connects and locks the ramp frame [1a] to the ramp fixations [1b]. 2. Pivoting frame [option OAF820.L]: locks the platform [3] + ramp frame [1a] to the base plate in its standard travel position.
1d	<b>Articulation pin:</b> pin around which the platform [3] + ramp frame [1a] of the pivotable ramp [OAF820.L] can swing inwards or outwards.
2	<b>Gas cylinders:</b> Gas cylinders make the operation of the ramp light and easy.
3	<b>Platform:</b> carries the load during loading and unloading. Following surfaces are available: [OAP821.0] → Platform in mesh aluminum, evacuating rainwater, snow, dirt, etc. quickly through the platform surface.

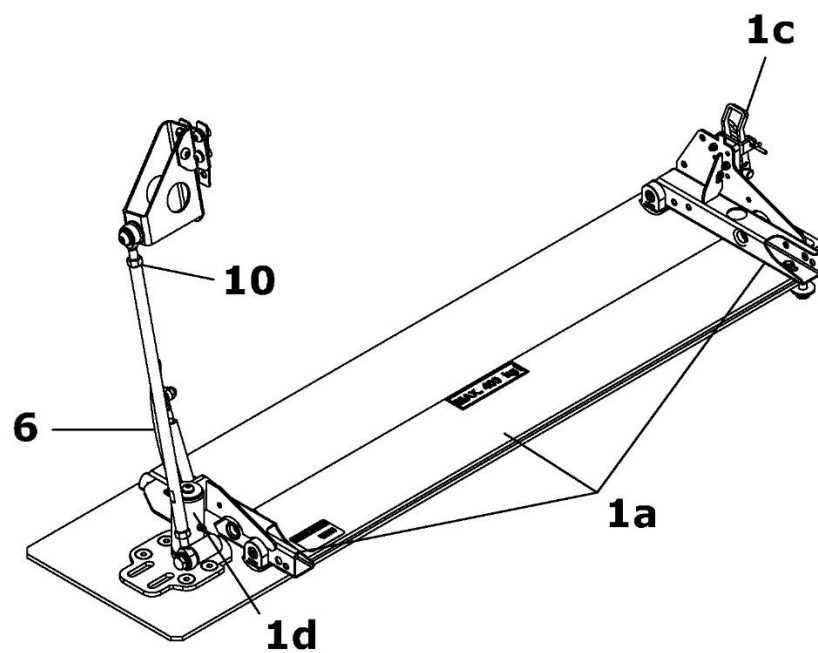


	[OAP822.1] → Platform in perforated aluminum plate with non-slip buds.
3a	<b>Platform main section:</b> inboard section of the foldable platform [3] connected to the ramp frame [1].
3b	<b>Foldable point:</b> foldable, outboard section of the platform [3] resting on the ground during use.
3c	<b>Flip-over point</b> [DH-AI13]: on DH-AI13 ramps with 3 platform sections, the foldable point [3b] is replaced by a foldable middle section supported by support feet [7] and a flip-over point [3c] resting on the ground during use.
4	<b>Door protection rubber:</b> absorbs small movements and/or vibration caused by the motion of the vehicle.
5	<b>Automatic lock:</b> keeps the 2 (or 3) parts of the platform together in travel position.
6	<b>Fixation pin</b> [OAF820.L]: gives the operator the possibility to lock the platform [3] in a 90° outward or inward position.
7	<b>Support feet:</b> DH-AI13 → height-adjustable feet supporting the flip-over point and middle section of the DH-AI13 [3b + 3c] while loading and unloading. DH-AI12.10 → height adjustable feet providing additional support while loading and unloading heavy loads.
8	<b>Rollers</b> [DH-AI12]: rollers mounted at the outboard edge of the flip-over point [3b], helping the operator to unfold and fold the ramp.
9	<b>Handles:</b> mounted at the side edges of the platform [3], used to grab the platform while unfolding and folding the ramp. The use of the handles is mandatory! They prevent that the operator can crush his / her fingers or hands between the folding platform sections.
10	<b>Turn support + bar</b> [OAF820.L]: holds the platform during the pivoting motion.
11	<b>Middle gas cylinder:</b> standard on DH-AI13, optional [OAP825] on DH-AI12 to induce a fully automatic deployment in case of emergency.
12	<b>Platform lock:</b> mechanical lock at the side of the platform. [DH-AI13] → locking the flip-over point [3c] in travel position. [DH-AI02] → keeps the platform main section and the foldable point together.
13	<b>Support rubber:</b> rubber buffers on which the platform rests in travel position, absorbing vibrations and mechanical driving noises [DH-AI12 / AI13]. On demountable ramps DH-AI01 / AI02, support rubbers are used as feet to rest the ramp frame on the vehicle floor.
14	<b>Side supports</b> [DH-AI01 / AI02]: protect the ramp when placed on its side.

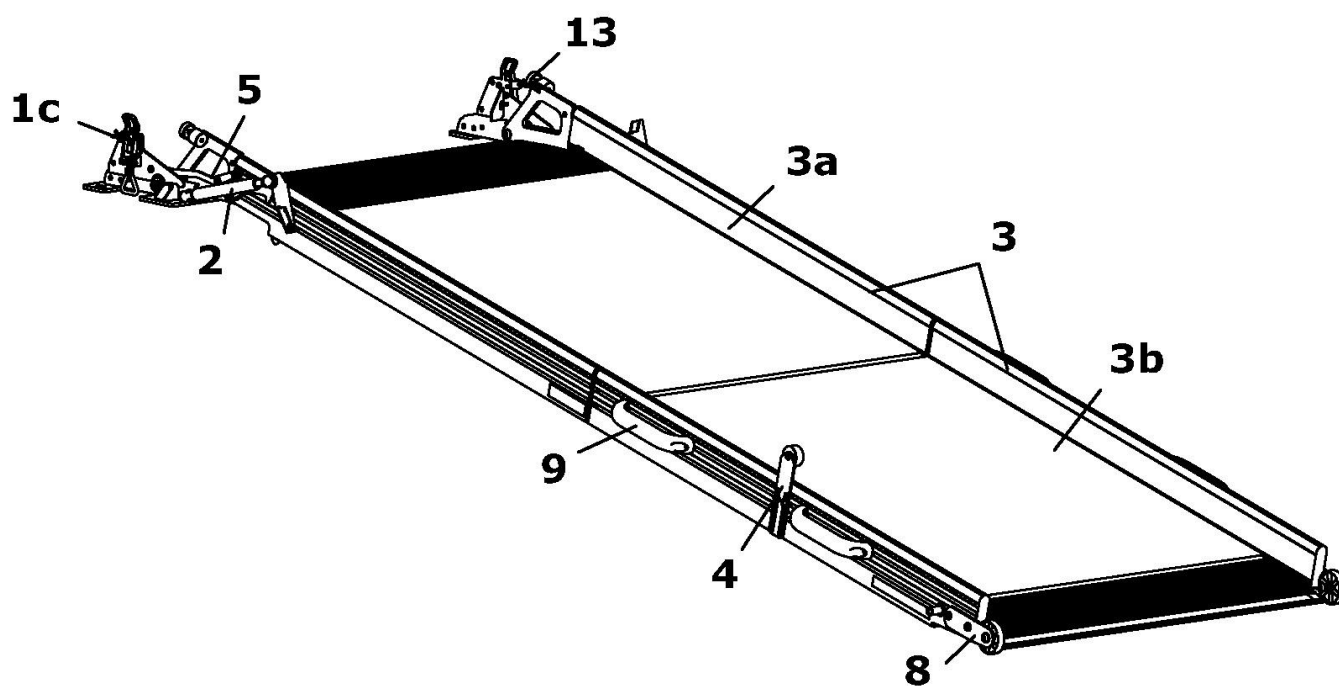
#### DH-AI fixed frame • TERMINOLOGY

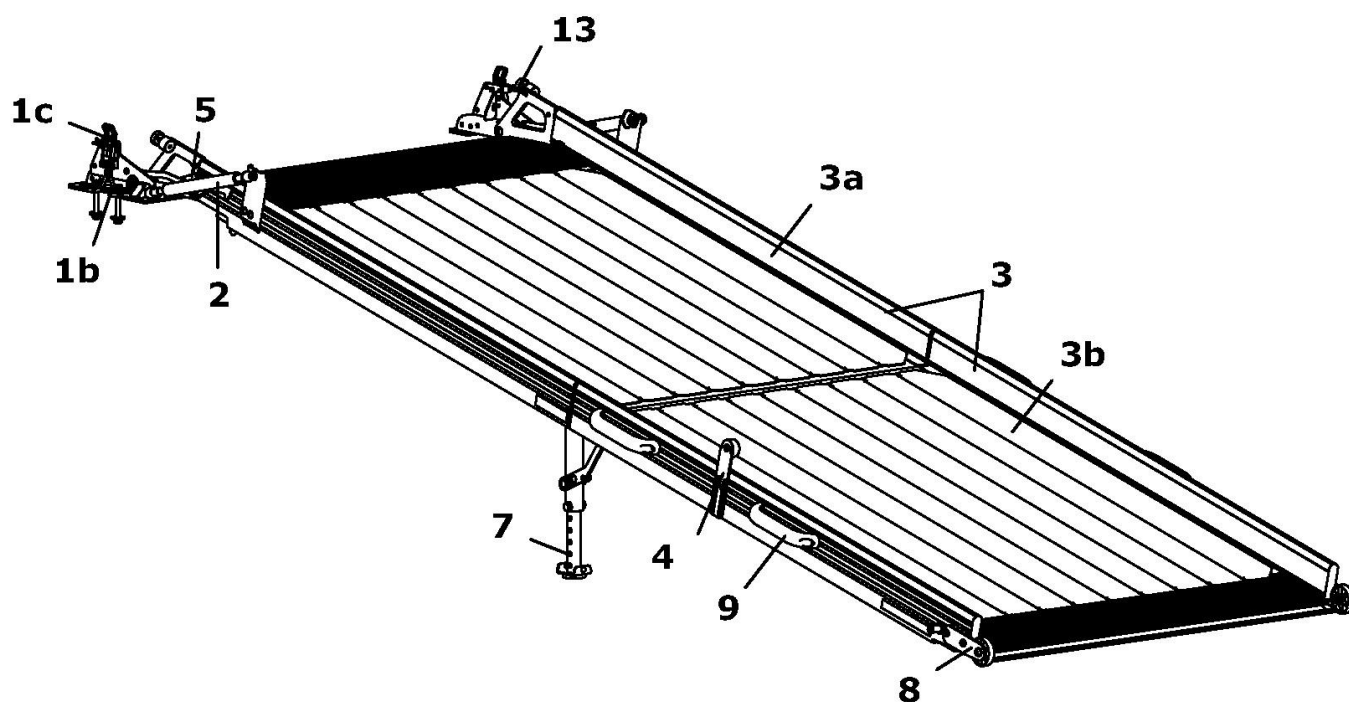
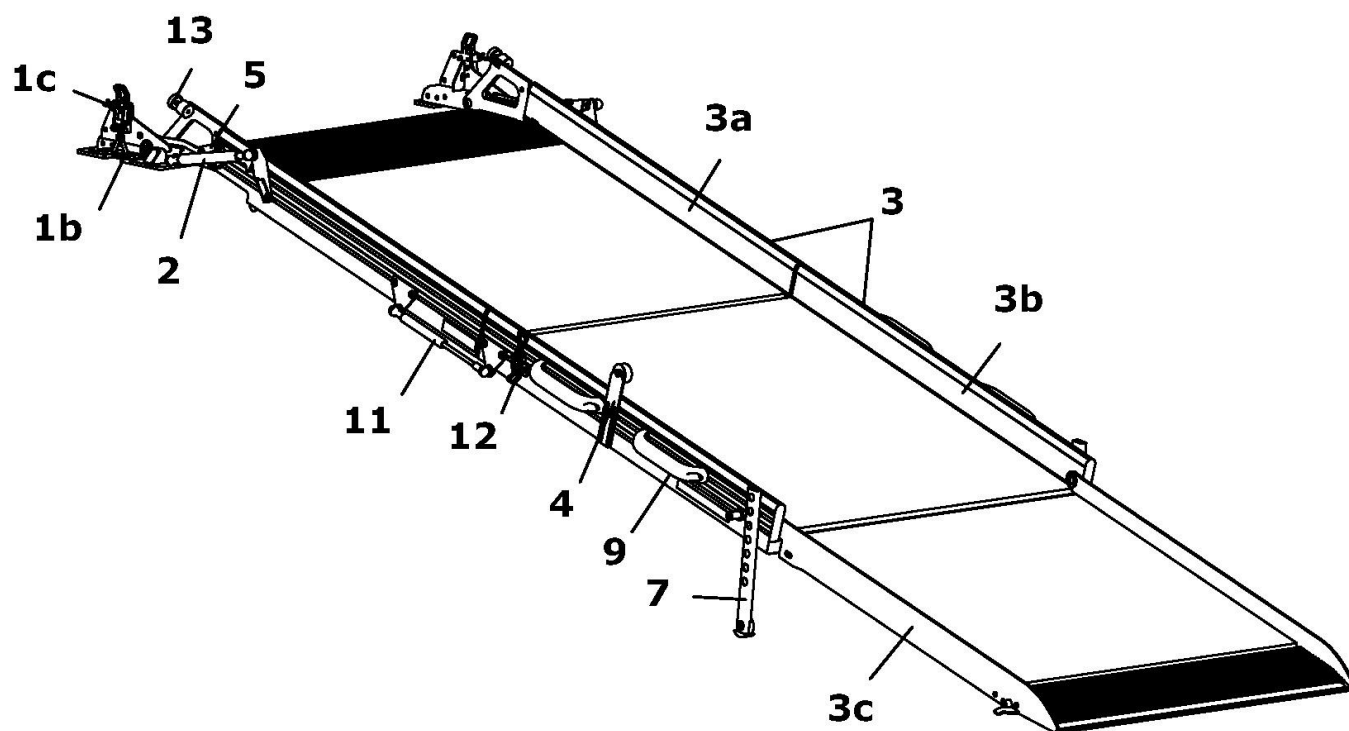




