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## Instructions for fitting, operating and maintenance

HTL2 ISO

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## 1 About these instructions





These instructions are **original operating instructions** as outlined in EC Directive 2006/42/EC and the Supply of Machinery (Safety) Regulations 2008 No. 1597 (UK).

**These instructions apply to dock levellers HTL2 ISO.**

### 1.1 Applicable documents

- ▶ In addition to these instructions, the following documents must be observed depending on the scope of delivery:
  - Control operating instructions

### 1.2 Warnings used

	Indicates a danger that can lead to <b>death or injuries</b> .
 <b>DANGER</b>	
	Indicates a danger that immediately leads to death or serious injuries.
 <b>WARNING</b>	
	Indicates a danger that can lead to death or serious injuries.
 <b>CAUTION</b>	
	Indicates a danger that can lead to minor or moderate injuries.
<b>ATTENTION</b>	
	Indicates a danger that can lead to <b>damage or destruction of the product</b> .

## 2 Safety instructions

### **WARNING**

#### **Danger of injury in the event of non-observance of these operating instructions**

These instructions contain important information on the safe use of the product. Possible dangers are emphasised.

- ▶ Read through all of the instructions carefully.
- ▶ Follow all safety instructions provided in this document.
- ▶ Keep these instructions accessible.

### 2.1 Intended use

The product is used in industrial applications and serves the following purposes:

- Attaching to loading sites for lorries
- Use for efficient loading
- Bridging height differences and distances between the loading area of the vehicle and the loading ramp
  - Max. permissible inclination angle in accordance with EN 1398: 12.5%, approx. 7°.
  - Maximum loading capacity, see *Page 5*.
  - Maximum levelling with standard sizes, see *Dimensions and effective working range on page 35*.

### 2.2 Non-intended use

The product is not suitable for the following applications:

- As a lifting platform
- For lifting and lowering goods or persons
- As a location for storing goods or loading equipment
- For operation with the liftgate of the vehicle.

### 2.3 Qualification of personnel

Only authorised persons may carry out work on the product. Authorised persons are personnel from the operator or manufacturer who have been instructed and trained in this work.

To perform work on the product, the personnel undertaking these tasks must meet certain requirements. The groups of persons are classified as follows:

#### 2.3.1 Operator

The operator is responsible for the building where the product is used. The operator has the following tasks:

- Instructing users
- Complying with the legal workplace safety rules and regulations
- Complying with the valid safety, accident prevention and environmental protection regulations
- Providing and observing documentation
- Ensuring that the product is always in perfect technical working order.

### 2.3.2 Specialist personnel

Members of specialist personnel are responsible for the following work:

- Fitting
- Initial start-up
- Maintenance
- Dismantling and disposal

Please note:

- Work must only be performed by qualified employees who are familiar with the assembly technology as well as the valid safety regulations.
- Fitting includes
  - Mechanical work
  - Welding and casting work, depending on the fitting model
  - Electrotechnical work.
- Special work during fitting must only be performed by suitably qualified employees of specialist companies. This includes work on the building statics or ventilation system.
- Electrical installations must only be performed by qualified electricians.

### 2.3.3 Users

Users are permitted to perform work for operation and maintenance of the product. Requirements for users:

- Instruction on the product by the operator
- Knowledge of these instructions
- Good sight and hearing, as well as good judgement and a sense of responsibility

## 2.4 General safety instructions

The use of the product is prohibited in the following cases:

- In non-industrial applications
- In case of damage to the product or individual components.

### WARNING

#### **Danger of injury from spacings and openings in the area of the dock leveller**

Spacings and openings in the area of the dock leveller can impair workplace safety. Example:

- Recesses in the ramp for guiding the hall door
- ▶ Take appropriate measures, e.g. briefing of personnel or structural protective measures.

### ATTENTION

#### **Damage due to liquids**

Contact with liquids can cause corrosion and short circuits. As a result components may be damaged.

- ▶ Avoid contact with liquids:
  - Of energized parts
  - Of the hydraulic power unit, e.g. by ingress through the ventilation filter.
- ▶ Check the dock leveller periodically according to these instructions.
- ▶ Remove all corrosion and touch up any paint damage.

### ATTENTION

#### **Damage due to mechanical forces**

The dock leveller can be damaged by mechanical forces, e.g. overloading.

- ▶ Perform a visual inspection for mechanical damage every day.
- ▶ Commission the repair of all defects immediately.

If damage puts the operational safety of the dock leveller at risk, a specialist must inspect the dock leveller and its operational safety. Use of the dock leveller is not permitted until the repair work has been completed.

Cross traffic is possible only in home position.

- ▶ Please observe the notes regarding cross traffic, see *Non-operation on page 25*.

### WARNING

#### **Danger of injury by changing the construction**

All the components are precisely matched to one another. Changing components or attaching additional components could affect the construction, disable important safety components and lead to serious injuries.

- ▶ Do not change any parts or the maximum load without consent of the manufacturer.

## 2.5 Noise protection

Operation of the dock leveller produces different types of noise:

- Short-term noise when the platform is raised and lowered, when the lip is moved and when the dock leveller is returned to the home position.
- Long-term noise when driving over the dock leveller, depending on the means of transport and cargo. The dock leveller causes a continuous sound level that does not exceed 70 dB(A). The noise can be influenced by the travel speed, type of tyres and type of transport packaging.

### WARNING

#### **Health risk due to noise exposure**

- ▶ Measure the actual level of noise exposure on site.
- ▶ Take appropriate protective measures, such as headphones or ear plugs.
- ▶ Observe legal regulations pertaining to noise protection.

## 2.6 Standards and directives

The product complies with all applicable standards and directives, see *Declaration of conformity on page 43*. The corresponding marking is attached to the product.

This declaration is not applicable under the following conditions:

- When operating under extreme conditions, e.g.
  - Temperatures outside the range mentioned in section 13
  - Strong magnetic fields
  - In special situations, e.g. if there is a risk of explosion
- Handling of loads which could lead to dangerous situations (e.g. molten metal, acids, radioactive materials, particularly fragile loads)



- Hazards occurring during transportation, fitting and dismantling
- When fitting into other systems or machines, operation with more than one control box or wirelessly.
- Risks caused when driving loading equipment (forklifts, etc.).

In any of these cases an individual risk assessment and conformity procedure in accordance with the respective European Directives is required.

### 3 Scope of delivery

The scope of delivery for the dock leveller comprises:

- Dock leveller
- Control
- Any individual parts supplied separately, depending on the version
- Transport profile with protective flap (1 x per delivery)


All dock levellers are tested and filled with hydraulic oil on delivery.

### 4 Product description

The HTL2 ISO is a stationary, hydraulically operated dock leveller. The platform is rotatable. The lip is continuously extendable.

The HTL2 ISO is equipped with insulation panels and seals for thermal insulation.

#### 4.1 Loading capacity

 <b>CAUTION</b>
<b>Damage to dock leveller or personal injury caused by overload</b>
Excessive load can damage the dock leveller or cause tripping hazards if the platform is deflected.
<ul style="list-style-type: none"> <li>▶ Observe the maximum load.</li> <li>▶ Please observe the conditions regarding cross traffic, see <i>Non-operation on page 25</i>.</li> </ul>

Platform and lip have a sufficient cross torsion flexibility to

- Adapt to the tilt of the loading surface during the loading process
- Avoid tripping hazards.

The calculation, dimensioning and design comply with the requirements of EN 1398. The load-bearing capacity stated on the data label applies to the total weight of:

- Industrial truck including batteries and any attachments
- Load
- Drivers

#### Maximum load

- Rated load according to data label
- In energy saving mode or in case of any other disruption to the electrical supply: max. 60 kN, including at higher rated loads; see control documentation.

#### 4.1.1 Industrial trucks


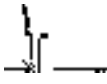

Acc. to EN 1398, the rated load refers to

- load on an axle
- Two rectangular contact surfaces, aspect ratio 3 : 2 (width : length) with one metre clearance
- Pressure load max. 2 N/mm<sup>2</sup>

These conditions apply to forklift trucks with air-filled tyres or super-elastic tyres.

With PU / Vulkollan tyres, the contact surface is smaller and the pressure load greater. This can cause permanent deformation (lane grooves) on the platform.

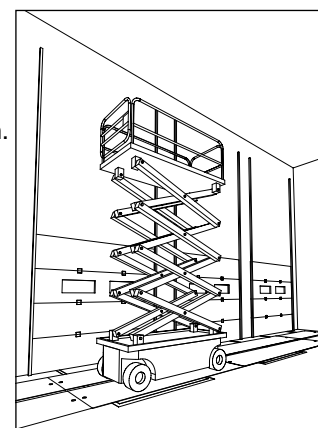
The deformation is permissible within the limit values specified in EN 1398. We recommend the following load limitation to prevent lane grooves:

Transport vehicle	Forklift	Electric lift truck	Reach lift truck
			
Tyres	Air-filled / Super-elastic	Tandem rollers made of PU / Vulkollan®	Rollers made of PU / Vulkollan®
Rated load 60 kN			
HTL 2 ISO	6 t	6 t	4 t

#### 4.1.2 Working platforms

If the dock leveller is driven over with mobile working platforms during construction or conversion of the hall:

- ▶ Make sure you use sufficiently dimensioned driving panels to distribute the point load and prevent deformation.
- ▶ Do not exceed the maximum loading capacity, see *Maximum load on page 5*.



#### 4.1.3 Changes to the operating conditions

When changing the operating conditions:

- ▶ Take any potential influences on the loading capacity of the dock leveller into consideration.
- ▶ Coordinate any necessary adjustments with the manufacturer or supplier of the dock leveller.

Changes to the operating conditions include:

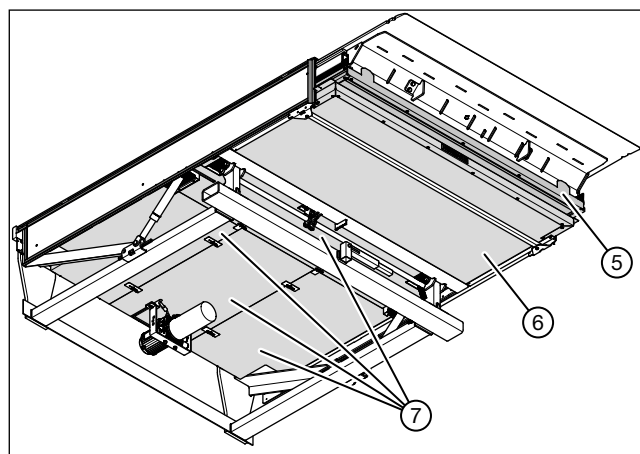
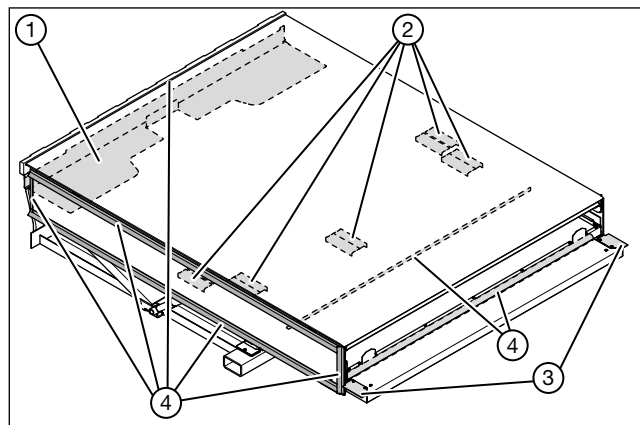
- The use of other, especially heavier, transport equipment
- Docking of other vehicles.

## 4.2 Temperature

Temperature range, see *Technical data on page 34*. The above temperature range applies to the hydraulic unit. Depending on the situation, lower or higher ambient temperatures will not have an adverse impact.

## 4.3 Seals and insulation

Seals reduce draughts, insulation panels improve thermal insulation.



- 1 Seal made of tarpaulin material
- 2 Brush seal
- 3 Seal made of tarpaulin material (only for version with protruding insulation panel)
- 4 Gap sealing (plastic profiles)
- 5 Insulation panel moving under the lip
- 6 Insulation panel, optionally protruding (as shown) in combination with correspondingly adapted door version
- 7 Insulation panels

### ATTENTION

#### Reduced thermal insulation in case of missing or damaged seals and insulation panels

- Keep the seals and insulation panels complete and intact at all times.

The dock leveller is optionally equipped with:

- Acoustic insulation: acoustic insulation coating on platform and lip, see *Pedestrian and driving surface on page 7*.

## 4.3.1 Moving insulation panel

Link brackets, magnets and a tension spring allow the insulation panel below the bridge plate to extend and retract together with the lip.

## 4.4 Hydraulic system

An electro-hydraulic system with two lifting cylinders and two lip cylinders operates the dock leveller.

## 4.5 Safety components

To prevent situations in which personnel can be injured, the dock leveller is equipped with safety devices.

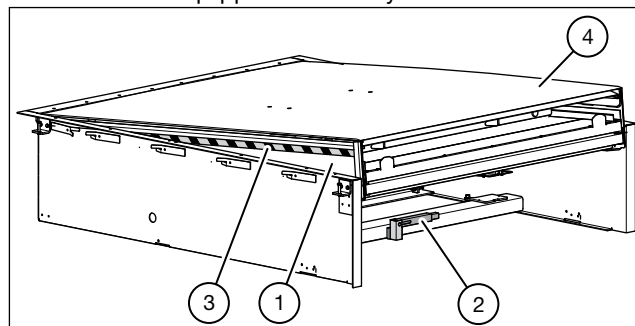


Figure: Frame models and box models

- 1 Side panel, foot guard, see 4.5.2
- 2 Maintenance support, see 4.5.4
- 3 Safety marking, see 4.5.5
- 4 Pedestrian and driving surface, see 4.5.6

## 4.5.1 Emergency stop and restart inhibition

The main switch is equipped with an emergency stop function. The emergency stop function triggers the restart inhibition in the control. All movement is blocked once the electrical supply is interrupted or the emergency stop switch is actuated. This prevents the platform from falling.

### ⚠ WARNING

#### Danger of injury and damage if the dock leveller is loaded after emergency stop

If a vehicle rolls over the dock leveller while the restart inhibition is activated, the platform will drop. The construction and hydraulic system may be damaged. This could result in injuries.

- Eliminate the cause that triggered the emergency stop.
- Press the *Lift platform* button to make the dock leveller ready for operation again.

### ⚠ WARNING

#### Danger of injury and damage if the dock leveller is operated using the main switch

Operating the dock leveller with the main switch can cause tripping and damage to the construction.

- Never use the main switch to operate the dock leveller.
- Only operate the main switch in case of an emergency and for inspection and maintenance work.

### NOTICE:

The main switch can be secured with a padlock (not included in delivery) to prevent unauthorised use.

- ▶ When performing inspection and maintenance work that does not rely on electrical power, set the main switch to 0 and secure it against actuation with a padlock.

#### 4.5.2 Foot guard

The dock leveller is equipped with fixed and, if required, movable side panels. The side panels prevent feet from being trapped between the hall floor and dock leveller.

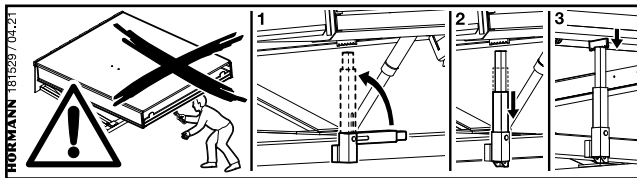
#### 4.5.3 Automatic safety equipment

Each lifting cylinder is equipped with a hose safety device. The hose safety device prevents unintended, hazardous lowering of the platform carrying a load, e.g. if a lorry drives away unexpectedly.

#### 4.5.4 Maintenance support

The maintenance support prevents the platform from lowering.

The sticker below, located on the front beam, contains a clear reference to this safety device.



Before all work under the platform, such as maintenance and repair work:

- ▶ Position the maintenance support to securely support the platform, see *Position the maintenance support*, on page 26.

#### 4.5.5 Safety marking

Yellow-black markings indicate that the platform has left the horizontal position.

Where?	Visible when?
Below the running plate	Platform lifted
Side panels (fitting model F, FR, B)	Platform lowered
Pit along the sides (fitting model P)	Platform lowered

#### 4.5.6 Pedestrian and driving surface

ATTENTION
<b>Damage caused by aggressive agents</b> Aggressive agents on the dock leveller can cause corrosion and damage. <ul style="list-style-type: none"> <li>▶ Do not use any aggressive cleaning agents or road salt.</li> </ul>

The surfaces of the platform and lip are designed as running plates to prevent slipping.

- ▶ Avoid increased risk of slipping due to moisture or black ice: Keep the pedestrian and driving surface dry and clean.

Under more severe conditions, e.g. wet surfaces due to frequent cleaning, additional measures, such as anti-slip coating, may be required.

If equipped accordingly, the dock leveller has an anti-slip coating, class R11, according to DIN 51130. The coating also has an optional acoustic insulation effect. The coating on the platform is then approximately twice as thick.

#### 4.5.7 Buffers (not included in the scope of delivery)

- ▶ Protect ramps and vehicles with suitable buffers. Special measures may be required for impact forces greater than 100 kN. Please contact the supplier or manufacturer.

#### NOTE

Loading sites with DOBO system (see 5.1) require a movable buffer. After docking, the buffer must be lowered so that the vehicle doors can be opened.

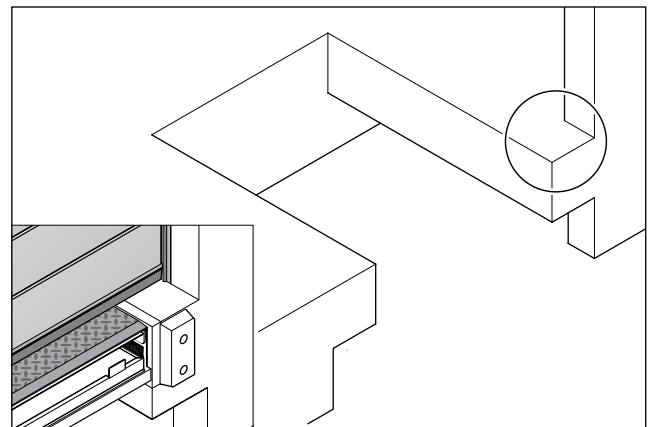
## 5 Fitting requirements

### 5.1 Pit shapes

Various pit shapes are possible depending on the door guide:

#### Door guided down onto the dock leveller

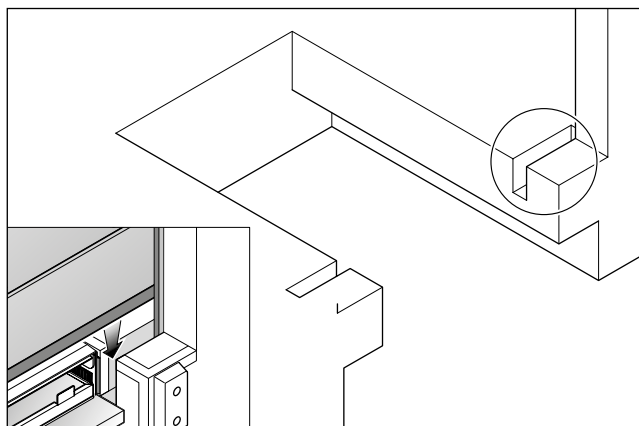
The door closes on the dock leveller platform at the front. This door guide does not have any effects on the pit version.



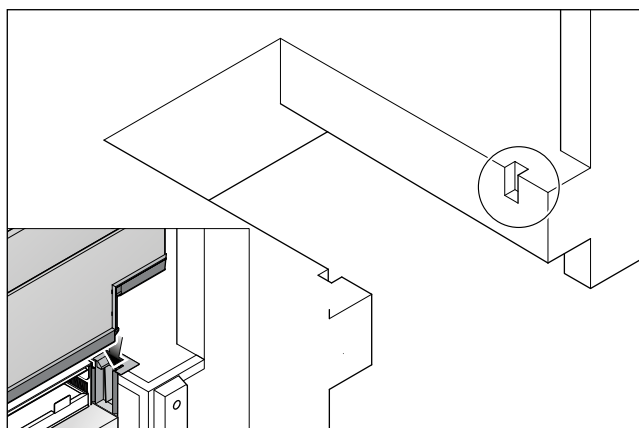
#### Door guided in front of the dock leveller

The door guide requires a longer pit with a recess for the door. The dock leveller is fitted further back in the pit. The lower insulation panel of the dock leveller is extended. The door closes on the insulation panel of the dock leveller. The design of the recess for the door depends on the door type and the dock leveller fitting model.

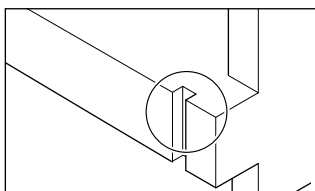
**DIFS:** Wide recess for standard door guide in front of dock leveller



**DIFT:** Narrow recess for special door guide with lowered bottom section in front of dock leveller

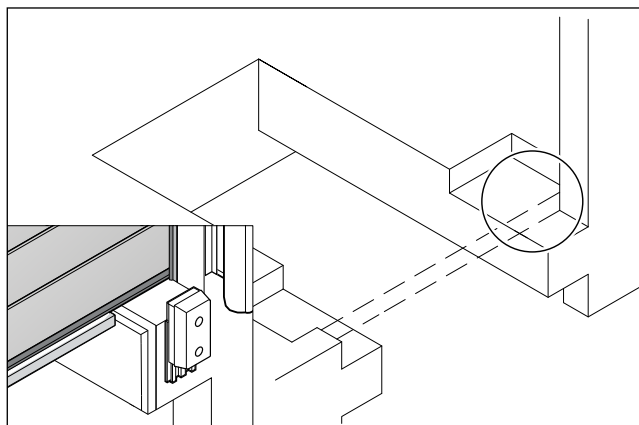


Depending on the fitting model, the recess for the door is short (P) or continuous (F, FR).