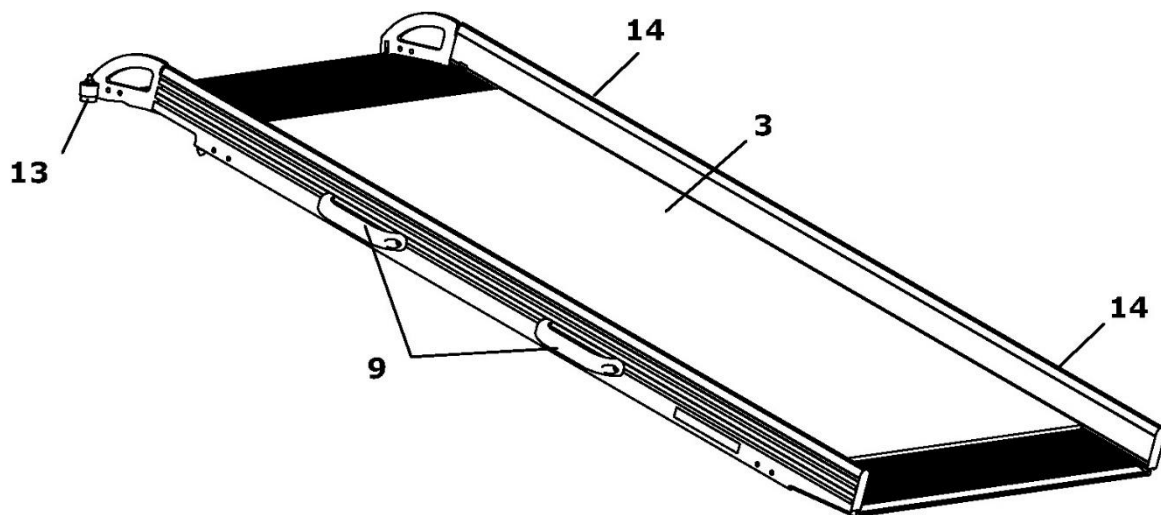


DH-AI12.04 • TERMINOLOGY

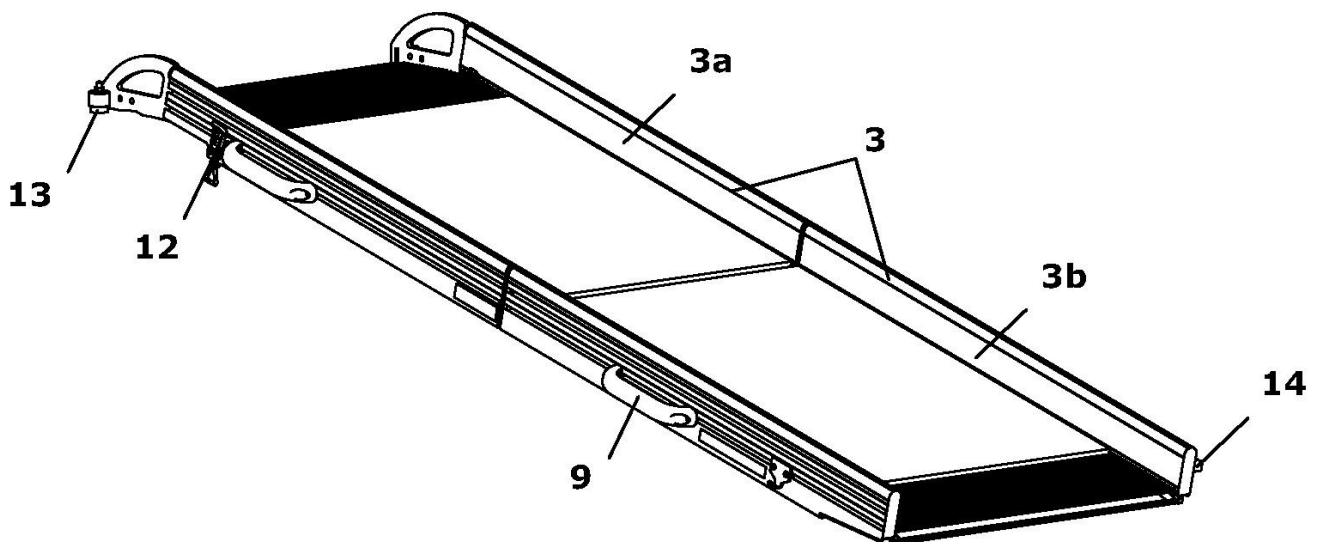




Portable ramp DH-AI01.04 • TERMINOLOGY



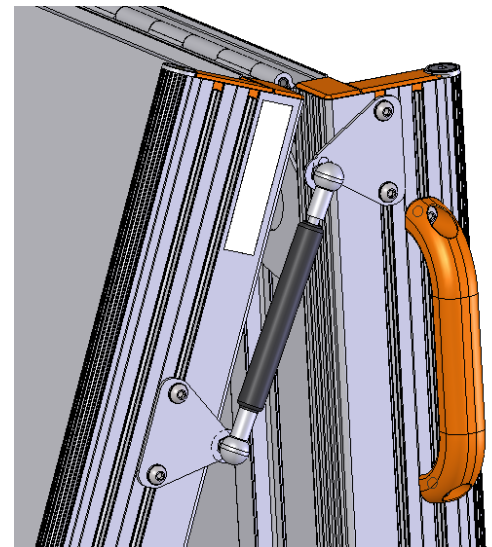
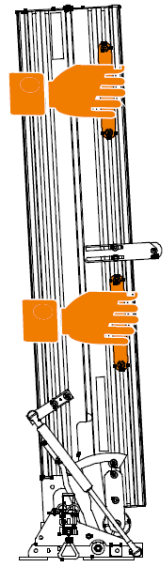
Portable ramp DH-AI02.04 • TERMINOLOGY



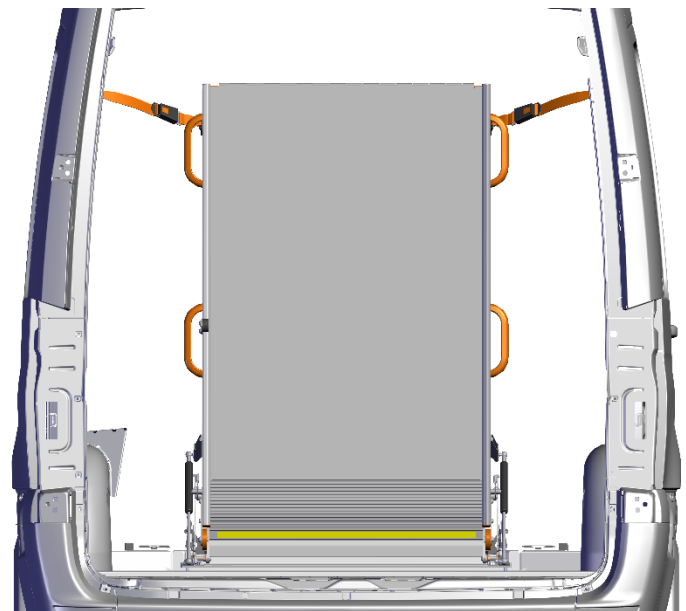
## 6.2 SAFETY FEATURES

DHOLLANDIA ramps are equipped with multiple safety features 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 features are incorporated on the DH-AI\*... Series:

- Non slip surface:
  - OAP821.0 : Surface in mesh aluminum
  - OAP822.1: Perforated aluminum plate with non-slip buds
- Platform sides:  
Designed to prevent the load from rolling off.
- 2-hand operation:  
The ramp should be operated with both hands placed on the handles at the side of the platform. This prevents the operator from crushing his/ her fingers or hands between the folding platform sections.
- Option OAP825: Additional gas spring for emergency operation (only available on DH-AI12).  
See section 9 for a detailed explanation.



- Option OAT801: Safety belt  
Provides additional fixation of the platform to the vehicle body to prevent it from moving during heavy braking.



## 7 SAFETY INSTRUCTIONS FOR USING THE RAMP

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

- DHOLLANDIA ramps 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. Images might feature a different product but the same instructions apply.

#### WARNING

- Improper use of the ramp 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 ramp 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 ramp.
- 
- 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 ramp 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 ramp. ALWAYS wear professional safety-toe shoes and protective gloves. Use of a hardhat and eye protection 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 ramp 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:
  - NEVER leave the ramp unattended in partially deployed position.
  - DO NOT run on the platform.