## DOBO system

For loading sites with DOBO system, the vehicle doors can be opened after docking. The pit has a step that allows the doors to be opened and set down.



## NOTICE:

The following figures in these instructions do not take into account the extension and adjustment of the pit for:

- The door guide in front of the dock leveller
- The step with the DOBO system.

(exception: section 5.2.1)

Depending on the fitting model, the dock leveller is suitable for the following fitting methods:

- In a prepared pit in the building floor
  - Pit model P for fitting by welding
  - Frame model FR for fitting by casting
  - Frame model F for fitting by welding to preassembled frame
- Simultaneously with the building floor by using a base construction and mould
  - Box model B for fitting by casting

## 5.2 Requirements for the pit

The design of the pit depends on the fitting model, see data label or delivery note.

To ensure long-term proper functioning, the pit must be designed as follows:

- In accordance with the manufacturer's planning drawings for the respective fitting model
- Dimensionally accurate and at right angles on all sides
- Sufficiently stable in order to withstand all common or infrequently occurring forces without damage.

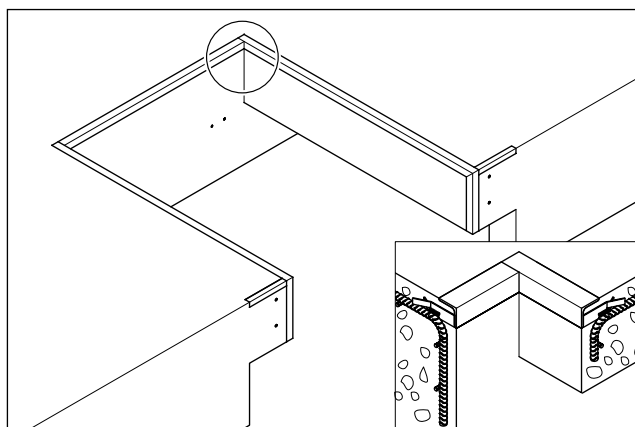
## ATTENTION

### Danger of breaking out caused by insufficient fixing

With insufficient fixing, the pit cannot withstand the load forces. The dock leveller will break away. When the automatic safety equipment is activated, the forces are particularly high. Example: A lorry drives away while the dock leveller is still in operation.

- Provide for proper connection to the building structure, especially in areas where load forces occur.

## For pit model P

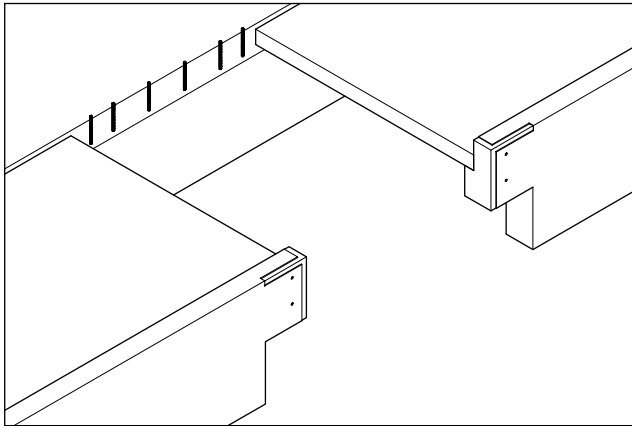


## NOTE

The cylinder support beam requires additional support for dock leveller lengths over 3000 mm.

## For frame model FR

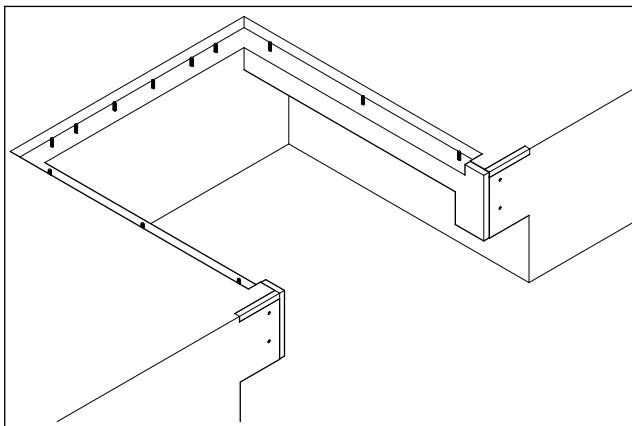
Fitting with prefabricated concrete elements



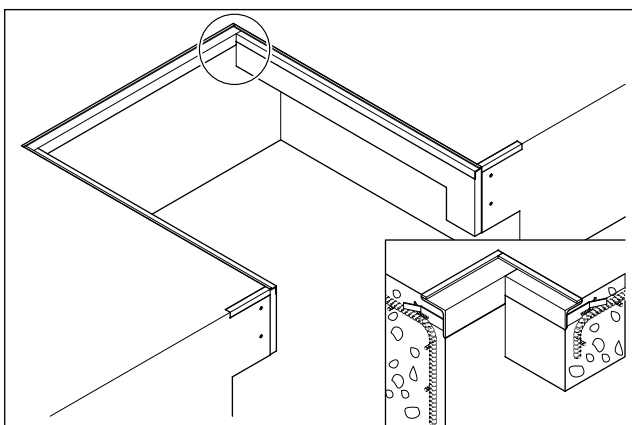
### NOTICE:

At the sides, the reinforcement must go to the edge of the pit. Alternatively, rowlocks must be installed in accordance with the manufacturer's pit drawings.

Fitting with casting groove

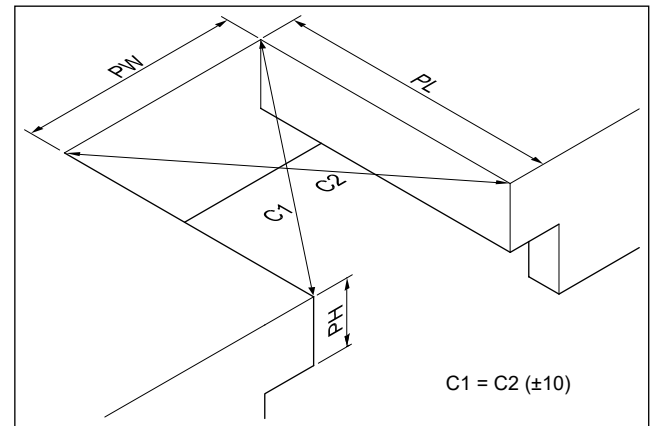


## For frame model F

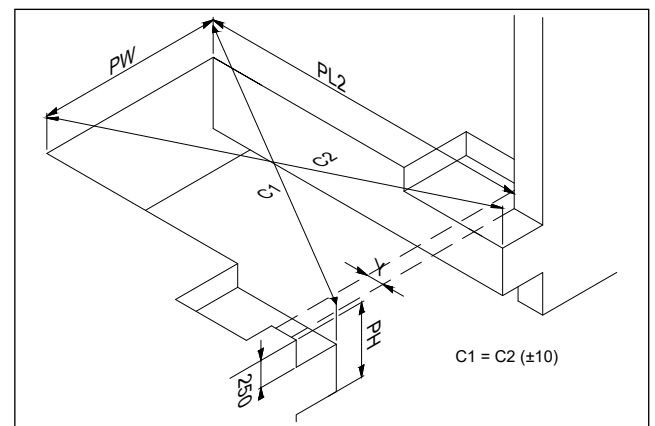


## 5.2.1 Checking the pit properties

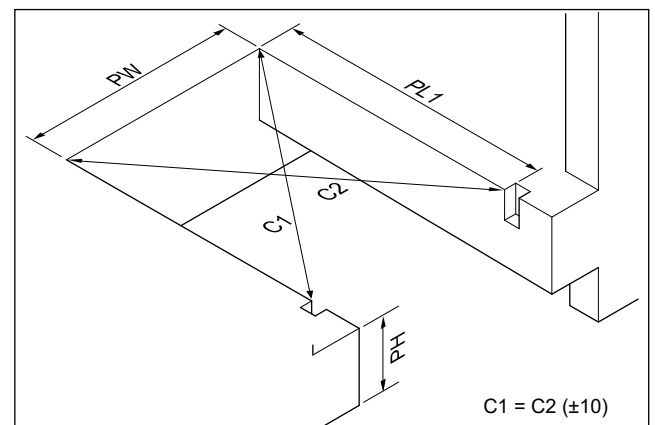
1. Pit without recess for door guide:



2. Pit with step for DOBO system:

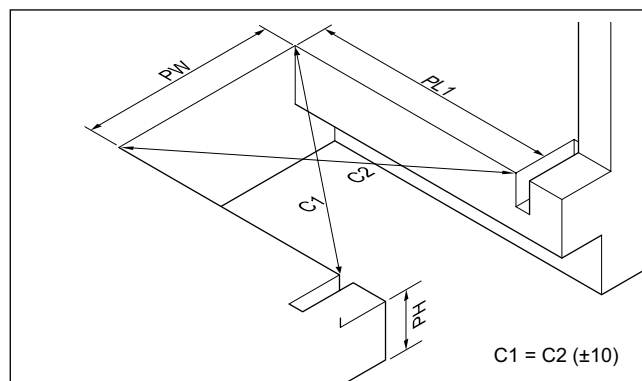


3. Pit with narrow recess for special door guide with lowered bottom section in front of dock leveller (door narrower in the ramp area):



## FITTING REQUIREMENTS

4. Pit with wide recess for standard door guide in front of dock leveller:



- PH Pit height  
 PL Pit length  
 PL1 Pit length from the back to the recess (pit with recess for door guide)  
 PL2 Pit length from the back to the wall  
 PW Pit width  
 C1/2 Diagonals  
 Y Door space requirement (see planning information or manufacturer's specifications)
- To check the dimensional accuracy, measure
- The pit length (PL), only up to the recess (PL1) for pits with recess for door guide, for DOBO pits up to the wall (PL2)
  - Pit width (PW)
  - Pit height (PH) at front and rear
  - for DOBO pits: height of the level
  - the diagonals (C1 and C2) of the pit
- Check the measurement result based on the following tables. The diagonals (C) should not deviate in length by more than 10 mm.

Pits 1, 2 and 3:

Fitting model	Pit dimensions (mm)		
	PW (tolerance)	PL / PL1 (tolerance)	PH
FR	NW + 70 (±10)	PL / PL1: NL – 5 (+5 / – 0)	≥ NH + 5
F	NW + 70 (±10)		
P	NW + 25 (+10 / – 0)	PL: NL (+10 / – 0)	
		PL1: NL – 20 (+ 10 / – 0)	
		PL2: NL – Y (+ 10 / – 0)	

Pit 4:

Fitting model	Pit dimensions (mm)		
	PW (Tolerance)	PL1 (Tolerance)	PH
FR	NW + 70 (±10)	PL1: NL – 75 (+5 / – 0)	≥ NH + 5
F			
P	NW + 25 (+10 / – 0)	PL1: NL – 70 (+ 5 / – 0)	

NW Ordering width  
 NL Ordering length  
 NH Installation height

Ordering sizes, see data label, delivery note or *Technical data on page 34*.

### ATTENTION

#### **Danger of damage due to improper fitting in case of deviating pit dimensions**

Fitting in a pit with deviating dimensions may result in damage:

- The dock leveller can deform
- The fixing may be insufficient.

The load on individual connections can considerably exceed the rated load.

- Contact the manufacturer in case of dimensional deviations beyond tolerance levels. The manufacturer will advise you on suitable measures for adjusting the pit.

### NOTICE:

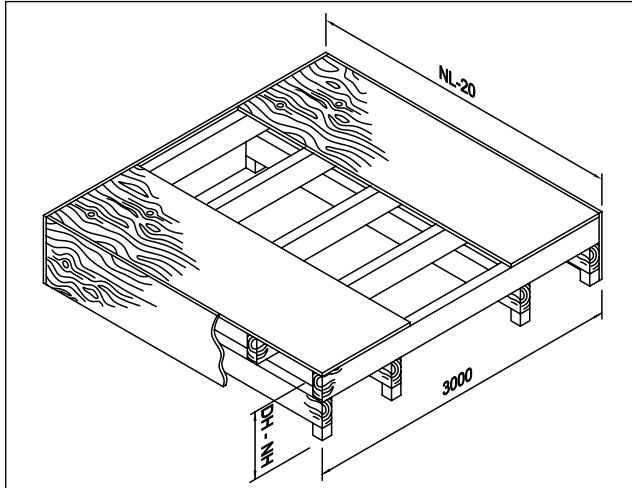
The dock leveller can be set up with a slope of up to 2% towards the door opening. Widthwise, the dock leveller must be installed precisely horizontally. Otherwise, problems may arise during operation, especially when loading below ramp level.

## 5.3 Requirements for the base construction

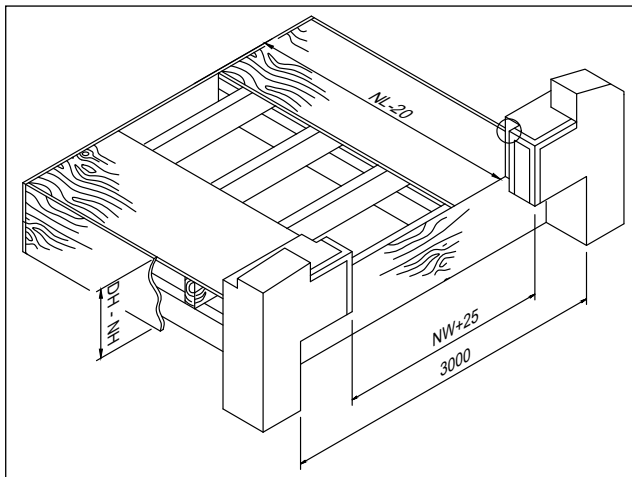
### 5.3.1 For box model (B)

- Provide for an on-site base construction in accordance with the figure and the manufacturer's planning drawing.

Standard:



With recess for door guide:



NL	Ordering length
NW	Ordering width
DH	Ramp height
NH	Dock leveller installation height

## 5.4 Requirements for the connection

- Make sure that the following requirements are fulfilled:
  - Mains connection based on the requirements of the dock leveller
  - Suitable cables and fuses
  - UPVC tube for laying the cable

## 6 Fitting

The dock leveller may only be fitted if the requirements for the fitting site are fulfilled.

### NOTICE:

Deviations from the pit shape shown are possible. The figures do not consider extension and adaptation of the pit for guiding the door in front of the dock leveller.

### 6.1 Safety instructions for fitting

#### **WARNING**

##### **Danger of injury in the event of non-observance of these fitting instructions**

This section contains important information on the safe fitting of the dock leveller.

- Before starting fitting work, carefully read through this chapter.
- Follow all safety instructions.
- Please observe all applicable local construction and safety regulations.
- Perform the fitting as described.

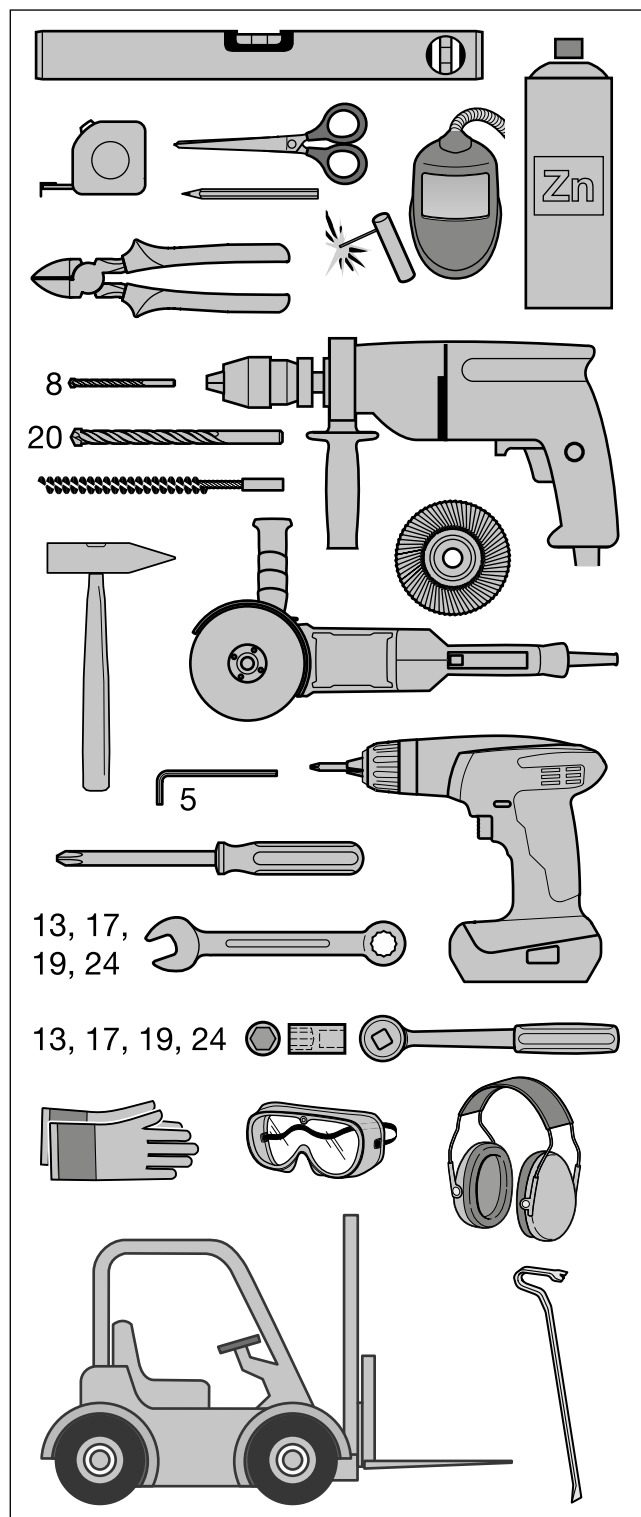
Fitting must only be carried out by qualified specialist personnel, see *Specialist personnel on page 4*.

Electrotechnical work must only be performed by qualified electricians, see *Specialist personnel on page 4*.

- Ensure that the following conditions are met when performing fitting work:
  - The working area is largely cordoned off.
  - The dock leveller is undamaged and in a proper state.
  - Cables and hoses are not kinked, squeezed or damaged.



## 6.2 Required tools



- Put together the required tools.

## 6.3 Unloading

- Choose an unloading method according to the weight of the dock leveller. See data label for weight.
- Please contact your supplier if there is any deformation or damage.
- Touch up minor paint or galvanising damage only after fitting has been completed.

### ATTENTION

#### Damage due to crashes

The base frame structure must not be deformed; otherwise problems may arise during operation.

- Always keep the dock leveller horizontal. Make sure that the dock leveller is not involved in crashes and cannot fall.
- Always unload only one dock leveller at a time.

### ⚠ DANGER

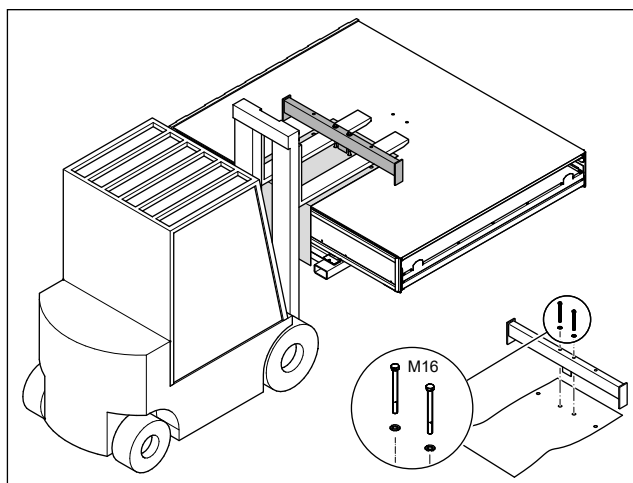
#### Danger of injury from falling dock leveller

- Make sure the transport aids are securely fastened to prevent the dock leveller from falling.
- Do not stand underneath the dock leveller.

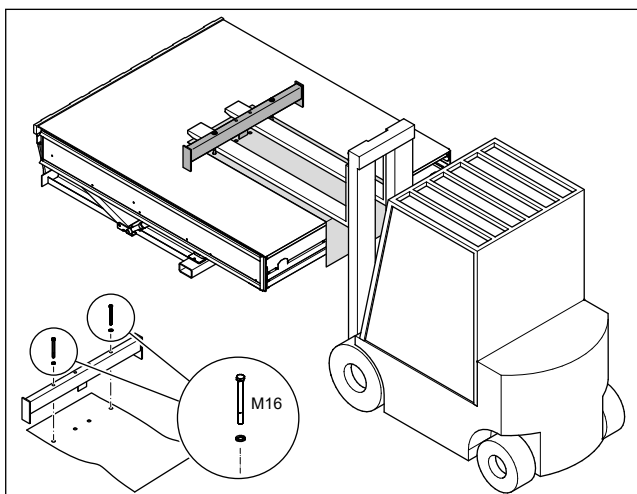
The dock leveller is prepared for two unloading possibilities.