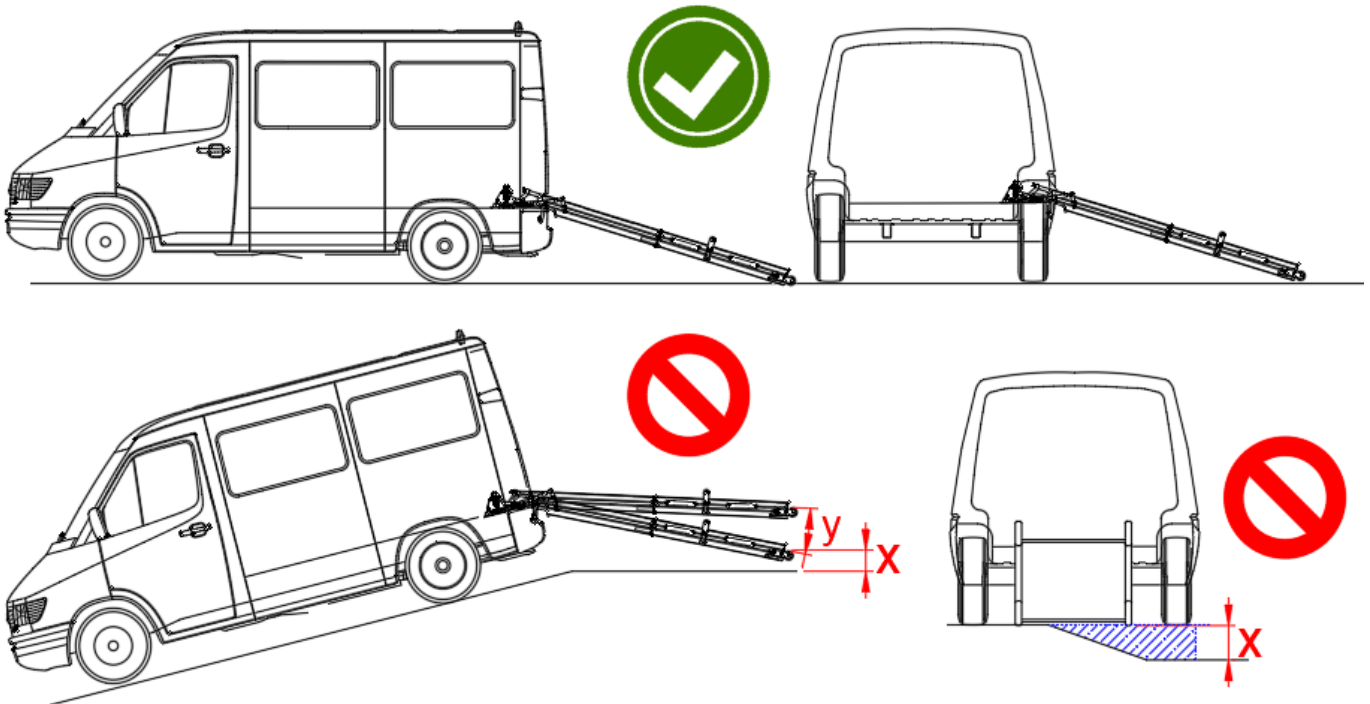


- Falling from the platform can result in serious bodily injury and death. To prevent injury by falling:
  - Make sure your footing is solid.
  - NEVER move the vehicle while a person is standing on the platform or inside the vehicle body.

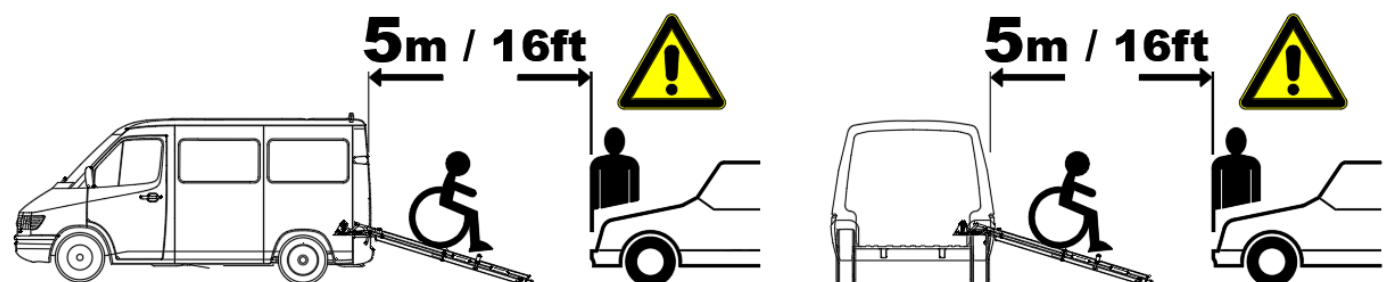


## ⚠ WARNING

- Make sure that the ramp is fit for purpose and the loading / unloading can proceed in optimum safety for all parties concerned. Consider the maximum rated capacity of the ramp, the ramp angle, the propulsion (or lack of self-propulsion) of the object to be handled, the possible slipperiness of the platform and the physical ability of the operator. See also 7.4 on page 19 and 7.5 on page 21. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- Prior to operating the ramp, the vehicle must be safely parked on flat, not yielding, slippery or uneven ground, have the parking brake applied, and the engine switched off. To avoid distortion of the platform, make sure both corners of the outboard platform edge are in firm contact with the ground. Failure to abide by these instructions can result in structural platform damage initially and to serious bodily injury as a consequence.



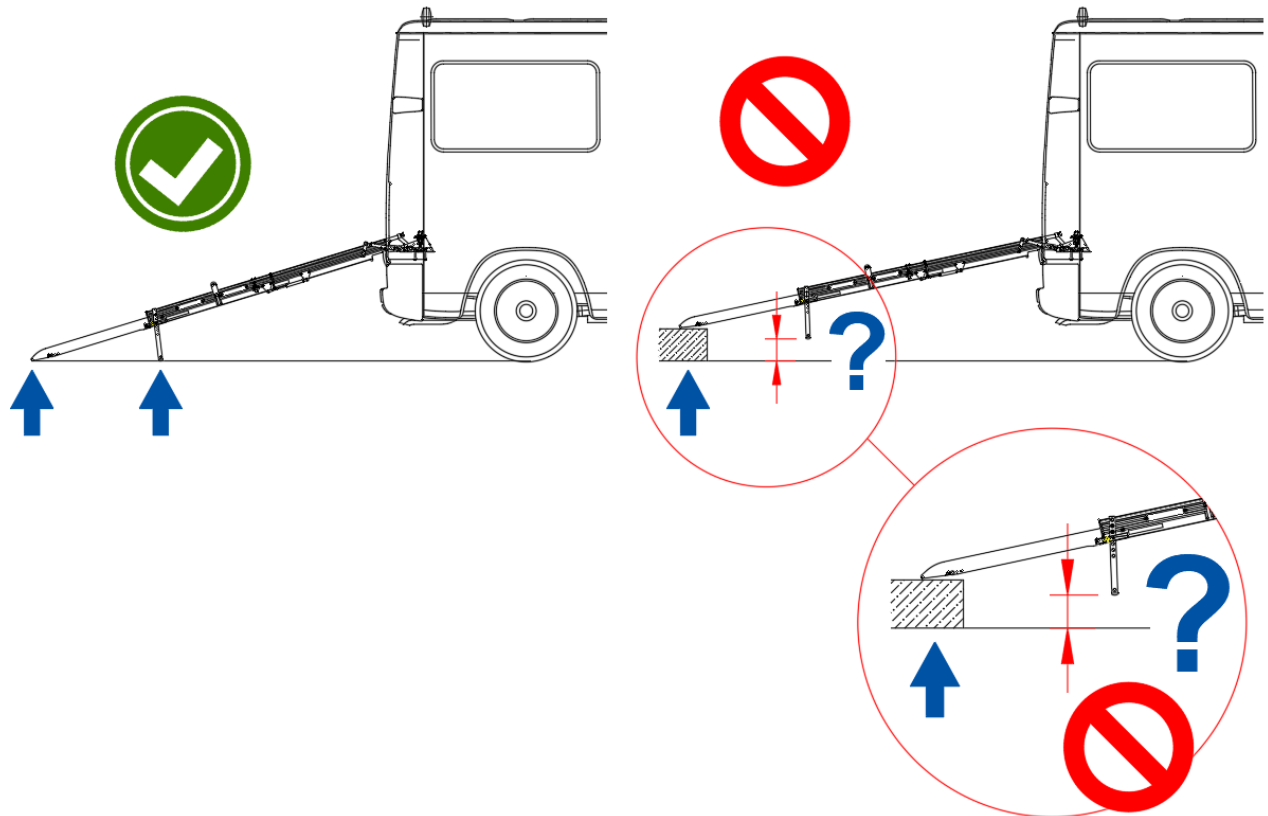
- Apply the parking brake and the switch off the engine. Open any doors located in front of the ramp and secure any moving parts of the vehicle body. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- Prior to deploying the platform, check if the ramp 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 ramp. 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.



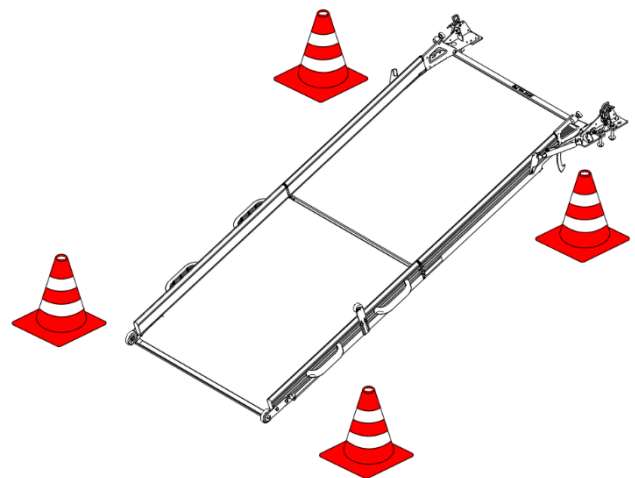


## ! WARNING

- Ensure that the vehicle cannot tip-over when putting weight on the ramp. If the vehicle is equipped with mechanical or hydraulic stabilizing legs, deploy these before opening the ramp. 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.
- Some ramps are equipped with mechanical legs to support the platform and the hinges between the various platform sections under heavy load. If so equipped, these support legs **MUST** be put in firm contact with the ground prior to loading and unloading.
- If the ramp is set up to be used at ground level, measures must be taken to use it at the kerbside or other elevations. Adjust the length of the support legs or underfill them with support blocks prior to loading or unloading. Negligence or disregard to put the support legs in firm contact with the ground can cause mechanical damage of the platform beyond repair, and may lead to serious bodily injury.



- 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. 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 lit.



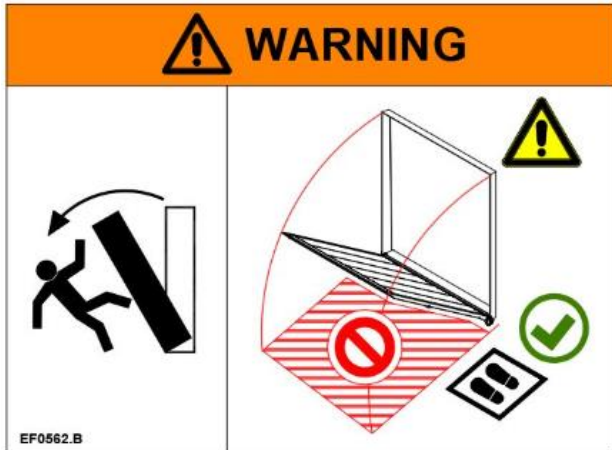


- Inspect the ramp prior to each use. If any unsafe condition exists or unusual noises or movements are noticed, **DO NOT** use the ramp and contact an authorized DHOLLANDIA service agent for repair. Please see 'pre-trip inspection' procedures under 7.7 from page 23 onwards.