#### With forklift:

- Use a forklift with forks at least 1500 mm long. With shorter forks, transport into the pit (see below) is not possible.

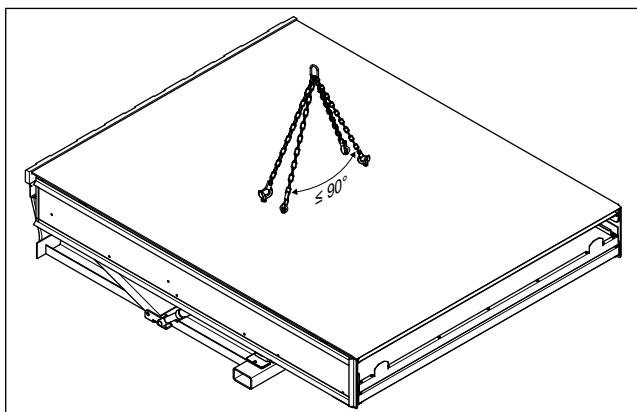






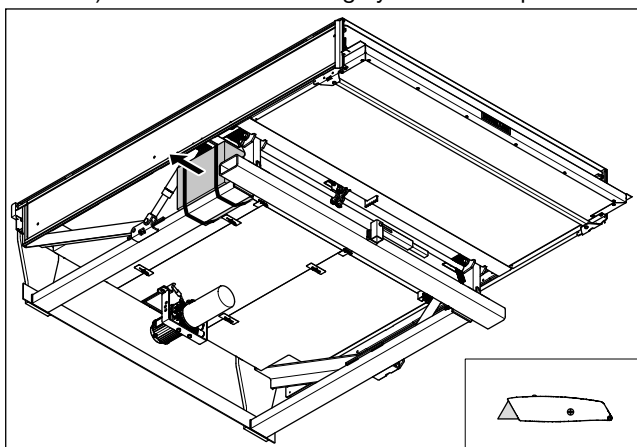
- Screw the provided transport profile to the protective flap on the platform.
- Never lift more than one dock leveller at a time.

**With crane:**

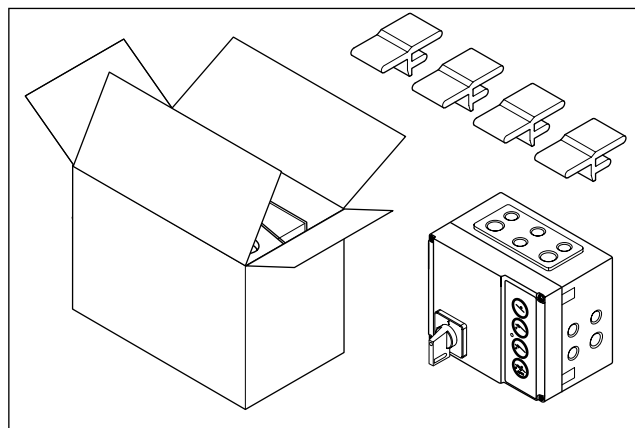


- Screw four lifting lugs M16 (not supplied) completely into the nuts on the platform.

The crane can pull up the dock leveller by chains (not included) connected to the lifting eyes and transport it.



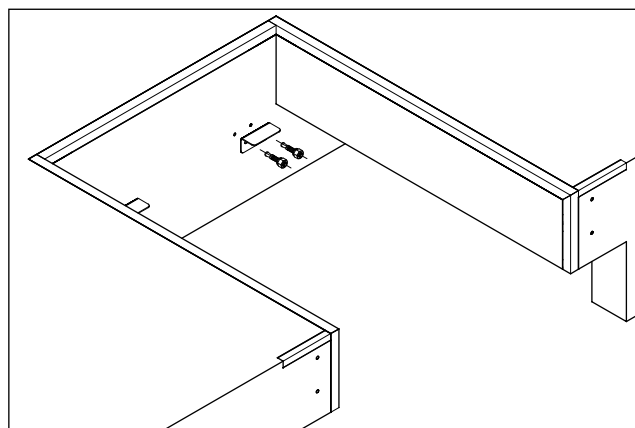
- Remove the box with the control box.



The box also contains further components in addition to the control box, depending on the equipment.

## 6.4 Fitting pit model P

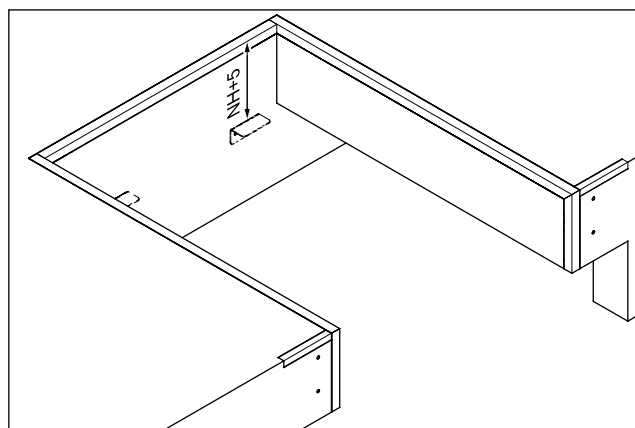
### 6.4.1 Fitting the support angles



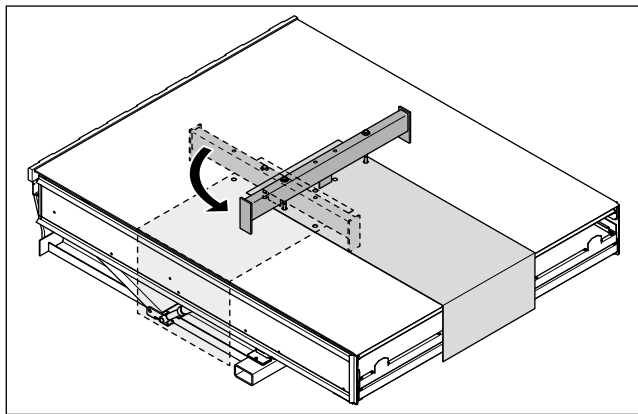
- Provide the rear wall with 2 x 2 drill holes to hold bolt anchors M20.

Distance between top edge of the edge bracket and top edge of the pit: installation height of the dock leveller NH + 5 mm tolerance

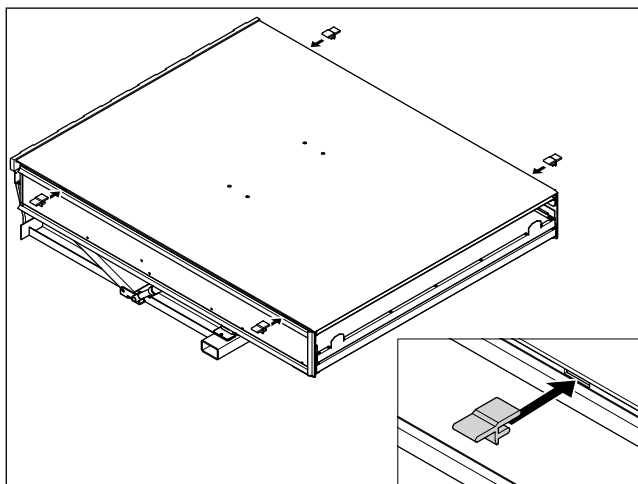
- Fit the two support angles provided.



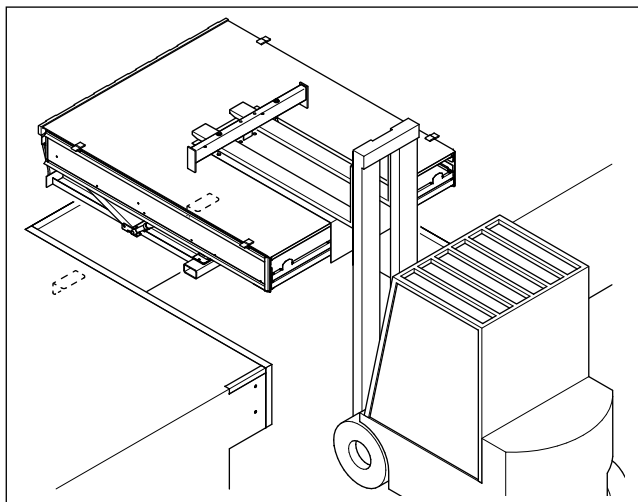
### 6.4.2 Set-up



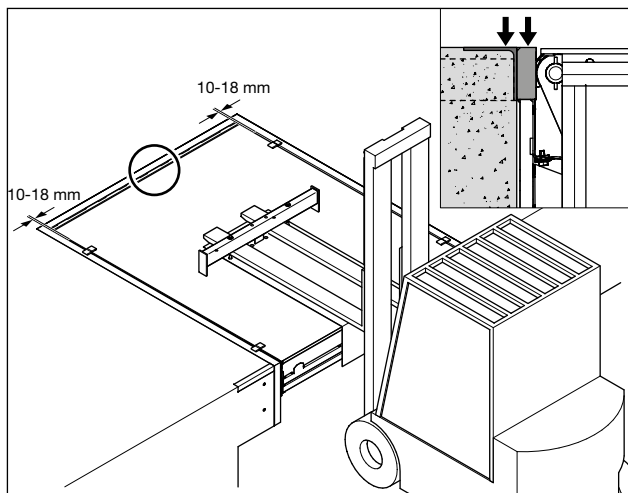
- Adjust the position of the transport profile to the required position if necessary.
- Use a forklift with forks at least 1500 mm long.



- Slide the positioning aids (supplied separately) into the corresponding recesses.



- Move the dock leveller into the pit.



The platform must be on the same level as the ramp. The longitudinal grooves between platform and recess must be the same width on both sides, approx. 10 – 18 mm.

### 6.4.3 Welding

#### **WARNING**

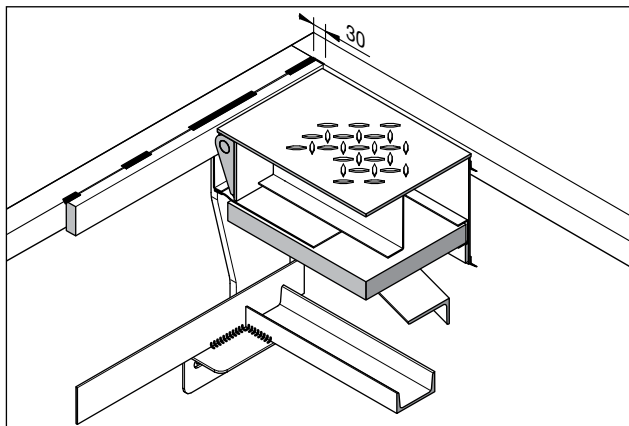
##### **Health risk from welding galvanized components**

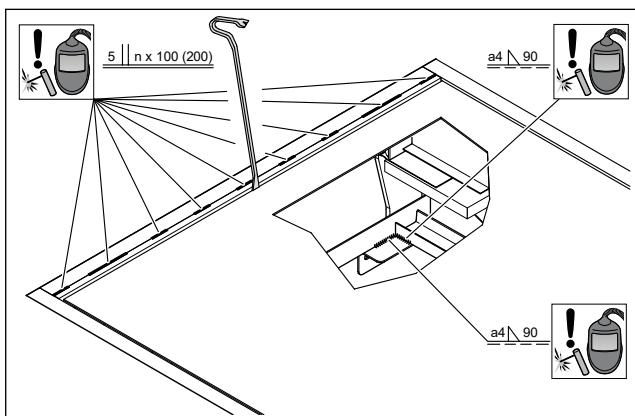
Zinc fumes are emitted during the welding of galvanized components, which results in health problems when absorbed through breathing.

- Grind away the zinc layer at the welding points.

The welding symbols correspond to ISO 2553 (E).

The dock leveller comes with cut-outs at the rear that show the exact position and length of the welding seams.





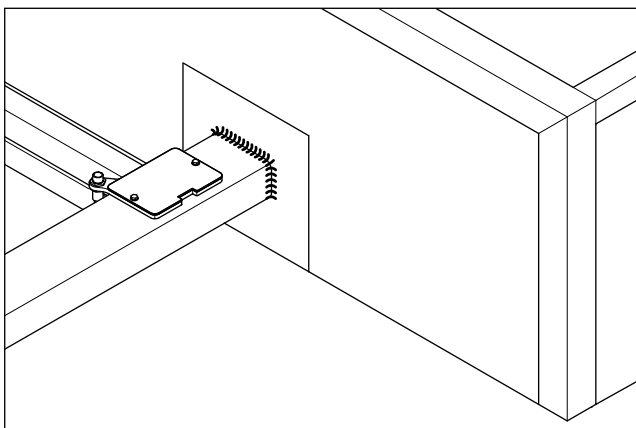
- Weld the dock leveller on the rear at the indicated points. Make sure the connection is correct and flat. If necessary, push the dock leveller back into the pit using a forklift.

### ATTENTION

#### Damage to protruding insulation panels by forklift

If the forklift pushes the loading bridge backwards into the pit, a protruding insulation panel can be damaged.

- If necessary, place a timber beam on the bottom insulation panel. The timber beam must be at least as wide as the protrusion of the insulation panel and as long as the platform width.



- Weld the front beam. If the pit is too wide for the front beam, fill the spacing with steel plates or strips.

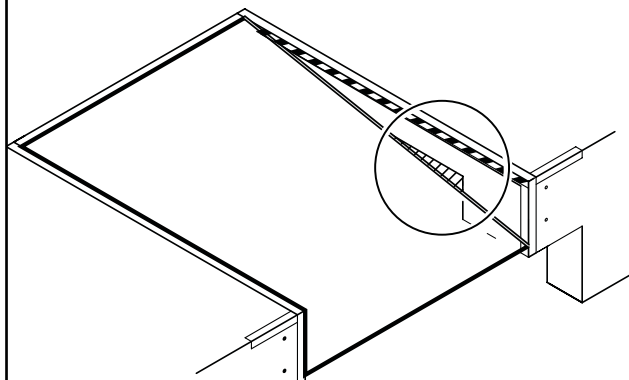
### NOTE

Welding the underside of the front beam is not necessary.

### WARNING

#### Possible crushing and shearing hazard point

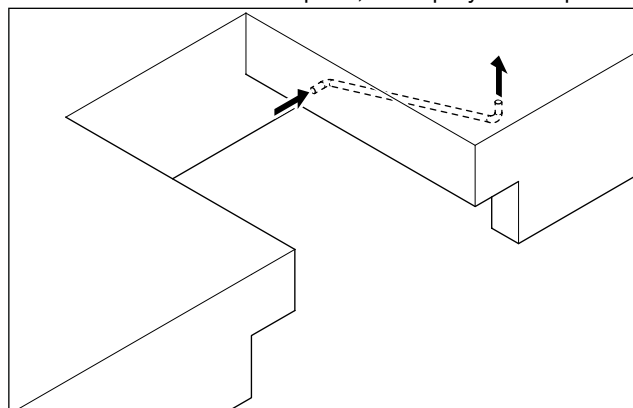
The working range of the dock leveller must be completely covered. There is a crushing and shearing hazard if the concrete cover on the sides is too thin.



- Make sure this area is sealed off.

- Restore the corrosion protection:

- Clean the welds.
- Treat the welds with paint, zinc spray or zinc paint.

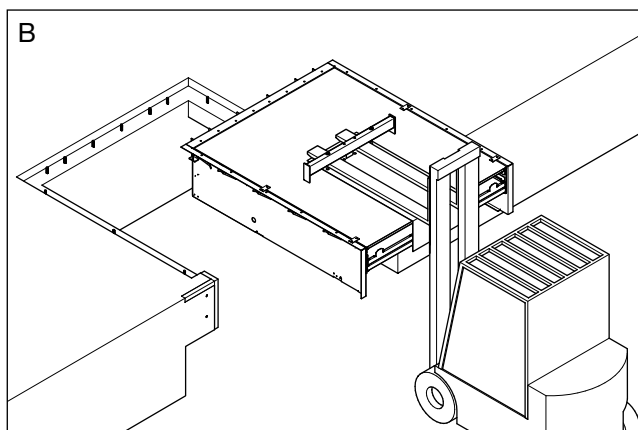
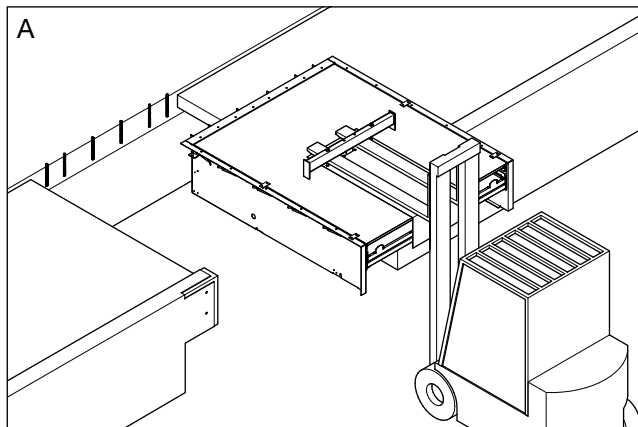


- Pull the cables through the provided PVC tube.

## 6.5 Fitting frame model FR

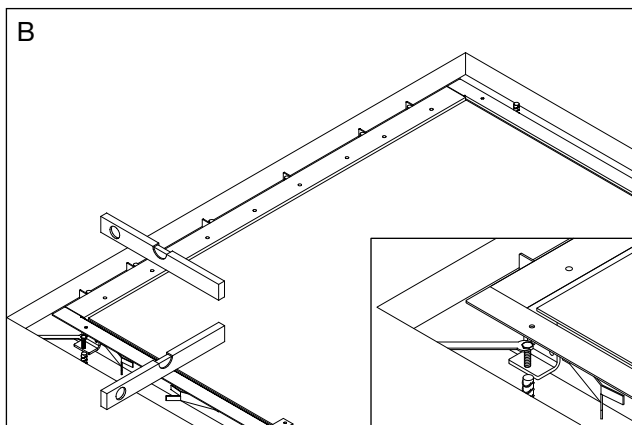
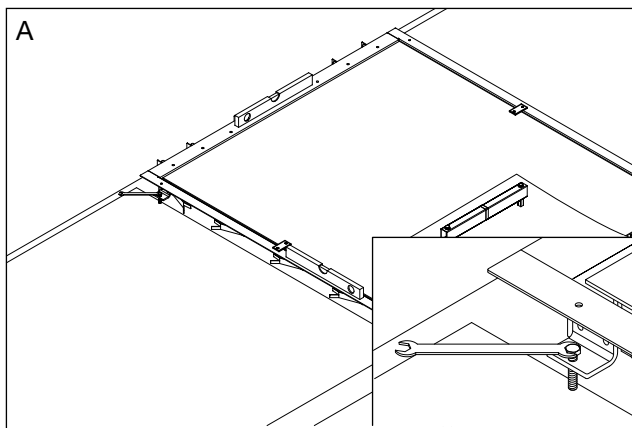
Frame model FR can either be cast with prefabricated concrete elements (A) or cast in a pit with a sufficiently wide casting groove (B).

### 6.5.1 Set-up

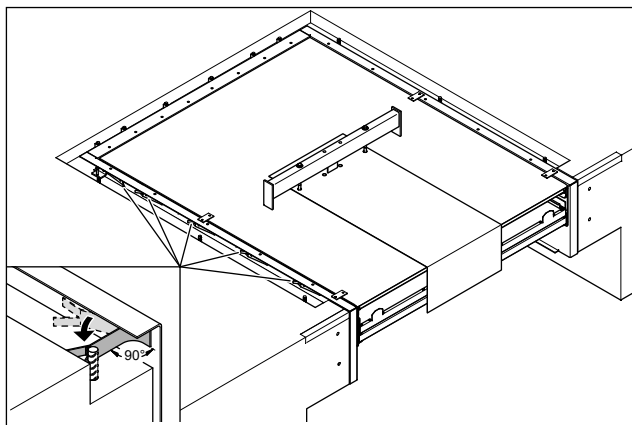


► Position the dock leveller.

The platform must be on the same level as the ramp.



► Align the dock leveller horizontally.



The dock leveller comes with anchors on the sides and rear.

► Bend the anchors in a way that allows you to connect them with the rowlocks or reinforcement.