## ! WARNING

- Read and comply with all warning decals, pictograms and instructions affixed to the ramp. Failure to abide by warnings and instructions may result in serious bodily injury or death.
- The ramp 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 ramp.
- Limit the operation of the ramp to one single operator. Operation of the ramp 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 rolling off the platform; being caught in pinch points or being pinched by the moving parts of the ramp:

	<p>→ Keep visual control over the entire working area of the ramp 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 ramp. <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 automatic locks on the side of the ramp are still engaged and that the ramp 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>EF0562.B</p> </div> <p>→ Upon loading and unloading: <b>DO NOT</b> allow any other person, to be in the proximity of the ramp and its platform.</p>

- Careful supervision is necessary if used on behalf of, or near children.
- NEVER leave the ramp unattended in open position. Before leaving the vehicle unattended, stow the ramp in its travel position and close the doors of the vehicle. Leaving the ramp in open position unattended can result in serious bodily injury or death to unaware bystanders. See 8 from page 25 onwards for instructions on properly stowing platform into its travel position.
- NEVER move the vehicle with the ramp in the open position. ALWAYS stow the ramp in its travel position, close and secure the doors of the vehicle. Failure to properly stow the ramp in its travel position prior to moving the vehicle may result in serious bodily injury or death.
- Use of the ramp near vehicular traffic may result in serious bodily injury or death from being struck by another vehicle. When operating the ramp on or near a street or parking lot, be sure to stay clear of vehicular traffic. When the ramp is operated near vehicular traffic, wear working clothes in high-visibility colours and a retro-reflective safety vest.
- Above all, **USE GOOD COMMON SENSE** when operating the ramp. **DO NOT** operate the ramp until the contents of this manual have been read and fully understood. Improper use of the ramp 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 ramp 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.



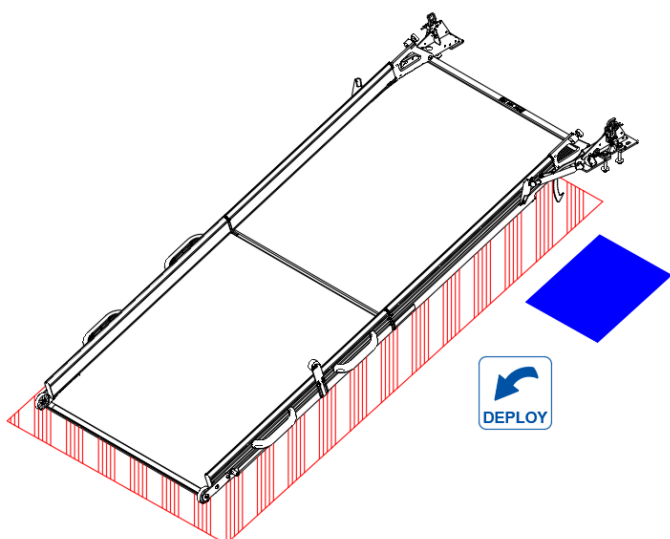
Correct operator position



Danger zone



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



#### WARNING

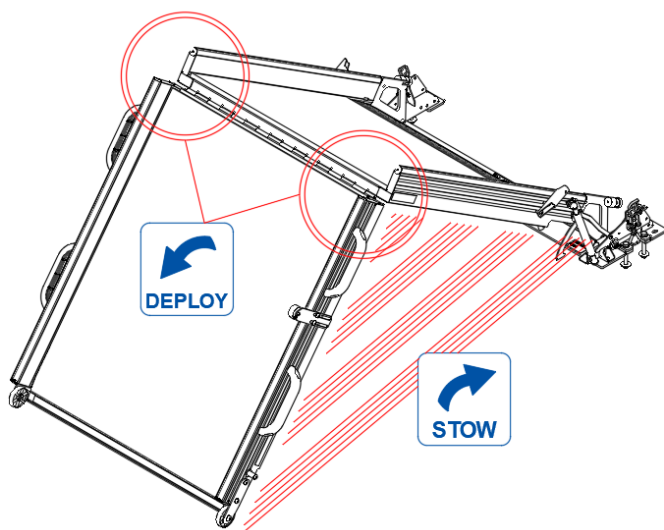


Impact by the platform will result in serious bodily injury or death. To prevent people from being hit by the platform, by objects rolling off the platform or being caught in pinch points or being pinched by the moving parts of the ramp:

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



ALWAYS beware of the crushing zone between the platform sections when opening or closing the platform.

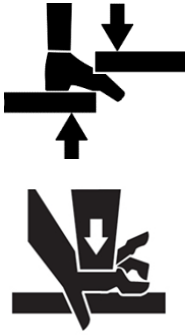


#### WARNING



- Parts of the body protruding into that area can be crushed or sheared while deploying 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 ramp.
- NEVER reach over or through any of the moving parts of the ramp.
- ALWAYS keep visual control over the entire working area of the ramp.

## **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 ramp.
- Keep hands, feet and upper body clear of pinch points and moving parts of the ramp.
- DO NOT allow any other person to stand near the ramp and its platform.

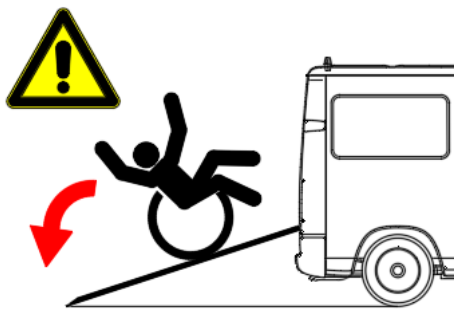
## **WARNING**

- The operator and the wheelchair occupant or platform occupant **SHALL NEVER** attempt to leave the platform before they have reached the final position for embarkation or disembarkation, either at the ground or at the vehicle floor.
- Any persons assigned to assist the wheelchair or platform occupant with embarkation or disembarkation, **MUST ALWAYS** 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.

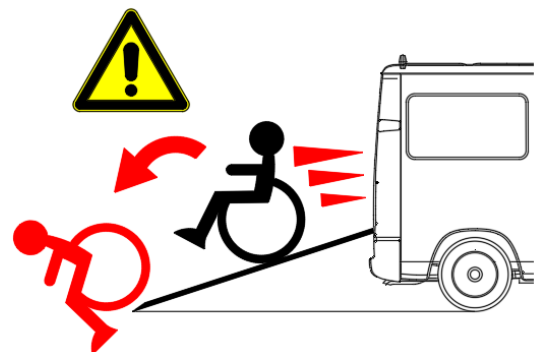
## 7.4 ADDITIONAL INSTRUCTIONS FOR RAMP PASSENGERS

### **WARNING**

- Ramp passengers (wheelchair occupants and standees) and attendants **MUST USE COMMON SENSE AND GOOD JUDGEMENT** to use the ramp safely.
- Failure to do so and disregard of the safety instructions may result in serious bodily injury or death, as well as property damage.
- The best method to enter and exit the vehicle depends on a variety of factors such as the unique physical (dis)abilities of the wheelchair occupant or standee, the technical characteristics of the wheelchair (brakes, powered or manual wheelchair etc.), and the weather conditions (dry or wet and slippery).
- Wheelchair attendants should be instructed on any special needs and / or procedures required for the safe transport of the wheelchair occupants.
  - Follow all safety instructions regarding torso restrains, stability, balance, weight distribution and use of attendants in accordance with the owner's manual supplied with the wheelchair (or other mobility aid).
  - Wheelchair occupants must determine, establish and practice ramp boarding and exiting procedures under the direction of their health care professional advisor.
  - Those safe work procedures must be conveyed to the driver or attendant to guarantee maximum safety while embarking or disembarking the vehicle.
- Seat belts and torso restraints should be positioned and buckled up before accessing the ramp. Different disabilities require different types of wheelchairs and different types of safety belts (torso restraint systems). It is the responsibility of the wheelchair occupant to have his or her wheelchair equipped with suitable safety devices, under guidance of their health care professional advisor.
- A fall of the wheelchair occupant, standee or their attendant off the platform may cause serious bodily injury or death.
- **ALWAYS** beware of the ramp slope. The slope will directly affect the ability of the (powered) wheelchairs, the wheelchair occupants and standees to embark and disembark the vehicle safely, as well as the ability of the attendants to assist them safely in doing so.
- The slope also has a direct effect on the center of gravity of the wheelchair and wheelchair occupants. Consult the guidelines of the wheelchair manufacturer regarding ramp slope, stability, brakes and means to control the speed of the wheelchair. Consider the combined center of gravity of the wheelchair and its occupants, and their ability to maintain stability and balance during embarkation / disembarkation.

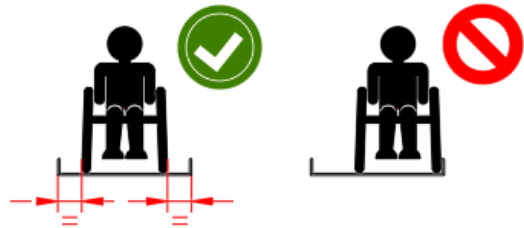


- To prevent slipping and falling, standees **MUST ALWAYS** make sure their footing on the platform is solid.
- Use extreme care in wet or slippery conditions. Wheelchair brakes are less effective if the platform and / or wheels of the wheelchair are wet or dirty.
- Disembark the vehicle slowly and in a controlled manner. Rolling off in an uncontrolled manner may result in serious personal injury to the wheelchair occupants or any persons standing near the platform.



## **WARNING**

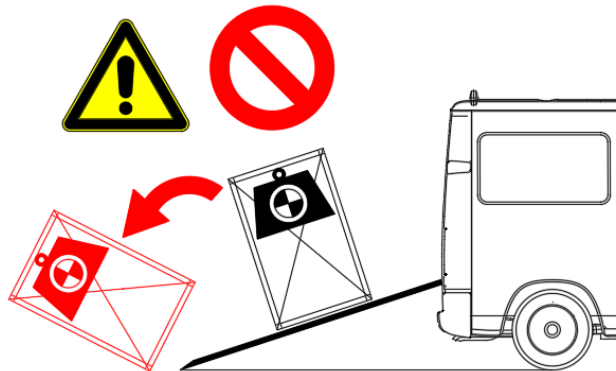
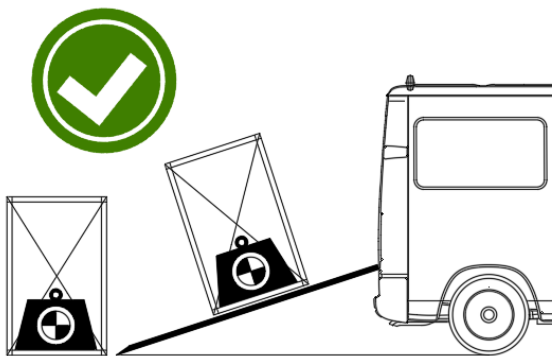
- The aid of an attendant stabilizing the wheelchair is recommended for maximum safety. Wheelchair passengers who are unable to maintain stability and balance should not board a ramp without assistance. Counterbalance devices (anti-tippers) may be available from the wheelchair vendor to enhance stability and balance.
- Attendants assisting in the embarkation or disembarkation of manual wheelchairs **MUST ALWAYS** make sure that they are fit and strong enough
  - to push up the weight of the wheelchair and its occupant when going up the ramp;
  - to hold back, slow down or stop the weight of the wheelchair and its occupant when coming down the ramp;
  - without slipping or falling down.
- If in doubt, **DO NOT** continue. Seek help. Make sure all persons involved follow the safety instructions carefully.
- **ALWAYS** keep the wheelchair in the centre of the platform.



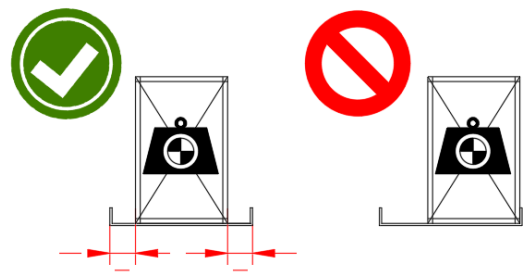
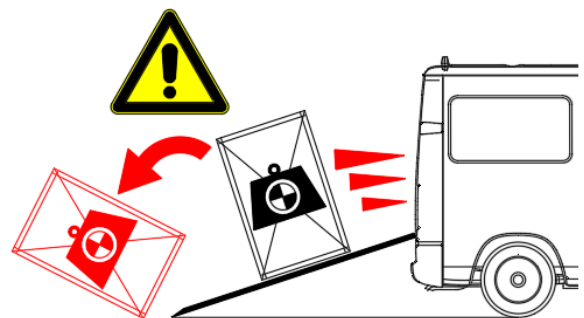
## 7.5 ADDITIONAL INSTRUCTIONS FOR LOADING CARGO

### **WARNING**

- Drivers and operators involved in loading or unloading cargo **MUST USE COMMON SENSE AND GOOD JUDGEMENT** to use the ramp safely.
- Failure to do so and disregard of the safety instructions may result in serious bodily injury or death, as well as property damage.
- The best method to load or unload the vehicle depends on a variety of factors such as the technical characteristics of the cargo to be handled (availability of brakes, self-powered or to be moved manually etc.), and the weather conditions (dry or wet and slippery).
- If applicable, clients or supervisors should instruct the drivers and operators on any special needs and / or procedures required for the safe transport of the cargo, to guarantee maximum safety while loading or unloading the vehicle.
- For repetitive transports, it is recommended that safe work procedures be issued by the H&S management or supervisor, and ramp boarding and exiting procedures be practiced by the drivers or operators.
- Safety straps and load restraints should be positioned and buckled up before accessing the ramp.
- A fall of the driver or operator off the platform may cause serious bodily injury or death.
- **ALWAYS** beware of the ramp slope. The slope will directly affect the ability powered machines to climb up the ramp or come down the ramp safely; and the ability of the driver / operator to manually push or pull cargo (without self-propulsion) up or down the ramp.
- The slope also has a direct effect on the center of gravity of the cargo. Consider the initial center of gravity of the load when positioned on flat ground, and the risk that the load might tumble over during loading or unloading.



- To prevent slipping and falling, **ALWAYS** make sure your footing on the platform is solid.
- Use extreme care in wet or slippery conditions. Machine brakes are less effective if the platform and / or wheels of the machine are wet or dirty.
- Disembark the vehicle slowly and in a controlled manner. Rolling off in an uncontrolled manner may result in serious personal injury to the wheelchair occupants or any persons standing near the platform.
- Drivers or operators loading and unloading by means of a ramp **MUST ALWAYS** make sure that they are fit and strong enough
  - to push up the weight of the load when going up the ramp;
  - to hold back, slow down or stop the weight of the load when coming down the ramp;
  - without slipping or falling down.
- If in doubt, **DO NOT** continue. Seek help. Make sure all persons involved follow the safety instructions carefully.
- **ALWAYS** keep the load in the centre of the platform.





## 7.6 MAXIMUM RATED CAPACITY

### ***NOTICE***

- The **maximum rated capacity** is indicated on the serial number decal, the capacity decal and the CE / UKCA certificate of conformity supplied with the ramp.
- It is the maximum weight allowed to be carried on the platform with the following constraints:
  - The weight is evenly spread over the platform surface, over minimum 4 wheels.
  - The weight is placed in a central position between the side profiles of the platform.
  - In case of heavy point loads (e.g. heavy weight on only 3 or 2 wheels), the safe working load **MUST** be limited to 75% of the maximum rated capacity.
- 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.

## 7.7 RECOMMENDED DAILY PRE-TRIP INSPECTION

### **WARNING**

- Using a ramp 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 ramp 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 ramp 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 ramp, 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 automatic locks are still engaged and the ramp is not leaning against the doors. When opening the doors and deploying the ramp, ALWAYS stand clear of the range of motion of the ramp!
- ☐ Replace missing, worn or illegible warning decals immediately. See page 3 for contact info.

**Follow the instructions in section 8 from page 25 onwards to deploy the platform and continue the checks:**

- ☐ Visually inspect the general condition of the ramp frame and platform. Look for cracks or deformations in the material and welds.
- ☐ If so equipped, visually inspect the general condition of the mechanical support legs. Look for cracks or deformation in the material and welds. Make sure the support legs and the outboard platform edge are in firm contact with the ground when the platform is deployed.
- ☐ Make sure all pivot pins in the ramp frame and platform are properly locked and secured.
- ☐ Inspect all attachments such as handles, wheels, locks etc. Check if they are still functional and properly fixed.
- ☐ Make sure the platform surface is clean. Remove any snow, mud, dirt, debris, or slippery liquids. Make sure you wear safety-toe shoes with a good non-slip sole.

**Perform all movements several times. Use the operating instructions in section 8 for guidance.**

- ☐ Make sure all movements occur smoothly and without any unusual noises.
- ☐ Make sure there is no excess play in the hinges between the various platform sections. Make sure there is no excess deformation when the platform is loaded and the ramp can be used safely.



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

→ **DO NOT use the ramp until it has been serviced or repaired by a qualified service technician.**

## 7.8 IMPORTANCE OF PREVENTATIVE MAINTENANCE

### ***NOTICE***

- Competent and regular preventative maintenance is essential to the operational reliability of the ramp as well as the safety of the operator, wheelchair occupants and any 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 ramp cannot be repaired immediately in case of breakdown, it must be put out of operation and secured against unauthorized use.
  - Avoid brutal force when opening or closing the ramp as this may afflict permanent damage to the product.

### **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..
- Warn your supervisor and have the vehicle put out of service.
- Contact an authorized DHOLLANDIA service agent to repair the ramp prior to any further use.

## 8 OPERATING INSTRUCTIONS – PRINCIPLES AND PROCEDURES

### WARNING

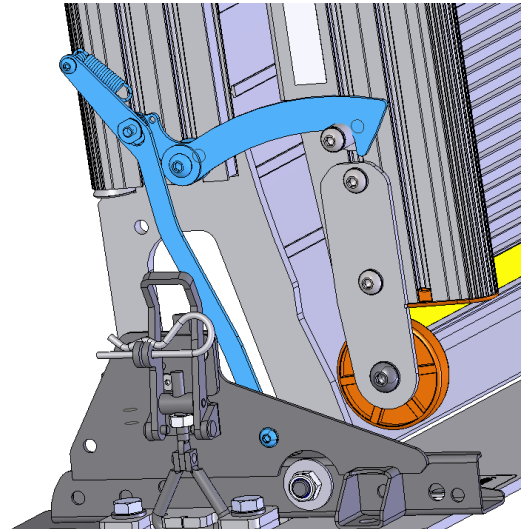
- Prior to operating the ramp, ALWAYS take note of the safety features, door system, door interlocks etc. installed by the manufacturer of the vehicle and the operation instructions issued. These might have a significant influence on the safety of the operator and wheelchair occupants.
- Negligence can put the operator and other parties at great risk of serious bodily injury and death.

### 8.1 PLATFORM LOCKS

- The DH-AI ramps are equipped with a few standard and optional platform locks.

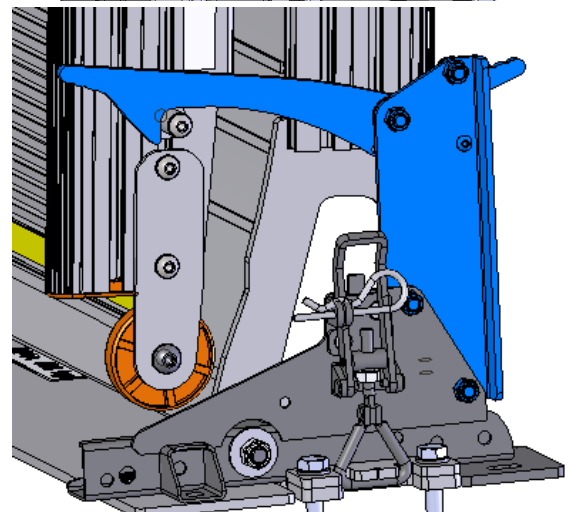
#### Automatic lock on both sides

- Standard on all DH-AI12 and DH-AI13 ramps
- Located on both sides
- Lock disengages / engages automatically when opening / closing the platform. It keeps the 2 sections of the platform shut in travel position.



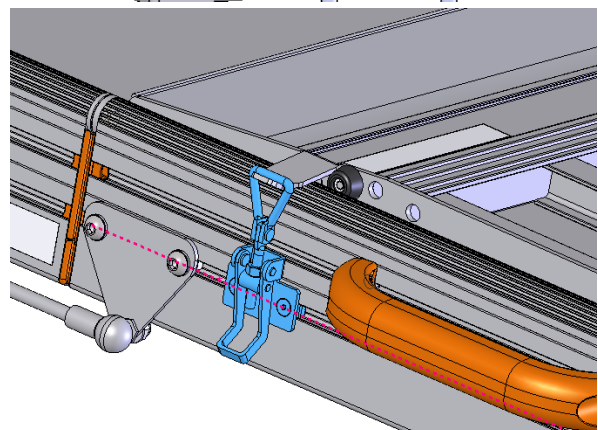
#### Additional mechanical platform lock [OAP824]

- Optional on DH-AI12 and DH-AI13 ramps: mostly chosen for ramps that are mounted on an open truck.
- Only on right side
- Lever needs to be lifted before you can continue with the standard operation of the ramp.



#### Manual platform lock (DH-AI13/ 02)

- On DH-AI13: this lock needs to be manually opened to unfold the flip-over point; and manually closed to stow the flip-over point in its travel position.
- On DH-AI02: this lock keeps the 2 sections of the platform together so that it is easy to transport.

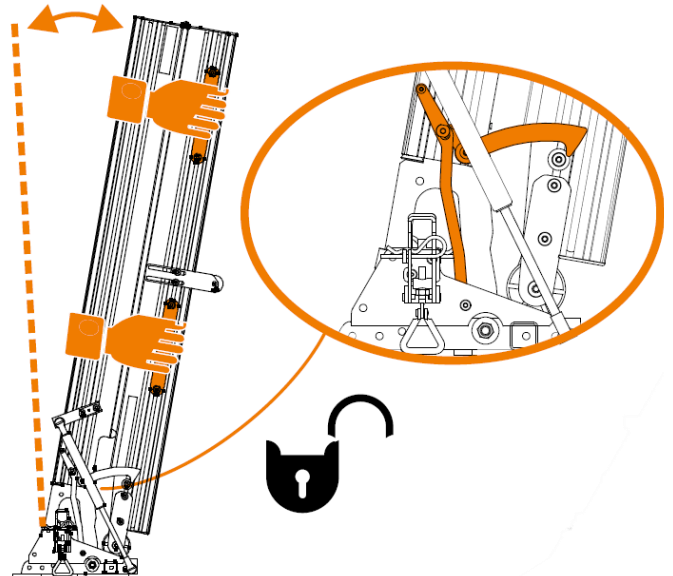
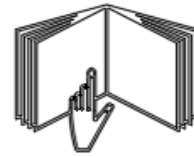


## 8.2 OPERATION OF DH-A112

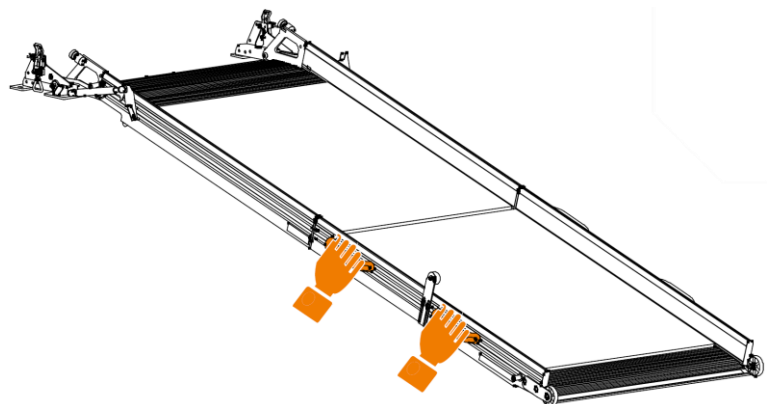
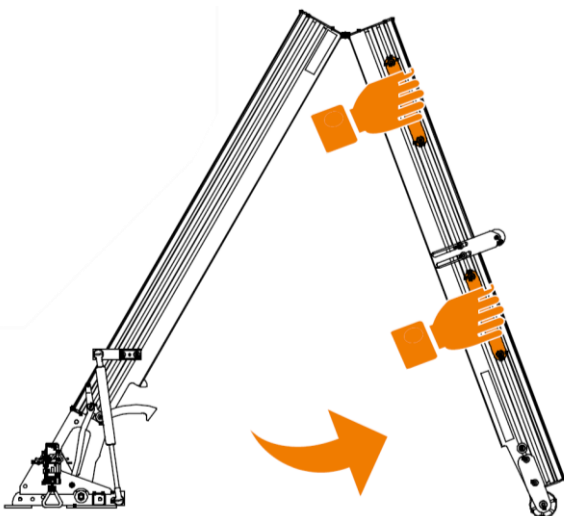
### Deployment of the platform

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

- If so equipped [option OAT801], release the safety belts.