## 6.5.2 Welding

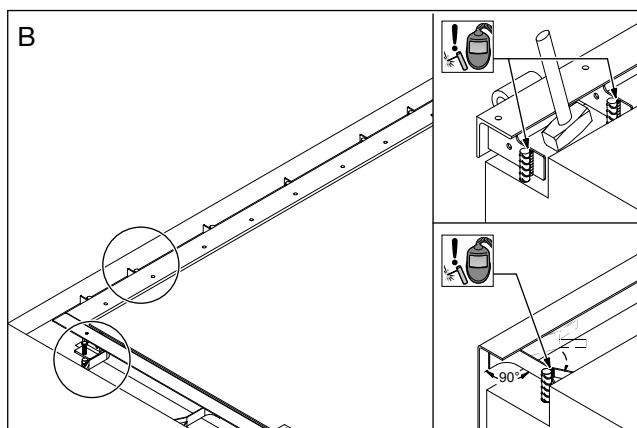
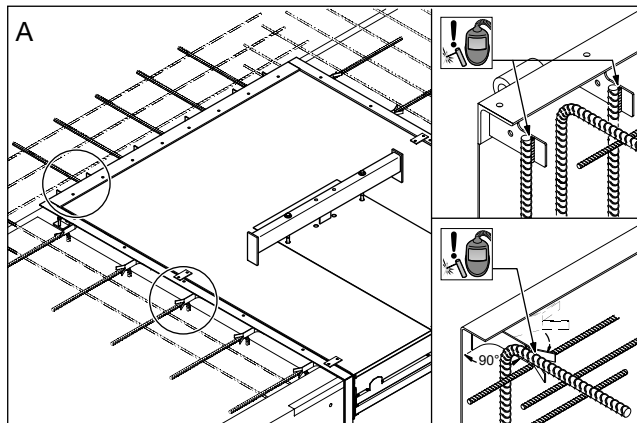
### WARNING

#### Health risk from welding galvanized components

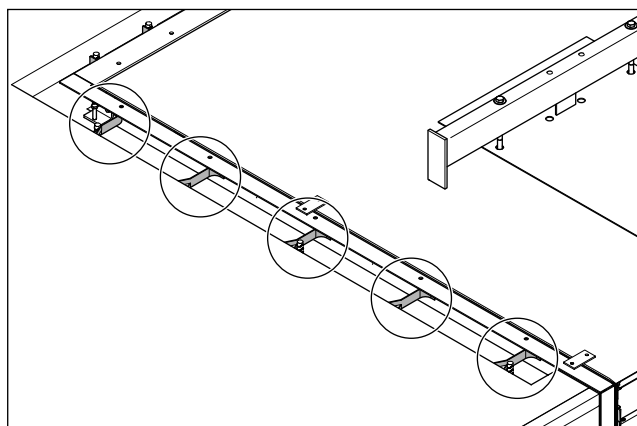
Zinc fumes are emitted during the welding of galvanized components, which results in health problems when absorbed through breathing.

- Grind away the zinc layer at the welding points.

The welding symbols correspond to ISO 2553 (E).



- Weld the anchors to the reinforcement or rowlocks.



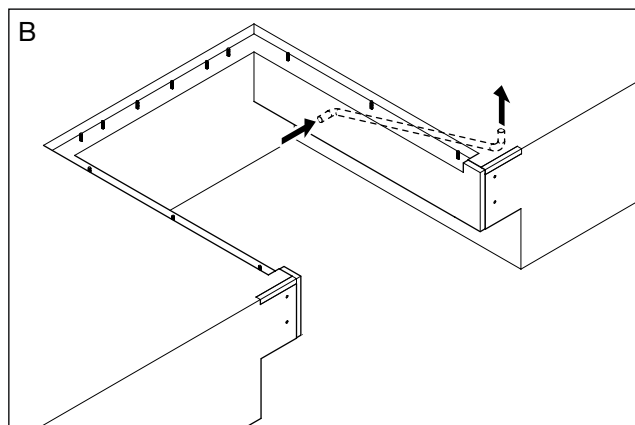
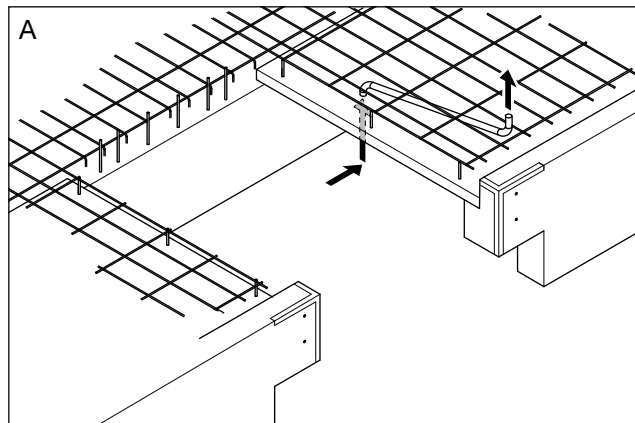
All anchors on the rear must be welded.

Under the following conditions, it is sufficient to weld only those anchors on the sides where there are rowlocks:

- The pit is equipped with rowlocks on the sides.
- The pit corresponds to the manufacturer's planning drawings for fitting model FR.
- The two outermost anchors are welded.

- At least half of the anchors are welded in total.
- The remaining anchors are bent. They ensure sufficient stability after casting.

- Make sure the spacers between the frame and the platform have remained in position.



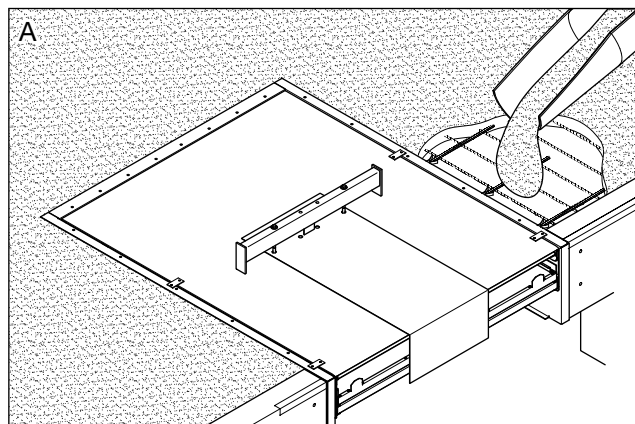
- Pull the cables through the provided UPVC tube.

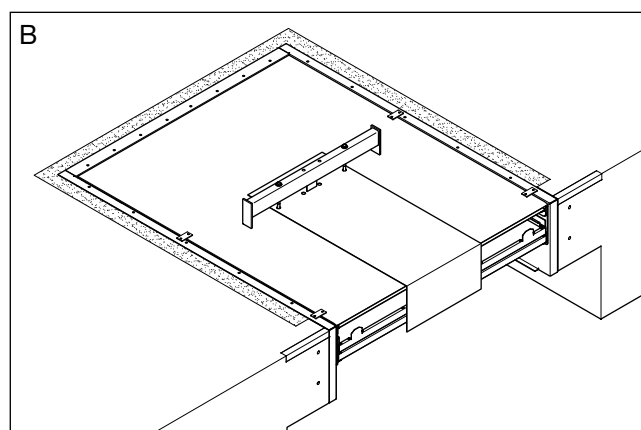
## 6.5.3 Casting

Concrete quality: at least C20 / 25.

We recommend covering the platform with a protective film before casting.

- Before casting, make sure that the positioning and fixing of the dock leveller is still intact.





- Cast the concrete casting compound.

### ATTENTION

#### Damage due to deformation

The base frame structure must not be deformed; otherwise problems may arise during operation.

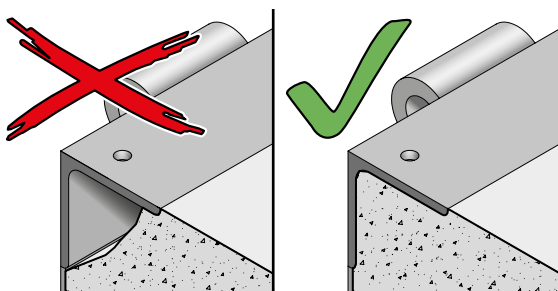
- Make sure that the side pressure is not too high during pouring and compacting.

### ATTENTION

#### Danger of breaking out caused by insufficient fixing

With insufficient fixing, the pit cannot withstand the load forces. The dock leveller will break away. When the automatic safety equipment is activated, the forces are particularly high. Example: A lorry drives away even though the dock leveller is still in operation.

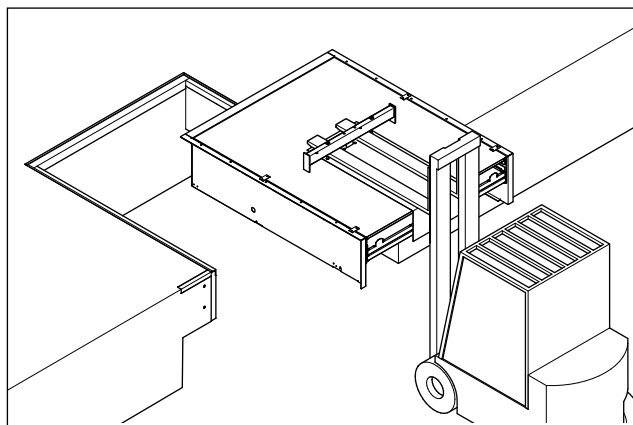
- Provide for proper connection to the building structure, especially in areas where load forces occur.



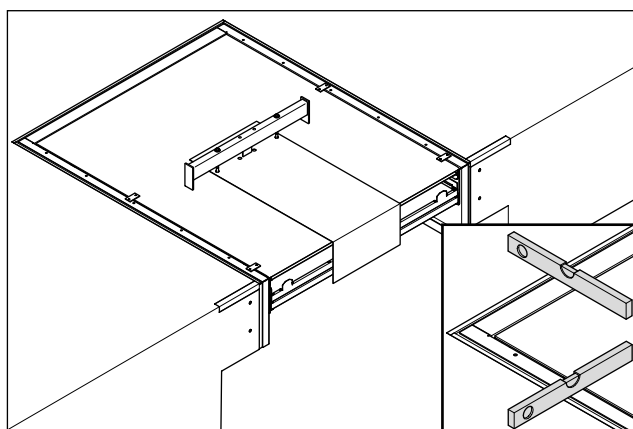
- Make sure the edge bracket is completely backfilled. You can check this through the opening in the edge bracket.

## 6.6 Fitting frame model F

### 6.6.1 Set-up



- Position the dock leveller.



The platform must be on the same level as the ramp. Spacers ensure that the longitudinal grooves are equally wide on both sides.

### 6.6.2 Welding

#### ⚠ WARNING

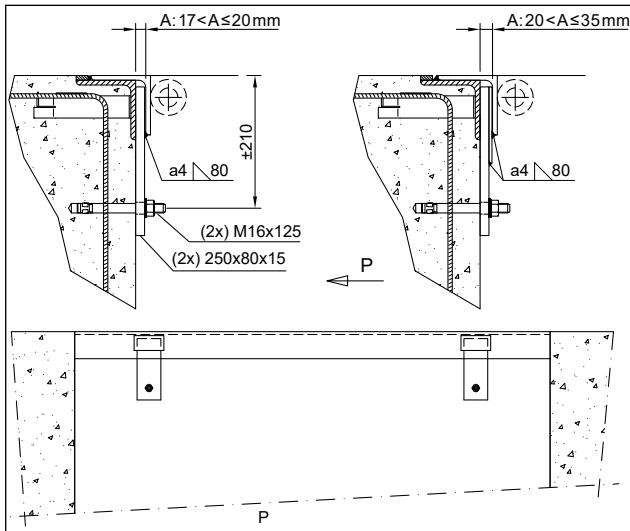
#### Health risk from welding galvanized components

Zinc fumes are emitted during the welding of galvanized components, which results in health problems when absorbed through breathing.

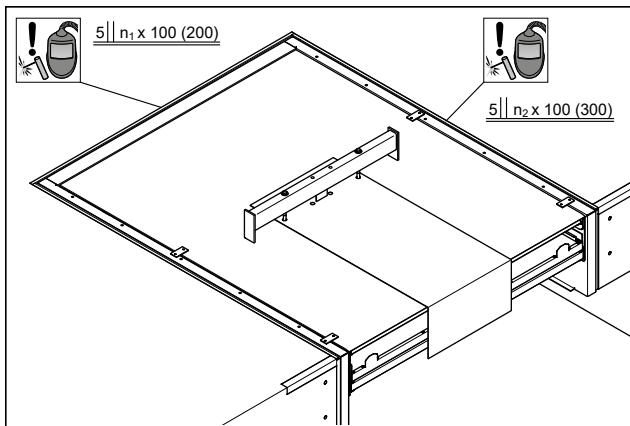
- Grind away the zinc layer at the welding points.

The welding symbols correspond to ISO 2553 (E).

1. Make sure the spacers between the frame and the platform have remained in position.

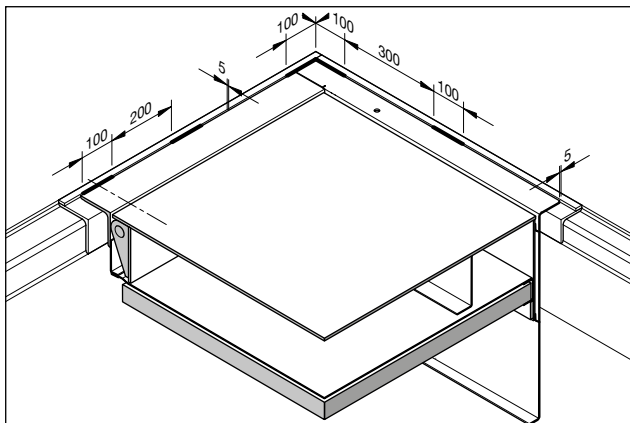


- Check the gap dimension on the rear. If the gap is wider than 17 mm, the rear must be backfilled near the hinges.



- Weld the edge bracket of the dock leveller to the edge bracket of the recess.

Position and length of the welding seams:



Number of welds:

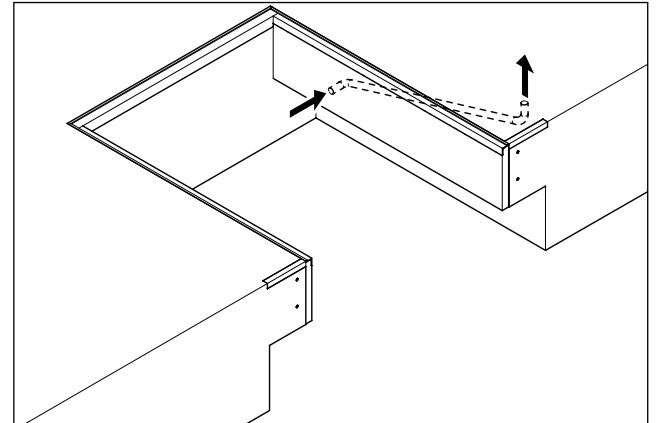
Ordering width NW*	2000	≥ 2100
Number n <sub>1</sub>	8	10

Ordering length NL*	2000	2500	2750	3000
Number n <sub>2</sub>	6	7	8	9

\* See data label.

## NOTE

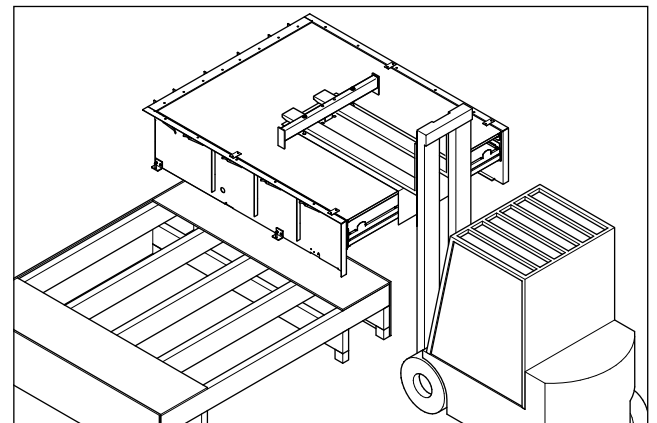
Always weld at the hinges and corners. The distance between the welding seams must not exceed 300 mm on the side and 200 mm on the rear.



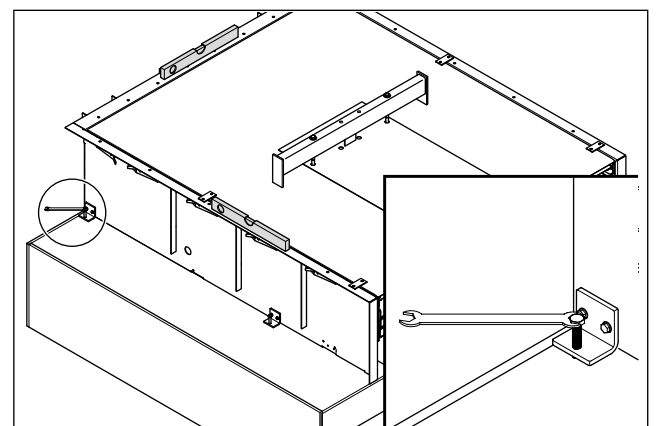
- Pull the cables through the provided UPVC tube.
- Restore the corrosion protection:
  - a. Clean the welds.
  - b. Treat the welds with paint, zinc spray or zinc paint.

## 6.7 Fitting box model B

### 6.7.1 Set-up



- Position the dock leveller.

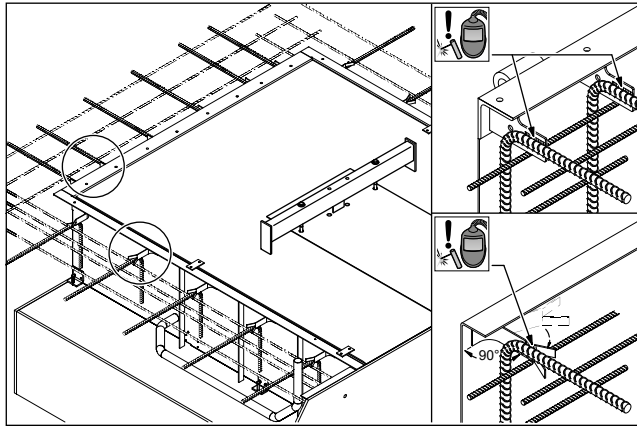


- Align the dock leveller horizontally.

Spacers ensure that the longitudinal grooves are equally wide on both sides.



When the mould and reinforcement are in place according to the manufacturer's planning drawing, you can proceed with fitting.



- Weld the anchors to the reinforcement.

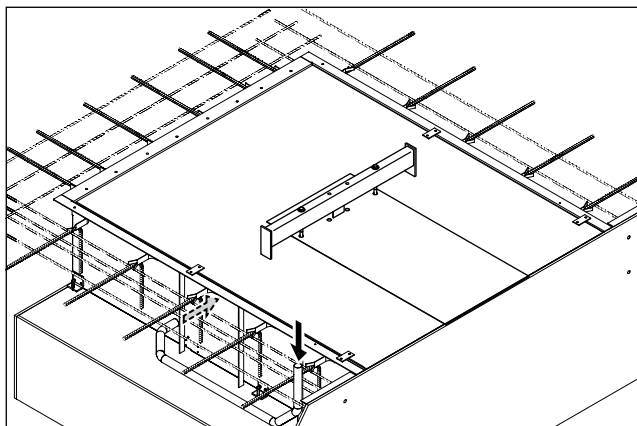
## ⚠ WARNING

### Health risk from welding galvanized components

Zinc fumes are emitted during the welding of galvanized components, which results in health problems when absorbed through breathing.

- Grind away the zinc layer at the welding points.

- Make sure the spacers between the frame and the platform have remained in position.

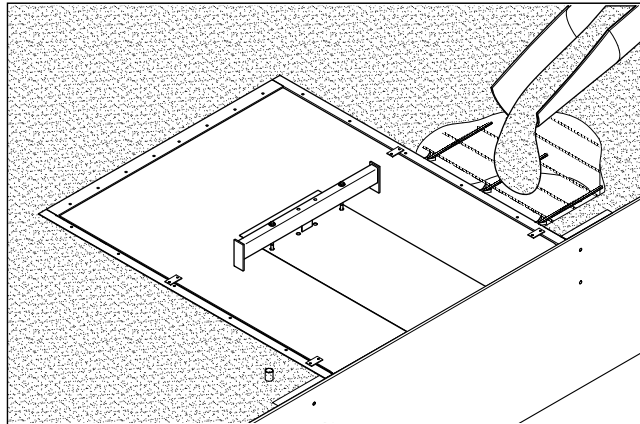


- Attach a UPVC tube Ø 50 mm:
  - Maximum angle 45°
  - Positioned at least 150 mm from the door opening
- Pull the cables through the UPVC tube.

## 6.7.2 Casting

Concrete quality: at least C20 / 25.

- Make sure the protective film is still intact over the entire platform and the adhesive strips are not damaged. If this is not the case, mend the protective film before casting the concrete.



- Cast the concrete casting compound slowly and in layers.

## ATTENTION

### Damage due to deformation

The base frame structure must not be deformed; otherwise problems may arise during operation.

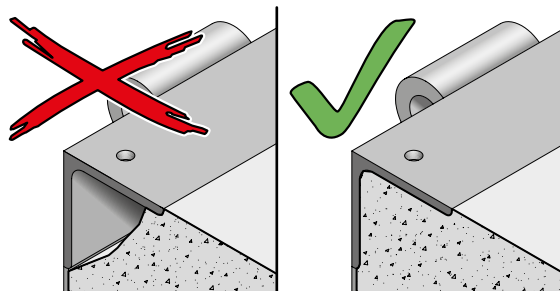
- Make sure that the side pressure is not too high during pouring and compacting.

## ATTENTION

### Danger of breaking out caused by insufficient fixing

With insufficient fixing, the pit cannot withstand the load forces. The dock leveller will break away. When the automatic safety equipment is activated, the forces are particularly high. Example: A lorry drives away even though the dock leveller is still in operation.

- Provide for proper connection to the building structure, especially in areas where load forces occur.



- Make sure the edge bracket is completely backfilled. You can check this through the opening in the edge bracket.

- Remove the mould once the concrete has hardened.