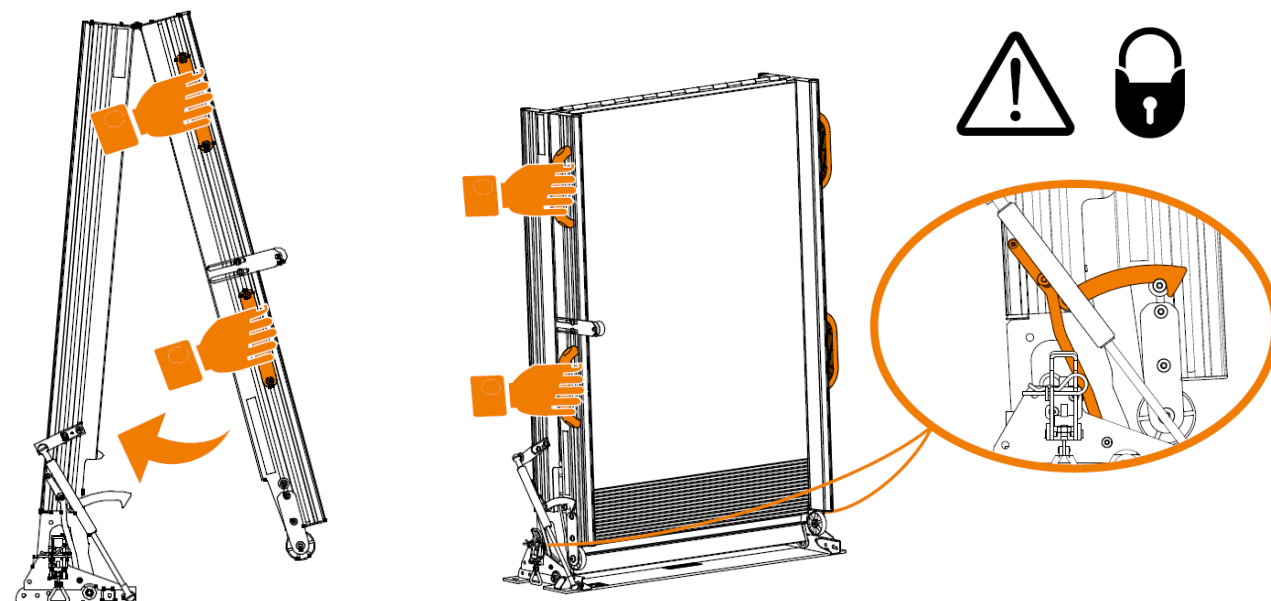


- Hold the platform by the orange handles on the side of the platform.
- Tilt the platform. The platform lock will disengage automatically when the correct angle is reached.



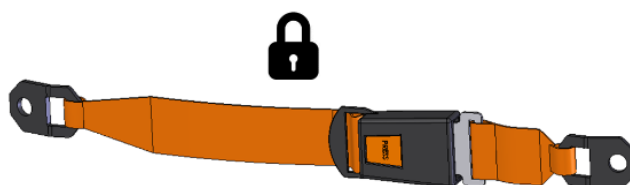
- Fold open the platform and let the wheels roll on the ground.
- Make sure the platform is fully aligned with the ground and that the platform is supported by both wheels.

## Stowage of the platform



- Place your hands on the handles and bring the platform gently towards its travel position.
- The platform lock will engage when the travel position has been reached.
- Verify that the platform is securely locked on both sides.

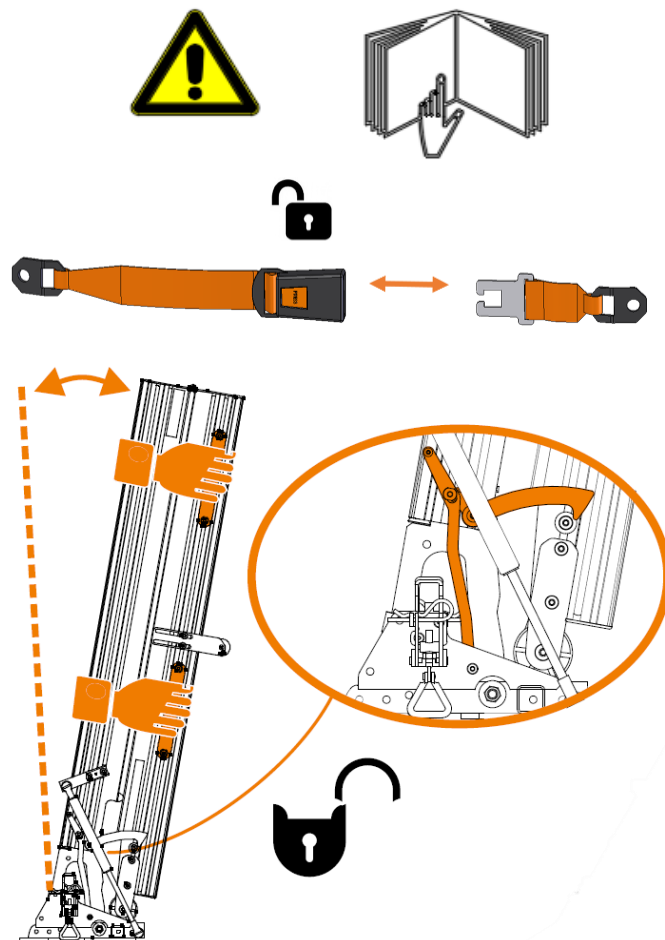
- If so equipped [option OAT801], fasten the safety belts.



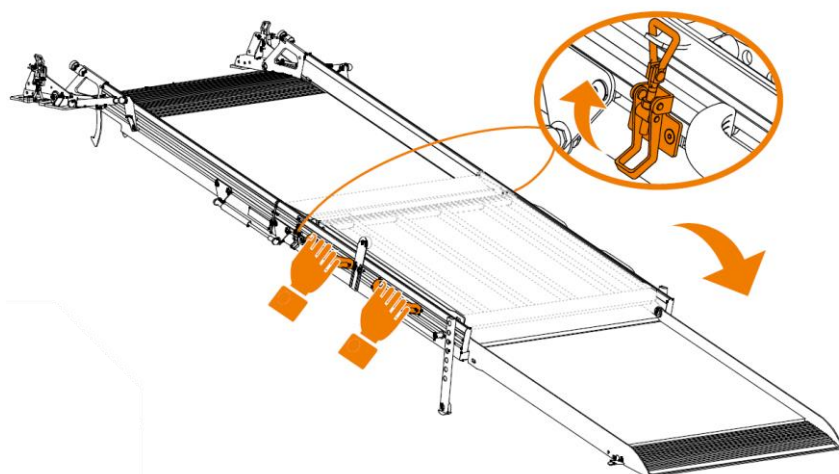
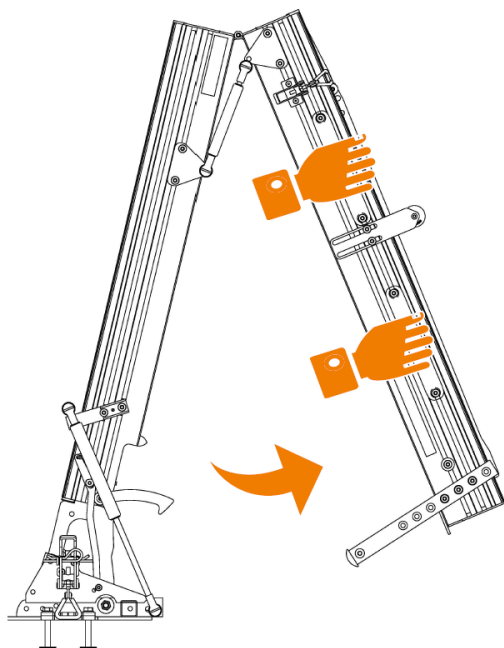
### 8.3 OPERATION OF DH-A113

#### Deployment of the platform

- Consult the operation manual before getting started. Follow ALL safety and operation instructions.
- If so equipped [option OAT801], release the safety belts.

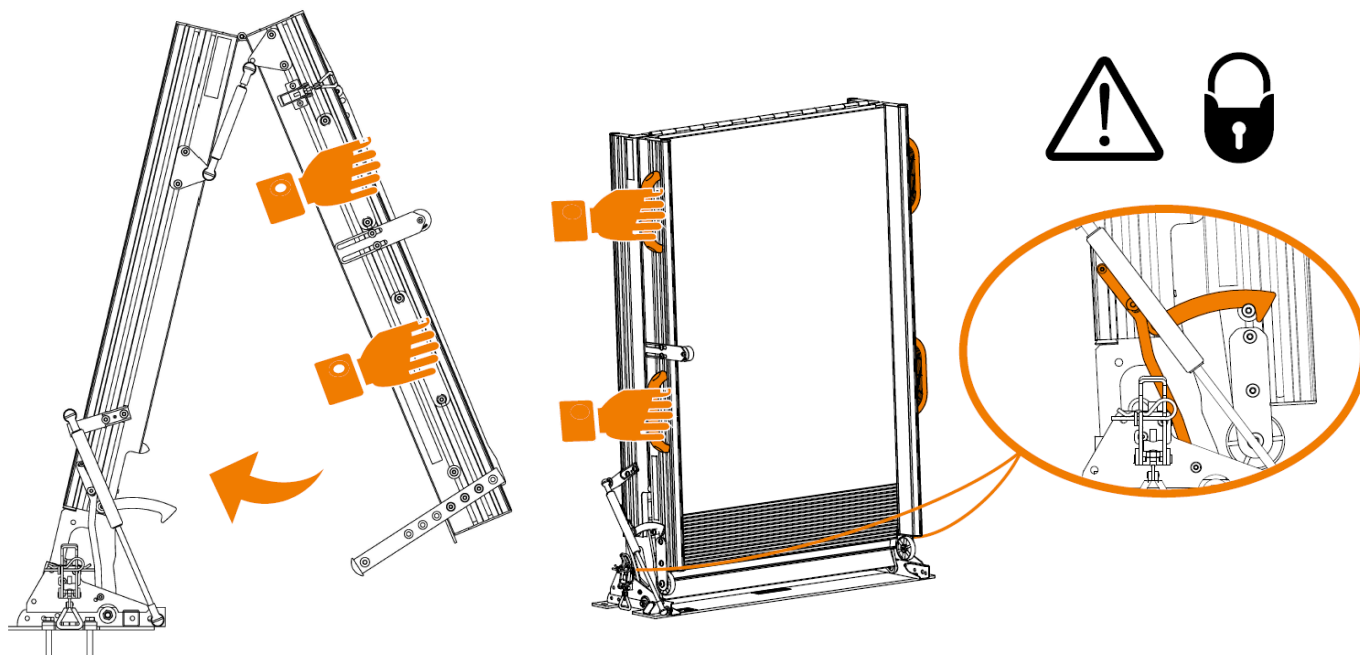


- Hold the platform by the orange handles on the side of the platform.
- Tilt the platform. The platform lock will disengage automatically when the correct angle is reached.

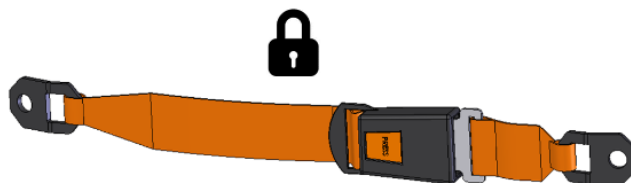


- Fold open the platform and place the support feet on the ground.
- Release the lock on the side to fold open the third part of the platform.
- Make sure the platform is fully aligned with the ground and that the outboard platform edge rests on the ground over its full width.





- Lock the foldable point. Place your hands on the handles and bring the platform towards its travel position.
- The platform lock will engage when the travel position has been reached.
- Verify that the platform is securely locked on both sides.
- If so equipped [option OAT801], fasten the safety belts.

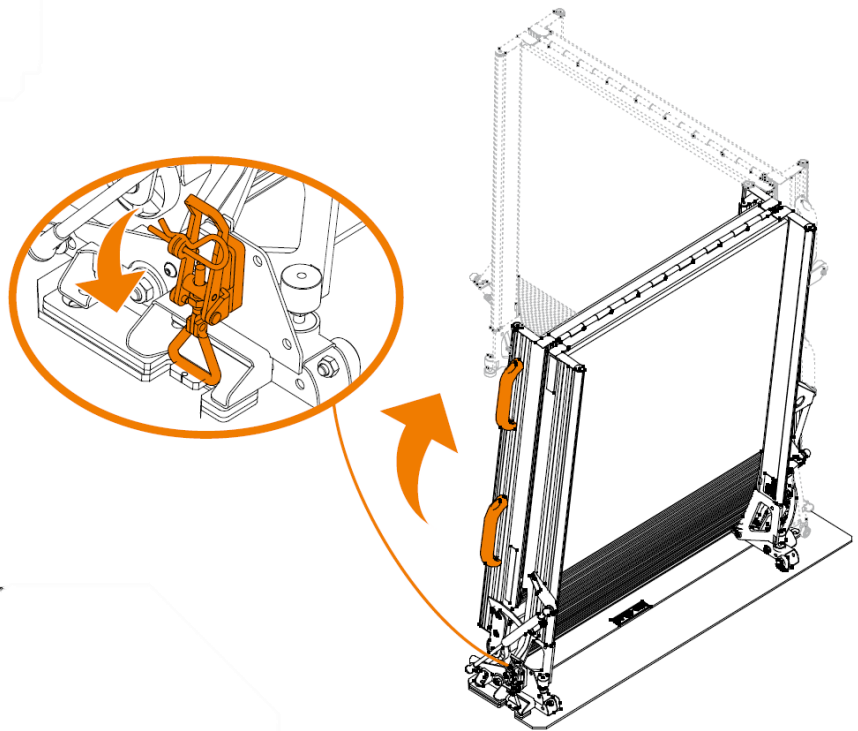


### NOTICE

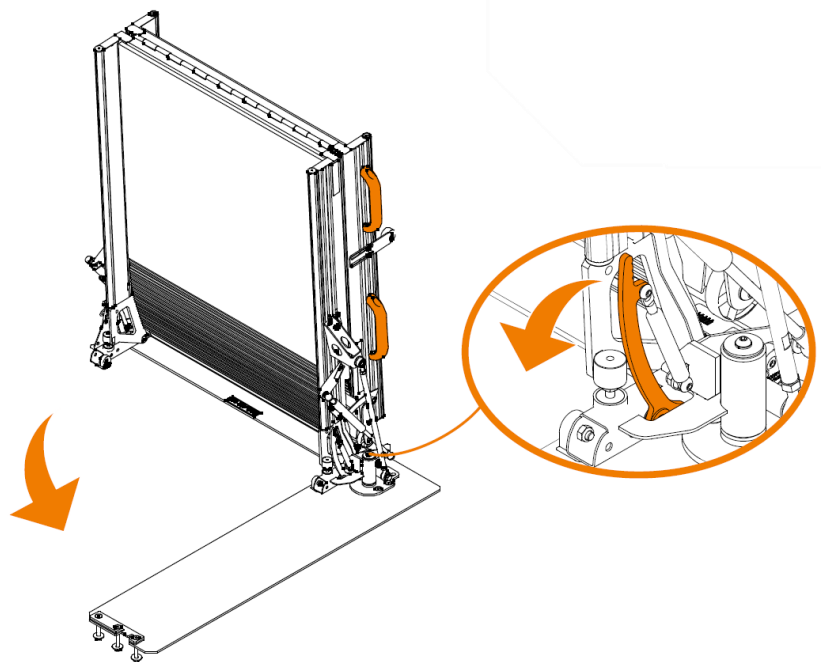
- If the support legs under the ramp are set up to be used at ground level, measures must be taken to use it at the kerbside or other elevations. Adjust the length of the support legs or underfill them with support blocks prior to loading or unloading.
- In case of problems with the alignment of the platform or the set-up of certain parts, consult the INSTALLATION MANUAL.

## 8.4 OPERATION OF PIVOTING FRAME OAF820.L

- The platform can be swung out- and inwards.
- Release the quick-release lock on the right side of the platform.
- Swing the platform outwards. The yellow lever will automatically lock when reaching the designated position and secure the platform in a firm position.



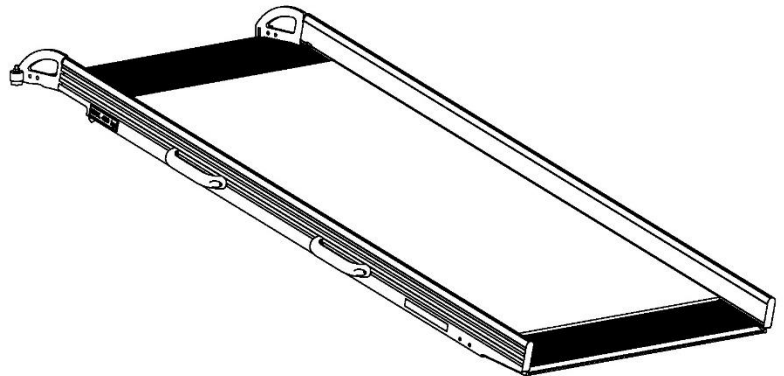
- Pull the lever and swing it back to its travel position.
- Engage the quick-release lock on the right side of the platform to secure the platform back in its travel position.



- With option OAF821, a second locking position for the platform inside the vehicle can be acquired. See the INSTALLATION MANUAL for fitting instructions.

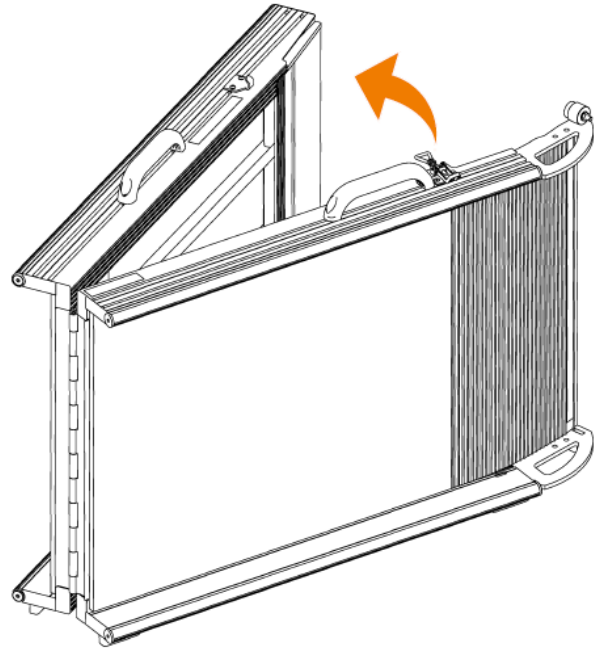
## 8.5 OPERATION OF THE PORTABLE RAMP DH-AI01.04

- Position the ramp vertically with the 2 handles facing upwards. The opposite side of the platform is equipped with wear pads to avoid scratches of the platform as much as possible.
- Flip the ramp over to its work position.
- Place the ramp inside the vehicle and let it rest on the rubbers or the fixation bolts.
- Make sure and verify before each passage that the ramp is properly rested on the vehicle floor and cannot slide or fall out during operation.
- Make sure the ramp is fully aligned at both ends: the inboard platform edge with the vehicle floor and the outboard edge with the ground. Make sure the 4 corners are in firm contact with a hard surface (not floating).

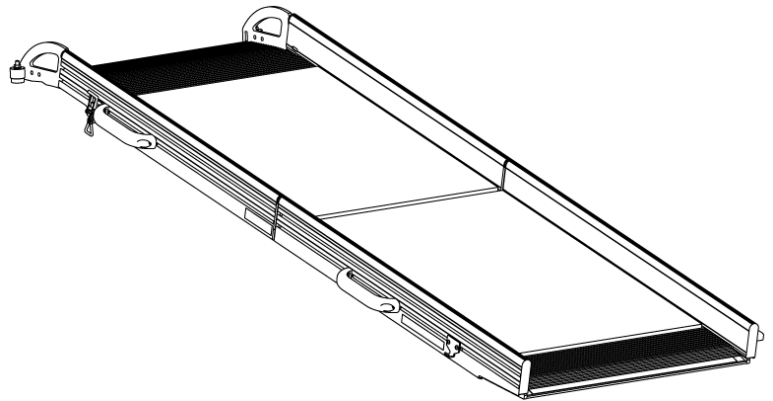


## 8.6 OPERATION OF THE PORTABLE RAMP DH-AI02

- Position the ramp vertically with the 2 handles facing upwards. The opposite side of the platform is equipped with wear pads to avoid scratches of the platform as much as possible.
- Release the platform lock and separate the two platform halves.



- Flip the ramp over to its work position.
- Place the ramp inside the vehicle and let it rest on the rubbers or the fixation bolts.
- Make sure and verify before each passage that the ramp is properly rested on the vehicle floor and cannot slide or fall out during operation.
- Make sure the ramp is fully aligned at both ends: the inboard platform edge with the vehicle floor and the outboard edge with the ground. Make sure the 4 corners are in firm contact with a hard surface (not floating).