## 6.8 Fitting combined fitting models

To fit combined fitting models, e.g. side fitting by welding and rear fitting by casting, the following applies:

- Follow the fitting instructions for the respective fitting models to make the structural connection on the front or side and rear.

## 6.9 Electrical connection

The electric motor is pre-wired and connected to the dock leveller.

Please read the separate documentation for connecting the control.

### DR sensor (with corresponding equipment)

The DR sensor (door release) is required for the following functions:

- “Door release” function: The door only closes when the dock leveller is in home position.
- Functional extensions, depending on the connected control, e.g. semi-operation, control of warning lights, switching off an inflatable dock seal

The DR sensor is pre-assembled.

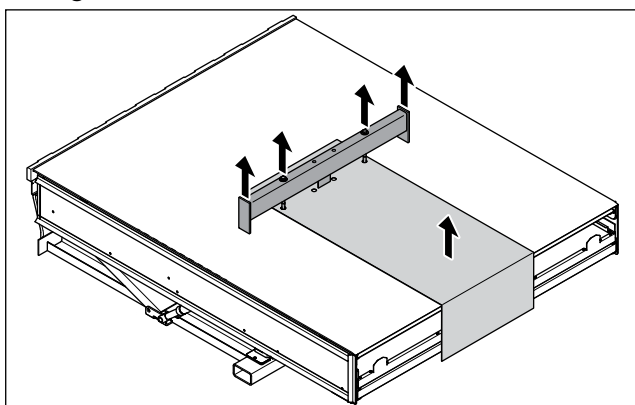
- Guide the cable alongside the connection cable through the UPVC tube.
- Connect the cable. Observe the documentation for the dock leveller and door controls.

## 7 Initial start-up

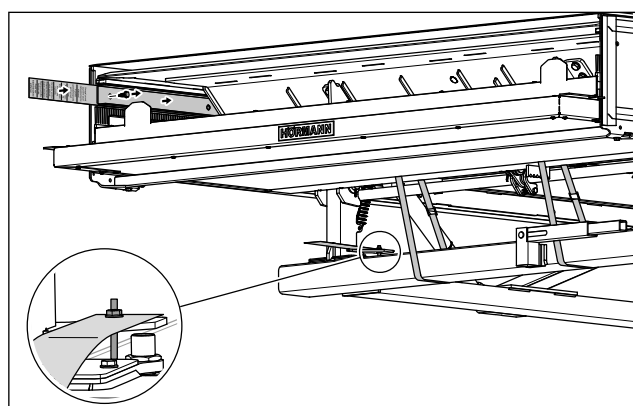
Initial start-up may only be carried out by qualified specialist personnel, see *Specialist personnel* on page 4.

### 7.1 Aids

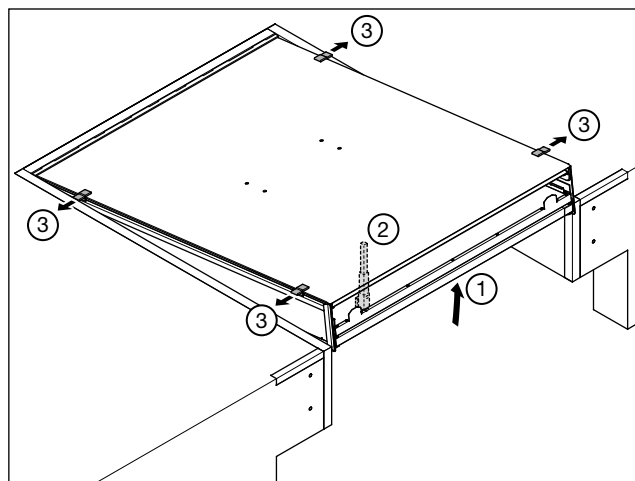
#### Fitting model P



- Remove the transport profile.

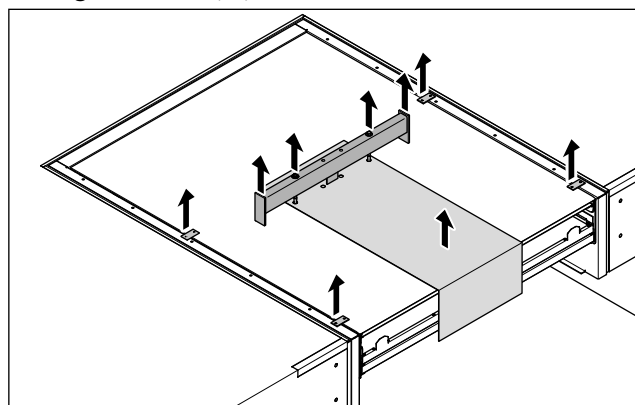


- Remove the transport safety devices.



- Remove the positioning aids as follows:
  - Press the *Lift platform* button.
  - Move the main switch to **0**.
  - Position the maintenance support.
  - Remove the positioning aids.
  - Return the maintenance support to its original position.
  - Set the main switch to **I**.
  - To make the dock leveller ready for operation again after interrupting the electrical supply, press the *Lift platform* button.
  - Return the dock leveller to the home position, see *Returning to home position* on page 25.

#### Fitting model FR, F, B



- Remove the spacers and the transport profile.

## 7.2 Buffers

<b>ATTENTION</b>
<p><b>Damage due to impact forces</b></p> <p>Impact forces can damage the building structure, the vehicle and the dock leveller. Transfer of impact forces to the dock leveller can affect the stability, functionality and the fixing of the dock leveller.</p> <ul style="list-style-type: none"> <li>▶ Install sufficiently dimensioned buffers.</li> <li>▶ Observe the transmission of the impact forces to the building structure.</li> <li>▶ In case of a protruding dock leveller frame, fill in the connection surface of the buffer.</li> </ul>

The depth of the buffers influences the distance between the vehicle and the dock leveller. The depth of the buffers influences the distance between the vehicle and the dock leveller. A greater depth or the use of a mounting bracket can increase the distance if necessary.

Hörmann buffers and fixing materials as well as the planning specifications for the pit version are designed to resist impact forces up to 100 kN.

- ▶ In case of higher impact forces, please contact the supplier or manufacturer.

## 7.3 Brief instructions


- ▶ Attach the illustrated brief instructions in the immediate vicinity of the control.
- ▶ Affix the supplied label indicating the nominal load to the space provided in the brief instructions.

## 7.4 Check


- ▶ Make sure that the platform is level with the ramp.
- ▶ Conduct a test run. Observe the separate instructions for the control.
- ▶ Make sure the dock leveller runs evenly and smoothly.
- ▶ Check the safety equipment.
- ▶ Set the auto-return time of the auto-return function. Follow the documentation for the control.


# 8 Operation


## 8.1 Safety instructions for operation

 <b>WARNING</b>
<p><b>Danger of injury in the event of non-observance of these operating instructions</b></p> <p>This section contains important information on the safe operation of the dock leveller.</p> <ul style="list-style-type: none"> <li>▶ Before operation, carefully read through this section.</li> <li>▶ Follow all safety instructions.</li> <li>▶ Please observe all applicable local safety regulations.</li> <li>▶ Observe the instructions in the documentation for the control.</li> </ul>

Operation must be carried out by qualified specialist personnel, see *Specialist personnel* on page 4.

 <b>WARNING</b>
<p><b>Danger of injury from tripping or falling</b></p> <p>Careless behaviour can lead to persons tripping or falling from the dock leveller.</p> <ul style="list-style-type: none"> <li>▶ Move carefully on the dock leveller. Pay particular attention to: <ul style="list-style-type: none"> <li>– Backward movements</li> <li>– Angled position of the platform</li> <li>– In situations where the door is guided in front of the dock leveller: side clearance in the front area</li> </ul> </li> </ul>

 <b>WARNING</b>
<p><b>Danger of injury and damage if the dock leveller is operated using the main switch</b></p> <p>Operating the dock leveller with the main switch can cause tripping and damage to the construction.</p> <ul style="list-style-type: none"> <li>▶ Never use the main switch to operate the dock leveller.</li> <li>▶ Use the main switch only in case of an emergency and for inspection and maintenance work.</li> </ul>

 <b>WARNING</b>
<p><b>Danger of injury during incorrect dock leveller operation</b></p> <p>Persons, body parts or objects may be crushed, trapped or otherwise injured when the dock leveller is operated.</p> <ul style="list-style-type: none"> <li>▶ Only use the dock leveller if it is in good condition.</li> <li>▶ Always ensure the following before and during operation: <ul style="list-style-type: none"> <li>– No persons or objects may be on the platform and in the area of travel of the dock leveller.</li> <li>– The dock leveller must not impact any body parts or other objects.</li> </ul> </li> <li>▶ In an emergency, move the main switch to <b>0</b>, see <i>Emergency stop and restart inhibition</i> on page 6.</li> </ul>

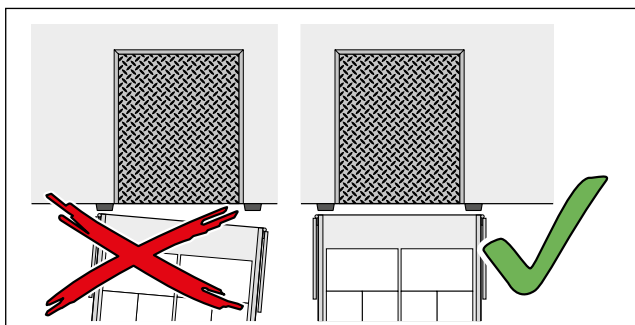
- ▶ Ensure sufficient lighting and a clear view when operating the dock leveller.

<b>ATTENTION</b>
<p><b>Danger of damage caused by exceeding the working range</b></p> <p>Cushioning of the vehicle during loading will also cause the dock leveller to move upwards or downwards. If the dock leveller is already positioned at the highest or lowest level, the maximum working range may be exceeded and the dock leveller damaged.</p> <ul style="list-style-type: none"> <li>▶ Do not start operating the dock leveller at the highest or lowest level.</li> </ul>

### 8.1.1 Docking as specified

Vehicles must be docked in such a way that the lip of the dock leveller can be safely positioned:

- Evenly over the full width
- Sufficiently deep.



- Make sure that vehicles dock straight.

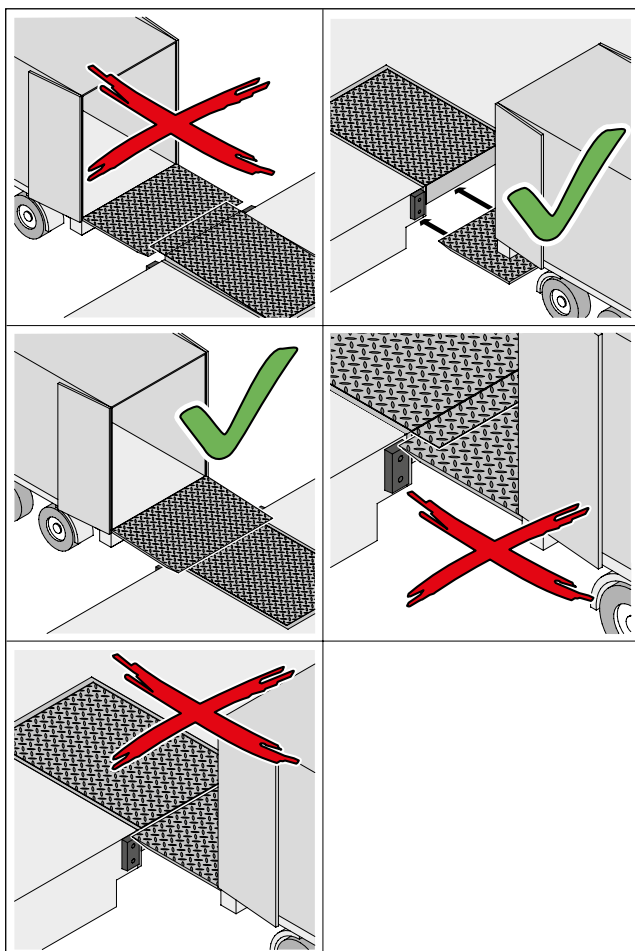
A vehicle is properly docked if there is only a small gap left before contacting the buffers. Direct contact between the vehicle and the buffers can cause damage to the buffers and the vehicle. Local conditions may require larger distances.

- Make sure that the vehicles are always at the right distance from the dock leveller. Observe the working range and the correct overlap of the lip.

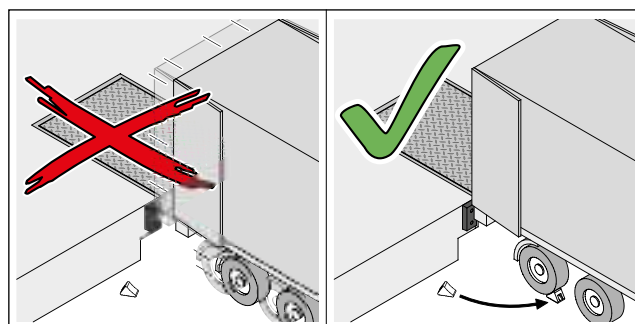
For dock levellers with a width under 1.25 m, the vehicle must not be parked more than 0.20 m away from the dock leveller.

#### NOTE

Loading ramps with DOBO system allow for the lorry to dock with the vehicle doors closed. To accommodate the lorry doors, recesses are provided in the ramp.



The dock leveller may only be operated on vehicles with a liftgate if the liftgate can be parked in a recess provided under the dock leveller (tailboard slot).



- Make sure the vehicle is secured against rolling away.

### 8.1.2 Safe lip positioning

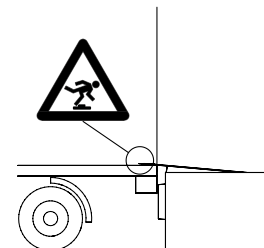
#### ATTENTION

##### Danger of injury and damage with too small or too large bearing surfaces

Too small bearing surfaces may lead to falls. Loading processes cause movements in which the lip may slip from the loading surface.

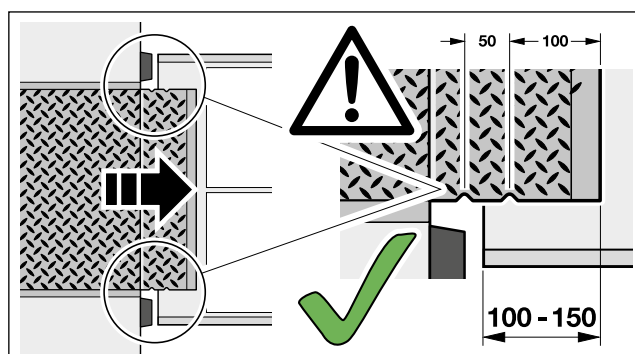
Too large bearing surfaces may lead to

- Tripping hazards if loading above level
- Damage to the lip, platform and guides

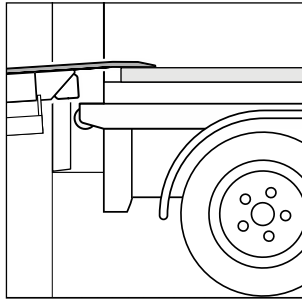


- Make sure the full width of the lip is resting on the vehicle loading surface: at least 100 mm, but no more than 150 mm.
- Possible adjustments to improve support: vehicle height or distance between the loading surface and the dock leveller

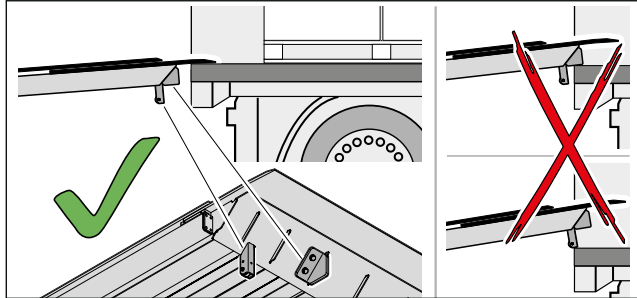
The bridge plate has two recesses on each side. Proper support is ensured when the front-most recess is covered by the loading surface of the vehicle on both sides, but the second recess is not covered.



For vehicles with an offset loading surface, make sure to position the lip sufficiently far into the cargo area.



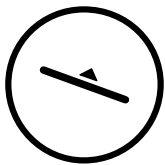
The lip has 2 overlap limiters and supports on the underside.



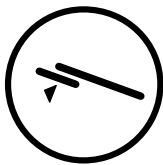
- ▶ Never place the telescopic lip with the overlap limiters or supports on the loading surface or on other vehicle parts.

## 8.2 Positioning the dock leveller

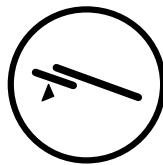
1. Open the loading ramp door completely, if available.
2. Make sure that no persons or objects are on the platform.



Raise platform



Extend lip



Retract lip

If the loading surface is at the same height or lower than the platform, you can skip step 3 and extend the lip directly (step 4).

3. Press the *Lift platform* button. Keep the button pressed until the platform is above the level of the loading surface.
4. Press the *Extend lip* button within the next second. Press and hold the button until the lip is extended as far as needed and no further.
5. Release the button.

The lip is lowered to the loading surface after approx. one second.

### Correct the lip:

- ▶ In order to retract the lip again, use the *Retract lip* button.

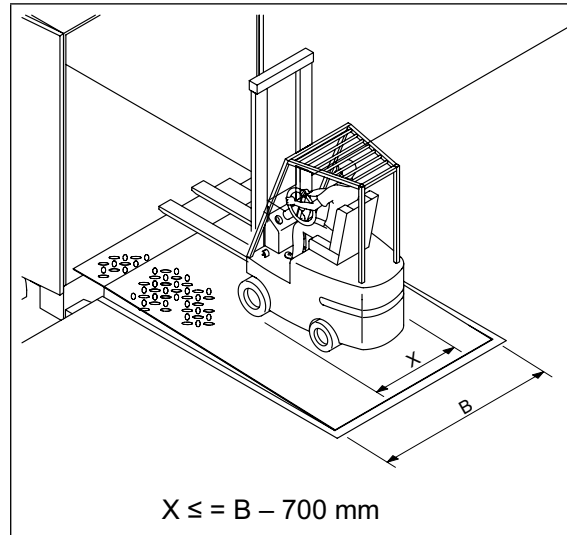
If the lip is already positioned on the loading surface, the platform lifts up briefly and lowers after releasing the button.

## DOBO system

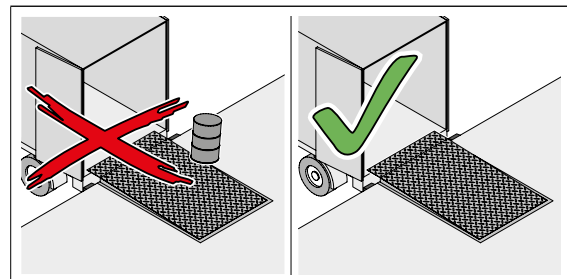
- ▶ First extend the lip to bridge the gap to the lorry.
- ▶ Then lower the movable buffers.
- ▶ Open the vehicle doors.
- ▶ Position the dock leveller as described above.

## 8.3 Loading and unloading

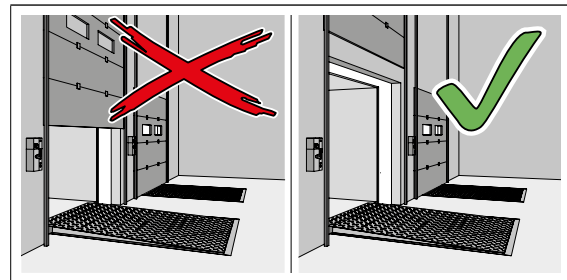
- ▶ Make sure that the following prerequisites are fulfilled every time the dock leveller is used:
  - Compliance with the maximum loading capacity as specified on the data label (rated load)
  - Only use suitable, safe and permissible transport equipment
  - Comply with the maximum inclination of 12.5%, taking the limitations depending on the type and the transport equipment into account, see 8.3.1
  - Max. speed 10 km/h
  - Maximum track width (X) = platform width (B) – 700 mm



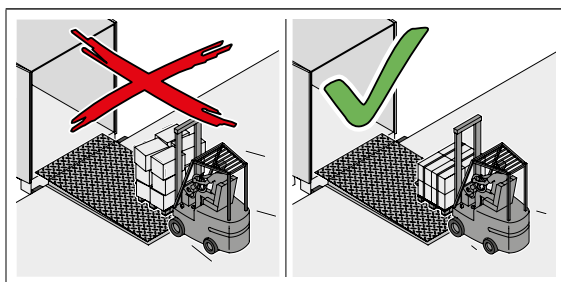
- No persons or objects in the dock leveller's area of travel



- Door fully opened



- Goods are protected from slipping and falling, especially large, unsteady or dangerous goods



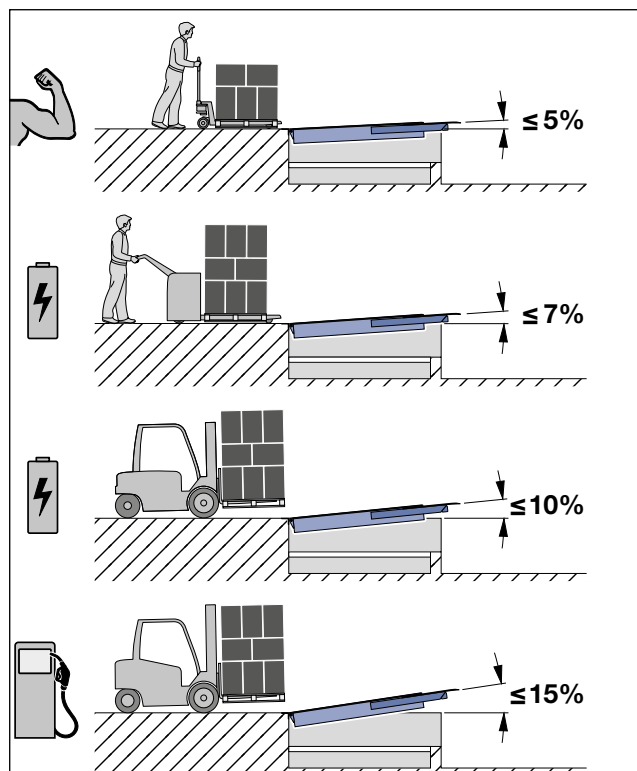
- ▶ Drive the transport equipment onto the platform as centrally as possible.
- ▶ Ensure that the underside of the transport equipment as well as the cargo do not contact the dock leveller.

### 8.3.1 Inclination

The following specifications apply to the highest and lowest operating position.

Maximum inclination in accordance with EN 1398: 12.5%.

Max. inclination depending on type and transport equipment:



## 8.4 Returning to home position



Auto return

- ▶ After use, return the dock leveller to its home position immediately:
  - a. Make sure that no persons are in the loading area.
  - b. Briefly press the auto-return button. The dock leveller will automatically move into the loading position.

### ATTENTION

#### Risk of damage due to incorrect operation

The *Retract lip* button is not suitable for moving the dock leveller directly from the operating position to the home position. If the lip has not been completely retracted by mistake, the platform is not sufficiently supported.

- ▶ Always use the auto-return button.
- ▶ Make sure that the lip is fully retracted.

### DOBO system

- ▶ First retract the lip with the *Retract lip* button so that the gap to the lorry still is bridged.
- ▶ Close the vehicle doors.
- ▶ Then release the movable buffers.
- ▶ Briefly press the auto-return button. The dock leveller will automatically move into the loading position.

## 9 Non-operation

- ▶ When not in use, make sure that the dock leveller is in home position.

### 9.1 Home position

The lip is fully retracted. The platform and hall floor are at the same height.

### CAUTION

#### Damage to dock leveller or personal injury caused by overload

Excessive load can damage the dock leveller or cause tripping hazards if the platform is deflected.

- ▶ Observe the maximum load, see *Maximum load on page 5*

### 9.2 Cross traffic

Cross traffic is possible under the following conditions:

- Dock leveller in home position
- Maximum load observed.
- For the DOBO system, sufficient protection in the area of the recess



## 10 Maintenance

### WARNING

#### **Danger of injury when working below the platform**

When working below the platform, persons, body parts or objects may be crushed or jammed.

- ▶ Before carrying out any work, put the maintenance support into the right position so that the platform is safely supported.

#### **Position the maintenance support.**

1. Press the *Lift platform* button.
2. Move the main switch to 0.
3. Position the maintenance support.

#### **After work is completed**

4. Return the maintenance support to its original position.
5. Set the main switch to I.
6. To make the dock leveller ready for operation again after interrupting the electrical supply, press the *Lift platform* button.
7. Return the dock leveller to the home position, see *Returning to home position on page 25*.

### 10.1 Cleaning and care

#### **ATTENTION**

##### **Damage caused by aggressive agents**

Use of aggressive cleaning agents or road salt on the pedestrian and driving surface may lead to corrosion and damage.

- ▶ Do not use any aggressive cleaning agents or road salt.

Waste and dirt can impair the function of the dock leveller:

- ▶ Keep the platform hinges and area below the platform clean.

Water and ice can cause an increased risk of slipping.

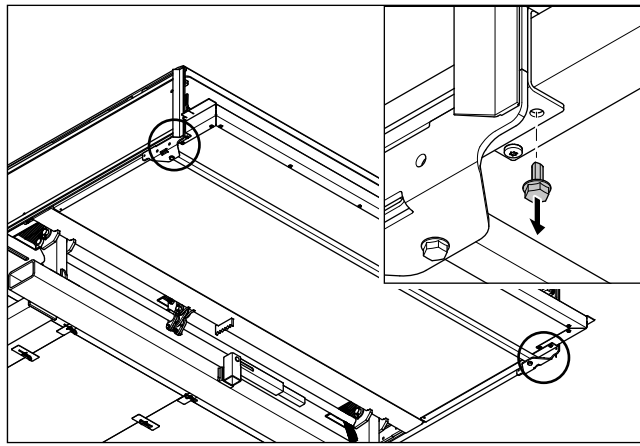
- ▶ Keep all pedestrian and driving surfaces dry and clean.

Dirt can damage the gap sealing, impair the thermal insulation and cause the insulation panels to jam.

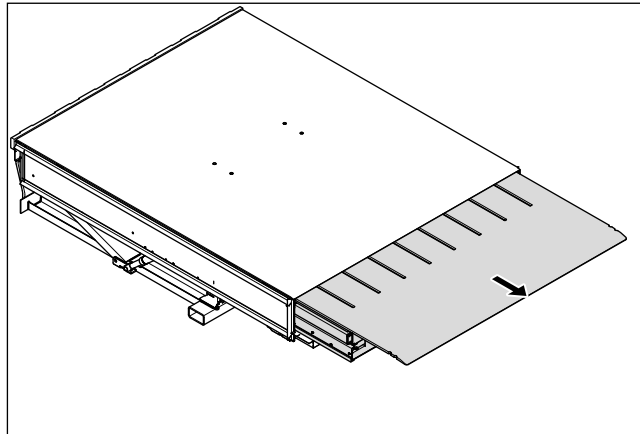
- ▶ Keep the following components clean at all times:
  - Gap sealing between the platform and frame / edge of the pit
  - Front insulation panels

#### **Cleaning the front insulation panels**

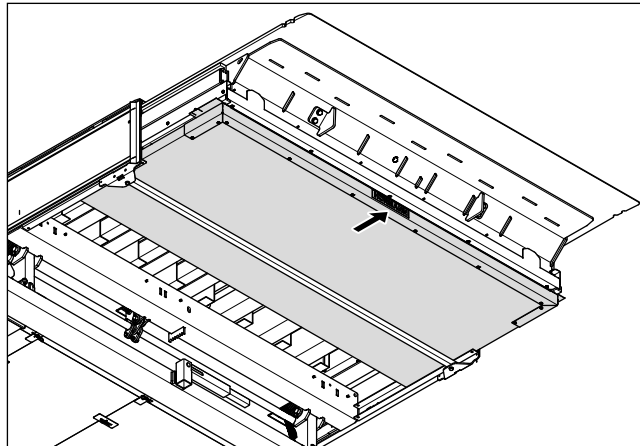
- ▶ Perform cleaning work at least once a year (after twelve months).



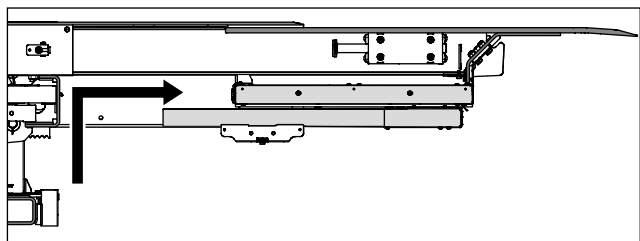
- ▶ Remove the two screws from the lower insulation panel.



- ▶ Extend the bridge plate at least 650 mm.



- ▶ Slide the lower insulation panel about 300 mm outwards.



- ▶ Clean the insulation panels.

#### **After cleaning**

- ▶ Bring the insulation panel into its original position.
- ▶ Secure it with the screws you just removed.
- ▶ Conduct a function test.

## 10.2 Inspection and maintenance

### **⚠ WARNING**

#### **Danger of injury in the event of non-observance of these inspection and maintenance instructions**

This section contains important information on the correct inspection and maintenance of the dock leveller. In case of insufficient inspection and maintenance important safety components may fail or be defective.

- ▶ Before starting maintenance work, carefully read through this section.
- ▶ Follow all safety instructions.
- ▶ Carry out inspection and maintenance at the specified intervals.
- ▶ Commission the repair of all defects immediately.

If damage puts the operational safety of the dock leveller at risk, a specialist must inspect the dock leveller and its operational safety. Use of the dock leveller is not permitted until the repair work has been completed.

Inspection and maintenance work must only be performed by qualified specialist personnel, see *Specialist personnel* on page 4.

### **⚠ WARNING**

#### **Danger of injury during inspection and maintenance**

Persons, body parts or objects may be crushed or jammed by the dock leveller during inspection and maintenance work.

- ▶ Before carrying out maintenance work, put the maintenance support into the right position so that the platform is safely supported.
- ▶ When performing inspection and maintenance work that does not rely on electrical power, set the main switch to **0** and secure it from actuation with a padlock. No strain can be placed on the dock leveller in this state.
- ▶ Secure the maintenance area. Use barrier tape, traffic cones or similar aids.

### **ATTENTION**

#### **Danger of short circuits due to liquids**

If liquids reach parts of the dock leveller that are under electrical voltage, this can result in a short circuit.

- ▶ Avoid contact between energized parts and liquids.

- ▶ Inspect the dock leveller at least once a year for damage and test it for proper operation. The maintenance intervals are shortened under the following conditions:
  - No protection by a dock seal or canopy
  - High exposure to weathering
  - Multi-shift operation

### **Dismantling the insulation panels**

Some maintenance work requires the insulation panels to be removed. This is indicated in the corresponding maintenance steps.

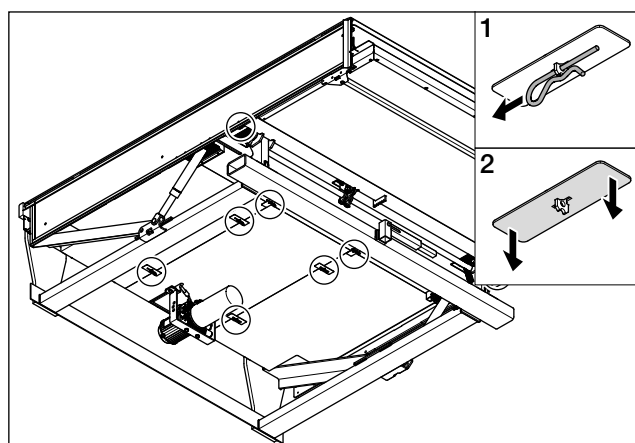
### **ATTENTION**

#### **Risk of damage to insulation panels during maintenance work**

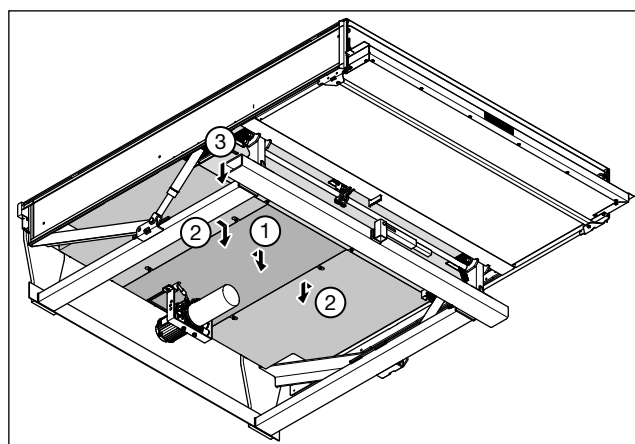
The insulation panels can easily be damaged during or after dismantling. Wind can blow away dismantled insulation panels. Sparks can occur during maintenance work and damage insulation panels.

Handle the insulation panels with care.

- ▶ Dismantle the insulation panels in the order specified.
- ▶ Store the insulation panels in a safe place.



1. On the underside of the platform, remove the securing split pins with the small plates.



2. Remove the insulation panels in the order specified.
3. After completing the inspection and maintenance work, reattach the insulation panels in reverse order.

<b>Actions</b>	<b>Intervals</b>
T = Test function	D = Daily
V = Visual inspection	W = Weekly
C = Change	M = Monthly
	A = Annually or after twelve months, or more frequently if used in multi-shift operation or used intensively

Area	Actions	Intervals
User information, see <i>10.2.1</i> <ul style="list-style-type: none"> <li>– Completeness</li> <li>– Legibility</li> </ul>	V	A
General condition of the dock leveller, see <i>10.2.2</i> <ul style="list-style-type: none"> <li>– Visual assessment</li> <li>– Damage, deformation</li> <li>– Corrosion</li> <li>– Dirt</li> <li>• Buffers <ul style="list-style-type: none"> <li>– Existence</li> <li>– Condition, wear</li> </ul> </li> </ul>	V	D
Emergency stop switch, see <i>10.2.3</i> <ul style="list-style-type: none"> <li>– Status</li> <li>– Function</li> <li>– Ease of movement</li> <li>– Option to secure system against unintentional actuation</li> </ul>	D	W
General operating functions, see <i>10.2.4</i> <ul style="list-style-type: none"> <li>– Function</li> <li>– Operational safety</li> </ul>	D	M
Construction, see <i>10.2.5</i> <ul style="list-style-type: none"> <li>• Welding seams, connections, guides, hinges, safety components <ul style="list-style-type: none"> <li>– Status</li> <li>– Ease of movement</li> <li>– Deformation</li> <li>– Corrosion</li> </ul> </li> <li>• Seals and insulation panels <ul style="list-style-type: none"> <li>– Completeness</li> <li>– Condition, wear</li> <li>– Deposits, see <i>Cleaning and care on page 26</i></li> </ul> </li> <li>• Safety components <ul style="list-style-type: none"> <li>– Completeness</li> <li>– Status</li> <li>– Function</li> </ul> </li> </ul>	V, T	A

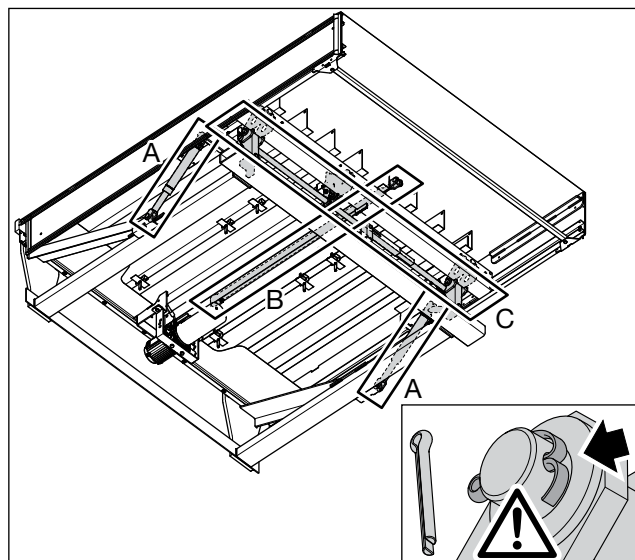
Area	Actions	Intervals
<ul style="list-style-type: none"> <li>Lip guide slider profiles               <ul style="list-style-type: none"> <li>Condition, wear</li> </ul> </li> </ul> <p>If equipped accordingly:</p> <ul style="list-style-type: none"> <li>Anti-slip or acoustic insulation coating               <ul style="list-style-type: none"> <li>Status</li> </ul> </li> </ul>		
Electrical system, see 10.2.6 <ul style="list-style-type: none"> <li>Control system and control elements               <ul style="list-style-type: none"> <li>Status</li> <li>Function</li> </ul> </li> <li>Cables               <ul style="list-style-type: none"> <li>Status</li> <li>Fixing</li> <li>Connections</li> </ul> </li> </ul>	V, T	A
Hydraulic unit, see 10.2.7 <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Status</li> <li>Tightness</li> <li>Corrosion</li> <li>Function</li> <li>Safety equipment</li> </ul> </li> <li>Hose lines               <ul style="list-style-type: none"> <li>Status</li> <li>Fixing</li> <li>Service life</li> <li>Connections</li> </ul> </li> <li>Cylinder               <ul style="list-style-type: none"> <li>Status</li> <li>Connections</li> </ul> </li> <li>Oil               <ul style="list-style-type: none"> <li>Quantity</li> <li>Status</li> <li>Bleeding</li> </ul> </li> </ul>	<div>V, T</div> <div>V C</div>  <div>V, T</div> <div>V C</div>	<div>A</div>   <div>A 5 A</div>  <div>A</div> <div>A 5 A</div>

- Check that the user information is complete and in good, legible condition.

What?	Where?
Data label with the following information: Manufacturer, type, rated load, serial number, year of manufacture, power supply	On the front beam
Motor label	On the hydraulic unit
Hydraulic unit data label	on the tank
Oil type sticker	on the tank
Operating instruction for maintenance support	On the front beam
Safety marking	On the side edges below the running plate, for frame and box models on the side panels of the frame construction. For pit models on the side in the pit



What?	Where?
Brief instructions: <ul style="list-style-type: none"> <li>Control operating symbols</li> <li>Label specifying rated load</li> <li>Illustrated brief instructions</li> </ul>	On or in direct vicinity of the control housing
Instructions for fitting, operating and maintenance	Readily accessible
Documentation for control and, if needed, functional extensions	Readily accessible
Log book	Readily accessible
Specification of next inspection and maintenance date	On or in direct vicinity of the control housing



### 10.2.2 General condition

- ▶ Perform a visual inspection for mechanical damage, deformation and corrosion. Pay attention to the connection to the building structure and the condition of the weld seams.
- ▶ Remove any dirt, see *Cleaning and care on page 26*.
- ▶ Check that the buffers are present on the ramp and in good condition.
- ▶ Commission the repair of all defects immediately.

### 10.2.3 Main switch and emergency stop

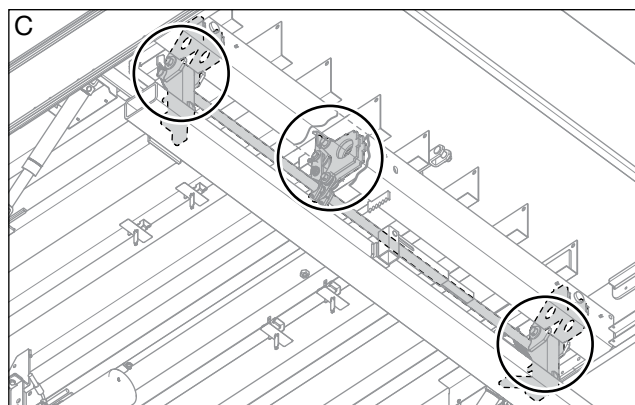
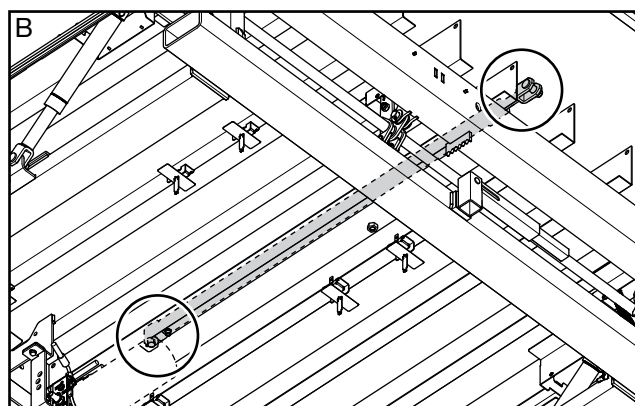
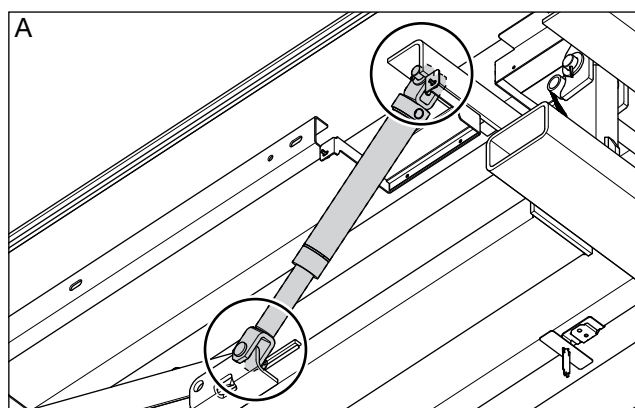
- ▶ Inspect the condition and functioning of the emergency stop function of the main switch and the restart inhibition. Follow the documentation for the control.

### 10.2.4 General operating functions

- ▶ Conduct a test run during which all operating functions are inspected:
    - Lifting
    - Extending and retracting the lip
    - Lowering
    - Returning to home position
    - Door release (with corresponding equipment)
    - Floating position
- Follow the documentation for the control.

### 10.2.5 Design

- ▶ Make sure that the insulation panels have been dismantled, see *Dismantling the insulation panels on page 27*.
- ▶ Perform a visual inspection for mechanical damage, deformation or corrosion. Pay attention to weld seams, screw connections and corruptions.
- ▶ Check the connection to the building structure.
- ▶ Check to see that movable parts move freely.
- ▶ Pay particular attention to the completeness, condition and functioning of the following safety devices:
  - Anti-slip platform
  - Foot guard plates
  - Maintenance supports
  - Securing split pins, see figures



- ▶ Check the completeness and condition of the insulating components:

- Insulation panels
- Gap sealing
- Brush seals
- Seals made of tarpaulin material

Replace insulating components immediately in case of wear.