## 8.7 ADJUSTMENTS

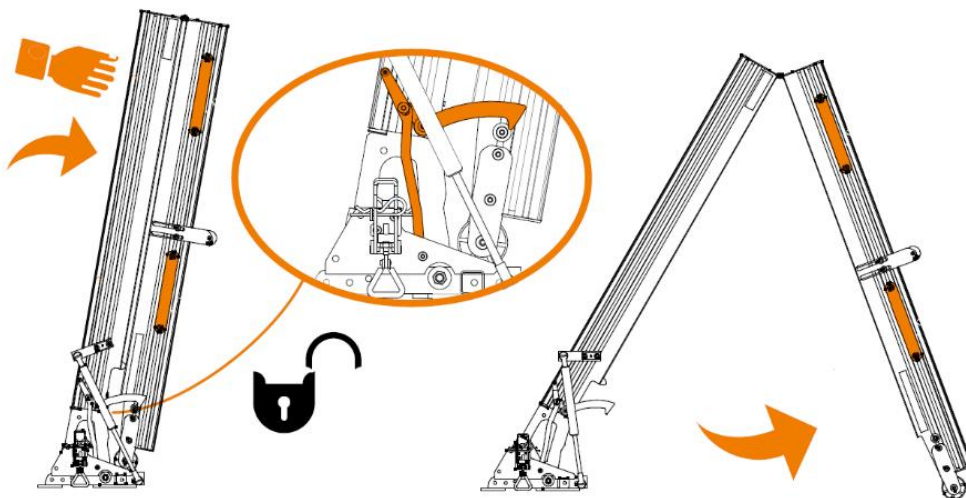
In case of problems with the alignment of the platform or the set-up of certain parts, consult the INSTALLATION MANUAL.

Contact your national DHOLLANDIA distributor when in doubt and before making any permanent changes. See contact details on page 3.

## 9 EMERGENCY OPERATION: OAP825

### 9.1 GENERAL

- Applicable to DH-AI12 with option OAP825.
- Whenever necessary, the ramp can be deployed from inside the vehicle by simply pushing the platform outwards. Option OAP825 will fold the platform open automatically.



### WARNING

- Negligence or ignorance during the emergency operation can put the operator and third parties at great risk of serious bodily injury or death.
- Prior to operating the emergency operation of the ramp, ALWAYS make sure you follow all applicable instructions.

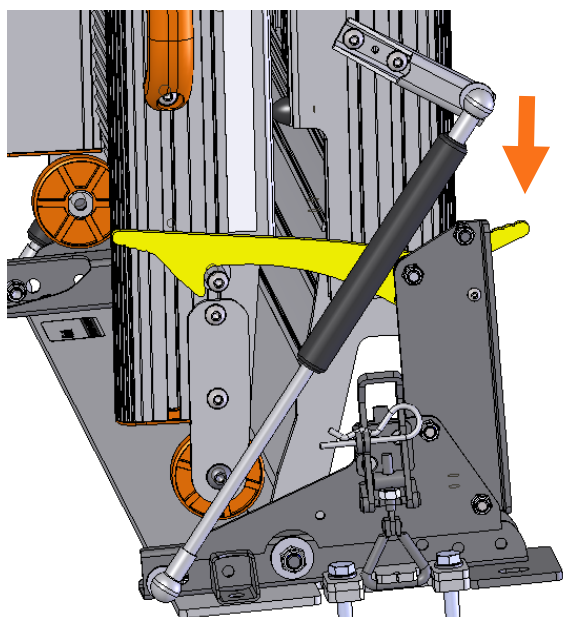
### WARNING



- Make sure the area behind the platform is completely clear and the platform can be deployed safely.
- Keep head, hands and feet clear of pinch points and moving parts.

## 9.2 EMERGENCY OPERATION WITH OAP824

- If the ramp is equipped with option OAP824, this additional lock must be disengaged before the ramp can be pushed outwards.
- Kick or push the lever down to disengage the lock.
- Then, continue to push the platform open in accordance with the instructions under 9.1.



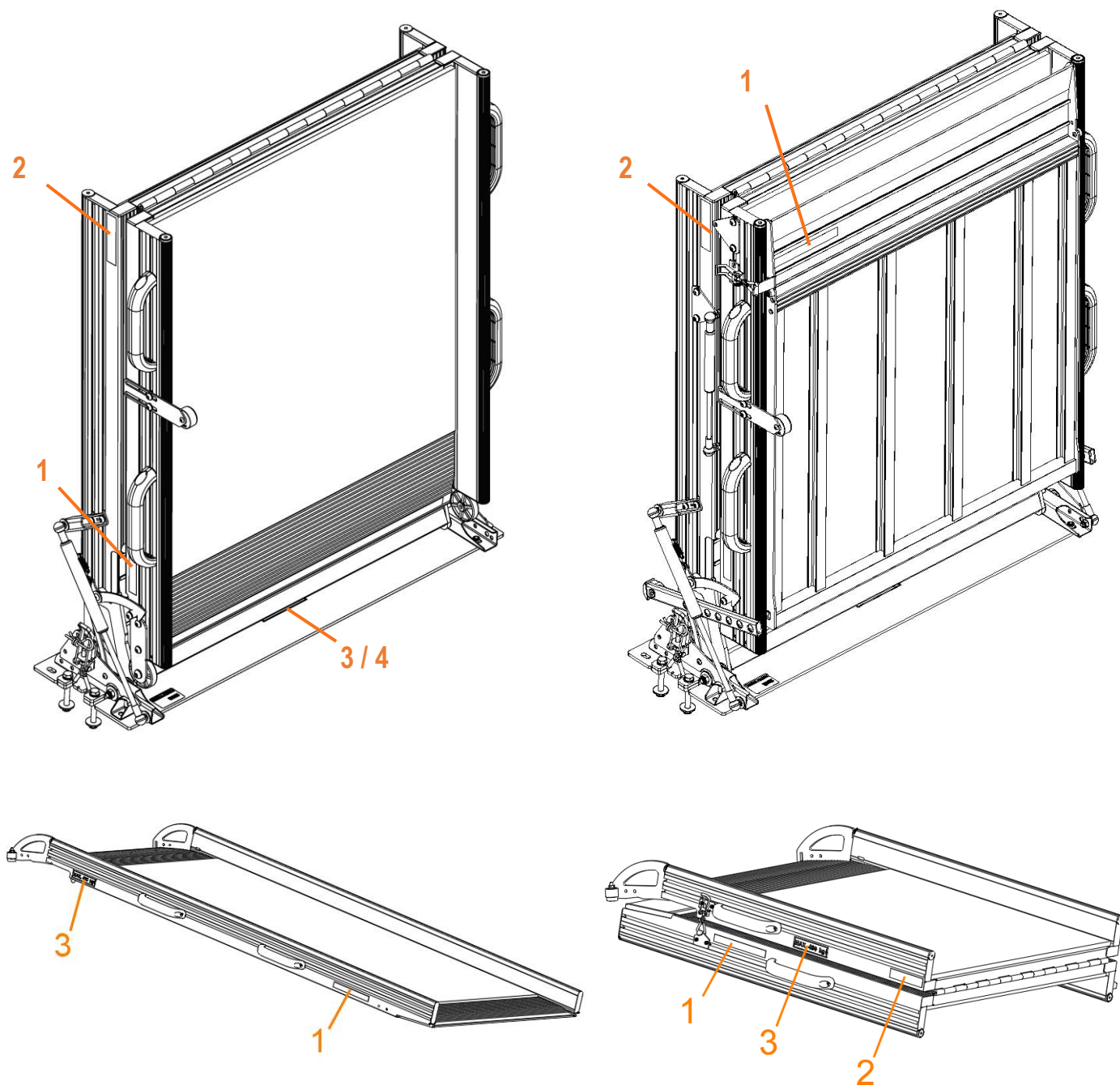
## 10 DECALS

### 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 ramp itself, or shall be mounted by the installer during installation and PDI of the ramp.
- 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.

### 10.2 REGULAR DECALS ON THE RAMP

- The following decals are premounted by DHOLLANDIA on the ramp.





1  
EF0577



2  
EF0593.EN



3  
EF0570.00400

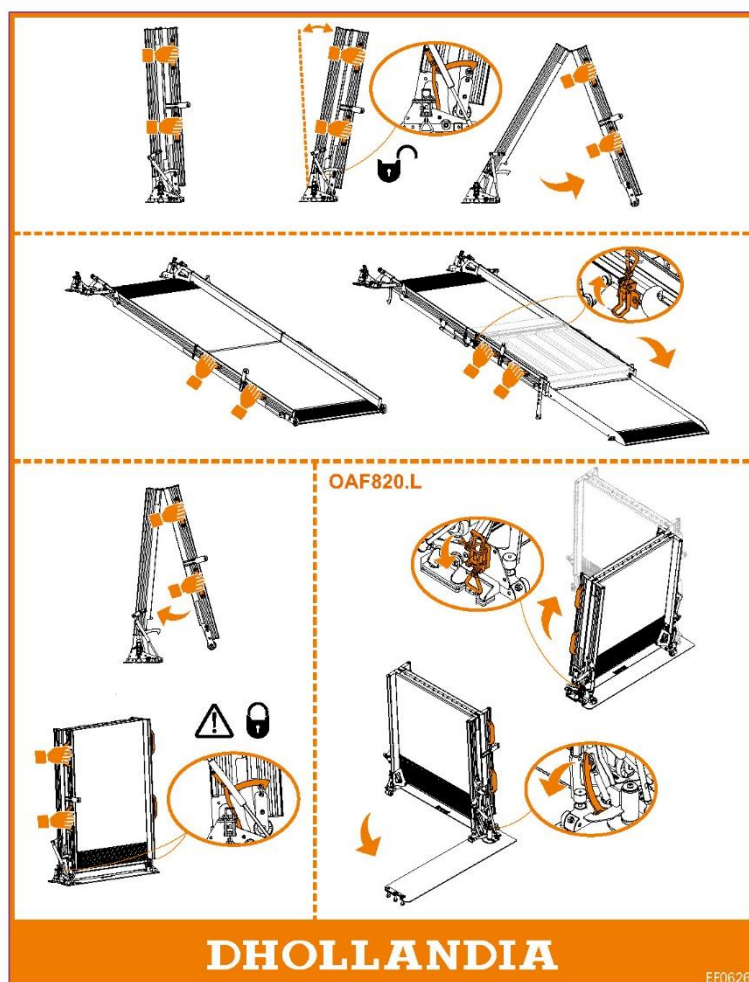


4  
EF0570.01000



























### 10.3 DECALS INSIDE THE VEHICLE

- The following decal is supplied loose with the ramp and shall be affixed by the installer near the ramp at a location clearly visible to the operator, preferably inside the vehicle to maximize longevity.



## 11 MEANING OF SAFETY AND WARNING SIGNS

WARNING signs		MANDATORY ACTION signs	
	Overview and keep visual control over the working area of the tail 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 ramp.
	Hazard caused by tilting objects.		Wear safety protection, eye protection and a safety hard hat.
	Hazard of falling from heights.		Follow these welding instructions.
	Crushing and entrapment hazard. Keep head, upper body and limbs away from moving parts		Follow these bolt instructions. Fasten the bolts and nuts with the required torque.
			Grease / lubricate. Inject grease in the grease nipples.
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 the electric / hydraulic functions	
	Yes do this way. Correct work procedure.		OPEN the platform, or TILT DOWN.
	No, DO NOT do this way. -Incorrect work procedure.		LOWER the platform.
	Position the load at the applicable center of maximum load. Follow the load instructions.		LIFT the platform.
	Tail lift with mechanical auto-tilt at ground level (and auto-tilt swing brackets).		CLOSE the platform, or TILT UP.
	Tail lift with hydraulic auto-tilt at ground level (and hydraulic memory cylinder)		SLIDE OUT the platform.
	Unlock. Disengage the mechanical locking system.		SLIDE IN the platform.
	Lock. Engage the mechanical locking system.		Push the stabilising LEGS DOWN.
	Switch ON the electrical power.		Pull the stabilising LEGS UP.
	Switch ON the electrical power to the tail lift via the main battery disconnect switch and / or cabin switch.		Lower the ramp DOWN.
	Switch OFF the electrical power.		Raise the ramp UP
	Switch OFF the electrical power to the tail lift via the main battery disconnect switch and / or cabin switch.		Switch between external and internal controls.
	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 ramp 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**