- ▶ With corresponding equipment: Check whether the following equipment is intact:
  - Anti-slip and acoustic-rated coating of the platform and lip.
- ▶ Check that the slider profiles for the lip guide are intact. Replace the slider profiles in case of wear.

**NOTE**

Do not grease the slider profiles.

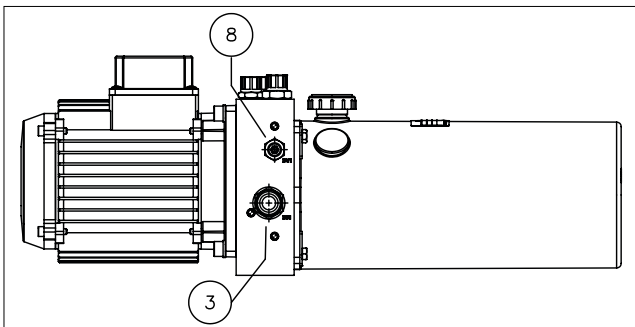
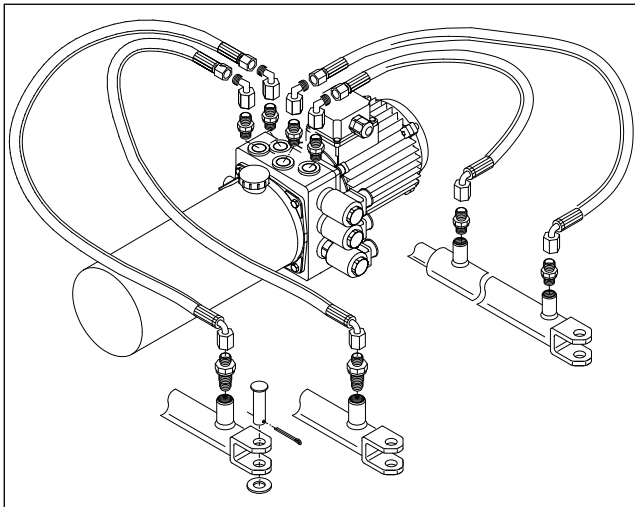
- ▶ Commission the repair of all defects immediately.

### 10.2.6 Electrical system

- ▶ Perform a visual inspection for mechanical damage to the electric cables and control elements. Follow the separate documentation for the control and, if appropriate, for the functional extensions of the dock leveller.
- ▶ Commission the repair of all defects immediately.

### 10.2.7 Hydraulic system

Deviations from the version shown may occur. Hydraulic diagrams, see *Hydraulic system diagram on page 36*.



- ③ Pressure relief valve
- ⑧ Throttle valve

- ▶ **Do not disconnect the power, as the solenoid valve will cease to function.**
- ▶ If there is no tailboard slot, make sure that the hydraulic components can be reached safely.
- ▶ Perform a visual inspection for mechanical damage to the following components:
  - Hose lines including connections. Check for porosity. Check the position of the hose clamps. Movements caused by differences in pressure during operation may not lead to friction damage.
  - Cylinders, including fastenings and connections. Check for the following: leaks, cracks, grooves, dirt and corrosion
  - Hydraulic unit, including connections. Check for the following: leaks, cracks, grooves, dirt and corrosion
- ▶ Remove any dirt and rust.
- ▶ Replace defective components immediately.
- ▶ Check that the automatic safety device (hose safety device) is in place and functioning.
  - Remove the valve and make sure it is easy to move and free of dirt.
  - Re-install the valve.
  - Exchange the valve if necessary.
- ▶ Test the oil level and oil quality. The dock leveller should be in the home position for this. The tank should be half to three quarters full. If the oil level is insufficient, top up the oil. Change the oil in case of: dark colouration, cloudiness, soiling, burned odour  
Standard value for oil change:
  - With normal use after five years
  - after 2.5 years with frequent use
 Do not substitute an oil change by purifying the oil. Purifying does not sufficiently prevent the oil quality from deteriorating.

**NOTE**

We recommend changing oil and hose lines every five years. The reference date is the year of manufacture as per the data label. If any evidence of wear or damage is visible, replace hose lines earlier, e.g. in case of small cracks or leaks.

### Testing and setting the lowering speed

Basic setting: The lowering speed is set correctly when the platform lowers as quickly as it raises.

The lowering speed must be fast enough to ensure that the lip is supported directly on the loading surface at all times during loading.

The lowering speed must not exceed a max. of 200 mm/s on average measured at the front of the dock leveller.

- ▶ Test the lowering speed at least 1 x a year
- ▶ If necessary, adjust the lowering speed with the throttle valve.

### Adjusting the pressure

The hydraulics pressure was set during production; it can, however, be affected by local conditions (temperature).

If faults are due to incorrect pressure, readjust the pressure:

1. With the lip extended, move the dock leveller to its lowest position
2. Remove the cover cap of the pressure relief valve.

3. Turn the main pressure relief valve to the left so that the main pressure is reduced. The platform should not rise anymore.
4. Turn the pressure relief valve to the right to increase the main pressure.
5. Once the platform begins to rise, turn the pressure relief valve another half rotation to the right.
6. Seal the valve with a new cover cap.

### Changing the oil

<b>⚠ WARNING</b>
<b>Danger of burns from hot oil</b> The oil may heat up excessively during operation of the dock leveller. <ul style="list-style-type: none"> <li>▶ Wear gloves.</li> <li>▶ Carefully feel the tank to see if the oil is sufficiently cool.</li> </ul>

1. Remove the insulation panels, see *Dismantling the insulation panels on page 27*.
2. Raise the dock leveller.
3. Secure the dock leveller using the maintenance support.
4. Remove the lifting cylinder from the platform and the base frame.
5. Unlock throttle valve 8 and open the valve completely. Note the number of rotations.
6. Press the lifting cylinder in by hand, thus causing the oil to flow back into the tank.
7. Remove the hose line from the lifting cylinder. Put the lifting cylinder into a receptacle.
8. Press the *Lift platform* button so that the oil can run out of the tank and into the receptacle. Stop as soon as the oil begins to squirt.
9. Fill the tank with new oil. If you use a different type of oil, rinse the tank with the new oil first.
10. Attach the hose line to the cylinder again.
11. Bleed the hydraulic system and check the lowering speed.
12. Document the type and viscosity of the oil used.
13. Properly dispose of the waste oil.

### Changing the hose line

1. Remove the insulation panels, see *Dismantling the insulation panels on page 27*.
2. Raise the dock leveller.
3. Secure the dock leveller using the maintenance support.
4. Remove the damaged hose line from the cylinder. Put the hose line in a receptacle.
5. Install a new hose line.

### Changing a cylinder

1. Remove the insulation panels, see *Dismantling the insulation panels on page 27*.
2. Raise the dock leveller.
3. Secure the dock leveller using the maintenance support.
4. Loosen the cylinder on both cylinder axles.
5. Press the damaged cylinder in by hand, thus causing the oil to flow back into the tank.

6. Remove the hose lines from the cylinder. Put the cylinder into a receptacle.
7. Attach the hose lines to a new cylinder.
8. Attach the new cylinder.
9. Make sure that the lowering speed is set correctly.

### Changing a valve

1. Raise the dock leveller.
2. Secure the dock leveller using the maintenance support.
3. Release the hydraulic unit from the holder.
4. Place the hydraulic unit vertically so that the oil is primarily in the tank.
5. Replace the damaged valve.
6. Make sure that the lowering speed is set correctly.
7. Refasten the hydraulic unit to the holder.

## 10.3 Malfunctions and troubleshooting

<b>⚠ WARNING</b>
<b>Danger of injury when remedying malfunctions</b> In the case of a malfunction, the dock leveller may no longer function reliably. Persons, body parts or objects may be crushed or jammed if a faulty dock leveller is operated. <ul style="list-style-type: none"> <li>▶ Before performing any work on the dock leveller, always unfold the maintenance support and secure it in a vertical position.</li> <li>▶ Set the main switch to <b>0</b> and secure it with a padlock to prevent unauthorized operation.</li> </ul>

Troubleshooting must only be carried out by qualified specialist personnel, see *Specialist personnel on page 4*.

- ▶ In the case of a malfunction, always first check if there is any mechanical damage or if any components are jammed. Only after that has been ruled out, start looking for other causes as described in the following overview.

Possible malfunctions are described in the following:

Malfunction
<b>Possible cause</b> ▶ Remedy

Adjustment work necessary to remedy faults is described in the "Inspection and maintenance" section.

<b>The dock leveller does not respond. The motor does not run.</b> <b>The emergency stop switch / main switch is set to "O" or the restart inhibition is activated.</b> <ul style="list-style-type: none"> <li>▶ Check whether (and why) the emergency stop switch has been actuated (e.g. for maintenance work).</li> <li>▶ After eliminating the cause, press the <i>Lift platform</i> button to deactivate the restart inhibition. Then the dock leveller is ready for operation again.</li> </ul>
--

<b>The dock leveller does not respond. The motor does not run.</b>
<b>Fault in the power supply</b> <ul style="list-style-type: none"> <li>▶ Check the connecting voltage and the wiring.</li> <li>▶ Check the control box to see if a fuse or the wiring has loosened. Follow the documentation for the control.</li> </ul>
<b>Dock leveller release function blocks the dock leveller.</b> <p>If equipped accordingly, the dock leveller cannot be operated if the door is not completely open.</p> <ul style="list-style-type: none"> <li>▶ Open the door completely.</li> <li>▶ Check the "OPEN" signal. Follow the documentation for the control.</li> </ul>
<b>Wheel chock with sensor blocks the dock leveller.</b> <p>If equipped accordingly, the dock leveller cannot be operated if the wheel chock with sensor is not positioned correctly.</p> <ul style="list-style-type: none"> <li>▶ Make sure that the wheel chock is positioned correctly.</li> <li>▶ Check for damage to the sensor or wiring.</li> <li>▶ Check whether the wheel chock switches properly. Follow the documentation for the wheel chock.</li> <li>▶ If the wheel chock functions properly, test the function of the dock leveller</li> <li>▶ Disconnect the wheel chock. Test whether the dock leveller is functioning. Follow the documentation for the control.</li> </ul>
<b>Fault in the hydraulics</b> <ul style="list-style-type: none"> <li>▶ If none of the above possibilities solve the problem, contact the supplier's or manufacturer's customer service department.</li> </ul>

<b>Platform does not rise, even with a functioning motor</b>
<b>The motor is running in the wrong direction.</b> <p>It is possible that the motor was connected with inverted phases during initial operation of the dock leveller or after the replacement of the hydraulic unit. In this case, the motor rotates, but the platform does not respond.</p> <ul style="list-style-type: none"> <li>▶ Correct the polarity of the motor connections in the control or, if necessary, on the motor.</li> </ul>
<b>Platform has jammed.</b> <ul style="list-style-type: none"> <li>▶ Check to see if the movement of the platform is blocked.</li> </ul>
<b>Inadequate pressure in the hydraulic system</b> <p>The hydraulics pressure was set during production; it can, however, be affected by local conditions (temperature).</p> <ul style="list-style-type: none"> <li>▶ Readjust the pressure.</li> </ul>
<b>Oil level is too low</b> <p>In the home position, the tank should be half to three quarters full.</p> <ul style="list-style-type: none"> <li>▶ Inspect the system for leaks on the cylinders, hose lines and connections.</li> <li>▶ Replace defective parts.</li> <li>▶ Top up the oil tank with a suitable oil.</li> </ul>

<b>Platform does not rise, even with a functioning motor</b>
<b>Fault in the hydraulics</b> <ul style="list-style-type: none"> <li>▶ If none of the above possibilities solve the problem, contact the supplier's or manufacturer's customer service department.</li> </ul>

<b>Platform rises very slowly or incompletely</b>
<b>Soiled hinge</b> <ul style="list-style-type: none"> <li>▶ Check for contamination on the hinges on the rear side. Clean if required.</li> </ul>
<b>Oil level is too low</b> <p>In the home position, the tank should be half to three quarters full.</p> <ul style="list-style-type: none"> <li>▶ Inspect the system for leaks on the cylinders, hose lines and connections.</li> <li>▶ Replace defective parts.</li> <li>▶ Top up the oil tank with a suitable oil.</li> </ul>
<b>Contaminated oil</b> <ul style="list-style-type: none"> <li>▶ Remove and dispose of the contaminated oil.</li> <li>▶ Clean the valves.</li> <li>▶ Top up the oil tank with a suitable oil.</li> </ul>
<b>Inadequate pressure in the hydraulic system</b> <p>The hydraulics pressure was set during production; it can, however, be affected by local conditions (temperature).</p> <ul style="list-style-type: none"> <li>▶ Readjust the pressure.</li> </ul>
<b>Fault in the hydraulics</b> <ul style="list-style-type: none"> <li>▶ If none of the above possibilities solve the problem, contact the supplier's or manufacturer's customer service department</li> </ul>

<b>Platform does not go down, is blocked at the highest position or during lowering</b>
<b>The emergency stop switch / main switch is set to "O" or the restart inhibition is activated.</b> <ul style="list-style-type: none"> <li>▶ Check whether (and why) the emergency stop switch has been actuated (e.g. for maintenance work).</li> <li>▶ After eliminating the cause, press the <i>Lift platform</i> button to deactivate the restart inhibition. Then the dock leveller is ready for operation again.</li> </ul>
<b>Fault in the power supply</b> <ul style="list-style-type: none"> <li>▶ Check the connecting voltage and the wiring.</li> <li>▶ Check the control box to see if a fuse or the wiring has loosened. Follow the documentation for the control.</li> </ul>
<b>Platform has jammed.</b> <ul style="list-style-type: none"> <li>▶ Check to see if the movement of the platform is blocked.</li> </ul>

<b>Platform does not go down, is blocked at the highest position or during lowering</b>
<b>Automatic safety device (hose safety device) has been activated.</b> <p><b>Attention</b></p> <p>Do not use the dock leveller any longer if the hose safety device has tripped.</p> <ul style="list-style-type: none"> <li>Find the cause: <ul style="list-style-type: none"> <li>The hydraulic system is contaminated or damaged.</li> <li>There is air in the cylinder.</li> <li>There is a load on the platform while the lip is not resting on the loading surface of the lorry.</li> </ul> </li> <li>Eliminate the cause. Briefly press the <i>Lift platform</i> button to unblock the platform.</li> </ul>
<b>The lowering speed is set too high</b> <p>The hydraulics pressure was set during production; it can, however, be affected by local conditions (temperature).</p> <ul style="list-style-type: none"> <li>Readjust the pressure.</li> </ul>
<b>Soiling or damage to the hydraulics</b> <ul style="list-style-type: none"> <li>Inspect the system for soiling and leaks on the cylinders, hose lines, and connections. Clean the system and replace defective parts.</li> </ul>
<b>Incorrect oil</b> <p>The specified viscosity was not observed when changing or topping up the oil.</p> <ul style="list-style-type: none"> <li>Exchange the oil.</li> </ul>
<b>2/2-way valve blocks the oil flow.</b> <ul style="list-style-type: none"> <li>Press the <i>Lift platform</i> button. Check the function of the solenoid coil: <ul style="list-style-type: none"> <li>With a magnetic field tester</li> <li>or by loosening the nut and pulling the coil.</li> </ul> Perceptible resistance indicates that the solenoid is functioning properly. </li> <li>Remove the valve and clean the inlet.</li> </ul>

<b>Platform lowers too quickly or too slowly</b>
<b>Extremely high or low temperatures</b> <ul style="list-style-type: none"> <li>Consult the manufacturer or supplier if the dock leveller is operated in a cooled or heated room. It may be necessary to use a different type of oil or adjust the settings.</li> </ul> <p>Do not change the settings if the malfunction is the result of a temporary temperature fluctuation.</p>
<b>Pressure in the hydraulic system is too low or too high</b> <p>The hydraulics pressure was set during production; it can, however, be affected by local conditions (temperature).</p> <ul style="list-style-type: none"> <li>Readjust the pressure.</li> </ul>
<b>Incorrect oil</b> <p>The specified viscosity was not observed when changing or topping up the oil.</p> <ul style="list-style-type: none"> <li>Exchange the oil.</li> </ul>

<b>Telescopic lip does not extend</b>
<b>Defective hose line</b> <ul style="list-style-type: none"> <li>Check the hose line for breaks or leaks.</li> <li>Replace defective parts.</li> </ul>
<b>Dirt has accumulated on the telescopic lip</b> <ul style="list-style-type: none"> <li>Increase the pressure on the valves until the telescopic lip extends.</li> <li>Thoroughly clean the telescopic lip and the underside of the platform.</li> <li>Bring the valve pressure back to the original level.</li> </ul>
<b>Lip valve does not close properly.</b> <ul style="list-style-type: none"> <li>Contact the supplier's or manufacturer's customer service department.</li> </ul>

<b>Telescopic lip does not retract</b>
<b>Dirt has accumulated on the telescopic lip</b> <ul style="list-style-type: none"> <li>Completely extend the telescopic lip.</li> <li>Thoroughly clean the telescopic lip and the underside of the platform.</li> </ul>
<b>Defective hose line</b> <ul style="list-style-type: none"> <li>Check the hose line for breaks or leaks.</li> <li>Replace defective parts.</li> </ul>
<b>Lip valve does not open.</b> <ul style="list-style-type: none"> <li>Contact the supplier's or manufacturer's customer service department.</li> </ul>

<b>Auto-return button does not work</b>
<b>One of the sensors on the front of the platform or on the support yoke of the front beam does not function correctly.</b> <ul style="list-style-type: none"> <li>Check that the sensors are clean and the wiring is in order. Replace defective sensors, if necessary.</li> </ul>
<b>The emergency stop switch / main switch is set to "O" or the restart inhibition is activated.</b> <ul style="list-style-type: none"> <li>Check whether (and why) the main switch has been actuated (e.g. for maintenance work).</li> <li>After eliminating the cause, press the <i>Lift platform</i> button to deactivate the restart inhibition. Then the dock leveller is ready for operation again.</li> </ul>

## 10.4 Spare parts

- Only use original spare parts from the manufacturer. The warranty claims for all defects attributable to the use of non-original spare parts will be invalidated.
- When ordering spare parts, always provide the following data:
  - All data label information, see section 13.1.
  - Component designation, see section 15.
  - Quantity and, if known, article number of the spare part
  - Shipping method and personal data

It is sometimes a good idea to keep some spare parts in stock. Ask your loading technology consultant for more information.

### 10.4.1 Returning parts

If the defective parts are still under warranty:

- ▶ Ask the supplier's or manufacturer's customer service whether the parts have to be returned.
- ▶ Do not return any parts that have been damaged due to wear, your own fault or by accident.
- ▶ Always provide the following data with your returns:
  - Type and serial number according to the data label, see section 13.1.
  - Serial number of the hydraulic unit, see motor data label
  - Delivery date, see invoice documents
  - Reference number, e.g. order number, service report number or ticket number, see correspondence
  - Personal data

Assemblies must not contain hydraulic oil for customs and environmental reasons.

- ▶ Remove the oil from the hydraulic unit before shipping.
- ▶ Properly dispose of the oil.

## 11 Dismantling and disposal

- ▶ During dismantling, make sure that the dock leveller is in home position.
- ▶ Disconnect the mains voltage.
- ▶ Drain the hydraulic oil and remove all hydraulic components.
- ▶ Properly dispose of the components.
- ▶ Completely disassemble and remove the dock leveller.
- ▶ Provide the components of the dock leveller to sufficiently qualified companies for recycling.

If you intend to install the dock leveller at another location, check for operational safety in accordance with the new operating conditions.

- ▶ To do this, pass these instructions, as well as documentation for the control, on to the responsible party.

## 12 Liability for defects

For the liability for defects (warranty), the generally recognised terms and conditions or those agreed in the delivery contract apply.

The liability for defects lapses for defects that can be traced back to the following causes:



- Non-observance of these instructions
- Improper use of the product
- Improper fitting and handling of the product
- Insufficient inspection and maintenance
- Use of the product by unqualified personnel
- Modifications to the design of the product without the manufacturer's prior permission
- Use of spare parts that were not manufactured or approved by the manufacturer.

## 13 Technical data

The specified dimensions and values apply for the standard versions.

Type	See data label
Weight	See data label
Rated load	See data label
Temperature range in the surrounding area of the hydraulic unit	–10°C to +50°C When using a suitable oil: –25°C to +50°C
Energy supply	See data label
Technical data for the control	See the control documentation
Insulation panels fire behaviour	Class B s2 d0 according to EN 13501-1:2018.

### 13.1 Data label

  <small>Hörmann KG Verkaufsgesellschaft Upheider Weg 94-98 D-33803 Steinhagen</small>	Type	<input type="text"/>	Production date	<input type="text"/>
	Serial no.	<input type="text"/>	Rated load	<input type="text"/>
	Dimensions (NW-NL-NH)	<input type="text"/>	Weight	<input type="text"/>
	Lip specifications	<input type="text"/>	Colour	<input type="text"/>
	Supply: Voltage, Frequency, Current	<input type="text"/>	Special properties	<input type="text"/>

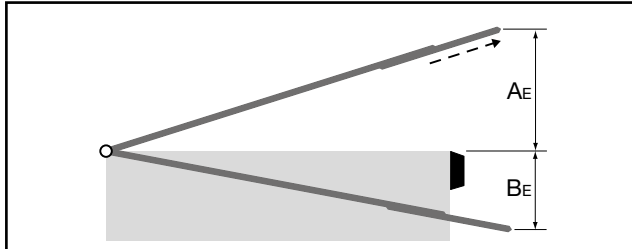
### Explanation of the specifications

TYPE	Type and fitting model of the dock leveller
SERIAL NO.	Serial number
DIMENSIONS (NW – NL – NH)	Ordering width NW Ordering length NL Installation height NH
LIP SPECIFICATIONS	Lip length and shape (R = straight, S = chamfered)
SUPPLY: VOLTAGE, FREQUENCY, CURRENT	Electrical data
PRODUCTION DATE	Production date
RATED LOAD	Rated load according to EN 1398
WEIGHT	Weight of the dock leveller
COLOUR	Colour of the dock leveller
SPECIAL PROPERTIES	Special versions and other optional extras

### 13.2 Dimensions and effective working range

The specified dimensions and values apply for the standard versions. The working range will deviate from the information in the tables if the installation height, length or rated load is different. If necessary, please ask the supplier or manufacturer for this information.

The dock leveller can be raised above and lowered below the ramp level.

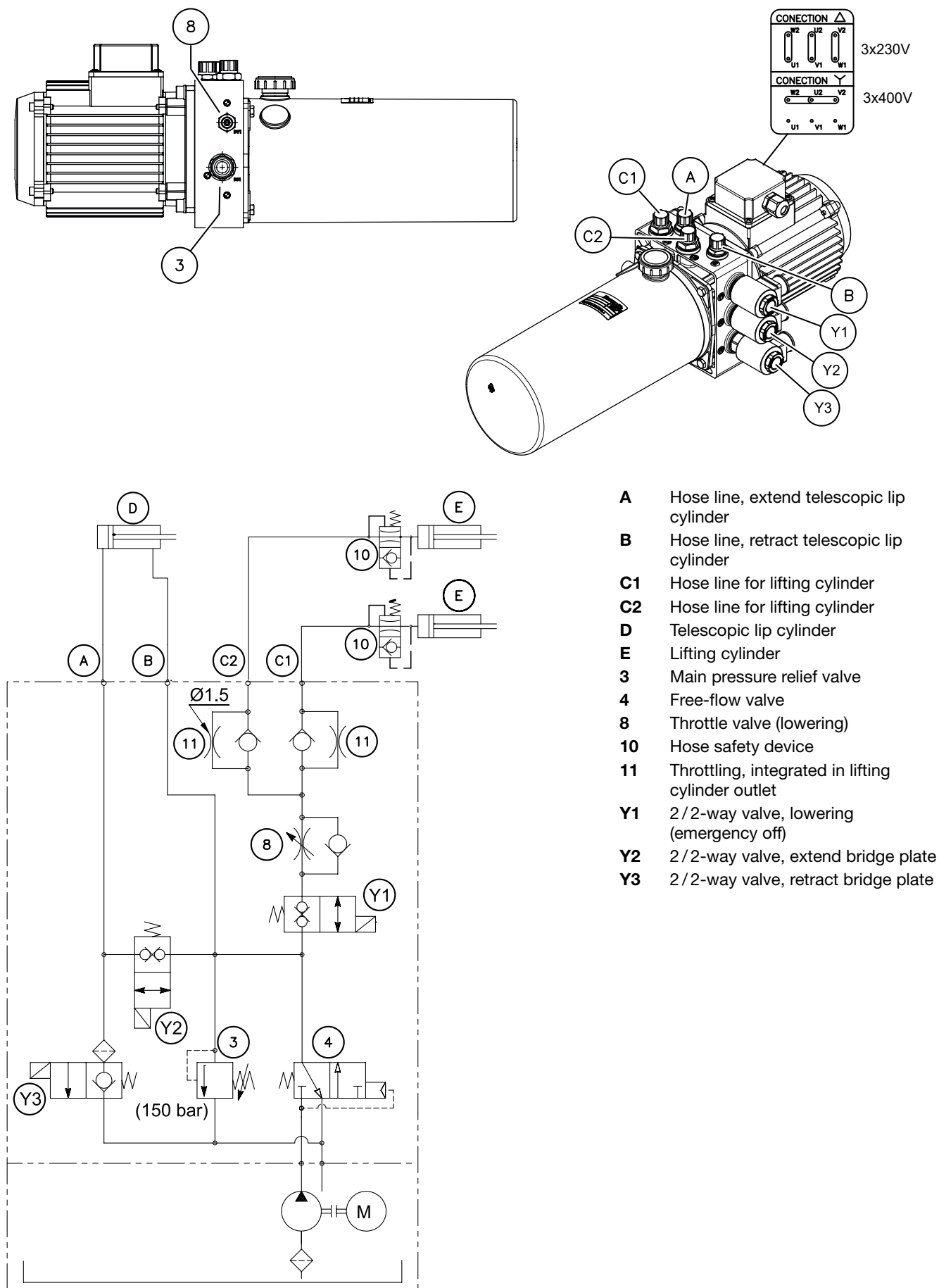


Levelling / effective working range:

HTL2 ISO with fully extended bridge plate		Bridge plate 650 mm		Bridge plate 1150 mm	
Ordering length	Installation height	A <sub>E</sub>	B <sub>E</sub>	A <sub>E</sub>	B <sub>E</sub>
3000	645	405	395	460	420
2750	645	370	400	430	430
2500	595	340	345	395	395
2000	595	270	350	325 <sup>1)</sup>	410 <sup>1)</sup>
Ordering width 2000, 2100, 2250					

1) Due to the design, the bridge plate is 950 mm long instead of 1150 mm.

## 14 Hydraulic system diagram

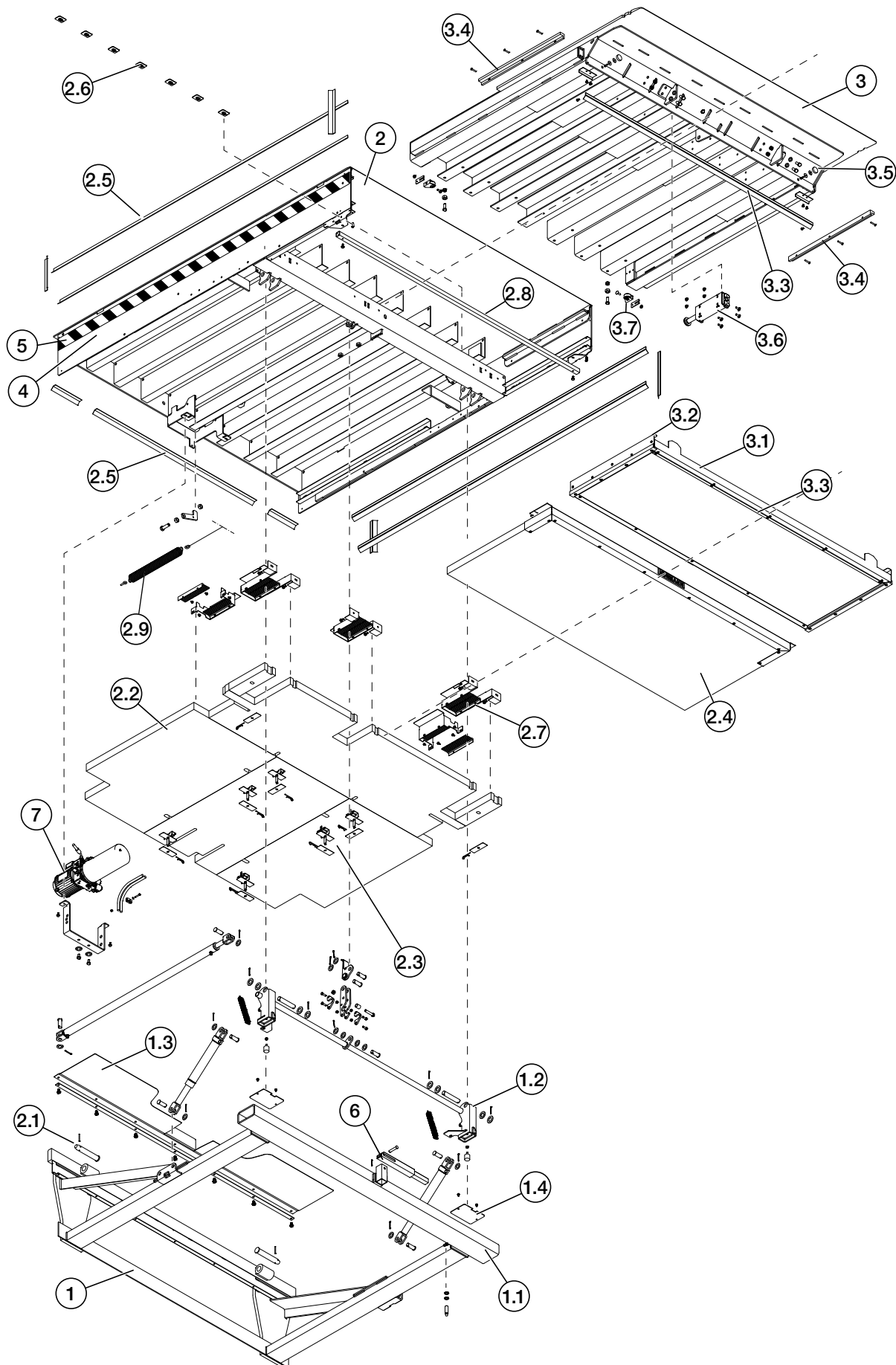


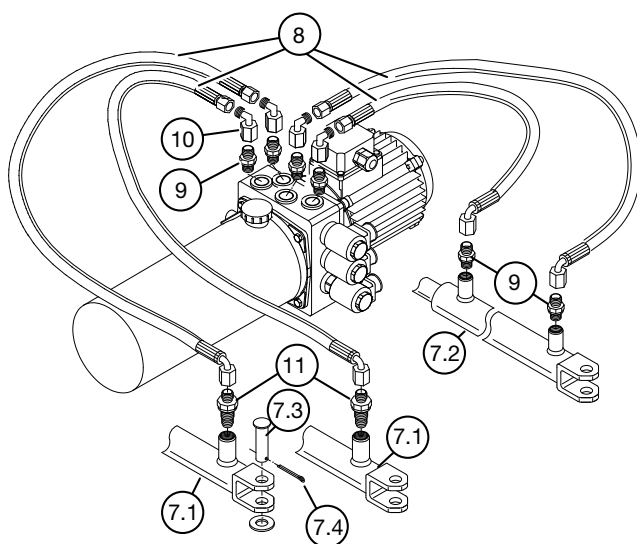




## 15 Overview of components

Pit model (may deviate from the illustration)



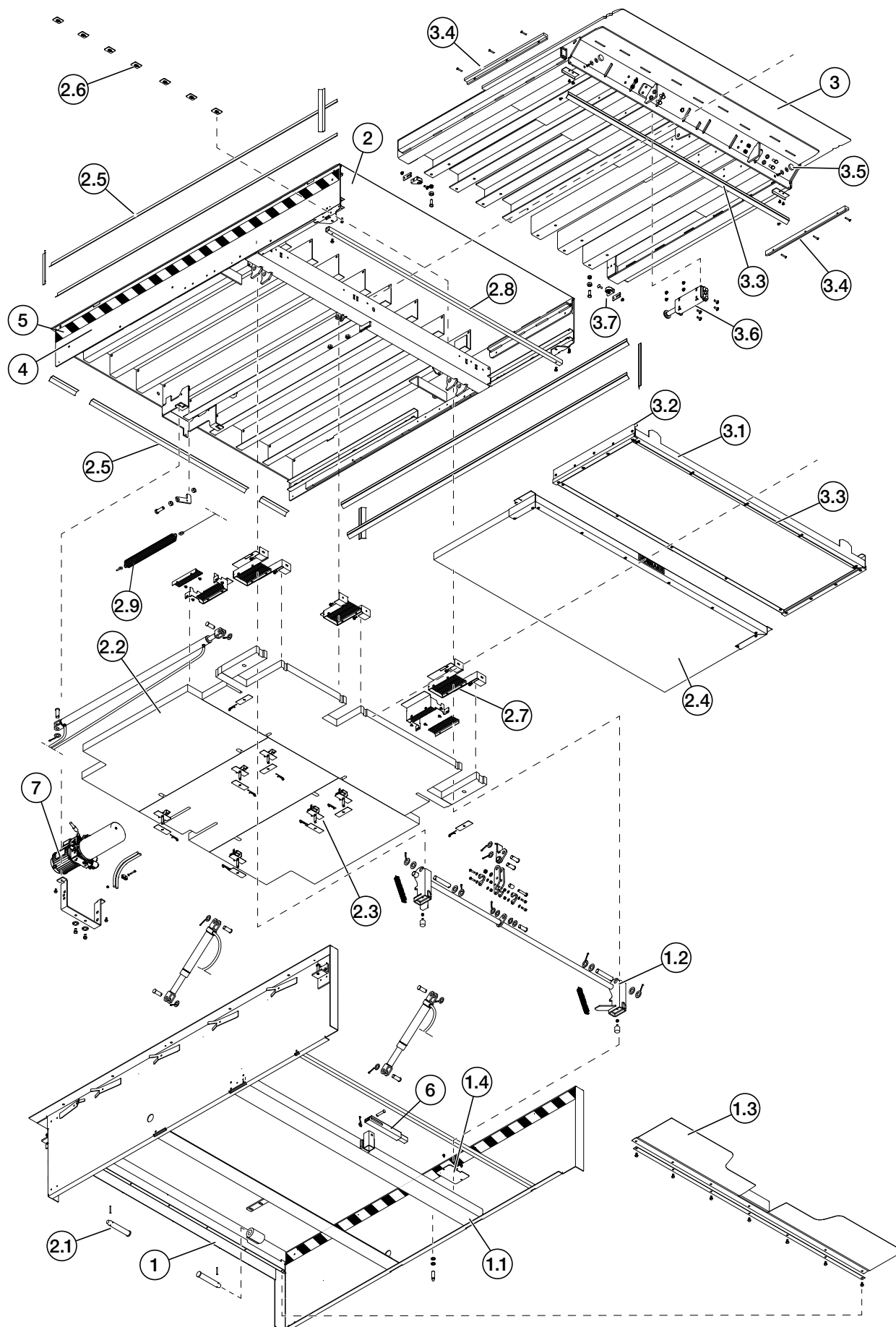


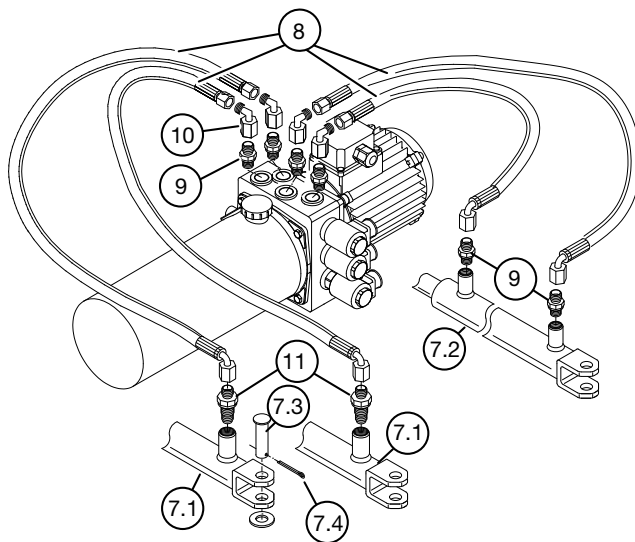
- 1** Base frame
- 1.1** Front beam
- 1.2** Folding supports
- 1.3** Sealing tarpaulin
- 1.4** Filler plate (deviating quantity possible)
- 2** Platform
- 2.1** Rear hinge axle
- 2.2** Insulation panel (aluminium)
- 2.3** Insulation panel holder
- 2.4** Insulation panel (steel)
- 2.5** Gap sealing
- 2.6** Slide plug
- 2.7** Bracket with brush seal
- 2.8** Spacer profile
- 2.9** Tension spring
- 3** Telescopic lip
- 3.1** Moving insulation panel
- 3.2** Guide profile
- 3.3** Gap sealing
- 3.4** Slider profile
- 3.5** Magnet
- 3.6** Pressure spring unit
- 3.7** Slide rollers
- 4** Foot guard plate
- 5** Marker stripes
- 6** Maintenance support
- 7** Hydraulic unit
- 7.1** Lifting cylinder
- 7.2** Telescopic lip cylinder
- 7.3** Cylinder axle
- 7.4** Securing split pin
- 8** Hose line
- 9** Coupling
- 10** Elbow screw fitting
- 11** Coupling with hose safety device\*

\* If the product deviates from the illustration (coupling as in item 9), the hose safety device is integrated in the lifting cylinder.

## OVERVIEW OF COMPONENTS

Frame model and box model (may deviate from the illustration)





- 1** Base frame
- 1.1** Front beam
- 1.2** Folding supports
- 1.3** Sealing tarpaulin
- 1.4** Filler plate (deviating quantity possible)
- 2** Platform
- 2.1** Rear hinge axle
- 2.2** Insulation panel (aluminium)
- 2.3** Insulation panel holder
- 2.4** Insulation panel (steel)
- 2.5** Gap sealing
- 2.6** Slide plug
- 2.7** Bracket with brush seal
- 2.8** Spacer profile
- 2.9** Tension spring
- 3** Telescopic lip
- 3.1** Moving insulation panel (steel)
- 3.2** Guide profile
- 3.3** Gap sealing
- 3.4** Slider profile
- 3.5** Magnet
- 3.6** Pressure spring unit
- 3.7** Slide rollers
- 4** Foot guard plate
- 5** Marker stripes
- 6** Maintenance support
- 7** Hydraulic unit
- 7.1** Lifting cylinder
- 7.2** Telescopic lip cylinder
- 7.3** Cylinder axle
- 7.4** Securing split pin
- 8** Hose line
- 9** Coupling
- 10** Elbow screw fitting
- 11** Coupling with hose safety device\*

\* If the product deviates from the illustration (coupling as in item 9), the hose safety device is integrated in the lifting cylinder.



## 16 Declaration of conformity

### EC declaration of conformity (EU)

as defined in EC Machinery Directive 2006/42/EC, Annex II, Part 1 A.

#### Manufacturer:

Hörmann KG Verkaufsgesellschaft  
Upheider Weg 94 – 98  
33803 Steinhagen, Germany  
Management: Axel Becker

The manufacturer above herewith declares under his sole responsibility that the product:

#### **Hörmann dock leveller HTL2 ISO with control 420 T, 420 Ti, 560 T**

conforms to the respective essential requirements of the directives listed below with intended use, on the basis of its design and style in the version marketed by us:

2006/42/EC	EC Machinery Directive
2014/35/EU	EU Low-Voltage Directive
2014/30/EU	EU Electromagnetic Compatibility Directive
2011/65/EU (RoHS)	EU Directive on the restriction of the use of certain hazardous substances

Applied and consulted standards and specifications (if undated, the latest edition of the publication applies, including any amendments):

- EN 1398 Dock levellers
- EN ISO 13849-1, Safety of machinery – Safety-related parts of control systems PL „c“
- EN 60204-1 Safety of machinery – Electrical equipment of machines
- EN 61000-6-2 Electromagnetic compatibility – Immunity standard for industrial environments
- EN 61000-6-3 Electromagnetic compatibility – Emission standard for equipment in residential environments

If any of the combinations described above is fitted and commissioned according to our requirements, the construction complies with these standards. Any modifications made to the product without our approval will invalidate this declaration.

The management of the above-mentioned manufacturer is the person authorised to compile the required technical documentation.

Steinhagen, 01.07.2023



ppa. Axel Becker  
Management

### Declaration of conformity - UK

as defined in Supply of Machinery (Safety) Regulations 2008, Part 2, Annex II A.

#### Manufacturer:

Hörmann UK Ltd.  
Gee Road  
Coalville  
LE67 4JW  
GB-Leicestershire  
Management: Wolfgang Gerner

The manufacturer above herewith declares under his sole responsibility that the product

#### **Hörmann dock leveller HTL2 ISO with control 420 T, 420 Ti, 560 T**

conforms to the respective essential requirements of the directives listed below with intended use, on the basis of its design and type in the version marketed by us:

2008 No. 1597	Supply of Machinery (Safety) Regulations 2008
2016 No. 1101	Electrical Equipment (Safety) Regulations 2016
2016 No. 1091	Electromagnetic Compatibility Regulations 2016
2012 No. 3032	Restriction of the use of certain Hazardous Substances (only regarding the control)

Applied and consulted standards and specifications (if undated, the latest edition of the publication applies, including any amendments):

- EN 1398 Dock levellers
- EN ISO 13849-1, Safety of machinery – Safety-related parts of control systems PL „c“
- EN 60204-1 Safety of machinery – Electrical equipment of machines
- EN 61000-6-2 Electromagnetic compatibility – Immunity for industrial environments
- EN 61000-6-3 Electromagnetic compatibility – Interference emission

Any modification made to this product without our express permission and approval shall render this declaration null and void.

The management of the above-mentioned manufacturer is authorised to compile the required technical documentation.

Coalville, 01.07.2023



Wolfgang Gerner  
Management



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## **HÖRMANN**

HÖRMANN KG Verkaufsgesellschaft  
Upheider Weg 94 – 98  
33803 Steinhagen, Germany  
[www.hoermann.com](http://www.hoermann.com)

